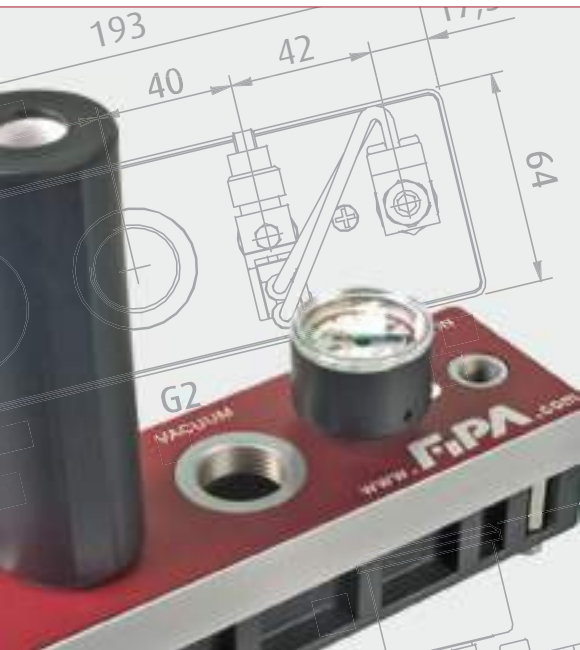


FIPA Vacuum Technology



www.fipa.com

FIPA

Material in Motion

„Only those who think ahead stay ahead.“



Vacuum Technology Expertise

With the headquarter in Ismaning / Germany, just outside of Munich, FIPA specialises in developing and marketing innovative vacuum technology for handling a wide variety of products.

In doing so we cover the entire process chain, from vacuum generation to system peripherals, through to vacuum cups and gripper systems at the interface with your product.

Our aim is to offer the right solution for every customer and every requirement. Either by selecting a suitable product from our extensive standard range or by developing a customised solution that is tailored to your exact requirements.

Our modular product and component construction kit forms the basis for this. The construction kit is being continually expanded and developed, allowing us to respond promptly to shifting market requirements.

Our innovative product solutions, combined with a competent workforce, a practiced service culture, an international sales network and reliable partners make FIPA a pioneering company in the field of vacuum technology.

This catalogue represents our extensive range of vacuum cups and vacuum components. Please contact us if you need a customised solution. We would be pleased to develop it for you.

FIPA: vacuum technology for streamlining your material flow!



Best regards, Rainer Mehrer
CEO of FIPA GmbH

Order information

> Please add the part number with the respective material code to your order.

> Please turn the page for available materials and material selection!



Overview of vacuum cup materials

Short designation	Material code	Hardness [Shore A ± 5°]	Commercial designation	Commercial name (example)	Short-term working temperature [°C]	Abrasion resistance	Flexibility	Oil-resistance	Fuel resistance	Ozone and weathering resistance	Acid resistance	Leaching resistance
BR-AS	10-AS	60	Butadiene rubber, anti-static		-50 / +100	++	+	0	0	0	+	++
CR	9	50 - 60	Chloroprene	Neoprene®	-40 / +110	+	+	++	0	++	+	+
EPDM	15	50		Vistalon®	-40 / +130	+	++	0	0	++++	+++	+++
FKM	7	65	Fluor rubber (FPM)	Viton®	-10 / +230	0	0	++++	++++	++++	+++	+++
Foam rubber	12						++++					
HNBR	14	55	Hydrogenated acrylonitrile-butadiene rubber	Therban®	-30 / +160	++	+	++++	++	+++	+	+
NBR	1	50 - 60	Nitrile rubber	Perbunan®	-30 / +90	+	+	+++	+	0	0	0
NBR-AS	1-AS	50 - 70	Nitrile rubber, anti-static		-30 / +90	+	+	+++	++	0	0	+
NR	4	35 - 45	Natural rubber	SMR	-40 / +80	++	++++	0	0	0	+	++
NR	3	50 - 65	Natural rubber	SMR	-40 / +80	++	+++	0	0	0	+	++
PU	5	50 - 65	Polyurethane (EU/AU)	Urepan®	-20 / +80	++	+	+++	++	+	0	0
SBR	13	50 - 60	Styrene-butadiene-rubber (SBR)	Buna®	-30 / +80	+++	++	0	0	+	+	+
SI	8	35 - 45	Silicone rubber	Elastosil®	-40 / +200	0	++++	0	0	+++	0	0
SI	2	50 - 65	Silicone rubber	Elastosil®	-40 / +200	0	+++	0	0	+++	0	0
SI-AS	2-AS	50 - 60	Silicone rubber, anti-static		-40 / +200	0	+++	0	0	+++	0	0
SI-FS	2-FS	40	Fluorosilicone		-50 / +190	0	+++	+	+	+++	++	+++
Tepuflex®	17	50	Thermoplastic elastomer		0 / +60	+++	++	0	0	+++	0	0
Thermalon®	19	60			0 / +160	++	+	+++	++	0	+	+
TPU	18	60	Thermoplastic elastomer	Elastollan®	0 / +65	+++	0	+++	++	+++	0	+
Varioflex®	16	30 / 60	Polyurethane (2 Shore Hardnesses)		+10 / +50	+++	++++	+++	+++	++	0	+++
Vinyl	V	50 - 55	PVC (soft)		0 / +60	+++	++	+	+	++	++	++
Vulkollan®	11	75		Vulkollan®	-40 / +80	++++	+	+++	++	+++	+	+

++++ = Excellent +++ = Very good ++ = Good + = Fair 0 = Low to satisfactory

Ordering example: Flat vacuum cup made of silicone 50° Shore A

Item No.

102.030.222.* > Add material code > 102.030.222.2

Note!

- > Depending on the application, vacuum cups are subject to mechanical and chemical stresses. The data serve therefore only as guidelines.
- > Special vacuum cups fitted with felt linings are extremely low-marking and can be deployed at temperatures up to a max. of 500 °C.
- > Material colors may change, but the quality remains unaffected.
Material colors: bg = beige, bl = blue, br = brown, g = green, ge = yellow, gr = gray, or = orange, r = red, sw = black, tr = transparent, w = white

Sachgerechte Lagerung von Elastomeren

Some elastomer parts are stored for long periods. This can affect product quality. Changes are the result of individual or combined influences of special factors, such as deformation, oxygen, ozone, light, heat, moisture, oils and solvents. For this reason, precautions must be taken to ensure that the service life will not be considerably shortened by incorrect storage. Storage and the recording of time in storage is governed by ISO 2230 and DIN 7716.



Heat

- > Storage temperature of elastomers should preferably be between +5 °C and +25 °C.
- > Direct contact with heat sources (such as radiators) or direct sunlight should be avoided.
- > Storage at low temperatures can cause elastomers to harden. In this temperature range, therefore, moulded parts must be handled with great care to avoid deformations.

Moisture

- > Relative humidity in storage areas should be below 70 %. Avoid extremely wet or dry conditions. No condensation should be present.

Light, ozone

- > Elastomer parts should be stored away from light sources and ozone. In particular, direct sunlight or strong artificial light containing an ultraviolet band should be avoided. The use of individual containers, especially plastic bags, is preferred, provided they are UV-protected.

Deformation

- > Elastomer components should be stored free of compressions or deformations and in an unbent state. Items delivered in an unbent state should be kept in their original packaging.

Contact with liquids or grease

- > Moulded elastomer parts should not come into contact during storage with solvents, oils or grease, if not already so packed by the manufacturer.

Contact with metal and non-ferrous metals

- > Direct contact with certain metals such as manganese, iron, copper and its alloys, e.g. brass, damages some elastomers and should be avoided during storage.
- > Due to the potential for plasticiser migration or migration of other components, elastomers should not be stored in contact with PVCs.

Length of storage and inspection (empirical values)

The useful life of elastomeric products depends to a considerable degree on the type of elastomer. If the above-mentioned recommendations for storage are observed, the various elastomers can be stored for the times given below:

AU, EU, BR, SBR, NR, thermoplastics	4 years
NBR, HNBR, CR	6 years
EPDM	8 years
FKM, SI, SI-FS	10 years

After the specified time, moulded elastomer parts should be inspected. An extension of shelf life is then possible. Elastomer parts and components less than 1.5 mm thick are more susceptible to attack by oxidation, even when stored under ideal conditions as recommended. The inspection interval should therefore be shorter than indicated above.

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The full FIPA product line

Criteria that affect quality, such as choice of materials or robustness can be taken for granted nowadays. At FIPA, we focus more on offering the right solution for every requirement.

Competence in vacuum cups and vacuum components

As a system provider, FIPA covers the entire process chain from vacuum generation, through system peripherals, to the optimal vacuum cups for your product.

A wide range of highly-efficient vacuum pumps and ejectors are available for optimum vacuum generation. This allows very short cycle times and compressed air savings up to 97 % to be achieved.

FIPA offers the widest range of vacuum cups in the world - perfectly tailored to the needs and application areas found in various industries.

Whatever the industry, FIPA produces complete gripper and vacuum systems that are individually tailored to customer requirements.

The high level of compatibility also allows third-party systems to be quickly and easily optimised with quality FIPA products.

Efficient and reliable

It is crucial that all components work together perfectly in order to ensure the proper functioning of vacuum cups and gripper systems.

FIPA components are designed on the basis of quality, efficiency, space-saving and market requirements, in collaboration with our clients. On the basis of extensive testing and always with an eye on market requirements.

The full FIPA product line:

Vacuum Technology



Generate



Generate



Regulate



Filter



Control



Check / Monitor



Suction

Service

> It's part of the package at FIPA.



End-of-Arm-Tooling

> Request a catalogue now
at www.fipa.com

Fix



Connect



Grab



Change



Grip



Grip



Cut



Expertise in End-of-Arm-Tooling (EOAT)

In addition to vacuum components and vacuum cups, FIPA is also your point of contact when it comes to End-of-Arm-Tooling, e.g. for industrial robot applications. Here, we continue to operate on the modular design principle and offer a comprehensive range of grippers, pneumatic air nippers and accessories. In addition, we provide complete gripper systems that are individually tailored to your requirements.

As a result of system compatibility, we ensure that existing systems from other providers can be quickly and easily expanded and optimised using FIPA products.

From base plates and extrusion systems to gripper parts and air nippers - all components are completely compatible with one another.

FIPA products are successfully utilised across all in various industries, such as the plastics, automotive, packaging and electronic industries.

Service as a company principle

FIPA is characterised by a strong service culture in combination with professional project management.

Our technical sales department will provide you with expert practical advice in all questions relating to product range, application options, system integration and system project management.

FIPA - your partner for material flow

FIPA listens to its clients carefully and finds the right product or tailor-made system solution for their application.



General explanation | Vacuum cups

Structure of order number:

Using the example of a flat vacuum cup with a diameter of 30 mm made of silicone material

Item No.

102.030.222.2

Vacuum cup diameter

Material code
(derived from the material overview in the foldover)

Structure of the drawings

Drawing of the cup

Product feature

Item No. of the vacuum cup
(* Please always add the material code - to be derived from the material overview in the foldover)

Recommended connection parts for the vacuum cup shown (fitting)

Recommended spring levelers for direct snap-in

Stroke spring levelers

Stroke vacuum cup

Available material (colour)

Part No.	Connection	Stroke
270.317	M5-AG	25
270.303	M6-AG	28
270.205	G1/8-AG	21.5
270.109	G1/8-AG	16.5
270.184	G1/8-AG	18.5

Part No.	Stroke
50.020	8.5 mm

Item No.:	Material:	Stroke
102.030.222...*	NBR (Sw), SE (Fr)	2 mm

Cross reference: Additional sizes available are found on p. 283

All dimensions in this catalogue are given in mm. Changes in any form are reserved.

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FIPA vacuum cups for sheet metal handling

> Oil-resistant materials, such as NBR, are primarily used in the handling of sheet metal.



Flat vacuum cups for dynamic sheet handling - SM-F

- > Reliable, non-slip handling of oily sheets thanks to "anti-slip" supporting ribs.
- Good absorption of lateral forces
- > Supports help to prevent deep-drawing or deformation of thin sheets
- > Vulcanised connection thread ensures a secure fit
- > Diameter: 30 - 125 mm

> See page 64



Bellows vacuum cups with 1.5 folds for dynamic sheet handling - SM-B

- > Reliable, non-slip handling of oily sheets thanks to "anti-slip" supporting ribs.
- Good absorption of lateral forces
- > Internal supports help to prevent deep-drawing or deformation of thin sheets
- > Leak-free suction even with curved surfaces due to flexible sealing lip
- > Secure fit due to vulcanised connection thread
- > Diameter: 30 - 125 mm

> See page 133



Non-slip flat vacuum cups - SM-P

- > Distinct, radially encircling supporting ribs increase holding force
- > The firmly bolted fittings (from a diameter of 20 mm) ensure good process security
- > Diameter: 10 - 50 mm

> See page 62



Flat vacuum cups with safety sealing lips - SFU-S

- > High process reliability through multiple sealing lip
- > Good stability due to vulcanised retainer plate, as well as support surfaces for the product
- > Diameter: 30 - 225 mm

> See page 68

Continued on the next page →



FIPA Vacuum cups for sheet metal handling



Heavy-duty flat vacuum suction plates - SFPL-D

- > Vulcanised steel carrier plate allows lifting of very heavy loads
- > Secure gripping of uneven surfaces thanks to additional inner sealing lip
- > Diameter: 160 - 300 mm

> See page 73



Vacuum suction plate with foamed sealing lip - SP-PLM

- > Good sealing of heavily textured surfaces
- > Cost-effective replacement of worn seals
- > Diameter: 35 - 300 mm

> See page 72



Flat XXL suction rings - SFR

- > Large, flat suction seals vulcanised on steel ring for handling very large loads
- > Connection through circular, circumferentially placed thread holes
- > Diameter: 450 - 920 mm

> See page 74



Oval vacuum suction plates - SOPL-S

- > High suction force on a small footprint
- > Rubberised support surfaces help prevent warping of the product
- > Individual machine connection
- > Dimensions: 110x40 - 580x180 mm

> See page 160



Varioflex® bellows cups, 1.5 and 2.5 folds for dry sheets - SP-BX

- > Special polyurethane in two degrees of hardness (60° Shore A black, 30° Shore A red)
- > Soft lip for optimal sealing
- > Long service life and low wear
- > Short cycle times and high process reliability
- > Low marking

1.5 folds - SP-BX1

- > Good adaptation to uneven product surfaces
- > Supports (Ø 20 - 75 mm) stabilise the product
- > Diameter: 15 - 75 mm

> See page 107



2.5 folds - SP-BX2

- > Good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Diameter: 15 - 75 mm

> See page 110



FIPA Vacuum cups for sheet metal handling



Bellows vacuum suction plates - SBPL-E

- > Gentle handling of heavy, sensitive products
- > Good adaptation to concave or convex surfaces
- > Rubberised support surfaces prevent deformation of workpieces
- > Diameter: 150 - 350 mm

> See page 137



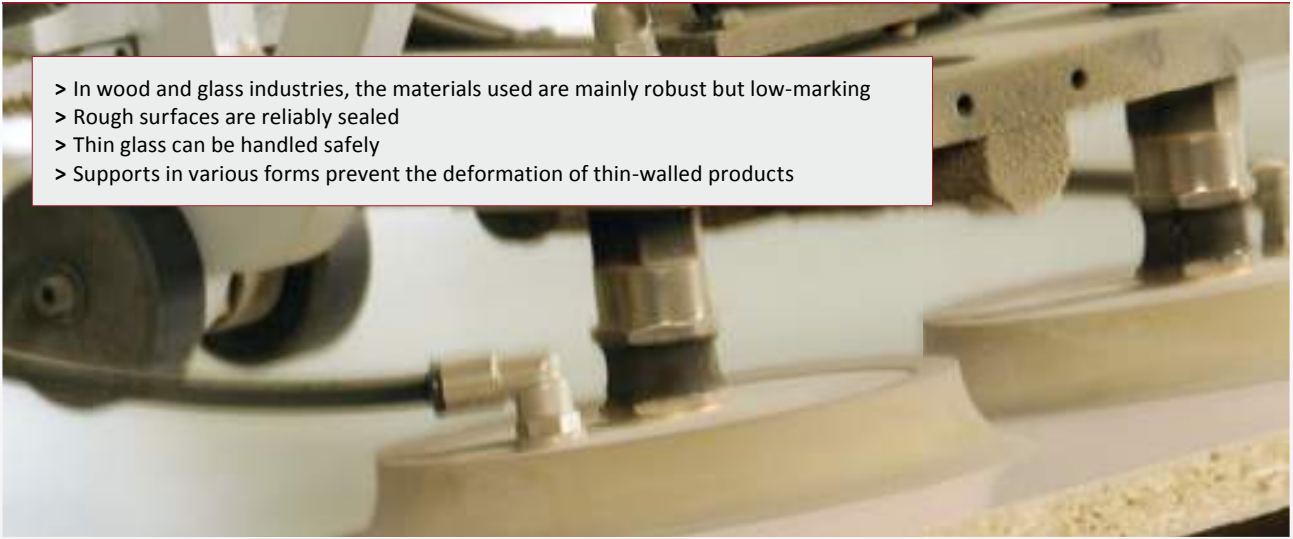
Suction plates with leakage reduction - SPLT

- > Reliable suction with variable product shapes in systems with multiple vacuum cups
- > Combination of 4x4 or 6x6 bellows vacuum cups with 2.5 folds
- > Flow restrictions prevent the collapse of the vacuum when individual vacuum cups are not in use

> See page 487



FIPA Vacuum cups for the wood and glass industries



- > In wood and glass industries, the materials used are mainly robust but low-marking
- > Rough surfaces are reliably sealed
- > Thin glass can be handled safely
- > Supports in various forms prevent the deformation of thin-walled products



Flat vacuum cups for textured surfaces - SFU-R

- > Optimal sealing of rough and uneven surfaces thanks to very fine sealing lips
- > Enhanced safety thanks to two-fold, internal safety sealing lip
- > Interlocking, clip-in retaining plate for quick and inexpensive replacement of the sealing lip
- > Diameter: 40 - 200 mm

> See page 66



Flat vacuum cups for porous products - SFU-RT

- > Separation of porous plate materials through simultaneous suction and punctual blow-off of the product
- > Enhanced safety thanks to two-fold, internal safety sealing lip
- > Diameter: 160 mm

> See page 67



Oval vacuum suction plates for textured surfaces - SOPL-R

- > Leak-free gripping of many problematic product surfaces thanks to very flexible, thinly tapered sealing lip
- > Increased security due to vulcanised carrier plate
- > Dimensions: 90x50 - 190x90 mm

> See page 158



Oval vacuum suction plates - SOPL-S and SOPL-A

- > High suction power with minimal space requirement
- > Rubberised support surfaces help prevent warping of the product
- > Available in the following materials: NBR (low-marking) and NR (wear-resistant)
- > Dimensions: 110x40 - 580x180 mm

> See page 160



FIPA Vacuum cups for the wood and glass industries



Varioflex® bellows cups, 1.5 and 2.5 folds - SP-BX

- > Special polyurethane in two degrees of hardness (60° Shore A black, 30° Shore A red)
- > Soft lip for optimal sealing
- > Long service life and low wear
- > Short cycle times and high process reliability
- > Low-marking

1.5 folds - SP-BX1

- > Good adaptation to uneven product surfaces
- > Supports (∅ 20 - 75 mm) stabilise the product
- > Diameter: 15 - 75 mm

> See page 107



2.5 folds - SP-BX2

- > Good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Diameter: 15 - 75 mm

> See page 110



Bellows vacuum suction plates Softgrip - SBPL-SG

- > Very gentle handling of sensitive products thanks to highly flexible fold walls
- > Combines the flexibility of bellows cups with the stability of flat vacuum suction plates
- > Central support block with safety sealing lip ensures a firm grip
- > Diameter: 150 - 210 mm

> See page 136



Short lift vacuum cups SFK

- > Minimal lift for flat, sensitive surfaces
- > Supports prevent deformation of the product and increase stability
- > Available in the following materials: NBR and SI
- > Particularly suited for use in clamping systems
- > Diameter: 65 - 150 mm

> See page 70



High temperature vacuum cups with felt pad - SX-F

- > Outstanding low-marking properties thanks to special felt coating
- > Highest temperature resistance (FKM briefly up to 300 °C; special silicone with an evaporated silicone lock made of aluminium briefly up to 500 °C)
- > Diameter: 25 - 160 mm

> See page 164



FIPA Vacuum cups for the plastics industry

- > The most common application in the plastics industry is the removal of plastic parts from the injection molding machine
- > Models which are able to take optimal advantage of the available space thanks to their design are primarily used for this purpose
- > Temperature-resistant vacuum cup materials which enable the subsequent painting of the parts are preferable for use

The industry recommendations listed here represent a selection of special materials. Vacuum cups made from standard materials (NBR, NR, silicone) can be found in the SF and SB series chapters.



HNBR vacuum cups

- > Standard material for removing hot plastic parts from an injection molding machine
- > Heat-resistant up to 160 °C
- > No silicones or other adhesive-repelling substances, enabling later painting of the products
- > Low-marking
- > Wear-resistant material

Bellows vacuum cups, 1.5 folds - SKH-B1

- > Good adaptation to uneven product surfaces
- > Bellows compensates for height differences
- > Diameter: 5 - 43 mm

> See page 86

Bellows vacuum cups, 2.5 folds - SKH-B2

- > Very good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Particularly gentle handling thanks to good cushioning
- > Diameter: 5 - 60 mm

> See page 94



Flat vacuum cups with a short lift - SFK

- > Flat vacuum cups with a short lift for flat surfaces
- > Minimal space requirement thanks to virtually vertical suction lip
- > Great suction power thanks to the largest active vacuum suction surface possible
- > Diameter: 20 - 45 mm

> See page 70

Oval vacuum cups - SKH-O

- > Flat vacuum cups in an oval design for the handling of narrow products
- > Narrow width enables the gripping of ribbed surfaces
- > Significantly greater suction power than round vacuum cups of equal width
- > Dimensions: 4x2 - 45x15 mm

> See page 146



FIPA Vacuum cups for the plastics industry



Thermalon® vacuum cups

- > Optimised material for less to marking
- > Heat-resistant up to 160 °C
- > No silicones or other adhesive-repelling substances, enabling later painting of the products

Bellows vacuum cups, 1.5 folds - SKT-B1

- > Good adaptation to uneven product surfaces
- > Diameter: 11 - 63 mm

> See page 84

Bellows vacuum cups, 2.5 folds - SKT-B2

- > Very good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Particularly gentle placement on product surfaces
- > Diameter: 5 - 62 mm

> See page 92



Oval vacuum cups - SKH-O

- > Oval-shaped flat vacuum cups for the handling of narrow products
- > Narrow width enables the gripping of ribbed surfaces
- > Significantly greater suction power than round vacuum cups of equal width
- > Dimensions: 4x2 - 45x15 mm

> See page 144

Flat vacuum cups - SKT-F

- > Flat vacuum cups with a flexible single sealing lip
- > Low internal volume saves energy
- > Diameter: 5 - 60 mm

> See page 36



Varioflex® bellows cups, 1.5 and 2.5 folds - SP-BX

- > Excellent service life and superior retention force
- > Special polyurethane in two degrees of hardness (60° Shore A black, 30° Shore A red)
- > Soft lip for optimal sealing
- > Short cycle times and high process reliability
- > Operating temperature: 10 - 50 °C
- > Low-marking

1.5 folds - SP-BX1

- > Good adaptation to uneven product surfaces
- > Supports (∅ 20 - 75 mm) stabilise the product
- > Diameter: 15 - 75 mm

> See page 107



2.5 folds - SP-BX2

- > Good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Diameter: 15 - 75 mm

> See page 110



Notes:

A large area for taking notes, featuring a vertical red line on the left side and a series of horizontal lines for writing.



FIPA Vacuum cups for the food industry

- > The requirements for vacuum cups in the food industry range from the handling of pre-packaged food up to the direct handling of unpackaged foodstuffs
- > The special shape and consistency of the products usually requires marked adjustments to the design of the cup
- > All FIPA vacuum cups for the food industry are manufactured from FDA-approved materials



Vacuum cups for chocolates - SL-P

- > Extremely flexible and adaptable suction lip for leak-free sealing of three-dimensional product surfaces
- > Low-marking and FDA-approved

Flat vacuum cups - SL-PF

- > Diameter: 16 - 22 mm

> See page 58

Bellows vacuum cups - SL-PB

- > Diameter: 12 - 16 mm

> See page 125



Vacuum cups for baked goods - SL-B

- > Multiple folds ensure a high degree of height adjustment and gentle product handling
- > FDA-approved
- > Diameter: 34 - 60 mm

> See page 126



Detectable vacuum cups for baked goods - SL-BD

- > Detectable, providing optimum assurance that the product is not contaminated by vacuum components
- > Multiple folds ensure a high degree of height adjustment and gentle product handling
- > FDA-approved
- > Diameter: 35 - 40 mm

> See page 128



Vacuum cups for eggs - SL-E

- > Bellows vacuum cups in a design specially optimised for handling eggs
- > Gentle attachment to the product and a high lifting motion thanks to a long vacuum cup lift
- > FDA-approved
- > Diameter: 33 - 34 mm

> See page 129



FIPA Vacuum cups for the packaging industry

> The packaging industry uses primarily wear-resistant vacuum cup materials which are resilient and flexible enough for complex applications (e.g. erection of boxes, handling of flexible goods, goods packaged in foil, palletising, etc.)



Vinyl bellows cups, 1.5 and 2.5 folds - SBV

- > Wear-resistant material - long service life
- > Good adaptation to curved or flexible product surfaces

1.5 folds - SBV 1

- > Diameter: 5 - 70 mm

> See page 113



2.5 folds - SBV 2

- > Diameter: 4 - 50 mm

> See page 116



Vinyl oval bellows cups - SO-BV

- > Compensates for height differences and enables gentle set down on the workpiece
- > Good adaptation to curved or flexible product surfaces
- > Wear-resistant material - long service life
- > Dimensions: 35x28 - 100x55 mm

> See page 149



Bellows vacuum cups 1.5 and 2.5 folds with special connection for standard packaging machines - SV-SB

- > Smooth suspension for gentle product handling
- > Available in NR and silicone (FDA-approved)
- > Diameter: 16 - 40 mm

> See page 130

Vacuum cups specially optimised for handling foils and foil-packaged goods can be found on p. 20



FIPA Vacuum cups for the packaging industry



Varioflex® bellows cups, 1.5 and 2.5 folds - SP-BX

- > Excellent service life and superior retention force
- > Special polyurethane in two degrees of hardness (60° Shore A black, 30° Shore A red)
- > Soft lip for optimal sealing
- > Long service life and low wear
- > Short cycle times and high process reliability
- > Low marking

1.5 folds - SP-BX1

- > Good adaptation to uneven product surfaces
- > Supports (∅ 20 - 75 mm) stabilise the product
- > Diameter: 15 - 75 mm

> See page 107



2.5 folds - SP-BX2

- > Good adaptation to uneven product surfaces
- > Large range of height and angle adjustment
- > Diameter: 15 - 75 mm

> See page 110



Silicone flat cups (FDA-approved) for use with tubes - SV-T

- > With straight or conical opening
- > Direct machine connection through pipe mounting
- > Handling of cans or tubes
- > Diameter: 11 - 46 mm

> See page 60



Silicone rectangular bellows cups, 2.5 and 3.5 folds - SV-RB

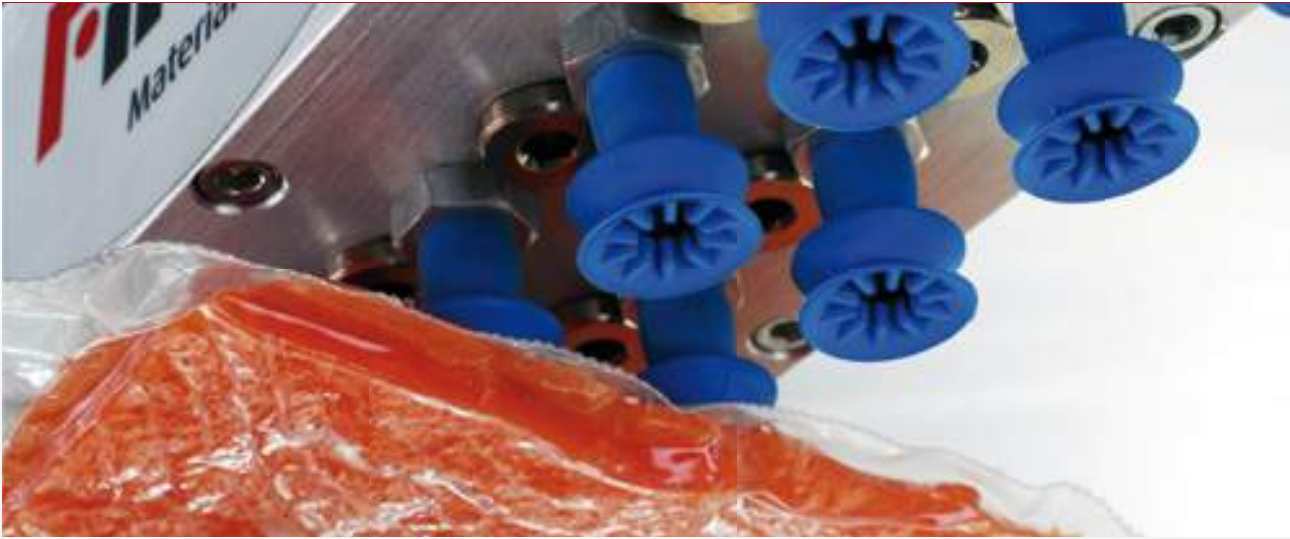
- > Handling of flexible parts and workpieces with uneven surfaces or products with flexible outer packaging
- > FDA-approved vacuum cup material
- > Dimensions: 52x25 - 80x50 mm

> See page 150

Vacuum cups specially optimised for handling foils and foil-packaged goods can be found on p. 20



FIPA Vacuum cups for the handling of foils and paper



Flat vacuum cups for foils and paper with and without supports - SD-F

- > Available in the materials NR, Vinyl, SI and NBR
- > Soft and flexible sealing lip for the optimum sealing of flexible substrates
- > Supports prevent the aspiration and wrinkling of foils and paper
- > Handling of foil-packaged goods

> See page 22



Bellows vacuum cups for foils and paper - SD-B

- > Available in the materials NR, NBR, CR and SI
- > Bellows allow for good compensation of height and angle differences
- > Soft and flexible sealing lip for the optimum sealing of flexible substrates
- > Supports prevent the aspiration and wrinkling of foils and paper
- > Handling of foil-packaged goods

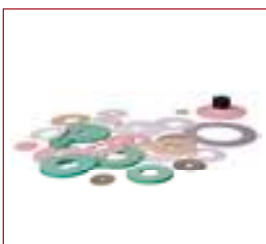
> See page 23



Vacuum cups with connection, compatible to Mueller-Martini machines - SD-MM

- > Available in the materials NR, SI, Vinyl and Vulkollan®
- > High cycle times possible
- > Wear-resistant materials

> See page 24



Suction discs - SD-S

- > Available in the materials NR and polyurethane
- > Suitable for universal use

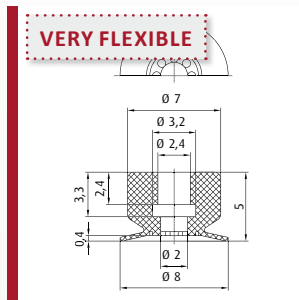
> See page 26



Vacuum cups - Industries | Printing industry, Films & Paper

Ø 8 - 29 mm

Flat vacuum cups with cleats for Films & Paper - SD-FA

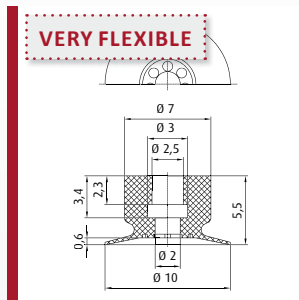


VERY FLEXIBLE

Item no. 104.008.070. _*

Material
NBR (sw), SI-FS (r) 0.5 mm

Details see page 181

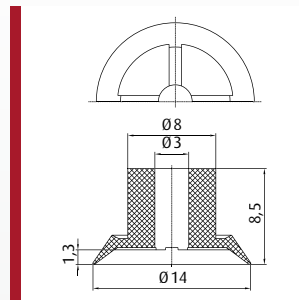


VERY FLEXIBLE

Item no. 104.010.071. _*

Material
NBR (sw), SI-FS (r) 0.7 mm

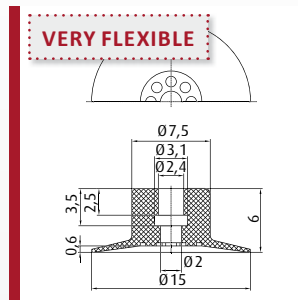
Details see page 184



Item no. 102.014.089. _*

Material
NBR (sw) 1.5 mm

Details see page 188

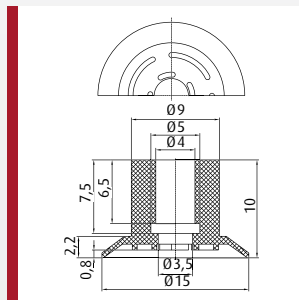


VERY FLEXIBLE

Item no. 104.015.072. _*

Material
NBR (sw), SI-FS (r) 1.1 mm

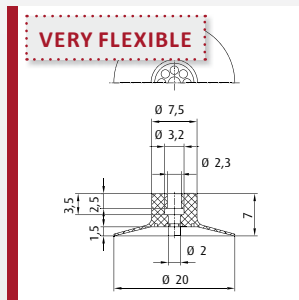
Details see page 190



Item no. 102.015.431. _*

Material
SI (tr), NR (bg) 0.5 mm

Details see page 190

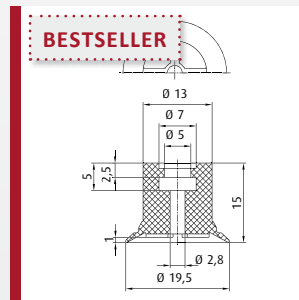


VERY FLEXIBLE

Item no. 104.020.073. _*

Material
NBR (sw), SI-FS (r) 1.6 mm

Details see page 201

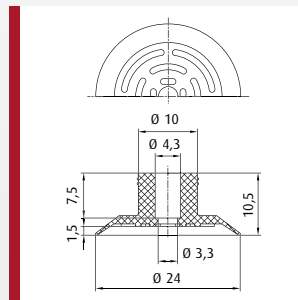


BESTSELLER

Item no. 102.020.083. _*

Material
NBR (sw), SI (tr), SI (r) 1 mm

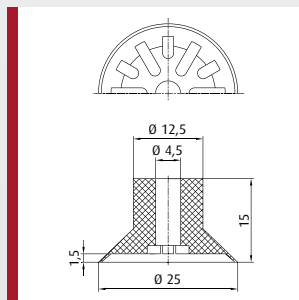
Details see page 198



Item no. 102.024.457. _*

Material
SI (tr), NR (bg) 1.8 mm

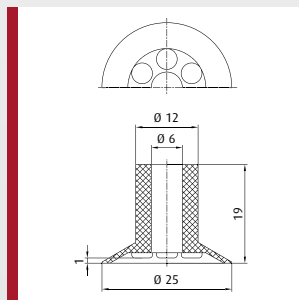
Details see page 207



Item no. 104.025.043. _*

Material
Vinyl (bl) 1.5 mm

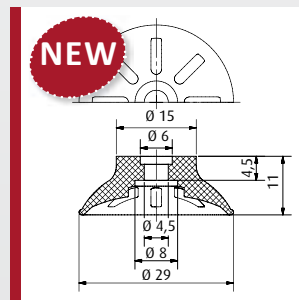
Details see page 211



Item no. 104.025.094. _*

Material
NR (br) 1 mm

Details see page 211



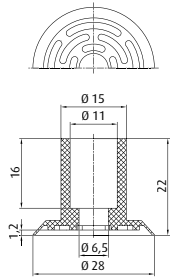
NEW

Item no. 102.029.509. _*

Material
NR (br) 4 mm

Details see page 217

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760

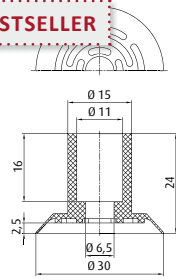


Item no. 104.029.093._*

Material
NR (sw) 1 mm

Details see page 216

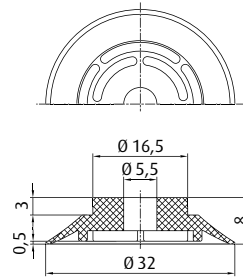
BESTSELLER



Item no. 104.030.009._*

Material
NBR (sw), SI (w), SI (tr), NR (sw) 3 mm

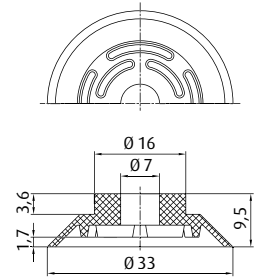
Details see page 221



Item no. 102.032.104._*

Material
NR (bg) 1.8 mm

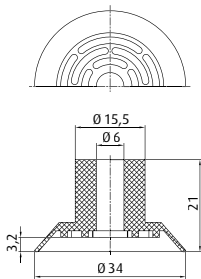
Details see page 224



Item no. 102.033.398._*

Material
Vinyl (bl) 2 mm

Details see page 224

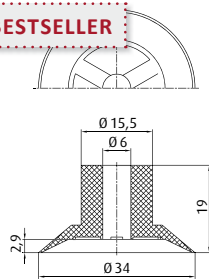


Item no. 104.034.036._*

Material
NR (bg) 3 mm

Details see page 225

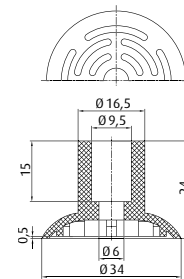
BESTSELLER



Item no. 104.034.054._*

Material
Vinyl (bl) 3 mm

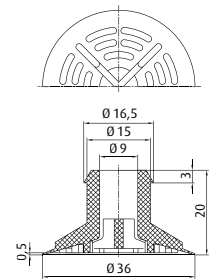
Details see page 226



Item no. 116.034.001._*

Material
NR (sw), NR (bg) 0.5 mm

Details see page 226

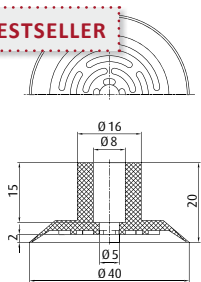


Item no. 102.036.342._*

Material
SI (tr) 0.5 mm

Details see page 229

BESTSELLER



Item no. 104.040.018._*

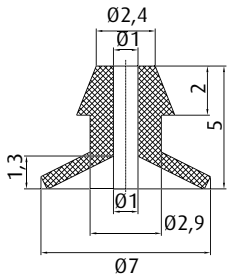
Material
SI (tr), NR (sw), NR (br) 2 mm

Details see page 233

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



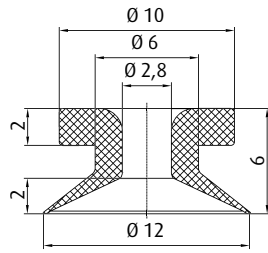
Flat vacuum cups for Film & Paper - SD-F



Item no. 102.007.266. *_

Material SI (tr) 1.5 mm

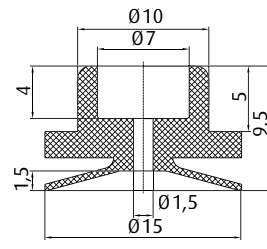
Details see page 179



Item no. 102.012.267. *_

Material NR (bg) 2.5 mm

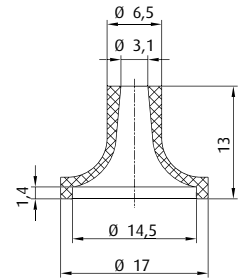
Details see page 186



Item no. 102.015.339. *_

Material Vinyl (bl) 1.5 mm

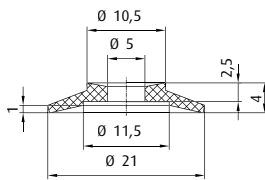
Details see page 189



Item no. 102.017.276. *_

Material NR (br) 3 mm

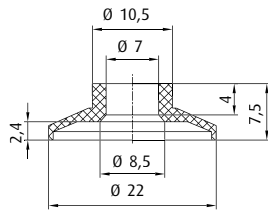
Details see page 195



Item no. 102.021.063. *_

Material NR (sw) 1 mm

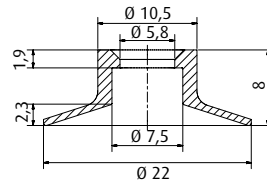
Details see page 204



Item no. 102.022.185. *_

Material NR (gr) 0.5 mm

Details see page 204



Item no. 102.022.526. *_

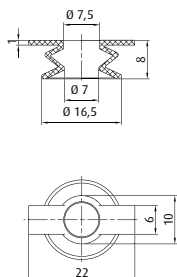
Material NR (bl) 2 mm

Details see page 204

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups for Films & Paper - SD-B

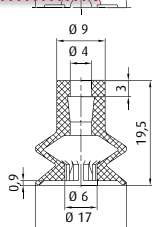


Item no. 23.017.102. *

Material
NR (sw) 5.5 mm

Details see page 300

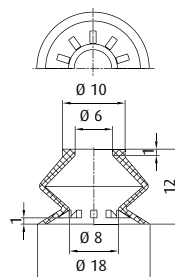
BESTSELLER



Item no. 23.018.175. *

Material
SI (tr), NR (bl) 5.5 mm

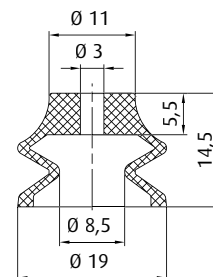
Details see page 300



Item no. 23.018.082. *

Material
SI (tr), NR (bl), CR (sw) 5.5 mm

Details see page 301

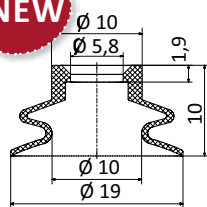


Item no. 23.019.168. *

Material
NR (bl), NR (br) 5.5 mm

Details see page 304

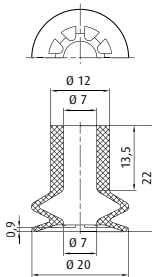
NEW



Item no. 23.019.254. *

Material
SI (tr) 3.5 mm

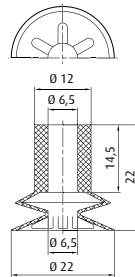
Details see page 304



Item no. 23.020.133. *

Material
NBR (sw), SI (tr) 4 mm

Details see page 305

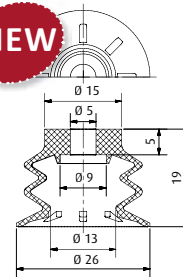


Item no. 23.023.099. *

Material
NR (br) 5 mm

Details see page 310

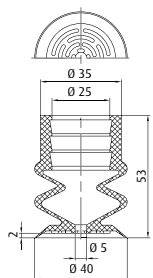
NEW



Item no. 21.026.162. *

Material
NR (br) 9 mm

Details see page 314



Item no. 21.040.141. *

Material
NR (bg) 18 mm

Details see page 328

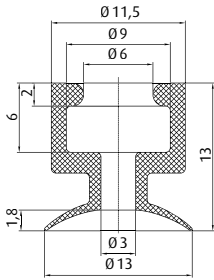
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Vacuum cups - Industries | Printing industry, Films & Paper

Ø 13 - 25 mm

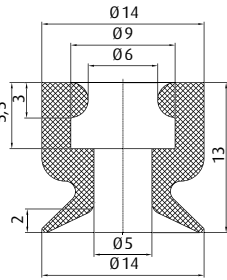
Vacuum cups compatible to machines manufactured by Mueller-Martini - SD-MM



Item no. 102.012.332._*

Material NR (or) 1.5 mm

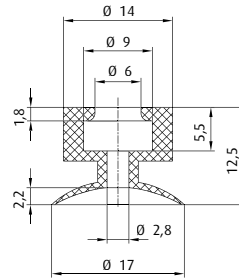
Details see page 187



Item no. 102.014.333._*

Material NR (or) 2 mm

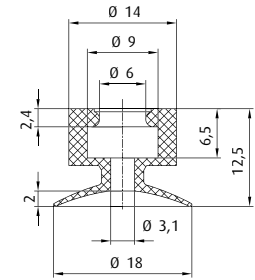
Details see page 187



Item no. 102.016.255._*

Material SI (r) 3 mm

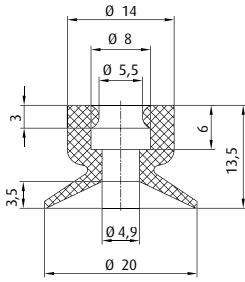
Details see page 193



Item no. 102.018.442._*

Material NR (or) 2 mm

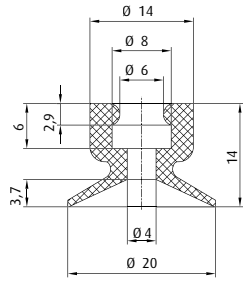
Details see page 196



Item no. 102.020.140._*

Material NR (sw), NR (or) 3 mm

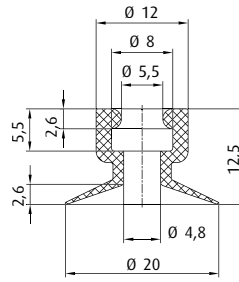
Details see page 198



Item no. 126.020.004._*

Material NR (or) 3.5 mm

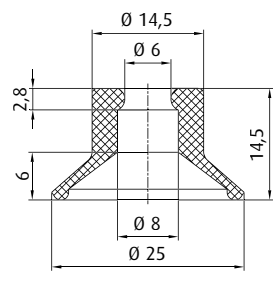
Details see page 198



Item no. 126.020.005._*

Material SI (tr) 1 mm

Details see page 199



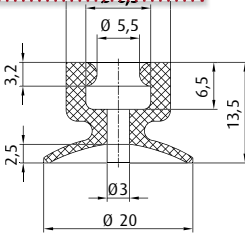
Item no. 102.025.102._*

Material NR (g) 4 mm

Details see page 209

Vulkollan® flat vacuum cups - SD-MM-VU

WEAR-RESISTANT

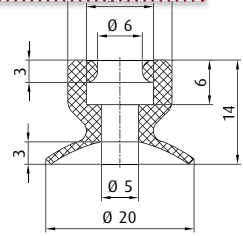


Item no. 102.020.299._*

Material Vulkollan® (br) 3.5 mm

Details see page 199

WEAR-RESISTANT

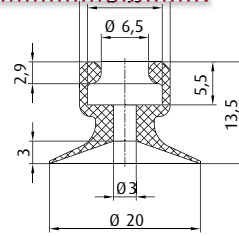


Item no. 102.020.300._*

Material Vulkollan® (br) 3 mm

Details see page 199

WEAR-RESISTANT



Item no. 102.020.308._*

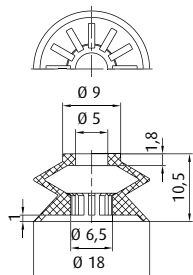
Material Vulkollan® (br) 1 mm

Details see page 199

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups - SD-MM



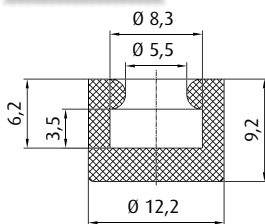
Item no. 23.018.183._*

Material NR (or)  5.5 mm

Details see page 300

Accessories - SD-MM

RUBBER CAP



Item no. 77.101

Material NR (r)

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Suction discs - SD-S



Ordering notes

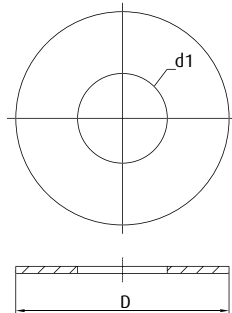
- > Packing unit = 100 pieces
- > When ordering, supplement the item no. with the material code according to ordering logic.

Ordering logic

Material code	Material	Thickness	Colour
01	NR	0.5	green
02	NR	0.8	pink
03	NR	1.0	beige

Material code	Material	Thickness	Colour
04	NR	1.6	white
05	NR	2.0	green
06	PU	0.8	transparent

Dimensions



Technical Data

Item no.	Material	Ø D [mm]	Ø d1 [mm]
3.13.001._XX	NR, PU	12.7	1.6
3.16.003._XX	NR, PU	15.9	1.6
3.16.007._XX	NR, PU	15.9	3.2
3.17.002._XX	NR, PU	17.5	3.2
3.19.004._XX	NR, PU	19.1	6.4
3.19.005._XX	NR, PU	19.1	1.6
3.19.011._XX	NR, PU	19.1	4.8
3.21.006._XX	NR, PU	20.6	4.8
3.22.008._XX	NR, PU	22.2	4.8
3.22.012._XX	NR, PU	22.2	6.4
3.24.010._XX	NR, PU	23.8	9.5
3.25.013._XX	NR, PU	25.4	4.8
3.25.014._XX	NR, PU	25.4	6.4
3.25.015._XX	NR, PU	25.4	9.5
3.27.016._XX	NR, PU	27.0	3.2
3.27.017._XX	NR, PU	27.0	6.4

Technical Data

Item no.	Material	Ø D [mm]	Ø d1 [mm]
3.27.018._XX	NR, PU	27.0	9.5
3.29.019._XX	NR, PU	28.6	6.4
3.29.020._XX	NR, PU	28.6	12.7
3.29.021._XX	NR, PU	28.6	14.3
3.30.022._XX	NR, PU	30.2	9.5
3.30.023._XX	NR, PU	30.2	12.7
3.30.024._XX	NR, PU	30.2	14.3
3.32.025._XX	NR, PU	31.8	4.8
3.32.026._XX	NR, PU	31.8	9.5
3.32.027._XX	NR, PU	31.8	12.7
3.32.028._XX	NR, PU	31.8	14.3
3.32.046._XX	NR, PU	31.8	6.4
3.32.047._XX	NR, PU	31.8	11.1
3.35.029._XX	NR, PU	34.9	9.5
3.35.030._XX	NR, PU	34.9	12.7
3.35.031._XX	NR, PU	34.9	14.3

Technical Data

Item no.	Material	Ø D [mm]	Ø d1 [mm]
3.38.032._XX	NR, PU	38.1	9.5
3.38.033._XX	NR, PU	38.1	12.7
3.38.034._XX	NR, PU	38.1	14.3
3.38.035._XX	NR, PU	38.1	15.9
3.38.045._XX	NR, PU	38.1	11.1
3.41.036._XX	NR, PU	41.3	9.5
3.41.037._XX	NR, PU	41.3	12.7
3.41.038._XX	NR, PU	41.3	14.3
3.41.039._XX	NR, PU	41.3	15.9
3.44.040._XX	NR, PU	44.5	7.9
3.44.041._XX	NR, PU	44.5	12.7
3.44.042._XX	NR, PU	44.5	14.3
3.44.043._XX	NR, PU	44.5	15.9
3.50.044._XX	NR, PU	50.8	12.7

Flat vacuum cups SF	28
Bellows vacuum cups SB	75
Oval vacuum cups SO	138
Special vacuum cups SX	162



FIPA Flat vacuum cups SF



- > Handling of flat products with smooth surfaces
- > Low cup volume enables short cycle times
- > Good stability allows the products to pivot



Universal flat vacuum cups - SFU-A

- > Very shallow cup with single sealing lip for handling smooth or slightly rough surfaces
- > Great stability allows high acceleration
- > Connection by means of plug-in nipple (up to a diameter of 50 mm), or vulcanised carrier plate (from a diameter of 60 mm)
- > Diameter: 1 - 200 mm

> See page 32



High temperature Thermanon® cups - SKT-F

- > Optimised special material for improved resistance to marking
- > Heat-resistant up to 160 °C
- > No silicones or paint-wetting-impairment substances (PWIS), enabling later painting of the products
- > Diameter: 5 - 60 mm

> See page 36



Universal flat vacuum cups - SFU-B

- > Very shallow cup with single sealing lip for handling smooth or slightly rough surfaces
- > Great stability allows high acceleration
- > Connection via firmly bolted nipple (from a diameter of 20 mm), thereby increasing process security
- > Diameter: 0.7 - 60 mm

> See page 38



Flat vacuum cups, modular - SP-F

- > Universal flat vacuum cups in even, supported or deep design
- > Design: Replacement sealing lip for attachment to fitting
- > Diameter: 5 - 150 mm

> See page 42



FIPA Flat vacuum cups SF



Flat vacuum cups with fixed mounted fittings - SP-F

- > Universal flat vacuum cups in even or supported design
- > Series with sensing valve prevents dropping of the product if individual vacuum cups in a system are not in contact with the product
- > Design: Complete with vacuum cup fitting and filter screen
- > Diameter: 20 - 150 mm

> See page 47



Flat vacuum cups with a flexible lip - SFU-F

- > Soft, very flexible single sealing lip for handling sensitive products
- > Good sealing to slightly rough surfaces
- > Diameter: 4 - 40 mm

> See page 50



Flat vacuum cups with curved lip - SFU-D

- > Universal flat vacuum cups with tapering curved sealing lip
- > Pre-tension of the sealing lip enables gripping of uneven, slightly curved products
- > Diameter: 4 - 85 mm

> See page 52



Flat vacuum cups with long shaft - SFU-L

- > Gentle handling of particularly sensitive, uneven and slightly curved products
- > Long, slim design enables pipe mounting and low gimbal leveling for uneven product surfaces
- > Diameter: 6 - 60 mm

> See page 56



Vacuum cups for chocolates - SL-PF

- > Extremely flexible and adaptable suction lip for leak-free sealing of three-dimensional product surfaces
- > Low-marking and FDA-approved
- > Diameter: 16 - 22 mm

> See page 58



Silicone cups (FDA-approved) for use with tubes - SV-T

- > With straight or conical opening
- > Direct machine connection through pipe mounting
- > Handling of cans or tubes

> See page 60

Continued on the next page →



FIPA Flat vacuum cups SF



Non-slip vacuum cups - SM-P

- > Flat vacuum cups for the handling of sheet metal
- > Distinct, radially encircling supporting ribs increase holding force
- > Diameter: 10 - 50 mm

> See page 62



Flat vacuum cups for dynamic sheet handling - SM-F

- > Reliable, non-slip handling of oily sheets thanks to "anti-slip" supporting ribs. Good absorption of lateral forces
- > Supports help to prevent deep-drawing or deformation of thin sheets
- > Vulcanised connection thread ensures a secure fit
- > Diameter: 30 - 125 mm

> See page 64



Flat vacuum cups for textured surfaces - SFU-R

- > Optimal seal with rough and uneven surfaces thanks to very fine sealing lips
- > Enhanced safety due to two-fold, internal safety sealing lip
- > Interlocking, clip-in retaining plate for quick and inexpensive replacement of the sealing lip
- > Diameter: 40 - 200 mm

> See page 66



Flat vacuum cups for porous products - SFU-RT

- > Separation of porous plate materials by simultaneous suction and punctual blow-off of the product
- > Enhanced safety due to two-fold, internal safety sealing lip
- > Diameter: 160 mm

> See page 67



Flat vacuum cups with safety sealing lips - SFU-S

- > High process reliability through multiple sealing lip
- > Good stability due to vulcanised retainer plate, as well as support surfaces for the product
- > Diameter: 30 - 225 mm

> See page 68



Short lift vacuum cups SFK

- > Minimum lift for flat, sensitive surfaces
- > Supports prevent deformation of the product and increase stability
- > Particularly suited for use in clamping systems
- > Diameter: 20 - 150 mm

> See page 70



FIPA Flat vacuum cups SF



Vacuum suction plate with foamed sealing lip - SP-PLM

- > Good sealing of heavily textured surfaces
- > Cost-effective replacement of worn seals
- > Diameter: 35 - 300 mm

> See page 72



Heavy-duty flat vacuum suction plates - SFPL-D

- > Vulcanised steel carrier plate allows lifting of very heavy loads
- > Secure gripping of uneven surfaces thanks to additional inner sealing lip
- > Diameter: 160 - 300 mm

> See page 73



Flat XXL suction rings - SFR

- > Large, flat suction seals vulcanised on steel ring for handling very large loads
- > Connection through circular, circumferentially placed thread holes
- > Diameter: 450 - 920 mm

> See page 74



Series | Flat vacuum cups SF

Universal flat vacuum cups - SFU-A

Universal flat vacuum cups - SFU-A



Product Description

Very shallow cup with single-lip seal for handling various products with smooth or rough surfaces.
Connection up to \varnothing 50 mm by means of plug-in nipple, from \varnothing 60 mm with vulcanised carrier plate (bolttable)


Advantage

- > Great stability allows high acceleration
- > Fast cycle times are possible, due to the cup's low volume
- > Cost-effective replacement of worn seals

Ordering notes:

\varnothing 1 mm to \varnothing 3 mm: PU = 10 pieces

Technical data

Item no.	Model / Lip dimensions		Material / Colour	Connection thread
102.001.002._*	SFU-A -1.5	0.3	NBR (sw), SI (tr)	--
102.002.004._*	SFU-A-2	0.4	NBR (sw), NBR-AS (sw), SI (tr), SI-AS (sw), PU (bl)	--
102.003.005._*	SFU-A -3	0.5	NBR (sw), NBR-AS (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw)	--
102.005.009._*	SFU-A -5	0.9	NBR (sw), SI (tr), SI-AS (sw), FKM (sw)	--
102.006.013._*	SFU-A -6	1	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw)	--
102.008.017._*	SFU-A -8	1.4	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw)	--
102.010.024._*	SFU-A -10	1.2	NBR (sw), NBR-AS (sw), SI (tr), SI-AS (sw), PU (bl)	--
102.015.030._*	SFU-A-15	2	NBR (sw), SI (tr), PU (bl)	--
102.015.309._*	SFU-A-15A	1.9	NBR (sw), SI (tr), PU (bl)	--
102.020.041._*	SFU-A -20	2	NBR (sw), SI (tr), PU (bl)	--
102.025.047._*	SFU-A -25	2.5	NBR (sw), SI (tr), PU (bl)	--
102.030.053._*	SFU-A -30	2	NBR (sw), SI (tr), PU (bl)	--
102.035.056._*	SFU-A -35	3	NBR (sw), SI (tr)	--
102.040.061._*	SFU-A -40	3.5	NBR (sw), SI (tr), PU (bl)	--
102.050.065._*	SFU-A -50	4	NBR (sw), SI (tr), PU (bl)	--
102.060.303._*	SFU-A -60	5	NBR (sw), SI (tr), PU (bl)	G1/4-female
102.080.304._*	SFU-A -80	6	NBR (sw), SI (tr), PU (bl)	G1/4-female
102.095.305._*	SFU-A -95	6	NBR (sw), SI (tr), PU (bl)	G1/4-female
154.120.018._*	SFU-A -120	7	NBR (sw), SI (tr)	--
154.150.020._*	SFU-A -150	9	NBR (sw), SI (tr)	--
154.191.025._*	SFU-A -200	13	NBR (sw), SI (tr), PU (bl)	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Accessories

Item no.	Suitable fittings										Suitable spring levelers (Snap-In)	
	M3-male	M5-male	M5-female	M6-male	M10x1.25-female	G1/8-male	G1/8-female	G1/4-male	G1/4-female	G1/2-female	Spring leveler	Height
102.001.002.*	270.011 (p.408)	--	--	--	--	--	--	--	--	--	--	--
102.002.004.*	270.014 (p.408)	270.300 (p.411)	--	--	--	--	--	--	--	--	--	--
102.003.005.*	270.014 (p.408)	270.300 (p.411)	--	--	--	--	--	--	--	--	--	--
102.005.009.*	--	270.010 (p.411)	270.005 (p.412)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	--	50.330 (p.454)	10
102.006.013.*	--	270.010 (p.411)	270.005 (p.412)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	--	50.330 (p.454)	10
102.008.017.*	--	270.010 (p.411)	270.005 (p.412)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	--	50.330 (p.454)	10
102.010.024.*	--	270.010 (p.411)	270.005 (p.412)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	--	50.330 (p.454)	10
102.015.030.*	--	270.200 (p.411)	--	--	--	270.064 (p.418)	270.065 (p.422)	--	--	--	--	--
102.015.309.*	--	270.010 (p.411)	270.005 (p.412)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	--	50.330 (p.454)	10
102.020.041.*	--	270.311 (p.411)	--	--	--	270.063 (p.419)	270.061 (p.422)	--	--	--	--	--
102.025.047.*	--	--	--	270.312/19 (p.414)	--	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--	--
102.030.053.*	--	--	--	270.312/19 (p.414)	--	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--	--
102.035.056.*	--	--	--	270.312/19 (p.414)	--	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--	--
102.040.061.*	--	--	--	270.312/19 (p.414)	--	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--	--
102.050.065.*	--	--	--	--	--	270.490 (p.420)	270.489 (p.423)	270.491 (p.429)	270.492 (p.434)	--	--	--
102.060.303.*	--	--	--	--	270.090 (p.752)	--	--	270.120 (p.750)	--	--	--	--
102.080.304.*	--	--	--	--	270.090 (p.752)	--	--	270.120 (p.750)	--	--	--	--
102.095.305.*	--	--	--	--	270.090 (p.752)	--	--	270.120 (p.750)	--	--	--	--
154.120.018.*	--	--	--	--	--	--	--	--	--	270.056 (p.437)	--	--
154.150.020.*	--	--	--	--	--	--	--	--	--	270.056 (p.437)	--	--
154.191.025.*	--	--	--	--	--	--	--	--	--	270.056 (p.437)	--	--

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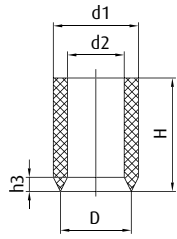
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



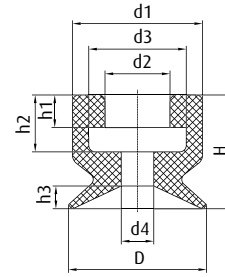
Series | Flat vacuum cups SF

Universal flat vacuum cups - SFU-A

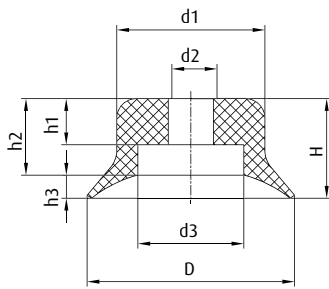
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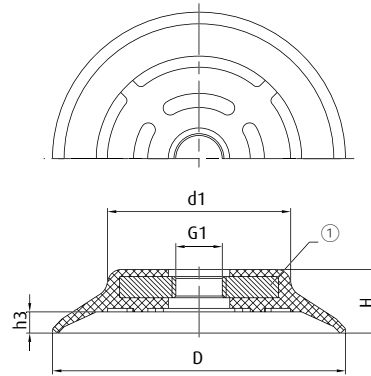
Drawing A



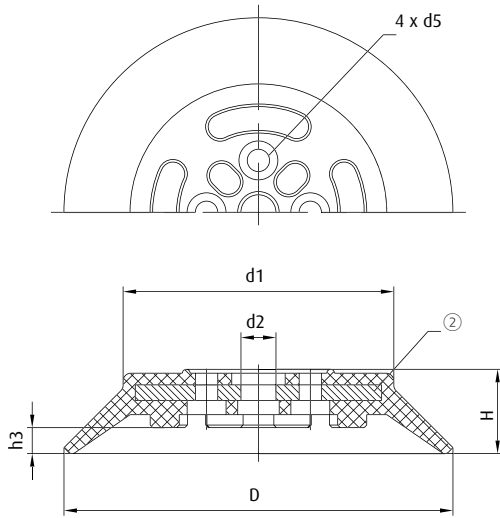
Drawing B



Drawing C



Drawing D



Drawing E

① = Aluminium ② = Steel

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Item no.	Drawing	∅ D [mm]	∅ d1 [mm]	∅ d2 [mm]	∅ d3 [mm]	∅ d4 [mm]	∅ d5 [mm]	G1	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
102.001.002.*	A	1.5	1.8	1.2	--	--	--	--	2.5	--	--	0.3
102.002.004.*	B	2.5	4	2	3	1.2	--	--	4	1.5	2.5	0.5
102.003.005.*	B	4	4	2	3	1.2	--	--	4	1.5	2.5	0.5
102.005.009.*	B	5	7.5	3.8	6	1.3	--	--	6.5	1.8	3.9	0.8
102.006.013.*	B	6.5	7.5	4	6	2	--	--	7	2	4	1
102.008.017.*	B	8.5	8	4	6	2	--	--	7	2	3.5	1.4
102.010.024.*	B	11	8.5	4	6	2	--	--	7.5	1.8	3.8	1.4
102.015.030.*	C	15	12	4.5	7.5	--	--	--	8	2.6	2.1	2.1
102.015.309.*	B	15.5	9	3.8	6	2	--	--	8	2.2	4.4	2
102.020.041.*	C	21	15	4.6	11	--	--	--	10	4.5	8	2.4
102.025.047.*	C	25	16	6	11	--	--	--	14	7	11	3
102.030.053.*	C	30	14	6	11	--	--	--	12	7	10	2
102.035.056.*	C	36	21	6	11	--	--	--	14	7	11.2	2.8
102.040.061.*	C	42	24	6	11	--	--	--	14	7	11.2	2.8
102.050.065.*	C	50	27	8	20	--	--	--	15	7.4	11.5	3.5
102.060.303.*	D	62	38	--	--	--	--	G1/4	16	--	--	4.8
102.080.304.*	D	83	52	--	--	--	--	G1/4	18	--	--	6
102.095.305.*	D	95	66	--	--	--	--	G1/4	18	--	--	5.5
154.120.018.*	E	117	90	14	--	--	8.5	--	26	--	--	9
154.150.020.*	E	150	104	13.5	--	--	8.5	--	33	--	--	10
154.191.025.*	E	193	142	13	--	--	8.5	--	40	--	--	15.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

High temperature Thermalon® cups - SKT-F

High temperature Thermalon® cups - SKT-F

UP TO 160 °C & MINIMUM MARKING




Product Description

Flat vacuum cups for smooth surfaces especially suitable for removing hot plastic parts to be painted from an injection moulding machine. Thermalon® is a material mixture optimised for the plastics industry with a hardness of 60° Shore A. Connection up to Ø 50 mm by means of plug-in nipple, from Ø 60 mm with vulcanised carrier plate (bolttable).




Advantage

- > Extremely low-marking
- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Great stability allows high acceleration

Technical data

Item no.	Model / Lip dimensions		Material / Colour	Usage temperature [°C]
102.005.496.*	SKT-F-5	0.9	Thermalon® (bl)	0 - 160
102.008.497.*	SKT-F-8	1.3	Thermalon® (bl)	0 - 160
102.010.498.*	SKT-F-10	1.5	Thermalon® (bl)	0 - 160
102.015.499.*	SKT-F-15	1.9	Thermalon® (bl)	0 - 160
102.020.500.*	SKT-F-20	2.3	Thermalon® (bl)	0 - 160
102.025.501.*	SKT-F-25	3	Thermalon® (bl)	0 - 160
102.030.502.*	SKT-F-30	2	Thermalon® (bl)	0 - 160
102.040.503.*	SKT-F-40	3.9	Thermalon® (bl)	0 - 160
102.050.504.*	SKT-F-50	4	Thermalon® (bl)	0 - 160
102.060.505.*	SKT-F-60	4.9	Thermalon® (bl)	0 - 160

Accessories

Item no.	 Suitable fittings							 Suitable spring levelers (Snap-In)	
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler	
102.005.496.*	270.010 (p.411)	270.005 (p.412)	--	270.009 (p.417)	270.007 (p.422)	--	--	50.330 (p.454)	10
102.008.497.*	270.010 (p.411)	270.005 (p.412)	--	270.009 (p.417)	270.007 (p.422)	--	--	50.330 (p.454)	10
102.010.498.*	270.010 (p.411)	270.005 (p.412)	--	270.009 (p.417)	270.007 (p.422)	--	--	50.330 (p.454)	10
102.015.499.*	270.200 (p.411)	--	--	270.064 (p.418)	270.065 (p.422)	--	--	50.330 (p.454)	10
102.020.500.*	270.311 (p.411)	--	--	270.063 (p.419)	270.061 (p.422)	--	--	--	--
102.025.501.*	--	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--
102.030.502.*	--	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--

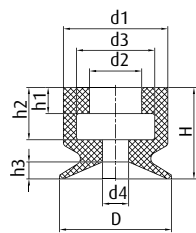
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



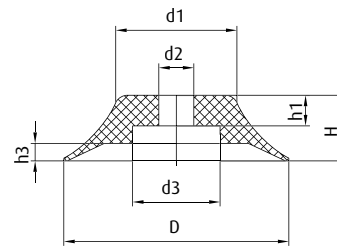
Accessories

Item no.	Suitable fittings							Suitable spring levelers (Snap-In)	
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler	
102.040.503._*	--	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)	--	--
102.050.504._*	--	--	--	270.012 (p.421)	270.020 (p.423)	270.491 (p.429)	270.492 (p.434)	--	--
102.060.505._*	--	--	--	--	--	--	--	--	--

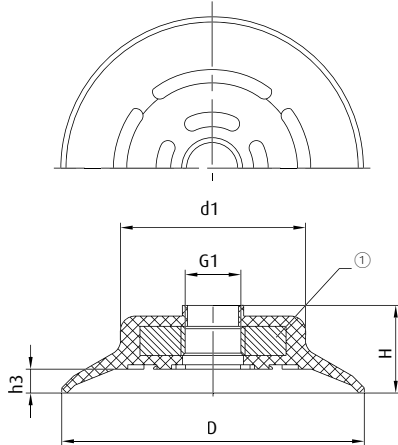
Dimensions



Drawing A



Drawing B



Drawing C

① = Aluminium

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	G1	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
102.005.496._*	A	5.5	7.5	4	6	1.5	--	6.5	2	4	0.9
102.008.497._*	A	8.5	8	4	6	2	--	7	2	4	1.3
102.010.498._*	A	11	8.5	4	6	2	--	7.5	2	4	1.4
102.015.499._*	B	15.5	12	4.5	8	--	--	8	2.7	--	1.8
102.020.500._*	B	21	15	4.5	11	--	--	10	4.5	--	2.2
102.025.501._*	B	26	16	6	11	--	--	14	7	--	2.8
102.030.502._*	B	31	14.5	6	11	--	--	12	7	--	2
102.040.503._*	B	41	24	6	11	--	--	14	7	--	3.9
102.050.504._*	B	51	27.5	8	20	--	--	15	7	--	4
102.060.505._*	C	62	38	--	30	--	G1/4	18	--	--	5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Universal flat vacuum cups - SFU-B

Universal flat vacuum cups - SFU-B




Product Description

Very shallow cup with single-lip seal for handling various products with smooth or slightly rough surfaces.
Connection up to \varnothing 15 mm by means of plug-in nipple, from \varnothing 20 mm with firmly screwed-in nipple.
Compatible "snap-in" spring levelers available.

Advantage

- > Great lateral stability allows high acceleration
- > Supported by support faces from \varnothing 30 mm
- > Fastest cycle times are possible due to the cup's low volume
- > Cost-effective replacement of worn seals
- > High process reliability due to fixed, non-rotating seat of the screw nipple

Technical data

Item no.	Model / Lip dimensions	Material / Colour	
102.001.425._*	SFU-B-0.7	NBR (sw), SI-AS (sw)	0
102.001.463._*	SFU-B-1	NBR (sw), SI-AS (sw)	0
102.002.464._*	SFU-B-1.5	NBR (sw), SI-AS (sw)	0
102.002.279._*	SFU-B-2	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.2
102.003.280._*	SFU-B-3	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.3
102.004.281._*	SFU-B-4	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.3
102.006.282._*	SFU-B-6	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.5
102.008.283._*	SFU-B-8	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	1
102.010.284._*	SFU-B-10	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	1
102.015.285._*	SFU-B-15	NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	1.5
102.020.286._*	SFU-B-20	NBR (sw), SI (tr), PU (bl), FKM (gr)	2
102.025.287._*	SFU-B-25	NBR (sw), SI (tr), PU (bl), FKM (gr)	2
102.030.288._*	SFU-B-30	NBR (sw), SI (tr), PU (bl), FKM (gr)	2
102.040.289._*	SFU-B-40	NBR (sw), SI (tr), PU (bl), FKM (gr)	2
102.050.290._*	SFU-B-50	NBR (sw), SI (tr), PU (bl), FKM (gr)	2
102.060.291._*	SFU-B-60	NBR (sw), SI (tr), PU (bl), FKM (gr)	2.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Accessories

Item no.	Suitable fittings								Suitable spring levelers (Snap-In)							
	M3-male	M5-male	M6-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler		Spring leveler		Spring leveler		Spring leveler	
102.001.425.*	270.524 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.001.463.*	270.524 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.002.464.*	270.524 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.002.279.*	270.427 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.003.280.*	270.427 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.004.281.*	270.427 (p.408)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.006.282.*	--	270.283 (p.409)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.008.283.*	--	270.283 (p.409)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
102.010.284.*	--	270.010 (p.411)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	50.103 (p.454)	6	50.125 (p.454)	10	50.126 (p.454)	15	50.127 (p.454)	20
102.015.285.*	--	270.010 (p.411)	--	--	270.009 (p.417)	270.007 (p.422)	--	--	50.103 (p.454)	6	50.125 (p.454)	10	50.126 (p.454)	15	50.127 (p.454)	20
102.020.286.*	--	270.311 (p.411)	270.459 (p.414)	--	270.480 (p.420)	270.479 (p.423)	--	--	50.095 (p.456)	20	50.096 (p.456)	30	50.097 (p.456)	40	50.098 (p.456)	50
102.025.287.*	--	270.311 (p.411)	270.459 (p.414)	--	270.480 (p.420)	270.479 (p.423)	--	--	50.095 (p.456)	20	50.096 (p.456)	30	50.097 (p.456)	40	50.098 (p.456)	50
102.030.288.*	--	--	270.460 (p.414)	--	270.482 (p.420)	270.481 (p.423)	270.483 (p.429)	270.484 (p.433)	50.095 (p.456)	20	50.096 (p.456)	30	50.097 (p.456)	40	50.098 (p.456)	50
102.040.289.*	--	--	270.498 (p.414)	--	270.486 (p.420)	270.485 (p.423)	270.487 (p.429)	270.488 (p.434)	50.170 (p.456)	20	50.171 (p.456)	30	50.172 (p.456)	40	50.173 (p.456)	50
102.050.290.*	--	--	270.499 (p.414)	--	270.490 (p.420)	270.489 (p.423)	270.491 (p.429)	270.492 (p.434)	50.174 (p.456)	20	50.175 (p.456)	30	50.176 (p.456)	40	50.177 (p.456)	50
102.060.291.*	--	--	--	270.512 (p.416)	--	--	--	--	--	--	--	--	--	--	--	--

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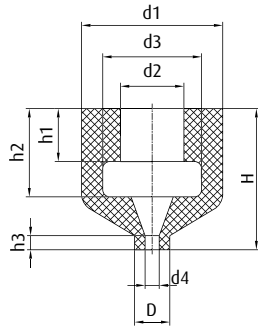
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



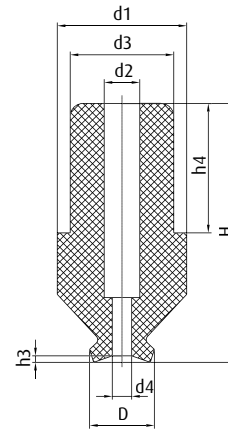
Series | Flat vacuum cups SF

Universal flat vacuum cups - SFU-B

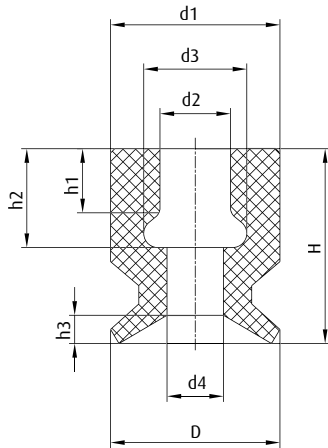
Dimensions



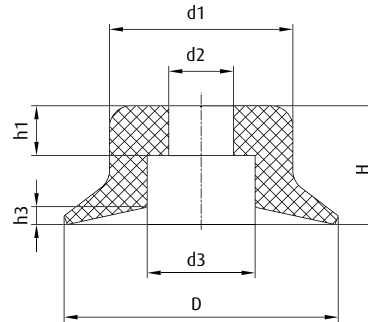
Drawing A



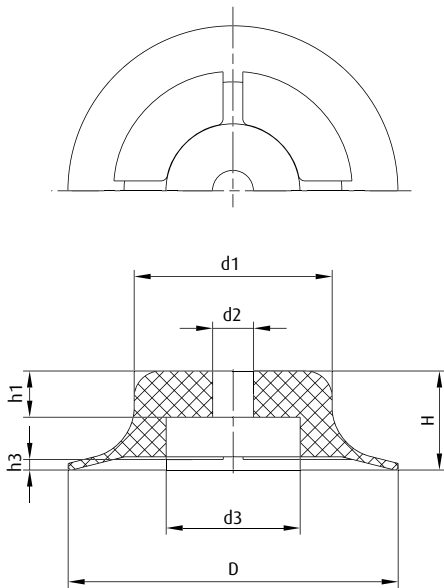
Drawing B



Drawing C



Drawing D



Drawing E

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]	h4 [mm]
102.001.425._*	A	0.7	4	1.8	2.9	0.2	4	1.5	2.4	0.4	--
102.001.463._*	A	1	4	1.8	2.8	0.4	4	1.5	2.5	0.4	--
102.002.464._*	A	1.5	4	1.8	2.8	0.7	4	1.5	2.5	0.4	--
102.002.279._*	B	2	4	1.1	3.2	0.6	8	--	--	0.2	4
102.003.280._*	B	3	4	1.2	3.3	0.8	8	--	--	0.3	4
102.004.281._*	B	4	4	1.2	3.3	1.2	8	--	--	0.5	4
102.006.282._*	C	6	6	2.5	3.6	2	7	2.3	3.5	1	--
102.008.283._*	D	8	6	2.6	3.6	--	5.5	2.6	--	1	--
102.010.284._*	D	10	10	4	6	--	8	3	--	1	--
102.015.285._*	D	15	11	3.9	6	--	9	3.1	--	2.4	--
102.020.286._*	D	20	15	6	10	--	10	4.1	--	1.7	--
102.025.287._*	D	25	17	6	10	--	11	4.6	--	1.7	--
102.030.288._*	E	30	17	6	12	--	11	5	--	1.9	--
102.040.289._*	E	40	25	6	15	--	14	7	--	1.6	--
102.050.290._*	E	50	30	6	20	--	15	7	--	1.6	--
102.060.291._*	E	60	40	10.5	28	--	22	11	--	2.3	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups, modular - SP-F

Flat vacuum cups, modular - SP-F



Product Description

Universal flat vacuum cup in even, supported or deep design.
Design: Replacement sealing lip for attachment to fitting.





Advantage

- > High suction force
- > Fast cycle times possible
- > Very resistant to wear (Tepuflex®)
- > Compatible with established products from other vendors

Ordering notes:

Explanation of the ending of the accessory fitting:
> S: with screen

Technical data

Item no.	Model / Lip dimensions		Material / Colour	Accessories
				Retaining ring
				
Smooth design				
102.005.090.*	SP-F-5	0.5	SI (tr), CR (sw)	--
102.007.091.*	SP-F-7	1	SI (tr), CR (sw)	--
102.009.092.*	SP-F-9	1.5	SI (tr), CR (sw)	--
102.011.093.*	SP-F-10	1	SI (tr), CR (sw)	--
102.016.098.*	SP-F-15	2	SI (tr), CR (sw)	--
102.020.095.*	SP-F-20	2.5	SI (tr), CR (sw)	78.011 (p.475)
102.030.096.*	SP-F-30	3.5	SI (tr), CR (sw)	78.011 (p.475)
102.040.094.*	SP-F-40	4	SI (tr), CR (sw)	78.012 (p.475)
102.050.097.*	SP-F-50	6.5	SI (tr), CR (sw)	78.013 (p.475)
				
With cleats				
104.016.003.*	SP-FA-16	0.5	SI (tr), CR (sw)	--
125.020.004.*	SP-FA-20	1	Tepuflex® (or), SI (tr), CR (sw)	78.011 (p.475)
125.025.007.*	SP-FA-25	1	Tepuflex® (or), SI (tr), CR (sw)	78.011 (p.475)
125.030.010.*	SP-FA-30	2	Tepuflex® (or), SI (tr), CR (sw)	78.011 (p.475)
125.040.013.*	SP-FA-40	2	Tepuflex® (or), SI (tr), CR (sw)	78.012 (p.475)
125.050.017.*	SP-FA-50	2.5	Tepuflex® (or), SI (tr), CR (sw)	78.013 (p.475)
154.078.027.*	SP-FA-75	3	Tepuflex® (or), SI (tr), CR (sw)	--
154.113.028.*	SP-FA-110	5	Tepuflex® (or), SI (tr), CR (sw)	--
154.155.026.*	SP-FA-150	5	Tepuflex® (or), SI (tr), CR (sw)	--
				
Deep design				
122.016.012.*	SP-FD-16	1.5	SI (tr), CR (sw)	--
122.022.022.*	SP-FD-20	2.5	SI (tr), CR (sw)	78.011 (p.475)
122.032.036.*	SP-FD-30	5	SI (tr), CR (sw)	78.011 (p.475)

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Accessories										
Item no.	Suitable fittings									
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G3/8-male	G3/8-female	G1/2-female	G3/4-female
Smooth design										
102.005.090.*	270.153 (p.409)	--	--	--	--	--	--	--	--	--
102.007.091.*	270.153 (p.409)	--	--	--	--	--	--	--	--	--
102.009.092.*	270.153 (p.409)	--	--	--	--	--	--	--	--	--
102.011.093.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
102.016.098.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
102.020.095.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
102.030.096.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
102.040.094.*	--	--	--	--	270.251, 270.501-S (p.423)	270.506-S (p.428)	270.505-S (p.434)	--	--	--
102.050.097.*	--	--	--	--	270.252, 270.502-S (p.424)	270.504-S (p.429)	270.507-S (p.435)	--	--	--
With cleats										
104.016.003.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
125.020.004.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
125.025.007.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
125.030.010.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
125.040.013.*	--	--	--	--	270.251, 270.501-S (p.423)	270.506-S (p.428)	270.505-S (p.434)	--	--	--
125.050.017.*	--	--	--	--	270.252, 270.502-S (p.424)	270.504-S (p.429)	270.507-S (p.435)	--	--	--
154.078.027.*	--	--	--	--	270.527-S (p.424)	--	--	270.528-S (p.436)	270.529-S (p.436)	--
154.113.028.*	--	--	--	--	--	--	--	270.530-S (p.437)	270.531-S (p.437)	--
154.155.026.*	--	--	--	--	--	--	--	--	270.532-S (p.437)	270.533-S (p.437)
Deep design										
122.016.012.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
122.022.022.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
122.032.036.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--

Continued on the next page

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups, modular - SP-F

Flat vacuum cups, modular

Example:



+



=



Assembly example



+



=

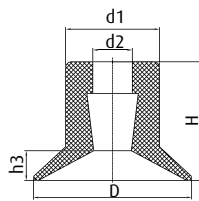


Assembly example

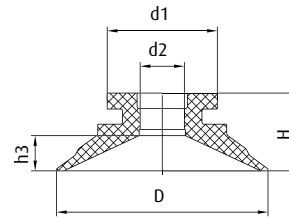
- * Fittings are optionally available with and without filter screen
- ** Fittings come fitted with filter screen as standard

- > The modular series allows you to assemble your own vacuum cups
- > Worn sealing lips can be replaced quickly, cost-effective and easily
- > High flexibility thanks to a large selection of fitting threads

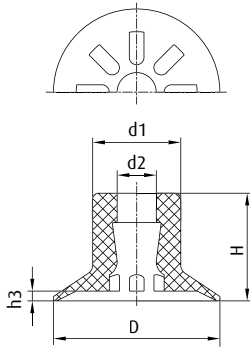
Dimensions



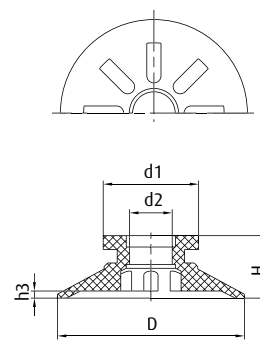
Drawing A



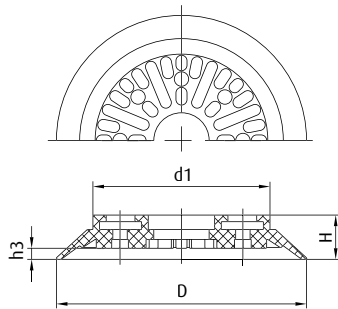
Drawing B



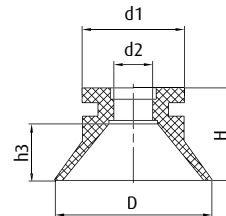
Drawing C



Drawing D



Drawing E



Drawing F

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	H [mm]	h3 [mm]
Smooth design						
102.005.090._*	A	5	4.5	2	6	0.5
102.007.091._*	A	7	5	2	7	0.9
102.009.092._*	A	9.5	5	2	7	1.1
102.011.093._*	A	11	9	3.8	10.5	0.8
102.016.098._*	A	16	9.5	4	12	3
102.020.095._*	B	22	14.5	5.5	8	3
102.030.096._*	B	32	14.5	6.5	10.5	4.7
102.040.094._*	B	42	20	7	13.5	6
102.050.097._*	B	52	27	11	19	8.5
With cleats						
104.016.003._*	C	17	9	4	11	1
125.020.004._*	D	22	14.5	5.5	8	0.9
125.025.007._*	D	28	14	5.5	9	1
125.030.010._*	D	32	14.5	6.5	10.5	1.2
125.040.013._*	D	42	20	7	13.5	2.1
125.050.017._*	D	53	27	12	17.5	2
154.078.027._*	E	78	55	--	13	3
154.113.028._*	E	113	80	--	20	5
154.155.026._*	E	155	109	--	24	5
Deep design						
122.016.012._*	F	17.5	9	4	17	8
122.022.022._*	F	22	14.5	5.5	13	8
122.032.036._*	F	32	14.5	5.5	19.5	14.4

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Flat vacuum cups with fully assembled fitting - SP-F








Product Description

Universal flat vacuum cups in even or supported design. Series with sensing valve prevents dropping of the product if individual vacuum cups in a system are not in contact with the product.
Version: Complete with vacuum cup fitting and filter screen.

Advantage

- > High suction force
- > Fast cycle times possible
- > Very resistant to wear (Tepuflex®)
- > Compatible with established products from other vendors

Technical data

Item no.	Model / Lip dimensions	Connection thread		Material / Colour	Accessories
Smooth design with fitting & filter screen					
					Spare cup
120.020.006.*	SP-F-20	G1/8-male, M5-female	2.5	SI (tr), CR (sw)	102.020.095.* (p.205)
120.030.013.*	SP-F-30	G1/8-male, M5-female	3.5	SI (tr), CR (sw)	102.030.096.* (p.223)
120.040.076.*	SP-F-40	G1/8-female	4	SI (tr), CR (sw)	102.040.094.* (p.234)
120.050.078.*	SP-F-50	G1/8-female	6.5	SI (tr), CR (sw)	102.050.097.* (p.242)
Smooth design with fitting, filter screen & touch valve					
					
121.030.006.*	SP-F-30	G1/8-male, M5-female	2.5	SI (tr), CR (sw)	102.030.096.* (p.223)
121.040.007.*	SP-F-40	G1/8-female	4	SI (tr), CR (sw)	102.040.094.* (p.234)
121.050.008.*	SP-F-50	G1/8-female	2.5	SI (tr), CR (sw)	102.050.097.* (p.242)
With cleats, fitting & filter screen					
					
123.020.003.*	SP-FA-20	G1/8-male, M5-female	1	Tepuflex® (or), SI (tr), CR (sw)	125.020.004.* (p.205)
123.025.010.*	SP-FA-25	G1/8-male, M5-female	1	Tepuflex® (or), SI (tr), CR (sw)	125.025.007.* (p.216)
123.030.019.*	SP-FA-30	G1/8-male, M5-female	2	Tepuflex® (or), SI (tr), CR (sw)	125.030.010.* (p.223)
123.040.028.*	SP-FA-40	G1/8-female	2	Tepuflex® (or), SI (tr), CR (sw)	125.040.013.* (p.235)
123.050.034.*	SP-FA-50	G1/8-female	2.5	Tepuflex® (or), SI (tr), CR (sw)	125.050.017.* (p.242)
152.078.133.*	SP-FA-75	G1/8-female	3	Tepuflex® (or), SI (tr), CR (sw)	154.078.027.* (p.252)
152.078.136.*	SP-FA-75	G3/8-female	3	Tepuflex® (or), SI (tr), CR (sw)	154.078.027.* (p.252)
152.078.139.*	SP-FA-75	G1/2-female	3	Tepuflex® (or), SI (tr), CR (sw)	154.078.027.* (p.252)
152.113.134.*	SP-FA-110	G3/8-female	5	Tepuflex® (or), SI (tr), CR (sw)	154.113.028.* (p.262)
152.113.137.*	SP-FA-110	G1/2-female	5	Tepuflex® (or), SI (tr), CR (sw)	154.113.028.* (p.262)
152.155.135.*	SP-FA-150	G1/2-female	5	Tepuflex® (or), SI (tr), CR (sw)	154.155.026.* (p.269)
152.155.138.*	SP-FA-150	G3/4-female	5	Tepuflex® (or), SI (tr), CR (sw)	154.155.026.* (p.269)
With cleats, fitting, filter screen & touch valve					
					
124.030.002.*	SP-FA-30	G1/8-male, M5-female	2	SI (tr), CR (sw)	125.030.010.* (p.223)
124.040.006.*	SP-FA-40	G1/8-female	2	SI (tr), CR (sw)	125.040.013.* (p.235)
124.050.009.*	SP-FA-50	G1/8-female	2.5	SI (tr), CR (sw)	125.050.017.* (p.242)

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

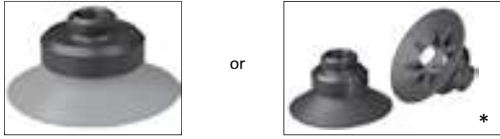


Series | Flat vacuum cups SF

Flat vacuum cups with fully assembled fitting - SP-F

Flat vacuum cups with fully mounted fitting

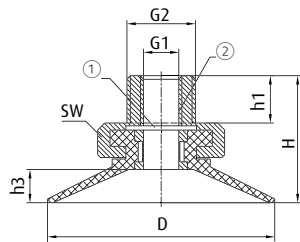
Example:



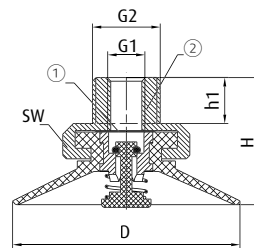
* Version with touch valve available only for flat vacuum cups in smooth design and flat vacuum cups with cleats

- > High process reliability thanks to permanently installed fitting
- > Worn sealing lips can be replaced if necessary

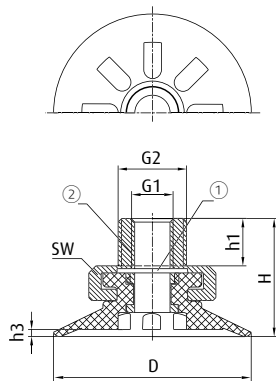
Dimensions



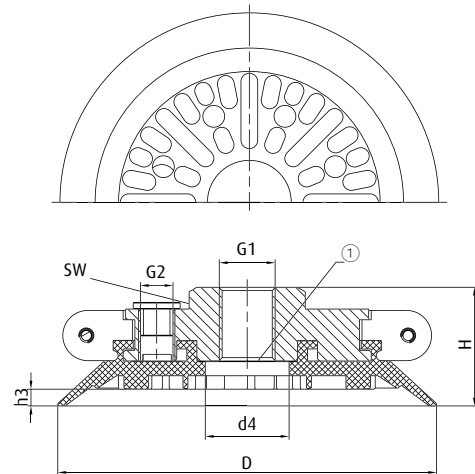
Drawing A



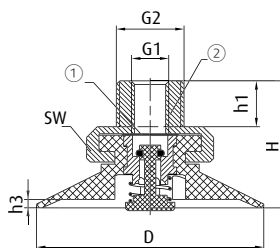
Drawing B



Drawing C



Drawing D



Drawing E

① = Filter screen ② = Aluminium

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760

Series | Flat vacuum cups SF

Flat vacuum cups with fully assembled fitting - SP-F



Item no.	Drawing	Ø D [mm]	Ø d4 [mm]	G1	G2	H [mm]	h1 [mm]	h3 [mm]	SW
Smooth design with fitting & filter screen									
120.020.006.*	A	22	--	M5	G1/8	15.5	6.5	3	17
120.030.013.*	A	32	--	M5	G1/8	18	6.5	4.5	17
120.040.076.*	A	42	--	G1/8	--	22	--	6	12
120.050.078.*	A	52	--	G1/8	--	27	--	8.5	12
Smooth design with fitting, filter screen & touch valve									
121.030.006.*	B	32	--	M5	G1/8	18	6.5	--	17
121.040.007.*	B	42	--	G1/8	--	22	--	--	12
121.050.008.*	B	52	--	G1/8	--	27	--	--	12
With cleats, fitting & filter screen									
123.020.003.*	C	22	--	M5	G1/8	15.5	6.5	0.9	17
123.025.010.*	C	28	--	M5	G1/8	16.5	6.5	1	17
123.030.019.*	C	32	--	M5	G1/8	18	6.5	1.2	17
123.040.028.*	C	42	--	G1/8	--	22	--	2.1	12
123.050.034.*	C	53	--	G1/8	--	26	--	2	12
152.078.133.*	D	78	10	G1/8	--	26	--	3	28
152.078.136.*	D	78	10	G3/8	--	26	--	3	28
152.078.139.*	D	78	10	G1/2	--	26	--	3	28
152.113.134.*	D	113	25	G3/8	G1/8	35	--	5	30
152.113.137.*	D	113	25	G1/2	G1/8	35	--	5	30
152.155.135.*	D	155	25	G1/2	G1/8	38	--	5	38
152.155.138.*	D	155	25	G3/4	G1/8	38	--	5	38
With cleats, fitting, filter screen & touch valve									
124.030.002.*	E	32	--	M5	G1/8	18	--	1.2	17
124.040.006.*	E	42	--	G1/8	--	22	--	2.1	12
124.050.009.*	E	53	--	G1/8	--	26	--	2	12

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups with a flexible lip - SFU-F

Flat vacuum cups with a flexible lip - SFU-F




Product Description

Flat vacuum cups with a soft, very flexible single-lip seal for handling highly sensitive products.
Connection via plug-in nipple.
Compatible "snap-in" spring levelers available.





Advantage

- > Gentle product handling
- > Very good fit to the product surface
- > Good seal over a slightly rough surface
- > Low volume of the cup enables fast cycle times
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Material / Colour
102.004.216.*	SFU-F-4	1	NBR (sw), SI (tr)
102.006.217.*	SFU-F-6	1	NBR (sw), SI (tr)
102.008.218.*	SFU-F-8	1	NBR (sw), SI (tr)
102.010.219.*	SFU-F-10	1	NBR (sw), SI (tr)
102.015.220.*	SFU-F-15	2	NBR (sw), SI (tr)
102.020.221.*	SFU-F-20	2	NBR (sw), SI (tr)
102.030.222.*	SFU-F-30	2	NBR (sw), SI (tr)
102.040.223.*	SFU-F-40	2	NBR (sw), SI (tr)

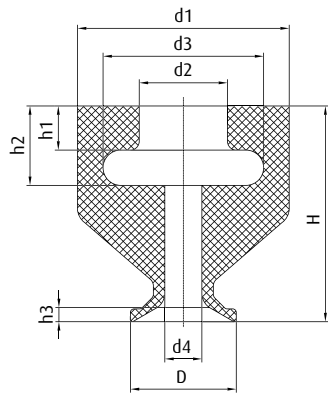
Accessories

Item no.	 Suitable fittings					 Suitable spring levelers (Snap-In)					
	M5-male	M6-male	G1/8-male	G1/8-female	G1/4-male	Spring leveler		Hose outside Ø	Spring leveler		Hose outside Ø
102.004.216.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
102.006.217.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
102.008.218.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
102.010.219.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
102.015.220.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
102.020.221.*	270.317 (p.410)	270.103 (p.413)	270.205 (p.416)	270.109 (p.421)	270.194 (p.425)	--	--	--	50.020 (p.454)	8.5	6
102.030.222.*	270.317 (p.410)	270.103 (p.413)	270.205 (p.416)	270.109 (p.421)	270.194 (p.425)	--	--	--	50.020 (p.454)	8.5	6
102.040.223.*	270.317 (p.410)	270.103 (p.413)	270.205 (p.416)	270.109 (p.421)	270.194 (p.425)	--	--	--	50.020 (p.454)	8.5	6

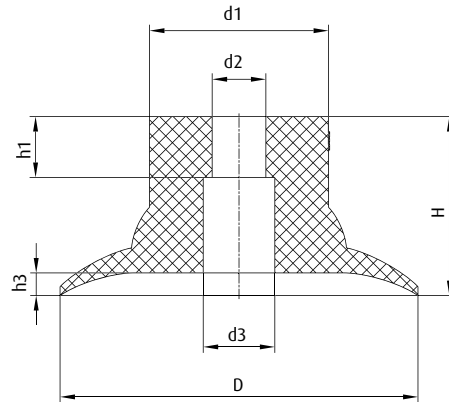
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
102.004.216.*	A	3.8	12	5	9	1.1	12	2.5	4.5	0.7
102.006.217.*	A	6	12	5	9	2.1	12.5	2.5	4.5	0.8
102.008.218.*	A	8	12	5	9	2	12.5	2.5	4.5	1.7
102.010.219.*	A	10.5	12	5	9	3	14.5	2.5	4.5	4.2
102.015.220.*	A	16	12	5	9.5	3.3	14	2.4	4.7	2.3
102.020.221.*	B	20	12	4.5	6	--	15	4.7	--	2.1
102.030.222.*	B	30	15	4.5	6	--	15	5	--	1.9
102.040.223.*	B	40	19.5	4.7	6.5	--	15	5	--	2

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups with curved lip - SFU-D

Flat vacuum cups with curved lip - SFU-D




Product Description

Universal flat vacuum cups with tapering curved sealing lip. Connection via plug-in nipple.

Advantage

- > Pre-tension of the sealing lip enables gripping of uneven, slightly curved products
- > Large lift

Technical data

Item no.	Model / Lip dimensions		Material / Colour
112.004.001.*	SFU-D-4	0.5	NBR (sw), SI (r)
112.005.002.*	SFU-D-5	0.7	NBR (sw), SI (r)
112.006.003.*	SFU-D-6	1	NBR (sw), SI (r)
112.008.007.*	SFU-D-8	1.5	NBR (sw), SI (w), NR (sw)
112.010.011.*	SFU-D-10	2	NBR (sw), SI (w)
112.012.015.*	SFU-D-12	2	NBR (sw), SI (w), NR (sw)
112.015.022.*	SFU-D-15	2	NBR (sw), SI (w), NR (sw)
112.018.024.*	SFU-D-18	2.3	NBR (sw), SI (w), NR (sw)
112.020.031.*	SFU-D-20	2.3	NBR (sw), SI (w), NR (sw)
112.022.037.*	SFU-D-22	2.5	NBR (sw), SI (w)
112.025.042.*	SFU-D-25	4.5	NBR (sw), SI (w), NR (sw)
112.030.052.*	SFU-D-30	4.5	NBR (sw), SI (w)
112.035.060.*	SFU-D-35	5	NBR (sw), SI (w), NR (sw)
112.040.071.*	SFU-D-40	4	NBR (sw), SI (tr)
112.045.077.*	SFU-D-45	7	NBR (sw), SI (w), NR (sw)
112.060.091.*	SFU-D-60	9	NBR (sw), SI (tr)
112.085.102.*	SFU-D-85	12	NBR (sw), SI (tr), NR (sw)

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Accessories

Item no.	Suitable fittings							
	M3-male	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
112.004.001.*	270.025 (p.408)	--	--	--	--	--	--	--
112.005.002.*	270.025 (p.408)	--	--	--	--	--	--	--
112.006.003.*	270.025 (p.408)	--	--	--	--	--	--	--
112.008.007.*	--	270.536 (p.409)	--	--	--	--	--	--
112.010.011.*	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.012.015.*	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.015.022.*	--	270.134 (p.409)	--	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.018.024.*	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.020.031.*	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.022.037.*	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
112.025.042.*	--	270.443 (p.410)	--	--	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--
112.030.052.*	--	270.443 (p.410)	--	--	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--
112.035.060.*	--	--	--	--	--	--	270.451 (p.426)	270.452 (p.431)
112.040.071.*	--	--	--	--	--	--	270.451 (p.426)	270.452 (p.431)
112.045.077.*	--	--	--	--	--	--	270.451 (p.426)	270.452 (p.431)
112.060.091.*	--	--	--	--	--	--	270.042 (p.431)	--
112.085.102.*	--	--	--	--	--	--	270.216 (p.431)	--

Continued on the next page →

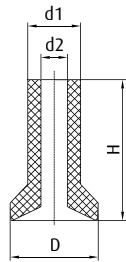
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



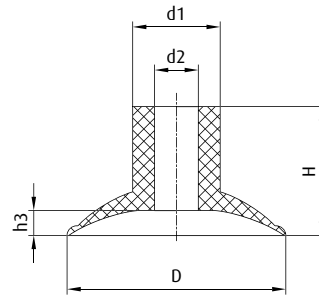
Series | Flat vacuum cups SF

Flat vacuum cups with curved lip - SFU-D

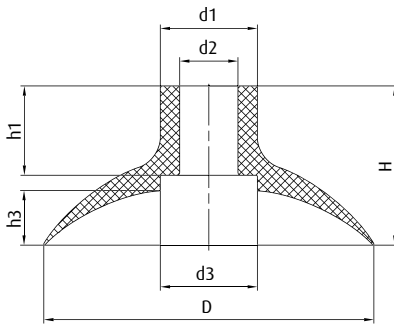
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	H [mm]	h1 [mm]	h3 [mm]
112.004.001.*	A	4	3	1.5	--	7.5	--	--
112.005.002.*	A	5	3	1.5	--	8	--	--
112.006.003.*	A	6	3	1.5	--	8	--	--
112.008.007.*	B	8	5	2.8	--	8	--	1.6
112.010.011.*	B	10	6.5	3.8	--	10.5	--	1.9
112.012.015.*	B	12	8	4	--	11	--	1.7
112.015.022.*	B	15	8	4	--	12	--	2.5
112.018.024.*	B	18	8	3.9	--	11.5	--	2.3
112.020.031.*	B	20	8	4	--	12	--	2.3
112.022.037.*	B	22	8	4	--	13	--	2.5
112.025.042.*	B	25	12	6	--	16	--	4.3
112.030.052.*	B	30	12	6	--	17	--	4.4
112.035.060.*	B	35	15	10	--	16.5	--	5.2
112.040.071.*	B	40	15	10	--	16	--	4
112.045.077.*	B	45	15.5	10	--	17	--	7.5
112.060.091.*	C	60	15	10	25	23	10	9
112.085.102.*	C	85	25	15	25	41	23	14

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Notes:



A large area for taking notes, featuring a vertical red line on the left side and horizontal ruling lines across the page.



Series | Flat vacuum cups SF

Flat vacuum cups with long shaft - SFU-L

Flat vacuum cups with long shaft - SFU-L



Product Description

Flat vacuum cups for handling sensitive or uneven and slightly curved products. Long, slim design enables pipe mounting and low gimbal leveling for uneven product surfaces.

Advantage

- > Gentle handling of particularly sensitive products
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions	Lip height	Material / Colour
122.006.002._*	SFU-L-6	1.5	NBR (sw), SI (tr)
122.010.005._*	SFU-L-10	1.5	NBR (sw), SI (tr)
122.016.009._*	SFU-L-16	5	NBR (sw), SI (tr), NR (sw)
122.025.025._*	SFU-L-25	5	NBR (sw), SI (tr), NR (sw)
122.040.043._*	SFU-L-40	4	SI (tr), NR (sw)
122.060.059._*	SFU-L-60	10	NBR (sw), SI (tr), NR (sw)

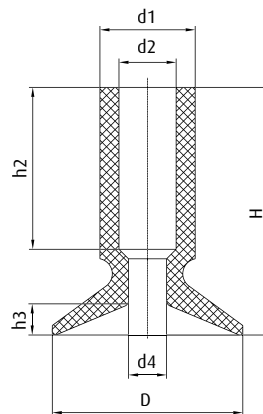
Accessories

Item no.	Suitable fittings				
	M5-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
122.006.002._*	270.001 (p.409)	--	--	--	--
122.010.005._*	270.022 (p.409)	--	--	--	--
122.016.009._*	270.013 (p.410)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
122.025.025._*	--	270.132 (p.417)	270.114 (p.422)	270.043 (p.425)	270.178 (p.431)
122.040.043._*	--	--	--	270.049-1 (p.426)	--
122.060.059._*	--	--	--	270.049-1 (p.426)	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d4 [mm]	H [mm]	h2 [mm]	h3 [mm]
122.006.002._*	6	4	2	1	12	8	1.3
122.010.005._*	10	5	3	2	13	8.5	1.6
122.016.009._*	16	8	4.8	3	20	13	3.8
122.025.025._*	25	12	8	4	30	18	5.5
122.040.043._*	43	20	11	4.4	41	22	10.2
122.060.059._*	62	24	11	6	45	21	14.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups for chocolates - SL-PF

Flat vacuum cups for chocolates - SL-PF



Product Description

Flat vacuum cups made of FDA-approved material for handling delicate products with heavily textured surfaces.

Advantage

- > Gentle handling of the most sensitive surfaces
- > Also suitable for three-dimensional products, e.g. chocolates

Technical data

Item no.	Model / Lip dimensions	mm	Material / Colour
107.016.008.*	SL-PF-16	2.4	SI (tr)
102.018.345.*	SL-PF-18	--	SI (tr)
107.018.004.*	SL-PF-18A	--	SI (tr)
102.022.043.*	SL-PF-22	5	SI (tr)

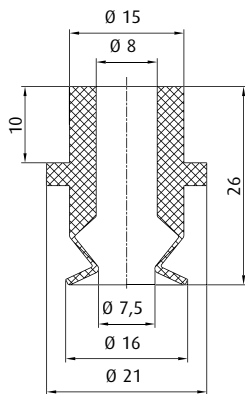
Accessories

Item no.	Suitable fittings				
	M5-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
107.016.008.*	--	270.132 (p.417)	270.114 (p.422)	270.043 (p.425)	270.178 (p.431)
102.018.345.*	270.443 (p.410)	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--
107.018.004.*	270.399 (p.410)	270.033 (p.416)	270.478 (p.421)	--	--
102.022.043.*	--	270.112 (p.419)	270.114 (p.422)	270.113 (p.425)	270.178 (p.431)

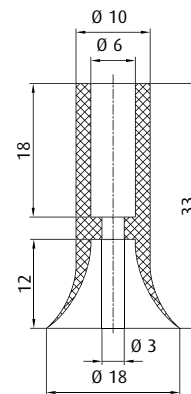
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



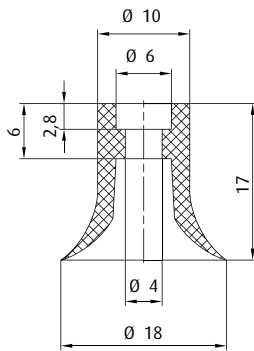
Dimensions



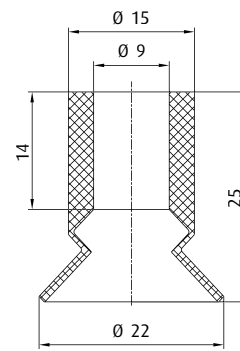
Drawing A



Drawing B



Drawing C



Drawing D

Item no.	Drawing
107.016.008._*	A
102.018.345._*	B
107.018.004._*	C
102.022.043._*	D

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Vacuum cups for handling tubes - SV-T

Vacuum cups for handling tubes - SV-T



Product Description

Special FDA-compliant seals for pipe mounting

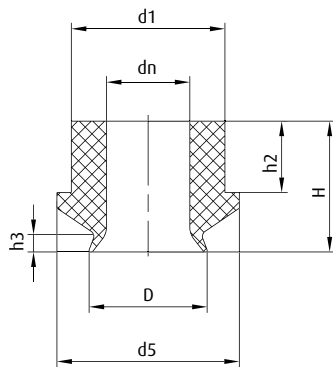
Technical data

Item no.	Model / Lip dimensions	Material / Colour
With straight passage - SV-TG		
107.019.076.*	SV-TG-19	SI (tr)
107.019.112.*	SV-TG-20	SI (tr)
107.022.107.*	SV-TG-22	SI (tr)
107.025.109.*	SV-TG-25	SI (tr)
107.026.111.*	SV-TG-26	SI (tr)
107.028.108.*	SV-TG-28	SI (tr)
107.032.113.*	SV-TG-32	SI (tr)
107.037.114.*	SV-TG-37	SI (tr)
107.045.115.*	SV-TG-46	SI (tr)
With conical passage - SV-TK		
107.011.103.*	SV-TK-11	SI (tr)
107.012.106.*	SV-TK-12	SI (tr)
107.013.101.*	SV-TK-13	SI (tr)
107.013.105.*	SV-TK-13A	SI (tr)
107.015.102.*	SV-TK-15	SI (tr)
107.017.066.*	SV-TK-17	SI (tr)
107.018.104.*	SV-TK-18	SI (tr)

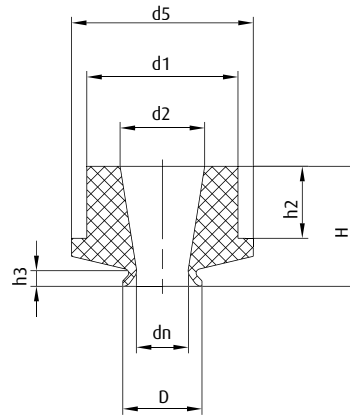
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d5 [mm]	Ø dn [mm]	H [mm]	h2 [mm]	h3 [mm]
With straight passage - SV-TG									
107.019.076.*	A	18.5	25	--	30	14	21	12	2.2
107.019.112.*	A	19.5	25	--	30	14	22	12	2.9
107.022.107.*	A	22	25	--	30	17	21.5	12	2.5
107.025.109.*	A	25	25	--	31	17	22	12	2.6
107.026.111.*	A	26	25	--	30	17	23	12	5.5
107.028.108.*	A	28	25	--	30	19	24	12	5.5
107.032.113.*	A	32	32	--	40	25	25	13	2.3
107.037.114.*	A	37	45	--	53	29	31	17.5	2.7
107.045.115.*	A	46	45	--	54	37	32	17.5	--
With conical passage - SV-TK									
107.011.103.*	B	11	25	13.5	31	7.5	21	12	1.2
107.012.106.*	B	12.5	25	14	30	10.5	21	12	1.9
107.013.101.*	B	13	25	14	30	10.5	20	12	1.1
107.013.105.*	B	13	25	14	30	8.5	20	12	2.6
107.015.102.*	B	15	25	16	30	10.5	20	12	3
107.017.066.*	B	17.5	25	17	31	12.5	20	12	2.7
107.018.104.*	B	18	25	18	30	14	21	12	2.4

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Anti-slip flat vacuum cups - SM-P


Anti-slip flat vacuum cups - SM-P



Product Description

Flat vacuum cups of oil-resistant NBR for handling metal sheets. Distinct radially extending cleats increase the holding force and prevent “deep drawing” of the product as well as any slipping of oily sheets. The firmly bolted holder (from Ø 20 mm) provides a secure seating.

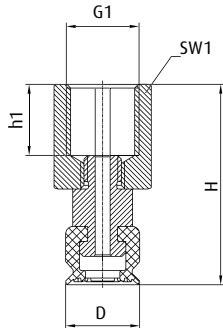
Technical data

Technical data					Accessories
Item no.	Model / Lip dimensions	Connection thread		Material / Colour	Spare cup
With female thread - SM-PI					
100.010.100.*	SM-PI-10	G1/8-female	0.5	NBR (sw)	104.010.065.1 (p.183)
100.020.101.*	SM-PI-20	G1/8-female	1.1	NBR (sw)	104.020.066.1 (p.201)
100.030.102.*	SM-PI-30	G1/8-female	1.8	NBR (sw)	104.030.067.1 (p.219)
100.040.103.*	SM-PI-40	G1/8-female	2.5	NBR (sw)	104.040.068.1 (p.231)
100.050.104.*	SM-PI-50	G1/4-female	3.1	NBR (sw)	104.050.069.1 (p.239)
With male thread - SM-PI					
100.010.110.*	SM-PA-10	G1/8-male	0.5	NBR (sw)	104.010.065.1 (p.183)
100.020.111.*	SM-PA-20	G1/8-male	1.1	NBR (sw)	104.020.066.1 (p.201)
100.030.112.*	SM-PA-30	G1/8-male	1.8	NBR (sw)	104.030.067.1 (p.219)
100.040.113.*	SM-PA-40	G1/8-male	2.5	NBR (sw)	104.040.068.1 (p.231)
100.050.114.*	SM-PA-50	G1/4-male	3.1	NBR (sw)	104.050.069.1 (p.239)

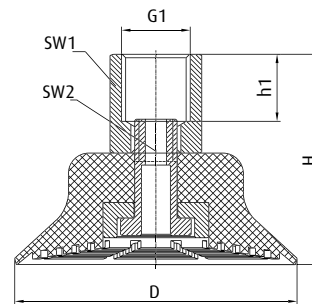
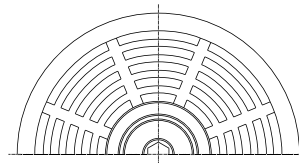
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



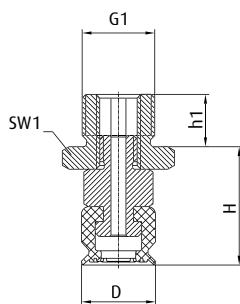
Dimensions



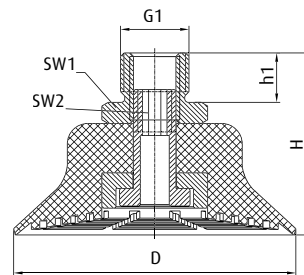
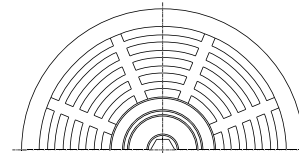
Drawing A



Drawing B



Drawing C



Drawing D

Item no.	Drawing	Ø D [mm]	G1	H [mm]	h1 [mm]	SW1	SW2
With female thread - SM-PI							
100.010.100.*	A	10	G1/8	27	9.5	13	--
100.020.101.*	B	20	G1/8	24	9.5	13	3
100.030.102.*	B	30	G1/8	26	9.5	13	3
100.040.103.*	B	40	G1/8	30	9.5	13	3
100.050.104.*	B	50	G1/4	35	11	17	3
With male thread - SM-PI							
100.010.110.*	C	10	G1/8	16	7	13	--
100.020.111.*	D	20	G1/8	23	8	13	3
100.030.112.*	D	30	G1/8	25	8	13	3
100.040.113.*	D	40	G1/8	29	8	13	3
100.050.114.*	D	50	G1/4	32	10	17	3

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups for dynamic sheet handling - SM-F

Flat vacuum cups for dynamic sheet handling - SM-F



Product Description

Robust, round NBR flat vacuum cups, 60° Shore A with vulcanised fitting made of aluminium and large area, multi-part "anti-slip" cleats. Various connection threads available. Silicone-free.

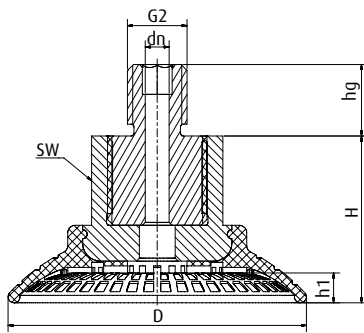
Advantage

- > Reliable, non-slip handling of oily sheets due to "anti-slip" cleats. Good absorption of lateral forces
- > Supports help to prevent deep-drawing or deformation of thin sheets
- > Leak-free suction even with slightly curved surfaces due to flexible sealing lip
- > Vulcanised connection thread ensures a secure fit

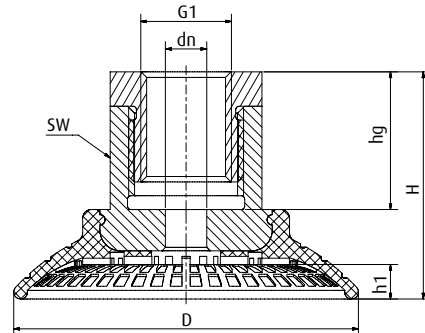
Technical data

Model / Lip dimensions	Thread (Aluminium)						
	G1/4-male	G1/4-female	G3/8-female	M10-male	M14x1.5-male	Rectangular adapter	
SM-F-30	103.030.030.1	103.030.031.1	103.030.032.1	103.030.033.1	103.030.034.1	103.030.035.1	3
SM-F-40	103.040.036.1	103.040.037.1	103.040.038.1	103.040.039.1	103.040.040.1	103.040.041.1	4
SM-F-50	103.050.042.1	103.050.043.1	103.050.044.1	103.050.045.1	103.050.046.1	103.050.047.1	5
SM-F-60	103.060.048.1	103.060.049.1	103.060.050.1	103.060.051.1	103.060.052.1	103.060.053.1	6
SM-F-80	103.080.054.1	103.080.055.1	103.080.056.1	103.080.057.1	103.080.058.1	103.080.059.1	7.6
SM-F-100	103.100.060.1	103.100.061.1	103.100.062.1	103.100.063.1	103.100.064.1	103.100.065.1	9.5
SM-F-125	103.125.066.1	103.125.067.1	103.125.068.1	103.125.069.1	103.125.070.1	103.125.071.1	12.5

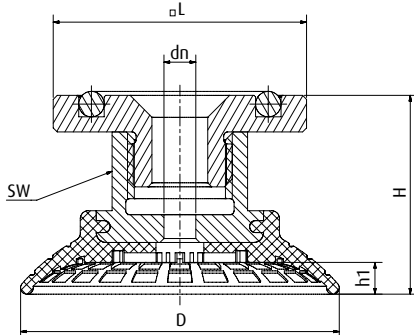
Dimensions



Drawing A



Drawing B



Drawing C



„Anti-Slip“-Cleats (SM-F-100)

Series | Flat vacuum cups SF

Flat vacuum cups for dynamic sheet handling - SM-F



Item no.	Drawing	G1 (female)	G2 (male)	Ø D [mm]	Ø dn [mm]	□L [mm]	H [mm]	h1 [mm]	hg [mm]	SW
103.030.030._*	A	--	G1/4	30	4	--	20	3	10	17
103.030.031._*	B	G1/4	--	30	4	--	20	3	12	17
103.030.032._*	B	G3/8	--	30	4	--	36	3	10	17
103.030.033._*	A	--	M10	30	4	--	20	3	12	17
103.030.034._*	A	--	M14x1.5	30	4	--	20	3	12	17
103.030.035._*	C	--	--	30	4	32	23.2	3	--	17
103.040.036._*	A	--	G1/4	40	4	--	22	4	10	17
103.040.037._*	B	G1/4	--	40	4	--	22	4	12	17
103.040.038._*	B	G3/8	--	40	4	--	38	4	10	17
103.040.039._*	A	--	M10	40	4	--	22	4	12	17
103.040.040._*	A	--	M14x1.5	40	4	--	22	4	12	17
103.040.041._*	C	--	--	40	4	32	25	4	--	17
103.050.042._*	A	--	G1/4	50	6	--	28	5	10	22
103.050.043._*	B	G1/4	--	50	6	--	33	5	20	22
103.050.044._*	B	G3/8	--	50	6	--	28	5	15	22
103.050.045._*	A	--	M10	50	4	--	28	5	12	22
103.050.046._*	A	--	M14x1.5	50	6	--	28	5	12	22
103.050.047._*	C	--	--	50	6	32	27.5	5	--	22
103.060.048._*	A	--	G1/4	60	6	--	31	6	10	22
103.060.049._*	B	G1/4	--	60	8	--	36	6	20	22
103.060.050._*	B	G3/8	--	60	8	--	31	6	15	22
103.060.051._*	A	--	M10	60	4	--	31	6	12	22
103.060.052._*	A	--	M14x1.5	60	6	--	31	6	12	22
103.060.053._*	C	--	--	60	6	32	30.5	6	--	22
103.080.054._*	A	--	G1/4	80	6	--	35	7.6	10	22
103.080.055._*	B	G1/4	--	80	8	--	40	7.6	20	22
103.080.056._*	B	G3/8	--	80	8	--	35	7.6	15	22
103.080.057._*	A	--	M10	80	4	--	35	7.6	12	22
103.080.058._*	A	--	M14x1.5	80	6	--	35	7.6	12	22
103.080.059._*	C	--	--	80	8	32	34.5	7.6	--	22
103.100.060._*	A	--	G1/4	100	6	--	36	9.5	10	22
103.100.061._*	B	G1/4	--	100	8	--	41	9.5	20	22
103.100.062._*	B	G3/8	--	100	8	--	36	9.5	15	22
103.100.063._*	A	--	M10	100	4	--	36	9.5	12	22
103.100.064._*	A	--	M14x1.5	100	6	--	36	9.5	12	22
103.100.065._*	C	--	--	100	8	32	35.5	9.5	--	22
103.125.066._*	A	--	G1/4	125	6	--	43	12.5	10	22
103.125.067._*	B	G1/4	--	125	8	--	48	12.5	20	22
103.125.068._*	B	G3/8	--	125	8	--	43	12.5	15	22
103.125.069._*	A	--	M10	125	4	--	43	12.5	12	22
103.125.070._*	A	--	M14x1.5	125	6	--	43	12.5	12	22
103.125.071._*	C	--	--	125	8	32	42.5	12.5	--	22



Series | Flat vacuum cups SF

Flat vacuum cups for textured surfaces - SFU-R

Flat vacuum cups for textured surfaces - SFU-R



Product Description

Flat vacuum cups with safety sealing lips to handle rough surfaces, as well as smooth but very uneven products. Connection via an interlocking, snap-in aluminium plate

Advantage

- > Leak-free gripping of many difficult product surfaces thanks to extremely flexible, thinly tapered sealing lip
- > High stability under lateral forces
- > Optimum process reliability due to additional double lip seal
- > Cleats help prevent warping of the product
- > Cost-effective, tool-free changing of worn seals

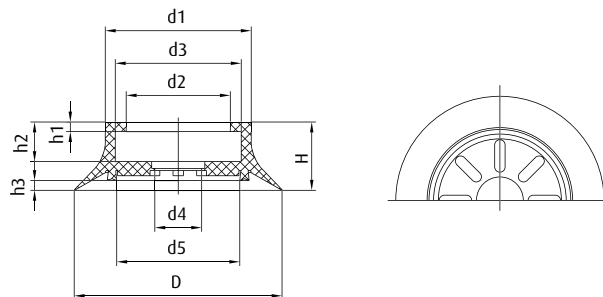
Technical data

Item no.	Model / Lip dimensions	↓	Material / Colour
102.040.357.*	SFU-R-40	3	SI (tr), NR (br)
102.070.234.*	SFU-R-70	6	NBR (gr), SBR (br), SI (tr), NR (bg), NR (br)
102.100.269.*	SFU-R-100	5	SBR (br), NBR (gr), NR (br)
102.200.350.*	SFU-R-200	5	NR (w)

Accessories

Item no.	Suitable fittings		
	G1/8-female	G1/4-female	G1/2-female
102.040.357.*	270.234 (p.438)	--	--
102.070.234.*	--	270.179 (p.438)	--
102.100.269.*	--	270.180 (p.438)	--
102.200.350.*	--	--	270.335 (p.438)

Dimensions



Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
102.040.357.*	40	26	17.5	21	8	21	12.5	2.9	6	2.5
102.070.234.*	70	50	33	43	14	40	30	3.5	17	5.4
102.100.269.*	100	70	50	61	23	59	33	4.6	19	4.7
102.200.350.*	200	168	148	158	25	158	31	5	18.5	3.2



Flat vacuum cups for separating porous products - SFU-RT



Product Description

Patented flat vacuum cups for stacking of partially air-permeable plate material that air is drawn through. Separates uppermost plate layer from underlying plate layers. Soft sealing lip made of abrasion-resistant NR. Secure handling even of rough surfaces thanks to additional internal safety sealing lip. High stability under lateral forces. Cost-effective replacement of the wear part, as it comes in two parts.

Ordering notes

Elastomer seal and carrier plate 270.380 must be ordered separately

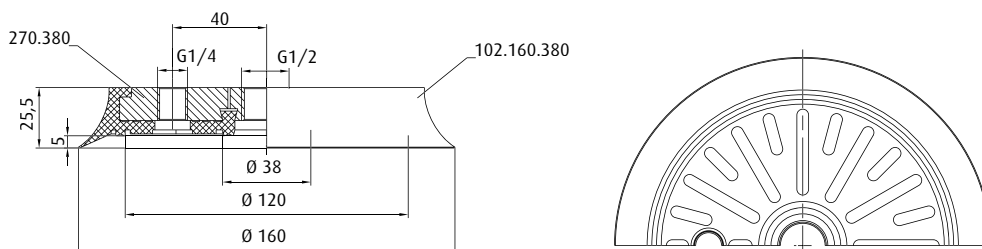
Technical data

Item no.	Model / Lip dimensions		Material / Colour	Suitable fittings
102.160.380.4	SFU-RT-160	6	NR (bg)	270.380

Functional principle

Task: Access the top layer of porous materials without carrying along the lower layers. Simultaneous intake (outer chamber) and selective blowing in a separate central chamber breaks adhesive forces between the layers. The unwanted take-up of lower layers is prevented. The air pressure level should be between 1 and 3 bar and is dependent on the nature of the product.

Dimensions



Gripping force [N] at vacuum level [%]

Item no.	20 % Vacuum	30 % Vacuum	40 % Vacuum	50 % Vacuum	60 % Vacuum	70 % Vacuum
102.160.380.4	83	137	186	230	280	324

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups with double safety sealing lips - SFU-S

Flat vacuum cups with double safety sealing lips - SFU-S




Product Description

Flat vacuum cups with dual internal safety sealing lip as well as vulcanised carrier plate made of aluminium.

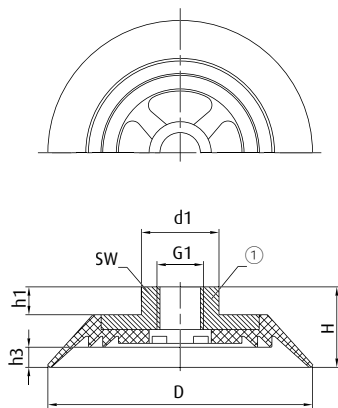
Advantage

- > High process reliability through multiple sealing lip
- > Excellent lateral stability due to vulcanised carrier plate, as well as rubberised support surfaces for the product

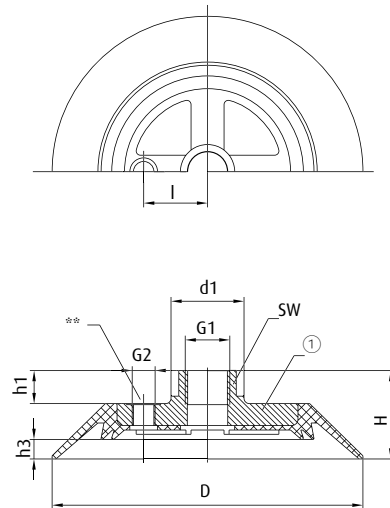
Technical data

Item no.	Model / Lip dimensions	Connection thread		Material / Colour
150.030.031._*	SFU-S-30	M5-female	3	SI (r), CR (sw)
150.050.032._*	SFU-S-50	G1/8-female	5.5	SI (r), FKM (sw), CR (sw)
150.075.033._*	SFU-S-75	G1/4-female	6	SI (r), FKM (sw), CR (sw)
150.100.034._*	SFU-S-100	G3/8-female	9	NBR (sw), SI (tr), NR (w)
150.150.010._*	SFU-S-150	G1/2-female	9	SI (gr), CR (gr)
150.225.018._*	SFU-S-225	G3/4-female	9.5	SI (gr), CR (gr)

Dimensions



Drawing A



Drawing B

① = Aluminium ** = Vacuum connection at the side possible

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Series | Flat vacuum cups SF

Flat vacuum cups with double safety sealing lips - SFU-S



Item no.	Drawing	Ø D [mm]	l [mm]	Ø d1 [mm]	G1	G2	H [mm]	h1 [mm]	h3 [mm]	SW
150.030.031._*	A	29	--	10	M5	--	17.5	7	3	8
150.050.032._*	A	50	--	18	G1/8	--	18.5	7	5.5	14
150.075.033._*	A	75	--	22	G1/4	--	23	8	5.5	17
150.100.034._*	A	100	--	30	G 3/8	--	30	10	9	24
150.150.010._*	B	146	30	34	G1/2	G1/8	42	15.5	9	27
150.225.018._*	B	223	50	49	G3/4	G1/8	52	20	9.5	40

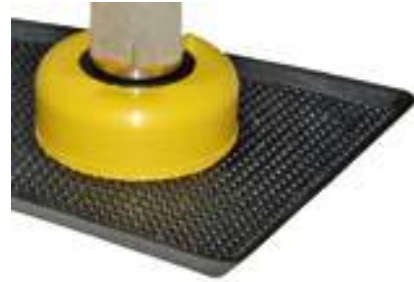
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Flat vacuum cups with a short lift - SFK

Flat vacuum cups with a short lift - SFK






Product Description

Flat vacuum cups with a minimum lift for flat surfaces. HNBR version especially suited for removing hot plastic parts from an injection moulding machine, as they are silicone-free and temperature-resistant up to 160 °C.
SFK-G series particularly suitable for clamping elements. Connection via a form-locking, snap-in aluminium plate.


Advantage

- > Great suction power thanks to the largest active vacuum suction surface possible
- > Minimised wear, as the suction lip does not slide over the product during suction
- > Low space requirement
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Material / Colour
	SFK-K		
102.020.458._*	SFK-K-20	0.5	HNBR (ge), NR (br)
102.030.459._*	SFK-K-30	0.8	HNBR (ge), NR (br)
102.045.460._*	SFK-K-45	1.2	HNBR (ge), NR (br)
	SFK-G		
154.065.003._*	SFK-G-65	3	NBR (sw), SI (w), NR (sw)
154.110.014._*	SFK-G-110	1.5	NBR (sw), SI (w)
154.150.021._*	SFK-G-150	2	NBR (sw), SI (w)

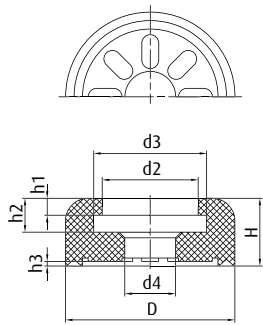
Accessories

Item no.	 Suitable fittings				
	M5-male	G1/8-female	G1/4-female	G3/8-female	G1/2-female
SFK-K					
102.020.458._*	270.521 (p.412)	--	--	--	--
102.030.459._*	--	270.234 (p.438)	--	--	--
102.045.460._*	--	270.235 (p.438)	--	--	--
SFK-G					
154.065.003._*	--	270.158 (p.438)	270.264 (p.438)	270.161 (p.438)	270.286 (p.438)
154.110.014._*	--	--	270.224 (p.438)	270.167 (p.438)	270.266 (p.438)
154.150.021._*	--	--	270.171 (p.438)	270.173 (p.438)	270.268 (p.438)

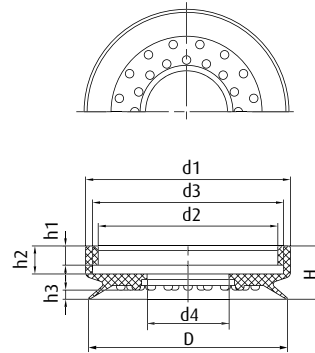
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



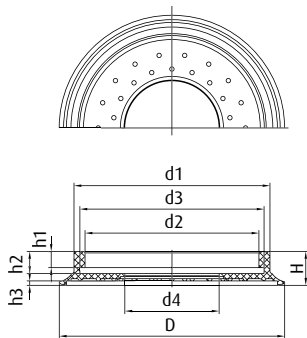
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
SFK-K										
102.020.458._*	A	20	20	10	14	6.5	12	3	7	0.5
102.030.459._*	A	30	30	17	20	9	12	3	6	0.8
102.045.460._*	A	45	45	25	28	9	12	3.5	5.5	1.2
SFK-G										
154.065.003._*	B	65	67	59	63	27	17.5	6.3	9	3
154.110.014._*	C	114	96	88	91	53	17	8	11	1.2
154.150.021._*	C	153	133	118	125	64	23	11	15	3

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Flat vacuum cups SF

Vacuum suction plates with foam rubber sealing lip - SP-PLM

Vacuum suction plates with foam rubber sealing lip - SP-PLM




Product Description

Flat vacuum suction plate with a soft, foamed sealing lip made of EPDM. The sealing lip snaps (form-locking) into a support plate.

Advantage

- > Good sealing of heavily textured surfaces
- > Cost-effective replacement of worn seals

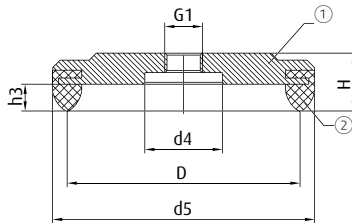
Technical data

Item no.	Model / Lip dimensions	Connection thread		Weight [g]	Material / Colour
160.042.001.*	SP-PLM-35	G1/8-female	1	22	EPDM (sw)
160.067.003.*	SP-PLM-60	G1/8-female	1	63	EPDM (sw)
160.107.006.*	SP-PLM-100	G1/2-female	1	234	EPDM (sw)
160.145.014.*	SP-PLM-140	G1/2-female	1	588	EPDM (sw)
160.215.009.*	SP-PLM-200	G3/4-female	2.5	1,220	EPDM (sw)
160.315.012.*	SP-PLM-300	G3/4-female	2.5	2,482	EPDM (sw)

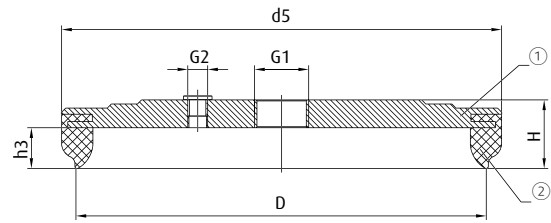
Accessories

Spare cup	Touch valve
102.038.451.15 (p.227)	270.129 (p.670)
102.060.452.15 (p.244)	270.129 (p.670)
102.100.453.15 (p.259)	270.130 (p.670)
102.140.454.15 (p.266)	270.130 (p.670)
102.210.455.15 (p.273)	--
102.310.456.15 (p.279)	--

Dimensions



Drawing A



Drawing B

① = Aluminium ② = EPDM foamed

Item no.	Drawing	Ø D [mm]	Ø d4 [mm]	Ø d5 [mm]	G1	G2	H [mm]	h3 [mm]
160.042.001.*	A	35	20	43	G1/8	--	15	7
160.067.003.*	A	60	20	68	G1/8	--	15	7
160.107.006.*	A	100	30	108	G1/2	--	19	7
160.145.014.*	A	138	30	145	G1/2	--	24	7
160.215.009.*	B	201	--	215	G3/4	G1/8	34	20
160.315.012.*	B	300	--	315	G3/4	G1/8	34	20

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Heavy-duty flat vacuum suction plates - SFPL-D




Product Description

Heavy-duty vacuum suction plate for both smooth and rough surfaces such as metal sheets, cut marble, granite, precast concrete, metal plates or rough-sawn wood. Central mounting connection - lateral vacuum port.

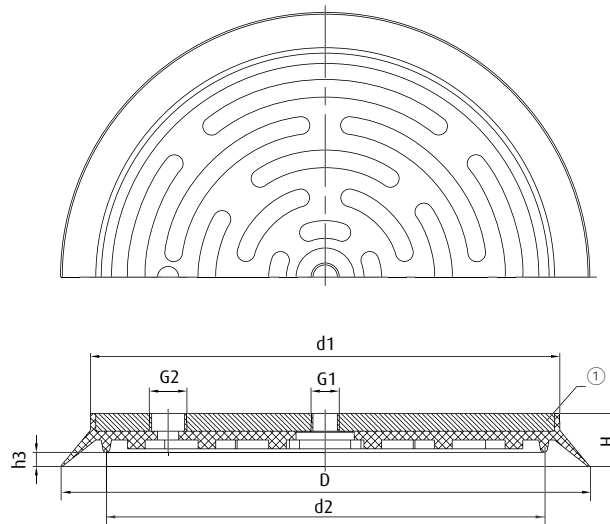
Advantage

- > Vulcanised steel carrier plate allows lifting of very heavy loads
- > Secure gripping of uneven surfaces thanks to additional inner sealing lip
- > Lateral vacuum connection

Technical data

Item no.	Model / Lip dimensions	Connection thread		Weight [g]	Material / Colour
152.160.127.*	SFPL-D-160	M12-female	9	970	CR (sw)
152.200.128.*	SFPL-D-200	M12-female	9	1,741	CR (sw)
152.250.129.*	SFPL-D-250	M12-female	9	2,990	CR (sw)
152.300.130.*	SFPL-D-300	M16-female	12	4,370	NBR (sw)
152.350.131.*	SFPL-D-350	M16-female	13	6,274	NBR (sw)

Dimensions



① = Steel

Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	G1	G2	H [mm]	h3 [mm]
152.160.127.*	160	124	109	M12	G3/8	28	9
152.200.128.*	200	166	146	M12	G3/8	27	7.5
152.250.129.*	250	212	194	M12	G3/8	27	7
152.300.130.*	300	266	248	M16	G1/2	30	8
152.350.131.*	350	316	298	M16	G1/2	30	8



Series | Flat vacuum cups SF

Flat XXL suction rings - SFR

Flat XXL suction rings - SFR



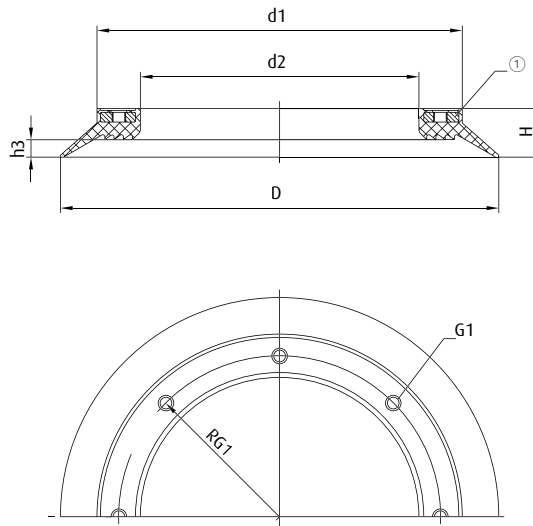
Product Description

Large flat suction seals vulcanised on steel ring for handling very large loads. Mounting through circular, circumferentially placed thread holes.

Technical data

Item no.	Material / Colour	
152.285.099.*	NBR (sw)	11
152.450.105.*	NBR (sw)	18
152.540.106.*	NBR (sw)	18
152.630.107.*	NBR (sw)	18
152.720.108.*	NBR (sw)	18
152.920.109.*	NBR (sw)	18

Dimensions



① = Ring made of vulcanised ST37

Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	G1	R G1	H [mm]	h3 [mm]
152.285.099.*	285	250	160	4xM12	102.5	32	11
152.450.105.*	450	375	286	8xM12	165	50	18
152.540.106.*	540	465	375	8xM12	210	50	18
152.630.107.*	630	556	464	12xM12	255	50	18
152.720.108.*	720	646	554	12xM12	300	50	18
152.920.109.*	920	846	754	12xM12	400	50	18



FIPA Bellows vacuum cups SB

- > Gentle handling of delicate products
- > Bellows allow for height and angle compensation
- > Good adaptation to curved surfaces
- > Lifting of the product occurs via the lifting movement of the bellows



Bellows vacuum cups, universal, 1.5 folds - SBU 1

- > Universal bellows vacuum cups for handling sensitive or uneven products
- > Diameter: 5 - 88 mm

> See page 81



High temperature Thermalon® bellows cups, 1.5 folds - SKT-B1

- > Material blend especially suited for removing hot plastic parts to be painted from an injection molding machine
- > Very low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Diameter: 11 - 63 mm

> See page 84



High temperature HNBR bellows cups, 1.5 folds - SKT-B1

- > Universal vacuum cup for removing hot plastic parts to be painted from an injection molding machine
- > Low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Diameter: 5 - 43 mm

> See page 86



Bellows vacuum cups, universal, 2.5 folds - SBU 2

- > Universal vacuum cup with large stroke for handling sensitive or uneven products
- > Diameter: 4 - 88 mm

> See page 89

Continued on the next page →



Series | Bellows vacuum cups SB at a glance

FIPA Bellows vacuum cups SB



High temperature Thermalon® bellows cups, 2.5 folds - SKT-B2

- > Material blend especially suited for removing hot plastic parts to be painted from an injection molding machine
- > Very low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Diameter 5 - 62 mm

> See page 92



High temperature HNBR bellows cups, 2.5 folds - SKH-B2

- > Universal vacuum cup with large stroke for removing hot plastic parts to be painted from an injection molding machine
- > Low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Diameter: 5 - 60 mm

> See page 94



Bellows vacuum cups, universal, 3.5 folds - SBU 3

- > Gentle handling of sensitive products
- > Very large lifting movement
- > Diameter: 18 - 25 mm

> See page 96



Vulkollan® bellows cups, universal, 1.5 to 2.5 folds - SBU-VU

- > Sturdy vacuum cup with minimal wear and a long service life - thereby offering long maintenance intervals
- > Short cycle times thanks to very good retraction
- > Diameter: 9 - 62 mm

> See page 97



Bellows vacuum cups, 1.5 and 4.5 folds, modular - SP-B

- > Widely spread out bellows vacuum cups with a short or long stroke
- > Design: Replacement sealing lip for attachment to fitting
- > Diameter: 5 - 160 mm

> See page 100



Bellows vacuum cups, 1.5 and 4.5 folds, with fixed mounted fittings - SP-B

- > Widely spread out bellows vacuum cups with a short or long stroke
- > Design: Complete with vacuum cup fitting and filter screen
- > Diameter: 20 - 160 mm

> See page 104



FIPA Bellows vacuum cups SB



Varioflex® bellows cups, 1.5 and 2.5 folds - SP-BX

- > Excellent service life and superior retention force
- > Special polyurethane in two degrees of hardness (60° Shore A black, 30° Shore A red)
- > Soft lip for optimal sealing
- > Long service life and low wear
- > Short cycle times and high process reliability
- > Low-marking

1.5 folds - SP-BX1

- > Supports (∅ 20 - 75 mm) stabilise the product
- > Diameter: 15 - 75 mm

> See page 107

2.5 folds - SP-BX2

- > Diameter: 15 - 75 mm

> See page 110



Vinyl bellows cups, 1.5 and 2.5 folds - SBV

- > Wear-resistant material - long service life
- > Good adaptation to curved or flexible product surfaces

1.5 folds - SBV 1

- > Diameter: 5 - 70 mm

> See page 113



2.5 folds - SBV 2

- > Diameter: 4 - 50 mm

> See page 116



Bellows vacuum cups, 1.5 folds - SBF-A

- > High degree of holding force thanks to supports at the sealing lip
- > Fine, flexible sealing lip suitable for uneven surfaces
- > Supporting ribs prevent the deformation of thin-walled products
- > High process reliability due to fixed, non-rotating seat of the screw fitting
- > Diameter: 10 - 80 mm

> See page 119



Bellows vacuum cups, 1.5 folds - SBF-B

- > Soft sealing lip and soft bellows enable adaptation to curved or flexible product surfaces
- > Extremely gentle handling of sensitive products
- > Cost-effective replacement of worn seals thanks to plug-in fittings
- > Diameter: 6 - 20 mm

> See page 122

Continued on the next page →



Series | Bellows vacuum cups SB at a glance

FIPA Bellows vacuum cups SB	
	<p>Bellows vacuum cups, 4.5 folds - SBF-C</p> <ul style="list-style-type: none">> Fine, flexible sealing lip fits in perfectly with irregularities of the product (e.g. bag-packaged goods)> Large stroke for the gentle handling of sensitive products> Connection via screwed fittings (hollow bolt + adapter)> Diameter: 10 - 50 mm <p>> See page 124</p>
	<p>Bellows vacuum cups for chocolates - SL-PB</p> <ul style="list-style-type: none">> Extremely flexible and adaptable suction lip for leak-free sealing of three-dimensional product surfaces> Low-marking and FDA-approved> Diameter: 12 - 16 mm <p>> See page 125</p>
	<p>Vacuum cups for baked goods SL-B</p> <ul style="list-style-type: none">> Multiple folds ensure a high degree of height adjustment and gentle product handling> FDA-approved> Diameter: 34 - 60 mm <p>> See page 126</p>
	<p>Detectable vacuum cups for baked goods - SL-BD</p> <ul style="list-style-type: none">> Detectable, providing optimum assurance that the product is not contaminated by vacuum components> Multiple folds ensure a high degree of height adjustment and gentle product handling> FDA-approved> Diameter: 35 - 40 mm <p>> See page 128</p>
	<p>Vacuum cups for eggs - SL-E</p> <ul style="list-style-type: none">> Bellows vacuum cups in a design specially optimised for handling eggs> Gentle attachment to the product and a high lifting motion thanks to a long vacuum cup stroke> FDA-approved> Diameter: 33 - 34 mm <p>> See page 129</p>
	<p>Bellows vacuum cups 1.5 and 2.5 folds with special connection for standard packaging machines - SV-SB</p> <ul style="list-style-type: none">> Smooth suspension for gentle product handling> Available in silicone (FDA-approved) and NR> Diameter: 16 - 40 mm <p>> See page 130</p>



FIPA Bellows vacuum cups SB



Bellows vacuum cups, 1.5 folds for dynamic sheet handling - SM-B

- > Reliable, non-slip handling of oily sheets thanks to "anti-slip" supporting ribs. Good absorption of lateral forces
- > Internal supports help to prevent deep-drawing or deformation of thin sheets
- > Leak-free suction even with curved surfaces due to flexible sealing lip
- > Secure fit thanks to vulcanised connecting thread
- > Diameter: 30 - 125 mm

> See page 133



Bellows vacuum suction plates softgrip - SBPL-SG

- > Very gentle handling of sensitive products thanks to highly flexible fold walls
- > Combines the flexibility of bellows cups with the stability of flat vacuum suction plates
- > Central support block with safety sealing lip ensures a firm grip
- > Diameter: 150 - 210 mm

> See page 136



Bellows vacuum suction plates - SBPL-E

- > Gentle handling of heavy, sensitive products
- > Good adaptation to concave or convex surfaces
- > Rubberised support surfaces prevent deformation of workpieces
- > Diameter: 150 - 350 mm

> See page 137



Bellows vacuum cups, universal, 1.5 folds - SBU 1



Product Description

Universal bellows vacuum cups with 1.5 folds for handling sensitive or uneven products.
Connection up to \varnothing 75 mm by means of plug-in nipple, from \varnothing 88 mm with vulcanised bracket.

Advantage

- > Bellows compensates for differences in height and enables good adaptation to curved or uneven product surfaces
- > Soft attachment for sensitive products
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour	Connection thread
23.005.181.*	SBU 1-5	2	1.5	NBR (sw), SI (tr)	--
23.011.008.*	SBU 1-11	4.5	1.5	NBR (sw), SI (tr)	--
23.013.120.*	SBU 1-13	4	1.5	NBR (sw), SI (tr), NR (gr)	--
23.016.016.*	SBU 1-16	6	1.5	NBR (sw), SI (tr)	--
23.019.119.*	SBU 1-19	4	1.5	NBR (sw), SI (tr)	--
23.022.028.*	SBU 1-22	8	1.5	NBR (sw), SI (tr)	--
23.025.137.*	SBU 1-25	9	1.5	NBR (sw), SI (tr), NR (gr)	--
23.033.039.*	SBU 1-33	12	1.5	NBR (sw), SI (tr), NR (gr)	--
23.043.096.*	SBU 1-43	12	1.5	NBR (sw), SI (tr), NR (gr)	--
23.053.033.*	SBU 1-53	11	1.5	NBR (sw), SI (tr), NR (gr)	--
23.075.151.*	SBU 1-75	20	1.5	NBR (sw), SI (tr)	--
22.088.158.*	SBU 1-88	23	1.5	NBR (sw), SI (tr)	G1/4-male
22.088.159.*	SBU 1-88	23	1.5	NBR (sw), SI (tr)	G1/4-female

Continued on the next page

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



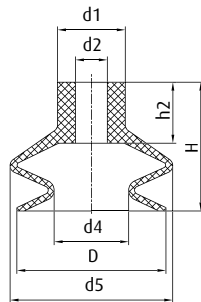
Series | Bellows vacuum cups SB

Bellows vacuum cups, universal, 1.5 folds - SBU 1

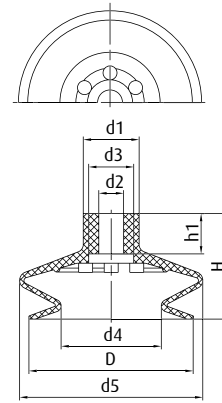
Accessories

Item no.	Suitable fittings							
	M5-male	M5-female	M6-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
23.005.181.*	270.195 (p.409)	--	--	--	--	--	--	--
23.011.008.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
23.013.120.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
23.016.016.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
23.019.119.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
23.022.028.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
23.025.137.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
23.033.039.*	--	--	270.315 (p.414)	--	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.043.096.*	--	--	270.315 (p.414)	--	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.053.033.*	--	--	270.315 (p.414)	--	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.075.151.*	--	--	--	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)
22.088.158.*	--	--	--	--	--	--	--	--
22.088.159.*	--	--	--	--	--	--	--	--

Dimensions



Drawing A

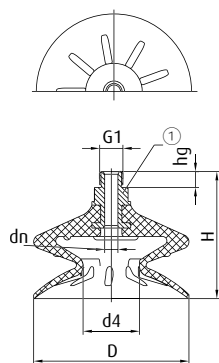


Drawing B

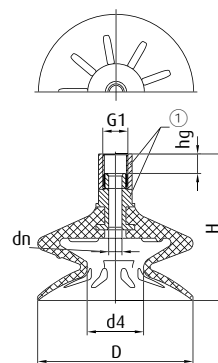
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing C



Drawing D

① = Aluminium fitting, vulcanised

Item no.	Drawing	∅ D [mm]	∅ d1 [mm]	∅ d2 [mm]	∅ d3 [mm]	∅ d4 [mm]	∅ d5 [mm]	∅ dn [mm]	G1	H [mm]	h1 [mm]	h2 [mm]	hg [mm]
23.005.181._*	A	5	3	1.5	--	2	5	--	--	13	--	9.5	--
23.011.008._*	A	12	10	5	--	4.5	12	--	--	16	--	9	--
23.013.120._*	A	13.5	10	3.8	--	5	13.5	--	--	16	--	9	--
23.016.016._*	A	16	10	5	--	8	17	--	--	19	--	9	--
23.019.119._*	A	18.5	10	4.5	--	11	19.5	--	--	15	--	8.5	--
23.022.028._*	A	22	10	4.5	--	11	24	--	--	19	--	9	--
23.025.137._*	A	24	10	4	--	10	24	--	--	23	--	9	--
23.033.039._*	B	33.5	18	8	16.5	17	36	--	--	28	13	--	--
23.043.096._*	B	43	18	8	14.5	23	45	--	--	27	12	--	--
23.053.033._*	B	53	18	8	14.5	32	59	--	--	34	13	--	--
23.075.151._*	B	75	27	11	--	43	70.5	--	--	52	--	22	--
22.088.158._*	C	88	--	--	--	32	88	7.5	G1/4	72	--	--	9
22.088.159._*	D	88	--	--	--	32	88	7.5	G1/4	83	--	--	11

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

High temperature Thermalon® bellows cups, 1.5 folds - SKT-B1

High temperature Thermalon® bellows cups, 1.5 folds - SKT-B1

UP TO 160 °C & MINIMUM MARKING




Product Description

Bellows vacuum cups for uneven surfaces especially suited for removing hot plastic parts to be painted from an injection moulding machine. Thermalon® is a material mixture specially optimised for the plastics industry with a hardness of 60° Shore A. Connection via plug-in nipple.


Advantage

- > Extremely low-marking
- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Bellows compensate differences in height and enable good adaptation to curved or uneven product surfaces

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour	Usage temperature [°C]
23.011.234._*	SKT-B1-11	5.5	1.5	Thermalon® (bl)	0 - 160
23.014.235._*	SKT-B1-14	5	1.5	Thermalon® (bl)	0 - 160
23.016.236._*	SKT-B1-16	8.5	1.5	Thermalon® (bl)	0 - 160
23.018.237._*	SKT-B1-18	5	1.5	Thermalon® (bl)	0 - 160
23.020.238._*	SKT-B1-20	5	1.5	Thermalon® (bl)	0 - 160
23.022.239._*	SKT-B1-22	8	1.5	Thermalon® (bl)	0 - 160
23.025.240._*	SKT-B1-25	12	1.5	Thermalon® (bl)	0 - 160
23.033.241._*	SKT-B1-33	11	1.5	Thermalon® (bl)	0 - 160
23.043.242._*	SKT-B1-43	12.5	1.5	Thermalon® (bl)	0 - 160
23.053.243._*	SKT-B1-53	15	1.5	Thermalon® (bl)	0 - 160
23.063.244._*	SKT-B1-63	15	1.5	Thermalon® (bl)	0 - 160

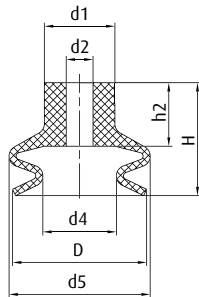
Accessories

Item no.	 Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
23.011.234._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.014.235._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.016.236._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.018.237._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.020.238._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.022.239._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.025.240._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.033.241._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.043.242._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.053.243._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
23.063.244._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)

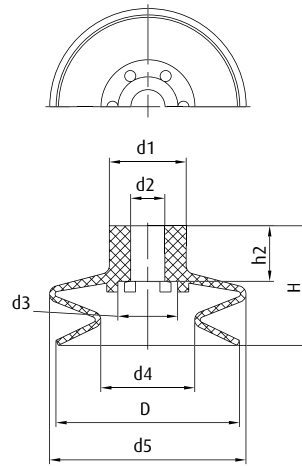
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h2 [mm]
23.011.234.*	A	11	10	3.8	--	5	12	16	9
23.014.235.*	A	13	10	3.8	--	5	14	16	9
23.016.236.*	A	16	10	3.8	--	8	17.5	19	9
23.018.237.*	A	18	10	3.8	--	8	18	16.5	9
23.020.238.*	A	19	10	3.8	--	10.5	20	16	9
23.022.239.*	A	22	10	3.8	--	11	24	19	9
23.025.240.*	A	24	10	3.8	--	9.5	25	23	9
23.033.241.*	B	33	18	8	14	17	36	28	13
23.043.242.*	B	43	18	8	14	22	46	28	13
23.053.243.*	B	53	18	8	14	33	59	34	13
23.063.244.*	B	63	18	8	14	44	67	34	13

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

High temperature HNBR bellows cups, 1.5 folds - SKH-B1

High temperature HNBR bellows cups, 1.5 folds - SKH-B1

UP TO 160 °C &
MINIMUM MARKING




Product Description

Bellows vacuum cups for uneven surfaces with suitability for removing hot plastic parts to be painted from an injection moulding machine. Connection via plug-in nipple.


Advantage

- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Minimum-marking
- > Bellows compensate differences in height and enable good adaptation to curved or uneven product surfaces

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour	Usage temperature [°C]
23.005.178._*	SKH-B1-5	2	1.5	HNBR (ge)	0 - 160
23.008.166._*	SKH-B1-8	3.5	1.5	HNBR (ge)	0 - 160
23.011.008._*	SKH-B1-11	4.5	1.5	HNBR (ge)	0 - 160
23.015.122._*	SKH-B1-15	5	1.5	HNBR (ge)	0 - 160
23.016.016._*	SKH-B1-16	6	1.5	HNBR (ge)	0 - 160
23.020.124._*	SKH-B1-20	8	1.5	HNBR (ge)	0 - 160
23.030.125._*	SKH-B1-30	9	1.5	HNBR (ge)	0 - 160
23.043.096._*	SKH-B1-43	12	1.5	HNBR (ge)	0 - 160

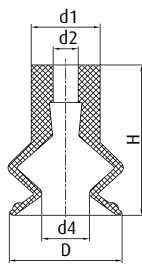
Accessories

Item no.	 Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
23.005.178._*	270.153 (p.409)	--	--	--	--	--	--
23.008.166._*	270.153 (p.409)	--	--	--	--	--	--
23.011.008._*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
23.015.122._*	270.010 (p.411)	270.005 (p.412)	--	270.009 (p.417)	270.007 (p.422)	--	--
23.016.016._*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
23.020.124._*	270.311 (p.411)	--	--	270.063 (p.419)	270.061 (p.422)	--	--
23.030.125._*	--	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)
23.043.096._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)

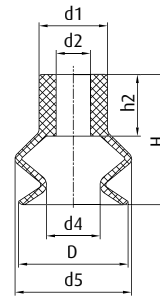
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



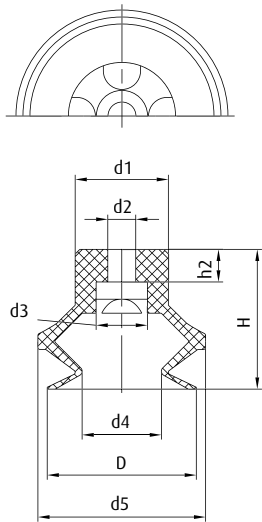
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h2 [mm]
23.005.178.*	A	6	5	2	--	2.2	--	9	--
23.008.166.*	A	9	5.5	2	--	3.8	--	12	--
23.011.008.*	B	12	10	5	--	4.5	12	16	9
23.015.122.*	C	15	8.5	3.6	6	8	17	16	1.7
23.016.016.*	B	16	10	5	--	8	17	19	9
23.020.124.*	C	21.5	15	4.5	11	10	23.5	20	4.6
23.030.125.*	C	32	20	6	11	17	36	30	7
23.043.096.*	B	43	18	8	--	23	45	27	12

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups, universal, 2.5 folds - SBU 2




Product Description

Universal bellows vacuum cups with 2.5 folds for handling sensitive or uneven products over large lift movements.
Connection up to \varnothing 75 mm by means of plug-in nipple, from \varnothing 88 mm with vulcanised bracket.

Advantage

- > Bellows compensate for differences in height and enable good adaptation to curved or uneven product surfaces
- > Soft attachment for sensitive products
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour	Connection thread
21.004.083._*	SBU 2-4	3	2.5	SI (tr)	--
21.005.057._*	SBU 2-5	3	2.5	NBR (gr), SI (g), SI-AS (sw)	--
21.006.093._*	SBU 2-6A	3	2.5	NBR (sw), SI (tr)	--
21.006.087._*	SBU 2-6	3.5	2.5	NBR (sw), SI (tr)	--
21.008.094._*	SBU 2-8	4	2.5	NBR (sw), SI (tr)	--
21.009.002._*	SBU 2-9	2	2.5	NBR (sw), SI (tr), SI-AS (sw), NR (gr), PU (bl)	--
21.010.119._*	SBU 2-10	8	2.5	NBR (sw), SI (tr)	--
21.012.135._*	SBU 2-12	7	2.5	NBR (sw), SI (tr), NR (gr), PU (bl)	--
21.014.133._*	SBU 2-14A	11	2.5	NBR (sw), SI (tr), NR (gr)	--
21.014.007._*	SBU 2-14	12	2.5	NBR (sw), SI (tr), PU (bl)	--
21.018.010._*	SBU 2-18	8	2.5	NBR (sw), SI (tr), PU (bl)	--
21.020.016._*	SBU 2-20	9	2.5	NBR (sw), SI (tr)	--
21.025.060._*	SBU 2-25	19	2.5	NBR (sw), SI (tr)	--
21.032.075._*	SBU 2-32	13	2.5	NBR (sw), SI (tr), NR (gr), PU (bl)	--
21.043.049._*	SBU 2-43	19	2.5	NBR (sw), SI (tr), NR (gr)	--
21.062.055._*	SBU 2-62	25	2.5	NBR (sw), SI (tr)	--
20.088.123._*	SBU 2-88	36	2.5	NBR (sw), SI (tr)	G1/4-male
20.088.124._*	SBU 2-88	36	2.5	NBR (sw), SI (tr)	G1/4-female

Continued on the next page 

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



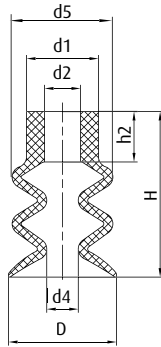
Series | Bellows vacuum cups SB

Bellows vacuum cups, universal, 2.5 folds - SBU 2

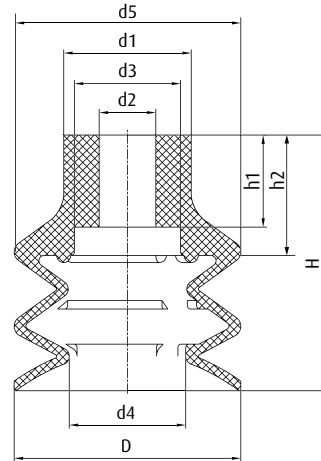
Accessories

Item no.	Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.004.083.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.005.057.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.006.093.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.006.087.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.008.094.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.009.002.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.010.119.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.012.135.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.014.133.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.014.007.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.018.010.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.020.016.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
21.025.060.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
21.032.075.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.043.049.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.062.055.*	--	--	270.315 (p.414)	--	--	270.540 (p.429)	270.539 (p.434)
20.088.123.*	--	--	--	--	--	--	--
20.088.124.*	--	--	--	--	--	--	--

Dimensions



Drawing A

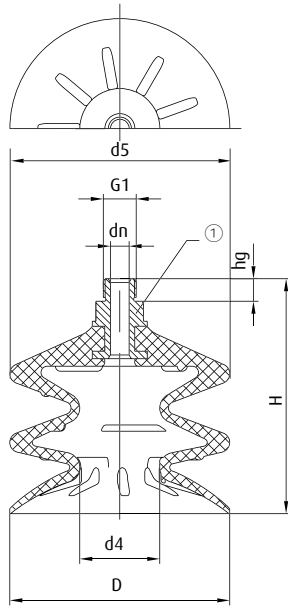


Drawing B

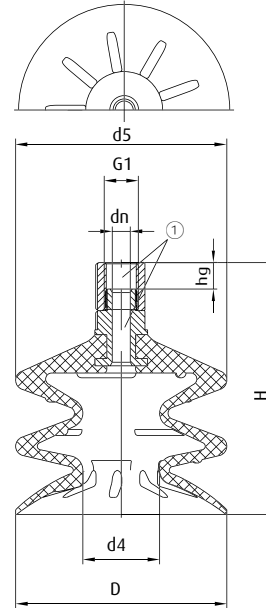
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing C



Drawing D

① = Aluminium fitting, vulcanised

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	Ø dn [mm]	G1	H [mm]	h1 [mm]	h2 [mm]	hg [mm]
21.004.083.*	A	4.5	7	4	--	2	6.5	--	--	14	--	8	--
21.005.057.*	A	5.5	7	4	--	2.5	6.5	--	--	14	--	8.5	--
21.006.093.*	A	6	8	4	--	3	8	--	--	15	--	8	--
21.006.087.*	A	6.5	9	5	--	2.5	6.5	--	--	14.5	--	7.5	--
21.008.094.*	A	7.5	8	4	--	4	7.5	--	--	15	--	8.5	--
21.009.002.*	A	9	9	5	--	4	9	--	--	15	--	7	--
21.010.119.*	A	10	10	5	--	4.5	10	--	--	21	--	7	--
21.012.135.*	A	12	10	5	--	5	12	--	--	21	--	9	--
21.014.133.*	A	14	10	3.8	--	5.5	14	--	--	23	--	7.5	--
21.014.007.*	A	15	10	5	--	4.5	15	--	--	23	--	7	--
21.018.010.*	A	18	10	4.5	--	7	18	--	--	22	--	8.5	--
21.020.016.*	A	20	10	4.5	--	10	20	--	--	23	--	9	--
21.025.060.*	A	25	10	4.8	--	10	25	--	--	33	--	8	--
21.032.075.*	B	32	18	8	15	16.5	32	--	--	36	13	17	--
21.043.049.*	B	42	20	8	15	15.5	42	--	--	46	13	17	--
21.062.055.*	B	62	21	8.5	14.5	27.5	62	--	--	54	13	14.7	--
20.088.123.*	C	88	--	--	--	32	88	7.5	G1/4	94	--	--	9
20.088.124.*	D	88	--	--	--	32	88	7.5	G1/4	105	--	--	11

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

High temperature Thermalon® bellows cups, 2.5 folds - SKT-B2

High temperature Thermalon® bellows cups, 2.5 folds - SKT-B2

UP TO 160 °C & MINIMUM MARKING



Product Description

Bellows vacuum cups for uneven surfaces especially suited for removing hot plastic parts to be painted from an injection moulding machine. Thermalon® is a material mixture specially optimised for the plastics industry with a hardness of 60° Shore A. Connection via plug-in nipple.

Advantage

- > Extremely low-marking
- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Long vacuum cup lift and good adaptation to curved or uneven product surfaces

Technical data

Item no.	Model / Lip dimensions	↓	Material / Colour	Number of folds	Usage temperature [°C]
21.005.146._*	SKT-B2-5	3	Thermalon® (bl)	2.5	0 - 160
21.007.147._*	SKT-B2-7	3	Thermalon® (bl)	2.5	0 - 160
21.009.148._*	SKT-B2-9	3	Thermalon® (bl)	2.5	0 - 160
21.012.149._*	SKT-B2-12	7	Thermalon® (bl)	2.5	0 - 160
21.014.150._*	SKT-B2-14	10	Thermalon® (bl)	2.5	0 - 160
21.018.151._*	SKT-B2-18	10	Thermalon® (bl)	2.5	0 - 160
21.020.152._*	SKT-B2-20	10	Thermalon® (bl)	2.5	0 - 160
21.025.153._*	SKT-B2-25	20	Thermalon® (bl)	2.5	0 - 160
21.032.154._*	SKT-B2-32	14.5	Thermalon® (bl)	2.5	0 - 160
21.042.155._*	SKT-B2-42	22	Thermalon® (bl)	2.5	0 - 160
21.052.156._*	SKT-B2-52	27	Thermalon® (bl)	2.5	0 - 160
21.062.157._*	SKT-B2-62	31	Thermalon® (bl)	2.5	0 - 160

Accessories

Item no.	Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.005.146._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.007.147._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.009.148._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.012.149._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.014.150._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.018.151._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.020.152._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.025.153._*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.032.154._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.042.155._*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)

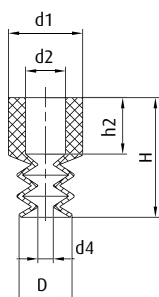
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



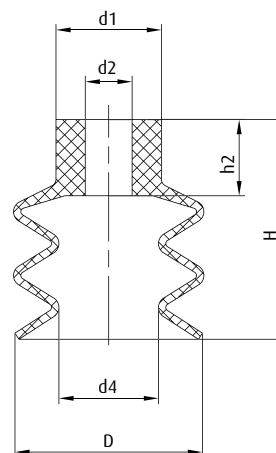
Accessories

Item no.	Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.052.156.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.062.157.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)

Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d4 [mm]	H [mm]	h2 [mm]
21.005.146.*	A	5.5	7	4	2.2	13.5	8
21.007.147.*	A	6	8.5	4.5	1.8	14	6.5
21.009.148.*	A	9.5	9	4.4	4	15	7.5
21.012.149.*	B	12	10	3.8	5	21	9
21.014.150.*	B	14	10	3.8	5	23	9
21.018.151.*	B	17.5	10	3.8	7.5	23	9
21.020.152.*	B	20	10	3.8	10	23	9
21.025.153.*	B	25	10	3.8	10	34	9
21.032.154.*	B	32	18	8	17	38	13
21.042.155.*	B	42	18	8	18.5	46	13
21.052.156.*	B	52	18	8	25	49	13
21.062.157.*	B	62	21	8	30	55	13

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

High temperature HNBR bellows cups, 2.5 folds - SKH-B2

High temperature HNBR bellows cups, 2.5 folds - SKH-B2

UP TO 160 °C &
MINIMUM MARKING



Product Description

Bellows vacuum cups for uneven surfaces with suitability for removing hot plastic parts to be painted from an injection moulding machine. Connection via plug-in nipple.

Advantage

- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Minimum-marking
- > Long vacuum cup lift and good adaptation to curved or uneven product surfaces

Technical data

Item no.	Model / Lip dimensions	Number of folds	Number of folds	Material / Colour	Usage temperature [°C]
21.005.057.*	SKH-B2-5	3	2.5	HNBR (ge)	0 - 160
21.007.089.*	SKH-B2-7	3	2.5	HNBR (ge)	0 - 160
21.009.002.*	SKH-B2-9	2	2.5	HNBR (ge)	0 - 160
21.012.135.*	SKH-B2-12	7	2.5	HNBR (ge)	0 - 160
21.014.053.*	SKH-B2-14	9	2.5	HNBR (ge)	0 - 160
21.018.010.*	SKH-B2-18	8	2.5	HNBR (ge)	0 - 160
21.020.016.*	SKH-B2-20	9	2.5	HNBR (ge)	0 - 160
21.032.075.*	SKH-B2-32	13	2.5	HNBR (ge)	0 - 160
21.043.049.*	SKH-B2-43	19	2.5	HNBR (ge)	0 - 160
21.060.051.*	SKH-B2-60	25	2.5	HNBR (ge)	0 - 160

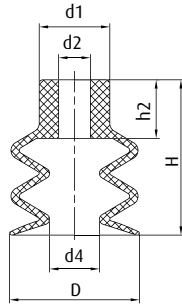
Accessories

Item no.	Suitable fittings						
	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.005.057.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.007.089.*	270.010 (p.411)	270.005 (p.412)	--	270.009 (p.417)	270.007 (p.422)	--	--
21.009.002.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.012.135.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.014.053.*	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
21.018.010.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
21.020.016.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
21.032.075.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.043.049.*	--	--	270.315 (p.414)	270.196 (p.420)	270.114 (p.422)	270.190 (p.428)	270.192 (p.432)
21.060.051.*	--	--	270.315 (p.414)	--	--	270.540 (p.429)	270.539 (p.434)

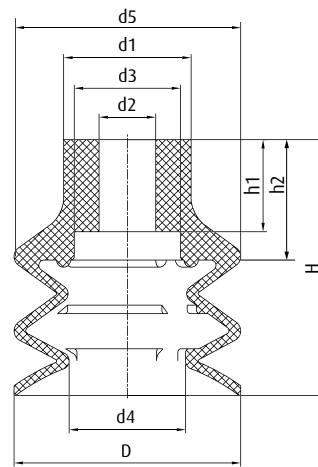
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h1 [mm]	h2 [mm]
21.005.057.*	A	5.5	7	4	--	2.5	--	14	--	8.5
21.007.089.*	B	7	7.5	4	5.5	3	7	10	2	3.5
21.009.002.*	A	9	9	5	--	4	--	15	--	7
21.012.135.*	A	12	10	5	--	5	--	21	--	9
21.014.053.*	A	14	8	4	--	5.5	--	18	--	5.5
21.018.010.*	A	18	10	4.5	--	7	--	22	--	8.5
21.020.016.*	A	20	10	4.5	--	10	--	23	--	9
21.032.075.*	B	32	18	8	15	16.5	32	36	13	17
21.043.049.*	B	42	20	8	15	15.5	42	46	13	17
21.060.051.*	B	61	22	8	14	28	61	57	14	18.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, universal, 3.5 folds - SBU 3

Bellows vacuum cups, universal, 3.5 folds - SBU 3



Product Description

Universal bellows vacuum cups with 3.5 folds for handling sensitive or uneven products over very large lift movements. Connection via plug-in nipple.

Advantage

- > Bellows compensate for differences in height and enable good adaptation to curved or uneven product surfaces
- > Soft attachment for sensitive products
- > Cost-effective replacement of worn seals

Technical data

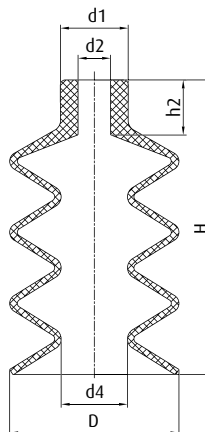
Item no.	Model / Lip dimensions		Number of folds	Material / Colour
25.018.031.*	SBU 3-18	12	3.5	NBR (sw), SI (tr)
25.025.005.*	SBU 3-25	24	3.5	NBR (sw), SI (tr)

Accessories

Suitable fittings

Item no.	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male
25.018.031.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)
25.025.005.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)

Dimensions



Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d4 [mm]	H [mm]	h2 [mm]
25.018.031.*	18	9.5	5	8	29	7
25.025.005.*	25	10	4.8	10	44	8

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760

Series | Bellows vacuum cups SB

Vulkollan® bellows cups, universal, 1.5 to 2.5 folds - SBU-VU



Vulkollan® bellows cups, universal, 1.5 to 2.5 folds - SBU-VU



SBU1-VU

SBU2-VU




Product Description

Extremely robust universal bellows vacuum cups, material made from Vulkollan®

Advantage

- > Minimal abrasion
- > Very long life cycle
- > Very good resetting, enabling fast cycle times
- > Bellows compensate differences in height and enable good adaptation to curved or uneven product surfaces
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
	Bellows vacuum cups, 1.5 folds - SBU1-VU			
23.020.169.*	SBU1-VU-20	7	1.5	Vulkollan® (br)
23.030.170.*	SBU1-VU-30	8	1.5	Vulkollan® (br)
23.050.171.*	SBU1-VU-50	10	1.5	Vulkollan® (br)
	Bellows vacuum cups, 2.5 folds - SBU2-VU			
21.009.106.*	SBU2-VU-9	2	2.5	Vulkollan® (br)
21.020.090.*	SBU2-VU-20	8	2.5	Vulkollan® (br)
21.032.091.*	SBU2-VU-30	16	2.5	Vulkollan® (br)
21.030.076.*	SBU2-VU-31	14	2.5	Vulkollan® (br)
21.051.097.*	SBU2-VU-50	18	2.5	Vulkollan® (br)
21.062.092.*	SBU2-VU-60	25	2.5	Vulkollan® (br)

Continued on the next page 

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



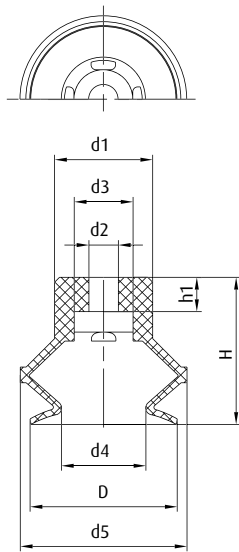
Series | Bellows vacuum cups SB

Vulkollan® bellows cups, universal, 1.5 to 2.5 folds - SBU-VU

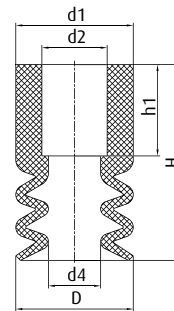
Accessories

Item no.	Suitable fittings							
	M5-male	M5-female	M6-male	M8-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
Bellows vacuum cups, 1.5 folds - SBU1-VU								
23.020.169.*	--	--	270.312/19 (p.414)	--	270.482 (p.420)	270.481 (p.423)	270.483 (p.429)	270.484 (p.433)
23.030.170.*	--	--	270.312/19 (p.414)	--	270.482 (p.420)	270.481 (p.423)	270.483 (p.429)	270.484 (p.433)
23.050.171.*	--	--	270.314 (p.415)	--	270.490 (p.420)	270.489 (p.423)	270.491 (p.429)	270.492 (p.434)
Bellows vacuum cups, 2.5 folds - SBU2-VU								
21.009.106.*	270.013 (p.410)	270.005 (p.412)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
21.020.090.*	270.024 (p.410)	--	270.104 (p.413)	--	270.033 (p.416)	270.478 (p.421)	--	--
21.032.091.*	--	--	270.315 (p.414)	--	270.132 (p.417)	270.114 (p.422)	270.190, 270.540 (p.428)	270.192, 270.539 (p.432)
21.030.076.*	--	--	--	270.255 (p.415)	270.486 (p.420)	270.485 (p.423)	270.487 (p.429)	270.488 (p.434)
21.051.097.*	--	--	--	--	270.132 (p.417)	270.114 (p.422)	270.204 (p.427)	270.324 (p.432)
21.062.092.*	--	--	270.315 (p.414)	--	--	--	270.540 (p.429)	270.539 (p.434)

Dimensions



Drawing A

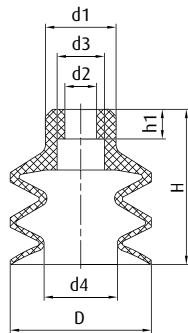


Drawing B

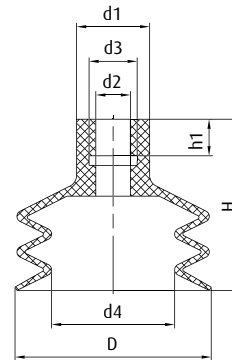
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



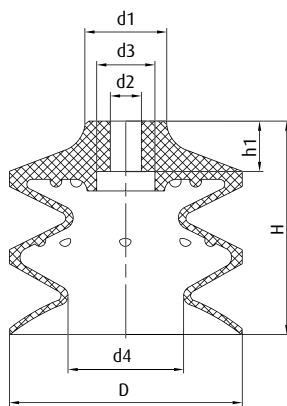
Dimensions



Drawing C



Drawing D



Drawing E

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h1 [mm]
Bellows vacuum cups, 1.5 folds - SBU1-VU									
23.020.169.*	A	20	15	6	12	12.5	22	22	7
23.030.170.*	A	30	20	6	12	17	34	30	7
23.050.171.*	A	50	29	9	20	31	56	37	7
Bellows vacuum cups, 2.5 folds - SBU2-VU									
21.009.106.*	B	9	9	5	--	4	--	15	7
21.020.090.*	C	20	10	4.5	6.5	10.5	--	22	4.2
21.032.091.*	B	30	18	8	15	17	--	38	13
21.030.076.*	C	31	18.5	8	15	19.5	--	29	7
21.051.097.*	D	51	19	9	12.5	32	--	45	9.5
21.062.092.*	E	60	21	8	15	30	--	55	13

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups with 1.5 and 4.5 folds, modular - SP-B

Bellows vacuum cups with 1.5 and 4.5 folds, modular - SP-B




Product Description

Bellows vacuum cups with a short or long lift.
Version: Replacement sealing lip for attachment to fitting

Advantage

- > High suction force
- > Fast cycle times possible
- > Very resistant to wear (Tepuflex®)
- > Compatible with established products from other vendors

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
Bellows vacuum cups, 1.5 folds				
23.005.178._*	SP-B1-5	2	1.5	SI (r), SI-AS (sw), CR (sw)
23.008.166._*	SP-B1-8	3.5	1.5	SI (r), SI-AS (sw), CR (sw)
23.011.007._*	SP-B1-10	5	1.5	SI (tr), SI-AS (sw), CR (sw)
23.016.015._*	SP-B1-15	7	1.5	SI (tr), SI-AS (sw), CR (sw)
23.020.026._*	SP-B1-20	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.030.037._*	SP-B1-30	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.040.045._*	SP-B1-40	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.050.054._*	SP-B1-50	12	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.078.065._*	SP-B1-75	22	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.117.069._*	SP-B1-110	29	1.5	Tepuflex® (or), SI (tr), CR (sw)
23.160.072._*	SP-B1-150	41	1.5	Tepuflex® (or), SI (tr), CR (sw)
Bellows vacuum cups, 4.5 folds				
25.020.025._*	SP-B4-20	16	4.5	SI (tr), CR (sw)
25.030.026._*	SP-B4-30	21	4.5	SI (tr), CR (sw)
25.040.027._*	SP-B4-40	20	4.5	SI (tr), CR (sw)
25.050.028._*	SP-B4-50	25	4.5	SI (tr), CR (sw)

Accessories

Filter disc	Retaining ring	Stiffening ring
--	--	--
--	--	--
--	--	--
--	--	--
78.200 (p.474)	78.011 (p.475)	--
78.201 (p.474)	78.011 (p.475)	--
78.202 (p.474)	78.012 (p.475)	--
78.203 (p.474)	78.013 (p.475)	--
--	--	--
--	--	--
--	--	--
--	--	--
--	78.011 (p.475)	78.000 (p.475)
--	78.012 (p.475)	78.001 (p.475)
--	78.012 (p.475)	78.002 (p.475)
--	78.013 (p.475)	78.003 (p.475)

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Accessories

Item no.	Suitable fittings									
	M5- male	M5- female	M6- male	G1/8- male	G1/8- female	G1/4- male	G3/8- male	G3/8- female	G1/2- female	G3/4- female
Bellows vacuum cups, 1.5 folds										
23.005.178.*	270.153 (p.409)	--	--	--	--	--	--	--	--	--
23.008.166.*	270.153 (p.409)	--	--	--	--	--	--	--	--	--
23.011.007.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
23.016.015.*	270.134 (p.409)	--	270.104 (p.413)	--	--	--	--	--	--	--
23.020.026.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
23.030.037.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
23.040.045.*	--	--	--	--	270.251, 270.501-S (p.423)	270.506-S (p.428)	270.505-S (p.434)	--	--	--
23.050.054.*	--	--	--	--	270.252, 270.502-S (p.424)	270.504-S (p.429)	270.507-S (p.435)	--	--	--
23.078.065.*	--	--	--	--	270.527-S (p.424)	--	--	270.528-S (p.436)	270.529-S (p.436)	--
23.117.069.*	--	--	--	--	--	--	--	270.530-S (p.437)	270.531-S (p.437)	--
23.160.072.*	--	--	--	--	--	--	--	--	270.532-S (p.437)	270.533-S (p.437)
Bellows vacuum cups, 4.5 folds										
25.020.025.*	--	270.500-S (p.413)	--	270.250, 270.503-S (p.418)	--	--	--	--	--	--
25.030.026.*	--	--	--	--	270.251, 270.501-S (p.423)	270.506-S (p.428)	270.505-S (p.434)	--	--	--
25.040.027.*	--	--	--	--	270.251, 270.501-S (p.423)	270.506-S (p.428)	270.505-S (p.434)	--	--	--
25.050.028.*	--	--	--	--	270.252, 270.502-S (p.424)	270.504-S (p.429)	270.507-S (p.435)	--	--	--

Ordering notes:

Explanation of the ending of the accessory fitting:
 > S with screen

Continued on the next page →

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups with 1.5 and 4.5 folds, modular - SP-B

Bellows vacuum cups - modular

Example:



+



=



Assembly example



+



=

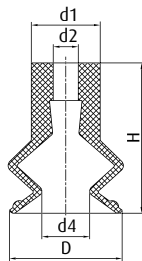


Assembly example

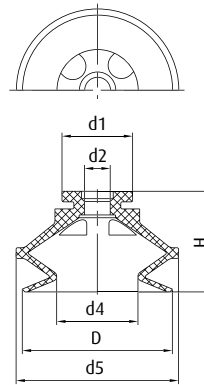
- * Fittings are optionally available with and without filter screen
- ** Fittings come fitted with filter screen as standard

- > The modular series allows you to assemble your own vacuum cups
- > Worn sealing lips can be replaced quickly, cost-effective and easily
- > High flexibility thanks to a large selection of fitting threads

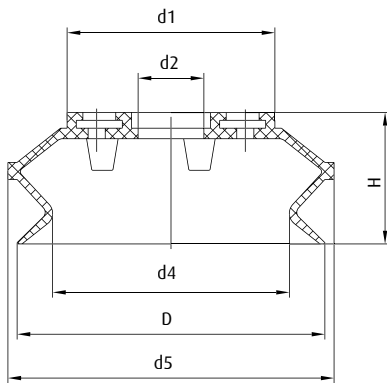
Dimensions



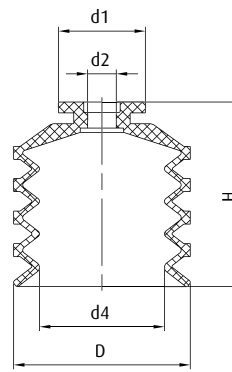
Drawing A



Drawing B



Drawing C



Drawing D

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

Series | Bellows vacuum cups SB

Bellows vacuum cups with 1.5 and 4.5 folds, modular - SP-B



Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]
Bellows vacuum cups, 1.5 folds							
23.005.178._*	A	6	4.5	2	2.2	--	9
23.008.166._*	A	9	5.5	2	3.8	--	12
23.011.007._*	A	11	9	3.9	5.5	--	17
23.016.015._*	A	16	9	3.9	8	--	19
23.020.026._*	B	21	14.5	5.5	11	24	19.5
23.030.037._*	B	33	15	5.5	18.5	37	28
23.040.045._*	B	43	20	7.5	23	46	29
23.050.054._*	B	53	26	10.5	32	58	35
23.078.065._*	C	81	55	10	59	84	37
23.117.069._*	C	117	79	25	90	124	50
23.160.072._*	C	160	110	24	112	166	67
Bellows vacuum cups, 4.5 folds							
25.020.025._*	D	20	14.5	5	14	--	23
25.030.026._*	D	31	20	6.5	22	--	32
25.040.027._*	D	41	20	6.5	29	--	43
25.050.028._*	D	51	27	10.5	37	--	53

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 and 4.5 folds, with fully assembled fitting - SP-B

Bellows vacuum cups, 1.5 and 4.5 folds, with fully assembled fitting - SP-B





Product Description


Bellows vacuum cups with a short or long lift.
Version: Complete with vacuum cup fitting and filter screen.

Advantage

- > High suction force
- > Fast cycle times possible
- > Very resistant to wear (Tepuflex®)
- > Compatible with established products from other vendors

Technical data

Item no.	Model / Lip dimensions	Connection thread		Number of folds	Material / Colour
					
Complete vacuum cups, 1.5 folds with fitting & filter screen					
22.020.020._*	SP-B1-20	G1/8-male, M5-female	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.030.033._*	SP-B1-30	G1/8-male, M5-female	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.040.045._*	SP-B1-40	G1/8-female	9	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.050.056._*	SP-B1-50	G1/8-female	12	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.078.163._*	SP-B1-75	G1/8-female	22	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.078.166._*	SP-B1-75	G3/8-female	22	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.078.169._*	SP-B1-75	G1/2-female	22	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.117.164._*	SP-B1-110	G3/8-female	29	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.117.167._*	SP-B1-110	G1/2-female	29	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.160.165._*	SP-B1-150	G1/2-female	41	1.5	Tepuflex® (or), SI (tr), CR (sw)
22.160.168._*	SP-B1-150	G3/4-female	41	1.5	Tepuflex® (or), SI (tr), CR (sw)

					
Complete vacuum cups, 4.5 folds with fitting & filter screen					
24.020.033._*	SP-B4-20	G1/8-male, M5-female	16	4.5	SI (tr), CR (sw)
24.030.039._*	SP-B4-30	G1/8-female	21	4.5	SI (tr), CR (sw)
24.040.074._*	SP-B4-40	G1/8-female	20	4.5	SI (tr), CR (sw)
24.050.087._*	SP-B4-50	G1/8-female	30	4.5	SI (tr), CR (sw)

Accessories

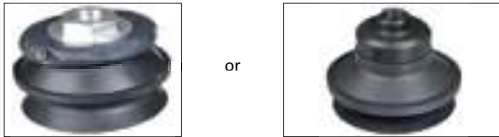
Spare cup	Filter disc	Stiffening ring
23.020.026._* (p.308)	78.200 (p.474)	--
23.030.037._* (p.321)	78.201 (p.474)	--
23.040.045._* (p.332)	78.202 (p.474)	--
23.050.054._* (p.338)	78.203 (p.474)	--
23.078.065._* (p.349)	--	--
23.078.065._* (p.349)	--	--
23.078.065._* (p.349)	--	--
23.117.069._* (p.355)	--	--
23.117.069._* (p.355)	--	--
23.160.072._* (p.358)	--	--
23.160.072._* (p.358)	--	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



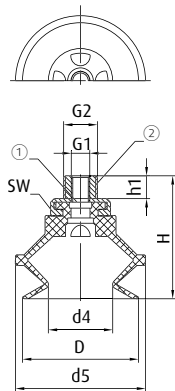
Bellows vacuum cups with fully assembled fitting

Example:

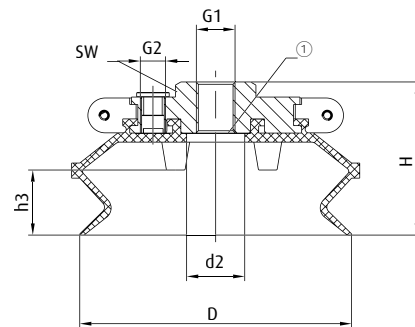


- > High process reliability thanks to permanently installed fitting
- > Worn sealing lips can be replaced if necessary

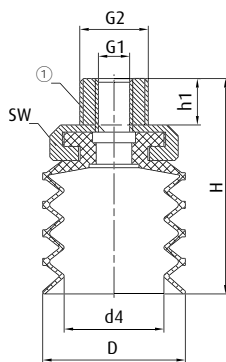
Dimensions



Drawing A



Drawing B



Drawing C

① = Filter screen ② = Aluminium

Continued on the next page →

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 and 4.5 folds, with fully assembled fitting - SP-B

Item no.	Drawing	∅ D [mm]	∅ d2 [mm]	∅ d4 [mm]	∅ d5 [mm]	G1	G2	H [mm]	h1 [mm]	h3 [mm]	SW
Complete vacuum cups, 1.5 folds with fitting & filter screen											
22.020.020.*	A	21	--	11	24	M5	G1/8	27	6.5	--	17
22.030.033.*	A	33	--	18.5	37	M5	G1/8	35	6.5	--	17
22.040.045.*	A	43	--	23	46	G1/8	--	35	--	--	12
22.050.056.*	A	53	--	32	58	G1/8	--	42	--	--	12
22.078.163.*	B	81	10	--	--	G1/8	--	50	--	21.6	28
22.078.166.*	B	81	10	--	--	G3/8	--	50	--	21.6	28
22.078.169.*	B	81	10	--	--	G1/2	--	50	--	21.6	28
22.117.164.*	B	117	25	--	--	G3/8	G1/8	66	--	28	30
22.117.167.*	B	117	25	--	--	G1/2	G1/8	66	--	28	30
22.160.165.*	B	160	24	--	--	G1/2	G1/8	81.5	--	42	38
22.160.168.*	B	160	24	--	--	G3/4	G1/8	81.5	--	42	38
Complete vacuum cups, 4.5 folds with fitting & filter screen											
24.020.033.*	C	20	--	14	--	M5	G1/8	30	6.5	--	17
24.030.039.*	C	31	--	22	--	G1/8	--	40	--	--	12
24.040.074.*	C	41	--	29	--	G1/8	--	51	--	--	12
24.050.087.*	C	51	--	37	--	G1/8	--	61	--	--	12

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Varioflex® bellows cups, 1.5 folds - SP-BX1

NEW



COMPOSITE MATERIAL 60°/30°



Product Description

Bellows vacuum cups with 1.5 folds made of an extremely wear-resistant polymer.
Soft, flexible sealing lip in 30° Shore A (red).
Stable body in 60° Shore A (black).
Cleats stabilise the product.

Advantage



- > Long life cycle reduces machine downtimes
- > Perfect sealing performance on rough or uneven surface
- > High stability and fast reset
- > Oil and Ozone resistant
- > Extremely low-marking
- > Bellows compensate for height differences
- > Cleats allow for fast acceleration

Notes:

Explanation of the type description:

- > SP-BX1 = series name of the bellows vacuum cup with 1.5 folds
- > -xx = nominal diameter
- > Example: SP-BX1-15 = bellows vacuum cup with 1.5 folds and a nominal diameter of 15 mm

Technical data

Model / Lip dimensions	Ø [mm]	Connection thread 1	Item no.	Connection thread 2	Item no.	Connection thread 3	Item no.	Usage temperature [°C]	
	Bellows vacuum cups 1.5 folds - SP-BX1 fully assembled with fitting								
SP-BX1-15	16	M5-male	22.016.253.16	M6-male	22.016.254.16	--	--	4.5 10 - 50	
SP-BX1-20	21	G1/8-male	22.021.255.16	--	--	--	--	5 10 - 50	
SP-BX1-25	26	G1/8-male	22.026.256.16	--	--	--	--	5 10 - 50	
SP-BX1-35	37	G1/8-female	22.037.257.16	G1/4-male	22.037.258.16	--	--	9 10 - 50	
SP-BX1-50	53	G1/8-female	22.053.259.16	G1/4-male	22.053.260.16	G3/8-male	22.053.261.16	10 10 - 50	
SP-BX1-75	75	G3/8-male	22.075.262.16	G3/8-female	22.075.263.16	--	--	18 10 - 50	

Accessories

Spare cup

Continued on the next page →

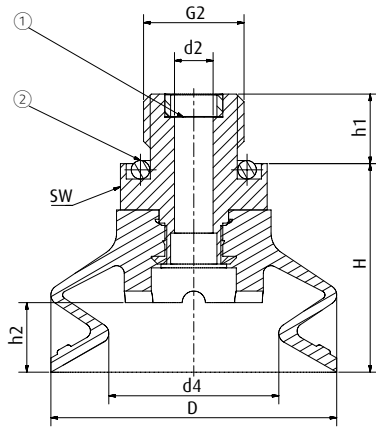
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



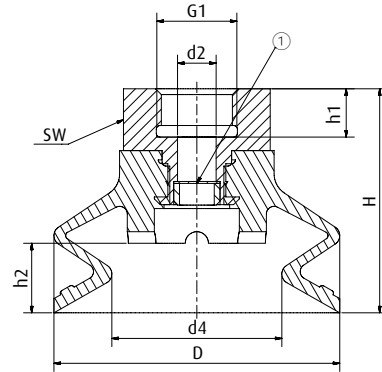
Series | Bellows vacuum cups SB

Varioflex® bellows cups, 1.5 folds - SP-BX1

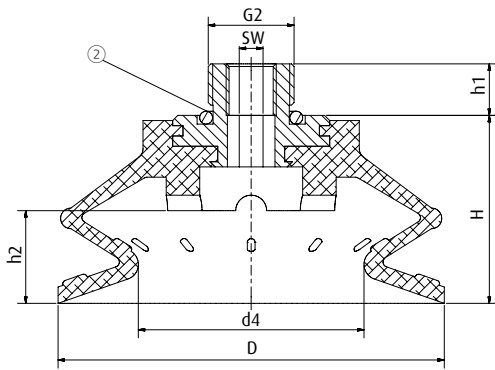
Dimensions



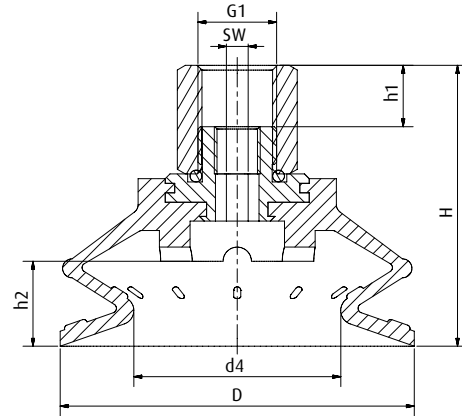
Drawing A



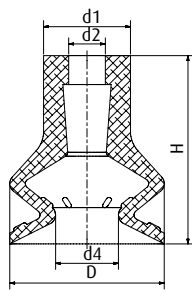
Drawing B



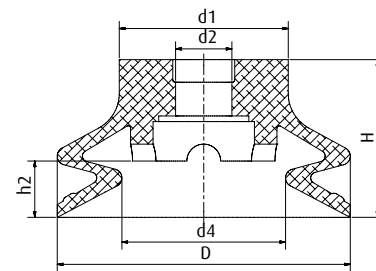
Drawing C



Drawing D



Drawing E



Drawing F

① = Filter screen ② = O-ring

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Item no.	Drawing	∅ D [mm]	∅ d1 [mm]	∅ d2 [mm]	∅ d4 [mm]	G1 (female)	G2 (male)	H	h1 [mm]	h2 [mm]	SW
Bellows vacuum cups 1.5 folds - SP-BX1 fully assembled with fitting											
22.016.253.*	A	16	--	2.5	6.5	--	M5	25	3.6	--	8
22.016.254.*	A	16	--	2.5	6.5	--	M6	24	6	--	13
22.021.255.*	A	21	--	4	12	--	G1/8	19	7	5	13
22.026.256.*	A	26	--	4	14.5	--	G1/8	19	7	5	13
22.037.257.*	B	37	--	5	22	G1/8	--	29	6.3	9	19
22.037.258.*	A	37	--	5	22	--	G1/4	27	9	9	19
22.053.259.*	B	53	--	8	32.5	G1/8	--	35	9	10	22
22.053.260.*	A	53	--	6	32.5	--	G1/4	32	9	10	22
22.053.261.*	A	53	--	6	32.5	--	G3/8	32	10	10	22
22.075.262.*	C	75	--	--	44	--	G3/8	36.5	10	18	8
22.075.263.*	D	75	--	--	44	G3/8	--	55	13	18	8
Spare cups											
23.016.263.*	E	16	9	4	6.5	--	--	19.5	--	--	--
23.021.264.*	F	21	11	5	12	--	--	14	--	5	--
23.026.265.*	F	26	15	5	14.5	--	--	14	--	5	--
23.037.266.*	F	37	20	7	22	--	--	21	--	9	--
23.053.267.*	F	53	26	10.5	32.5	--	--	26	--	10	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Varioflex® bellows cups, 2.5 folds - SP-BX2

Varioflex® bellows cups, 2.5 folds - SP-BX2

NEW



COMPOSITE MATERIAL 60°/30°



Product Description

Bellows vacuum cups with 2.5 folds made of an extremely wear-resistant polymer.
Soft, flexible sealing lip in 30° Shore A (red).
Stable body in 60° Shore A (black).

Advantage




- > Long life cycle reduces machine downtimes
- > Perfect sealing performance on rough or uneven surface
- > High stability and fast reset
- > Oil and Ozone resistant
- > Extremely low-marking
- > Excellent height and angle compensation
- > Optional: Filter disc from Ø 26 mm installed between the bellows

Notes:

Explanation of the type description:

- > SP-BX2 = series name of the bellows vacuum cup with 2.5 folds
- > -xx = nominal diameter
- > Example: SP-BX2-15 = bellows vacuum cup with 2.5 folds and a nominal diameter of 15 mm

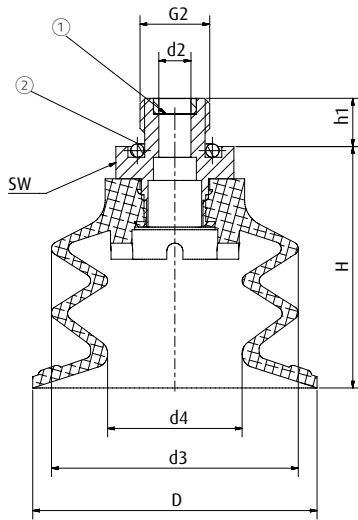
Technical data

Model / Lip dimensions	Ø [mm]	Connection thread 1	Item no.	Connection thread 2	Item no.	Connection thread 3	Item no.	Usage temp. [°C]	Accessories
Bellows vacuum cups 2.5 folds - SP-BX2 fully assembled with fitting									Spare cup
									
SP-BX2-15	16	M5-male	20.016.145.16	M6-male	20.016.146.16	--	--	5.5 10 - 50	21.016.175.16
SP-BX2-20	21	G1/8-male	20.021.147.16	--	--	--	--	6.5 10 - 50	21.021.176.16
SP-BX2-25	26	G1/8-male	20.026.148.16	--	--	--	--	8 10 - 50	21.026.177.16
SP-BX2-35	37	G1/8-female	20.037.149.16	G1/4-male	20.037.150.16	--	--	14 10 - 50	21.037.177.16
SP-BX2-50	53	G1/8-female	20.053.151.16	G1/4-male	20.053.152.16	G3/8-male	20.053.153.16	19 10 - 50	21.053.178.16
SP-BX2-75	77	G3/8-male	20.077.154.16	G3/8-female	20.077.155.16	--	--	25 10 - 50	--
Bellows vacuum cups 2.5 folds - SP-BX2 fully assembled with fitting and filter									
SP-BX2-25	26	G1/8-male	20.026.148.16-FI	--	--	--	--	8 10 - 50	21.026.177.16-FI
SP-BX2-35	37	G1/8-female	20.037.149.16-FI	G1/4-male	20.037.150.16-FI	--	--	14 10 - 50	21.037.177.16-FI
SP-BX2-50	53	G1/8-female	20.053.151.16-FI	G1/4-male	20.053.152.16-FI	G3/8-male	20.053.153.16-FI	19 10 - 50	21.053.178.16-FI
SP-BX2-75	77	G3/8-male	20.077.154.16-FI	G3/8-female	20.077.155.16-FI	--	--	25 10 - 50	--

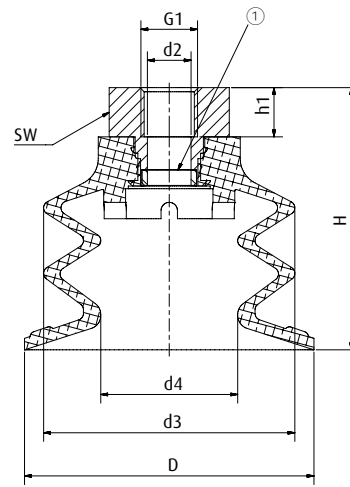
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



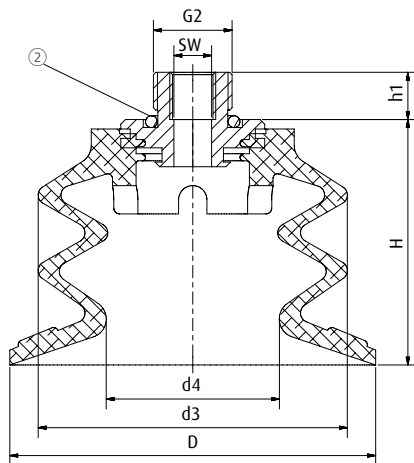
Dimensions



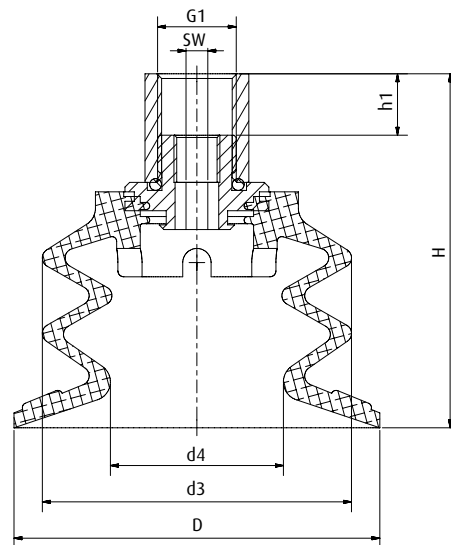
Drawing A



Drawing B



Drawing C



Drawing D

① = Filter screen ② = O-ring

Continued on the next page →

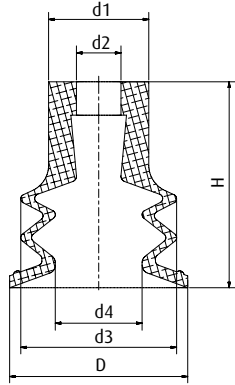
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



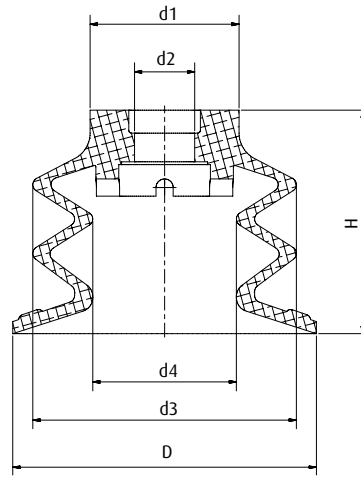
Series | Bellows vacuum cups SB

Varioflex® bellows cups, 2.5 folds - SP-BX2

Dimensions



Drawing E



Drawing F

① = Filter screen ② = O-ring

Item no.	Drawing	∅ D [mm]	∅ d1 [mm]	∅ d2 [mm]	∅ d3 [mm]	∅ d4 [mm]	G1 (female)	G2 (male)	H	h1 [mm]	SW
Bellows vacuum cups 2.5 folds - SP-BX2 fully assembled with fitting											
20.016.145.*	A	16	--	2.8	14	9	--	M5	24	4	8
20.016.146.*	A	16	--	2.5	14	9	--	M6	23	6	13
20.021.147.*	A	21	--	4	20	12	--	G1/8	20.2	7	13
20.026.148.*	A	26	--	4	23	12	--	G1/8	24	7	13
20.037.149.*	B	37	--	5	31	18	G1/8	--	34.8	6.3	19
20.037.150.*	A	37	--	5	31	18	--	G1/4	32.8	9	19
20.053.151.*	B	53	--	8	46	25	G1/8	--	48	9	22
20.053.152.*	A	53	--	6	46	25	--	G1/4	45	9	22
20.053.153.*	A	53	--	6	46	25	--	G3/8	45	10	22
20.077.154.*	C	77.5	--	--	65.5	37	--	G3/8	52	10	8
20.077.155.*	D	77.5	--	--	65.5	37	G3/8	--	75	13	8
Spare cups											
21.016.175.*	E	16	9	4	14	9	--	--	18.5	--	--
21.021.176.*	F	21	11	5	20	12	--	--	15.2	--	--
21.026.177.*	F	26	15	5	23	12	--	--	19	--	--
21.037.177.*	F	37	20	7	31	18	--	--	27	--	--
21.053.178.*	F	53	26	10.5	46	25	--	--	39	--	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Vinyl bellows cups, 1.5 folds - SBV 1




Product Description

Durable bellows vacuum cups with 1.5 folds from snug-fitting, wear-resistant material. Very well suited for handling abrasive products such as cardboard. Flexible material enables low-leakage gripping of highly flexible products such as foil-packaged goods. Connection via plug-in nipple.

Advantage

- > Bellows compensate differences in height and enable good adaptation to curved or uneven product surfaces
- > Flexible, soft lips
- > Long life cycle
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
23.005.095.*	SBV 1-5	2	1.5	Vinyl (bl)
23.007.112.*	SBV 1-7	2	1.5	Vinyl (bl)
23.013.097.*	SBV 1-13	5	1.5	Vinyl (bl)
23.015.098.*	SBV 1-15	5	1.5	Vinyl (bl)
23.019.109.*	SBV 1-19	8	1.5	Vinyl (bl)
23.020.114.*	SBV 1-20	6	1.5	Vinyl (bl)
23.022.028.*	SBV 1-22	8	1.5	Vinyl (bl)
23.028.113.*	SBV 1-28	9	1.5	Vinyl (bl)
23.030.107.*	SBV 1-30	10.5	1.5	Vinyl (bl)
23.031.192.*	SBV 1-31	6	1.5	Vinyl (bl)
23.035.111.*	SBV 1-35	12	1.5	Vinyl (bl)
23.052.116.*	SBV 1-52	6	1.5	Vinyl (bl)
23.070.060.*	SBV 1-70	20	1.5	Vinyl (bl)

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* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



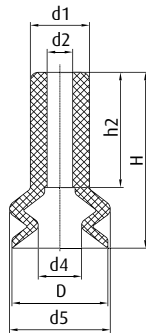
Series | Bellows vacuum cups SB

Vinyl bellows cups, 1.5 folds - SBV 1

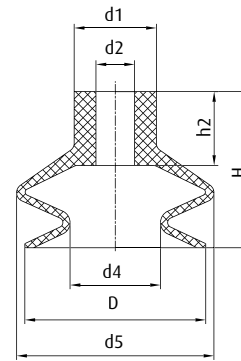
Accessories

Item no.	Suitable fittings					
	M5-male	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
23.005.095.*	270.195 (p.409)	--	--	--	--	--
23.007.112.*	270.001 (p.409)	--	--	--	--	--
23.013.097.*	270.013 (p.410)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	--	--
23.015.098.*	270.134 (p.409)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.019.109.*	--	--	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)
23.020.114.*	270.134 (p.409)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.022.028.*	270.013 (p.410)	270.103 (p.413)	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
23.028.113.*	270.134 (p.409)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
23.030.107.*	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)
23.031.192.*	--	270.312/19 (p.414)	270.030 (p.419)	270.019 (p.423)	270.274 (p.427)	270.275 (p.432)
23.035.111.*	270.443 (p.410)	--	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--
23.052.116.*	--	--	270.132 (p.417)	--	270.208 (p.425)	270.452 (p.431)
23.070.060.*	--	--	--	--	270.184 (p.431)	--

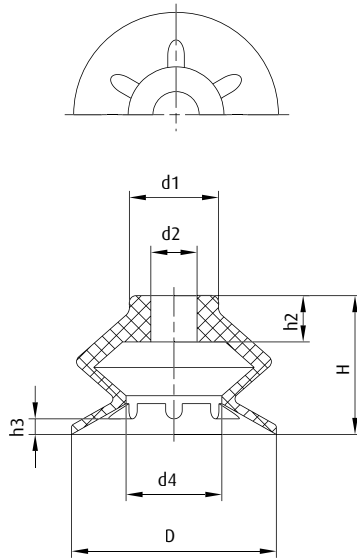
Dimensions



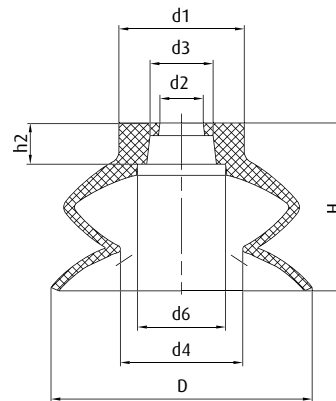
Drawing A



Drawing B



Drawing C



Drawing D

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

Series | Bellows vacuum cups SB

Vinyl bellows cups, 1.5 folds - SBV 1



Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	Ø d6 [mm]	H [mm]	h2 [mm]	h3 [mm]
23.005.095._*	A	4.5	3	1.5	--	2.5	4	--	12.5	10	--
23.007.112._*	A	6	3.7	1.6	--	2.5	6.5	--	11	7	--
23.013.097._*	B	13	7.5	3.5	--	7.5	12.5	--	14.5	6.5	--
23.015.098._*	B	15.5	9	3.4	--	8.5	17	--	20.5	11.5	--
23.019.109._*	B	19	13	7	--	12	19	--	18	7.5	--
23.020.114._*	B	20	9.5	3.5	--	11	19	--	20	9.5	--
23.022.028._*	A	22	10	4.5	--	11	24	--	19	9	--
23.028.113._*	B	28	12.5	3.5	--	13	26	--	21	9	--
23.030.107._*	B	30	13	7	--	15	29.5	--	22	7	--
23.031.192._*	C	31	13.5	7	--	14.5	--	--	21	7	2.4
23.035.111._*	B	35	17	6	--	20	33	--	30	16	--
23.052.116._*	B	51	18.5	9.5	--	30	50	--	41	21	--
23.070.060._*	D	70	34	11.5	17	33	--	24	45	11	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Vinyl bellows cups, 2.5 folds - SBV 2

Vinyl bellows cups, 2.5 folds - SBV 2



Product Description

Durable bellows vacuum cups with a long lift, made of snug-fitting, wear-resistant material. Very well suited for handling abrasive products such as cardboard. Flexible material enables low-leakage gripping of highly flexible products such as foil-packaged goods. Connection via plug-in nipple.

Advantage

- > Long vacuum cup lift and good adaptation to curved or uneven product surfaces
- > Flexible, soft lips
- > Long life cycle
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions	Number of folds	Material / Colour
21.004.142._*	SBV 2-4	1.3	Vinyl (bl)
21.006.001._*	SBV 2-6	3.5	Vinyl (bl)
21.010.070._*	SBV 2-10	5	Vinyl (bl)
21.018.068._*	SBV 2-18	11	Vinyl (bl)
21.023.066._*	SBV 2-23	9	Vinyl (bl)
21.029.069._*	SBV 2-29	10	Vinyl (bl)
21.032.082._*	SBV 2-32	14	Vinyl (bl)
21.040.027._*	SBV 2-40	16	Vinyl (bl)
21.050.084._*	SBV 2-50	20	Vinyl (bl)

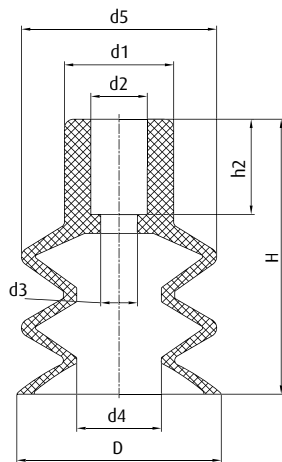
Accessories

Item no.	Suitable fittings						
	M5-male	M6-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.004.142._*	270.195 (p.409)	--	--	--	--	--	--
21.006.001._*	270.013 (p.410)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
21.010.070._*	270.013 (p.410)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	--	--
21.018.068._*	270.013 (p.410)	270.103 (p.413)	--	270.003 (p.416)	270.015 (p.421)	270.194 (p.425)	--
21.023.066._*	--	--	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)
21.029.069._*	--	--	--	270.132 (p.417)	270.114 (p.422)	270.043 (p.425)	270.178 (p.431)
21.032.082._*	--	--	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)
21.040.027._*	--	--	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)
21.050.084._*	--	--	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)

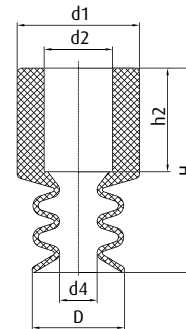
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



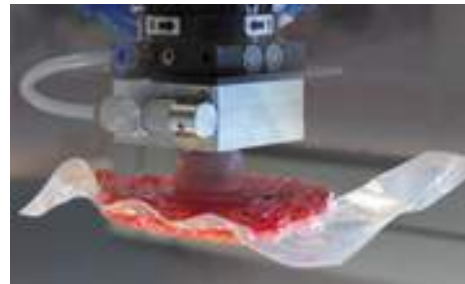
Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø d5 [mm]	H [mm]	h2 [mm]
21.004.142._*	A	3.5	3	1.5	1.5	2	4.5	12.5	9
21.006.001._*	B	6.5	8.5	5	--	2.5	--	14	7
21.010.070._*	B	10	10	5	--	5	--	15.5	7.5
21.018.068._*	A	19	10	5	5	9	19	24	9
21.023.066._*	A	23	17	11	11	13.5	23	26	12
21.029.069._*	A	29	15.5	8	5	12	28	39	13.5
21.032.082._*	A	32	17	11	11	19.5	32	35	14
21.040.027._*	A	40	20	10.5	8	18.5	40	53	13.5
21.050.084._*	A	50	19.5	10.5	6.5	30	50	49	13.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups, 1.5 folds - SBF-A



Product Description

Bellows vacuum cup with soft, very flexible single sealing lip for handling highly sensitive products with high leveling adjustment. Connection with fixed screwed nipple or attachment frame (Ø 80 mm). Compatible "snap-in" spring levelers available.

Advantage

- > Large holding force
- > Fine, flexible sealing lip fits in perfectly with irregularities of the product
- > Cleats for the sealing lip prevent retraction of flexible products (e.g. films)
- > Cost-effective replacement of worn seals
- > High process reliability due to fixed, non-rotating seat of the screw nipple

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
	Rubber sealing lip for attachment to fitting			
23.010.139.*	SBF-A -10	4	1.5	NBR (sw), SI (tr)
23.020.140.*	SBF-A -20	6	1.5	NBR (sw), SI (tr)
23.030.141.*	SBF-A -30	8	1.5	NBR (sw), SI (tr)
23.040.142.*	SBF-A -40	9.5	1.5	NBR (sw), SI (tr)
23.050.143.*	SBF-A -50	11	1.5	NBR (sw), SI (tr)
23.080.144.*	SBF-A -80	10	1.5	NBR (sw), SI (tr)

Accessories

Spare cup

	Full vacuum cups with receptacle				
22.080.161.*	SBF-A -80	10	1.5	NBR (sw), SI (tr)	23.080.144.* (p.348)

Accessories

Item no.	Suitable fittings								Suitable spring levelers (Snap-In)							
	M4-male	M5-male	M6-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler	Spring leveler	Spring leveler	Spring leveler	Spring leveler	Spring leveler		
23.010.139.*	270.458 (p.408)	270.134 (p.409)	270.104 (p.413)	--	--	--	--	--	50.103 (p.454)	6	50.125 (p.454)	10	50.126 (p.454)	15	50.127 (p.454)	20
23.020.140.*	--	270.311 (p.411)	270.459 (p.414)	--	270.480 (p.420)	270.479 (p.423)	--	--	50.095 (p.456)	20	50.096 (p.456)	30	50.097 (p.456)	40	50.098 (p.456)	50

Continued on the next page →

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



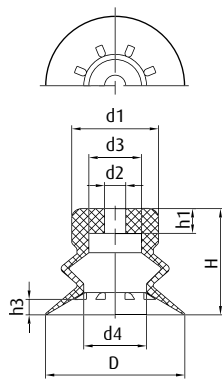
Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 folds - SBF-A

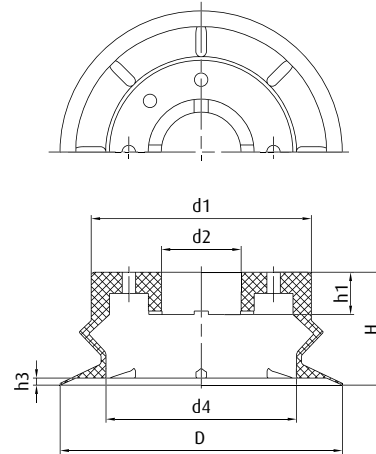
Accessories

Item no.	Suitable fittings								Suitable spring levelers (Snap-In)							
	M4-male	M5-male	M6-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler	Spring leveler	Spring leveler	Spring leveler	Spring leveler	Spring leveler	Spring leveler	
23.030.141.*	--	--	270.460 (p.414)	--	270.482 (p.420)	270.481 (p.423)	270.483 (p.429)	270.484 (p.433)	50.095 (p.456)	20	50.096 (p.456)	30	50.097 (p.456)	40	50.098 (p.456)	50
23.040.142.*	--	--	270.498 (p.414)	--	270.486 (p.420)	270.485 (p.423)	270.487 (p.429)	270.488 (p.434)	50.170 (p.456)	20	50.171 (p.456)	30	50.172 (p.456)	40	50.173 (p.456)	50
23.050.143.*	--	--	270.499 (p.414)	--	270.490 (p.420)	270.489 (p.423)	270.491 (p.429)	270.492 (p.434)	50.174 (p.456)	20	50.175 (p.456)	30	50.176 (p.456)	40	50.177 (p.456)	50
23.080.144.*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Full vacuum cups with receptacle																
22.080.161.*	--	--	--	270.462 (p.416)	--	--	270.514 (p.429)	270.513 (p.434)	--	--	--	--	--	--	--	--

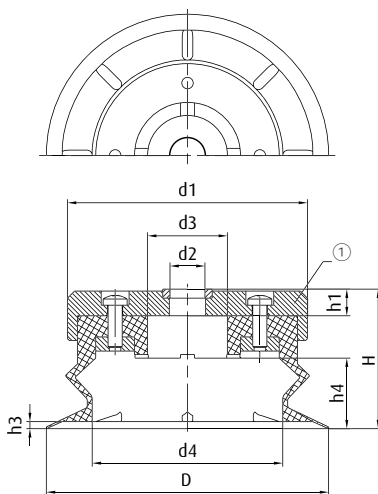
Dimensions



Drawing A



Drawing B



Drawing C

① = Aluminium

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 folds - SBF-A



Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h3 [mm]	h4 [mm]
Rubber sealing lip for attachment to fitting										
23.010.139._*	A	10	10	4	6	5	15.5	3	1	--
23.020.140._*	A	20	15	6	10	11	19	4	2	--
23.030.141._*	A	30	17	6	12	14	23	5	2.8	--
23.040.142._*	A	40	25	6	15	18	30	7	4.4	--
23.050.143._*	A	50	30	6	21	21	32	7	4	--
23.080.144._*	B	80	62	23	--	54	32	12	2	--
Full vacuum cups with receptacle										
22.080.161._*	C	80	68	10	23	54	40	7.5	2	20

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 folds - SBF-B

Bellows vacuum cups, 1.5 folds - SBF-B



Product Description

Bellows vacuum cup, 1.5 folds with soft sealing lip and a soft bellows for handling curved or uneven product surfaces. Connection via plug-in nipple. Compatible "snap-in" spring levelers available.

Advantage

- > Bellows compensate height differences
- > Good adaptation to curved or uneven product surfaces
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
23.006.145.*	SBF-B-6	5	1.5	NBR (sw), SI (tr)
23.008.146.*	SBF-B-8	5	1.5	NBR (sw), SI (tr)
23.010.147.*	SBF-B-10	5	1.5	NBR (sw), SI (tr)
23.015.148.*	SBF-B-15	7	1.5	NBR (sw), SI (tr)
23.020.149.*	SBF-B-20	6	1.5	NBR (sw), SI (tr)

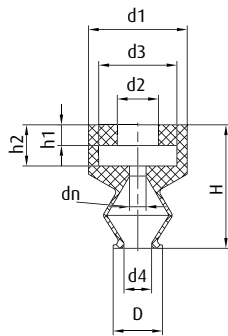
Accessories

Item no.	Suitable fittings					Suitable spring levelers (Snap-In)					
	M5-male	M6-male	G1/8-male	G1/8-female	G1/4-male	Spring leveler		Hose outside Ø	Spring leveler		Hose outside Ø
23.006.145.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
23.008.146.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
23.010.147.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
23.015.148.*	270.200 (p.411)	--	270.064 (p.418)	270.065 (p.422)	--	50.018 (p.454)	8.5	4	50.019 (p.454)	8.5	6
23.020.149.*	270.317 (p.410)	270.103 (p.413)	270.205 (p.416)	270.109 (p.421)	270.194 (p.425)	--	--	--	50.020 (p.454)	8.5	6

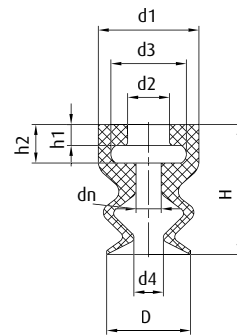
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	Ø dn [mm]	H [mm]	h1 [mm]	h2 [mm]
23.006.145.*	A	6	12	5	9.5	3.4	2	15	2.5	5
23.008.146.*	B	8	12	5	9	4	2	14.5	2.5	4.5
23.010.147.*	B	10	12	5	9	3.5	3	15.5	2.5	4.5
23.015.148.*	B	15	12	5	9	5.5	3	17	2.5	4.5
23.020.149.*	B	20	12	4.5	6	6	6	20	5	9.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, 4.5 folds - SBF-C

Bellows vacuum cups, 4.5 folds - SBF-C




Product Description

Bellows vacuum cup, 4.5 folds, with a very thin, flexible sealing lip and a large lift. Fine, flexible sealing lip fits in perfectly with irregularities of the product (e.g. groceries packaged in bags).
Connection via screw nipples (hollow bolt + adapter)


Advantage

- > Optimal height and angle compensation
- > Very good fit to irregular products
- > Gentle handling of sensitive products
- > A very safe seat, bolted down with a bracket from the bottom
- > Cost-effective replacement of worn seals

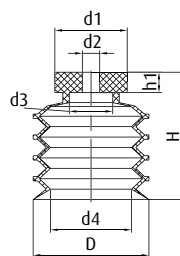
Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
25.010.044._*	SBF-C-10	4	4.5	NBR (sw), SI (tr)
25.020.045._*	SBF-C-20	10	4.5	NBR (sw), SI (tr)
25.030.046._*	SBF-C-30	14	4.5	NBR (sw), SI (tr)
25.040.047._*	SBF-C-40	19	4.5	NBR (sw), SI (tr)
25.050.048._*	SBF-C-50	26	4.5	NBR (sw), SI (tr)

Accessories

Item no.	 Suitable fittings					
	M4-male	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
25.010.044._*	270.458 (p.408)	--	270.009 (p.417)	270.007 (p.422)	--	--
25.020.045._*	--	270.459 (p.414)	270.480 (p.420)	270.479 (p.423)	--	--
25.030.046._*	--	270.460 (p.414)	270.482 (p.420)	270.481 (p.423)	270.483 (p.429)	270.484 (p.433)
25.040.047._*	--	--	270.486 (p.420)	270.485 (p.423)	270.487 (p.429)	270.488 (p.434)
25.050.048._*	--	--	270.490 (p.420)	270.489 (p.423)	270.491 (p.429)	270.492 (p.434)

Dimensions



Item no.	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]
25.010.044._*	10	10	4	--	6	14.5	3
25.020.045._*	20	15	6	10	14	25	4
25.030.046._*	30	18	6	12	19	38.5	5
25.040.047._*	40	25	6	15	28	44	7
25.050.048._*	50	30	6	19	32	54	7

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups for chocolates - SL-PB




Product Description

Bellows vacuum cups made of FDA-approved material for handling delicate products with heavily textured surfaces.


Advantage

- > Gentle handling of the most sensitive surfaces
- > Also suitable for three-dimensional products, e.g. chocolates

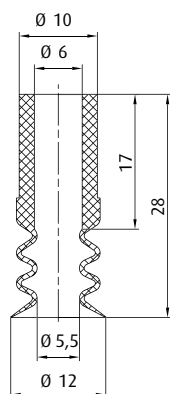
Technical data

Item no.	Model / Lip dimensions		Material / Colour	Number of folds
21.012.079.*	SL-PB-12	7	SI (w)	2.5
27.016.001.*	SL-PB-16	6	SI (tr)	1.5

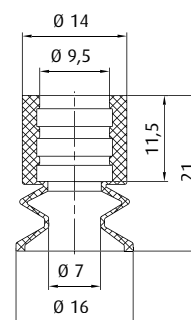
Accessories

Item no.	 Suitable fittings					
	M5-male	M10-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
21.012.079.*	270.443 (p.410)	--	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--
27.016.001.*	270.244 (p.410)	270.177 (p.416)	--	--	270.451 (p.426)	270.452 (p.431)

Dimensions



Drawing A



Drawing B

Item no.	Drawing
21.012.079.*	A
27.016.001.*	B

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Vacuum cups for baked goods - SL-B

Vacuum cups for baked goods - SL-B



Product Description

Bellows vacuum cups especially suitable for baked goods such as waffles, bread, rolls, pizzas and donut.

Advantage

- > Large degree of leveling
- > Gentle attachment to the product
- > Good holding strength through optimised lip geometry
- > FDA-compliant

Ordering notes:

Matching assembly aid for special fitting 270.419: Item No. 90.007

Technical data

Item no.	Model / Lip dimensions	Number of folds	Number of folds	Material / Colour
21.034.179.*	SL-B-34	12	2.5	SI (tr)
25.038.016.*	SL-B-38	24	4.5	SI (tr)
27.039.017.*	SL-B-38A	20	5.5	SI (tr)
25.040.043.*	SL-B-40	24	4.5	SI (tr)
25.040.058.*	SL-B-40A	25	4.5	SI (bl)
21.060.074.*	SL-B-60	12	2.5	SI (tr)

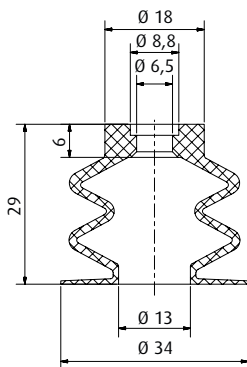
Accessories

Item no.	Suitable fittings				
	Without Thread	M6-male	G1/4-male	G1/4-female	G1/2-male
21.034.179.*	--	270.039 (p.414)	--	--	--
25.038.016.*	270.419 (p.441)	--	270.183 (p.431)	270.182 (p.434)	--
27.039.017.*	270.419 (p.441)	--	270.183 (p.431)	270.182 (p.434)	--
25.040.043.*	270.419 (p.441)	--	270.183 (p.431)	270.182 (p.434)	--
25.040.058.*	270.419 (p.441)	--	270.183 (p.431)	270.182 (p.434)	--
21.060.074.*	--	--	--	--	270.372 (p.437)

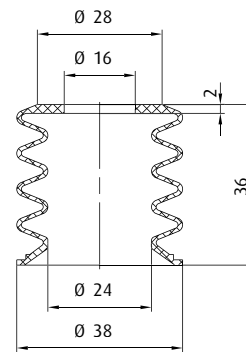
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



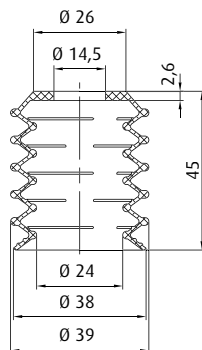
Dimensions



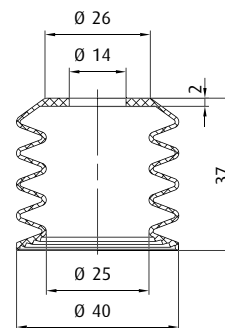
Drawing A



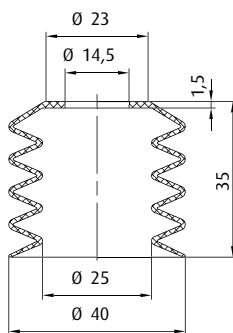
Drawing B



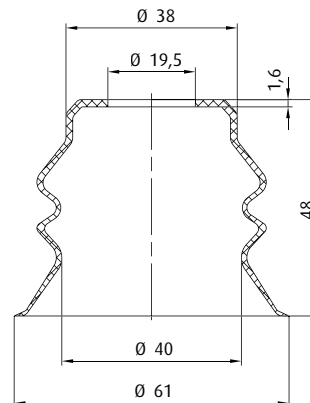
Drawing C



Drawing D



Drawing E



Drawing F

Item no.	Drawing
21.034.179._*	A
25.038.016._*	B
27.039.017._*	C
25.040.043._*	D
25.040.058._*	E
21.060.074._*	F

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Detectable vacuum cups for baked goods - SL-BD

Detectable vacuum cups for baked goods - SL-BD



Product Description

Bellows vacuum cups especially suitable for baked goods such as bread, rolls or pizza. The vacuum cup material used is a special mixture that can be detected, for example by metal detectors from SAFELINE, and then separated and discarded.

Advantage

- > Detectable
- > FDA-compliant

Ordering notes:

Matching assembly aid for special fittings 270.419: Item No. 90.007

Technical data

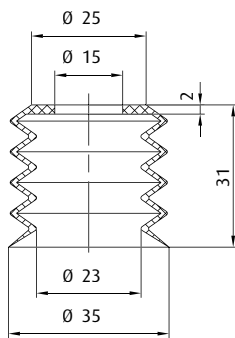
Item no.	Model / Lip dimensions	↓	Number of folds	Material / Colour
25.035.069._*	SL-BD-35	25	4.5	SI (r)
25.040.066._*	SL-BD-40	28	4.5	SI (br), SI (bl)

Accessories

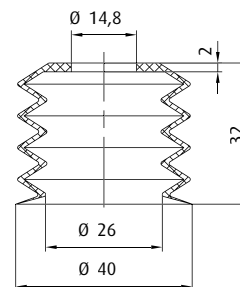
Suitable fittings

Item no.	Without Thread
25.035.069._*	270.419 (p.441)
25.040.066._*	270.419 (p.441)

Dimensions



Drawing A



Drawing B

Item no.	Drawing
25.035.069._*	A
25.040.066._*	B

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Vacuum cups for eggs - SL-E



Product Description

Bellows vacuum cups made of FDA-compliant silicone in a design specially optimised for handling eggs. Very long vacuum cup lift.

Advantage

- > Good absorption
- > Great stroke movement

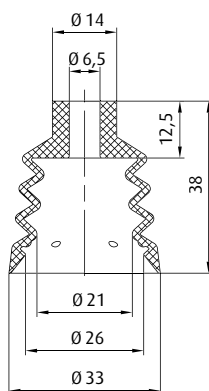
Technical data

Item no.	Model / Lip dimensions	Number of folds	Material / Colour
27.033.008.*	SL-E-33	16	SI (tr)
27.034.023.*	SL-E-34	39	SI (r)

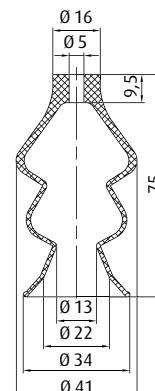
Accessories

Item no.	Suitable fittings				
	M5-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
27.033.008.*	--	270.132 (p.417)	270.114 (p.422)	270.208 (p.425)	270.178 (p.431)
27.034.023.*	270.443 (p.410)	270.238 (p.417)	270.110 (p.422)	270.534 (p.425)	--

Dimensions



Drawing A



Drawing B

Item no.	Drawing
27.033.008.*	A
27.034.023.*	B

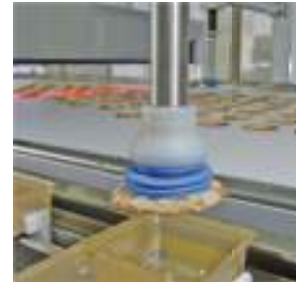
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum cups, 1.5 and 2.5 folds - SV-SB

Bellows vacuum cups, 1.5 and 2.5 folds - SV-SB




Product Description

Bellows vacuum cups, 1.5 and 2.5 folds, for standard packaging machines. Soft, flexible sealing lip for smooth contact. FDA-compliant materials (SI).


Advantage

> Gentle handling of sensitive products

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
Bellows vacuum cups 1.5 folds - SV-SB1				
23.016.232._*	SV-SB1-16	6	1.5	SI (tr)
23.030.230._*	SV-SB1-30	7	1.5	NR (gr)
Bellows vacuum cups 2.5 folds - SV-SB2				
21.030.030._*	SV-SB2-30	13	2.5	SI (tr), NR (bl)
21.040.132._*	SV-SB2-40	11	2.5	SI (tr), SI (bl)

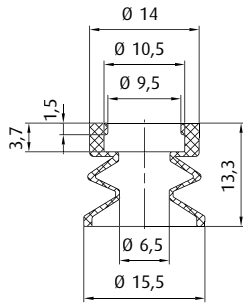
Accessories

Item no.	 Suitable fittings				
	M5-male	M6-male	M10-male	G1/4-male	G1/4-female
Bellows vacuum cups 1.5 folds - SV-SB1					
23.016.232._*	270.311 (p.411)	270.312/19 (p.414)	--	--	--
23.030.230._*	--	--	270.177 (p.416)	270.451 (p.426)	270.452 (p.431)
Bellows vacuum cups 2.5 folds - SV-SB2					
21.030.030._*	--	--	270.177 (p.416)	270.451 (p.426)	270.452 (p.431)
21.040.132._*	--	--	--	--	--

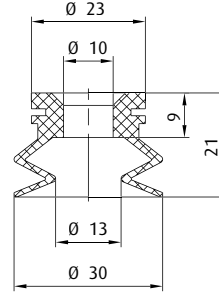
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



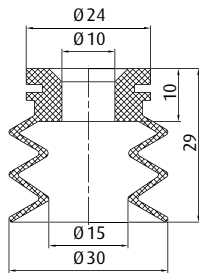
Dimensions



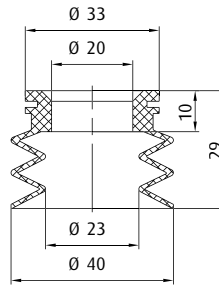
Drawing A



Drawing B



Drawing C



Drawing D

Item no.	Drawing
Bellows vacuum cups 1.5 folds - SV-SB1	
23.016.232.*	A
23.030.230.*	B
Bellows vacuum cups 2.5 folds - SV-SB2	
21.030.030.*	C
21.040.132.*	D

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Bellows vacuum cups with 1.5 folds for dynamic sheet handling - SM-B

NEW



Product Description

Robust, round NBR bellows vacuum cups, 60° Shore A with vulcanised fitting made of aluminium and large area, multi-part "anti-slip" cleats. Various connection threads available. Silicone-free.

Advantage

- > Internal supports help to prevent deep-drawing or deformation of thin sheets
- > Leak-free suction even with curved surfaces due to flexible sealing lip
- > Fold geometry allows handling of three dimensional shaped sheets
- > Secure fit due to vulcanised connection thread

Technical data

Model / Lip dimensions	Thread (Aluminium)						
	G1/4-male	G1/4-female	G3/8-female	M10-male	M14x1.5-male	Rectangular adapter	
SM-B-30	22.030.171.1	22.030.172.1	22.030.173.1	22.030.174.1	22.030.175.1	22.030.176.1	9
SM-B-40	22.040.177.1	22.040.178.1	22.040.179.1	22.040.180.1	22.040.181.1	22.040.182.1	10
SM-B-50	22.050.183.1	22.050.184.1	22.050.185.1	22.050.186.1	22.050.187.1	22.050.188.1	11.5
SM-B-60	22.060.189.1	22.060.190.1	22.060.191.1	22.060.192.1	22.060.193.1	22.060.194.1	14.5
SM-B-80	22.080.195.1	22.080.196.1	22.080.197.1	22.080.198.1	22.080.199.1	22.080.200.1	22
SM-B-100	22.100.201.1	22.100.202.1	22.100.203.1	22.100.204.1	22.100.205.1	22.100.206.1	26
SM-B-125	22.125.207.1	22.125.208.1	22.125.209.1	22.125.210.1	22.125.211.1	22.125.212.1	32

"Anti-Slip" Cleats (SM-B-80)



Continued on the next page →

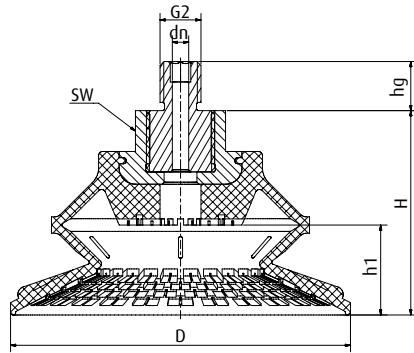
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



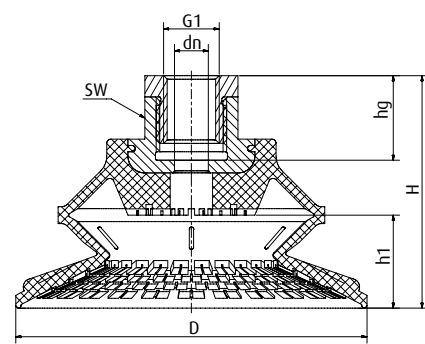
Series | Bellows vacuum cups SB

Bellows vacuum cups with 1.5 folds for dynamic sheet handling - SM-B

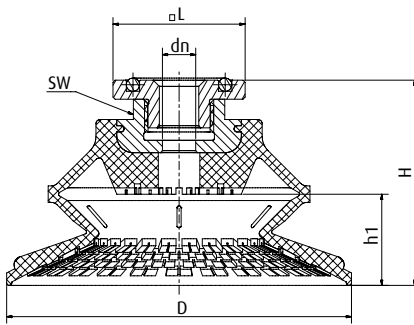
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	Ø D [mm]	Ø dn [mm]	G1 (female)	G2 (male)	□L [mm]	H [mm]	h1 [mm]	hg [mm]	SW
22.030.171.*	A	32	4	--	G1/4	--	28	9	10	17
22.030.172.*	B	32	4	G1/4	--	--	28	9	12	17
22.030.173.*	B	32	4	G3/8	--	--	44	9	10	17
22.030.174.*	A	32	4	--	M10	--	28	9	12	17
22.030.175.*	A	32	4	--	M14x1.5	--	28	9	12	17
22.030.176.*	C	32	4	--	--	32	31.2	9	--	17
22.040.177.*	A	42	4	--	G1/4	--	29	10	10	17
22.040.178.*	B	42	4	G1/4	--	--	29	10	12	17
22.040.179.*	B	42	4	G3/8	--	--	45	10	10	17
22.040.180.*	A	42	4	--	M10	--	29	10	12	17
22.040.181.*	A	42	4	--	M14x1.5	--	29	10	12	17
22.040.182.*	C	42	4	--	--	32	31.2	10	--	17
22.050.183.*	A	52	6	--	G1/4	--	37	11.5	10	22
22.050.184.*	B	52	6	G1/4	--	--	42	11.5	20	22
22.050.185.*	B	52	6	G3/8	--	--	37	11.5	15	22
22.050.186.*	A	52	4	--	M10	--	37	11.5	12	22
22.050.187.*	A	52	6	--	M14x1.5	--	37	11.5	12	22
22.050.188.*	C	52	6	--	--	32	36.5	11.5	--	22
22.060.189.*	A	63	6	--	G1/4	--	41.5	14.5	10	22
22.060.190.*	B	63	8	G1/4	--	--	46.5	14.5	20	22
22.060.191.*	B	63	8	G3/8	--	--	41.5	14.5	15	22
22.060.192.*	A	63	4	--	M10	--	41.5	14.5	12	22
22.060.193.*	A	63	6	--	M14x1.5	--	41.5	14.5	12	22
22.060.194.*	C	63	8	--	--	32	41	14.5	--	22

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Item no.	Drawing	Ø D [mm]	Ø dn [mm]	G1 (female)	G2 (male)	□L [mm]	H [mm]	h1 [mm]	hg [mm]	SW
22.080.195.*	A	83	6	--	G1/4	--	50	22	10	22
22.080.196.*	B	83	8	G1/4	--	--	55	22	20	22
22.080.197.*	B	83	8	G3/8	--	--	50	22	15	22
22.080.198.*	A	83	4	--	M10	--	50	22	12	22
22.080.199.*	A	83	6	--	M14x1.5	--	50	22	12	22
22.080.200.*	C	83	8	--	--	32	49.5	22	--	22
22.100.201.*	A	103	6	--	G1/4	--	57	26	10	22
22.100.202.*	B	103	8	G1/4	--	--	62	26	20	22
22.100.203.*	B	103	8	G3/8	--	--	57	26	15	22
22.100.204.*	A	103	4	--	M10	--	57	26	12	22
22.100.205.*	A	103	6	--	M14x1.5	--	57	26	12	22
22.100.206.*	C	103	8	--	--	32	56.5	26	--	22
22.125.207.*	A	128	6	--	G1/4	--	68	32	10	22
22.125.208.*	B	128	8	G1/4	--	--	73	32	20	22
22.125.209.*	B	128	8	G3/8	--	--	68	32	15	22
22.125.210.*	A	128	4	--	M10	--	68	32	12	22
22.125.211.*	A	128	6	--	M14x1.5	--	68	32	12	22
22.125.212.*	C	128	8	--	--	32	67.5	32	--	22

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Bellows vacuum cups SB

Bellows vacuum suction plates softgrip - SBPL-SG

Bellows vacuum suction plates softgrip - SBPL-SG



Product Description


Vacuum suction plate with 1.5 folds for gentle handling of heavy but sensitive products (e.g. glass plates). Divided support surfaces prevent deformation of the product and provide a firm grip. Additional safety sealing lip on the support block positions the product orthogonally to the ground.

Connection via an interlocking, snap-in aluminium plate.

Advantage

- > Very careful handling due to soft sealing lip and lightly compressing bellows
- > Cleats provide product support
- > Cost-effective replacement of worn seals

Technical data

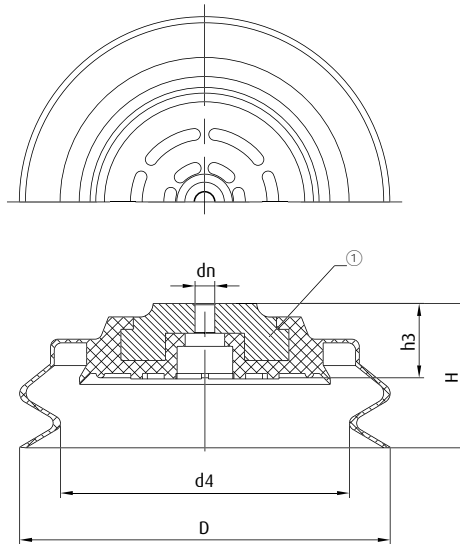
Item no.	Model / Lip dimensions		Weight [g]	Material / Colour	Number of folds
22.150.109._*	SBPL-SG-150	28	353	NBR (sw)	1.5
22.210.115._*	SBPL-SG-210	32	860	NBR (sw)	1.5

Accessories

Spare cup

23.150.090.1 (p.357)
23.210.009.1 (p.360)

Dimensions



① = Aluminium

Item no.	Ø D [mm]	Ø d4 [mm]	Ø dn [mm]	H [mm]	h3 [mm]
22.150.109._*	150	117	8	58	30
22.210.115._*	212	180	8	65	31

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Bellows vacuum suction plates - SBPL-E



Product Description

Vacuum suction plate, 1.5 folds, vulcanised carrier plate made of steel. Soft sealing lip from a low-marking NBR blend and lightly compressing bellows for gentle handling of heavy but sensitive products (e.g. glass plates). Divided support surfaces provide a firm grip for all loads.


Advantage

- > Gentle handling of heavy, sensitive products
- > Good adaptation to both concave and convex surfaces
- > Rubberised support surfaces prevent deformation of workpieces
- > Low-marking

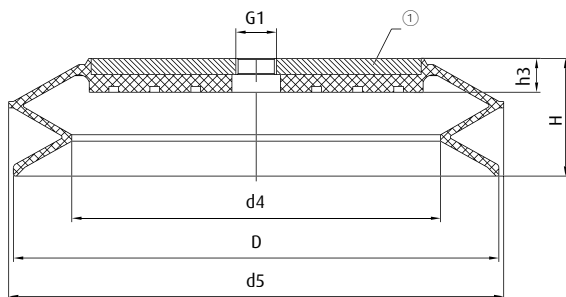
Ordering notes:

Customised drilling patterns on request

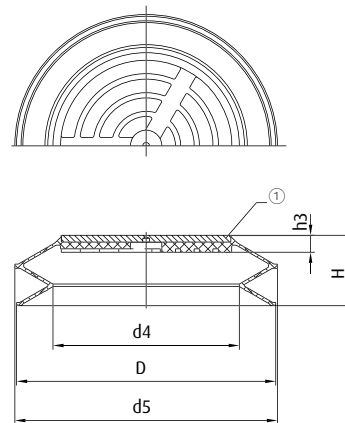
Technical data

Item no.	Model / Lip dimensions	Connection thread		Weight [g]	Number of folds	Material / Colour
22.150.084.*	SBPL-E-150	G1/2-female	32	460	1.5	NBR (gr)
22.200.087.*	SBPL-E-200	G1/2-female	30	860	1.5	NBR (gr)
22.250.088.*	SBPL-E-250	G1/2-female	38	1,900	1.5	NBR (gr)
22.300.091.*	SBPL-E-300	without	60	4,200	1.5	NBR (gr)
22.350.102.*	SBPL-E-350	without	55	4,200	1.5	NBR (gr)

Dimensions



Drawing A



Drawing B

① = Steel

Item no.	Drawing	Ø D [mm]	Ø d4 [mm]	Ø d5 [mm]	G1	H [mm]	h3 [mm]
22.150.084.*	A	150	94	157	G1/2	54	15.5
22.200.087.*	A	200	140	206	G1/2	57	17
22.250.088.*	A	250	190	255	G1/2	61	17.5
22.300.091.*	B	306	220	310	--	83	20
22.350.102.*	B	350	262	350	--	84	21



FIPA Oval vacuum cups SO

- > Ideal for elongated or cylindrical workpieces where only minimal space is available (e.g. rails, profiles, tubes, bolts)
- > Also suitable for curved workpieces and products with ridges
- > Significantly greater suction force than round vacuum cups of equal width



Oval vacuum cups, flat, universal - SO-FU

- > Soft sealing lip also allows for the pick-up of curved products
- > Supports help to prevent warping of the product
- > Dimensions: 4x2 - 100x30 mm

> See page 141



High temperature-resistant Thermalon® oval cups - SKT-O

- > Material blend especially suited for removing hot plastic parts to be painted from an injection molding machine
- > Very low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Dimensions: 4x2 - 75x25 mm

> See page 144



High temperature-resistant HNBR oval cups - SKH-O

- > Universal vacuum cups for removing hot plastic parts to be painted from an injection molding machine
- > Low-marking and free of silicone and other paint-wetting-impairment substances (PWIS)
- > Heat-resistant up to 160 °C
- > Dimensions: 4x2 - 45x15 mm

> See page 146



Oval vacuum cups, 2.5 folds, universal - SO-BU

- > Bellows compensate for level differences and enable gentle attachment to sensitive products
- > The reinforcement wires fitted into the folds help prevent collapse at excessive vacuum levels
- > Dimensions: 25x8 - 75x25 mm

> See page 148



FIPA Oval vacuum cups SO



Vinyl oval bellows cups - SO-BV

- > Compensates for height differences and enables gentle set down on the workpiece
- > Good adaptation to curved or flexible product surfaces
- > Wear-resistant material - long service life
- > Dimensions: 35x28 - 100x55 mm

> See page 149



Silicone rectangular bellows cups, 2.5 and 3.5 folds - SV-RB

- > Handling of flexible parts, workpieces with uneven surfaces or products with flexible outer packaging
- > FDA-approved vacuum cup material
- > Dimensions: 52x25 - 80x50 mm

> See page 150



Oval vacuum cups, flat - SO-E

- > Very slim design in a number of graduations
- > Antistatic version also available
- > Interlocking clip-in fittings ensure torsional rigidity and security against rotation
- > Cost-effective replacement of worn seals
- > Dimensions: 10x4 - 30x8 mm

> See page 152



Oval vacuum cups for cylindrical products - SO-Z

- > Greater suction force over normal oval vacuum cups due to three-dimensional oval suction lip contour partially encompassing the workpiece
- > Suitable for cylindrical products with diameters of 2 - 18 mm

> See page 154



Oval vacuum cups, flat - SO-C

- > Vacuum cup housing of anodised aluminium enables torsion-resistant handling
- > Screwed rubber clamping plate fixes rubber sealing lip
- > Dimensions: 30x12 - 55x12 mm

> See page 157



Oval vacuum suction plates for textured surfaces - SOPL-R

- > Leak-free gripping of many problematic product surfaces thanks to extremely flexible, thinly tapered sealing lip
- > Increased security due to vulcanised carrier plate
- > Dimensions: 90x50 - 190x90 mm

> See page 158



Oval vacuum suction plates - SOPL-S and SOPL-A

- > Durable vacuum suction plates for handling heavy, narrow products
- > Rubberised support surfaces prevent the deformation of products
- > Available in the following materials: NBR (low-marking) and NR (wear-resistant)
- > Dimensions: 110x40 - 580x180 mm

> See page 160



Notes:

A large area for taking notes, featuring a vertical red line on the left side and horizontal grey lines for writing.



Oval vacuum cups, flat, universal - SO-FU



Product Description

Flat vacuum cups in oval design for elongated workpieces where only minimal space is available (e.g., rails, profiles, tubes, bolts, etc.).
Size 100x35 mm reinforced with metal inserts.
Connection via plug-in nipple.


Advantage

- > Significantly increased suction force compared to round vacuum cups of the same width
- > Soft sealing lip also allows adhesion to curved products
- > Cleats help to prevent warping of the product
- > Cost-effective replacement of worn seals

Ordering notes:

From size 15x5 mm upward, a gripper clamp (available separately) is recommended to prevent inadvertent rotation.

Technical data

Item no.	Model / Lip dimensions		Material / Colour
132.4x2.001.*	SO-FU-4x2	0.5	NBR (sw), SI (tr), PU (bl)
132.4x2.031.*	SO-FU-4x2A	0.5	NBR (sw), SI (tr), PU (bl)
132.7x4.002.*	SO-FU-7x4	0.8	NBR (sw), SI (tr)
132.7x4.034.*	SO-FU-7x4A	0.8	NBR (sw), SI (tr)
132.12x4.004.*	SO-FU-12x4	0.5	NBR (gr), SI (tr)
132.15x5.008.*	SO-FU-15x5	1	NBR (gr), SI (tr), PU (bl)
132.18x6.012.*	SO-FU-18x6	1	NBR (gr), SI (tr), PU (bl)
132.24x8.016.*	SO-FU-24x8	1	NBR (gr), SI (tr), PU (bl)
132.30x10.018.*	SO-FU-30x10	2	NBR (gr), SI (tr), PU (bl)
132.36x12.019.*	SO-FU-36x12	2	NBR (gr), SI (tr), PU (bl)
132.45x15.020.*	SO-FU-45x15	3	NBR (gr), SI (tr), PU (bl)
132.60x20.022.*	SO-FU-60x20	3	NBR (gr), SI (tr), PU (bg)
132.75x25.023.*	SO-FU-75x25	3	NBR (gr), SI (tr)
132.100x35.26.*	SO-FU-100x35	3	NBR (sw)

Accessories

Clamp

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78.030 (p.476)
78.030 (p.476)
78.032 (p.476)
78.032 (p.476)
78.032 (p.476)
78.032 (p.476)
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78.033 (p.476)
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78.034 (p.476)

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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



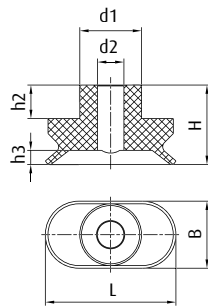
Series | Oval vacuum cups SO

Oval vacuum cups, flat, universal - SO-FU

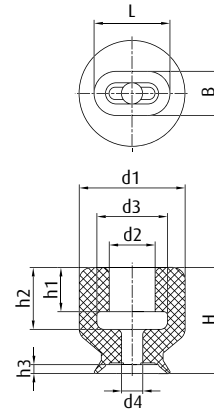
Accessories

Item no.	Suitable fittings								
	M3-male	M4-male	M5-male	M5-female	M6-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
132.4x2.001.*	270.011 (p.408)	--	--	--	--	--	--	--	--
132.4x2.031.*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--	--	--	--
132.7x4.002.*	270.025 (p.408)	--	--	--	--	--	--	--	--
132.7x4.034.*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--	--	--	--
132.12x4.004.*	--	--	270.134 (p.409)	270.347 (p.412)	270.104 (p.413)	270.033 (p.416)	270.478 (p.421)	--	--
132.15x5.008.*	--	--	270.094 (p.411)	270.005 (p.412)	--	270.095 (p.418)	270.096 (p.422)	--	--
132.18x6.012.*	--	--	270.094 (p.411)	270.005 (p.412)	--	270.095 (p.418)	270.096 (p.422)	--	--
132.24x8.016.*	--	--	270.094 (p.411)	270.005 (p.412)	--	270.095 (p.418)	270.096 (p.422)	--	--
132.30x10.018.*	--	--	270.094 (p.411)	270.005 (p.412)	--	270.095 (p.418)	270.096 (p.422)	--	--
132.36x12.019.*	--	--	270.094 (p.411)	270.005 (p.412)	--	270.095 (p.418)	270.096 (p.422)	--	--
132.45x15.020.*	--	--	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)
132.60x20.022.*	--	--	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)
132.75x25.023.*	--	--	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)
132.100x35.26.*	--	--	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)

Dimensions



Drawing A

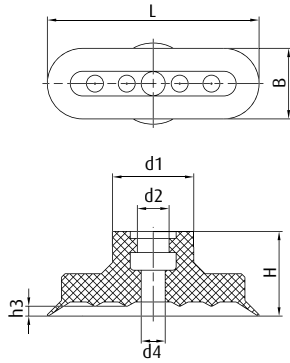


Drawing B

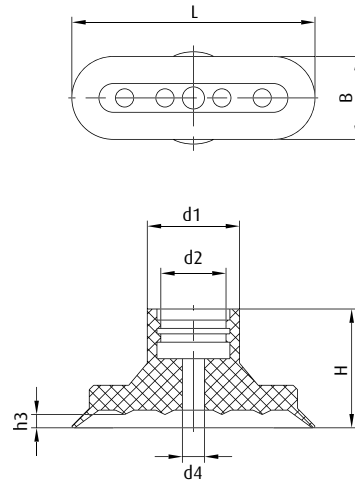
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing C



Drawing D

Item no.	Drawing	L [mm]	B [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
132.4x2.001._*	A	5	2.7	2	1	--	--	3	--	1.3	0.5
132.4x2.031._*	B	4.3	2.5	6	2.6	4	1.2	6	2.5	3.5	0.5
132.7x4.002._*	A	7.5	3.8	3.5	1.5	--	--	4.5	--	1.9	0.8
132.7x4.034._*	B	7.5	4	6	2.4	3	1.4	6	2.3	3	0.7
132.12x4.004._*	B	12	4	8	4	--	1.5	15	--	9.5	1
132.15x5.008._*	C	15	5	9	5	--	2	12	--	--	0.8
132.18x6.012._*	C	18	6	9	4.5	--	2	12	--	--	1.3
132.24x8.016._*	C	24	8	11.5	4.5	--	3	12	--	--	1.3
132.30x10.018._*	C	30	10	11.5	4.5	--	3.4	12	--	--	1.4
132.36x12.019._*	C	36	12	12	5	--	4	12	--	--	1.2
132.45x15.020._*	D	44	15	16.5	12	--	4	22	--	--	2.4
132.60x20.022._*	D	60	20	16.5	11.5	--	4	22	--	--	2.2
132.75x25.023._*	D	75	25	17.5	11	--	3.5	22	--	--	3
132.100x35.26._*	D	100	35	17.5	11.5	--	8	22	--	--	3.1

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

High temperature-resistant Thermalon® oval cups - SKT-O

High temperature-resistant Thermalon® oval cups - SKT-O

UP TO 160 °C & MINIMUM MARKING



Product Description

Oval vacuum cups for smooth surfaces suitable for removing hot plastic parts to be painted from an injection moulding machine. Thermalon® is a material mixture specially optimised for the plastics industry with a hardness of 60° Shore A. Connection via plug-in nipple.


Advantage

- > Extremely low-marking
- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Significantly increased suction force compared to round vacuum cups of the same width
- > Soft sealing lip also allows adhesion to curved products

Ordering notes:

From size 24x8 mm upward, a gripper clamp (available separately) is recommended to prevent inadvertent rotation.

Technical data


Item no.	Model / Lip dimensions		Material / Colour	Usage temperature [°C]
132.4x2.079._*	SKT-O-4x2	0.4	Thermalon® (bl)	0 - 160
132.7x4.080._*	SKT-O-7x4	0.5	Thermalon® (bl)	0 - 160
132.15x5.081._*	SKT-O-15x5	0.6	Thermalon® (bl)	0 - 160
132.18x6.082._*	SKT-O-18x6	1	Thermalon® (bl)	0 - 160
132.24x8.083._*	SKT-O-24x8	1	Thermalon® (bl)	0 - 160
132.30x10.084._*	SKT-O-30x10	1	Thermalon® (bl)	0 - 160
132.45x15.085._*	SKT-O-45x15	2	Thermalon® (bl)	0 - 160
132.60x20.086._*	SKT-O-60x20	2.5	Thermalon® (bl)	0 - 160
132.75x25.087._*	SKT-O-75x25	2.5	Thermalon® (bl)	0 - 160

Accessories

Clamp

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78.032 (p.476)
78.032 (p.476)
78.033 (p.476)
78.033 (p.476)
78.034 (p.476)

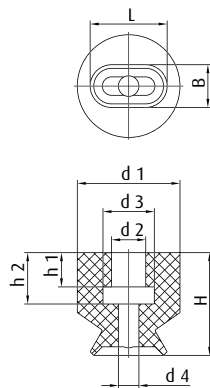
Accessories

Item no.	 Suitable fittings						
	M3-male	M4-male	M5-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female
132.4x2.079._*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--	--
132.7x4.080._*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--	--
132.15x5.081._*	--	--	270.094 (p.411)	270.095 (p.418)	270.096 (p.422)	--	--
132.18x6.082._*	--	--	270.094 (p.411)	270.095 (p.418)	270.096 (p.422)	--	--
132.24x8.083._*	--	--	270.094 (p.411)	270.095 (p.418)	270.096 (p.422)	--	--
132.30x10.084._*	--	--	270.094 (p.411)	270.095 (p.418)	270.096 (p.422)	--	--
132.45x15.085._*	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)
132.60x20.086._*	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)
132.75x25.087._*	--	--	--	--	--	270.097 (p.426)	270.098 (p.432)

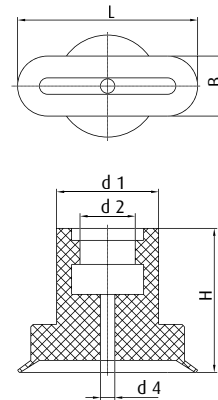
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



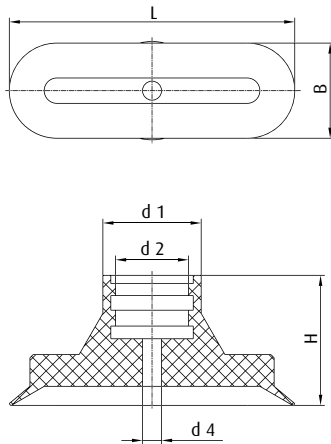
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	L [mm]	B [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]
132.4x2.079_*	A	4.5	2.5	6	2	3	1.2	6
132.7x4.080_*	A	7	3.5	6	2	3	1.4	6
132.15x5.081_*	B	15	5	8.5	4.6	--	1.2	12
132.18x6.082_*	B	18	6	8.5	4.6	--	1.5	12
132.24x8.083_*	B	24	8	11.5	5.5	--	1.5	12
132.30x10.084_*	B	30	10	11.5	5.5	--	2.5	12
132.45x15.085_*	C	45	15	15.5	11.5	--	3	21
132.60x20.086_*	C	60	20	15.5	11.5	--	4	21
132.75x25.087_*	C	75	25	17.5	11.5	--	4	21

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

High temperature-resistant HNBR oval cups - SKH-O

High temperature-resistant HNBR oval cups - SKH-O

UP TO 160 °C & MINIMUM MARKING



Product Description

Oval vacuum cups for smooth surfaces suitable for removing hot plastic parts to be painted from an injection moulding machine. Connection via plug-in nipple.


Advantage

- > Free of silicone and other paint-wetting-impairment substances (PWIS)
- > Minimum-marking
- > Significantly increased suction force compared to round vacuum cups of the same width
- > Soft sealing lip also allows adhesion to curved products

Ordering notes:

From size 15x5 mm upward, a gripper clamp (available separately) is recommended to prevent inadvertent rotation

Technical data


Item no.	Model / Lip dimensions		Material / Colour	Usage temperature [°C]
132.4x2.031._*	SKH-O-4x2A	0.5	HNBR (ge)	0 - 160
132.7x4.034._*	SKH-O-7x4	0.8	HNBR (ge)	0 - 160
132.15x5.067._*	SKH-O-15x5	1	HNBR (ge)	0 - 160
132.24x8.066._*	SKH-O-24x8	1	HNBR (ge)	0 - 160
132.36x12.068._*	SKH-O-36x12	2	HNBR (ge)	0 - 160
132.45x15.064._*	SKH-O-45x15	3	HNBR (ge)	0 - 160

Accessories

Clamp

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78.030 (p.476)
78.032 (p.476)
78.032 (p.476)
78.033 (p.476)

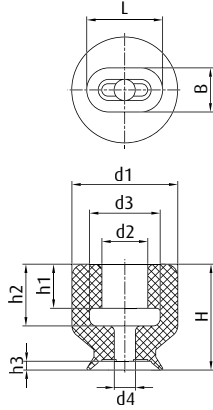
Accessories

Item no.	 Suitable fittings					
	M3-male	M4-male	M5-male	G1/8-male	G1/4-male	G1/4-female
132.4x2.031._*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--
132.7x4.034._*	270.014 (p.408)	270.111 (p.408)	270.300 (p.411)	--	--	--
132.15x5.067._*	--	--	--	270.431 (p.418)	--	--
132.24x8.066._*	--	--	--	270.431 (p.418)	--	--
132.36x12.068._*	--	--	--	270.431 (p.418)	--	--
132.45x15.064._*	--	--	--	--	270.097 (p.426)	270.098 (p.432)

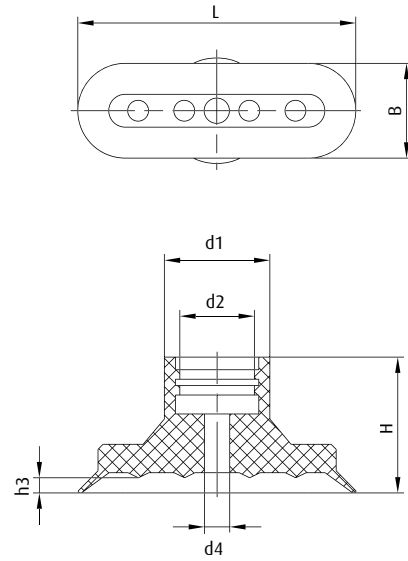
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

Item no.	Drawing	L [mm]	B [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]	h3 [mm]
132.4x2.031._*	A	4.3	2.5	6	2.6	4	1.2	6	2.5	3.5	0.5
132.7x4.034._*	A	7.5	4	6	2.4	3	1.4	6	2.3	3	0.7
132.15x5.067._*	B	15	5	9	5	--	2	12	--	--	0.8
132.24x8.066._*	B	24	8.5	12.5	5	--	3	13	--	--	1.5
132.36X12.068._*	B	36	12	12	5	--	4	12	--	--	1.6
132.45x15.064._*	B	44	15	16.5	12	--	4	22	--	--	2.4

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

Universal oval vacuum cups, 2.5 folds - SO-BU

Universal oval vacuum cups, 2.5 folds - SO-BU



Product Description

Bellows vacuum cups in oval design for elongated workpieces where only minimal space is available (e.g., rails, profiles, tubes, bolts, etc.). The reinforcement wires fitted into the folds helps prevent collapse at excessive vacuum levels. Connection via plug-in nipple.


Advantage

- > Significantly increased suction force compared to round vacuum cups of the same width
- > Bellows compensate for height differences
- > Soft sealing lip also allows adhesion to curved products

Ordering notes:

- > For fastening, the use of a gripper clamp (available separately) is recommended to prevent inadvertent rotation


Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
138.25x8.002._*	SO-BU-25x8	6	2.5	NBR (gr), SI (tr)
138.45x15.003._*	SO-BU-45x15	8	2.5	NBR (gr), SI (tr)
138.75x25.004._*	SO-BU-75x25	11	2.5	NBR (gr), SI (tr)

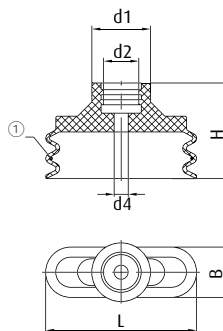
Accessories

Clamp
78.031 (p.476)
78.033 (p.476)
78.034 (p.476)

Accessories

Item no.	 Suitable fittings					
	M5-male	M5-female	G1/8-male	G1/8-female	G1/4-male	G1/4-female
138.25x8.002._*	270.094 (p.411)	270.005 (p.412)	270.095 (p.418)	270.096 (p.422)	--	--
138.45x15.003._*	--	--	--	--	270.097 (p.426)	270.098 (p.432)
138.75x25.004._*	--	--	--	--	270.097 (p.426)	270.098 (p.432)

Dimensions



① = Wire strap stiffening

Item no.	L [mm]	B [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d4 [mm]	H [mm]
138.25x8.002._*	25	8	10	4.5	2	18.5
138.45x15.003._*	45	15	17.5	10.5	4	29
138.75x25.004._*	75	25	17.5	10.5	6	35

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Vinyl oval bellows cups - SO-BV



Product Description

Durable oval vacuum cup with height adjustment made of snug-fitting, wear-resistant material. Very well suited for handling abrasive products such as cardboard. Flexible material enables low-leakage gripping of highly flexible products such as foil-packaged goods. Connection via plug-in nipple or vulcanised carrier plate.

Advantage

- > Significantly increased suction force compared to round vacuum cups of the same width
- > Bellows compensates for differences in height and enables good adaptation to curved or uneven product surfaces
- > Flexible, soft lips
- > Long life cycle

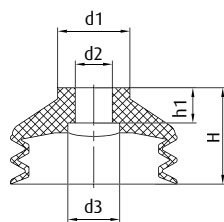
Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour
138.35x28.001.*	SO-BV-35x28	9	2.5	Vinyl (bl)
138.45x28.013.*	SO-BV-45x28	9	2.5	Vinyl (bl)
130.97x55.126.*	SO-BV-100x55	11	1.5	Vinyl (bl)

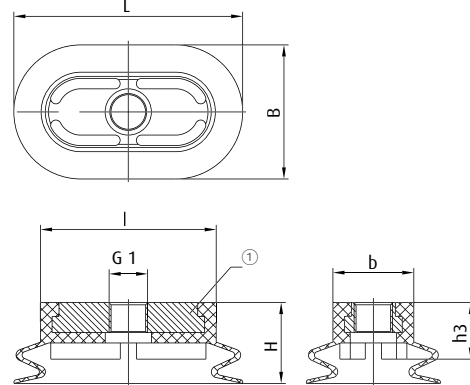
Accessories

Item no.	Suitable fittings		
	M10-male	G1/4-male	G1/4-female
138.35x28.001.*	270.177 (p.416)	270.451 (p.426)	270.452 (p.431)
138.45x28.013.*	270.177 (p.416)	270.451 (p.426)	270.452 (p.431)
130.97x55.126.*	--	--	--

Dimensions



Drawing A



Drawing B

① = Aluminium

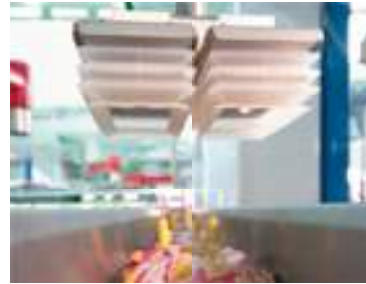
Item no.	Drawing	L [mm]	B [mm]	l [mm]	b [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	G1	H [mm]	h1 [mm]	h3 [mm]
138.35x28.001.*	A	35	28	--	--	19.5	10	14	--	24	8.5	--
138.45x28.013.*	A	45	28	--	--	19.5	10	14	--	26	9.5	--
130.97x55.126.*	B	99	58	76	35	--	--	--	G3/8	35	--	25



Series | Oval vacuum cups SO

Rectangular bellows vacuum cups - SV-RB

Rectangular bellows vacuum cups - SV-RB



Product Description

Bellows vacuum cups in rectangular design made of FDA-compliant material (SI). Particularly suitable for film-packaged products and filled pouches. Also available with wire stiffening. Connection via an interlocking snap-in carrier plate.


Advantage

- > Large suction surface due to rectangular design
- > Bellows compensate differences in height and enable good adaptation to curved or uneven product surfaces
- > Gentle attachment to the product
- > Good fit for irregularities and folds thanks to soft sealing lip


Ordering notes:

Optional: Wire strap reinforcement available.
When ordering, please add "-VERS" to item number

Technical data

Item no.	Model / Lip dimensions		Number of folds	Material / Colour	Accessories
					Wire strap reinforcement
Bellows vacuum cups, 2.5 folds, for cylindrical products					
201.79x29.002._*	SV-RB-79x29	16	2.5	SI (tr)	X 0020
Bellows vacuum cups, 2.5 folds, with flat sealing lip					
209.52x25.006._*	SV-RB-52x25	13	2.5	SI (tr)	X 0022
209.60x29.001._*	SV-RB-60x29	13	2.5	NBR (sw), SI (tr)	X 0024
Bellows vacuum cups, 3.5 folds, with thinly tapering, flexible sealing lip					
209.80x30.003._*	SV-RB-80x30	20	3.5	SI (tr)	X 0020
209.80x40.004._*	SV-RB-80x40	20	3.5	SI (tr)	X 0023
209.80x50.005._*	SV-RB-80x50	20	3.5	SI (tr)	X 0041

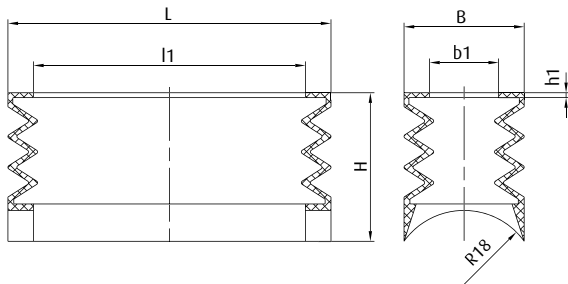
Accessories

Item no.	 Suitable fittings	
	G1/8-female	G1/4-female
Bellows vacuum cups, 2.5 folds, for cylindrical products		
201.79x29.002._*	--	270.392 (p.439)
Bellows vacuum cups, 2.5 folds, with flat sealing lip		
209.52x25.006._*	270.508 (p.439)	--
209.60x29.001._*	--	270.509 (p.439)
Bellows vacuum cups, 3.5 folds, with thinly tapering, flexible sealing lip		
209.80x30.003._*	--	270.392 (p.439)
209.80x40.004._*	--	270.510 (p.439)
209.80x50.005._*	--	270.511 (p.439)

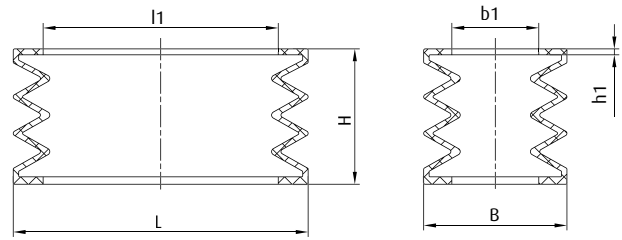
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



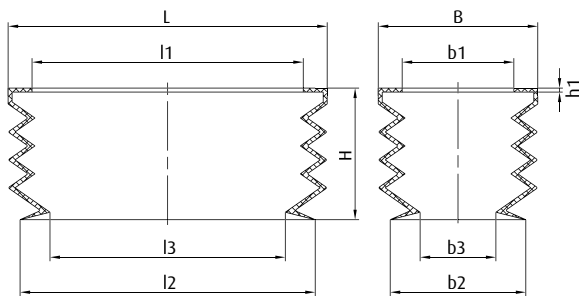
Dimensions



Drawing A



Drawing B



Drawing C

Item no.	Drawing	L [mm]	B [mm]	l1 [mm]	l2 [mm]	l3 [mm]	b1 [mm]	b2 [mm]	b3 [mm]	H [mm]	h1 [mm]
Bellows vacuum cups, 2.5 folds, for cylindrical products											
201.79x29.002.*	A	80	30	67	--	--	17	--	--	37	1.2
Bellows vacuum cups, 2.5 folds, with flat sealing lip											
209.52x25.006.*	B	53	26	40	--	--	13	--	--	28	1.2
209.60x29.001.*	B	60	29	48	--	--	17.5	--	--	27	1.2
Bellows vacuum cups, 3.5 folds, with thinly tapering, flexible sealing lip											
209.80x30.003.*	C	81	31	69	75	60	18	25	9	34	--
209.80x40.004.*	C	80	40	68	74	59	28	34	19	33	--
209.80x50.005.*	C	80	50	67	74	57	37	44	27	33	--

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

Oval vacuum cups, flat - SO-E

Oval vacuum cups, flat - SO-E



Product Description

Small flat vacuum cups in oval design for elongated workpieces where only minimal space is available (e.g. semiconductors, carrier plates, etc.). Connection via an interlocking snap-in plug-in nipple.


Advantage

- > Significantly increased suction force compared to round vacuum cups of the same width
- > Optimum bending strength due to elongated carrier plate in the plug-in nipple
- > Secured against rotation
- > Antistatic version available
- > Cost-effective replacement of worn seals

Ordering notes:

The cups are delivered fully assembled with fitting.
The listed fittings are spare parts.

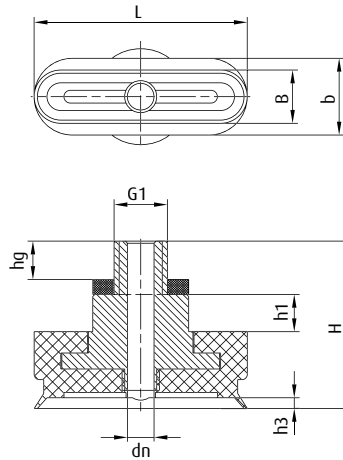
Technical Data

Model / Lip dimensions	Item no.			Material / Colour	Spare cup	Spare fittings	
	M5-male	M6-male				M5-male	M6-male
SO-E-10x4	130.10x4.115._*	130.10x4.068._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.10x4.003._*	270.463	270.339
SO-E-10x5	130.10x5.116._*	130.10x5.071._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.10x5.007._*	270.463	270.339
SO-E-10x6	130.10x6.117._*	130.10x6.073._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.10x6.011._*	270.463	270.339
SO-E-20x4	130.20x4.118._*	130.20x4.069._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.20x4.005._*	270.464	270.340
SO-E-20x5	130.20x5.119._*	130.20x5.081._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.20x5.009._*	270.464	270.340
SO-E-20x6	130.20x6.120._*	130.20x6.074._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.20x6.013._*	270.464	270.340
SO-E-20x8	130.20x8.121._*	130.20x8.076._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.20x8.015._*	270.464	270.340
SO-E-30x5	130.30x5.123._*	130.30x5.072._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.30x5.010._*	270.464	270.340
SO-E-30x6	130.30x6.124._*	130.30x6.075._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.30x6.014._*	270.464	270.340
SO-E-30x8	130.30x8.125._*	130.30x8.077._*	0.9	NBR (sw), SI (tr), BR-AS (sw)	132.30x8.017._*	270.464	270.340

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Item no.	L [mm]	B [mm]	b [mm]	Ø dn [mm]	G1	H [mm]	h1 [mm]	h3 [mm]	hg [mm]
130.10x4.115.*	10	4.6	7	2.5	M5	15.5	3.5	1	3.6
130.10x4.068.*	10	4.6	7	2	M6	15.5	3.5	1	4
130.10x5.116.*	10	5	7	2.5	M5	15.5	3.5	1	3.6
130.10x5.071.*	10	5	7	2	M6	15.5	3.5	1	4
130.10x6.117.*	10	6	7	2.5	M5	15.5	3.5	1	3.6
130.10x6.073.*	10	6	7	2	M6	15.5	3.5	1	4
130.20x4.118.*	20	4.3	7	2.5	M5	15.5	3.5	1	3.6
130.20x4.069.*	20	4.3	7	2	M6	15.5	3.5	1	4
130.20x5.119.*	20	5	7	2.5	M5	15.5	3.5	1	3.6
130.20x5.081.*	20	5	7	2	M6	15.5	3.5	1	4
130.20x6.120.*	20	6	7	2.5	M5	15.5	3.5	1	3.6
130.20x6.074.*	20	6	7	2	M6	15.5	3.5	1	4
130.20x8.121.*	20	8	8	2.5	M5	15.5	3.5	1	3.6
130.20x8.076.*	20	8	8	2	M6	15.5	3.5	1	4
130.30x5.123.*	30	5	7	2.5	M5	15.5	3.5	1	3.6
130.30x5.072.*	30	5	7	2	M6	15.5	3.5	1	4
130.30x6.124.*	30	6	7	2.5	M5	15.5	3.5	1	3.6
130.30x6.075.*	30	6	7	2	M6	15.5	3.5	1	4
130.30x8.125.*	30	8	8	2.5	M5	15.5	3.5	1	3.6
130.30x8.077.*	30	8	8	2	M6	15.5	3.5	1	4

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

Oval vacuum cups for cylindrical products - SO-Z

Oval vacuum cups for cylindrical products - SO-Z



Product Description

Oval vacuum cup for cylindrical products such as pins, needles, tubes, etc. Connection via plug-in nipple, hollow screw (SO-Z-10-18) or direct plug-in to the machine (SO-Z-4-10).

Advantage

- > Significantly greater suction force over normal oval vacuum cups due to three-dimensional oval suction lip contour partially encompassing the workpiece
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions	Suitable for cylindrical products with \varnothing [mm]	Material / Colour
201.10x3.005._*	SO-Z-2-4	2 - 4	NBR (sw), SI (tr)
201.10x6.006._*	SO-Z-3-7	3 - 7.5	NBR (sw), SI (tr)
132.15x7.073._*	SO-Z-4-10	4 - 10	SI (r)
201.12x9.007._*	SO-Z-6-13	6 - 13	NBR (sw), SI (tr)
9.23x11.036._*	SO-Z-10-18	10 - 18	SI (tr)

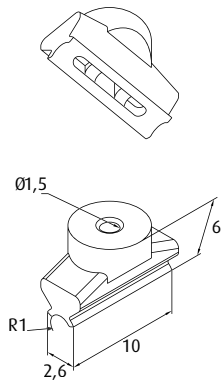
Accessories

Item no.	Suitable fittings		
	M5-male	G1/8-male	G1/8-female
201.10x3.005._*	270.300 (p.411)	--	--
201.10x6.006._*	270.300 (p.411)	--	--
132.15x7.073._*	--	--	--
201.12x9.007._*	270.300 (p.411)	--	--
9.23x11.036._*	270.310 (p.411)	270.493 (p.420)	270.494 (p.423)

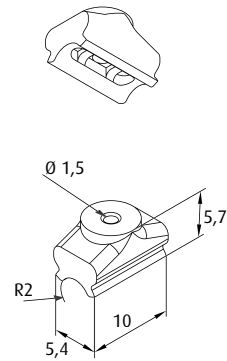
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



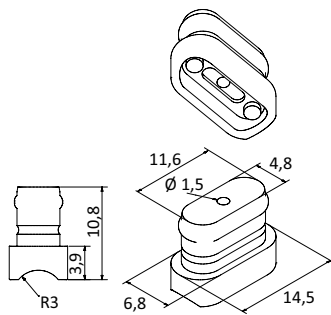
Dimensions



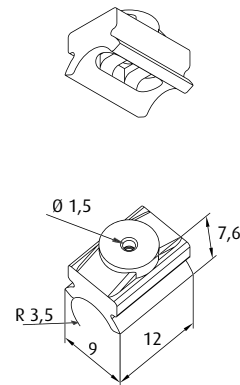
Drawing A



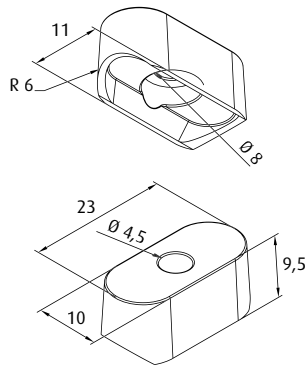
Drawing B



Drawing C



Drawing D



Drawing E

Item no.	Drawing
201.10x3.005_*	A
201.10x6.006_*	B
132.15x7.073_*	C
201.12x9.007_*	D
9.23x11.036_*	E

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Oval vacuum cups, flat - SO-C




Product Description

Flat vacuum cups in oval design for elongated workpieces where only minimal space is available (e.g. rails, profiles, tubes, bolts, etc.). Vacuum chamber housing of anodised aluminium. Rubber sealing lip is fixed by a screwed rubber clamping plate.

Advantage

- > Significantly increased suction force compared to round vacuum cups of the same width
- > Warp-resistant aluminium housing
- > Cost-effective replacement of worn seals

Technical data

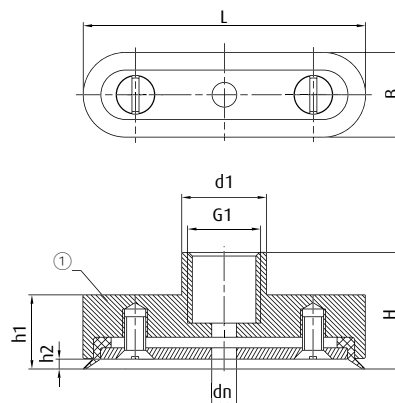
Item no.	Model / Lip dimensions	Connection thread		Material / Colour
130.30x12.057.*	SO-C-30x12	G1/8-female	1	SI (tr), NR (sw)
130.40x12.058.*	SO-C-40x12	G1/8-female	1	SI (tr), NR (sw)
130.55x12.082.*	SO-C-55x12	G1/8-female	1	NBR (sw), SI (tr), NR (sw)

Accessories

Spare cup

132.30x12.025.* (p.374)
132.40x12.027.* (p.375)
132.55x12.029.* (p.378)

Dimensions



① = Aluminium

Item no.	L [mm]	B [mm]	Ø d1 [mm]	Ø dn [mm]	G1	H [mm]	h1 [mm]	h2 [mm]
130.30x12.057.*	30	12	12	3.5	G1/8	16.5	10	1.3
130.40x12.058.*	40	12	12	3.5	G1/8	16.5	10	1.4
130.55x12.082.*	55	12	12	3.5	G1/8	16.5	10	1.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

Oval vacuum suction plates for textured surfaces - SOPL-R

Oval vacuum suction plates for textured surfaces - SOPL-R




Product Description

Oval vacuum cups for handling both rough surfaces and smooth, markedly uneven products.
Connection via vulcanised aluminium plate.

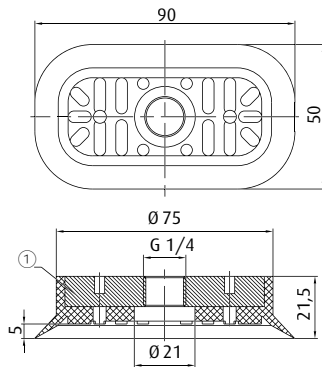
Advantage

- > Leak-free gripping of difficult product surfaces thanks to extremely flexible, thinly tapered sealing lip
- > Cleats help prevent warping of the product
- > Optimum process reliability due to vulcanised backing plate, as well as additional internal safety sealing lip (190x90 mm and 120x65 mm)

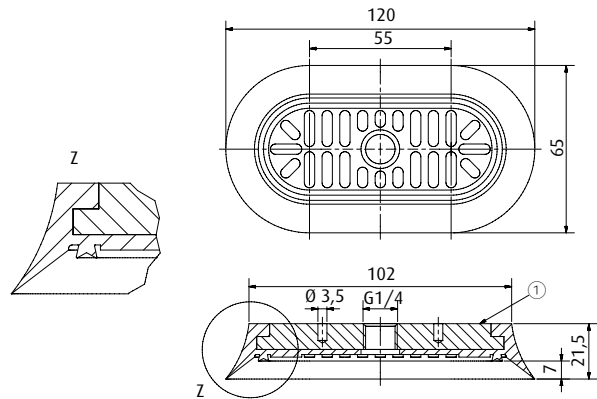
Technical data

Item no.	Model / Lip dimensions	Connection thread	Material / Colour		Weight [g]
130.90x50.113._*	SOPL-R-90x50	G1/4-female	NR (bg)	5	72
9.120x65.088._*	SOPL-R-120x65	G1/4-female	NR (bg)	7	131
9.190x90.061._*	SOPL-R-190x90	G1/4-female	NR (bg)	5.5	295

Dimensions



Drawing A



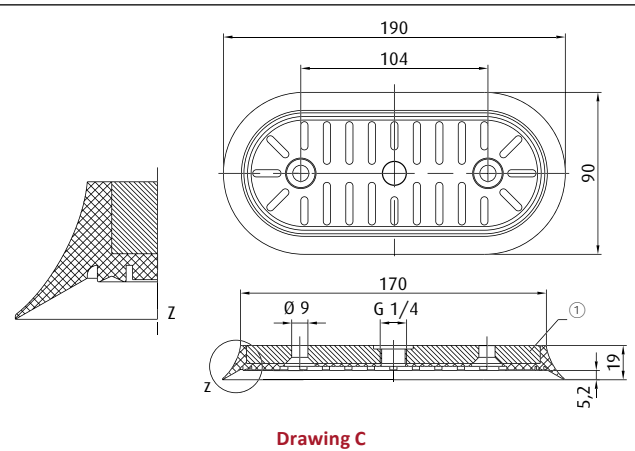
Drawing B

① = Aluminium

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing C

① = Aluminium

Item no.	Drawing
130.90x50.113._*	A
9.120x65.088._*	B
9.190x90.061._*	C

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Oval vacuum cups SO

Oval vacuum suction plates - SOPL-S and SOPL-A

Oval vacuum suction plates - SOPL-S and SOPL-A



Product Description

Oval vacuum cups, vulcanised, on a carrier plate of steel/aluminium for the handling of long, narrow products such as strips, profiles or frames. Rubberised support surfaces prevent deformation of the product and increase lateral stability.

Advantage

- > High suction force on a small footprint
- > Low-marking
- > High process reliability due to vulcanised carrier plate
- > Individual machine connection possible

Ordering notes:

Customised drilling patterns available on request for Series SOPL-S

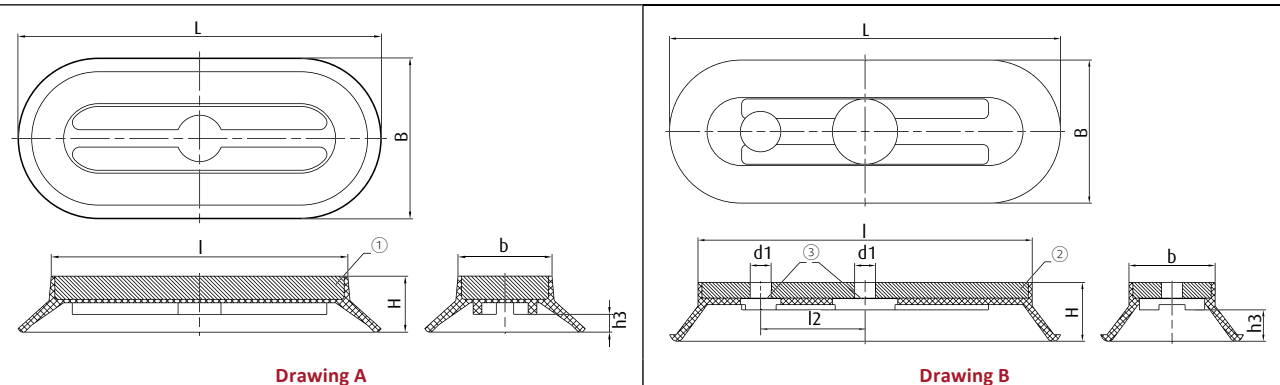
Technical data

Item no.	Model / Lip dimensions	Material / Colour		Weight [g]	Support surfaces
SOPL-S: NBR material, grey, with steel carrier plate					
9.200x40.010.*	SOPL-S-200x40	NBR (gr)	9	140	lengthwise
9.110x40.009.*	SOPL-S-110x40	NBR (gr)	9	122	lengthwise
9.125x55.012.*	SOPL-S-125x55	NBR (gr)	9	320	lengthwise
9.150x55.013.*	SOPL-S-150x55	NBR (gr)	7	255	lengthwise
9.200x55.014.*	SOPL-S-200x55	NBR (gr)	7	538	lengthwise
9.250x55.016.*	SOPL-S-250x55	NBR (gr)	8	770	lengthwise
9.300x55.019.*	SOPL-S-300x55	NBR (gr)	8	902	lengthwise
9.370x70.022.*	SOPL-S-370x70	NBR (gr)	10	1,895	lengthwise
9.200x100.015.*	SOPL-S-200x100	NBR (gr)	8	595	lengthwise
9.280x100.017.*	SOPL-S-280x100	NBR (gr)	10	1,880	lengthwise
9.450x130.025.*	SOPL-S-450x130	NBR (gr)	6	2,660	crosswise
9.430x180.024.*	SOPL-S-430x180	NBR (gr)	6	3,720	selective
9.580x180.029.*	SOPL-S-580x180	NBR (gr)	10	3,500	lengthwise
SOPL-A: NR material, orange, with aluminium carrier plate					
9.100x55.020.*	SOPL-A-100x55	NR (or)	8	65	lengthwise
9.150x55.083.*	SOPL-A-150x55	NR (or)	8	114	lengthwise
9.200x55.020.*	SOPL-A-200x55	NR (or)	8	159	lengthwise
9.300x55.046.*	SOPL-A-300x55	NR (or)	8	300	lengthwise

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



① = Steel ② = Aluminium ③ = Sealed with rubber

Item no.	Drawing	L [mm]	B [mm]	l [mm]	l2 [mm]	b [mm]	Ø d1 [mm]	H [mm]	h3 [mm]
SOPL-S: NBR material, grey, with steel carrier plate									
9.200x40.010.*	A	195	36	176	--	15	--	19	6
9.110x40.009.*	A	113	43	87	--	17	--	19	8.5
9.125x55.012.*	A	126	56	103	--	33	--	19	6
9.150x55.013.*	A	151	56	128	--	33	--	19	6
9.200x55.014.*	A	200	55	178	--	33	--	19	6.3
9.250x55.016.*	A	250	55	228	--	33	--	19	6
9.300x55.019.*	A	300	55	227	--	33	--	19	6
9.370x70.022.*	A	378	82	349	--	53	--	26	9
9.200x100.015.*	A	190	90	161	--	61	--	22	8.5
9.280x100.017.*	A	278	100	250	--	72	--	25	9
9.450x130.025.*	A	449	131	420	--	102	--	20	6.5
9.430x180.024.*	A	430	180	402	--	158	--	20	6
9.580x180.029.*	A	579	179	570	--	150	--	25	9
SOPL-A: NR material, orange, with aluminium carrier plate									
9.100x55.020.*	B	99	54	78	25	33	8	22.5	9
9.150x55.083.*	B	150	55	128	40	33	8	22.5	9
9.200x55.020.*	B	201	56	178	50	33	8	22.5	9
9.300x55.046.*	B	300	55	278	100	33	8	22.5	9

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



FIPA Special vacuum cups SX



Temperature-resistant, felt coated vacuum cups - SX-F

- > Virtually mark-free special vacuum cups for high temperature requirements, e.g. in the glass industry
- > Highest temperature resistance (FKM briefly up to 300 °C; special silicone with an evaporated silicone lock made of aluminium briefly up to 500 °C)
- > Special felt pad vulcanised inseparably to elastomer carrier
- > Diameter: 25 - 160 mm

> See page 164



Vacuum cups with sponge pad - SX-SH

- > Flat vacuum cups with contact surface made from special silicone sponge
- > Very low-marking on polished surfaces
- > Flat sealing prevents leakage for rough, porous surfaces
- > Diameter: 8 - 40 mm

> See page 166



Bernoulli vacuum cups - SX-B

- > Non-contact, deformation-resistant transport of thin and sensitive products
- > No ejector, requires compressed air only
- > High holding force: Bernoulli vacuum cups can move up to 1,200 g of mass
- > Perfectly suited for porous products thanks to high volume flow at low vacuum level
- > Series made of PEEK (approval according to FDA / EC 1935 / 2004) for direct contact with food and ease of cleaning

> See page 498



Foam grippers

- > Handling of individual products or layers without the need to change the gripper and regardless of workpiece positioning
- > Integrated vacuum generation or external compressor for use with particularly air-permeable workpieces
- > Versions available with leakage reduction or flow valves

> See page 477



FIPA Special vacuum cups SX



Hand grippers - SX-G

- > Sturdy gripper for the manual handling of flat, smooth products
- > No vacuum source required
- > Simple handling - release of the product via a release button

> See page 168



Sealing cords - SX-D

- > Long-length version for DIY production of individual vacuum suction plates
- > Ideal adaptation to special product shapes

> See page 169



Series | Special vacuum cups SX

High temperature vacuum cups with felt pad - SX-F

High temperature vacuum cups with felt pad - SX-F

**HEAT RESISTANT
& LOW MARKING**



Product Description

Almost mark-free special vacuum cup for high temperature requirements, e.g. in the glass industry. Special felt pad vulcanised to elastomer carrier. Migration of silicone particles is prevented by vapour-deposited aluminium layer. Connection up to \varnothing 70 mm by means of plug-in nipple, from \varnothing 90 mm with bolted bracket plate.


Advantage

- > Temperature-resistant up to 500 °C (SI)
- > Almost mark-free
- > Cost-effective replacement of worn seals


Notes:

There is a small leak at first use resulting from the texture of the special felt, but after a brief period of use this will be significantly reduced by the thickening of the felt layer.

Technical data

Item no.	Model / Lip dimensions	 ↓	Weight [g]	Max. operating temperature [°C]	Material / Colour	Number of bellows
26.025.009._*	SX-F-25	2	6	500	SI (tr/ge)	--
26.037.010._*	SX-F-40	3	10	500	SI (tr/ge)	--
26.070.011._*	SX-F-70	7	24	500	SI (tr/ge)	--
26.090.001._*	SX-F-90	17	80	500, 300	SI (tr/ge), FKM (sw/ge)	1.5
26.120.002._*	SX-F-120	18	140	300	FKM (sw/ge)	1.5
26.160.003._*	SX-F-160	18	205	300	FKM (sw/ge)	1.5

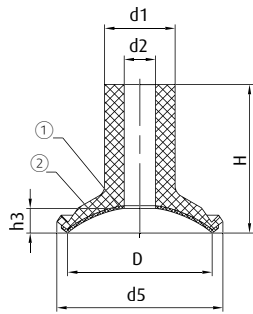
Accessories

Item no.	 Suitable fittings				
	G1/8-male	G1/8-female	G1/4-male	G1/4-female	G3/8-female
26.025.009._*	270.132 (p.417)	270.114 (p.422)	270.208 (p.425)	270.178 (p.431)	--
26.037.010._*	270.132 (p.417)	270.114 (p.422)	270.208 (p.425)	270.178 (p.431)	--
26.070.011._*	270.132 (p.417)	270.114 (p.422)	270.208 (p.425)	270.178 (p.431)	--
26.090.001._*	--	--	--	--	270.400 (p.436)
26.120.002._*	--	--	--	--	270.402 (p.436)
26.160.003._*	--	--	--	--	270.404 (p.436)

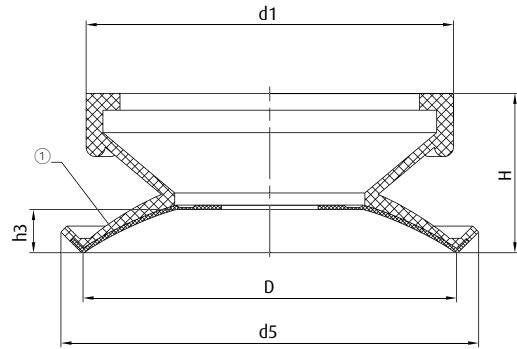
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

① = Felt pads ② = For silicone vacuum cups: Silicone membrane by evaporated aluminium layer

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d5 [mm]	H [mm]	h3 [mm]
26.025.009._*	A	24	16	8	29	36	3.3
26.037.010._*	A	37	18	8	42	38	6.5
26.070.011._*	A	67	21	8	71	36	8
26.090.001._*	B	89	87	--	99	38	10.5
26.120.002._*	B	120	108	--	129	45	17.5
26.160.003._*	B	150	130	--	161	48	16.5

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Special vacuum cups SX

Vacuum cups with sponge pad - SX-SH

Vacuum cups with sponge pad - SX-SH




Product Description

Low-marking flat vacuum cup with contact surface of special silicone sponge.
Soft sponge coating compensates for unevenness.
Connection via an interlocking snap-in plug-in nipple.






Advantage

- > Very low-marking on polished surfaces
- > Flat sealing prevents leakage
- > Cost-effective replacement of worn seals

Technical data

Item no.	Model / Lip dimensions		Max. operating temperature [°C]	Material / Colour
104.008.082.*	SX-SH-8	0.5	200	SI (bl/r)
104.009.083.*	SX-SH-9	0.5	200	SI (bl/r)
104.013.084.*	SX-SH-13	0.5	200	SI (bl/r)
104.015.085.*	SX-SH-15	1	200	SI (bl/r)
104.020.086.*	SX-SH-20	1.5	200	SI (bl/r)
104.030.087.*	SX-SH-30	1.5	200	SI (bl/r)
104.040.088.*	SX-SH-40	2.5	200	SI (bl/r)

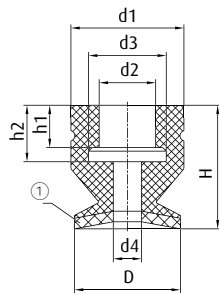
Accessories

Item no.	 Suitable fittings					 Suitable spring levelers (Snap-In)					
	M5-male	G1/8-male	G1/8-female	G1/4-male	G1/4-female	Spring leveler		Spring leveler		Spring leveler	
104.008.082.*	270.200 (p.411)	270.064 (p.418)	270.065 (p.422)	--	--	50.018 (p.454)	8.5	50.141 (p.456)	10	--	--
104.009.083.*	270.200 (p.411)	270.064 (p.418)	270.065 (p.422)	--	--	50.018 (p.454)	8.5	50.141 (p.456)	10	--	--
104.013.084.*	270.200 (p.411)	270.064 (p.418)	270.065 (p.422)	--	--	50.018 (p.454)	8.5	50.141 (p.456)	10	--	--
104.015.085.*	--	270.012 (p.421)	270.020 (p.423)	270.034 (p.428)	270.038 (p.432)	50.005 (p.456)	5	50.145 (p.456)	10	50.146 (p.456)	30
104.020.086.*	--	270.012 (p.421)	270.020 (p.423)	270.034 (p.428)	270.038 (p.432)	50.005 (p.456)	5	50.145 (p.456)	10	50.146 (p.456)	30
104.030.087.*	--	270.012 (p.421)	270.020 (p.423)	270.034 (p.428)	270.038 (p.432)	50.005 (p.456)	5	50.145 (p.456)	10	50.146 (p.456)	30
104.040.088.*	--	270.012 (p.421)	270.020 (p.423)	270.034 (p.428)	270.038 (p.432)	50.005 (p.456)	5	50.145 (p.456)	10	50.146 (p.456)	30

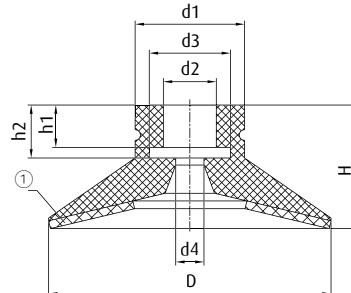
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Dimensions



Drawing A



Drawing B

① = Silicone sponge

Item no.	Drawing	Ø D [mm]	Ø d1 [mm]	Ø d2 [mm]	Ø d3 [mm]	Ø d4 [mm]	H [mm]	h1 [mm]	h2 [mm]
104.008.082._*	A	8	10.5	5	7	3	14	3	5
104.009.083._*	A	9	10.5	5	7	3	14	3	5
104.013.084._*	A	13	10.5	5	7	3	14	3	5
104.015.085._*	A	15	15.5	7.5	11.5	4	17.5	6	8
104.020.086._*	A	20	15.5	7.5	11.5	4	17.5	6	8
104.030.087._*	B	30	15.5	7.5	11.5	4	17.5	6	8
104.040.088._*	B	40	15.5	7.5	11.5	4	17.5	6	8

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760



Series | Special vacuum cups SX

Hand grippers - SX-G

Hand grippers - SX-G



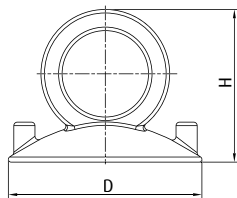
Product Description

Sturdy gripper for the manual handling of flat, smooth products.
No vacuum source required. Simple handling.
Release of the product via a release button.

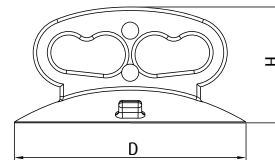
Technical data

Item no.	Model / Lip dimensions	Tearing force [kg]	Material / Colour
64.001.*	SX-G-55	14	Vinyl (sw)
64.002.*	SX-G-65	19	Vinyl (sw)
64.003.*	SX-G-75	22	Vinyl (sw)
64.004.*	SX-G-125	25	NBR (sw)
64.005.*	SX-G-130	28	Vinyl (sw)

Dimensions



Drawing A



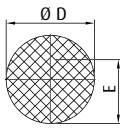
Drawing B

Item no.	Drawing	Ø D [mm]	H [mm]
64.001.*	A	54	42
64.002.*	A	66	48
64.003.*	B	82	42
64.004.*	B	115	63
64.005.*	B	121	65



Sealing cord, round - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

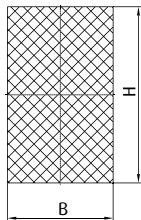
Item no.	Model / Lip dimensions	Recommended installation depth E [mm]	Material / Colour	Dimensions	
				Ø D [mm]	
231.05.026.12	SX-D-5	3.7	CR (sw)	5	
231.06.011.12	SX-D-6	4.5	CR (sw)	6	
231.08.012.12	SX-D-8	6	CR (sw)	8	
231.10.013.12	SX-D-10	7	CR (sw)	10	
231.12.014.12	SX-D-12	8.5	CR (sw)	12	

Ordering notes:

Minimum standard length: 1,000 mm

Sealing cord, rectangular - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

Item no.	Model / Lip dimensions	Material / Colour	Dimensions	
			B [mm]	H [mm]
231.10x6.006.12	SX-D-10x6	CR (gr)	6	10
231.20x10.027.12	SX-D-20x10	EPDM (sw)	10	20

Ordering notes:

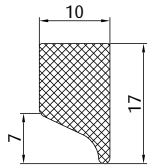
Minimum standard length: 1,000 mm



Series | Special vacuum cups SX

Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

Item no.

231.17x10.025.12

Material / Colour

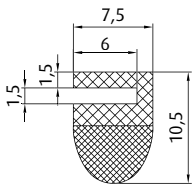
NR (gr)

Ordering notes:

Minimum standard length: 1,000 mm

Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

Item no.

231.10,5x7,5.001.12

Material / Colour

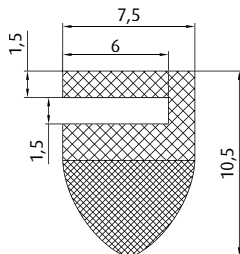
EPDM (sw) - 80°/30° Shore A

Ordering notes:

Minimum standard length: 1,000 mm

Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

Item no.

231.10,5x7,5.002.12

Material / Colour

EPDM (sw) - 80°/30° Shore A

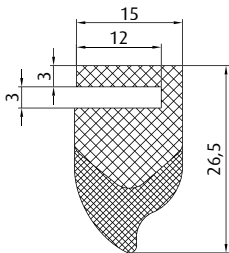
Ordering notes:

Minimum standard length: 1,000 mm



Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

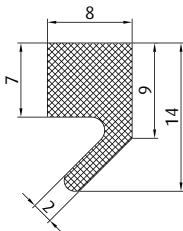
Item no.	Material / Colour
231.26,5x15.003.12	EPDM (sw) - 80°/30° Shore A

Ordering notes:

Minimum standard length: 1,000 mm

Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

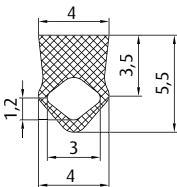
Item no.	Material / Colour
231.14x8x2.009.12	Sponge rubber (gr)

Ordering notes:

Minimum standard length: 1,000 mm

Sealing cord, profiled - SX-D

Long-length version for production of individual vacuum suction plates



Technical data

Item no.	Material / Colour
231.5,5x4.015.2tr	SI (tr)

Ordering notes:

1 packaging unit = 25 m

Flat vacuum cups by \varnothing	174
Bellows vacuum cups by \varnothing	283
Oval vacuum cups by size	363
Ring and segment vacuum cups	404

Vacuum cups by size | Flat vacuum cups at a glance

Application / Uses



- > Thanks to their shape, flat vacuum cups offer a high degree of stability, as well as good positional accuracy in the placement of materials
- > They enable both the horizontal and vertical handling of flat workpieces
- > Supporting ribs in the vacuum cup ensure good absorption of transverse forces and prevent slipping, e.g. when heavy, oily metal sheets are tilted in the automotive sector
- > Low cup volume enables short cycle times

Designs



- > FIPA flat vacuum cups are available with or without supporting ribs
- > Support ribs in the vacuum cup ensure significantly better suction by enlarging the active suction surface
- > They prevent the sucking in and deformation of flexible workpieces
- > Support ribs are especially recommended for:
 - flexible products
 - rapid acceleration of the machine

Methods of connection



Vacuum cups for attaching to the fittings (plug-in)

- > Secure hold
- > Quick replacement
- > Cost-efficient and environmentally-friendly, as only the rubber part needs to be replaced



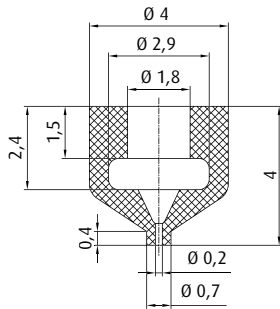
Bolted fittings

- > Vacuum cups are bolted from below into a threaded counterpart using a hollow bolt
- > Extremely secure hold
- > Eliminates twisting of the vacuum cups
- > Cost-efficient and environmentally-friendly, as only the rubber part needs to be replaced



Vulcanised fittings / retainer plate

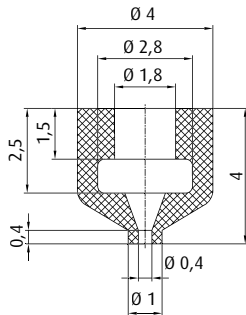
- > Very secure hold
- > Secured against rotation
- > High degree of dimensional stability



	Connection	see page
270.524	M3-male	408

Item no. 102.001.425.*	Material NBR (sw), SI-AS (sw)	0 mm
----------------------------------	---	------

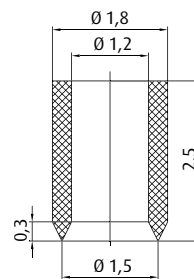
Additional sizes available are found on p. 38.



	Connection	see page
270.524	M3-male	408

Item no. 102.001.463.*	Material NBR (sw), SI-AS (sw)	0 mm
----------------------------------	---	------

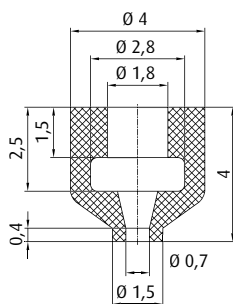
Additional sizes available are found on p. 38.



	Connection	see page
270.011	M3-male	408

Item no. 102.001.002.*	Material NBR (sw), SI (tr)	0.3 mm
----------------------------------	--------------------------------------	--------

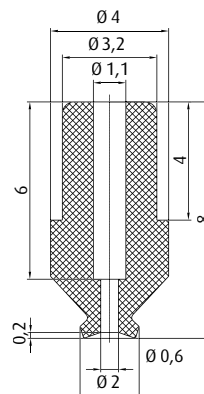
Additional sizes available are found on p. 32.
Ordering notes: Packing unit = 10 pieces



	Connection	see page
270.524	M3-male	408

Item no. 102.002.464.*	Material NBR (sw), SI-AS (sw)	0 mm
----------------------------------	---	------

Additional sizes available are found on p. 38.



	Connection	see page
270.427	M3-male	408

Item no. 102.002.279.*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.2 mm
----------------------------------	---	--------

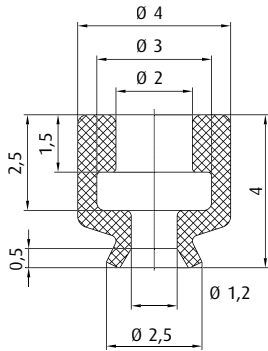
Additional sizes available are found on p. 38.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

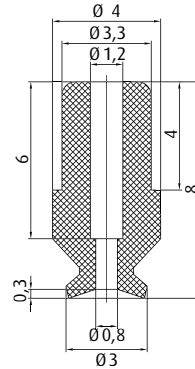
Ø 2 - 4 mm



	Connection	see page
270.014	M3-male	408
270.300	M5-male	411

Item no. 102.002.004._*	Material NBR (sw), NBR-AS (sw), SI (tr), SI-AS (sw), PU (bl)	0.4 mm
-----------------------------------	--	--------

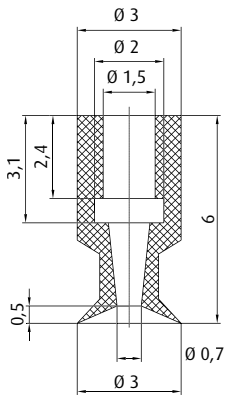
Additional sizes available are found on p. 32.
Ordering notes: Packing unit = 10 pieces



	Connection	see page
270.427	M3-male	408

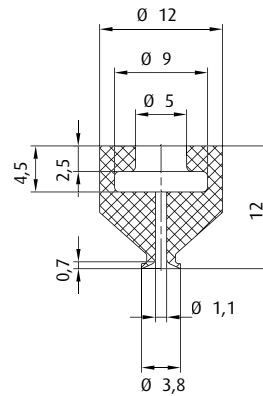
Item no. 102.003.280._*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.3 mm
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Additional sizes available are found on p. 38.



	Connection	see page
270.025	M3-male	408

Item no. 102.003.480._*	Material NBR (sw)	0.3 mm
-----------------------------------	-----------------------------	--------

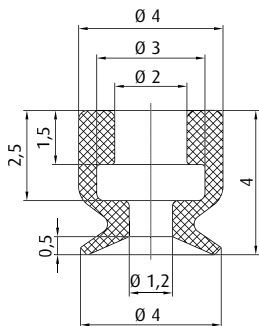


	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

		see page
50.018	8.5 mm	454
50.019	8.5 mm	454

Item no. 102.004.216._*	Material NBR (sw), SI (tr)	1 mm
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Additional sizes available are found on p. 50.

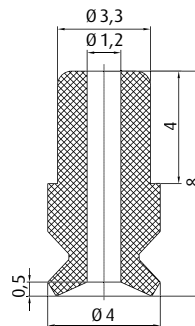


	Connection	see page
270.014	M3-male	408
270.300	M5-male	411

BESTSELLER

Item no. 102.003.005._*	Material NBR (sw), NBR-AS (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw)	0.5 mm
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Additional sizes available are found on p. 32.
Ordering notes: Packing unit = 10 pieces

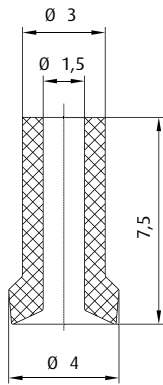


	Connection	see page
270.427	M3-male	408

Item no. 102.004.281._*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	0.3 mm
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Additional sizes available are found on p. 38.

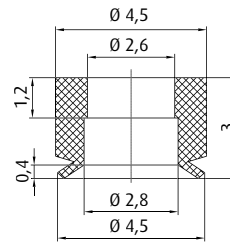
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	M3-male	408

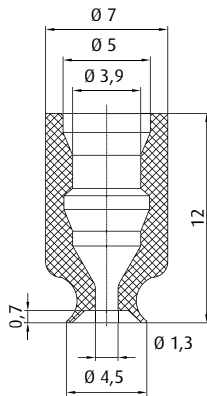
Item no. 112.004.001.* **Material** NBR (sw), SI (r) 0.5 mm

Additional sizes available are found on p. 52.



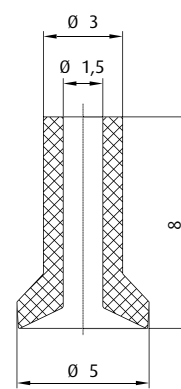
Icon	Connection	see page
	M3-male	408
	M4-male	408

Item no. 102.005.115.* **Material** NBR (sw), SI (tr) 0.5 mm



Icon	Connection	see page
	M5-male	410

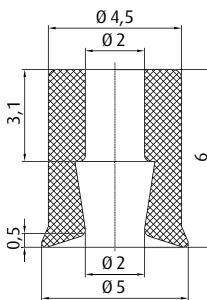
Item no. 102.005.391.* **Material** SI (tr) 0.5 mm



Icon	Connection	see page
	M3-male	408

Item no. 112.005.002.* **Material** NBR (sw), SI (r) 0.7 mm

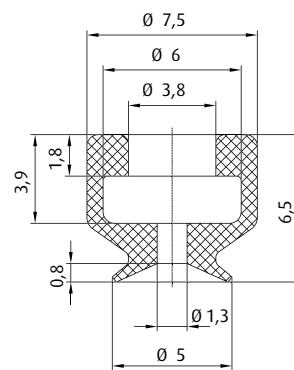
Additional sizes available are found on p. 52.



Icon	Connection	see page
	M5-male	409

Item no. 102.005.090.* **Material** SI (tr), CR (sw) 0.5 mm

Additional sizes available are found on p. 42.



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422
	10 mm	454

Item no. 102.005.009.* **Material** NBR (sw), SI (tr), SI-AS (sw), FKM (sw) 0.9 mm

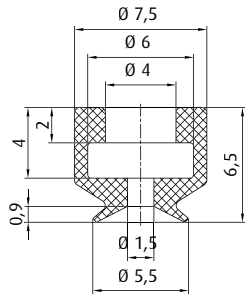
Additional sizes available are found on p. 32.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 5 - 6 mm



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

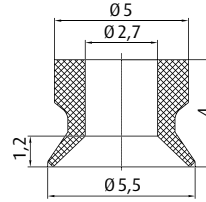
Icon	Connection	see page
	10 mm	454

Item no.
102.005.496._*

Material
Thermalon® (bl)

0.9 mm

Additional sizes available are found on p. 36.



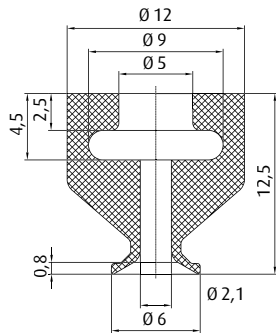
Icon	Connection	see page
	M3-male	408

Item no.
102.005.081._*

Material
NBR (sw), SI (tr), SI-AS (sw)

0.9 mm

Additional sizes available are found on p. 36.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

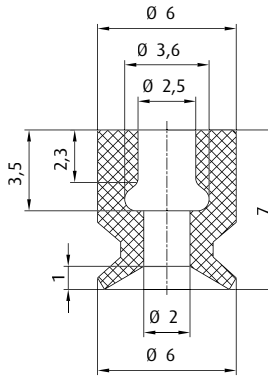
Icon	Connection	see page
	8.5 mm	454
	8.5 mm	454

Item no.
102.006.217._*

Material
NBR (sw), SI (tr)

1 mm

Additional sizes available are found on p. 50.



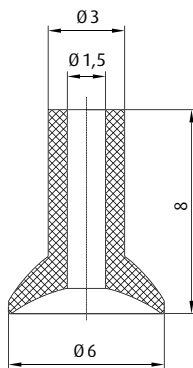
Icon	Connection	see page
	M5-male	409

Item no.
102.006.282._*

Material
NBR (sw), SI (tr), SI-AS (sw),
PU (bl), FKM (gr)

0.5 mm

Additional sizes available are found on p. 38.



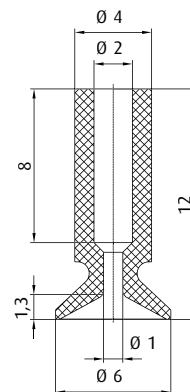
Icon	Connection	see page
	M3-male	408

Item no.
112.006.003._*

Material
NBR (sw), SI (r)

1 mm

Additional sizes available are found on p. 52.



Icon	Connection	see page
	M5-male	409

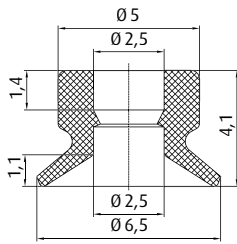
Item no.
122.006.002._*

Material
NBR (sw), SI (tr), Vulkollan® (br)

1.5 mm

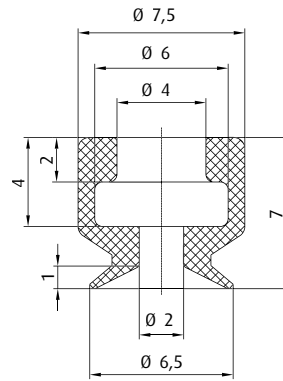
Additional sizes available are found on p. 56.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	M4-male	408
	M5-male	411

Item no. 102.006.297.* **Material** NBR (sw) 0.8 mm



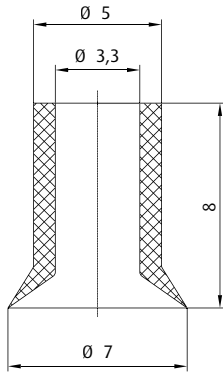
Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

Icon	Icon	see page
		454

BESTSELLER

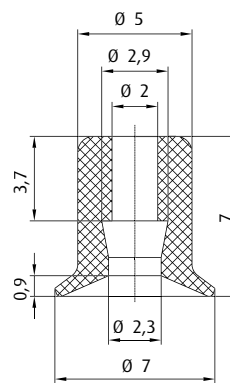
Item no. 102.006.013.* **Material** NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw) 1 mm

Additional sizes available are found on p. 32.



Icon	Connection	see page
	M5-male	409

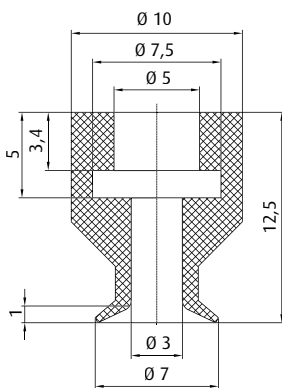
Item no. 112.006.004.* **Material** NBR (sw), SI (tr) 1 mm



Icon	Connection	see page
	M5-male	409

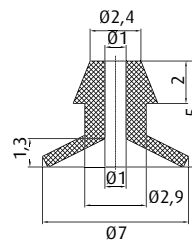
Item no. 102.007.091.* **Material** SI (tr), CR (sw) 1 mm

Additional sizes available are found on p. 42.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Item no. 102.007.109.* **Material** SI (r), SI-AS (sw) 1.6 mm



Icon	Connection	see page
	M3-male	408

Item no. 102.007.266.* **Material** SI (tr) 1.5 mm

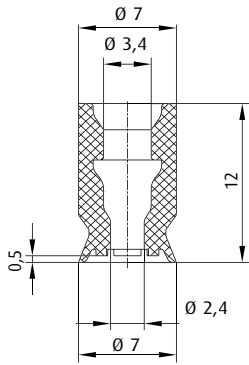
Additional sizes available are found on p. 22.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \varnothing

\varnothing 7 - 8 mm

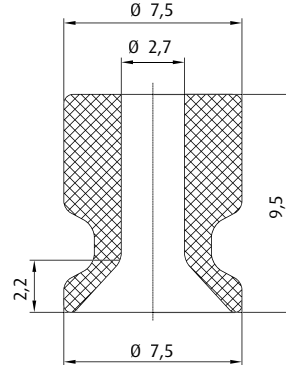


Icon	Connection	see page
	M5-male	410

Item no.
102.007.484.*

Material
SI (tr)

0.8 mm

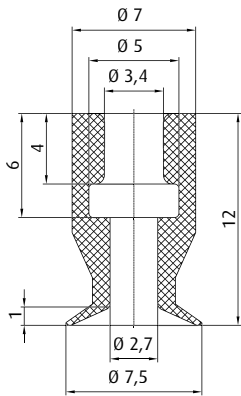


Icon	Connection	see page
	M5-male	409

Item no.
102.008.187.*

Material
NR (sw)

1.5 mm

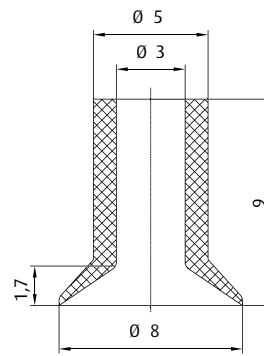


Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

Item no.
102.008.392.*

Material
SI (tr)

0.5 mm

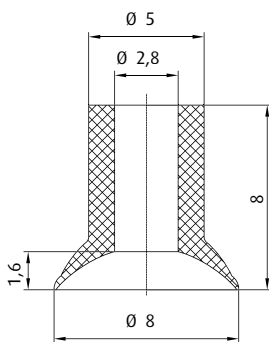


Icon	Connection	see page
	M5-male	409

Item no.
102.008.395.*

Material
NBR (sw)

0.9 mm



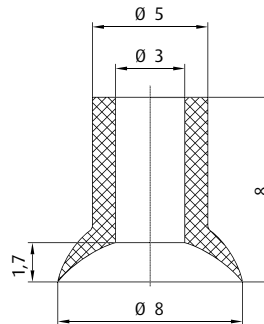
Icon	Connection	see page
	M5-male	409

Item no.
112.008.007.*

Material
NBR (sw), SI (w), NR (sw)

1.5 mm

Additional sizes available are found on p. 52.



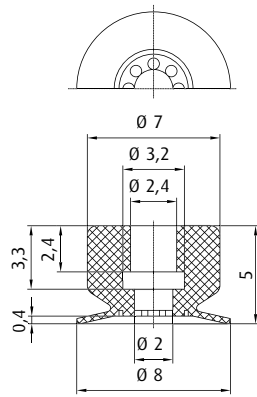
Icon	Connection	see page
	M5-male	409

Item no.
112.008.009.*

Material
SI (tr), NR (sw), NR (br)

1 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

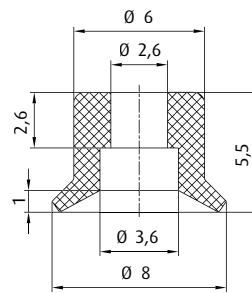


Item no.	Connection	see page
270.283	M5-male	409

VERY FLEXIBLE

Item no. 104.008.070.*	Material NBR (sw), SI-FS (r)	0.5 mm
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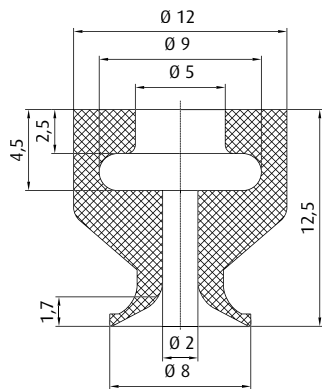
Additional sizes available are found on p. 20.
This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 20 mm



Item no.	Connection	see page
270.283	M5-male	409

Item no. 102.008.283.*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	1 mm
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Additional sizes available are found on p. 38.

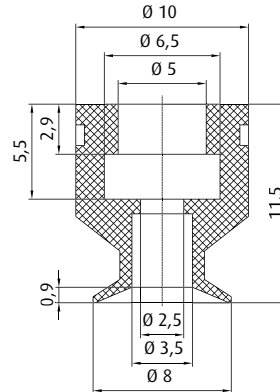


Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	see page
50.018	8.5 mm
50.019	8.5 mm

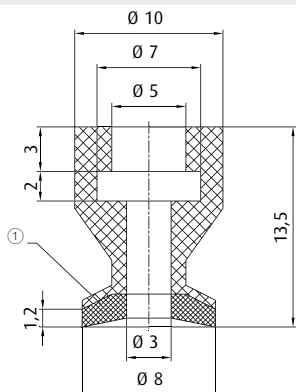
Item no. 102.008.218.*	Material NBR (sw), SI (tr)	1 mm
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Additional sizes available are found on p. 50.



Item no.	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no. 102.008.227.*	Material SI (tr)	0.5 mm
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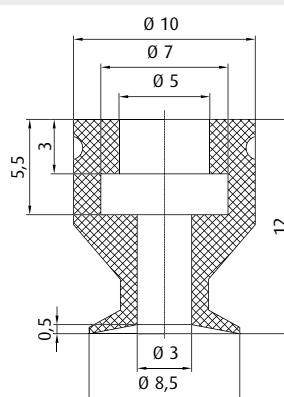
Item no.	Connection	see page
270.094	M5-male	411
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	see page
50.018	8.5 mm
50.141	10 mm

① = Silicone sponge

Item no. 104.008.082.*	Material SI (bl/r)	0.5 mm
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Additional sizes available are found on p. 166.



Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	see page
50.018	8.5 mm
50.141	10 mm

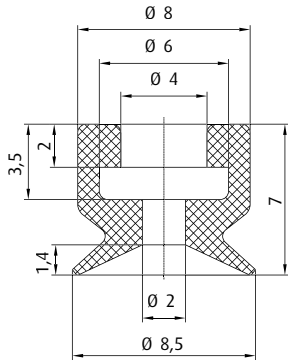
Item no. 102.008.362.*	Material SI (bl)	0.6 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 8 - 9 mm



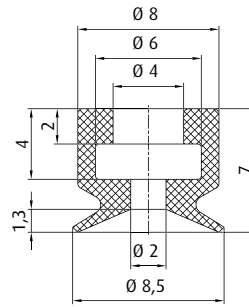
Connection	see page
270.010 M5-male	411
270.005 M5-female	412
270.009 G1/8-male	417
270.007 G1/8-female	422

Connection	see page
50.330 10 mm	454

BESTSELLER

Item no. 102.008.017.*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (sw)	1.4 mm
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Additional sizes available are found on p. 32.

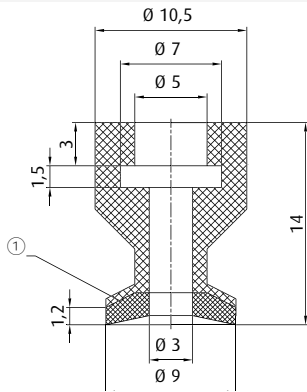


Connection	see page
270.010 M5-male	411
270.005 M5-female	412
270.009 G1/8-male	417
270.007 G1/8-female	422

Connection	see page
50.330 10 mm	454

Item no. 102.008.497.*	Material Thermalon® (bl)	1.3 mm
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Additional sizes available are found on p. 36.



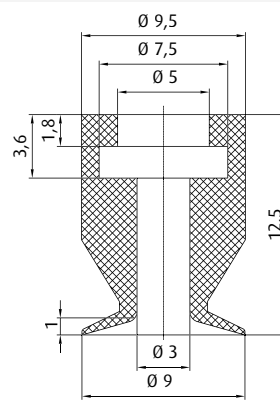
Connection	see page
270.200 M5-male	411
270.064 G1/8-male	418
270.065 G1/8-female	422

Connection	see page
50.141 10 mm	456
50.018 8.5 mm	454

① = Silicone sponge

Item no. 104.009.083.*	Material SI (bl/r)	0.5 mm
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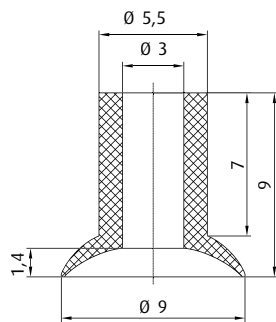
Additional sizes available are found on p. 166.



Connection	see page
270.200 M5-male	411
270.064 G1/8-male	418
270.065 G1/8-female	422

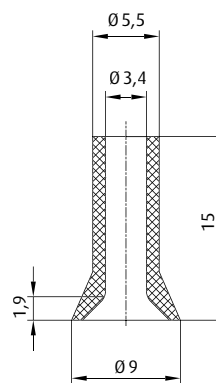
Connection	see page
50.018 8.5 mm	454
50.141 10 mm	456

Item no. 102.009.111.*	Material SI (tr)	1 mm
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Connection	see page
270.536 M5-male	409

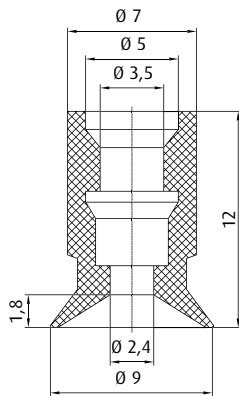
Item no. 102.009.174.*	Material Vinyl (bl)	1 mm
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Connection	see page
270.134 M5-male	409
270.104 M6-male	413
270.033 G1/8-male	416
270.478 G1/8-female	421

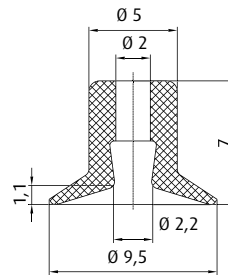
Item no. 107.009.001.*	Material SI (tr), NR (br)	1.5 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.399	M5-male	410

Item no. 102.008.228.*	Material SI (tr)	0.8 mm
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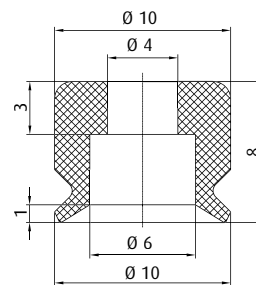


Item no.	Connection	see page
270.153	M5-male	409

BESTSELLER

Item no. 102.009.092.*	Material SI (tr), CR (sw)	1.5 mm
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Additional sizes available are found on p. 42.

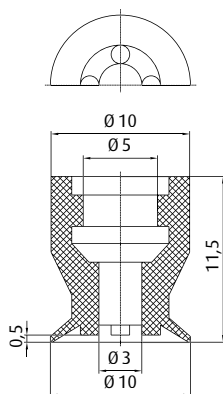


Item no.	Connection	see page
270.010	M5-male	411
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no.	Thickness	see page
50.103	6 mm	454
50.104	6 mm	454
50.125	10 mm	454
50.126	15 mm	454
50.127	20 mm	454

Item no. 102.010.284.*	Material NBR (sw), SI (tr), SI-AS (sw), PU (bl), FKM (gr)	1 mm
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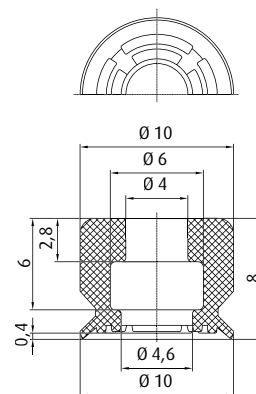
Additional sizes available are found on p. 38.



Item no.	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no. 104.010.001.*	Material NBR (sw), SI (bl)	1.5 mm
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This vacuum cup is also available in the following dimensions: 15 mm, 18 mm, 24 mm, 30 mm, 40 mm, 50 mm



Item no.	Connection	see page
270.010	M5-male	411
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no.	Thickness	see page
50.103	6 mm	454
50.104	6 mm	454
50.125	10 mm	454
50.126	15 mm	454
50.127	20 mm	454

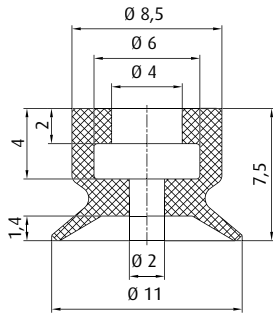
Item no. 104.010.065.*	Material NBR (sw)	0.5 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

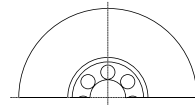
Ø 10 mm



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422
	10 mm	454

Item no. 102.010.498.* **Material** Thermalon® (bl) 1.5 mm

Additional sizes available are found on p. 36.

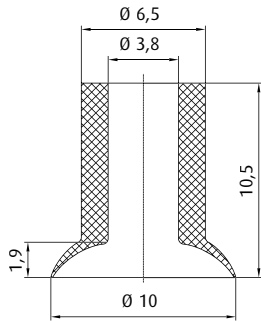


Icon	Connection	see page
	M5-male	409

Item no. 104.010.071.* **Material** NBR (sw), SI-FS (r) 0.7 mm

Additional sizes available are found on p. 20.
This vacuum cup is also available in the following dimensions: 8 mm, 15 mm, 20 mm

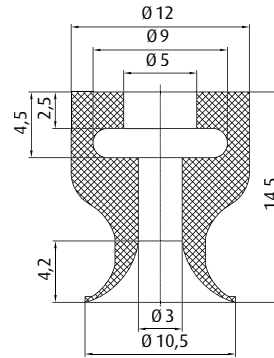
VERY FLEXIBLE



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	25 mm	456

Item no. 112.010.011.* **Material** NBR (sw), SI (w) 2 mm

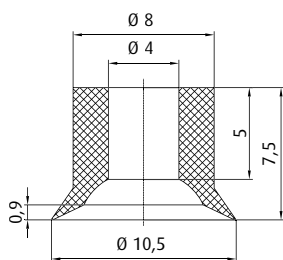
Additional sizes available are found on p. 52.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422
	8.5 mm	454
	8.5 mm	454

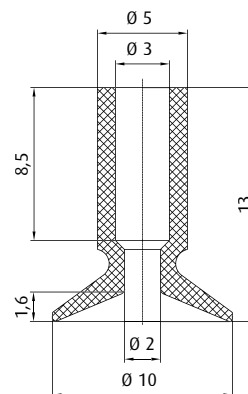
Item no. 102.010.219.* **Material** NBR (sw), SI (tr) 1 mm

Additional sizes available are found on p. 50.



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

Item no. 112.010.027.* **Material** NBR (sw), SI (bl) 1.5 mm

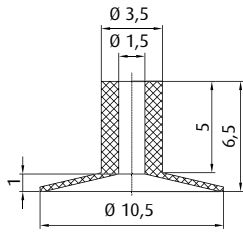


Icon	Connection	see page
	M5-male	409

Item no. 122.010.005.* **Material** NBR (sw), SI (tr), Vulkollan® (br) 1.5 mm

Additional sizes available are found on p. 56.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

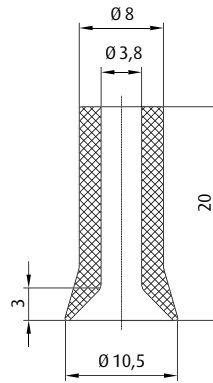


Icon	Connection	see page
	M3-male	408
	M5-male	409

Item no.
102.011.172.*

Material
Vinyl (bl)

0.5 mm

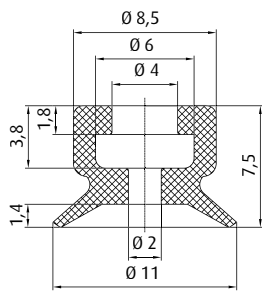


Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no.
102.011.173.*

Material
Vinyl (bl)

1.5 mm



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

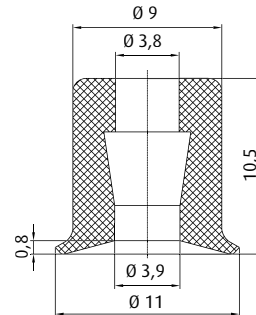
Icon	see page
	454

Item no.
102.010.024.*

Material
NBR (sw), NBR-AS (sw), SI (tr),
SI-AS (sw), PU (bl)

1.2 mm

Additional sizes available are found on p. 32.



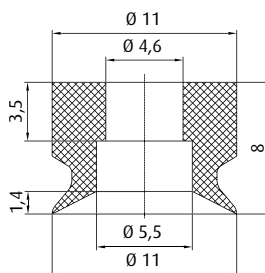
Icon	Connection	see page
	M5-male	409
	M6-male	413

Item no.
102.011.093.*

Material
SI (tr), CR (sw)

1 mm

Additional sizes available are found on p. 42.

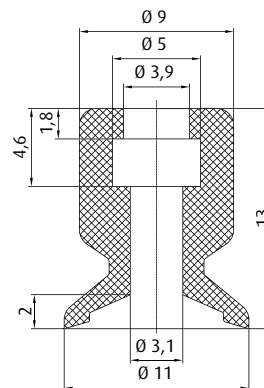


Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

Item no.
102.011.181.*

Material
NBR (sw), SI (tr)

1 mm



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no.
102.011.171.*

Material
Vinyl (bl)

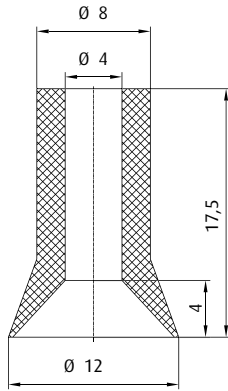
0.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 12 - 13 mm

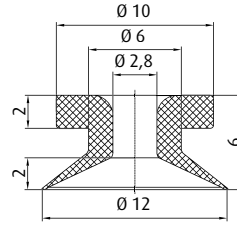


	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no.
102.012.101.*

Material
NR (br)

2.5 mm



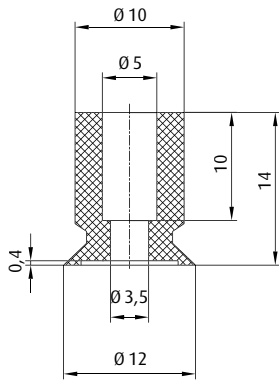
	Connection	see page
270.283	M5-male	409

Item no.
102.012.267.*

Material
NR (bg)

2.5 mm

Additional sizes available are found on p. 22.

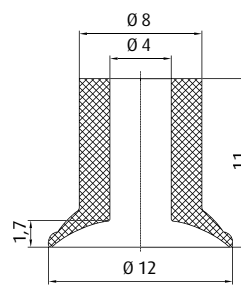


	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no.
107.012.002.*

Material
NBR (sw), SI (tr), NR (bg)

0.4 mm



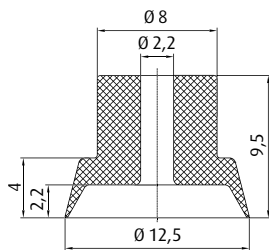
	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no.
112.012.015.*

Material
NBR (sw), SI (w), NR (sw)

2 mm

Additional sizes available are found on p. 52.

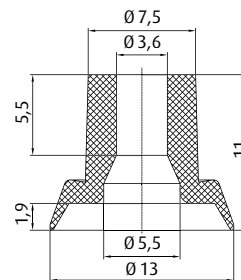


	Connection	see page
270.153	M5-male	409

Item no.
102.013.070.*

Material
NR (bg)

2 mm



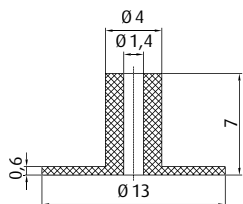
	Connection	see page
270.010	M5-male	411
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no.
102.013.077.*

Material
NR (bl)

2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

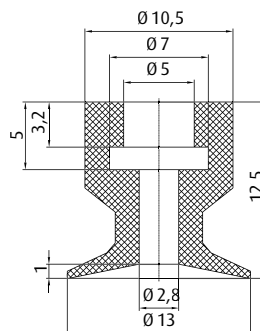


Icon	Connection	see page
	M3-male	408

Item no.
102.013.012.*

Material
SI (tr)

0 mm



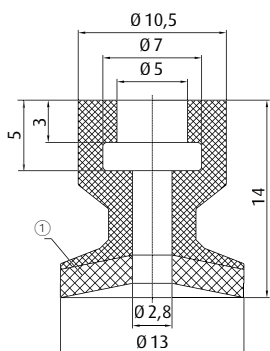
Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	10 mm	456

Item no.
102.013.363.*

Material
SI (bl)

0.8 mm



Icon	Connection	see page
	M5-male	411
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	10 mm	456

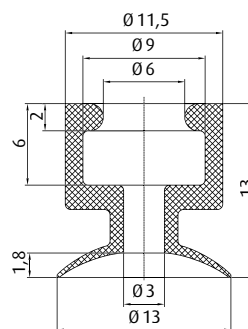
① = Silicone sponge

Item no.
104.013.084.*

Material
SI (bl/r)

0.5 mm

Additional sizes available are found on p. 166.



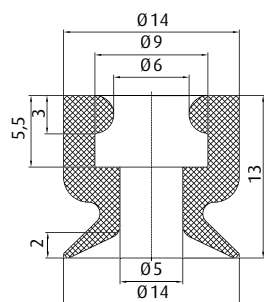
Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Item no.
102.012.332.*

Material
NR (or)

1.5 mm

Additional sizes available are found on p. 24.



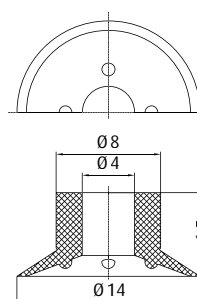
Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Item no.
102.014.333.*

Material
NR (or)

2 mm

Additional sizes available are found on p. 24.



Icon	Connection	see page
	M5-male	411
	G1/8-male	416
	G1/8-female	421

Item no.
104.014.020.*

Material
NBR (sw)

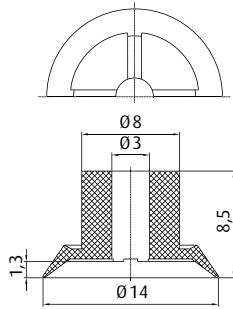
1.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 14 - 15 mm



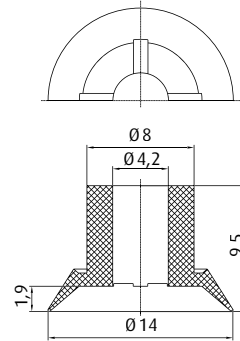
Icon	Connection	see page
	M5-male	409

Item no.
102.014.089.*

Material
NBR (sw)

1.5 mm

Additional sizes available are found on p. 20.

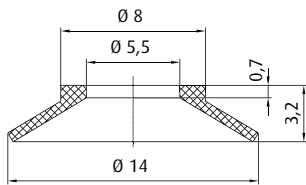


Icon	Connection	see page
	M5-male	411
	G1/8-male	416
	G1/8-female	421

Item no.
104.014.025.*

Material
SI (tr), NR (sw)

2 mm

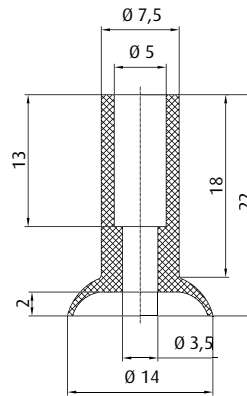


Icon	Connection	see page
	M6-male	414
	M8-male	415
	G1/8-male	419

Item no.
107.014.005.*

Material
PU (tr)

1.5 mm

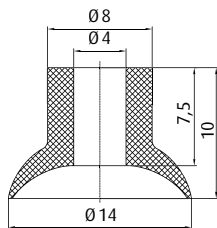


Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no.
115.015.002.*

Material
NR (bg)

3 mm

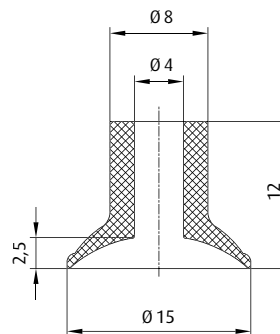


Icon	Connection	see page
	M5-male	411
	G1/8-male	416
	G1/8-female	421

Item no.
112.015.021.*

Material
NBR (sw), SI (tr)

2 mm



Icon	Connection	see page
	M5-male	409
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Icon	Icon	see page
	25 mm	456

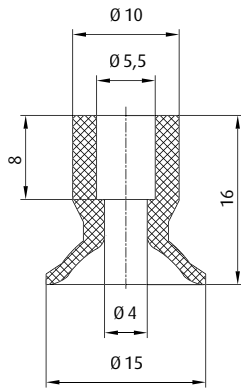
Item no.
112.015.022.*

Material
NBR (sw), SI (w), NR (sw)

2 mm

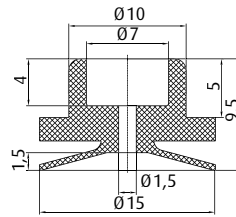
Additional sizes available are found on p. 52.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 122.015.004.* Material CR (sw) 2 mm

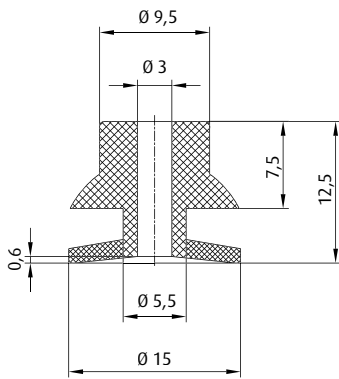


Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	Connection	see page
50.018	8.5 mm	454
50.019	8.5 mm	454

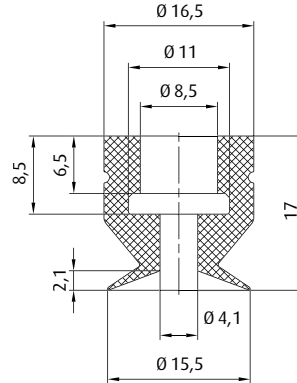
Item no. 102.015.339.* Material Vinyl (bl) 1.5 mm

Additional sizes available are found on p. 22.



Item no.	Connection	see page
270.022	M5-male	409

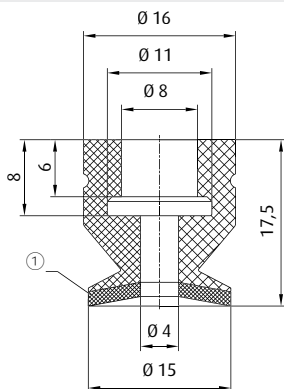
Item no. 107.015.062.* Material NR (sw) 1.5 mm



Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Connection	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

Item no. 102.015.414.* Material SI (bl) 2 mm



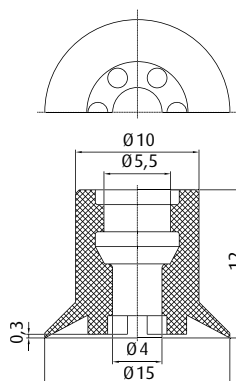
Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Connection	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

① = Silicone sponge

Item no. 104.015.085.* Material SI (bl/r) 1 mm

Additional sizes available are found on p. 166.



Item no.	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no. 104.015.002.* Material NBR (sw), SI (bl) 1 mm

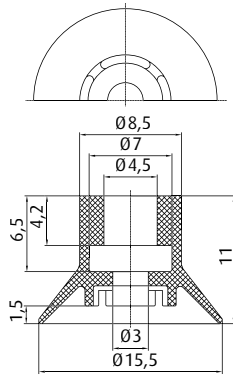
This vacuum cup is also available in the following dimensions: 10 mm, 18 mm, 24 mm, 30 mm, 40 mm, 50 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 15 mm

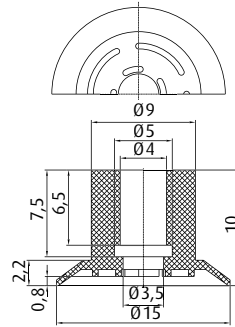


	Connection	see page
270.013	M5-male	410
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no.
102.015.367.*

Material
Vulkollan® (br)

2 mm



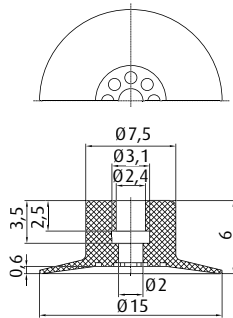
	Connection	see page
270.134	M5-male	409
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no.
102.015.431.*

Material
SI (tr), NR (bg)

0.5 mm

Additional sizes available are found on p. 20.
This vacuum cup is also available in the following dimensions: 24 mm, 28 mm, 30 mm, 40 mm



	Connection	see page
270.283	M5-male	409

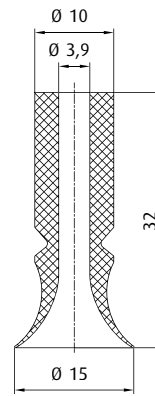
VERY FLEXIBLE

Item no.
104.015.072.*

Material
NBR (sw), SI-FS (r)

1.1 mm

Additional sizes available are found on p. 20.
This vacuum cup is also available in the following dimensions: 8 mm, 10 mm, 20 mm



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

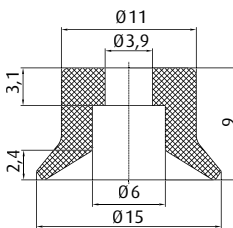
**FOR HIGHLY
STRUCTURED
SURFACES (3D)**

		see page
50.037	25 mm	456

Item no.
126.015.002.*

Material
NR (sw), NR (bg)

6 mm



	Connection	see page
270.010	M5-male	411
270.009	G1/8-male	417
270.007	G1/8-female	422

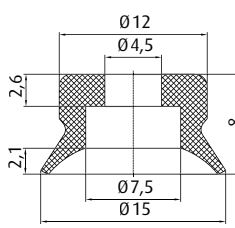
		see page
50.103	6 mm	454
50.104	6 mm	454
50.125	10 mm	454
50.126	15 mm	454
50.127	20 mm	454

Item no.
102.015.285.*

Material
NBR (sw), SI (tr), SI-AS (sw),
PU (bl), FKM (gr)

1.5 mm

Additional sizes available are found on p. 38.



	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

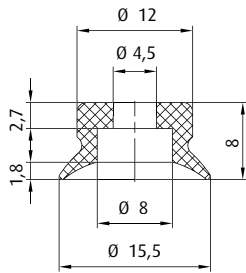
Item no.
102.015.030.*

Material
NBR (sw), SI (tr), PU (bl)

2 mm

Additional sizes available are found on p. 32.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

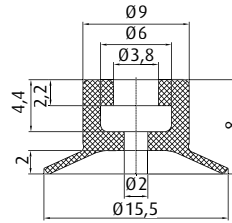


Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	Connection	see page
50.330	10 mm	454

Item no. 102.015.499.* **Material** Thermalon® (bl) 1.9 mm

Additional sizes available are found on p. 36.

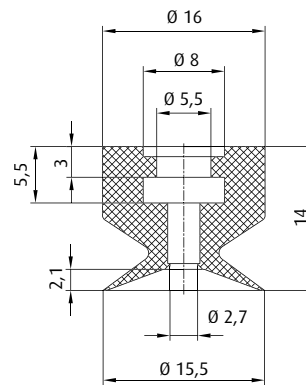


Item no.	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no.	Connection	see page
50.330	10 mm	454

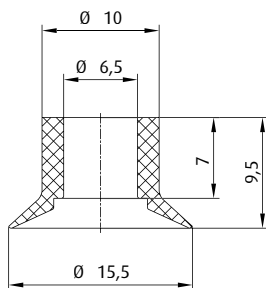
Item no. 102.015.309.* **Material** NBR (sw), SI (tr), PU (bl) 1.9 mm

Additional sizes available are found on p. 32.



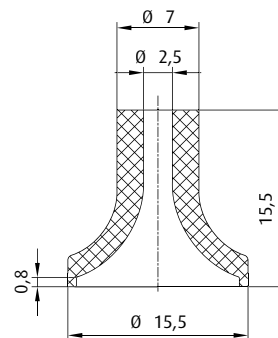
Item no.	Connection	see page
270.037	M5-male	411
270.085	G1/8-male	418
270.086	G1/8-female	422

Item no. 102.016.319.* **Material** PU (bl) 2 mm



Item no.	Connection	see page
270.250	G1/8-male	418

Item no. 102.016.146.* **Material** NR (gr) 2 mm



Item no.	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

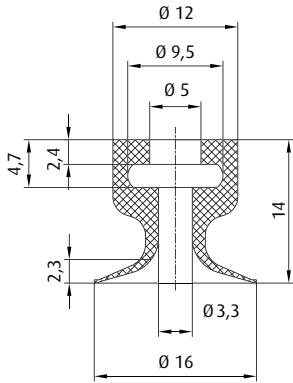
Item no. 102.016.138.* **Material** NR (bg) 3.2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

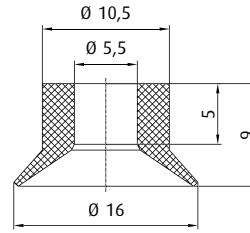
Ø 16 mm



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422
	8.5 mm	454
	8.5 mm	454

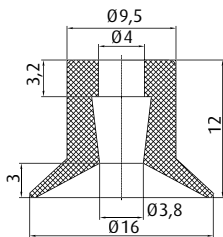
Item no. 102.015.220.* **Material** NBR (sw), SI (tr) 2 mm

Additional sizes available are found on p. 50.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

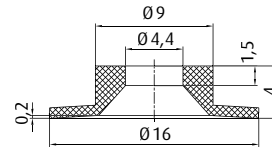
Item no. 126.016.003.* **Material** NR (bg) 3 mm



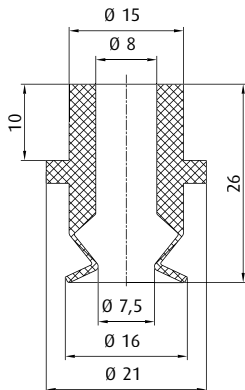
Icon	Connection	see page
	M5-male	409
	M6-male	413

Item no. 102.016.098.* **Material** SI (tr), CR (sw) 2 mm

Additional sizes available are found on p. 42.



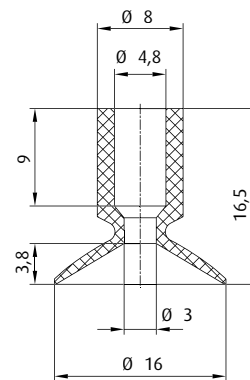
Item no. 102.016.145.* **Material** NR (bg) 0.5 mm



Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no. 107.016.008.* **Material** SI (tr) 2.4 mm

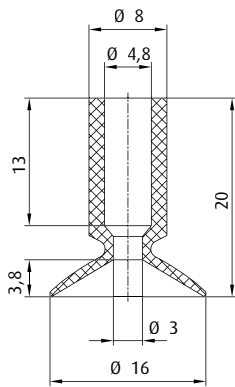
Additional sizes available are found on p. 58.



Icon	Connection	see page
	M5-male	410
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425
	25 mm	456

Item no. 122.016.006.* **Material** NBR (sw) 5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

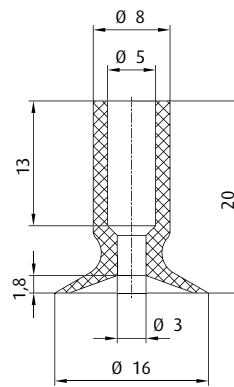


Icon	Connection	see page
	270.013 M5-male	410
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

Icon	Icon	see page
	50.037 25 mm	456

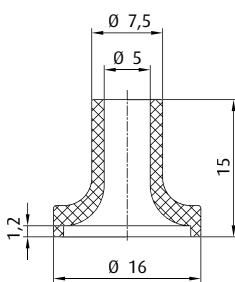
Item no. 122.016.009.* **Material** NBR (sw), SI (tr), NR (sw) 5 mm

Additional sizes available are found on p. 56.



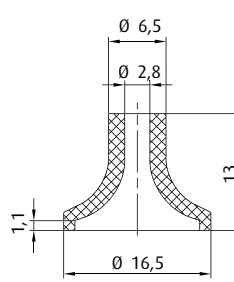
Icon	Connection	see page
	270.013 M5-male	410
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

Item no. 122.016.076.* **Material** Vulkollan® (br) 2.5 mm



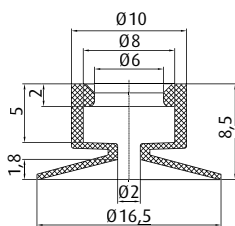
Icon	Connection	see page
	270.013 M5-male	410
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 102.016.122.* **Material** NR (bg) 3 mm



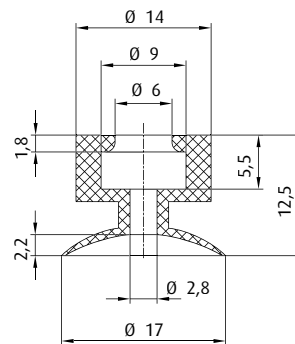
Icon	Connection	see page
	270.536 M5-male	409

Item no. 102.017.420.* **Material** NR (br) 3.5 mm



Icon	Connection	see page
	270.037 M5-male	411
	270.373 M6-male	413
	270.085 G1/8-male	418
	270.086 G1/8-female	422

Item no. 102.016.151.* **Material** NR (gr) 0.5 mm



Icon	Connection	see page
	270.037 M5-male	411
	270.373 M6-male	413
	270.085 G1/8-male	418
	270.086 G1/8-female	422

Item no. 102.016.255.* **Material** SI (r) 3 mm

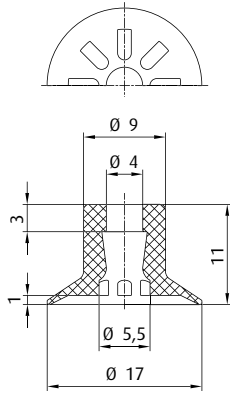
Additional sizes available are found on p. 24.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \varnothing

\varnothing 17 - 18 mm

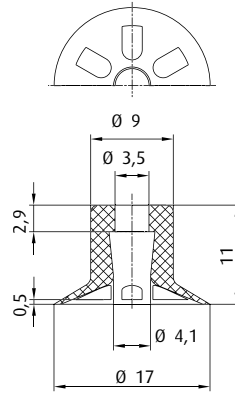


	Connection	see page
270.134	M5-male	409
270.104	M6-male	413

BESTSELLER

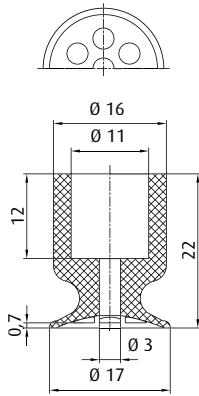
Item no. 104.016.003_* **Material** SI (tr), CR (sw) 0.5 mm

Additional sizes available are found on p. 42.



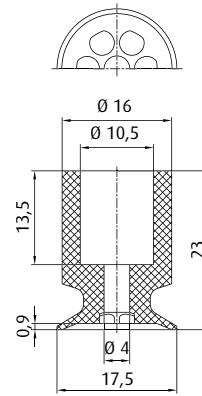
	Connection	see page
270.134	M5-male	409
270.104	M6-male	413

Item no. 104.017.026_* **Material** NR (sw) 1 mm



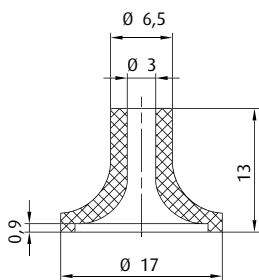
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 102.017.193_* **Material** Vulkollan® (br) 0.7 mm



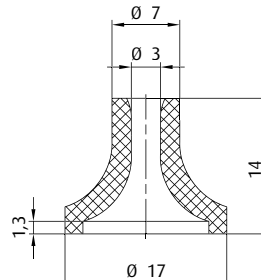
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 104.018.049_* **Material** Vinyl (bl) 2 mm



	Connection	see page
270.536	M5-male	409

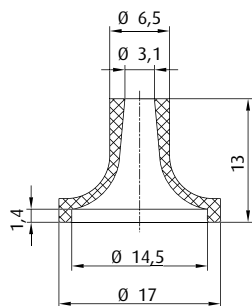
Item no. 102.017.132_* **Material** NR (bl) 3 mm



	Connection	see page
270.536	M5-male	409

Item no. 102.017.133_* **Material** NR (g) 2.4 mm

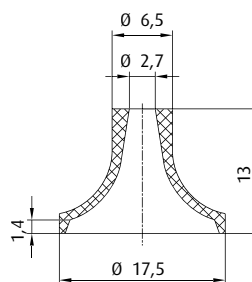
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	M5-male	409

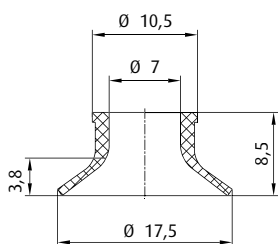
Item no. 102.017.276.* **Material** NR (br) 3 mm

Additional sizes available are found on p. 22.



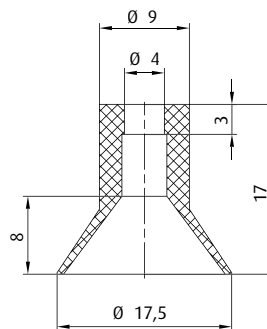
Icon	Connection	see page
	M5-male	410
	M5-female	412
	G1/8-male	416

Item no. 102.018.277.* **Material** NR (bl) 0.6 mm



Icon	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-male	418

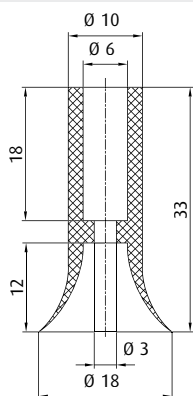
Item no. 102.019.139.* **Material** NR (bg) 1 mm



Icon	Connection	see page
	M5-male	409
	M6-male	413

Item no. 122.016.012.* **Material** SI (tr), CR (sw) 1.5 mm

Additional sizes available are found on p. 42.

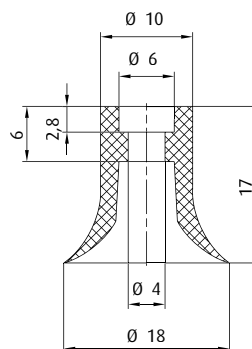


Icon	Connection	see page
	M5-male	410
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

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Item no. 102.018.345.* **Material** SI (tr) --

Additional sizes available are found on p. 58.



Icon	Connection	see page
	M5-male	410
	G1/8-male	416
	G1/8-female	421

Item no. 107.018.004.* **Material** SI (tr) --

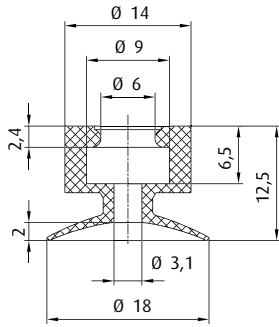
Additional sizes available are found on p. 58.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

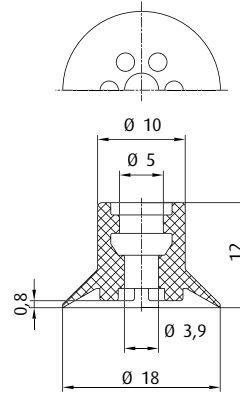
Ø 18 mm



Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Item no. 102.018.442.* **Material** NR (or) 2 mm

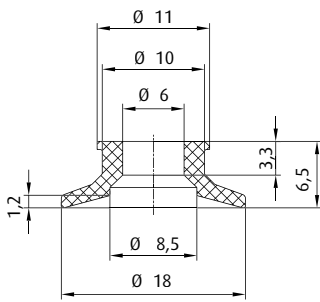
Additional sizes available are found on p. 24.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Item no. 104.018.005.* **Material** NBR (sw), SI (bl) 1 mm

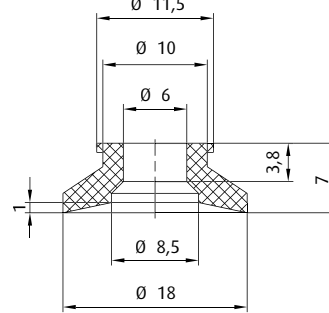
This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 24 mm, 30 mm, 40 mm, 50 mm



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	8.5 mm	454

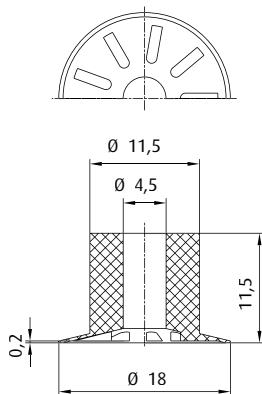
Item no. 102.018.143.* **Material** NR (bg) 0.5 mm



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	8.5 mm	454

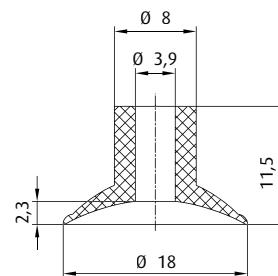
Item no. 102.018.144.* **Material** NR (bg) 0.5 mm



Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Icon	Icon	see page
	25 mm	456

Item no. 104.018.051.* **Material** Vinyl (bl) 0.5 mm



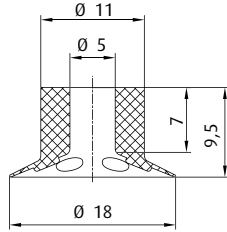
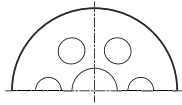
Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Icon	Icon	see page
	25 mm	456

Item no. 112.018.024.* **Material** NBR (sw), SI (w), NR (sw) 2.3 mm

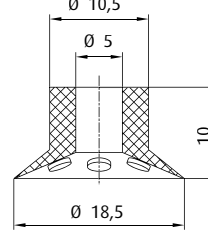
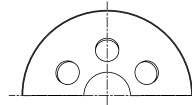
Additional sizes available are found on p. 52.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



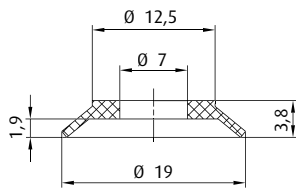
	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 112.018.111.* **Material** SI (tr), NR (sw) 1 mm

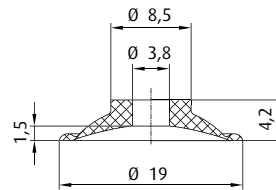


	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

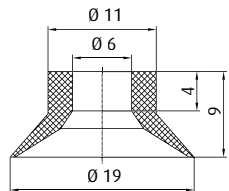
Item no. 127.018.001.* **Material** NBR (sw), SI (tr), NR (bg) 1.5 mm



Item no. 107.019.054.* **Material** NR (bl) 0.5 mm

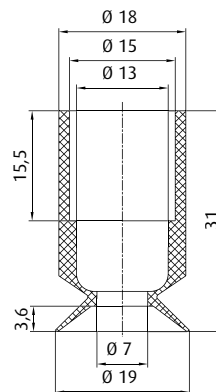


Item no. 112.019.073.* **Material** NR (sw) 2 mm



	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418
270.534	G1/4-male	425

Item no. 122.019.014.* **Material** SI (tr), NR (bg) 3 mm



	Connection	see page
270.207	G1/4-male	426

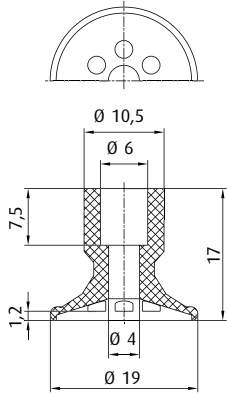
Item no. 102.019.036.* **Material** NR (sw) 5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 19 - 20 mm

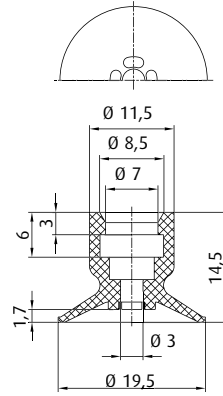


Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

Item no.
104.020.042.*

Material
Vinyl (bl)

0.5 mm



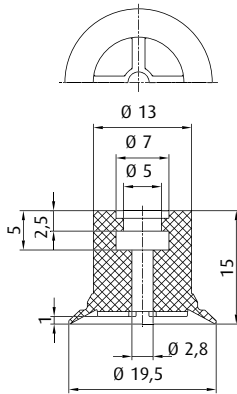
Icon	Connection	see page
	G1/8-female	423
	G1/8-female	424
	G1/4-male	428
	G3/8-male	434

Item no.
102.020.355.*

Material
NBR (sw)

3 mm

This vacuum cup is also available in the following dimensions: 28 mm



Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	8.5 mm	454

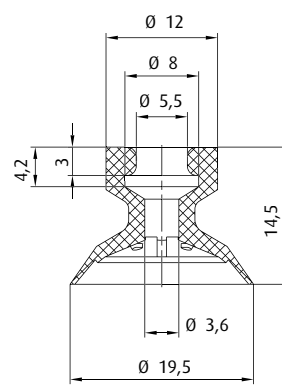
BESTSELLER

Item no.
102.020.083.*

Material
NBR (sw), SI (tr), SI (r)

1 mm

Additional sizes available are found on p. 20.

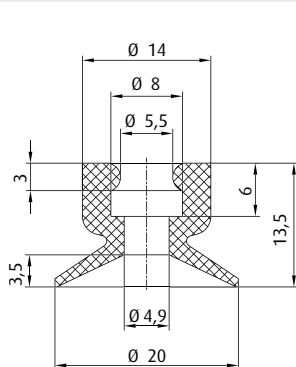


Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Item no.
102.020.272.*

Material
NR (sw)

1 mm



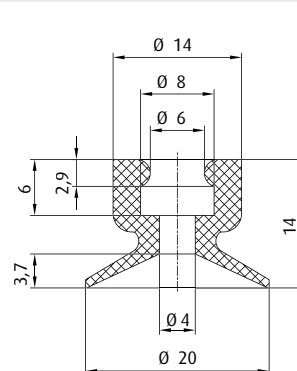
Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

Item no.
102.020.140.*

Material
NR (sw), NR (or)

3 mm

Additional sizes available are found on p. 24.



Icon	Connection	see page
	M5-male	411
	M6-male	413
	G1/8-male	418
	G1/8-female	422

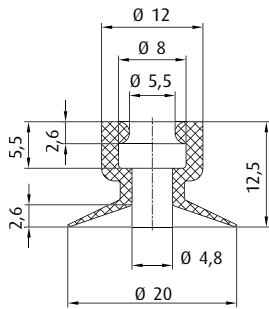
Item no.
126.020.004.*

Material
SI (tr), NR (or), NR (br)

3.5 mm

Additional sizes available are found on p. 24.

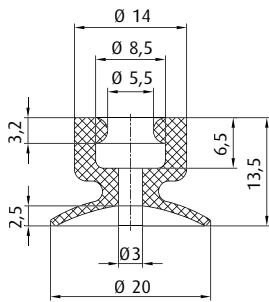
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.037	M5-male	411
270.373	M6-male	413
270.085	G1/8-male	418
270.086	G1/8-female	422

Item no. 126.020.005.*	Material NBR (sw), SI (tr), NR (sw)	1 mm
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Additional sizes available are found on p. 24.

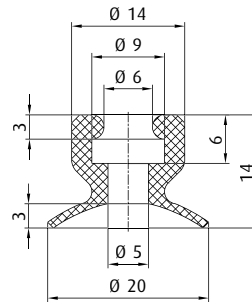


	Connection	see page
270.037	M5-male	411
270.373	M6-male	413
270.085	G1/8-male	418
270.086	G1/8-female	422

WEAR-RESISTANT

Item no. 102.020.299.*	Material Vulkollan® (br)	3.5 mm
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Additional sizes available are found on p. 24.

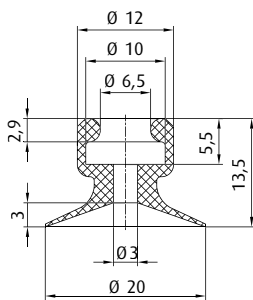


	Connection	see page
270.037	M5-male	411
270.373	M6-male	413
270.085	G1/8-male	418
270.086	G1/8-female	422

WEAR-RESISTANT

Item no. 102.020.300.*	Material Vulkollan® (br)	3 mm
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Additional sizes available are found on p. 24.

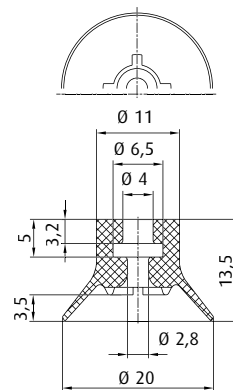


	Connection	see page
270.037	M5-male	411
270.373	M6-male	413
270.085	G1/8-male	418
270.086	G1/8-female	422

WEAR-RESISTANT

Item no. 102.020.308.*	Material Vulkollan® (br)	1 mm
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Additional sizes available are found on p. 24.



	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

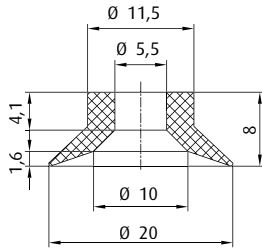
Item no. 102.020.321.*	Material Vulkollan® (br)	3.5 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 20 mm

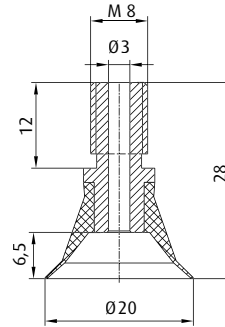


Connection	see page
270.094 M5-male	411
270.095 G1/8-male	418
270.096 G1/8-female	422

Item no.
102.019.110.*

Material
NR (bg)

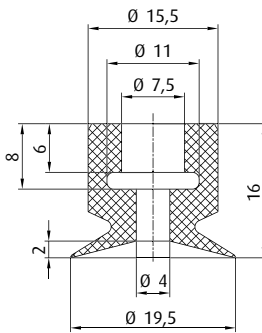
2 mm



Item no.
120.019.003.*

Material
NBR (sw), SI (tr), NR (sw)

2 mm



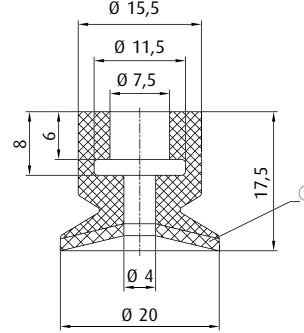
Connection	see page
270.012 G1/8-male	421
270.020 G1/8-female	423
270.034 G1/4-male	428
270.038 G1/4-female	432

see page	
50.005 5 mm	456
50.145 10 mm	456
50.146 30 mm	456

Item no.
102.020.365.*

Material
SI (bl)

1.5 mm



Connection	see page
270.012 G1/8-male	421
270.020 G1/8-female	423
270.034 G1/4-male	428
270.038 G1/4-female	432

see page	
50.005 5 mm	456
50.145 10 mm	456
50.146 30 mm	456

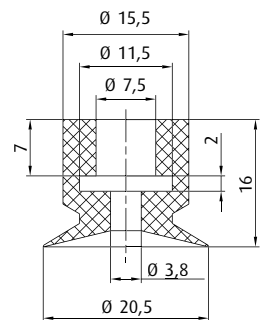
① = Silicone sponge

Item no.
104.020.086.*

Material
SI (bl/r)

1.5 mm

Additional sizes available are found on p. 166.



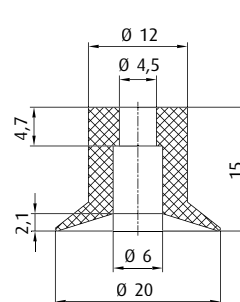
Connection	see page
270.012 G1/8-male	421
270.020 G1/8-female	423
270.034 G1/4-male	428
270.038 G1/4-female	432

see page	
50.005 5 mm	456
50.145 10 mm	456
50.146 30 mm	456

Item no.
107.020.014.*

Material
SI (tr)

1 mm



Connection	see page
270.317 M5-male	410
270.103 M6-male	413
270.205 G1/8-male	416
270.109 G1/8-female	421
270.194 G1/4-male	425

see page	
50.020 8.5 mm	454

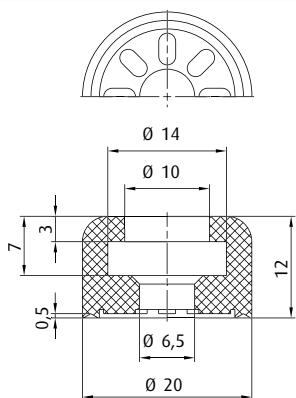
Item no.
102.020.221.*

Material
NBR (sw), SI (tr)

2 mm

Additional sizes available are found on p. 50.

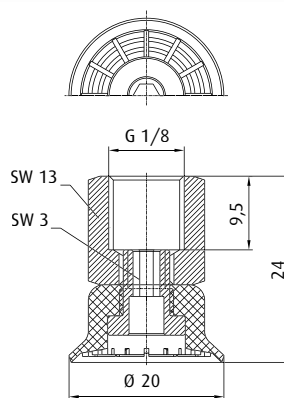
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.521	M5-male	412

Item no. 102.020.458.* **Material** HNBR (ge), NR (br) 0.5 mm

Additional sizes available are found on p. 70.

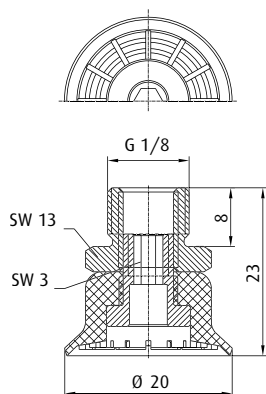


NON-SLIP

Item no. 100.020.101.* **Material** NBR (sw) 1.1 mm

Additional sizes available are found on p. 62.

Spare cup

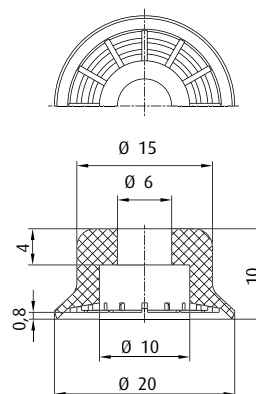


NON-SLIP

Item no. 100.020.111.* **Material** NBR (sw) 1.1 mm

Additional sizes available are found on p. 62.

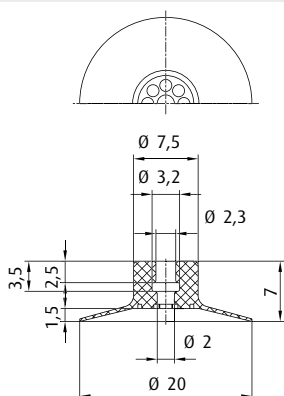
Spare cup



	Connection	see page
270.311	M5-male	411
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

		see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.130	20 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

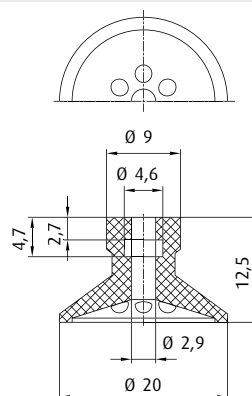
Item no. 104.020.066.* **Material** NBR (sw) 1.1 mm



VERY FLEXIBLE

Item no. 104.020.073.* **Material** NBR (sw), SI-FS (r) 1.6 mm

Additional sizes available are found on p. 20.
This vacuum cup is also available in the following dimensions: 8 mm, 10 mm, 15 mm



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413

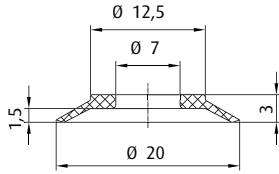
Item no. 104.020.075.* **Material** Vinyl (bl) 2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 20 mm

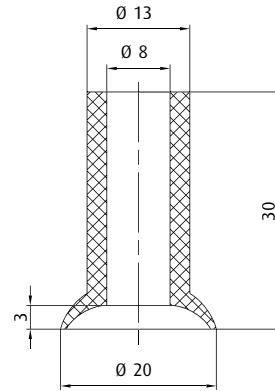


Icon	Connection	see page
	M6-male	414
	M8-male	415
	G1/8-male	419

Item no.
102.020.271.*

Material
NR (sw)

1 mm

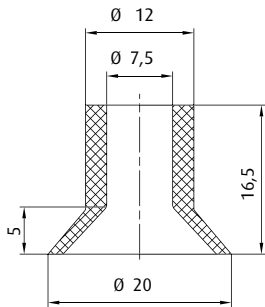


Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no.
107.020.013.*

Material
SI (tr), NR (br)

4 mm

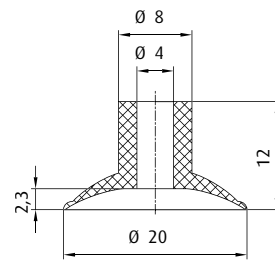


Icon	Connection	see page
	G1/8-male	419
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no.
107.020.015.*

Material
SI (tr), NR (sw), NR (br)

3 mm



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

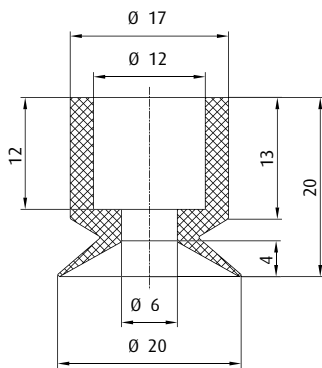
Icon	Thickness	see page
	25 mm	456

Item no.
112.020.031.*

Material
NBR (sw), SI (w), NR (sw)

2.3 mm

Additional sizes available are found on p. 52.

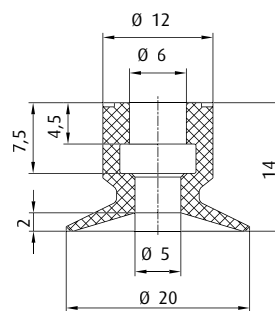


Icon	Connection	see page
	G1/4-male	426
	G1/4-female	432

Item no.
122.020.017.*

Material
SI (tr), NR (bg)

3 mm



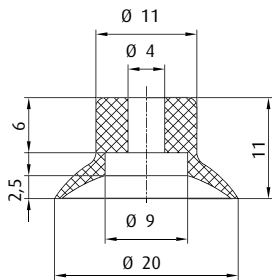
Icon	Connection	see page
	G1/8-male	419
	G1/8-female	422

Item no.
102.021.179.*

Material
Vinyl (bl)

0.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

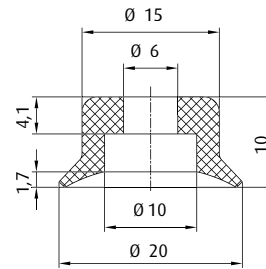


	Connection	see page
270.013	M5-male	410
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no.
102.020.312.*

Material
SI (tr)

2.5 mm



	Connection	see page
270.311	M5-male	411
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

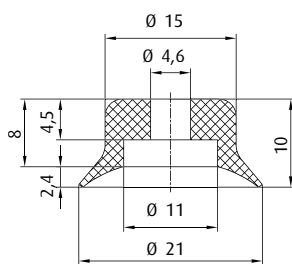
		see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.130	20 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no.
102.020.286.*

Material
NBR (sw), SI (tr), PU (bl),
FKM (gr)

2 mm

Additional sizes available are found on p. 38.



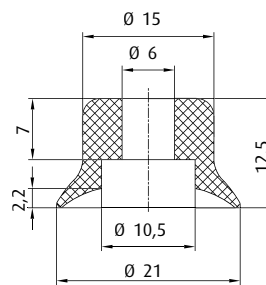
	Connection	see page
270.311	M5-male	411
270.063	G1/8-male	419
270.061	G1/8-female	422

Item no.
102.020.041.*

Material
NBR (sw), SI (tr), PU (bl)

2 mm

Additional sizes available are found on p. 32.

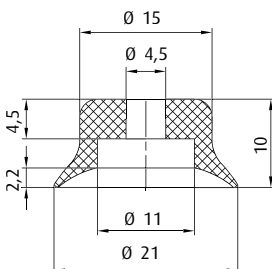


	Connection	see page
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no.
102.020.330.*

Material
NBR (sw), SI (tr)

3 mm



	Connection	see page
270.311	M5-male	411
270.063	G1/8-male	419
270.061	G1/8-female	422

Item no.
102.020.500.*

Material
Thermalon® (bl)

2.3 mm

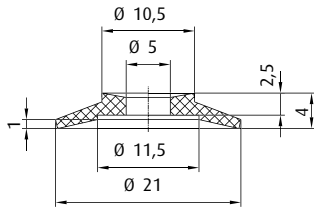
Additional sizes available are found on p. 36.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 21 - 22 mm

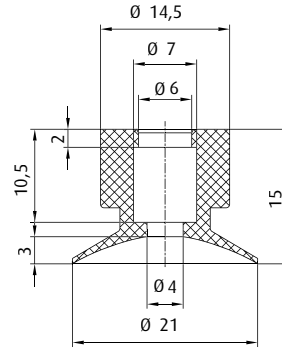


Item no.
102.021.063._*

Material
NR (sw)

1 mm

Additional sizes available are found on p. 22.



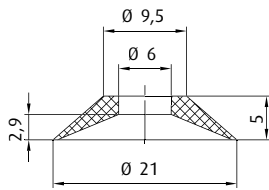
Item no.
102.021.399._*

Material
Vinyl (bl)

2.5 mm

	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

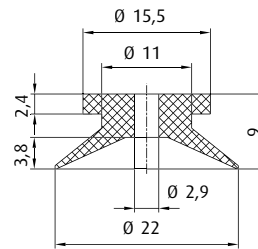
		see page
50.018	8.5 mm	454
50.019	8.5 mm	454



Item no.
107.021.049._*

Material
NR (bg)

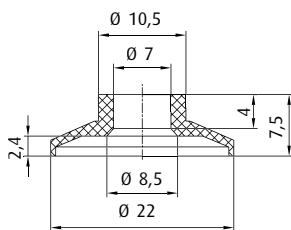
1.5 mm



Item no.
102.022.150._*

Material
Vinyl (bl)

2.5 mm



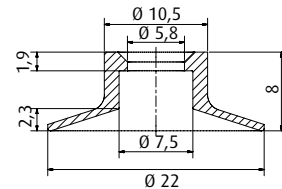
Item no.
102.022.185._*

Material
NR (gr)

0.5 mm

Additional sizes available are found on p. 22.

	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418



Item no.
102.022.526._*

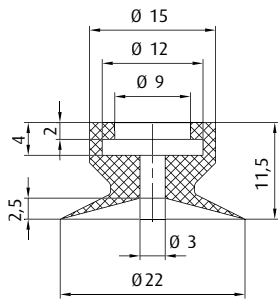
Material
NR (bl)

2 mm

Additional sizes available are found on p. 22.

	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

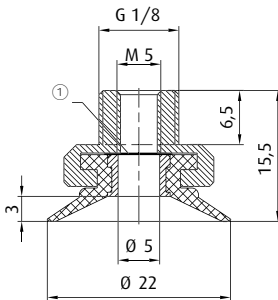


	Connection	see page
270.541	G1/8-male	421

Item no.
102.022.406._*

Material
SI (r)

2 mm



① = Filter screen

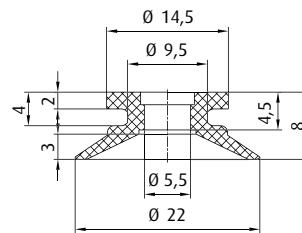
Item no.
120.020.006._*

Material
SI (tr), CR (sw)

2.5 mm

Additional sizes available are found on p. 47.

Spare cup



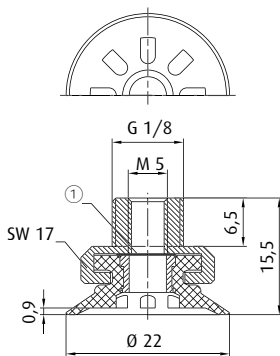
	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

Item no.
102.020.095._*

Material
SI (tr), CR (sw)

2.5 mm

Additional sizes available are found on p. 42.



① = Filter screen

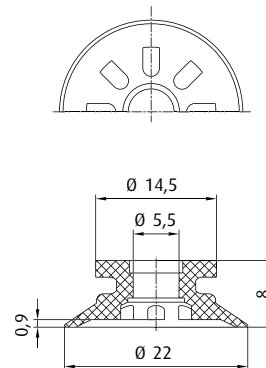
Item no.
123.020.003._*

Material
Tepuflex® (or), SI (tr), CR (sw)

1 mm

Additional sizes available are found on p. 47.

Spare cup



	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

BESTSELLER

Item no.
125.020.004._*

Material
Tepuflex® (or), SI (tr), CR (sw)

1 mm

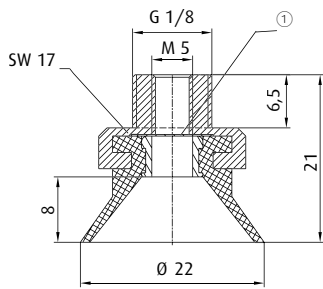
Additional sizes available are found on p. 42.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

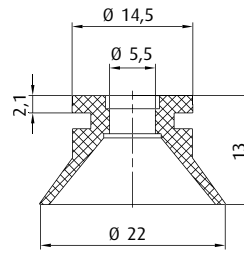
Ø 22 mm



① = Filter screen

Item no. 120.022.011.*	Material SI (tr), CR (sw)	2.5 mm
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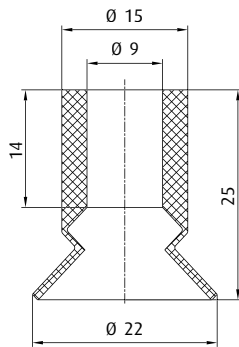
Spare cup



Item no. 122.022.022.*	Material SI (tr), CR (sw)	2.5 mm
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Additional sizes available are found on p. 42.

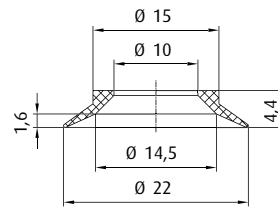
	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-female	418



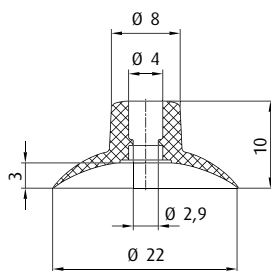
	Connection	see page
	G1/8-male	419
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no. 102.022.043.*	Material NBR (sw), SI (tr), NR (sw)	5 mm
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Additional sizes available are found on p. 58.



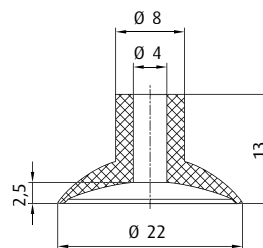
Item no. 107.022.016.*	Material NR (sw)	1 mm
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	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no. 102.022.071.*	Material PU (bl)	3 mm
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This vacuum cup is also available in the following dimensions: 25 mm, 30 mm



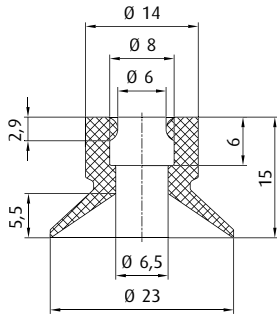
	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

	Connection	see page
	25 mm	456

Item no. 112.022.037.*	Material NBR (sw), SI (w)	2.5 mm
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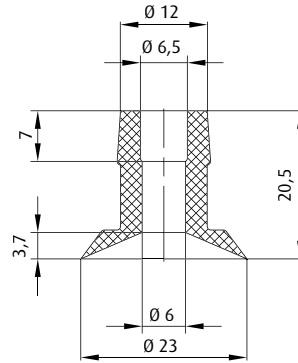
Additional sizes available are found on p. 52.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



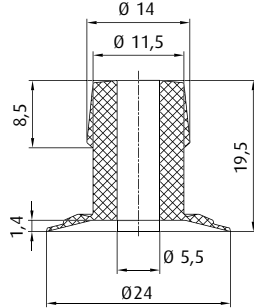
Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no. 102.023.356_*
Material Vinyl (bl)
 Thickness: 3.8 mm



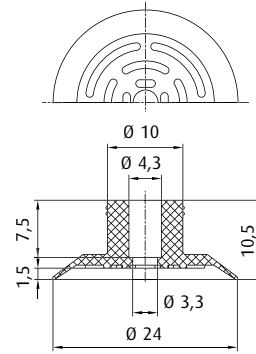
Item no.	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425
270.043	G1/4-male	425

Item no. 102.023.331_*
Material Vinyl (tr)
 Thickness: 2.5 mm



Item no.	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

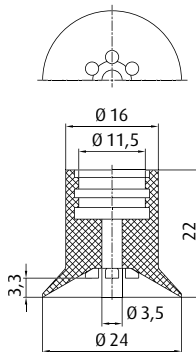
Item no. 102.023.149_*
Material Vinyl (tr)
 Thickness: 0.5 mm



Item no.	Connection	see page
270.134	M5-male	409
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 102.024.457_*
Material SI (tr), NR (bg)
 Thickness: 1.8 mm

Additional sizes available are found on p. 20.
 This vacuum cup is also available in the following dimensions: 15 mm, 28 mm, 30 mm, 40 mm



Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 104.024.006_*
Material NBR (sw)
 Thickness: 1 mm

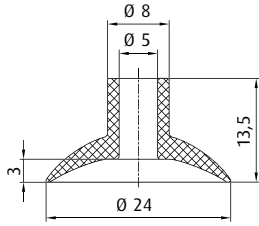
This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 30 mm, 40 mm, 50 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



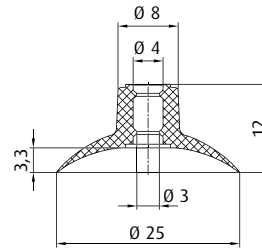
Vacuum cups by size | Flat vacuum cups by Ø

Ø 24 - 25 mm



Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

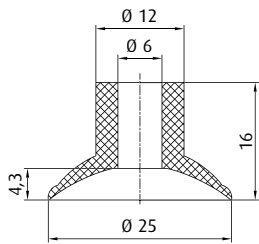
Item no. 102.024.123.* **Material** NR (sw), NR (bg) 4 mm



Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 102.025.085.* **Material** PU (r) 4 mm

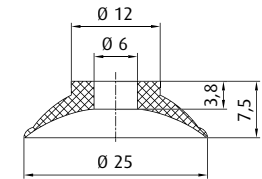
This vacuum cup is also available in the following dimensions: 22 mm, 30 mm



Item no.	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

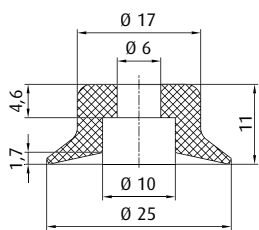
Item no. 112.025.042.* **Material** NBR (sw), SI (w), NR (sw) 4.5 mm

Additional sizes available are found on p. 52.



Item no.	Connection	see page
270.039	M6-male	414

Item no. 112.025.043.* **Material** NBR (sw), SI (w), NR (sw) 2.5 mm

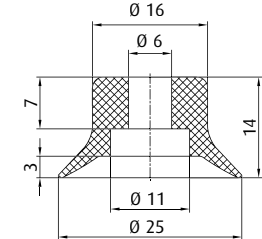


Item no.	Connection	see page
270.311	M5-male	411
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

Item no.	Material	see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.130	20 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 102.025.287.* **Material** NBR (sw), SI (tr), PU (bl), FKM (gr) 2 mm

Additional sizes available are found on p. 38.



Item no.	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 102.025.047.* **Material** NBR (sw), SI (tr), PU (bl) 2.5 mm

Additional sizes available are found on p. 32.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no. 102.025.102._*	Material NR (g), NR (sw)	4 mm
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Additional sizes available are found on p. 24.

	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no. 126.025.010._*	Material FKM (sw)	5 mm
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	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

Item no. 102.025.113._*	Material NBR (sw), SI (tr)	3.5 mm
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	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

Item no. 102.025.103._*	Material NR (sw)	2.5 mm
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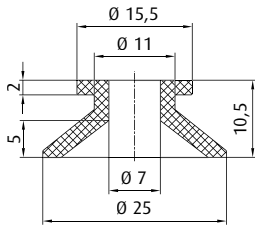
Item no. 102.025.119._*	Material NR (bg)	1.5 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

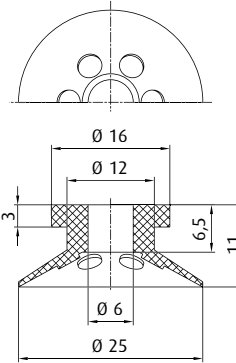
Ø 25 mm



Item no.
102.026.128._*

Material
NR (bg)

2.5 mm

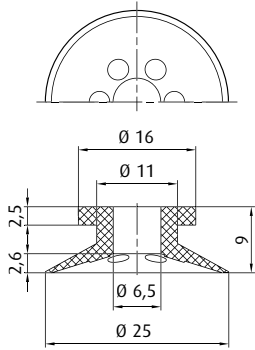


Item no.
104.025.027._*

Material
NR (bg)

3.5 mm

	Connection	see page
270.200	M5-male	411
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

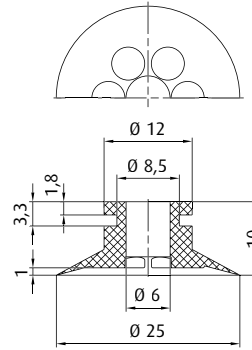


Item no.
104.025.031._*

Material
NR (bg), PU (sw)

1 mm

	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

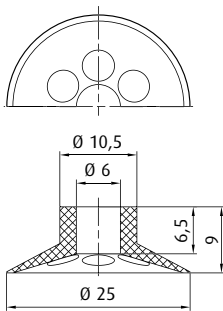


Item no.
102.025.225._*

Material
NR (br)

1.5 mm

	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

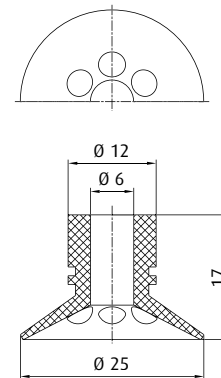


Item no.
104.025.030._*

Material
NR (bg)

1 mm

	Connection	see page
270.200	M5-male	411
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425



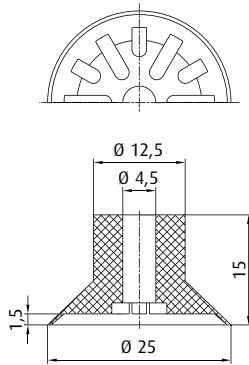
Item no.
104.025.040._*

Material
Vinyl (bl)

2.5 mm

	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

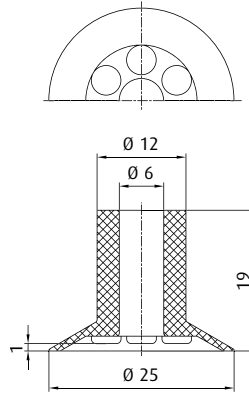
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

Item no. 104.025.043.* **Material** Vinyl (bl) 1.5 mm

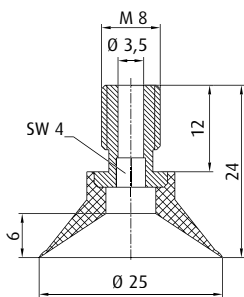
Additional sizes available are found on p. 20.



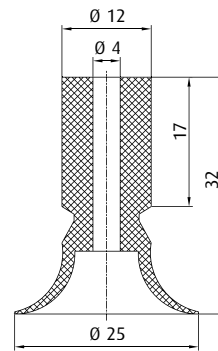
Icon	Connection	see page
	270.443 M5-male	410
	270.238 G1/8-male	417
	270.110 G1/8-female	422
	270.534 G1/4-male	425

Item no. 104.025.094.* **Material** NR (br) 1 mm

Additional sizes available are found on p. 20.

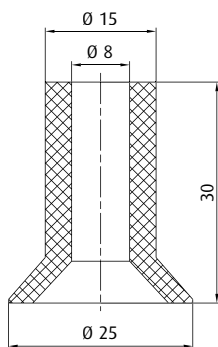


Item no. 120.025.086.* **Material** SI (w), NR (sw) 3.5 mm



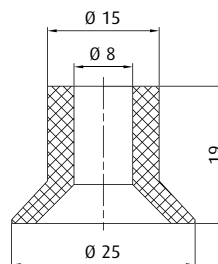
Icon	Connection	see page
	270.134 M5-male	409
	270.347 M5-female	412
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

Item no. 126.025.009.* **Material** NR (bg) --



Icon	Connection	see page
	270.132 G1/8-male	417
	270.114 G1/8-female	422
	270.043 G1/4-male	425
	270.178 G1/4-female	431

Item no. 107.025.019.* **Material** NR (br) 2 mm



Icon	Connection	see page
	270.114 G1/8-female	422
	270.043 G1/4-male	425
	270.178 G1/4-female	431

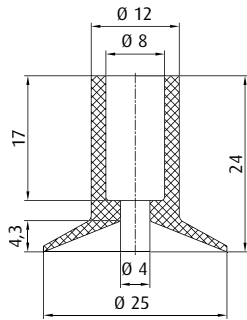
Item no. 107.025.020.* **Material** NR (br) 1 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 25 mm

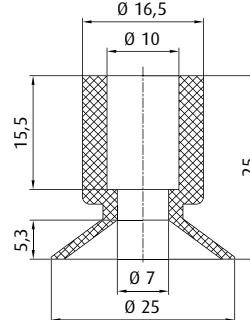


	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no.
102.025.417.*

Material
SI (r)

3 mm

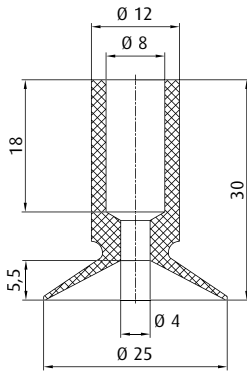


	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
102.025.126.*

Material
NR (bg)

4 mm



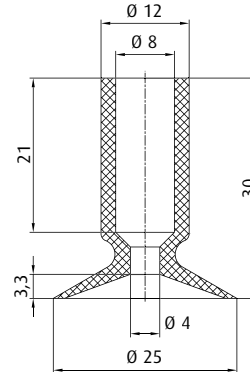
	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no.
122.025.025.*

Material
NBR (sw), SI (tr), NR (sw)

5 mm

Additional sizes available are found on p. 56.



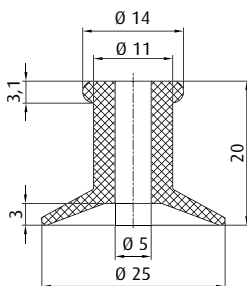
	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

WEAR-RESISTANT

Item no.
122.025.077.*

Material
Vulkollan® (br)

4 mm



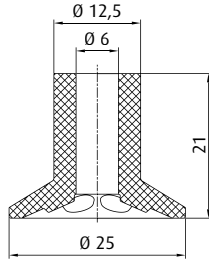
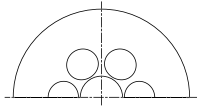
	Connection	see page
270.013	M5-male	410
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no.
102.027.124.*

Material
NR (bg)

4 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

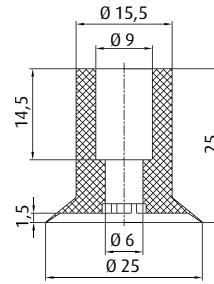
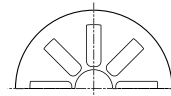


	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

Item no.
104.026.033.*

Material
NR (bg)

2 mm

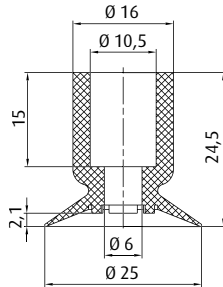
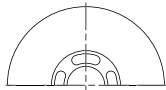


	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

Item no.
102.025.373.*

Material
Vinyl (bl)

1.5 mm

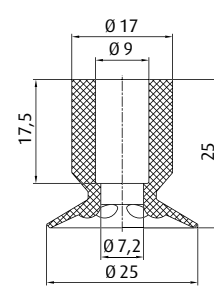
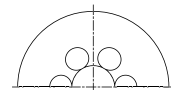


	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
104.025.037.*

Material
NR (bg)

2 mm

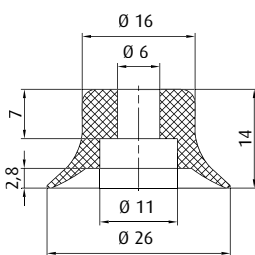


	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
104.025.056.*

Material
Vinyl (bl)

2.5 mm



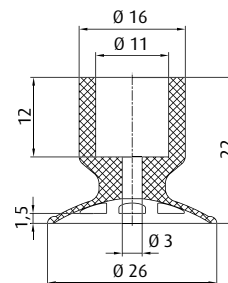
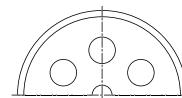
	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no.
102.025.501.*

Material
Thermalon® (bl)

3 mm

Additional sizes available are found on p. 36.



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

WEAR-RESISTANT

Item no.
102.025.192.*

Material
Vulkollan® (br)

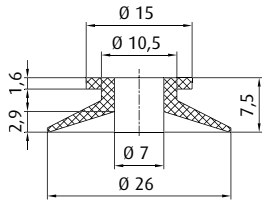
3 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

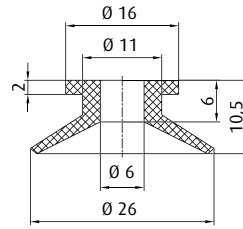
Ø 26 - 27 mm



Item no.
102.026.121.*

Material
NR (bg)

3 mm

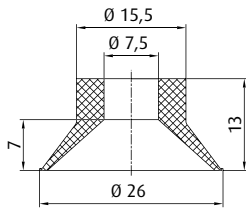


Item no.
102.026.180.*

Material
Vinyl (bl)

4 mm

	Connection	see page
270.200	M5-male	411
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

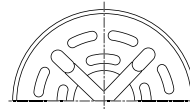


Item no.
102.027.167.*

Material
Vinyl (bl)

5 mm

	Connection	see page
270.043	G1/4-male	425
270.038	G1/4-female	432



Item no.
102.027.298.*

Material
SI (tr)

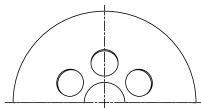
0.5 mm

	Connection	see page
270.451	G1/4-male	426
270.452	G1/4-female	431

Additional sizes available are found on p. 20.

Notes: Especially well-suited for foils

This vacuum cup is also available in the following dimensions: 36 mm

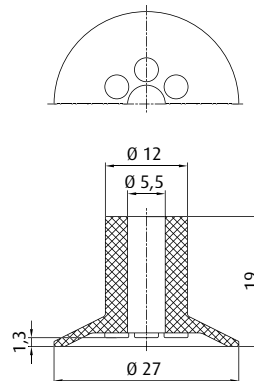


Item no.
104.027.032.*

Material
NR (bg)

2 mm

	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425



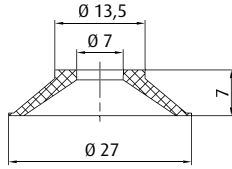
Item no.
104.027.055.*

Material
Vinyl (bl)

2.5 mm

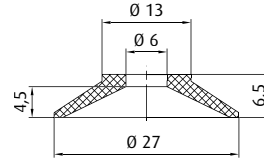
	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



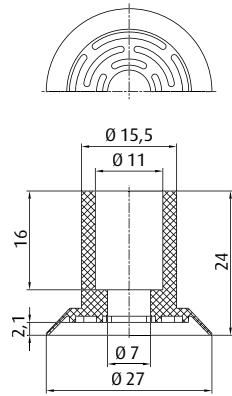
Item no.	Connection	see page
270.105	M6-male	414
270.040	M8-male	415
270.077	G1/8-male	419

Item no. 107.027.022.* **Material** NBR (sw), SI (tr) **Height** 4 mm



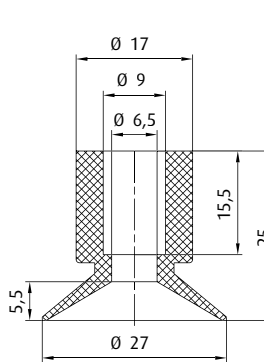
Item no.	Connection	see page
270.105	M6-male	414
270.040	M8-male	415
270.077	G1/8-male	419

Item no. 107.027.052.* **Material** NR (gr) **Height** 3 mm



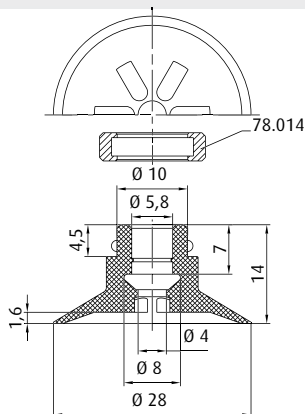
Item no.	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 104.027.062.* **Material** NR (sw) **Height** 2 mm



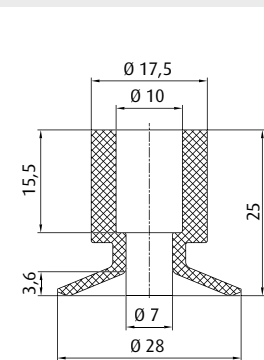
Item no.	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 102.028.164.* **Material** Vinyl (bl) **Height** 5 mm



Item no. 102.028.461.* **Material** SI (tr) **Height** 2 mm

Ordering notes: The retaining ring Item. No. 78.014 (stainless steel) must be ordered separately



Item no.	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

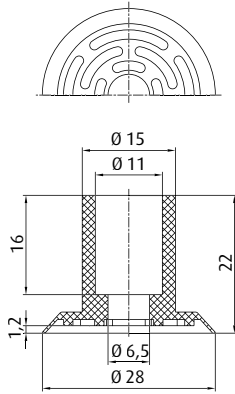
Item no. 102.028.163.* **Material** Vinyl (bl) **Height** 4 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

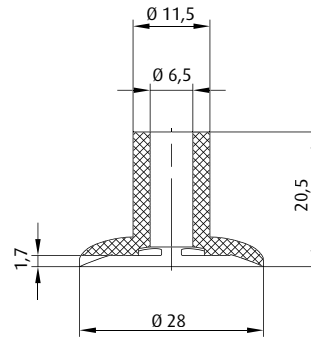
Ø 28 mm



Icon	Connection	see page
	270.451 G1/4-male	426
	270.452 G1/4-female	431

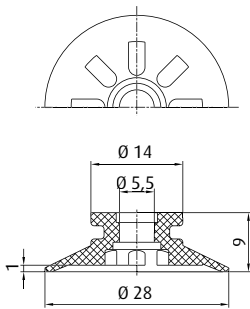
Item no. 104.029.093.* **Material** NR (sw) 1 mm

Additional sizes available are found on p. 21.
This vacuum cup is also available in the following dimensions: 15 mm, 24 mm, 30 mm, 40 mm



Icon	Connection	see page
	270.112 G1/8-male	419
	270.114 G1/8-female	422
	270.113 G1/4-male	425
	270.178 G1/4-female	431

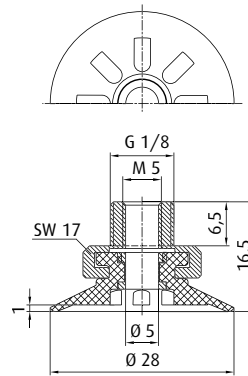
Item no. 102.027.246.* **Material** NR (br) 2 mm



Icon	Connection	see page
	270.500-S M5-female	413
	270.250 G1/8-male	418
	270.503-S G1/8-male	418

Item no. 125.025.007.* **Material** Tepuflex® (or), SI (tr), CR (sw) 1 mm

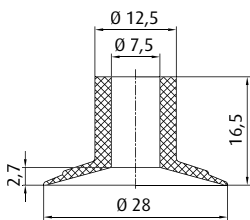
Additional sizes available are found on p. 42.



Spare cup

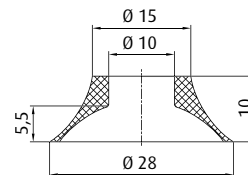
Item no. 123.025.010.* **Material** Tepuflex® (or), SI (tr), CR (sw) 1 mm

Additional sizes available are found on p. 47.



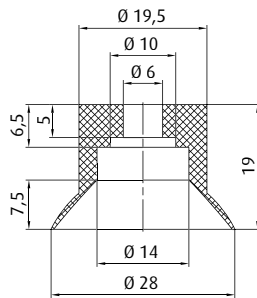
Icon	Connection	see page
	270.112 G1/8-male	419
	270.114 G1/8-female	422
	270.113 G1/4-male	425
	270.178 G1/4-female	431

Item no. 102.028.175.* **Material** Vinyl (bl) 2 mm



Item no. 102.028.375.* **Material** SI (tr) 2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

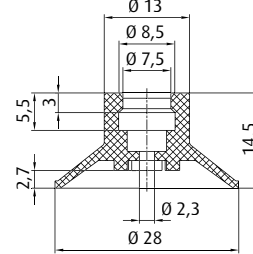
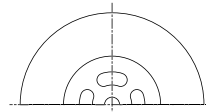


Item no.	Connection	see page
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

Item no.
102.028.159.*

Material
Vinyl (bl)

4 mm



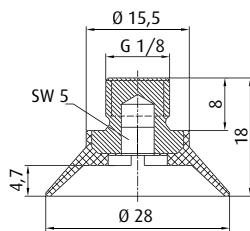
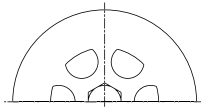
Item no.	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434

Item no.
102.028.194.*

Material
NBR (sw)

3 mm

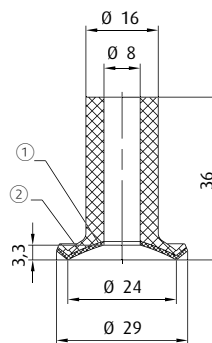
This vacuum cup is also available in the following dimensions: 20 mm



Item no.
103.030.024.*

Material
NBR (gr), NR (br)

4.5 mm



Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

NON-MARKING!
TEMP. MAX. 500 °C

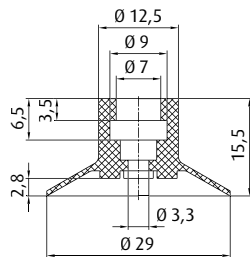
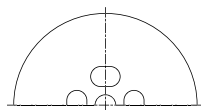
① = Felt pads ② = For silicone vacuum cups with silicone membranes: evaporated aluminium layer

Item no.
26.025.009.*

Material
SI (tr/ge)

2 mm

Additional sizes available are found on p. 164.



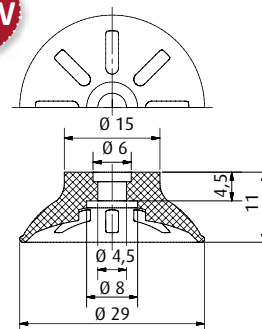
Item no.	Connection	see page
270.030	G1/8-male	419
270.019	G1/8-female	423

Item no.
104.029.053.*

Material
Vinyl (bl)

4 mm

NEW



Item no.	Connection	see page
270.063	G1/8-male	419

Item no.
102.029.509.*

Material
NR (br)

4 mm

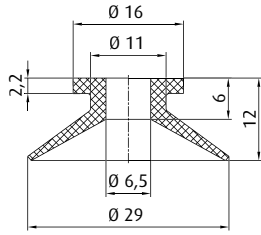
Additional sizes available are found on p. 20.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 29 - 30 mm

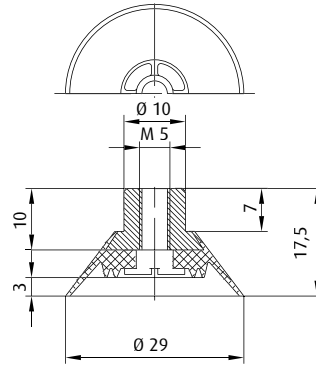


Icon	Connection	see page
	M5-male	411
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

Item no.
102.029.160._*

Material
Vinyl (bl)

4.5 mm

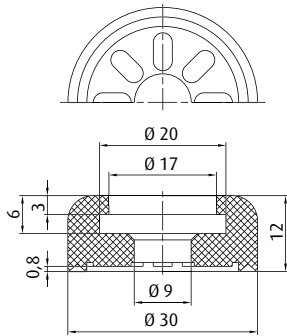


Item no.
150.030.031._*

Material
SI (r), CR (sw)

3 mm

Additional sizes available are found on p. 68.



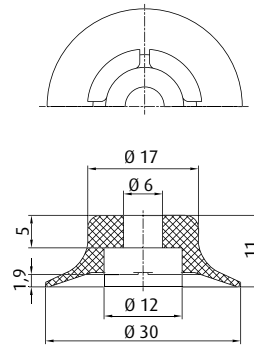
Icon	Connection	see page
	G1/8-female	438

Item no.
102.030.459._*

Material
HNBR (ge), NR (br)

0.8 mm

Additional sizes available are found on p. 70.



Icon	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	423
	G1/4-male	429
	G1/4-female	433

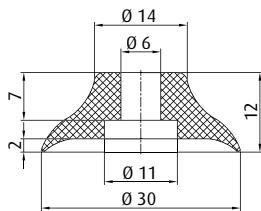
Icon	Thickness	see page
	6 mm	454
	10 mm	454
	15 mm	454
	20 mm	454
	20 mm	456
	30 mm	456
	40 mm	456
	50 mm	456

Item no.
102.030.288._*

Material
NBR (sw), SI (tr), PU (bl), FKM (gr)

2 mm

Additional sizes available are found on p. 38.



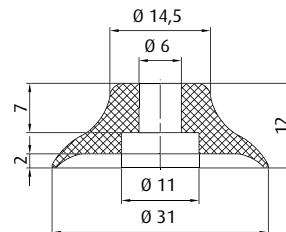
Icon	Connection	see page
	M6-male	414
	G1/8-male	419
	G1/8-female	423
	G1/4-male	427
	G1/4-female	432

Item no.
102.030.053._*

Material
NBR (sw), SI (tr), PU (bl)

2 mm

Additional sizes available are found on p. 32.



Icon	Connection	see page
	M6-male	414
	G1/8-male	419
	G1/8-female	423
	G1/4-male	427
	G1/4-female	432

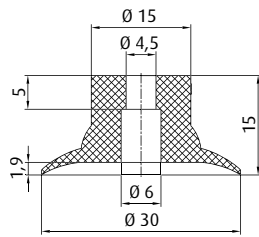
Item no.
102.030.502._*

Material
Thermalon® (bl)

2 mm

Additional sizes available are found on p. 36.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



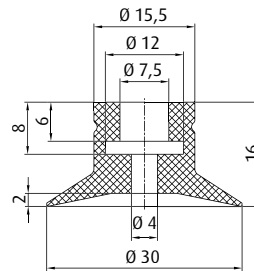
Item no.	Connection	see page
270.317	M5-male	410
270.103	M6-male	413
270.205	G1/8-male	416
270.109	G1/8-female	421
270.194	G1/4-male	425

Item no.	Connection	see page
50.020	8.5 mm	454

BESTSELLER

Item no. 102.030.222.* Material NBR (sw), SI (tr) 2 mm

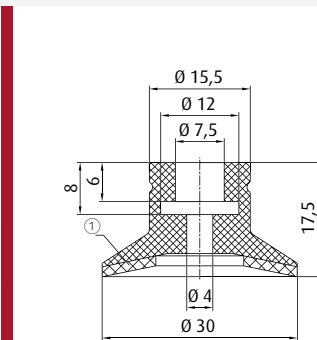
Additional sizes available are found on p. 50.



Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Connection	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

Item no. 126.030.013.* Material SI (bl), SI (r) 1.5 mm



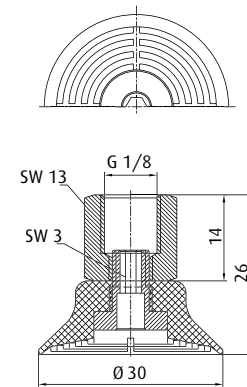
Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Connection	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

① = Silicone sponge

Item no. 104.030.087.* Material SI (bl/r) 1.5 mm

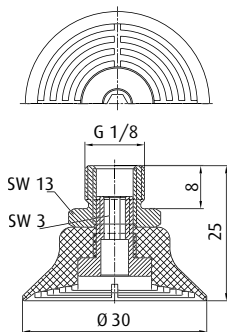
Additional sizes available are found on p. 166.



NON-SLIP

Item no. 100.030.102.* Material NBR (sw) 1.8 mm

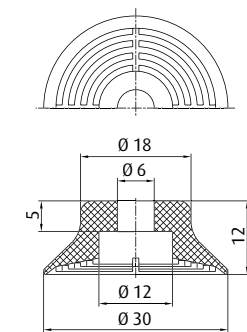
Additional sizes available are found on p. 62.



NON-SLIP

Item no. 100.030.112.* Material NBR (sw) 1.8 mm

Additional sizes available are found on p. 62.



Spare cup

Item no.	Connection	see page
270.460	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

Item no.	Connection	see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

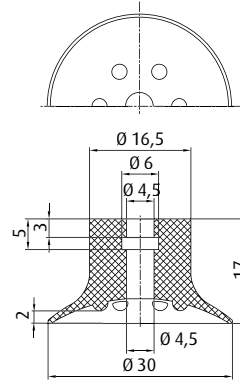
Item no. 104.030.067.* Material NBR (sw) 1.8 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 30 mm

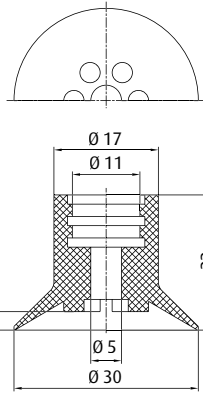


	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no.
102.030.322.*

Material
Vulkollan® (br)

2 mm



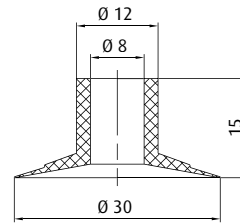
	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no.
104.030.008.*

Material
NBR (sw), SI (bl)

3 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 24 mm, 40 mm, 50 mm

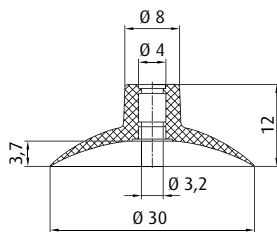


	Connection	see page
270.112	G1/8-male	419
270.113	G1/4-male	425
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no.
107.030.023.*

Material
NBR (sw), NR (bg)

1 mm



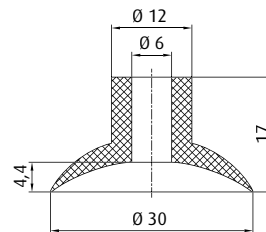
	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no.
102.030.086.*

Material
PU (g)

4.5 mm

This vacuum cup is also available in the following dimensions: 22 mm, 25 mm



	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

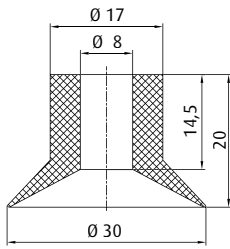
Item no.
112.030.052.*

Material
NBR (sw), SI (w)

4.5 mm

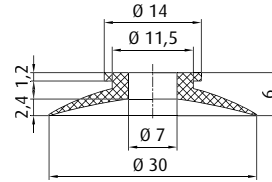
Additional sizes available are found on p. 52.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

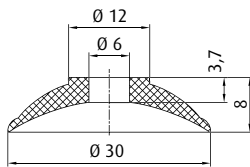


	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 115.030.005_*
Material NBR (sw), SI (tr), NR (sw), NR (bg)
 3 mm

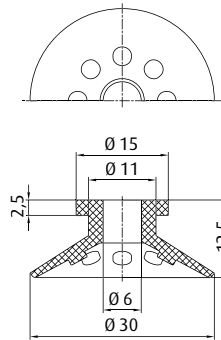


Item no. 102.030.178_*
Material Vinyl (bl)
 3 mm



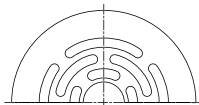
	Connection	see page
270.255	M8-male	415

Item no. 112.030.051_*
Material NBR (sw), SI (w)
 4 mm

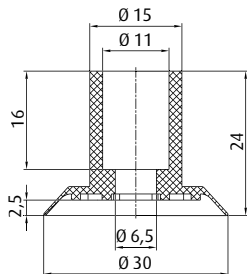


	Connection	see page
270.039	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 104.030.059_*
Material Vinyl (bl)
 3 mm



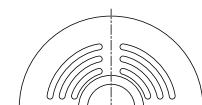
	Connection	see page
270.451	G1/4-male	426
270.452	G1/4-female	431



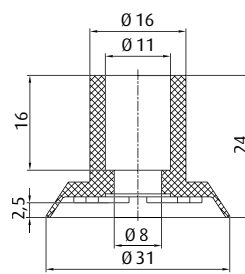
BESTSELLER

Item no. 104.030.009_*
Material NBR (sw), SI (w), SI (tr), NR (sw)
 3 mm

Additional sizes available are found on p. 21.
 This vacuum cup is also available in the following dimensions: 15 mm, 24 mm, 28 mm, 40 mm



	Connection	see page
270.451	G1/4-male	426
270.452	G1/4-female	431



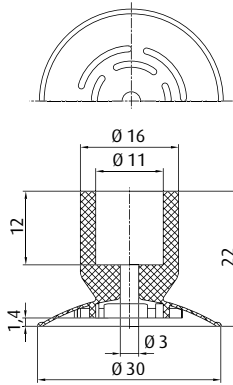
Item no. 104.030.007_*
Material SI (tr), NR (sw)
 3 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



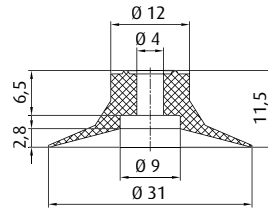
Vacuum cups by size | Flat vacuum cups by Ø

Ø 30 - 31 mm



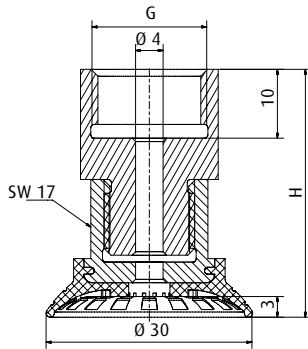
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 102.030.215.*	Material Vulkollan® (br)	2 mm
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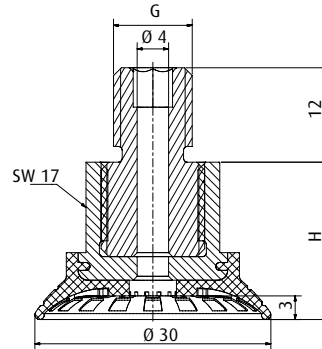
	Connection	see page
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

Item no. 102.031.313.*	Material SI (tr)	3 mm
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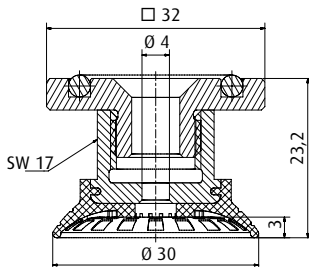
Item no.	Material	[mm]	Connection thread	H [mm]
103.030.031.*	NBR (bl)	3	G1/4-female	20
103.030.032.*	NBR (bl)	3	G3/8-female	36

Additional sizes available are found on p. 64.



Item no.	Material	[mm]	Connection thread	H [mm]
103.030.030.*	NBR (bl)	3	G1/4-male	20
103.030.033.*	NBR (bl)	3	M10-male	20
103.030.034.*	NBR (bl)	3	M14x1.5-male	20

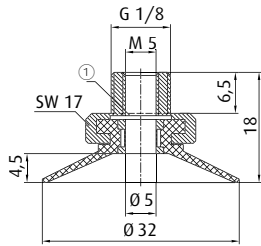
Additional sizes available are found on p. 64.



Item no. 103.030.035.*	Material NBR (bl)	3 mm
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Additional sizes available are found on p. 64.

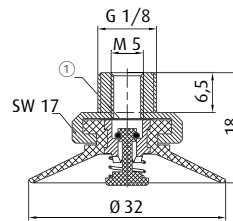
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Filter screen

Item no. 120.030.013_* **Material** SI (tr), CR (sw) 3.5 mm

Additional sizes available are found on p. 47.



① = Filter screen

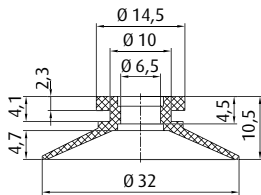
Item no. 121.030.006_* **Material** SI (tr), CR (sw) 2.5 mm

Additional sizes available are found on p. 47.

Spare cup

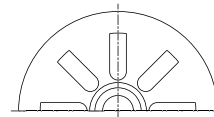
	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

Spare cup



Item no. 102.030.096_* **Material** SI (tr), CR (sw) 3.5 mm

Additional sizes available are found on p. 42.



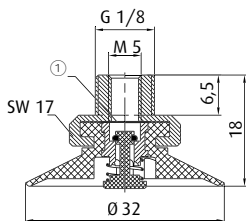
① = Filter screen

Item no. 123.030.019_* **Material** Tepuflex® (or), SI (tr), CR (sw) 2 mm

Additional sizes available are found on p. 47.

Spare cup

	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

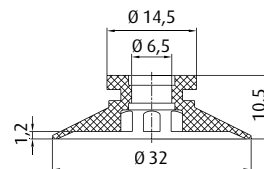


① = Filter screen

Item no. 124.030.002_* **Material** SI (tr), CR (sw) 2 mm

Additional sizes available are found on p. 47.

Spare cup



BESTSELLER

Item no. 125.030.010_* **Material** Tepuflex® (or), SI (tr), CR (sw) 2 mm

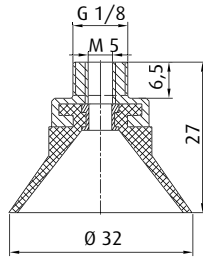
Additional sizes available are found on p. 42.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



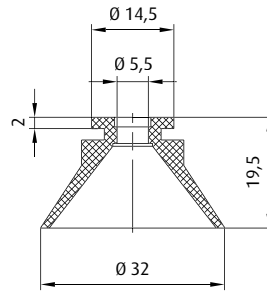
Vacuum cups by size | Flat vacuum cups by Ø

Ø 32 - 33 mm



Item no. 120.032.025.* **Material** SI (tr), CR (sw) 5 mm

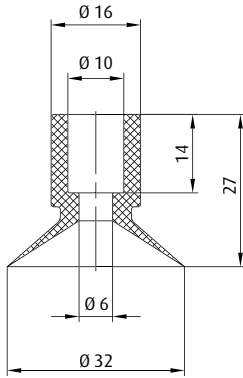
Spare cup



Item no. 122.032.036.* **Material** SI (tr), CR (sw) 5 mm

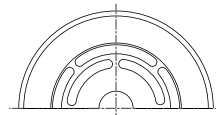
	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-male	418

Additional sizes available are found on p. 42.



	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431

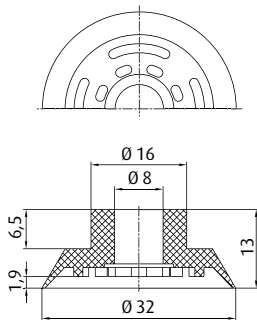
Item no. 122.030.034.* **Material** SI (tr), NR (sw) 6.5 mm



	Connection	see page
	G1/8-male	419
	G1/8-female	422

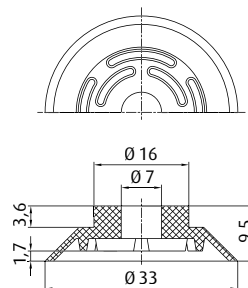
Item no. 102.032.104.* **Material** NR (bg) 1.8 mm

Additional sizes available are found on p. 21.



	Connection	see page
	G1/4-male	426
	G1/4-female	431

Item no. 108.032.002.* **Material** SI (tr), NR (bg) 2 mm

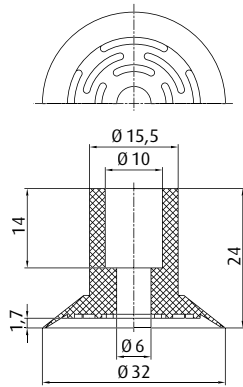


	Connection	see page
	M6-male	414

Item no. 102.033.398.* **Material** Vinyl (bl) 2 mm

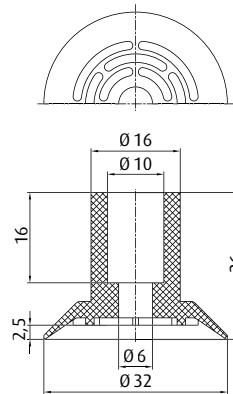
Additional sizes available are found on p. 21.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

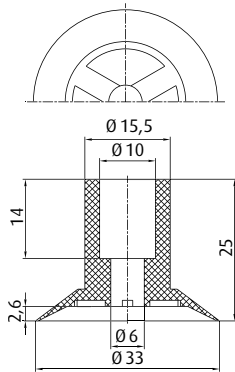
Item no. 104.032.044.* **Material** Vinyl (bl) 2 mm



	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

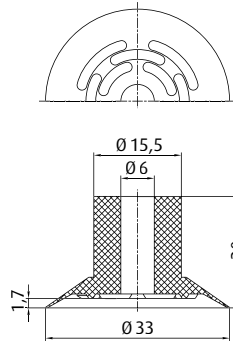
Item no. 104.033.034.* **Material** NR (bg), CR (r) 2.5 mm

Notes: Especially well-suited for flexible products (foils, leather, veneer)



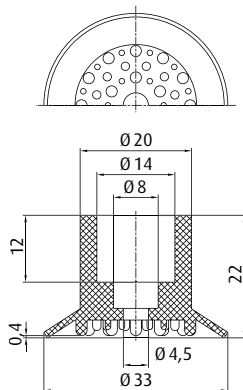
	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 102.033.226.* **Material** Vinyl (bl) 3 mm



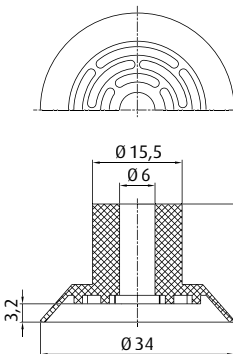
	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

Item no. 104.033.057.* **Material** Vinyl (bl) 1.5 mm



Item no. 102.033.112.* **Material** NBR (sw), SI (tr) 0.5 mm

Notes: Especially well-suited for foils



	Connection	see page
270.030	G1/8-male	419
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 104.034.036.* **Material** NR (bg) 3 mm

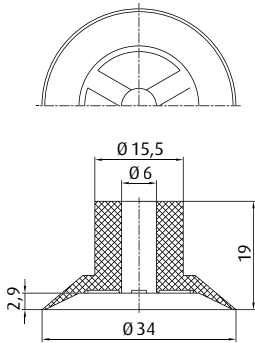
Additional sizes available are found on p. 21.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 34 - 35 mm

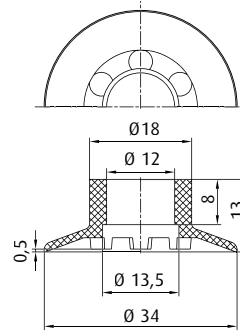


	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

BESTSELLER

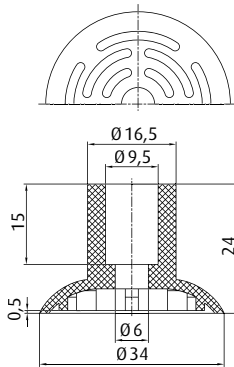
Item no. 104.034.054.* **Material** Vinyl (bl) 3 mm

Additional sizes available are found on p. 21.



	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 108.034.003.* **Material** NR (bg) 1 mm

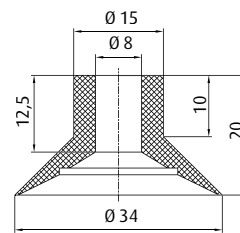


	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 116.034.001.* **Material** NR (sw), NR (bg) 0.5 mm

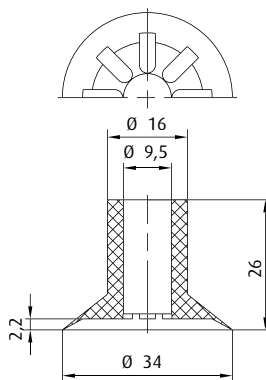
Additional sizes available are found on p. 21.

Notes: Especially well-suited for flexible products (foils, leather, veneer)



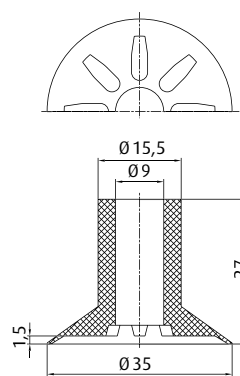
	Connection	see page
270.112	G1/8-male	419
270.114	G1/8-female	422
270.113	G1/4-male	425
270.178	G1/4-female	431

Item no. 122.034.038.* **Material** NR (sw), NR (br) 3 mm



	Connection	see page
270.177	M10-male	416
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.452	G1/4-female	431

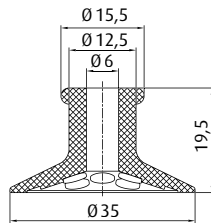
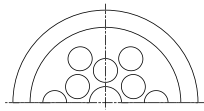
Item no. 104.035.048.* **Material** Vinyl (bl) 2 mm



	Connection	see page
270.177	M10-male	416
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.452	G1/4-female	431

Item no. 104.035.050.* **Material** Vinyl (bl) 2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

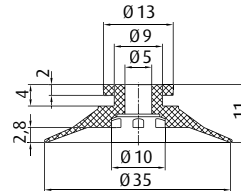
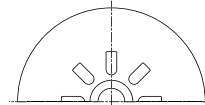


	Connection	see page
270.030	G1/8-male	419
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no.
104.035.038.*

Material
NR (bg)

1 mm

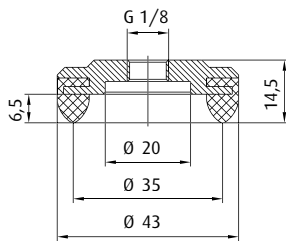


	Connection	see page
270.310	M5-male	411
270.250	G1/8-male	418

Item no.
102.035.320.*

Material
NR (sw)

2.8 mm



Item no.
160.042.001.*

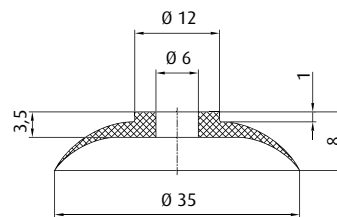
Material
EPDM (sw)

1 mm

Additional sizes available are found on p. 72.

Notes: Foam sealing lip equalises product unevenness

	Connection	see page
270.250	G1/8-male	418

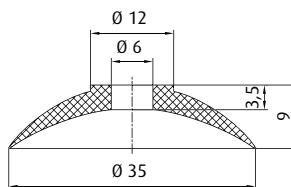


Item no.
112.035.059.*

Material
SI (tr), NR (sw)

3 mm

	Connection	see page
270.039	M6-male	414



Item no.
112.035.065.*

Material
SI (tr)

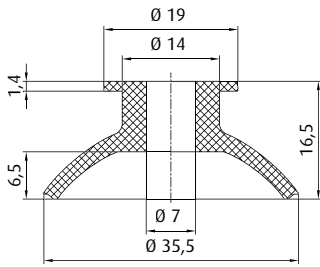
5.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 35 - 36 mm

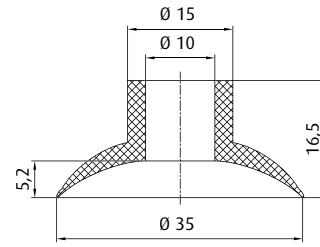


	Connection	see page
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427

Item no.
102.035.176.*

Material
Vinyl (bl)

6 mm



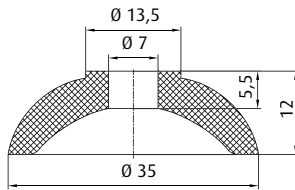
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
112.035.060.*

Material
NBR (sw), SI (w), NR (sw)

5 mm

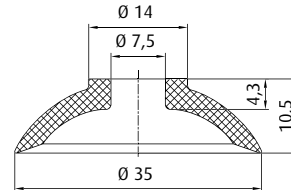
Additional sizes available are found on p. 52.



Item no.
112.035.064.*

Material
NR (sw), NR (bg)

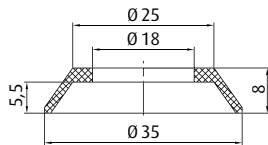
5 mm



Item no.
115.035.007.*

Material
NBR (sw), SI (tr), NR (sw)

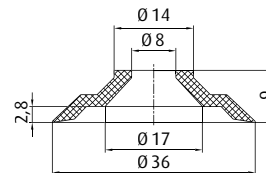
5 mm



Item no.
107.035.055.*

Material
NR (bg)

4 mm



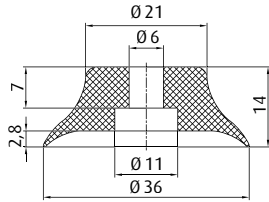
	Connection	see page
270.255	M8-male	415

Item no.
102.036.106.*

Material
SI (gr)

3 mm

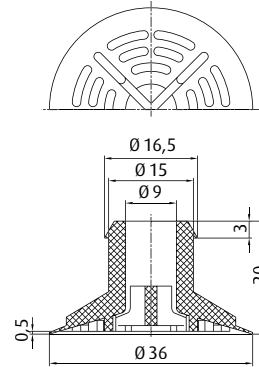
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 102.035.056.* **Material** NBR (sw), SI (tr) **Thickness** 3 mm

Additional sizes available are found on p. 32.



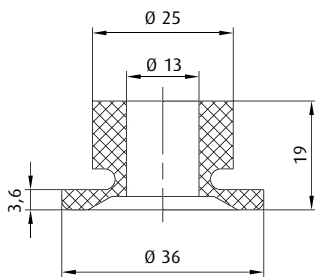
Item no.	Connection	see page
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 102.036.342.* **Material** SI (tr) **Thickness** 0.5 mm

Additional sizes available are found on p. 21.

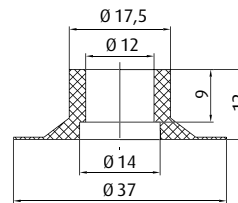
Notes: Especially well-suited for foils

This vacuum cup is also available in the following dimensions: 27 mm



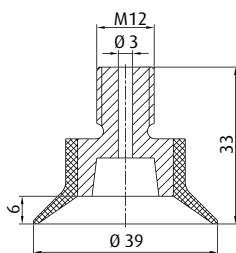
Item no.	Connection	see page
270.207	G1/4-male	426

Item no. 107.036.037.* **Material** NR (br) **Thickness** 1.5 mm

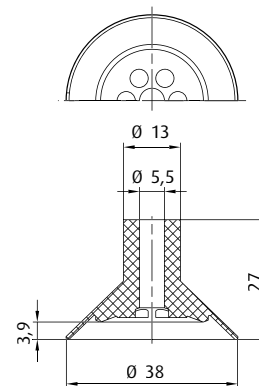


Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 107.037.027.* **Material** NR (br) **Thickness** 0 mm



Item no. 120.038.021.* **Material** NR (sw) **Thickness** 3 mm



Item no.	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

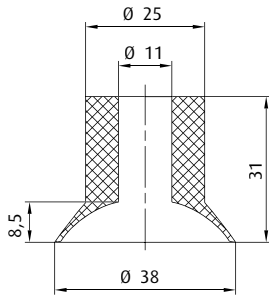
Item no. 104.038.039.* **Material** PU (br), Vinyl (bl) **Thickness** 3.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 38 - 40 mm

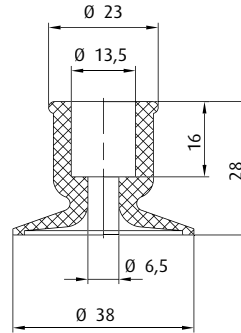


Icon	Connection	see page
	G1/4-male	426

Item no.
102.038.157.*

Material
Vinyl (bl)

6 mm

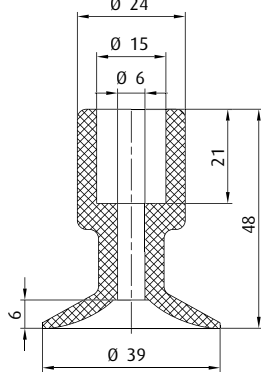


Icon	Connection	see page
	G1/4-male	426

Item no.
102.038.136.*

Material
NR (bg)

2.5 mm

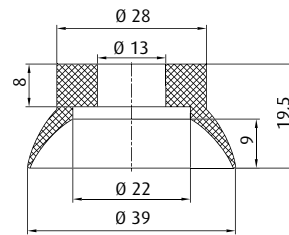


Icon	Connection	see page
	G1/4-female	432

Item no.
102.039.154.*

Material
NR (bg)

2 mm

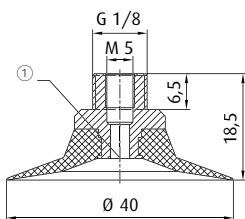


Icon	Connection	see page
	G1/4-male	430

Item no.
112.039.069.*

Material
NR (bg)

5 mm



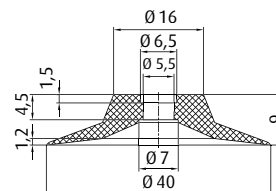
① = Filter screen

Item no.
120.040.084.*

Material
CR (sw)

2.5 mm

Spare cup



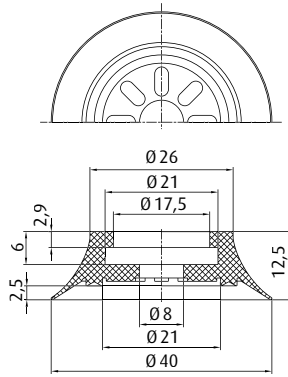
Icon	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-male	418

Item no.
102.040.310.*

Material
CR (sw)

2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

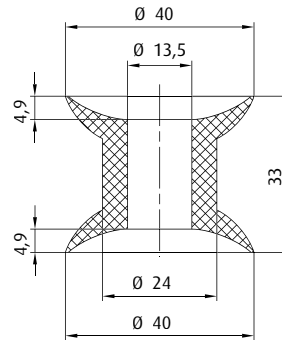


	Connection	see page
270.234	G1/8-female	438

FLEXIBLE LIP

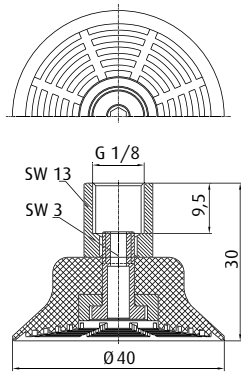
Item no. 102.040.357.* **Material** SI (tr), NR (br) **3 mm**

Additional sizes available are found on p. 66.



	Connection	see page
270.116	G1/4-female	432

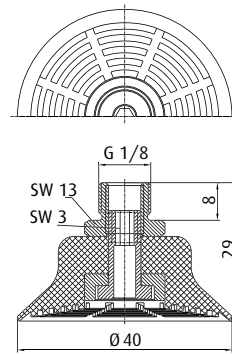
Item no. 102.039.235.* **Material** NR (br) **5 mm**



NON-SLIP

Item no. 100.040.103.* **Material** NBR (sw) **2.5 mm**

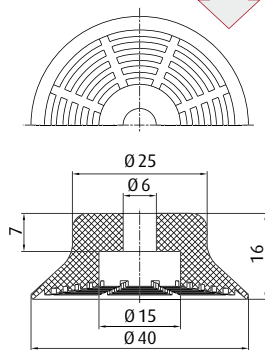
Additional sizes available are found on p. 62.



NON-SLIP

Item no. 100.040.113.* **Material** NBR (sw) **2.5 mm**

Additional sizes available are found on p. 62.



	Connection	see page
270.498	M6-male	414
270.486	G1/8-male	420
270.485	G1/8-female	423
270.487	G1/4-male	429
270.488	G1/4-female	434

	see page
50.170	20 mm 456
50.171	30 mm 456
50.172	40 mm 456
50.173	50 mm 456

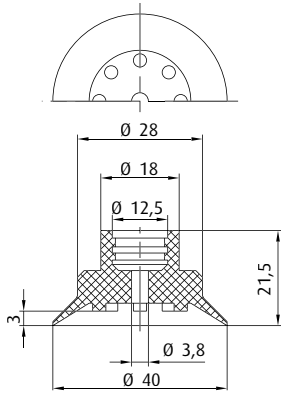
Item no. 104.040.068.* **Material** NBR (sw) **2.5 mm**

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 40 mm



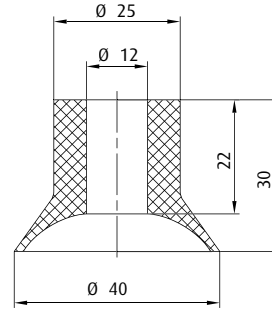
Icon	Connection	see page
	270.097 G1/4-male	426
	270.098 G1/4-female	432

Item no.
104.040.014.*

Material
NBR (sw)

2.5 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 24 mm, 30 mm, 50 mm

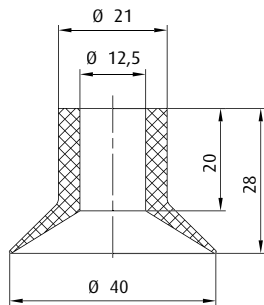


Icon	Connection	see page
	270.049-1 G1/4-male	426

Item no.
122.040.001.*

Material
NBR (sw), SI (tr), NR (bg)

5 mm

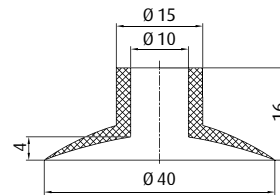


Icon	Connection	see page
	270.049-1 G1/4-male	426

Item no.
122.040.044.*

Material
SI (tr), NR (bg)

4.5 mm



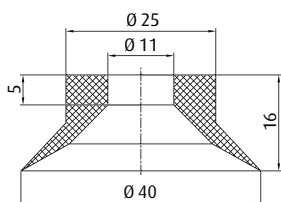
Icon	Connection	see page
	270.177 M10-male	416
	270.451 G1/4-male	426
	270.452 G1/4-female	431

Item no.
112.040.071.*

Material
NBR (sw), SI (tr)

4 mm

Additional sizes available are found on p. 52.

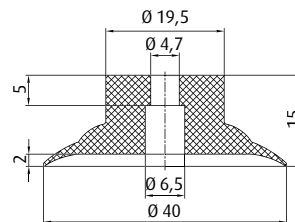


Icon	Connection	see page
	270.256 M8-male	415
	270.252 G1/8-female	424

Item no.
126.040.016.*

Material
SI (tr), NR (bg), PU (bl)

5 mm



Icon	Connection	see page
	270.317 M5-male	410
	270.103 M6-male	413
	270.205 G1/8-male	416
	270.109 G1/8-female	421
	270.194 G1/4-male	425

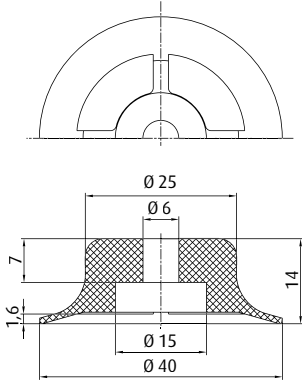
Item no.
102.040.223.*

Material
NBR (sw), SI (tr)

2 mm

Additional sizes available are found on p. 50.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

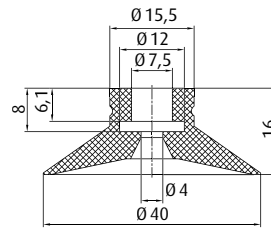


Item no.	Connection	see page
270.498	M6-male	414
270.486	G1/8-male	420
270.485	G1/8-female	423
270.487	G1/4-male	429
270.488	G1/4-female	434

Item no.	Thickness	see page
50.170	20 mm	456
50.171	30 mm	456
50.172	40 mm	456
50.173	50 mm	456

Item no. 102.040.289.*	Material NBR (sw), SI (tr), PU (bl), FKM (gr)	2 mm
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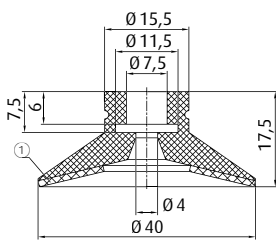
Additional sizes available are found on p. 38.



Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Thickness	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

Item no. 102.040.364.*	Material SI (bl)	3 mm
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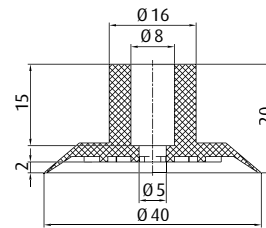
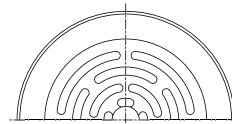
Item no.	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.034	G1/4-male	428
270.038	G1/4-female	432

Item no.	Thickness	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

① = Silicone sponge

Item no. 104.040.088.*	Material SI (bl/r)	2.5 mm
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Additional sizes available are found on p. 166.



Item no.	Connection	see page
270.112	G1/8-male	419
270.114	G1/8-female	422
270.113	G1/4-male	425
270.178	G1/4-female	431

BESTSELLER

Item no. 104.040.018.*	Material SI (tr), NR (sw), NR (br)	2 mm
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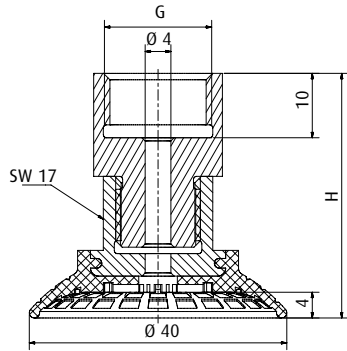
Additional sizes available are found on p. 21.
This vacuum cup is also available in the following dimensions: 15 mm, 24 mm, 28 mm, 30 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



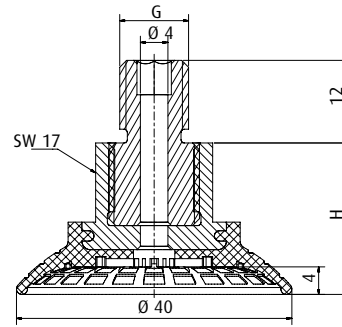
Vacuum cups by size | Flat vacuum cups by Ø

Ø 42 mm



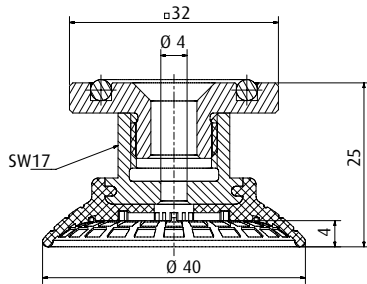
Item no.	Material	📏 [mm]	Connection thread	H [mm]
103.040.037.*	NBR (bl)	4	G1/4-female	22
103.040.038.*	NBR (bl)	4	G3/8-female	38

Additional sizes available are found on p. 64.



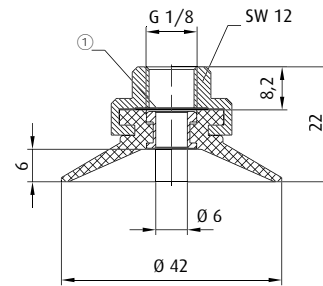
Item no.	Material	📏 [mm]	Connection thread	H [mm]
103.040.036.*	NBR (bl)	4	G1/4-male	22
103.040.039.*	NBR (bl)	4	M10-male	22
103.040.040.*	NBR (bl)	4	M14x1.5-male	22

Additional sizes available are found on p. 64.



Item no.	Material	📏 [mm]
103.040.041.*	NBR (bl)	4

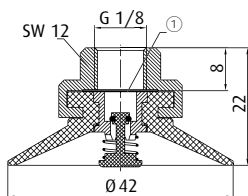
Additional sizes available are found on p. 64.



① = Filter screen

Item no.	Material	📏 [mm]
120.040.076.*	SI (tr), CR (sw)	4

Additional sizes available are found on p. 47.

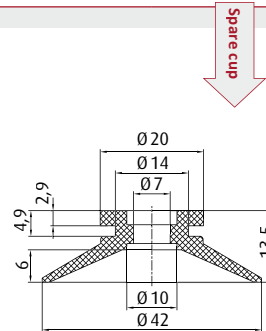


① = Filter screen

Item no.	Material	📏 [mm]
121.040.007.*	SI (tr), CR (sw)	4

Additional sizes available are found on p. 47.

Spare cup

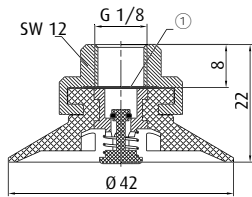


📏	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434

Item no.	Material	📏 [mm]
102.040.094.*	SI (tr), CR (sw)	4

Additional sizes available are found on p. 42.

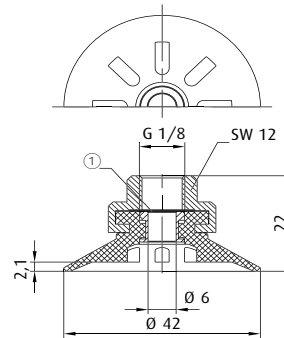
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



① = Filter screen

Item no. 124.040.006._*	Material SI (tr), CR (sw)	2 mm
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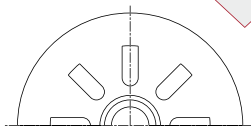
Additional sizes available are found on p. 47.



① = Filter screen

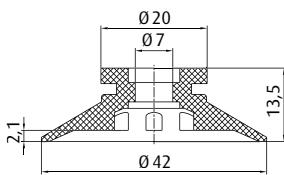
Item no. 123.040.028._*	Material Tepuflex® (or), SI (tr), CR (sw)	2 mm
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Additional sizes available are found on p. 47.



Spare cup

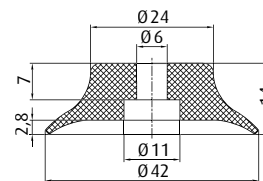
	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434



BESTSELLER

Item no. 125.040.013._*	Material Tepuflex® (or), SI (tr), CR (sw)	2 mm
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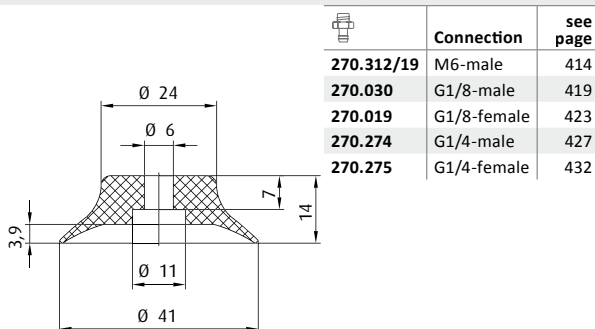
Additional sizes available are found on p. 42.



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 102.040.061._*	Material NBR (sw), SI (tr), PU (bl)	3.5 mm
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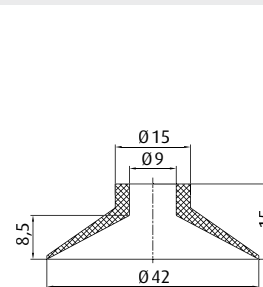
Additional sizes available are found on p. 32.



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 102.040.503._*	Material Thermalon® (bl)	3.9 mm
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Additional sizes available are found on p. 36.



	Connection	see page
270.034	G1/4-male	428
270.038	G1/4-female	432

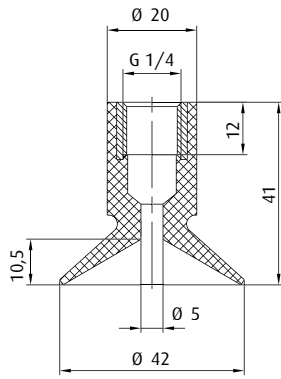
Item no. 102.042.232._*	Material NR (sw)	7 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



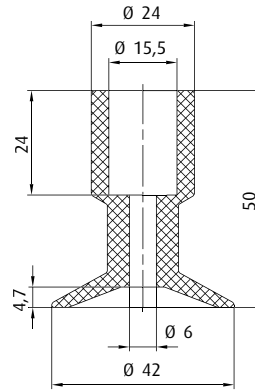
Vacuum cups by size | Flat vacuum cups by Ø

Ø 42 - 43 mm



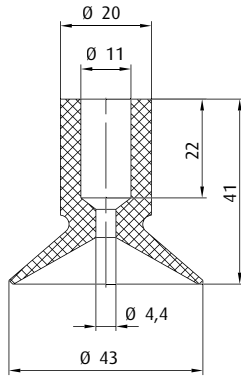
Item no. 120.040.032.* **Material** SI (tr), NR (sw) 6 mm

This vacuum cup is also available in the following dimensions: 53 mm, 62 mm, 83 mm



Item no. 102.042.184.* **Material** Vinyl (bl) 4 mm

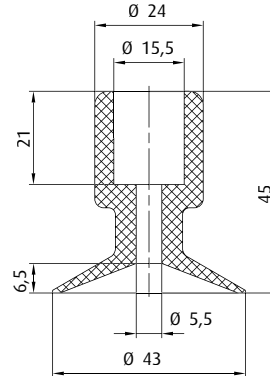
	Connection	see page
270.116	G1/4-female	432



	Connection	see page
270.049-1	G1/4-male	426

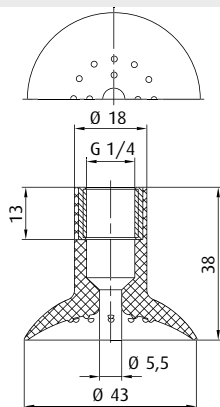
Item no. 122.040.043.* **Material** SI (tr), NR (sw) 4 mm

Additional sizes available are found on p. 56.



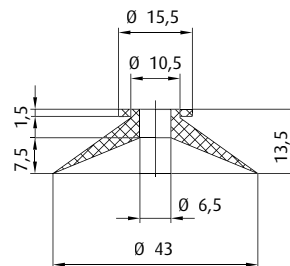
	Connection	see page
270.116	G1/4-female	432

Item no. 102.043.252.* **Material** NR (br) 7 mm



Item no. 110.042.068.* **Material** SI (tr), NR (sw) 5 mm

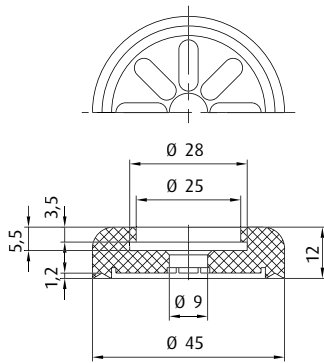
This vacuum cup is also available in the following dimensions: 50 mm, 62 mm, 81 mm, 100 mm



	Connection	see page
270.063	G1/8-male	419
270.061	G1/8-female	422

Item no. 102.043.170.* **Material** Vinyl (bl) 5 mm

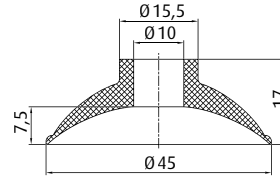
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.235	G1/8-female	438

Item no. 102.045.460.* **Material** HNBR (ge), NR (br) 1.2 mm

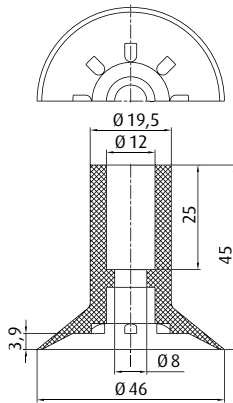
Additional sizes available are found on p. 70.



Item no.	Connection	see page
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 112.045.077.* **Material** NBR (sw), SI (w), NR (sw) 7 mm

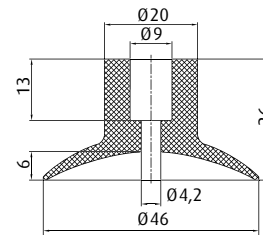
Additional sizes available are found on p. 52.



Item no.	Connection	see page
270.049-1	G1/4-male	426

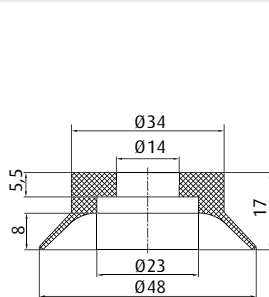
Item no. 127.045.002.* **Material** NR (sw) 5 mm

This vacuum cup is also available in the following dimensions: 65 mm



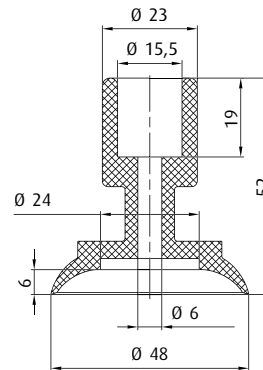
Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425

Item no. 102.046.046.* **Material** NBR (sw) 6 mm



Item no.	Connection	see page
270.210	G1/4-male	430

Item no. 107.048.031.* **Material** SI (tr), NR (gr) 5 mm



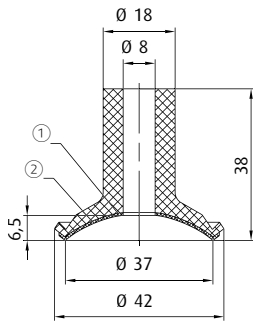
Item no. 115.048.008.* **Material** NR (sw) 8 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 37 - 50 mm



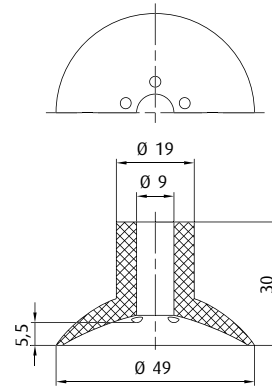
	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

**NON-MARKING!
TEMP. MAX. 500 °C**

① = Felt pads ② = For silicone vacuum cups with silicone membranes: evaporated aluminium layer

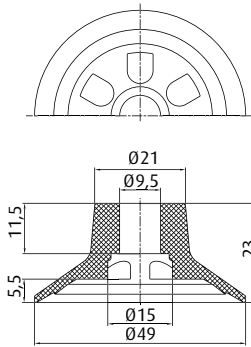
Item no. 26.037.010._*	Material SI (tr/ge)	3 mm
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Additional sizes available are found on p. 164.



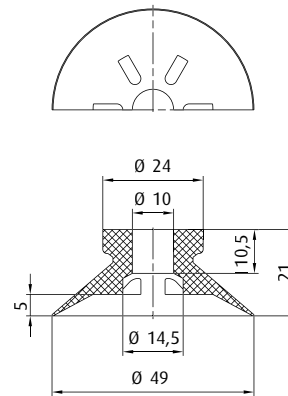
	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

Item no. 102.048.274._*	Material NR (sw)	6 mm
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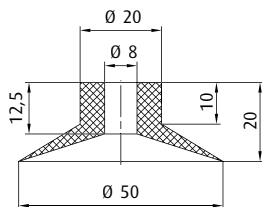
	Connection	see page
270.315	M6-male	414
270.177	M10-male	416
270.540	G1/4-male	429
270.539	G1/4-female	434

Item no. 104.050.022._*	Material NBR (gr), NR (bg)	4.5 mm
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	Connection	see page
270.249	G1/4-male	427
270.248	G1/4-female	433

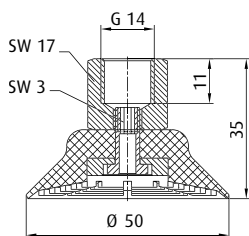
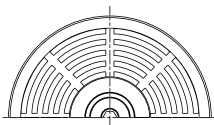
Item no. 127.050.004._*	Material SI (tr), NR (sw), NR (bg)	4 mm
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	Connection	see page
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 126.050.017._*	Material SI (tr), NR (bg)	4 mm
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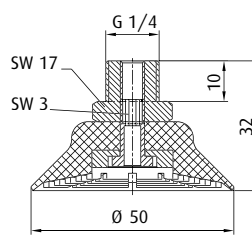
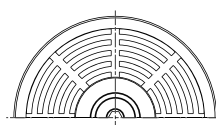
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



NON-SLIP

Item no. 100.050.104.* Material NBR (sw) 3.1 mm

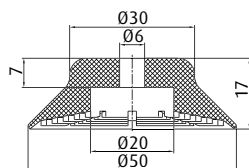
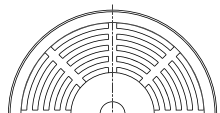
Additional sizes available are found on p. 62.



NON-SLIP

Item no. 100.050.114.* Material NBR (sw) 3.1 mm

Additional sizes available are found on p. 62.

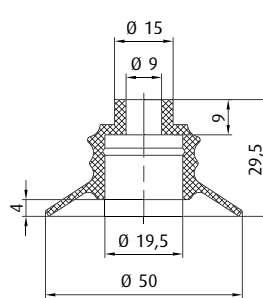


Spare cup

	Connection	see page
270.499	M6-male	414
270.490	G1/8-male	420
270.489	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

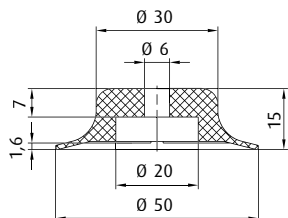
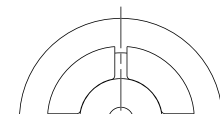
		see page
50.174	20 mm	456
50.175	30 mm	456
50.176	40 mm	456
50.177	50 mm	456

Item no. 104.050.069.* Material NBR (sw) 3.1 mm



	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423

Item no. 107.050.042.* Material NR (sw), NR (br) 6 mm

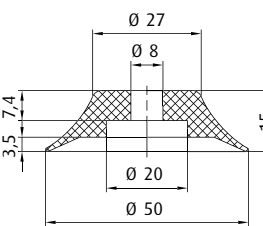


	Connection	see page
270.499	M6-male	414
270.490	G1/8-male	420
270.489	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

		see page
50.174	20 mm	456
50.175	30 mm	456
50.176	40 mm	456
50.177	50 mm	456

Item no. 102.050.290.* Material NBR (sw), SI (tr), PU (bl), FKM (gr) 2 mm

Additional sizes available are found on p. 38.



	Connection	see page
270.490	G1/8-male	420
270.489	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

Item no. 102.050.065.* Material NBR (sw), SI (tr), PU (bl) 4 mm

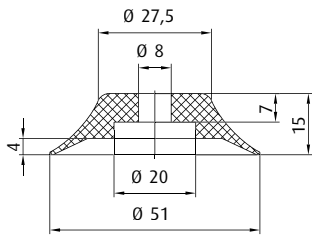
Additional sizes available are found on p. 32.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

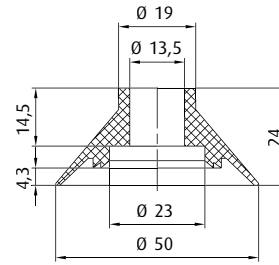
Ø 50 mm



	Connection	see page
270.012	G1/8-male	421
270.020	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

Item no. 102.050.504.* **Material** Thermalon® (bl) 4 mm

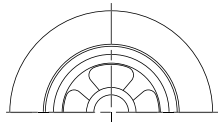
Additional sizes available are found on p. 36.



	Connection	see page
270.184	G1/4-male	431

Item no. 127.050.003.* **Material** SI (r), CR (sw) 5 mm

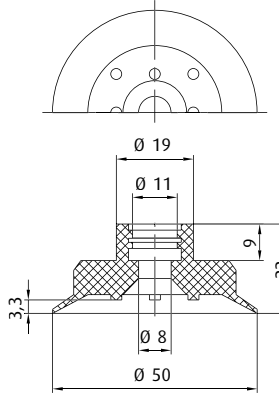
BESTSELLER



① = Aluminium

Item no. 150.050.032.* **Material** SI (r), FKM (sw), CR (sw) 5.5 mm

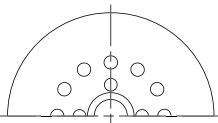
Additional sizes available are found on p. 68.



	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

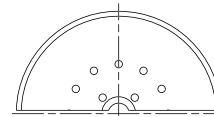
Item no. 104.050.064.* **Material** NBR (sw), SI (tr) 5 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 24 mm, 30 mm, 40 mm



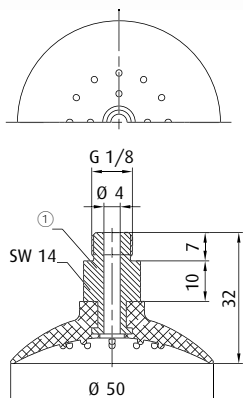
	Connection	see page
270.112	G1/8-male	419
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 102.050.433.* **Material** Vulkollan® (br) 3 mm



Item no. 110.050.080.* **Material** NR (sw) 4 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

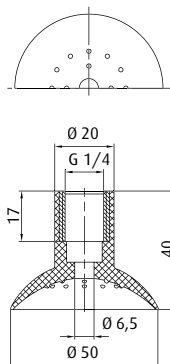


① = Aluminium

Item no.
113.050.014.*

Material
NBR (sw)

5 mm

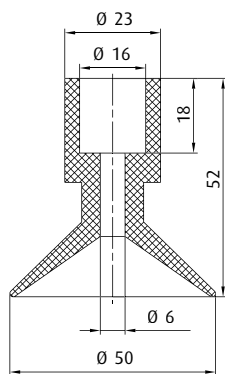


Item no.
110.050.078.*

Material
SI (tr), NR (sw)

9 mm

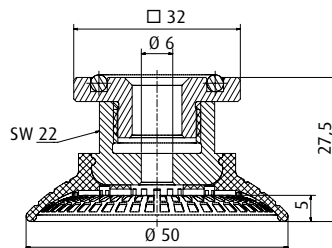
This vacuum cup is also available in the following dimensions: 43 mm, 62 mm, 81 mm, 100 mm



Item no.
126.050.018.*

Material
NR (bg)

10 mm

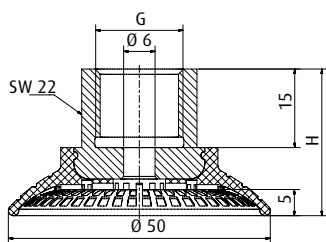


Item no.
103.050.047.*

Material
NBR (bl)

5 mm

Additional sizes available are found on p. 64.



Item no.

Material

[mm]

Connection thread

H [mm]

103.050.043.*

NBR (bl)

5

G1/4-female

33

103.050.044.*

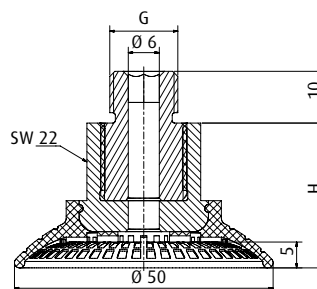
NBR (bl)

5

G3/8-female

28

Additional sizes available are found on p. 64.



Item no.

Material

[mm]

Connection thread

H [mm]

103.050.042.*

NBR (bl)

5

G1/4-male

28

103.050.045.*

NBR (bl)

5

M10-male

28

103.050.046.*

NBR (bl)

5

M14x1.5-male

28

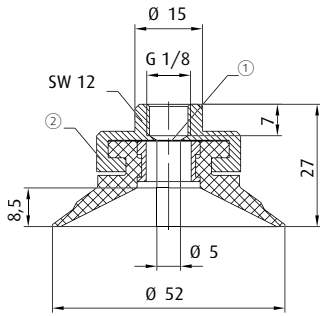
Additional sizes available are found on p. 64.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

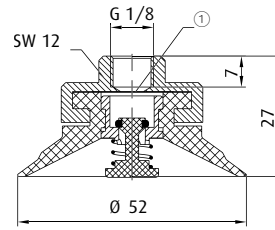
Ø 52 - 53 mm



① = Filter screen ② = Aluminium

Item no. 120.050.078_* **Material** SI (tr), CR (sw) 6.5 mm

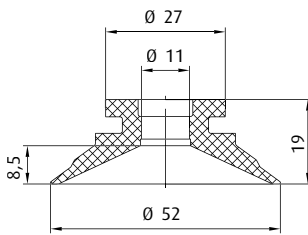
Additional sizes available are found on p. 47.



① = Filter screen

Item no. 121.050.008_* **Material** SI (tr), CR (sw) 2.5 mm

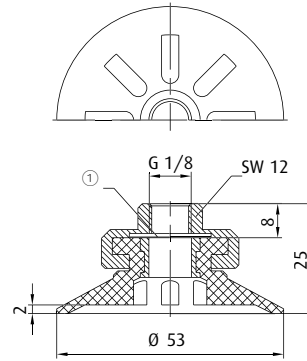
Additional sizes available are found on p. 47.



	Connection	see page
	270.252 G1/8-female	424
	270.502-S G1/8-female	424
	270.504-S G1/4-male	429
	270.507-S G3/8-male	435

Item no. 102.050.097_* **Material** SI (tr), CR (sw) 6.5 mm

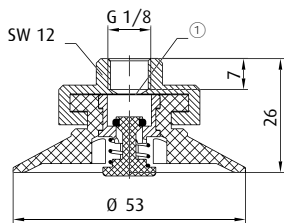
Additional sizes available are found on p. 42.



① = Filter screen

Item no. 123.050.034_* **Material** Tepuflex® (or), SI (tr), CR (sw) 2.5 mm

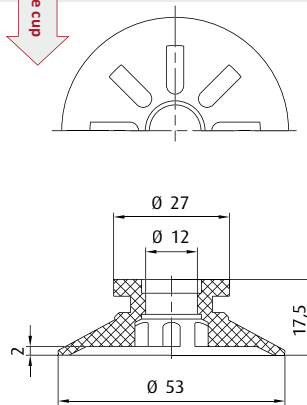
Additional sizes available are found on p. 47.



① = Filter screen

Item no. 124.050.009_* **Material** SI (tr), CR (sw) 2.5 mm

Additional sizes available are found on p. 47.

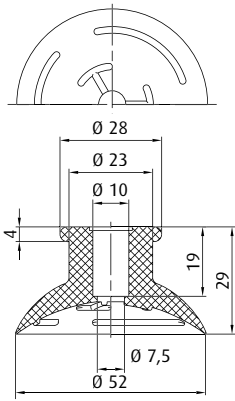


	Connection	see page
	270.252 G1/8-female	424
	270.502-S G1/8-female	424
	270.504-S G1/4-male	429
	270.507-S G3/8-male	435

Item no. 125.050.017_* **Material** Tepuflex® (or), SI (tr), CR (sw) 2.5 mm

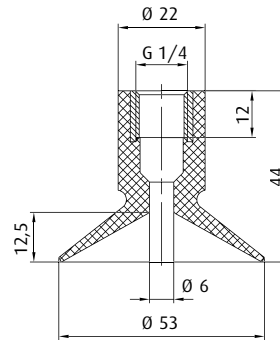
Additional sizes available are found on p. 42.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



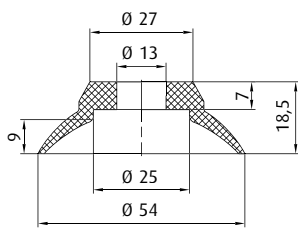
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 114.052.008.* **Material** NR (bg) 6 mm



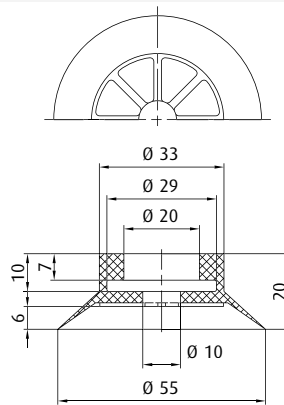
Item no. 120.050.040.* **Material** SI (tr), NR (sw) 11 mm

This vacuum cup is also available in the following dimensions: 42 mm, 62 mm, 83 mm



	Connection	see page
270.184	G1/4-male	431

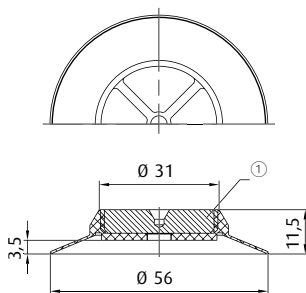
Item no. 112.055.086.* **Material** PU (bl) 6 mm



	Connection	see page
270.289	G1/8-female	438

FLEXIBLE LIP

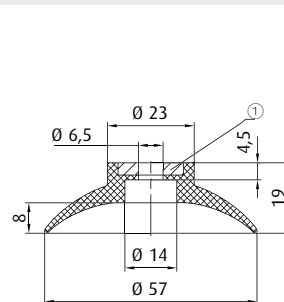
Item no. 154.055.060.* **Material** NBR (gr) 6 mm



① = Steel

Item no. 152.055.092.* **Material** NBR (gr) 4 mm

Ordering notes: Customised drilling patterns on request



	Connection	see page
270.312/19	M6-male	414

① = Aluminium

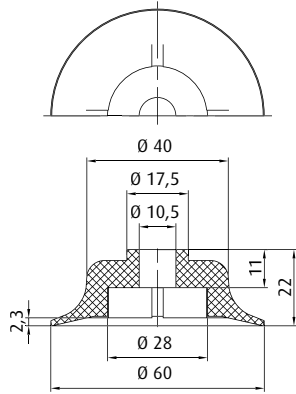
Item no. 112.057.087.* **Material** NR (sw) 6 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

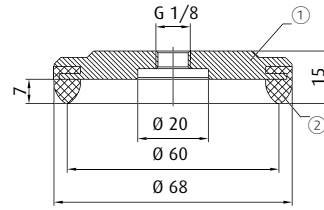
Ø 60 - 62 mm



Connection	see page
270.512 M10-male	416

Item no. 102.060.291.*	Material NBR (sw), SI (tr), PU (bl), FKM (gr)	2.5 mm
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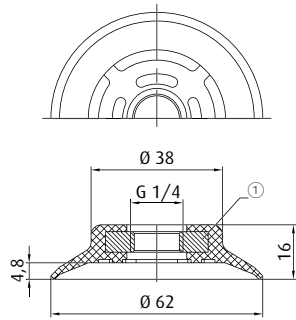
Additional sizes available are found on p. 38.



① = Aluminium ② = EPDM foamed

Item no. 160.067.003.*	Material EPDM (sw)	1 mm
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Additional sizes available are found on p. 72.
Notes: Foam sealing lip equalises product unevenness



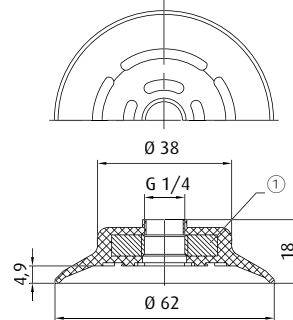
Connection	see page
270.090 M10x1.25-female	752
270.120 G1/4-male	750

BESTSELLER

① = Aluminium

Item no. 102.060.303.*	Material NBR (sw), SI (tr), PU (bl)	5 mm
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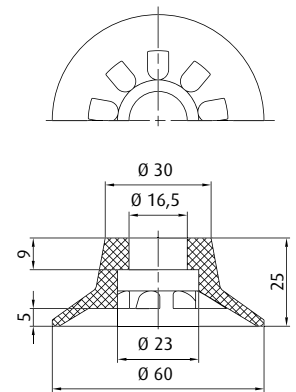
Additional sizes available are found on p. 32.



① = Aluminium

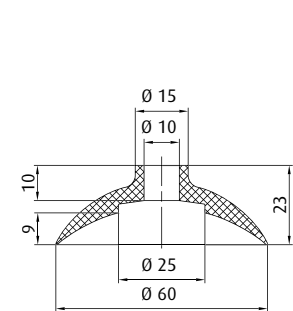
Item no. 102.060.505.*	Material Thermalon® (bl)	4.9 mm
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Additional sizes available are found on p. 36.



Connection	see page
270.237 G1/4-male	430

Item no. 104.060.024.*	Material NBR (gr), SBR (br), NR (bg)	4 mm
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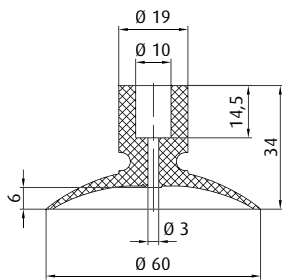


Connection	see page
270.042 G1/4-male	431

Item no. 112.060.091.*	Material NBR (sw), SI (tr)	9 mm
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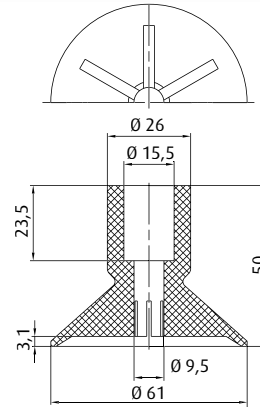
Additional sizes available are found on p. 52.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



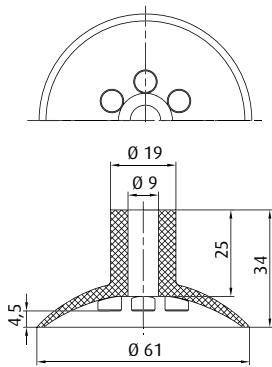
Item no.	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 115.060.009.* **Material** NR (sw) 5 mm



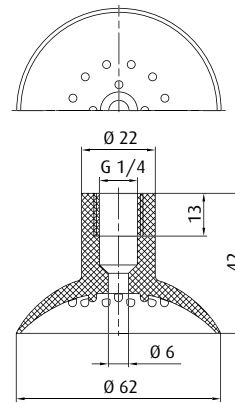
Item no.	Connection	see page
270.116	G1/4-female	432

Item no. 104.061.060.* **Material** Vinyl (bl) 2.5 mm



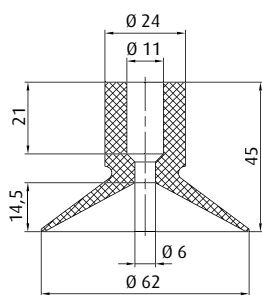
Item no.	Connection	see page
270.208	G1/4-male	425

Item no. 114.061.010.* **Material** SI (tr), NR (sw) 5 mm



Item no. 110.060.085.* **Material** SI (tr), NR (sw) 9.5 mm

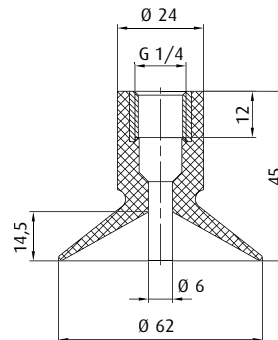
This vacuum cup is also available in the following dimensions: 43 mm, 50 mm, 81 mm, 100 mm



Item no.	Connection	see page
270.049-1	G1/4-male	426

Item no. 122.060.059.* **Material** NBR (sw), SI (tr), NR (sw) 10 mm

Additional sizes available are found on p. 56.



Item no. 120.060.045.* **Material** SI (tr), NR (sw) 10 mm

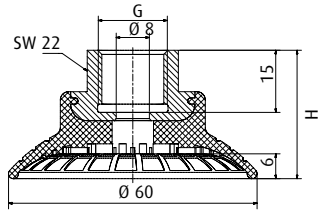
This vacuum cup is also available in the following dimensions: 42 mm, 53 mm, 83 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



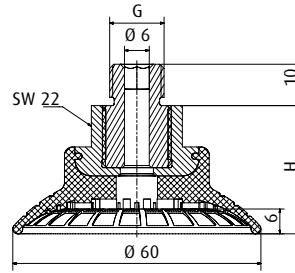
Vacuum cups by size | Flat vacuum cups by Ø

Ø 63 - 64 mm



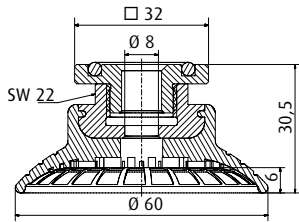
Item no.	Material	⌀ [mm]	Connection thread	H [mm]
103.060.049.*	NBR (bl)	6	G1/4-female	36
103.060.050.*	NBR (bl)	6	G3/8-female	31

Additional sizes available are found on p. 64.



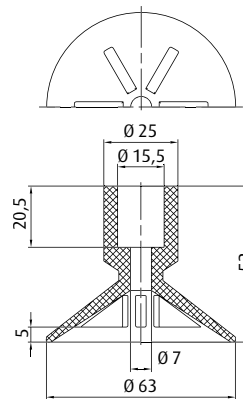
Item no.	Material	⌀ [mm]	Connection thread	H [mm]
103.060.048.*	NBR (bl)	6	G1/4-male	31
103.060.051.*	NBR (bl)	6	M10-male	31
103.060.052.*	NBR (bl)	6	M14x1.5-male	31

Additional sizes available are found on p. 64.



Item no.	Material	⌀ [mm]
103.060.053.*	NBR (bl)	6 mm

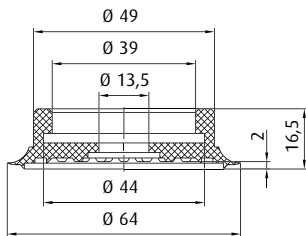
Additional sizes available are found on p. 64.



⌀ [mm]	Connection	see page
270.116	G1/4-female	432

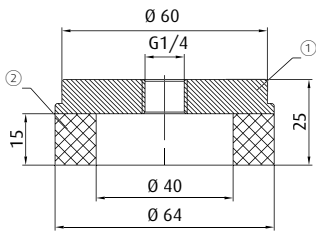
Item no.	Material	⌀ [mm]
104.063.041.*	NR (bg), CR (r)	6.5 mm

⌀ [mm]	Connection	see page
270.262	G1/8-female	438
270.284	G1/4-female	438



Item no.	Material	⌀ [mm]
154.065.002.*	SI (tr), NR (sw), NR (br), Vinyl (bl)	1.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

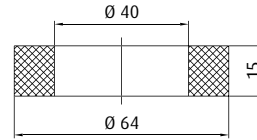


① = Aluminium ② = Sponge rubber NR

Item no. 206.064.006.*	Material Sponge rubber (or)	10 mm
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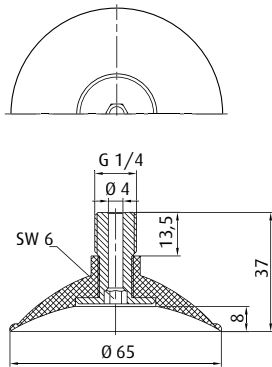
This vacuum cup is also available in the following dimensions: 91 mm

Spare cup

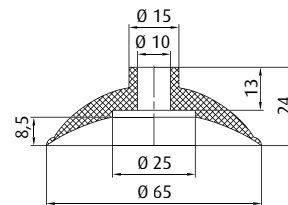


Item no. 208.064.001.*	Material Sponge rubber (or)	10 mm
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This vacuum cup is also available in the following dimensions: 91 mm

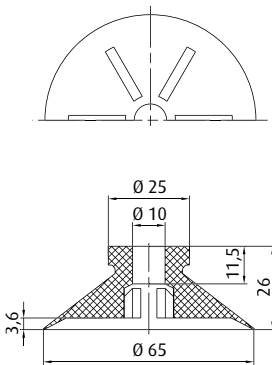


Item no. 110.065.091.*	Material NBR (sw), SI (tr), NR (sw), NR (bg), Vinyl (bl)	7 mm
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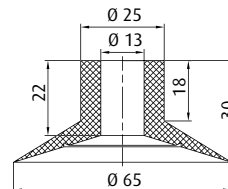
Item no. 112.065.093.*	Material NBR (sw), SI (tr), NR (sw), NR (bg), Vinyl (bl)	7 mm
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	Connection	see page
270.176	G1/4-male	430



Item no. 125.065.026.*	Material SI (tr), NR (sw), NR (bg)	5 mm
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	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431



Item no. 126.065.019.*	Material SI (tr), NR (sw)	5 mm
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	Connection	see page
270.207	G1/4-male	426

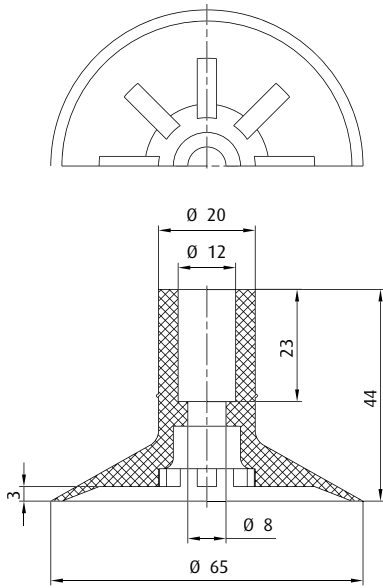
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \varnothing

\varnothing 65 - 70 mm

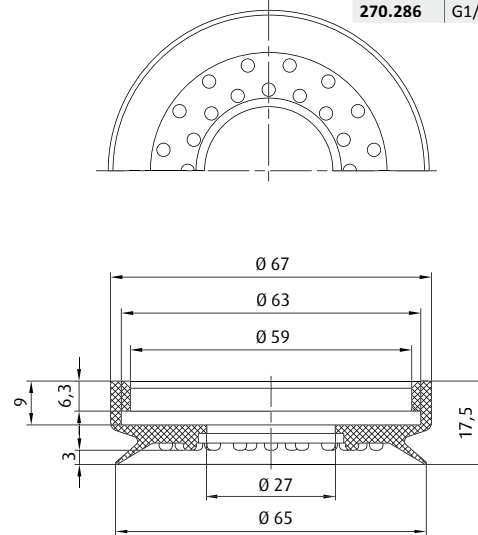
	Connection	see page
270.049-1	G1/4-male	426



Item no. 127.065.006._*	Material SI (tr), NR (sw)	3 mm
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This vacuum cup is also available in the following dimensions: 46 mm

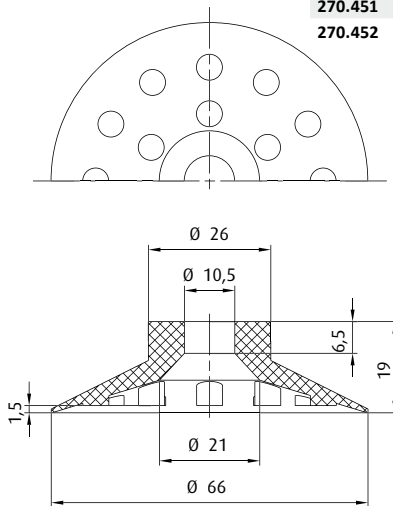
	Connection	see page
270.158	G1/8-female	438
270.264	G1/4-female	438
270.161	G3/8-female	438
270.286	G1/2-female	438



Item no. 154.065.003._*	Material NBR (sw), SI (w), NR (sw)	3 mm
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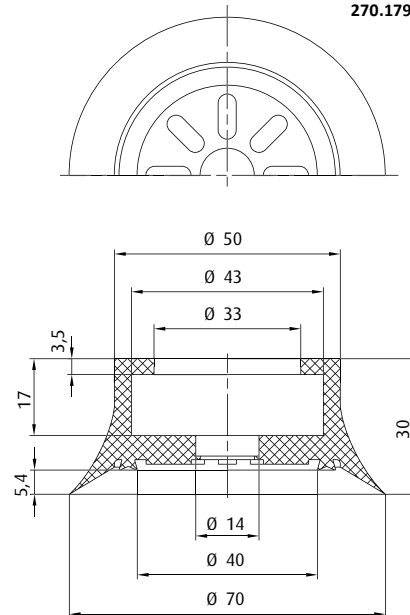
Additional sizes available are found on p. 70.

	Connection	see page
270.256	M8-male	415
270.012	G1/8-male	421
270.020	G1/8-female	423
270.451	G1/4-male	426
270.452	G1/4-female	431



Item no. 125.066.027._*	Material NBR (sw), SI (tr), NR (sw)	0.5 mm
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	Connection	see page
270.179	G1/4-female	438



Item no. 102.070.234._*	Material NBR (gr), SBR (br), SI (tr), NR (bg), NR (br)	6 mm
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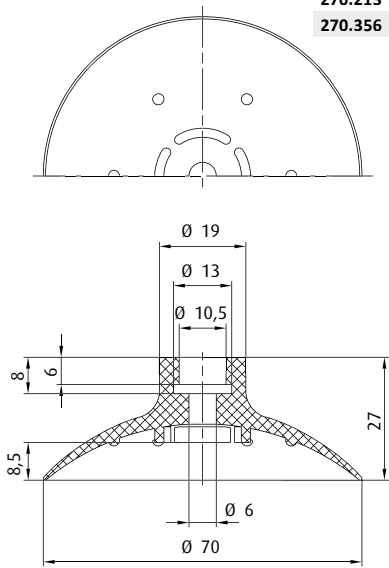
Additional sizes available are found on p. 66.

BESTSELLER

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



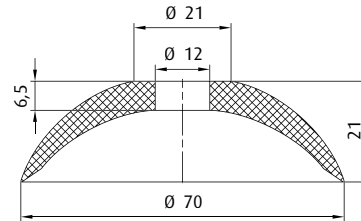
	Connection	see page
270.213	G1/4-male	428
270.356	G1/4-female	433



Item no.
102.070.325.*

Material
Vulkollan® (br)

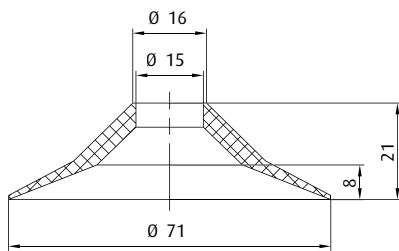
8.5 mm



Item no.
112.070.096.*

Material
NR (bg)

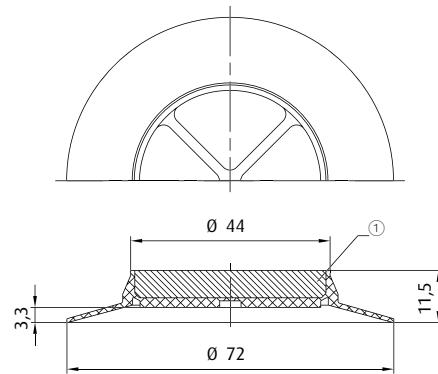
12 mm



Item no.
107.070.029.*

Material
NR (br)

6 mm



① = Steel

Item no.
152.070.093.*

Material
NBR (gr)

4 mm

Ordering notes: Customised drilling patterns on request

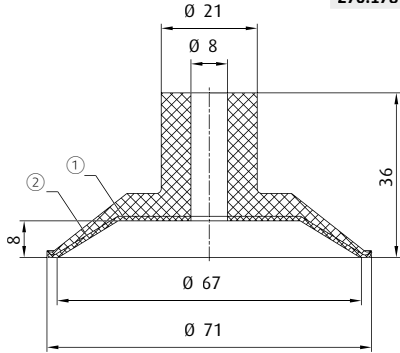
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 70 - 75 mm

	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431



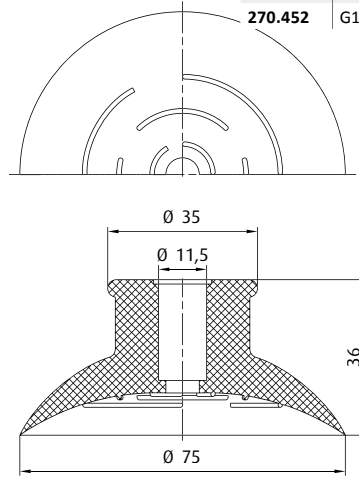
NON-MARKING!
TEMP. MAX. 500 °C

① = Felt pads ② = For silicone vacuum cups with silicone membranes: evaporated aluminium layer

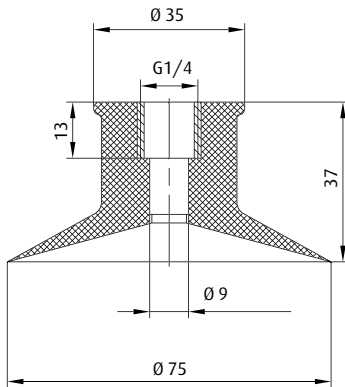
Item no. 26.070.011._*	Material SI (tr/ge)	7 mm
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Additional sizes available are found on p. 164.

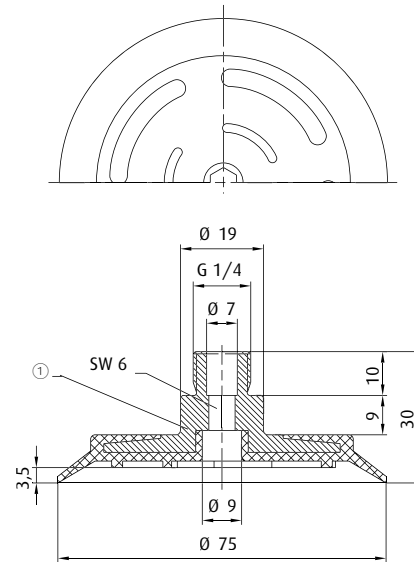
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431



Item no. 114.075.012._*	Material NR (br)	3.5 mm
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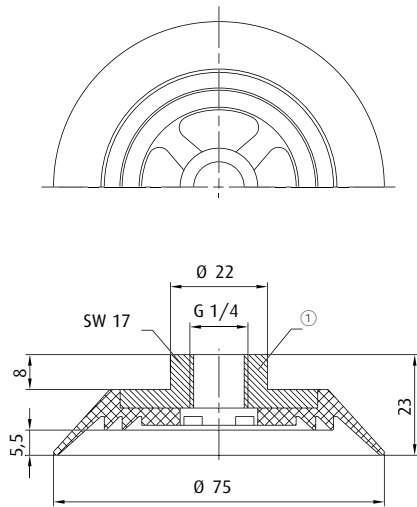
Item no. 120.075.075._*	Material NR (bg)	3 mm
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① = Aluminium

Item no. 103.075.025._*	Material Vulkollan® (br)	3.5 mm
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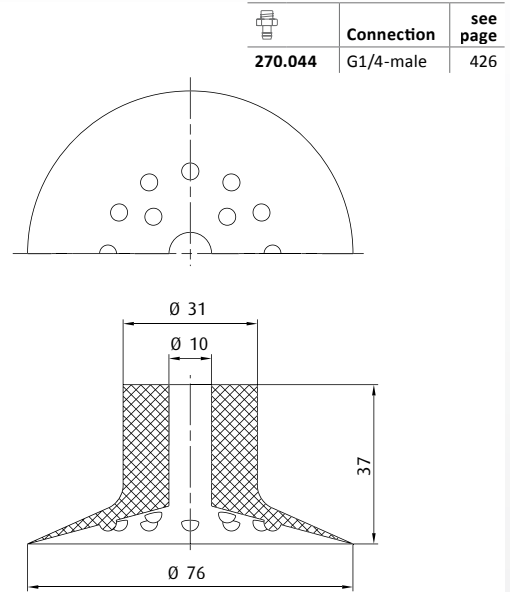
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



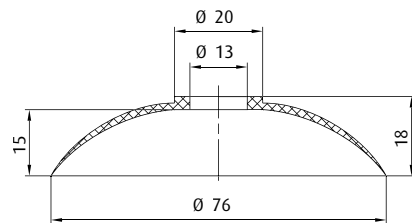
① = Aluminium

Item no. 150.075.033.*	Material SI (r), FKM (sw), CR (sw)	6 mm
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Additional sizes available are found on p. 68.



Item no. 102.075.275.*	Material NR (br)	3 mm
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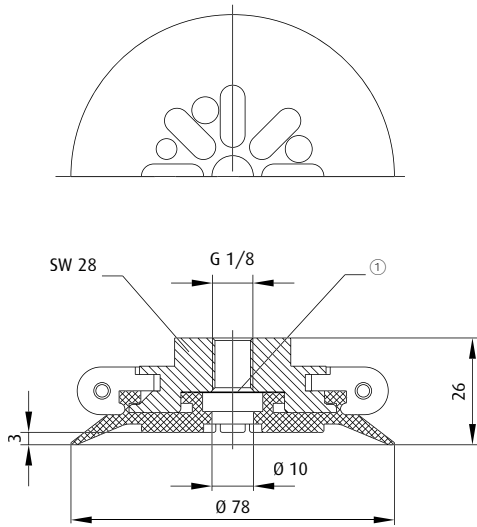
Item no. 102.076.263.*	Material Vinyl (bl)	9 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

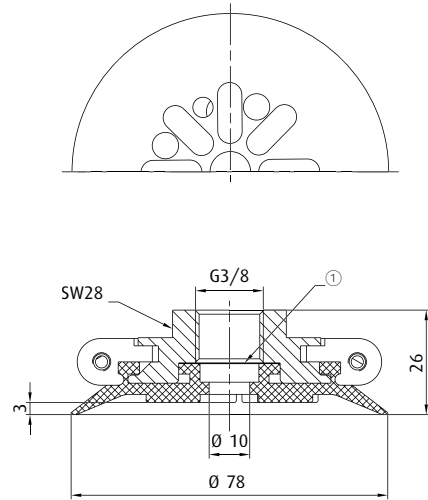
Ø 78 mm



① = Filter screen

Item no. 152.078.133.* **Material** Tepuflex® (or), SI (tr), CR (sw) 3 mm

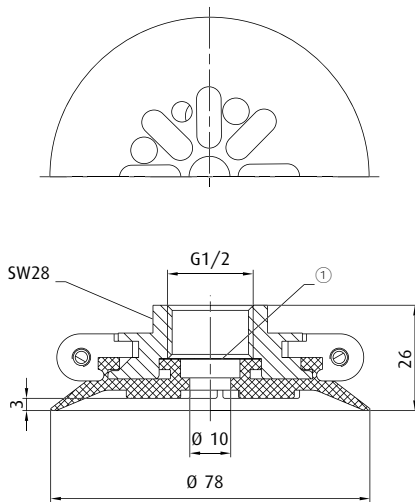
Additional sizes available are found on p. 47.



① = Filter screen

Item no. 152.078.136.* **Material** Tepuflex® (or), SI (tr), CR (sw) 3 mm

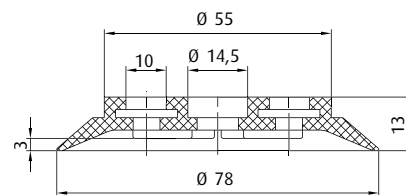
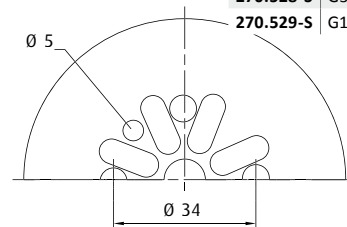
Additional sizes available are found on p. 47.



① = Filter screen

Item no. 152.078.139.* **Material** Tepuflex® (or), SI (tr), CR (sw) 3 mm

Additional sizes available are found on p. 47.



Item no. 154.078.027.* **Material** Tepuflex® (or), SI (tr), CR (sw) 3 mm

Additional sizes available are found on p. 42.

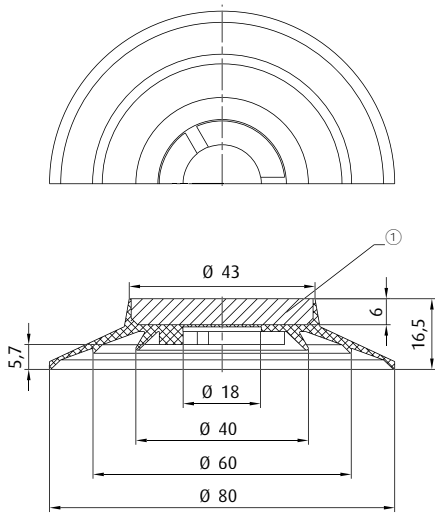
	Connection	see page
	270.527-S G1/8-female	424
	270.528-S G3/8-female	436
	270.529-S G1/2-female	436

Spare cup

Spare cup

Spare cup

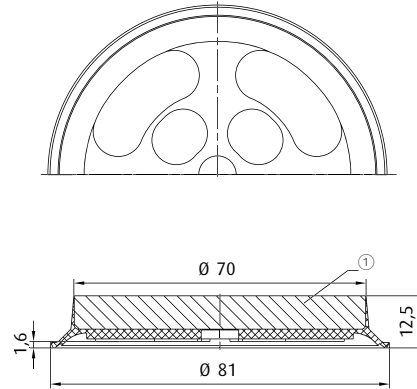
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Steel

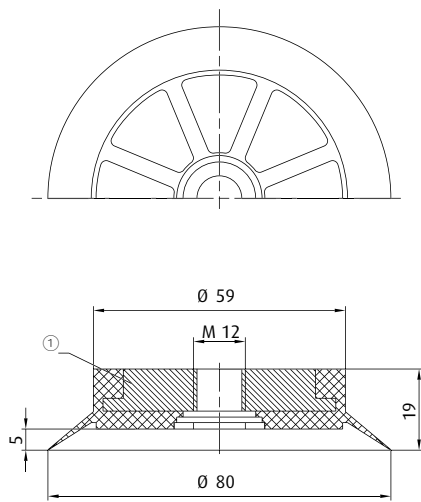
Item no.
104.080.078._* **Material**
SBR (br) 4.5 mm

Notes: Use: Picking up products of varying sizes



① = Steel

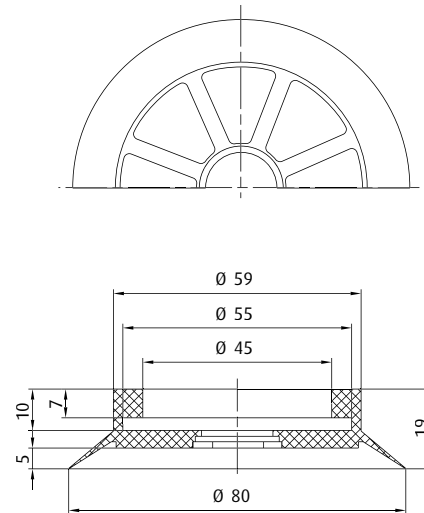
Item no.
152.080.069._* **Material**
SBR (sw) 1 mm



① = Aluminium

Item no.
152.080.083._* **Material**
NBR (sw), SI (tr), NR (sw) 6 mm

Spare cup



Item no.
154.080.055._* **Material**
NBR (sw), SI (tr), NR (sw) 6 mm


	Connection	see page
270.338	M12x1.75-female	438

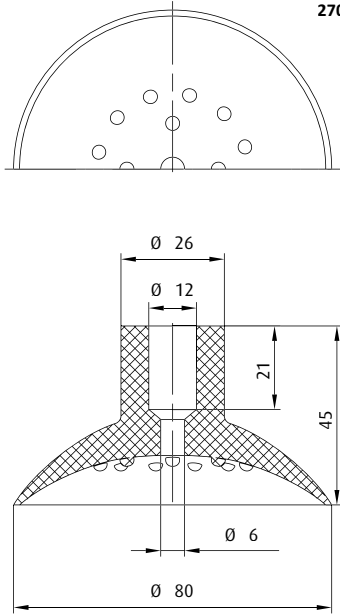
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø


Ø 80 - 83 mm

	Connection	see page
270.049-1	G1/4-male	426

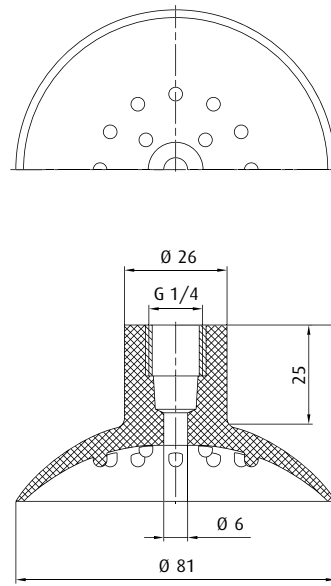


Item no.
114.080.020.*

Material
NR (sw)


 9 mm

This vacuum cup is also available in the following dimensions: 100 mm




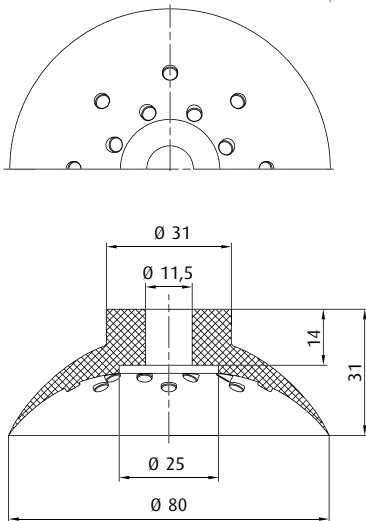
Item no.
110.080.095.*

Material
SI (tr), NR (sw)

 10 mm


This vacuum cup is also available in the following dimensions: 43 mm, 50 mm, 62 mm, 100 mm

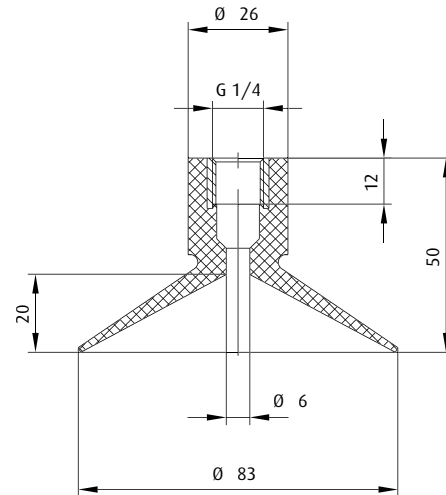
	Connection	see page
270.042	G1/4-male	431



Item no.
114.080.021.*


Material
NR (br)

 9 mm



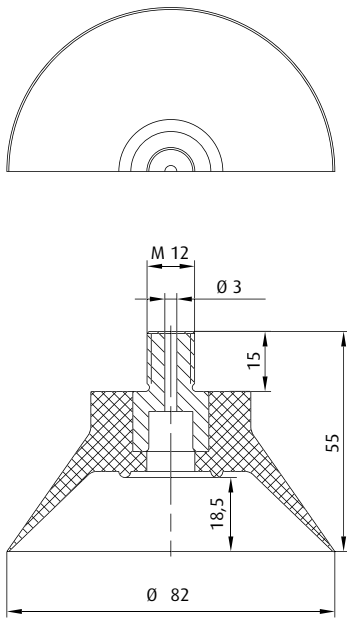
Item no.
120.080.052.*

Material
SI (tr), NR (sw)

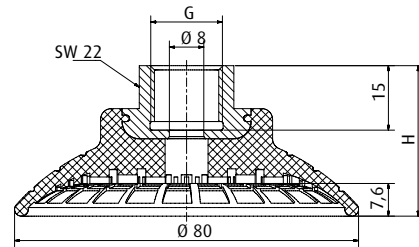
 12 mm

This vacuum cup is also available in the following dimensions: 42 mm, 53 mm, 62 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

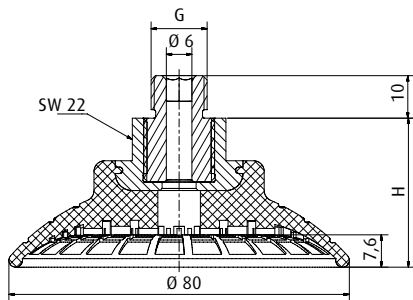


Item no. 120.082.063.*	Material NR (sw)	18.5 mm
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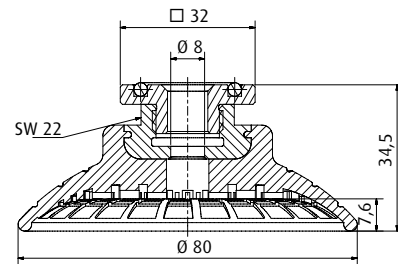
Item no.	Material	[mm]	Connection thread	H [mm]
103.080.055.*	NBR (bl)	7.6	G1/4-female	40
103.080.056.*	NBR (bl)	7.6	G3/8-female	35

Additional sizes available are found on p. 64.



Item no.	Material	[mm]	Connection thread	H [mm]
103.080.054.*	NBR (bl)	7.6	G1/4-male	35
103.080.057.*	NBR (bl)	7.6	M10-male	35
103.080.058.*	NBR (bl)	7.6	M14x1.5-male	35

Additional sizes available are found on p. 64.



Item no. 103.080.059.*	Material NBR (bl)	7.6 mm
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Additional sizes available are found on p. 64.

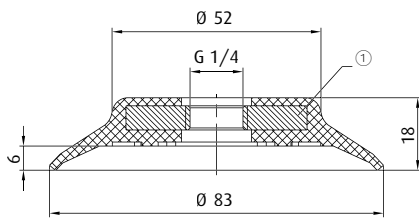
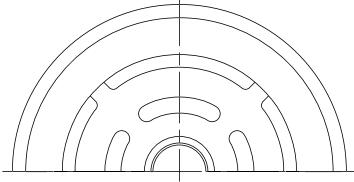
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 83 - 87 mm

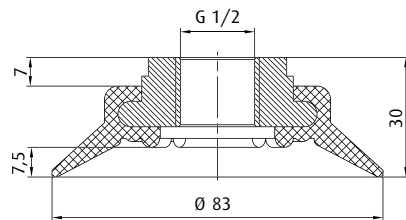
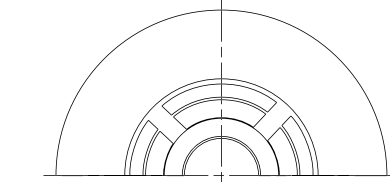
	Connection	see page
270.090	M10x1.25-female	752
270.120	G1/4-male	750



① = Aluminium

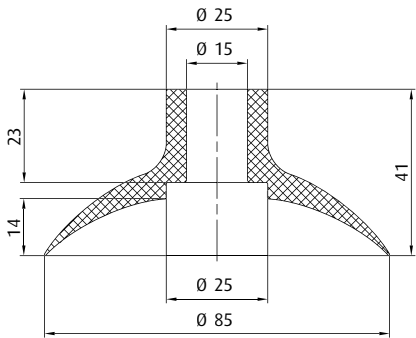
Item no. 102.080.304.*	Material NBR (sw), SI (tr), PU (bl)	6 mm
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Additional sizes available are found on p. 32.



Item no. 100.083.060.*	Material Vinyl (bl)	7.5 mm
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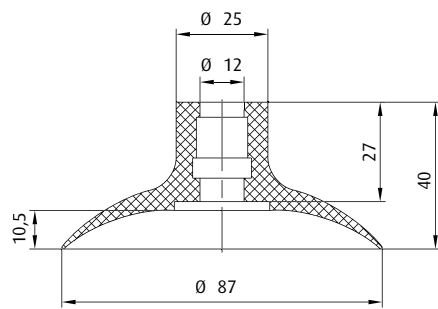
	Connection	see page
270.216	G1/4-male	431



Item no. 112.085.102.*	Material NBR (sw), SI (tr), NR (sw)	12 mm
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Additional sizes available are found on p. 52.

	Connection	see page
270.338	M12x1.75-female	438
270.207	G1/4-male	426

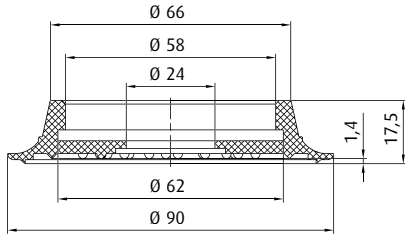


Item no. 112.087.089.*	Material NR (sw)	9 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



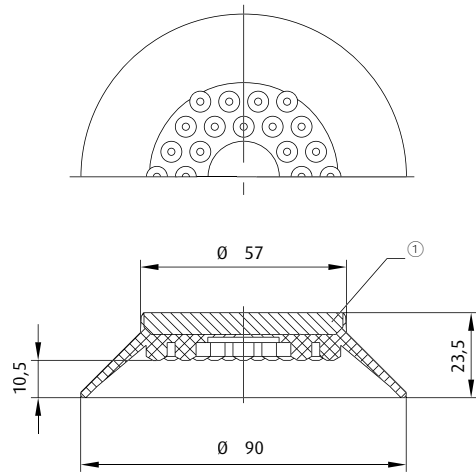
	Connection	see page
270.158	G1/8-female	438
270.264	G1/4-female	438
270.161	G3/8-female	438
270.286	G1/2-female	438



Item no.
154.090.010.*

Material
SI (tr), NR (sw)

1.5 mm

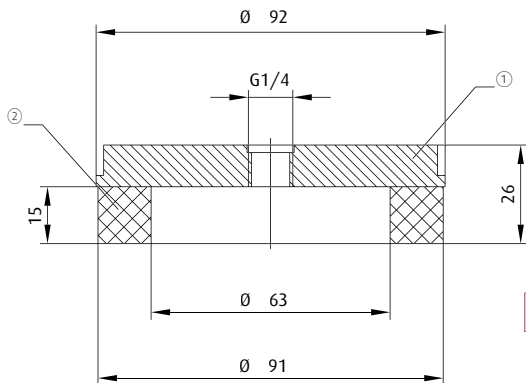


① = Steel

Item no.
152.090.089.*

Material
SBR (br)

11 mm



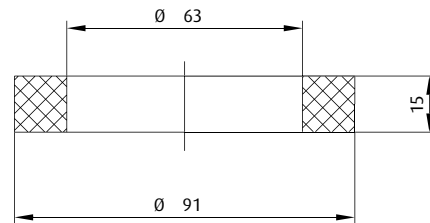
① = Aluminium ② = Sponge rubber NR

Item no.
206.092.007.*

Material
Sponge rubber (or)

10 mm

Spare cup



Item no.
208.092.002.*

Material
Sponge rubber (or)

10 mm

This vacuum cup is also available in the following dimensions: 64 mm

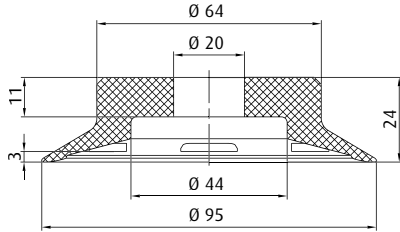
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 95 - 100 mm

	Connection	see page
270.100	G1/4-male	431

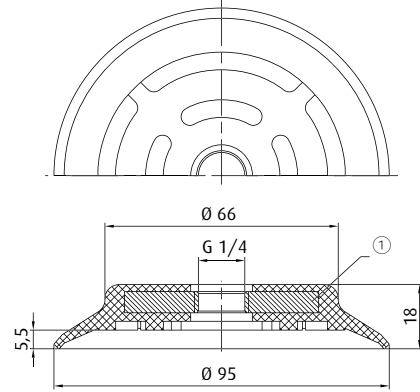


Item no.
102.095.182.*

Material
NR (bg)

2.5 mm

	Connection	see page
270.090	M10x1.25-female	752
270.120	G1/4-male	750



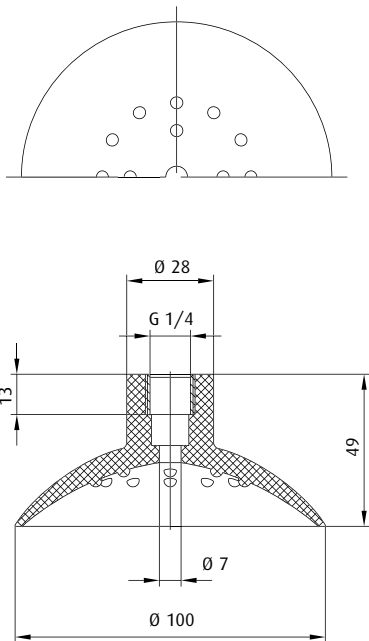
① = Aluminium

Item no.
102.095.305.*

Material
NBR (sw), SI (tr), PU (bl)

6 mm

Additional sizes available are found on p. 32.



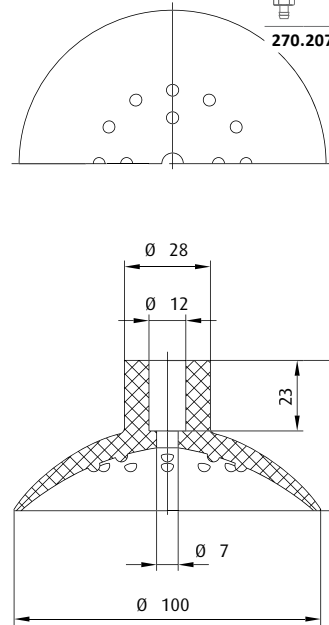
Item no.
110.100.103.*

Material
NBR (sw)

13 mm

This vacuum cup is also available in the following dimensions: 43 mm, 50 mm, 62 mm, 81 mm

	Connection	see page
270.207	G1/4-male	426



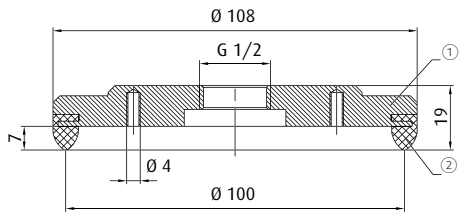
Item no.
114.100.022.*

Material
NR (sw)

13 mm

This vacuum cup is also available in the following dimensions: 80 mm

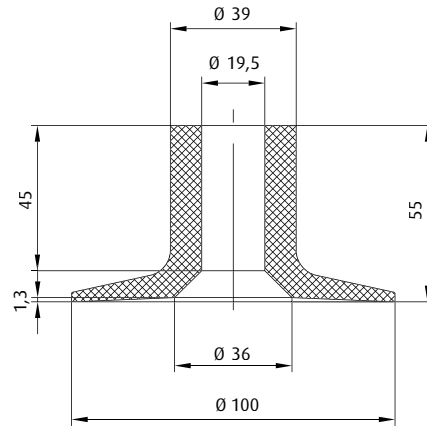
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Aluminium ② = EPDM foamed

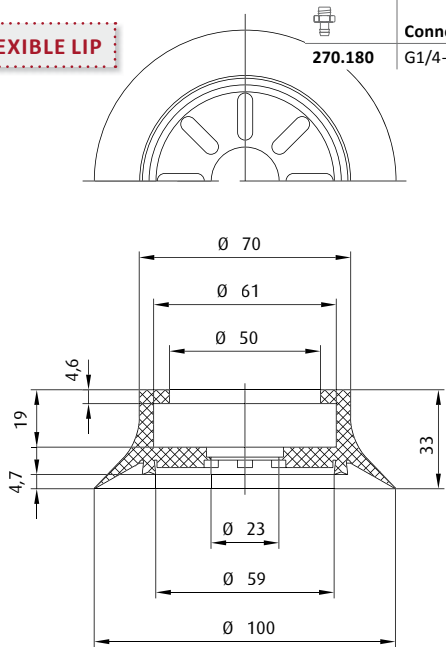
Item no. 160.107.006.*	Material EPDM (sw)	1 mm
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Additional sizes available are found on p. 72.
Notes: Foam sealing lip equalises product unevenness



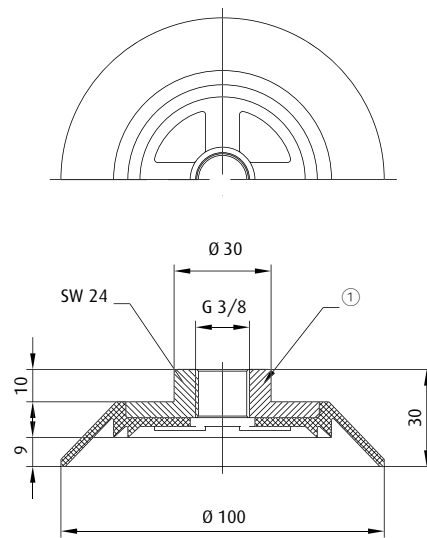
Item no. 102.100.100.*	Material NR (bg)	0.5 mm
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FLEXIBLE LIP		Connection G1/4-female	see page 438
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Item no. 102.100.269.*	Material SBR (br), NBR (gr), NR (br)	5 mm
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Additional sizes available are found on p. 66.



① = Aluminium

Item no. 150.100.034.*	Material NBR (sw), SI (tr), NR (w)	9 mm
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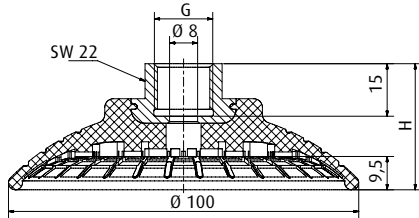
Additional sizes available are found on p. 68.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



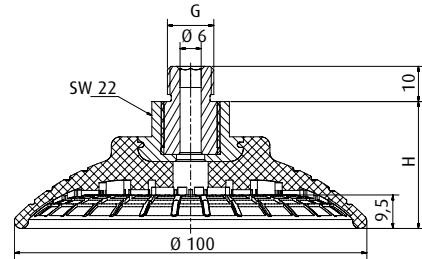
Vacuum cups by size | Flat vacuum cups by \varnothing

\varnothing 100 mm



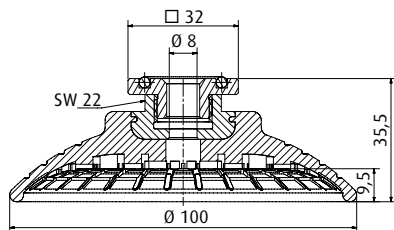
Item no.	Material	[mm]	Connection thread	H [mm]
103.100.061.*	NBR (bl)	9.5	G1/4-female	41
103.100.062.*	NBR (bl)	9.5	G3/8-female	36

Additional sizes available are found on p. 64.



Item no.	Material	[mm]	Connection thread	H [mm]
103.100.060.*	NBR (bl)	9.5	G1/4-male	36
103.100.063.*	NBR (bl)	9.5	M10-male	36
103.100.064.*	NBR (bl)	9.5	M14x1.5-male	36

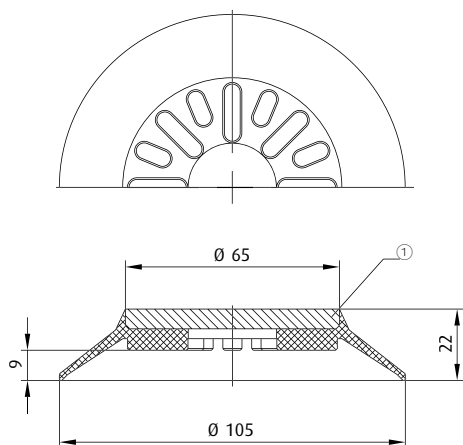
Additional sizes available are found on p. 64.



Item no.	Material	[mm]
103.100.065.*	NBR (bl)	9.5 mm

Additional sizes available are found on p. 64.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Steel

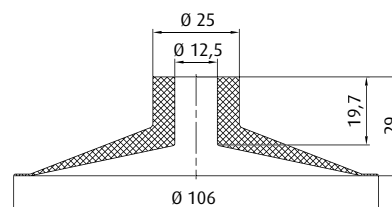
Item no.
152.105.094.*

Material
NBR (gr)

9 mm

Ordering notes: Customised drilling patterns on request

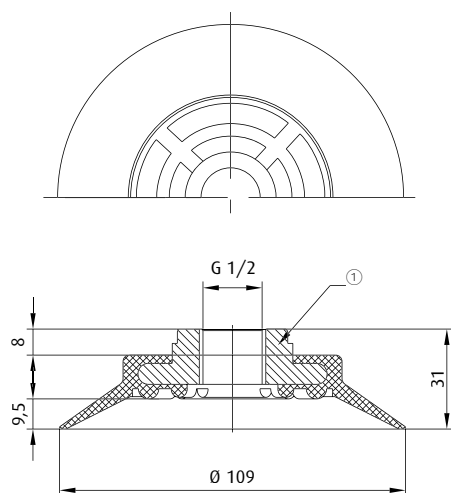
	Connection	see page
270.141	G1/4-male	430



Item no.
107.105.035.*

Material
NR (br)

8.5 mm



① = Aluminium

Item no.
100.109.059.*

Material
Vinyl (bl)

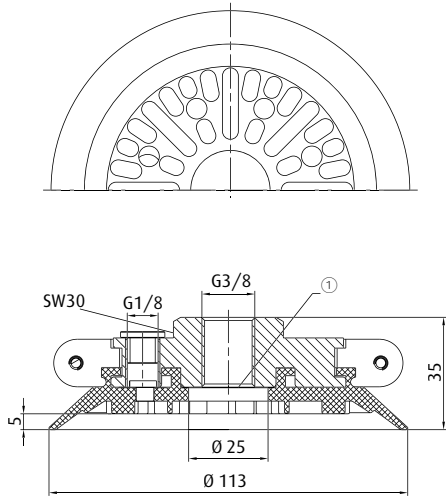
9.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \varnothing

\varnothing 113 - 114 mm

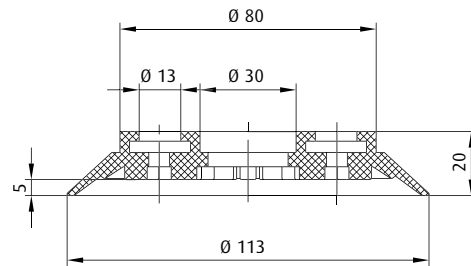
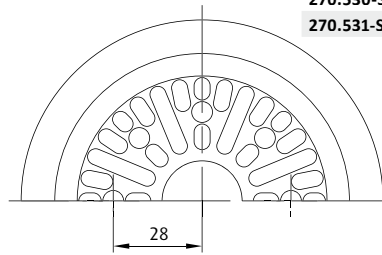


① = Filter screen

Item no. 152.113.134.* **Material** Tepuflex® (or), SI (tr), CR (sw) 5 mm

Additional sizes available are found on p. 47.

Spare cup

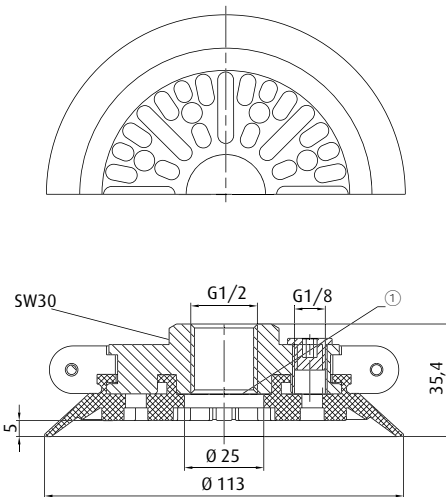


Item no. 154.113.028.* **Material** Tepuflex® (or), SI (tr), CR (sw) 5 mm

Additional sizes available are found on p. 42.

	Connection	see page
270.530-S	G3/8-female	437
270.531-S	G1/2-female	437

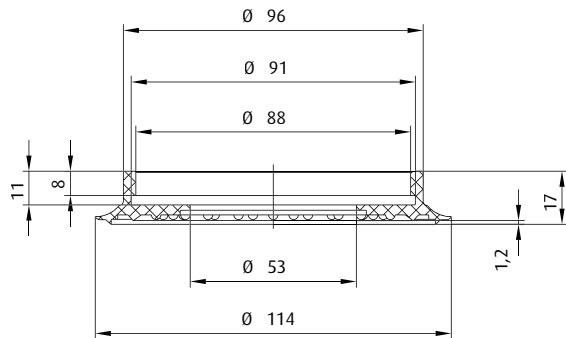
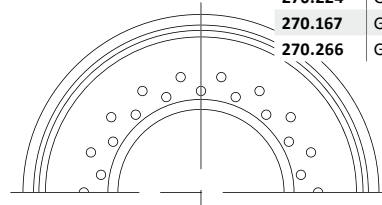
Spare cup



① = Filter screen

Item no. 152.113.137.* **Material** Tepuflex® (or), SI (tr), CR (sw) 5 mm

Additional sizes available are found on p. 47.



Item no. 154.110.014.* **Material** NBR (sw), SI (w) 1.5 mm

Additional sizes available are found on p. 70.

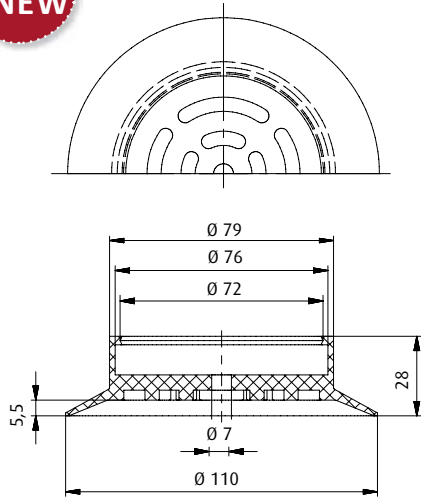
	Connection	see page
270.224	G1/4-female	438
270.167	G3/8-female	438
270.266	G1/2-female	438

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

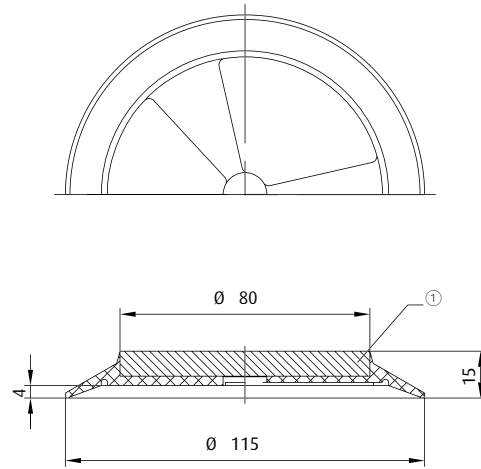


NEW

	Connection	see page
270.554	G1/4-female	434



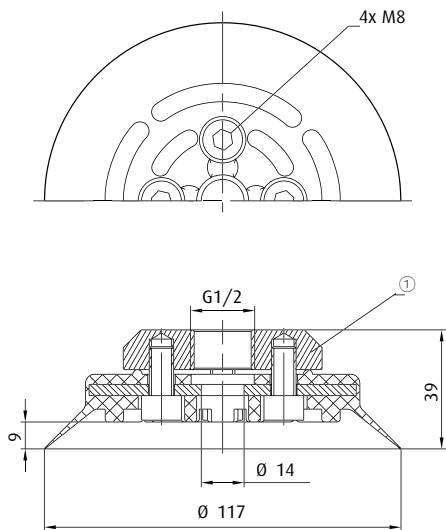
Item no. 102.110.483.*	Material NBR (sw)	5.5 mm
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① = Steel

Item no. 152.115.095.*	Material NBR (gr)	4 mm
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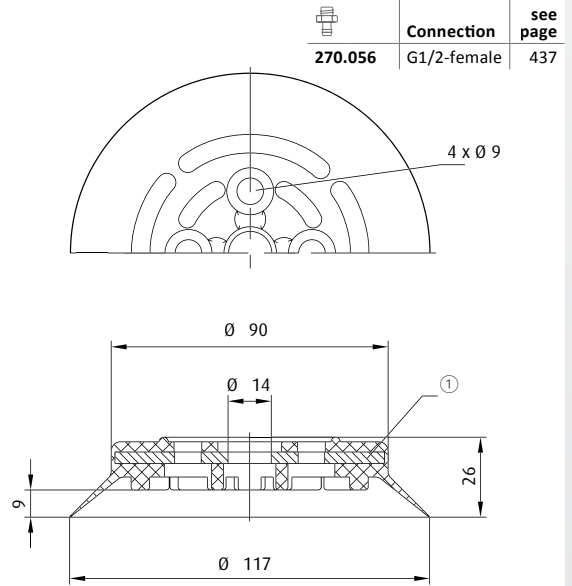
Ordering notes: Customised drilling patterns on request



① = Aluminium

Item no. 152.120.017.*	Material NBR (sw), SI (tr)	7 mm
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Spare cup



① = Steel

Item no. 154.120.018.*	Material NBR (sw), SI (tr)	7 mm
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Additional sizes available are found on p. 32.

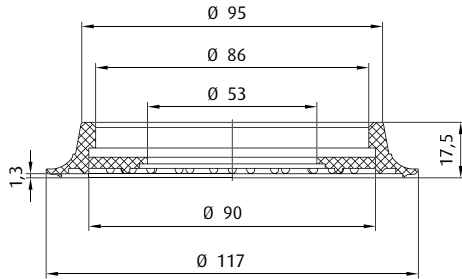
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760




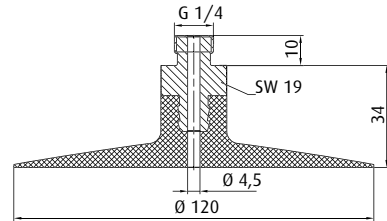
Vacuum cups by size | Flat vacuum cups by Ø


Ø 117 - 120 mm

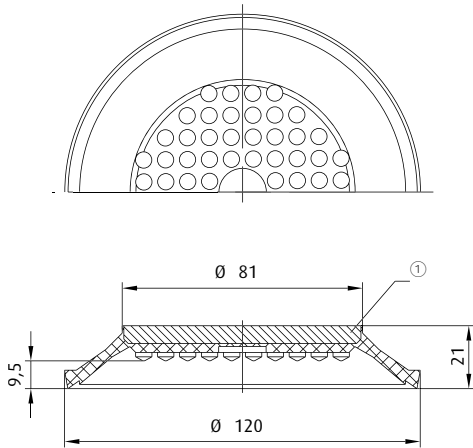
	Connection	see page
270.164	G1/8-female	438
270.224	G1/4-female	438
270.167	G3/8-female	438
270.266	G1/2-female	438




Item no. 154.120.017.*
Material SI (tr), NR (sw), Vinyl (bl)
 1.5 mm



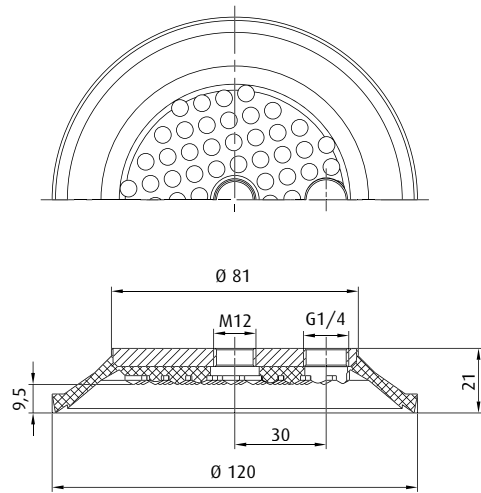
Item no. 100.120.036.*
Material NBR (sw)
 0.5 mm




① = Steel

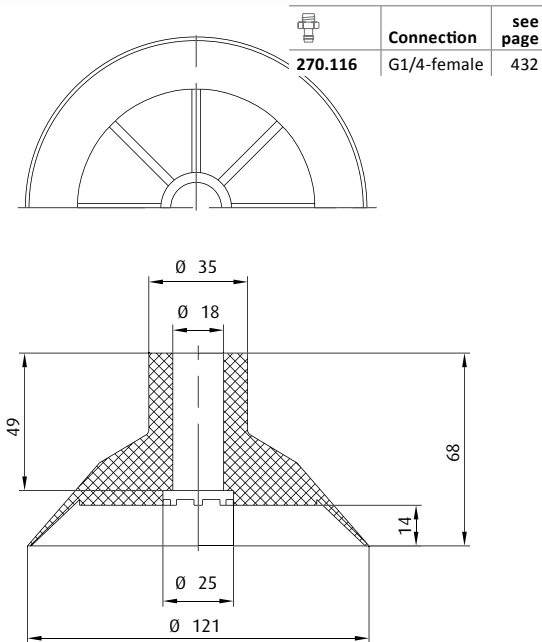
Item no. 152.120.064.*
Material NBR (gr), NR (br)
 11 mm

Ordering notes: Customised drilling patterns on request

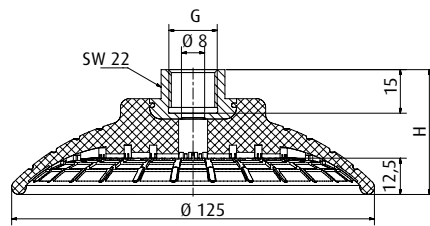


Item no. 152.120.115.*
Material NBR (gr)
 9.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760

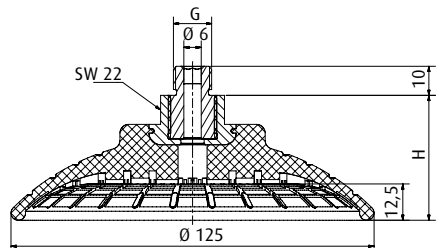


Item no. 108.120.006._*	Material NR (sw)	14 mm
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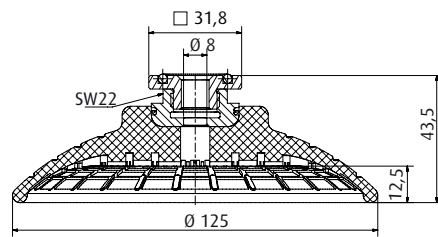
Item no.	Material	[mm]	Connection thread	H [mm]
103.125.067._*	NBR (bl)	12.5	G1/4-female	48
103.125.068._*	NBR (bl)	12.5	G3/8-female	43

Additional sizes available are found on p. 64.



Item no.	Material	[mm]	Connection thread	H [mm]
103.125.066._*	NBR (bl)	12.5	G1/4-male	43
103.125.069._*	NBR (bl)	12.5	M10-male	43
103.125.070._*	NBR (bl)	12.5	M14x1.5-male	43

Additional sizes available are found on p. 64.



Item no. 103.125.071._*	Material NBR (bl)	12.5 mm
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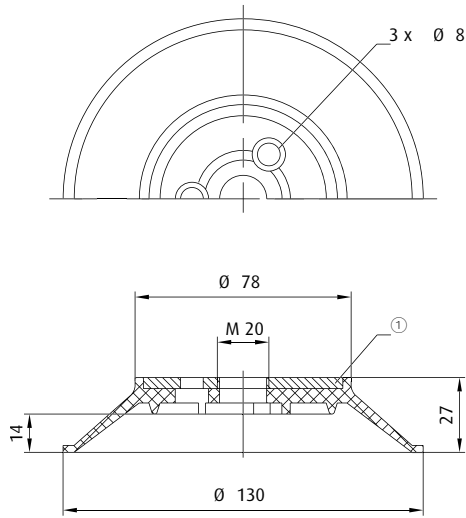
Additional sizes available are found on p. 64.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 130 - 137 mm



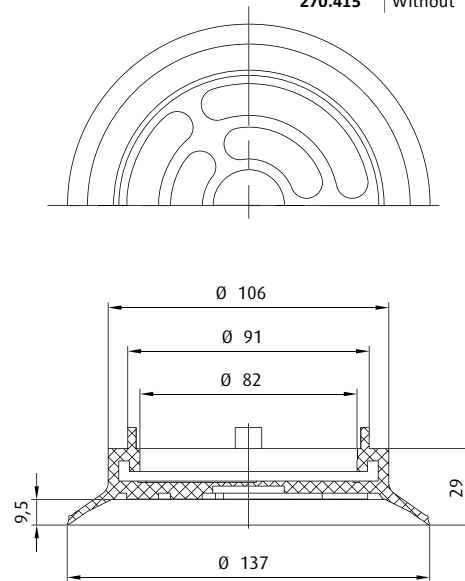
① = Steel

Item no.
100.130.058.*

Material
NR (sw)

14 mm

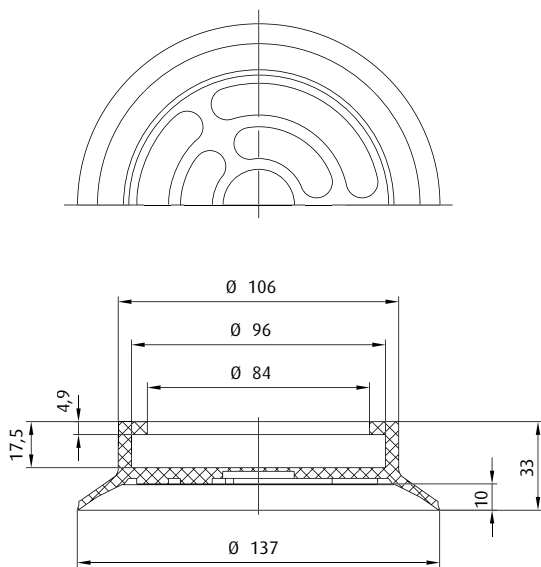
	Connection	see page
270.415	Without	440



Item no.
102.130.258.*

Material
SBR (sw)

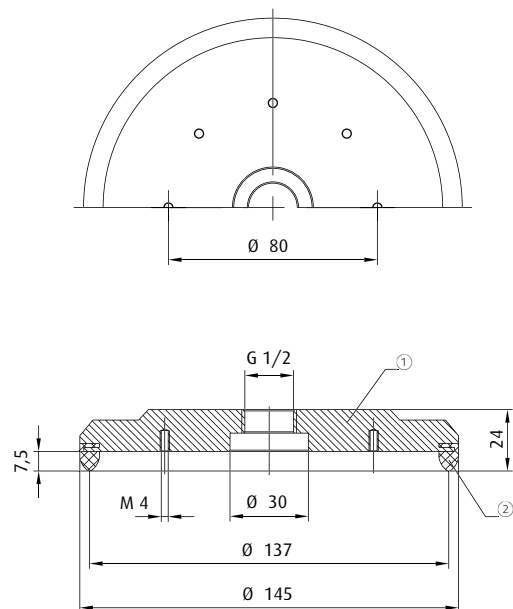
10 mm



Item no.
102.135.256.*

Material
NBR (gr), SBR (sw)

11 mm



① = Aluminium ② = EPDM foamed

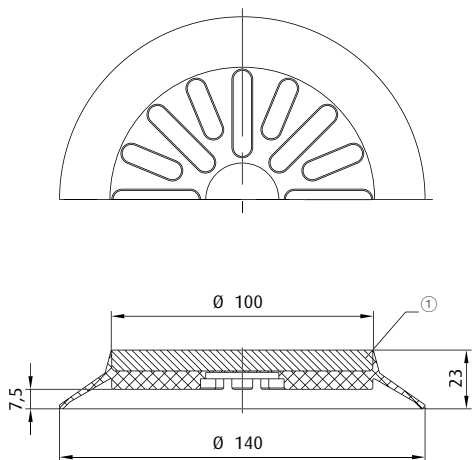
Item no.
160.145.014.*

Material
EPDM (sw)

1 mm

Additional sizes available are found on p. 72.
Notes: Foam sealing lip equalises product unevenness

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



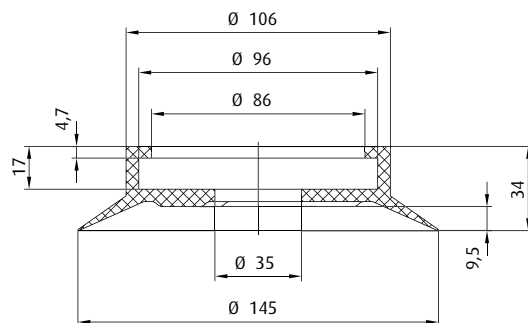
① = Steel

Item no.
152.140.096.*

Material
NBR (gr)

8 mm

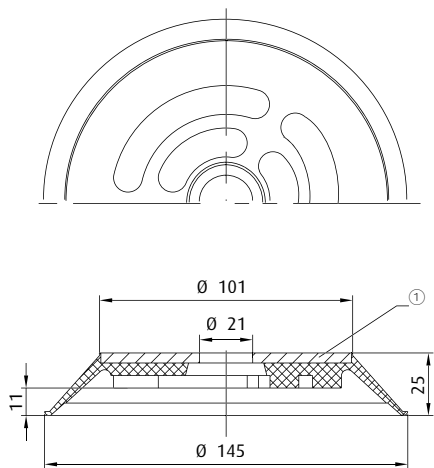
Ordering notes: Customised drilling patterns on request



Item no.
102.145.257.*

Material
NBR (gr), SBR (sw)

9 mm

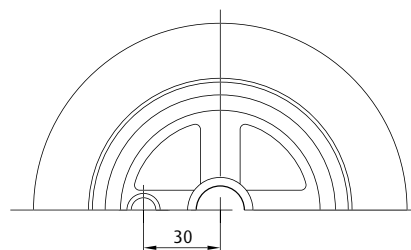


① = Aluminium

Item no.
152.145.045.*

Material
NBR (sw), SI (tr)

11 mm

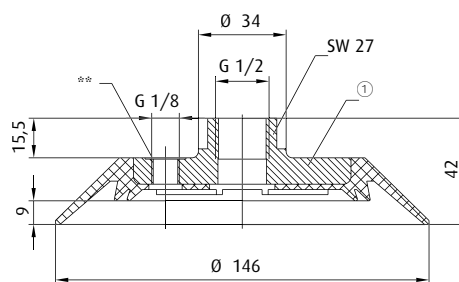


① = Aluminium ** = Vacuum connection at the side possible

Item no.
150.150.010.*

Material
SI (gr), CR (gr)

9 mm



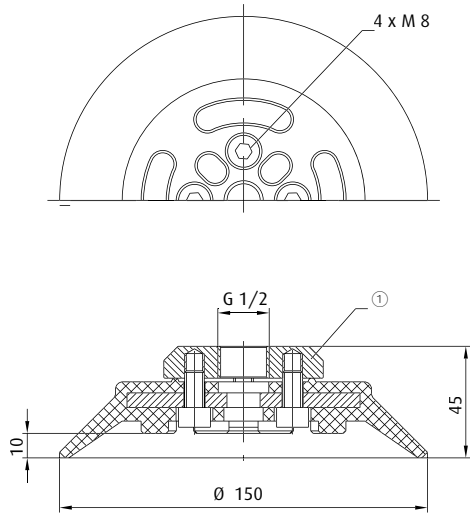
Additional sizes available are found on p. 68.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

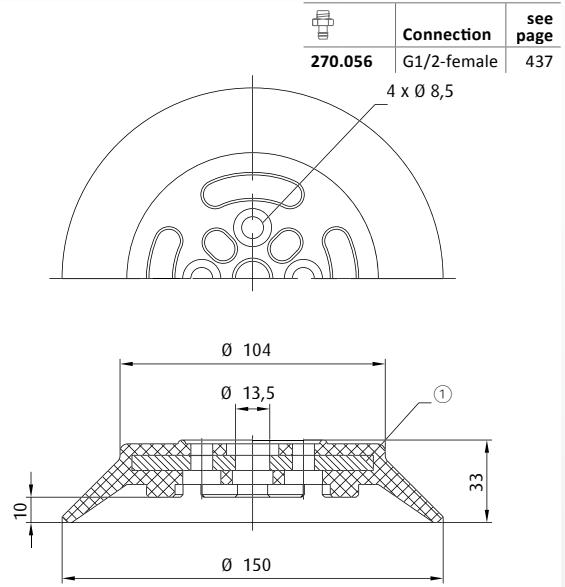
Ø 150 - 153 mm



① = Aluminium

Item no. 152.150.019.*	Material NBR (sw), SI (tr)	9 mm
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Spare cup

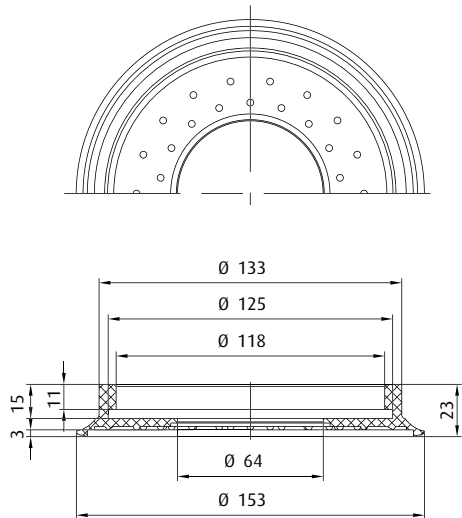


① = Steel

Item no. 154.150.020.*	Material NBR (sw), SI (tr)	9 mm
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Additional sizes available are found on p. 32.

	Connection	see page
270.171	G1/4-female	438
270.173	G3/8-female	438
270.268	G1/2-female	438




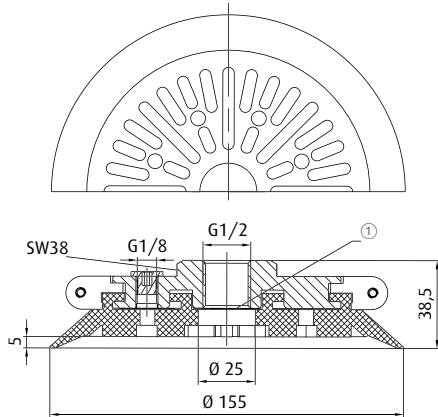
Item no. 154.150.021.*	Material NBR (sw), SI (w)	2 mm
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Additional sizes available are found on p. 70.

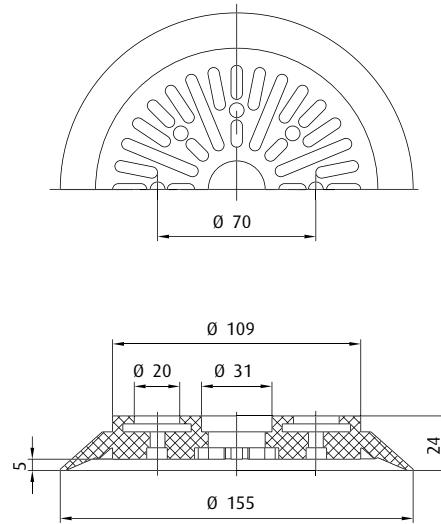
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760




	Connection	see page
270.532-S	G1/2-female	437
270.533-S	G3/4-female	437




Spare cup



① = Filter screen

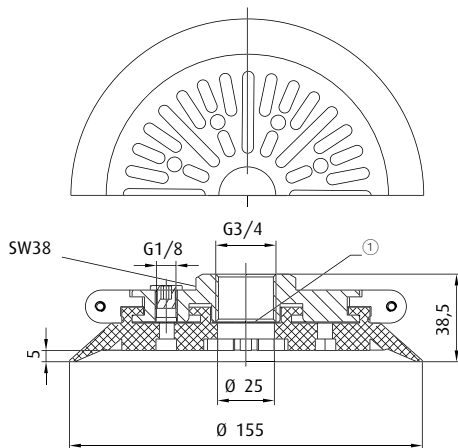
Item no. 152.155.135.* **Material** Tepuflex® (or), SI (tr), CR (sw)  5 mm

Additional sizes available are found on p. 47.


Item no. 154.155.026.* **Material** Tepuflex® (or), SI (tr), CR (sw)  5 mm

Additional sizes available are found on p. 42.

Spare cup



① = Filter screen

Item no. 152.155.138.* **Material** Tepuflex® (or), SI (tr), CR (sw)  5 mm

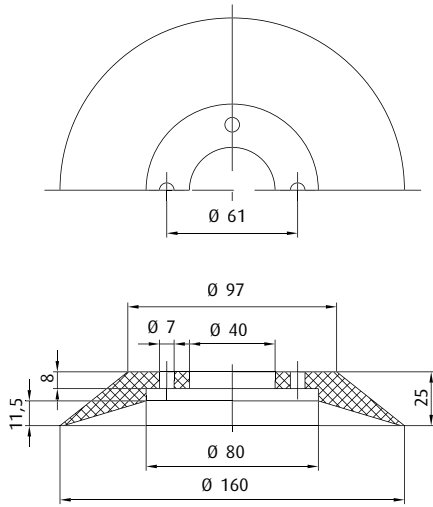
Additional sizes available are found on p. 47.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \varnothing

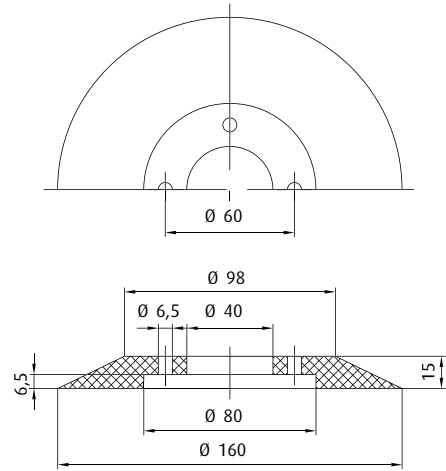
\varnothing 160 mm



Item no.
102.160.031.*

Material
SI (r), NR (gr)

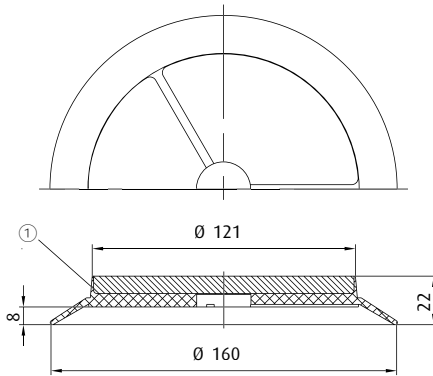
10 mm



Item no.
102.160.195.*

Material
SI (gr)

0 mm



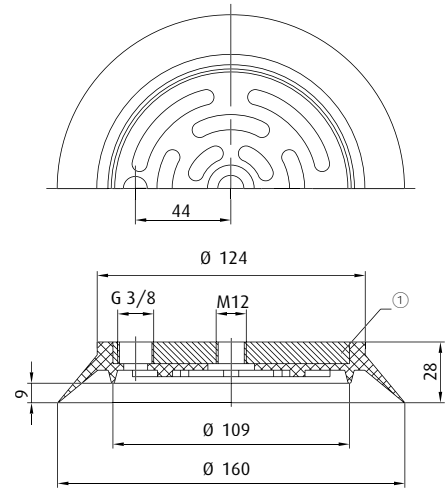
① = Steel

Item no.
152.160.097.*

Material
NBR (gr)

8 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
152.160.127.*

Material
CR (sw)

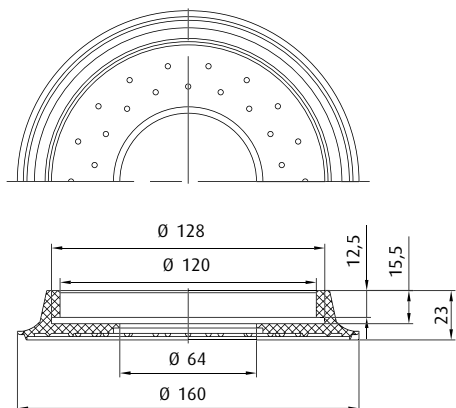
9 mm

Additional sizes available are found on p. 73.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



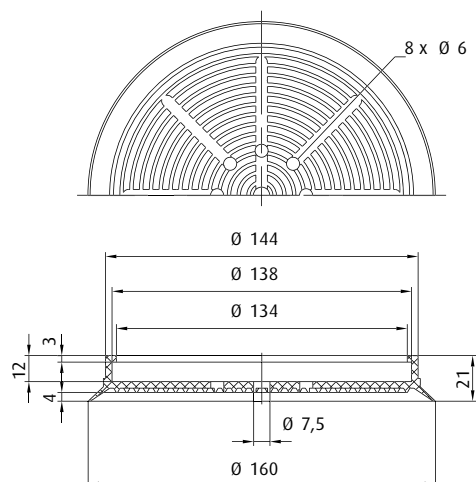
	Connection	see page
270.171	G1/4-female	438
270.173	G3/8-female	438
270.268	G1/2-female	438



Item no.
154.160.024.*

Material
SI (tr), NR (sw)

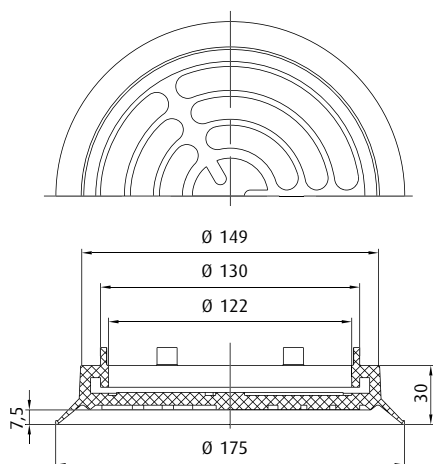
3 mm



Item no.
154.160.049.*

Material
NBR (gr), SI (tr)

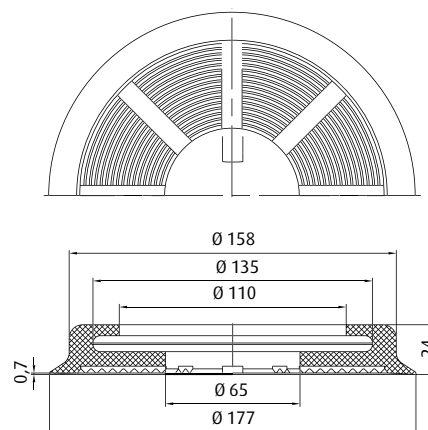
4.7 mm



Item no.
102.170.259.*

Material
SBR (sw), NR (bg)

7 mm



Item no.
154.177.053.*

Material
SI (tr)

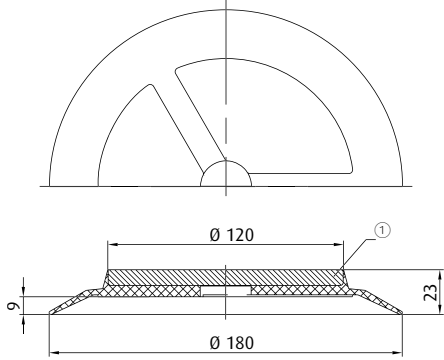
0.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

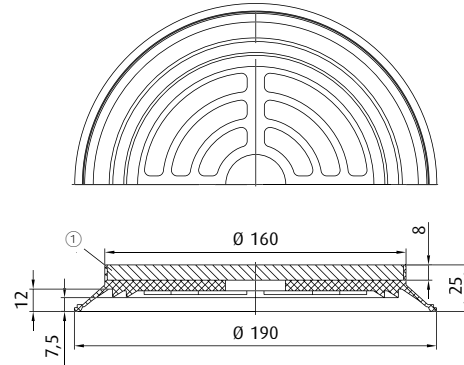
Ø 180 - 193 mm



① = Steel

Item no. 152.180.067.*	Material NBR (gr)	9 mm
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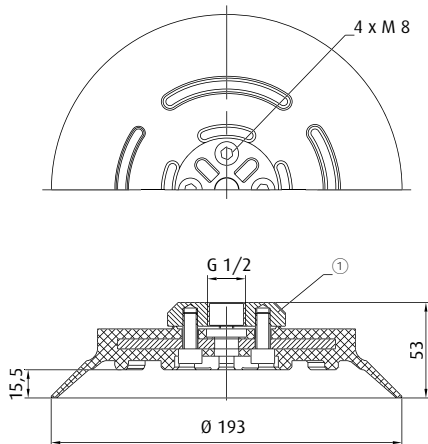
Ordering notes: Customised drilling patterns on request



① = Steel

Item no. 152.190.080.*	Material SBR (br), NBR (gr)	10 mm
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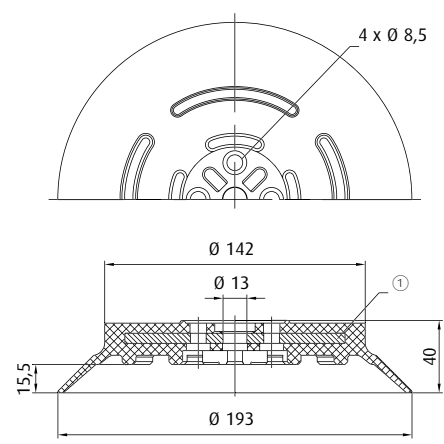
Ordering notes: Customised drilling patterns on request



① = Aluminium

Item no. 152.191.025.*	Material NBR (sw), SI (tr), PU (bl)	13 mm
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Spare cup



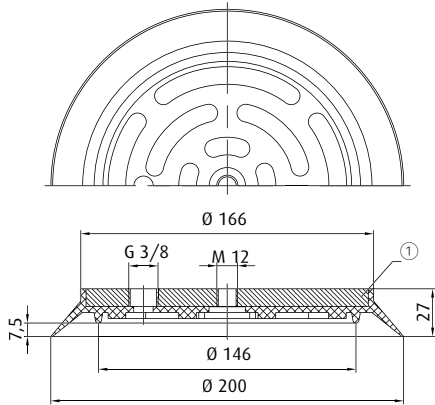
① = Steel

Item no. 154.191.025.*	Material NBR (sw), SI (tr), PU (bl)	13 mm
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Additional sizes available are found on p. 32.

	Connection	see page
270.056	G1/2-female	437

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Steel

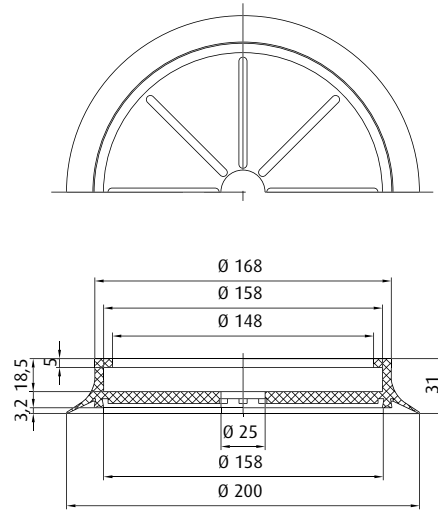
Item no.
152.200.128.*

Material
CR (sw)

9 mm

Additional sizes available are found on p. 73.

Item no.	Connection	see page
270.335	G1/2-female	438

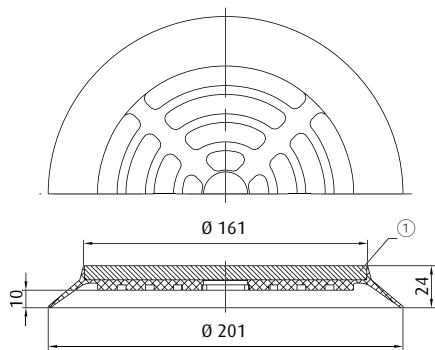


Item no.
102.200.350.*

Material
NR (w)

5 mm

Additional sizes available are found on p. 66.



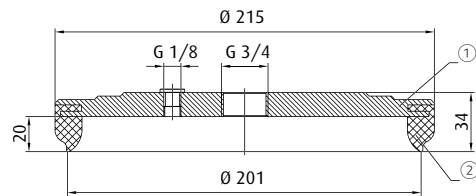
① = Steel

Item no.
150.190.015.*

Material
NBR (gr)

11 mm

Ordering notes: Customised drilling patterns on request



① = Aluminium ② = EPDM foamed

Item no.
160.215.009.*

Material
EPDM (sw)

2.5 mm

Additional sizes available are found on p. 72.


Notes: Foam sealing lip equalises product unevenness

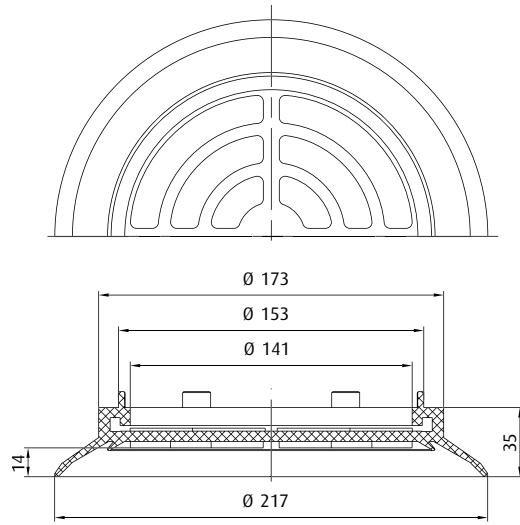
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø


Ø 217 - 223 mm

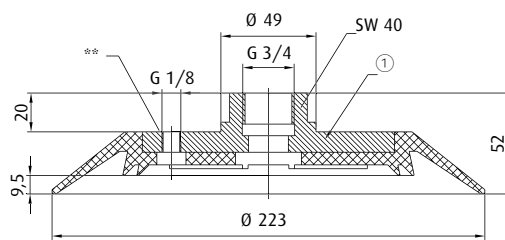
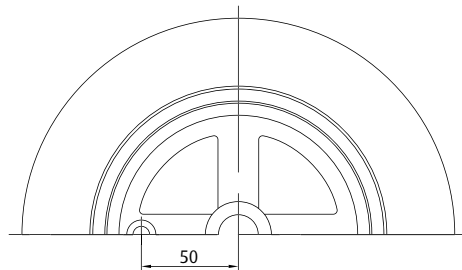
	Connection	see page
270.155	Without	440



Item no.
102.210.260._*

Material
SBR (sw)


 14 mm



① = Aluminium ** = Vacuum connection at the side possible

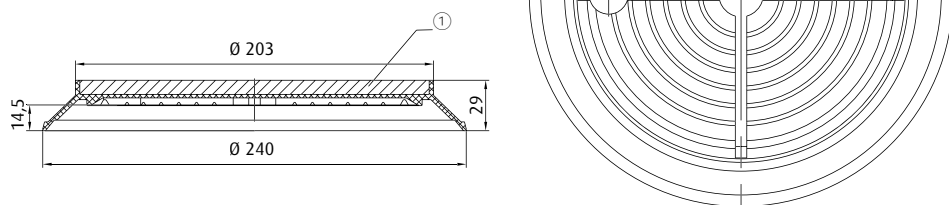
Item no.
150.225.018._*

Material
SI (gr), CR (gr)

 9.5 mm

Additional sizes available are found on p. 68.

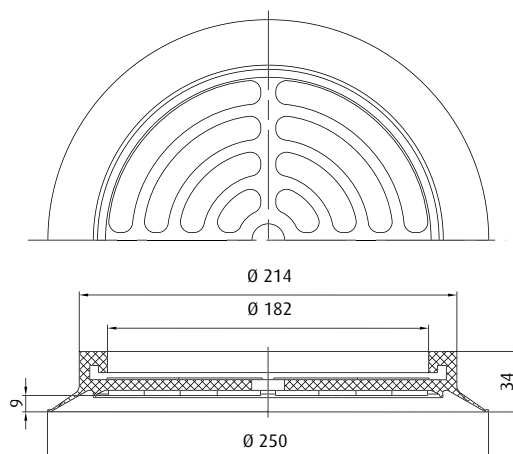
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Steel

Item no. 152.240.046._*	Material NBR (gr), SBR (sw)	14 mm	Ordering notes: Customised drilling patterns on request
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	Connection	see page
270.236	G1/2-female	440



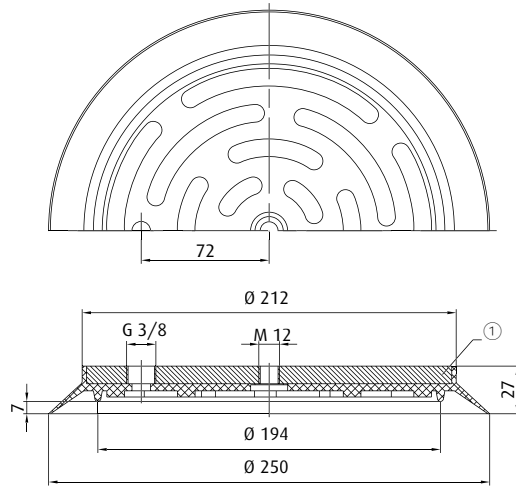
Item no. 102.250.261._*	Material SBR (sw)	8.5 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 250 mm



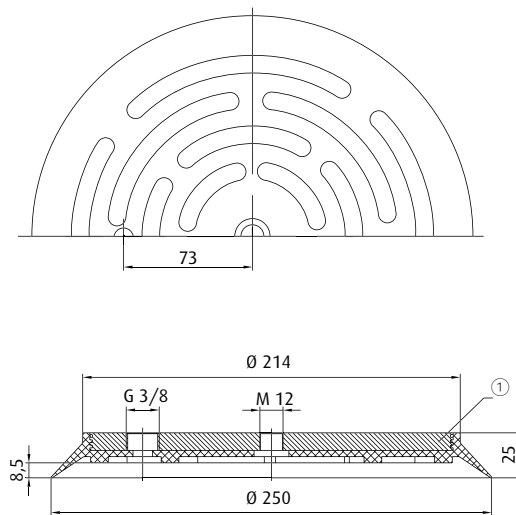
① = Steel

Item no.
152.250.129.*

Material
CR (sw)

9 mm

Additional sizes available are found on p. 73.



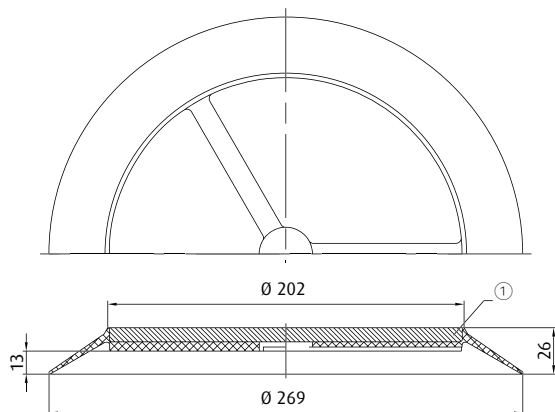
① = Steel

Item no.
152.250.031.*

Material
NBR (sw)

11 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



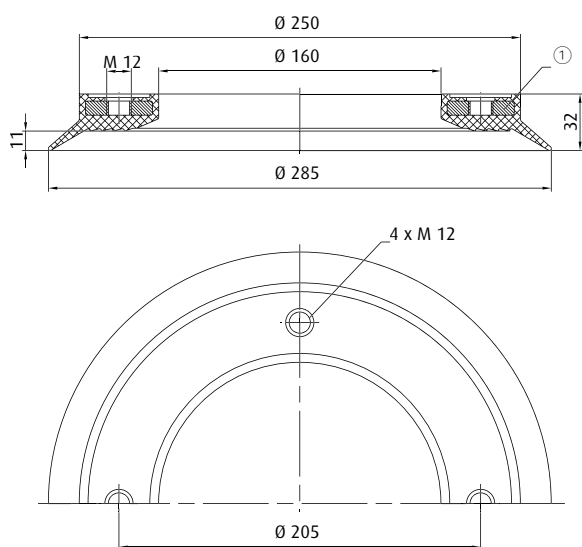
① = Steel

Item no.
152.260.068._*

Material
NBR (gr)

13 mm

Ordering notes: Customised drilling patterns on request



① = Ring made of vulcanised ST37

Item no.
152.285.099._*

Material
NBR (sw)

11 mm

Additional sizes available are found on p. 74.

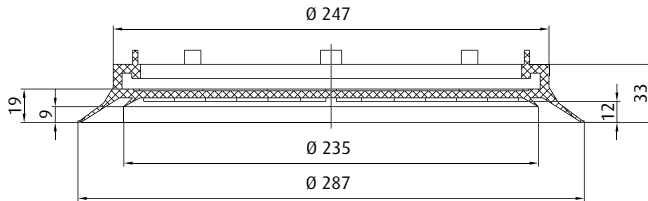
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 287 - 300 mm

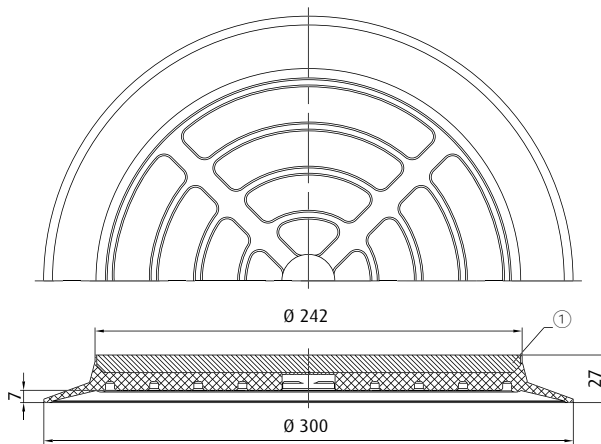
	Connection	see page
270.535	Without	440



Item no.
102.290.262.*

Material
SBR (sw)

15 mm



① = Steel

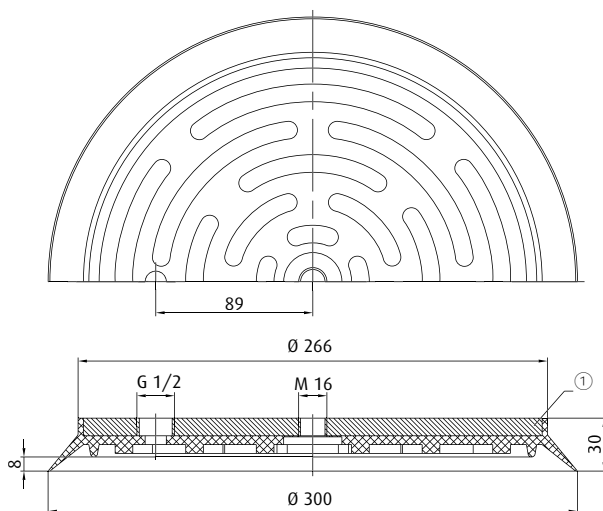
Item no.
152.300.098.*

Material
NBR (gr)

7 mm

Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



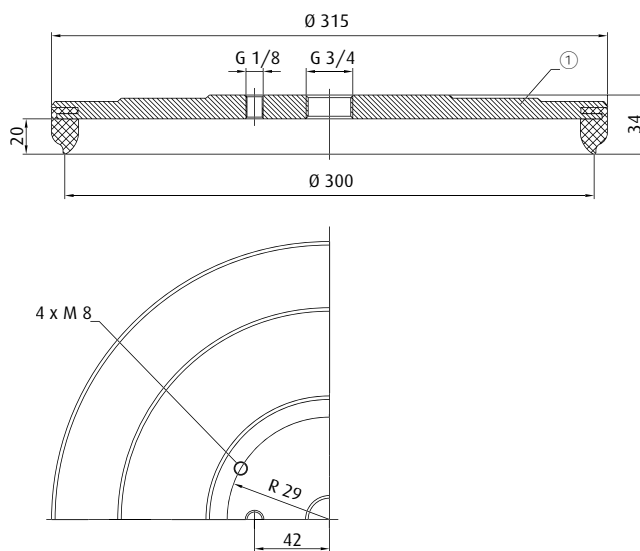
① = Steel

Item no.
152.300.130._*

Material
NBR (sw)

12 mm

Additional sizes available are found on p. 73.



① = Aluminium

Item no.
160.315.012._*

Material
EPDM (sw)

2.5 mm

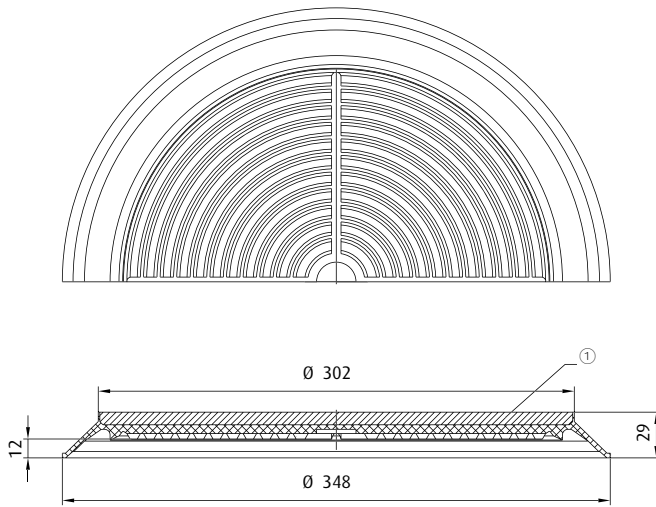
Additional sizes available are found on p. 72.
Notes: Foam sealing lip equalises product unevenness

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by Ø

Ø 348 - 350 mm



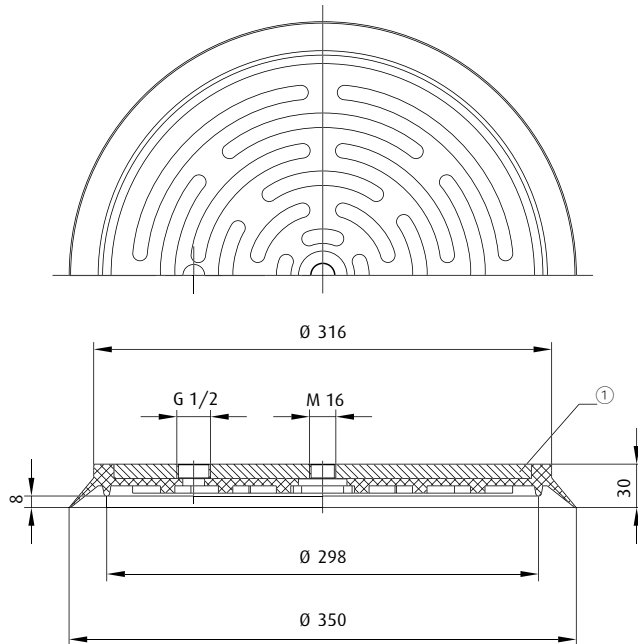
① = Steel

Item no.
150.340.030.*

Material
NBR (gr)

15 mm

Ordering notes: Customised drilling patterns on request



① = Steel

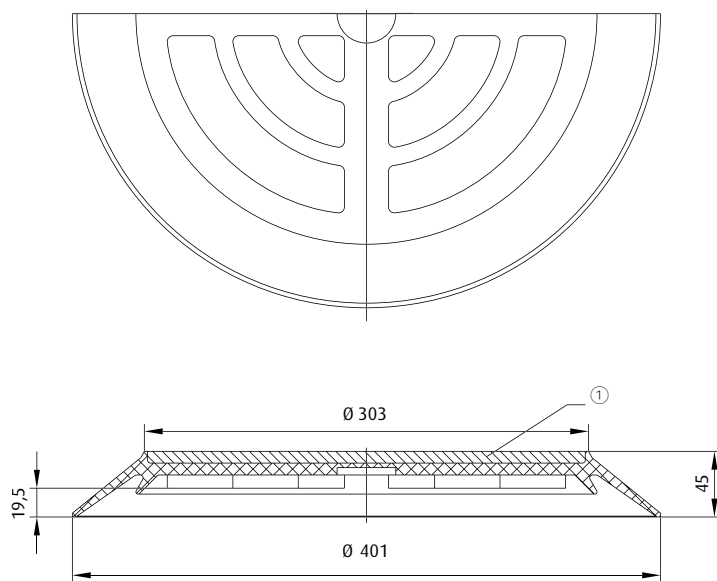
Item no.
152.350.131.*

Material
NBR (sw)

13 mm

Additional sizes available are found on p. 73.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



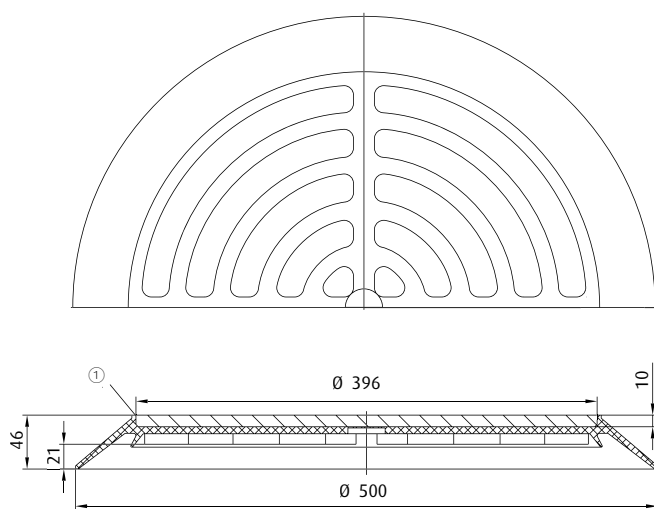
① = Steel

Item no.
152.400.085._*

Material
NBR (gr), SBR (br), NR (sw)

25 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
152.500.086._*

Material
NBR (gr), SBR (br), NR (sw)

25 mm

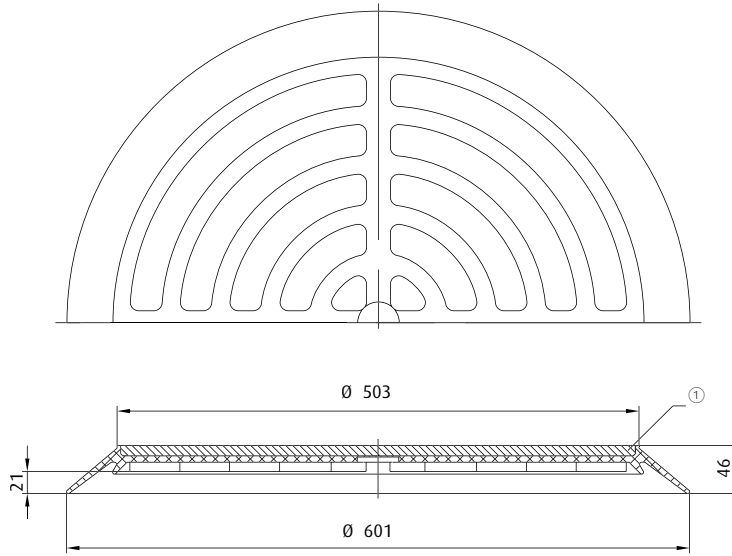
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Flat vacuum cups by \emptyset

\emptyset 601 mm



① = Steel

Item no.

152.600.087.*

Material

NBR (gr), SBR (br), NR (sw)



25 mm

Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Application / Uses

- > Bellows vacuum cups are especially suited to the gentle handling of sensitive products.
- > They allow for easy height and angle compensation for variable surfaces and lift the product up as soon as the vacuum is turned on.
- > The more folds the vacuum cup has, the greater the lifting movement and thus the height compensation. However, lateral stability is reduced by the number of folds. Bellows vacuum cups are therefore only recommended for vertical handling tasks.



Designs



FIPA bellows vacuum cups are available in various different versions (generally 1.5 - 4.5 folds). They are available with supporting ribs towards the product, with supporting ribs between the folds and without supporting ribs.

Supporting ribs towards the product (supporting ribs make contact with the object being handled):

- > Increased stability and suction power
- > Prevent flexible product parts from being sucked in
- > Avoid slipping of the product while suction is being applied

Supporting ribs between the folds:

- > Improve lateral stability
- > Accelerate the depositing process, as the folds are prevented from sticking together

Methods of connection



Vacuum cups for attaching to the fittings (plug-in)

- > Secure hold
- > Quick replacement
- > Cost-efficient and environmentally-friendly, as only the rubber part needs to be replaced



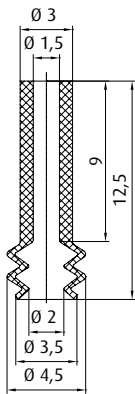
Bolted fittings

- > Vacuum cups are bolted from below into a threaded counterpart using a hollow bolt
- > Extremely secure hold
- > Eliminates twisting of the vacuum cups
- > Cost-efficient and environmentally-friendly, as only the rubber part needs to be replaced



Vulcanised fittings / retainer plates

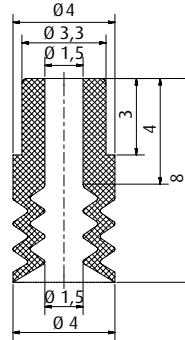
- > Very secure hold
- > Secured against rotation
- > High degree of dimensional stability



Icon	Connection	see page
	M5-male	409

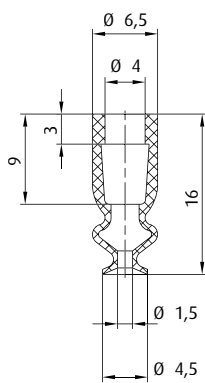
Item no. 21.004.142.* **Material** Vinyl (bl) 1.3 mm

Additional sizes available are found on p. 116.



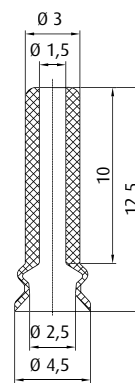
Icon	Connection	see page
	M3-male	408

Item no. 21.018.068.* **Material** NBR (bl) 1 mm



Icon	Connection	see page
	M5-male	409
	M6-male	413
	G1/8-male	416
	G1/8-female	421

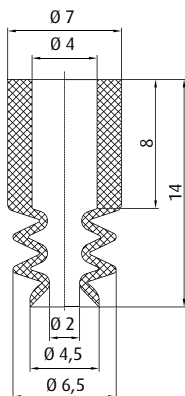
Item no. 23.004.189.* **Material** NBR (sw), SI (tr) 4 mm



Icon	Connection	see page
	M5-male	409

Item no. 23.005.095.* **Material** Vinyl (bl) 2 mm

Additional sizes available are found on p. 113.

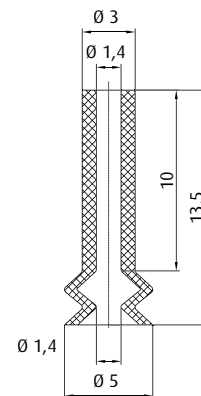


Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

BESTSELLER

Item no. 21.004.083.* **Material** SI (tr) 3 mm

Additional sizes available are found on p. 89.



Icon	Connection	see page
	M5-male	409

Item no. 23.005.181.* **Material** NBR (sw), SI (tr) 2 mm

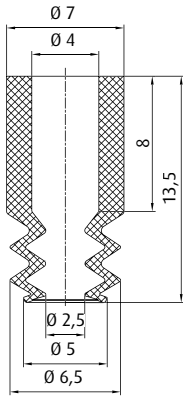
Additional sizes available are found on p. 81.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



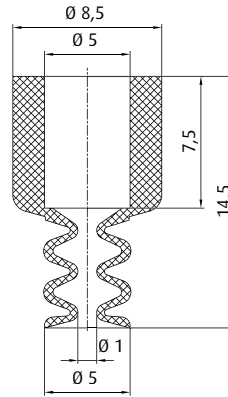
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 5 - 6 mm



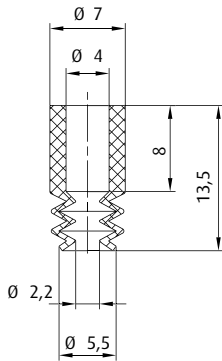
	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 21.005.058._* **Material** NBR (sw), SI (tr) 3 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.005.086._* **Material** SI (tr) 3.5 mm

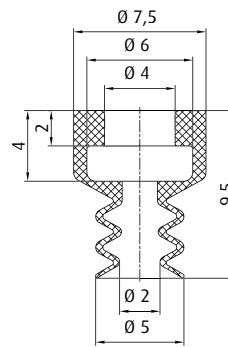


	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 21.005.146._* **Material** Thermalon® (bl) 3 mm

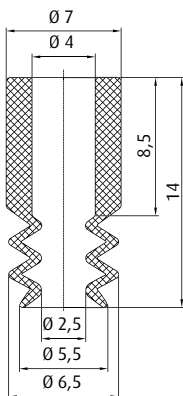
Additional sizes available are found on p. 92.



	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no. 21.005.088._* **Material** NBR (sw), SI (tr) 3 mm

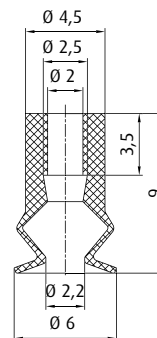
This vacuum cup is also available in the following dimensions: 7 mm



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 21.005.057._* **Material** NBR (g), HNBR (ge), EPDM (gr), SI (g), SI-AS (sw) 3 mm

Additional sizes available are found on p. 89.



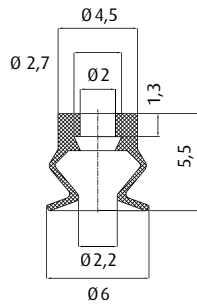
	Connection	see page
270.153	M5-male	409

BESTSELLER

Item no. 23.005.178._* **Material** SI (r), SI-AS (sw), CR (sw), HNBR (ge) 2 mm

Additional sizes available are found on p. 100.

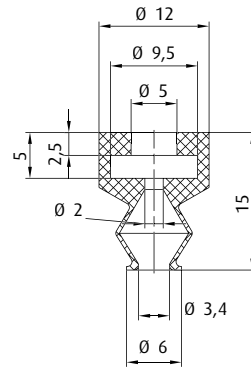
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Item no.
23.005.231._*

Material
SI (r)

2 mm



Item no.
23.006.145._*

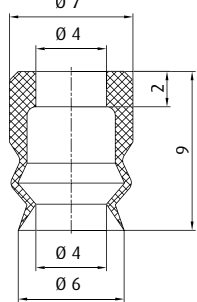
Material
NBR (sw), SI (tr)

5 mm

Additional sizes available are found on p. 122.

	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

		see page
	8.5 mm	454
	8.5 mm	454



	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	417
	G1/8-female	422

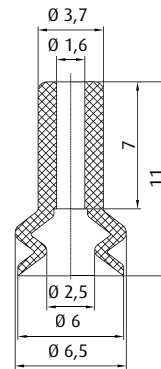
		see page
	10 mm	454

Item no.
23.006.161._*

Material
SI (tr)

2 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 20 mm, 30 mm



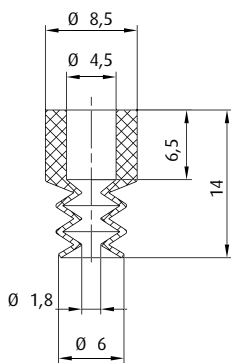
Item no.
23.007.112._*

Material
Vinyl (bl)

2 mm

Additional sizes available are found on p. 113.

	Connection	see page
	M5-male	409



	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

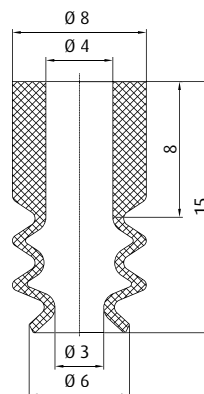
UP TO 160 °C & MINIMUM MARKING

Item no.
21.007.147._*

Material
Thermalon® (bl)

3 mm

Additional sizes available are found on p. 92.



Item no.
21.006.093._*

Material
NBR (sw), SI (tr)

3 mm

Additional sizes available are found on p. 89.

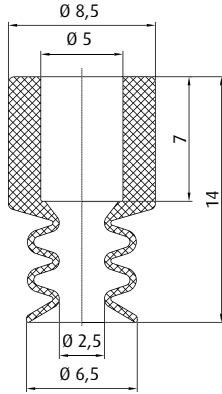
	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

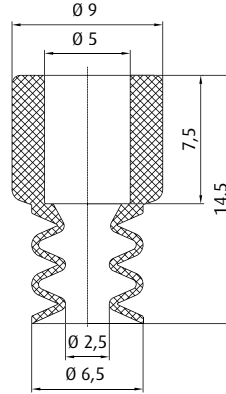
\varnothing 6 - 8 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.006.001._*	Material NBR (sw), EPDM (gr), NBR-AS (sw), SI (tr), Vinyl (bl)	3.5 mm
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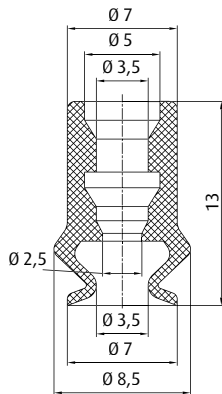
Additional sizes available are found on p. 116.



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

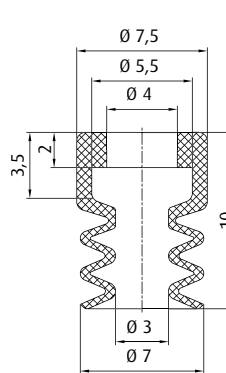
Item no. 21.006.087._*	Material NBR (sw), SI (tr)	3.5 mm
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Additional sizes available are found on p. 89.



	Connection	see page
270.399	M5-male	410

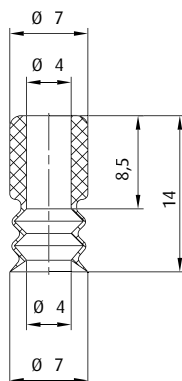
Item no. 21.007.096._*	Material NBR (sw), SI (tr)	2 mm
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	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

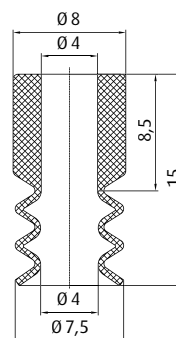
Item no. 21.007.089._*	Material NBR (sw), HNBR (ge), SI (tr), SI-AS (sw), PU (bl)	3 mm
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Additional sizes available are found on p. 94.
This vacuum cup is also available in the following dimensions: 5 mm



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 21.007.120._*	Material SI (tr)	4 mm
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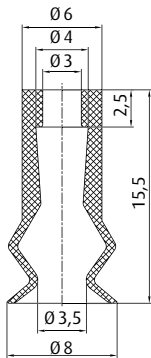
	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

BESTSELLER

Item no. 21.008.094._*	Material NBR (sw), SI (tr)	4 mm
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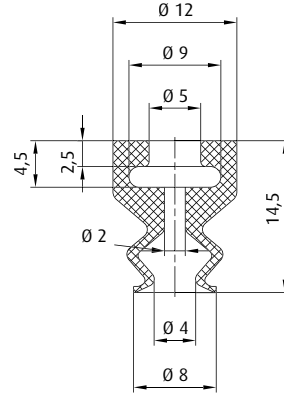
Additional sizes available are found on p. 89.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413

Item no. 23.008.057.* Material SI (tr), SI-AS (sw) 3.5 mm

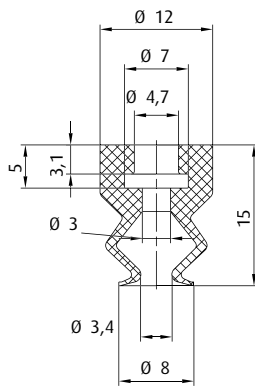


Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.	Connection	see page
50.018	8.5 mm	454
50.019	8.5 mm	454

Item no. 23.008.146.* Material NBR (sw), SI (tr) 5 mm

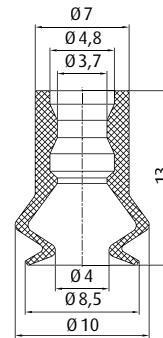
Additional sizes available are found on p. 122.



Item no.	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

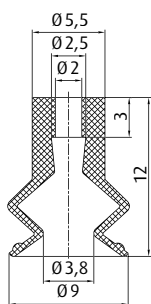
Item no.	Connection	see page
50.141	10 mm	456
50.018	8.5 mm	454

Item no. 21.008.126.* Material SI (r) 8 mm



Item no.	Connection	see page
270.399	M5-male	410

Item no. 23.008.225.* Material SI (tr) 3 mm

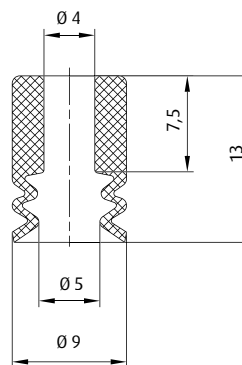


Item no.	Connection	see page
270.153	M5-male	409

BESTSELLER

Item no. 23.008.166.* Material SI (r), SI-AS (sw), CR (sw), HNBR (ge) 3.5 mm

Additional sizes available are found on p. 100.



Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

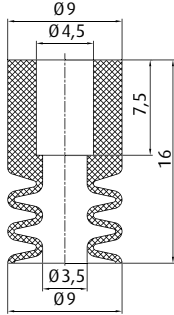
Item no. 21.009.029.* Material PU (bl) 1.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



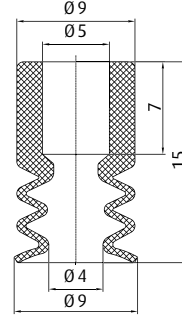
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 9 - 10 mm



Icon	Connection	see page
	270.013 M5-male	410
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 21.009.100.* **Material** NBR (sw) 3.5 mm

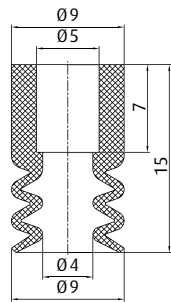


Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 21.009.002.* **Material** NBR (sw), HNBR (ge), SI (tr), SI-AS (sw), NR (gr), PU (bl) 2 mm

BESTSELLER

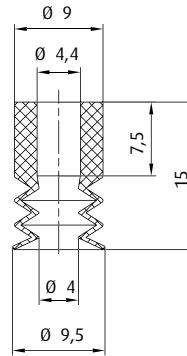
Additional sizes available are found on p. 89.



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 21.009.106.* **Material** Vulkollan® (br) 2 mm

Additional sizes available are found on p. 97.

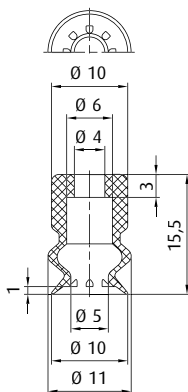


Icon	Connection	see page
	270.134 M5-male	409
	270.347 M5-female	412
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

Item no. 21.009.148.* **Material** Thermalon® (bl) 3 mm

Additional sizes available are found on p. 92.

UP TO 160 °C & MINIMUM MARKING

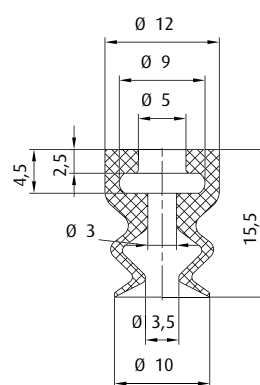


Icon	Connection	see page
	270.458 M4-male	408
	270.134 M5-male	409
	270.104 M6-male	413

Icon	Icon	see page
	50.103	454
	50.104	454
	50.125	454
	50.126	454
	50.127	454

Item no. 23.010.139.* **Material** NBR (sw), SI (tr) 4 mm

Additional sizes available are found on p. 119.



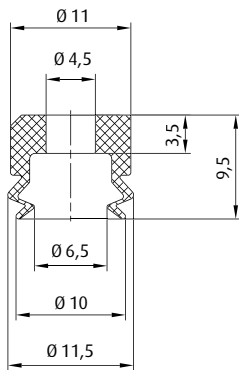
Icon	Connection	see page
	270.200 M5-male	411
	270.064 G1/8-male	418
	270.065 G1/8-female	422

Icon	Icon	see page
	50.018	454
	50.019	454

Item no. 23.010.147.* **Material** NBR (sw), SI (tr) 5 mm

Additional sizes available are found on p. 122.

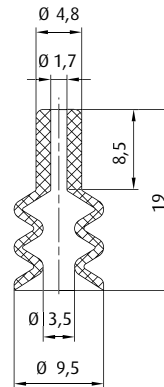
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.310	M5-male	411
270.493	G1/8-male	420
270.494	G1/8-female	423
50.330	10 mm	454

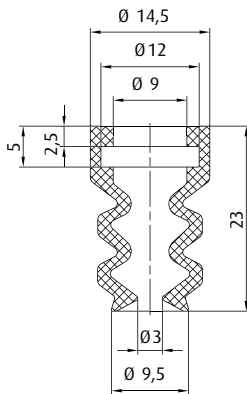
Item no. 23.010.163.* **Material** SI (tr) 2.5 mm

This vacuum cup is also available in the following dimensions: 6 mm, 15 mm, 20 mm, 30 mm



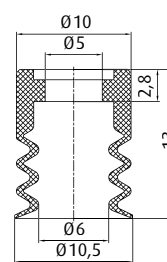
	Connection	see page
270.195	M5-male	409

Item no. 21.010.061.* **Material** Vinyl (bl) 8 mm



	Connection	see page
270.541	G1/8-male	421

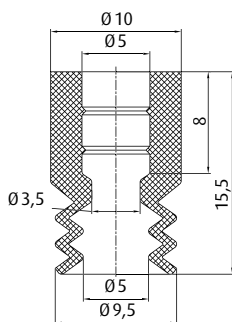
Item no. 21.010.071.* **Material** Vinyl (bl) 8 mm



	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

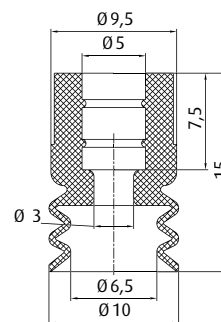
Item no. 21.010.005.* **Material** NBR (sw), SI (bl) 4 mm

This vacuum cup is also available in the following dimensions: 15 mm, 18 mm, 24 mm, 30 mm, 40 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.010.004.* **Material** NBR (sw), SI (r), PU (bg) 3 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

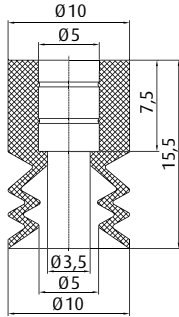
Item no. 21.010.056.* **Material** SI (bl), SI (r) 4 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 10 - 11 mm

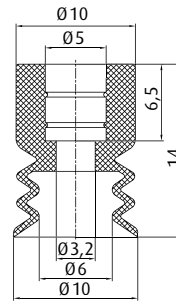


Icon	Connection	see page
	270.013 M5-male	410
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

BESTSELLER

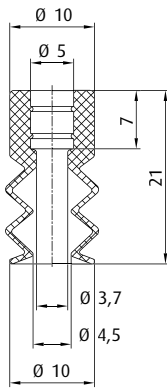
Item no. 21.010.070.* Material Vinyl (bl) 5 mm

Additional sizes available are found on p. 116.



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

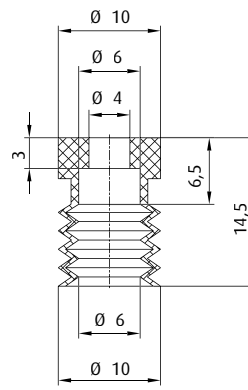
Item no. 21.010.078.* Material SI (r), SI (tr), PU (bg) 4 mm



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 21.010.119.* Material NBR (sw), SI (tr) 8 mm

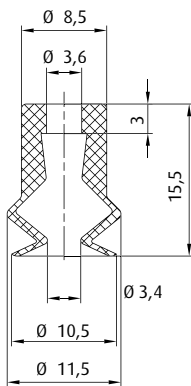
Additional sizes available are found on p. 89.



Icon	Connection	see page
	270.458 M4-male	408
	270.009 G1/8-male	417
	270.007 G1/8-female	422

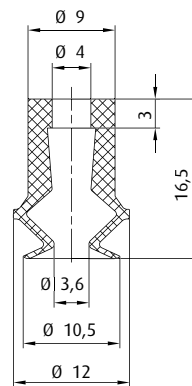
Item no. 25.010.044.* Material NBR (sw), SI (tr) 4 mm

Additional sizes available are found on p. 124.



Icon	Connection	see page
	270.134 M5-male	409
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

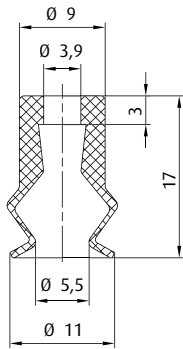
Item no. 23.011.138.* Material SI (r) 4 mm



Icon	Connection	see page
	270.134 M5-male	409
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.015 G1/8-female	421

Item no. 23.011.173.* Material SI (tr) 3.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



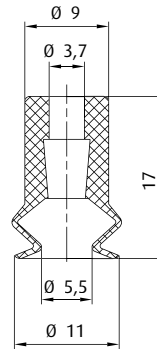
Icon	Connection	see page
	270.134 M5-male	409
	270.104 M6-male	413

Item no.
23.011.007.*

Material
SI (tr), SI-AS (sw), PU (bl),
CR (sw)

5 mm

Additional sizes available are found on p. 100.

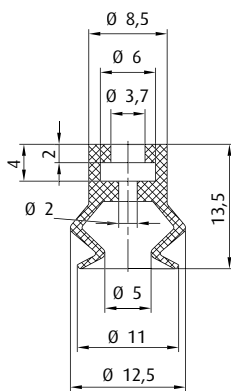


Icon	Connection	see page
	270.134 M5-male	409
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

Item no.
23.011.131.*

Material
NBR (sw), SI (r)

4 mm



Icon	Connection	see page
	270.010 M5-male	411
	270.005 M5-female	412
	270.009 G1/8-male	417
	270.007 G1/8-female	422

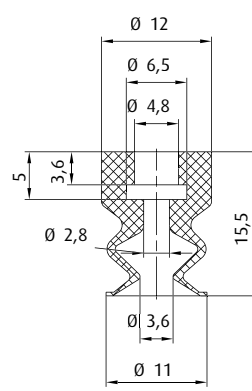
Icon	Connection	see page
	50.330 10 mm	454

Item no.
23.010.123.*

Material
NBR (sw), NBR-AS (sw), SI (tr),
SI-AS (sw), PU (bl)

4 mm

This vacuum cup is also available in the following dimensions: 15 mm, 21 mm, 32 mm, 42 mm, 54 mm

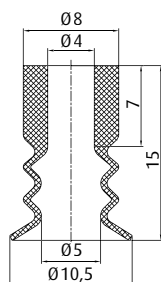


Icon	Connection	see page
	270.200 M5-male	411
	270.064 G1/8-male	418
	270.065 G1/8-female	422

Item no.
21.010.127.*

Material
SI (r)

6 mm

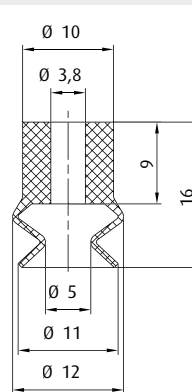


Icon	Connection	see page
	270.013 M5-male	410
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no.
21.011.095.*

Material
NBR (sw), SI (tr)

5 mm



Icon	Connection	see page
	270.134 M5-male	409
	270.347 M5-female	412
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

**UP TO 160 °C &
MINIMUM MARKING**

Item no.
23.011.234.*

Material
Thermalon® (bl)

5.5 mm

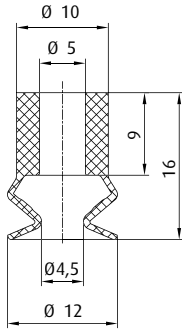
Additional sizes available are found on p. 84.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 12 - 13 mm

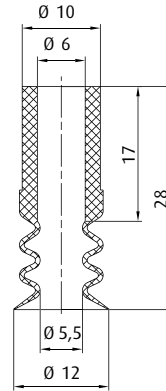


	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

		see page
50.037	25 mm	456

Item no. 23.011.008.* Material NBR (sw), HNBR (ge), SI (tr) 4.5 mm

Additional sizes available are found on p. 81.

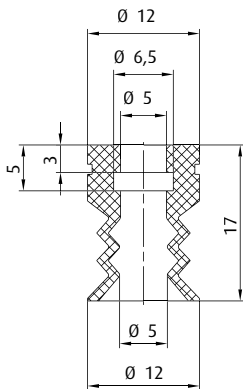


	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

FOR HIGHLY STRUCTURED SURFACES (3D)

Item no. 21.012.079.* Material NBR (sw), SI (w), SI (tr) 7 mm

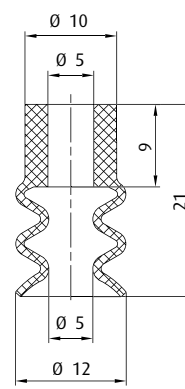
Additional sizes available are found on p. 125.



	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

		see page
50.141	10 mm	456
50.018	8.5 mm	454

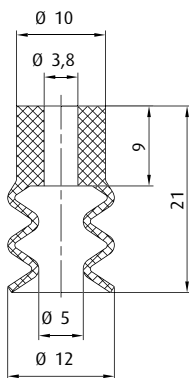
Item no. 21.012.108.* Material SI (r) 5 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.012.135.* Material NBR (sw), HNBR (ge), SI (tr), NR (gr), PU (bl) 7 mm

Additional sizes available are found on p. 89.

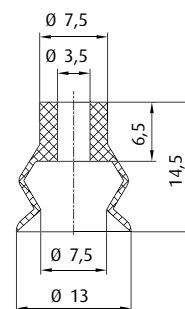


	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 21.012.149.* Material Thermalon® (bl) 7 mm

Additional sizes available are found on p. 92.



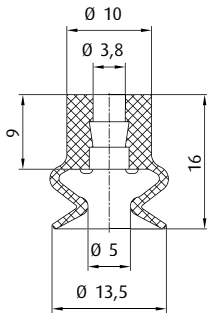
	Connection	see page
270.013	M5-male	410
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

BESTSELLER

Item no. 23.013.097.* Material Vinyl (bl) 5 mm

Additional sizes available are found on p. 113.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

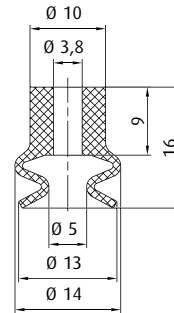


	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

	see page
50.037	25 mm

Item no. 23.013.120.* **Material** NBR (sw), SI (tr), NR (gr) 4 mm

Additional sizes available are found on p. 81.

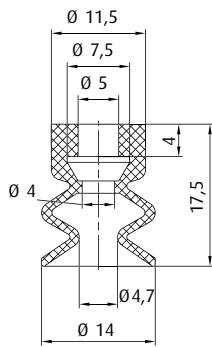


	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 23.014.235.* **Material** Thermanon® (bl) 5 mm

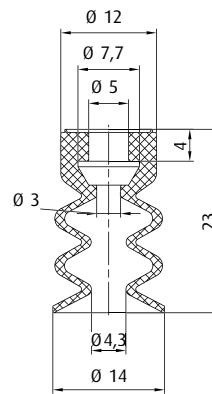
Additional sizes available are found on p. 84.



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

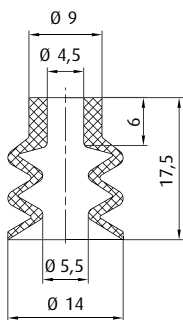
Item no. 23.014.010.* **Material** NBR (sw), SI (r), NR (bg), PU (bl) 8 mm

This vacuum cup is also available in the following dimensions: 24 mm, 40 mm, 60 mm



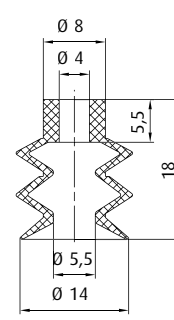
	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.014.006.* **Material** NBR (sw), SI (r), NR (bg), PU (bl) 10 mm



	Connection	see page
270.024	M5-male	410
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 21.014.046.* **Material** PU (r) 7 mm



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

BESTSELLER

Item no. 21.014.053.* **Material** HNBR (ge), SI (tr), CR (sw) 9 mm

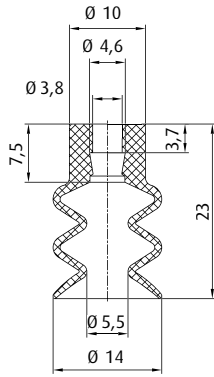
Additional sizes available are found on p. 84.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

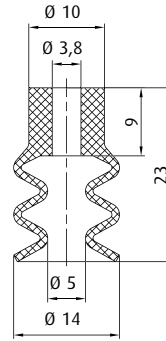
Ø 14 - 15 mm



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no. 21.014.133.* **Material** NBR (sw), SI (tr), NR (gr) 11 mm

Additional sizes available are found on p. 89.

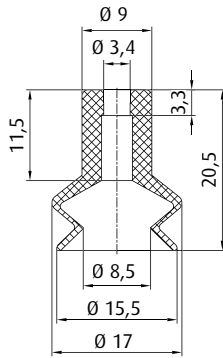


Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no. 21.014.150.* **Material** Thermalon® (bl) 10 mm

Additional sizes available are found on p. 92.

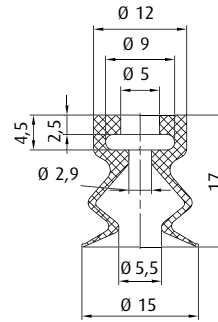
UP TO 160 °C & MINIMUM MARKING



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no. 23.015.098.* **Material** Vinyl (bl) 5 mm

Additional sizes available are found on p. 113.

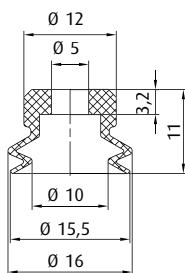


Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Icon	Icon	see page
	8.5 mm	454
	8.5 mm	454

Item no. 23.015.148.* **Material** NBR (sw), SI (tr) 7 mm

Additional sizes available are found on p. 122.

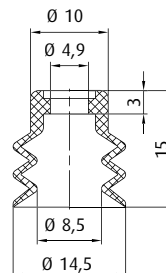


Icon	Connection	see page
	M5-male	411
	G1/8-male	420
	G1/8-female	423

Icon	Icon	see page
	10 mm	454

Item no. 23.015.164.* **Material** NBR (sw), SI (tr) 3.5 mm

This vacuum cup is also available in the following dimensions: 6 mm, 10 mm, 20 mm, 30 mm

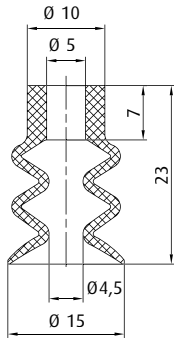


Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Item no. 21.015.009.* **Material** NBR (sw), SI (tr) 5 mm

This vacuum cup is also available in the following dimensions: 10 mm, 18 mm, 24 mm, 30 mm, 40 mm

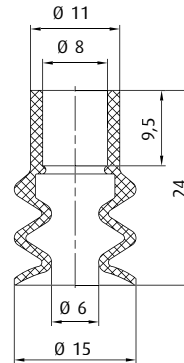
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no. 21.014.007.* **Material** NBR (sw), SI (tr), PU (bl) 12 mm

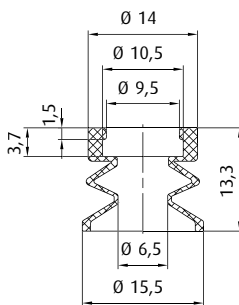
Additional sizes available are found on p. 89.



Item no.	Connection	see page
270.112	G1/8-male	419
270.113	G1/4-male	425

Item no. 21.015.008.* **Material** NBR (sw), SI (r) 7 mm

This vacuum cup is also available in the following dimensions: 20 mm, 30 mm

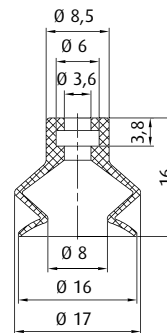


Item no.	Connection	see page
270.311	M5-male	411
270.312/19	M6-male	414

Item no.	Height	see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

Item no. 23.016.232.* **Material** SI (tr) 6 mm

Additional sizes available are found on p. 130.

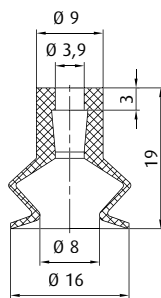


Item no.	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no.	Height	see page
50.330	10 mm	454

Item no. 23.015.122.* **Material** NBR (sw), SI (tr), PU (bl), HNBR (ge) 5 mm

Additional sizes available are found on p. 86.
This vacuum cup is also available in the following dimensions: 11 mm, 21 mm, 32 mm, 42 mm, 54 mm

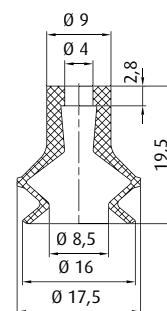


Item no.	Connection	see page
270.134	M5-male	409
270.104	M6-male	413

BESTSELLER

Item no. 23.016.015.* **Material** SI (tr), SI-AS (sw), CR (sw) 7 mm

Additional sizes available are found on p. 100.



Item no.	Connection	see page
270.134	M5-male	409
270.104	M6-male	413
270.033	G1/8-male	416
270.015	G1/8-female	421

Item no. 23.016.174.* **Material** SI (tr) 5 mm

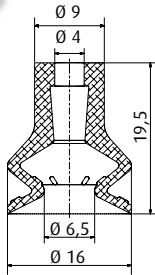
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

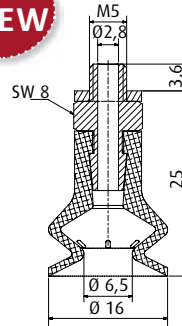
Ø 16 mm

NEW



	Connection	see page
270.134	M5-male	409
270.104	M6-male	413

NEW



Spare cup

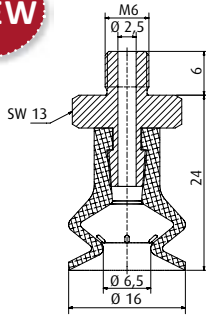
Item no. 23.016.263.* Material Varioflex® 60/30° (sw/r) 4.5 mm

Additional sizes available are found on p. 107.

Item no. 22.016.253.* Material Varioflex® 60/30° (sw/r) 4.5 mm

Additional sizes available are found on p. 107.

NEW



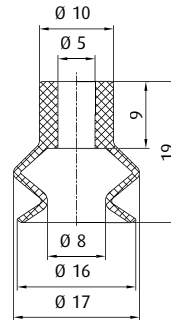
Spare cup

Item no. 22.016.254.* Material Varioflex® 60/30° (sw/r) 4.5 mm

Additional sizes available are found on p. 107.

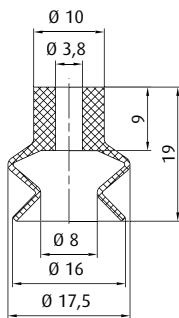
	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

	see page
50.037	25 mm 456



Item no. 23.016.016.* Material NBR (sw), HNBR (ge), SI (tr) 6 mm

Additional sizes available are found on p. 81.



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

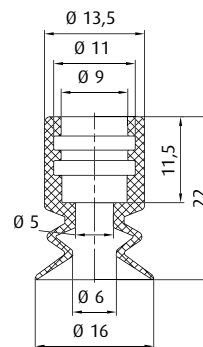
UP TO 160 °C & MINIMUM MARKING

Item no. 23.016.236.* Material Thermalon® (bl) 8.5 mm

Additional sizes available are found on p. 84.

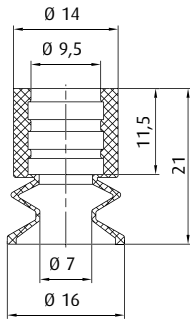
	Connection	see page
270.244	M5-male	410

	see page
50.005	5 mm 456
50.145	10 mm 456
50.146	30 mm 456



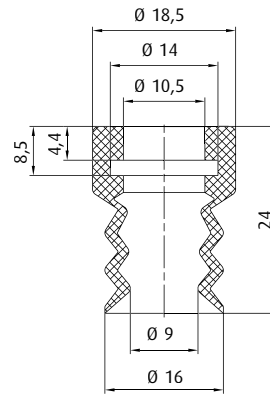
Item no. 23.016.104.* Material Vinyl (bl) 7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

		see page
50.005	5 mm	456
50.145	10 mm	456
50.146	30 mm	456

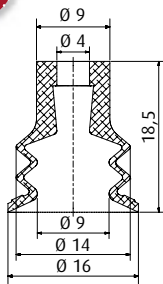


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 27.016.001.* **Material** SI (tr), NR (sw) 6 mm
Additional sizes available are found on p. 125.

Item no. 21.016.072.* **Material** Vinyl (bl) 9 mm

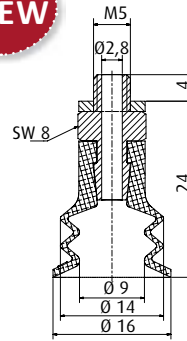
NEW



	Connection	see page
270.134	M5-male	409
270.104	M6-male	413

Spare cup

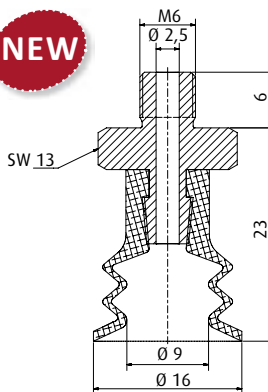
NEW



Item no. 21.016.175.* **Material** Varioflex® 60/30° (sw/r) 5.5 mm
Additional sizes available are found on p. 110.

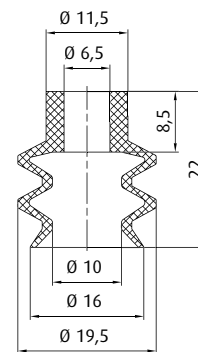
Item no. 20.016.145.* **Material** Varioflex® 60/30° (sw/r) 5.5 mm
Additional sizes available are found on p. 110.

NEW



Spare cup

Item no. 20.016.146.* **Material** Varioflex® 60/30° (sw/r) 5.5 mm
Additional sizes available are found on p. 110.



	Connection	see page
270.274	G1/4-male	427
270.275	G1/4-female	432

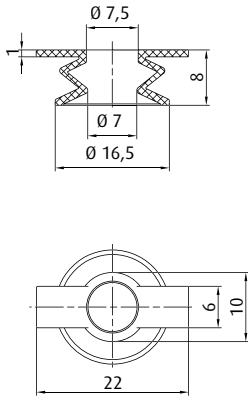
Item no. 21.015.050.* **Material** SI (tr), NR (bg) 10 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 17 - 18 mm

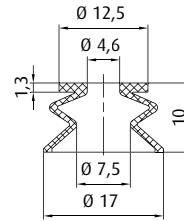


Item no.
23.017.102.*

Material
NR (sw)

5.5 mm

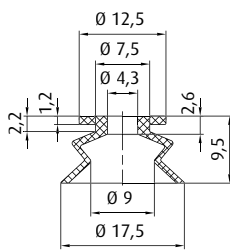
Additional sizes available are found on p. 23.



Item no.
23.017.100.*

Material
NR (br)

6 mm

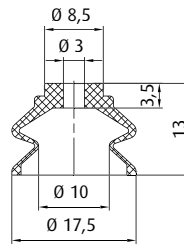


	Connection	see page
270.010	M5-male	411
270.005	M5-female	412
270.009	G1/8-male	417
270.007	G1/8-female	422

Item no.
23.016.086.*

Material
SI (tr), PU (bg)

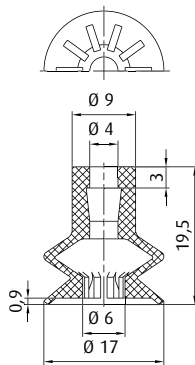
6 mm



Item no.
23.017.105.*

Material
NR (sw)

7 mm



	Connection	see page
270.134	M5-male	409
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

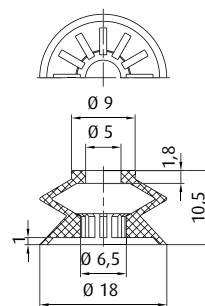
BESTSELLER

Item no.
23.018.175.*

Material
SI (tr), NR (bl)

5.5 mm

Additional sizes available are found on p. 23.



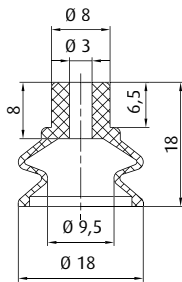
Item no.
23.018.183.*

Material
NR (or)

5.5 mm

Additional sizes available are found on p. 25.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

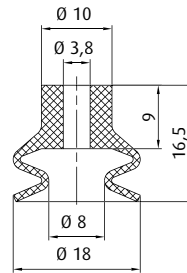


Icon	Connection	see page
	M5-male	409
	M5-female	412

Item no.
23.018.101.*

Material
NR (sw)

6 mm



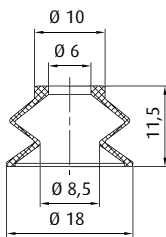
Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no.
23.018.237.*

Material
Thermalon® (bl)

5 mm

Additional sizes available are found on p. 84.

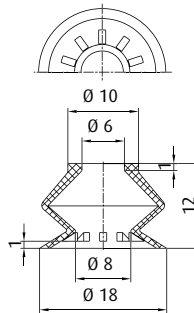


Icon	Connection	see page
	M6-male	414
	M8-male	415
	G1/8-male	419

Item no.
23.018.019.*

Material
SI (tr), NR (sw), NR (bl)

8 mm



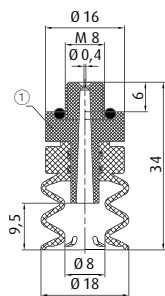
Icon	Connection	see page
	M6-male	414
	M8-male	415
	G1/8-male	419

Item no.
23.018.082.*

Material
SI (tr), NR (bl), CR (sw)

5.5 mm

Additional sizes available are found on p. 23.



Spare cup

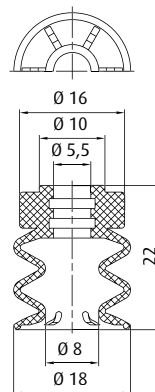
REDUCED LEAKAGE

① = Special fitting with installed orifice Ø 0.4 mm.
Material: PA6/ O-ring NBR

Item no.
20.018.125.*

Material
NBR (gr)

9.5 mm



Icon	Connection	see page
	M5-male	410
	M8-male	415
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

Item no.
21.018.118.*

Material
NBR (gr)

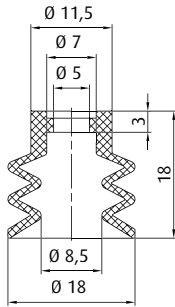
10 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

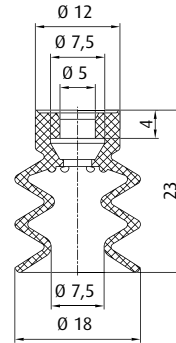
Ø 18 mm



Icon	Connection	see page
	270.013 M5-male	410
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

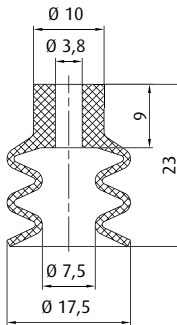
Item no. 21.018.012.* Material NBR (sw), SI (bl) 7 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 24 mm, 30 mm, 40 mm



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

Item no. 21.018.011.* Material NBR (sw), SI (r), NR (bg), PU (bl) 8 mm

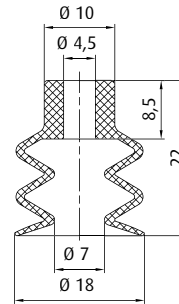


Icon	Connection	see page
	270.134 M5-male	409
	270.347 M5-female	412
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 21.018.151.* Material Thermalon® (bl) 10 mm

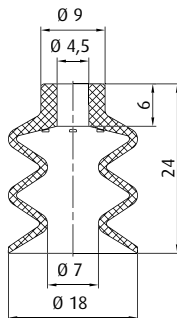
Additional sizes available are found on p. 92.



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421

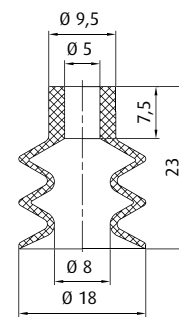
Item no. 21.018.010.* Material NBR (sw), HNBR (ge), SI (tr), PU (bl) 8 mm

Additional sizes available are found on p. 89.



Icon	Connection	see page
	270.024 M5-male	410
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

Item no. 21.018.047.* Material PU (g) 12 mm

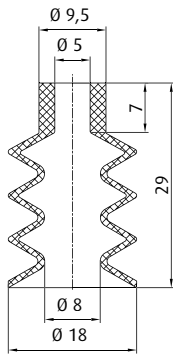


Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

BESTSELLER

Item no. 21.018.013.* Material NBR (sw), SI (tr), NR (sw) 9 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

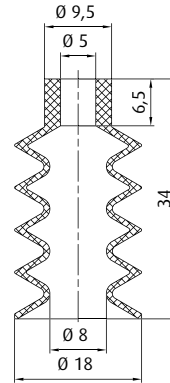


Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425

BESTSELLER

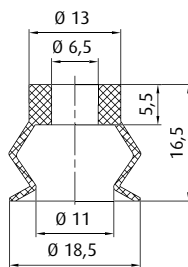
Item no. 25.018.031_* **Material** NBR (sw), SI (tr) 12 mm

Additional sizes available are found on p. 96.



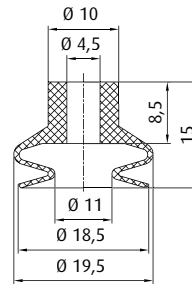
Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425

Item no. 25.018.032_* **Material** SI (tr) 14 mm



Icon	Connection	see page
	M6-male	414
	G1/8-male	419
	G1/8-female	422

Item no. 23.019.021_* **Material** NBR (sw), SI (tr) 8 mm



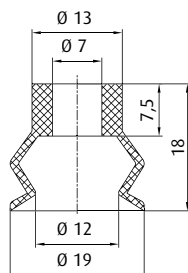
Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425

Icon	Icon	see page
		456

BESTSELLER

Item no. 23.019.119_* **Material** NBR (sw), SI (tr) 4 mm

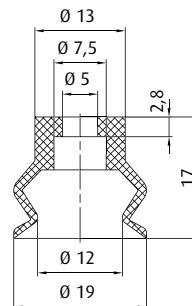
Additional sizes available are found on p. 81.



Icon	Connection	see page
	G1/8-male	419
	G1/8-female	423
	G1/4-male	427
	G1/4-female	432

Item no. 23.019.109_* **Material** Vinyl (bl) 8 mm

Additional sizes available are found on p. 113.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

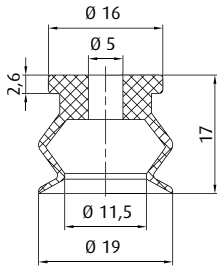
Item no. 23.019.179_* **Material** Vinyl (bl) 7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 19 - 20 mm

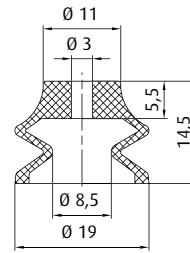


	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no.
23.019.110.*

Material
Vinyl (bl)

8 mm

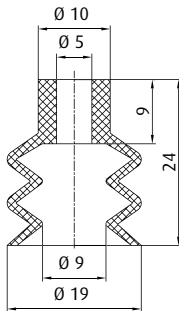


Item no.
23.019.168.*

Material
NR (bl), NR (br)

5.5 mm

Additional sizes available are found on p. 23.



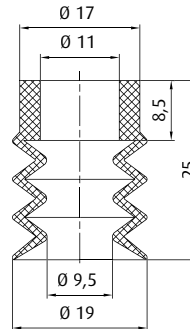
	Connection	see page
270.013	M5-male	410
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no.
21.018.068.*

Material
Vinyl (bl)

11 mm

Additional sizes available are found on p. 116.



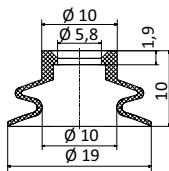
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
25.019.037.*

Material
Vinyl (bl)

10 mm

NEW



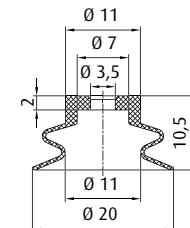
	Connection	see page
270.200	M5-male	411
270.064	G1/8-male	418
270.065	G1/8-female	422

Item no.
23.019.254.*

Material
SI (tr)

3.5 mm

Additional sizes available are found on p. 23.



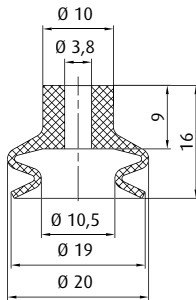
	Connection	see page
270.310	M5-male	411
270.493	G1/8-male	420
270.494	G1/8-female	423

Item no.
23.020.103.*

Material
NR (bg)

2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

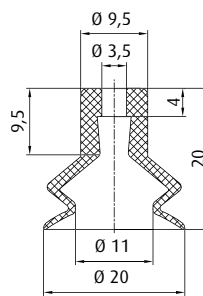


Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 23.020.238.* Material Thermalon® (bl) 5 mm

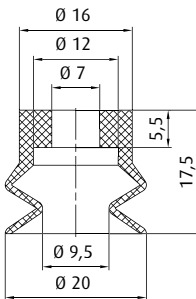
Additional sizes available are found on p. 84.



Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

Item no. 23.020.114.* Material Vinyl (bl) 6 mm

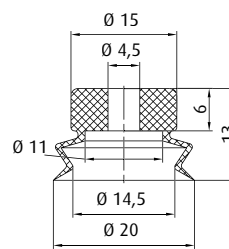
Additional sizes available are found on p. 113.



Item no.	Connection	see page
270.311	M5-male	411
270.312/19	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

WEAR-RESISTANT

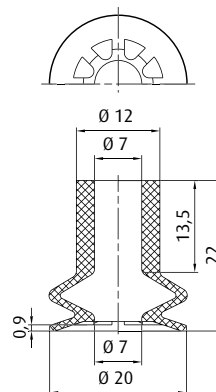
Item no. 23.020.121.* Material Tepuflex® (or), Vulkollan® (br) 5 mm



Item no.	Connection	see page
270.311	M5-male	411
270.063	G1/8-male	419
270.061	G1/8-female	422

Item no. 23.020.154.* Material SI (tr) 4 mm

This vacuum cup is also available in the following dimensions: 6 mm, 10 mm, 15 mm, 30 mm



Item no.	Connection	see page
270.030	G1/8-male	419
270.019	G1/8-female	423
270.113	G1/4-male	425
270.275	G1/4-female	432

Item no. 23.020.133.* Material NBR (sw), SI (tr) 4 mm

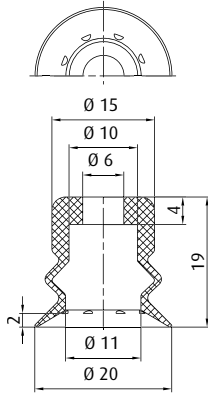
Additional sizes available are found on p. 23.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 20 mm

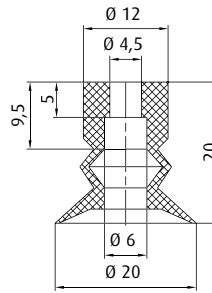


	Connection	see page
270.311	M5-male	411
270.459	M6-male	414
270.480	G1/8-male	420
270.479	G1/8-female	423

		see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 23.020.140.* **Material** NBR (sw), SI (tr) 6 mm

Additional sizes available are found on p. 119.

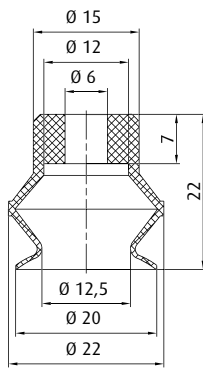


	Connection	see page
270.317	M5-male	410
270.103	M6-male	413
270.205	G1/8-male	416
270.109	G1/8-female	421
270.194	G1/4-male	425

		see page
50.020	8.5 mm	454

Item no. 23.020.149.* **Material** NBR (sw), SI (tr) 6 mm

Additional sizes available are found on p. 122.

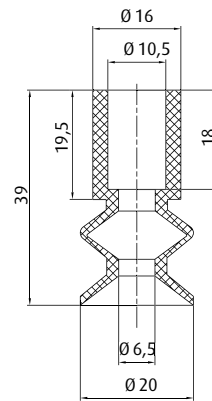


	Connection	see page
270.312/19	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

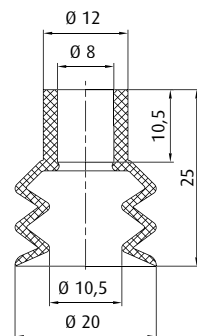
Item no. 23.020.169.* **Material** Vulkollan® (br) 7 mm

Additional sizes available are found on p. 97.



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

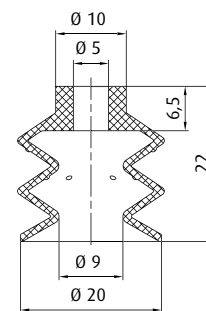
Item no. 23.020.027.* **Material** SI (tr), NR (sw), NR (br) 10 mm



	Connection	see page
270.112	G1/8-male	419
270.113	G1/4-male	425
270.178	G1/4-female	431

Item no. 21.020.014.* **Material** NBR (sw), SI (tr) 10 mm

This vacuum cup is also available in the following dimensions: 15 mm, 30 mm

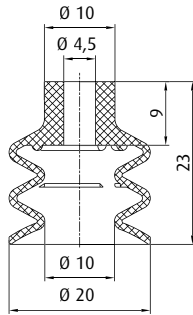


	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

Item no. 21.020.015.* **Material** NBR (sw), SI (tr), NR (sw) 11 mm

BESTSELLER

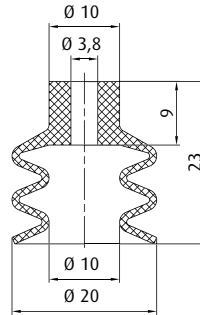
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

Item no. 21.020.016.* **Material** NBR (sw), HNBR (ge), SI (tr) 9 mm

Additional sizes available are found on p. 89.

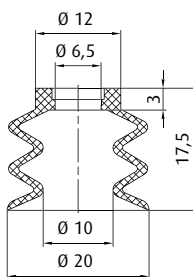


Icon	Connection	see page
	270.134 M5-male	409
	270.347 M5-female	412
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 21.020.152.* **Material** Thermalon® (bl) 10 mm

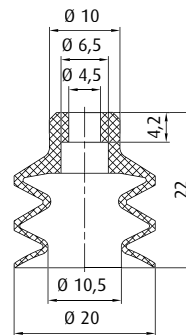
Additional sizes available are found on p. 92.



Icon	Connection	see page
	270.039 M6-male	414
	270.247 M8-male	415
	270.543 G1/8-male	419

Item no. 21.020.073.* **Material** SI (tr) 9 mm

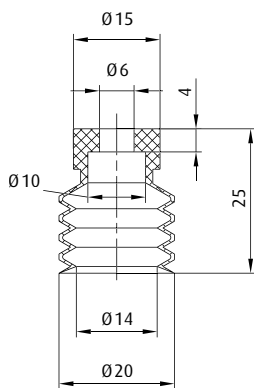
Additional sizes available are found on p. 89.



Icon	Connection	see page
	270.024 M5-male	410
	270.104 M6-male	413
	270.033 G1/8-male	416
	270.478 G1/8-female	421

Item no. 21.020.090.* **Material** Vulkollan® (br) 8 mm

Additional sizes available are found on p. 92.



Icon	Connection	see page
	270.459 M6-male	414
	270.480 G1/8-male	420
	270.479 G1/8-female	423

Item no. 25.020.045.* **Material** NBR (sw), SI (tr) 10 mm

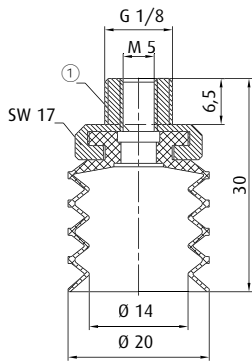
Additional sizes available are found on p. 124.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 20 - 21 mm

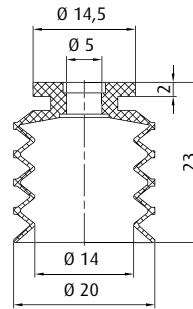


① = Filter screen

Item no. 24.020.033.*	Material SI (tr), CR (sw)	16 mm
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Additional sizes available are found on p. 104.

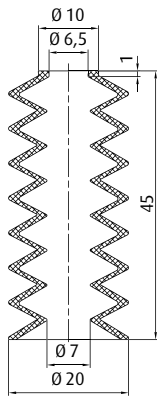
Spare cup



Item no. 25.020.025.*	Material SI (tr), CR (sw)	16 mm
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Additional sizes available are found on p. 100.

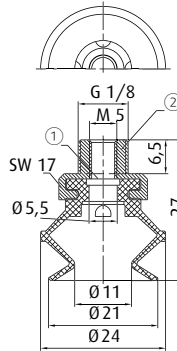
	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-male	418



	Connection	see page
	M6-male	414
	M8-male	415
	G1/8-male	419

Item no. 25.020.002.*	Material SI (w)	26 mm
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Additional sizes available are found on p. 104.

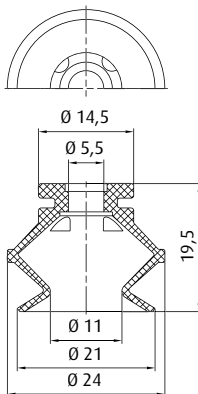


① = Filter screen ② = Aluminium

Item no. 22.020.020.*	Material Tepuflex® (or), SI (tr), CR (sw)	9 mm
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Additional sizes available are found on p. 104.

Spare cup



	Connection	see page
	M5-female	413
	G1/8-male	418
	G1/8-male	418

BESTSELLER

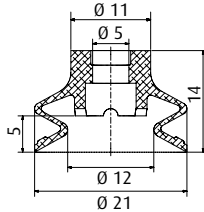
Item no. 23.020.026.*	Material Tepuflex® (or), SI (tr), CR (sw)	9 mm
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Additional sizes available are found on p. 100.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



NEW



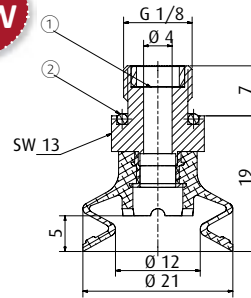
	Connection	see page
270.500-S	M5-female	413
270.503-S	G1/8-male	418

Spare cup

Item no. 23.021.264.* **Material** Varioflex® 60/30° (sw/r) 5 mm

Additional sizes available are found on p. 107.

NEW

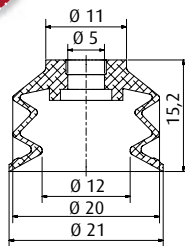


① = Filter screen ② = O-ring

Item no. 22.021.255.* **Material** Varioflex® 60/30° (sw/r) 5 mm

Additional sizes available are found on p. 107.

NEW



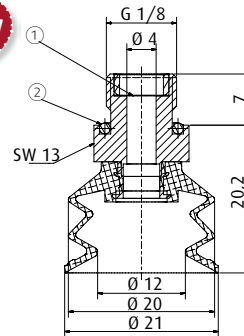
	Connection	see page
270.500-S	M5-female	413
270.503-S	G1/8-male	418

Spare cup

Item no. 21.021.176.* **Material** Varioflex® 60/30° (sw/r) 6.5 mm

Additional sizes available are found on p. 110.

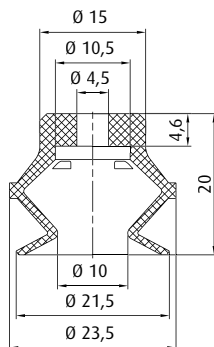
NEW



① = Filter screen ② = O-ring

Item no. 20.021.147.* **Material** Varioflex® 60/30° (sw/r) 6.5 mm

Additional sizes available are found on p. 110.



	Connection	see page
270.311	M5-male	411
270.063	G1/8-male	419
270.061	G1/8-female	422

Item no. 23.020.124.* **Material** NBR (sw), HNBR (ge), SI (tr), PU (bl) 8 mm

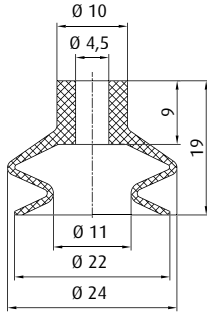
Additional sizes available are found on p. 86.
This vacuum cup is also available in the following dimensions: 11 mm, 15 mm, 32 mm, 42 mm, 54 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 22 - 24 mm



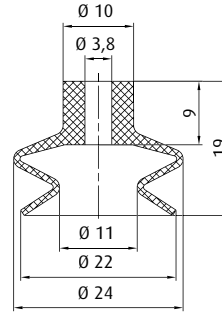
Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425

Icon	see page
	25 mm

BESTSELLER

Item no. 23.022.028.* Material NBR (sw), SI (tr), Vinyl (bl) 8 mm

Additional sizes available are found on p. 113.

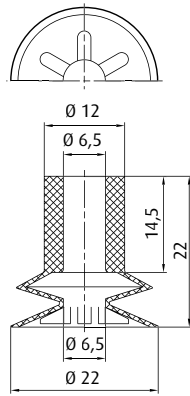


Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 23.022.239.* Material Thermalon® (bl) 8 mm

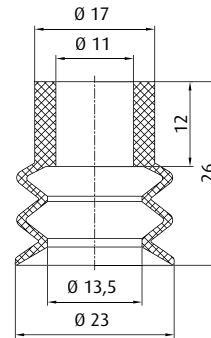
Additional sizes available are found on p. 84.



Icon	Connection	see page
	M5-male	410
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

Item no. 23.023.099.* Material NR (br) 5 mm

Additional sizes available are found on p. 23.

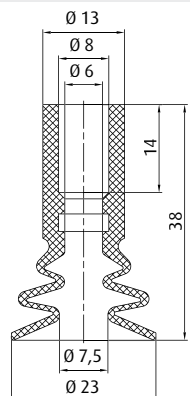


Icon	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431

BESTSELLER

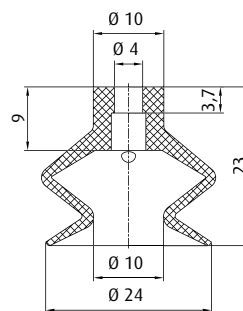
Item no. 21.023.066.* Material Vinyl (bl) 9 mm

Additional sizes available are found on p. 116.



Icon	Connection	see page
	G1/8-male	419
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no. 21.023.102.* Material SI (g) 12 mm



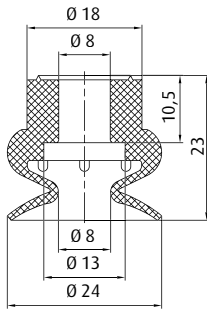
Icon	Connection	see page
	M5-male	410
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421
	G1/4-male	425

BESTSELLER

Item no. 23.025.137.* Material NBR (sw), SI (tr), NR (gr) 9 mm

Additional sizes available are found on p. 81.

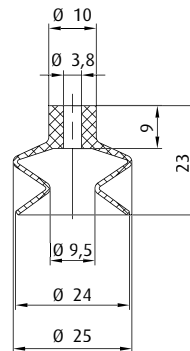
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Item no.	Connection	see page
270.093	G1/8-male	421
270.092	G1/8-female	424
270.249	G1/4-male	427
270.248	G1/4-female	433

Item no. 23.025.030.* Material NBR (sw), SI (r), NR (bg) 5 mm

This vacuum cup is also available in the following dimensions: 14 mm, 40 mm, 60 mm

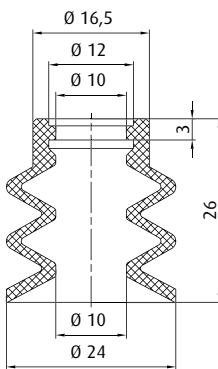


Item no.	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

UP TO 160 °C & MINIMUM MARKING

Item no. 23.025.240.* Material Thermalon® (bl) 12 mm

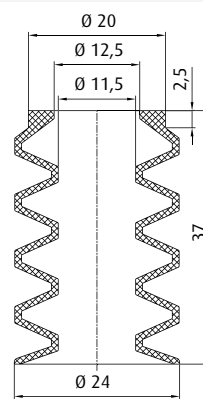
Additional sizes available are found on p. 84.



Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

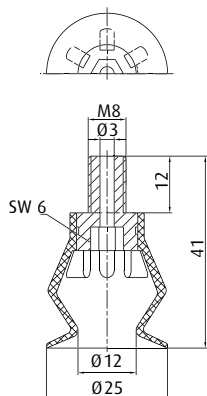
Item no. 21.024.017.* Material NBR (sw), SI (tr) 10 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 30 mm, 40 mm



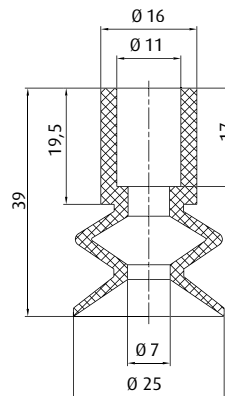
Item no.	Connection	see page
270.233	G1/8-female	438

Item no. 25.024.057.* Material SI (tr) 20 mm



Item no. 22.025.029.* Material NBR (sw), SI (tr), NR (sw) 11 mm

This vacuum cup is also available in the following dimensions: 31 mm, 44 mm



Item no.	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

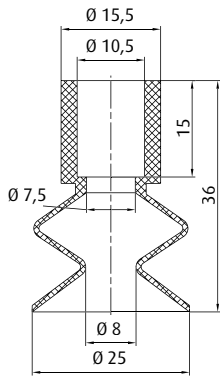
Item no. 23.025.032.* Material SI (tr), NR (sw), NR (br) 12 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 25 mm

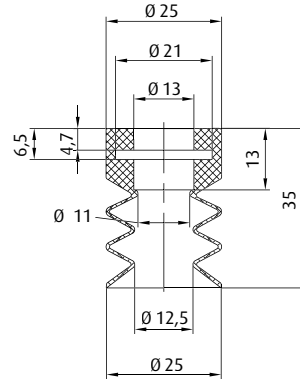


	Connection	see page
270.244	M5-male	410
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
23.025.200.*

Material
Vulkollan® (br)

13 mm

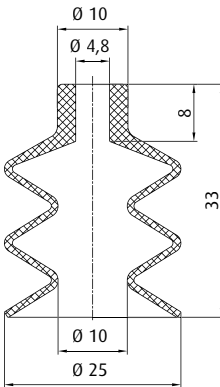


	Connection	see page
270.049-1	G1/4-male	426

Item no.
21.025.059.*

Material
SI (tr)

16 mm



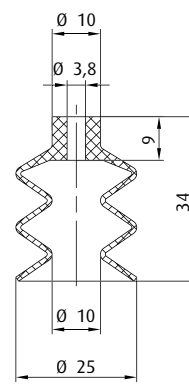
	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no.
21.025.060.*

Material
NBR (sw), SI (tr)

19 mm

Additional sizes available are found on p. 89.



	Connection	see page
270.134	M5-male	409
270.347	M5-female	412
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

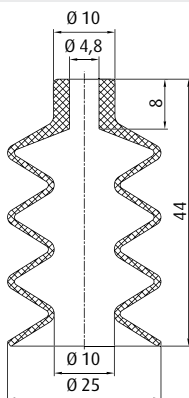
UP TO 160 °C &
MINIMUM MARKING

Item no.
21.025.153.*

Material
Thermalon® (bl)

20 mm

Additional sizes available are found on p. 92.



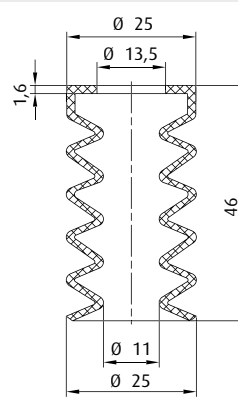
	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no.
25.025.005.*

Material
NBR (sw), SI (tr)

24 mm

Additional sizes available are found on p. 96.



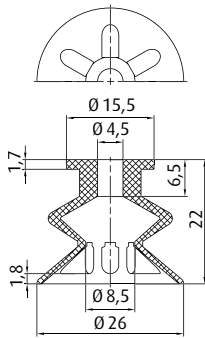
	Connection	see page
270.182.U	G1/4-male	431
270.182	G1/4-female	434

Item no.
25.025.004.*

Material
SI (tr)

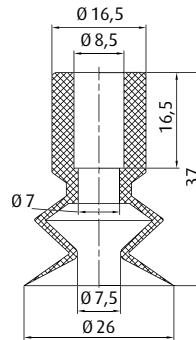
29 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Icon	Connection	see page
	270.013 M5-male	410
	270.005 M5-female	412
	270.103 M6-male	413
	270.003 G1/8-male	416
	270.015 G1/8-female	421
	270.194 G1/4-male	425

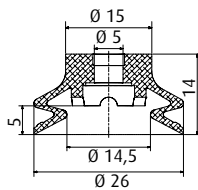
Item no. 23.026.115.* **Material** Vinyl (bl) 8 mm



Icon	Connection	see page
	270.244 M5-male	410
	270.177 M10-male	416
	270.451 G1/4-male	426
	270.452 G1/4-female	431

Item no. 23.026.118.* **Material** Vinyl (bl) 12.5 mm

NEW

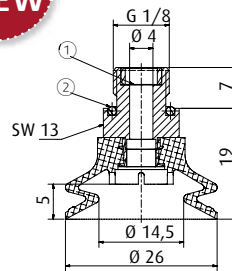


Icon	Connection	see page
	270.500-S M5-female	413
	270.503-S G1/8-male	418

Item no. 23.026.265.* **Material** Varioflex® 60/30° (sw/r) 5 mm

Additional sizes available are found on p. 107.

NEW

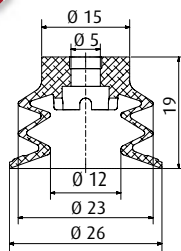


① = Filter screen ② = O-ring

Item no. 22.026.256.* **Material** Varioflex® 60/30° (sw/r) 5 mm

Additional sizes available are found on p. 107.

NEW



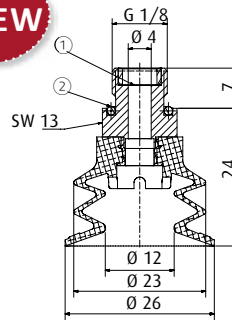
Icon	Connection	see page
	270.500-S M5-female	413
	270.503-S G1/8-male	418

Item no. 21.026.177.* **Material** Varioflex® 60/30° (sw/r) 8 mm

Additional sizes available are found on p. 110.

Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

NEW



① = Filter screen ② = O-ring

Item no. 20.026.148.* **Material** Varioflex® 60/30° (sw/r) 8 mm

Additional sizes available are found on p. 110.

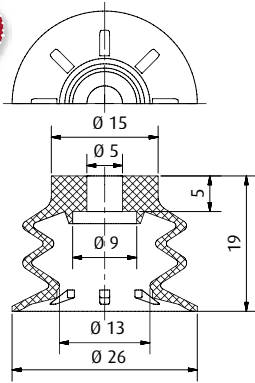
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 26 - 29 mm

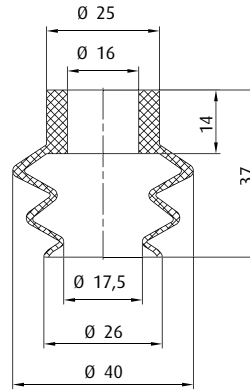
NEW



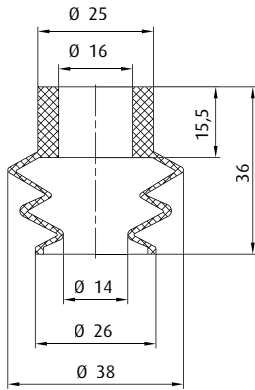
Connection	see page
270.063 G1/8-male	419
270.061 G1/8-female	422

Item no. 21.026.162.* Material NR (br) 9 mm

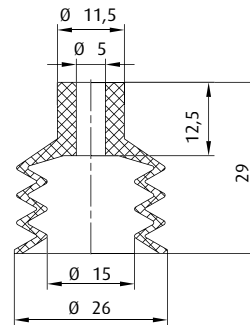
Additional sizes available are found on p. 23.



Item no. 27.026.005.* Material SI (tr) 16 mm

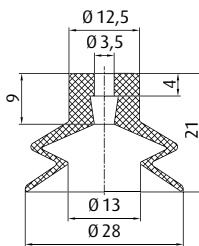


Item no. 27.026.015.* Material SI (tr) 16 mm



Connection	see page
270.013 M5-male	410
270.103 M6-male	413
270.003 G1/8-male	416
270.015 G1/8-female	421
270.194 G1/4-male	425

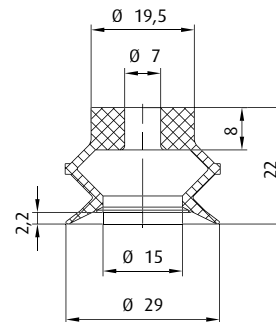
Item no. 25.025.003.* Material SI (tr), NR (sw) 9 mm



Connection	see page
270.134 M5-male	409
270.347 M5-female	412
270.104 M6-male	413
270.033 G1/8-male	416
270.478 G1/8-female	421

Item no. 23.028.113.* Material Vinyl (bl) 9 mm

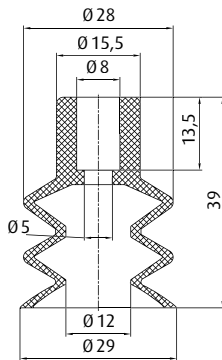
Additional sizes available are found on p. 113.



Connection	see page
270.030 G1/8-male	419
270.019 G1/8-female	423
270.274 G1/4-male	427
270.275 G1/4-female	432

Item no. 23.030.088.* Material NBR (gr), SI (tr), PU (bg) 10 mm

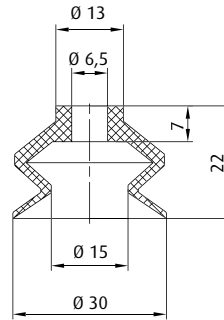
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 21.029.069.* **Material** Vinyl (bl) 10 mm

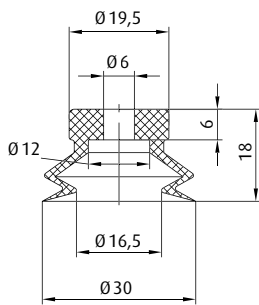
Additional sizes available are found on p. 116.



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 23.030.107.* **Material** Vinyl (bl) 10.5 mm

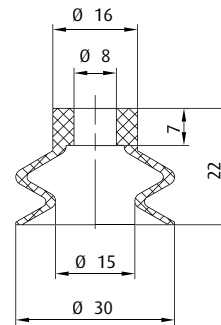
Additional sizes available are found on p. 113.



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

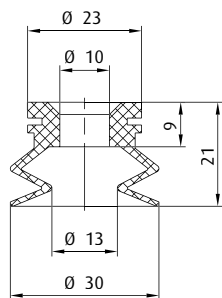
Item no. 23.030.155.* **Material** SI (tr) 4.5 mm

This vacuum cup is also available in the following dimensions: 6 mm, 10 mm, 15 mm, 20 mm



	Connection	see page
270.255	M8-male	415
270.486	G1/8-male	420
270.485	G1/8-female	423
270.487	G1/4-male	429
270.488	G1/4-female	434

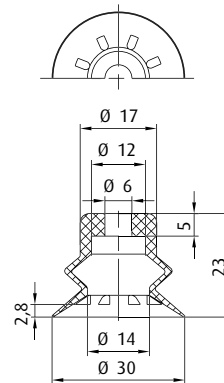
Item no. 23.030.193.* **Material** Vulkollan® (br) 8 mm



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 23.030.230.* **Material** NR (gr) 7 mm

Additional sizes available are found on p. 130.



	Connection	see page
270.460	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

		see page
50.085	6 mm	454
50.128	10 mm	454
50.129	15 mm	454
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 23.030.141.* **Material** NBR (sw), SI (tr) 8 mm

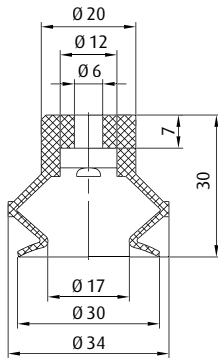
Additional sizes available are found on p. 119.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 30 mm

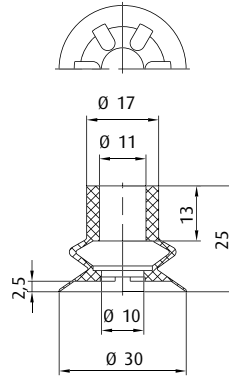


	Connection	see page
270.312/19	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

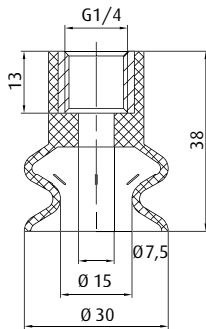
Item no. 23.030.170.* **Material** Vulkollan® (br) 8 mm

Additional sizes available are found on p. 97.



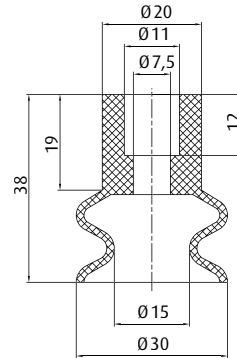
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 23.033.134.* **Material** Vinyl (bl) 10 mm



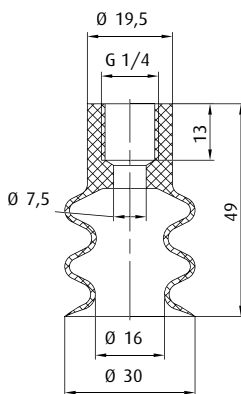
Item no. 22.030.035.* **Material** SI (tr), NR (sw) 16 mm

This vacuum cup is also available in the following dimensions: 40 mm, 44 mm, 50 mm



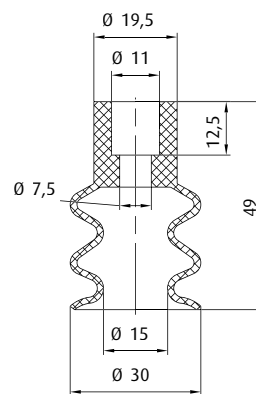
	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 23.030.038.* **Material** NBR (sw), SI (tr) 16 mm



Item no. 20.030.044.* **Material** SI (tr), NR (sw) 19 mm

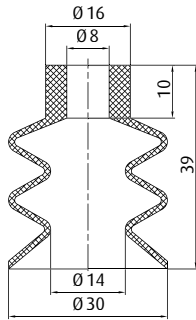
This vacuum cup is also available in the following dimensions: 40 mm, 50 mm



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

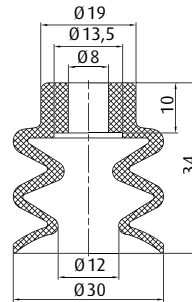
Item no. 21.030.021.* **Material** SI (tr), NR (sw), NR (bg) 18 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



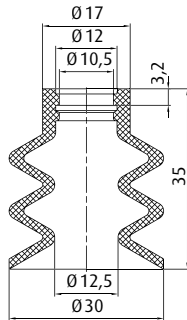
Item no.	Connection	see page
270.315	M6-male	414
270.132	G1/8-male	417
270.114	G1/8-female	422
270.540	G1/4-male	429
270.539	G1/4-female	434

Item no. 21.030.018.* Material NBR (sw), SI (r) 18 mm
 This vacuum cup is also available in the following dimensions: 15 mm, 20 mm



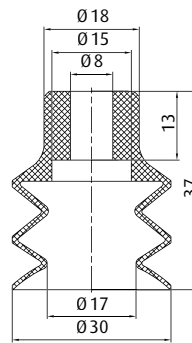
Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

Item no. 21.030.019.* Material NBR (sw), SI (r), NR (bg), PU (bl) 13 mm



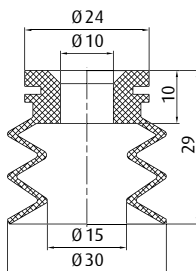
Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 21.030.022.* Material NBR (sw), SI (bl) 14 mm
 This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 24 mm, 40 mm



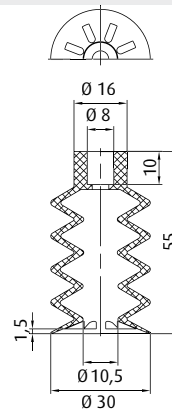
Item no.	Connection	see page
270.315	M6-male	414
270.132	G1/8-male	417
270.114	G1/8-female	422
270.190	G1/4-male	428
270.540	G1/4-male	429
270.192	G1/4-female	432
270.539	G1/4-female	434

Item no. 21.032.091.* Material Vulkollan® (br) 16 mm
 Additional sizes available are found on p. 97.



Item no.	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 21.030.030.* Material SI (tr), NR (bl) 13 mm
 Additional sizes available are found on p. 130.



Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

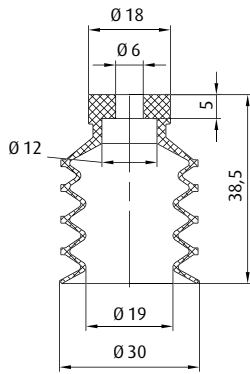
Item no. 25.030.030.* Material NBR (sw), SI (tr) 27 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

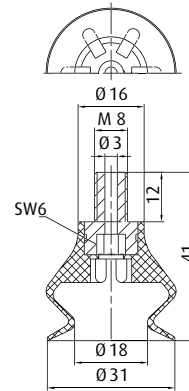
Ø 30 - 31 mm



	Connection	see page
270.460	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

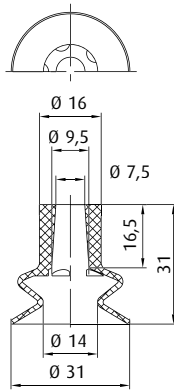
Item no. 25.030.046_* **Material** NBR (sw), SI (tr) 14 mm

Additional sizes available are found on p. 124.



Item no. 22.030.036_* **Material** NBR (sw), SI (tr), NR (sw) 9 mm

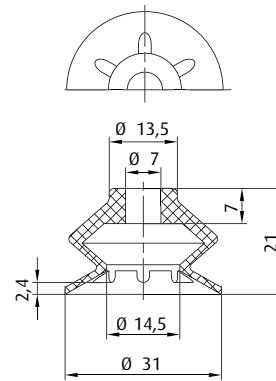
This vacuum cup is also available in the following dimensions: 25 mm, 44 mm



	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.208	G1/4-male	425
270.178	G1/4-female	431

Item no. 23.030.035_* **Material** NBR (sw), SI (r) 11 mm

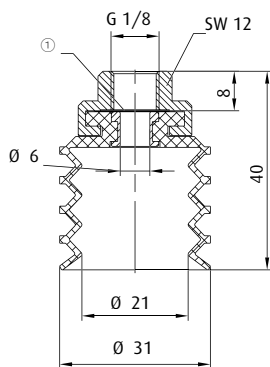
This vacuum cup is also available in the following dimensions: 53 mm, 75 mm



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 23.031.192_* **Material** Vinyl (bl) 6 mm

Additional sizes available are found on p. 113.

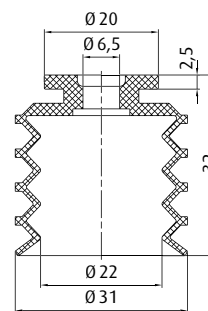


① = Filter screen

Item no. 24.030.039_* **Material** SI (tr), CR (sw) 21 mm

Additional sizes available are found on p. 104.

Spare cup

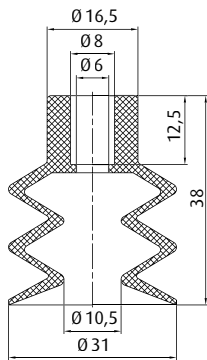


	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434

Item no. 25.030.026_* **Material** SI (tr), CR (sw) 21 mm

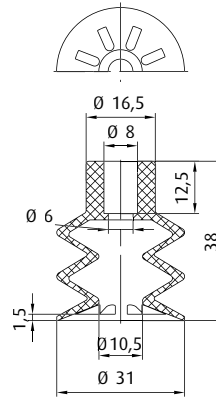
Additional sizes available are found on p. 100.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



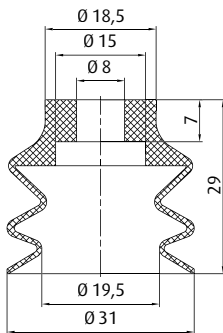
Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 21.030.023.* **Material** NBR (sw), SI (tr), NR (sw) **Height** 15 mm



Item no.	Connection	see page
270.132	G1/8-male	417
270.114	G1/8-female	422
270.043	G1/4-male	425
270.178	G1/4-female	431

Item no. 27.030.006.* **Material** NBR (sw), SI (tr), NR (sw) **Height** 15 mm

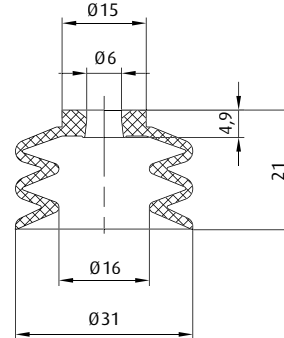


Item no.	Connection	see page
270.255	M8-male	415
270.486	G1/8-male	420
270.485	G1/8-female	423
270.487	G1/4-male	429
270.488	G1/4-female	434

WEAR-RESISTANT

Item no. 21.030.076.* **Material** Vulkollan® (br) **Height** 14 mm

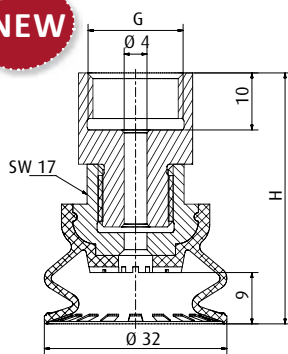
Additional sizes available are found on p. 97.



Item no.	Connection	see page
270.460	M6-male	414
270.482	G1/8-male	420
270.481	G1/8-female	423
270.483	G1/4-male	429
270.484	G1/4-female	433

Item no. 21.031.048.* **Material** SI (tr), NR (sw) **Height** 6 mm

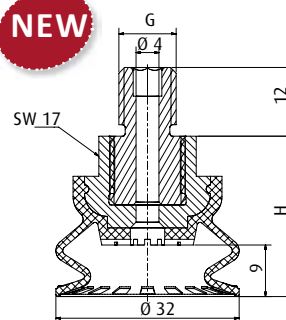
NEW



Item no.	Material	Height [mm]	Connection thread	H [mm]
22.030.172.*	NBR (bl)	9	G1/4-female	28
22.030.173.*	NBR (bl)	9	G3/8-female	44

Additional sizes available are found on p. 133.

NEW



Item no.	Material	Height [mm]	Connection thread	H [mm]
22.030.171.*	NBR (bl)	9	G1/4-male	28
22.030.174.*	NBR (bl)	9	M10-male	28
22.030.175.*	NBR (bl)	9	M14x1.5-male	29

Additional sizes available are found on p. 133.

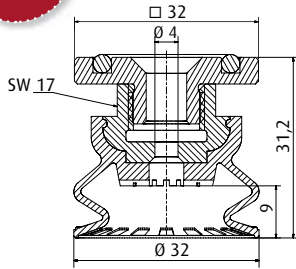
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

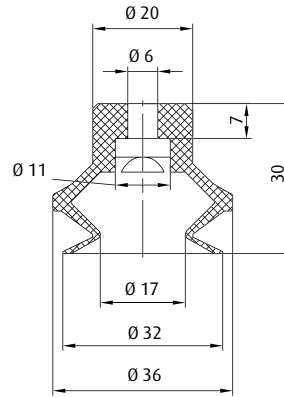
Ø 32 mm

NEW



Item no. 22.030.176._*	Material NBR (bl)	9 mm
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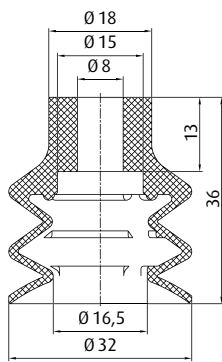
Additional sizes available are found on p. 133.



	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423
270.274	G1/4-male	427
270.275	G1/4-female	432

Item no. 23.030.125._*	Material NBR (sw), HNBR (ge), SI (tr), PU (bl)	9 mm
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Additional sizes available are found on p. 86.
This vacuum cup is also available in the following dimensions: 11 mm, 15 mm, 21 mm, 42 mm, 54 mm

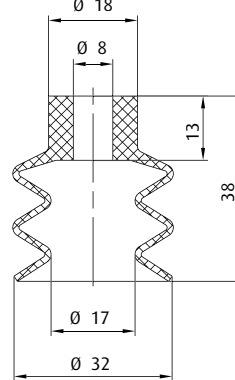


	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

BESTSELLER

Item no. 21.032.075._*	Material NBR (sw), HNBR (ge), SI (tr), NR (gr), PU (bl)	13 mm
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Additional sizes available are found on p. 89.

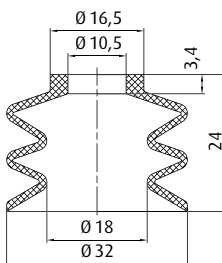


	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

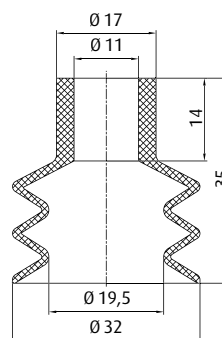
Item no. 21.032.154._*	Material Thermalon® (bl)	14.5 mm
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Additional sizes available are found on p. 92.



	Connection	see page
270.521	M5-male	412
270.254	M6-male	415
270.256	M8-male	415

Item no. 21.032.067._*	Material Vinyl (bl)	10 mm
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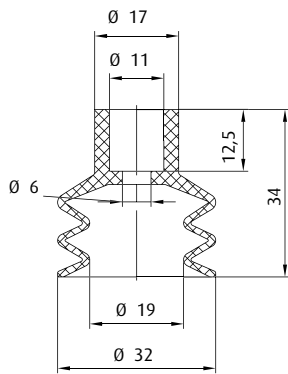


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 21.032.082._*	Material Vinyl (bl)	14 mm
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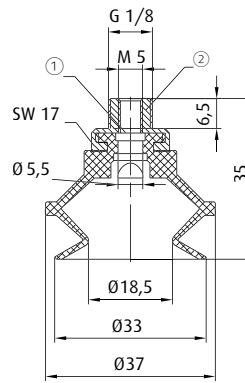
Additional sizes available are found on p. 116.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

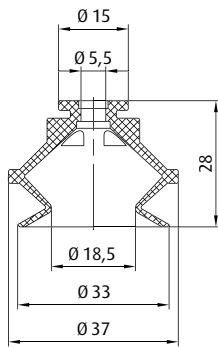
Item no. 21.032.081.* **Material** NR (sw) 13 mm



① = Filter screen ② = Aluminium

Item no. 22.030.033.* **Material** Tepuflex® (or), SI (tr), CR (sw) 9 mm

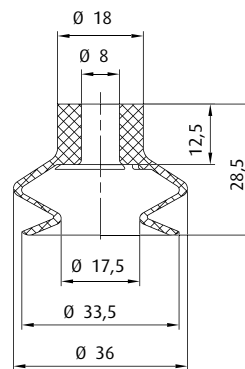
Additional sizes available are found on p. 104.



	Connection	see page
270.500-S	M5-female	413
270.250	G1/8-male	418
270.503-S	G1/8-male	418

Item no. 23.030.037.* **Material** Tepuflex® (or), SI (tr), CR (sw) 9 mm

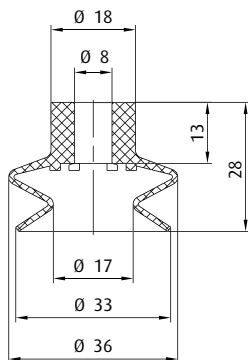
Additional sizes available are found on p. 100.



	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

Item no. 23.033.039.* **Material** NBR (sw), SI (tr), NR (gr) 12 mm

Additional sizes available are found on p. 81.

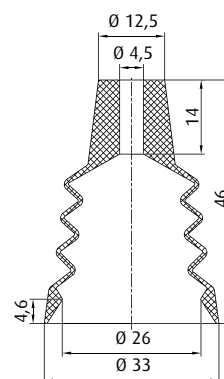


	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

Item no. 23.033.241.* **Material** Thermalon® (bl) 11 mm

Additional sizes available are found on p. 84.



	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

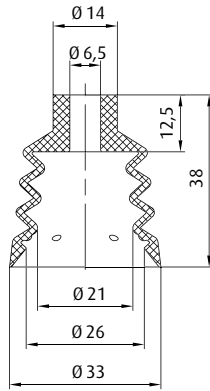
Item no. 27.033.017.* **Material** SI (tr) 25 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

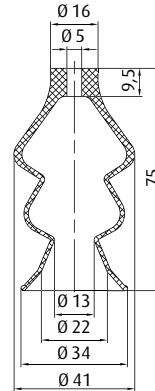
Ø 33 - 35 mm



Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425
	G1/4-female	431

Item no. 27.033.008.* **Material** SI (tr) 16 mm

Additional sizes available are found on p. 129.

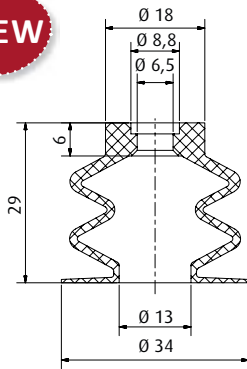


Icon	Connection	see page
	M5-male	410
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

Item no. 27.034.023.* **Material** SI (r) 39 mm

Additional sizes available are found on p. 129.

NEW

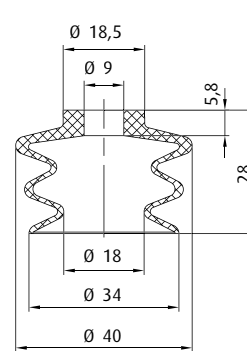


Icon	Connection	see page
	M6-male	414

IDEAL FOR WAFERS

Item no. 21.034.179.* **Material** SI (tr) 12 mm

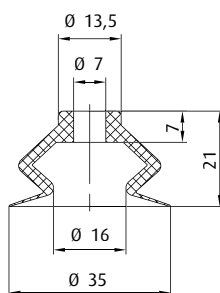
Additional sizes available are found on p. 126.



Icon	Connection	see page
	G1/8-male	420
	G1/8-female	423
	G1/4-male	429
	G1/4-female	433

Item no. 27.034.003.* **Material** Vulkollan® (br) 18 mm

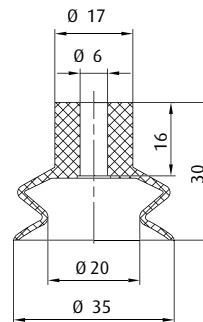
Additional sizes available are found on p. 129.



Icon	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	423
	G1/4-male	429
	G1/4-female	433

Item no. 23.035.106.* **Material** Vinyl (bl) 14 mm

Additional sizes available are found on p. 113.



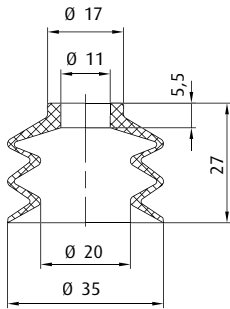
Icon	Connection	see page
	M5-male	410
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425

BESTSELLER

Item no. 23.035.111.* **Material** Vinyl (bl) 12 mm

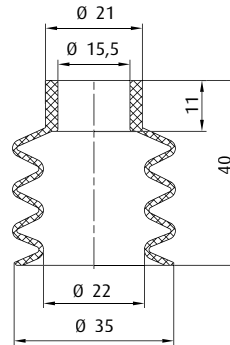
Additional sizes available are found on p. 113.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

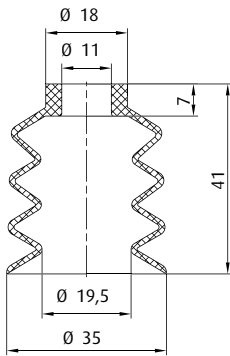


Connection	see page
270.313 M8-male	415
270.177 M10-male	416
270.183 G1/4-male	431
270.182 G1/4-female	434

Item no. 21.035.080.* **Material** Vinyl (bl) 13 mm

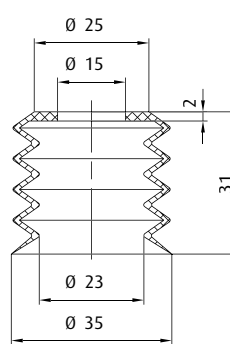


Item no. 25.035.011.* **Material** NR (sw), SI (tr) 20 mm



Connection	see page
270.313 M8-male	415
270.177 M10-male	416
270.451 G1/4-male	426
270.452 G1/4-female	431

Item no. 25.036.040.* **Material** Vinyl (bl) 20 mm

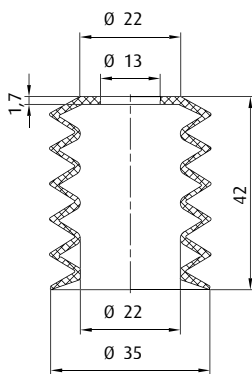


Connection	see page
270.419 Without Thread	441

DETECTABLE

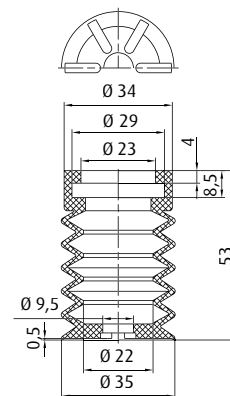
Item no. 25.035.069.* **Material** SI (r) 25 mm

Additional sizes available are found on p. 128.



Connection	see page
270.419 Without Thread	441
270.183 G1/4-male	431
270.182 G1/4-female	434

Item no. 25.035.010.* **Material** SI (tr), NR (sw) 26.5 mm



Connection	see page
270.235 G1/8-female	438

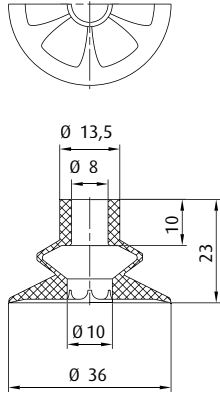
Item no. 270.235 **Material** Vinyl (bl) 22 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



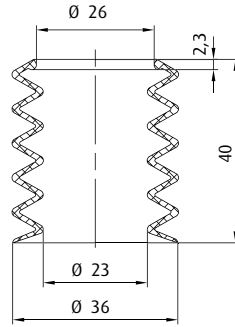
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 36 - 37 mm



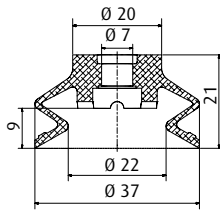
	Connection	see page
270.093	G1/8-male	421
270.092	G1/8-female	424
270.249	G1/4-male	427
270.248	G1/4-female	433

Item no. 27.036.011.* **Material** SI (tr), NR (sw) 7 mm



Item no. 25.036.072.* **Material** SI (tr) 24 mm

NEW

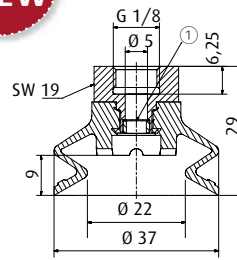


	Connection	see page
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434

Item no. 23.037.266.* **Material** Varioflex® 60/30° (sw/r) 9 mm

Additional sizes available are found on p. 107.

NEW



① = Filter screen

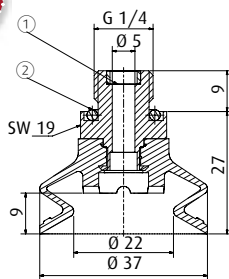
Item no. 22.037.257.* **Material** Varioflex® 60/30° (sw/r) 9 mm

Additional sizes available are found on p. 107.

Spare cup

Spare cup

NEW



① = Filter screen ② = O-ring

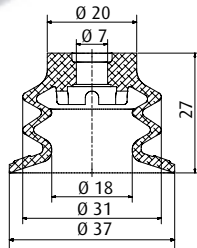
Item no. 22.037.258.* **Material** Varioflex® 60/30° (sw/r) 9 mm

Additional sizes available are found on p. 107.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



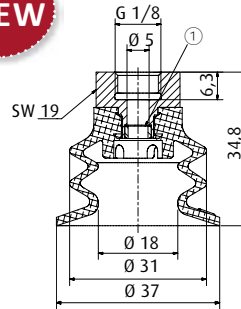
NEW



	Connection	see page
	270.501-S G1/8-female	424
	270.506-S G1/4-male	428
	270.505-S G3/8-male	434

Spare cup

NEW



① = Filter screen

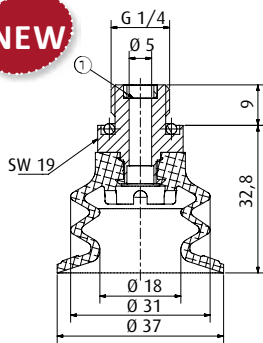
Item no. 21.037.177.* **Material** Varioflex® 60/30° (sw/r) 14 mm

Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

Item no. 20.037.149.* **Material** Varioflex® 60/30° (sw/r) 14 mm

Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

NEW

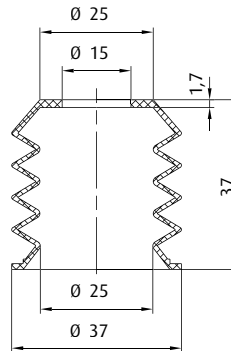


① = Filter screen

Item no. 20.037.150.* **Material** Varioflex® 60/30° (sw/r) 14 mm

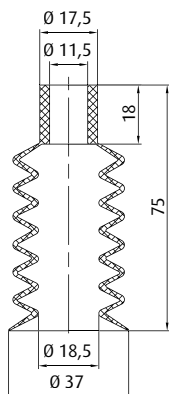
Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

	Connection	see page
	270.419 Without Thread	441
	270.183 G1/4-male	431
	270.182 G1/4-female	434



Item no. 25.037.012.* **Material** SI (bl) 19 mm

Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code



	Connection	see page
	270.177 M10-male	416
	270.451 G1/4-male	426
	270.452 G1/4-female	431

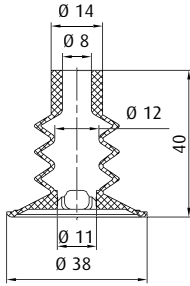
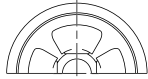
Item no. 25.038.039.* **Material** Vinyl (bl) 35 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



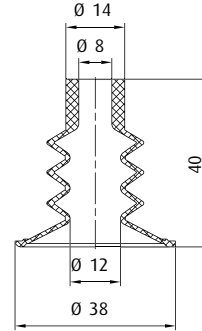
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 38 - 39 mm



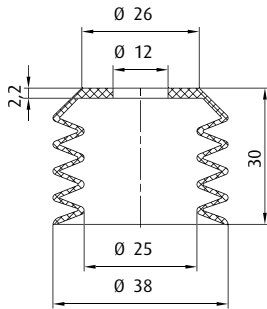
	Connection	see page
270.112	G1/8-male	419
270.114	G1/8-female	422
270.113	G1/4-male	425
270.178	G1/4-female	431

Item no. 27.038.012.* **Material** SI (tr), NR (br) 16 mm



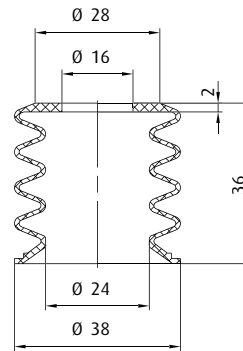
	Connection	see page
270.315	M6-male	414
270.112	G1/8-male	419
270.114	G1/8-female	422
270.113	G1/4-male	425
270.178	G1/4-female	431

Item no. 27.038.020.* **Material** SI (tr) 16 mm



	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

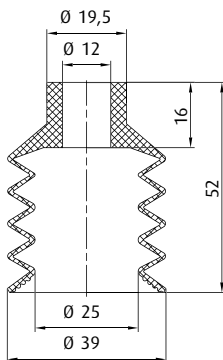
Item no. 25.038.014.* **Material** SI (tr) 18 mm



	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

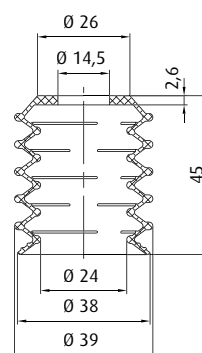
Item no. 25.038.016.* **Material** SI (tr) 24 mm

Additional sizes available are found on p. 126.



	Connection	see page
270.049-1	G1/4-male	426

Item no. 25.038.015.* **Material** NBR (sw), SI (tr) 23 mm

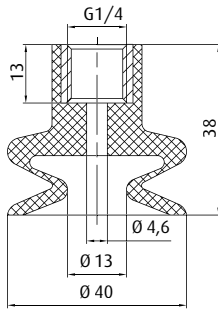


	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

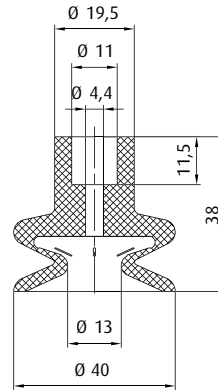
Item no. 27.039.017.* **Material** SI (tr) 20 mm

Additional sizes available are found on p. 126.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

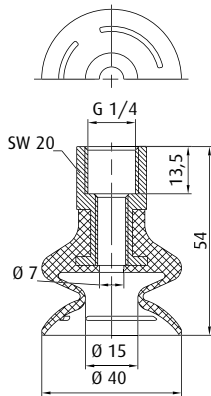


Item no. 22.040.046.* **Material** SI (tr), NR (sw) 7 mm
This vacuum cup is also available in the following dimensions: 30 mm, 44 mm, 50 mm

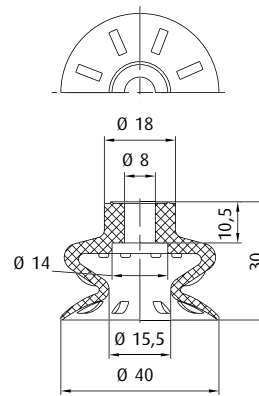


Item no. 23.040.044.* **Material** SI (tr), NR (sw) 7 mm

	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431



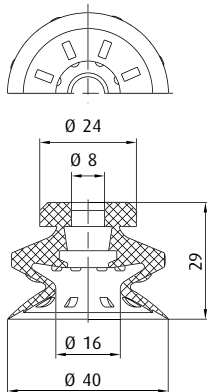
Item no. 22.040.048.* **Material** NBR (sw), SI (tr) 12 mm



Item no. 23.040.042.* **Material** NBR (sw), SI (r), NR (bg) 13 mm

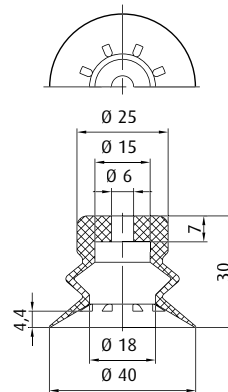
	Connection	see page
	G1/8-male	421
	G1/8-female	424
	G1/4-male	427
	G1/4-female	433

This vacuum cup is also available in the following dimensions: 14 mm, 24 mm, 60 mm



Item no. 23.040.223.* **Material** NR (br) 7 mm

	Connection	see page
	G1/4-male	425
	G1/4-female	431



Item no. 23.040.142.* **Material** NBR (sw), SI (tr) 9.5 mm

	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	423
	G1/4-male	429
	G1/4-female	434

		see page
	20 mm	456
	30 mm	456
	40 mm	456
	50 mm	456

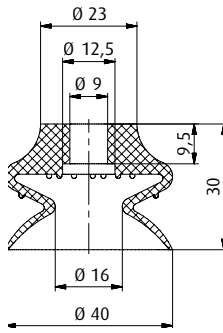
Additional sizes available are found on p. 119.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



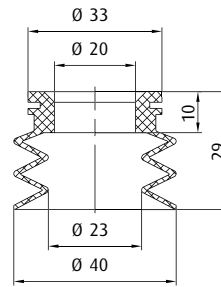
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 40 mm



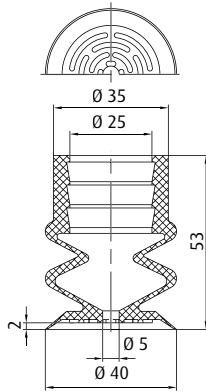
	Connection	see page
270.315	M6-male	414
270.540	G1/4-male	429
270.539	G1/4-female	434

Item no. 23.040.176.*	Material Vulkollan® (br)	12 mm
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Item no. 21.040.132.*	Material SI (tr), SI (bl)	11 mm
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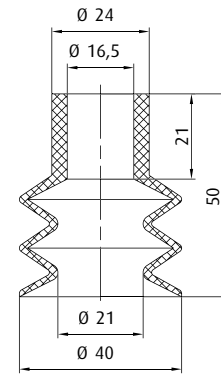
Additional sizes available are found on p. 130.



	Connection	see page
270.438	G1/4-male	427
270.442	G3/8-male	435

Item no. 21.040.141.*	Material NR (bg)	18 mm
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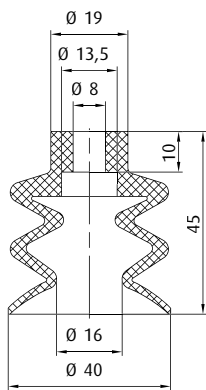
Additional sizes available are found on p. 23.



	Connection	see page
270.116	G1/4-female	432

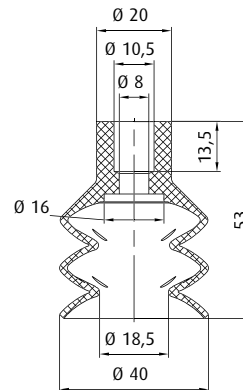
Item no. 21.040.024.*	Material NBR (sw), SI (tr)	18 mm
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This vacuum cup is also available in the following dimensions: 60 mm



	Connection	see page
270.093	G1/8-male	421
270.092	G1/8-female	424
270.249	G1/4-male	427
270.248	G1/4-female	433

Item no. 21.040.025.*	Material NBR (sw), SI (r), NR (bg), PU (bl)	20 mm
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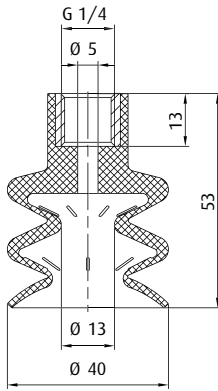


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 21.040.027.*	Material NBR (sw), SI (tr), NR (br), Vinyl (bl)	16 mm
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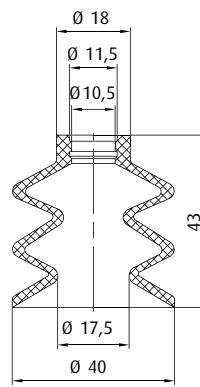
Additional sizes available are found on p. 116.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no. 20.040.054.* **Material** NBR (sw), SI (tr), NR (sw), NR (bg) 16 mm

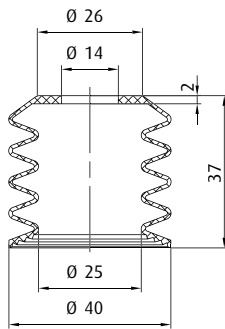
This vacuum cup is also available in the following dimensions: 30 mm, 50 mm



Item no. 21.040.028.* **Material** NBR (sw), SI (bl) 20 mm

This vacuum cup is also available in the following dimensions: 10 mm, 15 mm, 18 mm, 24 mm, 30 mm

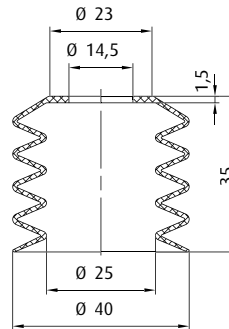
	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432



	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

Item no. 25.040.043.* **Material** SI (tr) 24 mm

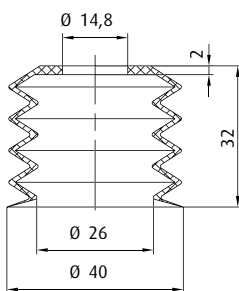
Additional sizes available are found on p. 126.



	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

Item no. 25.040.058.* **Material** SI (bl) 25 mm

Additional sizes available are found on p. 126.

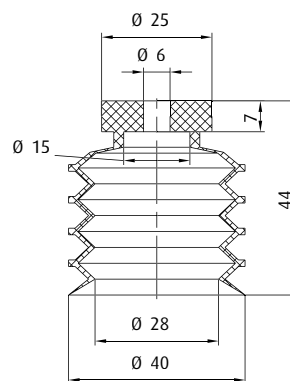


	Connection	see page
270.419	Without Thread	441

DETECTABLE

Item no. 25.040.066.* **Material** SI (br), SI (bl) 28 mm

Additional sizes available are found on p. 128.



	Connection	see page
270.486	G1/8-male	420
270.485	G1/8-female	423
270.487	G1/4-male	429
270.488	G1/4-female	434

Item no. 25.040.047.* **Material** NBR (sw), SI (tr) 19 mm

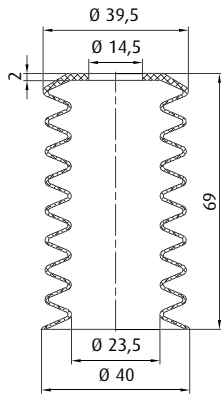
Additional sizes available are found on p. 124.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



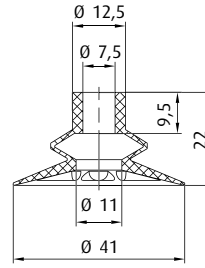
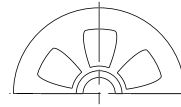
Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 40 - 42 mm



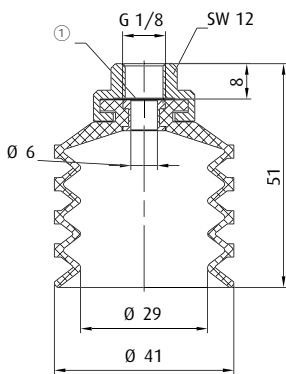
Item no.	Connection	see page
270.419	Without Thread	441
270.183	G1/4-male	431
270.182	G1/4-female	434

Item no. 25.040.019.*	Material SI (tr)	40 mm
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Item no.	Connection	see page
270.093	G1/8-male	421
270.092	G1/8-female	424
270.249	G1/4-male	427
270.248	G1/4-female	433

Item no. 23.040.084.*	Material NBR (sw), SI (tr)	9 mm
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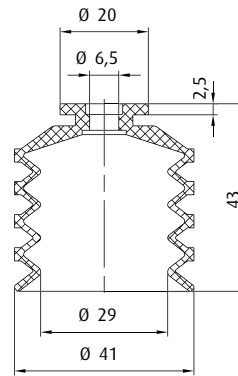


① = Filter screen

Item no. 24.040.074.*	Material SI (tr), CR (sw)	20 mm
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Additional sizes available are found on p. 104.

Spare cup

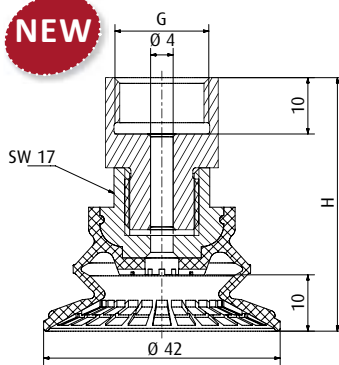


Item no.	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434

Item no. 25.040.027.*	Material SI (tr), CR (sw)	20 mm
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Additional sizes available are found on p. 100.

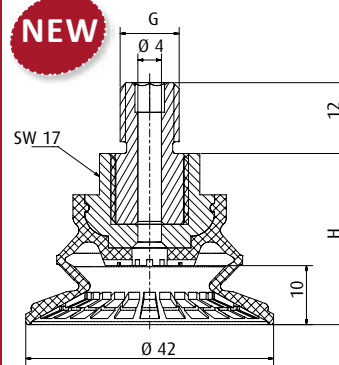
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.040.178.*	NBR (bl)	10	G1/4-female	29
22.040.179.*	NBR (bl)	10	G3/8-female	29

Additional sizes available are found on p. 133.

NEW



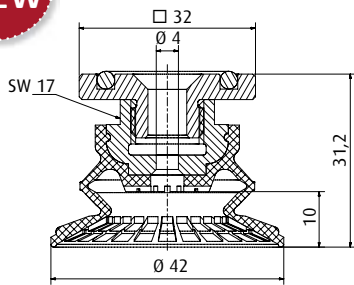
Item no.	Material	[mm]	Connection thread	H [mm]
22.040.177.*	NBR (bl)	10	G1/4-male	29
22.040.180.*	NBR (bl)	10	M10-male	29
22.040.181.*	NBR (bl)	10	M14x1.5-male	29

Additional sizes available are found on p. 133.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

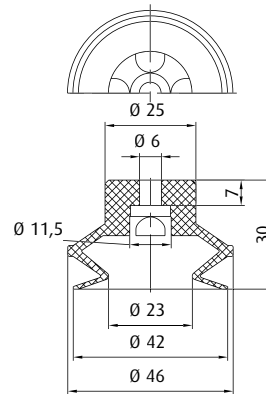


NEW



Item no. 22.040.182.* **Material** NBR (bl) 10 mm

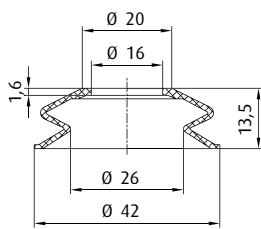
Additional sizes available are found on p. 133.



	Connection	see page
	M6-male	414
	G1/8-male	419
	G1/8-female	423
	G1/4-male	427
	G1/4-female	432

Item no. 23.040.126.* **Material** NBR (sw), SI (tr), PU (bl) 10 mm

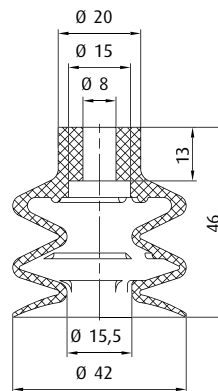
This vacuum cup is also available in the following dimensions: 11 mm, 15 mm, 21 mm, 32 mm, 54 mm



	Connection	see page
	Without Thread	441
	G1/4-male	431
	G1/4-female	434

Item no. 23.042.048.* **Material** SI (tr), NR (sw), NR (br) 11 mm

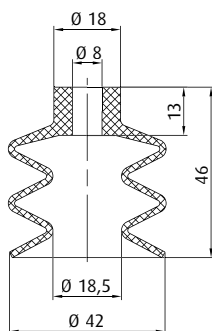
This vacuum cup is also available in the following dimensions: 47 mm



	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	422
	G1/4-male	428
	G1/4-female	432

Item no. 21.043.049.* **Material** NBR (sw), HNBR (ge), SI (tr), NR (gr) 19 mm

Additional sizes available are found on p. 89.



	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	422
	G1/4-male	428
	G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

Item no. 21.042.155.* **Material** Thermalon® (bl) 22 mm

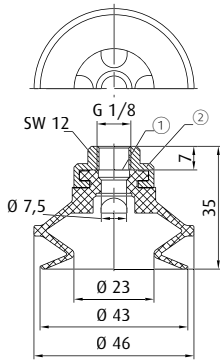
Additional sizes available are found on p. 92.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

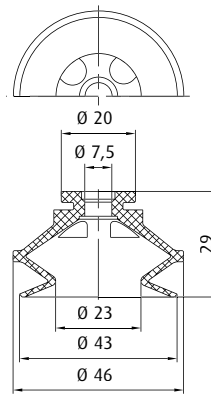
Ø 43 - 44 mm



① = Filter screen ② = Aluminium

Item no. 22.040.045.*	Material Tepuflex® (or), SI (tr), CR (sw)	9 mm
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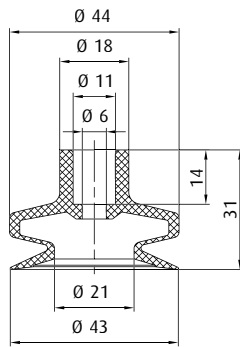
Additional sizes available are found on p. 104.



Item no. 23.040.045.*	Material Tepuflex® (or), SI (tr), CR (sw)	9 mm
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Additional sizes available are found on p. 100.

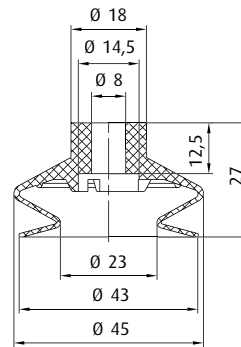
	Connection	see page
270.251	G1/8-female	423
270.501-S	G1/8-female	424
270.506-S	G1/4-male	428
270.505-S	G3/8-male	434



	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no. 23.042.049.*	Material SI (tr), NR (sw)	14 mm
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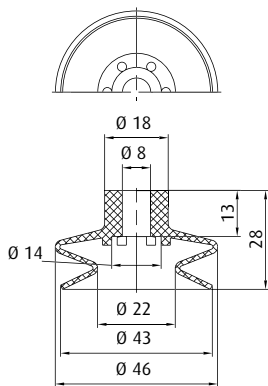
Additional sizes available are found on p. 104.



	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

Item no. 23.043.096.*	Material NBR (sw), HNBR (ge), SI (tr), NR (gr)	12 mm
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Additional sizes available are found on p. 81.

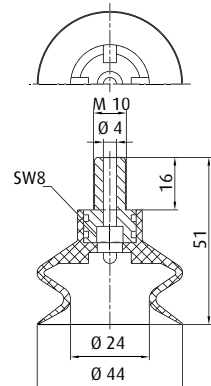


	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

Item no. 23.043.242.*	Material Thermalon® (bl)	12.5 mm
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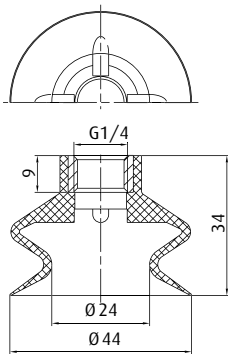
Additional sizes available are found on p. 84.



Item no. 22.044.054.*	Material SI (tr), NR (sw)	14 mm
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This vacuum cup is also available in the following dimensions: 25 mm, 31 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

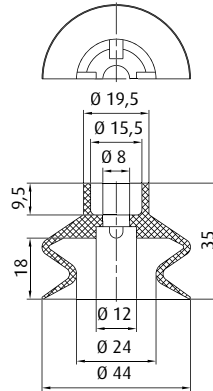


Item no.
22.044.034.*

Material
SI (tr), NR (sw)

15 mm

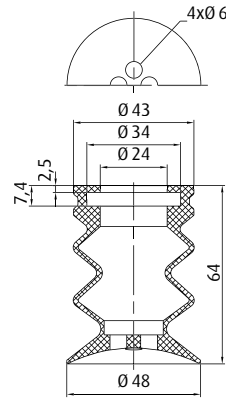
This vacuum cup is also available in the following dimensions: 30 mm, 40 mm, 50 mm



Item no.
23.044.091.*

Material
SI (tr)

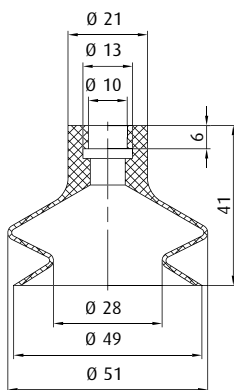
15 mm



Item no.
25.048.056.*

Material
SI (tr)

25 mm

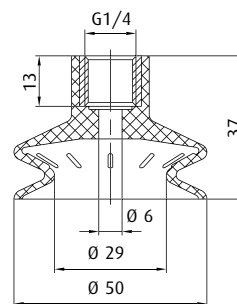


	Connection	see page
270.213	G1/4-male	428
270.356	G1/4-female	433

Item no.
23.049.199.*

Material
Vulkollan® (br)

20 mm



Item no.
22.050.058.*

Material
SI (tr), NR (br), NBR (sw)

12 mm

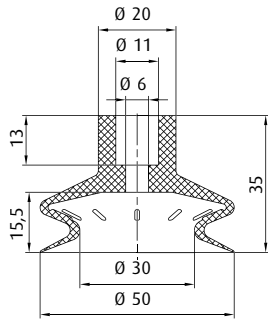
This vacuum cup is also available in the following dimensions: 30 mm, 40 mm, 44 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 50 mm

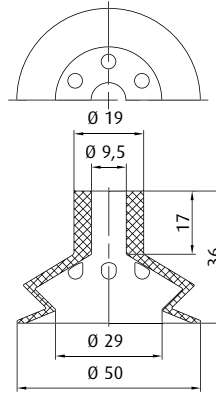


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
23.050.061._*

Material
SI (tr), NR (sw)

10 mm

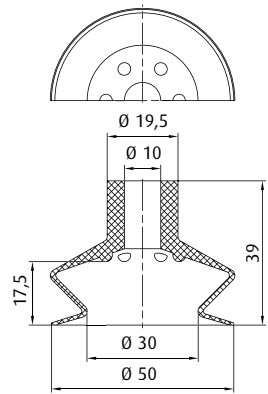


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

Item no.
23.050.135._*

Material
NBR (sw)

10 mm

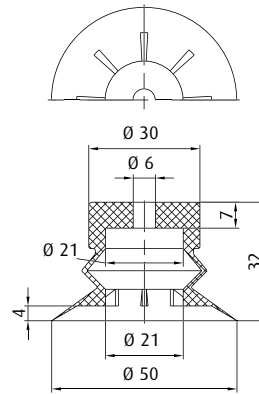


	Connection	see page
270.177	M10-male	416
270.044	G1/4-male	426
270.452	G1/4-female	431

Item no.
23.050.188._*

Material
NR (sw)

20 mm



	Connection	see page
270.499	M6-male	414
270.490	G1/8-male	420
270.489	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

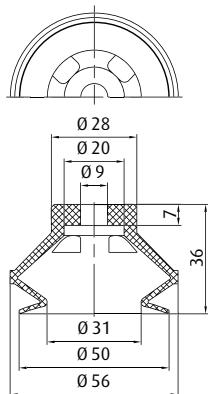
		see page
50.174	20 mm	456
50.175	30 mm	456
50.176	40 mm	456
50.177	50 mm	456

Item no.
23.050.143._*

Material
NBR (sw), SI (tr)

11 mm

Additional sizes available are found on p. 119.



	Connection	see page
270.314	M6-male	415
270.490	G1/8-male	420
270.489	G1/8-female	423
270.491	G1/4-male	429
270.492	G1/4-female	434

		see page
50.174	20 mm	456
50.175	30 mm	456
50.176	40 mm	456
50.177	50 mm	456

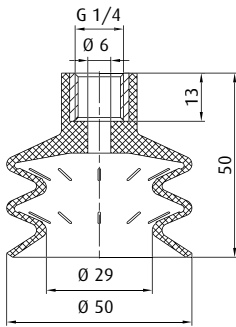
Item no.
23.050.171._*

Material
Vulkollan® (br)

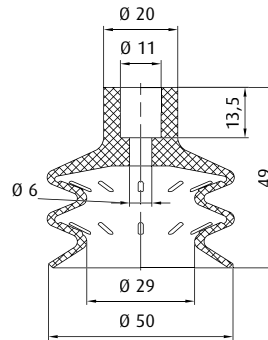
10 mm

Additional sizes available are found on p. 97.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

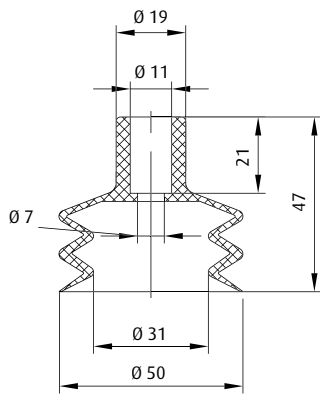


Item no. 20.050.064._* **Material** SI (tr), NR (sw), NR (bg) 18 mm
This vacuum cup is also available in the following dimensions: 30 mm, 40 mm



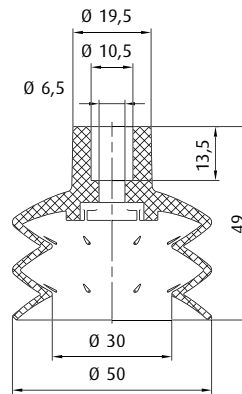
Item no. 21.050.031._* **Material** NBR (sw), SI (tr), NR (sw), NR (br), PU (tr) 18 mm

	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431



	Connection	see page
	G1/4-male	426
	G1/4-female	431

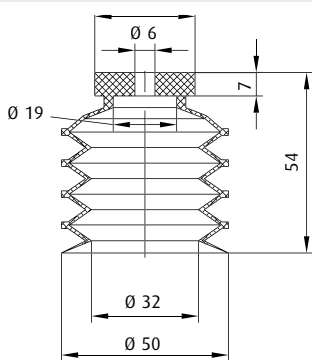
Item no. 21.050.065._* **Material** Vinyl (bl) 25 mm



	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431

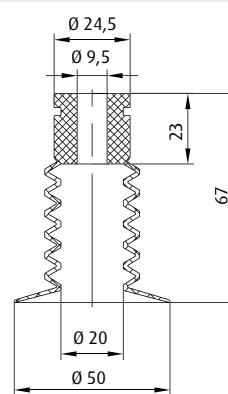
Item no. 21.050.084._* **Material** Vinyl (bl) 20 mm

Additional sizes available are found on p. 116.



	Connection	see page
	G1/8-male	420
	G1/8-female	423
	G1/4-male	429
	G1/4-female	434

Item no. 25.050.048._* **Material** NBR (sw), SI (tr) 26 mm
Additional sizes available are found on p. 124.



	Connection	see page
	M10-male	416
	G1/8-male	417
	G1/4-male	426
	G1/4-female	431

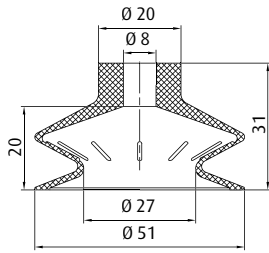
Item no. 25.050.054._* **Material** NBR (sw), SI (tr) 29 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 51 mm

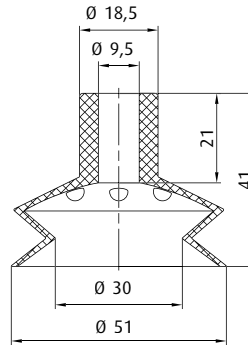


Icon	Connection	see page
	M6-male	414
	G1/8-male	421
	G1/8-female	424
	G1/4-male	427
	G1/4-female	433

Item no.
23.050.029_*

Material
SI (tr), NR (sw)

10 mm



Icon	Connection	see page
	G1/8-male	417
	G1/4-male	425
	G1/4-female	431

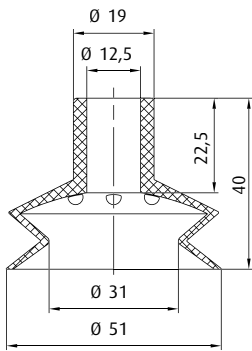
BESTSELLER

Item no.
23.052.116_*

Material
Vinyl (bl)

6 mm

Additional sizes available are found on p. 113.

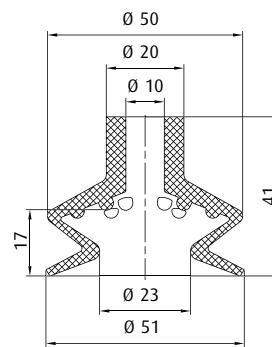


Icon	Connection	see page
	G1/4-male	426

Item no.
23.052.117_*

Material
SI (tr), Vinyl (bl)

6 mm

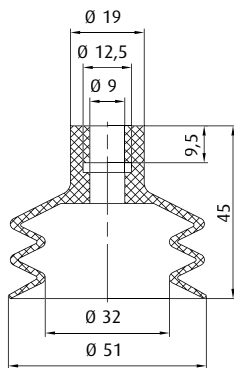


Icon	Connection	see page
	M10-male	416
	G1/4-male	426
	G1/4-female	431

Item no.
23.050.056_*

Material
NBR (sw), SI (tr), NR (sw)

11 mm



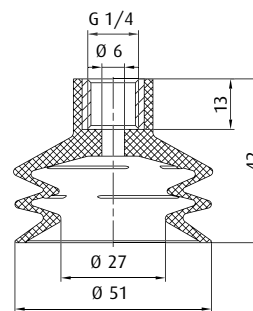
Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	427
	G1/4-female	432

Item no.
21.051.097_*

Material
Vulkollan® (br)

18 mm

Additional sizes available are found on p. 97.

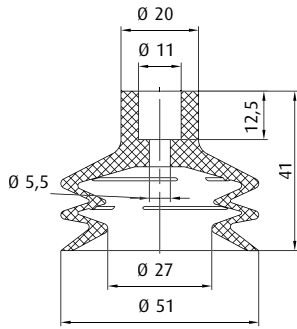


Item no.
20.050.065_*

Material
SI (tr), NR (sw)

8 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

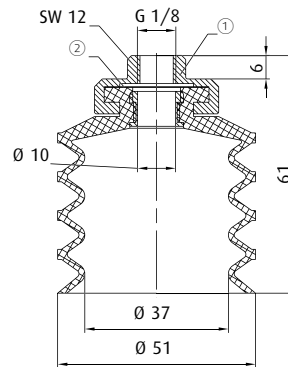


Connection	see page
270.177 M10-male	416
270.451 G1/4-male	426
270.452 G1/4-female	431

Item no.
21.050.032.*

Material
NBR (sw), SI (tr), NR (sw),
NR (br)

8 mm



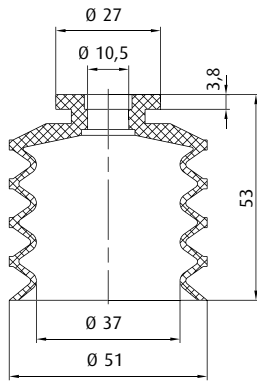
① = Filter screen ② = Aluminium

Item no.
24.050.087.*

Material
SI (tr), CR (sw)

30 mm

Additional sizes available are found on p. 104.



Connection	see page
270.252 G1/8-female	424
270.502-S G1/8-female	424
270.504-S G1/4-male	429
270.507-S G3/8-male	435

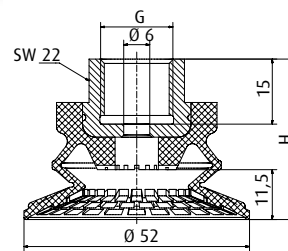
Item no.
25.050.028.*

Material
SI (tr), CR (sw)

25 mm

Additional sizes available are found on p. 100.

NEW



Item no.

Material

[mm]

Connection thread

H [mm]

22.050.184.*

NBR (bl)

11.5

G1/4-female

42

22.050.185.*

NBR (bl)

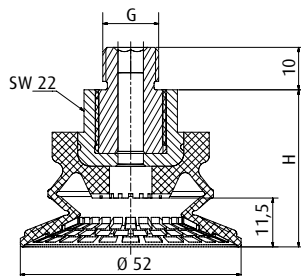
11.5

G3/8-female

37

Additional sizes available are found on p. 133.

NEW



Item no.

Material

[mm]

Connection thread

H [mm]

22.050.183.*

NBR (bl)

11.5

G1/4-male

37

22.050.186.*

NBR (bl)

11.5

M10-male

37

22.050.187.*

NBR (bl)

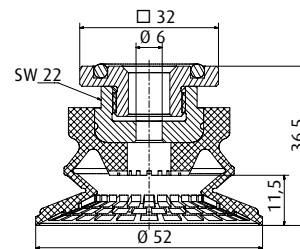
11.5

M14x1.5-male

37

Additional sizes available are found on p. 133.

NEW



Item no.
22.050.188.*

Material
NBR (bl)

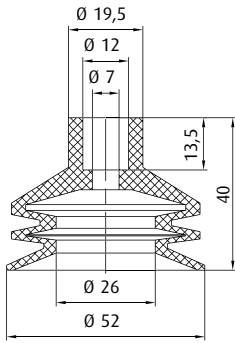
11.5 mm

Additional sizes available are found on p. 133.



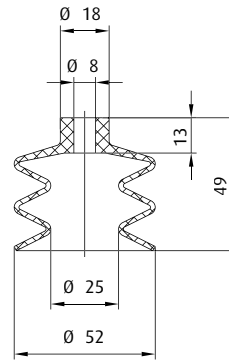
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 52 - 53 mm



Icon	Connection	see page
	G1/4-male	426

Item no. 21.052.033.* **Material** NBR (sw) 12 mm

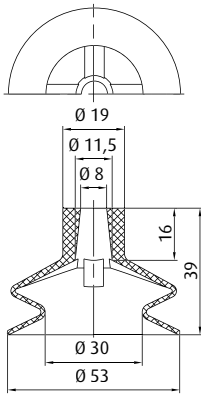


Icon	Connection	see page
	M6-male	414
	G1/8-male	420
	G1/8-female	422
	G1/4-male	428
	G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

Item no. 21.052.156.* **Material** Thermalon® (bl) 27 mm

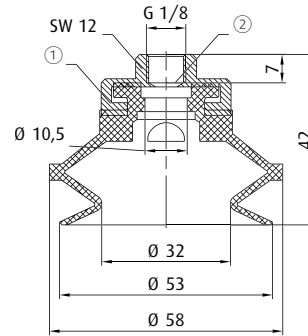
Additional sizes available are found on p. 92.



Icon	Connection	see page
	G1/8-male	417
	G1/8-female	422
	G1/4-male	425
	G1/4-female	432

Item no. 23.055.058.* **Material** NBR (sw), SI (r) 11 mm

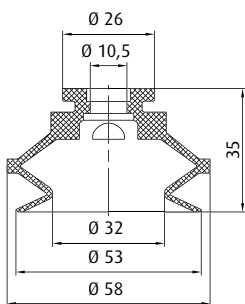
This vacuum cup is also available in the following dimensions: 31 mm, 75 mm



① = Filter screen ② = Aluminium

Item no. 22.050.056.* **Material** Tepuflex® (or), SI (tr), CR (sw) 12 mm

Additional sizes available are found on p. 104.



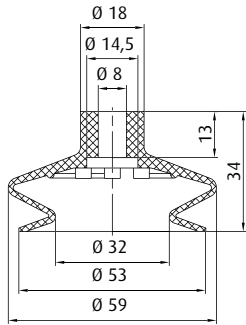
Icon	Connection	see page
	G1/8-female	424
	G1/8-female-S	424
	G1/4-male-S	429
	G3/8-male-S	435

Item no. 23.050.054.* **Material** Tepuflex® (or), SI (tr), CR (sw) 12 mm

Additional sizes available are found on p. 100.

Spare cup

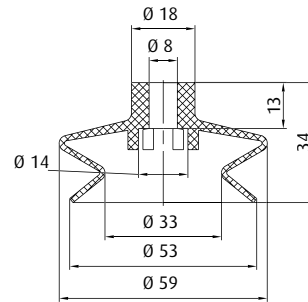
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Connection	see page
270.315 M6-male	414
270.196 G1/8-male	420
270.114 G1/8-female	422
270.190 G1/4-male	428
270.192 G1/4-female	432

Item no. 23.053.033. * **Material** NBR (sw), SI (tr), NR (gr) 11 mm

Additional sizes available are found on p. 81.



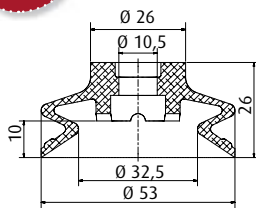
Connection	see page
270.315 M6-male	414
270.196 G1/8-male	420
270.114 G1/8-female	422
270.190 G1/4-male	428
270.192 G1/4-female	432

UP TO 160 °C & MINIMUM MARKING

Item no. 23.053.243. * **Material** Thermalon® (bl) 15 mm

Additional sizes available are found on p. 84.

NEW

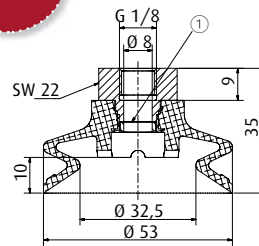


Connection	see page
270.502-S G1/8-female	424
270.504-S G1/4-male	429
270.507-S G3/8-male	435

Item no. 23.053.267. * **Material** Varioflex® 60/30° (sw/r) 10 mm

Additional sizes available are found on p. 107.

NEW



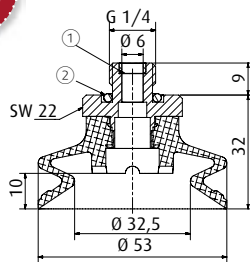
① = Filter screen

Item no. 22.053.259. * **Material** Varioflex® 60/30° (sw/r) 10 mm

Additional sizes available are found on p. 107.

Spare cup

NEW

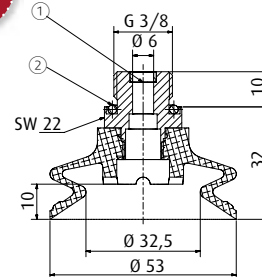


① = Filter screen ② = O-ring

Item no. 22.053.260. * **Material** Varioflex® 60/30° (sw/r) 10 mm

Additional sizes available are found on p. 107.

NEW



① = Filter screen ② = O-ring

Item no. 22.053.261. * **Material** Varioflex® 60/30° (sw/r) 10 mm

Additional sizes available are found on p. 107.

Spare cup

Spare cup

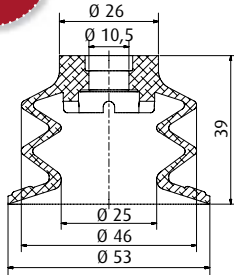
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

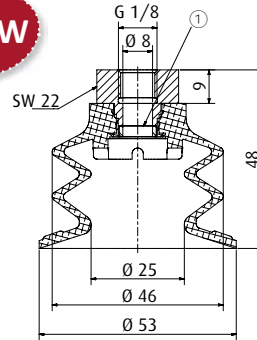
Ø 53 - 56 mm

NEW



Connection	see page
270.502-S G1/8-female	424
270.504-S G1/4-male	429
270.507-S G3/8-male	435

NEW



① = Filter screen

Item no. 21.053.178.* Material Varioflex® 60/30° (sw/r) 19 mm

Additional sizes available are found on p. 110.

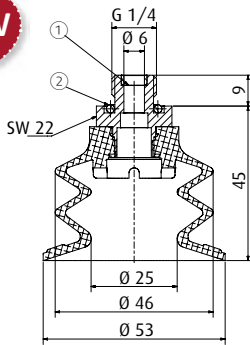
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

Item no. 20.053.151.* Material Varioflex® 60/30° (sw/r) 19 mm

Additional sizes available are found on p. 110.

Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

NEW



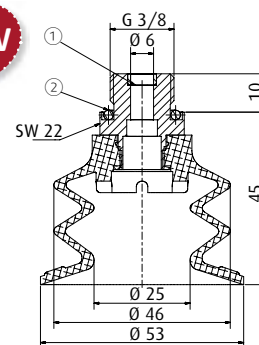
① = Filter screen ② = O-ring

Item no. 20.053.152.* Material Varioflex® 60/30° (sw/r) 19 mm

Additional sizes available are found on p. 110.

Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

NEW

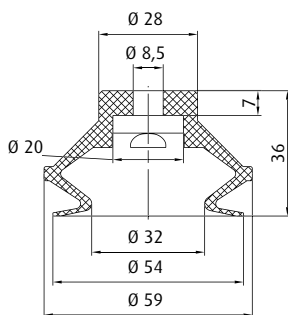


① = Filter screen ② = O-ring

Item no. 20.053.153.* Material Varioflex® 60/30° (sw/r) 19 mm

Additional sizes available are found on p. 110.

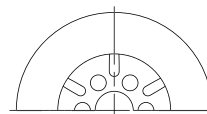
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code



Connection	see page
270.314 M6-male	415
270.499 M6-male	414
270.490 G1/8-male	420
270.489 G1/8-female	423
270.492 G1/4-female	434

Item no. 23.050.127.* Material NBR (sw), SI (tr), PU (bl) 10 mm

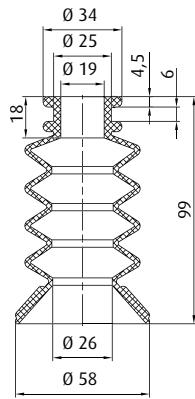
This vacuum cup is also available in the following dimensions: 11 mm, 15 mm, 21 mm, 32 mm, 42 mm



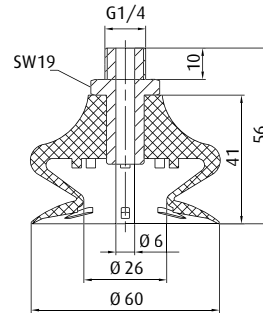
Connection	see page
270.177 M10-male	416
270.451 G1/4-male	426
270.452 G1/4-female	431

Item no. 23.056.150.* Material SI (tr) 16 mm

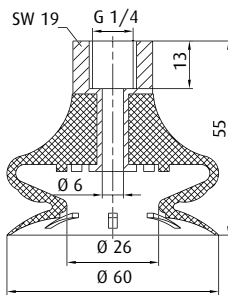
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



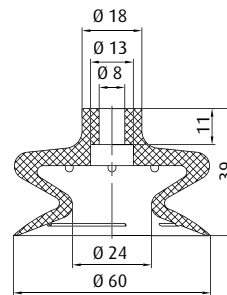
Item no. 25.058.049.* **Material** Vinyl (bl) 55 mm



Item no. 22.060.142.* **Material** Vulkollan® (br) 12 mm



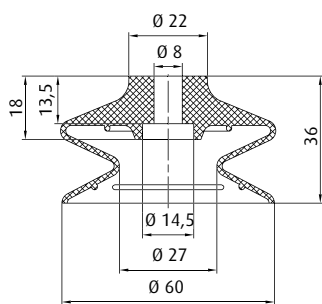
Item no. 22.060.143.* **Material** Vulkollan® (br) 12 mm



Item no. 23.060.059.* **Material** NBR (sw), SI (r) 15 mm

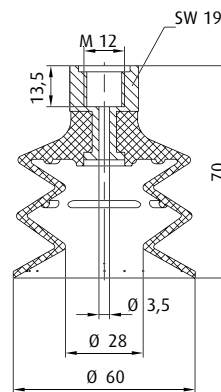
	Connection	see page
270.093	G1/8-male	421
270.092	G1/8-female	424
270.249	G1/4-male	427
270.248	G1/4-female	433

This vacuum cup is also available in the following dimensions: 14 mm, 24 mm, 40 mm



	Connection	see page
270.281	G1/4-male	428
270.282	G1/4-female	433

Item no. 23.060.172.* **Material** SI (tr), NR (sw) 12 mm



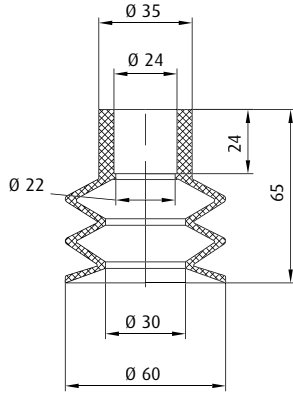
Item no. 20.060.101.* **Material** NR (sw) 25 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



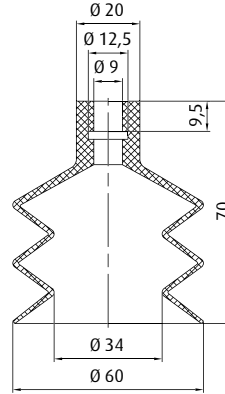
Vacuum cups by size | Bellows vacuum cups by Ø

Ø 60 - 61 mm



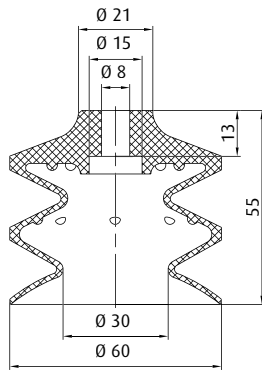
Item no. 21.060.035.* **Material** EPDM (sw), SI (r) 27 mm

This vacuum cup is also available in the following dimensions: 40 mm



Item no. 21.060.099.* **Material** Vulkollan® (br) 16 mm

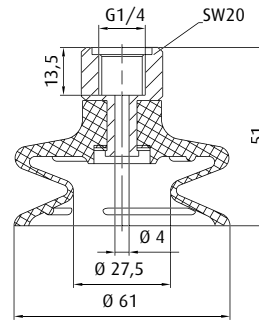
	Connection	see page
270.352	G1/8-male	420
270.204	G1/4-male	427
270.324	G1/4-female	432



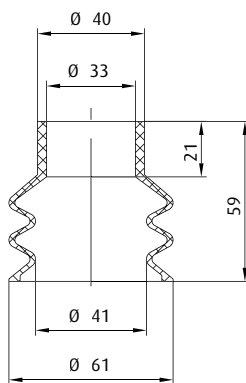
	Connection	see page
270.315	M6-male	414
270.540	G1/4-male	429
270.539	G1/4-female	434

Item no. 21.062.092.* **Material** Vulkollan® (br) 25 mm

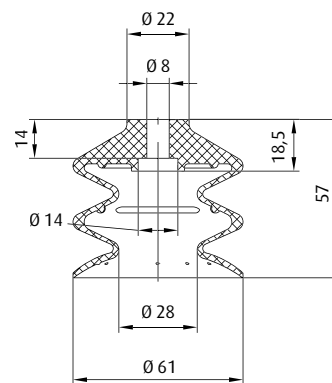
Additional sizes available are found on p. 97.



Item no. 22.060.107.* **Material** SI (tr), NR (sw) 11 mm



Item no. 21.060.038.* **Material** NBR (sw), SI (tr) 25 mm




Item no. 21.060.051.* **Material** HNBR (ge), SI (tr), NR (sw) 25 mm

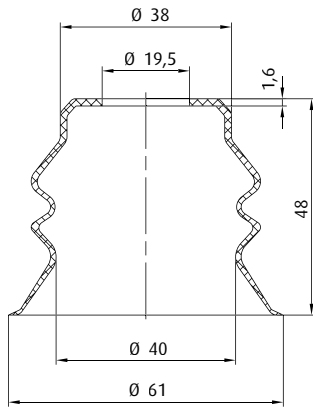
	Connection	see page
270.315	M6-male	414
270.540	G1/4-male	429
270.539	G1/4-female	434

Additional sizes available are found on p. 94.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760





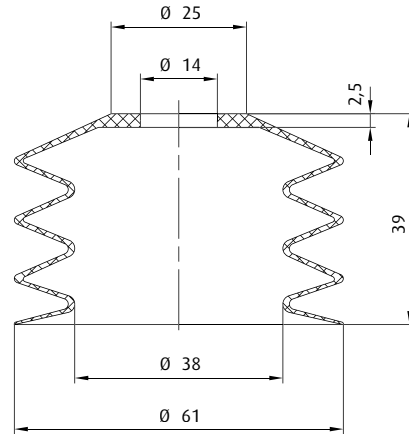
	Connection	see page
	270.372 G1/2-male	437







Item no. 21.060.074._*	Material SI (tr)	 12 mm
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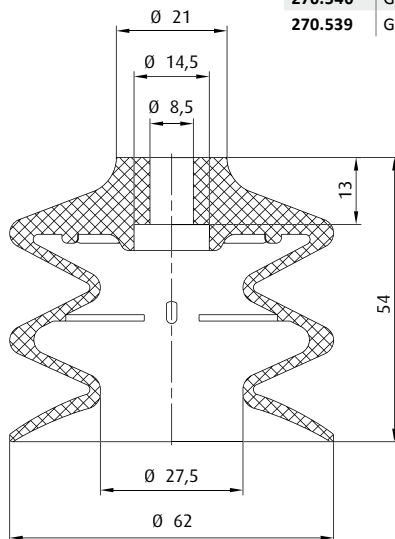
Additional sizes available are found on p. 126.


	Connection	see page
	270.183 G1/4-male	431
	270.182 G1/4-female	434








Item no. 25.060.033._*	Material NBR (sw), SI (br)	 16 mm
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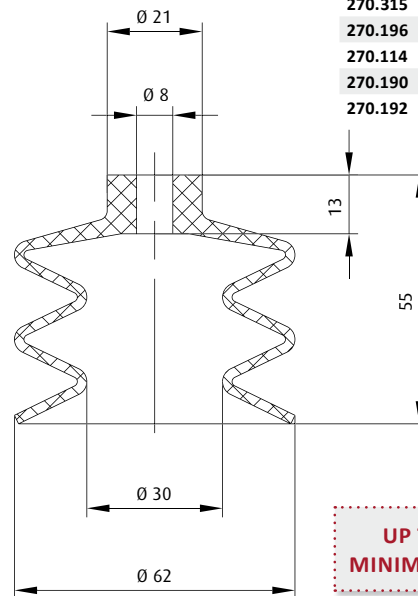
	Connection	see page
	270.315 M6-male	414
	270.540 G1/4-male	429
	270.539 G1/4-female	434




Item no. 21.062.055._*	Material NBR (sw), SI (tr)	 25 mm
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Additional sizes available are found on p. 89.

	Connection	see page
	270.315 M6-male	414
	270.196 G1/8-male	420
	270.114 G1/8-female	422
	270.190 G1/4-male	428
	270.192 G1/4-female	432



UP TO 160 °C & MINIMUM MARKING

Item no. 21.062.157._*	Material Thermalon® (bl)	 31 mm
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Additional sizes available are found on p. 92.

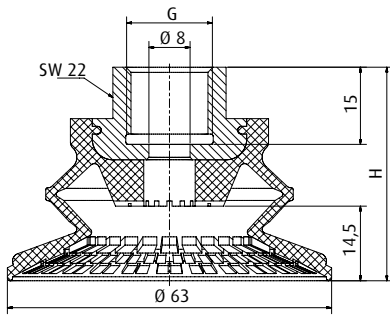
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 62 - 63 mm

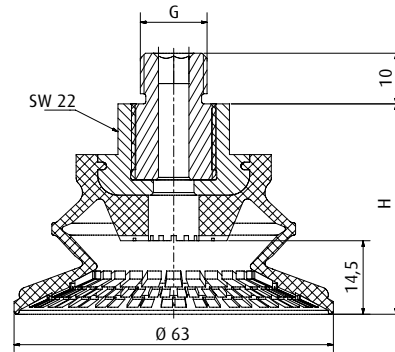
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.060.190.*	NBR (bl)	14.5	G1/4-female	46.5
22.060.191.*	NBR (bl)	14.5	G3/8-female	41.5

Additional sizes available are found on p. 133.

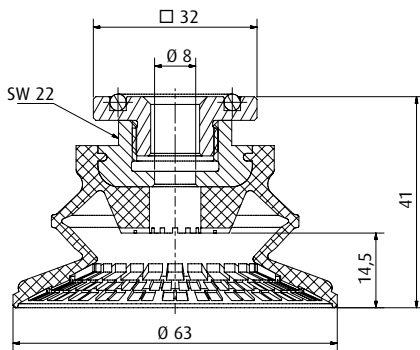
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.060.189.*	NBR (bl)	14.5	G1/4-male	41.5
22.060.192.*	NBR (bl)	14.5	M10-male	41.5
22.060.193.*	NBR (bl)	14.5	M14x1.5-male	41.5

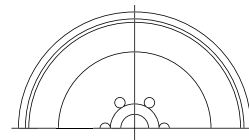
Additional sizes available are found on p. 133.

NEW



Item no.	Material	[mm]
22.060.194.*	NBR (bl)	14.5 mm

Additional sizes available are found on p. 133.



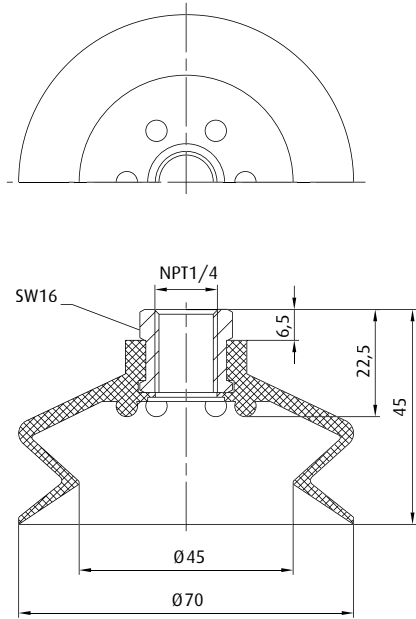
	Connection	see page
270.315	M6-male	414
270.196	G1/8-male	420
270.114	G1/8-female	422
270.190	G1/4-male	428
270.192	G1/4-female	432

Item no.	Material	[mm]
23.063.244.*	Thermalon® (bl)	15 mm

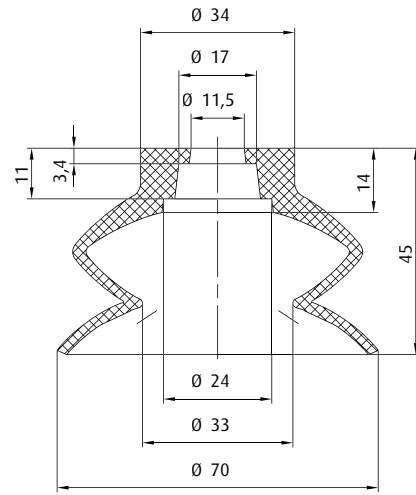
Additional sizes available are found on p. 84.

UP TO 160 °C & MINIMUM MARKING

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

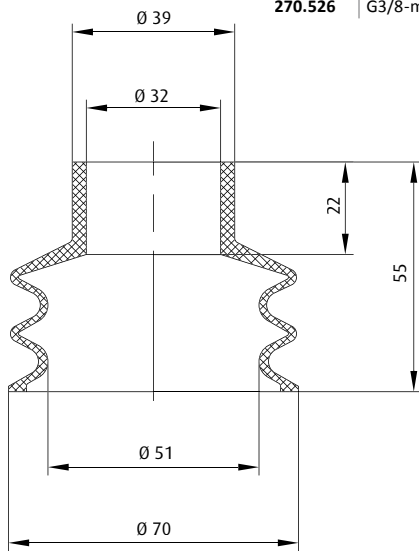


Item no. 22.070.127.* **Material** Vinyl (bl) 13 mm

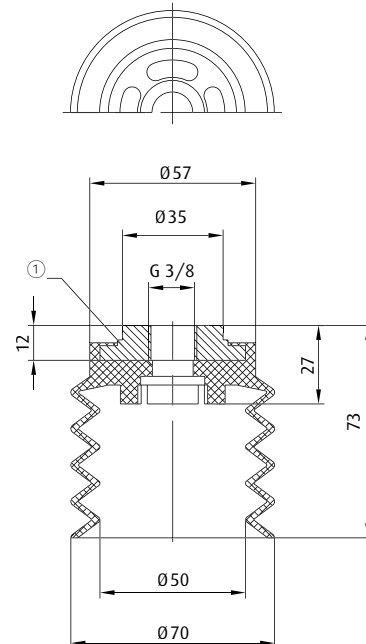


Item no. 23.070.060.* **Material** NBR (sw), SI (tr), NR (sw), Vinyl (bl) 20 mm

Additional sizes available are found on p. 113.



Item no. 21.070.041.* **Material** NR (sw), SI (tr) 17 mm



① = Aluminium

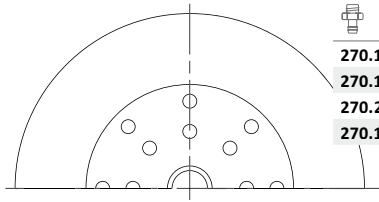
Item no. 25.069.050.* **Material** Vinyl (bl) 32 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

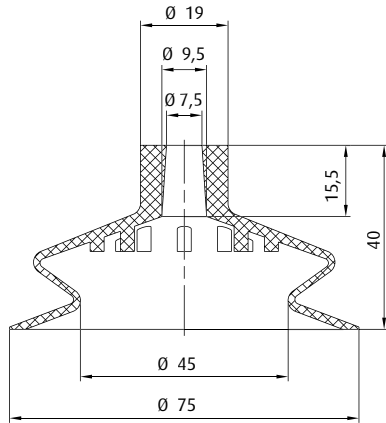


Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 75 mm

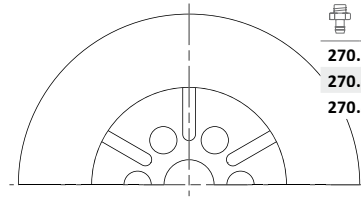


Connection	see page
270.132 G1/8-male	417
270.114 G1/8-female	422
270.208 G1/4-male	425
270.178 G1/4-female	431

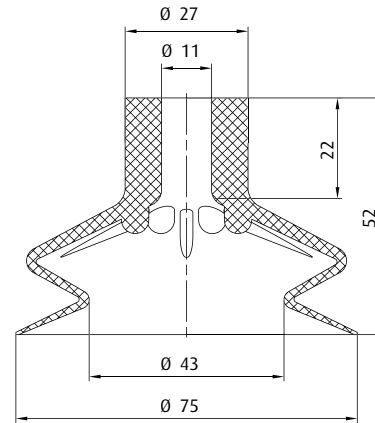


Item no. 23.075.063.* **Material** NBR (sw), SI (r) 17 mm

This vacuum cup is also available in the following dimensions: 31 mm, 53 mm



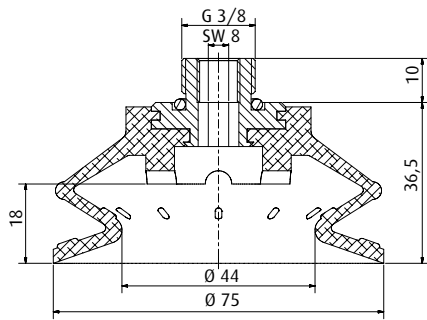
Connection	see page
270.177 M10-male	416
270.451 G1/4-male	426
270.452 G1/4-female	431



Item no. 23.075.151.* **Material** NBR (sw), SI (tr) 20 mm

Additional sizes available are found on p. 81.

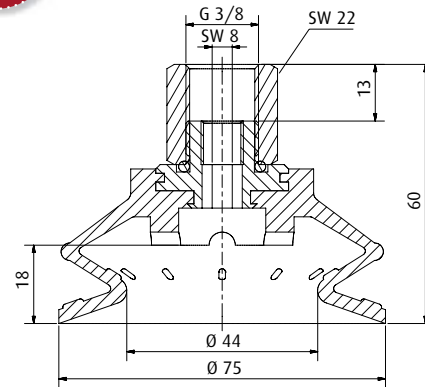
NEW



Item no. 22.075.262.* **Material** Varioflex® 60/30° (sw/r) 18 mm

Additional sizes available are found on p. 107.

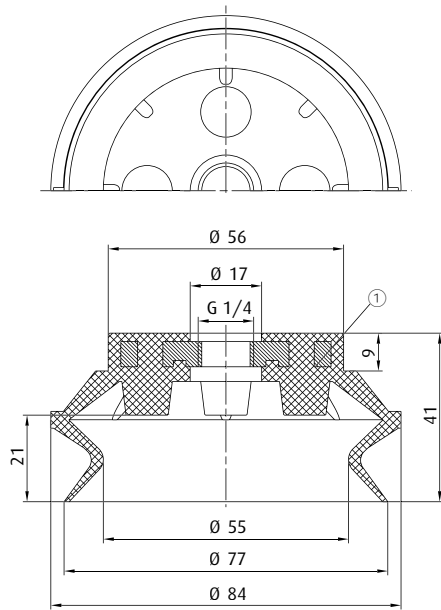
NEW



Item no. 22.075.263.* **Material** Varioflex® 60/30° (sw/r) 18 mm

Additional sizes available are found on p. 107.

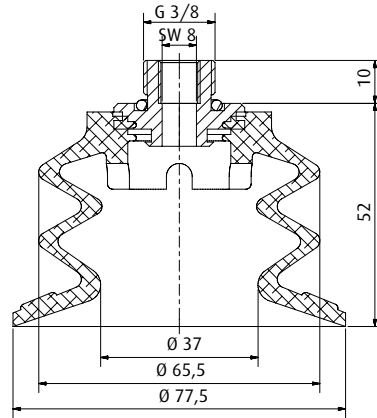
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Aluminium

Item no. 23.075.130. * **Material** NBR (sw), SI (tr), PU (bl) 21 mm

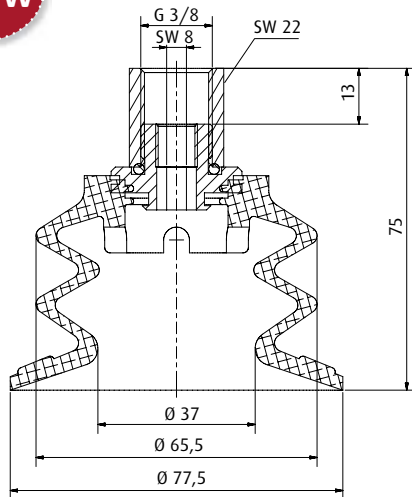
NEW



Item no. 20.077.154. * **Material** Varioflex® 60/30° (sw/r) 25 mm

Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code

NEW



Item no. 20.077.155. * **Material** Varioflex® 60/30° (sw/r) 25 mm

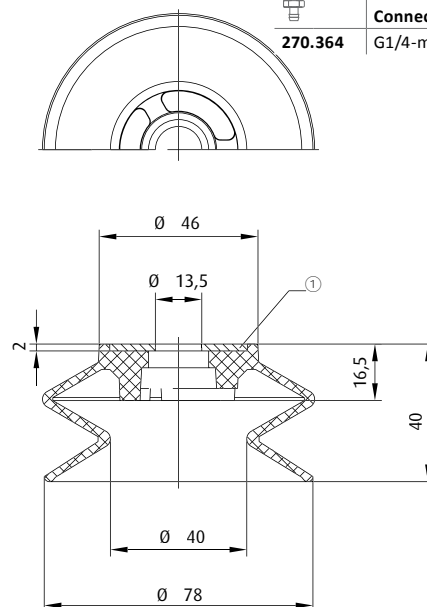
Additional sizes available are found on p. 110.
Ordering notes: For version with in bellows inserted filter disc please add "-FI" to material code



270.364

Connection G1/4-male

see page 430



① = Aluminium

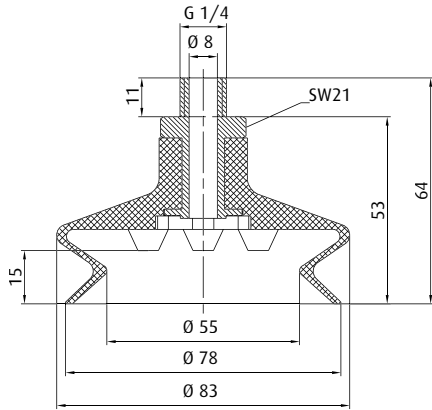
Item no. 22.080.144. * **Material** SBR (br) 23 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 78 - 80 mm

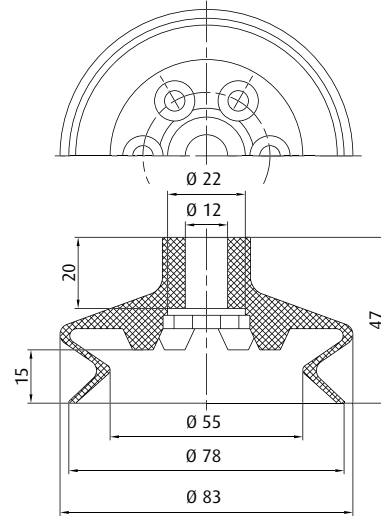


Item no.
22.078.071.*

Material
NBR (sw), SI (tr), NR (gr)

15 mm

	Connection	see page
270.184	G1/4-male	431

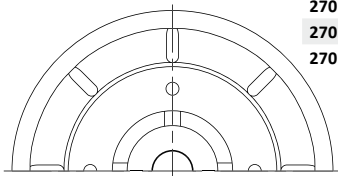


Spare cup

Item no.
23.078.067.*

Material
NBR (sw), SI (tr), NR (gr)

15 mm



	Connection	see page
270.462	M10-male	416
270.514	G1/4-male	429
270.513	G1/4-female	434

① = Aluminium

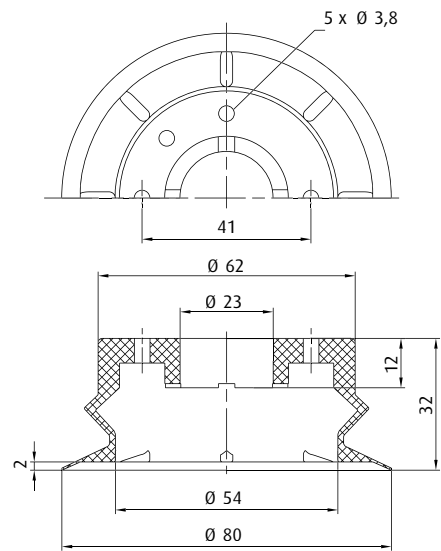
FLEXIBLE & STABLE

Item no.
22.080.161.*

Material
NBR (sw), SI (tr)

10 mm

Additional sizes available are found on p. 119.



Spare cup

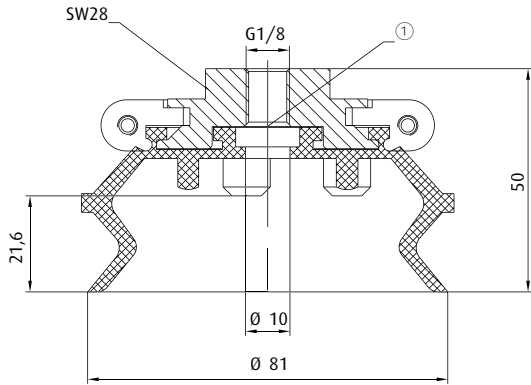
Item no.
23.080.144.*

Material
NBR (sw), SI (tr)

10 mm

Additional sizes available are found on p. 119.

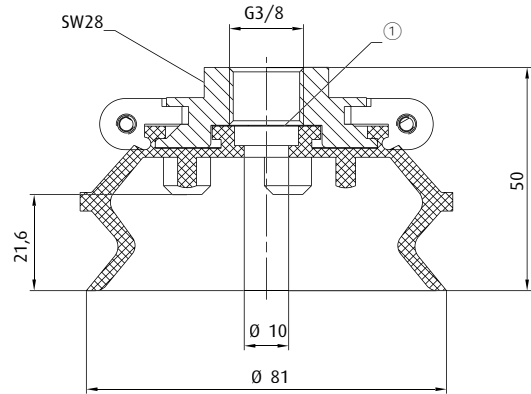
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Filter screen

Item no. 22.078.163. * **Material** Tepuflex® (or), SI (tr), CR (sw) 22 mm

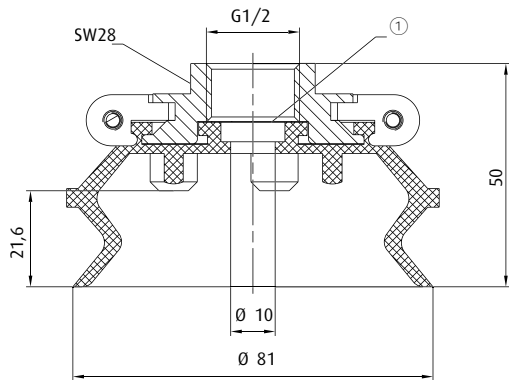
Additional sizes available are found on p. 104.



① = Filter screen

Item no. 22.078.166. * **Material** Tepuflex® (or), SI (tr), CR (sw) 22 mm

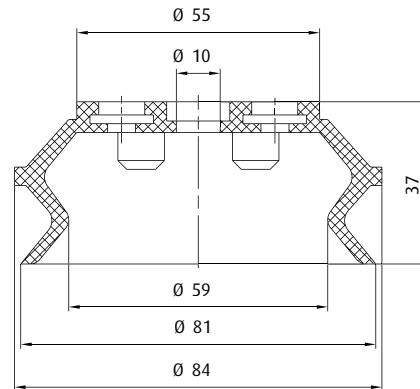
Additional sizes available are found on p. 104.



① = Filter screen

Item no. 22.078.169. * **Material** Tepuflex® (or), SI (tr), CR (sw) 22 mm

Additional sizes available are found on p. 104.



Item no. 23.078.065. * **Material** Tepuflex® (or), SI (tr), CR (sw) 22 mm

Additional sizes available are found on p. 100.

	Connection	see page
270.527-S	G1/8-female	424
270.528-S	G3/8-female	436
270.529-S	G1/2-female	436

Spare cup

Spare cup

Spare cup

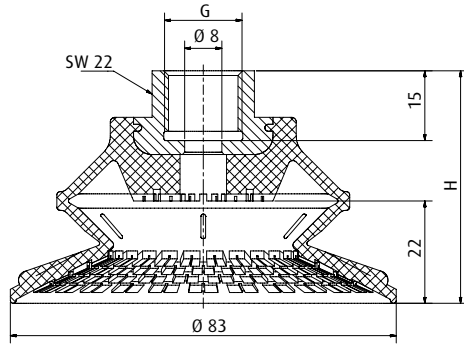
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by Ø

Ø 82 - 84 mm

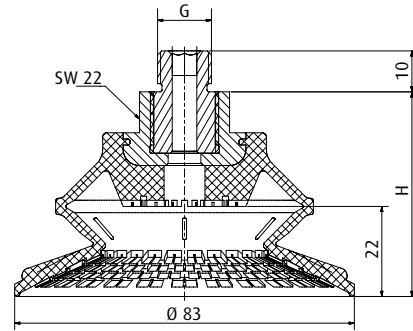
NEW



Item no.	Material	SW [mm]	Connection thread	H [mm]
22.080.196.*	NBR (bl)	22	G1/4-female	55
22.080.197.*	NBR (bl)	22	G3/8-female	50

Additional sizes available are found on p. 133.

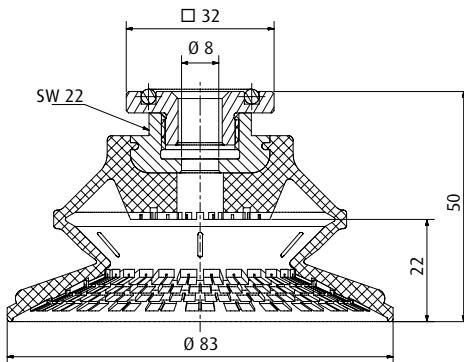
NEW



Item no.	Material	SW [mm]	Connection thread	H [mm]
22.080.195.*	NBR (bl)	22	G1/4-male	50
22.080.198.*	NBR (bl)	22	M10-male	50
22.080.199.*	NBR (bl)	22	M14x1.5-male	50

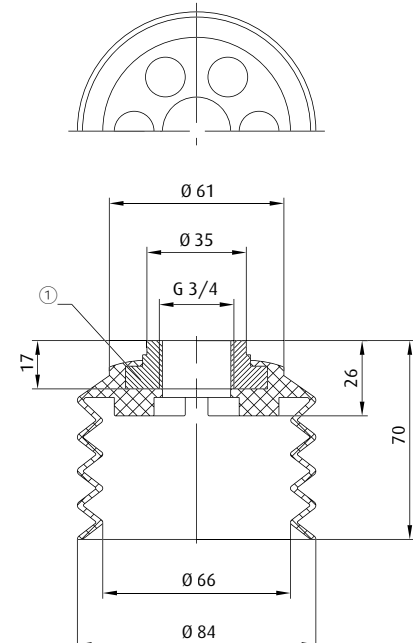
Additional sizes available are found on p. 133.

NEW



Item no.	Material	SW [mm]
22.080.200.*	NBR (bl)	22 mm

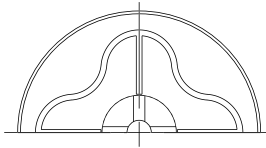
Additional sizes available are found on p. 133.



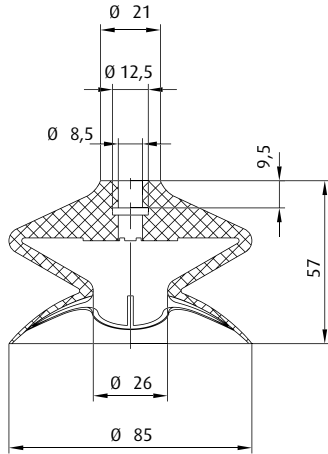
① = Aluminium

Item no.	Material	SW [mm]
25.084.051.*	Vinyl (bl)	31 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



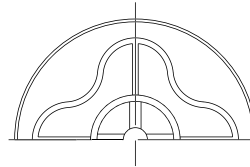
	Connection	see page
270.359	G1/4-male	427
270.361	G1/4-female	433



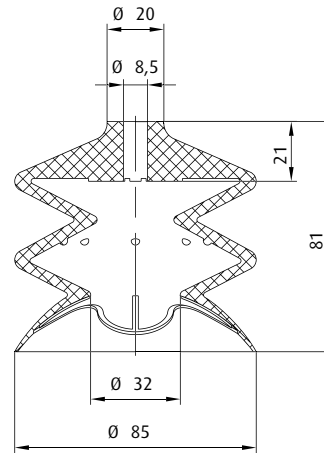
Item no.
23.085.201.*

Material
Vulkollan® (br)

25 mm



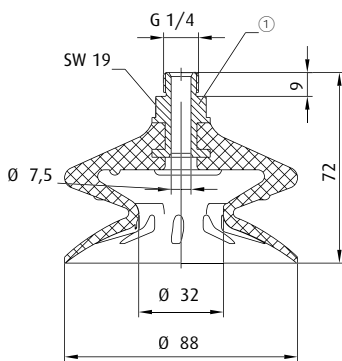
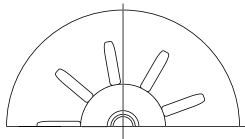
	Connection	see page
270.359	G1/4-male	427



Item no.
21.085.107.*

Material
Vulkollan® (br)

38 mm



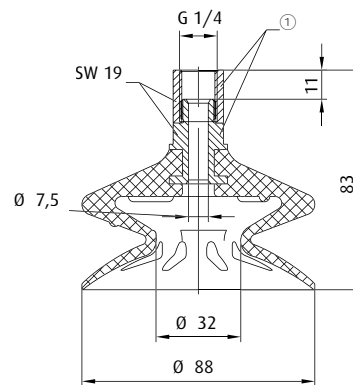
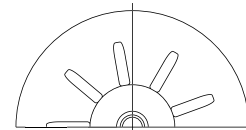
① = Aluminium fitting, vulcanised

Item no.
22.088.158.*

Material
NBR (sw), SI (tr)

23 mm

Additional sizes available are found on p. 81.



① = Aluminium fitting, vulcanised

Item no.
22.088.159.*

Material
NBR (sw), SI (tr)

23 mm

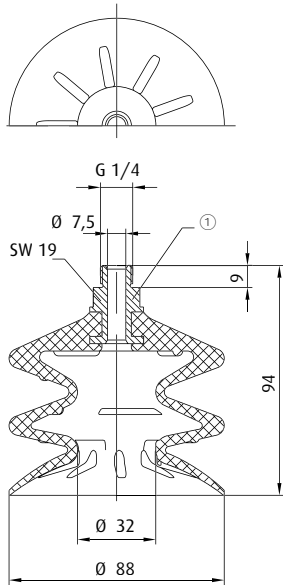
Additional sizes available are found on p. 81.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

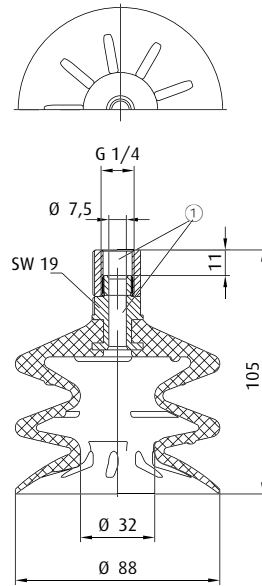
\varnothing 88 - 92 mm



① = Aluminium fitting, vulcanised

Item no. 20.088.123._*	Material NBR (sw), SI (tr)	36 mm
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Additional sizes available are found on p. 89.

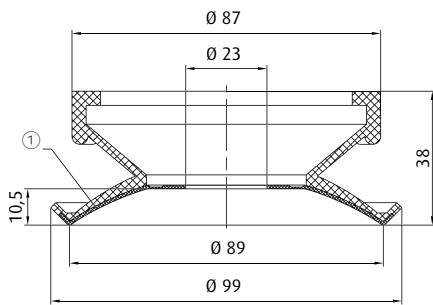


① = Aluminium fitting, vulcanised

Item no. 20.088.124._*	Material NBR (sw), SI (tr)	36 mm
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Additional sizes available are found on p. 89.

	Connection	see page
270.400	G3/8-female	436

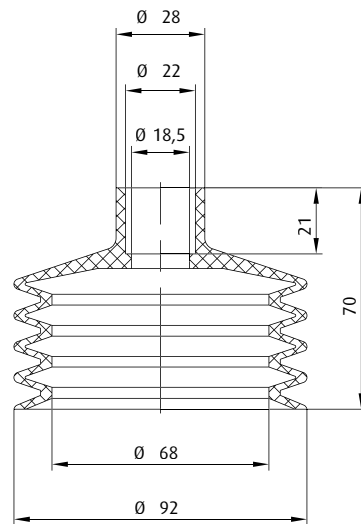


HEAT RESISTANT & LOW MARKING

① = Felt pads

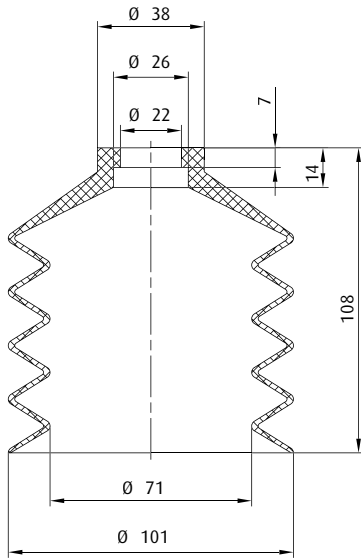
Item no. 26.090.001._*	Material SI (tr/ge), FKM (sw/ge)	17 mm
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Additional sizes available are found on p. 164.



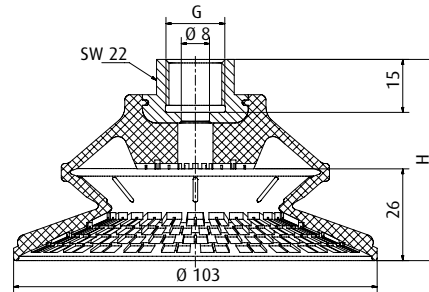
Item no. 25.091.052._*	Material Vinyl (bl)	32 mm
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Item no. 25.102.053.* **Material** Vinyl (bl) 55 mm

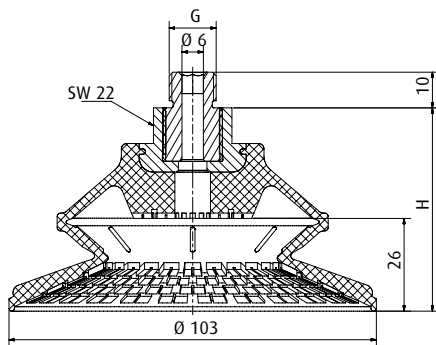
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.100.202.*	NBR (bl)	26	G1/4-female	62
22.100.203.*	NBR (bl)	26	G3/8-female	57

Additional sizes available are found on p. 133.

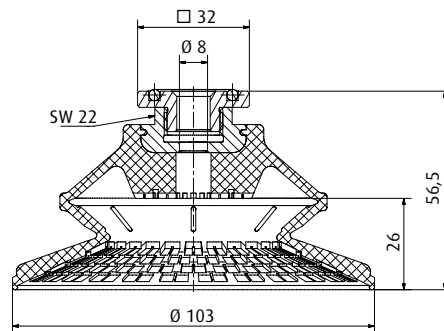
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.100.201.*	NBR (bl)	26	G1/4-male	57
22.100.204.*	NBR (bl)	26	M10-male	57
22.100.205.*	NBR (bl)	26	M14x1.5-male	57

Additional sizes available are found on p. 133.

NEW



Item no. 22.100.206.* **Material** NBR (bl) 26 mm

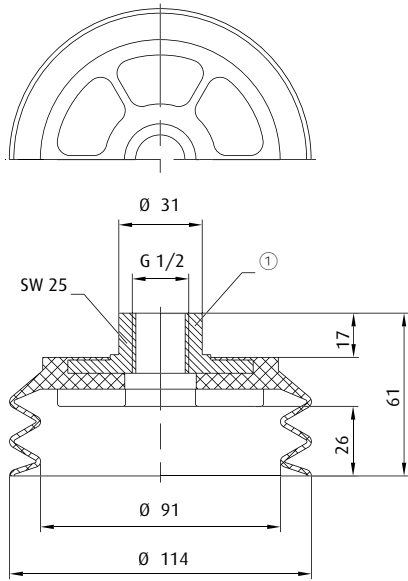
Additional sizes available are found on p. 133.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



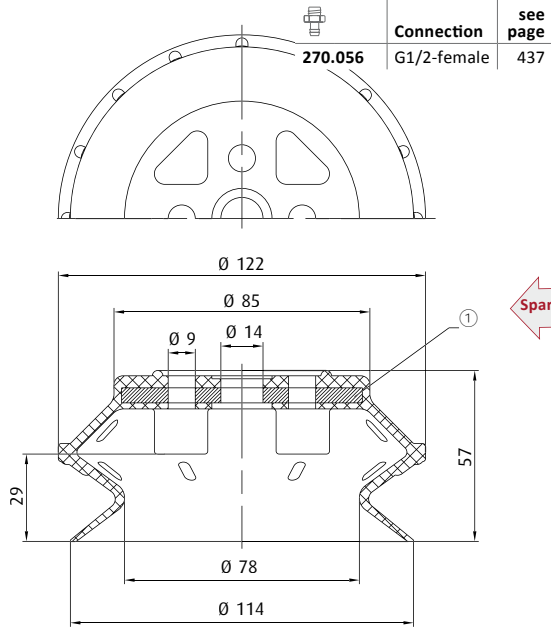
Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 114 mm



① = Aluminium

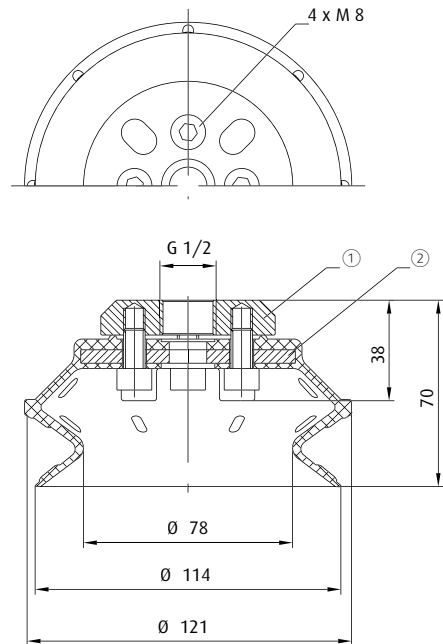
Item no. 20.115.114._*	Material Vinyl (bl)	27 mm
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① = Steel

Item no. 23.110.070._*	Material NBR (sw)	29 mm
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Notes: Hardness 70° Shore A



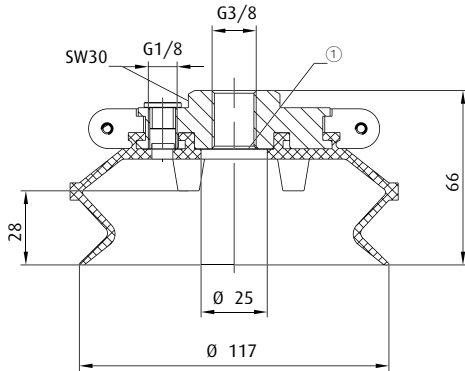
① = Aluminium ② = Steel

Item no. 22.110.080._*	Material NBR (sw)	29 mm
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Notes: Hardness 70° Shore A

Spare cup

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

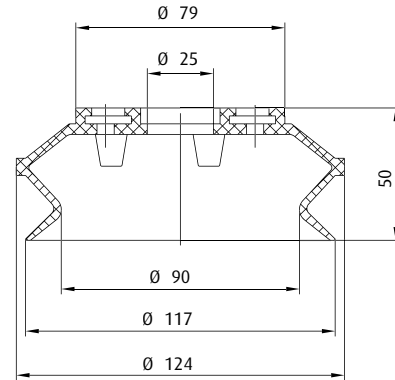


① = Filter screen

Item no. 22.117.164.* **Material** Tepuflex® (or), SI (tr), CR (sw) 29 mm

Additional sizes available are found on p. 104.

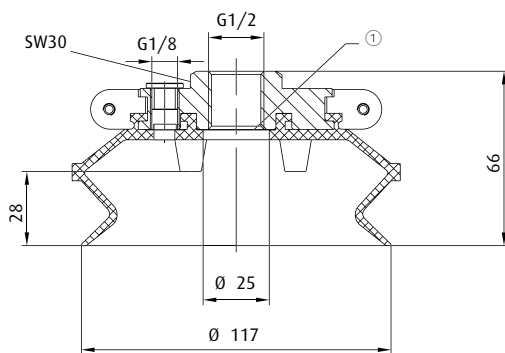
Spare cup



Item no. 23.117.069.* **Material** Tepuflex® (or), SI (tr), CR (sw) 29 mm

Additional sizes available are found on p. 100.

	Connection	see page
270.530-S	G3/8-female	437
270.531-S	G1/2-female	437

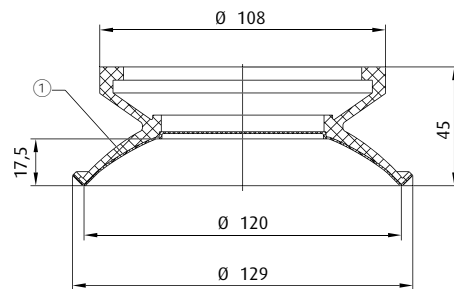


① = Filter screen

Item no. 22.117.167.* **Material** Tepuflex® (or), SI (tr), CR (sw) 29 mm

Additional sizes available are found on p. 104.

Spare cup



① = Felt pads

Item no. 26.120.002.* **Material** FKM (sw/ge) 18 mm

Additional sizes available are found on p. 164.

HEAT RESISTANT & LOW MARKING

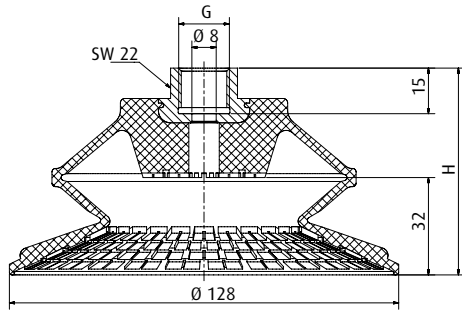
* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

\varnothing 128 mm

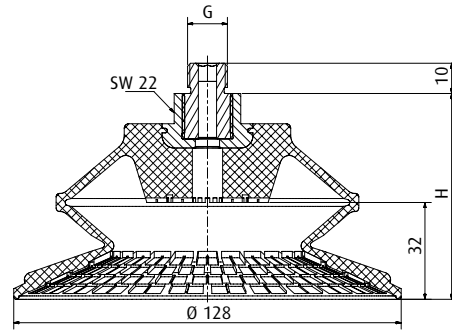
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.125.208.*	NBR (bl)	32	G1/4-female	73
22.125.209.*	NBR (bl)	32	G3/8-female	68

Additional sizes available are found on p. 133.

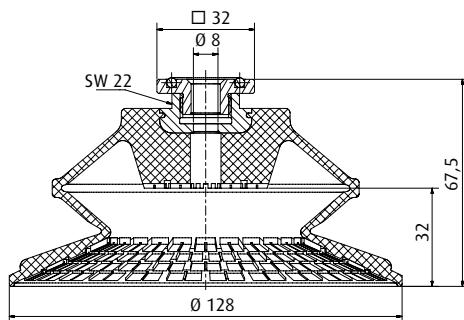
NEW



Item no.	Material	[mm]	Connection thread	H [mm]
22.125.207.*	NBR (bl)	32	G1/4-male	68
22.125.210.*	NBR (bl)	32	M10-male	68
22.125.211.*	NBR (bl)	32	M14x1.5-male	68

Additional sizes available are found on p. 133.

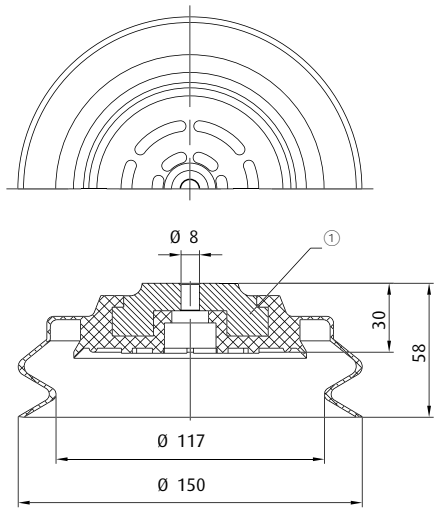
NEW



Item no.	Material	[mm]
22.125.212.*	NBR (bl)	32 mm

Additional sizes available are found on p. 133.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

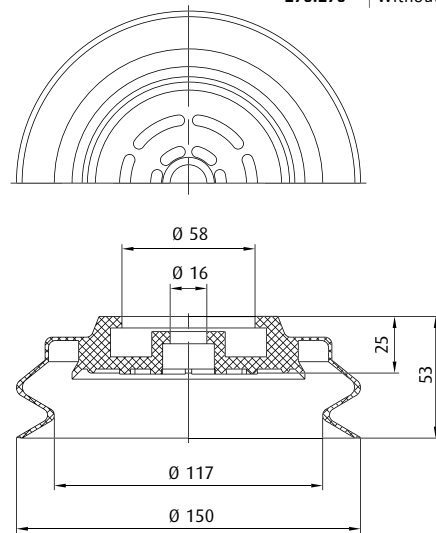


① = Aluminium

Item no. 22.150.109.* **Material** NBR (sw) 28 mm

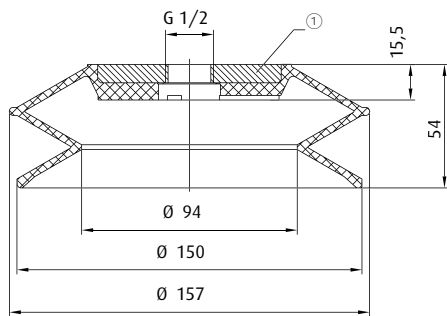
Additional sizes available are found on p. 136.

Spare cup



Item no. 23.150.090.* **Material** NBR (sw) 28 mm

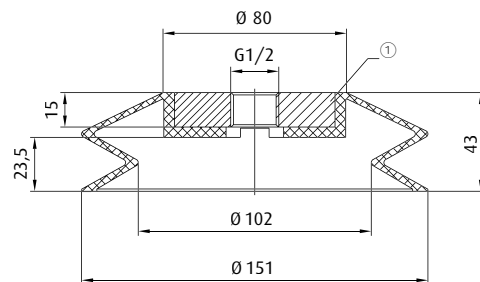
	Connection	see page
270.270	Without	440



① = Steel

Item no. 22.150.084.* **Material** NBR (gr), NR (br) 32 mm

Additional sizes available are found on p. 137.



① = Aluminium

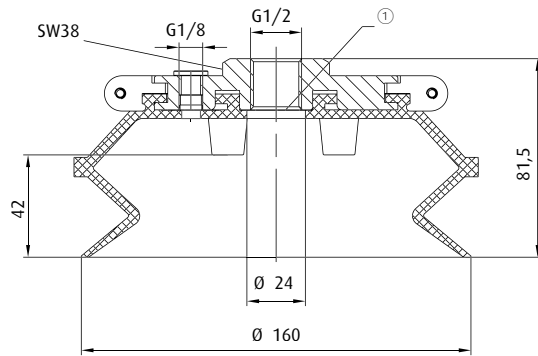
Item no. 22.150.020.* **Material** NBR (sw), SI (tr) 20 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

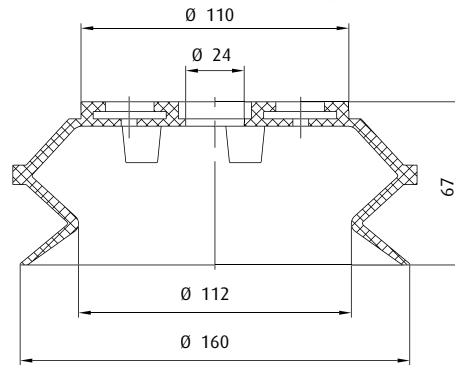
\varnothing 160 mm



① = Filter screen

Item no. 22.160.165.*	Material Tepuflex® (or), SI (tr), CR (sw)	41 mm	Additional sizes available are found on p. 104. This vacuum cup is also available in the following dimensions: 160 mm
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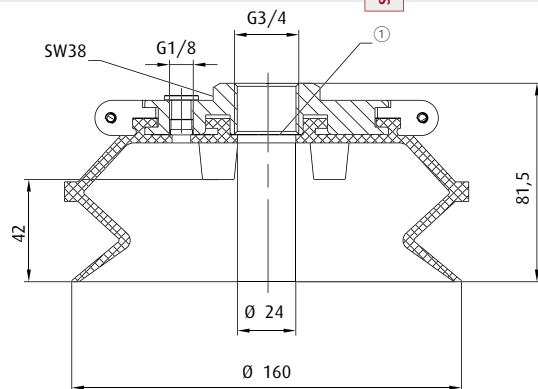
Spare cup



	Connection	see page
270.532-S	G1/2-female	437
270.533-S	G3/4-female	437

Item no. 23.160.072.*	Material Tepuflex® (or), SI (tr), CR (sw)	41 mm	Additional sizes available are found on p. 100.
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Spare cup



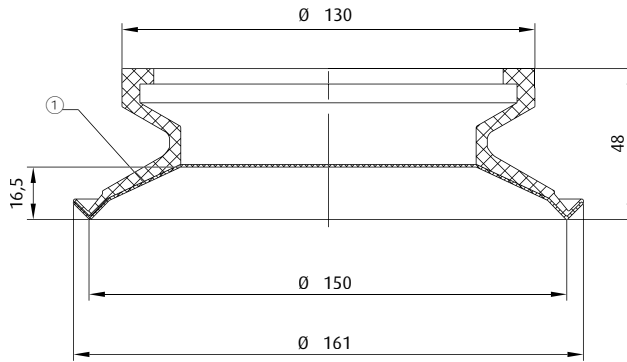
① = Filter screen

Item no. 22.160.168.*	Material Tepuflex® (or), SI (tr), CR (sw)	41 mm	Additional sizes available are found on p. 104.
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



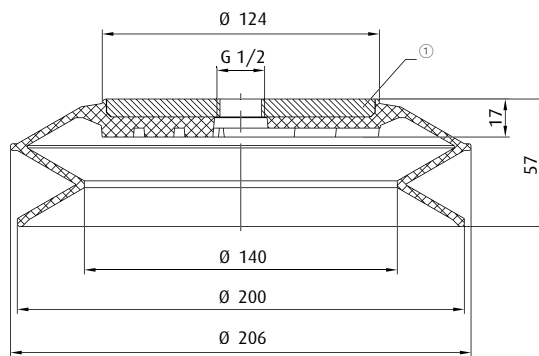
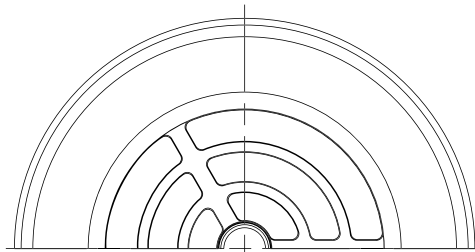
	Connection	see page
270.404	G3/8-female	436



HEAT RESISTANT & LOW MARKING

① = Felt pads

Item no. 26.160.003.*	Material FKM (sw/ge)	18 mm	Additional sizes available are found on p. 164.
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① = Steel

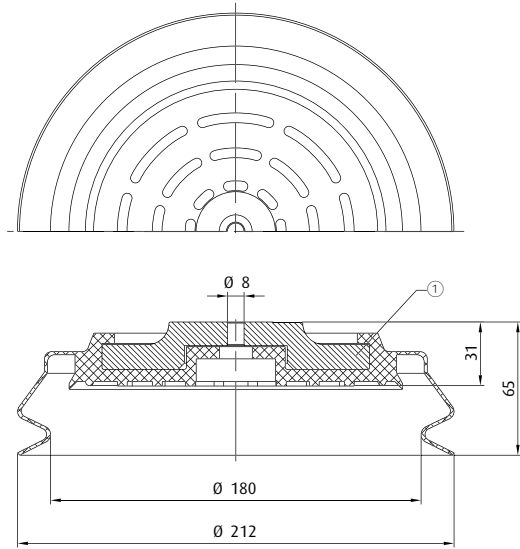
Item no. 22.200.087.*	Material NBR (gr), NR (br)	30 mm	Additional sizes available are found on p. 137.
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \varnothing

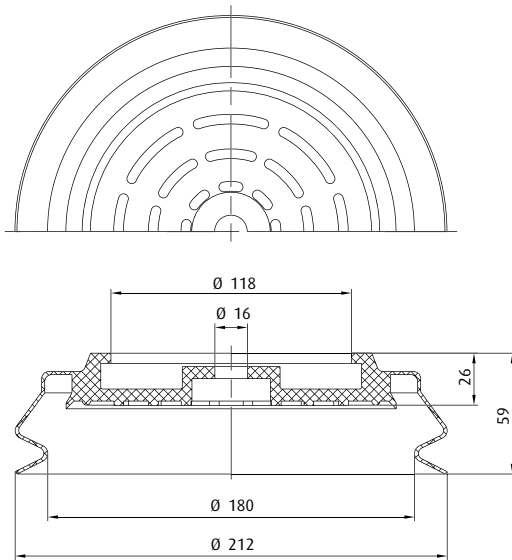
\varnothing 212 mm



① = Aluminium

Item no. 22.210.115._*	Material NBR (sw)	32 mm	Additional sizes available are found on p. 136.
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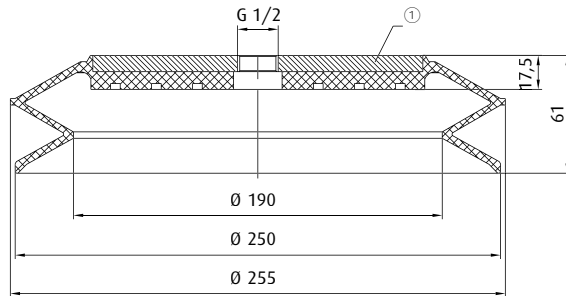
Spare cup



	Connection	see page
270.269	Without	440

Item no. 23.210.009._*	Material NBR (sw)	32 mm	
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



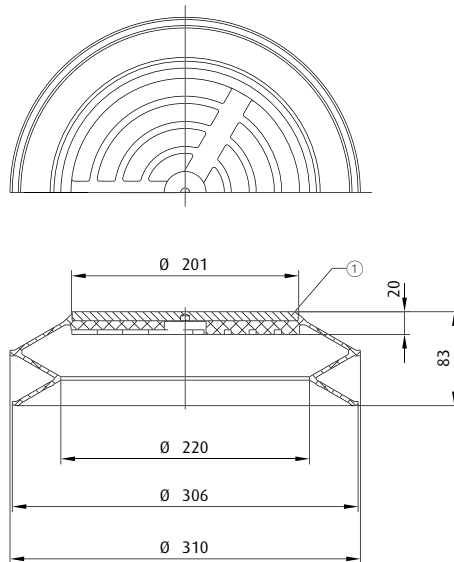
① = Steel

Item no.
22.250.088._*

Material
NBR (gr), SI (tr)

38 mm

Additional sizes available are found on p. 137.



① = Steel

Item no.
22.300.091._*

Material
NBR (gr)

60 mm

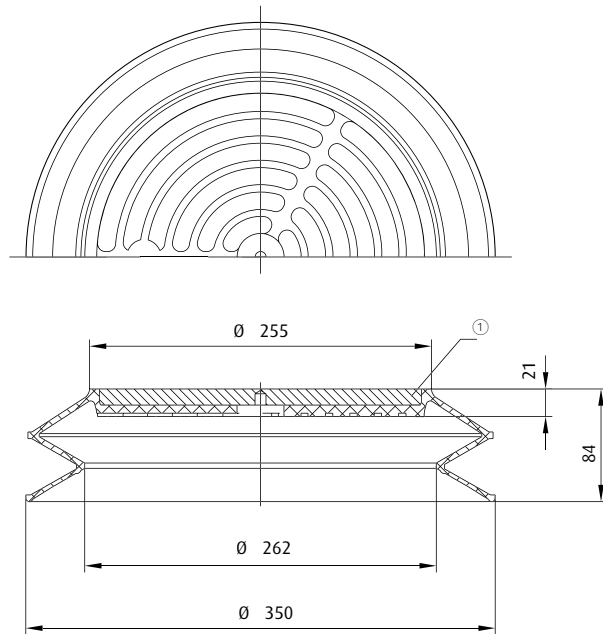
Additional sizes available are found on p. 137.
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Bellows vacuum cups by \emptyset


\emptyset 350 mm



① = Steel

Item no.
22.350.102.*

Material
NBR (gr)

 55 mm

Additional sizes available are found on p. 137.
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Application / Uses

- > Oval vacuum cups are suited for elongated workpieces where only minimal space is available (e.g. rails, profiles, products with ridges)
- > Also suitable for curved workpieces
- > Significantly greater suction power than round vacuum cups of equal width



Designs



- > FIPA oval vacuum cups are available as flat or bellows vacuum suction cups, with or without supporting ribs
- > Supporting ribs:
 - Improve stability and suction power
 - Prevent flexible product parts from being sucked in
 - Prevent slipping of the product while suction is being applied

Methods of connection



Vacuum cups for attaching to the fittings (plug-in)

- > Secure hold
- > Quick replacement
- > Cost-efficient and environmentally-friendly, as only the rubber part needs to be replaced



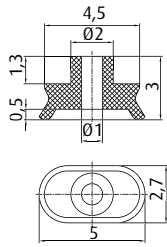
Vulcanised fittings / retainer plates

- > Very secure hold
- > Secured against rotation during handling
- > High degree of dimensional stability



Vacuum cups by size | Oval vacuum cups by size

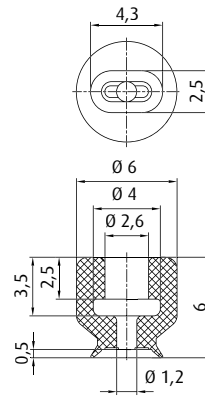
4x2 mm - 7x4 mm



	Connection	see page
270.011	M3-male	408

Item no. 132.4x2.001.*	Material NBR (sw), SI (tr), PU (bl)	0.5 mm
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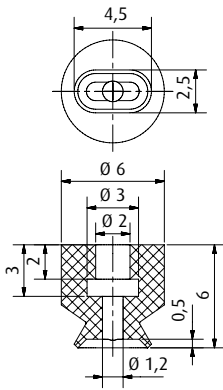
Additional sizes available are found on p. 141.



	Connection	see page
270.014	M3-male	408
270.111	M4-male	408
270.300	M5-male	411

Item no. 132.4x2.031.*	Material NBR (sw), HNBR (ge), SI (tr), PU (bl)	0.5 mm
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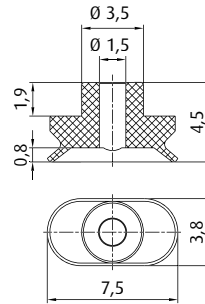
Additional sizes available are found on p. 141.



	Connection	see page
270.014	M3-male	408
270.111	M4-male	408
270.300	M5-male	411

Item no. 132.4x2.079.*	Material Thermalon® (bl)	0.4 mm
----------------------------------	------------------------------------	--------

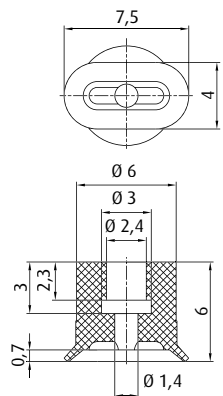
Additional sizes available are found on p. 144.



	Connection	see page
270.025	M3-male	408

Item no. 132.7x4.002.*	Material NBR (sw), SI (tr), SI-AS (sw)	0.8 mm
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Additional sizes available are found on p. 141.

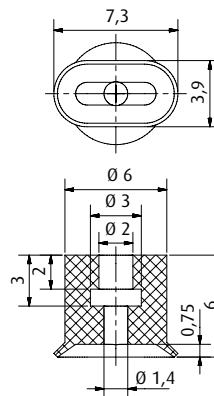


	Connection	see page
270.014	M3-male	408
270.111	M4-male	408
270.300	M5-male	411

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Item no. 132.7x4.034.*	Material NBR (sw), HNBR (ge), SI (tr)	0.8 mm
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Additional sizes available are found on p. 141.



	Connection	see page
270.014	M3-male	408
270.111	M4-male	408
270.300	M5-male	411

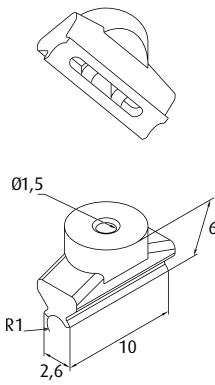
Item no. 132.7x4.080.*	Material Thermalon® (bl)	0.5 mm
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Additional sizes available are found on p. 144.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

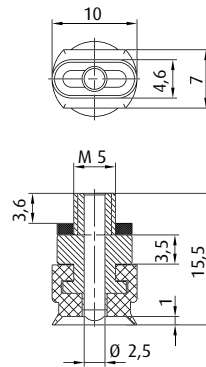
10x3 mm - 10x4 mm



Item no.	Connection	see page
270.300	M5-male	411

Item no. 201.10x3.005.* **Material** NBR (sw), SI (tr) 0 mm

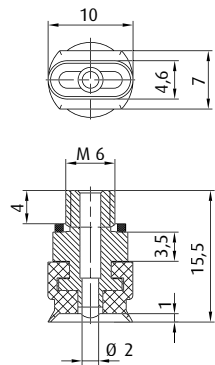
Additional sizes available are found on p. 154.
Notes: Suitable for cylindrical products diam. 2-4 mm



Item no.	Connection	see page
50.152	10 mm	444
50.153	20 mm	444

Item no. 130.10x4.115.* **Material** NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

Additional sizes available are found on p. 152.

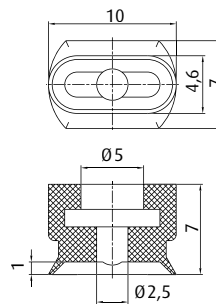


Item no.	Connection	see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.10x4.068.* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.

Spare cup



Item no.	Connection	see page
270.463	M5-male	412
270.339	M6-male	413

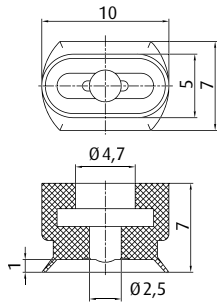
Item no. 132.10x4.003.* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



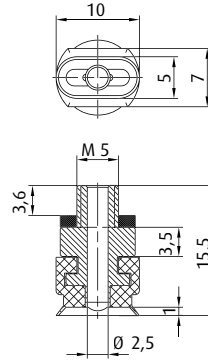
Vacuum cups by size | Oval vacuum cups by size

10x5 mm - 10x6 mm



Connection	see page
270.463 M5-male	412
270.339 M6-male	413

Spare cup

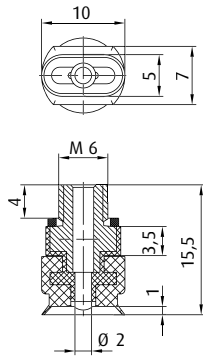


Connection	see page
50.152 10 mm	444
50.153 20 mm	444

Item no.	Material	0.9 mm
132.10x5.007.*	NBR (sw), BR-AS (sw), SI (tr)	

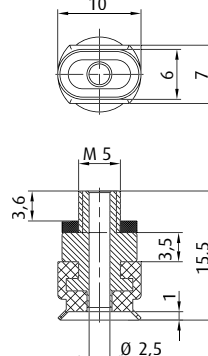
Item no.	Material	0.9 mm
130.10x5.116.*	NBR (sw), SI (tr), BR-AS (sw)	

Additional sizes available are found on p. 152.



Connection	see page
50.095 20 mm	456
50.096 30 mm	456
50.097 40 mm	456
50.098 50 mm	456

Spare cup



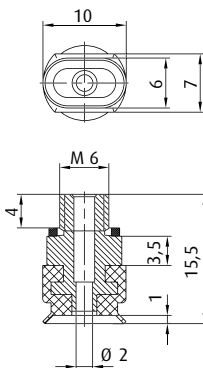
Connection	see page
50.152 10 mm	444
50.153 20 mm	444

Item no.	Material	0.9 mm
130.10x5.071.*	NBR (sw), BR-AS (sw), SI (tr)	

Additional sizes available are found on p. 152.

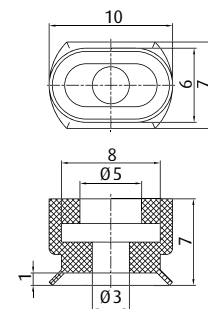
Item no.	Material	0.9 mm
130.10x6.117.*	NBR (sw), SI (tr), BR-AS (sw)	

Additional sizes available are found on p. 152.



Connection	see page
50.095 20 mm	456
50.096 30 mm	456
50.097 40 mm	456
50.098 50 mm	456

Spare cup



Connection	see page
270.463 M5-male	412
270.339 M6-male	413

Item no.	Material	0.9 mm
130.10x6.073.*	NBR (sw), BR-AS (sw), SI (tr)	

Additional sizes available are found on p. 152.

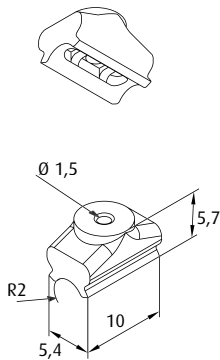
Item no.	Material	0.9 mm
132.10x6.011.*	NBR (sw), BR-AS (sw), SI (tr)	

Spare cup

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

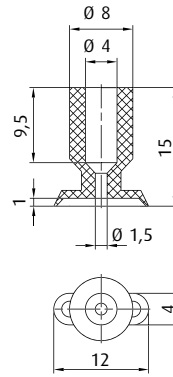
10x6 mm - 15x5 mm



Icon	Connection	see page
	M5-male	411

Item no. 201.10x6.006.* **Material** NBR (sw), SI (tr) **Thickness** 0 mm

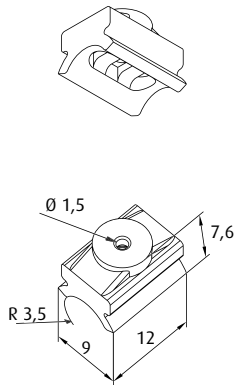
Additional sizes available are found on p. 154.



Icon	Connection	see page
	M5-male	409
	M5-female	412
	M6-male	413
	G1/8-male	416
	G1/8-female	421

Item no. 132.12x4.004.* **Material** NBR (gr), SI (tr) **Thickness** 0.5 mm

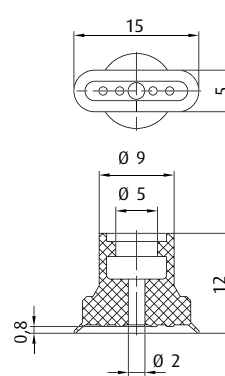
Additional sizes available are found on p. 141.



Icon	Connection	see page
	M5-male	411

Item no. 201.12x9.007.* **Material** NBR (sw), SI (tr) **Thickness** 0 mm

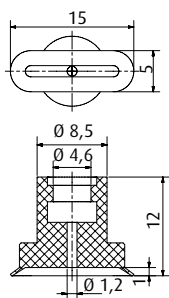
Additional sizes available are found on p. 154.
Notes: Suitable for cylindrical products diam. 6-13 mm



Icon	Connection	see page
	M5-male	411
	M5-female	412
	G1/8-male	418
	G1/8-female	422

Item no. 132.15x5.008.* **Material** NBR (gr), SI (tr), PU (bl) **Thickness** 1 mm

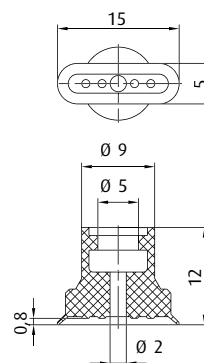
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Icon	Connection	see page
	M5-male	411
	G1/8-male	418
	G1/8-female	422

Item no. 132.15x5.081.* **Material** Thermalon® (bl) **Thickness** 0.6 mm

Additional sizes available are found on p. 144.



Icon	Connection	see page
	G1/8-male	418

Item no. 132.15x5.067.* **Material** HNBR (ge) **Thickness** 1 mm

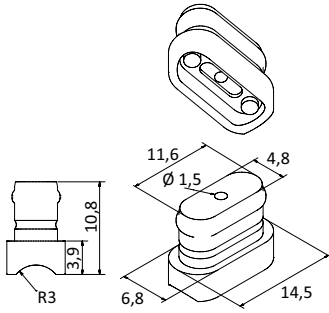
Additional sizes available are found on p. 146.
Ordering notes: Use of a gripper clamp (available separately) recommended.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

15x8 mm - 19x5 mm

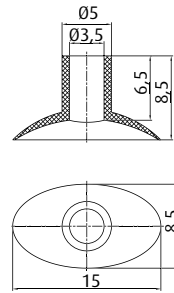


Item no.
132.15x7.073._*

Material
SI (r)

0 mm

Additional sizes available are found on p. 154.
Notes: Suitable for cylindrical products diam. 4-10 mm

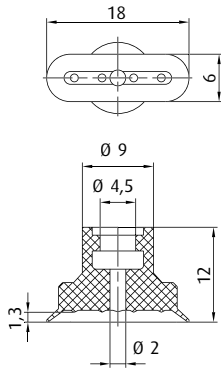


	Connection	see page
270.536	M5-male	409

Item no.
132.15x8.5.33._*

Material
NR (sw)

2 mm



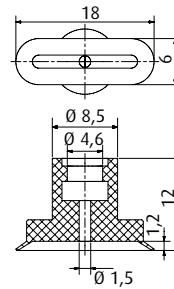
	Connection	see page
270.094	M5-male	411
270.005	M5-female	412
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no.
132.18x6.012._*

Material
NBR (gr), SI (tr), PU (bl)

1 mm

Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



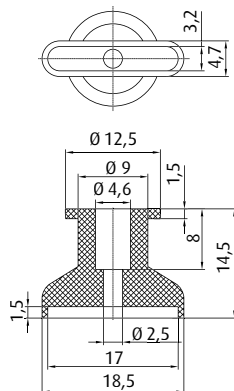
	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no.
132.18x6.082._*

Material
Thermalon® (bl)

1 mm

Additional sizes available are found on p. 144.



	Connection	see page
270.013	M5-male	410
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421

Item no.
132.19x5.044._*

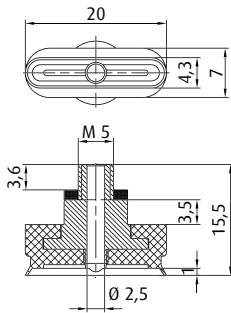
Material
Vinyl (bl)

0 mm

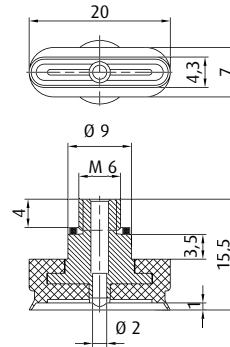
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

20x4 mm - 20x5 mm



		see page
50.152	10 mm	444
50.153	20 mm	444



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.20x4.118.* Material NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

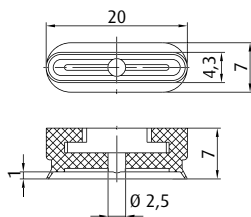
Item no. 130.20x4.069.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.

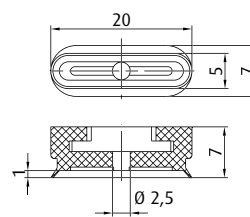
Additional sizes available are found on p. 152.

Spare cup

Spare cup



	Connection	see page
270.464	M5-male	412
270.340	M6-male	413



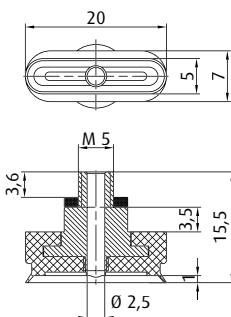
	Connection	see page
270.464	M5-male	412
270.340	M6-male	413

Item no. 132.20x4.005.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

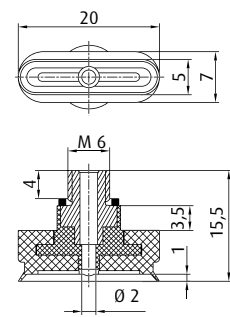
Item no. 132.20x5.009.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Spare cup

Spare cup



		see page
50.152	10 mm	444
50.153	20 mm	444



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.20x5.119.* Material NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

Item no. 130.20x5.081.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.

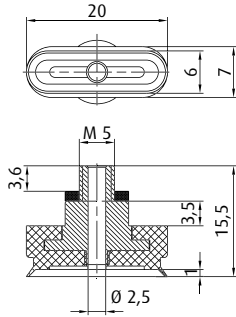
Additional sizes available are found on p. 152.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

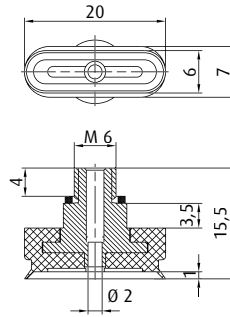


Vacuum cups by size | Oval vacuum cups by size

20x6 mm - 20x8 mm



		see page
50.152	10 mm	444
50.153	20 mm	444



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.20x6.120.* Material NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

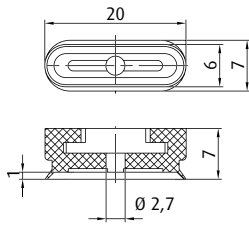
Additional sizes available are found on p. 152.

Item no. 130.20x6.074.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

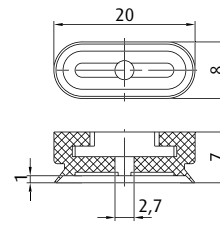
Additional sizes available are found on p. 152.

Spare cup

Spare cup



	Connection	see page
270.464	M5-male	412
270.340	M6-male	413



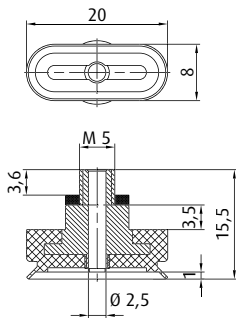
	Connection	see page
270.464	M5-male	412
270.340	M6-male	413

Item no. 132.20x6.013.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

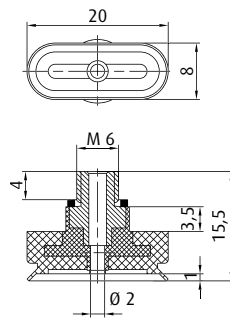
Item no. 132.20x8.015.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Spare cup

Spare cup



		see page
50.152	10 mm	444
50.153	20 mm	444



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.20x8.121.* Material NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

Additional sizes available are found on p. 152.

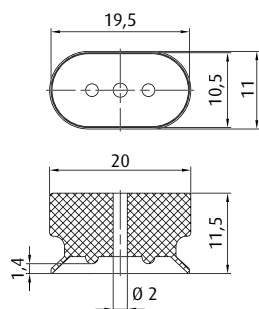
Item no. 130.20x8.076.* Material NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

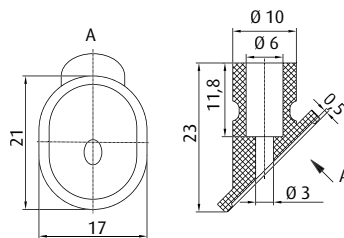
Vacuum cups by size | Oval vacuum cups by size

20x11 mm - 24x8 mm



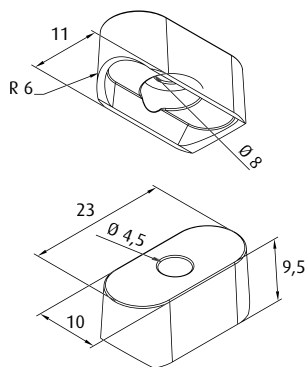
Connection	see page
M5-male	409

Item no. 132.20x11.077.* **Material** SI (tr) **1.5 mm**



Connection	see page
M5-male	410
G1/8-male	417
G1/8-female	422
G1/4-male	425

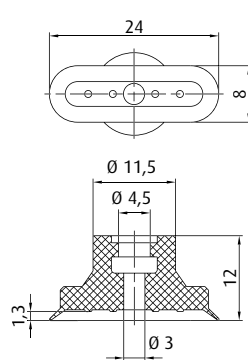
Item no. 132.21x17.047.* **Material** NR (sw) **0 mm**



Connection	see page
M5-male	411
G1/8-male	420
G1/8-female	423

Item no. 9.23x11.036.* **Material** SI (tr) **0 mm**

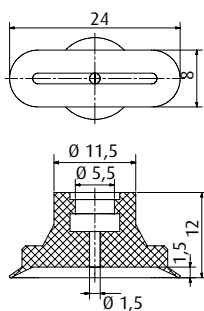
Additional sizes available are found on p. 154.
Notes: Suitable for cylindrical products diam. 10-18 mm



Connection	see page
M5-male	411
M5-female	412
G1/8-male	418
G1/8-female	422

Item no. 132.24x8.016.* **Material** NBR (gr), SI (tr), NR (bg), PU (bl) **1 mm**

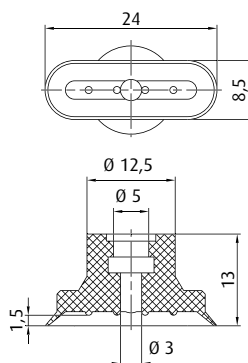
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Connection	see page
M5-male	411
G1/8-male	418
G1/8-female	422

Item no. 132.24x8.083.* **Material** Thermalon® (bl) **1 mm**

Additional sizes available are found on p. 144.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Connection	see page
G1/8-male	418

Item no. 132.24x8.066.* **Material** HNBR (ge) **1 mm**

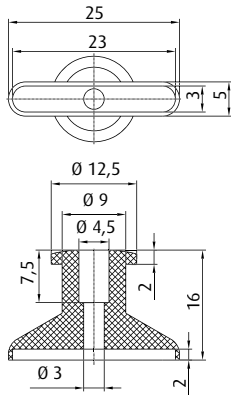
Additional sizes available are found on p. 146.
Ordering notes: Use of a gripper clamp (available separately) recommended.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



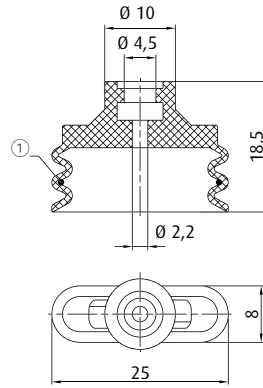
Vacuum cups by size | Oval vacuum cups by size

25x5 mm - 30x5 mm



	Connection	see page
270.013	M5-male	410
270.005	M5-female	412
270.103	M6-male	413
270.003	G1/8-male	416
270.015	G1/8-female	421
270.194	G1/4-male	425

Item no. 132.25x5.045.* **Material** Vinyl (bl) 0 mm



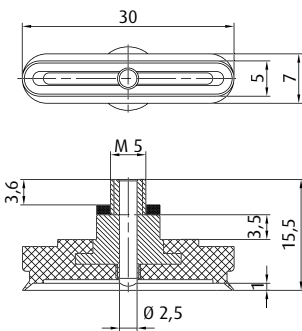
	Connection	see page
270.094	M5-male	411
270.005	M5-female	412
270.095	G1/8-male	418
270.096	G1/8-female	422

① = Wire strap stiffening

BESTSELLER

Item no. 138.25x8.002.* **Material** NBR (gr), SI (tr) 6 mm

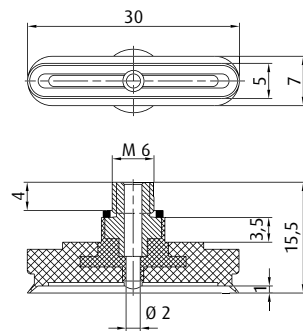
Additional sizes available are found on p. 148.
Ordering notes: Use of a gripper clamp (available separately) recommended.



		see page
50.152	10 mm	444
50.153	20 mm	444

Item no. 130.30x5.123.* **Material** NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

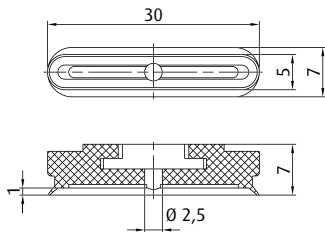
Additional sizes available are found on p. 152.



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456

Item no. 130.30x5.072.* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.



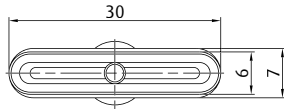
	Connection	see page
270.464	M5-male	412
270.340	M6-male	413

Item no. 132.30x5.010.* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

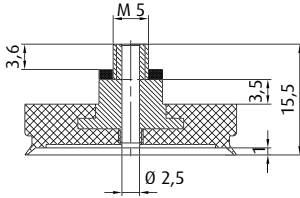
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

30x6 mm - 30x8 mm

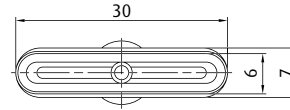


		see page
50.152	10 mm	444
50.153	20 mm	444

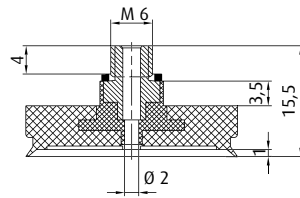


Item no. 130.30x6.124._* **Material** NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

Additional sizes available are found on p. 152.

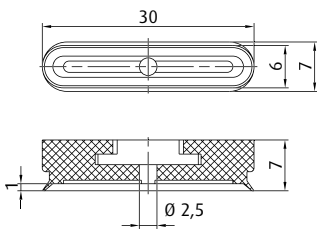


		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456



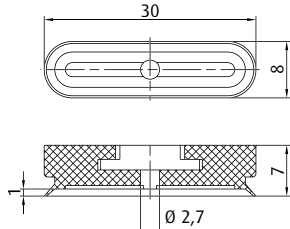
Item no. 130.30x6.075._* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

Additional sizes available are found on p. 152.



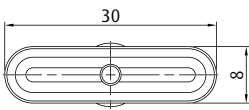
	Connection	see page
270.464	M5-male	412
270.340	M6-male	413

Item no. 132.30x6.014._* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

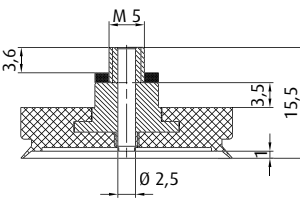


	Connection	see page
270.464	M5-male	412
270.340	M6-male	413

Item no. 132.30x8.017._* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

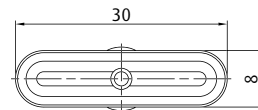


		see page
50.152	10 mm	444
50.153	20 mm	444

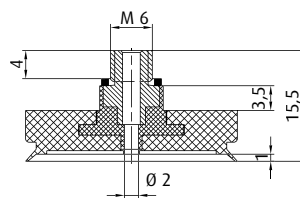


Item no. 130.30x8.125._* **Material** NBR (sw), SI (tr), BR-AS (sw) 0.9 mm

Additional sizes available are found on p. 152.



		see page
50.095	20 mm	456
50.096	30 mm	456
50.097	40 mm	456
50.098	50 mm	456



Item no. 130.30x8.077._* **Material** NBR (sw), BR-AS (sw), SI (tr) 0.9 mm

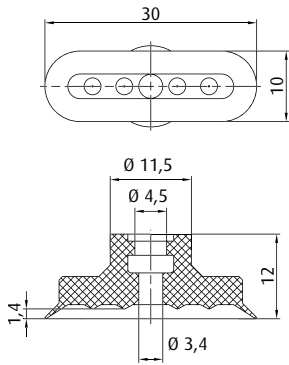
Additional sizes available are found on p. 152.

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

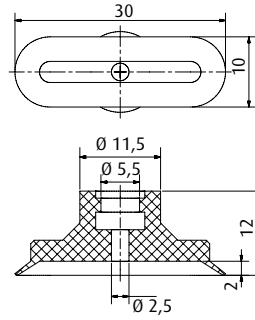
30x10 mm - 36x12 mm



	Connection	see page
270.094	M5-male	411
270.005	M5-female	412
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no. 132.30x10.018.*
Material NBR (gr), SI (tr), PU (bl)
 2 mm

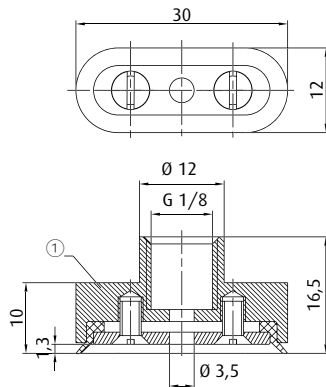
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



	Connection	see page
270.094	M5-male	411
270.095	G1/8-male	418
270.096	G1/8-female	422

Item no. 132.30x10.084.*
Material Thermalon® (bl)
 1 mm

Additional sizes available are found on p. 144.
Ordering notes: Use of a gripper clamp (available separately) recommended.

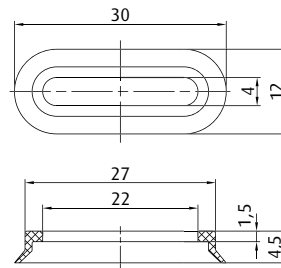


① = Aluminium

Item no. 130.30x12.057.*
Material SI (tr), NR (sw)
 1 mm

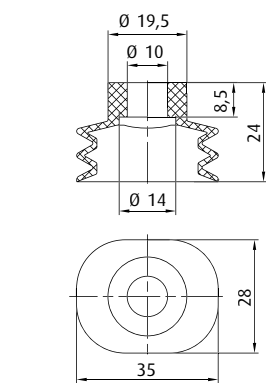
Additional sizes available are found on p. 157.

Spare cup



	Connection	see page
270.439	G1/8-female	424

Item no. 132.30x12.025.*
Material SI (tr), NR (sw)
 1 mm

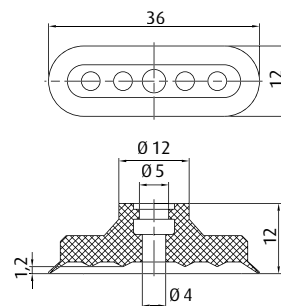


	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

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Item no. 138.35x28.001.*
Material Vinyl (bl)
 9 mm

Additional sizes available are found on p. 149.



	Connection	see page
270.094	M5-male	411
270.005	M5-female	412
270.095	G1/8-male	418
270.096	G1/8-female	422

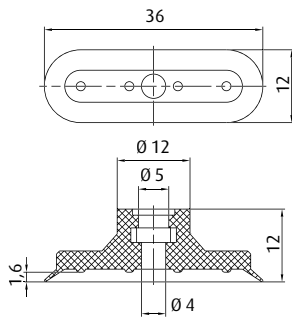
Item no. 132.36x12.019.*
Material NBR (gr), SI (tr), PU (bl)
 2 mm

Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

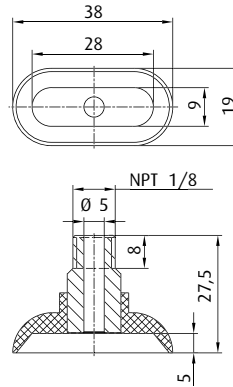
36x12 mm - 40x20 mm



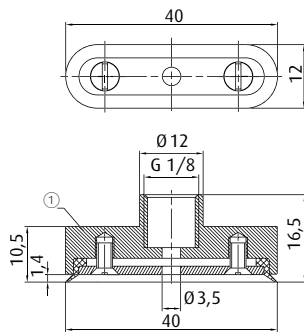
Item no.	Connection	see page
270.431	G1/8-male	418

Item no. 132.36X12.068.* Material HNBR (ge) 2 mm

Additional sizes available are found on p. 146.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Item no. 130.38x19.085.* Material Vinyl (bl) 0 mm

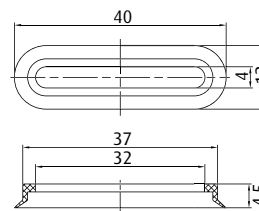


① = Aluminium

Item no. 130.40x12.058.* Material SI (tr), NR (sw) 1 mm

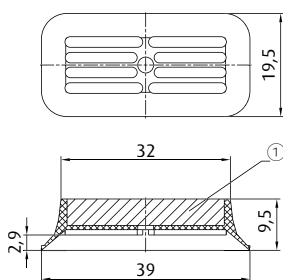
Additional sizes available are found on p. 157.

Spare cup



Item no.	Connection	see page
270.440	G1/8-female	424

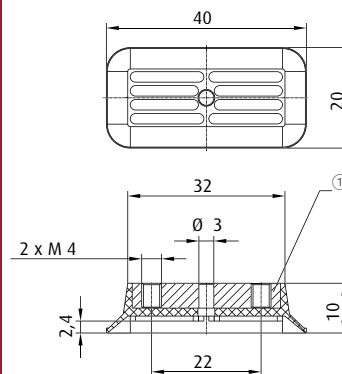
Item no. 132.40x12.027.* Material SI (tr), NR (sw) 1 mm



① = Steel

Item no. 9.40x20.041.* Material NBR (gr), SI (tr), PU (bg) 2 mm

Ordering notes: Customised drilling patterns on request



① = Steel

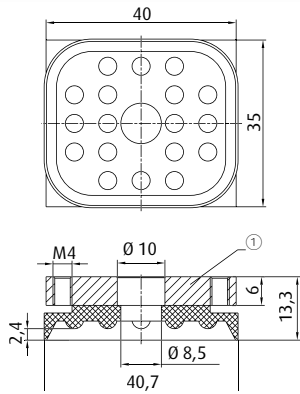
Item no. 9.40x20.057.* Material SI (tr) 2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



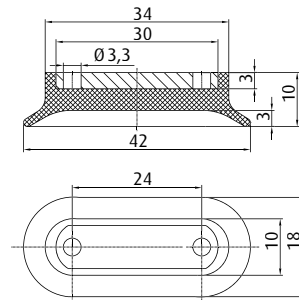
Vacuum cups by size | Oval vacuum cups by size

40x35 mm - 45x15 mm

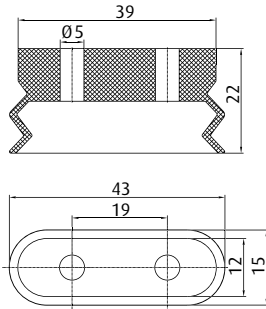


① = Steel

Item no. 155.40x35.004._*	Material NBR (gr)	2.5 mm
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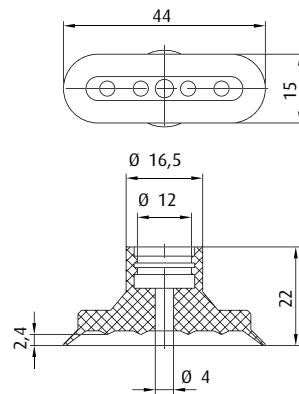


Item no. 130.42x18.037._*	Material SI (tr)	2.5 mm
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	Connection	see page
270.013	M5-male	410

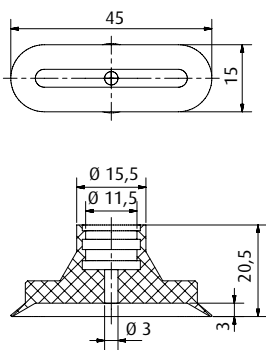
Item no. 138.43x15.001._*	Material Vinyl (bl)	8 mm
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	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 132.45x15.020._*	Material NBR (gr), SI (tr), PU (bl)	3 mm
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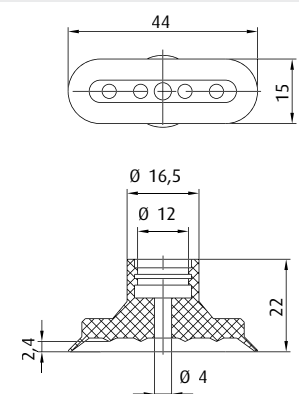
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 132.45x15.085._*	Material Thermalon® (bl)	2 mm
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Additional sizes available are found on p. 144.
Ordering notes: Use of a gripper clamp (available separately) recommended.



	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

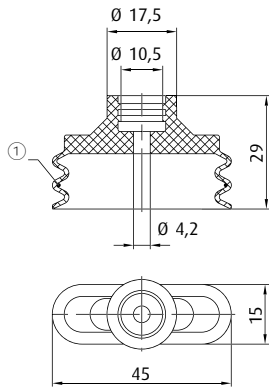
Item no. 132.45x15.064._*	Material HNBR (ge)	3 mm
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Additional sizes available are found on p. 146.
Ordering notes: Use of a gripper clamp (available separately) recommended.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

45x15 mm - 50x20 mm

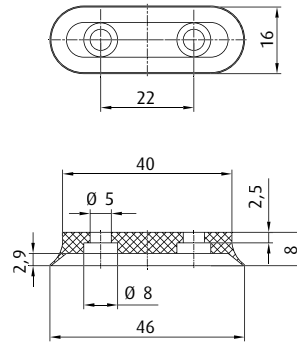


Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

① = Wire strap stiffening

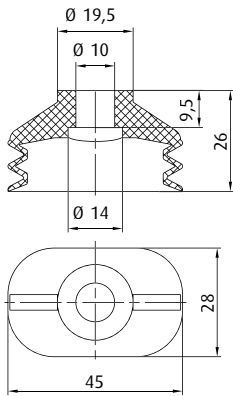
Item no. 138.45x15.003.* **Material** NBR (gr), SI (tr) 8 mm

Additional sizes available are found on p. 148.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Item no.	Connection	see page
270.310	M5-male	411
270.493	G1/8-male	420
270.494	G1/8-female	423

Item no. 9.45x15.038.* **Material** NBR (sw), SI (tr) 3 mm

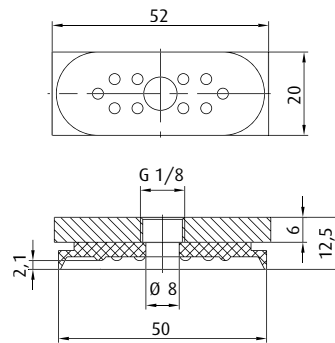


Item no.	Connection	see page
270.177	M10-male	416
270.451	G1/4-male	426
270.452	G1/4-female	431

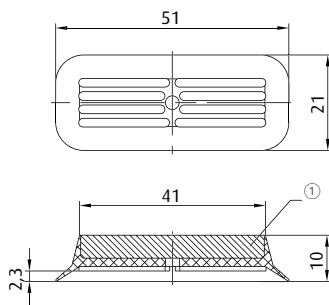
BESTSELLER

Item no. 138.45x28.013.* **Material** Vinyl (bl) 9 mm

Additional sizes available are found on p. 149.



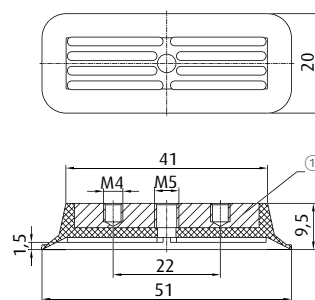
Item no. 130.50x20.102.* **Material** NBR (gr) 3 mm



① = Steel

Item no. 9.50x20.001.* **Material** NBR (gr), SI (tr) 2 mm

Ordering notes: Customised drilling patterns on request



① = Aluminium

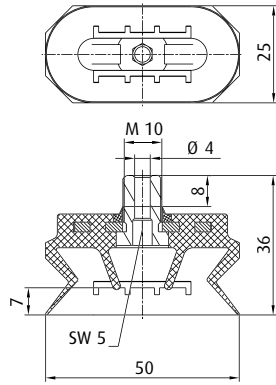
Item no. 9.50x20.034.* **Material** NBR (gr), SI (tr) 2 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760

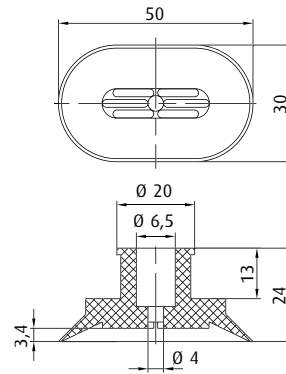


Vacuum cups by size | Oval vacuum cups by size

50x25 mm - 60x20 mm

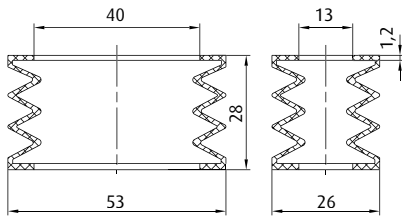


Item no. 130.50x25.094_* **Material** NBR (sw), SI (tr) 8 mm



Item no. 132.50x30.030_* **Material** NBR (gr), SBR (br) 5 mm

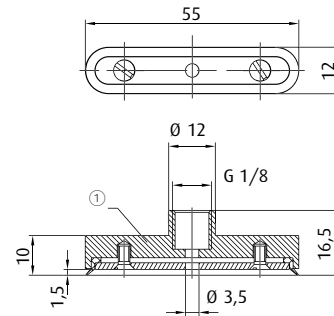
	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425



Item no. 209.52x25.006_* **Material** SI (tr) 13 mm

Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement

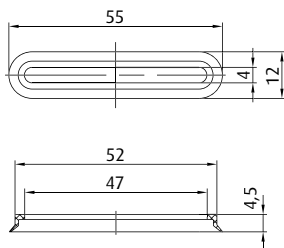
	Connection	see page
270.508	G1/8-female	439



Item no. 130.55x12.082_* **Material** NBR (sw), SI (tr), NR (sw) 1 mm

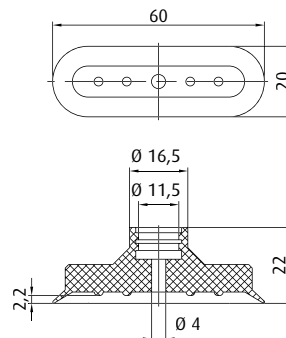
Additional sizes available are found on p. 157.

① = Aluminium



Item no. 132.55x12.029_* **Material** NBR (sw), SI (tr), NR (sw) 1 mm

	Connection	see page
270.441	G1/8-female	424



Item no. 132.60x20.022_* **Material** NBR (gr), SI (tr), PU (bg) 3 mm

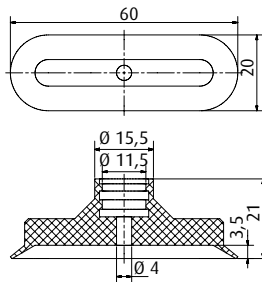
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.

	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

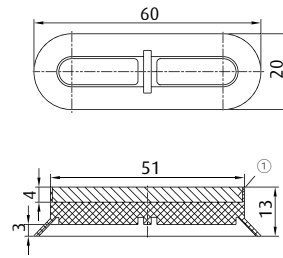
60x20 mm - 62x42 mm



	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 132.60x20.086.* **Material** Thermalon® (bl) **Thickness** 2.5 mm

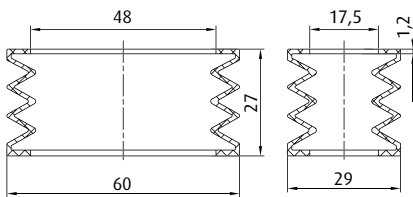
Additional sizes available are found on p. 144.
Ordering notes: Use of a gripper clamp (available separately) recommended.



① = Steel

Item no. 9.60x20.003.* **Material** SBR (sw), NR (bg) **Thickness** 4 mm

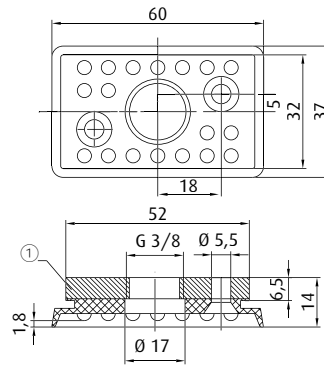
Ordering notes: Customised drilling patterns on request



	Connection	see page
270.509	G1/4-female	439

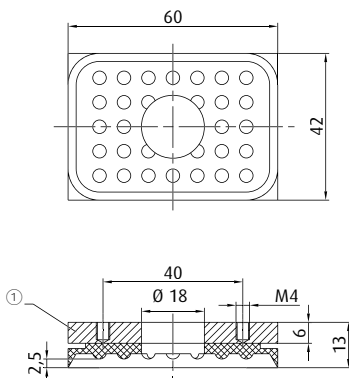
Item no. 209.60x29.001.* **Material** NBR (sw), SI (tr) **Thickness** 13 mm

Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement



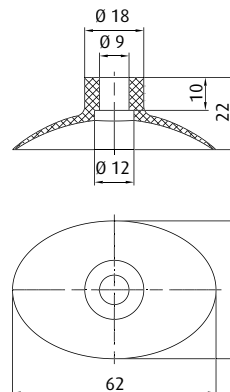
① = Aluminium

Item no. 130.60x38.091.* **Material** NBR (gr) **Thickness** 2 mm



① = Steel

Item no. 155.60x42.005.* **Material** NBR (gr) **Thickness** 2.5 mm



PERFECT FOR SOAPS

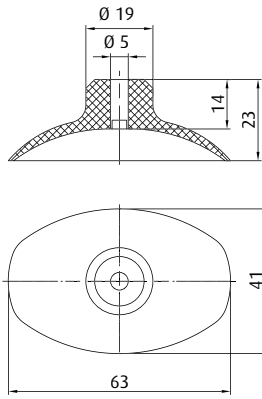
Item no. 130.62x42.111.* **Material** Vulkollan® (br) **Thickness** 7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

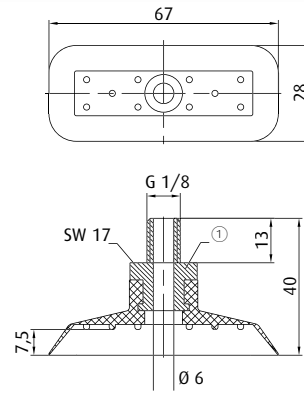
63x41 mm - 75x25 mm



	Connection	see page
270.443	M5-male	410
270.238	G1/8-male	417
270.110	G1/8-female	422
270.534	G1/4-male	425

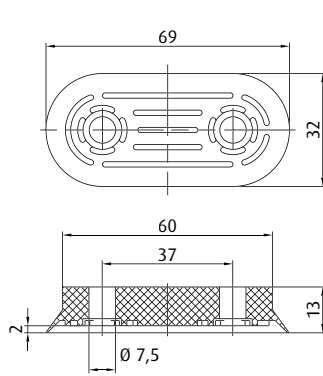
PERFECT FOR SOAPS

Item no. 132.60x42.052_* **Material** SI (g) 8 mm



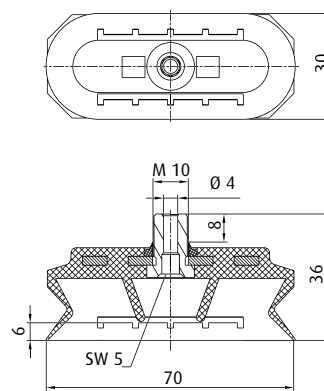
① = Aluminium

Item no. 130.67x28.104_* **Material** Vulkollan® (br) 7 mm

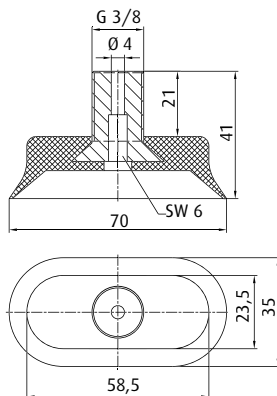


	Connection	see page
270.312/19	M6-male	414
270.030	G1/8-male	419
270.019	G1/8-female	423

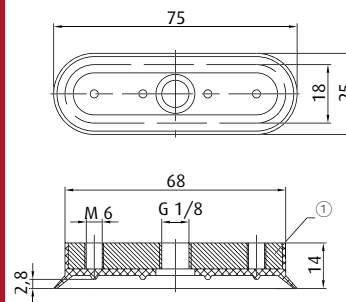
Item no. 132.69x32.060_* **Material** NR (bg) 2 mm



Item no. 130.70x30.095_* **Material** NBR (sw) 8 mm



Item no. 130.70x35.089_* **Material** NR (sw) 6 mm



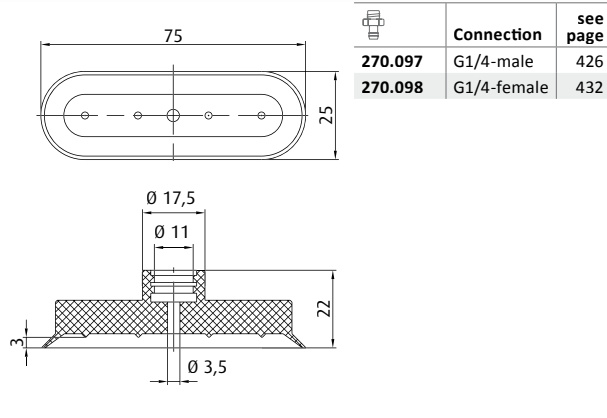
① = Aluminium

Item no. 130.75x25.080_* **Material** NBR (sw), SI (r) 3 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout. Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

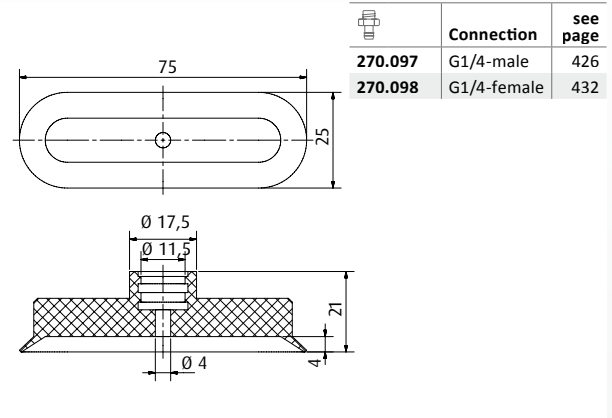
75x25 mm - 80x30 mm



Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 132.75x25.023.* Material NBR (gr), SI (tr) 3 mm

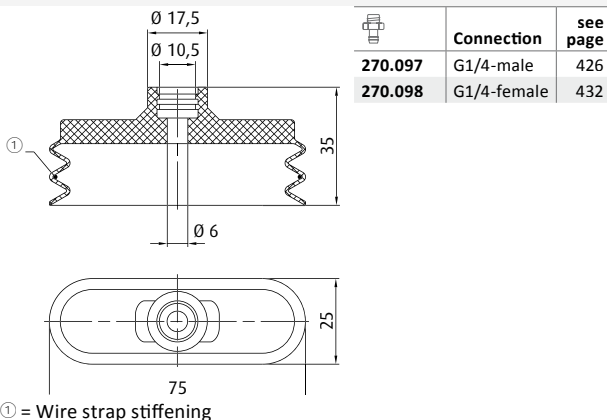
Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 132.75x25.087.* Material Thermalon® (bl) 2.5 mm

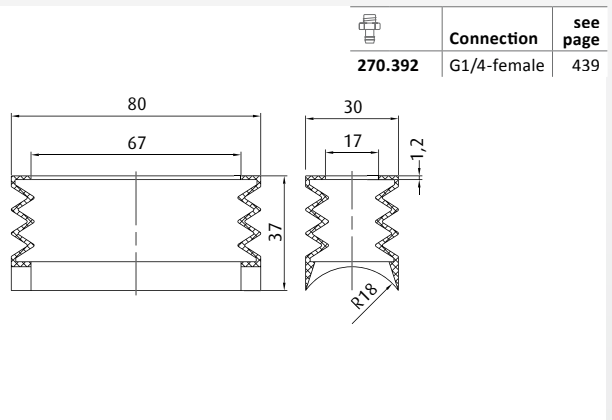
Additional sizes available are found on p. 144.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Item no.	Connection	see page
270.097	G1/4-male	426
270.098	G1/4-female	432

Item no. 138.75x25.004.* Material NBR (gr), SI (tr) 11 mm

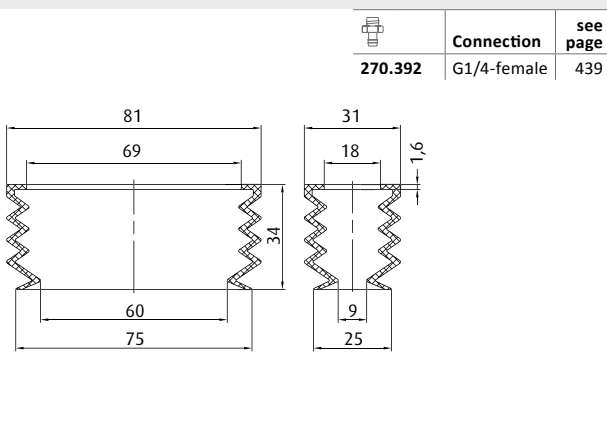
Additional sizes available are found on p. 148.
Ordering notes: Use of a gripper clamp (available separately) recommended.



Item no.	Connection	see page
270.392	G1/4-female	439

Item no. 201.79x29.002.* Material SI (tr) 16 mm

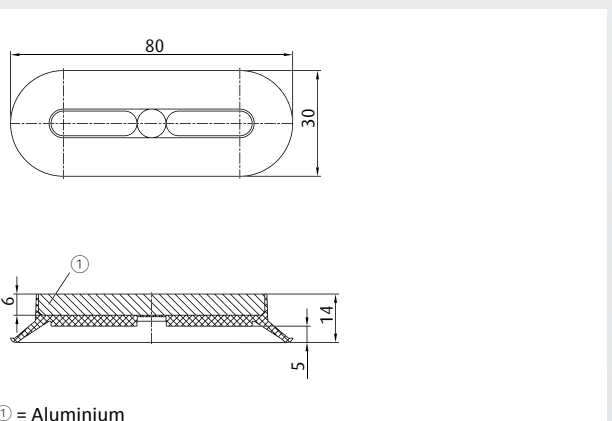
Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement



Item no.	Connection	see page
270.392	G1/4-female	439

Item no. 209.80x30.003.* Material SI (tr) 20 mm

Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement



Item no. 9.80x30.004.* Material NR (br) 5 mm

Ordering notes: Customised drilling patterns on request

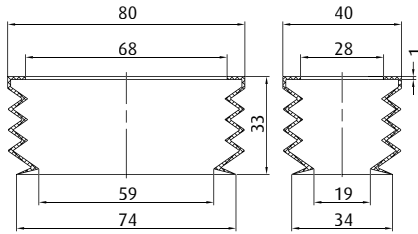
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
 Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

85x55 mm - 96x27 mm

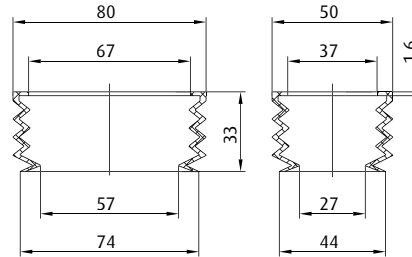
Connection	see page
G1/4-female	439



Item no. 209.80x40.004_*	Material SI (tr)	20 mm
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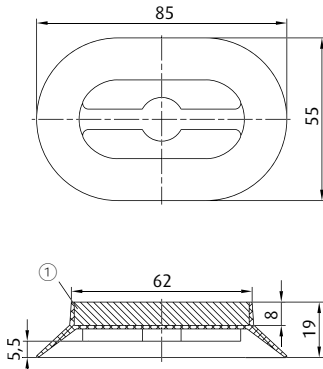
Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement

Connection	see page
G1/4-female	439



Item no. 209.80x50.005_*	Material SI (tr)	20 mm
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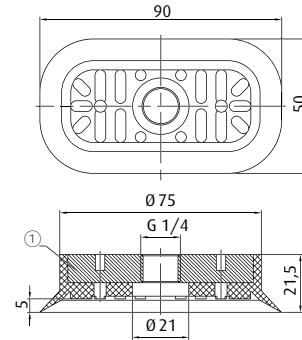
Additional sizes available are found on p. 150.
Ordering notes: On request, available with wire reinforcement



① = Aluminium

Item no. 9.85x55.006_*	Material NBR (gr), NR (bg)	7 mm
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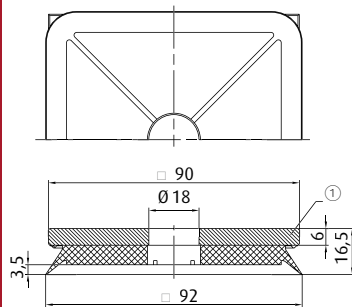
Ordering notes: Customised drilling patterns on request



① = Aluminium

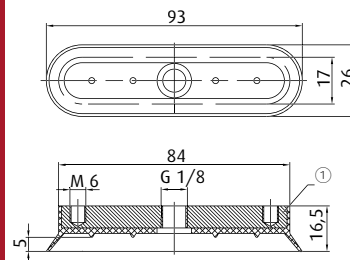
Item no. 130.90x50.113_*	Material NR (bg)	5 mm
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Additional sizes available are found on p. 158.



① = Steel

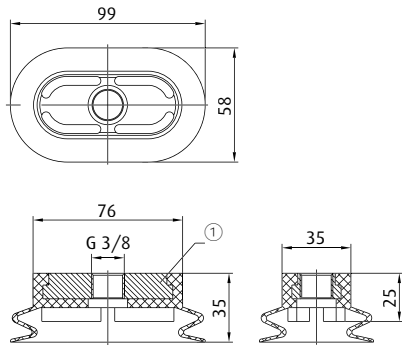
Item no. 130.92x92.006_*	Material NBR (gr)	3 mm
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① = Aluminium

Item no. 130.96x27.036_*	Material SI (r)	6 mm
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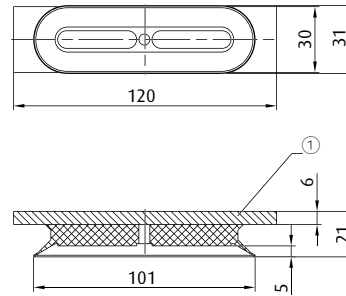
* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



① = Aluminium

Item no.
130.97x55.126.* **Material**
Vinyl (bl) 11 mm

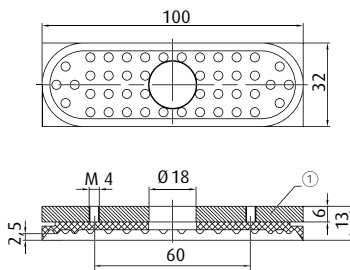
Additional sizes available are found on p. 149.



① = Steel

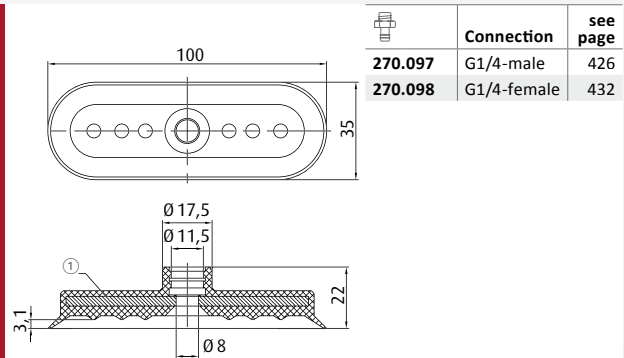
Item no.
9.100x30.007.* **Material**
NBR (gr), SBR (br) 5 mm

Ordering notes: Customised drilling patterns on request



① = Aluminium

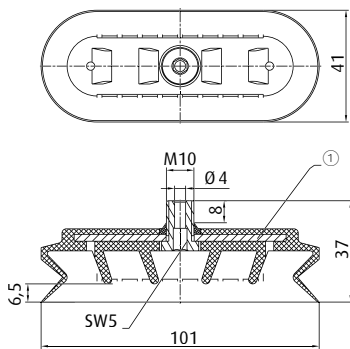
Item no.
130.100x32.067.* **Material**
NBR (gr) 2.5 mm



① = Aluminium

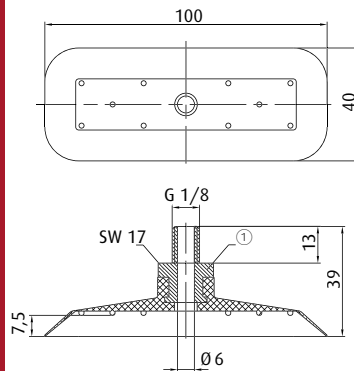
Item no.
132.100x35.26.* **Material**
NBR (sw) 3 mm

Additional sizes available are found on p. 141.
Ordering notes: Use of a gripper clamp (available separately) recommended.



① = Steel

Item no.
130.100x40.096.* **Material**
NBR (sw), SI (tr) 8 mm



① = Aluminium

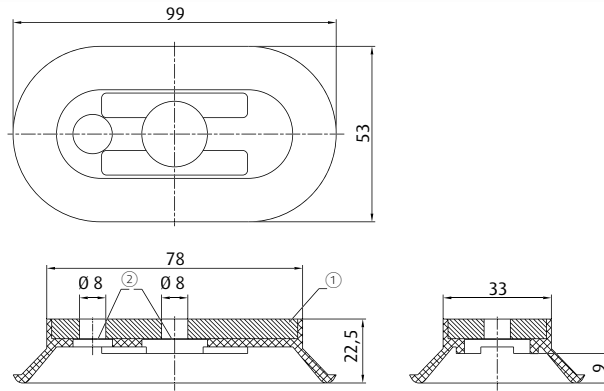
Item no.
130.100x40.105.* **Material**
Vulkollan® (br) 7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



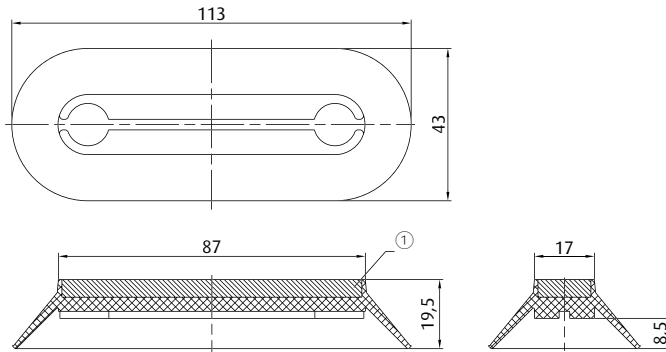
Vacuum cups by size | Oval vacuum cups by size

100x55 mm - 120x30 mm



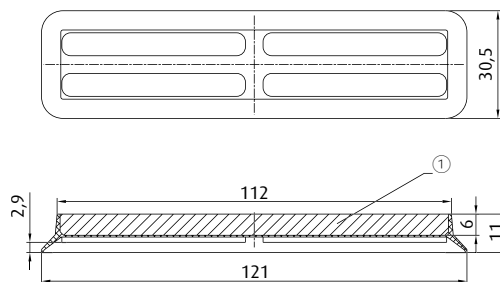
① = Aluminium ② = Sealed with rubber

Item no. 9.100x55.020.*	Material NR (or)	8 mm	Additional sizes available are found on p. 160.
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① = Steel

Item no. 9.110x40.009.*	Material NBR (gr), NR (br)	9 mm	Additional sizes available are found on p. 160. Ordering notes: Version with aluminium carrier: 9.110x40.011._
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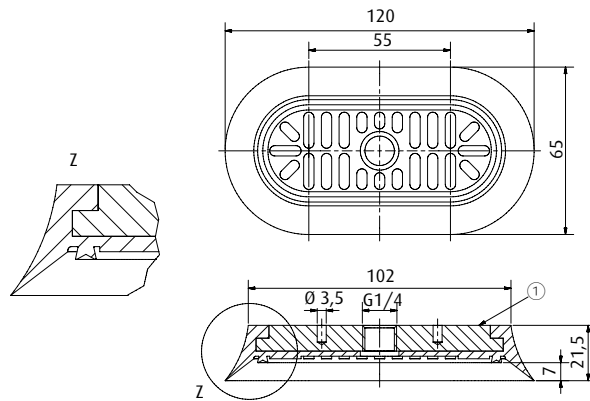
① = Steel

Item no. 9.120x30.062.*	Material NBR (gr)	3 mm	Ordering notes: Customised drilling patterns on request
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

120x65 mm - 135x75 mm



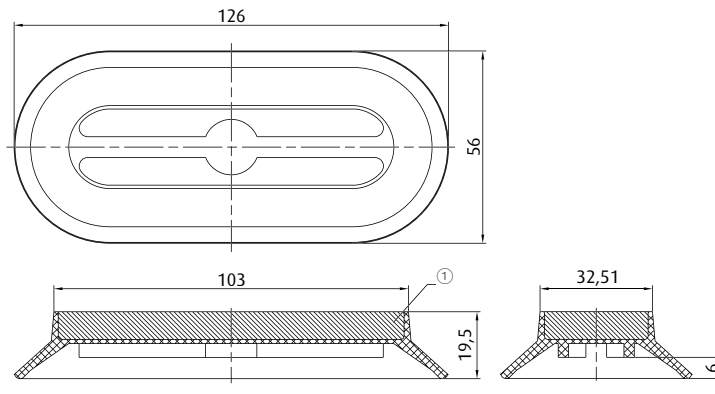
① = Aluminium

Item no.
9.120x65.088. * *

Material
NR (bg)

7 mm

Additional sizes available are found on p. 158.



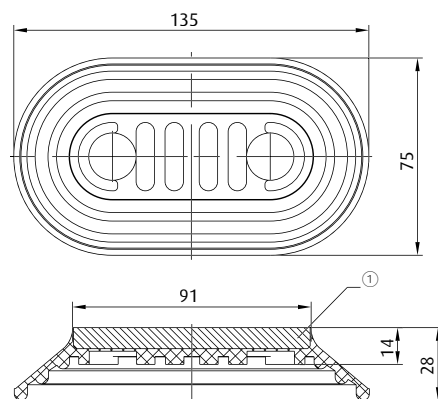
① = Steel

Item no.
9.125x55.012. * *

Material
NBR (gr), SBR (br), NR (br)

9 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.135x75.066. * *

Material
SBR (sw)

12 mm

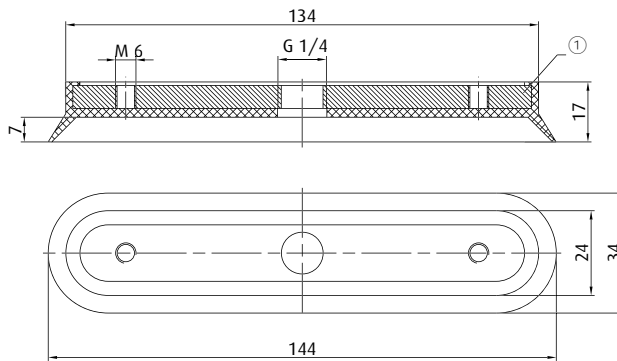
Ordering notes: Customised drilling patterns on request
Notes: Especially well-suited for rough surfaces

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



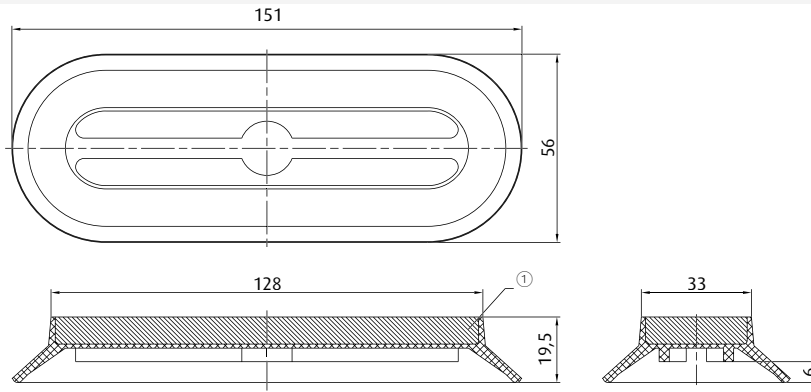
Vacuum cups by size | Oval vacuum cups by size

145x34 mm - 150x55 mm



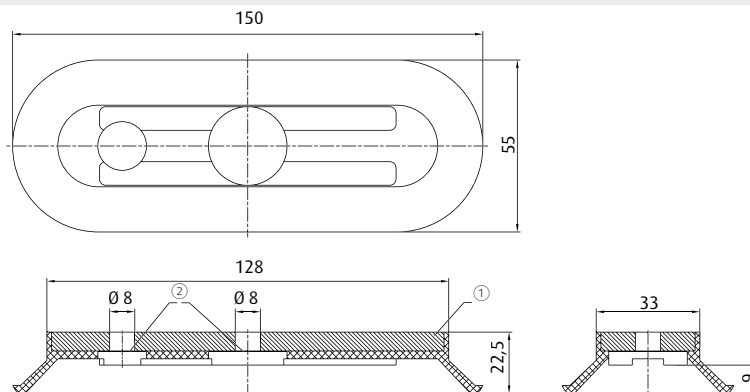
① = Aluminium

Item no. 130.145x34.55.*	Material NBR (sw), SI (r)	7 mm	
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① = Steel

Item no. 9.150x55.013.*	Material NBR (gr)	7 mm	Additional sizes available are found on p. 160. Ordering notes: Customised drilling patterns on request
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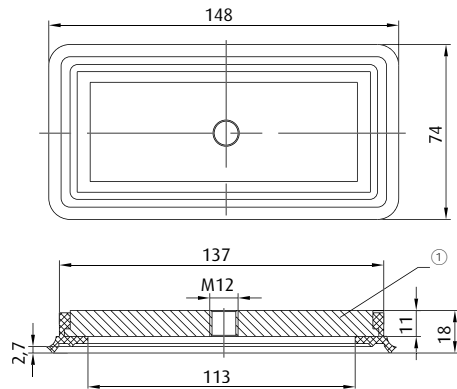
① = Aluminium ② = Sealed with rubber

Item no. 9.150x55.083.*	Material NR (or)	8 mm	Additional sizes available are found on p. 160.
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* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

150x75 mm - 152x51 mm

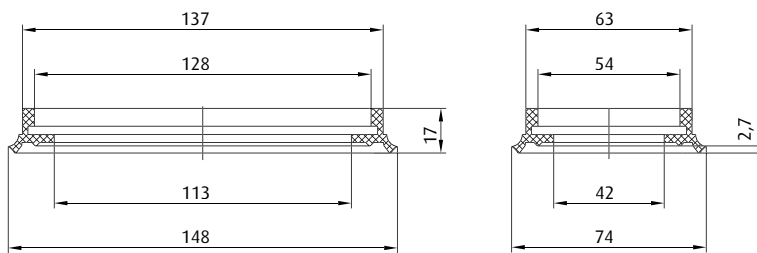


① = Aluminium

Item no.
155.150x75.3._*

Material
NBR (sw)

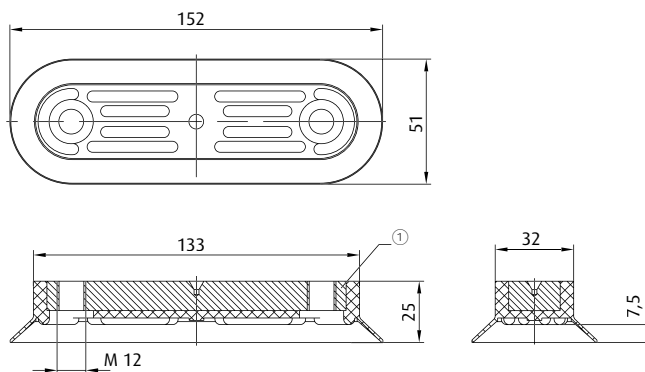
1.5 mm



Item no.
216.150x75.3._*

Material
NBR (sw)

1.5 mm



① = Aluminium

Item no.
130.152x51.092._*

Material
Vinyl (bl)

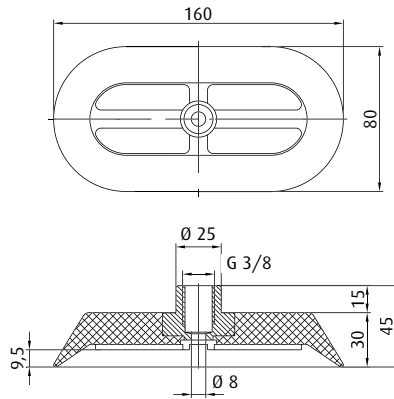
7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

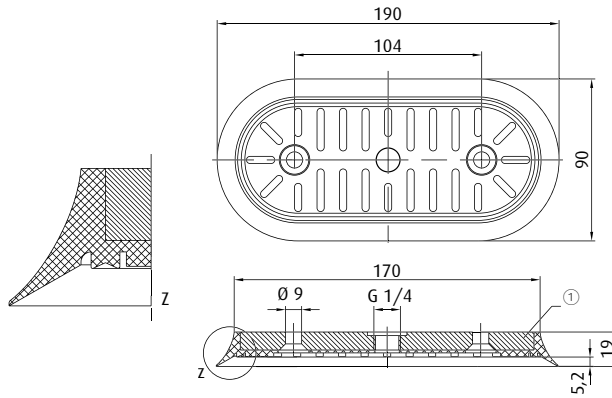
160x80 mm - 190x90 mm



Item no.
9.160x80.075._*

Material
SBR (sw)

9 mm



BESTSELLER

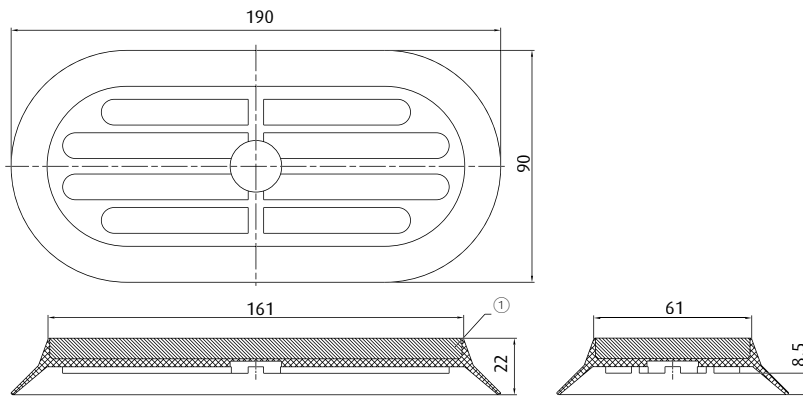
① = Aluminium

Item no.
9.190x90.061._*

Material
NR (bg)

5.5 mm

Additional sizes available are found on p. 158.



① = Steel

Item no.
9.200x100.015._*

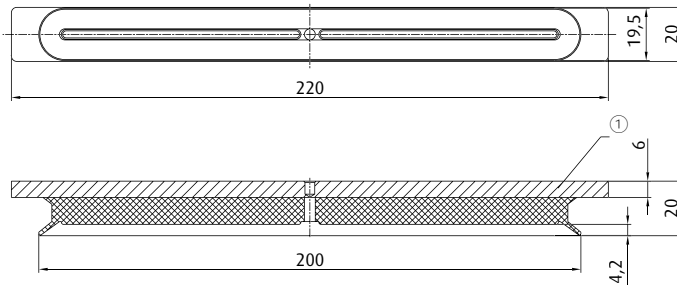
Material
NBR (gr), SBR (sw), NR (br)

8 mm

Additional sizes available are found on p. 160.

Ordering notes: Version with aluminium carrier: 9.200x100.054._

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



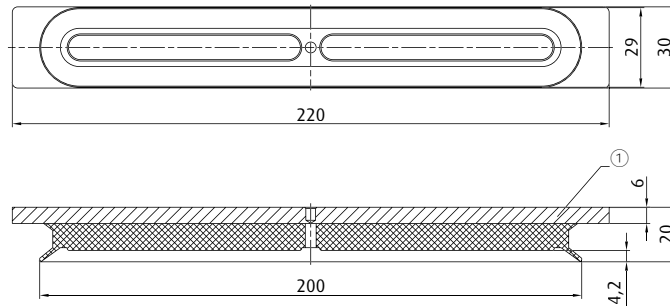
① = Steel

Item no.
9.200x20.063._*

Material
NBR (gr)

5 mm

Ordering notes: Customised drilling patterns on request



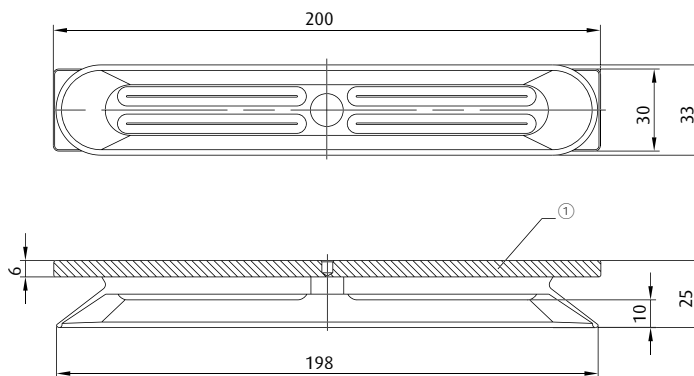
① = Steel

Item no.
9.200x30.031._*

Material
SBR (br), NBR (gr)

4 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.200x35.065._*

Material
NBR (gr), PU (bg)

10 mm

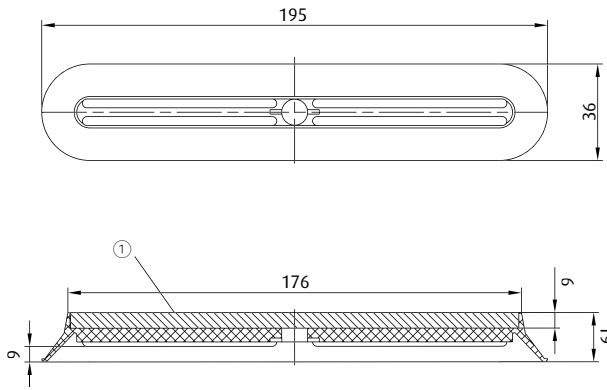
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

200x40 mm - 200x55 mm



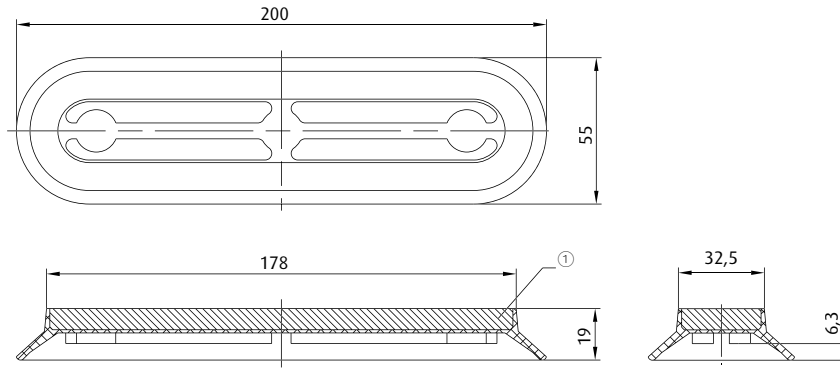
① = Steel

Item no.
9.200x40.010.*

Material
SBR (br), NBR (gr)

9 mm

Additional sizes available are found on p. 160.
Ordering notes: Version with aluminium carrier: 9.200x40.030.* on request customised drilling patterns available



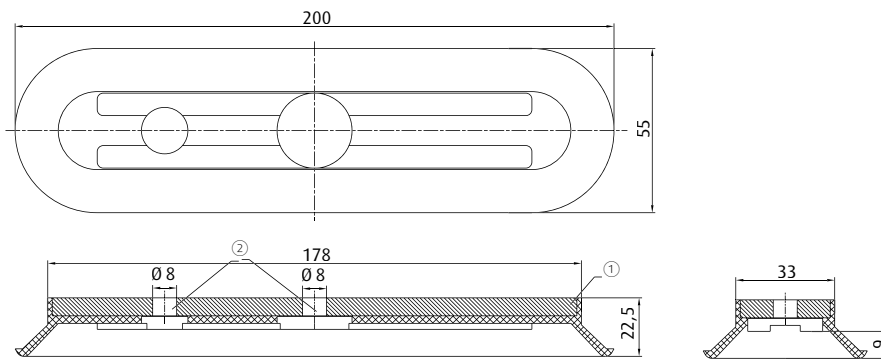
① = Steel

Item no.
9.200x55.014.*

Material
NBR (gr)

7 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request



① = Aluminium ② = Sealed with rubber

Item no.
9.200x55.020.*

Material
NR (or)

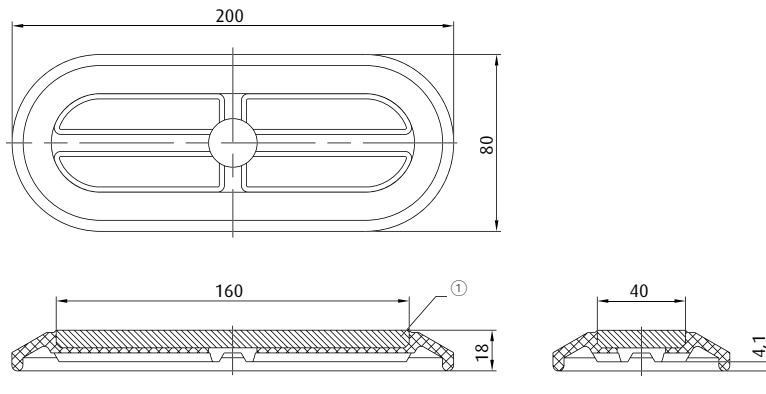
8 mm

Additional sizes available are found on p. 160.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

200x80 mm - 204x76 mm



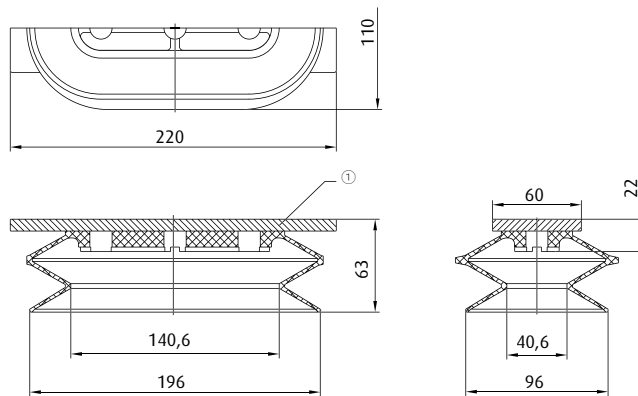
① = Steel

Item no.
9.200x80.067._*

Material
SBR (sw)

4 mm

Ordering notes: Customised drilling patterns on request



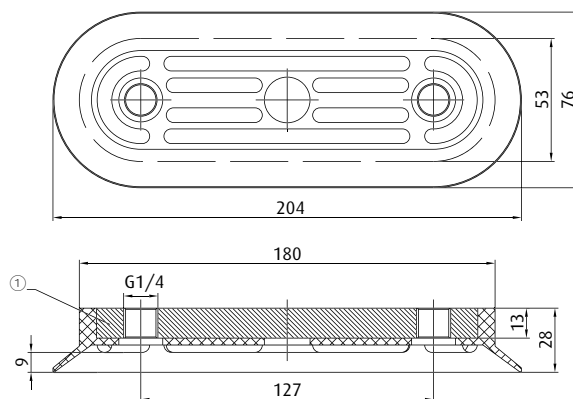
① = Aluminium

Item no.
138.200x100.005._*

Material
SBR (br), NBR (gr)

41 mm

Ordering notes: With steel wire reinforcement in the fold:
138.200x100.006._* Customised drilling patterns on request



① = Aluminium

Item no.
130.204x76.86._*

Material
Vinyl (bl)

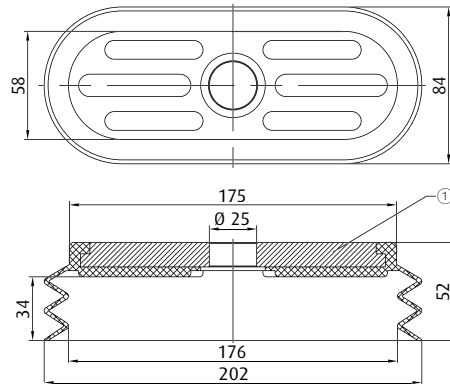
8 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

205x82 mm - 250x80 mm

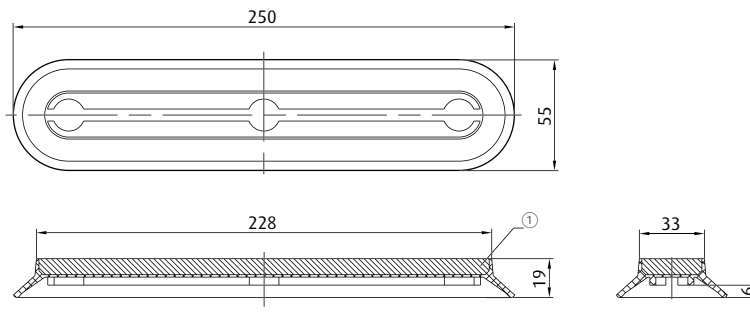


① = Aluminium

Item no.
137.205x82.1.*

Material
Vinyl (bl)

25 mm



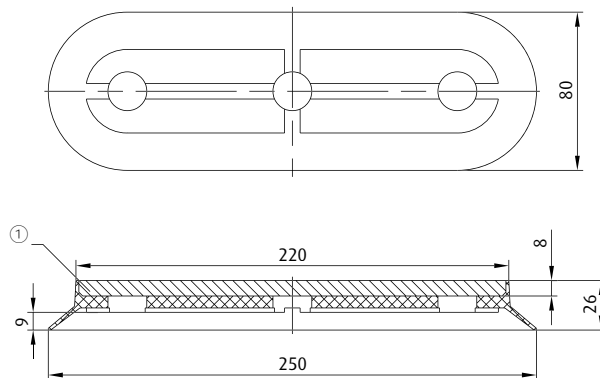
① = Steel

Item no.
9.250x55.016.*

Material
NBR (gr), NR (br)

8 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.250x80.033.*

Material
NBR (gr), SBR (br), NR (br)

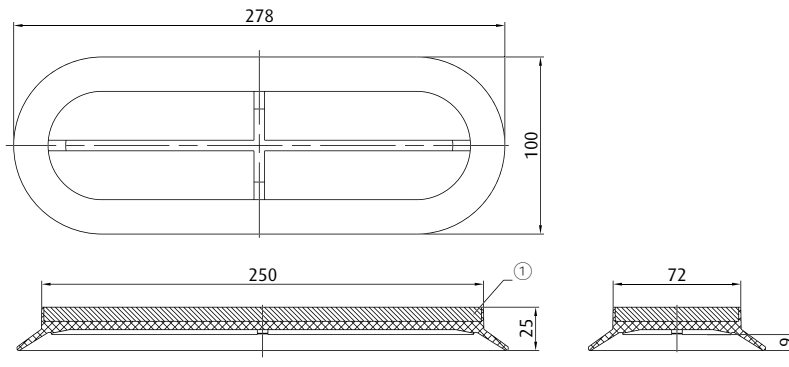
10 mm

Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

280x100 mm - 300x30 mm



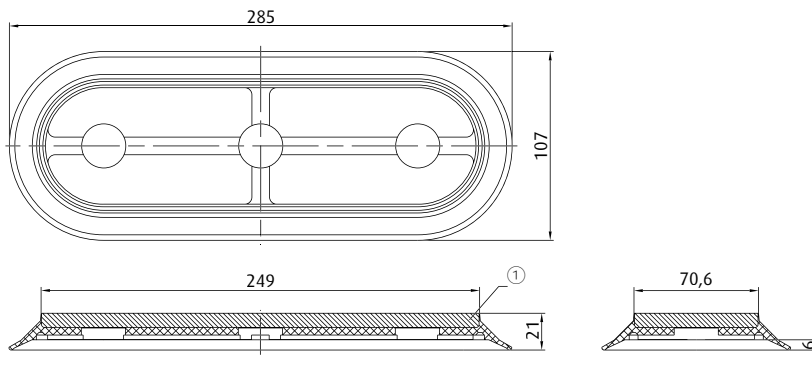
① = Steel

Item no.
9.280x100.017.*

Material
NBR (gr), SBR (br)

10 mm

Additional sizes available are found on p. 160.
Ordering notes: Version with aluminium carrier: 9.280x100.018.*



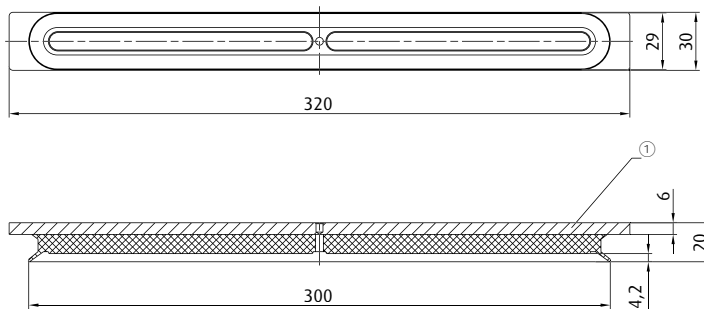
① = Steel

Item no.
9.280x107.070.*

Material
SBR (br)

6 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.300x30.069.*

Material
NBR (gr)

5 mm

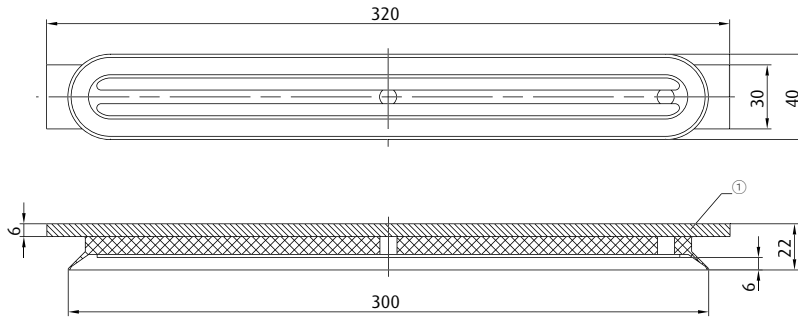
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

300x40 mm - 300x55 mm



① = Steel

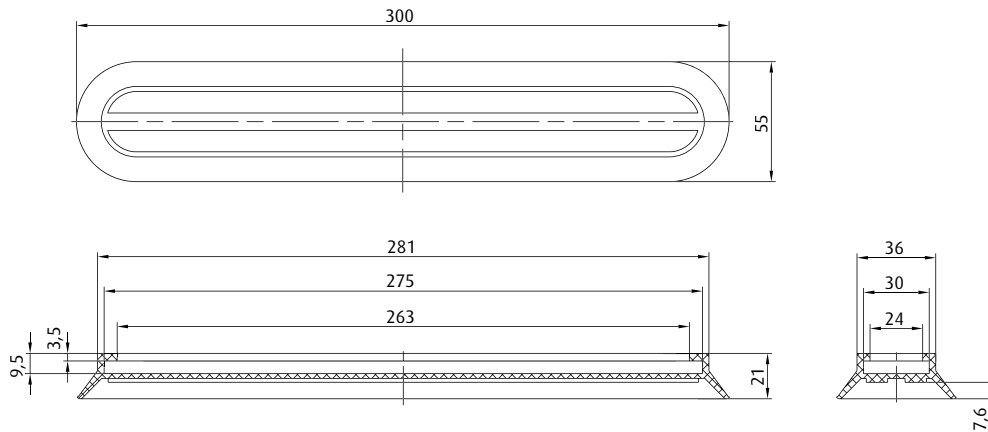
Item no.
9.300x40.064.*

Material
NBR (gr)

7 mm

Ordering notes: Customised drilling patterns on request

	Connection	see page
270.332	Without	438

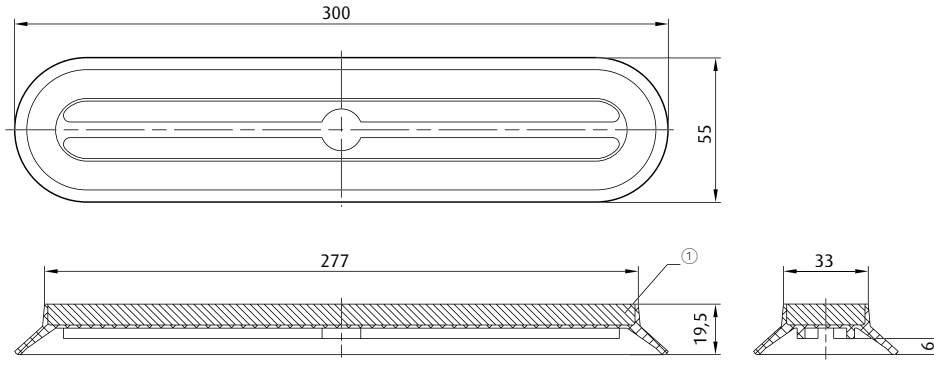


Item no.
9.290x55.071.*

Material
NBR (gr)

7 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



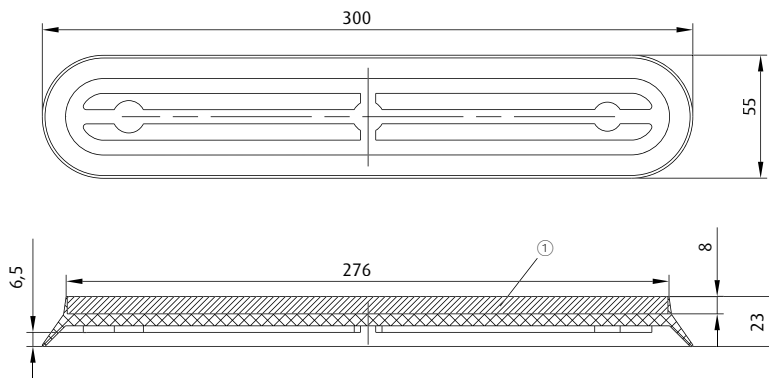
① = Steel

Item no.
9.300x55.019.*

Material
NBR (gr)

8 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request



① = Aluminium

Item no.
9.300x55.020.*

Material
NBR (gr)

8 mm

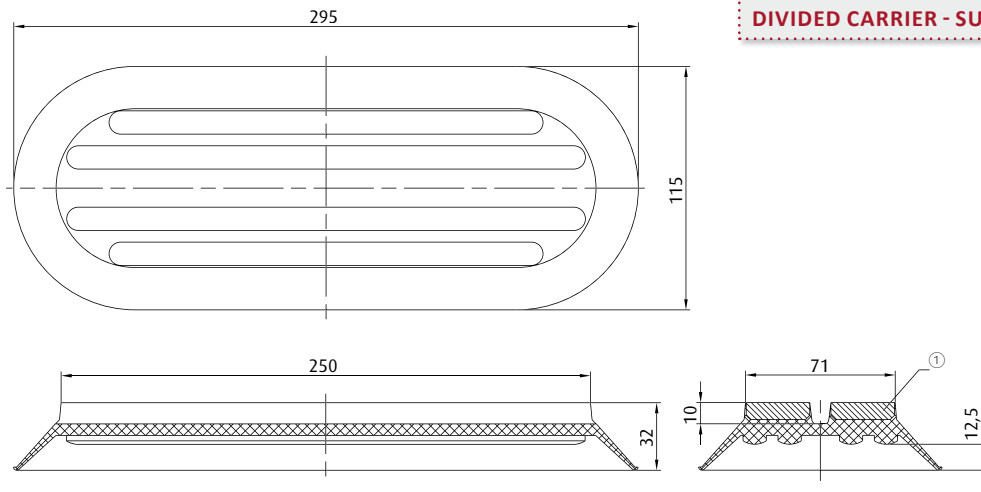
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

300x55 mm - 300x115 mm



DIVIDED CARRIER - SUITABLE FOR PIPES

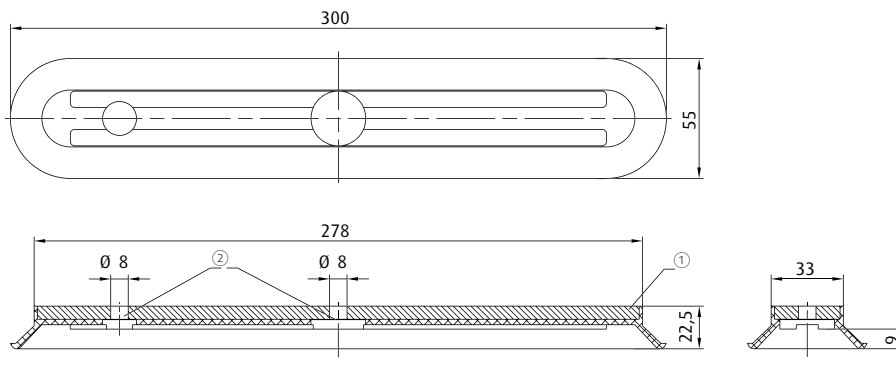
① = Steel beam divided (flexible)

Item no.
9.300x115.068._*

Material
NBR (gr)

14 mm

Ordering notes: Customised drilling patterns on request



① = Aluminium ② = Sealed with rubber

Item no.
9.300x55.046._*

Material
NR (or)

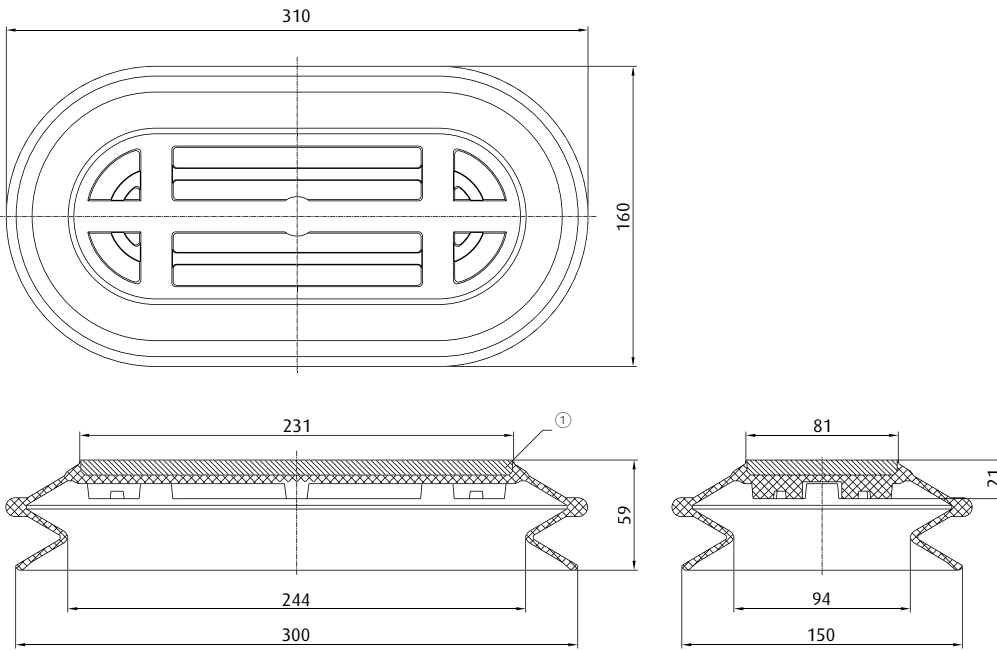
8 mm

Additional sizes available are found on p. 160.

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

300x120 mm - 300x150 mm



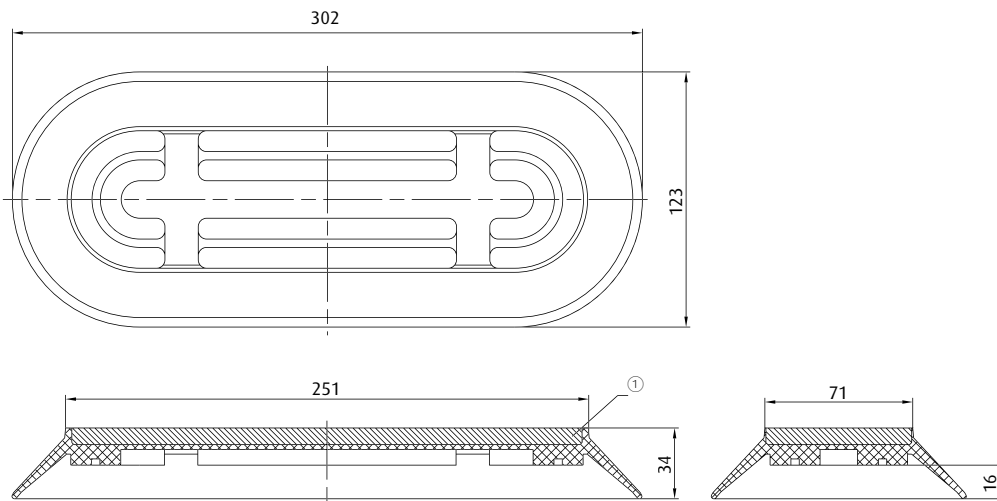
① = Steel

Item no.
138.300x150.007.*

Material
SBR (br), NBR (gr)

39 mm

Ordering notes: With vulcanised metal reinforcement in the fold:
138.300x150.008.*



① = Steel

Item no.
9.300x120.021.*

Material
NBR (gr), SBR (br)

17 mm

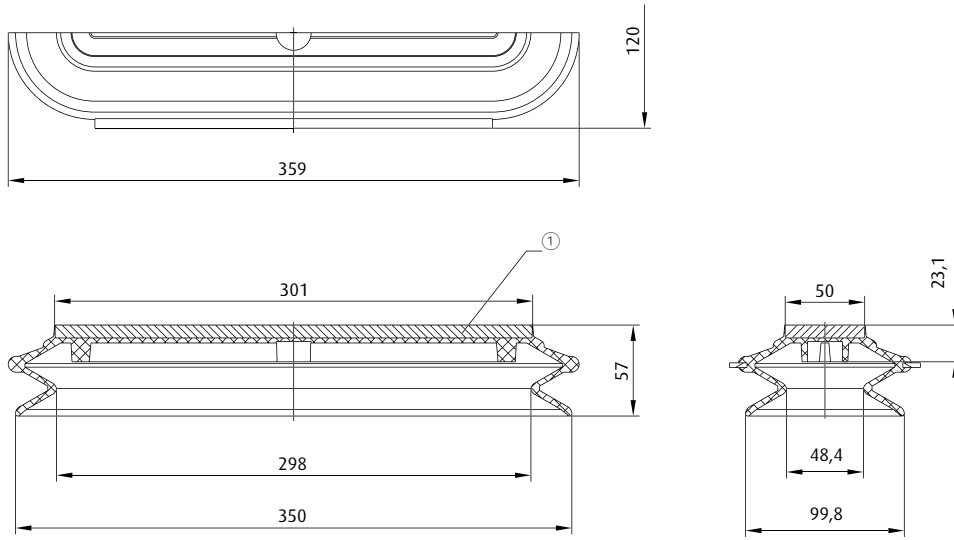
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

350x100 mm - 370x70 mm



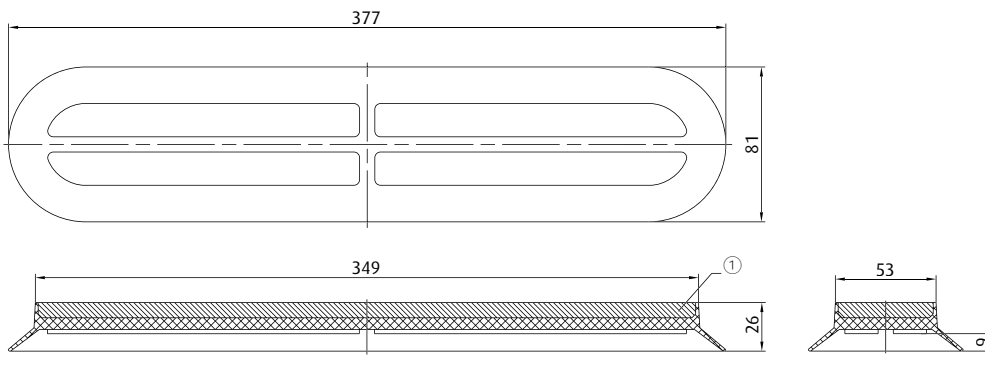
① = Steel

Item no.
138.350x100.009.*

Material
SBR (br), NBR (gr)

39 mm

Ordering notes: With vulcanised metal reinforcement in the fold:
138.350x100.010.*



① = Steel

Item no.
9.370x70.022.*

Material
NBR (gr), SBR (br)

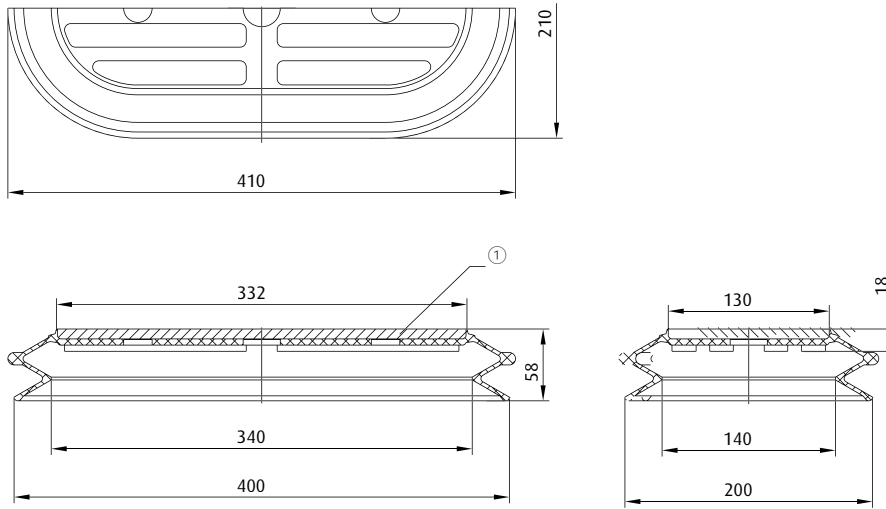
10 mm

Additional sizes available are found on p. 160.
Ordering notes: Version with aluminium carrier: 9.370x70.023.*

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

400x200 mm - 430x180 mm



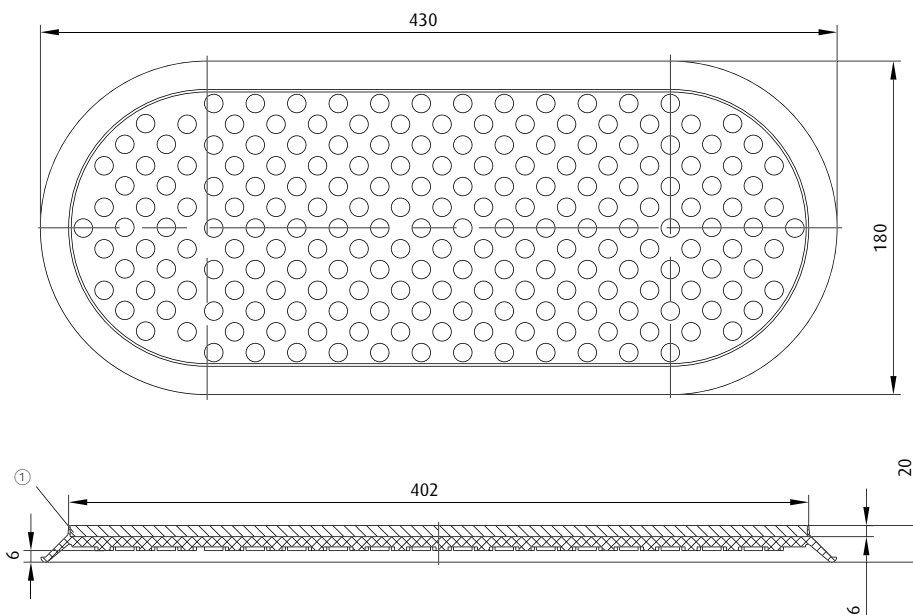
① = Steel

Item no.
138.400x200.011.*

Material
SBR (br), NBR (gr)

39 mm

Ordering notes: With vulcanised metal reinforcement in the fold:
138.400x200.012.*



① = Steel

Item no.
9.430x180.024.*

Material
SBR (sw), NBR (gr), PU (bg)

6 mm

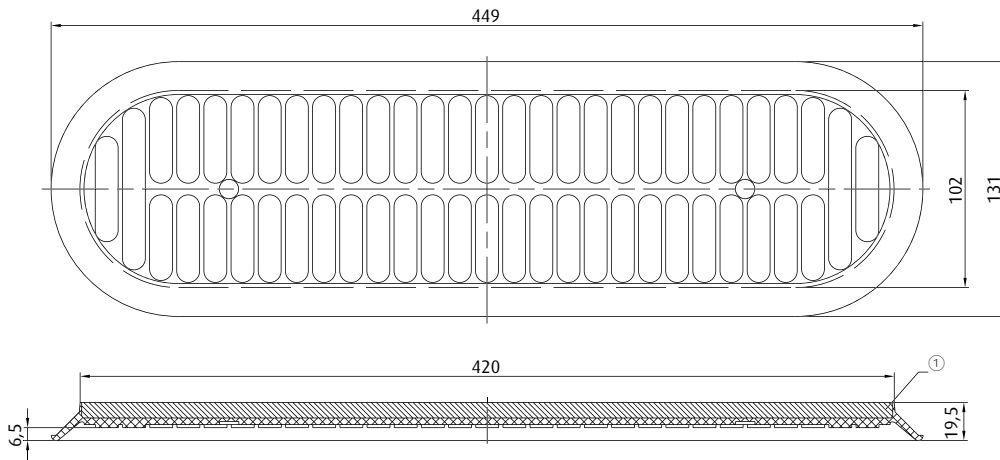
Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

450x130 mm - 450x150 mm



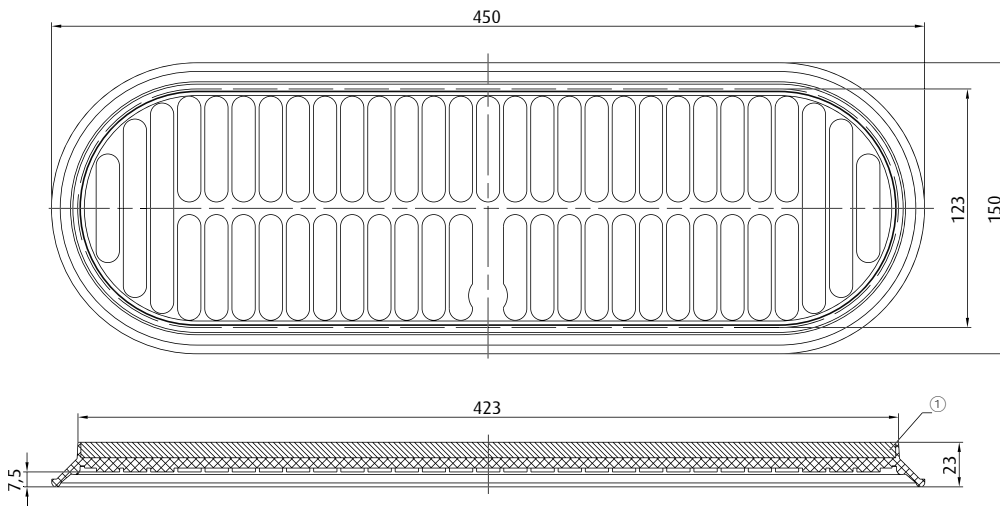
① = Steel

Item no.
9.450x130.025_*

Material
NBR (gr), SBR (br)

6 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.450x150.026_*

Material
NBR (gr), SBR (sw)

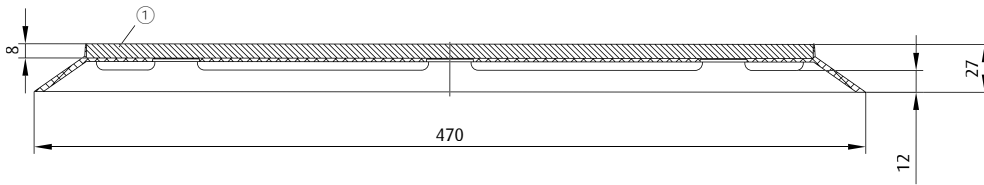
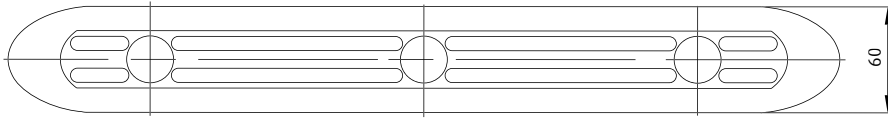
9 mm

Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

470x60 mm - 470x470 mm



SUITABLE FOR ROUND SECTIONS AND PIPES

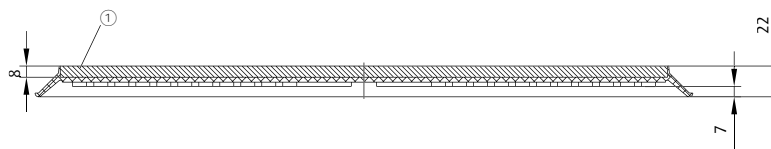
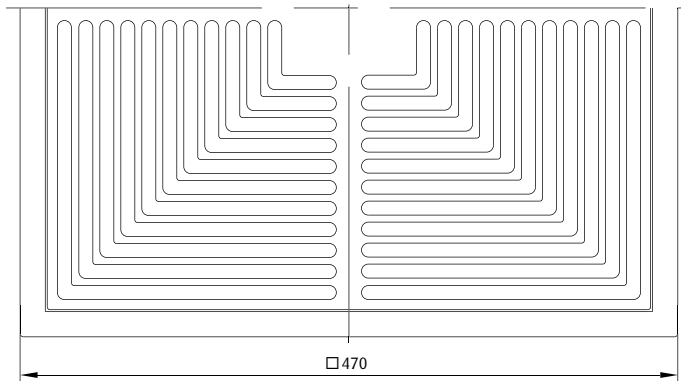
① = Steel

Item no.
9.470x60.072.*

Material
NBR (gr), SBR (sw)

12 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.470x470.027.*

Material
SBR (sw)

6 mm

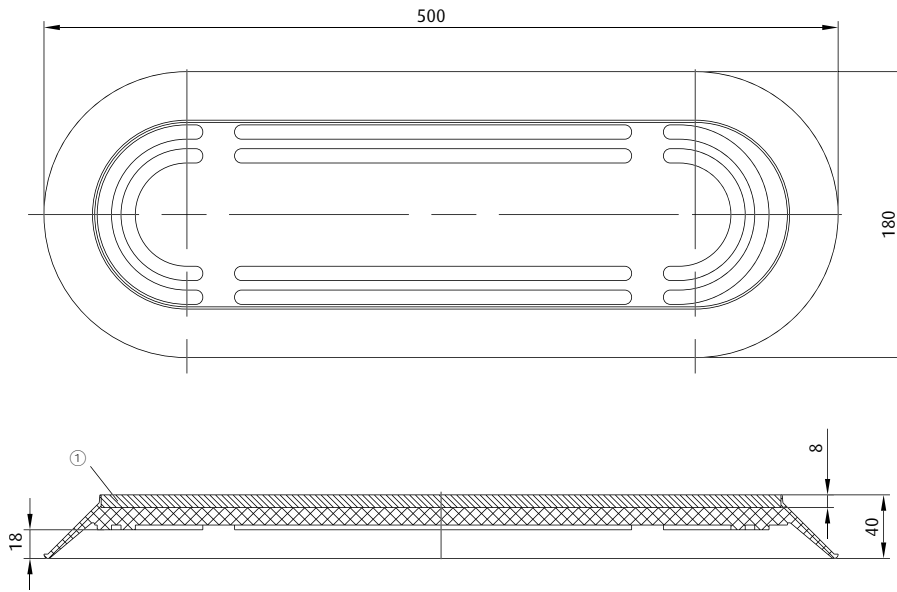
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760



Vacuum cups by size | Oval vacuum cups by size

500x180 mm - 580x180 mm



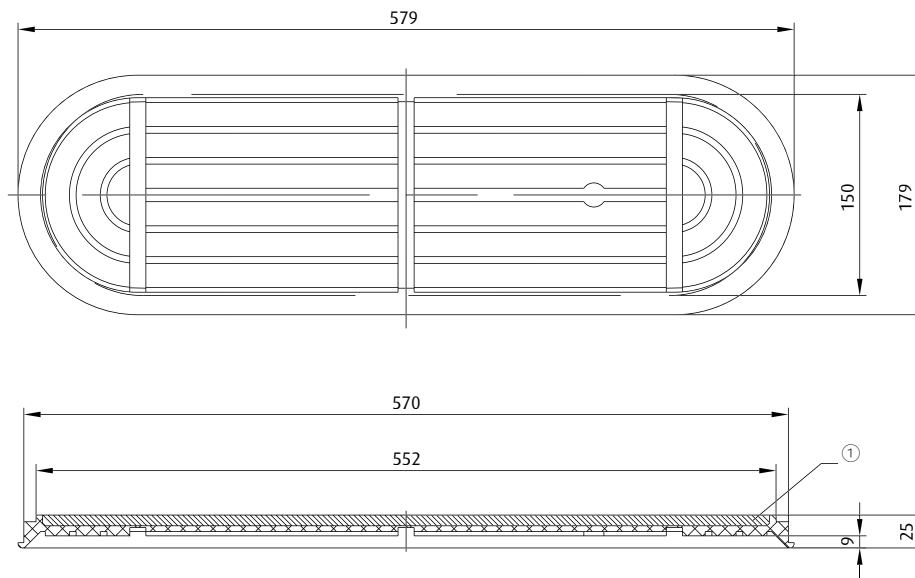
① = Steel

Item no.
9.500x180.028.*

Material
NBR (gr), SBR (sw)

21 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.580x180.029.*

Material
NBR (gr), SBR (br)

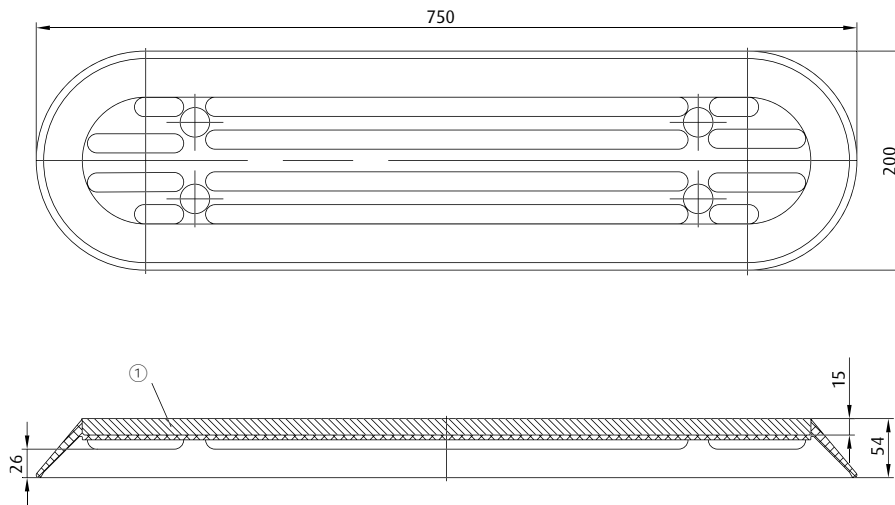
10 mm

Additional sizes available are found on p. 160.
Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Oval vacuum cups by size

750x200 mm - 800x400 mm



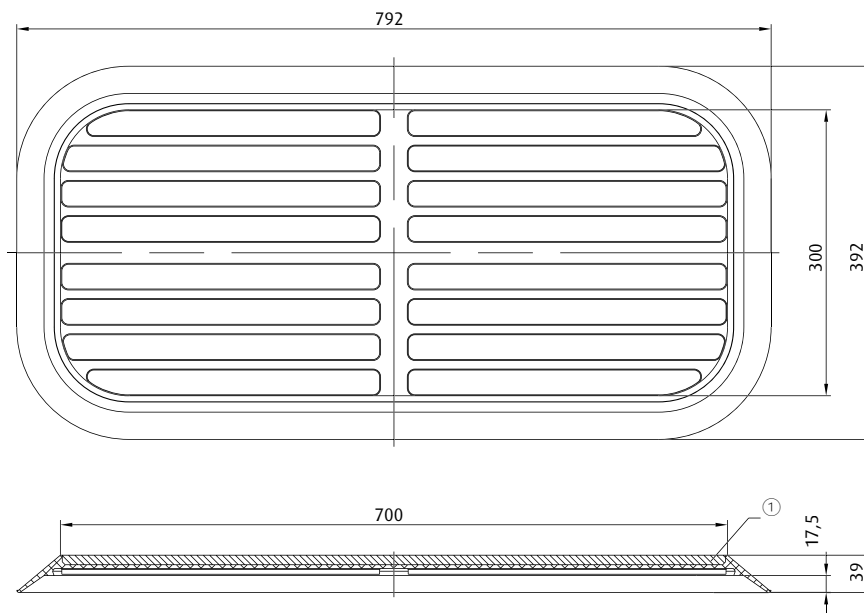
① = Steel

Item no.
9.750x200.049.*

Material
SBR (br)

29 mm

Ordering notes: Customised drilling patterns on request



① = Steel

Item no.
9.800x400.048.*

Material
SBR (br), NBR (gr)

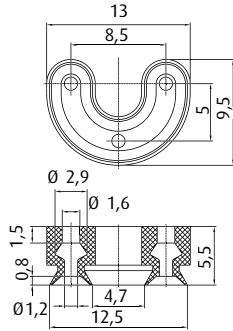
20 mm

Ordering notes: Customised drilling patterns on request

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for Vacuum cups you will find on page 760

Vacuum cups by size | Ring and segment vacuum cups

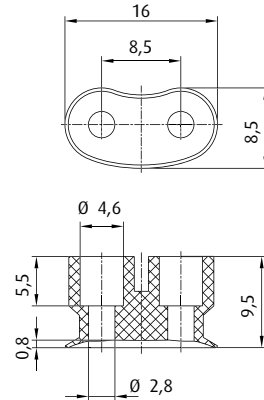
∅ 13 - 24 mm



Item no.
107.013.095._*

Material
SI (tr)

0.7 mm

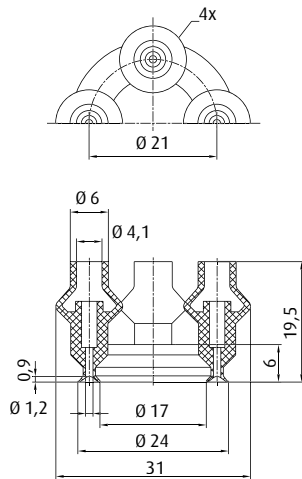


Item no.
107.017.093._*

Material
SI (tr)

0.2 mm

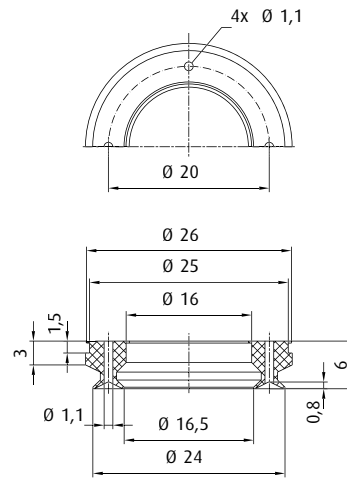
Connection	see page
M5-male	411



Item no.
107.024.060._*

Material
SI (tr)

0.8 + 1.4 mm



Item no.
107.024.061._*

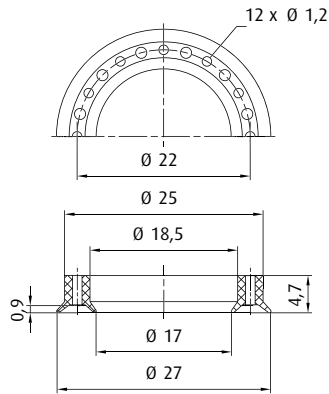
Material
SI (tr)

0.8 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

Vacuum cups by size | Ring and segment vacuum cups

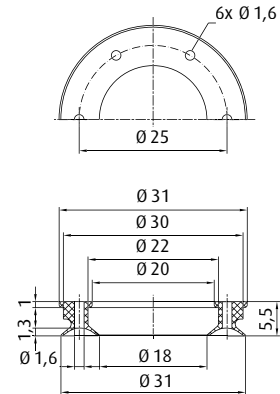
∅ 27 - 33 mm



Item no.
107.027.121.*

Material
SI (tr)

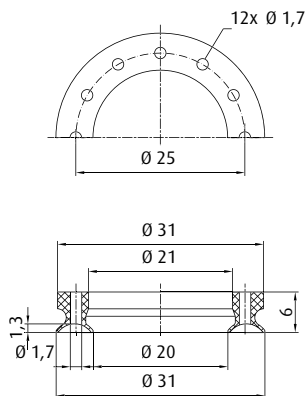
0.5 mm



Item no.
107.031.079.*

Material
SI (bl)

1.3 mm

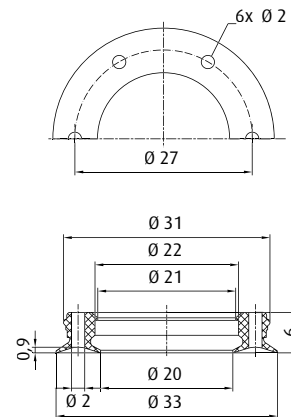


BESTSELLER

Item no.
107.031.091.*

Material
SI (tr)

1.3 mm



Item no.
107.033.046.*


Material
SI-AS (sw)

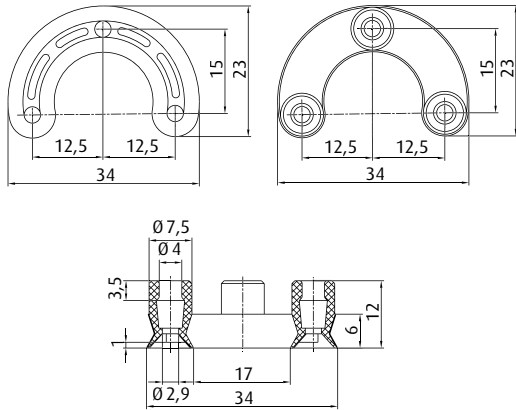
0.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760

Vacuum cups by size | Ring and segment vacuum cups


∅ 33 - 114 mm


	Connection	see page
270.134	M5-male	409
270.104	M6-male	413
270.033	G1/8-male	416
270.478	G1/8-female	421

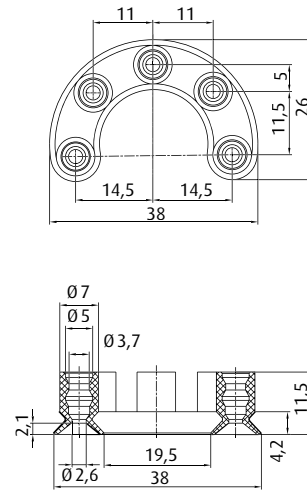


Item no.
107.033.047.*

Material
SI (tr)


 1.2 mm

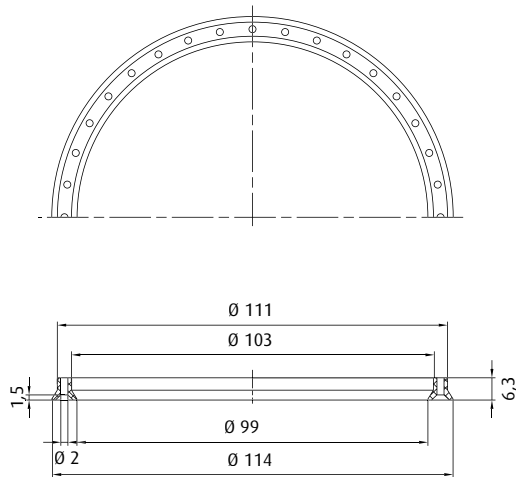
	Connection	see page
270.399	M5-male	410



Item no.
107.038.119.*

Material
SI (tr)


 2 mm



PTFE COATED

Item no.
107.114.118.*

Material
SI (tr)

 0.5 mm

* When ordering please add the appropriate material code to item no. You will find it in the foldout.
Average holding forces for vacuum cups you will find on page 760