

NC compact tensioners | 5-axis compact tensioner

27656

NC compact tensioners type RKE



Type

With mechanical intensification, horizontal, vertical or lateral clamping. Steel base unit all sides hardened and ground. Stepped jaws fixed, reversible, stepped jaws movable, reversible. Long clamping slide with transverse keyway. Drive spindle with clamping force preset. Mounting thread M for workpiece stops. Clamping areas for clamping claws, stable chip guard prevents metal chips from entering the inner area of the body.

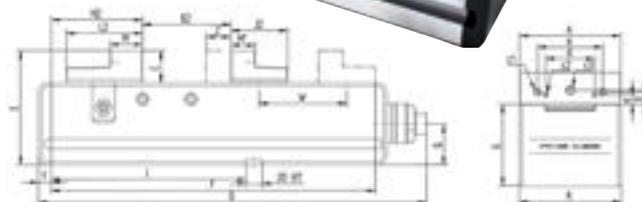
Note:

Accessories see cat.-no. 27657 - 27663 and 27682 - 27684.

Standard top jaws available on request. Clamping width with reversible stepped jaws: jaw width 125 = 97-312 mm, 160 = 131-451 mm.



27656



Jaw width A	B2	E	F	G	H2	K	W	Clamping force	Weight	27656	...
mm	mm	mm	mm	mm	mm	mm	mm	kN	approx. kg		
125	0-216	140	400	100	112.5	126	1 x 108.0	40	41		201
160	0-320	165	530	115	130.0	162	2 x 102.5	60	79		202

27649

NC compact spanners Type MM-G 125/160



Type

Basic version, clamping on base. Clamping system mechanical/mechanical. Basic body made of GGG. Stepped jaws reversible, hardened and ground. Long clamping slide with transverse keyway, drive spindle with clamping force presetting. Mounting thread M 12 for workpiece stops. Driving face for clamping claws. Stable chip guard prevents the ingress of swarf to the interior of the body.

Use

Locating bores compatible for ATORN datum point clamping system. Keyway dimension 200 mm.

Note:

Accessories see cat.-no. 27657 - 27663 and 27682 - 27684.



27649 101

Jaw width	Offset range	Feed travel	Overall length	Overall height	Jaw height	Chucking capacity	Chucking capacity	Clamping force	Weight	27649	...
mm	jaws mm	slide mm	mm	mm	mm	high side mm	step face mm	kN	kg		
125	1 x 108.0	109	463	140	40	0-216	97-312	40	41		101
160	2 x 102.5	117	618	165	50	0-320	131-451	60	79		102

27657 - 27663

Accessories for NC compact tensioner, type RKE



27657

Set of stepped jaws

27658

Set of carrier jaws

27659

Pronged insert, single, with fastening screws suitable for carrier jaws.

27660

Set of base jaws

27661

Standard insert, in pairs.

27662

Claw insert, in pairs.

27663

V-drive 90°

Use

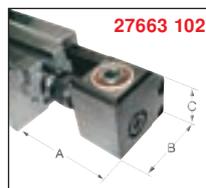
Ideal for side-mounted clamping jaws or for large machine tables.

27663 101

Dimensions: L = 133 mm, W = 106 mm, C = 98 mm.

27663 102

Dimensions: L = 166 mm, B = 111 mm, C = 98 mm.



27657



27658



27659



27660



27661



27662

for jaw width	27657	...	27658	...	27659	...	27660	...	27661	...	27662	...	27663	...
mm														
125														
160														



Type

Stable, compact base unit (GGG60). Guide tracks inductively hardened and ground. Zero-maintenance, encapsulated high-pressure spindle with self-tensioning spring pack. Precise guide keyways. Optimised chip guard. Minimum cleaning cost. Clamping system mechanical-mechanical.

Advantages:

- Max. accessibility during machining
- Patented fast adjustment
- lower tensioning losses even when clamping near the edges
- very low tensioning losses, even when clamping using gripper points
- Stepped chucks with clip-in fixtures for support strips

Scope of supply:

Base unit without chucks, incl. 4 clamping brackets

Use

For 5-axis machines or on CNC machines. Safe and fast clamping of blanks. Burning and sawing cuts achieved using interchangeable gripper chucks.



27590 101

27590 201



27590 202



27590 203



27590 204



27590 301



27590 401



27590 402



27590 501-502



27590 601



27590 602



Base unit Cat. No. 27590 101	
Height mm:	100
Width mm:	126
Body length mm:	250
Total length mm:	273
Clamping force at 110 Nm kN:	40



Version	Dimensions mm H x W x L	waf mm	27590	...
Base unit without chuck jaws, incl. 4 clamping brackets	-	-	101	
Stepped jaws, fixed	39.5 x 125 x 78	0-178	201	
Stepped jaws, movable	39.5 x 125 x 78	0-178	202	
Gripper jaws, fixed	25 x 160 x 105	10-202	203	
Gripper jaws, movable	25 x 160 x 105	10-202	204	
Pendulum jaw with 2 grip inserts	20 x 156 x 65	6-168	301	
Gripper strip, screw-mounted	19.5 x 125 x 5	39-172	401	
Gripper strip, screw-mounted	39.5 x 125 x 6.4	5-82	402	
Stepped strip for clipping in	15-125	10-178	501	
Stepped strip for clipping in	35-125	10-178	502	
Screw-on chuck for large waf sizes	15 x 125 x 45	75-240	601	
Screw-on chuck for small waf sizes	15 x 60 x 45	7-168	602	

SAFETY FIRST! The current PSA catalogues



Centring tensioner

27591

Mechanical centring tensioner MZE



27591 101-106

Type

- Robust steel version
- Base unit, basic chucks and spindles surface-hardened
- High clamping force
- Compact design
- Maximum level of freedom for 5-sided and multi-sided machining
- Centring precision 0.03 mm
- Retaining bore pattern on underside.

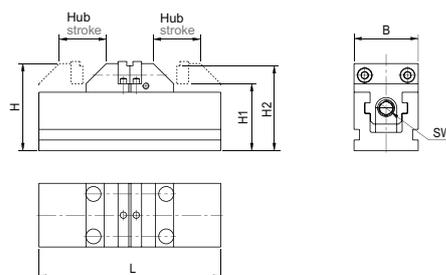
Scope of supply:

Incl. 1 pair of hard stepped chucks with recess,
1 operating key.

Use

Specifically for the clamping of blanks and for machining of blanks on multi-axis machining centres and as a cost-effective centring tensioner solution for use on palletisers and automation systems.

27591 101-106



Chucks-width mm	L mm	H mm	H1 mm	H2 mm	Clamping-width mm	Clamping force kN	SW mm	Weight approx. kg	27591	...
36	80	50	39	48	4 - 40	8.0	8	1		101
60	170	82	63	80	18 - 90	12.5	12	4		103
100	280	114	90	112	50 - 190	22.5	15	15		105
125	360	140	110	138	58 - 250	32.5	18	30		106

Short clamping chucks, hardened

27591 201-206

Use

- For positive connection clamping of workpieces for rough chip-cutting
- 15° recess (swallowtail) maximum holding force on workpiece

Jaw width mm	Clamping depth mm	27591	...
36	4		201
60	4		203
100	4		205
125	4		206

27591 201-206



Gripper clamping chucks, hardened and coated

27591 211-216

Use

- To increase the holding forces on workpiece blanks

Jaw width mm	Clamping depth mm	27591	...
36	4		211
60	4		213
100	4		215
125	4		216

27591 211-216



Attachment chucks, hardened and ground

27591 223-226

Use

- Higher clamping position makes it possible to use short tools, specifically with small workpieces
- For holding all standard clamping chucks as well as self-manufactured chucks

Jaw width mm	H1 mm	Clamping width-mm	27591	...
60	20	7 - 42		223
100	28	7 - 146		225
125	40	7 - 195		226

27591 223-226



Base frame

27591 233-235

Scope of supply:

Including centring pins and retaining screws.

Use

- For collision-free machining using short tools
- For shortening the Z movement of the machine spindles

Jaw width mm	L mm	W mm	H mm	27591	...
60	170	160	78		233
100	280	160	78		235

27591 233-235



Fasteners

27591 243-246

Scope of supply:

2 centring pins d = 14 mm, 4 clamping brackets, 4 screws M 12, 4 T-keyway nuts 14 mm.

Use

- For securing the MZE centring tensioner on the machine table
- T-keyway dimension 14 mm.

Jaw width mm	27591	...
60		243
100		245
125		246

27591 243-246





Zero.Point zero-point clamping system

- Precision-ground support surfaces of hardened stainless steel for plane-parallel clamping set-up ≤ 0.005 mm. Absolutely insensitive to the occurring lateral and tensile forces.
- Hardened piston - the combination of positive locking and self-locking results in reliable and constant clamping.
- Precision steel balls for optimal force transmission and vibration-inhibiting and wear-free implementation.
- Stainless steel ball support seals the clamping module against contamination and liquid.
- Robust disc springs for maximum draw-in forces, sealing forces and holding forces.
- Module floor with integrated blow-out function.
- The minimal install depth of the clamping modules of 22 mm enables an install height of the base plate of just 28 mm (without blow-out just 24 mm).

Clamping systems 3AX and 5AX

27669

Clamping systems 3AX-100 and 5AX-100



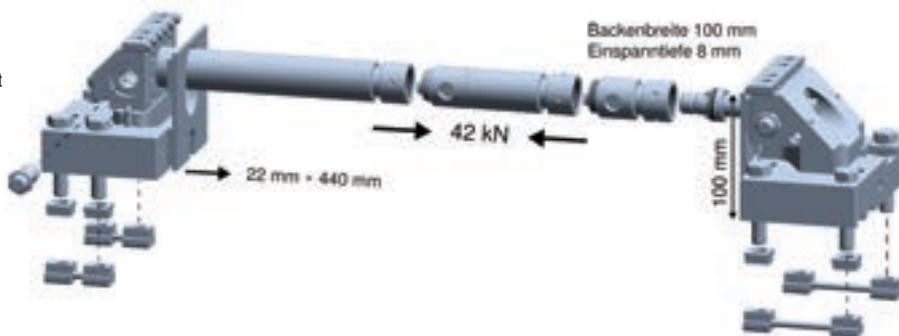
Type

- High clamping force (up to 42 kN) where needed
- Tension spindle immediately below workpiece support
- No expansion of chucks under load
- No torsional stress on machine table
- Extreme rigidity of system
- 3 or 8 mm clamping depth
- Interference edge-free 3 and/or 5-axis machining
- Any size of waf

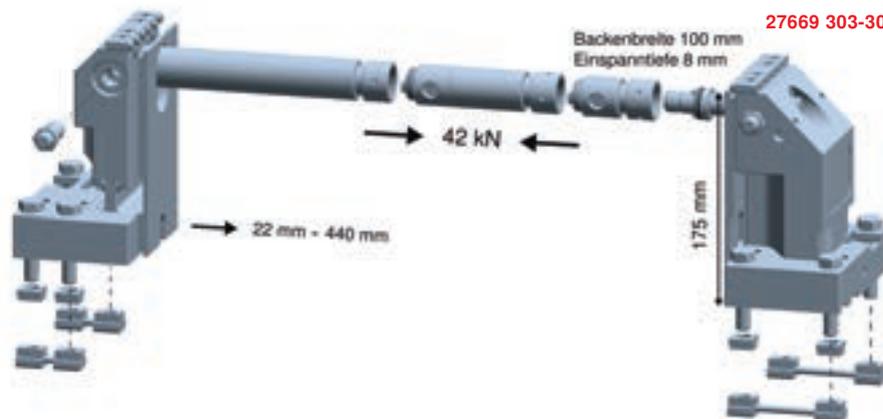
Use

For clamping of workpiece on a 3 and/or 5 axis milling machine.

27669 301-302



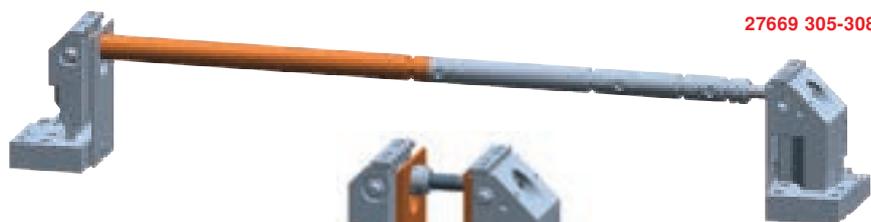
27669 303-304



Type	for keyway mm	27669	...
3AX-100	14		301
3AX-100	18		302
5AX-100	14		303
5AX-100	18		304

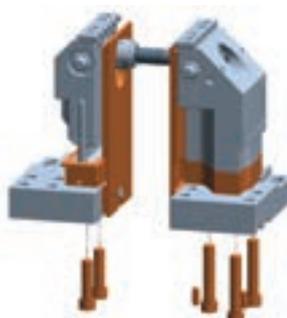
Extension shaft with nut

Length mm	27669	...
60		305
120		306
240		307
480		308



Increase including suitable support strip

for tensioner	increase to mm	27669	...
3AX-100	125		309
3AX-100	150		310
5AX-100	200		311
5AX-100	225		312
5AX-100	250		313



27669 309-313

27669 314



27669 315



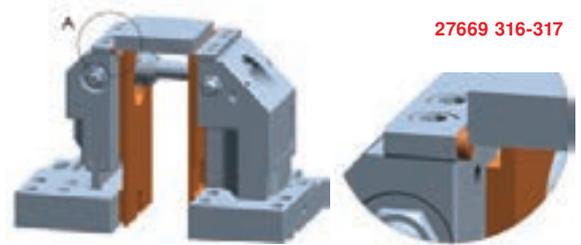
Description	27669	...
Round clamping heads incl. pins, Retaining material and support		314

Description	27669	...
Hold-down chucks, smooth		315

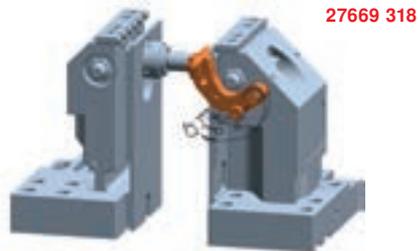
Continuation ▶

Clamping Technology

Designation	for Tensioner	27669	...
Support strip 105 mm, Clamping depth 3 mm incl. 12 pins, Ring cutter 6 mm	3AX-100		316
Support strip 180 mm, Clamping depth 3 mm incl. 12 pins, Ring cutter 6 mm	5AX-100		317



Description	27669	...
Limit stop set pivotable		318



Description	27669	...
T-keyway plate 400 mm incl. mounting for Keyway width 14 mm		319
T-keyway plate 400 mm incl. mounting for Keyway width 18 mm		320



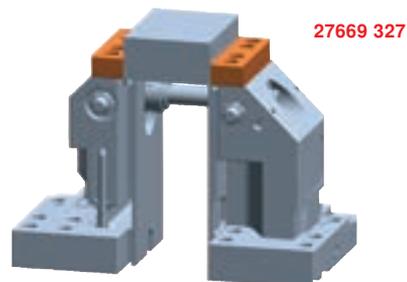
Description	27669	...
T-keyway plate 400 mm with NP journal bore		323



Description	27669	...
Pin smooth		324
Pin with ring cutter Ø 4 mm		325
Pin with ring cutter Ø 6 mm		326



Description	27669	...
Chuck jaws, blank		327



27664

NC-Self Centring Vise Type RKZ



Type

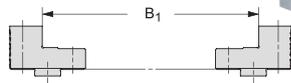
- Central clamping with 2 movable chuck jaws
- Steel base unit hardened and ground on all sides
- Centre clamping accuracy +/- 0.01 mm
- Clamping repetition accuracy +/- 0.01 mm
- 3-sided clamping: base side, face end and lateral large clamping stroke, 50 mm per chuck
- With stepped attachment chucks
- Securing of bench vise only possible with clamping brackets
- Thread for angle drive mounting.

Note:

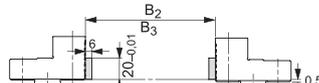
Accessories see cat.-no. 27682 - 27684.
Prism jaws on request.

Clamping range:

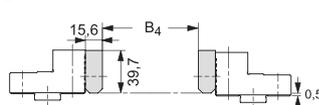
B1 = 112-298 mm



B2/B3 = 32-218 mm

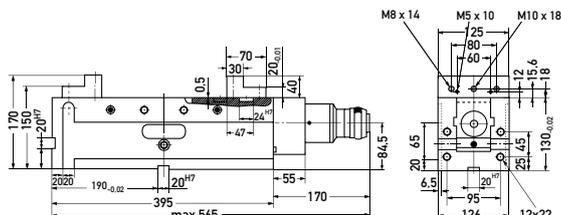


B4 = 0-186 mm



27664

Gewinde-Tiefe



Jaw width mm	Offset range of the jaws	Feed travel of the slide	Clamping force kN	Weight approx. kg	27664	...
125	1 x 46	50	40	50.5		101

27667

NC compact double tensioner type RKD-M

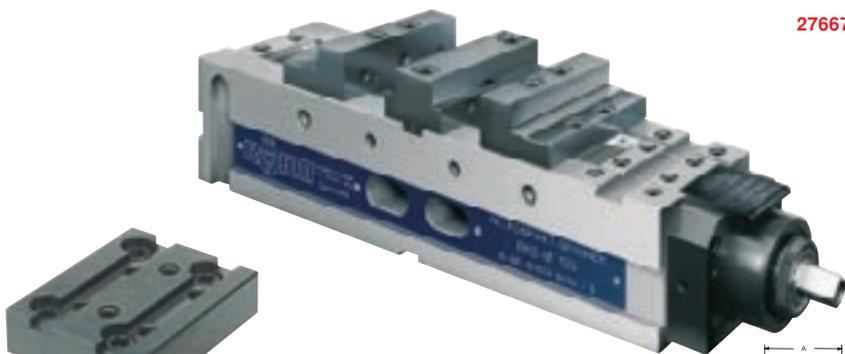


Type

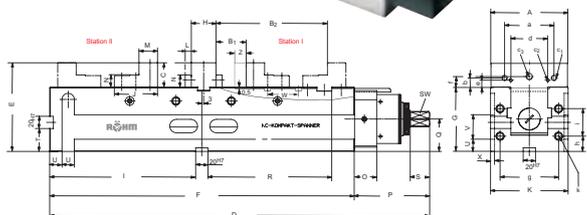
- With one-sided drive spindle
- Tensioning system: mechanical without power booster
- 3 clamping functions: Double clamping, central clamping and single clamping
- Steel base unit hardened and ground on all sides
- Clamping repetition accuracy +/- 0.01 mm
- 3-sided clamping: base side, face end, side
- The clamping thread on the spindle is protected in every position of the basic chucks from dirt and swarf
- With stepped attachment chucks and centre chuck with workpiece supports
- Securing of bench vise possible only with clamping brackets

Note:

Accessories see cat.-no. 27682 - 27684.



27667



Clamping ranges for double clamping			Clamping ranges for centring clamping			Clamping ranges for single clamping		
Jaw width mm	92	125	Jaw width mm	92	125	Jaw width mm	92	125
Keyway 1	0 - 48	0 - 48	Keyway 1	30 - 132	40 - 142	Keyway 1	126 - 177	171 - 222
Keyway 2	48 - 96	46 - 94	Keyway 2	126 - 228	132 - 235	Keyway 2	174 - 225	217 - 268
Keyway 3	-	92 - 140	Keyway 3	-	224 - 327	Keyway 3	-	263 - 314
Keyway 1	42 - 79	51 - 88	Keyway 1	92 - 195	120 - 222	Keyway 1	196 - 247	267 - 318
Keyway 2	79 - 127	86 - 134	Keyway 2	188 - 290	212 - 315	Keyway 2	244 - 295	313 - 364
Keyway 3	-	132 - 180	Keyway 3	-	304 - 407	Keyway 3	-	360 - 410

Jaw width mm	B mm	E mm	F mm	G mm	H mm	K mm	W mm	Clamping force kN	Weight approx. kg	27667	...
92	480 + 3	117	366	85	30	94	1 x 48	25	24		101
125	617 + 3	145	495	105	40	126	2 x 46	40	52		102

27701

strain gauges for machine vises

Use

For controlling the clamping force.

Note:

Further strain gauges, see HHW catalogue volume 2 (tools + machines) cat.-no. 38801.

for jaw width mm	Head graduation kN	27701	...
100/125/160	0 - 60		101



27701

27680

Set of claw jaws SKB



Type

Form-true clamping thanks to the penetration of the hardened claw tips. **Chucking force 3 - 5 times higher** than with standard jaws. **5-side machining** in one chucking, low loss of material, shorter machining times, reduced production and unit costs.

Use

For use with vises. Simple bolting to RÖHM NC compact tensioner. Easy and secure clamping of parallel unfinished and saw parts. Hydraulic and manual clamping are possible.

27680 101-103

Type

With fine adjustment for clamping depths of up to 2 mm.

27680 201-203

Type

Without fine adjustment for clamping depths of more than 2 mm.

27680 101-103



27680 201-203



Fine adjustment	clamping depth	A mm	B mm	C mm	a mm	b mm	Øc mm	27680	...
x	< 2 mm	92	14	32	63	13.6	7 (M 6)		101
x	< 2 mm	125	16	40	80	15.6	9 (M 8)		102
x	< 2 mm	160	18	50	100	19.6	9 (M 8)		103
-	> 2 mm	92	14	32	63	13.6	7 (M 6)		201
-	> 2 mm	125	16	40	80	15.6	9 (M 8)		202
-	> 2 mm	160	18	50	100	19.6	9 (M 8)		203

27682

Single Clamping Claws For NC Compact Visers



Type

Assembly, for mounting vises on end and on the base. **Single.**

Use

For cat.-no. 27655, 27656, 27664 and 27667.

Note:

For professional clamping you need to have four single clamping claws.

27682



suitable for T-keyway	27682	...	suitable for T-keyway	27682	...
12		201	16		203
14		202	18		204

27683

Double Clamping Claw For NC Compact Visers



Type

Assembly, for mutual support when clamped on face and in pairs. **Single.**

Use

For cat.-no. 27655, 27656, 27664 and 27667.

27683



27683	...
	201

27684

Workpiece Locator for NC Compact Visers



Type

Connecting thread M 12, universally adjustable.

Use

For cat.-no. 27655, 27656, 27664, 27667 and 27710.

27684



27684	...
	101

Info

Power Grip - Modular Palettising System



0-point clamping system with guaranteed repeat precision ± 0.002 mm

Non-productive downtimes are reduced to a minimum. Thanks to the resulting longer operation time, productivity and efficiency are increased.



27750

Multiple sliding rails (Sets)



Type

Multiple clamping system according to the wedge-type tensioner principle. Simple, yet precise design. Extension of the clamps is possible, therefore maximum utilisation of the machine table. Extraordinary cost/performance ratio.

Use

Quick and precise clamp for all machine tools.

Advantage:

- all components of the system are compatible with each other.
- can also be used on ATORN Zero-Point datum clamping system
- absolutely flexible

- easy-to-mount system of stops.
- solve all clamping challenges with only one clamping system.
- replaces any bench vise.

Note:

The wedge-type tensioners allow for very high clamping forces. Workpieces which require low clamping forces, can also be clamped. The clamping elements are mounted on the rod. Other combinations are also available. See cat.-no. 27751 - 27754.

27750 208



Clamping rail L x W x H mm	Chucks L x W x H mm	Fixed chuck (pcs.)	Wedge type tensioner (pcs.)	27750	...
200 x 50 x 80	50 x 42 x 22	2	1		201
200 x 80 x 80	72 x 42 x 29	2	1		202
300 x 50 x 80	50 x 42 x 22	2	3		203
300 x 80 x 80	72 x 42 x 29	3	2		204
400 x 50 x 80	50 x 42 x 22	3	2		205
400 x 80 x 80	72 x 42 x 29	3	2		206
500 x 50 x 80	50 x 42 x 22	3	2		207
500 x 80 x 80	72 x 42 x 29	3	2		208

27751

Multiple sliding rails (single)



Type

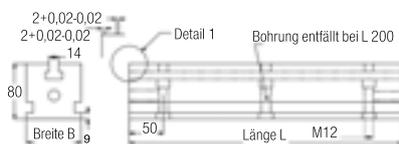
Without jaws (see cat.-no. 27752) and wedge-type tensioner (see cat.-no. 27753).

27751

Length mm	Width mm	Height mm	27751	...
200	50	80		101
200	80	80		102
300	50	80		103
300	80	80		104
400	50	80		105
400	80	80		106
500	50	80		107
500	80	80		108

Note:

Other accessories, see Cat. No. 27754.



27752

Fixed jaws (single)



Type

Incl. of tenons and screw.

27752 101-109

Type

With smooth clamping surface.

27752 201-209

Type

With corrugated clamping surface.

27752 301-309

Type

With claws.

Note:

Cat.-no. 27752 101-103, 27752 201-203 and 27752 301-303 require T-keyway nut with M 8 thread.

27752 201-209



Clamping width B mm	B1 mm	H mm	Screw DIN 912	smooth		corrugated		with claws	
				27752	...	27752	...	27752	...
22	22	15	M 8		101		201		301
32	22	15	M 8		102		202		302
42	22	15	M 8		103		203		303
30	42	22	M 12		104		204		304
40	42	22	M 12		105		205		305
50	42	22	M 12		106		206		306
42	42	29	M 12		107		207		307
57	42	29	M 12		108		208		308
72	42	29	M 12		109		209		309

27753

Wedge-type tensioners (single)



Type
Incl. of tenons and screw.

27753 101-109
Type
With smooth clamping surface (standard).

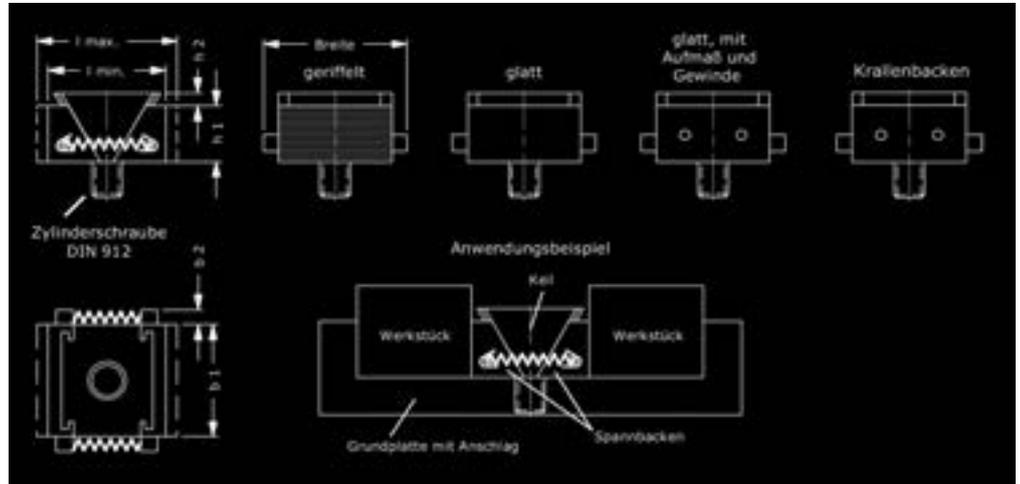
27753 201-209
Type
With corrugated clamping surface
(for unfinished parts).

27753 301-309
With allowance.

27753 401-409
With claws.

Note:
Cat.-no. 27753 101-103, 27753 201-203,
27753 301-303 and 27753 401-403
require T-keyway nut with M 8 thread. .

27753 101-109



Width mm	Clamping force kN	L min. mm	L max. mm	h1 mm	b1 mm	b2 mm	h2 mm	Screw DIN 912	smooth	corrugated	with allowance	with claws
									27753	... 27753	... 27753	... 27753
30	15	27	31	15	22	4	4	8	101	201	301	401
40	15	27	31	15	32	4	4	8	102	202	302	402
50	15	27	31	15	42	4	4	8	103	203	303	403
40	30	39	45	22	30	5	7	12	104	204	304	404
50	30	39	45	22	40	5	7	12	105	205	305	405
60	30	39	45	22	50	5	7	12	106	206	306	406
54	50	52	62	29	42	6	11	16	107	207	307	407
69	50	52	62	29	57	6	11	16	108	208	308	408
84	50	52	62	29	72	6	11	16	109	209	309	409

27754

Accessories



Use
Accessories for ATORN multiple sliding rails see
cat.-no. 27750 - 27751.

Note:
* The length of the adapter is 72 mm. The adapter
connects two sliding rails with each other without
gap. Other lengths in dependence of the desired
distance between the sliding rails available on
request.

Designation	Units	27754	...
Adapter set *	1	101	
Adjustable limit stop	1	102	
Fixed limit stop	1	103	
Short M8 fulcrum pad	5	104	
Short M12 fulcrum pad	5	105	
Long M12 fulcrum pad	5	107	
Threaded bush	5	108	
Positioning bush 20x14	1	109	
Positioning bush 20x18	1	110	
Clamping brackets	4	111	

27754 101



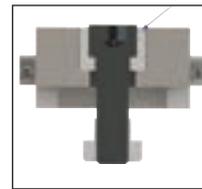
27754 102-103



27754 104-107



27754 108



27754 109-110



27754 111



27724 - 27725 High-pressure machine screw vises

27724

High-pressure machine vises

Type

- Base unit and top carriage made of spheroidal cast iron GGG60
- Guideways hardened and ground
- Ground in camber to compensate for tilting
- Zero-maintenance and completely encapsulated high-pressure spindle with integrated mechanical power booster
- Lower section with longitudinal and transverse keyways for precise alignment
- Fast adjustment using stud bolts

Scope of supply:

- 4 clamping brackets
- 1 pair of hardened chuck jaws
- 1 hand crank

Use

For zero-vibration, absolutely safe clamping at highest cutting and feed forces.

27724



Note:

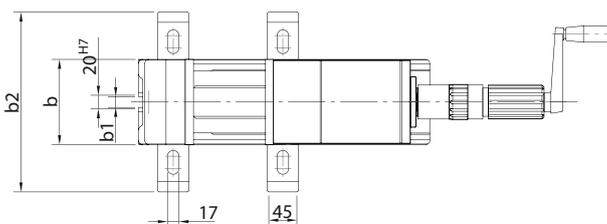
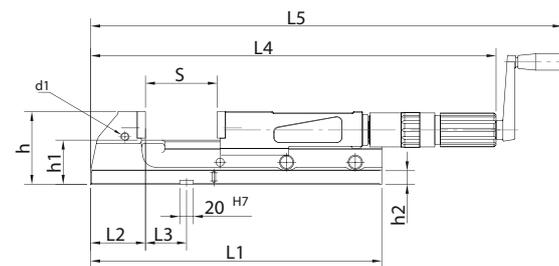
Tight production tolerances enable retrofitting of several bench vises beside one another.

Technical data:	Cat. No. 27724 101	Cat. No. 27724 102
Jaw width mm:	125	160
Clamping range S level 1/2 mm:	0-105 / 100-205	0-155 / 150-305
Clamping range extended mm*:	255	365
Clamping force max. kN:	40	50
L1 mm:	425	570
L2 mm:	80	90
L3 mm:	60	95
L4 min./max mm:	489 / 694	575 / 880
L5 min./max mm:	613 / 818	712 / 1007
h mm:	107	130
h1 (+0.002) mm:	65	80
d1:	M 12	M 16

* Clamping range of magnification by bolts fixing in the transverse groove of the spindle nut

Bench vises

Chuck width mm	27724	...
125		101
160		102



27725 201-202

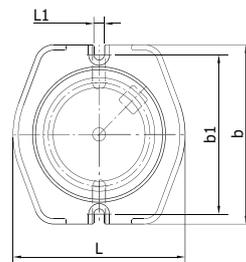
Rotary plates

Type

- Rotary plate with 360 easily readable dashes (4 x 90°)
- Good mounting option on the machine table with clamping keyways

Rotary plates

for chucks-width mm	L mm	L1 mm	Height mm	b mm	b1 mm	Weight kg	27725	...
125	264	16	28	270	240	10.8		201
160	325	16	32	325	295	18.4		202



27725 201-202



27725 301-305

Chuck jaws

Chuck jaws for chucks-width mm	with longitudinal groove	...	with step	...	
125	27725		301		304
160	27725		302		305

27725 301-302

27725 304-305



27710 - 27715 High-pressure machine vises RB



27710

High-pressure machine vises RB

Type

- Mechanical-hydraulic
- With mechanical preload using hand crank
- Clamping force pre-settable via limit stop
- Alignment on the machine table using longitudinal grooves
- Rough setting of clamping range using stud bolts
- Repeat clamping accuracy at identical clamping force 0.01 mm

Scope of supply:

- 1 set of standard chucks (1 side smooth, 1 side corrugated)
- Hand crank

Use

For unit and serial production with drilling and milling machines.

Quality

Body made of steel, forged (jaw width 200 mm, made of spheroidal graphite iron). Guideways hardened and ground.

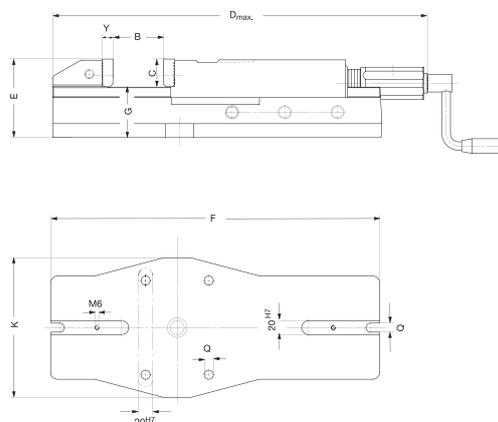
Note:

Workpiece limit stop, see Cat. No. 27684. Bench vises with jaw width 250 and 315 mm and additional V-drive available on request.



27710

Technical data:				
Cat. No.	27710 101	27710 102	27710 103	27710 104
Jaw width mm:	113	135	160	200
Waf B mm:	170	220	310	350
Chuck height C mm:	31.6	39.6	49.6	66.6
Length D mm:	583	681	817	1.022
Height E mm:	97	112	133	171
Length F mm:	390	468	574	685
Height G +/- 0.02 mm:	65.5	72.5	83.5	104.5
Width K mm:	160	200	240	280
Keyway width Q mm:	13	13	17	21
Chuck thickness y mm:	12	16	16	20
Clamping force max. kN:	30	40	50	100
Weight kg:	24	39	60	112



Bench vises

Jaw width mm	27710	...
113		101
135		102
160		103
200		104

27711

Rotary plates

Type

- With ground support edge to brace the bench vise

- Angle sub-division, retaining screws and fulcrum pads for mounting bench vise on rotary plate

27711 101-103

27711 104



Rotary plates

for jaw width mm	27711	...
113		101
135		102
160		103
200		104

27712 - 27715

Chuck jaws

Note:

Prism jaws see cat.-no. 27678.

27712

Roller hold-down jaws

Type

- Hardened and ground
- In pairs

Use

Hanging type. For workpieces with/without angle deviation.



27712

27713

Mechanical Compensating Jaws

Type

- Hardened and ground
- In pairs

Use

Hanging type. For workpieces with/without angle and parallelism deviations.



27713

27715

Prism and standard jaw

Type

- With workpiece support
- Soft and burnished
- In pairs

Use

Screw-on.



27715

for jaw width mm	27712	...	27713	...	27715	...
113		101		101		101
135		102		102		102
160		103		103		103
200		104		104		104



27695

Hydro Machine Vises EuroLine

ROEMHELD
HILMA • STARK

Type

Mechanical-hydraulic. Thanks to the revised power intensification, only a minimum of cranking force is necessary. An angle drive (see cat.-no. 27703) facilitates the usage e.g. for lateral clamping on a machine table. The optional clamping force preset (see cat.-no. 27705) allows for a limitation of the maximum force in 6 increments.

Application:

Quick advance of moving jaw to workpiece by means of crank handle with coarse-pitch hollow screw spindle. After workpiece contact: automatic release of the inner thrust spindle. Turning the crank further: infinitely building-up of clamping force to the maximum. Releasing clamping pressure by turning the crank into reverse direction.

Scope of supply:

Standard reversible jaws smooth/corrugated, hand crank, operation manual.

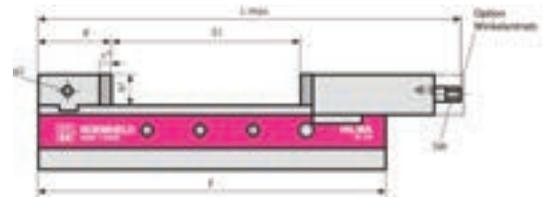
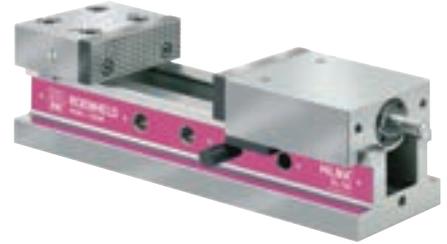
Use

For tool and mould-building, fixture construction and production.

Note:

Not suitable for the use with a swivel base.
Clamping claw sets see cat.-no. 27805.

27695 302



Type	Jaw width mm	Clamping width S1 mm	Clamping force approx. kN	Jaw height b mm	Overall length L max. mm	Lower section f mm	Crank force N	Crank radius mm	Weight approx. kg	27695	...
EL 100	100	205	25	34	464	380	50	80	18.5		301
EL 125	125	225	40	45	526	430	75	100	31.5		302
EL 160	160	309	50	54	684	550	95	125	58.5		303
EL 160 L	160	509	50	54	884	750	95	125	75.0		304

27800

Hydro machine bench vises type NC

ROEMHELD
HILMA • STARK

Type

Mechanical-hydraulic. Manual clamping by hydraulic force transmission. Exact aligning on machine table by longitudinal and transverse keyways. Increased chucking capacity with clamp-on stepped jaws or customised jaws over flutes and threaded holes on slides and fixed jaw. Threaded holes for mounting oversized jaws is standard.

Application:

Quick advance of moving jaw to workpiece by means of crank handle with coarse-pitch hollow screw spindle. After workpiece contact: automatic release of the inner thrust spindle. Turning the crank further: infinitely building-up of clamping force to the maximum. Releasing clamping pressure by turning the crank into reverse direction.

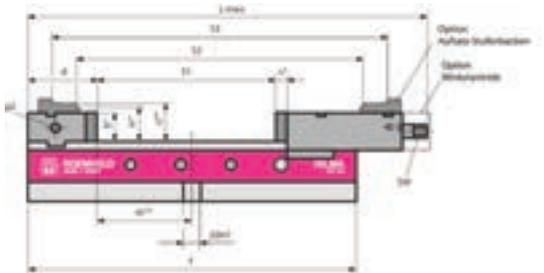
Use

For tool and mould-building, fixture construction and production.

Note:

1 = Option of clamp-on stepped jaws
2 = Option of angle drive
3 = Option of clamping force display in kN
Clamping claw sets see cat.-no. 27805.
Hydraulic type available on request.

27800 102



Type	Jaw width mm	Clamping width S1 / S2 / S3 max. mm	Clamping force kN	Jaw height b mm	Overall length L max. mm	Lower section f mm	Crank force N	Crank radius mm	Weight approx. kg	27800	...
NC 100	100	205 / 330 / 386	25	34	464	380	50	80	18.5		101
NC 125	125	225 / 363 / 431	40	45	526	430	75	100	31.5		102
NC 160	160	309 / 503 / 573	50	54	684	550	95	125	58.5		103

27702

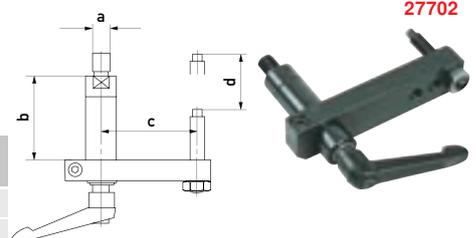
Workpiece Stops for Type EL, NC

ROEMHELD
HILMA • STARK

Use

Coordinate workpiece stops, for self-assembling on all HILMA machine vises, can be turned away for three side machining.

Type	for jaw width mm	a mm	b mm	c mm	d mm	27702	...
9.3291.0201	100/125	M 12	61	95	46		101
9.3291.0401	160	M 20	81	124	66		102



27702

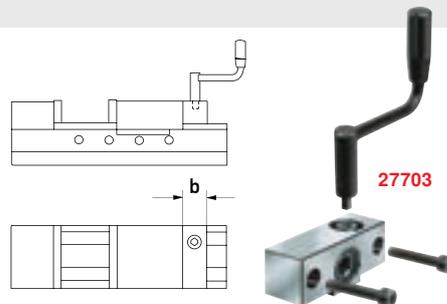
27703

Angle Drives for Type EL, NC-M



Type
Quick mounting with only 2 screws
(length L max of the machine vise is not altered).
Hand crank not included.

Use
Important accessories for lateral clamping on the machine table or when the standard crank action is difficult.



Type	for jaw width mm	b mm	27703	...
9.3294.0605	125	43	102	
9.3294.0705	160	46	103	

27705

Clamping force preselection 6-stage



Type
The preselection of the clamping force limits the feed of the spindle and therefore the clamping power can be set infinitely variable. The highest clamping force is reached with step 6.

Safety advice:
The set clamping force must be high enough, so that the machining forces will not move the workpiece.

Scope of supply:
Clamping force preselection, 6-stage, including retaining screws and two shim washers to balance up tolerances.
Use
With this 6-stage clamping force preselection function, thin-walled parts, fragile materials and workpieces for precision machining are clamped using an appropriately reduced level of clamping force. For mechanical-hydraulic machine vises Type EL, NC-M.

27705



Type	for jaw width mm	Thread of pressure spindle	Distance X mm	27705	...
9.3762.0100	100	M 6 x 12	0.7 - 1.0	101	
9.3762.0125	125	M 8 x 14	1.0 - 1.5	102	
9.3762.0160	160	M 8 x 14	1.0 - 1.5	103	



27729

Standard Clamping Jaws

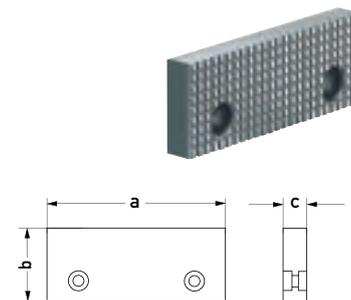


Type
usable on both sides
1. side corrugated.
2. side smooth.

Use
For hydro machine vises Type EL, NC.

27729

Type	a mm	b mm	c mm	pcs. 27729	...
5.2058.1003	100	34	13	101	
5.2058.1004	125	45	15	102	
5.2058.1005	160	54	18	103	



27734

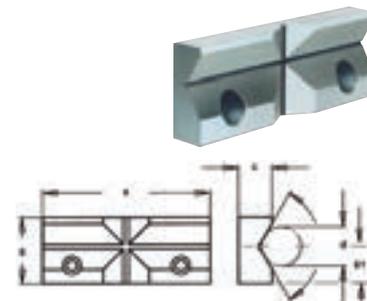
Prism jaws



Use
For clamping round workpieces, horizontal and vertical.
For hydro machine vises Type EL, NC.

27734

Type	a mm	b mm	b1 mm	c mm	d mm	pcs. 27734	...
5.3030.0002	100	34	19	17	8 - 35	101	
5.3030.0003	125	45	27	19	10 - 50	102	
5.3030.0004	160	54	32	21	12 - 60	103	



27738

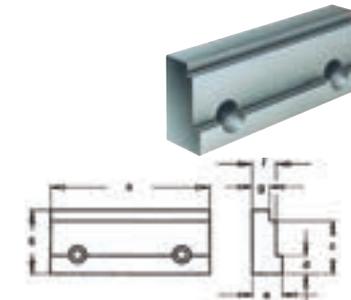
Precision-Type Stepped Jaws



Use
Used in pairs. For clamping rectangular workpieces without parallels. For drilling near edges. For hydro machine vises Type EL, NC.

27738

Type	a mm	b mm	c mm	d mm	e mm	f mm	g mm	pcs. 27738	...
5.2082.0001	100	34	29	10	19	15	11	201	
5.2082.0002	125	45	39	13	25	20	16	202	
5.2082.0003	160	54	45	15	25	20	16	203	



27739

Mechanical Compensating Jaws

ROEMHELD
HILMA • STARK

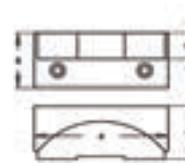
Use

For clamping workpieces with unparallel clamping

surfaces or 2 workpieces with different tolerances.
For hydro machine vises Type EL, NC.

27739

Type	a mm	b mm	c mm	d mm	pcs. 27739	...
8.3711.0208	100	34	35	16	101	
8.3711.0308	125	45	50	22	102	
8.3711.0408	160	54	55	26	103	



27741

Clamping Jaws, Extra Wide

ROEMHELD
HILMA • STARK

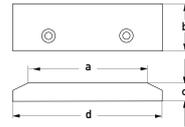
Use

For secure clamping of workpieces, which are wider than normal jaw width.

Used in pairs.
For hydro machine vises Type EL, NC.

27741

Type	a mm	b mm	c mm	d mm	pcs. 27741	...
5.2058.1025	100	34	13	125	201	
5.2058.1026	125	45	15	160	202	
5.2058.1027	160	54	18	200	203	



27803 - 27804

Stepped Top Jaws

ROEMHELD
HILMA • STARK

Type

For achieving very large clamping width. Includes fastening screws.

Use

For machine vises cat.-no. 27800.

27803

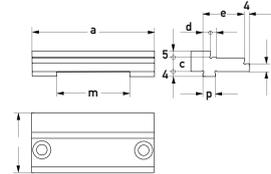
For fixed jaws.

27804

For slides.

Note:

Recess dimension only for cat.-no. 27804.



27803



Type	a mm	c mm	d mm	e mm	h mm	m mm	p mm	27803	...	27804	...
9.3284.0201	100	11.5	6	34	6.5	60	10h6	101			
9.3284.0301	125	14.0	6	40	9.0	58	12h6	102			
9.3284.0401	160	17.0	8	43	12.0	64	18h6	103			
9.3284.1201	100	11.5	6	34	6.5	60	10h6			201	
9.3284.1301	125	14.0	6	40	9.0	58	12h6			202	
9.3284.1401	160	17.0	8	43	12.0	64	18h6			203	

27805

Clamping claw sets for type EL/NC/DS

ROEMHELD
HILMA • STARK

Type

4-part, with screws.

Use

For machine vises cat.-no. 27695, 27800.

27805

Type	for Type	Clamping rim mm	Keyway mm	Cheese head screw	27805	...
9.3777.2011	EL/NC 100, DS 100	24	14	M 12	101	
9.3777.3011	EL/NC 125/160, DS 125	27	14	M 12	102	
9.3777.3021	EL/NC 125/160, DS 125	27	18	M 16	103	

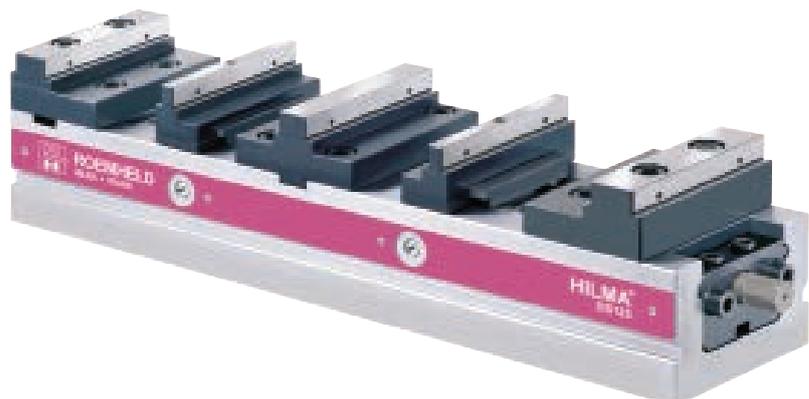


Info

Double Clamping Systems DS

The perfect component for efficient multi-clamping. Single-ended spindle action and 3. Hand function allows for loading and unloading of the clamping sections with large workpieces of the same or different sizes after one another. The spindle area is incompletely encapsulated, this provides effective protection from metal chips and coolant. Free from float linear guiding for high precision. Preselection of clamping force by means of torque wrench.

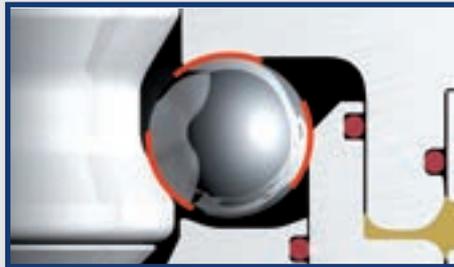
Please send us your enquiry!



Your advantages at a glance!

10 concise advantages assure you of priceless advantages. The sum of these advantages results in a new product series that is 100% in line with your requirements and, it is combined with experience in zero point clamping technology since 1985.

Positive locking!



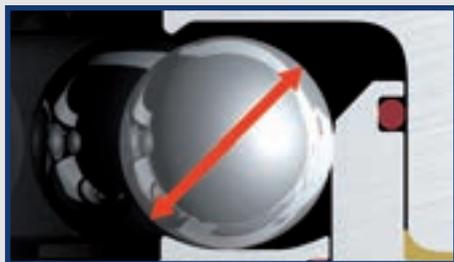
The balls are optimally enclosed from three sides.

Stainless steel!



High-alloy, hardened tool steel, thus there is no corrosion.

Large ball diameter!

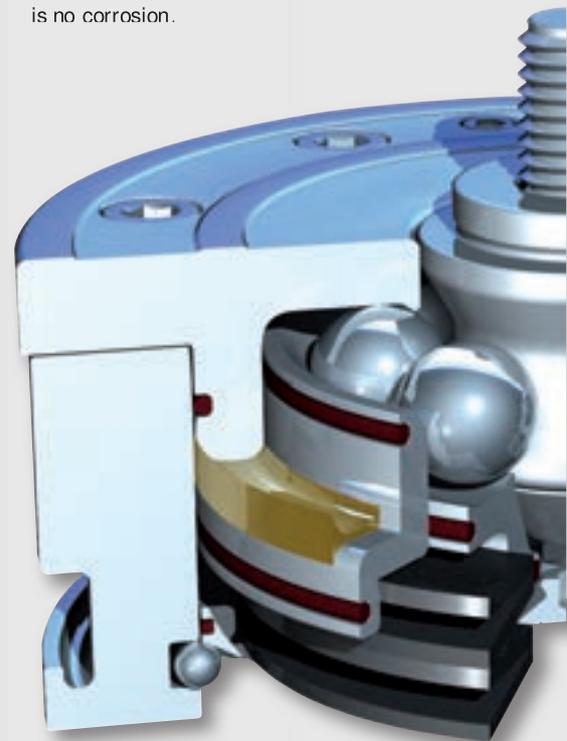


784% larger ball surface than conventional ball systems.

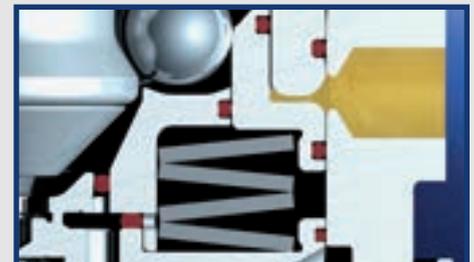
Larger catchment!



Pre-positioning of 12 mm suffices.



Safety system!

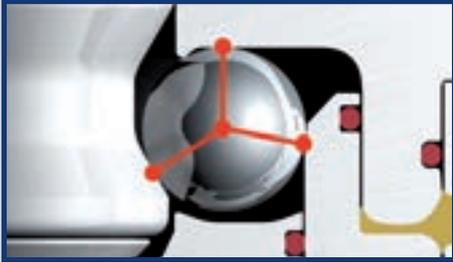


Process reliable - the clamping module can always be opened.

- **Assure the future**
optimising the product quality (repeatability to 2 µm)
- **Increase process efficiency**
to ensure competitiveness
- **Increase profitability**
by minimising set-up costs, increasing the product quality and protecting the machine
- **Optimise manufacturing**
through variability and flexibility with the market leading system
- **Pin-point, user-friendly clamping**
with maximum precision and a broad and demanding user spectrum

zero point clamping system

Three-cycle principle!



Force transmission via the three-cycle principle. Thanks to optimal force transmission, the balls are not subject to shear stress.

No ball cage retainer!



The balls are free in the ball channel. Thanks to the freedom of movement, the balls constantly reposition themselves.

High, holding forces, pull-in forces and closure forces!



Size	Holding force [kN]	Pull-in force/closure force to [kN]	
		Hydr.	Pneum.
K 5	13	5	1,5
K 10	25	10	8
K 20	55	20	17
K 40	105	40	30

Media supply!



Minimal install depth, fewer supply bores are required.

No misalignment!



Misalignment extension and retraction via the unit's own support edge.

- **Optimal safety**
even under difficult implementation conditions for the demanding user
- **Individual adaptation**
to the various tasks in order to meet the varied challenges of the market
- **Sustainability and long service life**
through outstanding product quality and precision assure long-term success of the enterprise
- **Technology transfer through optimal consulting**
assures success even for difficult machining tasks particularly with 6-sided machining

27895

Chuck jaws with positioning pins



27895



- Type**
- Patented bench vise chuck system
 - Mechanical pressing in and out of studs/pins
 - Nomenclature for predefined limit stop points

- Advantages:**
- Precise work, reproducible at any time
 - Major time saving
 - Absolute repeat precision

Use
Fast, uncomplicated positioning, without large tooling costs.



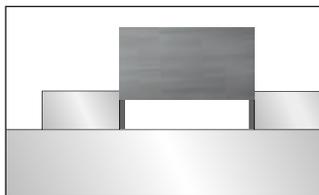
Jaw width mm	for bench vise	brand	stud dimensions for retaining bore (b x h)	Fixed chucks		movable chucks	
				27895	...	27895	...
125	Allmatic:	TC, LC, HD, Basic	M 10 x 18 (1 bore)	101		102	
125	Hilma:	NC 125, NC 125 H, EL 125, KNC 125	80 x 14	105		106	
125	ATORN:	MM-G 125, 5-axis tensioner		109		110	
	Kesel:	CNC 125, Bull 125	80 x 15				
	Röhm:	RKE 125, RKE-L 125, RKE-U 125, RKE-UL 125, RKG-L 125, RKE-LV 125					
160	Allmatic:	TC, LC, HD, Basic	M 10 x 20 (1 bore)	103		104	
160	Hilma:	NC 160, NC 160 H, EL 160, KNC 160	100 x 17	107		108	
160	ATORN:	MM-G 160		111		112	
	Kesel:	CNC 160, Bull 160	100 x 19.6				
	Röhm:	RKE 160, RKE-L 160, RKE-U 160, RKG-L 160, RKE-LV 160					

27890

Magnetic parallel support sets



- Type**
- Made of hardened, burnished and distortion-free tool steel
 - **Height tolerance +/- 0.01 mm**
 - High holding force for magnets
- Advantage:**
Strip width 2.5 mm, so machining close to edges is possible.



Length mm	Content Pairs	Content Height in mm	27890	...
100	5	20, 27, 29, 31, 32		101
125	5	15, 30, 35, 37, 39		102
160	5	22, 30, 37, 42, 47		103



27890

36600

Precision parallel support sets



- Type**
In pairs, plan-parallel precision-ground. Dimensions on face. The sets result in a large range with 1 mm increments Case-hardened. **Pair tolerance IT 5, nominal dimension tolerance +/- 0.01 mm.** Remaining dimensions acc. to DIN ISO 2768 m. In wooden stand.
- Use**
For clamping and positioning of different sized workpieces, e.g. for grinding, milling, eroding, measuring and scribing. Can be used in conjunction with clamping tools and for parallel positioning workpieces in toolmaker's vises and on test plates.
- Note:**
Versions of special dimensions, with higher precision levels or as individual pairs, can all be supplied on request.

- 36600 101**
Type
Length 100 mm.
Box contents, all in pairs:
2 x 5 / 2 x 10 / 2 x 15 / 2 x 20 / 3 x 6 / 3 x 11 / 3 x 16 / 3 x 21 / 4 x 7 / 4 x 12 / 4 x 17 / 4 x 22 / 5 x 8 / 5 x 13 / 5 x 18 / 5 x 23 / 6 x 9 / 6 x 14 / 6 x 19 / 6 x 24 mm.

- 36600 103**
Type
Interlock(tm) mechanism to prevent opening of both blades at the same time. Length 125 mm.
Box contents, all in pairs:
8 x 11 / 8 x 16 / 8 x 21 / 8 x 26 / 8 x 31 / 8 x 36 / 10 x 13 / 10 x 18 / 10 x 23 / 10 x 28 / 10 x 33 / 10 x 38 / 12 x 15 / 12 x 20 / 12 x 25 / 12 x 30 / 12 x 35 / 12 x 40 / 14 x 17 / 14 x 22 / 14 x 27 / 14 x 32 / 14 x 37 / 14 x 42 mm.

- 36600 102**
Type
Interlock(tm) mechanism to prevent opening of both blades at the same time. Length 150 mm.
Box contents, all in pairs:
8 x 11 / 8 x 16 / 8 x 21 / 8 x 26 / 8 x 31 / 8 x 36 / 10 x 13 / 10 x 18 / 10 x 23 / 10 x 28 / 10 x 33 / 10 x 38 / 12 x 15 / 12 x 20 / 12 x 25 / 12 x 30 / 12 x 35 / 12 x 40 / 14 x 17 / 14 x 22 / 14 x 27 / 14 x 32 / 14 x 37 / 14 x 42 mm.

Length mm	Content Pairs	36600	...
100	20		101
125	24		103
150	24		102



36600