Info — Overview - machine thread-cutting taps/machine thread-forming taps (I)

Brand				ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN
Type of core removing hole	1	Through-hole	M	14368	14291	14292	14293	14294	14295	14372	14317	14318		14341
	2	Blind hole	MF			14499	14500						14505	
	3	Blind passage and through-passage	G			14594								
Cooling lubricant	E	Emulsion	UNC			14560								
	O	Oil	UNF			14577								
Suitability symbols	●	Well suited	Type of core removing hole	1	1	1	1	1	1	1	1	1	1	1
	O	Limited suitability	Catalogue page	14.27	14.13	14.4/14.51	14.14/14.44	14.14	14.14	14.27	14.17	14.18	14.47	14.21

	Material	Cutting speed Vcm/min Uncoated	Cutting speed Vcm/min Coated	Tolerance Emulsion/oil E/O	6 H HSS-E	6 H HSS-E	6 H HSS-E	6 H HSS-E TiN	6 H HSS-E TiCN	6 H PM TiN	6 H HSS-E Left-hand	6 H HSS-E Long	6 H HSS-E vapo/TiN	6 H HSS-E vapo	6 H HSS-E uncoated/TiCN
P	St < 520 N/mm²	5 - 20	5 - 40	E/O	●	●	●	●	●	●	●	●			●
	St < 750 N/mm²	5 - 15	5 - 30	E/O	●	●	●	●	●	●	●	●			●
	St < 900 N/mm²	5 - 12	5 - 24	E/O	●	●	●	●	●	●	●				●
	St < 1200 N/mm²	2 - 8	2 - 12	E/O	●				●	●					●
	St < 1400 N/mm²	2 - 8	2 - 12	E/O											
M	VA-steel < 900 N/mm²	5 - 12	5 - 20	E						●			●	●	●
	VA-steel > 900 N/mm²	5 - 12	5 - 20	E						●			●	●	O
K	GG	8 - 20	8 - 30	E						●					
	GGG	8 - 20	8 - 30	E	O	O	O	O	O	●	O	O			
A	Copper	10 - 12	10 - 20	E/O	O	O	O	O	O		O	O			
	Al < 10% Si	20 - 25	30 - 40	E/O	O	O	O	O	O		O	O			
	Al > 10% Si	10 - 40	10 - 60	E/O	O	O	O	O	O		O	O			
S	Ti	2 - 6	-	O											
	Ti alloy	2 - 6	-	O											
	Ni alloy	2 - 6	-	O											
H	45-52 HRC	-	2 - 6	O											
	53-67 HRC	-	1 - 3	O											
Plas-tics	Thermoplastics	20 - 30	-	E											
	Thermosetting plastics	20 - 30	-	E											

Brand				ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN
Type of core removing hole	1	Through-hole	M	14344	14353	14356	14345	14360		14358	14354	14355	
	2	Blind hole	MF						14498	14514			
	3	Blind passage and through-passage	G							14596			14595
Cooling lubricant	E	Emulsion	UNC										
	O	Oil	UNF										
Suitability symbols	●	Well suited	Type of core removing hole	1	1	1	1	1	1	1	3	3	3
	O	Limited suitability	Catalogue page	14.21	14.22	14.22	14.22	14.25	14.44	14.24/14.52	14.24	14.24	14.51

	Material	Cutting speed Vcm/min Uncoated	Cutting speed Vcm/min Coated	Tolerance Emulsion/oil E/O	6 H HSS-E	6 H HSS-E	6 H HSS-E PM TiCN	6 H HSS-E PM TiCN	6 H HSS-E	6 H HSS-E	6 H (X) HSS-E Nitrided/TiN	6 H PM TiAlN	6 H Solid carbide TiAlN+C	HSS-E
P	St < 520 N/mm²	5 - 20	5 - 40	E/O	●			●		●				●
	St < 750 N/mm²	5 - 15	5 - 30	E/O	●			●		●				●
	St < 900 N/mm²	5 - 12	5 - 24	E/O	●			●		●				●
	St < 1200 N/mm²	2 - 8	2 - 12	E/O	●			●				●		
	St < 1400 N/mm²	2 - 8	2 - 12	E/O								●		
M	VA-steel < 900 N/mm²	5 - 12	5 - 20	E	O			●						
	VA-steel > 900 N/mm²	5 - 12	5 - 20	E	O			O						
K	GG	8 - 20	8 - 30	E							●			
	GGG	8 - 20	8 - 30	E							●			O
A	Copper	10 - 12	10 - 20	E/O					●					O
	Al < 10% Si	20 - 25	30 - 40	E/O					●					O
	Al > 10% Si	10 - 40	10 - 60	E/O					●					O
S	Ti	2 - 6	-	O		●	●							
	Ti alloy	2 - 6	-	O		●	●							
	Ni alloy	2 - 6	-	O		●	●							
H	45-52 HRC	-	2 - 6	O								●	●	
	53-67 HRC	-	1 - 3	O									●	
Plas-tics	Thermoplastics	20 - 30	-	E										
	Thermosetting plastics	20 - 30	-	E										

Info

Overview - machine thread-cutting taps/machine thread-forming taps (II)

Brand				ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN
Type of core removing hole	1	Through-hole	M		14392	14393	14395	14394	14463	14396	14397	14398	14404	14399
	2	Blind hole	MF		14507					14508	14509			
	3	Blind passage and through-passage	G	14598						14599				
Cooling lubricant	E	Emulsion	UNC							14565				
	O	Oil	UNF							14578				
Suitability symbols	●	Well suited	Type of core removing hole	3	2	2	2	2	2	2	2	2	2	2
	O	Limited suitability	Catalogue page	14.52	14.29/14.45	14.29	14.29	14.29	14.42	14.30/14.52	14.30/14.45	14.30	14.30	14.30

	Material	Cutting speed Vcm/min Uncoated	Cutting speed Vcm/min Coated	Tolerance Emulsion/oil	HSS-E	6 H HSS-E	6 H HSS-E TiN	6 H HSS-E TiN-IKZ	6 H HSS-E TiCN	6 H HSS-E	6 H HSS-E	6 H HSS-E TiN	6 H HSS-E TiCN	6 H HSS-E PM TiN	6 H HSS-E
				E/O											
P	St < 520 N/mm²	5 - 20	5 - 40	E/O	●	●	●	●	●		●	●	●	●	●
	St < 750 N/mm²	5 - 15	5 - 30	E/O	●	●	●	●	●		●	●	●	●	●
	St < 900 N/mm²	5 - 12	5 - 24	E/O	●	●	●		●		●	●	●	●	●
	St < 1200 N/mm²	2 - 8	2 - 12	E/O	●				●		●	●	●	●	●
	St < 1400 N/mm²	2 - 8	2 - 12	E/O											
M	VA-steel < 900 N/mm²	5 - 12	5 - 20	E											
	VA-steel > 900 N/mm²	5 - 12	5 - 20	E											
K	GG	8 - 20	8 - 30	E											
	GGG	8 - 20	8 - 30	E											
A	Copper	10 - 12	10 - 20	E/O	O	O	O		O	●	O	O	O	O	
	Al < 10% Si	20 - 25	30 - 40	E/O	O	O	O		O	●	O	O	O	O	
	Al > 10% Si	10 - 40	10 - 60	E/O	O	O	O		O	●	O	O	O	O	
S	Ti	2 - 6	-	O											
	Ti alloy	2 - 6	-	O											
	Ni alloy	2 - 6	-	O											
H	45-52 HRC	-	2 - 6	O											
	53-67 HRC	-	1 - 3	O											
Plas-tics	Thermoplastics	20 - 30	-	E						●					
	Thermosetting plastics	20 - 30	-	E						●					

Brand				EMUGE	HW		HW	HW	EMUGE	HW	HW		HW	EMUGE	UNIMAX	HW	HW	EMUGE
Type of core removing hole	1	Through-hole	M	14290	14302	14304	14306	14308	14315	14319	14330	14333	14338	14340	14342	14361	14365	14390
	2	Blind hole			14303	14305	14307	14309	14316	14320	14331	14334	14339					
	3	Blind passage and through-passage						14310										
Cooling lubricant	E	Emulsion	MF		14501	14504									14510			
	O	Oil	G															
Suitability symbols	●	Well suited	UNC															
	O	Limited suitability																
			UNF															
			Type of core removing hole	1	1	1	1	1	1	1	1	1	1	1	1	1	Former	2
			Catalogue page	14.13	14.15/14.46	14.15/14.46	14.16	14.16	14.17	14.19	14.18	14.19	14.20	14.20	1423/1448	14.23	14.26	14-28

	Material	Cutting speed Vcm/min Uncoated	Cutting speed Vcm/min Coated	Tolerance Emulsion/oil	6 H HSS-E	6 H HSS-E	6 H HSS-E	6 H HSS-E OX	6G / 7G HSS-E	6 H HSS-E	6 H HSS-E TiN	6 H HSS-E	6 H HSS-E TiCN	6 H HSS-E VAOX	6 H HSS-E	6 HX PM Hardlube	6 HX PM TiCN	6 HX HSS-E TiN	6 H HSS-E
				E/O															
P	St < 520 N/mm²	5 - 20	5 - 40	E/O	●	●	●	●	●	●	●	●	O	●	O	●	●	●	●
	St < 750 N/mm²	5 - 15	5 - 30	E/O	●	●	●	●	●	●	●	●	O	●	O	●	●	●	●
	St < 900 N/mm²	5 - 12	5 - 24	E/O	●					●	●	●	O	●	O	●	●	●	●
	St < 1200 N/mm²	2 - 8	2 - 12	E/O	●					●	●			●	O	●	●	●	●
	St < 1400 N/mm²	2 - 8	2 - 12	E/O															
M	VA-steel < 900 N/mm²	5 - 12	5 - 20	E	●						●		●	●	●	●	●	●	●
	VA-steel > 900 N/mm²	5 - 12	5 - 20	E							●		●	●	●	●	○	●	
K	GG	8 - 20	8 - 30	E	O						●				●	●	O		●
	GGG	8 - 20	8 - 30	E	●										●	●	O		●
A	Copper	10 - 12	10 - 20	E/O		O	O		O					●		●	O	●	
	Al < 10% Si	20 - 25	30 - 40	E/O	●	O	O		O					●		●	O	●	●
	Al > 10% Si	10 - 40	10 - 60	E/O	●	O	O		O					●		●	O	●	●
S	Ti	2 - 6	-	O															
	Ti alloy	2 - 6	-	O															
	Ni alloy	2 - 6	-	O															
H	45-52 HRC	-	2 - 6	O															
	53-67 HRC	-	1 - 3	O															
Plas-tics	Thermoplastics	20 - 30	-	E			O												
	Thermosetting plastics	20 - 30	-	E															

Info

Overview - machine thread-cutting taps/machine thread-forming taps (III)

ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN	ATORN
14473	14462	14425	14445	14449	14454	14364	14364	14364	14367	14446	14450
2 14.43	2 14.41	2 14.34	2 14.37	2 14.38	2 14.41	Former 14.25	Former 14.25	Former 14.25	Former 14.26	2 14.39	2 14.39
											
6 H HSS-E Left-hand	6 H HSS-E Long	6 H HSS-E vapo/TiN	6 H HSS-E	6 H HSS-E TiCn	6 H PM	6 HX HSS-E TiN	6 HX HSS-E TiAlN+C	6 HX PM TiCN	6 HX Solid carbide TiAlN+C	6 H PM	6 H PM TiCN

KHW	KHW		KHW	KHW	EMUGE		KHW	KHW	EMUGE	KHW	EMUGE	KHW	KHW	UNIMAX	EMUGE	KHW	
14400 14401	14406 14407	14402 14403	14408 14409	14412 14413	14420 14421	14429 14430	14436 14437	14438	14439 14440	14443 14444		14447 14448	14451 14452	14453	14459	14466	
	14502										14506			14511			
		14603			14605		14601										
	14570																
		14571															
	14582																
2 14.31	2 14.31/14.51	2 14.32/14.53	2 14.32	2 14.33	2 14.33/14.53	2 14.34	2 14.35/14.53	2 14.35	2 14.36	2 14.36	2 14.48	2 14.37	2 14.38	2 14.40/14.48	2 14.42	2 14.40	3 14.53
																	
6 H HSS-E	6 H HSS-E	6 H HSS-E	6 G HSS-E	6 H HSS-E OX	6 H HSS-E	6 H HSS-E TiCN	6 H HSS-E VAOX	6 G HSS-E VAOX	6 H HSS-E	6 H HSS-E VAOX	6 H HSS-E	6 H HSS-E TiN	6 H HSS-E	6 HX PM Hardlube	6 H HSS-E Long	6 HX PM TiCN	HSS-E

Info

Dimensions of the machine spindle heads in accordance with DIN

Core removing hole dimensions for thread cutting

M	Ø MM	MF	Ø MM	MF	Ø MM	UNC	Ø MM	G	Ø MM	UNF	Ø MM	PG	Ø MM	NPT	Ø MM
M 1	0,75	M 2,5 x 0,35	2,15	M 22 x 1,5	20,50	Nr. 1	1,50	G 1/8	8,80	No. 4	2,40	PG7	11,40	1/16	6,30
M 1,1	0,85	M 3 x 0,35	2,65	M 22 x 2	20,00	Nr. 2	1,80	G 1/4	11,80	No. 5	2,70	PG9	14,00	1/8	8,50
M 1,2	0,95	M 3,5 x 0,35	3,15	M 24 x 1	23,00	Nr. 3	2,10	G 3/8	15,25	No. 6	3,00	PG11	17,25	1/4	11,10
M 1,4	1,10	M 4 x 0,35	3,65	M 24 x 1,5	22,50	No. 4	2,30	G 1/2	19,00	No. 8	3,50	PG13,5	19,00	3/8	14,50
M 1,6	1,25	M 4 x 0,5	3,50	M 24 x 2	22,00	No. 5	2,65	G 3/4	24,50	No. 10	4,10	PG16	21,25	1/2	17,75
M 1,8	1,45	M 5 x 0,5	4,50	M 25 x 1,5	23,50	No. 6	2,85	G 1	30,75	No. 12	4,65	PG21	27,00	3/4	23,00
M 2	1,60	M 6 x 0,5	5,50	M 26 x 1,5	24,50	No. 8	3,50	1 G	35,50	1/4	5,50	PG26	35,50	1	29,00
M 2,2	1,75	M 6 x 0,75	5,20	M 27 x 1,5	25,50	No. 10	3,90	G 1 1/4	39,50	5/16	6,90				
M 2,5	2,05	M 7 x 0,75	6,20	M 27 x 2	25,00	No. 12	4,50	G 1 1/2	45,00	3/8	8,50				
M 3	2,50	M 8 x 0,5	7,50	M 28 x 1,5	26,50	1/4	5,10			7/16	9,90				
M 3,5	2,90	M 8 x 0,75	7,20	M 30 x 1	29,00	5/16	6,60			1/2	11,50				
M 4	3,30	M 8 x 1	7,00	M 30 x 1,5	28,50	3/8	8,00			9/16	12,90				
M 4,5	3,80	M 9 x 1	8,00	M 30 x 2	28,00	7/16	9,40			5/8	14,50				
M 5	4,20	M 10 x 0,75	9,20	M 32 x 1,5	30,50	1/2	10,80			3/4	17,50				
M 6	5,00	M 10 x 1	9,00	M 33 x 2	31,00	9/16	12,2			7/8	20,50				
M 7	6,00	M 10 x 1,25	8,80	M 34 x 1,5	32,50	5/8	13,50			1	23,25				
M 8	6,80	M 11 x 1	10,00	M 36 x 1,5	34,50	3/4	16,50								
M 9	7,80	M 12 x 1	11,00	M 36 x 2	34,00	7/8	19,50								
M 10	8,50	M 12 x 1,25	10,80	M 36 x 3	33,00	1	22,25								
M 11	9,50	M 12 x 1,5	10,50	M 38 x 1,5	36,50										
M 12	10,20	M 14 x 1	13,00	M 40 x 1,5	38,50										
M 14	12,00	M 14 x 125	12,80	M 42 x 1,5	40,50										
M 16	14,00	M 14 x 1,5	12,50												
M 18	15,50	M 15 x 1	14,00												
M 20	17,50	M 15 x 1,5	13,50												
M 22	19,50	M 16 x 1	15,00												
M 24	21,00	M 16 x 1,5	14,50												
M 30	26,50	M 18 x 1,5	16,50												
M 33	29,50	M 20 x 1	19,00												
M 36	32,00	M 20 x 1,5	18,50												
M 39	35,00	M 20 x 2	18,00												
M 42	37,50	M 22 x 1	21,00												

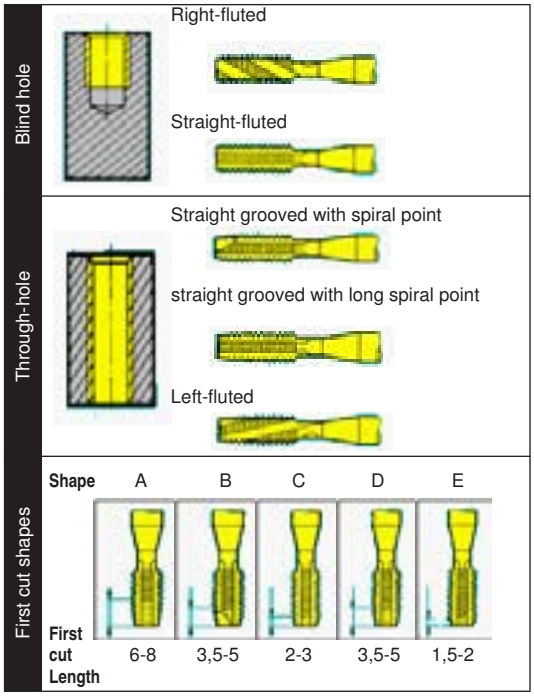
Core removing hole dimensions for thread forming

M	Ø mm	M	Ø mm	MF	Ø mm	MF	Ø mm	MF	Ø mm
M 1	0,90	M 3,5	3,25	M 2,5 x 0,35	2,35	M 10 x 0,75	9,65	M 14 x 1,5	13,30
M 1,2	1,10	M 4	3,70	M 3 x 0,35	2,85	M 10 x 1	9,50	M 16 x 1	15,50
M 1,4	1,10	M 5	4,65	M 3,5 x 0,35	3,35	M 10 x 1,25	9,40	M 16 x 1,5	15,30
M 1,6	1,45	M 6	5,55	M 4 x 0,5	3,80	M 12 x 1	11,50	M 18 x 1,5	17,30
M 1,8	1,65	M 8	7,40	M 4,5 x 0,5	4,30	M 12 x 1,25	11,40	M 20 x 1,5	19,50
M 2	1,83	M 10	9,30	M 5 x 0,5	4,80	M 12 x 1,5	11,30	M 20 x 1,5	19,30
M 2,2	2,00	M 12	11,10	M 6 x 0,75	5,65	M 14 x 1	13,50	M 20 x 2	19,00
M 2,5	2,30	M 14	13,00	M 8 x 0,75	7,65				
M 3	2,80	M 16	15,00	M 8 x 1	7,50				

Cooling lubricants for thread cutting

The problem zone is reached, as soon as the emulsion has a grease content under 5%

- A pure cooling effect occurs, the actual lubricating effect is dispensed with.
- The consequence is an edge build-up.
- The surface quality becomes very poor.
- Service life is reduced.
- Optimisation is achieved with IKZ (abbreviation of the German term for inner coolant supply).



Minimum quantity lubrication (MQL)

- Lubrication of the tool and of the workpiece through oil droplets finely distributed in an air flow.
- Supply of the lubricant through inner or outer MQL.

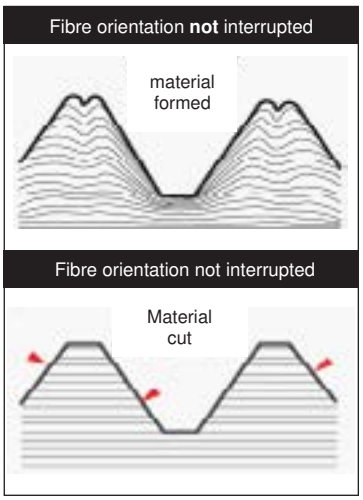
Advantage:

- Cooling lubricant is dispensed with.
- No disposal costs for chips and cooling lubricants.
- Workpiece cleaning is dispensed with.

With cut thread the permissible critical loads are impaired through the cutting of the material fibres. In addition, flank angle errors can more easily occur, which cause unfavourable tension distributions and reduce the percentage contact area. With formed thread non-interrupted chamfers and a work-hardened material are produced; this considerably increases the pull-out strength. Additional flank angle deviations are avoided because the material is formed on the flank of the tool without play. The incompletely formed core, a typical characteristic of formed thread, does not influence the strength.

Thread forming

- For thread forming a highly-compressible cooling lubricant is required.
- In this process the lubricating film must not break down.
- If you are forming with emulsion, the emulsion should have a grease content of at least 8-10%.



14010 - 14020 Hand taps

M | 6H | DIN 352 | ≤ 2xD | HSS | ≤ 800 N/mm²

Type
To M 1,4 tolerance zone ISO 1 (4H).

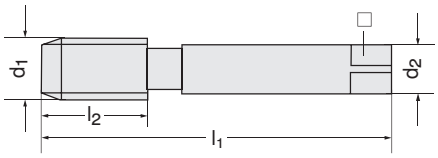
14010
3-part set consisting of **taper tap, plug tap, and bottoming tap.**

14018
Taper tap.

14019
Plug tap.

14020
Bottoming tap.

14010



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊡ mm	Set 14010 ...	No. 1 14018 ...	No. 2 14019 ...	F 14020 ...
M 1	0,75	0,25	5,5	32	2,5 x 2,1	301	101	101	101
M 1,1	0,85	0,25	5,5	32	2,5 x 2,1	302	102	102	102
M 1,2	0,95	0,25	5,5	32	2,5 x 2,1	303	103	103	103
M 1,4	1,10	0,30	7,0	32	2,5 x 2,1	304	104	104	104
M 1,6	1,25	0,35	8,0	32	2,5 x 2,1	305	105	105	105
M 1,8	1,45	0,35	8,0	32	2,5 x 2,1	306	106	106	106
M 2	1,60	0,40	8,0	36	2,8 x 2,1	307	107	107	107
M 2,2	1,75	0,45	9,0	36	2,8 x 2,1	308	108	108	108
M 2,5	2,05	0,45	9,0	40	2,8 x 2,1	309	109	109	109
M 3	2,50	0,50	11,0	40	3,5 x 2,7	310	110	110	110
M 3,5	2,90	0,60	12,0	45	4,0 x 3,0	311	111	111	111
M 4	3,30	0,70	13,0	45	4,5 x 3,4	312	112	112	112
M 4,5	3,70	0,75	16,0	50	6,0 x 4,9	313	113	113	113
M 5	4,20	0,80	16,0	50	6,0 x 4,9	314	114	114	114
M 6	5,00	1,00	19,0	56	6,0 x 4,9	315	115	115	115
M 7	6,00	1,00	19,0	56	6,0 x 4,9	316	116	116	116
M 8	6,80	1,25	22,0	63	6,0 x 4,9	317	117	117	117
M 9	7,80	1,25	22,0	63	7,0 x 5,5	318	118	118	118
M 10	8,50	1,50	24,0	70	7,0 x 5,5	319	119	119	119
M 11	9,50	1,50	24,0	70	8,0 x 6,2	320	120	120	120
M 12	10,20	1,75	28,0	75	9,0 x 7,0	321	121	121	121
M 14	12,00	2,00	30,0	80	11,0 x 9,0	322	123	123	123
M 16	14,00	2,00	32,0	80	12,0 x 9,0	323	125	125	125
M 18	15,50	2,50	34,0	95	14,0 x 11,0	324	127	127	127
M 20	17,50	2,50	34,0	95	16,0 x 12,0	325	129	129	129
M 22	19,50	2,50	34,0	100	18,0 x 14,5	326	131	131	131
M 24	21,00	3,00	38,0	110	18,0 x 14,5	327	133	133	133
M 27	24,00	3,00	38,0	110	20,0 x 16,0	328	136	136	136
M 30	26,50	3,50	45,0	125	22,0 x 18,0	329	139	139	139
M 33	29,50	3,50	50,0	125	25,0 x 20,0	330	142	142	142
M 36	32,00	4,00	56,0	150	28,0 x 22,0	331	145	145	145
M 39	35,00	4,00	60,0	150	32,0 x 24,0	332	148	148	148
M 42	37,50	4,50	60,0	150	32,0 x 24,0	333	151	151	151

Hand taps

14014 - 14028 Hand taps

M | 6H | DIN 352 | ≤2,5xD | HSS | ≤ 800 N/mm²

Type
To M 1,4 tolerance zone ISO 1 (4H).

Note:
Economically-priced Type.

14014
3-part set consisting of **taper tap, plug tap, and bottoming tap.**

6-8 A

14026
Taper tap.

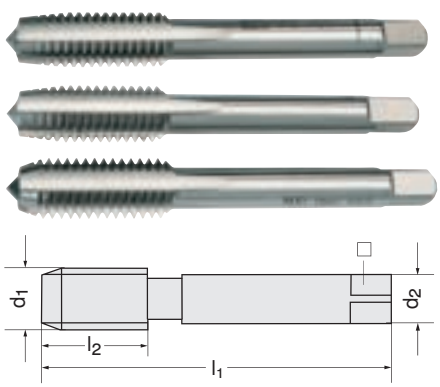
3,5-5 D

14027
Plug tap.

2-3 C

14028
Bottoming tap.

14014



						Set	No. 1	No. 2	F
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14014 ...	14026 ...	14027 ...	14028 ...
M 3	2,50	0,50	11,0	40	3,5 x 2,7	310	110	110	110
M 4	3,30	0,70	13,0	45	4,5 x 3,4	312	112	112	112
M 5	4,20	0,80	16,0	50	6,0 x 4,9	314	114	114	114
M 6	5,00	1,00	19,0	56	6,0 x 4,9	315	115	115	115
M 8	6,80	1,25	22,0	63	6,0 x 4,9	317	117	117	117
M 10	8,50	1,50	24,0	70	7,0 x 5,5	319	119	119	119
M 12	10,20	1,75	28,0	75	9,0 x 7,0	321	121	121	121
M 14	12,00	2,00	30,0	80	11,0 x 9,0	322	122	122	122
M 16	14,00	2,00	32,0	80	12,0 x 9,0	323	123	123	123
M 18	15,50	2,50	34,0	95	14,0 x 11,0	324	124	124	124
M 20	17,50	2,50	34,0	95	16,0 x 12,0	325	125	125	125
M 22	19,50	2,50	34,0	100	18,0 x 14,5	326	126	126	126
M 24	21,00	3,00	38,0	110	18,0 x 14,5	327	127	127	127
M 27	24,00	3,00	38,0	110	20,0 x 16,0	328	128	128	128
M 30	26,50	3,50	45,0	125	22,0 x 18,0	329	129	129	129

14016 - 14025 Hand taps

M | 6H | DIN 352 | ≤2,5xD | HSS-E | VA-OX | ≤ 1200 N/mm²

Type
To M 1,4 tolerance zone ISO 1 (4H).

14016
3-part set consisting of **taper tap, plug tap, and bottoming tap.**

6-8 A

14023
Taper tap.

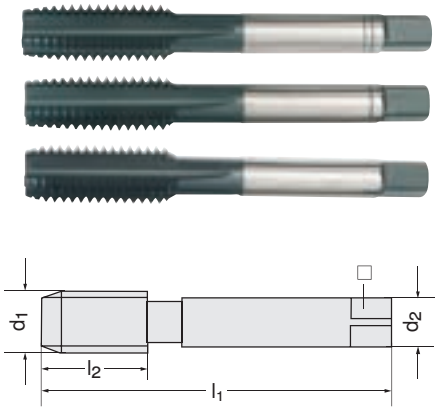
3,5-5 D

14024
Plug tap.

2-3 C

14025
Bottoming tap.

14016

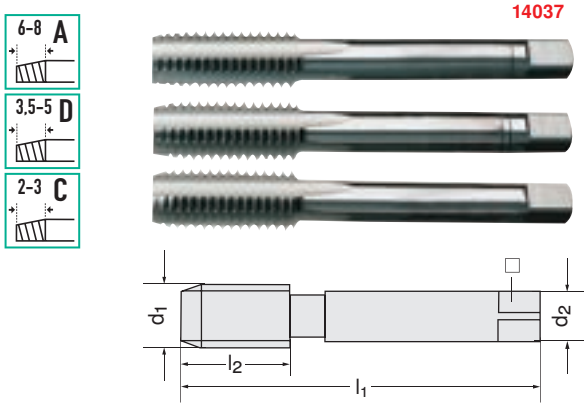


						Set	No. 1	No. 2	F
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14016 ...	14023 ...	14024 ...	14025 ...
M 2	1,60	0,40	8,0	36	2,8 x 2,1	307	101	101	101
M 2,5	2,05	0,45	9,0	40	2,8 x 2,1	309	103	103	103
M 3	2,50	0,50	11,0	40	3,5 x 2,7	310	104	104	104
M 3,5	2,90	0,60	12,0	45	4,0 x 3,0	311	105	105	105
M 4	3,30	0,70	13,0	45	4,5 x 3,4	312	106	106	106
M 5	4,20	0,80	16,0	50	6,0 x 4,9	314	107	107	107
M 6	5,00	1,00	19,0	56	6,0 x 4,9	315	108	108	108
M 8	6,80	1,25	22,0	63	6,0 x 4,9	317	109	109	109
M 10	8,50	1,50	24,0	70	7,0 x 5,5	319	110	110	110
M 12	10,20	1,75	28,0	75	9,0 x 7,0	321	111	111	111
M 14	12,00	2,00	30,0	80	11,0 x 9,0	322	112	112	112
M 16	14,00	2,00	32,0	80	12,0 x 9,0	323	113	113	113

14037 Hand tap set left-hand thread

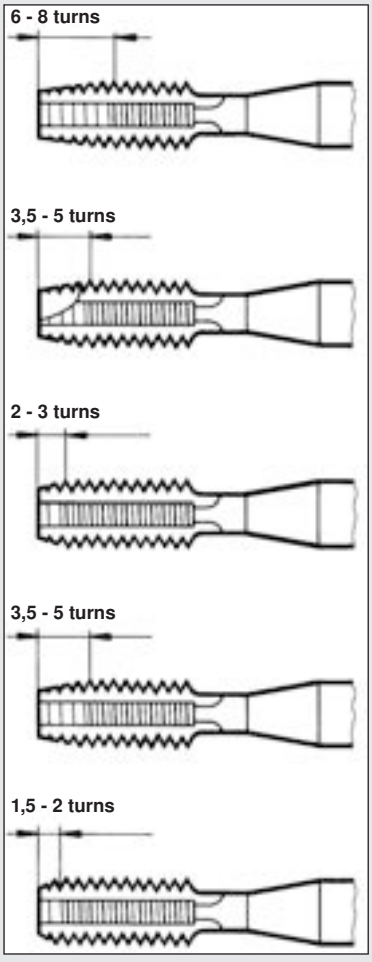
M | 6H | DIN 352 | ≤2,5xD | HSS | ≤ 800 N/mm²

Type
3-part set consisting of
Taper tap, plug tap and bottoming tap.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	HSS 14037	...
M 3	2,50	0,50	11	40	3,5 x 2,7		301
M 4	3,30	0,70	13	45	4,5 x 3,4		302
M 5	4,20	0,80	16	50	6,0 x 4,9		303
M 6	5,00	1,00	19	56	6,0 x 4,9		304
M 8	6,80	1,25	22	63	6,0 x 4,9		305
M 10	8,50	1,50	24	70	7,0 x 5,5		306
M 12	10,20	1,75	28	75	9,0 x 7,0		307
M 14	12,00	2,00	30	80	11,0 x 9,0		308
M 16	14,00	2,00	32	80	12,0 x 9,0		309
M 18	15,50	2,50	34	95	14,0 x 11,0		310
M 20	17,50	2,50	34	95	16,0 x 12,0		311

Info Chamfer shapes DIN Taps



Shape A 6-8 A

Shape B 3,5-5 B

Shape C 2-3 C

Shape D 3,5-5 D

Shape E 1,5-2 E

Hand taps

14052 - 14054 Hand taps

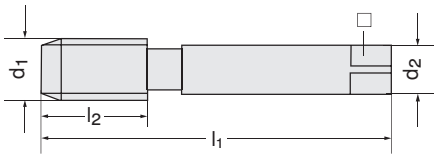
MF | 6H | DIN 2181 | ≤2,5xD | HSS | ≤ 800 N/mm² | 14052

HHW

14052
2-part set consisting of
taper tap and bottoming tap.

14054 101-191
Taper tap.

14054 102-192
Bottoming tap.



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x □ mm	Set 14052 ...	No. 1 14054 ...	F 14054 ...
M 3 x 0,35	2,65	8	40	3,5 x 2,7	304	101	102
M 3,5 x 0,35	3,15	9	45	4,0 x 3,0	305	103	104
M 4 x 0,50	3,50	10	45	4,5 x 3,4	307	107	108
M 5 x 0,50	4,50	12	50	6,0 x 4,9	308	111	112
M 6 x 0,50	5,50	14	56	6,0 x 4,9	309		
M 6 x 0,75	5,20	14	56	6,0 x 4,9	310	115	116
M 7 x 0,75	6,20	14	56	6,0 x 4,9	311	119	120
M 8 x 0,50	7,50	18	56	6,0 x 4,9	312		
M 8 x 0,75	7,20	18	56	6,0 x 4,9	313	121	122
M 8 x 1,00	7,00	22	63	6,0 x 4,9	314	123	124
M 9 x 1,00	8,00	22	63	7,0 x 5,5	315	125	126
M 10 x 0,75	9,20	20	63	7,0 x 5,5	316		
M 10 x 1,00	9,00	20	63	7,0 x 5,5	317	129	130
M 10 x 1,25	8,80	24	70	7,0 x 5,5	318		
M 11 x 1,00	10,00	20	63	8,0 x 6,2	319	133	134
M 12 x 1,00	11,00	22	70	9,0 x 7,0	320	135	136
M 12 x 1,25	10,75	22	70	9,0 x 7,0	321		
M 12 x 1,25	10,80	22	70	9,0 x 7,0		137	138
M 12 x 1,50	10,50	22	70	9,0 x 7,0	322	139	140
M 14 x 1,00	13,00	22	70	11,0 x 9,0	323		
M 14 x 1,25	12,80	22	70	11,0 x 9,0	324		
M 14 x 1,50	12,50	22	70	11,0 x 9,0	325	145	146
M 15 x 1,00	14,00	22	70	12,0 x 9,0	326		
M 15 x 1,50	13,50	22	70	12,0 x 9,0	327		
M 16 x 1,00	15,00	22	70	12,0 x 9,0	328		
M 16 x 1,50	14,50	22	70	12,0 x 9,0	329	153	154
M 18 x 1,00	17,00	22	80	14,0 x 11,0	330		
M 18 x 1,50	16,50	22	80	14,0 x 11,0	331	157	158
M 18 x 2,00	16,00	22	80	14,0 x 11,0	332		
M 20 x 1,00	19,00	22	80	16,0 x 12,0	333		
M 20 x 1,50	18,50	22	80	16,0 x 12,0	334	163	164
M 20 x 2,00	18,00	22	80	16,0 x 12,0	335		
M 22 x 1,00	21,00	22	80	18,0 x 14,5	336		
M 22 x 1,50	20,50	22	80	18,0 x 14,5	337	169	170
M 22 x 2,00	20,00	22	80	18,0 x 14,5	338		
M 24 x 1,00	23,00	22	90	18,0 x 14,5	339		
M 24 x 1,50	22,50	22	90	18,0 x 14,5	340	175	176
M 24 x 2,00	22,00	22	90	18,0 x 14,5	341		
M 25 x 1,50	23,50	22	90	18,0 x 14,5	342		
M 26 x 1,50	24,50	22	90	18,0 x 14,5	343	181	182
M 27 x 1,50	25,50	22	90	20,0 x 16,0	344		
M 27 x 2,00	25,00	22	90	20,0 x 16,0	345		
M 28 x 1,50	26,50	22	90	20,0 x 16,0	346		
M 30 x 1,00	29,00	22	90	22,0 x 18,0	347		
M 30 x 1,50	28,50	22	90	22,0 x 18,0	348	191	192
M 30 x 2,00	28,00	22	90	22,0 x 18,0	349		
M 32 x 1,50	30,50	22	90	22,0 x 18,0	350		
M 33 x 2,00	31,00	25	100	25,0 x 20,0	352		
M 34 x 1,50	32,50	25	100	28,0 x 22,0	353		
M 36 x 1,50	34,50	25	100	28,0 x 22,0	354		
M 36 x 2,00	34,00	40	125	28,0 x 22,0	355		
M 36 x 3,00	33,00	40	125	28,0 x 22,0	356		
M 38 x 1,50	36,50	25	100	28,0 x 22,0	357		
M 40 x 1,50	38,50	25	110	32,0 x 24,0	358		
M 42 x 1,50	40,50	25	110	32,0 x 24,0	359		

= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

14055 - 14058 Toolmaker's hand taps

M | 6H | DIN 352 | ≤2,5xD | HSS-E | VA-OX | ≤1200 N/mm²

Type
Taper tap with pilot.

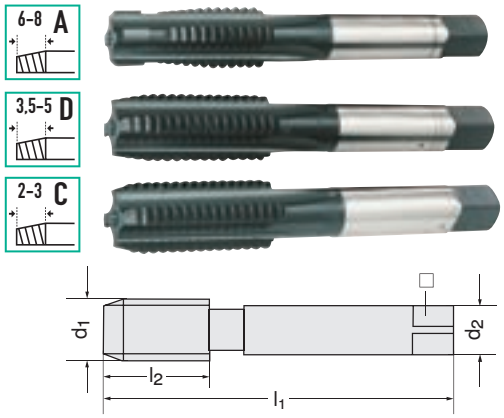
14055
3-part set consisting of
taper tap, plug tap, and bottoming tap.

14056
Taper tap.

14057
Plug tap.

14058
Bottoming tap.

14055



						Set	No. 1	No. 2	F
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	14055 ...	14056 ...	14057 ...	14058 ...
M 2	1,60	0,40	8	36	2,8 x 2,1	201	201	201	201
M 2,5	2,05	0,45	9	40	2,8 x 2,1	204	204	204	204
M 3	2,50	0,50	11	40	3,5 x 2,7	206	206	206	206
M 4	3,30	0,70	13	45	4,5 x 3,4	208	208	208	208
M 5	4,20	0,80	16	50	6,0 x 4,9	209	209	209	209
M 6	5,00	1,00	19	56	6,0 x 4,9	210	210	210	210
M 8	6,80	1,25	22	63	6,0 x 4,9	211	211	211	211
M 10	8,50	1,50	24	70	7,0 x 5,5	212	212	212	212
M 12	10,20	1,75	28	75	9,0 x 7,0	213	213	213	213
M 14	12,00	2,00	30	80	11,0 x 9,0	214	214	214	214
M 16	14,00	2,00	32	80	12,0 x 9,0	215	215	215	215

14060 Toolmaker's hand taps

M | 6H | DIN 352 | ≤2,5xD | HSS-E PM | Uni | ≤1200 N/mm²

Type
Taper tap with pilot.

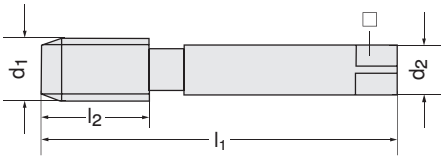
14060 103-112
3-part set consisting of
taper tap, plug tap, and bottoming tap.

14060 203-212
Taper tap.

14060 303-312
Plug tap.

14060 403-412
Bottoming tap.

14060



						Set	No. 1	No. 2	F
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	14060 ...	14060 ...	14060 ...	14060 ...
M 3	2,50	0,50	10	40	3,5 x 2,7	103	203	303	403
M 4	3,30	0,70	12	45	4,5 x 3,4	104	204	304	404
M 5	4,20	0,80	14	50	6,0 x 4,9	105	205	305	405
M 6	5,00	1,00	16	56	6,0 x 4,9	106	206	306	406
M 8	6,80	1,25	18	63	6,0 x 4,9	108	208	308	408
M 10	8,50	1,50	20	70	7,0 x 5,5	110	210	310	410
M 12	10,20	1,75	24	75	9,0 x 7,0	112	212	312	412

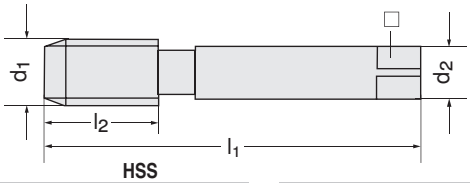
Hand Taps | Machine Taps

14059 Hand tap set

BSW | DIN 352 | ≤ 3xD | HSS | ≤ 800 N/mm²

Type
3-part set consisting of
taper tap, plug tap, and bottoming tap.

14059



HSS

d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	14059	...
BSW 1/8	2,50	40	11	40	3,5 x 2,7		201
BSW 3/16	3,70	24	16	50	6,0 x 4,9		202
BSW 1/4	5,10	20	19	56	6,0 x 4,9		203
BSW 5/16	6,50	18	22	63	6,0 x 4,9		204
BSW 3/8	7,90	16	22	63	7,0 x 5,5		205

HSS

d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	14059	...
BSW 1/2	10,50	12	28	75	9,0 x 7,0		206
BSW 5/8	13,50	11	32	80	12,0 x 9,0		207
BSW 3/4	16,50	10	34	95	14,0 x 11,0		208
BSW 7/8	19,25	9	34	100	18,0 x 14,5		209
BSW 1	22,00	8	38	110	20,0 x 16,0		210

14068 - 14069 Hand taps

14068
2-part set consisting of
taper tap and bottoming tap.

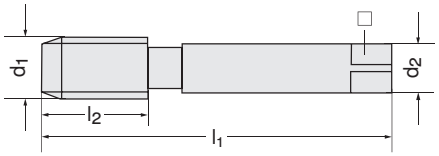
14069 101 - 109
Taper tap.

14069 201 - 209
Bottoming tap.

Note:
Economically-priced Type.

G | DIN 5157 | ≤ 3xD | HSS | ≤ 800 N/mm²

14068



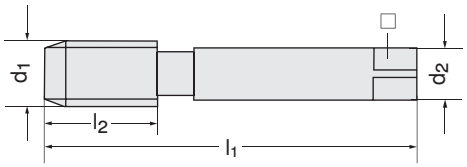
d_1	Core hole Ø mm	Pitch tpi/1 Z.	l_2 mm	l_1 mm	d_2 x ⫫ mm	Set 14068	...	No. 1 14069	...	F 14069	...
G 1/8	8,80	28	20	63	7 x 5,5		101		101		201
G 1/4	11,80	19	22	70	11 x 9,0		102		102		202
G 3/8	15,25	19	22	70	12 x 9,0		103		103		203
G 1/2	19,00	14	22	80	16 x 12,0		104		104		204
G 5/8	21,00	14	22	80	18 x 15,5				105		205
G 3/4	24,50	14	22	90	20 x 16,0		106		106		206
G 7/8	28,25	14	22	90	22 x 18,0				107		207
G 1	30,75	11	25	100	25 x 20,0		108		108		208
G 1.1/4	39,50	11	40	125	32 x 24,0				109		209

14070 Hand tap set

UNC | DIN 2184-2 | ≤2,5xD | HSS | ≤ 800 N/mm²

Type
3-part set consisting of
taper tap, plug tap, and bottoming tap.

14070



HSS

d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	14070	...
Nr. 5	2,65	40	11	40	3,5 x 2,7		105
Nr. 6	2,85	32	12	45	4,0 x 3,0		106
Nr. 8	3,50	32	13	45	4,5 x 3,4		107
Nr. 10	3,90	24	16	50	6,0 x 4,9		108
Nr. 12	4,50	24	17	56	6,0 x 4,9		109
1/4	5,10	20	19	56	6,0 x 4,9		110
5/16	6,60	18	22	63	6,0 x 4,9		111
3/8	8,00	16	24	70	7,0 x 5,5		112

HSS

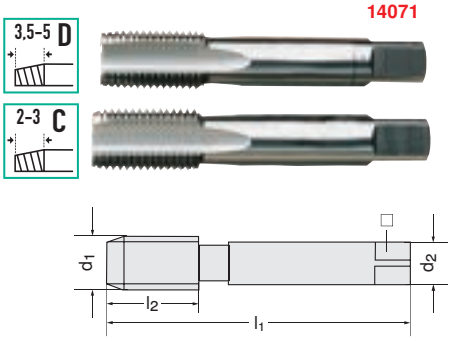
d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	14070	...
7/16	9,40	14	24	70	8,0 x 6,2		113
1/2	10,80	13	28	75	9,0 x 7,0		114
9/16	12,20	12	30	80	11,0 x 9,0		115
5/8	13,50	11	32	80	12,0 x 9,0		116
3/4	16,50	10	34	95	14,0 x 11,0		117
7/8	19,50	9	34	100	18,0 x 14,5		118
1.	22,25	8	38	110	20,0 x 16,0		119

14071 Hand tap set

UNF | DIN 2181 | ≤2,5xD | HSS | ≤ 800 N/mm²

Type
2-part set consisting of
taper tap and bottoming tap.

14071



d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS 14071	...
No. 0	1,25	80	8	32	2,5 x 2,1		301
No. 1	1,55	72	8	36	2,8 x 2,1		302
No. 2	1,85	64	9	36	2,8 x 2,1		303
No. 3	2,10	56	9	40	2,8 x 2,1		304
No. 4	2,40	48	8	40	3,5 x 2,7		305
No. 5	2,70	44	8	40	3,5 x 2,7		306
No. 6	3,00	40	9	45	4,0 x 3,0		307
No. 8	3,50	36	10	45	4,5 x 3,4		308
No. 10	4,10	32	12	50	6,0 x 4,9		309
No. 12	4,65	28	12	56	6,0 x 4,9		310

d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS 14071	...
1/4	5,50	28	19	56	6,0 x 4,9		311
5/16	6,90	24	22	63	6,0 x 4,9		312
3/8	8,50	24	20	63	7,0 x 5,5		313
7/16	9,90	20	20	70	8,0 x 6,2		314
1/2	11,50	20	22	70	9,0 x 7,0		315
9/16	12,90	18	22	70	11,0 x 9,0		316
5/8	14,50	18	22	70	12,0 x 9,0		317
3/4	17,50	16	22	80	14,0 x 11,0		318
7/8	20,50	14	22	80	18,0 x 14,5		319
1.	23,25	12	22	80	20,0 x 16,0		320

14110 - 14112 Short machine taps

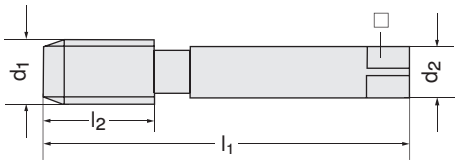
M | 6H | DIN 352 | HSS-E | ≤ 800 N/mm²

14110
Type
With curling cut chamfer. Starting taper shape B.
Use
For through-hole thread.

14110

14112
Type
With 15° spiral. Starting taper shape C.
Use
For blind holes.

14112



Straight flutes

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	14110	...
M 2	1,60	0,40	8	36	2,8 x 2,1		201
M 2,5	2,05	0,45	9	40	2,8 x 2,1		203
M 3	2,50	0,50	11	40	3,5 x 2,7		204
M 4	3,30	0,70	13	45	4,5 x 3,4		206
M 5	4,20	0,80	16	50	6,0 x 4,9		208
M 6	5,00	1,00	19	56	6,0 x 4,9		209
M 8	6,80	1,25	22	63	6,0 x 4,9		210
M 10	8,50	1,50	24	70	7,0 x 5,5		211
M 12	10,20	1,75	28	75	9,0 x 7,0		212

Spiral flutes

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	14112	...
M 4	3,30	0,70	7	45	4,5 x 3,4		206
M 5	4,20	0,80	8	50	6,0 x 4,9		208
M 6	5,00	1,00	10	56	6,0 x 4,9		209
M 8	6,80	1,25	13	63	6,0 x 4,9		210
M 10	8,50	1,50	15	70	7,0 x 5,5		211
M 12	10,20	1,75	18	75	9,0 x 7,0		212

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14110																	
15-22	15-18	12-18	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-	25-30
14112																	
12-18	12-15	10-15	8-10	8-10	-	-	-	-	-	-	-	-	-	-	-	-	20-25

= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

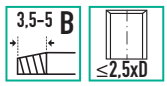
Machine Taps | Taps for through-holes

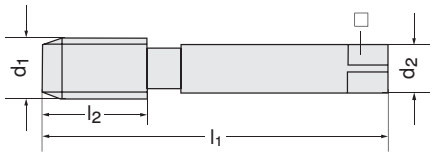
14114 - 14115 Short machine taps

M | 6H | DIN 352 | HSS-E | ≤ 800 N/mm²

14114
Type
With curling cut chamfer, starting taper shape B.
Use
For through-hole thread.

14115
Type
With 35° spirals, starting taper shape C.
Use
For blind holes.





Straight flutes

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14114	...
M 3	2,50	0,50	11	40	3,5 x 2,7		104
M 4	3,30	0,70	13	45	4,5 x 3,4		106
M 5	4,20	0,80	16	48	6,0 x 4,9		108
M 6	5,00	1,00	19	50	6,0 x 4,9		109
M 8	6,80	1,25	22	56	6,0 x 4,9		110
M 10	8,50	1,50	24	70	7,0 x 5,5		111
M 12	10,20	1,75	29	75	9,0 x 7,0		112

Spiral flutes

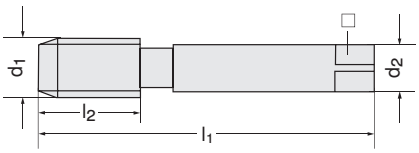
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14115	...
M 3	2,50	0,50	11	40	3,5 x 2,7		104
M 4	3,30	0,70	13	45	4,5 x 3,4		106
M 5	4,20	0,80	16	48	6,0 x 4,9		108
M 6	5,00	1,00	19	50	6,0 x 4,9		109
M 8	6,80	1,25	22	56	6,0 x 4,9		110
M 10	8,50	1,50	24	70	7,0 x 5,5		111
M 12	10,20	1,75	29	75	9,0 x 7,0		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14114																	
15-22	15-18	12-18	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-	25-30
14115																	
12-18	12-15	10-15	8-10	8-10	-	-	-	-	-	-	-	-	-	-	-	-	20-25

14265 Short machine taps

PG | DIN 40432 | 2-3 C | ≤ 2xD | ≤ 2xD | HSS-E | ≤ 800 N/mm²

Use
For blind hole and through-hole threads.



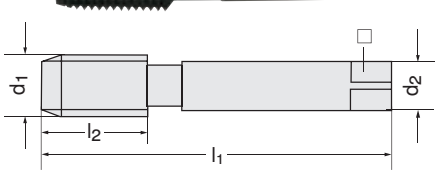
d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x □ mm	HSS-E 14265	...
PG 7	11,40	20	22	70	9 x 7,0		101
PG 9	14,00	18	22	70	12 x 9,0		102
PG 11	17,25	18	22	80	14 x 11,0		103
PG 13,5	19,00	18	22	80	16 x 12,0		104
PG 16	21,25	18	22	80	18 x 14,5		105
PG 21	27,00	16	22	90	22 x 18,0		106
PG 29	35,50	16	25	100	28 x 22,0		107

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-15	12-15	5-12	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-	20-25

14270 Short machine taps

NPT | DIN 2181 | 2-3 C | ≤ 2xD | ≤ 2xD | HSS-E | ≤ 800 N/mm²

Use
For blind hole and through-hole threads.



d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x □ mm	HSS-E 14270	...
NPT 1/16	6,40	27	14	56	6 x 4,9		101
NPT 1/8	8,70	27	15	63	7 x 5,5		102
NPT 1/4	11,40	18	21	63	11 x 9,0		103
NPT 3/8	14,70	18	21	70	12 x 9,0		104
NPT 1/2	18,30	14	27	80	16 x 12,0		105
NPT 3/4	23,70	14	27	100	20 x 16,0		106
NPT 1	29,70	11.1/2	32	110	25 x 20,0		107

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-15	12-15	5-12	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-	20-25

14285 - 14290 Taps for through-holes Multi

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD | HSS-E | Uni

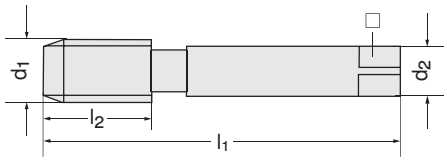
EMUGE

Version
Multi-purpose tap with optimised grind and special surface treatment.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Use
For machining automated machine steel, structural steel, tempered steel, cast steel, and spheroidal cast iron with a strength of up to GGG 70, (GG, as well), forgings, aluminium alloys up to 12% Si, low-alloyed INOX materials.

14285

14290



Set contents	HSS-E 14285 ...
7-part M 3 - M 12	101

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14290 ...	DIN 376 14290 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101	
M 3	2,50	0,50	11	56	3,5 x 2,7	103	
M 4	3,30	0,70	13	63	4,5 x 3,4	105	
M 5	4,20	0,80	15	70	6,0 x 4,9	106	
M 6	5,00	1,00	17	80	6,0 x 4,9	107	
M 8	6,80	1,25	20	90	8,0 x 6,2	108	
M 10	8,50	1,50	22	100	10,0 x 8,0	109	
M 12	10,20	1,75	24	110	9,0 x 7,0		110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-20	10-20	-	5-20	5-20	5-15	2-8	2-8	-	-	-	-	-	2-10	-	-	8-20	-

14291 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

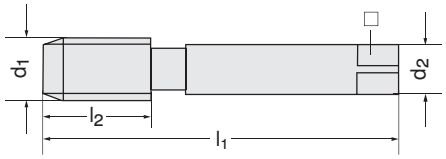
ATORN®

Type
Without curling cut chamfer.

14291 101-110
M 2 - M 10, DIN 371.

14291 204-220
M 4 - M 20, DIN 376.

14291



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	DIN 371 d_2 x 中 mm	DIN 376 d_2 x 中 mm	DIN 371 14291 ...	DIN 376 14291 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	-	101	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	-	102	
M 3	2,50	0,50	10	56	3,5 x 2,7	-	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	2,8 x 2,1	104	204
M 5	4,20	0,80	14	70	6,0 x 4,9	3,5 x 2,7	105	205
M 6	5,00	1,00	16	80	6,0 x 4,9	4,5 x 3,4	106	206
M 7	6,00	1,00	16	80	7,0 x 5,5	-	107	
M 8	6,80	1,25	18	90	8,0 x 6,2	6,0 x 4,9	108	208
M 10	8,50	1,50	20	100	10,0 x 8,0	7,0 x 5,5	110	210
M 12	10,20	1,75	22	110	-	9,0 x 7,0		212
M 14	12,00	2,00	25	110	-	11,0 x 9,0		214
M 16	14,00	2,00	28	110	-	12,0 x 9,0		216
M 20	17,50	2,50	32	140	-	16,0 x 12,0		220

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-

Taps for through-holes

14292 - 14295 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD

ATORN®

Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

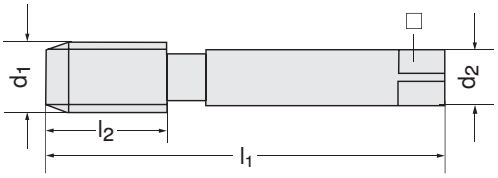
14292
Use
For steel **with a strength of up to 800 N/mm².**

14293
Use
Low tendency of the machined material to stick to the machining tool thanks to TiN coating. For steel **with a strength of up to 850 N/mm².**

14294
Use
Extraordinary emergency running characteristics; satisfies the highest performance requirements, thanks to special TiCN-coating. For steel **with a strength of up to 1000 N/mm².**

14295
Use
For steel **with a strength of up to 1000 N/mm².**
Also suitable for synchro-chucks.

HSS-E ≤ 800 N/mm² — 14292
HSS-E TiN ≤ 850 N/mm² — 14293
HSS-E TiCN ≤ 1000 N/mm² — 14294
HSS-E-PM TiN ≤ 1000 N/mm² — 14295



							HSS-E		HSS-E/TiN		HSS-E/TiCN		PM-TiN	
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN	14292	...	14293	...	14294	...	14295	...
M 2	1,60	0,40	8	45	2,8 x 2,1	371		100						102
M 2,5	2,05	0,45	9	50	2,8 x 2,1	371		101						
M 3	2,50	0,50	10	56	3,5 x 2,7	371		102		102		102		103
M 3,5	2,90	0,60	11	56	4,0 x 3,0	371		103		103		103		
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		104		104		104
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		105		105		105
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		106		106		106
M 7	6,00	1,00	16	80	7,0 x 5,5	371		107						
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		108		108		108
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		110		110		110
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		112		112		112
M 14	12,00	2,00	25	110	11,0 x 9,0	376		114		114		114		114
M 16	14,00	2,00	28	110	12,0 x 9,0	376		116		116		116		116
M 18	15,50	2,50	32	125	14,0 x 11,0	376		118		118		118		118
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		120		120		120
M 22	19,50	2,50	32	140	18,0 x 14,5	376		122						
M 24	21,00	3,00	36	160	18,0 x 14,5	376		124		124		124		
M 27	24,00	3,00	36	160	20,0 x 16,0	376		127		127				
M 30	26,50	3,50	40	180	22,0 x 18,0	376		130						

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14292+14293																	
-	-	-	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-
14294																	
-	-	-	5-40	5-30	5-24	5-18	-	-	-	-	-	-	-	-	-	-	-
14295																	
-	-	-	5 - 40	5 - 30	5 - 24	2 - 12	-	-	-	-	-		5 - 20	5 - 20		8 - 30	-

14302 - 14303 Taps for through-holes

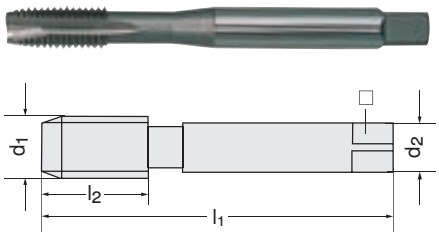
M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤1,5xD | HSS-E | ≤ 800 N/mm²

Type
With curling cut chamfer.
To M 1,4 tolerance zone ISO 1 (4H).

14302
M 1,4 - M 10, DIN 371.

14303
M 4 - M 42, DIN 376.

14302



DIN 371

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	14302	...
M 1,4	1,10	0,30	7	40	2,5 x 2,1		102
M 1,6	1,25	0,35	8	40	2,5 x 2,1		103
M 1,8	1,45	0,35	8	40	2,5 x 2,1		104
M 2	1,60	0,40	8	45	2,8 x 2,1		105
M 2,5	2,05	0,45	9	50	2,8 x 2,1		107
M 3	2,50	0,50	11	56	3,5 x 2,7		108
M 4	3,30	0,70	13	63	4,5 x 3,4		110
M 5	4,20	0,80	16	70	6,0 x 4,9		112
M 6	5,00	1,00	19	80	6,0 x 4,9		113
M 8	6,80	1,25	22	90	8,0 x 6,2		114
M 10	8,50	1,50	24	100	10,0 x 8,0		115

DIN 376

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	14303	...
M 4	3,30	0,70	13	63	2,8 x 2,1		110
M 5	4,20	0,80	16	70	3,5 x 2,7		112
M 6	5,00	1,00	19	80	4,5 x 3,4		113
M 8	6,80	1,25	22	90	6,0 x 4,9		114
M 10	8,50	1,50	24	100	7,0 x 5,5		115
M 12	10,20	1,75	28	110	9,0 x 7,0		116
M 14	12,00	2,00	30	110	11,0 x 9,0		117
M 16	14,00	2,00	32	110	12,0 x 9,0		118
M 18	15,50	2,50	34	125	14,0 x 11,0		119
M 20	17,50	2,50	34	140	16,0 x 12,0		120
M 22	19,50	2,50	34	140	18,0 x 14,5		121
M 24	21,00	3,00	38	160	18,0 x 14,5		122
M 27	24,00	3,00	38	160	20,0 x 16,0		123
M 30	26,50	3,50	45	180	22,0 x 18,0		125
M 33	29,50	3,50	50	180	25,0 x 20,0		126
M 36	32,00	4,00	56	200	28,0 x 22,0		127
M 42	37,50	4,50	60	200	32,0 x 24,0		129

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
18-25	10-25	10-15	5-25	5-20	-	-	-	-	-	-	-	-	-	-	-	-	-

14304 - 14305 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤1,5xD | HSS-E | ≤ 800 N/mm²

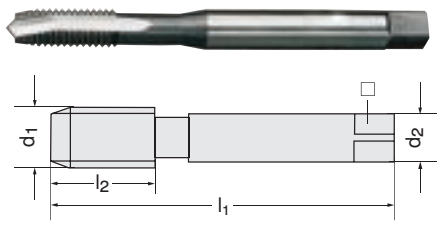
Type
With curling cut chamfer.

Note:
Economically-priced model.

14304
M 2 - M 10, DIN 371.

14305
M 3 - M 24, DIN 376.

14304



DIN 371

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	14304	...
M 2	1,60	0,40	9	45	2,8 x 2,1		105
M 2,5	2,05	0,45	9	50	2,8 x 2,1		107
M 3	2,50	0,50	10	56	3,5 x 2,7		108
M 4	3,30	0,70	12	63	4,5 x 3,4		110
M 5	4,20	0,80	14	70	6,0 x 4,9		112
M 6	5,00	1,00	16	80	6,0 x 4,9		113
M 8	6,80	1,25	18	90	8,0 x 6,2		114
M 10	8,50	1,50	20	100	10,0 x 8,0		115

DIN 376

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	14305	...
M 3	2,50	0,50	10	56	2,2 x –		108
M 4	3,30	0,70	12	63	2,8 x 2,1		110
M 5	4,20	0,80	14	70	3,5 x 2,7		112
M 6	5,00	1,00	16	80	4,5 x 3,4		113
M 8	6,80	1,25	18	90	6,0 x 4,9		114
M 10	8,50	1,50	20	100	7,0 x 5,5		115
M 12	10,20	1,75	28	110	9,0 x 7,0		116
M 14	12,00	2,00	26	110	11,0 x 9,0		117
M 16	14,00	2,00	28	110	12,0 x 9,0		118
M 20	17,50	2,50	32	140	16,0 x 12,0		120
M 24	21,00	3,00	34	160	18,0 x 14,5		122

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
18-25	10-25	10-15	5-25	5-20	-	-	-	-	-	-	-	-	-	-	-	-	20-30

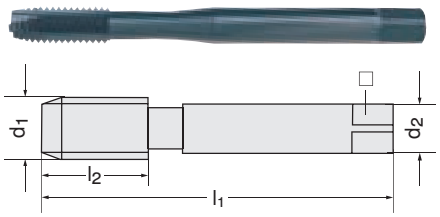
Taps for through-holes

14306 - 14307 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤1,5xD | HSS-E OX | ≤ 800 N/mm²

Type
With curling cut chamfer.
Special OX coating for soft and lubricating steel (St 33/St 37).
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14306



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	DIN 371 14306 ...	DIN 376 14307 ...
M 3	2,50	0,50	11	56	3,5 x 2,7	201	
M 4	3,30	0,70	13	63	4,5 x 3,4	202	
M 5	4,20	0,80	16	70	6,0 x 4,9	203	
M 6	5,00	1,00	19	80	6,0 x 4,9	204	
M 8	6,80	1,25	22	90	8,0 x 6,2	205	
M 10	8,50	1,50	24	100	10,0 x 8,0	206	
M 12	10,20	1,75	28	110	9,0 x 7,0		201
M 14	12,00	2,00	30	110	11,0 x 9,0		202
M 16	14,00	2,00	32	110	12,0 x 9,0		203
M 18	15,50	2,50	34	125	14,0 x 11,0		204
M 20	17,50	2,50	34	140	16,0 x 12,0		205

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	15-20	15-20	-	-	-	-	-	-	-	-	-	-	-	-	-

14308 - 14310 Taps for through-holes

M | 3,5–5 B | ≤1,5xD | HSS-E | ≤ 800 N/mm²

Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
For workpieces that are retroactively provided with a galvanic coating.

14308
Tolerance zone 6g.

14309
Tolerance zone 7g.

14310
Tolerance zone 7g.

6G | DIN 371

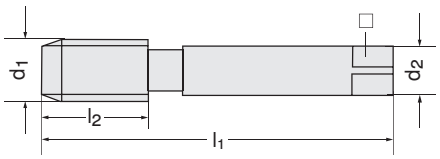
14308

7G | DIN 371

14309

7G | DIN 376

14310



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	DIN 371/6G 14308 ...	DIN 371/7G 14309 ...	DIN 376/7G 14310 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	105		
M 2,5	2,05	0,45	9	50	2,8 x 2,1	107		
M 3	2,50	0,50	11	56	3,5 x 2,7	108	108	
M 4	3,30	0,70	13	63	4,5 x 3,4	110	110	
M 5	4,20	0,80	16	70	6,0 x 4,9	112	112	
M 6	5,00	1,00	19	80	6,0 x 4,9	113	113	
M 8	6,80	1,25	22	90	8,0 x 6,2	114	114	
M 10	8,50	1,50	24	100	10,0 x 8,0	115	115	
M 12	10,20	1,75	28	110	9,0 x 7,0			116
M 16	14,00	2,00	32	110	12,0 x 9,0			118
M 20	17,50	2,50	34	140	16,0 x 12,0			120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
18-25	10-25	10-15	5-25	5-20	-	-	-	-	-	-	-	-	-	-	-	-	20-30

14315 - 14316 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD | HSS-E | ≤ 900 N/mm²

EMUGE

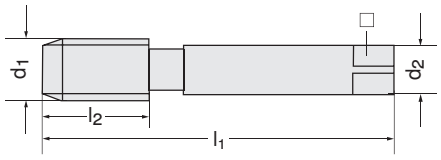
Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Taps which deviate from the ATORN colour -coded system (yellow ring - here for low-alloy steel).

14315
Record-1 B.

14316
Record-2 B.

14315



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14315 ...	DIN 376 14316 ...
M 3	2,50	0,50	11	56	3,5 x 2,7	107	
M 4	3,30	0,70	13	63	4,5 x 3,4	109	
M 5	4,20	0,80	15	70	6,0 x 4,9	111	
M 6	5,00	1,00	17	80	6,0 x 4,9	112	
M 7	6,00	1,00	17	80	7,0 x 5,5	106	
M 8	6,80	1,25	20	90	8,0 x 6,2	113	
M 10	8,50	1,50	22	100	10,0 x 8,0	114	
M 12	10,20	1,75	24	110	9,0 x 7,0		115
M 14	12,00	2,00	26	110	11,0 x 9,0		116
M 16	14,00	2,00	27	110	12,0 x 9,0		117
M 20	17,50	2,50	32	140	16,0 x 12,0		119

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	10-40	5-25	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-

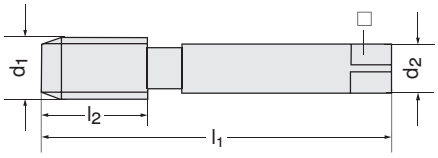
14317 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
With curling cut chamfer and over-long shank.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14317



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14317 ...	DIN 376 14317 ...
M 3	2,50	0,50	10	112	3,5 x 2,7	103	
M 4	3,30	0,70	12	126	4,5 x 3,4	104	
M 5	4,20	0,80	14	140	6,0 x 4,9	105	
M 6	5,00	1,00	16	160	6,0 x 4,9	106	
M 8	6,80	1,25	18	180	8,0 x 6,2	108	
M 10	8,50	1,50	20	200	10,0 x 8,0	110	
M 12	10,20	1,75	22	220	9,0 x 7,0		112
M 14	12,00	2,00	25	220	11,0 x 9,0		114
M 16	14,00	2,00	28	220	12,0 x 9,0		116
M 20	17,50	2,50	32	280	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

Taps for through-holes

14330 - 14331 Taps for through-holes

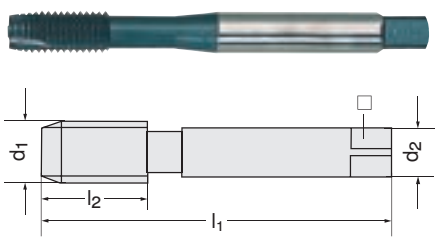
M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤1,5xD | HSS-E | ≤ 800 N/mm²

HW

Type
With curling cut chamfer and **oil grooves.**
Reduction of tendency of the machined material to stick to the machining tool thanks to nitriding and steam treatment.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Particularly suitable for sheet metal structures.

14330



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14330 ...	DIN 376 14331 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101	
M 3	2,50	0,50	11	56	3,5 x 2,7	104	
M 4	3,30	0,70	13	63	4,5 x 3,4	106	
M 5	4,20	0,80	16	70	6,0 x 4,9	107	
M 6	5,00	1,00	19	80	6,0 x 4,9	108	
M 8	6,80	1,25	22	90	8,0 x 6,2	109	
M 10	8,50	1,50	24	100	10,0 x 8,0	110	
M 12	10,20	1,75	28	110	9,0 x 7,0		112
M 16	14,00	2,00	32	110	12,0 x 9,0		114
M 20	17,50	2,50	34	140	16,0 x 12,0		116

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	15-20	15-20	15-20	-	-	-	-	-	-	-	-	-	-	-	-

14318 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤ 3xD | ≤ 1200 N/mm²

ATORN®

Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Very suitable for the machining of VA-steel.

14318 101-120
Type
Less tendency of the machined material to stick to the machining tool thanks to vapourising.
Quality
HSS-E, vapourised.

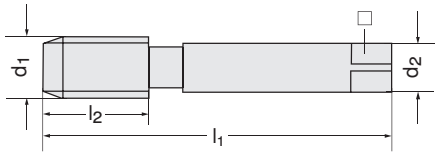
14318 203-210
Type
TiN-coated for even longer service life.
Quality
HSS-E/TiN-coated.

HSS-E

14318 101-120

HSS-E TiN

14318 203-210



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN	Vaporised 14318 ...	TiN-coated 14318 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	371	101	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	371	102	
M 3	2,50	0,50	10	56	3,5 x 2,7	371	103	203
M 4	3,30	0,70	12	63	4,5 x 3,4	371	104	204
M 5	4,20	0,80	14	70	6,0 x 4,9	371	105	205
M 6	5,00	1,00	16	80	6,0 x 4,9	371	106	206
M 8	6,80	1,25	18	90	8,0 x 6,2	371	108	207
M 10	8,50	1,50	20	100	10,0 x 8,0	371	110	208
M 12	10,20	1,75	22	110	9,0 x 7,0	376	112	209
M 16	14,00	2,00	28	110	12,0 x 9,0	376	116	210

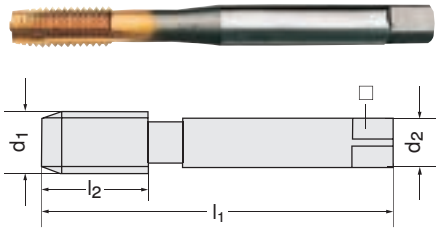
	Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14318 101-120	-	-	-	50-20	5-15	5-12	-	-	-	-	-	-	-	5-12	5-12	2-6	-	-
14318 203-210	-	-	-	5-40	5-30	5-24	-	-	-	-	-	-	-	5-20	5-20	2-6	-	-

14319 - 14320 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤1,5xD | HSS-E TiN | ≤ 1200 N/mm²

Type
With curling cut chamfer.
Improved wear resistance thanks to TiN-coating.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14319



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⫫ mm	DIN 371 14319 ...	DIN 376 14320 ...
M 3	2,50	0,50	11	56	3,5 x 2,7	101	
M 4	3,30	0,70	13	63	4,5 x 3,4	102	
M 5	4,20	0,80	16	70	6,0 x 4,9	103	
M 6	5,00	1,00	19	80	6,0 x 4,9	104	
M 8	6,80	1,25	22	90	8,0 x 6,2	105	
M 10	8,50	1,50	24	100	10,0 x 8,0	106	
M 12	10,20	1,75	28	110	9,0 x 7,0		107
M 14	12,00	2,00	30	110	11,0 x 9,0		108
M 16	14,00	2,00	32	110	12,0 x 9,0		109
M 20	17,50	2,50	34	140	16,0 x 12,0		110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	10-40	10-35	10-30	8-20	8-20	-	-	-	-	-	8-20	5-15	-	-	25-30

14333 - 14334 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 2xD | HSS-E TiCN | ≤ 1000 N/mm²

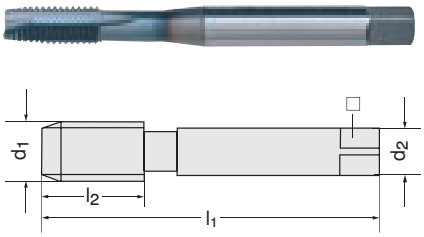
Type
With curling cut chamfer.
Long service life thanks to TiCN-coating.

Note:
Economically-priced Type.

14333
M 2 - M 10, DIN 371.

14334
M 3 - M 24, DIN 376.

14333



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⫫ mm	DIN 371 14333 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	201
M 2,5	2,05	0,45	9	50	2,8 x 2,1	202
M 3	2,50	0,50	10	56	3,5 x 2,7	203
M 4	3,30	0,70	12	63	4,5 x 3,4	204
M 5	4,20	0,80	14	70	6,0 x 4,9	205
M 6	5,00	1,00	16	80	6,0 x 4,9	206
M 8	6,80	1,25	18	90	8,0 x 6,2	207
M 10	8,50	1,50	20	100	10,0 x 8,0	208

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⫫ mm	DIN 376 14334 ...
M 3	2,50	0,50	10	56	2,2 x –	203
M 4	3,30	0,70	12	63	2,8 x 2,1	204
M 5	4,20	0,80	14	70	3,5 x 2,7	205
M 6	5,00	1,00	16	80	4,5 x 3,4	206
M 8	6,80	1,25	18	90	6,0 x 4,9	207
M 10	8,50	1,50	20	100	7,0 x 5,5	208
M 12	10,20	1,75	28	110	9,0 x 7,0	209
M 14	12,00	2,00	26	110	11,0 x 9,0	210
M 16	14,00	2,00	28	110	12,0 x 9,0	211
M 20	17,50	2,50	32	140	16,0 x 12,0	212
M 24	21,00	3,00	34	160	18,0 x 14,5	213

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	10-40	10-35	10-30	10-30	-	-	-	-	-	-	8-20	5-15	-	-	-

Taps for through-holes

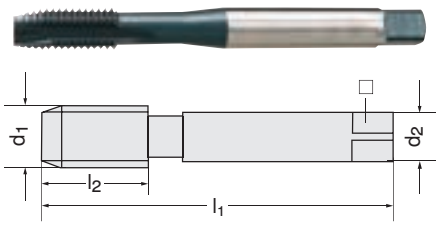
14338 - 14339 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 2xD | HSS-E | VA-OX | ≤ 1200 N/mm²

Type
With curling cut chamfer.
Increased wear resistance thanks to OX-coating.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Very suitable for the machining of VA-steel.

14338



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14338 ...	DIN 376 14339 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	103	
M 3	2,50	0,50	11	56	3,5 x 2,7	104	
M 3,5	2,90	0,60	12	56	4,0 x 3,0	105	
M 4	3,30	0,70	13	63	4,5 x 3,4	106	
M 5	4,20	0,80	16	70	6,0 x 4,9	107	
M 6	5,00	1,00	19	80	6,0 x 4,9	108	
M 8	6,80	1,25	22	90	8,0 x 6,2	109	
M 10	8,50	1,50	24	100	10,0 x 8,0	110	
M 12	10,20	1,75	28	110	9,0 x 7,0		111
M 14	12,00	2,00	30	110	11,0 x 9,0		112
M 16	14,00	2,00	32	110	12,0 x 9,0		113
M 18	15,50	2,50	34	125	14,0 x 11,0		114
M 20	17,50	2,50	34	140	16,0 x 12,0		115
M 22	19,50	2,50	34	140	18,0 x 14,5		116
M 24	21,00	3,00	38	160	18,0 x 14,5		117
M 30	26,50	3,50	45	180	22,0 x 18,0		118

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
18-25	10-25	10-15	5-25	5-20	5-15	5-15	5-10	-	-	-	-	-	5-15	5-12	-	-	-

14340 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD | HSS-E | ≤ 1100 N/mm²

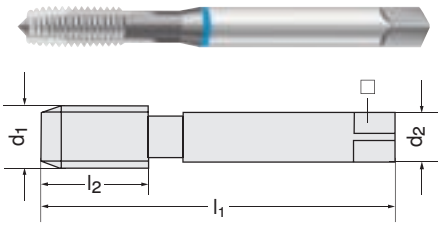
Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14340 104-110
Record 1B-VA.

14340 111-117
Record 2B-VA.

Note:
Taps which deviate from the ATORN colour-coded system (blue ring, here for rust, heat, corrosion, and acid-resistant VA-steel).

14340



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14340 ...	DIN 376 14340 ...
M 3	2,50	0,50	11	56	3,5 x 2,7	104	
M 4	3,30	0,70	13	63	4,5 x 3,4	106	
M 5	4,20	0,80	15	70	6,0 x 4,9	107	
M 6	5,00	1,00	17	80	6,0 x 4,9	108	
M 8	6,80	1,25	20	90	8,0 x 6,2	109	
M 10	8,50	1,50	22	100	10,0 x 8,0	110	
M 12	10,20	1,75	24	110	9,0 x 7,0		111
M 14	12,00	2,00	26	110	11,0 x 9,0		112
M 16	14,00	2,00	27	110	12,0 x 9,0		113
M 20	17,50	2,50	32	140	16,0 x 12,0		115
M 24	21,00	3,00	34	160	18,0 x 14,5		117

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-25	5-20	5-15	5-12	5-10	-	-	-	-	-	5-15	2-10	-	5-20	-

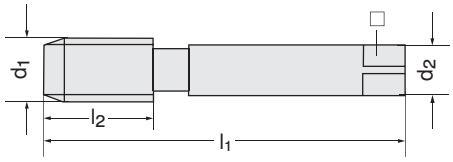
14344 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤ 3xD | HSS-E | ≤ 1200 N/mm²

ATORN®

Type
With curling cut chamfer.
With intermittent teeth for reduction of torque and better distribution of the lubricant.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
Especially suitable for materials, which have a tendency of seizing, and thin-walled parts, because the low viscous drag does not induce the material to warp.

14344



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14344 ...	DIN 376 14344 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112
M 16	14,00	2,00	25	110	12,0 x 9,0		116
M 20	17,50	2,50	32	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	-	5-20	5-15	5-12	4-10	2-8	-	-	-	-	-	5-12	5-12	-	-	-

14341 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤ 3xD | ≤ 1400 N/mm²

ATORN®

Type
With curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
Special grind for steel **with a strength of up to 1400 N/mm².**

Note:
The solution for high-strength materials.

14341 103-120
Quality
HSS-E.

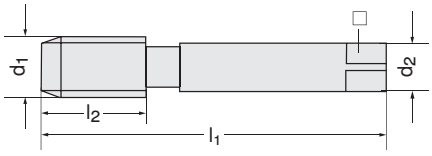
14341 203-220
Quality
HSS-E/TiCN coated.

HSS-E

14341 103-120

HSS-E TiCN

14341 203-220



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN	HSS-E 14341 ...	HSS-E/TiCN 14341 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	371	103	203
M 4	3,30	0,70	12	63	4,5 x 3,4	371	104	204
M 5	4,20	0,80	14	70	6,0 x 4,9	371	105	205
M 6	5,00	1,00	16	80	6,0 x 4,9	371	106	206
M 8	6,80	1,25	18	90	8,0 x 6,2	371	108	208
M 10	8,50	1,50	20	100	10,0 x 8,0	371	110	210
M 12	10,20	1,75	22	110	9,0 x 7,0	376	112	212
M 16	14,00	2,00	28	110	12,0 x 9,0	376	116	216
M 20	17,50	2,50	32	140	16,0 x 12,0	376	120	220

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	5-12	4-10	2-8	2-8	-	-	-	-	5-12	5-12	2-6	-	-

Taps for through-holes

14353 - 14356 Taps for through-holes

M | DIN 371 | DIN 376 | 3,5-5 B | Ti/Ni

ATORN®

Type
With strong curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For titanium, titanium alloys and superalloys.

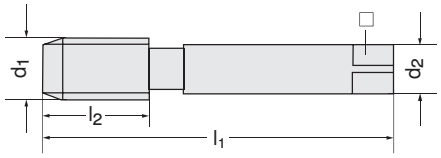
Note:
For hard-to-machine materials.

14353
Use
For particularly long service life.
Quality
HSS-E-PM.

14356
Use
For even longer service life.
Quality
HSS-E-PM/TiCN coated.

14353
6H | ≤ 3xD | HSS-E PM

14356
6H | ≤ 3xD | HSS-E-PM TiCN



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN	HSS-E/PM 14353	...	HSS-E/PM-TiCN 14356	...
M 2	1,60	0,40	8	45	2,8 x 2,1	371				202
M 3	2,50	0,50	10	56	3,5 x 2,7	371		203		203
M 4	3,30	0,70	12	63	4,5 x 3,4	371		204		204
M 5	4,20	0,80	14	70	6,0 x 4,9	371		205		205
M 6	5,00	1,00	16	80	6,0 x 4,9	371		206		206
M 8	6,80	1,25	18	90	8,0 x 6,2	371		208		208
M 10	8,50	1,50	20	100	10,0 x 8,0	371		210		210
M 12	10,20	1,75	22	110	9,0 x 7,0	376		212		212
M 16	14,00	2,00	28	110	12,0 x 9,0	376		216		216

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloy	Ni alloys	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2-10	2-10	-

14345 Taps for through-holes Uni

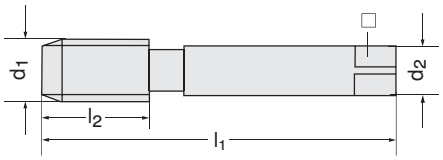
M | 6H | DIN 371 | DIN 376 | 2-3 C | ≤2,5xD | HSS-E-PM TiN | Uni

ATORN®

Type
With curling cut chamfer.
Extra stable PM taps.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For **universal implementation,** e.g. in VA-steel, case-hardened steel, quenched and tempered steel, tool steel, aluminium, copper and cast iron.

Note:
Outstanding price-performance ratio.
Maximum economy.

14345



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14345	...	DIN 376 14345	...
M 3	2,50	0,50	10	56	3,5 x 2,7		203		
M 4	3,30	0,70	12	63	4,5 x 3,5		204		
M 5	4,20	0,80	14	70	6,0 x 4,9		205		
M 6	5,00	1,00	16	80	6,0 x 4,9		206		
M 8	6,80	1,25	18	90	8,0 x 6,2		208		
M 10	8,50	1,50	20	100	10,0 x 8,0		210		
M 12	10,20	1,75	22	110	12,0 x 9,0				212
M 16	14,00	2,00	28	110	12,0 x 9,0				216

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-25	5-20	5-12	4-10	2-8	-	-	-	-	-	5-20	5-20	-	-	-

14342 Taps for through-holes Unimaxx

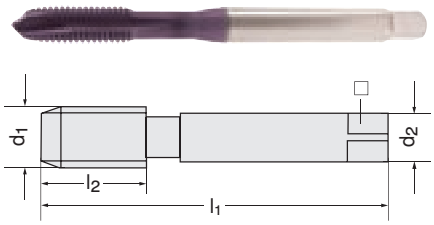
M | 6HX | DIN 371 | DIN 376 | 3,5–5 B | ≤ 2xD | HSS-E-PM HARDLUBE | Uni

UNIMAX

Type
With curling cut chamfer.
HSS-E-PM steel and HARDLUBE coating for particularly high wear-resistance and minimised surface friction.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
50% higher cutting values and service life are possible. Multi-purpose for a variety of materials. Extraordinary value for money, great cost effectiveness.

14342



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14342 ...	DIN 376 14342 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	099	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	100	
M 3	2,50	0,50	11	56	3,5 x 2,7	101	
M 4	3,30	0,70	13	63	4,5 x 3,4	102	
M 5	4,20	0,80	16	70	6,0 x 4,9	103	
M 6	5,00	1,00	19	80	6,0 x 4,9	104	
M 8	6,80	1,25	22	90	8,0 x 6,2	106	
M 10	8,50	1,50	24	100	10,0 x 8,0	108	
M 12	10,20	1,75	28	110	9,0 x 7,0		110
M 16	14,00	2,00	32	110	12,0 x 9,0		112
M 20	17,50	2,50	34	140	16,0 x 12,0		114
M 24	21,00	3,00	38	160	18,0 x 14,5		116
M 27	24,00	3,00	38	160	20,0 x 16,0		117
M 30	26,50	3,50	45	180	22,0 x 18,0		118

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-45	10-45	15-40	15-40	15-35	10-30	10-25	8-20	-	-	-	-	-	8-20	5-15	-	15-40	-

14361 Taps for through-holes Synchro

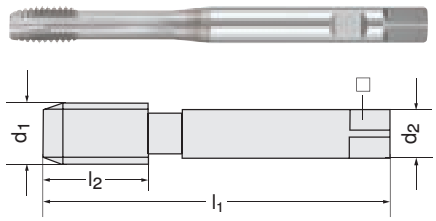
M | 6HX | DIN 371 | DIN 376 | 3,5–5 B | ≤ 3xD | HSS-E-PM TiCN | Uni

HHW

Type
Extra sturdy PM taps with **h6 shank for shrinking and with clamping surface** for mounting in surface chucks. Special geometry for **multi-purpose use** with machines with **synchronised spindle drive.**
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
The percentage of the emulsion should be at least 8%. In order to increase the service life of the tap, use synchro tapping chucks (see cat.-no. 21449 cont.).

14361



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14361 ...	DIN 376 14361 ...
M 2	1,60	0,40	4	70	6 x 4,9	101	
M 2,5	2,05	0,45	5	70	6 x 4,9	102	
M 3	2,50	0,50	5	70	6 x 4,9	103	
M 4	3,30	0,70	7	70	6 x 4,9	104	
M 5	4,20	0,80	8	70	6 x 4,9	105	
M 6	5,00	1,00	10	80	6 x 4,9	106	
M 8	6,80	1,25	13	90	8 x 6,2	108	
M 10	8,50	1,50	15	100	10 x 8,0	110	
M 12	10,20	1,75	18	110	12 x 9,0		112
M 14	12,00	2,00	20	110	14 x 11,0		114
M 16	14,00	2,00	20	110	16 x 12,0		116
M 20	17,50	2,50	25	140	16 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
60-80	40-50	25-70	50-60	40-50	30-40	20-30	20-30	20-30	-	-	-	-	10-20	10-20	10-25	-	40-50

Taps for through-holes | Blind hole taps | Machine thread formers

14354 - 14355 Through-hole and blind hole taps

M | 6H | DIN 371 | DIN 376 | ≤ 2xD | ≤ 2xD

ATORN®

Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

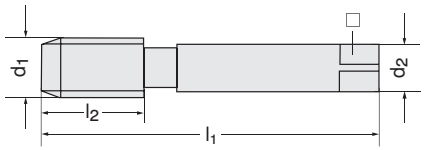
Note:
For extremely hard steels we recommend, in deviation to DIN, that you bore the core hole 1,3 mm to 0,3 mm larger.

14354
Type
HSS-E-PM-TiAlN tap
with long taper shape.
Use
For steel with a hardness of up to 52 HRC.

14355
Type
Solid carbide finest grit tap
with TiAlN+C coating.
Starting at M 6 with internal coolant flow (ICF).
Use
For steel with a hardness of up to 67 HRC.

6-8 A | HSS-E-PM TiAlN | 52 HRC — 14354

2-3 C | VHM TiAlN+C | 67 HRC — 14355



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN	PM/TiAlN 14354	...	VHM/TiAlN+C 14355	...
M 3	2,50	0,50	10	56	3,5 x 2,7	371				103
M 4	3,30	0,70	12	63	4,5 x 3,4	371				104
M 5	4,20	0,80	14	70	6,0 x 4,9	371				105
M 6	5,50	1,00	16	80	6,0 x 4,9	371		106		106
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		108
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		110
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		112
M 16	14,00	2,00	28	110	12,0 x 9,0	376		116		116
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		

	Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14354	-	-	-	-	-	5-24	4-10	2-12	2-8	2-5	2-5	-	-	-	-	-	-	-
14355	-	-	-	-	-	-	-	-	-	-	2-5	1-4	1-3	-	-	-	-	-

14358 Taps for through-holes

M | 6HX | DIN 371 | DIN 376 | 2-3 C | ≤ 2xD | GG(G)

ATORN®

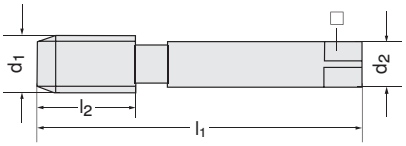
Type
Without curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14358 103-120
Use
For high machining performance in grey cast iron.
Quality
HSS-E, nitrided.

14358 203-220
Use
For even longer service life.
Quality
HSS-E/TiN-coated.

HSS-E — 14358 103-120

HSS-E TiN — 14358 203-220



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN	HSS-E nitrided 14358	...	HSS-E/TiN 14358	...
M 3	2,50	0,50	10	56	3,5 x 2,7	371		103		203
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		204
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		205
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		206
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		208
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		210
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		212
M 16	14,00	2,00	28	110	12,0 x 9,0	376		116		216
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		220

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8-20	-

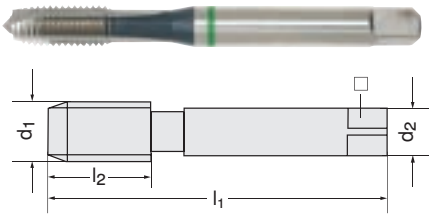
14360 Taps for through-holes

M | 6H | DIN 371 | DIN 376 | 3,5–5 B | ≤ 3xD | HSS-E | ALU

ATORN®

Type
With considerable curling cut chamfer and increased chip space. Polished flutes for improved chip removal when machining long-chipping non-ferrous metals.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For through-hole threads with increased chip space.

14360



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14360	...	DIN 376 14360	...
M 3	2,50	0,50	10	56	3,5 x 2,7		203		
M 4	3,30	0,70	12	63	4,5 x 3,4		204		
M 5	4,20	0,80	14	70	6,0 x 4,9		205		
M 6	5,00	1,00	16	80	6,0 x 4,9		206		
M 8	6,80	1,25	18	90	8,0 x 6,2		208		
M 10	8,50	1,50	20	100	10,0 x 8,0		210		
M 12	10,20	1,75	22	110	9,0 x 7,0				212

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30

14364 Machine thread formers

M | 6HX | DIN 371 | DIN 376 | 2–3 C | ≤ 2xD | ≤ 2xD | Uni

ATORN®

Type
Significantly reduced torque thanks to the optimised geometry. With oil grooves for perfect lubrication even in deep threads.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For through-holes and blind holes.

Note:
For all materials with a minimum expansion of 8%.
For shaping, preferably use high-compression cutting oils.

14364 103-112
Quality
TiN-coating for good surface slip characteristics.

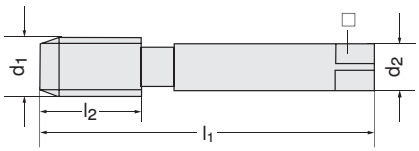
14364 203-212
Quality
TiAlN+C coating for less wear and lower material clogging tendency.

14364 303-312
Quality
Powder steel PM/TiCN coating.

HSS-E TiN
14364 103-112

HSS-E TiAlN+C
14364 203-212

HSS-E-PM TiCN
14364 303-312



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN	HSS-E/TiN 14364	...	HSS-E/TiAlN+C 14364	...	HSS-E/PM-TiCN 14364	...
M 3	2,50	0,50	10	56	3,5 x 2,7	371		103		203		303
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		204		304
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		205		305
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		206		306
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		208		308
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		210		310
M 12	10,20	1,75	24	110	9,0 x 7,0	376		112		212		312

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
45-60	20-80	10-20	8-60	8-45	8-36	5-20	3-18	-	-	-	-	-	8-30	8-30	-	-	-

Machine thread formers | Taps for through-holes

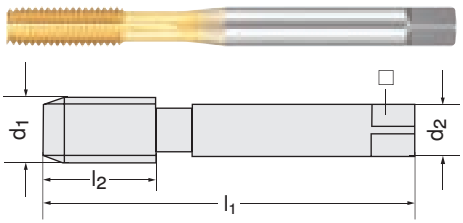
14365 Machine thread formers

M | 6HX | DIN 2174 | 2-3 C | ≤2,5xD | ≤2,5xD | HSS-E TiN | Uni

14365

Type
TiN coating for good surface slip characteristics.
With oil grooves for optimal lubrication effects.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For through-holes and blind holes.

Note:
For all materials with a minimum expansion of 8%.
For shaping, preferably use high-compression cutting oils.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	DIN 371 14365 ...	DIN 376 14365 ...
M 2	1,83	0,40	8	45	2,8 x 2,1	101	
M 2,5	2,30	0,45	9	50	2,8 x 2,1	102	
M 3	2,80	0,50	11	56	3,5 x 2,7	103	
M 3,5	3,25	0,60	11	56	4,0 x 3,0	104	
M 4	3,70	0,70	13	63	4,5 x 3,4	105	
M 5	4,65	0,80	16	70	6,0 x 4,9	106	
M 6	5,55	1,00	19	80	6,0 x 4,9	107	
M 8	7,40	1,25	22	90	8,0 x 6,2	108	
M 10	9,30	1,50	24	100	10,0 x 8,0	109	
M 12	11,10	1,75	28	110	9,0 x 7,0		110
M 14	13,00	2,00	30	110	11,0 x 9,0		111
M 16	15,00	2,00	32	110	12,0 x 9,0		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
45-60	20-80	10-20	8-60	8-45	8-36	5-20	3-18	-	-	-	-	-	8-30	8-30	-	-	-

14367 Solid carbide machine thread formers

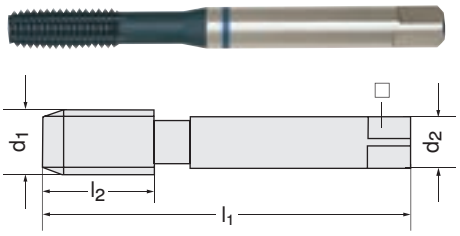
M | 6HX | DIN 371 | DIN 376 | 2-3 C | ≤ 2xD | ≤ 2xD | VHM TiAlN+C | Uni

14367

ATORN®

Type
h6 shank for mounting in **shrinking chucks.**
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For through-holes and blind holes.
Quality
Solid carbide finest grit for the utmost in machining capacity. **TiAlN+C coated** for significant reduction of torque and lower material clogging tendency.

Note:
For all materials with a minimum expansion of 8%.
For shaping, preferably use high-compression cutting oils.
Extremely long service life in serial production.
High process reliability.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	DIN 371 14367 ...	DIN 376 14367 ...
M 3	2,80	0,50	10	56	6,0 x 4,9	103	
M 4	3,70	0,70	12	63	6,0 x 4,9	104	
M 5	4,65	0,80	14	70	6,0 x 4,9	105	
M 6	5,55	1,00	16	80	6,0 x 4,9	106	
M 8	7,40	1,25	18	90	8,0 x 6,2	108	
M 10	9,30	1,50	20	100	10,0 x 8,0	110	
M 12	11,10	1,75	24	110	12,0 x 9,0		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
40-70	30-60	30-50	40-70	30-65	25-60	20-55	20-50	-	-	-	-	-	20-25	-	-	-	-

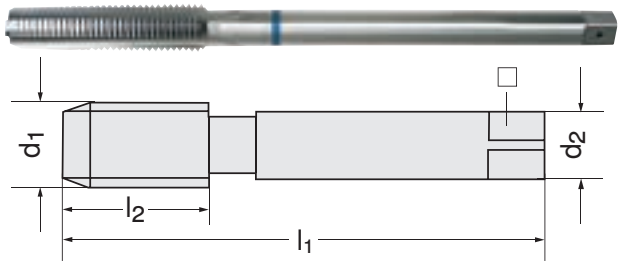
14368 Through-hole nut taps

M | 6H | DIN 357 | ca. 20 | ≤ 2xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
With extra long curling cut chamfer
and long shank.

14368



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 357 14368 ...
M 3	2,50	0,50	22	70	2,2 x -	103
M 4	3,30	0,70	25	90	2,8 x 2,1	104
M 5	4,20	0,80	28	100	3,5 x 2,7	105
M 6	5,00	1,00	32	110	4,5 x 3,4	106
M 8	6,80	1,25	40	125	6,0 x 4,9	108
M 10	8,50	1,50	45	140	7,0 x 5,5	110
M 12	10,20	1,75	50	180	9,0 x 7,0	112
M 16	14,00	2,00	63	200	12,0 x 9,0	116
M 20	20,00	2,50	70	250	16,0 x 12,0	120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

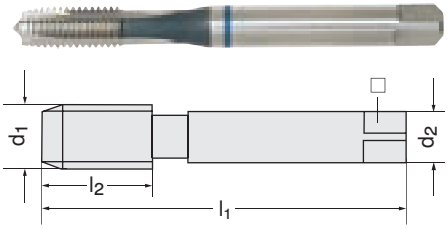
14372 Taps for through-holes left-hand cut

M | 6H | DIN 371 | DIN 376 | 3,5-5 B | ≤ 2xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
With strong curling cut chamfer.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14372



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14372 ...	DIN 376 14372 ...
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112
M 14	12,00	2,00	25	110	11,0 x 9,0		114
M 16	14,00	2,00	28	110	12,0 x 9,0		116
M 20	17,50	2,50	32	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

Blind hole taps

14389 - 14390 Blind hole taps Multi

M | 6H | DIN 371 | DIN 376 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | Uni

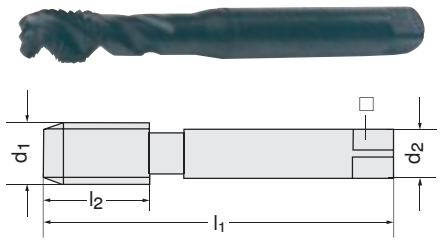
EMUGE

Type
Multi-purpose tap with optimised grind and special surface treatment.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Use
For machining automated machine steel, structural steel, tempered steel, cast steel, and spheroidal cast iron with a strength of up to GGG 70, (GG, as well), forgings, aluminium alloys up to 12% Si, low-alloyed INOX materials.

14389

14390



Set contents		HSS-E 14389	...
7-part	M 3 - M 12		101

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14390	...	DIN 376 14390	...
M 2	1,60	0,40	4	45	2,8 x 2,1		101		
M 3	2,50	0,50	6	56	3,5 x 2,7		103		
M 4	3,30	0,70	7	63	4,5 x 3,4		105		
M 5	4,20	0,80	8	70	6,0 x 4,9		106		
M 6	5,00	1,00	10	80	6,0 x 4,9		107		
M 8	6,80	1,25	14	90	8,0 x 6,2		108		
M 10	8,50	1,50	16	100	10,0 x 8,0		109		
M 12	10,20	1,75	18	110	9,0 x 7,0				110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-20	10-20	-	5-25	5-20	5-15	2-8	2-8	-	-	-	-	-	2-10	-	-	8-20	-

14392 - 14394 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 15° | 2-3 C | ≤ 2xD

ATORN®

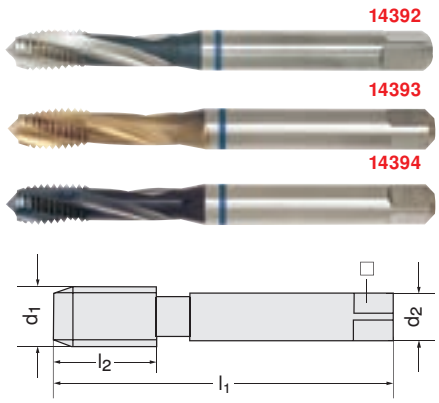
Type
With enlarged chip space.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14392
Use
For steel **with a strength of up to 800 N/mm².**

14393
Use
Low tendency of the machined material to stick to the machining tool thanks to TiN coating.
For steel **with a strength of up to 850 N/mm².**

14394
Use
Outstanding emergency running characteristics; satisfies the highest performance requirements, thanks to special TiCN-coating. For steel **with a strength of up to 1000 N/mm².**

HSS-E ≤ 800 N/mm² | HSS-E TiN ≤ 850 N/mm² | HSS-E TiCN ≤ 1000 N/mm²



							HSS-E		HSS-E/TiN		HSS-E/TiCN	
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN	14392	...	14393	...	14394	...
M 2	1,60	0,40	8	45	2,8 x 2,1	371		098				
M 2,3	1,90	0,40	9	45	2,8 x 2,1	371		099				
M 2,5	2,05	0,45	9	50	2,8 x 2,1	371		100				
M 2,6	2,10	0,45	9	50	2,8 x 2,1	371		101				
M 3	2,50	0,50	10	56	3,0 x 2,7	371		102		102		102
M 3,5	2,90	0,60	11	56	4,0 x 3,0	371		103				
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		104		104
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		105		105
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		106		106
M 7	6,00	1,00	16	80	7,0 x 5,5	371		107				
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		108		108
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		110		110
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		112		112
M 14	12,00	2,00	25	110	11,0 x 9,0	376		114				
M 16	14,00	2,00	28	110	12,0 x 9,0	376		116		116		116
M 18	15,50	2,50	32	125	14,0 x 11,0	376		118				
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		120		120
M 24	21,00	3,00	36	160	18,0 x 14,5	376		124				
M 30	26,50	3,50	40	180	22,0 x 18,0	376		130				

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14392-14393																	
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	8-20	-
14394																	
30-40	10-60	10-20	5-40	5-30	3-24	5-18	-	-	-	-	-	-	-	-	-	-	-

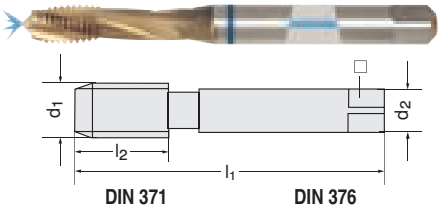
14395 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 15° | 2-3 C | ≤ 2xD | HSS-E TiN | ≤ 800 N/mm²

ATORN®

Type
Easy chip removal. TiN coating and internal coolant flow (ICF).
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For highest cutting performance and longest service life.

Note:
Perfect chip removal thanks to ICF.



						DIN 371		DIN 376	
d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	14395	...	14395	...
M 6	5,00	1,00	16	80	6,0 x 4,9		106		
M 8	6,80	1,25	18	90	8,0 x 6,2		108		
M 10	8,50	1,50	20	100	10,0 x 8,0		110		
M 12	10,20	1,75	22	110	9,0 x 7,0				112
M 16	14,00	2,00	28	110	12,0 x 9,0				116
M 20	17,50	2,50	32	140	16,0 x 12,0				120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
30-40	10-60	10-20	5-40	5-30	3-24	-	-	-	-	-	-	-	8-20	8-20	-	-	-

= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

Blind hole taps

14396 - 14404 Blind hole taps

M | 6H | DIN 371 | DIN 376 | 2-3 C | ≤2,5xD

ATORN®

Type
With increased chip space and considerable helix.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14396
Use
For steel **with a strength of up to 800 N/mm².**

14397
Use
Low tendency of the machined material to stick to the machining tool thanks to TiN coating. For steel **with a strength of up to 850 N/mm².**

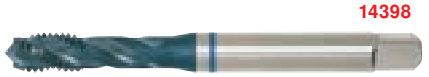
14398
Use
Extraordinary emergency running characteristics and satisfaction of the highest requirements when it comes to power thanks to a special TiCN-coating. For steel **with a strength of up to 1000 N/mm².**

14404
Use
Also suitable for synchro-chucks. For steel **with a strength of up to 1000 N/mm².**

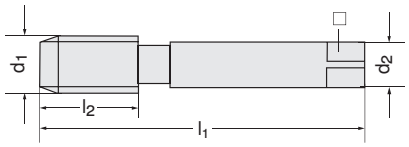
≈ 40° | HSS-E | ≤ 800 N/mm² — 14396

≈ 40° | HSS-E TiN | ≤ 850 N/mm² — 14397

≈ 40° | HSS-E TiCN | ≤ 1000 N/mm² — 14398



≈ 50° | HSS-E-PM TiN | ≤ 1000 N/mm² — 14404



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN	HSS-E 14396	...	HSS-E/TiN 14397	...	HSS-E/TiCN 14398	...	PM/TiN 14404	...
M 2	1,60	0,40	8	45	2,8 x 2,1	371		101		101		101		
M 2,5	2,05	0,45	9	50	2,8 x 2,1	371		102		102		102		
M 3	2,50	0,50	10	56	3,5 x 2,7	371		103		103		103		101 NEW
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		104		104		102 NEW
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		105		105		103 NEW
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		106		106		104 NEW
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		108		108		105 NEW
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		110		110		106 NEW
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		112		112		107 NEW
M 14	12,00	2,00	25	110	11,0 x 9,0	376		114				114		108 NEW
M 16	14,00	2,00	28	110	12,0 x 9,0	376		116		116		116		109 NEW
M 18	15,50	2,50	32	125	14,0 x 11,0	376		118						
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		120		120		110 NEW
M 24	21,00	3,00	36	160	18,0 x 14,5	376		124		124				
M 30	26,50	3,50	40	180	22,0 x 18,0	376		130		130				

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14396 + 14397																	
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-
14398																	
30-40	10-60	10-20	5-40	5-30	5-24	5-18	-	-	-	-	-	-	-	-	-	-	-
14404																	
-	-	-	5-40	5-30	5-24	2-22	-	-	-	-	-	-	5-20	5-20	-	8-30	-

14399 Blind hole taps

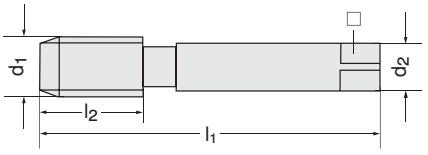
M | 6H | DIN 371 | ≈ 40° | 1,5-2 E | ≤2,5xD | HSS-E | ≤ 1000 N/mm²

ATORN®

Type
Extremely short tape shape **(1,5 - 2 turns)**.

Use
For tapped holes with extremely short thread run-out.

14399



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14399	...
M 3	2,50	0,50	6,0	56	3,5 x 2,7		103
M 4	3,30	0,70	7,5	63	4,5 x 3,4		104
M 5	4,20	0,80	8,5	70	6,0 x 4,9		105
M 6	5,00	1,00	11,0	80	6,0 x 4,9		106
M 8	6,80	1,25	14,0	90	8,0 x 6,2		108
M 10	8,50	1,50	16,0	100	10,0 x 8,0		110

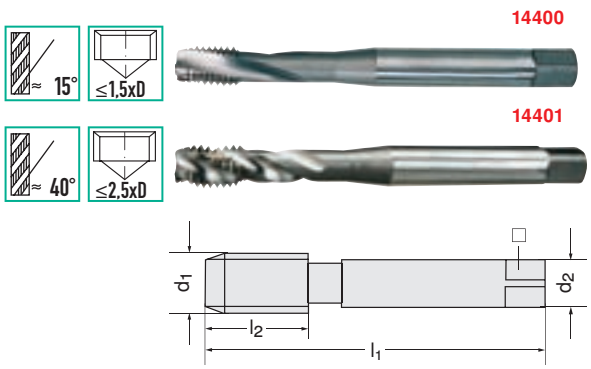
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5 - 20	5 - 15	5 - 12	4- 10	-	-	-	-	-	-	-	-	-	-	-

14400 - 14401 Blind hole taps

M | 6H | DIN 371 | 2-3 C | HSS-E | ≤ 800 N/mm²

14400
Type
Right-hand spiral flutes approx. 15°.

14401
Type
Right-hand spiral flutes approx. 40°.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	15 ° 14400 ...	40 ° 14401 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101	101
M 2,5	2,05	0,45	9	50	2,8 x 2,1	103	103
M 3	2,50	0,50	5	56	3,5 x 2,7	104	104
M 4	3,30	0,70	7	63	4,5 x 3,4	106	106
M 5	4,20	0,80	8	70	6,0 x 4,9	107	107
M 6	5,00	1,00	10	80	6,0 x 4,9	108	108
M 8	6,80	1,25	13	90	8,0 x 6,2	109	109
M 10	8,50	1,50	15	100	10,0 x 8,0	110	110

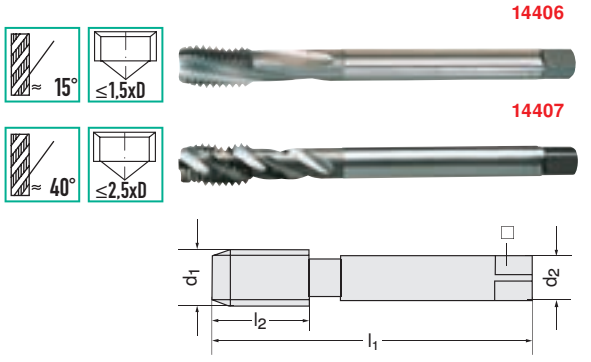
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	20-30

14406 - 14407 Blind hole taps

M | 6H | DIN 376 | 2-3 C | HSS-E | ≤ 800 N/mm²

14406
Type
Right-hand spiral flutes approx. 15°.

14407
Type
Right-hand spiral flutes approx. 40°.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⌑ mm	15 ° 14406 ...	40 ° 14407 ...
M 3	2,50	0,50	5	56	2,2 x –	101	101
M 4	3,30	0,70	7	63	2,8 x 2,1	103	103
M 5	4,20	0,80	8	70	3,5 x 2,7	104	104
M 6	5,00	1,00	10	80	4,5 x 3,4	105	105
M 8	6,80	1,25	13	90	6,0 x 4,9	106	106
M 10	8,50	1,50	15	100	7,0 x 5,5	107	107
M 12	10,20	1,75	18	110	9,0 x 7,0	108	108
M 14	12,00	2,00	20	110	11,0 x 9,0	109	109
M 16	14,00	2,00	20	110	12,0 x 9,0	110	110
M 18	15,50	2,50	25	125	14,0 x 11,0	111	111
M 20	17,50	2,50	25	140	16,0 x 12,0	112	112
M 22	19,50	2,50	25	140	18,0 x 14,5	113	113
M 24	21,00	3,00	30	160	18,0 x 14,5	114	114
M 27	24,00	3,00	30	160	20,0 x 16,0	115	115
M 30	26,50	3,50	35	180	22,0 x 18,0	116	116

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	20-30

Blind hole taps

14402 - 14403 Blind hole taps

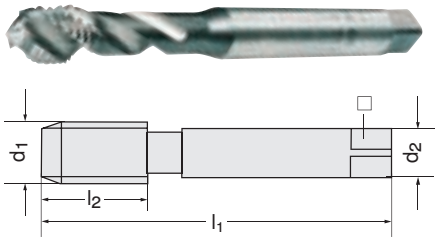
M | 6H | DIN 371 | DIN 376 | ≈ 35° | 2-3 C | ≤ 2xD | HSS-E | ≤ 800 N/mm²

Note:
Economically-priced Type.

14402
M 3 - M 10, DIN 371.

14403
M 3 - M 24, DIN 376.

14402



DIN 371

d_1 Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	14402	...
M 3	2,50	0,50	11	56	3,5 x 2,7	104
M 4	3,30	0,70	13	63	4,5 x 3,4	106
M 5	4,20	0,80	16	70	6,0 x 4,9	107
M 6	5,00	1,00	19	80	6,0 x 4,9	108
M 8	6,80	1,25	22	90	8,0 x 6,2	109
M 10	8,50	1,50	24	100	10,0 x 6,2	110

DIN 376

d_1 Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	14403	...
M 3	2,50	0,50	11	56	2,2 x –	204
M 4	3,30	0,70	13	63	2,8 x 2,1	206
M 5	4,20	0,80	16	70	3,5 x 2,7	207
M 6	5,00	1,00	19	80	4,5 x 3,4	208
M 8	6,80	1,25	22	90	6,0 x 4,9	209
M 10	8,50	1,50	24	100	7,0 x 5,5	210
M 12	10,20	1,75	29	110	9,0 x 7,0	211
M 14	12,00	2,00	30	110	11,0 x 9,0	212
M 16	14,00	2,00	32	110	12,0 x 9,0	213
M 20	17,50	2,50	34	140	16,0 x 12,0	214
M 24	21,00	3,00	38	160	18,0 x 14,5	215

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	20-25

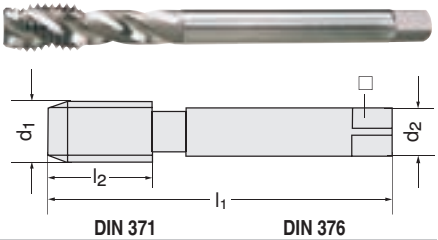
14408 - 14409 Blind hole taps

M | 6G | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E | ≤ 800 N/mm²

Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
For workpieces that are retroactively provided with a galvanic coating.

14408



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14408	...	DIN 376 14409	...
M 3	2,50	0,50	5	56	3,5 x 2,7		204		
M 4	3,30	0,70	7	63	4,5 x 3,4		206		
M 5	4,20	0,80	8	70	6,0 x 4,9		207		
M 6	5,00	1,00	10	80	6,0 x 4,9		208		
M 8	6,80	1,25	13	90	8,0 x 6,2		209		
M 10	8,50	1,50	15	100	10,0 x 8,0		210		
M 12	10,20	1,75	18	110	9,0 x 7,0				108
M 14	12,00	2,00	20	110	11,0 x 9,0				109
M 16	14,00	2,00	20	110	12,0 x 9,0				110
M 18	15,50	2,50	25	125	14,0 x 11,0				111
M 20	17,50	2,50	25	140	16,0 x 12,0				112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-

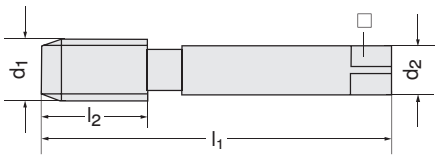
14412 - 14413 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E OX | ≤ 800 N/mm²

Type
Special OX treatment for soft and lubricating steel (St 33/St 37).
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Particularly suitable for use on machines with non-guided work spindle.
A dimensionally accurate cutting thread is achieved thanks to the special cutting edge geometry.

14412



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14412 ...	DIN 376 14413 ...
M 3	2,50	0,50	5	56	3,5 x 2,7	101	
M 4	3,30	0,70	7	63	4,5 x 3,4	103	
M 5	4,20	0,80	8	70	6,0 x 4,9	104	
M 6	5,00	1,00	10	80	6,0 x 4,9	105	
M 8	6,80	1,25	13	90	8,0 x 6,2	106	
M 10	8,50	1,50	15	100	10,0 x 8,0	107	
M 12	10,20	1,75	18	110	9,0 x 7,0		108
M 14	12,00	2,00	20	110	11,0 x 9,0		109
M 16	14,00	2,00	20	110	12,0 x 9,0		110
M 18	15,50	2,50	25	125	14,0 x 11,0		111
M 20	17,50	2,50	25	140	16,0 x 12,0		112
M 22	19,50	2,50	25	140	18,0 x 14,5		113
M 24	21,00	3,00	30	160	18,0 x 14,5		114

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-

14420 - 14421 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | ≤ 900 N/mm²

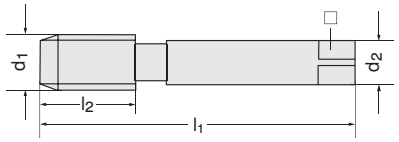
Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Taps which deviate from the ATORN colour-coded system (yellow ring - here for low-alloy steel).

14420
1 Enorm.

14421
2 Enorm.

14420



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14420 ...	DIN 376 14421 ...
M 3	2,50	0,50	11	56	3,5 x 2,7	101	
M 4	3,30	0,70	13	63	4,5 x 3,4	103	
M 5	4,20	0,80	15	70	6,0 x 4,9	104	
M 6	5,00	1,00	17	80	6,0 x 4,9	105	
M 7	6,00	1,00	17	80	7,0 x 5,5	108	
M 8	6,80	1,25	20	90	8,0 x 6,2	106	
M 10	8,50	1,50	22	100	10,0 x 8,0	107	
M 12	10,20	1,75	18	110	9,0 x 7,0		108
M 14	12,00	2,00	20	110	11,0 x 9,0		109
M 16	14,00	2,00	22	110	12,0 x 9,0		110
M 20	17,50	2,50	25	140	16,0 x 12,0		112
M 24	21,00	3,00	30	160	18,0 x 14,5		114

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	10-12	5-25	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-

Blind hole taps

14425 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 3xD | ≤ 1200 N/mm²

ATORN®

Type
Minimal relief.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Very suitable for the machining of VA-steel.

14425 101-120
Type
Less tendency of the machined material to stick to the machining tool thanks to vapourising.
Quality
HSS-E, vapourised.

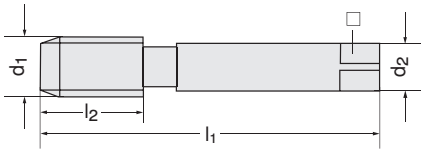
14425 203-216
Type
TiN-coated for even longer service life.
Quality
HSS-E/TiN-coated.

HSS-E

14425 101-120

HSS-E TiN

14425 203-216



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN	Vapourised 14425	...	TiN-coated 14425	...
M 2	1,60	0,40	8	45	2,8 x 2,1	371		101		
M 2,5	2,05	0,45	9	50	2,8 x 2,1	371		102		
M 3	2,50	0,50	10	56	3,5 x 2,7	371		103		203
M 4	3,30	0,70	12	63	4,5 x 3,4	371		104		204
M 5	4,20	0,80	14	70	6,0 x 4,9	371		105		205
M 6	5,00	1,00	16	80	6,0 x 4,9	371		106		206
M 8	6,80	1,25	18	90	8,0 x 6,2	371		108		208
M 10	8,50	1,50	20	100	10,0 x 8,0	371		110		210
M 12	10,20	1,75	22	110	9,0 x 7,0	376		112		212
M 16	14,00	2,00	25	110	11,0 x 9,0	376		116		216
M 20	17,50	2,50	32	140	16,0 x 12,0	376		120		

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14425 101-120																	
20-25	-	-	-	-	5-12	-	-	-	-	-	-	-	5-12	5-12	2-6	-	-
14425 203-216																	
-	-	-	-	-	5-12	-	-	-	-	-	-	-	5-20	5-20	2-6	-	-

14429 - 14430 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 35° | 2-3 C | ≤ 2xD | HSS-E TiCN | ≤ 1000 N/mm²

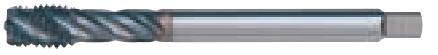
Type
Long service life thanks to TiCN-coating.

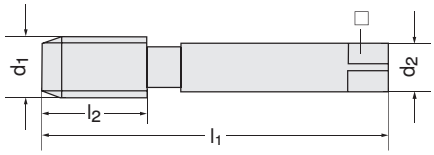
Note:
Economically-priced Type.

14429
M 3 - M 10, DIN 371.

14430
M 3 - M 24, DIN 376.

14429





DIN 371

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14429	...
M 3	2,50	0,50	11	56	3,5 x 2,7		201
M 4	3,30	0,70	13	63	4,5 x 3,4		202
M 5	4,20	0,80	15	70	6,0 x 4,9		203
M 6	5,00	1,00	17	80	6,0 x 4,9		204
M 8	6,80	1,25	20	90	8,0 x 6,2		205
M 10	8,50	1,50	22	100	10,0 x 8,0		206

DIN 376

d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	14430	...
M 3	2,50	0,50	11	56	2,2 x –		201
M 4	3,30	0,70	13	63	2,8 x 2,1		202
M 5	4,20	0,80	15	70	3,5 x 2,7		203
M 6	5,00	1,00	17	80	4,5 x 3,4		204
M 8	6,80	1,25	20	90	6,0 x 4,9		205
M 10	8,50	1,50	22	100	7,0 x 5,5		206
M 12	10,20	1,75	24	110	9,0 x 7,0		207
M 14	12,00	2,00	30	110	11,0 x 9,0		208
M 16	14,00	2,00	32	110	12,0 x 9,0		209
M 20	17,50	2,50	34	140	16,0 x 12,0		210
M 24	21,00	3,00	38	160	18,0 x 14,5		211

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-40	5-30	5-24	5-24	-	-	-	-	-	-	5-20	5-20	-	-	-

= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

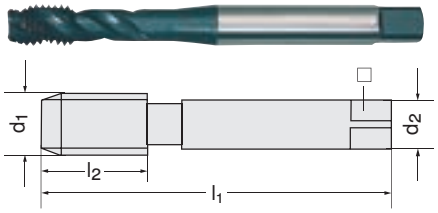
14436 - 14437 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E | VA-OX | ≤ 1200 N/mm²

Type
Increased wear resistance thanks to OX-coating.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Very suitable for the machining of VA-steel.

14436



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14436 ...	DIN 376 14437 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	103	
M 3	2,50	0,50	5	56	3,5 x 2,7	104	
M 3,5	2,90	0,60	6	56	4,0 x 3,0	105	
M 4	3,30	0,70	7	63	4,5 x 3,4	106	
M 5	4,20	0,80	8	70	6,0 x 4,9	107	
M 6	5,00	1,00	10	80	6,0 x 4,9	108	
M 8	6,80	1,25	13	90	8,0 x 6,2	109	
M 10	8,50	1,50	15	100	10,0 x 8,0	110	
M 12	10,20	1,75	18	110	9,0 x 7,0		111
M 14	12,00	2,00	20	110	11,0 x 9,0		112
M 16	14,00	2,00	20	110	12,0 x 9,0		113
M 18	15,50	2,50	25	125	14,0 x 11,0		114
M 20	17,50	2,50	25	140	16,0 x 12,0		115
M 22	19,50	2,50	25	140	18,0 x 14,5		116
M 24	21,00	3,00	30	160	18,0 x 14,5		117
M 30	26,50	3,50	35	180	22,0 x 18,0		118

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	5-12	2-8	-	-	-	-	-	5-12	5-12	-	-	-

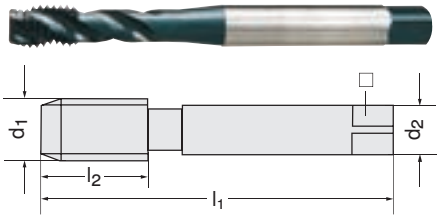
14438 Blind hole taps

M | 6G | DIN 371 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E | VA-OX | ≤ 1200 N/mm²

Type
Increased wear resistance thanks to OX-coating.

Note:
For workpieces that are retroactively provided with a galvanic coating.
Very suitable for the machining of VA-steel.

14438



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x □ mm	DIN 371 14438 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	101
M 2,5	2,05	0,45	9	50	2,8 x 2,1	103
M 3	2,50	0,50	5	56	3,5 x 2,7	104
M 4	3,30	0,70	7	63	4,5 x 3,4	106
M 5	4,20	0,80	8	70	6,0 x 4,9	107
M 6	5,00	1,00	10	80	6,0 x 4,9	108
M 8	6,80	1,25	13	90	8,0 x 6,2	109
M 10	8,50	1,50	15	100	10,0 x 8,0	110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	5-12	2-8	-	-	-	-	-	5-12	5-12	-	-	-

Blind hole taps

14439 - 14440 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | ≤ 1100 N/mm²

EMUGE

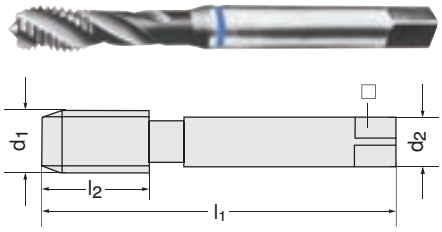
Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Taps which deviate from the ATORN colour-coded system (blue ring - here for rust, heat and acid-resistant VA-steel).

14439
1 Enorm-VA.

14440
2 Enorm-VA.

14439



d1	Core hole Ø mm	Pitch mm	l2 mm	l1 mm	d2 x □ mm	DIN 371 14439 ...	DIN 376 14440 ...
M 3	2,50	0,50	6	56	3,5 x 2,7	104	
M 4	3,30	0,70	7	63	4,5 x 3,4	106	
M 5	4,20	0,80	8	70	6,0 x 4,9	107	
M 6	5,00	1,00	10	80	6,0 x 4,9	108	
M 8	6,80	1,25	14	90	8,0 x 6,2	109	
M 10	8,50	1,50	16	100	10,0 x 8,0	110	
M 12	10,20	1,75	18	110	9,0 x 7,0		111
M 14	12,00	2,00	20	110	11,0 x 9,0		112
M 16	14,00	2,00	22	110	12,0 x 9,0		113
M 20	17,50	2,50	25	140	16,0 x 12,0		115
M 24	21,00	3,00	30	160	18,0 x 14,5		117

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-25	5-20	5-15	5-12	5-10	-	-	-	-	-	5-15	2-10	-	-	-

14443 - 14444 Blind hole taps

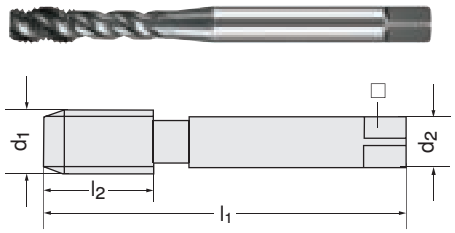
M | 6H | DIN 371 | DIN 376 | ≈ 45° | 2-3 C | ≤ 3xD | HSS-E | VA-OX | ≤ 1200 N/mm²

HHW

Type
Right-hand spiral flutes approx. 45°.
Increased wear resistance thanks to OX-coating.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
For extremely deep blind holes.

14443



d1	Core hole Ø mm	Pitch mm	l2 mm	l1 mm	d2 x □ mm	DIN 371 14443 ...	DIN 376 14444 ...
M 3	2,50	0,50	5	56	3,5 x 2,7	101	
M 4	3,30	0,70	7	63	4,5 x 3,4	102	
M 5	4,20	0,80	8	70	6,0 x 4,9	103	
M 6	5,00	1,00	10	80	6,0 x 4,9	104	
M 8	6,80	1,25	13	90	8,0 x 6,2	105	
M 10	8,50	1,50	15	100	10,0 x 8,0	106	
M 12	10,20	1,75	18	110	9,0 x 7,0		107
M 16	14,00	2,00	20	110	12,0 x 9,0		109
M 20	17,50	2,50	25	140	16,0 x 12,0		110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	5-12	2-8	-	-	-	-	-	5-12	5-12	-	-	-

14445 Blind hole taps

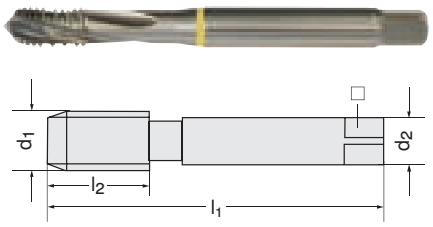
M | 6H | DIN 371 | DIN 376 | ≈ 15° | 2-3 C | ≤ 2xD | HSS-E | ≤ 1200 N/mm²

ATORN®

Type
Spiral flutes with intermittent teeth for reduction of torque and better distribution of the lubricant.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Use
Especially suitable for materials, which have a tendency of seizing, and thin-walled parts, because the low viscous drag does not induce the material to warp.

14445



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14445 ...	DIN 376 14445 ...
M 3	2,50	0,50	6,0	56	3,5 x 2,7	103	
M 4	3,30	0,70	7,5	63	4,5 x 3,4	104	
M 5	4,20	0,80	8,5	70	6,0 x 4,9	105	
M 6	5,00	1,00	11,0	80	6,0 x 4,9	106	
M 8	6,80	1,25	14,0	90	8,0 x 6,2	108	
M 10	8,50	1,50	16,0	100	10,0 x 8,0	110	
M 12	10,20	1,75	18,5	110	9,0 x 7,0		112
M 16	14,00	2,00	20,0	110	12,0 x 9,0		116
M 20	17,50	2,50	25,0	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	5 - 12	5 - 12	-	-	-

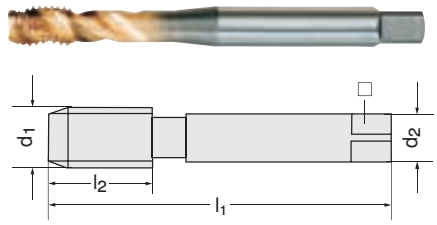
14447 - 14448 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E TiN | ≤ 1200 N/mm²

HHW

Type
Improved wear characteristics thanks to TiN-coating.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

14447



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14447 ...	DIN 376 14448 ...
M 3	2,50	0,50	5	56	3,5 x 2,7	101	
M 4	3,30	0,70	7	63	4,5 x 3,4	102	
M 5	4,20	0,80	8	70	6,0 x 4,9	103	
M 6	5,00	1,00	10	80	6,0 x 4,9	104	
M 8	6,80	1,25	13	90	8,0 x 6,2	105	
M 10	8,50	1,50	15	100	10,0 x 8,0	106	
M 12	10,20	1,75	18	110	9,0 x 7,0		107
M 16	14,00	2,00	20	110	12,0 x 9,0		109
M 20	17,50	2,50	25	140	16,0 x 12,0		110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-40	5-30	5-24	5-20	2-12	-	-	-	-	-	5-20	5-20	-	-	-

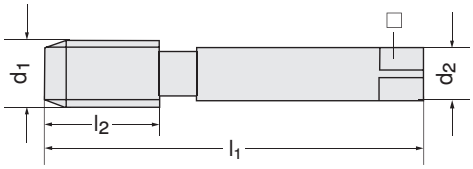
Blind hole taps

14451 - 14452 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤ 2xD | HSS-E | ≤ 1200 N/mm²

Type
With intermittent teeth for reduction of torque and better distribution of the lubricant.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
Especially suitable for materials, which have a tendency of seizing, and thin-walled parts, because the low viscous drag does not induce the material to warp.

14451



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	DIN 371 14451 ...	DIN 376 14452 ...
M 3	2,50	0,50	5	56	3,5 x 2,7	104	
M 4	3,30	0,70	7	63	4,5 x 3,4	106	
M 5	4,20	0,80	8	70	6,0 x 4,9	107	
M 6	5,00	1,00	10	80	6,0 x 4,9	108	
M 8	6,80	1,25	13	90	8,0 x 6,2	109	
M 10	8,50	1,50	15	100	10,0 x 8,0	110	
M 12	10,20	1,75	18	110	9,0 x 7,0		111
M 16	14,00	2,00	20	110	12,0 x 9,0		113
M 20	17,50	2,50	25	140	16,0 x 12,0		114

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-20	5-15	5-12	5-12	2-8	-	-	-	-	-	5-12	-	-	-	-

14449 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤2,5xD | ≤ 1400 N/mm²

ATORN®

Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
Special grind for steel **with a strength of up to 1400 N/mm².**

Note:
The solution for high-strength materials.

14449 103-120
Quality
HSS-E.

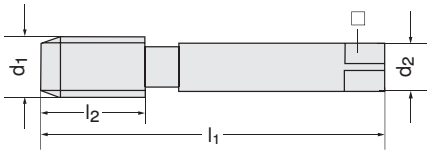
14449 203-220
Quality
HSS-E/TiCN.

14449 103-120

HSS-E

14449 203-220

HSS-E TiCN



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	DIN	HSS-E 14449 ...	HSS-E/TiCN 14449 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	371	103	203
M 4	3,30	0,70	12	63	4,5 x 3,4	371	104	204
M 5	4,20	0,80	14	70	6,0 x 4,9	371	105	205
M 6	5,00	1,00	16	80	6,0 x 4,9	371	106	206
M 8	6,80	1,25	18	90	8,0 x 6,2	371	108	208
M 10	8,50	1,50	20	100	10,0 x 8,0	371	110	210
M 12	10,20	1,75	22	110	9,0 x 7,0	376	112	212
M 16	14,00	2,00	28	110	12,0 x 9,0	376	116	216
M 20	17,50	2,50	32	140	16,0 x 12,0	376	120	220

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	5-15	5-12	4-10	2-8	2-5	2-3	-	-	-	5-12	5-12	2-6	-	-

14446 Blind hole taps

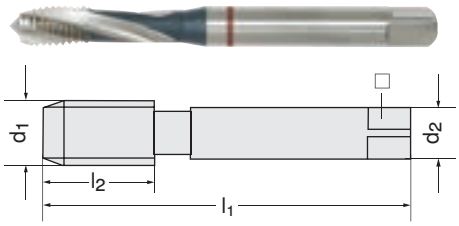
M | 6H | DIN 371 | DIN 376 | ≈ 15° | 3-4 | ≤ 3xD | HSS-E PM | Ti/Ni

ATORN®

Type
Easy chip removal to the rear.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For particularly long service life.
For titanium, titanium alloys and superalloys.

Note:
For hard-to-machine materials.

14446



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14446 ...	DIN 376 14446 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112
M 16	14,00	2,00	28	110	12,0 x 9,0		116

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloy	Ni alloys	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2-6	2-6	-

14450 Blind hole taps Uni

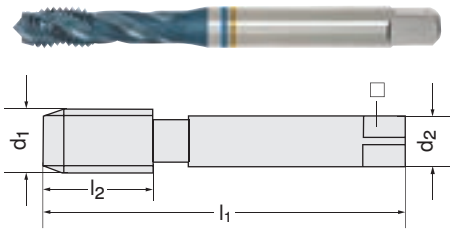
M | 6H | DIN 371 | DIN 376 | ≈ 45° | 2-3 C | ≤2,5xD | HSS-E-PM TiCN | Uni

ATORN®

Type
Extra sturdy PM-tap with 45° helix.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For **universal implementation,** e.g. in VA-steel, case-hardened steel, quenched and tempered steel, tool steel, aluminium, copper and cast iron.

Note:
Outstanding price-performance ratio.
Great cost effectiveness.

14450



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14450 ...	DIN 376 14450 ...
M 3	2,50	0,50	6	56	3,5 x 2,7	101	
M 4	3,30	0,70	7	63	4,5 x 3,4	102	
M 5	4,20	0,80	8	70	6,0 x 4,9	103	
M 6	5,00	1,00	10	80	6,0 x 4,9	104	
M 8	6,80	1,25	13	90	8,0 x 6,2	106	
M 10	8,50	1,50	15	100	10,0 x 8,0	108	
M 12	10,20	1,75	18	110	9,0 x 7,0		110
M 16	14,00	2,00	20	110	12,0 x 9,0		112

Al<10% Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-25	5-20	5-12	4-10	2-8	-	-	-	-	-	8-20	8-20	-	-	-

Blind hole taps

14453 Blind hole taps Unimaxx

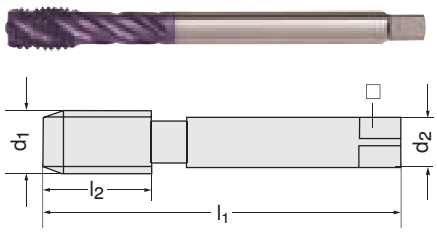
M | 6HX | DIN 371 | DIN 376 | ≈ 50° | 2-3 C | ≤ 3xD | HSS-E-PM HARDLUBE | Uni

UNIMAX

Type
HSS-E-PM steel and HARDLUBE coating for particularly high wear-resistance and minimised surface friction.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
50% higher cutting values and service life are possible. Multi-purpose for a variety of materials. Extraordinary value for money, great cost effectiveness.

14453



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14453 ...	DIN 376 14453 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	099	
M 2,5	2,05	0,45	9	50	2,8 x 2,1	100	
M 3	2,50	0,50	5	56	3,5 x 2,7	101	
M 4	3,30	0,70	7	63	4,5 x 3,4	102	
M 5	4,20	0,80	8	70	6,0 x 4,9	103	
M 6	5,00	1,00	10	80	6,0 x 4,9	104	
M 8	6,80	1,25	13	90	8,0 x 6,2	106	
M 10	8,50	1,50	15	100	10,0 x 8,0	108	
M 12	10,20	1,75	18	110	9,0 x 7,0		110
M 16	14,00	2,00	20	110	12,0 x 9,0		112
M 20	17,50	2,50	25	140	16,0 x 12,0		114
M 24	21,00	3,00	30	160	18,0 x 14,5		116
M 27	24,00	3,00	30	160	20,0 x 16,0		117
M 30	26,50	3,50	35	180	22,0 x 18,0		118

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-50	10-40	15-50	15-40	15-35	10-30	10-25	8-20	-	-	-	-	-	8-20	5-15	-	15-40	-

14466 Blind hole taps Synchro

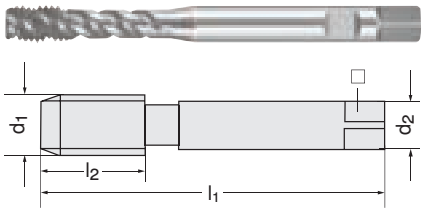
M | 6HX | DIN 371 | DIN 376 | ≈ 50° | 2-3 C | ≤2,5xD | HSS-E-PM TiCN | Uni

HHW

Type
Extra sturdy PM taps **with h6 shank for shrinking and with clamping surface** for mounting in surface chucks. Special geometry for **multi-purpose use** with machines with **synchronised spindle drive.**
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
The percentage of the emulsion should be at least 8%. In order to increase the service life of the tap, use synchro tapping chucks (see cat.-no. 21449 cont.)

14466



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14466 ...	DIN 376 14466 ...
M 2	1,60	0,40	4	70	6,0 x 4,9	101	
M 2,5	2,05	0,45	5	70	6,0 x 4,9	102	
M 3	2,50	0,50	5	70	6,0 x 4,9	103	
M 4	3,30	0,70	7	70	6,0 x 4,9	104	
M 5	4,20	0,80	8	70	6,0 x 4,9	105	
M 6	5,00	1,00	10	80	6,0 x 4,9	106	
M 8	6,80	1,25	13	90	8,0 x 6,2	108	
M 10	8,50	1,50	15	100	10,0 x 8,0	110	
M 12	10,20	1,75	18	110	12,0 x 9,0		112
M 14	12,00	2,00	20	110	14,0 x 11,0		114
M 16	14,00	2,00	20	110	16,0 x 12,0		116
M 20	17,50	2,50	25	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti	GG(G)	Plastics
60-80	40-50	25-70	50-60	40-50	30-40	20-30	20-30	20-30	-	-	-	-	10-20	10-20	10-25	-	40-50

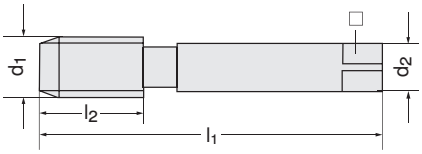
14454 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E PM | ≤ 1400 N/mm²

ATORN®

Type
HSS-E-PM taps for increased service life. Shortened thread, large relief, narrow raised cutting stud for larger cutting flutes.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
For steel **with a strength of up to 1400 N/mm².**

14454



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14454 ...	DIN 376 14454 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112
M 14	12,00	2,00	25	110	11,0 x 9,0		114
M 16	14,00	2,00	28	110	12,0 x 9,0		116
M 20	17,50	2,50	32	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	4-10	2-8	2-5	-	-	-	-	-	-	-	-	-

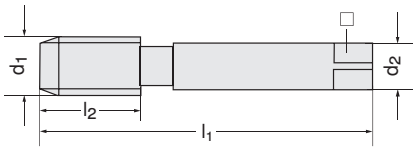
14462 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
With extra long shank.
With minimal relief.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.
Use
Very suitable for tapping of hard-to-reach places.

14462



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14462 ...	DIN 376 14462 ...
M 3	2,50	0,50	10	112	3,5 x 2,7	103	
M 4	3,30	0,70	12	126	4,5 x 3,4	104	
M 5	4,20	0,80	14	140	6,0 x 4,9	105	
M 6	5,00	1,00	16	160	6,0 x 4,9	106	
M 8	6,80	1,25	18	180	8,0 x 6,2	108	
M 10	8,50	1,50	20	200	10,0 x 8,0	110	
M 12	10,20	1,75	22	220	9,0 x 7,0		112
M 14	12,00	2,00	25	220	9,0 x 7,0		114
M 16	14,00	2,00	28	220	12,0 x 9,0		116
M 20	17,50	2,50	32	280	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

Blind hole taps | Multi-purpose taps

14459 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | ≤ 900 N/mm²

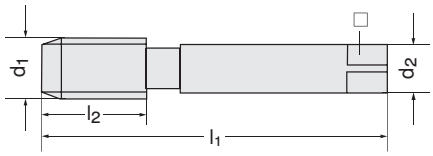
EMUGE

Type
With extra long shank.
Up to M 5 DIN 371.
Starting at M 6 DIN 376.
Use
Very suitable for tapping of hard-to-reach places.

Note:
Taps which deviate from the ATORN colour-system (yellow ring - here for low alloy steels).

14459 201-203
1-Enorm-LS.

14459 204-209
2-Enorm-LS.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14459 ...	DIN 376 14459 ...
M 3	2,50	0,50	6	100	3,5 x 2,7	201	
M 4	3,30	0,70	7	125	4,5 x 3,4	202	
M 5	4,20	0,80	8	140	6,0 x 4,9	203	
M 6	5,00	1,00	10	160	4,5 x 3,4		204
M 8	6,80	1,25	14	180	6,0 x 4,9		205
M 10	8,50	1,50	16	200	7,0 x 5,5		206
M 12	10,20	1,75	18	224	9,0 x 7,0		207
M 16	14,00	2,00	22	224	12,0 x 9,0		208
M 20	17,50	2,50	25	280	16,0 x 12,0		209

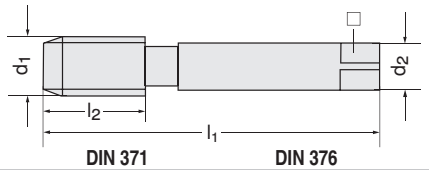
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-25	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-

14463 Blind hole taps

M | 6H | DIN 371 | DIN 376 | ≈ 45° | 2-3 C | ≤2,5xD | HSS-E | ALU

ATORN®

Type
Polished flutes for improved chip removal when machining long-chipping non-ferrous metals.
Up to M 10 DIN 371.
Starting at M 12 DIN 376.



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN 371 14463 ...	DIN 376 14463 ...
M 2	1,60	0,40	8	45	2,8 x 2,1	102	
M 3	2,50	0,50	10	56	3,5 x 2,7	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30

14473 Blind hole taps left-hand cut

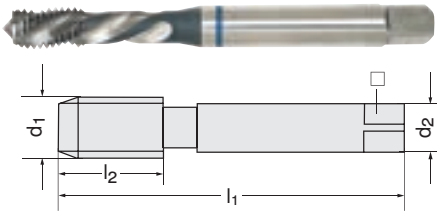
M | 6H | DIN 371 | DIN 376 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
Up to M 10 DIN 371.
Starting at M 12 DIN 376.

Note:
Good chip removal towards the back especially for long-chipping materials but also suitable for steel materials.

14473



d_1	Core hole Ø mm	Pitch mm	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14473 ...	DIN 376 14473 ...
M 3	2,50	0,50	10	56	3,5 x 2,7	103	
M 4	3,30	0,70	12	63	4,5 x 3,4	104	
M 5	4,20	0,80	14	70	6,0 x 4,9	105	
M 6	5,00	1,00	16	80	6,0 x 4,9	106	
M 8	6,80	1,25	18	90	8,0 x 6,2	108	
M 10	8,50	1,50	20	100	10,0 x 8,0	110	
M 12	10,20	1,75	22	110	9,0 x 7,0		112
M 16	14,00	2,00	28	110	12,0 x 9,0		116
M 20	17,50	2,50	32	140	16,0 x 12,0		120

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

14468 - 14469 Multi-purpose taps

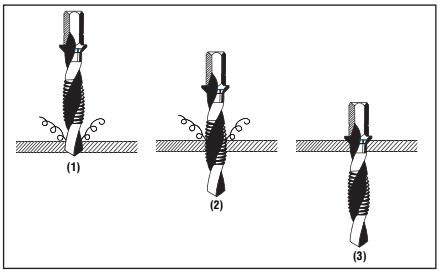
M | HSS | ≤ 600 N/mm²

Type
With 1/4 inch hex shank in compliance with DIN 3126.
Use
For core hole drilling **(1),** thread-cutting **(2)** and deburring **(3)** in one work step.
For steel and NF metals to 1 x nominal Ø.

Note:
Select rpm in accordance to the cutting speed of individual tool.

14468
7-part set
Contents 1 each.: M 3 / M 4 / M 5 / M 6 / M 8 / M 10 and 1 bit multi-purpose adapter in cassette.

14469
Multi-purpose tap, single.



14468

Set	HSS
Set contents	14468 ...
7-part, M 3 - M 10	101

14469

single Nominal Ø	Pitch mm	Twist drill Ø mm	Total length mm	RPM max. rpm	HSS 14469 ...
M 3	0,50	2,5	36	1600	101
M 4	0,70	3,3	39	1200	102
M 5	0,80	4,2	41	950	103
M 6	1,00	5,0	44	800	104
M 8	1,25	6,8	50	600	105
M 10	1,50	8,5	59	450	106

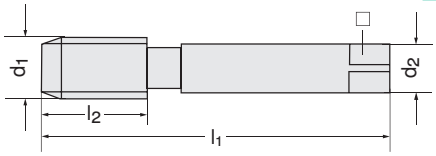
Taps for through-holes | Blind hole taps

14498 Taps for through-holes

MF | 6H | DIN 374 | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
Without curling cut chamfer.



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS-E 14498	...
M 3 x 0,35	2,65	6	56	2,2 x -		101
M 4 x 0,50	3,50	8	63	2,8 x 2,1		103
M 5 x 0,50	4,50	9	70	3,5 x 2,7		104
M 6 x 0,75	5,20	12	80	4,5 x 3,4		106
M 8 x 0,75	7,20	14	80	6,0 x 4,9		108
M 8 x 1,00	7,00	16	90	6,0 x 4,9		109
M 10 x 1,00	9,00	16	90	7,0 x 5,5		112
M 10 x 1,25	8,80	20	100	7,0 x 5,5		113
M 12 x 0,75	11,20	22	100	9,0 x 7,0		114
M 12 x 1,00	11,00	16	100	9,0 x 7,0		115
M 12 x 1,25	10,80	22	100	9,0 x 7,0		116
M 12 x 1,50	10,50	22	110	9,0 x 7,0		117
M 14 x 1,00	13,00	22	100	11,0 x 9,0		118
M 14 x 1,25	12,80	22	100	11,0 x 9,0		119
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120
M 15 x 1,00	14,00	22	100	12,0 x 9,0		121

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS-E 14498	...
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124
M 18 x 1,00	17,00	25	110	14,0 x 11,0		125
M 18 x 1,50	16,50	25	110	14,0 x 11,0		126
M 20 x 1,00	19,00	18	125	16,0 x 12,0		128
M 20 x 2,00	18,00	32	140	16,0 x 12,0		130
M 22 x 1,50	20,50	25	125	18,0 x 14,5		132
M 24 x 1,50	22,50	25	125	18,0 x 14,5		135
M 24 x 2,00	22,00	28	140	18,0 x 14,5		136
M 26 x 1,00	25,00	28	140	18,0 x 14,5		137
M 27 x 1,50	25,50	28	140	20,0 x 16,0		138
M 27 x 2,00	25,00	28	140	20,0 x 16,0		139
M 30 x 1,00	29,00	28	150	22,0 x 18,0		141
M 30 x 1,50	28,50	28	150	22,0 x 18,0		142
M 30 x 2,00	28,00	28	150	22,0 x 18,0		143
M 33 x 1,50	31,50	28	160	25,0 x 20,0		145

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

14499 - 14500 Taps for through-holes

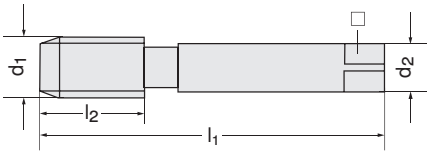
MF | 6H | DIN 374 | 3,5-5 B | ≤ 3xD | ≤ 800 N/mm²

ATORN®

Type
With curling cut chamfer for effective chip removal towards the front.

14499
Use
For steel **with a strength of up to 800 N/mm².**

14500
Use
Low tendency of the machined material to stick to the machining tool through TiN coating.



HSS-E

HSS-E TiN

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS-E 14499	...	HSS-E/TiN 14500	...
M 4 x 0,50	3,50	8	63	2,8 x 2,1		103		103
M 5 x 0,50	4,50	9	70	3,5 x 2,7		104		104
M 6 x 0,75	5,20	12	80	4,5 x 3,4		106		106
M 8 x 0,75	7,20	14	80	6,0 x 4,9		108		108
M 8 x 1,00	7,00	16	90	6,0 x 4,9		109		109
M 10 x 0,75	8,20	16	90	7,0 x 5,5		111		111
M 10 x 1,00	9,00	16	90	7,0 x 5,5		112		112
M 10 x 1,25	8,80	20	100	7,0 x 5,5		113		113
M 12 x 1,00	11,00	16	100	9,0 x 7,0		115		115
M 12 x 1,25	10,80	22	100	9,0 x 7,0		116		116
M 12 x 1,50	10,50	22	100	9,0 x 7,0		117		117
M 14 x 1,00	13,00	22	100	11,0 x 9,0		118		118
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120		120
M 16 x 1,00	15,00	22	100	12,0 x 9,0		123		123
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124		124
M 18 x 1,00	17,00	25	100	14,0 x 11,0		125		125
M 18 x 1,50	16,50	25	110	14,0 x 11,0		126		126
M 20 x 1,00	19,00	25	125	16,0 x 12,0		128		128
M 20 x 1,50	18,50	25	125	16,0 x 12,0		129		129
M 22 x 1,50	20,50	25	125	18,0 x 14,5		132		132
M 24 x 1,50	22,50	25	140	18,0 x 14,5		135		135

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

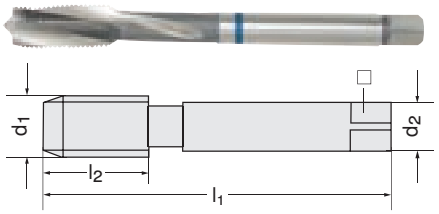
14507 Blind hole taps

MF | 6H | DIN 374 | ≈ 15° | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

ATORN®

Use
For easy chip removal towards the back.

14507



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⌴ mm	HSS-E 14507	...
M 5 x 0,50	4,50	9	70	6,0 x 4,9		104
M 6 x 0,75	5,20	12	80	6,0 x 4,9		106
M 7 x 0,75	6,20	14	80	7,0 x 5,5		107
M 8 x 0,75	7,20	14	80	6,0 x 4,9		108
M 8 x 1,00	7,00	16	90	6,0 x 4,9		109
M 10 x 1,00	9,00	16	90	7,0 x 5,5		112
M 10 x 1,25	8,80	20	100	7,0 x 5,5		113
M 12 x 1,00	11,00	16	100	9,0 x 7,0		115
M 12 x 1,25	10,80	22	100	9,0 x 7,0		116
M 12 x 1,50	10,50	22	110	9,0 x 7,0		117
M 14 x 1,00	13,00	16	100	11,0 x 9,0		118
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120
M 16 x 1,00	15,00	22	100	12,0 x 9,0		123

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⌴ mm	HSS-E 14507	...
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124
M 18 x 1,50	16,50	25	110	14,0 x 11,0		126
M 20 x 1,50	18,50	25	125	16,0 x 12,0		129
M 22 x 1,00	21,00	25	125	18,0 x 14,5		131
M 22 x 1,50	20,50	25	125	18,0 x 14,5		132
M 24 x 1,50	22,50	25	140	18,0 x 14,5		135
M 24 x 2,00	22,00	25	140	18,0 x 14,5		136
M 26 x 1,50	24,50	28	140	18,0 x 14,5		137
M 27 x 1,50	25,50	28	140	20,0 x 16,0		138
M 27 x 2,00	25,00	28	140	20,0 x 16,0		139
M 28 x 1,50	26,50	28	140	20,0 x 16,0		140
M 30 x 1,50	28,50	28	150	22,0 x 18,0		142
M 30 x 2,00	28,00	28	150	22,0 x 18,0		143

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

14508 - 14509 Blind hole taps

MF | 6H | DIN 374 | ≈ 40° | 2-3 C | ≤2,5xD | ≤ 800 N/mm²

ATORN®

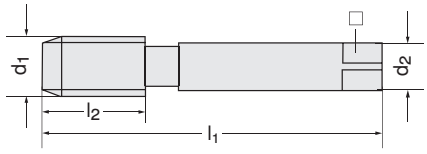
Type
Minimal relief.
Use
Good chip removal towards the back.

HSS-E

14508

14509

HSS-E TiN



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⌴ mm	HSS-E 14508	...	HSS-E/TiN 14509	...
M 6 x 0,75	5,20	12	80	4,5 x 3,4		106		106
M 8 x 1,00	7,00	16	90	6,0 x 4,9		109		109
M 10 x 1,00	9,00	16	90	7,0 x 5,5		112		112
M 10 x 1,25	8,80	20	100	7,0 x 5,5		113		113
M 12 x 1,25	10,80	22	100	9,0 x 7,0		116		116
M 12 x 1,50	10,50	22	100	9,0 x 7,0		117		117
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120		120
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124		124
M 18 x 1,50	16,50	25	100	14,0 x 11,0		126		126
M 20 x 1,50	18,50	25	125	16,0 x 12,0		129		129

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

Machine Taps | Taps for through-holes

14501 - 14504 Machine taps

MF | 6H | DIN 374 | HSS-E | ≤ 800 N/mm²

14501

Type
With curling cut chamfer. Up to and including M 32 x 1,5 starting taper shape B. Above that starting taper shape C.

Use
For through-hole thread.

14502

Type
40° right-hand short taper helix with Form C.

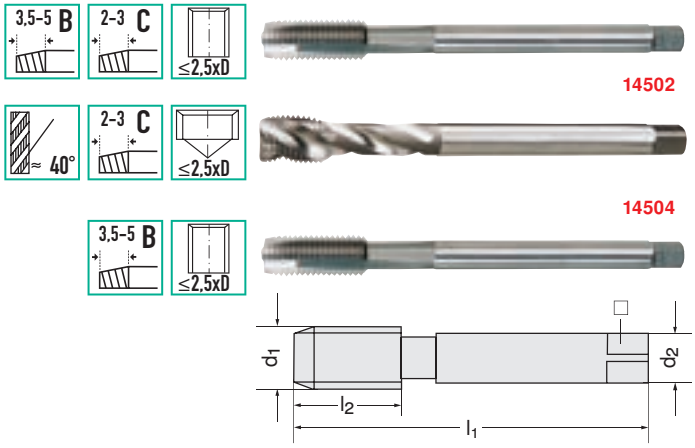
Use
For blind holes.

14504

Type
With curling cut chamfer, starting taper shape B.

Use
For through-hole thread.

Note:
Economically-priced Type.



d1 x pitch	Core hole Ø mm	14501 + 14504 l2 mm	14502 l2 mm	l1 mm	d2 x T mm	Straight/B+C 14501	...	40°/C 14502	...	Straight/B 14504	...
M 3 x 0,35	2,65	8	4	56	2,2 x –		101		101		
M 4 x 0,50	3,50	10	6	63	2,8 x 2,1		103				
M 5 x 0,50	4,50	12	7	70	3,5 x 2,7		104		104		104
M 6 x 0,50	5,50	14	8	80	4,5 x 3,4		105				
M 6 x 0,75	5,25	14	8	80	4,5 x 3,4		106		106		106
M 7 x 0,75	6,25	14	–	80	5,5 x 4,3		107				
M 8 x 0,75	7,25	18	10	80	6,0 x 4,9		108		108		108
M 8 x 1,00	7,00	22	10	90	6,0 x 4,9		109		109		109
M 9 x 1,00	8,00	22	–	90	7,0 x 5,5		110				
M 10 x 0,75	9,25	20	–	90	7,0 x 5,5		111				
M 10 x 1,00	9,00	20	12	90	7,0 x 5,5		112		112		112
M 10 x 1,25	8,75	24	12	100	7,0 x 5,5		113		113		113
M 11 x 1,00	10,00	20	–	90	8,0 x 6,2		114				
M 12 x 1,00	11,00	22	14	100	9,0 x 7,0		115		115		115
M 12 x 1,25	10,75	22	14	100	9,0 x 7,0		116		116		116
M 12 x 1,50	10,50	22	14	100	9,0 x 7,0		117		117		117
M 14 x 1,00	13,00	22	16	100	11,0 x 9,0		118		118		
M 14 x 1,25	12,75	22	16	100	11,0 x 9,0		119		119		
M 14 x 1,50	12,50	22	16	100	11,0 x 9,0		120		120		120
M 16 x 1,00	15,00	22	16	100	12,0 x 9,0		123		123		
M 16 x 1,50	14,50	22	16	100	12,0 x 9,0		124		124		124
M 18 x 1,00	17,00	25	20	110	14,0 x 11,0		125		125		
M 18 x 1,50	16,50	25	20	110	14,0 x 11,0		126		126		126
M 20 x 1,00	19,00	25	20	125	16,0 x 12,0				128		
M 20 x 1,50	18,50	25	20	125	16,0 x 12,0		129		129		129
M 22 x 1,50	20,50	25	20	125	18,0 x 14,5		132		132		132
M 22 x 2,00	20,00	34	–	140	18,0 x 14,5		133				
M 24 x 1,50	22,50	28	24	140	18,0 x 14,5				135		135
M 24 x 2,00	22,00	28	–	140	18,0 x 14,5		136				
M 25 x 1,50	23,50	–	24	140	18,0 x 14,5				151		
M 26 x 1,50	24,50	28	–	140	18,0 x 14,5		137				
M 27 x 2,00	25,00	28	24	140	20,0 x 16,0				139		
M 28 x 1,50	26,50	28	–	140	20,0 x 16,0		140				
M 30 x 1,50	28,50	28	28	150	22,0 x 18,0		142		142		
M 30 x 2,00	28,00	28	28	150	22,0 x 18,0		143		143		
M 32 x 1,50	30,50	28	–	150	22,0 x 18,0		144				
M 35 x 1,50	33,50	30	–	170	28,0 x 22,0		146				
M 36 x 1,50	34,50	30	–	170	28,0 x 22,0		147				
M 38 x 1,50	36,50	30	–	170	28,0 x 22,0		148				
M 40 x 1,50	38,50	30	–	170	32,0 x 24,0		149				
M 42 x 1,50	40,50	30	–	170	32,0 x 24,0		150				

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14501+14504																	
15-22	15-18	12-18	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-	-
14502																	
12-18	12-15	12-18	8-10	8-10	-	-	-	-	-	-	-	-	-	-	-	-	-

14505 Taps for through-holes

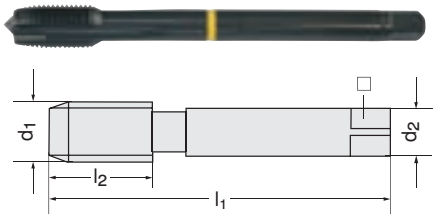
MF | 6H | DIN 374 | 3,5–5 B | ≤ 3xD | HSS-E | ≤ 1200 N/mm²

ATORN®

Type
Reduction of tendency of the machined material to stick to the machining tool thanks to vaporising.

Note:
Very suitable for the machining of VA-steel.

14505



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	vapourised 14505	...
M 4 x 0,50	3,50	8	63	2,8 x 2,1		101
M 5 x 0,50	4,50	9	70	3,5 x 2,7		102
M 6 x 0,50	5,50	14	80	4,5 x 3,4		103
M 6 x 0,75	5,20	12	80	4,5 x 3,4		104
M 7 x 0,75	6,20	14	80	5,5 x 4,3		105
M 8 x 0,50	7,50	14	80	6,0 x 4,9		106
M 8 x 0,75	7,20	14	80	6,0 x 4,9		107
M 8 x 1,00	7,00	16	90	6,0 x 4,9		108
M 9 x 1,00	8,00	22	90	7,0 x 5,5		109
M 10 x 0,75	9,20	16	90	7,0 x 5,5		110
M 10 x 1,00	9,00	16	90	7,0 x 5,5		111
M 10 x 1,25	8,80	20	100	7,0 x 5,5		112
M 11 x 1,00	10,00	20	90	8,0 x 6,2		113
M 12 x 1,00	11,00	16	100	9,0 x 7,0		114
M 12 x 1,25	10,80	22	100	9,0 x 7,0		115
M 12 x 1,50	10,50	22	100	9,0 x 7,0		116
M 14 x 1,00	13,00	22	100	11,0 x 9,0		117
M 14 x 1,25	12,80	22	100	11,0 x 9,0		118
M 14 x 1,50	12,50	22	100	11,0 x 9,0		119
M 15 x 1,00	14,00	22	100	12,0 x 9,0		120
M 16 x 1,00	15,00	22	100	12,0 x 9,0		122

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	vapourised 14505	...
M 16 x 1,50	14,50	22	100	12,0 x 9,0		123
M 18 x 1,00	17,00	25	110	14,0 x 11,0		124
M 18 x 1,50	16,50	25	110	14,0 x 11,0		125
M 20 x 1,00	19,00	25	125	16,0 x 12,0		126
M 20 x 1,50	18,50	25	125	16,0 x 12,0		127
M 20 x 2,00	18,00	32	140	16,0 x 12,0		128
M 22 x 1,00	21,00	25	125	18,0 x 14,5		129
M 22 x 1,50	20,50	25	125	18,0 x 14,5		130
M 24 x 1,00	23,00	25	140	18,0 x 14,5		131
M 24 x 1,50	22,50	25	140	18,0 x 14,5		132
M 24 x 2,00	22,00	28	140	18,0 x 14,5		133
M 26 x 1,50	24,50	28	140	18,0 x 14,5		134
M 30 x 1,50	28,50	28	150	22,0 x 18,0		135
M 30 x 2,00	28,00	28	150	22,0 x 18,0		136
M 33 x 1,50	31,50	28	160	25,0 x 20,0		137
M 33 x 2,00	31,00	28	160	25,0 x 20,0		138
M 35 x 1,50	33,50	30	170	28,0 x 22,0		139
M 36 x 1,50	34,50	30	170	28,0 x 22,0		140
M 36 x 2,00	34,00	30	170	28,0 x 22,0		141
M 38 x 1,50	36,50	30	170	28,0 x 22,0		142
M 42 x 1,50	40,50	30	170	32,0 x 24,0		143

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	5 - 12	5 - 12	-	-	-

Blind hole taps | Machine Taps | Taps for through-holes

14506 Blind hole taps

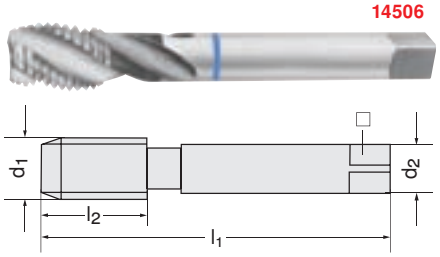
MF | 6H | DIN 374 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | ≤ 1100 N/mm²

EMUGE

Type
2 Enorm-VA.

Note:
Taps which deviate from the ATORN colour-system (blue ring, here for rust, heat, corrosion, and acid-resistant VA-steels).

14506



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	HSS-E 14506	...
M 6 x 0,75	5,20	8	80	4,5 x 3,4		101
M 8 x 0,75	7,20	8	80	6,0 x 4,9		102
M 8 x 1,00	7,00	10	90	6,0 x 4,9		103
M 10 x 0,75	9,20	10	90	7,0 x 5,5		104
M 10 x 1,00	9,00	10	90	7,0 x 5,5		105
M 12 x 1,00	11,00	11	100	9,0 x 7,0		106
M 12 x 1,50	10,50	15	100	9,0 x 7,0		107
M 14 x 1,50	12,50	15	100	11,0 x 9,0		108
M 16 x 1,50	14,50	15	100	12,0 x 9,0		109
M 18 x 1,50	16,50	17	110	14,0 x 11,0		110
M 22 x 1,50	20,50	17	125	18,0 x 14,5		111
M 24 x 1,50	22,50	20	140	18,0 x 14,5		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-25	5-20	5-15	5-12	5-10	-	-	-	-	-	5-15	2-10	-	5-20	-

14510 - 14511 Machine Taps Unimaxx

MF | 6HX | DIN 374 | HSS-E-PM HARDLUBE | Uni

UNIMAX

Type
HSS-E-PM steel and HARDLUBE coating for particularly high wear-resistance and minimised surface friction.

Note:
50% higher cutting values and service life are possible. Multi-purpose for a variety of materials. Extraordinary value for money, great cost effective-ness.

14510
Type
With curling cut chamfer.
Use
For through-hole thread.

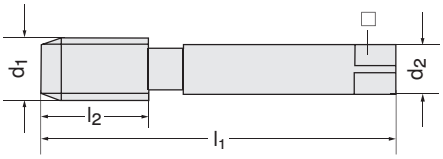
3,5-5 B | ≤ 3xD

14510

14511
Use
For blind holes.

≈ 50° | 2-3 C | ≤2,5xD

14511



straight

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	14510	...
M 8 x 1,00	7,00	22	90	6,0 x 4,9		109
M 10 x 1,00	9,00	20	90	7,0 x 5,5		112
M 10 x 1,25	8,80	24	100	7,0 x 5,5		113
M 12 x 1,00	11,00	22	100	9,0 x 7,0		115
M 12 x 1,25	10,80	22	100	9,0 x 7,0		116
M 12 x 1,50	10,50	22	100	9,0 x 7,0		117
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124
M 18 x 1,50	16,50	25	110	14,0 x 11,0		126
M 20 x 1,50	18,50	25	125	16,0 x 12,0		129

50 °

d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x ⊓ mm	14511	...
M 8 x 1,00	7,00	10	90	6,0 x 4,9		109
M 10 x 1,00	9,00	12	90	7,0 x 5,5		112
M 10 x 1,25	8,80	12	100	7,0 x 5,5		113
M 12 x 1,00	11,00	14	100	9,0 x 7,0		115
M 12 x 1,25	10,80	14	100	9,0 x 7,0		116
M 12 x 1,50	10,50	14	100	9,0 x 7,0		117
M 14 x 1,50	12,50	16	100	11,0 x 9,0		120
M 16 x 1,50	14,50	16	100	12,0 x 9,0		124
M 18 x 1,50	16,50	20	110	14,0 x 11,0		126
M 20 x 1,50	18,50	20	125	16,0 x 12,0		129

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-45	10-45	15-40	10-40	10-35	10-30	10-25	8-20	-	-	-	-	-	8-20	5-15	-	15-40	-

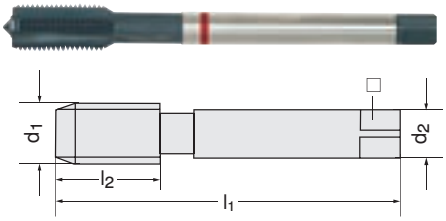
= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

14514 Taps for through-holes

MF | 6HX | DIN 374 | 2-3 C | ≤ 3xD | HSS-E | GG(G)

ATORN®

Type
Nitrided.
Use
For high machining performance in grey cast iron.



d_1 x pitch	Core hole Ø mm	l_2 mm	l_1 mm	d_2 x 中 mm	HSS-E nitrided 14514	...
M 8 x 1,00	7,00	16	90	6,0 x 4,9		109
M 10 x 1,00	9,00	16	90	7,0 x 5,5		112
M 12 x 1,50	8,50	22	100	9,0 x 7,0		117
M 14 x 1,50	12,50	22	100	11,0 x 9,0		120
M 16 x 1,50	14,50	22	100	12,0 x 9,0		124
M 18 x 1,50	16,50	25	110	14,0 x 11,0		126
M 20 x 1,50	18,50	25	125	16,0 x 12,0		129
M 22 x 1,50	20,50	25	125	18,0 x 14,5		132
M 24 x 1,50	22,50	25	140	18,0 x 14,5		135
M 30 x 1,50	28,50	28	150	22,0 x 18,0		142

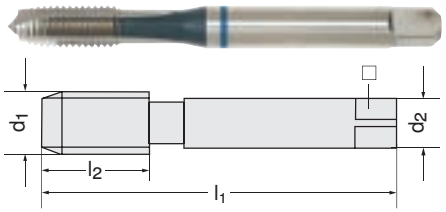
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	< 45 HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8-20	-

14560 Taps for through-holes

UNC | DIN 371 | DIN 376 | 3,5-5 B | ≤ 3xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
To 3/8 inch DIN 371.
Starting at 7/16 inches DIN 376.



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14560	...	DIN 376 14560	...
1/4	5,20	20	16	80	7,0 x 5,5		110		
5/16	6,60	18	18	90	8,0 x 6,2		111		
3/8	8,00	16	20	100	9,0 x 7,0		112		
7/16	9,40	14	20	100	8,0 x 6,2				113
1/2	10,80	13	22	110	9,0 x 7,0				114
9/16	12,20	12	24	110	11,0 x 9,0				115
5/8	13,50	11	26	110	12,0 x 9,0				116
3/4	16,50	10	32	140	16,0 x 12,0				117

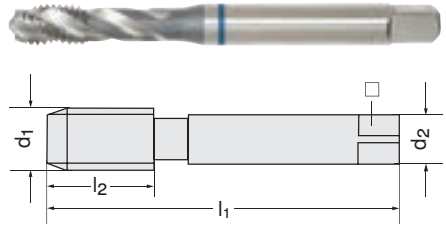
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-

14565 Blind hole taps

UNC | DIN 371 | DIN 376 | ≈ 40° | 3,5-5 B | ≤2,5xD | HSS-E | ≤ 800 N/mm²

ATORN®

Type
To 3/8 inch DIN 371.
Starting at 7/16 inches DIN 376.



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x 中 mm	DIN 371 14565	...	DIN 376 14565	...
1/4	5,20	20	16	80	7,0 x 5,5		110		
5/16	6,60	18	18	90	8,0 x 6,2		111		
3/8	8,00	16	20	100	9,0 x 7,0		112		
7/16	9,40	14	20	100	8,0 x 6,2				113
1/2	10,80	13	22	110	9,0 x 7,0				114
9/16	12,20	12	24	110	11,0 x 9,0				115
5/8	13,50	11	26	110	12,0 x 9,0				116
3/4	16,50	10	32	140	16,0 x 12,0				117

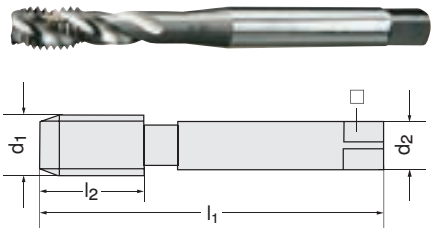
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	< 45 HRC	<55HRC	<60HRC	<67HRC	VA-steel < 900 N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

Blind hole taps | Machine Taps

14570 - 14571 Blind hole taps

UNC | DIN 2184-1 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

14570



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⏍ mm	HSS-E 14570	...	HSS-E 14571	...
Nr. 2	1,85	56	9	50	2,8 x 2,1		201		
Nr. 3	2,10	48	9	50	2,8 x 2,1		202		
Nr. 4	2,35	40	11	56	3,5 x 2,7		203		
Nr. 5	2,65	40	7	56	3,5 x 2,7		204		
Nr. 6	2,85	32	8	56	4,0 x 3,0		205		
Nr. 8	3,50	32	8	63	4,5 x 3,4		206		
Nr. 10	3,90	24	11	70	6,0 x 4,9		207		
Nr. 12	4,50	24	11	80	6,0 x 4,9		208		
1/4	5,10	20	13	80	7,0 x 5,5		209		
5/16	6,60	18	15	90	8,0 x 6,2		210		
3/8	8,00	16	16	90	9,0 x 7,0		211		
7/16	9,40	14	22	100	8,0 x 6,2				212
1/2	10,80	13	23	110	9,0 x 7,0				213
9/16	12,25	12	25	110	11,0 x 9,0				214
5/8	13,50	11	28	110	12,0 x 9,0				215
3/4	16,50	10	30	125	14,0 x 11,0				216
7/8	19,50	9	34	140	18,0 x 14,5				217
1.	22,25	8	38	160	18,0 x 14,5				218

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
12-18	12-15	10-15	8-10	8-10	-	-	-	-	-	-	-	-	-	-	-	-	-

14577 - 14578 Machine taps

UNF | DIN 371 | DIN 376 | HSS-E | ≤ 800 N/mm²

ATORN®

Type
To 3/8 inch DIN 371.
Starting at 7/16 inches DIN 376.

3,5-5 B | ≤ 3xD

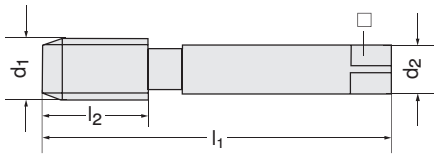
14577

14577
Use
For through-hole thread.

≈ 40° | 2-3 C | ≤ 3xD

14578

14578
Use
For blind holes.



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⏍ mm	DIN	straight 14577	...	40° 14578	...
1/4	5,50	28	16	80	7,0 x 5,5	371		111		111
5/16	6,90	24	18	90	8,0 x 6,2	371		112		112
3/8	8,50	24	20	100	10,0 x 8,0	371		113		113
7/16	9,90	20	20	100	8,0 x 6,2	376		114		114
1/2	11,50	20	20	100	9,0 x 7,0	376		115		115
9/16	13,00	18	22	100	11,0 x 9,0	376		116		116
5/8	14,50	18	22	100	12,0 x 9,0	376		117		117
3/4	17,50	16	25	110	14,0 x 11,0	376		118		118

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	< 45 HRC	<55HRC	<60HRC	<67HRC	VA-steel < 900 N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	-	-	-	-	-	-	-	-	-	-	-	-

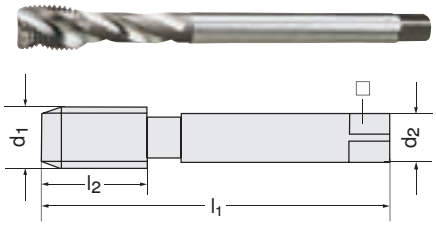
= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

14582 Blind hole taps

UNF | DIN 2184-1 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E | ≤ 800 N/mm²

Use
For blind holes.

14582



d_1	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⊓ mm	HSS-E 14582 ...
Nr. 4	2,40	48	7	56	2,2 x –	205
Nr. 5	2,70	44	7	56	2,2 x –	206
Nr. 6	3,00	40	7	56	2,5 x 2,1	207
Nr. 8	3,50	36	7	63	2,8 x 2,1	208
Nr. 10	4,10	32	9	70	3,5 x 2,7	209
Nr. 12	4,60	28	9	80	4,0 x 3,0	210
1/4	5,50	28	11	80	4,5 x 3,4	211
5/16	6,90	24	12	90	6,0 x 4,9	212
3/8	8,50	24	13	90	7,0 x 5,5	213
7/16	9,90	20	15	100	8,0 x 6,2	214
1/2	11,50	20	16	100	9,0 x 7,0	215
9/16	12,90	18	17	100	11,0 x 9,0	216
5/8	14,50	18	19	100	12,0 x 9,0	217
3/4	17,50	16	21	110	14,0 x 11,0	218
7/8	20,40	14	23	125	18,0 x 14,5	219
1.	23,25	12	25	125	18,0 x 14,5	220

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
12-18	12-15	-	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-

14594 - 14595 Machine taps

G | DIN 5156 | HSS-E | ≤ 1200 N/mm²

ATORN®

Type
DIN 5156-DIN ISO 228.

14594
Use
For through-hole thread.

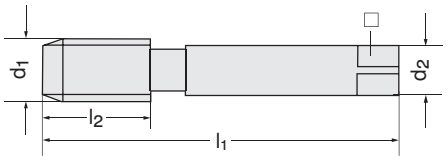
14595
Use
For blind hole and through-hole threads.

3,5-5 B | ≤2,5xD

2-3 C | ≤2,5xD | ≤2,5xD

14594

14595



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⊓ mm	Shape B 14594 ...	Shape C 14595 ...
G 1/8	8,80	28	20	90	7,0 x 5,5	101	101
G 1/4	11,80	19	22	100	11,0 x 9,0	102	102
G 3/8	15,30	19	22	100	12,0 x 9,0	103	103
G 1/2	19,00	14	25	125	16,0 x 12,0	104	104
G 3/4	24,50	14	28	140	20,0 x 16,0	106	106
G 1.	30,50	11	30	160	25,0 x 16,0	108	108

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	5-20	5-15	5-12	4-10	2-8	-	-	-	-	-	-	-	-	-	-

Taps for through-holes | Machine Taps | Blind hole taps

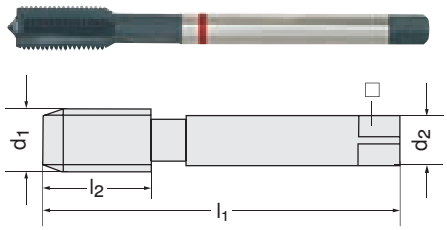
14596 Taps for through-holes

G | DIN 5156 | 2-3 C | ≤2,5xD | HSS-E | GG(G)

ATORN®

Type
DIN 5156-DIN ISO 228. Nitrided.
Use
For high machining performance in grey cast iron.

14596



HSS-E nitrided

d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	14596 ...
G 1/16	6,80	28	20	90	6,0 x 4,9	100
G 1/8	8,80	28	20	90	7,0 x 5,5	101
G 1/4	11,80	19	22	100	11,0 x 9,0	102
G 3/8	15,30	19	22	100	12,0 x 9,0	103
G 1/2	19,00	14	25	125	16,0 x 12,0	104
G 5/8	21,00	14	25	125	18,0 x 14,5	105
G 3/4	24,50	14	28	140	20,0 x 16,0	106
G 7/8	28,30	14	28	150	22,0 x 18,0	107
G 1.	30,50	11	30	160	25,0 x 20,0	108
G 1.1/4	39,50	11	30	170	32,0 x 24,0	110

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	< 45 HRC	<55HRC	<60HRC	<67HRC	VA-steel < 900 N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8-20	-

14598 - 14599 Machine taps

G | DIN 5156 | 2-3 C | HSS-E | ≤ 800 N/mm²

ATORN®

Type
DIN 5156-DIN ISO 228.

14598
Use
For blind hole and through-hole threads.

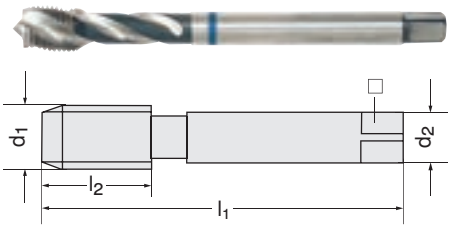
≈ 15° | ≤2,5xD | ≤2,5xD

14598

14599
Use
For blind holes.

≈ 40° | ≤2,5xD

14599



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x ⫫ mm	15 ° 14598 ...	40 ° 14599 ...
G 1/8	8,80	28	20	90	7,0 x 5,5	101	101
G 1/4	11,80	19	22	100	11,0 x 9,0	102	102
G 3/8	15,30	19	22	100	12,0 x 9,0	103	103
G 1/2	19,00	14	25	125	16,0 x 12,0	104	104
G 3/4	24,50	14	28	140	20,0 x 16,0	106	106
G 1.	30,50	11	30	160	25,0 x 20,0	108	108
G 1.1/4	39,50	11	30	170	32,0 x 24,0	110	
G 1.1/2	45,00	11	32	190	36,0 x 29,0	112	

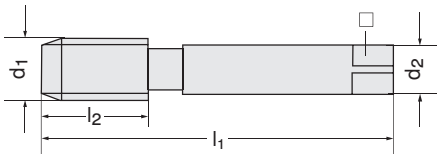
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	< 45 HRC	<55HRC	<60HRC	<67HRC	VA-steel < 900 N	VA-steel>900N	Ti alloys	GG(G)	Plastics
14598																	
20-25	10-40	10-12	5-20	5-15	5-12	4-10	2-8	-	-	-	-	-	5-12	5-12	-	-	-
14599																	
20-25	10-40	10-12	5-20	5-15	5-12	4-10	2-8	-	-	-	-	-	5-12	5-12	-	-	-

14601 Blind hole taps

G | DIN 5156 | ≈ 40° | 2-3 C | ≤2,5xD | HSS-E | VA-OX | ≤ 1200 N/mm²

Type
DIN 5156-DIN ISO 228.
Increased wear resistance thanks to OX-coating.

14601



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x □ mm	HSS-E VA-OX 14601	...
G 1/8	8,80	28	20	90	7 x 5,5		101
G 1/4	11,80	19	22	100	11 x 9,0		102
G 3/8	15,25	19	22	100	12 x 9,0		103
G 1/2	19,00	14	25	125	16 x 12,0		104
G 5/8	21,00	14	25	125	18 x 14,5		105
G 3/4	24,50	14	28	140	20 x 16,0		106
G 7/8	28,25	14	28	150	22 x 18,0		107
G 1.	30,75	11	30	160	25 x 20,0		108
G 1.1/8	35,50	11	30	170	28 x 22,0		109
G 1.1/4	39,25	11	30	170	32 x 24,0		110
G 1.1/2	45,25	11	32	190	36 x 29,0		112

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
20-25	10-40	10-12	5-20	5-15	5-12	4-10	2-8	-	-	-	-	-	5-12	5-12	-	-	-

14602 - 14603 Machine taps

G | DIN 5156 | 2-3 C | HSS-E | ≤ 800 N/mm²

Type
DIN 5156-DIN ISO 228.

Note:
Economically-priced Type.

≤2,5xD | ≤2,5xD

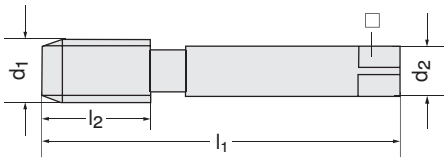
14602

14602
Use
For blind hole and through-hole threads.

≈ 35° | ≤2,5xD

14603

14603
Use
For blind holes.



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x □ mm	straight 14602	...	35° 14603	...
G 1/8	8,80	28	20	90	7 x 5,5		101		101
G 1/4	11,80	19	22	100	11 x 9,0		102		102
G 3/8	15,25	19	22	100	12 x 9,0		103		103
G 1/2	19,00	14	25	125	16 x 12,0		104		104
G 3/4	24,50	14	28	140	20 x 16,0		106		106
G 1.	30,75	11	30	160	25 x 20,0		108		108

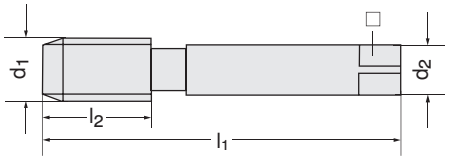
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
10-15	12-15	5-12	8-12	8-12	8-12	-	-	-	-	-	-	-	-	-	-	-	-

14605 Blind hole taps

G | DIN 5156 | ≈ 39° | 2-3 C | ≤2,5xD | HSS-E | ≤ 900 N/mm²

Type
2 Enorm.
DIN 5156-DIN ISO 228.

14605



d_1 Inch	Core hole Ø mm	Pitch tpi	l_2 mm	l_1 mm	d_2 x □ mm	HSS-E 14605	...
G 1/8	8,80	28	10	90	7 x 5,5		101
G 1/4	11,80	19	15	100	11 x 9,0		102
G 3/8	15,25	19	15	100	12 x 9,0		103
G 1/2	19,00	14	17	125	16 x 12,0		104
G 3/4	24,50	14	20	140	20 x 16,0		106
G 1.	30,75	11	24	160	25 x 20,0		108

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	10-40	5-25	5-20	5-15	-	-	-	-	-	-	-	-	-	-	-	-

= Sales are restricted to the packaging units mentioned in the catalogue. Purchase orders must be in units.

Thread milling cutters

14610 Solid carbide thread milling cutters

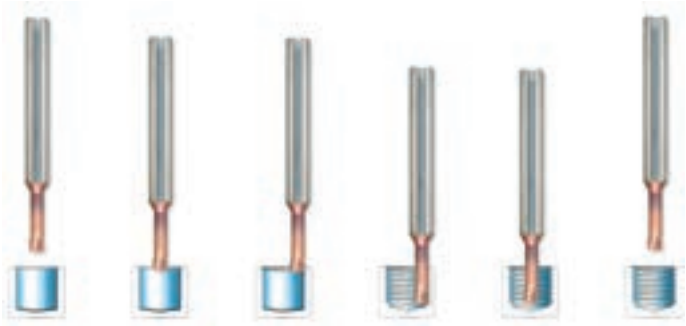
M | VHM TiAlN | ≈ 15° | DIN 6535 HA | Z 3–5 | ≤ 2xD | DIN 13 | IR/IL | Uni

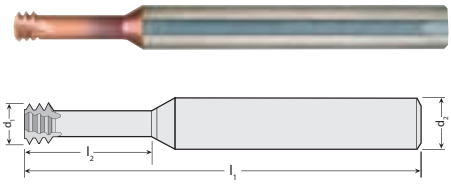
ATORN®

Type
- **Fixed dimension Type**
- **Corrected thread profile** for milling **precise internal thread** (ensure stable clamping)

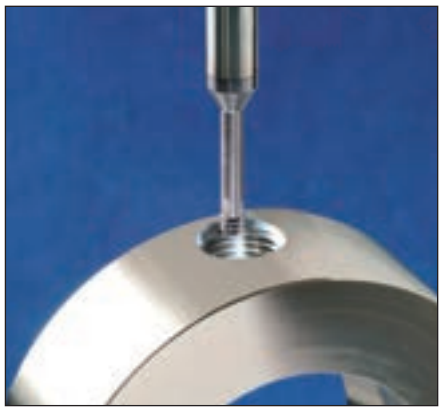
Note:
Types to thread depth 3xD and Types for hard machining to 62 HRC available on request.

14610





Size	Pitch mm	d_1 mm	l_2 mm	l_1 mm	d_2 mm	Z	14610 ...
M 1	0,25	0,72	2,5	39	3	3	101
M 2	0,40	1,53	4,5	58	6	3	102
M 2,2	0,45	1,65	5,0	58	6	3	103
M 2,5	0,45	1,95	5,5	58	6	3	104
M 3	0,50	2,37	6,5	58	6	3	105
M 3,5	0,60	2,75	7,5	58	6	3	106
M 4	0,70	3,10	9,0	58	6	3	107
M 5	0,80	3,80	12,5	58	6	3	108
M 6	1,00	4,65	14,0	58	6	3	109
M 8	1,25	6,00	18,0	58	6	3	110
M 10	1,50	7,80	23,0	64	8	3	111
M 12	1,75	9,00	26,0	73	10	3	112
M 16	2,00	11,80	35,0	84	12	4	113
M 20	2,50	15,00	43,0	105	16	5	114



Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
200-400	200-350	200-400	100-180	80-160	70-140	55-110	50-100	60-80	-	-	-	-	50-100	60-80	40-60	80-160	-

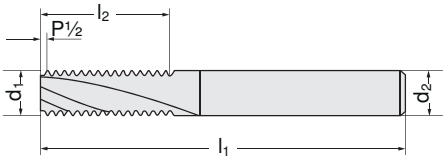
14611 Solid carbide thread milling cutters

M | VHM TiAlN | ≈ 15° | DIN 6535 HA | Z 2–4 | ≤ 2xD | DIN 13 | IR/IL | Uni

Type
- **Fixed dimension Type**
- **Corrected thread profile** for milling **precise internal thread** (ensure stable clamping)

Note:
Types to thread depth 3xD and Types for hard machining to 62 HRC available on request.

14611



Size	Pitch mm	d_1 mm	l_2 mm	l_1 mm	d_2 mm	Z	IK	14611 ...
M 3	0,50	2,40	7,0	42	4	2	-	101
M 4	0,70	3,15	9,8	55	6	3	-	102
M 5	0,80	4,00	12,0	55	6	3	-	103
M 6	1,00	4,80	14,0	55	6	3	-	104
M 8	1,25	5,95	18,75	60	6	3	x	105
M 10	1,50	7,95	22,5	70	8	3	x	106
M 12	1,75	9,90	28,0	75	10	4	x	107
M 14	2,00	11,60	32,0	85	12	4	x	108
M 16	2,00	12,00	36,0	85	12	4	x	109
M 18	2,50	14,00	42,5	90	14	4	x	110
M 20	2,50	16,00	42,5	90	16	4	x	111

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti	GG(G)	Plastics
200-400	200-350	200-400	100-180	80-160	70-140	55-110	50-100	60-80	-	-	-	-	50-100	60-80	40-60	80-160	-

14612 Solid carbide thread milling cutters

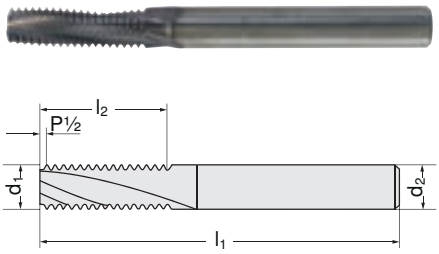
MF | VHM TiAlN | ≈ 15° | DIN 6535 HA | Z 3-4 | ≤ 2xD | DIN 13 | IR/IL | Uni

Type
- **Fixed dimension Type**
- **Corrected thread profile** for milling **precise internal thread** (ensure stable clamping)

Note:
Types to thread depth 3xD and Types for hard machining to 62 HRC available on request.

14612

Size	Pitch mm	d_1 mm	l_2 mm	l_1 mm	d_2 mm	Z	IK	14612 ...
M 5	0,50	4,00	11,50	55	6	3	-	101
M 6	0,75	4,80	14,25	55	6	3	-	102
M 8	1,00	5,95	19,00	60	6	3	-	103
M 10	1,25	7,95	21,50	70	8	3	x	104
M 12	1,00	9,90	27,00	75	10	4	x	105
M 12	1,25	9,90	27,50	75	10	4	x	106
M 12	1,50	9,90	27,00	75	10	4	x	107
M 14	1,00	11,60	31,00	85	12	4	x	108
M 14	1,50	11,60	31,50	85	12	4	x	109
M 16	1,50	11,85	34,50	85	12	4	x	110
M 18	1,50	14,00	42,00	90	14	4	x	111
M 20	1,50	16,00	42,00	90	16	4	x	112



Al < 10% Si	Al > 10% Si	Cu	St < 520 N	St < 750 N	St < 900 N	St < 1100 N	St <1200 N	St > 1400 N	< 45 HRC	< 55 HRC	< 60 HRC	< 67 HRC	VA-steel < 900 N	VA-steel > 900 N	Ti	GG(G)	Plastics
200-400	200-350	200-400	100-180	80-160	70-140	55-110	50-100	60-80	-	-	-	-	50-100	60-80	40-60	80-160	-

14613 Solid carbide thread milling cutters

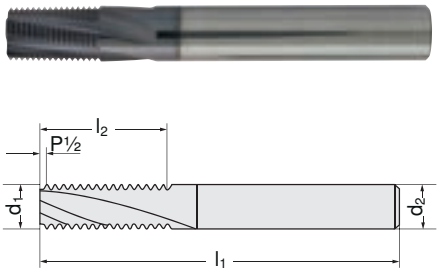
MF | VHM TiAlN | ≈ 15° | DIN 6535 HA | Z 3-5 | ≤ 2xD | DIN 13 | IR/IL | Uni

Type
- Universal Type
- **Corrected thread profile** for milling **precise internal thread** (ensure stable clamping)

Note:
Types to thread depth 3xD and Types for hard machining to 62 HRC available on request.

14613

Size	Pitch mm	d_1 mm	l_2 mm	l_1 mm	d_2 mm	Z	IK	14613 ...
> M 10	0,50	8,00	12	70	8	3	x	101
> M 11	0,75	8,00	12	70	8	3	x	102
> M 12	1,00	10,00	16	75	10	4	x	103
> M 14	1,00	12,00	20	85	12	4	x	104
> M 18	1,00	16,00	25	90	16	5	x	105
> M 22	1,00	20,00	32	105	20	5	x	106
> M 14	1,50	10,00	16	75	10	4	x	107
> M 16	1,50	12,00	20	85	12	4	x	108
> M 20	1,50	16,00	25	90	16	5	x	109
> M 24	1,50	20,00	32	105	20	5	x	110
> M 16	2,00	12,00	20	85	12	4	x	111
> M 20	2,00	16,00	25	90	16	5	x	112
> M 24	2,00	20,00	32	105	20	5	x	113
> M 24	3,00	16,00	25	90	16	5	x	114
> M 27	3,00	20,00	32	105	20	5	x	115



Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
200-400	200-350	200-400	100-180	80-160	70-140	55-110	50-100	60-80	-	-	-	-	50-100	60-80	40-60	80-160	-

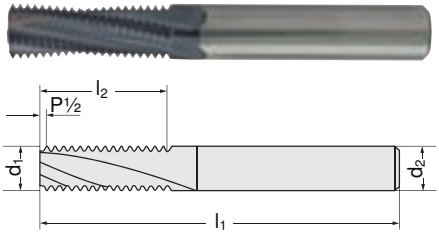
14614 Solid carbide thread milling cutters

G | VHM TiAlN | ≈ 15° | DIN 6535 HA | Z 3-4 | ≤ 2xD | DIN 228/1 | IR/IL | Uni

Type
- **Fixed dimension Type**
- **Corrected thread profile** for milling **precise internal thread** (ensure stable clamping)

14614

Size Inch	Pitch mm	d_1 mm	l_2 mm	l_1 mm	d_2 mm	Z	IK	14614 ...
G 1/8	28,0	8,00	20,80	70	8	3	x	101
G 1/4	19,0	9,90	28,00	75	10	4	x	102
G 3/8	19,0	14,00	41,45	90	14	4	x	103
G 1/2	14,0	16,00	43,50	90	16	4	x	104



Al <10% Si	Al >10% Si	Cu	St <520 N	St <750 N	St <900 N	St <1100 N	St <1200 N	St >1400 N	<45 HRC	<55 HRC	<60 HRC	< 67 HRC	VA-steel< 900 N	VA-steel>900 N	TI	GG(G)	Plastics
200-400	200-300	200-400	100-180	80-100	70-140	55-110	50-100	60-80	-	-	-	-	50-100	60-80	40-60	80-160	-

14625 - 14628 Indexable insert thread milling cutters with ICF

ATORN®

Use
For cylindrical **internal and external threads.** For **through-hole and blind hole threads.** Multi-purpose use for **left-hand and right-hand** threads.
Low cutting pressure, no chip problems, because the chips produced are short.
Scope of supply:
Incl. Wrench and clamping screw.

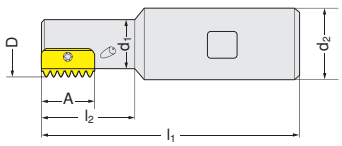
Note:
Reversible cutting inserts see cat.-no. 14630-14631.

14625
Type
Holder made of special steel.

14626
Type
Holder made of solid carbide.

14627
Type
Holder made of special steel **with two mounts** for high feed rates and especially for harder materials.

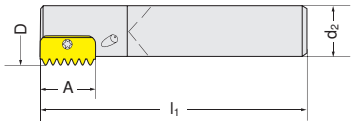
14628
Spare clamping screws



14625

Holder made of special steel — **Clamping screw**

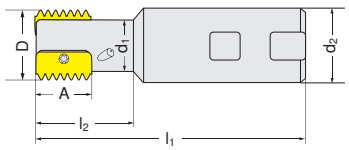
Designation	A mm	D mm	d_2 mm	d_1 mm	l_1 mm	l_2 mm	14625 ...	14628 ...
SR009H12	12	9,5	20	7,5	85	14	101	101
SR0012F14	14	12,0	20	8,9	75	20	103	102
SR0014H14	14	14,5	20	11,2	85	25	104	102
SR0017H14	14	17,0	20	13,4	85	30	105	102
SR0021H21	21	21,0	20	16,5	94	40	107	103
SR0029J30	30	29,0	25	22,4	110	50	109	104



14626

Holder made of solid carbide — **Clamping screw**

Designation	A mm	D mm	d_2 mm	l_1 mm	14626 ...	14628 ...
SR0010K12C	12	9,9	8	125	101	101
SR0013J14C	14	13,2	10	150	103	102
SR0015K14C	14	15,2	12	175	104	102
SR0021M21C	21	21,0	16	200	106	103
SR0027S30C	30	27	20	270	107	104



14627

Holder made of special steel (2 mounts) — **Clamping screw**

Designation	A mm	D mm	d_2 mm	d_1 mm	l_1 mm	l_2 mm	14627 ...	14628 ...
SR0020H14-2	14	20	20	16	93	41	101	101
SR0030J21-2	21	30	25	24	108	52	102	103
SR0040L30-2	30	40	32	30	130	70	103	104

14630 - 14631 Thread milling inserts

M MF

ATORN®

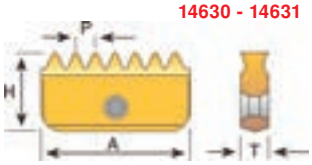
Type
Stable, **2x useable** full profile indexable insert.
Use
Universal implementation in many materials.
Quality
VHM/AMT7 TiAlN-coated.

Note:
14630 101-105 cuts on one side.

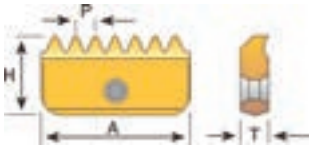
14630
Type
Full profile 60° internal.
Use
For bores.

14631
Type
Full profile 60° external.
Use
For projections.

14630 - 14631



14630 101-105



Designation	P mm	A mm	H mm	T mm	Internal 14630 ...	External 14631 ...
12 I 0,5 ISO	0,50	12	6,3	2,9	101	
12 I 0,75 ISO	0,75	12	6,3	2,9	102	
12 I 1,0 ISO	1,00	12	6,3	2,9	103	
12 I 1,25 ISO	1,25	12	6,3	2,9	104	
12 I 1,5 ISO	1,50	12	6,3	2,9	105	
14 I 0,5 ISO	0,50	14	7,5	3,1	106	
14 I/E 0,75 ISO	0,75	14	7,5	3,1	107	107
14 I/E 1,0 ISO	1,00	14	7,5	3,1	108	108
14 I/E 1,25 ISO	1,25	14	7,5	3,1	109	109
14 I/E 1,5 ISO	1,50	14	7,5	3,1	110	110
14 I/E 1,75 ISO	1,75	14	7,5	3,1	111	111
14 I/E 2,0 ISO	2,00	14	7,5	3,1	112	112
14 I/E 2,5 ISO	2,50	14	7,5	3,1	113	113
21 I/E 1,0 ISO	1,00	21	12	4,7	114	114
21 I/E 1,5 ISO	1,50	21	12	4,7	115	115
21 I 1,75 ISO	1,75	21	12	4,7	116	
21 I/E 2,0 ISO	2,00	21	12	4,7	117	117
21 I/E 2,5 ISO	2,50	21	12	4,7	118	118
21 I/E 3,0 ISO	3,00	21	12	4,7	119	119
21 I 3,5 ISO	3,50	21	12	4,7	120	
30 I/E 1,5 ISO	1,50	30	16	5,5	121	121
30 I/E 2,0 ISO	2,00	30	16	5,5	122	122
30 I/E 3,0 ISO	3,00	30	16	5,5	123	123
30 I/E 3,5 ISO	3,50	30	16	5,5	124	124
30 I/E 4,0 ISO	4,00	30	16	5,5	125	125
30 I 4,5 ISO	4,50	30	16	5,5	126	
30 I 5,0 ISO	5,00	30	16	5,5	127	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
180-460	180-460	115-460	130-280	120-240	115-200	110-190	105-180	105-180	-	-	-	-	130-190	130-190	25-80	60-170	115-460

14800 HELICOIL® plus repair assortment

HELICOIL® plus made by BÖLLHOFF

Use
The world leader when it comes to quick thread repair solutions:
- For scrap recovery and thread repair
- For repair of damaged or worn-off thread
- For thread reinforcement, where materials of lower shear strength, e.g. aluminium, are used (machine tools, automotive engineering, electrical engineering and medical technology, etc.)
- Absolutely firm seat, even under extreme loads, abrasion-resistant threaded insert of corrosion-resistant, wear-resistant and heat resistant CrNi steel, ideal transmission of force, and increased load capacity of nut thread and bolt thread

230-part, set contents:
20 of each thread inserts
M 5 x 5 / M 5 x 7,5 / M 5 x 10 / M 6 x 6 / M 6 x 9 / M 6 x 12,
10 of each thread inserts
M 8 x 8 / M 8 x 12 / M 8 x 16 / M 10 x 10 / M 10 x 15 / M 10 x 20 / M 12 x 12 / M 12 x 18 / M 12 x 24,
5 twist drills,
5 hand taps,
5 setting tools,
5 pin breakers.

14800

Set contents	Set size	14800 ...
230-part	M 5 - M 12	202

Thread Repair Assortment | Thread boring tools | Tap Extractors

14810 HELICOIL® plus repair packs

HELICOIL® plus made by BOLLHOFF

Use
For metric ISO coarse-pitch thread DIN 13.
Quality
Stainless steel thread inserts.

14810 103-106
Type
Set contents:
60 threaded inserts, (20 each per nominal length),
1 twist drill,
1 hand tap,
1 setting tool,
1 pin breaker.

14810 107-112
Type
Set contents:
30 thread inserts (10 pcs. per nominal length),
1 twist drill,
1 hand tap,
1 setting tool,
1 pin breaker.

14810 113-114
Type
Set contents:
30 thread inserts (10 pcs. per nominal length),
1 hand tap, 1 setting tool.


14810 103-106


14810 107-112


14810 113


14810 114

d mm	Nominal length mm	Core hole Ø mm	Number of inserts	14810 ...
M 3	3 / 4,5 / 6	3,2	60	103
M 4	4 / 6 / 8	4,2	60	104
M 5	5 / 7,5 / 10	5,2	60	105
M 6	6/ 9 / 12	6,3	60	106
M 7	7 / 10,5 / 14	7,3	30	107
M 8	8 / 12 / 16	8,4	30	108

d mm	Nominal length mm	Core hole Ø mm	Number of inserts	14810 ...
M 9	9 / 13,5 / 18	9,4	30	109
M 10	10 / 15 / 20	10,5	30	110
M 11	11 / 17,5 / 22	11,5	30	111
M 12	12 / 18 / 24	12,5	30	112
M 14	14 / 21 / 28	14,5	30	113
M 16	16 / 24 / 32	16,5	30	114

14802 - 14808 Component parts for HELICOIL® plus Kat.-Nr. 14800 + 14810

HELICOIL® plus made by BOLLHOFF

14802
Thread inserts
M 3 - M 6, pack = 20 pcs.,
M 8 - M 12, pack = 10 pcs.

14804
Single-pass thread tap HSS.

14806
Setting tool.

14808
Pin breaker.


14802


14806


14804


14808

Size	Core hole Ø mm	Thread inserts 14802 ...	Taps 14804 ...	Setting tools 14806 ...	Pin breakers 14808 ...
M 3 x 3	3,2	114	102	102	102
M 3 x 4,5	3,2	115	102	102	102
M 3 x 6	3,2	116	102	102	102
M 4 x 4	4,2	120	104	104	103
M 4 x 6	4,2	121	104	104	103
M 4 x 8	4,2	122	104	104	103
M 5 x 5	5,2	126	106	106	104
M 5 x 7,5	5,2	127	106	106	104
M 5 x 10	5,2	128	106	106	104
M 6 x 6	6,3	130	107	107	104
M 6 x 9	6,3	131	107	107	104
M 6 x 12	6,3	132	107	107	104
M 8 x 8	8,4	141	109	109	105
M 8 x 12	8,4	142	109	109	105
M 8 x 16	8,4	143	109	109	105
M 10 x 10	10,5	156	112	112	106
M 10 x 15	10,5	157	112	112	106
M 10 x 20	10,5	158	112	112	106
M 12 x 12	12,5	176	116	116	107
M 12 x 18	12,5	177	116	116	107
M 12 x 24	12,5	178	116	116	107

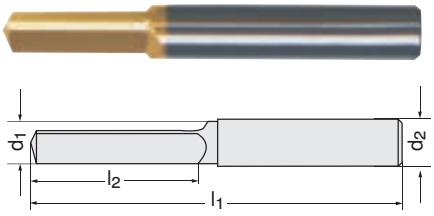
11069 Solid carbide thread boring tools

VHM TiN | DIN 6535 HA

Type
With straight shank, self-centring.
Use
For drilling out broken HSS and HSS-E taps.
Quality
Solid carbide micro finest grit/TiN-coated.

Note:
Stable clamping operation required. Bore dry and free of cutting oil.

11069



d_1 h9 mm	l_2 mm	l_1 mm	d_2 h6 mm	11069	...
3.3	50	15	6		101
4.2	50	15	6		103
5.0	50	15	6		105
6.8	60	20	8		107
8.5	70	25	10		109
10.2	75	30	12		111

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	Plastics
-	-	-	-	-	-	-	-	-	-	-	-	35-45	-	-	-	-	-

14900 - 14905 Tap Extractors

14900-14903
Use
For broken off taps. The fingers are inserted into the flutes of the broken off tap. This is done by moving the upper **sliding ring (1)** . They are then secured with the **guiding sleeve (2)** . A tap wrench is used to toggle the broken part until it comes loose and can be unscrewed.

14900 102-104
Sets of Tap Extractors
Use
For **three-fluted taps.** Delivery complete in case.

14900 106-108
Sets of Tap Extractors
Use
For **four-fluted taps.** Delivery complete in case.

14902
Tap extractor, single
Use
For **three-fluted taps.**

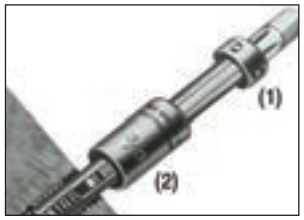
14903
Tap extractor, single
Use
For **four-fluted taps.**

14904
Replacement fingers
For **three-fluted** tap extractors.

14905
Replacement fingers
For **four-fluted** tap extractors.

14900

14902-14903 14904-14905



Sets		3 flutes		4 flutes	
Set contents	**Extractor**	**14900**	**...**	**14900**	**...**
6-part	M 4 / 5 / 6 / 8 / 10 / 12		102		106
10-part	M 3 / 4 / 5 / 6 / 8 / 10 / 12 / 14 / 16 / 20		104		
10-part	M 4 / 5 / 6 / 8 / 10 / 12 / 14 / 16 / 20 / 22				108

Single for taps Metric / Whitworth	3 flutes 14902	...	4 flutes 14903	...	3 spare fingers 14904	...	4 spare fingers 14905	...
M 3 / 1/8		102				102		
M 4 / 5/32		104		104		104		104
M 5 / 3/16		105		105		105		105
M 6 / 1/4		107		107		107		107
M 8 / 5/16		109		109		109		109
M 10 / 3/8		111		111		111		111
M 12 / 1/2		113		113		113		113
M 14 / 9/16		114		114		114		114
M 16 / 5/8		115		115		115		115
M 20 / 3/4		117		117		117		117

Tap Extractors | Bolt extractors | Arc erosion drilling machines

14929 Sets of Tap Extractors

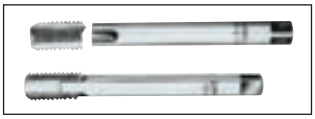
Use
For screwing out taps that have broken off.

14929 101
Type
- 6-part
- Size 1 - 4 three-flute
- Size 5 - 6 four-flute

14929 102
Type
- 9-part
- Size 2 - 4 three-flute
- Size 5 - 10 four-flute

14929 101

Set contents	14929 ...
6-part	101
9-part	102



14930 - 14931 Sets of Tap Extractors

Use
For screwing out taps that have broken off.

14930
For **three-fluted** taps.

14931
For **four-fluted** taps.

14930

14931

Size	for tap Metric / Whitworth	Total length mm	Square mm	14930 ...	14931 ...
1	M 4 / 5/32	55	3,0	101	
2	M 5 / 3/16	60	3,5	102	
3	M 6 / 1/4	60	3,8	103	103
4	M 8 / 5/16	60	5,0	104	104
5	M 10 / 3/8	70	6,0	105	105
6	M 12 / 1/2	70	7,5	106	106
7	M 14 / 9/16	70	8,5	107	107
8	M 16 / 5/8	80	10,5	108	108
9	M 20 / 3/4	80	13,0	109	109

14933 Bolt extractor set

Use
For drilling out torn-off studs
M 5 - M 16.
Quality
Special steel, burnished.

14933

	Set contents:
5	HSS-E drills
10	Guidance aids
5	Drilling out pins
5	Drilling out nuts

Set contents	for stud Ø mm	Type	14933 ...
25-part	5-16	in the box	201

14934 - 14935 Erosion drilling device eromobil®

The new eromobil®

NEW

More compact, more functional, more practical
Since its start in 1972 **eromobil®** is and remains the most effective solution for tool break. Within minutes broken off taps, twist drills, reamers, etc. are eroded. The device can quickly be used on column drills, radial drills and magnetic drills, milling machines, drilling machines, as well as CNC machines. Thus production faults are minimised, workpiece damage and costs are avoided. With its new design, the **eromobil®** is more compact and more functional. The new intelligent design integrates all components in a well-organised and space-saving manner; handling is easy and convenient.

Functional principle
The hollow electrode is clamped into the vibration head. This is smaller in diameter than broken off tool. When eroding, the core piece of the broken-off tool is removed. Consequently, the cutting blades come loose and can be removed easily. The electrode does not come into contact with the workpiece, thus the thread remains undamaged. The boring emulsion generally used in the shop is used as coolant.

Generator in robust, compact housing with ergonomic handles for easy lift-out and transport

Supply hose 2 m from the generator to the vibration head (available to 7.5 m)

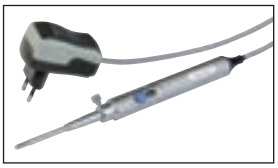
Vibration head with ergonomic handles, LED indicator light and straight shank receptacle 12 mm

Magnetic stands

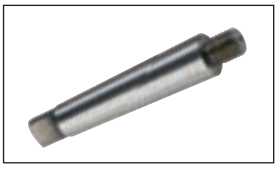
Ground cable 2 m with workpiece clamp (available up to 7.5 m)

Front view

14935 103-104
Deep hole test light
With lamp holder Ø 5 mm, 100 mm long for illuminating the bores after electrical discharge machining. Also with plug transformer 230 V for universal monitoring tasks.



14935 105
Vibration head receptacle:
MK2 directly in the centre sleeve of machine tool.



Select from two models

eromobil®-er 230 s-ND
- For thread from M2 to approx. M20
- 220/230 V
- 50 Hz AC
- 3,6 kVA
- 16 amp

eromobil®-er 400 t-ND
- For thread from M2 to approx. M40
- Optimally suited for deep holes and carbide tools
- 380/400 V
- 50 Hz three-phase current
- 6,0 kVA
- 16 amp

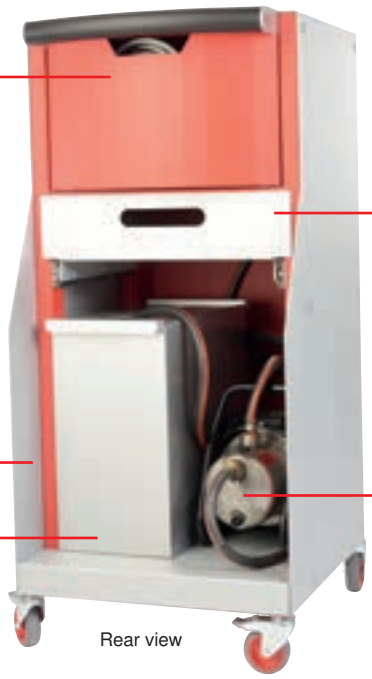
Standard scope of supply
- Generator in the trolley
- Vibration head
- Supply hose
- Ground cable
- Coolant pump
- Coolant tank
- 1 each fork spanner AF 19 and AF 24
- 10 splash guard bags

Storage compartment for vibration head, supply hose, and ground cable

Opened cover housing compartment with vibration head supply hose

Trolley with placement surface for coolant pump and coolant container, with easy running castors

Coolant tanks with two chambers for intake and return, with practical handles



Rear view

Tool drawer with interior compartment settings for electrodes, collet chucks, fork spanners, splash protection bags and accessories, pulls out on easy-running profile rollers

Coolant pump for effective flushing with approx. 3,4 bar pressure incl. 2 m suction hose with foot valve, as well as 2 pressure hose with quick-release coupling (hoses to 5 m are available)

Erosion drilling machine	14934 ...
er 230 s-ND	201
er 400 t-ND	202

Special accessories	14935 ...
Deep hole test light	103
Lamp holder, 100 mm long	104
Vibration head receptacle, MK 2	105

Continuation ▶

Arc erosion drilling machines | Tap Sets

14936 - 14937 Electrodes and collets for eromobil®

Continuation ▶

14936
Copper electrodes
Use
For tools made of HSS.

Note:
Special electrodes up to diameter 30 mm and 1.000 mm length and electrodes made of graphite and tungsten copper for machining carbide metal tools are available on request.

14937
Collets

14936

14937

Electrode Ø x length mm	for thread M	14936 ...
1,0 x 250	2 - 2,6	101
1,5 x 250	3	102
2,0 x 250	4	103
2,5 x 250	5	104
3,0 x 250	5 - 6	105
3,5 x 250	6	106
4,0 x 250	6 - 8	107
4,5 x 250	8	108
5,0 x 250	8 - 10	109
6,0 x 250	10	110
7,0 x 250	12	111
8,0 x 250	12 - 14	112
10,0 x 250	16 - 20	113

Collets Ø mm	14937 ...
1.0	101
1.5	102
2.0	103
2.5	104
3.0	105
3.5	106
4.0	107
4.5	108
5.0	109
6.0	110
7.0	111
8.0	112
10.0	113

System Prefab Office SHB 50

MDS® Raumsysteme

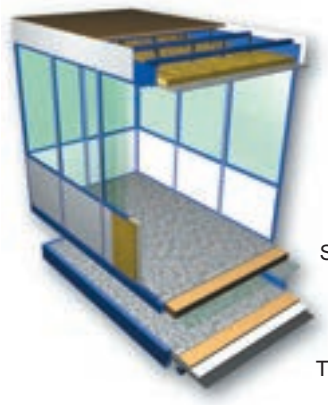
Use

Individual spatial concepts - turnkey solutions.

The Prefab Office SHB 50 is the optimal spatial solution - from the small foreman's office to the 2-storey large facility with many advantages:

- Fast and easy installation through monoblock elements
- Optimal protection against noise and dust
- Effective use of space
- Turnkey solution
- Easy extensibility
- Cost-effective transferability
- Room heights to 3000 mm

Design



Standard floor

Transport floor

Additional information on request

1-storey spatial solution

2-story spatial solution

Spatial solution on a platform

Transportable spatial solution

14950 - 14953 Tap Sets

Type
For metric ISO standard threads DIN 13, right-hand cut, in sheet steel case.
Use
For cutting standard-duty materials.

14950 101

HSS

≤ 800 N/mm²

14950 103

HSS

≤ 800 N/mm²

14950 105-109

HSS

HSS-E

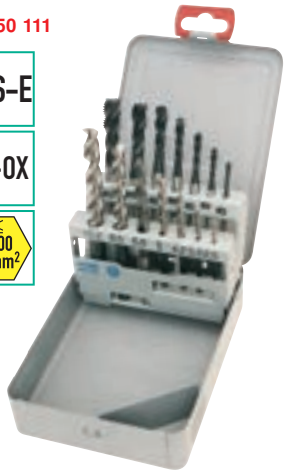
≤ 800 N/mm²

14950 111

HSS-E

VA-OX

≤ 1200 N/mm²



14950 112

HSS-E

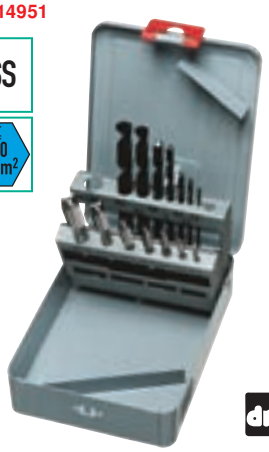
VA-OX

≤ 1200 N/mm²

14951

HSS

≤ 900 N/mm²



14952

HSS

HSS-E

≤ 900 N/mm²

drilbox®

Cat.-no.		Contents	Use
14950 101	sets of hand taps cat.-no. 14010	M3, M4, M5, M6, M8, M10, M12	for steel with a strength of up to 800 N/mm²
14950 102	sheet steel case empty for cat.-no. 14950 101		
14950 103	sets of hand taps cat.-no. 14010 Tapping drill cat.-no. 10001	M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	for steel with a strength of up to 800 N/mm²
14950 104	sheet steel case empty for cat.-no. 14950 103		
14950 105	machine taps blind hole cat.-no. 14302+14303 Tapping drill cat.-no. 10001	M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	for steel with a strength of up to 800 N/mm²
14950 109	machine tap blind hole, 40° spiral flutes, cat.-no. 14401+14407 Tapping drill cat.-no. 10001	 M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	for steels to 800 N/mm²
14950 111	machine taps through-hole cat.-no. 14338+14339 (VA-steel-OX) Tapping drill cat.-no. 10050	M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	multi-purpose use for steel with a strength of up to 1200 N/mm²
14950 112	machine tap blind hole, 40° spiral-fluted, cat.-no. 14436+14437 (VAOX) Tapping drill cat.-no. 10050	 M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	universal implementation for steels to 1200 N/mm²
14950 110	sheet steel case empty for cat.-no. 14950 105-109 + 111-112		
14951 101	sets of hand taps cat.-no. 14014	M3, M4, M5, M6, M8, M10, M12	for steel with a strength of up to 900 N/mm²
14952 101	machine tap through-hole cat.-no. 14304+14305 Tapping drill cat.-no. 10003	M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	for steels to 900 N/mm²
14953 101	machine tap blind hole, 35° spiral flutes, cat.-no. 14402+14403 Tapping drill cat.-no. 10003	 M3, M4, M5, M6, M8, M10, M12 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	for steels to 900 N/mm²

Set contents	Type	14950 ...	14951 ...	14952 ...	14953 ...
M 3 - M 12 (hand)	Straight flute	101	101		
Sheet steel box	leer	102			
M 3 - M 12 (hand drill + core drill)	Straight flute	103			
Sheet steel box	leer	104			
M 3 - M 12 (machine drill + core drill)	Straight flute, with curling cut chamfer	105		101	
M 3 - M 12 (machine drill + core drill)	Spiral flute ca. 40°	109			
M 3 - M 12 (machine drill + core drill)	Straight flute, with curling cut chamfer	111			
M 3 - M 12 (machine drill + core drill)	Spiral flute ca. 40°	112			
Sheet steel box	leer	110			
M 3 - M 12 (machine drill + core drill)	Spiral flute ca. 35°				101

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Tap and Die Sets | Round dies

14960 - 14962 Tap and Die Sets

HSS-E ≤ 900 N/mm²

Type
For metric ISO coarse-pitch thread DIN 13.
Right-hand cut. In sheet steel case.
Use
For cutting standard-duty materials.

14960

14960 101

14962 101

14962 103

Cat.-no.		Contents	Use
14960 101	sets of hand taps cat.-no. 14010	M3, M4, M5, M6, M8, M10, M12	for steel with a strength of up to 900 N/mm²
	Round dies cat.-no. 15203	M3, M4, M5, M6, M8, M10, M12	
	Die stock cat.-no. 23502	25x9	
	Tap wrench cat.-no. 23130	size 1.1/2	
14960 102	sheet steel case empty for cat.-no. 14960 101		
14962 101	sets of hand taps cat.-no. 14014	M3, M4, M5, M6, M8, M10, M12	for steel with a strength of up to 900 N/mm²
	Round dies cat.-no. 15204	M3, M4, M5, M6, M8, M10, M12	
	Tapping drill cat.-no. 10003	2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5 / 10,2	
	Tool holder with ratchet cat.-no. 23160		
	Die stock cat.-no. 23502	20x5, 20x7, 25x9, 30x11, 38x14	
	Tap wrench cat.-no. 23130	size 1, 2	
	Screw pitch gauge M / Ww	M / Ww	
	Screwdriver	size 2,3x80	
14962 102	sheet steel case empty for cat.-no. 14962 101		
14962 103	sets of hand taps cat.-no. 14014	M3, M4, M5, M6, M8, M10, M12, M14, M16, M18, M20	for steel with a strength of up to 900 N/mm²
	Round dies cat.-no. 15204	M3, M4, M5, M6, M8, M10, M12, M14, M16, M18, M20	
	Die stock cat.-no. 23502	20x5, 20x7, 25x9, 30x11, 38x14, 45x18	
	Tap wrench cat.-no. 23130	size 1.1/2, 3	
	Screw pitch gauge M / Ww	M / Ww	
	Screwdriver	size 2,3x80	
14962 104	sheet steel case empty for cat.-no. 14962 103		

	14960 ...	14962 ...
M 3 - M 12	101	
Sheet steel box, leer	102	
M 3 - M 12		101
Sheet steel box, leer		102
M 3 - M 20		103
Sheet steel box, leer		104

23197 Thread repair set

HAZET

Type
21-part, with HSS high-performance tapping tools.
In plastic case, with PUR-foam inlays.

Use
For easy retapping, even in hard to access areas.
For use with reversible ratchet or T-handle, square end 1/4 and 3/8 inch.

23197

	Set contents:
7	Tap for internal thread M3 / M4 / M5 / M6 / M8 / M10 / M12,
7	Round dies for external thread M3 / M4 / M5 / M6 / M8 / M10 / M12,
1	Chuck hex (solid) 6,3 = 1/4 inch for taps M3-M6,
1	Connection part hex (hollow) 6,3 = 1/4 inch, square (hollow) 6,3 = 1/4 inch,
1	Chuck hex (solid) 8 = 5/16 inch for taps M8-M12,
1	Connection part hex (hollow) 8 = 5/16 inch, square (hollow) 10 = 3/8 inch,
1	Holder square (hollow) 6,3 = 1/4 inch for round dies M3-M6,
1	Holder square (hollow) 10 = 3/8 inch for round dies M8-M12,
1	Offset screwdrivers 2,5 mm.

Set contents	23197 ...
21-part	101

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