

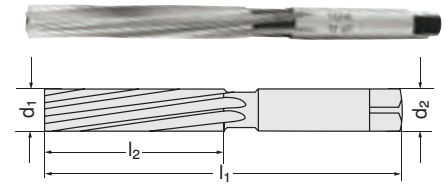
ATORN®**Type**

- With straight shank and square
- Right-hand cut
- Left-hand spiral 7 - 8°
- First cut 1/4 of the cutting length (l_2)
- Accuracy H7

Quality
HSS.

Note:
Not suitable for blind holes.

13010



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS	
				13010	...
2,0	25	50	1,60	201	
2,2	27	54	1,80	203	
2,5	29	58	2,00	206	
3,0	31	62	2,24	211	
3,2	33	66	2,50	213	
3,5	35	71	2,80	216	
4,0	38	76	3,15	221	
4,5	41	81	3,55	226	
5,0	44	87	4,00	231	
5,5	47	93	4,50	236	
6,0	47	93	4,50	241	
7,0	54	107	5,60	251	
8,0	58	115	6,30	261	
9,0	62	124	7,10	271	
10,0	66	133	8,00	281	
11,0	71	142	9,00	282	
12,0	76	152	10,00	283	
13,0	76	152	10,00	284	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS	
				13010	...
14,0	81	163	11,20	285	
15,0	81	163	11,20	286	
16,0	87	175	12,50	287	
17,0	87	175	12,50	288	
18,0	93	188	14,00	289	
19,0	93	188	14,00	290	
20,0	100	201	16,00	291	
21,0	100	201	16,00	292	
22,0	107	215	18,00	293	
23,0	107	215	18,00	294	
24,0	115	231	20,00	295	
25,0	115	231	20,00	296	
26,0	115	231	20,00	297	
28,0	124	247	22,40	299	
30,0	124	247	22,40	301	
32,0	133	265	25,00	303	
35,0	142	284	28,00	306	
40,0	152	305	31,50	311	

HHW**Type**

- With straight shank and square
- Right-hand cut
- Left-hand spiral 4°
- Slotted
- Ø 4 and 5 mm straight-fluted

Readjustment range of the nominal diameter:

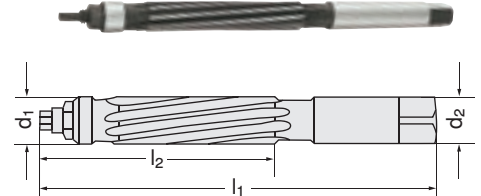
- Ø 4 - 5 mm approx. 0.05 mm,
- Ø 6 - 10 mm ca. 0.1 mm,
- Ø 11 - 15 mm ca. 0.15 mm,
- Ø 16 - 20 mm ca. 0.2 mm.

Use

All desired fits can be adjusted and wear can be compensated.

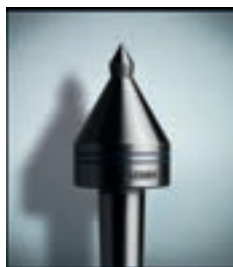
Quality
HSS.

13033



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS	
				13033	...
4	38	76	3,15	101	
5	41	87	4,00	102	
6	47	93	4,50	103	
7	54	107	5,60	104	
8	58	115	6,30	105	
9	62	124	7,10	106	
10	66	133	8,00	107	
11	71	142	9,00	108	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS	
				13033	...
12	76	152	10,00	109	
13	76	152	10,00	110	
14	81	163	11,20	111	
15	81	163	11,20	112	
16	87	175	12,50	113	
18	93	188	14,00	115	
19	93	188	14,00	116	
20	100	201	16,00	117	



Performance requires quality.

For example, with the revolving lathe centre from ATORN.

- Extended moving point
- True-running deviation, max. 0.005 mm
- Completely hardened and ground
- Protected against penetration of contamination and coolant

ATORN®
Performance requires quality.

13101

Sets of Quick-Adjustable Blade Hand Reamers



Type

- With straight shank and square
- Right-hand cut
- Short, eccentrically arched, relief ground blade
- In the box

Use

For finishing short, single drill holes. Only for rounding out. Minimum chip removal.

Quality

Special steel.

13101 101



Set contents	adjusting range mm	13101	...
11-part	8 - 31,5		101
13-part	8 - 45,0		102

13102 - 13104

Quick-Adjustable Blade Hand Reamers



Version

- With straight shank and square
- Right-hand cut
- Short, eccentrically arched, relief-ground blade

Use

For reaming out and re-reaming short, simple bores, only for levelling, minor chip removal.

Quality

Special steel.

13103

Spare blade

13103 101-102

Pack = 4 pcs.

13103 103-112

Pack = 5 pcs.

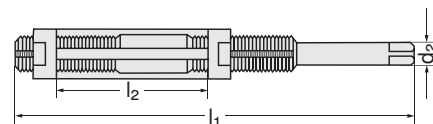
13103 113-116

Pack = 6 pcs.

13104

Spare nuts, in pairs.

13102



13103



13104



Adjustment range mm	l ₂ mm	l ₁ mm	d ₂ mm	Reamer		Spare blade		Spare nut	
				13102	...	13103	...	13104	...
6,4 - 7,2	32	111	3,0		101		101		101
7,2 - 8,0	32	111	3,5		102		102		102
8,0 - 9,0	32	111	4,3		103		103		103
9,0 - 10,0	32	115	4,3		104		104		104
10,0 - 11,0	35	120	4,9		105		105		105
11,0 - 12,0	35	125	6,2		106		106		106
12,0 - 13,5	42	130	6,2		107		107		107
13,5 - 15,5	50	145	7,0		108		108		108
15,5 - 18,0	60	165	8,0		109		109		109
18,0 - 21,0	65	180	9,0		110		110		110
21,0 - 24,0	70	190	10,0		111		111		111
24,0 - 27,5	75	205	11,0		112		112		112
27,5 - 31,5	80	225	12,0		113		113		113
31,5 - 37,0	90	240	14,5		114		114		114
37,0 - 45,0	100	285	16,0		115		115		115
45,0 - 55,0	109	320	20,0		116		116		116

13420

Taper Reamers

HSS 1:10



Type

- Taper 1:10
- With straight shank and square
- Right-hand cut
- Spiral flutes

Use

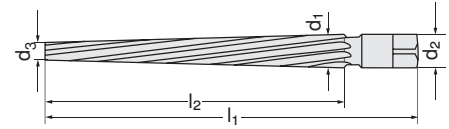
Suitable for holes with and without interruptions.

Quality
HSS.

Note:
Holes must be pre-machined conically.
Reaming of str. borehole not possible!



13420



						HSS	
d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm		13420	...
3	10	70	100	6,3		101	
5	15	100	140	10,0		102	

						HSS	
d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm		13420	...
10	25	150	195	16,0		103	
15	35	200	250	22,4		104	

13432

Hand Taper Pin Reamers DIN 9

HSS 1:50



Type

- Taper 1:50
- With straight shank and square
- Right-hand cut
- Spiral flutes

Use

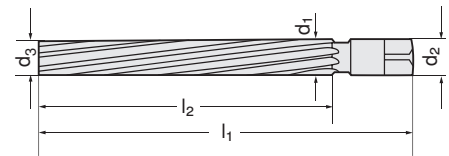
For precision reaming of conical bores for tapered pins DIN 1.

Quality
HSS.

Note:
For predrilling use taper pin drills cat.-no. 10899!



13432



						HSS	
Nominal Ø mm	d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	13432	...
3	2,9	4,06	58	80	3,15	206	
4	3,9	5,26	68	93	4,00	208	
5	4,9	6,36	73	100	5,00	210	
6	5,9	8,00	105	135	6,30	212	
8	7,9	10,80	145	180	8,00	215	

						HSS	
Nominal Ø mm	d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	13432	...
10	9,9	13,40	175	215	10,00	217	
12	11,8	16,00	210	255	11,20	218	
16	15,8	20,40	230	280	14,00	221	
20	19,8	24,80	250	310	18,00	222	
25	24,7	30,70	300	370	22,40	223	

13440

High-Helix Taper Pin Reamers DIN 2179

HSS 1:50



High-helix taper reamer

Version

- Taper 1:50
- With straight shank and driver
- Right-hand cut
- Left-hand spiral approx. 45°

Use

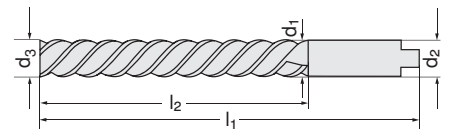
For precision reaming of conical bores for tapered pins DIN 1.

Quality
HSS.

Note:
Use taper drills cat.-no. 10899 for predrilling!
Greater power due to curling cut - high rate of chip removal required! Tapered holes free of chatter marks! Only for machine use! High-helix taper reamers are not suitable for blind holes.



13440



						HSS	
Nominal Ø mm	d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	13440	...
2	1,9	2,86	48	86	3,15	101	
3	2,9	4,06	58	100	4,00	103	
4	3,9	5,26	68	112	5,00	104	
5	4,9	6,36	73	122	6,30	105	

						HSS	
Nominal Ø mm	d ₃ mm	d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	13440	...
6	5,9	8,00	105	160	8,00	106	
8	7,9	10,80	145	207	10,00	108	
10	9,9	13,40	175	245	12,50	109	
12	11,8	16,00	210	290	16,00	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)	plastic
15-20	10-15	10-13	10-12	8-10	8-10	8-10	-	-	-	-	-	-	6-7	5-6	-	6-8	-



13450

Rivet Hole Reamers DIN 311

HSS



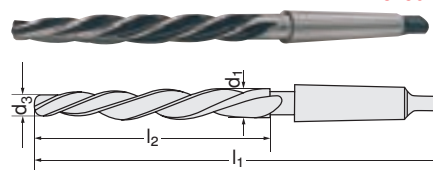
Version

With Morse taper shank, right-hand cut, left-hand helix approx. 25°, arched land, blade 1/3 conical, 2/3 cylindrical,

Use

For reaming out misaligned, offset holes which have to be riveted together or bolted.

Quality HSS.



13450

		HSS														
d ₁	d ₃	l ₂	l ₁	shank	13450		...									
mm	mm	mm	mm	MT												
6,4	4,5	75	151	1												
7,4	5,2	80	156	1												
8,4	5,9	85	161	1												
9,5	6,6	90	166	1												
10	7,0	95	171	1												
11	7,7	100	176	1												
12	8,4	105	199	2												
13	9,1	105	199	2												
14	9,8	115	209	2												
15	10,5	125	219	2												
16	11,2	135	229	2												
17	11,9	135	251	3												

		HSS														
d ₁	d ₃	l ₂	l ₁	shank	13450		...									
mm	mm	mm	mm	MT												
18	12,6	145	261	3												
20	14,0	155	271	3												
21	14,7	155	271	3												
22	15,4	165	281	3												
23	16,1	165	281	3												
24	16,8	180	296	3												
25	17,5	180	296	3												
27	18,9	195	311	3												
28	19,6	195	311	3												
30	21,0	195	311	3												
31	21,7	210	326	3												

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)	plastic
15-20	10-15	10-13	10-12	8-10	8-10	8-10	-	-	-	-	-	-	6-7	5-6	-	6-8	-

13490

NC Chucking Reamers

HSS-E

H7



Version

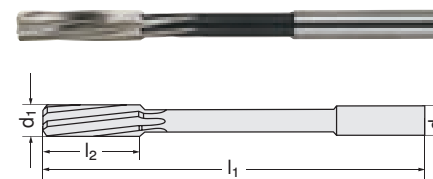
Similar to DIN 212. With straight shank, spiral flutes, right-hand cut, tolerance zone H7. Due to the tool shanks' small tolerance zone h6, chucking accuracy is improved considerably.

Use

The NC shank allows the direct use in hydraulic expanding chucks and high-precision chucks without adapters or special mounting clamps.

Quality HSS-E.

Note: Intermediate dimensions available on request.



13490

		HSS-E														
d ₁	l ₂	l ₁	d ₂	13490		...										
mm	mm	mm	mm													
1,0	5,5	34	1													
1,5	8,0	40	2													
1,6	9,0	43	2													
1,7	9,0	43	2													
1,8	10,0	46	2													
1,9	10,0	46	2													
2,0	11,0	49	2													
2,1	11,0	49	2													
2,2	12,0	53	3													
2,3	12,0	53	3													
2,4	14,0	57	3													
2,5	14,0	57	3													
2,6	14,0	57	3													
2,7	15,0	61	3													
2,8	15,0	61	3													
2,9	15,0	61	3													
3,0	15,0	61	3													
3,1	16,0	65	4													
3,2	16,0	65	4													
3,3	16,0	65	4													
3,4	18,0	70	4													
3,5	18,0	70	4													
3,6	18,0	70	4													
3,7	18,0	70	4													
3,8	19,0	75	4													

		HSS-E														
d ₁	l ₂	l ₁	d ₂	13490		...										
mm	mm	mm	mm													
3,9	19,0	75	4													
4,0	19,0	75	4													
4,1	19,0	75	4													
4,2	19,0	75	5													
4,3	23,0	86	5													
4,4	23,0	86	5													
4,5	23,0	86	5													
5,0	23,0	86	5													
5,5	26,0	93	6													
6,0	26,0	93	6													
6,5	28,0	101	6													
7,0	31,0	109	8													
7,5	31,0	109	8													
8,0	33,0	117	8													
8,5	33,0	117	8													
9,0	36,0	125	10													
9,5	36,0	125	10													
10,0	38,0	133	10													
11,0	41,0	142	10													
12,0	44,0	151	10													
14,0	47,0	160	14													
15,0	50,0	162	14													
16,0	52,0	170	14													
18,0	56,0	182	14													
20,0	60,0	195	16													

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)	plastic
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14





Quality
HSS-E.

Type

- With straight shank
- Right-hand cut.

Manufacturing tolerance +0.003/-0

- In plastic cassette.

Size	Number of Reamers	Contents 1 ea. reamer		HSS-E	
		0,01 mm increments		13500	...
2,98 - 10,02	24	2,98	5,98	102	
		3,00 - 3,02	6,00 - 6,02		
		3,98	7,98		
		4,00 - 4,02	8,00 - 8,02		
		4,98	9,98		
0,98 - 5,02	25	0,98 - 1,02	3,98 - 4,02	103	
		1,98 - 2,02	4,98 - 5,02		
		2,98 - 3,02			
		5,00 - 5,02	10,00 - 10,02		
5,98 - 10,02	25	5,98 - 6,02	8,98 - 9,02	104	
		6,98 - 7,02	9,98 - 10,02		
		7,98 - 8,02			



13500



Type

- Similar to DIN 212
- With straight shank diameters
- Spiral flutes
- Right-hand cut.
- Due to the tool shanks' small tolerance zone h6, chucking accuracy is improved considerably.
- Manufacturing tolerance + 0.003/-0.

Use

The NC shank allows the direct use in hydraulic expanding chucks and high-precision chucks without adapters or special mounting clamps.

Quality
HSS-E.

Note:

Intermediate dimensions available on request.



13503



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	HSS-E	
				13503	...
0,98	6,0	34	1,0	101	
0,99	6,0	34	1,0	102	
1,00	6,0	34	1,0	103	
1,01	6,0	34	1,0	104	
1,02	6,0	34	1,0	105	
1,03	6,0	34	1,0	106	
1,48	8,0	40	2,0	107	
1,49	8,0	40	2,0	108	
1,50	8,0	40	2,0	109	
1,51	9,0	43	2,0	110	
1,52	9,0	43	2,0	111	
1,53	9,0	43	2,0	112	
1,98	11,0	49	2,0	113	
1,99	11,0	49	2,0	114	
2,00	11,0	49	2,0	115	
2,01	11,0	49	2,0	116	
2,02	11,0	49	2,0	117	
2,03	11,0	49	2,0	118	
2,48	14,0	57	3,0	119	
2,49	14,0	57	3,0	120	
2,50	14,0	57	3,0	121	
2,51	14,0	57	3,0	122	
2,52	14,0	57	3,0	123	
2,53	14,0	57	3,0	124	
2,97	15,0	61	3,0	125	
2,98	15,0	61	3,0	126	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	HSS-E	
				13503	...
2,99	15,0	61	3,0	127	
3,00	15,0	61	3,0	128	
3,01	15,0	61	3,0	129	
3,02	15,0	61	3,0	130	
3,03	15,0	61	3,0	131	
3,97	19,0	75	4,0	132	
3,98	19,0	75	4,0	133	
3,99	19,0	75	4,0	134	
4,00	19,0	75	4,0	135	
4,01	19,0	75	4,0	136	
4,02	19,0	75	4,0	137	
4,03	19,0	75	4,0	138	
4,97	23,0	86	5,0	139	
4,98	23,0	86	5,0	140	
4,99	23,0	86	5,0	141	
5,00	23,0	86	5,0	142	
5,01	23,0	86	5,0	143	
5,02	23,0	86	5,0	144	
5,03	23,0	86	5,0	145	
5,97	26,0	93	6,0	146	
5,98	26,0	93	6,0	147	
5,99	26,0	93	6,0	148	
6,00	26,0	93	6,0	149	
6,01	26,0	93	6,0	150	
6,02	26,0	93	6,0	151	
6,03	26,0	93	6,0	152	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	HSS-E	
				13503	...
7,97	33,0	117	8,0	153	
7,98	33,0	117	8,0	154	
7,99	33,0	117	8,0	155	
8,00	33,0	117	8,0	156	
8,01	33,0	117	8,0	157	
8,02	33,0	117	8,0	158	
8,03	33,0	117	8,0	159	
8,04	33,0	117	8,0	160	
9,97	38,0	133	10,0	161	
9,98	38,0	133	10,0	162	
9,99	38,0	133	10,0	163	
10,00	38,0	133	10,0	164	
10,01	38,0	133	10,0	165	
10,02	38,0	133	10,0	166	
10,03	38,0	133	10,0	167	
10,04	38,0	133	10,0	168	
10,05	38,0	133	10,0	169	
11,97	44,0	151	10,0	170	
11,98	44,0	151	10,0	171	
11,99	44,0	151	10,0	172	
12,00	44,0	151	10,0	173	
12,01	44,0	151	10,0	174	
12,02	44,0	151	10,0	175	
12,03	44,0	151	10,0	176	
12,04	44,0	151	10,0	177	
12,05	44,0	151	10,0	178	

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)	plastic
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14

13502

Solid Carbide NC Chucking Reamers

VHM

H7

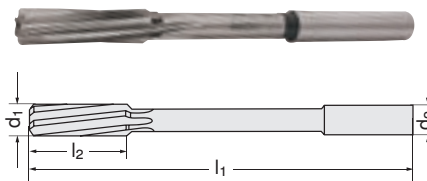


Type
Similar to DIN 8093. With straight shank, left-hand spiral flute, right-hand cut, **tolerance zone H7**. Due to the tool shanks' small **tolerance zone h6**, chucking accuracy is improved considerably.

Use
The NC shank allows the direct use in hydraulic expanding chucks and high-precision chucks without adapters or special mounting clamps.

Quality
Solid carbide, type K 10 Up to Ø 8 mm made of solid carbide, starting from Ø 8,5 mm with solid carbide tip and steel shank.

Note:
Intermediate dimensions available on request.



13502

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13502	...
1,0	6	34	1,0		101
1,2	6	34	1,0		105
1,4	8	40	2,0		106
1,5	8	40	2,0		107
1,6	9	43	2,0		111
1,8	10	46	2,0		113
2,0	11	49	2,0		118
2,2	12	53	3,0		123
2,5	14	57	3,0		129
2,8	15	61	3,0		135
3,0	15	61	3,0		140

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13502	...
3,2	16	65	4,0		145
3,5	18	70	4,0		148
4,0	19	75	4,0		156
4,5	21	80	5,0		164
5,0	23	86	5,0		172
5,5	26	93	6,0		180
6,0	26	93	6,0		188
6,5	28	101	6,0		196
7,0	31	109	8,0		201
8,0	33	117	8,0		214
9,0	36	125	10,0		222

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13502	...
10,0	38	133	10,0		243
11,0	41	142	10,0		247
12,0	44	151	10,0		251
13,0	44	151	10,0		252
14,0	47	160	14,0		253
15,0	50	162	14,0		254
16,0	52	170	14,0		255
17,0	54	175	14,0		256
18,0	56	182	14,0		257
19,0	58	189	16,0		258
20,0	60	195	16,0		259

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)	plastic
30-60	30-60	25-40	15-25	15-20	10-20	8-18	8-12	6-10	-	-	-	-	8-15	6-10	8-12	6-18	10-30

13512

Solid Carbide NC Chucking Reamers (1/100 Reamers)

VHM

1/100

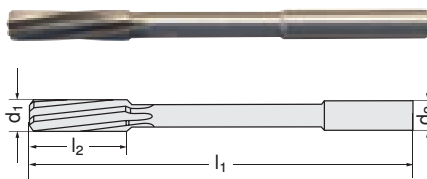


Type
Similar to DIN 8093. With even-numbered shank diameters, spiral flutes, right-hand cut. Due to the tool shanks' small **tolerance zone h6**, chucking accuracy is improved considerably.
Manufacturing tolerance + 0.003/0.

Use
Thanks to the NC shank, suitable for hydraulic expansion and high-precision chucks without adapter or special mounting clamps.

Quality
Solid carbide, type K 10

Note:
Intermediate dimensions available on request.



13512

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13512	...
0,98	6,0	34	1,0		101
0,99	6,0	34	1,0		102
1,00	6,0	34	1,0		103
1,01	6,0	34	1,0		104
1,02	6,0	34	1,0		105
1,03	6,0	34	1,0		106
1,48	8,0	40	2,0		107
1,49	8,0	40	2,0		108
1,50	8,0	40	2,0		109
1,51	9,0	43	2,0		110
1,52	9,0	43	2,0		111
1,53	9,0	43	2,0		112
1,98	11,0	49	2,0		113
1,99	11,0	49	2,0		114
2,00	11,0	49	2,0		115
2,01	11,0	49	2,0		116
2,02	11,0	49	2,0		117
2,03	11,0	49	2,0		118
2,48	14,0	57	3,0		119
2,49	14,0	57	3,0		120
2,50	14,0	57	3,0		121
2,51	14,0	57	3,0		122
2,52	14,0	57	3,0		123
2,53	14,0	57	3,0		124
2,97	15,0	61	3,0		125
2,98	15,0	61	3,0		126

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13512	...
2,99	15,0	61	3,0		127
3,00	15,0	61	3,0		128
3,01	15,0	61	3,0		129
3,02	15,0	61	3,0		130
3,03	15,0	61	3,0		131
3,97	19,0	75	3,0		132
3,98	19,0	75	3,0		133
3,99	19,0	75	3,0		134
4,00	19,0	75	4,0		135
4,01	19,0	75	4,0		136
4,02	19,0	75	4,0		137
4,03	19,0	75	4,0		138
4,97	23,0	86	5,0		139
4,98	23,0	86	5,0		140
4,99	23,0	86	5,0		141
5,00	23,0	86	5,0		142
5,01	23,0	86	5,0		143
5,02	23,0	86	5,0		144
5,03	23,0	86	5,0		145
5,97	26,0	93	5,0		146
5,98	26,0	93	6,0		147
5,99	26,0	93	6,0		148
6,00	26,0	93	6,0		149
6,01	26,0	93	6,0		150
6,02	26,0	93	6,0		151
6,03	26,0	93	6,0		152

Solid carbide					
d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h6 mm	13512	...
7,97	33,0	117	8,0		153
7,98	33,0	117	8,0		154
7,99	33,0	117	8,0		155
8,00	33,0	117	8,0		156
8,01	33,0	117	8,0		157
8,02	33,0	117	8,0		158
8,03	33,0	117	8,0		159
8,04	33,0	117	8,0		160
9,97	38,0	133	10,0		161
9,98	38,0	133	10,0		162
9,99	38,0	133	10,0		163
10,00	38,0	133	10,0		164
10,01	38,0	133	10,0		165
10,02	38,0	133	10,0		166
10,03	38,0	133	10,0		167
10,04	38,0	133	10,0		168
10,05	38,0	133	10,0		169
11,97	44,0	151	10,0		170
11,98	44,0	151	10,0		171
11,99	44,0	151	10,0		172
12,00	44,0	151	10,0		173
12,01	44,0	151	10,0		174
12,02	44,0	151	10,0		175
12,03	44,0	151	10,0		176
12,04	44,0	151	10,0		177
12,05	44,0	151	10,0		178

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)	plastic
30-60	30-60	25-40	15-25	15-20	10-20	8-18	8-12	6-10	-	-	-	-	8-15	6-10	8-12	6-18	10-30





Type

- Extremely stable connection due to **polygonal insert seat**

- Cutting plates for **through-holes and blind holes**

- Long **service life** and high **precision**

- High true-running accuracy

- Easy blade change

- The **inner coolant feed** is routed via a baffle plate directly in the first-cut area on the blades

- Good chip removal even in blind holes

Use

For a reduction of process time thanks to **highest cutting speeds, higher feed rates and larger volumes.**

Quality

Solid Carbide/TiAlN-coated.

13535

Polygon shanks

Use

For reamer heads cat. nr. 13538 - 13540.

13536

Clamping screws

13537

Impact discs

13538

Type

Left-hand twist for through-holes.

Use

For steel + VA-steel.

13539

Type

Straight flutes for blind holes.

Use

For steel + VA-steel.

13540

Type

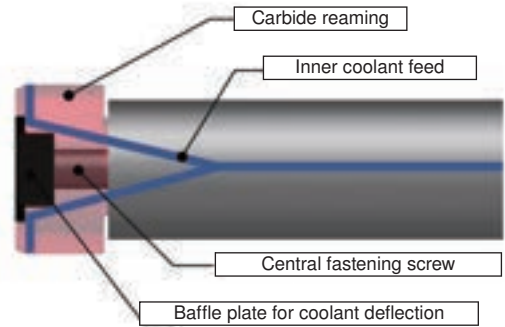
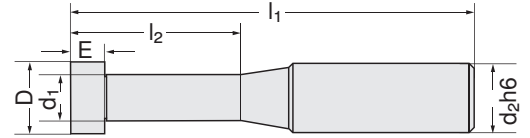
Straight flutes for through-holes.

Use

For aluminium + cast iron.

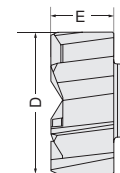


13535



Polygon shanks

Designation	Shank size	To drilling depth	D min. - max. mm	d ₂ h6 mm	d ₁ mm	E mm	l ₁ mm	l ₂ mm	Shank		Clamping screw		Impact disc	
									13535	...	13536	...	13537	...
RPS400J3D6	1	3 x D	12,00 - 16,20	16	11	9	110	38	101	...	101	...	101	...
RPS400J5D6	1	5 x D	12,00 - 16,20	16	11	9	140	68	102	...	101	...	101	...
RPS400M3D6	2	3 x D	16,21 - 20,20	20	14	9	125	50	103	...	102	...	102	...
RPS400M5D6	2	5 x D	16,21 - 20,20	20	14	9	175	100	104	...	102	...	102	...



13538 - 13540

Reamer heads

D mm	for shank size	E mm	Number of flutes	Through-holes steel+VA		Blind holes steel+VA		Through-holes aluminium+cast iron	
				13538	...	13539	...	13540	...
12	1	9	6	120	...	120	...	120	...
13	1	9	6	130	...	130	...	130	...
14	1	9	6	140	...	140	...	140	...
15	1	9	6	150	...	150	...	150	...
16	1	9	6	160	...	160	...	160	...
17	2	9	6	170	...	170	...	170	...
18	2	9	6	180	...	180	...	180	...
19	2	9	6	190	...	190	...	190	...
20	2	9	6	200	...	200	...	200	...

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)	plastic
200-400	200-40	50-250	100-250	100-250	20-50	20-50	20-50	20-50	-	-	-	-	15-40	10-30	-	60-200	-

Chucking reamers | High-Helix Taper Pin Reamers

13508

Sets Chucking Reamers

HSS-E HSS-E TiN H7

ATORN®

Type

- 7-part
- With straight shank
- Right-hand cut
- **Accuracy H7**

13508 101
Quality
HSS-E.

13508 102
Quality
HSS-E/TiN.

13508 102



Quality	Content 1 piece each Ø mm	Version	13508	...
HSS-E	3 / 4 / 5 / 6 / 8 / 10 / 12	in plastic cassette		101
HSS-E/TiN	3 / 4 / 5 / 6 / 8 / 10 / 12	in plastic cassette		102

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)	plastic
13508 101																	
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14
13508 102																	
14-20	14-20	14-20	10-20	8-15	8-12	4-6	4-6	3-5	-	-	-	-	-	-	4-6	4-14	20-60

13505 - 13507 Chucking Reamers DIN 212

H7

HHW

Type

- With straight shank (without square)
- Right-hand cut
- Spiral flutes
- Left-hand spiral 7 - 8°
- With short 45° first cut
- **Accuracy H7**
- For through holes and blind holes
- Even number of teeth
- Unequal tooth pitch (prevents chatter marks and ovalisation of the bore)

13505
Quality
HSS-E.

13507
Quality
HSS-E/TiN-coated.

13505

13507



Note:
Intermediate dimensions available on request.

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS-E		HSS-E/TiN	
				13505	...	13507	...
1,0	6	35	1,0		100		
1,5	8	40	1,5		101		
1,6	9	43	1,6		102		
1,8	10	46	1,8		103		
2,0	11	49	2,0		104		
2,2	12	53	2,2		105		
2,5	14	57	2,5		106		
2,8	15	61	2,8		107		
3,0	15	61	3,0		108		108
3,2	16	65	3,2		109		
3,5	18	70	3,5		110		
4,0	19	75	4,0		111		111
4,5	21	80	4,5		112		
5,0	23	86	5,0		113		113
6,0	26	93	5,6		114		114

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS-E		HSS-E/TiN	
				13505	...	13507	...
7,0	31	109	7,1		115		115
8,0	33	117	8,0		116		116
9,0	36	125	9,0		117		117
10,0	38	133	10,0		118		118
11,0	41	142	10,0		119		119
12,0	44	151	10,0		120		120
13,0	44	151	10,0		121		121
14,0	47	160	12,5		122		122
15,0	50	162	12,5		123		123
16,0	52	170	12,5		124		124
17,0	54	175	14,0		125		125
18,0	56	182	14,0		126		126
19,0	58	189	16,0		127		127
20,0	60	195	16,0		128		128

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)	plastic
13505																	
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14
13507																	
14-20	14-20	14-20	10-20	8-15	8-12	4-6	4-6	3-5	-	-	-	-	-	-	4-6	4-14	20-60

13482

Extra long chucking reamers similar to DIN 212

HSS-E H7



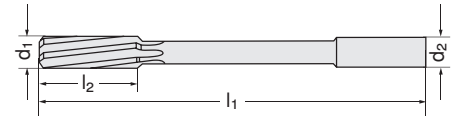
Type

- With straight shank
- Right-hand cut
- Spiral flutes
- Accuracy H7
- Similar to DIN 212

Quality
HSS-E.



13482



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ h9 mm	Max. reamer length mm	Blades	HSS-E 13482	...
2,0	11	65	2,0	45,0	4	101	
3,0	15	90	3,0	65,0	6	102	
4,0	19	105	4,0	70,0	6	103	
5,0	23	115	5,0	80,0	6	104	
6,0	26	130	6,0	90,0	6	105	
L 6,0	26	250	6,0	210,0	6	106	
8,0	33	160	8,0	115,0	6	107	
L 8,0	33	250	8,0	205,0	6	108	
10,0	38	190	10,0	140,0	6	109	
L 10,0	38	250	10,0	200,0	6	110	
12,0	44	210	12,0	160,0	6	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)	plastic
15-20	10-15	10-13	10-12	8-10	8-10	8-10	8-10	-	-	-	-	-	6-7	5-6	-	6-10	10-15

13509

High-Helix Chucking Reamers DIN 212

HSS-E H7



Type

- With straight shank (without square)
- Right-hand cut
- Left-hand spiral approx. 45°
- First cut approx. 1/6 of the cutting length
- Accuracy H7

Use

Particularly for long-chipping materials.

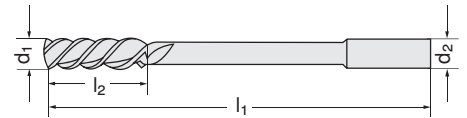
Quality
HSS-E.

Note:

Greater cutting power and longer tool life than standard reamers due to curling cut and large chip clearance. Up to double feed rates and higher cutting speeds. **High-helix taper reamers are not suitable for blind holes.** Intermediate dimensions available on request.



13509



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS-E 13509	...
2	11	49	2,0	101	
3	15	61	3,0	103	
4	19	75	4,0	105	
5	23	86	5,0	107	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	HSS-E 13509	...
6	26	93	5,6	108	
8	33	117	8,0	110	
10	38	133	10,0	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)	plastic
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14

13511

Carbide-Tipped Chucking Reamers DIN 8093

HM K10 H7



Type

- With straight shank and driver
- Right-hand cut
- Straight-fluted
- Lange HM blades
- Similar to DIN 212
- Accuracy H7

Use

For materials which cause high blade wear (grey cast iron, plastics). For through-holes and blind holes.

Quality
Carbide-tipped blades,
Type K 10.

Note:

Only use stable machines operating without chatter! Intermediate dimensions available on request.



13511



d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	Carbide-tipped 13511	...
6	30	93	5,6	102	
8	30	117	8,0	104	
10	45	133	10,0	106	

d ₁ mm	l ₂ mm	l ₁ mm	d ₂ mm	Carbide-tipped 13511	...
12	45	151	10,0	108	
14	45	160	12,5	110	
16	45	170	12,5	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)	plastic
14-20	14-20	14-20	10-20	8-15	8-12	4-6	4-6	3-5	-	-	-	-	-	-	4-6	4-14	20-60



13518

Carbide-Tipped Chucking Reamers DIN 8051

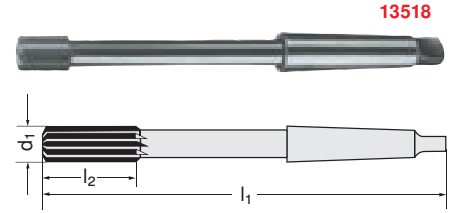
HM K10 H7



- Type**
- With Morse taper shank
 - Straight-fluted
 - Right-hand cut
 - **Short blades**
 - **Accuracy H7**

Quality
Carbide-tipped blades, quality K 10.

Note:
*d₁ 5-7 mm not standardised.
Intermediate dimensions available on request.*



13518

Carbide-tipped

d ₁ mm	l ₂ mm	l ₁ mm	shank MT	13518	...
5	12	133	1	101	
6	12	138	1	102	
7	16	150	1	103	
8	16	156	1	104	
9	19	162	1	105	
10	19	168	1	106	
11	19	175	1	107	
12	19	182	1	108	
13	19	182	1	109	
14	19	189	1	110	
15	19	204	2	111	
16	22	210	2	112	
17	22	214	2	113	
18	22	219	2	114	
19	22	223	2	115	
20	22	228	2	116	
21	25	232	2	117	

Carbide-tipped

d ₁ mm	l ₂ mm	l ₁ mm	shank MT	13518	...
22	25	237	2	118	
23	25	241	2	119	
24	25	268	3	120	
25	25	268	3	121	
26	25	273	3	122	
27	30	277	3	123	
28	30	277	3	124	
29	30	281	3	125	
30	30	281	3	126	
31	30	285	3	127	
32	30	317	4	128	
34	30	321	4	129	
35	30	321	4	130	
36	30	325	4	131	
38	30	329	4	132	
40	30	329	4	133	

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)	plastic
14-20	14-20	14-20	10-20	8-15	8-12	4-6	4-6	3-5	-	-	-	-	-	-	4-6	4-14	20-60

13521

Chucking Reamers DIN 208

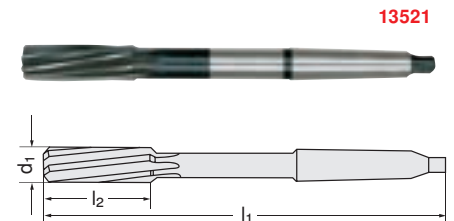
HSS-E H7



- Type**
- With Morse taper shank
 - Right-hand cut
 - Left-hand spiral approx. 7-8°
 - **Accuracy H7**

Quality
HSS-E.

Note:
Intermediate dimensions available on request.



13521

HSS-E

d ₁ mm	l ₂ mm	l ₁ mm	shank MT	13521	...
5	23	133	1	101	
6	26	138	1	102	
7	31	150	1	103	
8	33	156	1	104	
9	36	162	1	105	
10	38	168	1	106	
11	41	175	1	107	
12	44	182	1	108	
13	44	182	1	109	
14	47	189	1	110	
15	50	204	2	111	
16	52	210	2	112	
17	54	214	2	113	
18	56	219	2	114	
19	58	223	2	115	
20	60	228	2	116	
21	62	232	2	117	

HSS-E

d ₁ mm	l ₂ mm	l ₁ mm	shank MT	13521	...
22	64	237	2	118	
23	66	241	2	119	
24	68	268	3	120	
25	68	268	3	121	
26	70	273	3	122	
27	71	277	3	123	
28	71	277	3	124	
29	73	281	3	125	
30	73	281	3	126	
31	75	285	3	127	
32	77	317	4	128	
35	78	321	4	129	
40	81	329	4	130	
42	82	333	4	131	
45	83	336	4	132	
50	86	344	4	134	

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)	plastic
14-20	14-20	14-20	10-15	10-13	8-12	4-6	4-6	-	-	-	-	-	-	-	4-6	4-14	8-14





Type

- With conical bore 1:30 and transverse flute in accordance with DIN 138
- Right-hand cut
- Left-hand spiral 7-8°
- First cut 45°

- Accuracy H7

- Cylindrical grinding chamfer

Quality

HSS-E.

13820

Arbors

Type

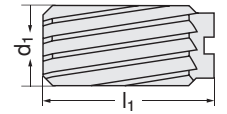
- With Morse taper shaft and tang in accordance with DIN 228 B
- Mounting shank 1:30
- Complete with jacknut, driver ring and feather key
- Completely hardened and ground

Use

For mounting of detachable reamers (cat.-no. 13811).



13811



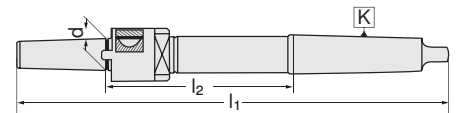
Note:

Intermediate dimensions available on request.

d ₁ mm	l ₁ mm	for holder size	Reamer	
			13811	...
25	45	2	108	108
26	45	2	109	109
27	45	2	110	110
28	45	2	111	111
30	45	2	113	113
32	50	3	115	115
34	50	3	117	117
35	50	3	118	118
36	56	4	119	119
38	56	4	121	121
40	56	4	122	122
42	56	4	123	123
44	63	5	124	124
45	63	5	125	125
48	63	5	128	128
50	63	5	129	129



13820



Size	d mm	l ₂ mm	l ₁ mm	Shank MT	Arbors	
					13820	...
2	13	111,9	250	3	102	102
3	16	117,9	261	3	103	103
4	19	125,6	298	4	104	104
5	22	132,6	312	4	105	105

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)	plastic
14-20	14-20	14-20	10-20	8-15	8-12	4-6	4-6	3-5	-	-	-	-	-	-	4-6	4-14	20-60

13902

Sets of Jet Reamers

Type

Five-edged, taper 1:100,
Set = 12 pcs., ranging from 0,5 - 2,0 mm Ø,
with tool holder, in plastic sleeve.

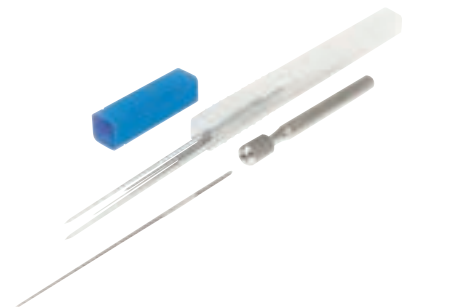
Use

For cleaning jets.

Quality

Special steel.

13902



Set contents	13902	...
12-part	101	

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