



Tooth shape A
Fine-toothed



Tooth shape B
Coarse-toothed



Tooth shape BW
Coarse-toothed,
alternate
bevel



Tooth shape C
High-performance toothing (HZ)
with pre- and
post-cutting edge

17002

Metal circular saw blades, DIN 1837 A

HSS



Design

Tooth shape A, DIN 1840, fine-toothed, hollow ground.

Applications

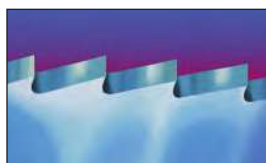
Low tooth pitches with small chip pockets for shallow cuts and thin-walled workpieces (1–5 mm) only. Particularly suitable for processing brittle, short-chipping materials.

Quality

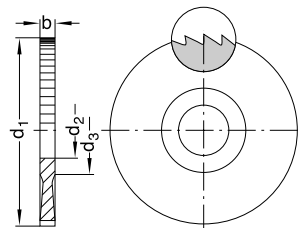
HSS.

Note:

For saw blade holders see art. no. 21636.



Tooth shape A



17002

d ₁ x b x d ₂ mm	No. of teeth	17002	...
20 x 0.20 x 5	80	101	
20 x 0.25 x 5	64	102	
20 x 0.30 x 5	64	103	
20 x 0.40 x 5	64	104	
20 x 0.50 x 5	48	105	
20 x 0.60 x 5	48	106	
20 x 0.80 x 5	48	107	
20 x 1.00 x 5	40	108	
20 x 1.20 x 5	40	109	
20 x 1.60 x 5	40	110	
20 x 2.00 x 5	32	111	
20 x 3.00 x 5	32	113	
25 x 0.20 x 8	80	117	
25 x 0.25 x 8	80	118	
25 x 0.30 x 8	80	119	
25 x 0.40 x 8	64	120	
25 x 0.50 x 8	64	121	
25 x 1.00 x 8	48	124	
25 x 1.20 x 8	48	125	
25 x 1.60 x 8	40	126	
25 x 2.00 x 8	40	127	
25 x 2.50 x 8	40	128	
25 x 3.00 x 8	32	129	
32 x 0.20 x 8	100	133	
32 x 0.25 x 8	100	134	
32 x 0.30 x 8	80	135	
32 x 0.40 x 8	80	136	
32 x 0.50 x 8	80	137	
32 x 0.60 x 8	64	138	
32 x 0.80 x 8	64	139	
32 x 1.00 x 8	64	140	
32 x 1.20 x 8	48	141	
32 x 1.60 x 8	48	142	
32 x 2.00 x 8	48	143	
32 x 2.50 x 8	40	144	
32 x 3.00 x 8	40	145	
40 x 0.20 x 10	128	149	
40 x 0.25 x 10	100	150	

d ₁ x b x d ₂ mm	No. of teeth	17002	...
40 x 0.30 x 10	100	151	
40 x 0.40 x 10	100	152	
40 x 0.50 x 10	80	153	
40 x 0.60 x 10	80	154	
40 x 0.80 x 10	80	155	
40 x 1.00 x 10	64	156	
40 x 1.20 x 10	64	157	
40 x 1.60 x 10	64	158	
40 x 2.00 x 10	48	159	
40 x 2.50 x 10	48	160	
40 x 3.00 x 10	48	161	
50 x 0.20 x 13	128	165	
50 x 0.25 x 13	128	166	
50 x 0.30 x 13	128	167	
50 x 0.40 x 13	100	168	
50 x 0.50 x 13	100	169	
50 x 0.60 x 13	100	170	
50 x 0.80 x 13	80	171	
50 x 1.00 x 13	80	172	
50 x 1.20 x 13	80	173	
50 x 1.60 x 13	64	174	
50 x 2.00 x 13	64	175	
50 x 2.50 x 13	64	176	
50 x 3.00 x 13	48	177	
63 x 0.30 x 16	128	183	
63 x 0.40 x 16	128	184	
63 x 0.50 x 16	128	185	
63 x 0.80 x 16	100	187	
63 x 1.00 x 16	100	188	
63 x 1.20 x 16	80	189	
63 x 1.60 x 16	80	190	
63 x 2.00 x 16	80	191	
63 x 2.50 x 16	64	192	
63 x 3.00 x 16	64	193	
63 x 4.00 x 16	64	194	
63 x 6.00 x 16	48	196	
80 x 0.30 x 22	160	199	
80 x 0.40 x 22	160	200	

d ₁ x b x d ₂ mm	No. of teeth	17002	...
80 x 0.50 x 22	128	201	
80 x 0.80 x 22	128	203	
80 x 1.00 x 22	100	204	
80 x 1.20 x 22	100	205	
80 x 1.60 x 22	100	206	
80 x 2.00 x 22	80	207	
80 x 2.50 x 22	80	208	
80 x 3.00 x 22	80	209	
80 x 4.00 x 22	64	210	
80 x 6.00 x 22	64	212	
100 x 0.50 x 22	160	217	
100 x 0.80 x 22	128	219	
100 x 1.00 x 22	128	220	
100 x 1.20 x 22	128	221	
100 x 1.60 x 22	100	222	
100 x 2.00 x 22	100	223	
100 x 2.50 x 22	100	224	
100 x 3.00 x 22	80	225	
100 x 4.00 x 22	80	226	
100 x 6.00 x 22	64	228	
125 x 0.60 x 22	160	234	
125 x 0.80 x 22	160	235	
125 x 1.00 x 22	160	236	
125 x 1.20 x 22	128	237	
125 x 1.60 x 22	128	238	
125 x 2.00 x 22	128	239	
125 x 2.50 x 22	100	240	
125 x 3.00 x 22	100	241	
125 x 4.00 x 22	100	242	
125 x 6.00 x 22	80	244	
160 x 1.00 x 32	160	252	
160 x 1.20 x 32	160	253	
160 x 1.60 x 32	160	254	
160 x 2.00 x 32	128	255	
160 x 2.50 x 32	128	256	
160 x 3.00 x 32	128	257	
160 x 4.00 x 32	100	258	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
-	-	-	45–50	40–45	35–40	30–35	25–30	-	-	-	-	-	25–30	20–25	-	25–40	-

17005

Metal circular saw blades, DIN 1838 B

HSS



Design

Tooth shape B, DIN 1840, coarse-toothed, hollow ground.

Applications

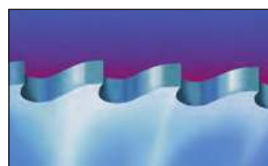
For medium and deep cuts in thicker workpieces (3 mm and above); larger, well-designed chip pockets enable universal use.

Quality

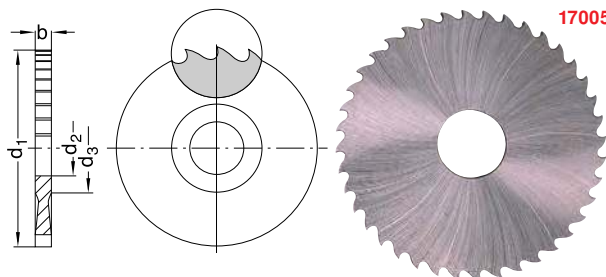
HSS.

Note:

For saw blade holders see art. no. 21636.



Tooth shape B



17005

d ₁ x b x d ₂ mm	No. of teeth	17005	...
50 x 1.0 x 13	40	101	
50 x 1.2 x 13	40	102	
50 x 1.6 x 13	32	103	
50 x 2.0 x 13	32	104	
50 x 3.0 x 13	24	106	
50 x 4.0 x 13	24	107	
63 x 1.0 x 16	48	110	
63 x 1.2 x 16	40	111	
63 x 1.6 x 16	40	112	
63 x 2.0 x 16	40	113	
63 x 3.0 x 16	32	115	
63 x 4.0 x 16	32	116	
63 x 5.0 x 16	24	117	
63 x 6.0 x 16	24	118	
80 x 1.0 x 22	48	119	
80 x 1.2 x 22	48	120	
80 x 1.6 x 22	48	121	
80 x 2.0 x 22	40	122	

d ₁ x b x d ₂ mm	No. of teeth	17005	...
80 x 3.0 x 22	40	124	
80 x 4.0 x 22	32	125	
80 x 5.0 x 22	32	126	
80 x 6.0 x 22	32	127	
100 x 1.0 x 22	64	128	
100 x 1.2 x 22	64	129	
100 x 1.6 x 22	48	130	
100 x 2.0 x 22	48	131	
100 x 3.0 x 22	40	133	
100 x 4.0 x 22	40	134	
100 x 5.0 x 22	40	135	
100 x 6.0 x 22	32	136	
125 x 1.0 x 22	80	137	
125 x 1.2 x 22	64	138	
125 x 1.6 x 22	64	139	
125 x 2.0 x 22	64	140	
125 x 3.0 x 22	48	142	
125 x 4.0 x 22	48	143	

d ₁ x b x d ₂ mm	No. of teeth	17005	...
125 x 5.0 x 22	40	144	
160 x 1.0 x 32	80	146	
160 x 1.6 x 32	80	148	
160 x 2.0 x 32	64	149	
160 x 3.0 x 32	64	151	
160 x 4.0 x 32	48	152	
160 x 5.0 x 32	48	153	
200 x 1.0 x 32	100	155	
200 x 1.6 x 32	80	157	
200 x 2.0 x 32	80	158	
200 x 3.0 x 32	64	160	
200 x 4.0 x 32	64	161	
200 x 5.0 x 32	64	162	
250 x 1.6 x 32	100	166	
250 x 2.0 x 32	100	167	
250 x 3.0 x 32	80	169	
250 x 4.0 x 32	80	170	
250 x 5.0 x 32	64	171	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
80-140	50-80	30-50	32-35	28-32	25-30	25-28	20-25	15-20	-	-	-	-	25-30	20-25	-	25-40	60-100

17008

Metal circular saw blades, DIN 1838 C

HSS



Design

Tooth shape C, DIN 1840, hollow ground, high-performance toothing (HZ) with pre- and post-cutters. Depending on the tooth pitch, the pre-cutters are up to 0.3 mm higher than the post-cutters and thus only suitable for continuous cuts, otherwise a step is formed at the bottom of the cut by the pre-cutting edge. Chip-separating tooth shape for outstanding cutting performance.

Applications

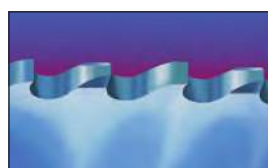
For medium and deep cuts in thicker workpieces (3 mm and above). Particularly suitable for materials with low to medium strength.

Quality

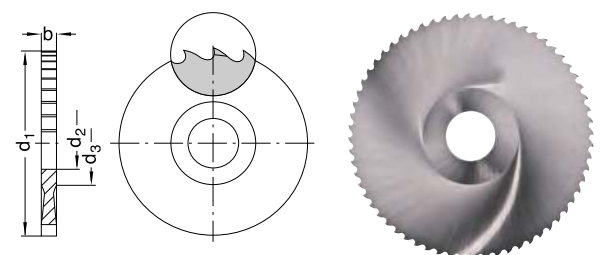
HSS.

Note:

For saw blade holders see art. no. 21636.



Tooth shape C



17008

d ₁ x b x d ₂ mm	No. of teeth	17008	...
50 x 1.0 x 13	40	101	
50 x 1.2 x 13	40	102	
50 x 1.6 x 13	32	103	
50 x 2.0 x 13	32	104	
63 x 1.0 x 16	48	110	
63 x 1.6 x 16	40	112	
63 x 2.0 x 16	40	113	
63 x 3.0 x 16	32	115	
63 x 4.0 x 16	32	116	
80 x 1.0 x 22	48	119	
80 x 1.6 x 22	48	121	
80 x 2.0 x 22	40	122	

d ₁ x b x d ₂ mm	No. of teeth	17008	...
80 x 3.0 x 22	40	124	
80 x 4.0 x 22	32	125	
100 x 1.0 x 22	64	128	
100 x 1.6 x 22	48	130	
100 x 2.0 x 22	48	131	
100 x 2.5 x 22	48	132	
100 x 3.0 x 22	40	133	
100 x 4.0 x 22	40	134	
125 x 1.0 x 22	80	137	
125 x 1.6 x 22	64	139	
125 x 2.0 x 22	64	140	
125 x 2.5 x 22	48	141	

d ₁ x b x d ₂ mm	No. of teeth	17008	...
125 x 3.0 x 22	48	142	
125 x 4.0 x 22	48	143	
160 x 1.2 x 32	80	147	
160 x 1.6 x 32	80	148	
160 x 2.0 x 32	64	149	
160 x 3.0 x 32	64	151	
200 x 1.6 x 32	80	157	
200 x 2.0 x 32	80	158	
200 x 3.0 x 32	64	160	
250 x 1.6 x 32	100	166	
250 x 2.0 x 32	100	167	
250 x 3.0 x 32	80	169	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
80-140	50-80	30-50	32-35	28-32	-	-	-	-	-	-	-	-	-	-	-	-	60-100

ATORN®**Design**

- Curved tooth shape B
- Coarse-toothed
- Laterally hollow ground
- Bore without wedge taper
- Tolerance: $d_1 = j15$, $b = j11$, $d_2 = H6$

Applications

For larger cross-sections and greater cutting depths.
Better chip formation than with fine-toothed versions.

Quality

Solid carbide.

Note:

Cutting speed 3–5 times higher than with HSS saw blades.

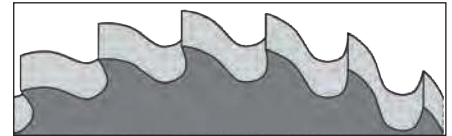
The advantages are shorter processing times, a longer service life and clean cutting surfaces.

Prerequisites are stable machine conditions,
good workpiece clamping and coolant supply.

NEW

17030

Tooth shape B, coarse-toothed



$d_1 \times b \times d_2$ mm	No. of teeth	17030	...
15 x 0.2 x 5	20	500	
15 x 0.25 x 5	20	501	
15 x 0.3 x 5	20	502	
15 x 0.35 x 5	20	503	
15 x 0.4 x 5	20	504	
15 x 0.5 x 5	20	505	
15 x 0.6 x 5	20	506	
15 x 0.7 x 5	20	507	
15 x 0.8 x 5	20	508	
15 x 0.9 x 5	20	509	
15 x 1.0 x 5	20	510	
15 x 1.1 x 5	20	511	
15 x 1.2 x 5	20	512	
15 x 1.3 x 5	20	513	
15 x 1.4 x 5	20	514	
15 x 1.5 x 5	20	515	
15 x 1.6 x 5	20	516	
15 x 1.7 x 5	20	517	
15 x 1.8 x 5	20	518	
15 x 1.9 x 5	20	519	
15 x 2.0 x 5	20	520	
15 x 2.5 x 5	20	521	
15 x 3.0 x 5	20	522	
15 x 3.5 x 5	20	523	
15 x 4.0 x 5	20	524	
15 x 4.5 x 5	20	525	
15 x 5.0 x 5	20	526	
15 x 5.5 x 5	20	527	
15 x 6.0 x 5	20	528	
20 x 0.2 x 5	20	529	
20 x 0.25 x 5	20	530	
20 x 0.3 x 5	20	531	
20 x 0.35 x 5	20	532	
20 x 0.4 x 5	20	533	
20 x 0.5 x 5	20	534	
20 x 0.6 x 5	20	535	
20 x 0.7 x 5	20	536	
20 x 0.8 x 5	20	537	
20 x 0.9 x 5	20	538	
20 x 1.0 x 5	20	539	
20 x 1.1 x 5	20	540	
20 x 1.2 x 5	20	541	
20 x 1.3 x 5	20	542	

$d_1 \times b \times d_2$ mm	No. of teeth	17030	...
20 x 1.4 x 5	20	543	
20 x 1.5 x 5	20	544	
20 x 1.6 x 5	20	545	
20 x 1.7 x 5	20	546	
20 x 1.8 x 5	20	547	
20 x 1.9 x 5	20	548	
20 x 2.0 x 5	20	549	
20 x 2.5 x 5	20	550	
20 x 3.0 x 5	20	551	
20 x 3.5 x 5	20	552	
20 x 4.0 x 5	20	553	
20 x 4.5 x 5	20	554	
20 x 5.0 x 5	20	555	
20 x 5.5 x 5	20	556	
20 x 6.0 x 5	20	557	
25 x 0.2 x 8	20	558	
25 x 0.25 x 8	20	559	
25 x 0.3 x 8	20	560	
25 x 0.35 x 8	20	561	
25 x 0.4 x 8	20	562	
25 x 0.5 x 8	20	563	
25 x 0.6 x 8	20	564	
25 x 0.7 x 8	20	565	
25 x 0.8 x 8	20	566	
25 x 0.9 x 8	20	567	
25 x 1.0 x 8	20	568	
25 x 1.1 x 8	20	569	
25 x 1.2 x 8	20	570	
25 x 1.3 x 8	20	571	
25 x 1.4 x 8	20	572	
25 x 1.5 x 8	20	573	
25 x 1.6 x 8	20	574	
25 x 1.7 x 8	20	575	
25 x 1.8 x 8	20	576	
25 x 1.9 x 8	20	577	
25 x 2.0 x 8	20	578	
25 x 2.5 x 8	20	579	
25 x 3.0 x 8	20	580	
25 x 3.5 x 8	20	581	
25 x 4.0 x 8	20	582	
25 x 4.5 x 8	20	583	
25 x 5.0 x 8	20	584	
25 x 5.5 x 8	20	585	

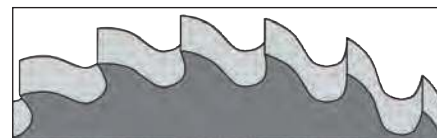
$d_1 \times b \times d_2$ mm	No. of teeth	17030	...
25 x 6.0 x 8	20	586	
30 x 0.2 x 8	30	587	
30 x 0.25 x 8	30	588	
30 x 0.3 x 8	30	589	
30 x 0.35 x 8	30	590	
30 x 0.4 x 8	30	591	
30 x 0.5 x 8	30	592	
30 x 0.6 x 8	30	593	
30 x 0.7 x 8	30	594	
30 x 0.8 x 8	24	595	
30 x 0.9 x 8	24	596	
30 x 1.0 x 8	24	597	
30 x 1.1 x 8	24	598	
30 x 1.2 x 8	24	599	
30 x 1.3 x 8	24	600	
30 x 1.4 x 8	24	601	
30 x 1.5 x 8	24	602	
30 x 1.6 x 8	24	603	
30 x 1.7 x 8	24	604	
30 x 1.8 x 8	24	605	
30 x 1.9 x 8	24	606	
30 x 2.0 x 8	24	607	
30 x 2.5 x 8	24	608	
30 x 3.0 x 8	24	609	
30 x 3.5 x 8	24	610	
30 x 4.0 x 8	24	611	
30 x 4.5 x 8	24	612	
30 x 5.0 x 8	24	613	
30 x 5.5 x 8	24	614	
30 x 6.0 x 8	24	615	
40 x 0.2 x 10	40	616	
40 x 0.25 x 10	40	617	
40 x 0.3 x 10	40	618	
40 x 0.35 x 10	40	619	
40 x 0.4 x 10	40	620	
40 x 0.5 x 10	40	621	
40 x 0.6 x 10	40	622	
40 x 0.7 x 10	40	623	
40 x 0.8 x 10	32	624	
40 x 0.9 x 10	32	625	
40 x 1.0 x 10	32	626	
40 x 1.1 x 10	32	627	
40 x 1.2 x 10	32	628	

Continued

Continued



Tooth shape B, coarse-toothed



d ₁ x b x d ₂ mm	No. of teeth	17030	...	d ₁ x b x d ₂ mm	No. of teeth	17030	...	d ₁ x b x d ₂ mm	No. of teeth	17030	...
40 x 1.3 x 10	32	629		63 x 1.1 x 16	40	683		100 x 1.4 x 22	48	737	
40 x 1.4 x 10	32	630		63 x 1.2 x 16	40	684		100 x 1.5 x 22	48	738	
40 x 1.5 x 10	32	631		63 x 1.3 x 16	40	685		100 x 1.6 x 22	48	739	
40 x 1.6 x 10	32	632		63 x 1.4 x 16	40	686		100 x 1.7 x 22	48	740	
40 x 1.7 x 10	32	633		63 x 1.5 x 16	40	687		100 x 1.8 x 22	48	741	
40 x 1.8 x 10	32	634		63 x 1.6 x 16	40	688		100 x 1.9 x 22	48	742	
40 x 1.9 x 10	32	635		63 x 1.7 x 16	40	689		100 x 2.0 x 22	48	743	
40 x 2.0 x 10	32	636		63 x 1.8 x 16	40	690		100 x 2.5 x 22	48	744	
40 x 2.5 x 10	32	637		63 x 1.9 x 16	40	691		100 x 3.0 x 22	40	745	
40 x 3.0 x 10	32	638		63 x 2.0 x 16	40	692		100 x 3.5 x 22	40	746	
40 x 3.5 x 10	32	639		63 x 2.5 x 16	32	693		100 x 4.0 x 22	40	747	
40 x 4.0 x 10	32	640		63 x 3.0 x 16	32	694		100 x 4.5 x 22	40	748	
40 x 4.5 x 10	32	641		63 x 3.5 x 16	32	695		100 x 5.0 x 22	40	749	
40 x 5.0 x 10	32	642		63 x 4.0 x 16	32	696		100 x 5.5 x 22	32	750	
40 x 5.5 x 10	32	643		63 x 4.5 x 16	32	697		100 x 6.0 x 22	32	751	
40 x 6.0 x 10	32	644		63 x 5.0 x 16	24	698		125 x 0.6 x 22	80	752	
50 x 0.2 x 13	48	645		63 x 5.5 x 16	24	699		125 x 0.7 x 22	80	753	
50 x 0.25 x 13	48	646		63 x 6.0 x 16	24	700		125 x 0.8 x 22	80	754	
50 x 0.3 x 13	48	647		80 x 0.3 x 22	64	701		125 x 0.9 x 22	80	755	
50 x 0.35 x 13	48	648		80 x 0.35 x 22	64	702		125 x 1.0 x 22	80	756	
50 x 0.4 x 13	48	649		80 x 0.4 x 22	64	703		125 x 1.1 x 22	64	757	
50 x 0.5 x 13	48	650		80 x 0.5 x 22	64	704		125 x 1.2 x 22	64	758	
50 x 0.6 x 13	48	651		80 x 0.6 x 22	64	705		125 x 1.3 x 22	64	759	
50 x 0.7 x 13	40	652		80 x 0.7 x 22	64	706		125 x 1.4 x 22	64	760	
50 x 0.8 x 13	40	653		80 x 0.8 x 22	64	707		125 x 1.5 x 22	64	761	
50 x 0.9 x 13	40	654		80 x 0.9 x 22	48	708		125 x 1.6 x 22	64	762	
50 x 1.0 x 13	40	655		80 x 1.0 x 22	48	709		125 x 1.7 x 22	64	763	
50 x 1.1 x 13	40	656		80 x 1.1 x 22	48	710		125 x 1.8 x 22	64	764	
50 x 1.2 x 13	40	657		80 x 1.2 x 22	48	711		125 x 1.9 x 22	64	765	
50 x 1.3 x 13	32	658		80 x 1.3 x 22	48	712		125 x 2.0 x 22	64	766	
50 x 1.4 x 13	32	659		80 x 1.4 x 22	48	713		125 x 2.5 x 22	48	767	
50 x 1.5 x 13	32	660		80 x 1.5 x 22	48	714		125 x 3.0 x 22	48	768	
50 x 1.6 x 13	32	661		80 x 1.6 x 22	48	715		125 x 3.5 x 22	48	769	
50 x 1.7 x 13	32	662		80 x 1.7 x 22	40	716		125 x 4.0 x 22	48	770	
50 x 1.8 x 13	32	663		80 x 1.8 x 22	40	717		125 x 4.5 x 22	40	771	
50 x 1.9 x 13	32	664		80 x 1.9 x 22	40	718		125 x 5.0 x 22	40	772	
50 x 2.0 x 13	32	665		80 x 2.0 x 22	40	719		125 x 5.5 x 22	40	773	
50 x 2.5 x 13	32	666		80 x 2.5 x 22	40	720		125 x 6.0 x 22	40	774	
50 x 3.0 x 13	24	667		80 x 3.0 x 22	40	721		160 x 1.0 x 32	80	783	
50 x 3.5 x 13	24	668		80 x 3.5 x 22	32	722		160 x 1.2 x 32	80	784	
50 x 4.0 x 13	24	669		80 x 4.0 x 22	32	723		160 x 1.5 x 32	80	785	
50 x 4.5 x 13	24	670		80 x 4.5 x 22	32	724		160 x 1.6 x 32	80	786	
50 x 5.0 x 13	24	671		80 x 5.0 x 22	32	725		160 x 2.0 x 32	64	787	
50 x 5.5 x 13	20	672		80 x 5.5 x 22	32	726		160 x 2.5 x 32	64	788	
50 x 6.0 x 13	20	673		80 x 6.0 x 22	32	727		160 x 3.0 x 32	64	789	
63 x 0.3 x 16	64	674		100 x 0.5 x 22	80	728		160 x 4.0 x 32	48	790	
63 x 0.35 x 16	64	675		100 x 0.6 x 22	80	729		200 x 1.5 x 32	80	791	
63 x 0.4 x 16	64	676		100 x 0.7 x 22	80	730		200 x 1.6 x 32	80	792	
63 x 0.5 x 16	64	677		100 x 0.8 x 22	64	731		200 x 2.0 x 32	80	793	
63 x 0.6 x 16	48	678		100 x 0.9 x 22	64	732		200 x 2.5 x 32	80	794	
63 x 0.7 x 16	48	679		100 x 1.0 x 22	64	733		200 x 3.0 x 32	64	795	
63 x 0.8 x 16	48	680		100 x 1.1 x 22	64	734		200 x 4.0 x 32	64	796	
63 x 0.9 x 16	48	681		100 x 1.2 x 22	64	735					
63 x 1.0 x 16	48	682		100 x 1.3 x 22	48	736					

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
400-1000	400-800	150-600	100-180	100-180	100-180	60-120	40-80	20-60	-	-	-	-	60-160	60-160	20-60	100-150	150-1000



ATORN®**Design**

- Angular tooth shape A
- Fine-toothed
- Laterally hollow ground
- Bore without wedge taper
- Tolerance: $d_1 = j15$, $b = j11$, $d_2 = H6$

Applications

For thin-walled work pieces and shallow cutting depths.

Quality

Solid carbide.

Note:

Cutting speed 3–5 times higher than with HSS saw blades.

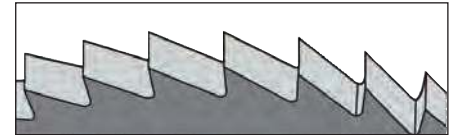
The advantages are shorter processing times, a longer service life and clean cutting surfaces.

Prerequisites are stable machine conditions, good workpiece clamping and coolant supply.

NEW

17031

Tooth shape A, fine-toothed



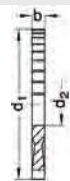
$d_1 \times b \times d_2$ mm	No. of teeth	17031	...
15 x 0.1 x 5	64	500	
15 x 0.15 x 5	64	501	
15 x 0.2 x 5	64	502	
15 x 0.25 x 5	64	503	
15 x 0.3 x 5	64	504	
15 x 0.35 x 5	64	505	
15 x 0.4 x 5	64	506	
15 x 0.5 x 5	48	507	
15 x 0.6 x 5	48	508	
15 x 0.7 x 5	48	509	
15 x 0.8 x 5	40	510	
15 x 0.9 x 5	40	511	
15 x 1.0 x 5	40	512	
15 x 1.1 x 5	40	513	
15 x 1.2 x 5	40	514	
15 x 1.3 x 5	40	515	
15 x 1.4 x 5	40	516	
15 x 1.5 x 5	40	517	
15 x 1.6 x 5	40	518	
15 x 1.7 x 5	40	519	
15 x 1.8 x 5	40	520	
15 x 1.9 x 5	40	521	
15 x 2.0 x 5	40	522	
15 x 2.5 x 5	40	523	
15 x 3.0 x 5	40	524	
15 x 3.5 x 5	40	525	
15 x 4.0 x 5	40	526	
15 x 4.5 x 5	40	527	
15 x 5.0 x 5	40	528	
15 x 5.5 x 5	40	529	
15 x 6.0 x 5	40	530	
20 x 0.1 x 5	80	531	
20 x 0.15 x 5	80	532	
20 x 0.2 x 5	80	533	
20 x 0.25 x 5	64	534	
20 x 0.3 x 5	64	535	
20 x 0.35 x 5	64	536	
20 x 0.4 x 5	64	537	
20 x 0.5 x 5	48	538	
20 x 0.6 x 5	48	539	
20 x 0.7 x 5	48	540	
20 x 0.8 x 5	48	541	
20 x 0.9 x 5	40	542	
20 x 1.0 x 5	40	543	
20 x 1.1 x 5	40	544	

$d_1 \times b \times d_2$ mm	No. of teeth	17031	...
20 x 1.2 x 5	40	545	
20 x 1.3 x 5	40	546	
20 x 1.4 x 5	40	547	
20 x 1.5 x 5	40	548	
20 x 1.6 x 5	40	549	
20 x 1.7 x 5	40	550	
20 x 1.8 x 5	32	551	
20 x 1.9 x 5	32	552	
20 x 2.0 x 5	32	553	
20 x 2.5 x 5	32	554	
20 x 3.0 x 5	32	555	
20 x 3.5 x 5	24	556	
20 x 4.0 x 5	24	557	
20 x 4.5 x 5	24	558	
20 x 5.0 x 5	24	559	
20 x 5.5 x 5	24	560	
20 x 6.0 x 5	24	561	
25 x 0.1 x 8	80	562	
25 x 0.15 x 8	80	563	
25 x 0.2 x 8	80	564	
25 x 0.25 x 8	80	565	
25 x 0.3 x 8	80	566	
25 x 0.35 x 8	64	567	
25 x 0.4 x 8	64	568	
25 x 0.5 x 8	64	569	
25 x 0.6 x 8	64	570	
25 x 0.7 x 8	48	571	
25 x 0.8 x 8	48	572	
25 x 0.9 x 8	48	573	
25 x 1.0 x 8	48	574	
25 x 1.1 x 8	48	575	
25 x 1.2 x 8	48	576	
25 x 1.3 x 8	40	577	
25 x 1.4 x 8	40	578	
25 x 1.5 x 8	40	579	
25 x 1.6 x 8	40	580	
25 x 1.7 x 8	40	581	
25 x 1.8 x 8	40	582	
25 x 1.9 x 8	40	583	
25 x 2.0 x 8	40	584	
25 x 2.5 x 8	40	585	
25 x 3.0 x 8	32	586	
25 x 3.5 x 8	32	587	
25 x 4.0 x 8	32	588	
25 x 4.5 x 8	32	589	

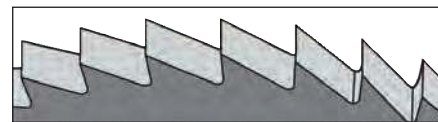
$d_1 \times b \times d_2$ mm	No. of teeth	17031	...
25 x 5.0 x 8	32	590	
25 x 5.5 x 8	24	591	
25 x 6.0 x 8	24	592	
30 x 0.1 x 8	100	593	
30 x 0.15 x 8	100	594	
30 x 0.2 x 8	100	595	
30 x 0.25 x 8	100	596	
30 x 0.3 x 8	80	597	
30 x 0.35 x 8	80	598	
30 x 0.4 x 8	80	599	
30 x 0.5 x 8	80	600	
30 x 0.6 x 8	64	601	
30 x 0.7 x 8	64	602	
30 x 0.8 x 8	64	603	
30 x 0.9 x 8	64	604	
30 x 1.0 x 8	64	605	
30 x 1.1 x 8	64	606	
30 x 1.2 x 8	48	607	
30 x 1.3 x 8	48	608	
30 x 1.4 x 8	48	609	
30 x 1.5 x 8	48	610	
30 x 1.6 x 8	48	611	
30 x 1.7 x 8	48	612	
30 x 1.8 x 8	48	613	
30 x 1.9 x 8	48	614	
30 x 2.0 x 8	48	615	
30 x 2.5 x 8	40	616	
30 x 3.0 x 8	40	617	
30 x 3.5 x 8	40	618	
30 x 4.0 x 8	40	619	
30 x 4.5 x 8	32	620	
30 x 5.0 x 8	32	621	
30 x 5.5 x 8	32	622	
30 x 6.0 x 8	32	623	
40 x 0.1 x 10	128	624	
40 x 0.15 x 10	128	625	
40 x 0.2 x 10	128	626	
40 x 0.25 x 10	100	627	
40 x 0.3 x 10	100	628	
40 x 0.35 x 10	100	629	
40 x 0.4 x 10	80	630	
40 x 0.5 x 10	80	631	
40 x 0.6 x 10	80	632	
40 x 0.7 x 10	80	633	
40 x 0.8 x 10	80	634	

Continued

Continued ▶



Tooth shape A, fine-toothed



d ₁ x b x d ₂ mm	No. of teeth	17031	...
40 x 0.9 x 10	64	635	
40 x 1.0 x 10	64	636	
40 x 1.1 x 10	64	637	
40 x 1.2 x 10	64	638	
40 x 1.3 x 10	64	639	
40 x 1.4 x 10	64	640	
40 x 1.5 x 10	64	641	
40 x 1.6 x 10	64	642	
40 x 1.7 x 10	48	643	
40 x 1.8 x 10	48	644	
40 x 1.9 x 10	48	645	
40 x 2.0 x 10	48	646	
40 x 2.5 x 10	48	647	
40 x 3.0 x 10	48	648	
40 x 3.5 x 10	48	649	
40 x 4.0 x 10	40	650	
40 x 4.5 x 10	40	651	
40 x 5.0 x 10	40	652	
40 x 5.5 x 10	40	653	
40 x 6.0 x 10	40	654	
50 x 0.1 x 13	128	655	
50 x 0.15 x 13	128	656	
50 x 0.2 x 13	128	657	
50 x 0.25 x 13	128	658	
50 x 0.3 x 13	128	659	
50 x 0.35 x 13	100	660	
50 x 0.4 x 13	100	661	
50 x 0.5 x 13	100	662	
50 x 0.6 x 13	100	663	
50 x 0.7 x 13	80	664	
50 x 0.8 x 13	80	665	
50 x 0.9 x 13	80	666	
50 x 1.0 x 13	80	667	
50 x 1.1 x 13	80	668	
50 x 1.2 x 13	80	669	
50 x 1.3 x 13	64	670	
50 x 1.4 x 13	64	671	
50 x 1.5 x 13	64	672	
50 x 1.6 x 13	64	673	
50 x 1.7 x 13	64	674	
50 x 1.8 x 13	64	675	
50 x 1.9 x 13	64	676	
50 x 2.0 x 13	64	677	
50 x 2.5 x 13	64	678	
50 x 3.0 x 13	48	679	
50 x 3.5 x 13	48	680	
50 x 4.0 x 13	48	681	
50 x 4.5 x 13	48	682	
50 x 5.0 x 13	48	683	
50 x 5.5 x 13	40	684	
50 x 6.0 x 13	40	685	
63 x 0.2 x 16	160	686	
63 x 0.25 x 16	160	687	
63 x 0.3 x 16	128	688	
63 x 0.35 x 16	128	689	
63 x 0.4 x 16	128	690	

d ₁ x b x d ₂ mm	No. of teeth	17031	...
63 x 0.5 x 16	128	691	
63 x 0.6 x 16	100	692	
63 x 0.7 x 16	100	693	
63 x 0.8 x 16	100	694	
63 x 0.9 x 16	100	695	
63 x 1.0 x 16	100	696	
63 x 1.1 x 16	80	697	
63 x 1.2 x 16	80	698	
63 x 1.3 x 16	80	699	
63 x 1.4 x 16	80	700	
63 x 1.5 x 16	80	701	
63 x 1.6 x 16	80	702	
63 x 1.7 x 16	80	703	
63 x 1.8 x 16	80	704	
63 x 1.9 x 16	80	705	
63 x 2.0 x 16	80	706	
63 x 2.5 x 16	64	707	
63 x 3.0 x 16	64	708	
63 x 3.5 x 16	64	709	
63 x 4.0 x 16	64	710	
63 x 4.5 x 16	64	711	
63 x 5.0 x 16	48	712	
63 x 5.5 x 16	48	713	
63 x 6.0 x 16	48	714	
80 x 0.3 x 22	160	715	
80 x 0.35 x 22	160	716	
80 x 0.4 x 22	160	717	
80 x 0.5 x 22	128	718	
80 x 0.6 x 22	128	719	
80 x 0.7 x 22	128	720	
80 x 0.8 x 22	128	721	
80 x 0.9 x 22	100	722	
80 x 1.0 x 22	100	723	
80 x 1.1 x 22	100	724	
80 x 1.2 x 22	100	725	
80 x 1.3 x 22	100	726	
80 x 1.4 x 22	100	727	
80 x 1.5 x 22	100	728	
80 x 1.6 x 22	100	729	
80 x 1.7 x 22	80	730	
80 x 1.8 x 22	80	731	
80 x 1.9 x 22	80	732	
80 x 2.0 x 22	80	733	
80 x 2.5 x 22	80	734	
80 x 3.0 x 22	80	735	
80 x 3.5 x 22	64	736	
80 x 4.0 x 22	64	737	
80 x 4.5 x 22	64	738	
80 x 5.0 x 22	64	739	
80 x 5.5 x 22	64	740	
80 x 6.0 x 22	64	741	
100 x 0.5 x 22	160	742	
100 x 0.6 x 22	160	743	
100 x 0.7 x 22	128	744	
100 x 0.8 x 22	128	745	
100 x 0.9 x 22	128	746	

d ₁ x b x d ₂ mm	No. of teeth	17031	...
100 x 1.0 x 22	128	747	
100 x 1.1 x 22	128	748	
100 x 1.2 x 22	128	749	
100 x 1.3 x 22	100	750	
100 x 1.4 x 22	100	751	
100 x 1.5 x 22	100	752	
100 x 1.6 x 22	100	753	
100 x 1.7 x 22	100	754	
100 x 1.8 x 22	100	755	
100 x 1.9 x 22	100	756	
100 x 2.0 x 22	100	757	
100 x 2.5 x 22	100	758	
100 x 3.0 x 22	80	759	
100 x 3.5 x 22	80	760	
100 x 4.0 x 22	80	761	
100 x 4.5 x 22	80	762	
100 x 5.0 x 22	80	763	
100 x 5.5 x 22	64	764	
100 x 6.0 x 22	64	765	
125 x 0.6 x 22	160	766	
125 x 0.7 x 22	160	767	
125 x 0.8 x 22	160	768	
125 x 0.9 x 22	160	769	
125 x 1.0 x 22	160	770	
125 x 1.1 x 22	128	771	
125 x 1.2 x 22	128	772	
125 x 1.3 x 22	128	773	
125 x 1.4 x 22	128	774	
125 x 1.5 x 22	128	775	
125 x 1.6 x 22	128	776	
125 x 1.7 x 22	128	777	
125 x 1.8 x 22	128	778	
125 x 1.9 x 22	128	779	
125 x 2.0 x 22	128	780	
125 x 2.5 x 22	100	781	
125 x 3.0 x 22	100	782	
125 x 3.5 x 22	100	783	
125 x 4.0 x 22	100	784	
125 x 4.5 x 22	100	785	
125 x 5.0 x 22	80	786	
125 x 5.5 x 22	80	787	
125 x 6.0 x 22	80	788	
160 x 1.0 x 32	160	797	
160 x 1.2 x 32	160	798	
160 x 1.5 x 32	160	799	
160 x 1.6 x 32	160	800	
160 x 2.0 x 32	128	801	
160 x 2.5 x 32	128	802	
160 x 3.0 x 32	128	803	
160 x 4.0 x 32	128	804	
200 x 1.5 x 32	160	805	
200 x 1.6 x 32	160	806	
200 x 2.0 x 32	160	807	
200 x 2.5 x 32	160	808	
200 x 3.0 x 32	128	809	
200 x 4.0 x 32	128	810	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
400-1000	400-600	150-600	100-180	100-180	100-180	60-120	40-80	20-60	-	-	-	-	60-160	60-160	20-60	100-150	150-1000



Design

With straight shank for mounting on surface chucks, high degree of concentricity.

Applications

For mounting saw blades with a diameter of 20–100 mm and saw blade thicknesses of 0.2–6 mm (see art. no. 17002–17008 and 17030–17031).

Note:

Saw blade not included in delivery.

21636 300**Design**

Set, 6 pieces, consisting of all sizes of art. no. 21636 301–306, including case.

21636 301-308**Design**

Individual.



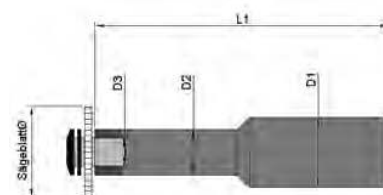
21636 300

Set contents	Holder Ø mm	Set 21636	...
Six pieces	20/25/32/40/50/63		300

For saw blade Ø mm	L1 mm	Ø D1 mm	Ø D2 mm	Ø D3 mm	Individual 21636	...
20	94	20	10.0	5		301
25	104	20	13.0	8		302
32	110	20	16.0	8		303
40	114	20	19.5	10		304
50	141	25	24.5	13		305
63	141	25	24.5	16		306
80	160	25	34.0	22		307
100	160	25	39.5	22		308



21636 301-308



Metal circular saw blades

17010 - 17011

Metal circular saw blades

HSS

HSS-E

17010 - 17011



Design

With combined driving holes, steam-treated surface; prevents material build-up on the side of the blade and improves the service life.

Tooth shape BW: alternate bevel.

Tooth shape C: High-performance toothing (HZ) with pre- and post-cutting edge.

Applications

For circular saws,

e.g. EISELE, ULMIA and TRENNJÄGER.

17010

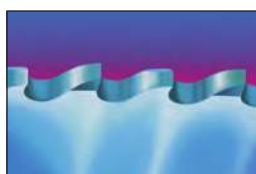
Quality

HSS, steam-treated.

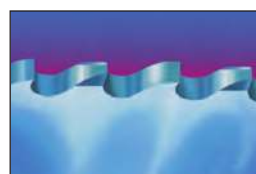
17011

Quality

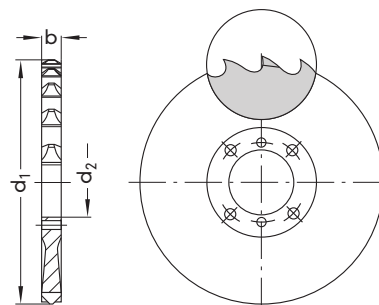
HSS-E, steam-treated.



Tooth shape BW



Tooth shape C



d ₁ x b x d ₂ mm	Secondary holes: no./Ø/pitch circle	No. of teeth	Tooth shape	HSS 17010	...	HSS-E 17011	...
225 x 2.0 x 40	2/8/55 + 4/12/64	180	BW		110		
225 x 2.0 x 40	2/8/55 + 4/12/64	120	C		111		
225 x 2.0 x 40	2/8/55 + 4/12/64	90	C		112		
250 x 2.0 x 40	2/8/55 + 4/12/64	200	BW		116		116
250 x 2.0 x 40	2/8/55 + 4/12/64	128	C		117		117
250 x 2.0 x 40	2/8/55 + 4/12/64	100	C		118		118
250 x 2.5 x 40	2/8/55 + 4/12/64	200	BW		120		
250 x 2.5 x 40	2/8/55 + 4/12/64	128	C		121		
250 x 2.5 x 40	2/8/55 + 4/12/64	100	C		122		
275 x 2.0 x 40	2/8/55 + 4/12/64	220	BW		125		125
275 x 2.0 x 40	2/8/55 + 4/12/64	144	C		126		126
275 x 2.0 x 40	2/8/55 + 4/12/64	110	C		127		127
275 x 2.5 x 40	2/8/55 + 4/12/64	220	BW		129		129
275 x 2.5 x 40	2/8/55 + 4/12/64	144	C		130		130
275 x 2.5 x 40	2/8/55 + 4/12/64	110	C		131		131
300 x 2.5 x 40	2/8/55 + 4/12/64	160	C		134		134
300 x 2.5 x 40	2/8/55 + 4/12/64	120	C		135		135
315 x 2.5 x 40	2/8/55 + 4/12/64	250	BW		137		137
315 x 2.5 x 40	2/8/55 + 4/12/64	160	C		138		138
315 x 2.5 x 40	2/8/55 + 4/12/64	120	C		139		139
315 x 3.0 x 40	2/8/55 + 4/12/64	250	BW		141		141
315 x 3.0 x 40	2/8/55 + 4/12/64	160	C		142		142
315 x 3.0 x 40	2/8/55 + 4/12/64	120	C		143		143
350 x 2.5 x 40	2/8/55 + 4/12/64	220	C		145		
350 x 2.5 x 40	2/8/55 + 4/12/64	180	C		146		
350 x 2.5 x 40	2/8/55 + 4/12/64	110	C		147		
350 x 3.0 x 40	2/8/55 + 4/12/64	180	C		149		149
350 x 3.0 x 40	2/8/55 + 4/12/64	140	C		150		150
400 x 3.0 x 40	2/8/55 + 2/15/80 + 4/12/64	200	C		152		
400 x 3.0 x 40	2/8/55 + 2/15/80 + 4/12/64	160	C		153		
425 x 3.5 x 40	2/15/80 + 4/12/64	220	C		155		
425 x 3.5 x 40	2/15/80 + 4/12/64	160	C		156		

**Design**

With combined driving holes. Steam-treated surface; prevents material build-up on the side of the blade and improves the service life.

Tooth shape BW: alternate bevel.

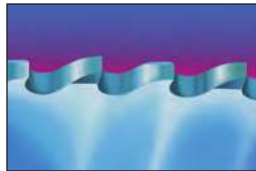
Tooth shape C: High-performance toothing (HZ) with pre- and post-cutting edge.

Applications

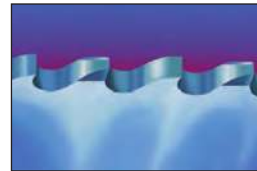
For circular saws with a 32-mm hole, e.g. Italian brands.

Quality

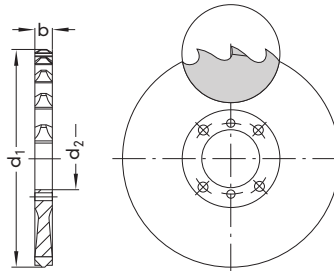
HSS, steam-treated.



Tooth shape BW



Tooth shape C



17014

d ₁ x b x d ₂ mm	Secondary holes: no./Ø/pitch circle	No. of teeth	Tooth shape	17014	...
225 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	180	BW		105
225 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	120	C		106
225 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	90	C		107
250 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	200	BW		110
250 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	128	C		111
250 x 2.0 x 32	2/8/45 + 2/9/50 + 2/11/63	100	C		112
275 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	220	BW		116
275 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	144	C		117
275 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	110	C		118
300 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	240	BW		122
300 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	160	C		123
300 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	120	C		124
315 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	250	BW		125
315 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	160	C		126
315 x 2.5 x 32	2/8/45 + 2/9/50 + 2/11/63	120	C		127
315 x 3.0 x 32	2/8/45 + 2/9/50 + 2/11/63	250	BW		128
315 x 3.0 x 32	2/8/45 + 2/9/50 + 2/11/63	160	C		129
315 x 3.0 x 32	2/8/45 + 2/9/50 + 2/11/63	120	C		130
350 x 2.5 x 32	2/8/45 + 2/11/63 + 2/12/75	220	C		132
350 x 2.5 x 32	2/8/45 + 2/11/63 + 2/12/75	180	C		133
350 x 2.5 x 32	2/8/45 + 2/11/63 + 2/12/75	140	C		134
350 x 3.0 x 32	2/8/45 + 2/11/63 + 2/12/75	220	C		137
350 x 3.0 x 32	2/8/45 + 2/11/63 + 2/12/75	180	C		138
350 x 3.0 x 32	2/8/45 + 2/9/50 + 2/11/63 + 2/12/75	140	C		139

Design

Coarse-toothed, riveted tooth segments. Steel blade made of alloyed tool steel, hardened, **approx. 1300 N/mm²** strength.

Tooth shape C: The high-performance toothing with pre- and post-cutters (HZ), combined with the coolant channels ground into the side of the tooth segments, ensure optimum machining. The steel blade is thinner than the cutting width of the segment teeth, thus preventing the saw blade from seizing.

Quality

Tooth segments HSS (DMo5).

Note:

The individual tooth segments are easily replaced in the event of tooth breakage. Segmented circular saw blades with medium-sized toothing for thin profiles and segmented circular saw blades with different dimensions are deliverable on request.



17051

d ₁ x b x d ₂ mm	Secondary holes: no./Ø/pitch circle	No. of teeth	No. of segments	17051	...
360 x 3.6 x 50	4/14/85 + 4/15/80	128	16		214
360 x 3.6 x 50	4/14/85 + 4/15/80	96	16		215
400 x 4.0 x 40	2/15/80 + 4/12/64	128	16		221
400 x 4.0 x 40	2/15/80 + 4/12/64	96	16		222
400 x 4.0 x 50	4/14/85 + 4/15/80	128	16		225
400 x 4.0 x 50	4/14/85 + 4/15/80	96	16		226

17085

Narrow disc milling cutters (side and face milling cutters), DIN 1834 A

HHW

Design

- Type N

- Cuts on three sides

- Cross-toothed

- With longitudinal groove according to DIN 138

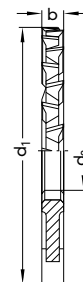
Quality
HSS-E.

N

HSS-E



17085



d ₁ js16 mm	b k11 mm	d ₂ H7 mm	Cutting edges	HSS-E 17085	...
63	1.6	22	28	201	
63	2	22	28	202	
63	2.5	22	28	203	
63	3	22	28	204	
63	4	22	28	205	
63	5	22	28	206	
80	2	27	32	207	
80	2.5	27	32	208	
80	3	27	32	209	
80	4	27	32	210	
80	5	27	32	211	
80	6	27	32	212	
100	2	32	36	213	
100	3	32	36	215	
100	4	32	36	216	

d ₁ js16 mm	b k11 mm	d ₂ H7 mm	Cutting edges	HSS-E 17085	...
100	5	32	36	217	
100	6	32	36	218	
100	8	32	28	219	
125	2	32	40	220	
125	3	32	40	222	
125	4	32	40	223	
125	5	32	40	224	
125	6	32	40	225	
125	8	32	32	226	
125	10	32	32	227	
160	2	40	48	228	
160	3	40	48	230	
160	4	40	48	231	
160	5	40	48	232	
160	6	40	48	233	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	50-80	50-80	35-40	32-35	25-28	22-25	-	-	-	-	-	-	20-25	18-22	12-20	25-40	50-60

17241

Disc milling cutters, DIN 885 A

HHW

Design

- Type N

- Cuts on three sides

- Cross-toothed

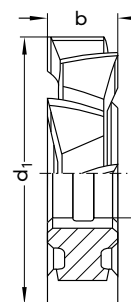
- With longitudinal groove according to DIN 138

Quality
HSS-E (Co5).

N

HSS-E
Co5

17241



d ₁ js16 mm	b k11 mm	d ₂ H7 mm	Cutting edges	HSS-E 17241	...
50	5	16	12	201	
50	6	16	12	202	
50	8	16	12	203	
63	6	22	12	205	
63	8	22	12	206	
63	10	22	12	207	
63	12	22	12	208	
80	10	27	14	213	
80	12	27	14	214	
80	16	27	14	216	

d ₁ js16 mm	b k11 mm	d ₂ H7 mm	Cutting edges	HSS-E 17241	...
80	20	27	14	218	
100	10	32	14	219	
100	12	32	14	220	
100	16	32	14	222	
100	20	32	14	224	
125	12	32	16	227	
125	14	32	16	228	
125	16	32	16	229	
125	20	32	16	231	
125	25	32	16	233	

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	50-80	50-80	35-40	32-35	25-28	22-25	-	-	-	-	-	-	20-25	18-22	12-20	25-40	50-60



17413

Shell end mills

DIN
841

N

HSS-E
Co5≤
1000
N/mm²**HHW**

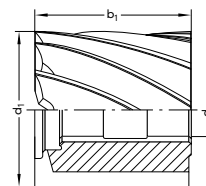
Design

- Type N

- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- With longitudinal and transverse groove according to DIN 138

Quality
HSS-E (Co5).

17413



d ₁ k12 mm	b ₁ k16 mm	d ₂ H7 mm	Cutting edges	HSS-E 17413	...
40	40	16	8		204
50	50	22	8		206
60	30	27	8		207
60	60	27	8		208
75	35	27	10		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<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-

17441 - 17443

Shell end mills

DIN
1880

N

≤
1000
N/mm²**HHW**

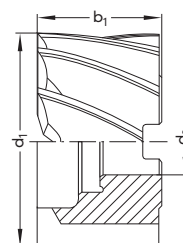
Design

- Type N

- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- With longitudinal and transverse groove according to DIN 138

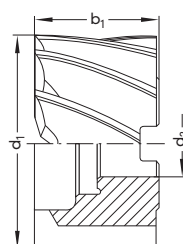
17441
Quality
HSS-E (Co5).17443
Quality
HSS-E/TiCN-coated.

17441

HSS-E
Co5

d ₁ k12 mm	b ₁ k16 mm	d ₂ H7 mm	Cutting edges	HSS-E 17441	...	HSS-E/TiCN 17443	...
40	32	16	8		101		101
50	36	22	8		102		102
63	40	27	8		103		103
80	45	27	10		104		104
100	50	32	12		105		105
125	56	40	14		106		

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-
70-200	40-150	40-150	75-85	45-55	40-60	20-45	-	-	-	-	-	-	5-28	3-25	3-25	-	-

HSS-E
TiCN

17443

17445

Shell end mills

DIN
1880

W

HSS-E
Co5

ALU

≤
1100
N/mm²**HHW**

Design

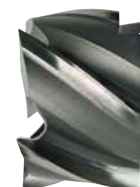
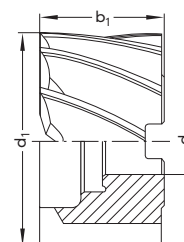
- Type W

- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- With longitudinal and transverse groove according to DIN 138

Applications

For materials up to approx. 1100 N/mm² strength.
For soft, tough and long-chipping materials.Quality
HSS-E (Co5).

17445



d ₁ k12 mm	b ₁ k16 mm	d ₂ H7 mm	Cutting edges	HSS-E 17445	...
40	32	16	4		101
50	36	22	4		102
63	40	27	5		103
80	45	27	6		104

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-

17452

Shell end mills

DIN
841

NR

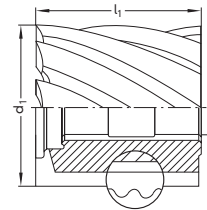
HSS-E
Co5

≤
1000
N/mm²

Quality
HSS-E (Co5).

Design

- Type NR with roughing teeth
(chip separator with round profile)
- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- Profile relief ground
- With longitudinal and transverse groove according to DIN 138



17452

HSS-E

d ₁ k14 mm	l ₁ k16 mm	d ₂ H7 mm	Cutting edges	17452	...
40	40	16	6		202
50	50	22	8		204
60	30	27	8		205
60	60	27	8		206
75	35	27	8		207

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-

17475

Shell end mills

DIN
1880

NR

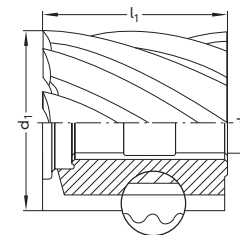
HSS-E
Co5

≤
1000
N/mm²

Quality
HSS-E (Co5).

Design

- Type NR with roughing teeth
- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- Profile relief ground
- With longitudinal and transverse groove according to DIN 138



17475

HSS-E

d ₁ k14 mm	l ₁ k16 mm	d ₂ H7 mm	Cutting edges	17475	...
40	32	16	6		101
50	36	22	6		102
63	40	27	8		103
80	45	27	8		104
100	50	32	10		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<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-

17478

Shell end mills

DIN
1880

NF

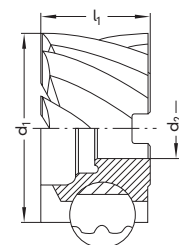
HSS-E
Co5

≤
1000
N/mm²

Quality
HSS-E (Co5).

Design

- Type NF with roughing and finishing teeth
- Right cutting
- Right-hand spiral
- For cutting on periphery and end face
- Profile relief ground
- With longitudinal and transverse groove according to DIN 138



17478

HSS-E

d ₁ k14 mm	l ₁ k16 mm	d ₂ H7 mm	Cutting edges	17478	...
40	32	16	6		101
50	36	22	6		102
63	40	27	8		103
80	45	27	8		104
100	50	32	10		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<900N	VA>900N	Ti alloy	GG(G)	Plastic
70-120	40-70	40-70	28-32	25-30	18-25	16-22	-	-	-	-	-	-	5-15	3-12	3-12	-	-

17482 - 17484

Shell end mills



Design

- Type HR, fine roughing profile
- Right cutting
- Right-hand spiral, for cutting on periphery and end face
- Profile relief ground
- With longitudinal and transverse groove according to DIN 138

17482
Quality
HSS-E.

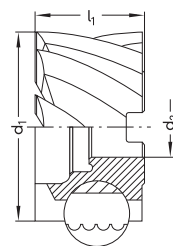
17484
Quality
HSS-E/TiAlN-coated.

DIN
1880

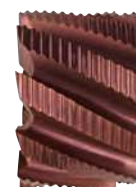
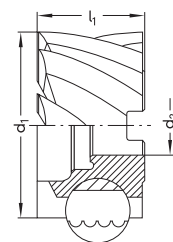
HR

HSS-E

17482

HSS-E
TiAlN

17484



d ₁ k14 mm	l ₁ k16 mm	d ₂ H7 mm	Cutting edges	HSS-E 17482	...	HSS-E/TiAlN 17484	...
40	32	16	8		101		101
50	36	22	8		102		102
63	40	27	10		103		103
80	45	27	10		104		104
100	50	32	12		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<900N	VA>900N	Ti alloy	GG(G)	Plastic
17482																	
70-120	40-70	40-70	28-32	25-30	18-25	16-22	12-18	-	-	-	-	-	5-15	3-12	3-12	-	-
17484																	
70-200	40-150	40-150	75-85	45-55	40-60	20-45	15-35	-	-	-	-	-	5-28	3-25	3-25	-	-

17488

Single-angle milling cutters



Design

- Type H
- Milling angle $\alpha = 45^\circ$
- Right cutting
- Straight-grooved, for cutting on periphery and end face
- With longitudinal groove according to DIN 138

Applications

For milling dovetail guides etc.

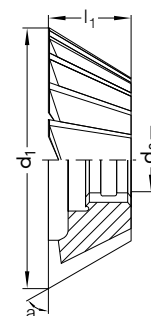
Quality
HSS-E.

DIN
842

H

HSS-E

17488



d ₁ js16 mm	l ₁ mm	d ₂ H7 mm	Cutting edges	HSS-E 17488	...
50	13	13	16		102
63	18	16	18		103
80	22	22	20		104
100	28	27	22		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<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	45-90	45-56	40-45	35-40	32-36	26-30	-	-	-	-	-	-	20-28	18-25	10-22	28-45	70-90

17490 - 17492

Prism milling cutters



Design

- Straight-grooved
- With longitudinal groove according to DIN 138

17490
Milling angle $\alpha = 45^\circ$.

17491
Milling angle $\alpha = 60^\circ$.

17492
Milling angle $\alpha = 90^\circ$.

Applications

For milling prismatic guides etc.

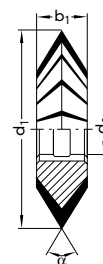
Quality

HSS-E.

DIN
847

HSS

17490



d ₁ k14 mm	b ₁ mm At milling angle (js 16)	d ₂ H7 mm	Cutt. edges	Cutt. edges	Cutt. edges	45° 17490	...	60° 17491	...	90° 17492	...
	45°	60°	90°	45°	60°						
50	8	10	14	16	16	16	201	201	201	201	201
63	10	14	20	22	16	16	202	202	202	202	202
80	12	18	22	27	20	18	203	203	203	203	203
100	18	25	32	32	20	20	204	204	204	204	204

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	45-90	45-56	40-45	35-40	32-36	26-30	-	-	-	-	-	-	20-28	18-25	10-22	28-45	70-90

Semi-circular profile cutters

17493

Semi-circular profile cutters

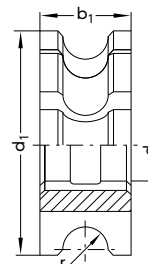


Design

- **Concave**, cutter curved inwards, relieved
- With longitudinal groove according to DIN 138

Quality
HSS-E.

r h11 mm	d ₁ js16 mm	d ₂ H7 mm	b ₁ mm	Cutting edges	HSS-E 17493	...
2	50	16	9	14		104
3	63	22	12	12		106
4	63	22	16	12		108
5	63	22	20	12		109
6	80	27	24	12		110
8	80	27	32	12		112
10	100	32	36	12		114



17493

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	45-90	45-56	40-45	35-40	32-36	26-30	-	-	-	-	-	-	20-28	18-25	10-22	28-45	70-90

17494

Semi-circular profile cutters

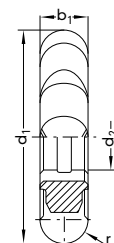


Design

- **Convex**, cutter curved outwards, relieved
- With longitudinal groove according to DIN 138

Quality
HSS-E.

r h11 mm	d ₁ js16 mm	d ₂ H7 mm	b ₁ mm	Cutting edges	HSS-E 17494	...
1	50	16	2	14		101
2	50	16	4	14		104
3	63	22	6	12		106
4	63	22	8	12		108
5	63	22	10	12		109
6	80	27	12	12		110
8	80	27	16	12		112
10	100	32	20	12		114



17494

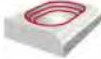
Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
100-150	45-90	45-56	40-45	35-40	32-36	26-30	-	-	-	-	-	-	20-28	18-25	10-22	28-45	70-90

		HHW	ATORN®	ATORN®	ATORN®	ATORN®	ATORN®	ATORN®
		Angular milling cutter	Drill groove milling cutter	Angular milling cutter				
●	1. Choice	17530	17501	17500	17500	17500	17500	17550
●	Alternative							
●	May be possible							
●	Can be used to a limited extent							
▽	Roughing							
▽▽	Medium machining							
▽▽▽	Finishing							
Version								
Diameter		16 - 20	20 - 32	10 - 32	10 - 25	16 - 25	32 - 50	12 - 20
Number of cutting edges		1	1	2 - 8	2 - 7	2 - 5	8 - 11	2 - 4
Insert		SDHT/SDMT	APKT/APHX	APKT 06	APKT 06	APKT 06	APKT 06	ADHX06/ADKX06
Machining		▽▽	▽▽	▽▽▽	▽▽▽	▽	▽▽▽	▽▽▽
Catalogue page		17.57	17.27	17.26	17.26	17.26	17.26	17.32
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Angular milling			●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Groove milling			●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Pocket milling				●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Contour milling								
Chamfer milling		●●●●●						
Keyway milling								
Hole machining			●●●●●					

		ATORN®	ATORN®	ATORN®	ATORN®	ATORN®	ATORN®	ATORN®
		Angular milling cutter						
●	1. Choice	17550	17551	17551	17552	17552	17552	17553
●	Alternative							
●	May be possible							
●	Can be used to a limited extent							
▽	Roughing							
▽▽	Medium machining							
▽▽▽	Finishing							
Version								
Diameter		10 - 25	20 - 32	16 - 32	32 - 40	20 - 40	40 - 63	25 - 40
Number of cutting edges		1 - 6	3 - 6	2 - 6	4 - 6	2 - 6	4 - 9	2 - 4
Insert		ADHX06/ADKX06	ADHX09/ADKX09	ADHX09/ADKX09	ADHX12/ADKX12	ADHX12/ADKX12	ADHX12/ADKX12	ADHX17/ADKX17
Machining		▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽
Catalogue page		17.32	17.33	17.33	17.34	17.34	17.34	17.35
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Angular milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Groove milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Pocket milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Contour milling								
Chamfer milling								
Keyway milling								
Hole machining								

Overview of indexable insert milling tools (II)

		Angular milling cutter																											
		17553				17553				17556				17557				17558				17558				17558			
●	1. Choice																												
●	Alternative																												
◐	May be possible																												
◑	Can be used to a limited extent																												
▽	Roughing																												
▽▽	Medium machining																												
▽▽▽	Finishing																												
Version																													
Diameter		25 - 40				40 - 100				50 - 160				50 - 160				20 - 32				32 - 50				50 - 160			
Number of cutting edges		2 - 4				4 - 9				4 - 20				5 - 20				3 - 5				6 - 8				5 - 11			
Insert		ADHX17/ADKX17				ADHX17/ADKX17				LNMU				XNMU				WNEU				WNEU				WNEU/WNEX			
Machining		▽▽▽				▽▽▽				▽▽▽				▽▽▽				▽▽▽				▽▽▽				▽▽▽			
Catalogue page		17.35				17.35				17.36				17.37				17.38				17.38				17.38			
ISO code		P M K N S H				P M K N S H				P M K N S H				P M K N S H				P M K N S H				P M K N S H				P M K N S H			
Face milling																													
Angular milling																													
Groove milling																													
Pocket milling																													
Contour milling																													
Chamfer milling																													
Keyway milling																													
Hole machining																													

		CUTTING SOLUTIONS BY CERATIZIT		CUTTING SOLUTIONS BY CERATIZIT		CUTTING SOLUTIONS BY CERATIZIT		ATORN®		ATORN®		HILTI	
		Angular milling cutter											
● 1. Choice ◐ Alternative ◑ May be possible ◒ Can be used to a limited extent ▽ Roughing ▽▽ Medium machining ▽▽▽ Finishing		17681	17680	17682	17505	17735	17662						
													
Version					 								
Diameter		32	32	40 - 160	10 - 40	20-32	20 - 32						
Number of cutting edges		2	2	3 - 14	1 - 5	3 - 4	2 - 4						
Insert		SNUH 12	SNUH 12	SNUH 12	APKT/APHX	LN.X	SOMT						
Machining					▽▽	▽▽▽▽	▽▽▽▽						
Catalogue page		17.39	17.39	17.39	17.28	17.45	17.44						
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H						
Face milling		◐◐◐◐◐	◐◐◐◐◐	◐◐◐◐◐	◐◐◐◐◐	●●●●●	◐◐						
Angular milling		●●●●●	●●●●●	●●●●●	◐◐◐◐◐	●●●●●	●●						
Groove milling		●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●						
Pocket milling													
Contour milling													
Chamfer milling													
Keyway milling													
Hole machining													

		Angular milling cutter					
		17882	17507	17882	17755	17736	17742
●	1. Choice						
●	Alternative						
◐	May be possible						
◑	Can be used to a limited extent						
▽	Roughing						
▽▽	Medium machining						
▽▽▽	Finishing						
Version							
Diameter		12 - 40	10 - 40	20 - 32	40 - 250	40 - 160	40 - 125
Number of cutting edges		1 - 6	1 - 5	2 - 5	4 - 16	5 - 10	4 - 9
Insert		XD..	APKT/APHX	XD..	APKT/APHX	LN.X	SDMT
Machining		▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽
Catalogue page		1741	1728	1741	1729	1745	1743
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Angular milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Groove milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Pocket milling							
Contour milling							
Chamfer milling							
Keyway milling							
Hole machining							

		Angular milling cutter			Face-milling cutter		
		17662	17882	17534	17876	17873	17876
●	1. Choice						
●	Alternative						
◐	May be possible						
◑	Can be used to a limited extent						
▽	Roughing						
▽▽	Medium machining						
▽▽▽	Finishing						
Version							
Diameter		40 - 63	40 - 160	24 - 40	18.9 - 32	32 - 40	18.9 - 32
Number of cutting edges		5 - 7	4 - 14	2 - 4	3 - 5	3 - 4	3 - 5
Insert		SOMT	XD..	SEHT	OF./SF..	OAKU	OF./SF..
Machining		▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽	▽▽▽▽▽▽
Catalogue page		1744	1741	1765	1763	1768	1763
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Angular milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Groove milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Pocket milling				● ● ● ● ●			
Contour milling							
Chamfer milling				● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Keyway milling							
Hole machining							

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CUTTING SOLUTIONS BY
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CERATIZIT

		Face-milling cutter					
		17720	17722	17728	17728	17876	17873
●	1. Choice						
●	Alternative						
●	May be possible						
●	Can be used to a limited extent						
▽	Roughing						
▽▽	Medium machining						
▽▽▽	Finishing						
Version					Left 		
Diameter		40 - 250	50 - 250	50 - 250	50 - 125	30.7 - 125	40 - 125
Number of cutting edges		3 - 8	4 - 20	4 - 13	4 - 7	4 - 13	4 - 12
Insert		SEHT	SNEX/SNMX	SEEN	SEEN	OF./SF.	OAKU
Machining		▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽
Catalogue page		1765	1762	1766	1766	1764	1768
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
       	Face milling	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●
	Angular milling						
	Groove milling						
	Pocket milling						
	Contour milling						
	Chamfer milling	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●
	Keyway milling						
	Hole machining						

H.W.

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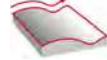
H.W.

H.W.

H.W.

		Face-milling cutter	Spiral milling cutter (Igel)		HPC milling cutter		
		17739	17510	17753	17660	17660	17660
●	1. Choice						
●	Alternative						
●	May be possible						
●	Can be used to a limited extent						
▽	Roughing						
▽▽	Medium machining						
▽▽▽	Finishing						
Version							
Diameter		50 - 100	20 - 40	40 - 100	25 - 32	25 - 40	40 - 80
Number of cutting edges		4 - 8	1 - 3	3 - 6	2	2 - 4	4 - 5
Insert		HNGJ	APKT/APHX	APKT/APHX	ZDCW	ZDCW/ZDEW	ZDCW/ZDEW
Machining		▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽	▽▽▽▽▽▽▽▽
Catalogue page		1767	1729	1730	1751	1751	1751
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
       	Face milling	● ● ● ● ● ● ● ●			● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●
	Angular milling		● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●			
	Groove milling		● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●			
	Pocket milling				● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ●
	Contour milling						
	Chamfer milling						
	Keyway milling						
	Hole machining						



		 CUTTING SOLUTIONS BY CERATIZIT	 CUTTING SOLUTIONS BY CERATIZIT	 CUTTING SOLUTIONS BY CERATIZIT	 ATORN®	 ATORN®	 ATORN®
		HFC milling cutter			Aluminium plunge milling cutter		
	1. Choice	17865	17865	17865	17560	17561	17562
	Alternative						
	May be possible						
	Can be used to a limited extent						
	Roughing						
	Medium machining						
	Finishing						
Version							
Diameter		16 - 32	16 - 32	32 - 63	25 - 32	25 - 42	42 - 100
Number of cutting edges		2-5	2-5	3-6	2	2-3	3-5
Insert		XP..	XP..	XD..	VCGT/VPGT	VCGT/VPGT	VCGT
Machining		▽	▽	▽	▽▽▽	▽▽▽	▽▽▽
Catalogue page		17.52	17.52	17.52	17.47	17.47	17.47
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
		● ●	● ●	● ●	●	●	●
					●	●	●
					●	●	●
		● ●	● ●	● ●	●	●	●
		● ●	● ●	● ●	●	●	●
							
							
							

		CUTTING SOLUTIONS BY CERATIZIT		CUTTING SOLUTIONS BY CERATIZIT		ATORN®			
		Centring milling cutter		Copy milling cutter					
		17536	17868	17613 - 17614	17868	17613 - 17615	17707		
●	1. Choice								
●	Alternative								
◐	May be possible								
◑	Can be used to a limited extent								
▽	Roughing								
▽▽	Medium machining								
▽▽▽	Finishing								
Version									
Diameter		20	10 - 32	15 - 20	20 - 42	15 - 42	52 - 125		
Number of cutting edges		1	2 - 5	2	2 - 7	2 - 6	4 - 8		
Insert		TCMX	RD../RP..	RDHX	RD../RP..	RDHX	OCKX/RCKX/XCKX		
Machining		▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽		
Catalogue page		17.59	17.55	17.53	17.55	17.53 - 17.54	17.61		
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H		
			● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●		
									
									
				● ● ● ● ●	●	● ● ● ● ●	●		
			● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●		
									
									
		● ● ● ● ●							

		Copy milling cutter		End-of-use milling cutter	Chamfer milling cutter		
		17868	17614 - 17616	17750	17527	17529	17536
● 1. Choice							
● Alternative							
● May be possible							
● Can be used to a limited extent							
▽ Roughing							
▽▽ Medium machining							
▽▽▽ Finishing							
Version							
Diameter		40 - 100		50 - 125	12 - 20	10 - 42.3	16
Number of cutting edges		3 - 10		3 - 7	1 - 2	1 - 3	1
Insert		RP.		APKT/APHX	TCMT	SCMT	SEEX
Machining		▽▽▽▽▽		▽▽▽	▽▽▽▽	▽▽▽▽	▽▽▽▽
Catalogue page		1756		1731	1758	1758	1759
ISO code		P M K N S H		P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●			
Angular milling							
Groove milling							
Pocket milling			● ● ● ● ●	●			
Contour milling		● ● ● ● ●	● ● ● ● ●	●			
Chamfer milling					● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Keyway milling							
Hole machining						● ● ● ● ●	

		Chamfer milling cutter	Adjustable counter-bore milling cutter	T-grooving milling cutter	Boring and counterboring bit		
		17760	17526	17540	17576	17577	17578
● 1. Choice							
● Alternative							
● May be possible							
● Can be used to a limited extent							
▽ Roughing							
▽▽ Medium machining							
▽▽▽ Finishing							
Version							
Diameter		33 - 90	20 - 25	21 - 50	9.8 - 33	16 - 42	10 - 45
Number of cutting edges		6 - 9	1	2 - 4	1	2	1
Insert		APKT/APHX	TCMT/SCMT	SPMT	CC...	CC...	CC...
Machining		▽▽▽	▽▽▽	▽	▽▽▽▽	▽▽▽▽	▽▽▽▽
Catalogue page		1730	1757	1760	1749	1750	1750
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling							
Angular milling							
Groove milling				● ● ● ● ●			
Pocket milling							
Contour milling							
Chamfer milling		● ● ● ● ●	● ●				
Keyway milling							
Hole machining			● ●		● ● ● ● ●	● ● ● ● ●	● ● ● ● ●

		Boring and counterboring bit		Disc milling cutter	
		17570	17570	17780	17782
●	1. Choice				
●	Alternative				
○	May be possible				
○	Can be used to a limited extent				
▽	Roughing				
▽▽	Medium machining				
▽▽▽	Finishing				
Version					
Diameter		18 - 76	15 - 31	63 - 250	63 - 160
Number of cutting edges		1	1	3 - 12	3 - 8
Insert		CC...	TCMT	SNHX	SNHX
Machining		▽▽▽▽▽	▽▽▽▽▽	▽▽	▽▽
Catalogue page		17.48	17.48	17.69	17.70
ISO code		P M K N S H	P M K N S H	P M K N S H	P M K N S H
Face milling					
Angular milling					
Groove milling					
Pocket milling					
Contour milling					
Chamfer milling					
Keyway milling				● ● ●	● ● ●
Hole machining		● ● ● ●	● ● ● ●		

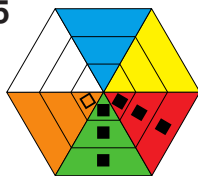
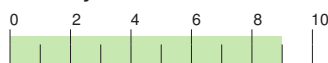
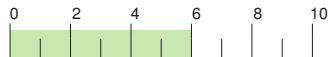


		Application area																											
HM grade		P					M					K					N					S					H		
		5	10	20	30	40	5	10	20	30	40	5	10	20	30	40	5	10	20	30	40	5	10	20	30	40	5	10	20
Coated grades	H 42																												
	H 45																												
	P 25/TiN																												
	K 10/TiAlN																												
	HC 4635																												
	HC 4535																												
	HC 4410																												
	HC 4540																												
	HC 4620																												
	P 40/TiAlN																												
	P 25/TiAlN																												
	M 40																												
	P20-P40																												
	Uncoated grades	H 55																											
H 25																													
H 12																													
HW 4415																													
HW 4410																													
HW 4540																													

		ISO P	ISO M	ISO K	ISO N	ISO S	ISO H		
Coated grade	H 42	P20-P30	M20-M30	K20-K30				Universal grade	Average cutting speed, average chip cross section
	H 45		M30-M40	K30-K40				Titanium and titanium alloys, austenitic and martensitic VA, Inconel	Average cutting speed, milling of VA using coolant, wear-resistant grade
	P 25/TiN	P20-P30	M20-M30	K20-K30				Universal grade	Average cutting speed, average chip cross section
	K 10/TiAlN						K05-K15	Hardened materials	Suitable for dry milling
	HC 4635	P30-P40	M35-M40					Steel, alloy steel, tool steel, titanium and titanium alloys, austenitic and martensitic VA, Inconel	Average cutting speed, milling of VA using coolant, high resistance to breakouts
	HC 4535	P20-P40	M20-M40	K20-K40				Steel, alloy steel, tool steel, GG, GGG, titanium and titanium alloys, austenitic and martensitic VA, Inconel	Average cutting speed, milling of VA using coolant, high resistance to breakouts
	HC 4410			K05-K15	N05-N15			Aluminium and aluminium alloys, GG, GGG	High cutting speed and feed rate
	HC 4540	P20-P40	M20-M40	K20-K40				Steel, alloy steel, tool steel, GG, GGG, VA	Average cutting speed, milling of VA using coolant
	HC 4620	P15-P30	M15-M30	K10-K30				Steel, cast steel, alloy steel, tool steel	For difficult milling and interrupted cutting, maximum service lives
	P 40/TiAlN	P30-P40						Steel, cast steel, alloy steel, tool steel	High wear-resistant grade
	P 25/TiAlN	P20-P30						Steel, cast steel, alloy steel, tool steel	Tough grade, even for interrupted cuts
	M 40		M30-M40					VA	Average cutting speed, average feed rate
	P20-P40	P20-P40	M20-M40					Universal grade	Average cutting speed, average chip cross section
Uncoated grade	H 25				N20-N30			Aluminium and aluminium alloys	High cutting speed and feed rate
	H 12	P20-P30	M20-M30					Universal grade	Average cutting speed, average chip cross section
	HW 4415			K05-K20				Aluminium and copper alloys	Light to medium-heavy machining
	HW 4410			K10-K20	N10-N20	S10-S20	S10-S20	GG over 220 HB, GTW, aluminium and copper alloys, high heat-resistant alloys	Light to medium-heavy chip machining
	HW 4540	P30-P40						Steel and cast steel, alloy steel, tool steel	For difficult milling and interrupted cutting

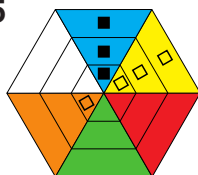
**CTW4615**

HW-K15

**Ductility****Wear resistance****Wet / dry****CTPP235**

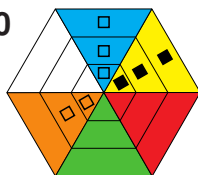
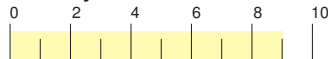
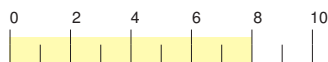
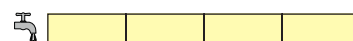
HC-P35

HC-M30

**Ductility****Wear resistance****Wet / dry****CTPM240**

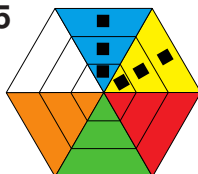
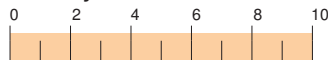
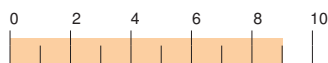
HC-P40

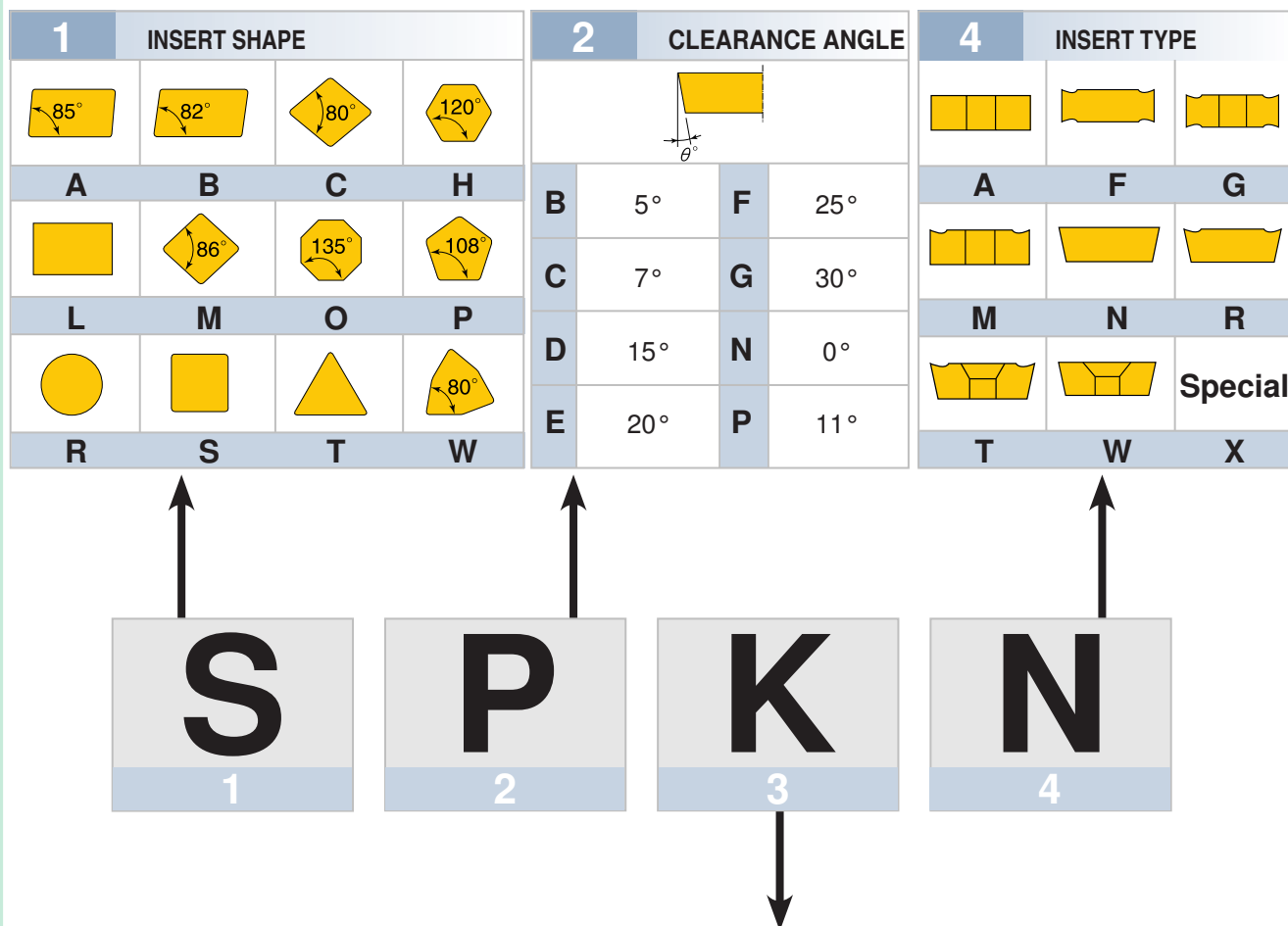
HC-M40

**Ductility****Wear resistance****Wet / dry****CTPM245**

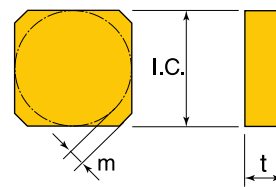
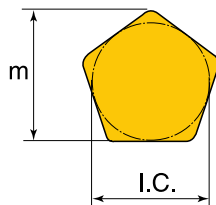
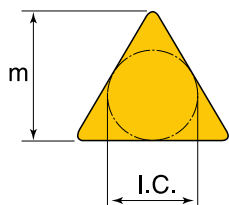
HC-M45

HC-P45

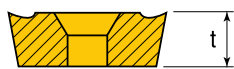
**Ductility****Wear resistance****Wet / dry****Chip deflection step overview - milling**

**3 TOLERANCE CLASS**

Class	Tolerance (mm)			I.C. Dimensions (mm)					
	m	t	I.C.	06:35	9,525	12.7	15,875	19:05	25.4
A	± 0.005	± 0.025	± 0.025	•	•	•	•	•	•
E	± 0.025	± 0.025	± 0.025	•	•	•	•	•	•
F	± 0.005	± 0.025	± 0.013	•	•	•	•	•	•
g	± 0.025	± 0.13	± 0.025	•	•	•	•	•	•
H	± 0.013	± 0.025	± 0.013	•	•	•	•	•	•
K	± 0.013	± 0.025	± 0.05	•	•				
			± 0.08			•			
			± 0.10				•	•	
			± 0.13						•
M	± 0.08 ± 0.13 ± 0.15	± 0.13	± 0.05	•	•				
			± 0.08			•			
			± 0.10				•	•	
			± 0.13						•

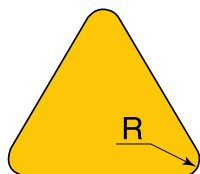


6 INSERT THICKNESS (mm)



01t = 1.59	05t = 5.56
02t = 2.38	06t = 6.35
03t = 3.18	07t = 7.94
T3t = 3.97	09t = 9.52
04t = 4.76	

7 CORNER RADIUS (mm)



00R = round	
02R = 0.2	15R = 1.5
04R = 0.4	16R = 1.6
05R = 0.5	24R = 2.4
08R = 0.8	32R = 3.2
10R = 1.0	40R = 4.0
12R = 1.2	

8 CUTTING EDGE VERSION

F

Sharp

E

Rounded

T

Chamfered

S

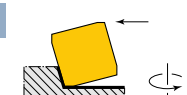
Chamfered and rounded

9 CUTTING DIRECTION

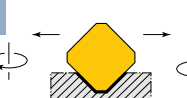
R



L



N



12

5

03

6

08
ED

7

T

8

R

9

-

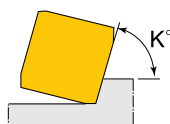
10

5 CUTTING EDGE LENGTH

I.C	Insert shape				
	C	R,S	T	H	O
5.56			09		
6.35	06	06	11		
7.94	08		13		
9.525	09	09	16		
12.7	12	12	22		05
15.875	16	15	27	09	
17.94					07
19.05	19	19	33	10	
25.4	25	25			
L					

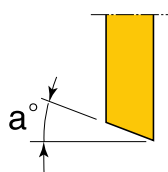
7 CORNER

Setting angle face cutting



A = 45°
D = 60°
E = 75°
F = 85°
P = 90°
Z = Special

Clearance angle face cutting



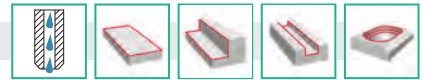
B = 5° F = 25°
C = 7° G = 30°
D = 15° N = 0°
E = 20° P = 11°
Z = Special

10 ADDITIONAL INFORMATION

This information is not part of the standard, and is therefore optional to the supplier.
E.G. – 14 for chip forming geometry

17500

Angular milling cutters, 90°

**ATORN®****Design**

- Soft cutting due to the positive installation position of the indexable insert
- Smooth milling behaviour of tools
- Precise 90° angular milling
- Axial runout max. 0.03 mm
- Radial runout max. 0.03 mm
- Supplied with clamping screw and wrench
- **Without** indexable inserts

NEWDIN
1835
HA

17500 101-108

with shank						
Ø D mm	Ø d mm	L mm	L1 mm	p mm	Z	17500 ...
10	10	100	28	5.2	2	101
12	12	100	30	5.2	3	102
14	12	120	32	5.2	3	103
16	16	120	32	5.2	4	104
18	16	120	32	5.2	4	105
20	20	150	35	5.2	5	106
25	20	150	35	5.2	7	107
32	25	150	35	5.2	8	108

with bore					
Ø D mm	Ø d mm	H mm	p mm	Z	17500 ...
32	16	40	5.2	8	140
40	16	40	5.2	10	141
50	22	40	5.2	11	142



17500 140-142

with thread							
Ø D mm	D1 mm	L mm	L1 mm	M	p mm	Z	17500 ...
10	6.5	16	14.5	M6	5.2	2	120
12	6.5	16	14.5	M6	5.2	3	121
16	8.5	21	17.5	M8	5.2	4	122
20	10.5	26	20.0	M10	5.2	5	123
25	12.5	30	22.0	M12	5.2	7	124



17500 120-124

DIN
1835
B

17500 130-132

Long edge milling cutters with shank							
Ø D mm	d mm	L mm	L1 mm	p mm	Z	Indexable inserts	17500 ...
16	16	80	19.8	5.2	2	8	130
20	20	90	24.6	5.2	3	15	131
25	25	100	29.4	5.2	5	30	132

**Applications
Coating****P M K**
TiN/PVD

ISO designation	l mm	d mm	s mm	d1 mm	r mm	17808 ...
APKT 060204	6.4	3.65	2.15	2.0	0.4	102

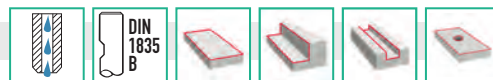
17808

**Spare parts**

Clamping screw 17520 ...

Wrench 52529 ...

For indexable inserts		TX size			
size		T			
AP.0602		6		201	401


ATORN®
Design

- **Positive**
- Right cutting
- **With centre cutting**
- Angle of attack 90°
- Straight shank with driving surface in accordance with DIN 1835 B
- **Without** indexable inserts

Applications

For plunge milling, face milling and circular milling.

Note:

For indexable inserts see art. no. 17809–17811.

17501 102-104



Ø D mm	Ø d h6 mm	H mm	h mm	L mm	Z	Z eff.	Indexable inserts	Short 17501	...
20	20	90	17	35	2	1	AP..1003		102
25	25	110	19	50	2	1	AP..1003		103
32	32	130	30	50	2	1	AP..1604		104

17501 110-111

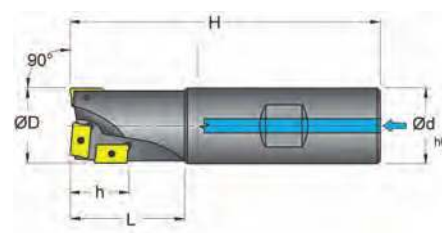


Ø D mm	Ø d h6 mm	H mm	h mm	L mm	Z	Z eff.	Indexable inserts	Long 17501	...
20	20	150	17	30	3	1	AP..1003		110
25	25	150	19	50	3	1	AP..1003		111

17501 120-122



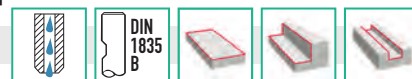
Ø D mm	Ø d h6 mm	H mm	h mm	L mm	Z	Z eff.	Indexable inserts	Extra long 17501	...
20	20	180	17	30	3	1	AP..1003		120
25	25	200	19	50	3	1	AP..1003		121
32	32	220	30	50	3	1	AP..1604		122



Spare parts	Clamping screw	Key
For indexable inserts	17520	52529
TX size T		
AP..1003	8	202
AP..1604	15	205

17505

End mills, 90°

**ATORN®****Design**

- Straight shank with driving surface in accordance with DIN 1835 B
- Positive
- Right cutting
- **Without** indexable inserts

Applications

For excellent machining performance, for processing steel and cast materials, and for high-alloy steels.

Note:

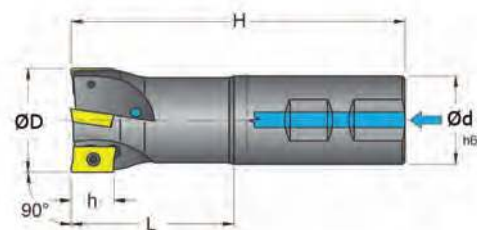
For indexable inserts see art. no. 17809–17811.

17505



17505 126-127

Without internal cooling.



Ø D mm	Ø d mm	H mm	L mm	h mm	Z	Indexable inserts	Short	
							17505	...
10	16	80	24	10	1	AP..1003		101
11	16	80	24	10	1	AP..1003		110
12	16	80	24	10	1	AP..1003		103
13	16	80	24	10	1	AP..1003		118
14	16	80	24	10	1	AP..1003		105
15	16	85	25	10	2	AP..1003		120
15.7	16	85	25	10	2	AP..1003		130
16	16	85	25	10	2	AP..1003		107
17	16	85	25	10	2	AP..1003		128
18	20	85	25	10	2	AP..1003		109
19.7	20	90	25	10	3	AP..1003		131
20	20	90	25	10	3	AP..1003		111
22	25	95	25	10	3	AP..1003		129
24.7	25	95	25	10	4	AP..1003		132
25	25	95	25	10	3	AP..1003		133
25	25	95	25	10	4	AP..1003		113
28	25	95	25	10	4	AP..1003		134
30	25	95	25	10	4	AP..1003		135
32	25	95	26	10	5	AP..1003		115
25	25	100	44	17	2	AP..1604		117
32	32	110	50	17	3	AP..1604		119
40	32	115	45	17	4	AP..1604		121

Ø D mm	Ø d mm	H mm	L mm	h mm	Z	Indexable inserts	Long	
							17505	...
10	16	150	24	10	1	AP..1003		102
12	16	150	24	10	1	AP..1003		104
16	16	150	100	10	2	AP..1003		122
18	16	150	25	10	2	AP..1003		137
20	20	150	100	10	3	AP..1003		123
25	20	150	25	10	4	AP..1003		124
25	25	200	60	17	2	AP..1604		126
32	25	150	90	10	5	AP..1003		125
32	32	200	60	17	3	AP..1604		127

Spare parts

For indexable inserts size	TX size T	Clamping screw		Wrench	
		17520	...	52529	...
AP..1003	8		202		403
AP..1604	15		205		406

17507

Screw-in milling cutters, 90°

ATORN®**Design**

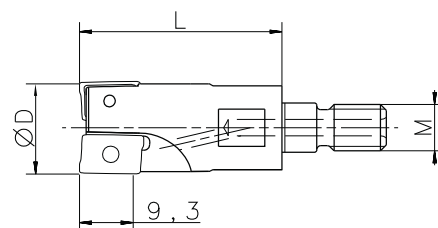
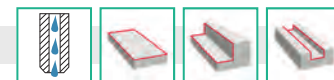
- Soft cutting due to the positive installation position of the indexable insert
- High radial and axial runout accuracy of 0.03 mm
- **Without** indexable inserts

Note:

For milling arbours see cat. size 21, art. no. 17676.

For indexable inserts see art. no. 17809–17811.

17507



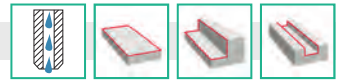
Ø D mm	L mm	M mm	D ₁ mm	Z	Indexable inserts	17507	...
10	20	M 6	6.5	1	AP..1003		101
12	20	M 6	6.5	1	AP..1003		102
16	25	M 8	8.5	2	AP..1003		103
20	30	M 10	10.5	3	AP..1003		104
25	35	M 12	12.5	4	AP..1003		106
32	43	M 16	17.0	5	AP..1003		107
32	46	M 16	17.0	3	AP..1604		108
40	46	M 16	17.0	4	AP..1604		109

Spare parts

For indexable inserts size	TX size T	Clamping screw		Wrench	
		17520	...	52529	...
AP..1003	8		202		403
AP..1604	15		205		406

17755

Angular milling cutter 90°

**ATORN®**

Design

- Positive
- Right cutting
- With internal cooling (except art. no. 17755 112–114)
- Without indexable inserts

Applications

For excellent machining performance.

Note:

For indexable inserts see art. no. 17809–17811.

17755



For indexable inserts AP.. 1003

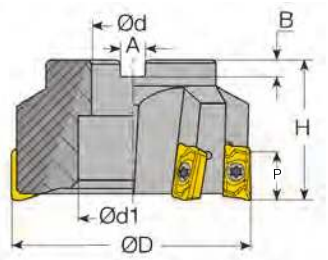
Ø D mm	Ø d1 mm	Ø d H7 mm	H mm	Z	p mm	Indexable inserts	17755	...
40	17	16	40	6	10	AP.1003		101
50	17	22	40	7	10	AP.1003		102
63	17	22	40	8	10	AP.1003		103
80	20	27	50	11	10	AP.1003		109
100	26	32	50	12	10	AP.1003		110

For indexable inserts AP.. 1604

Ø D mm	Ø d1 mm	Ø d H7 mm	H mm	Z	p mm	Indexable inserts	17755	...
40	12	16	40	4	17	AP.1604		104
50	18	22	40	5	17	AP.1604		105
63	18	22	40	6	17	AP.1604		106
80	20	27	50	7	17	AP.1604		107
100	45	32	50	8	17	AP.1604		108
125	56	40	63	9	17	AP.1604		111
160	87	40	63	10	17	AP.1604		112
200	-	60	63	13	17	AP.1604		113
250	-	60	63	16	17	AP.1604		114

Spare parts

For indexable inserts size	TX size T	Clamping screw	Wrench
AP..1003	8	17520	52529
AP..1604	15	202	403
		205	406



17510

Spiral end mills, 90° (porcupine)

**ATORN®**

Design

- Positive
- Right cutting
- Straight shank with driving surface in accordance with DIN 1835 B
- Without indexable inserts

Note:

For indexable inserts see cat. no. 17809–17811.

17510



For indexable inserts AP.. 1003

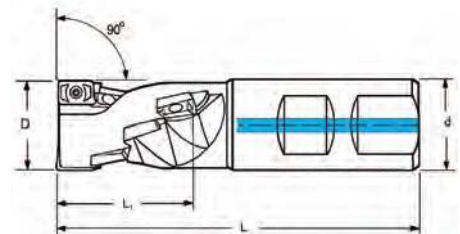
Ø D mm	d mm	L ₁ mm	L mm	Z	Z effective	Indexable inserts	17510	...
20	20	28	86	4	1	AP..1003		102
25	25	37	105	8	2	AP..1003		103
32	32	46	115	12	2	AP..1003		104
40	32	54	128	18	3	AP..1003		107

For indexable inserts AP.. 1604

Ø D mm	d mm	L ₁ mm	L mm	Z	Z effective	Indexable inserts	17510	...
25	25	29	105	2	1	AP.1604		108
32	32	44	115	6	2	AP.1604		105
40	32	58	130	8	2	AP.1604		106

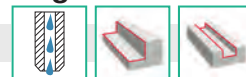
Spare parts

For indexable inserts size	TX size T	Clamping screw	Wrench
AP..1003	8	17520	52529
AP..1604	15	202	403
		205	406



17753

Porcupine milling cutter, 90°


ATORN®

Design

- Positive
- Right-hand cutting
- Only one insert type for face and circumferential cutting edge
- Arrangement with high right-hand twist for good chip formation

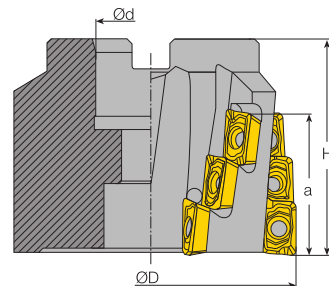
- Full overlap within a row of teeth
- Supplied with clamping screws and wrench
- **Without** indexable inserts

Note:

For indexable inserts see art. no. 17809–17811.



17753



For indexable inserts AP.. 1003

Ø D mm	Ø d mm	a mm	H mm	Indexable inserts	Z	Z eff.	17753	...
40	16	37	50	AP..1003	12	3	098	
50	22	46	60	AP..1003	15	3	099	
63	27	46	60	AP..1003	20	4	100	

For indexable inserts AP.. 1604

Ø D mm	Ø d mm	a mm	H mm	Indexable inserts	Z	Z eff.	17753	...
50	27	30	55	AP..1604	6	3	101	
63	27	44	60	AP..1604	12	4	102	
80	32	44	60	AP..1604	15	5	103	
100	40	44	60	AP..1604	18	6	104	

Spare parts

For indexable inserts size	TX size T	Clamping screw	Wrench
AP..1003	8	17520	52529
AP..1604	15	202	403
		205	406

17760

Chamfer cutters

ATORN®

Design

- Milling jig with clamping screws and wrench
- **Without** indexable inserts

Applications

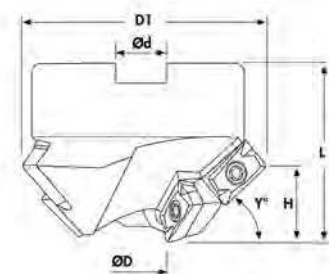
For chamfering 15° to 75° bevels.

Note:

For indexable inserts see art. no. 17809–17811.



17760



For indexable inserts AP.. 1003

Y	Ø D mm	D1 mm	Ø d mm	L mm	H mm	No. of tooth rows	Z	17760	...
15°	17	70	22	50	7	3	9	096	
30°	17	65	22	50	13	3	9	097	
40°	17	60	22	50	17	3	9	106	
45°	17	56	22	50	19	3	9	098	
60°	17	45	16	50	24	3	9	099	
75°	19	33	16	60	27	3	9	100	

For indexable inserts AP.. 1604

Y	Ø D mm	D1 mm	Ø d mm	L mm	H mm	No. of tooth rows	Z	17760	...
15°	35	90	27	50	8.0	3	6	101	
30°	35	85	27	50	15.0	3	6	102	
40°	35	84	27	50	19.0	3	6	107	
45°	35	75	27	50	21.5	3	6	103	
60°	35	62	27	50	26.5	3	6	104	
75°	35	45	22	60	29.5	3	6	105	

Spare parts

For indexable inserts size	TX size T	Clamping screw	Wrench
AP..1003	8	17520	52529
AP..1604	15	202	403
		205	406


ATORN®

Design

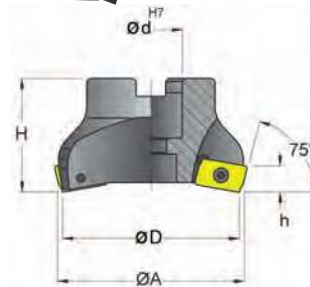
- Positive
- Right cutting
- Without indexable inserts

Note:

For indexable inserts see art. no. 17809–17811.

Ø D mm	Ø A mm	Ø d H7 mm	H mm	Z	Indexable inserts	17750	...
50	54	16	40	3	AP..1604	201	
63	67	22	40	4	AP..1604	202	
80	84	27	50	5	AP..1604	203	
100	104	32	50	6	AP..1604	204	
125	129	40	63	7	AP..1604	205	

Spare parts		Clamping screw	Wrench
For indexable inserts size	TX size T	17520	52529
AP..1003	8	202	403
AP..1604	15	205	406


ATORN®

Design

- Square
- Positive 11°

17809 101+104

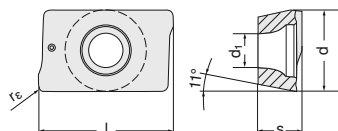
Design

- Polished

17809 102–103+105–106

Design

- With sintered chip breaker



17809 104

17809 105

17809 201+204



17809 110-111



Applications							N	PMK	MK	H
Cemented carbide grade							HW 4415	HC 4635	HC 4535	HC 4615
Coating							uncoated	coated	coated	coated
ISO designation	l mm	d mm	s mm	d ₁ mm	r		17809	17809	17809	17809
APHX100304 FR-ALU	10.5	6.35	3.18	2.85	0.4	10 pcs.	101			
APKT1003 PDER-S	10.5	6.35	3.18	2.85	0.5	10 pcs.		102	103	110
APKT1003 PDFR-R04	10.5	6.35	3.18	2.85	0.5	10 pcs.	201			
APHX160404 FR-ALU	17.0	9.52	4.76	4.40	0.4	10 pcs.	104			
APKT1604 PDER-S	17.0	9.52	4.76	4.40	0.8	10 pcs.		105	106	111
APKT1604 PDFR-R04	17.0	9.52	4.76	4.40	0.8	10 pcs.	204			

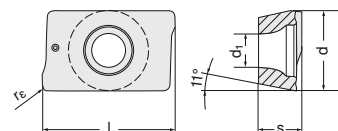
Design

- Square
- Positive 11°

17811

Design

- With sintered chip breaker



17810

17811



Applications							N	PM
Carbide type							H 25/Al	H 55
Coating							Uncoated	TiAlN+TiN
ISO designation	l mm	d mm	s mm	d ₁ mm	r		17810	17811
APKT1003	10.5	6.35	3.18	2.85	0.5	10 pcs.	101	
APKT1003 PDFR	10.5	6.35	3.18	2.85	0.5	10 pcs.		101
APKT1604 PD	17.0	9.52	4.76	4.40	0.8	10 pcs.	104	
APKT1604 PDFR	17.0	9.52	4.76	4.40	0.8	10 pcs.		102

High performance angular milling cutters

17550 - 17553

High performance angular milling cutters

ATORN®

Design

- Milling jig with uneven pitch
- The latest generation of high-performance angular milling cutters
- With geometry that reduces cutting forces
- **Precise 90° angular milling**
- Internal coolant feed

Advantage:

- Maximum smoothness with low power consumption
- Large selection of basic bodies and milling inserts
- Indexable inserts in four sizes with different corner radii
- Maximum precision
- High cutting performance
- Positive cutting geometry for a soft cut

Applications

Ideally suited for almost any milling work even with **unstable conditions and low-performance machines**.

Indexable inserts

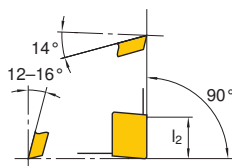
ADKX — precision-sintered milling inserts
ADHX — precision-ground milling inserts



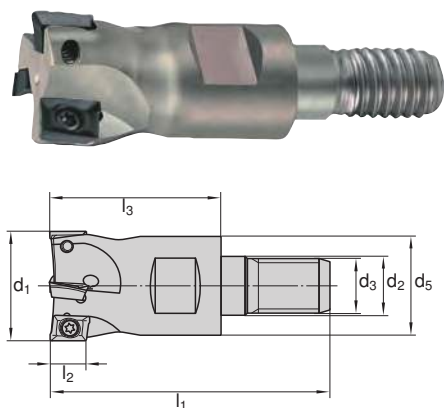
Screw-in milling cutters for insert size 06

Applications

For milling inserts AD.X 06..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₅ mm	d ₃ mm	d ₂ mm	Z	Indexable inserts	17550	...
12	5.5	45	28	13	M 8	8.5	2	AD.X 06...		101
16	5.5	45	28	13	M 8	8.5	3	AD.X 06...		102
20	5.5	49	30	18	M 10	10.5	4	AD.X 06...		103

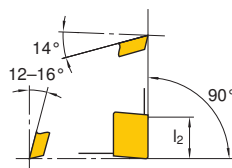


17550 101-103

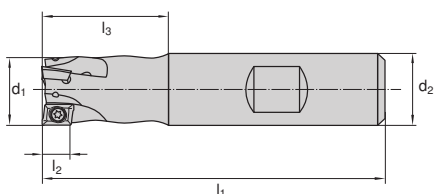
End mills for insert size 06

Applications

For milling inserts AD.X 06..

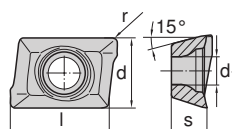


d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₂ mm	Z	Indexable inserts	17550	...
10	5.5	60	20	10	1	AD.X 06...		110
12	5.5	70	25	12	2	AD.X 06...		111
16	5.5	76	28	16	3	AD.X 06...		112
20	5.5	86	36	20	4	AD.X 06...		113
25	5.5	86	36	20	6	AD.X 06...		114



17550 110-114

Indexable inserts AD.X 06... and spare parts



Applications
Carbide type
Coating

ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17550	...	17550	...	17550	...
ADHX 060202 FR-ALC	6.35	4.76	2.38	2.0	0.2		201		211		
ADKX 060202 SR	6.35	4.76	2.38	2.0	0.2		202				221
ADKX 060204 SR	6.35	4.76	2.38	2.0	0.4		203				222

17550 FR-ALC

17550 SR



NKP
HC 4410
Coated

N
HW 4410
Uncoated

PMK
HC 4640
Coated

Clamping screw



Wrench



Spare parts	TX size	17550	...	52529	...
For indexable insert	T				
AD.X 06...	6		130		401

Continued

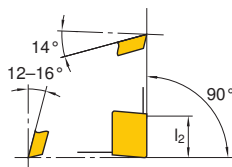
Continued



Screw-in milling cutters for insert size 09

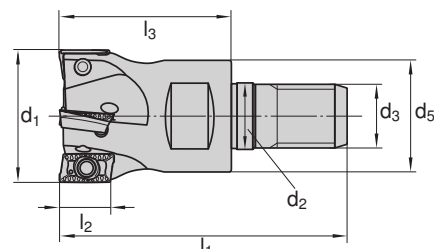
Applications

For milling inserts AD.X 09..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₅ mm	d ₃ mm	d ₂ mm	Z	Indexable inserts	17551	...
20	8.5	49	30	18	M 10	10.5	3	AD.X 09...		101
25	8.5	55	33	21	M 12	12.5	4	AD.X 09...		102
32	8.5	67	43	29	M 16	17.0	6	AD.X 09...		103

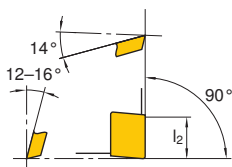
17551 101-103



End mills for insert size 09

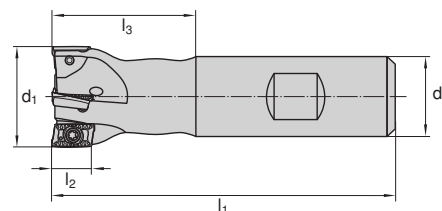
Applications

For milling inserts AD.X 09..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₂ mm	Z	Indexable inserts	17551	...
16	8.5	76	28	16	2	AD.X 09...		110
20	8.5	86	36	20	3	AD.X 09...		111
20	8.5	86	36	20	4	AD.X 09...		112
25	8.5	86	36	20	4	AD.X 09...		113
25	8.5	86	36	20	5	AD.X 09...		114
32	8.5	86	40	25	6	AD.X 09...		115

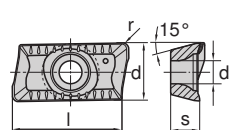
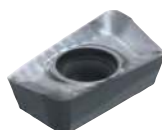
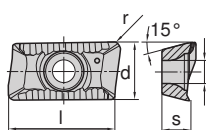
17551 110-115



Indexable inserts AD.X 09... and spare parts

17551 FR-ALC

17551 SR-TR

Applications
Carbide type
CoatingNKP
HC 4410
CoatedN
HW 4410
UncoatedPMK
HC 4640
CoatedM
HC 4540
CoatedM
HC 4544
Coated

ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17551	...	17551	...	17551	...	17551	...	17551	...
ADHX 090308 FR-ALC	9.52	5.56	3.18	2.8	0.8		201		211						
ADHX 090312 FR-ALC	9.52	5.56	3.18	2.8	1.2		202		212						
ADKX 090304 SR-TR	9.52	5.56	3.18	2.8	0.4		203			221					
ADKX 090308 SR-TR	9.52	5.56	3.18	2.8	0.8		204			222		231		241	
ADKX 090312 SR-TR	9.52	5.56	3.18	2.8	1.2		205			223		232		242	
ADKX 090316 SR-TR	9.52	5.56	3.18	2.8	1.6		206			224		233		243	

Clamping screw
17551Wrench
52529Spare parts
For indexable insertTX size
T

AD.X 09...

8

130

403

Continued

High performance angular milling cutters

17550 - 17553

High performance angular milling cutters

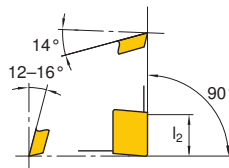
Continued



Screw-in milling cutters for insert size 12

Applications

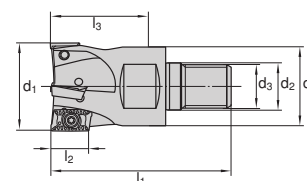
For milling inserts AD.X 12..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₅ mm	d ₃ mm	d ₂ mm	Z	Indexable inserts	17552	...
32	12	67	43	29	M 16	17	4	AD.X 12...	101	
40	12	67	43	29	M 16	17	6	AD.X 12...	102	



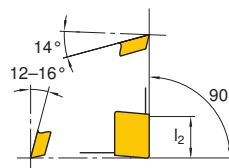
17552 101-102



End mills for insert size 12

Applications

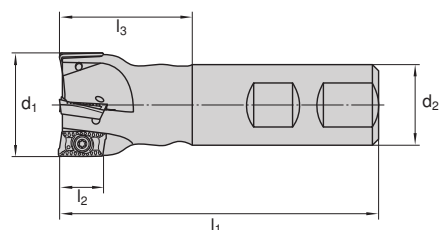
For milling inserts AD.X 12..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₂ mm	Z	Indexable inserts	17552	...
20	12	86	36	20	2	AD.X 12...	110	
25	12	86	36	20	3	AD.X 12...	111	
32	12	96	40	25	4	AD.X 12...	112	
32	12	96	40	25	5	AD.X 12...	113	
40	12	110	50	32	6	AD.X 12...	114	



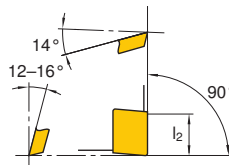
17552 110-114



Cutters with bore for insert size 12

Applications

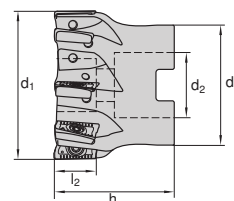
For milling inserts AD.X 12..



d ₁ mm	l ₂ mm	h mm	d ₅ mm	d ₂ mm	Z	Indexable inserts	17552	...
40	12	40	32	16	4	AD.X 12...	120	
40	12	40	32	16	6	AD.X 12...	121	
50	12	40	40	22	5	AD.X 12...	122	
50	12	40	40	22	7	AD.X 12...	123	
63	12	40	50	22	6	AD.X 12...	124	
63	12	40	50	22	9	AD.X 12...	125	



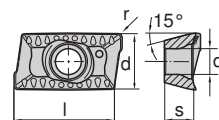
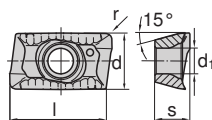
17552 120-125



Indexable inserts AD.X 12... and spare parts

17552 FR-ALC

17552 SR-TR



Applications
Carbide type
Coating

N K P
HC 4410
Coated

N
HW 4410
Uncoated

P M K
HC 4640
Coated

M
HC 4540
Coated

M
HC 4544
Coated

ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17552	...	17552	...	17552	...	17552	...	17552	...
ADHX 120408 FR-ALC	12.7	7.4	4.76	3.4	0.8		201		211						
ADHX 120412 FR-ALC	12.7	7.4	4.76	3.4	1.2		202		212						
ADHX 120416 FR-ALC	12.7	7.4	4.76	3.4	1.6		203		213						
ADKX 120408 SR-TR	12.7	7.4	4.76	3.4	0.8		204			221		231		241	
ADKX 120412 SR-TR	12.7	7.4	4.76	3.4	1.2		205			222		232		242	
ADKX 120416 SR-TR	12.7	7.4	4.76	3.4	1.6		206			223		233		243	
ADKX 120420 SR-TR	12.7	7.4	4.76	3.4	2.0		207			224					

Spare parts
For indexable insert
AD.X 12...

TX size
T
8

Clamping screw



Wrench



17552

...

52529

...

130

403

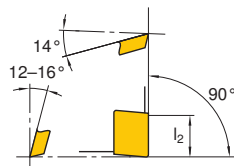
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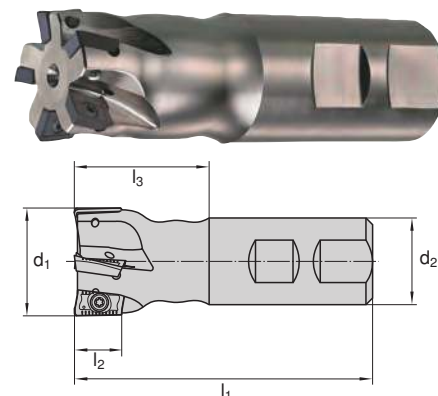
End mills for insert size 17

Applications

For milling inserts AD.X 17..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₂ mm	Z	Indexable inserts	17553	...
25	16.5	96	40	25	2	AD.X 17...		110
32	16.5	110	50	32	3	AD.X 17...		111
40	16.5	110	50	32	4	AD.X 17...		112

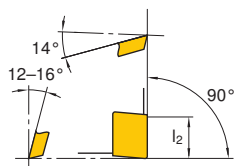


17553 110-112

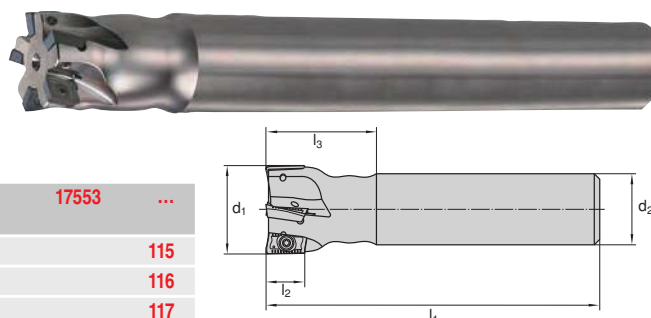
End mills, long, for insert size 17

Applications

For milling inserts AD.X 17..



d ₁ mm	l ₂ mm	l ₁ mm	l ₃ mm	d ₂ mm	Z	Indexable inserts	17553	...
25	16.5	200	40	25	2	AD.X 17...		115
32	16.5	250	50	32	3	AD.X 17...		116
40	16.5	250	50	32	4	AD.X 17...		117

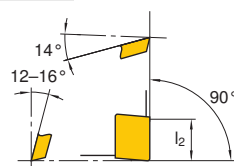


17553 115-117

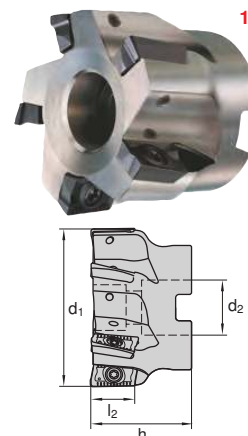
Cutters with bore for insert size 17

Applications

For milling inserts AD.X 17..

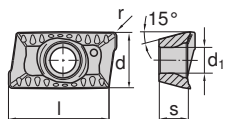


d ₁ mm	H mm	d ₂ mm	l ₂ mm	Z	Indexable inserts	17553	...
40	36	16	16.5	4	AD.X 17...		120
50	40	22	16.5	5	AD.X 17...		121
63	40	22	16.5	6	AD.X 17...		122
80	50	27	16.5	8	AD.X 17...		123
100	50	32	16.5	9	AD.X 17...		124



17553 120-124

Indexable inserts AD.X 17... and spare parts



17553 FR-ALC

17553 SR-TR



Applications	Carbide type	Coating	ISO designation	r mm	17553	...	17553	...	17553	...	17553	...	17553	...	17553	...
	NKP	HC 4410 Coated														
	N	HW 4410 Uncoated														
	PMK	HC 4640 Coated														
	M	HC 4540 Coated														
	M	HC 4544 Coated														
	PK	HC 4430 Coated														
ADHX 170508 FR-ALC				0.8		201		211								
ADHX 170512 FR-ALC				1.2		202		212								
ADHX 170516 FR-ALC				1.6		203		213								
ADKX 170508 SR-TR				0.8		204			221							251
ADKX 170512 SR-TR				1.2		205			222		232		242			252
ADKX 170516 SR-TR				1.6		206			223		233		243			253
ADKX 170520 SR-TR				2.0		207			224		234		244			254
Spare parts																
For indexable insert																
AD.X 17...																

Clamping screw 17553 Wrench 52529



17553

...

52529

...

130

403

Info

17556 - 17557 - tangential angular milling cutters

ATORN®

The tangential indexable insert milling system with 4 and 8 cutting edges has been developed for roughing and semi-finishing operations on steel and cast iron. The programme includes supports with diameters ranging from 50 to 160 mm and indexable inserts with cutting depths to 11.5 mm.

Tangential installation position for process reliability

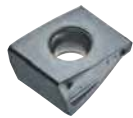
The tangential installation position of the indexable inserts offers several characteristic features. The favourable ratio between the supporting surface and the clamping force provides maximum stability. Even at a high cutting performance, the tools make the process extremely reliable.

Profitability through good machining properties

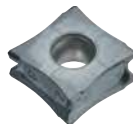
The robust indexable inserts have a positive chip angle resulting in excellent cutting behaviour and low power consumption for the machine. This greatly increases the service life of the cutting edge, which has a direct and positive impact on the tool costs.

Cost savings through cycle time reduction

The ratio of the tool diameter to the number of teeth, combined with the high feed rates that are possible, enables huge material removal rates. This means much shorter cycle times are achieved, which significantly reduces the overall process costs or the cost per part.



- 4-edged indexable insert for stable processes
- Feed depth to max. ap 11.5 mm
- Stable geometry for a wide range of applications



- 8-edged indexable insert for excellent cost efficiency
- Feed depth to max. ap 10 mm
- Soft cutting geometry for reduced chipping forces



17556

Tangential angular milling cutters, 90° LNMU 1306



ATORN®

Design

- Angular milling cutter with tangentially arranged indexable inserts and 4 usable cutting edges
- Wear-resistant, nickel-plated version
- With internal cooling up to Ø 125 mm

Advantage:

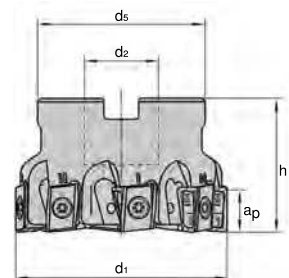
- Cutting depth down to 11.5 mm

Note:

For clamping screws see art. no. 17557 501.

NEW

17556 101-112



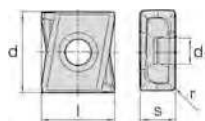
Ø d ₁ mm	h mm	d ₂ mm	d ₃ mm	ap mm	Z	Indexable inserts	17556	...
50	40	22	40	11.5	4	LNMU 1306		101
50	40	22	40	11.5	6	LNMU 1306		102
63	40	22	50	11.5	6	LNMU 1306		103
63	40	22	50	11.5	8	LNMU 1306		104
80	50	27	60	11.5	8	LNMU 1306		105
80	50	27	60	11.5	10	LNMU 1306		106
100	50	32	65	11.5	10	LNMU 1306		107
100	50	32	65	11.5	12	LNMU 1306		108
125	63	40	90	11.5	12	LNMU 1306		109
125	63	40	90	11.5	16	LNMU 1306		110
160	63	40	130	11.5	14	LNMU 1306		111
160	63	40	130	11.5	20	LNMU 1306		112

Indexable inserts

17556 201-221

Design

- 4-edged indexable insert for stable processes
- Feed depth to max. ap 11.5 mm
- Stable geometry for a wide range of applications



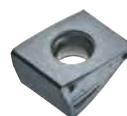
Applications

Cemented carbide grade

Coating

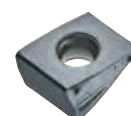
ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17556	...	17556	...	17556	...
LNMU 1306 SR	13.5	12.4	6	4.4	0.8		201		211		221

17556 201



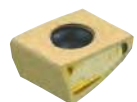
K
HC 4420
coated

17556 211



PK
HC 4430
coated

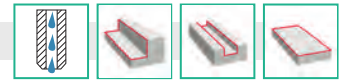
17556 221



P
HC 4640
coated

17557

Tangential angular milling cutters, 90°, XNMU 1206

**ATORN®****Design**

- Angular milling cutter with tangentially arranged indexable inserts and 8 usable cutting edges
- Wear-resistant, nickel-plated version

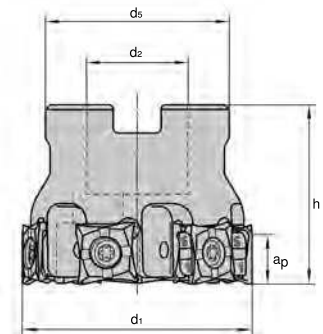
17557 101-110

Design

- With internal cooling

NEW

17557 101-112

**Advantage:**

- Cutting depth down to 10 mm

Note:

For clamping screws see art. no. 17557 501.

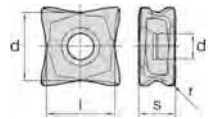
Ø d ₁ mm	h mm	d ₂ mm	d ₅ mm	ap mm	Z	Indexable inserts	17557	...
50	40	22	40	10	5	XNMU 1206		101
50	40	22	40	10	6	XNMU 1206		102
63	40	22	50	10	6	XNMU 1206		103
63	40	22	50	10	8	XNMU 1206		104
80	50	27	60	10	8	XNMU 1206		105
80	50	27	60	10	10	XNMU 1206		106
100	50	32	65	10	9	XNMU 1206		107
100	50	32	65	10	12	XNMU 1206		108
125	63	40	90	10	11	XNMU 1206		109
125	63	40	90	10	16	XNMU 1206		110
160	63	40	130	10	13	XNMU 1206		111
160	63	40	130	10	20	XNMU 1206		112

Indexable inserts and spare parts

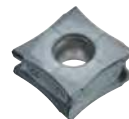
17557 201-221

Design

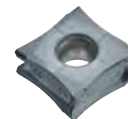
- 8-edged indexable insert for excellent cost efficiency
- Feed depth to max. ap 10 mm
- Soft cutting geometry for reduced chipping forces



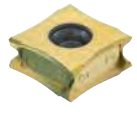
17557 201



17557 211



17557 221

**Applications**

Cemented carbide grade

Coating

KHC 4420
coated

17557

P KHC 4430
coated

17557

PHC 4640
coated

17557

ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17557	...	17557	...	17557	...
XNMU 1206 SR	12	12	6.35	4.4	0.8		201		211		221

Spare partsClamping screw Wrench 

Size	TX size T	17557	...	52529	...
M 4 x 11.0	15		501		406

17558

Angular milling cutter 90°

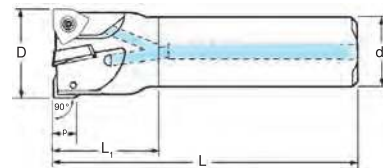
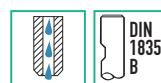
ATORN®

Design

- Wear-resistant, nickel-plated version
- Positive structural design of indexable insert
- Precise 90° angular milling
- Special chip breaker geometry for minimal power consumption
- Double-sided indexable insert with 6 cutting edges per indexable insert, therefore particularly cost-effective
- Substantial insert thickness for optimum process reliability with optimised plane cutting edge for high surface quality
- Internal coolant feed

Scope of delivery:

- Clamping screw and wrench
- Without indexable inserts

NEW


17558 101-106



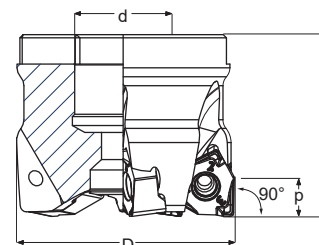
Ø D mm	Ø d mm	L mm	L ₁ mm	p mm	Z	Indexable inserts	17558	...
20	20	100	40	4	3	WNEU 0403..	101	
20	20	150	40	4	3	WNEU 0403..	102	
25	25	115	44	4	4	WNEU 0403..	103	
25	25	170	50	4	4	WNEU 0403..	104	
32	32	125	50	4	5	WNEU 0403..	105	
32	32	195	35	4	15	WNEU 0403..	106	

Ø D mm	Ø d mm	H mm	p mm	Z	Indexable inserts	17558	...
32	16	40	4	6	WNEU 0403..	120	
40	16	40	4	6	WNEU 0403..	121	
50	22	40	4	8	WNEU 0403..	122	

Ø D mm	Ø d mm	H mm	p mm	Z	Indexable inserts	17558	...
50	22	40	7	5	WNEU/WNEX 0806..	130	
63	22	40	7	6	WNEU/WNEX 0806..	131	
80	27	50	7	7	WNEU/WNEX 0806..	132	
100	32	50	7	8	WNEU/WNEX 0806..	133	
125	40	63	7	10	WNEU/WNEX 0806..	134	
160	40	63	7	11	WNEU/WNEX 0806..	135	



17558 120-122



17558 130-135

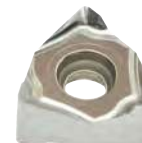
Indexable inserts and spare parts

17558 201-202 + 301-302 + 401-402

17558 203+303+403

17558 404

17558 501



Applications
Carbide type
Coating

P M K
HC 4430
Coated

P K
HC 4620
Coated

P M
HC 4630
Coated

N
HW 4415
Uncoated

ISO designation	l mm	s mm	r mm	17558	...	17558	...	17558	...	17558	...
WNEU 040304-M	4.0	3.30	0.4	201		301		401			
WNEU 040308-M	4.0	3.30	0.8	202		302		402			
WNEU 080608-M	7.5	6.56	0.8	203		303		403			
WNEU 080608-MM	7.5	6.56	0.8					404			
WNEX 080608	7.5	6.56	0.8							501	

Spare parts

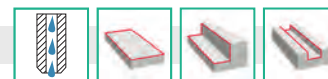
For indexable inserts size	Screw	TX size T	Clamping screw	Wrench
WNEU 04..	M 2.5 x 5.5	8	17558 601	52529 403
WNE 08..	M 4.0 x 12.0	15	17558 602	52529 406

Clamping screw



Wrench



**Advantage:**

- Patented system
- Exact 90° profile with 8 usable cutting edges per indexable insert
- Ground precision indexable insert in the H tolerance range
- Soft cut with low power consumption
- Perfect surface quality
- Holders available in metric and inch sizes
- For universal use (e.g. face milling, angular milling, trimming, slot milling, trochoidal groove milling)
- Tools with irregular pitch for perfect running smoothness during the milling process

- Smooth running is a great advantage, especially for low-performance machines or thin-walled, fragile components
- Optimum chip removal
- Perfectly adapted chip spaces
- Cooling takes place directly at the cutting edge and is suitable for emulsion, MMS and compressed air
- Innovative insert design with generous contact surfaces for maximum repeat accuracy
- Quick and easy insert assembly
- TX Plus clamping screws
- Milled coolant bore suitable for MMS, emulsion and compressed air
- The range includes tools with narrow or wide pitch
- Durable basic body with new base material and Hard & Tough coating

Great benefits:

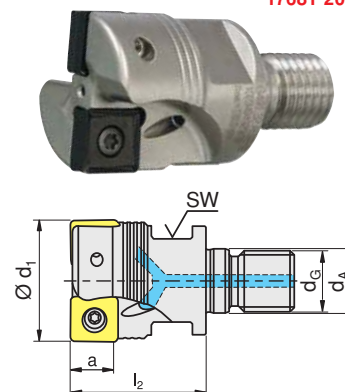
- Enormous profitability in terms of price per cutting edge for 90° angular milling
- Exact 90° profile
- Perfect axial and radial runout accuracy
- Also ideally suited to low-performance machines
- The cutter is quickly and easily equipped

Ø d ₁ mm	Designation	Z mm	l ₂ mm	a mm	Ø dA mm	Ø dG mm	max. rpm	Indexable inserts	with thread	
									17681	...
32	G491.32.R.02-12	2	35	8	17	16	13,600	SN..12..		201

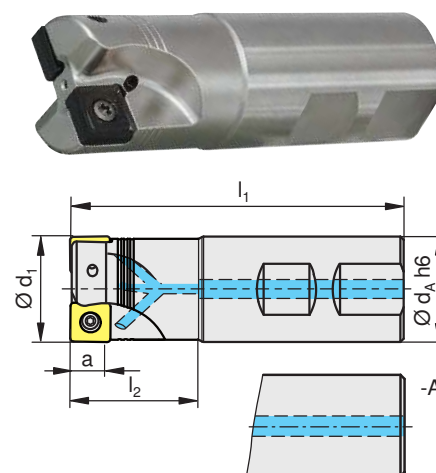
Ø d ₁ mm	Designation	Z mm	l ₂ mm	Ø dA mm	a mm	max. rpm	Indexable inserts	with shank	
								17680	...
32	C491.32.R.02-12-B-40	2	102	32	8	13,600	SN..12..		201
32	C491.32.R.02-12-A-63-250	2	250	32	8	10,200	SN..12..		202

Ø d ₁ mm	Designation	Z mm	h mm	Ø d mm	Ø dA mm	a mm	max. rpm	Indexable inserts	with bore	
									17682	...
40	A491.40.R.03-12	3	40	38	16	8	11,500	SN..12..		201
40	A491.40.R.04-12	4	40	38	16	8	11,500	SN..12..		202
50	A491.50.R.04-12	4	40	43	22	8	9,800	SN..12..		203
50	A491.50.R.05-12	5	40	43	22	8	9,800	SN..12..		204
63	A491.63.R.05-12	5	40	48	22	8	8,500	SN..12..		205
63	A491.63.R.06-12	6	40	48	22	8	8,500	SN..12..		206
80	A491.80.R.06-12	6	50	58	27	8	7,400	SN..12..		207
80	A491.80.R.08-12	8	50	58	27	8	7,400	SN..12..		208
100	A491.100.R.07-12	7	50	78	32	8	6,500	SN..12..		209
100	A491.100.R.10-12	10	50	78	32	8	6,500	SN..12..		210
125	A491.125.R.08-12	8	63	88	40	8	5,700	SN..12..		211
125	A491.125.R.12-12	12	63	88	40	8	5,700	SN..12..		212
160	A491.160.R.09-12	9	63	98	40	8	5,000	SN..12..		213
160	A491.160.R.14-12	14	63	98	40	8	5,000	SN..12..		214

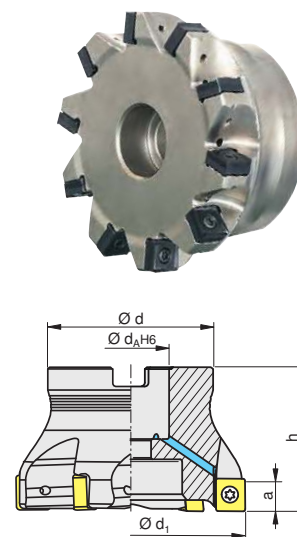
17681 201



17680 201-202



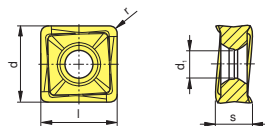
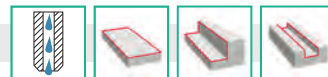
17682 201-214



Continued ►

Milling tools

Angular/slot milling cutters, MaxiMill 491



17685 106-107

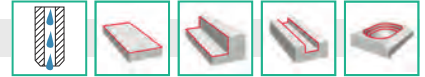


K
CTPK220
Coated
-B50

17685

17.40

eng/P



17882

Design

- Sturdy basic body made from tool steel with Hard & Tough coating
- Coolant bore also suitable for MMS
- Precise contact surfaces and exact positioning of the indexable insert

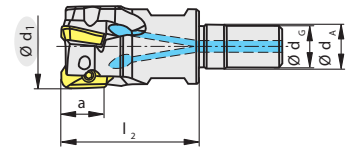
Advantage:

- Soft cut

Scope of delivery:

- Basic body with clamping screws
- **Without** indexable inserts

17882 102-106

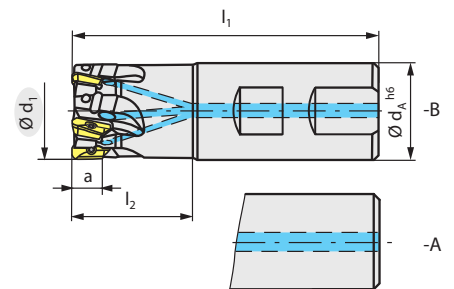
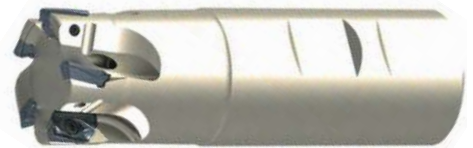


Ø d ₁ mm	Designation	Z	l ₂ mm	a mm	Ø d _A mm	Ø d _G mm	Indexable inserts	with thread	
								17882	...
20	G211.20.R.03-11	3	33	10	10.5	10	XD.. 11..		102
25	G211.25.R.03-11	3	34	10	12.5	12	XD.. 11..		103
25	G211.25.R.04-11	4	35	10	12.5	12	XD.. 11..		104
32	G211.32.R.04-11	4	36	10	17.0	16	XD.. 11..		105
32	G211.32.R.05-11	5	37	10	17.0	16	XD.. 11..		106

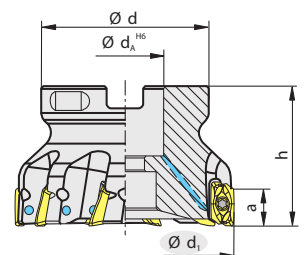
Ø d ₁ mm	Designation	Z	l ₁ mm	l ₂ mm	Ø d _A mm	a mm	Indexable inserts	with shank	
								17882	...
12	C211.12.R.01-11-B-20	1	75	20	16	10	XD.. 11..		201
16	C211.16.R.02-11-A15-32-165	2	165	32	15	10	XD.. 11..		202
16	C211.16.R.02-11-A-25	2	75	25	16	10	XD.. 11..		203
16	C211.16.R.02-11-A-32-165	2	165	32	16	10	XD.. 11..		204
16	C211.16.R.02-11-B-25	2	75	25	16	10	XD.. 11..		205
20	C211.20.R.02-11-A19-40-200	2	200	40	19	10	XD.. 11..		206
20	C211.20.R.02-11-A-25	2	77	25	20	10	XD.. 11..		207
20	C211.20.R.02-11-A-40-200	2	200	40	20	10	XD.. 11..		208
20	C211.20.R.02-11-B-25	2	77	25	20	10	XD.. 11..		209
20	C211.20.R.03-11-A-25	3	77	25	20	10	XD.. 11..		210
20	C211.20.R.03-11-A-32-165	3	165	32	20	10	XD.. 11..		211
20	C211.20.R.03-11-B-25	3	77	25	20	10	XD.. 11..		212
25	C211.25.R.02-11-A-50-225	2	225	50	25	10	XD.. 11..		213
25	C211.25.R.03-11-A24-50-225	3	225	50	24	10	XD.. 11..		214
25	C211.25.R.03-11-A-32	3	90	32	25	10	XD.. 11..		215
25	C211.25.R.03-11-A-50-225	3	225	50	25	10	XD.. 11..		216
25	C211.25.R.03-11-B-32	3	90	32	25	10	XD.. 11..		217
25	C211.25.R.04-11-A-32	4	90	32	25	10	XD.. 11..		218
25	C211.25.R.04-11-A-40-165	4	165	40	25	10	XD.. 11..		219
25	C211.25.R.04-11-B-32	4	90	32	25	10	XD.. 11..		220
32	C211.32.R.04-11-B-40	4	102	40	32	10	XD.. 11..		221
32	C211.32.R.05-11-B25-40	5	102	40	25	10	XD.. 11..		222
32	C211.32.R.05-11-B-40	5	102	40	32	10	XD.. 11..		223
40	C211.40.R.06-11-B-50	6	122	50	40	10	XD.. 11..		224

Ø d ₁ mm	Designation	Z	h mm	Ø d mm	Ø d _A mm	a mm	Indexable inserts	with bore	
								17882	...
40	A211.40.R.04-11	4	40	38	16	10	XD.. 11..		301
40	A211.40.R.06-11	6	40	38	16	10	XD.. 11..		302
50	A211.50.R.05-11	5	40	43	22	10	XD.. 11..		303
50	A211.50.R.08-11	8	40	43	22	10	XD.. 11..		304
63	A211.63.R.06-11	6	40	48	22	10	XD.. 11..		305
63	A211.63.R.10-11	10	40	48	22	10	XD.. 11..		306
80	A211.80.R.07-11	7	50	58	27	10	XD.. 11..		307
80	A211.80.R.10-11	10	50	58	27	10	XD.. 11..		308
100	A211.100.R.08-11	8	50	78	32	10	XD.. 11..		310
125	A211.125.R.10-11	10	63	88	40	10	XD.. 11..		312

17882 201-224



17882 301-312

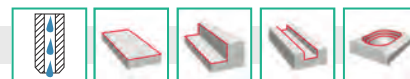


Continued

Angular/slot milling cutters

17882 - 17884

Angular/slot milling cutter system, MaxiMill 211-11



Continued

17884

Indexable inserts

Design

The notch makes the difference:

Up to WP radius 1.6 mm, the notch enables smooth, vibration-free operation, higher stability during plunge milling and improved machining performance. The radial forces during plunge milling are compensated.

Applications

Chip breaker F20:

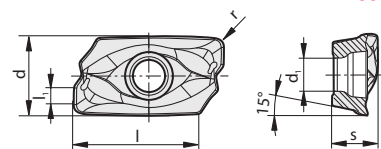
- Very good cutting efficiency, finishing of non-ferrous metals

Chip breaker F50:

- Chamfered indexable insert, very good cutting efficiency, finishing of steel, stainless steel and cast iron even under unstable conditions

Chip breaker M50:

- For universal use, compromise between cutting efficiency and stability, for medium machining of steel, stainless steel and cast iron



17884

17884 101-103

17884 104-106

17884 107-109



N

CTWN215
uncoated
F20

P

CTPP235
PVD
F50

M

CTPM240
PVD
M50

Applications
Cemented carbide type
Coating
Chip breaker

Designation	d mm	l mm	s mm	l ₁ mm	r mm	d ₁ mm		17884	...	17884	...	17884	...
XDKT 11T304FR-F20	6.8	10.6	3.8	1.8	0.4	2.8	10 pcs.		101				
XDKT 11T308FR-F20	6.8	10.6	3.8	1.4	0.8	2.8	10 pcs.		102				
XDKT 11T3020FR-F20	6.8	10.6	3.8	1.7	2.0	2.8	10 pcs.		103				
XDKT 11T304SR-F50	6.8	10.6	3.8	1.8	0.4	2.8	10 pcs.				104		
XDKT 11T308SR-F50	6.8	10.6	3.8	1.4	0.8	2.8	10 pcs.				105		
XDKT 11T320SR-F50	6.8	10.6	3.8	2.1	2.0	2.8	10 pcs.				106		
XDKT 11T308SR-M50	6.8	10.6	3.8	1.4	0.8	2.8	10 pcs.					107	
XDKT 11T312SR-M50	6.8	10.6	3.8	1.0	1.2	2.8	10 pcs.					108	
XDKT 11T320SR-M50	6.8	10.6	3.8	2.1	2.0	2.8	10 pcs.					109	

Spare parts

Clamping screw



Wrench



for Ø d ₁ mm	Clamping screw	Wrench	17999	...	51932	...
12	M 2.5 x 5.0	IP 8		123		404
15.7-32	M 2.5 x 5.6	IP 8		124		404
40-160	M 2.5 x 7.3	IP 8		125		404

Power screw



For cutters with bore Ø d ₁ mm	Power screw	17998	...
40	M 8 x 30.0		101
50	M 10 x 31.0		102

Info

MaxiMill 211-11

Active principle by "the notch" during circular and oblique immersion: (r < 2.0 mm)

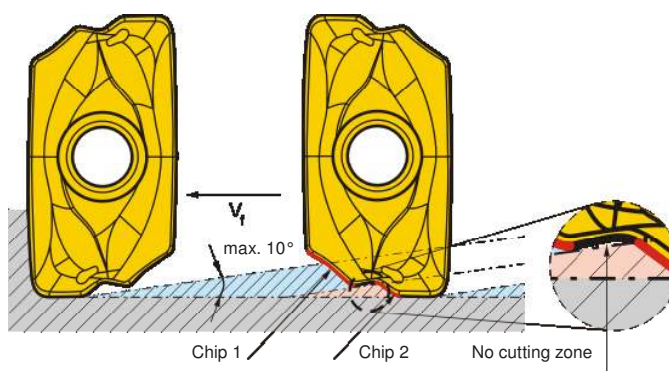


Radial force compensation

- The notch provides additional stability during immersion.
- Smooth running and vibration-free operation are thus guaranteed to a large extent.

Chip division

- Low cutting pressure
- Low power consumption
- Optimal chip transport
- Minimal vibrations
- Very good chip formation

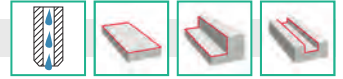


The PLUS for professional machinists:

- Higher cutting performance
- Better surfaces when milling closed grooves and pockets

17742

Angular milling cutter 90°

**ATORN®****Design**

- Positive
- Right cutting
- **Without** indexable inserts
- Insert design with four cutting edges per insert
- Cutting depths up to a maximum of 10.5 mm

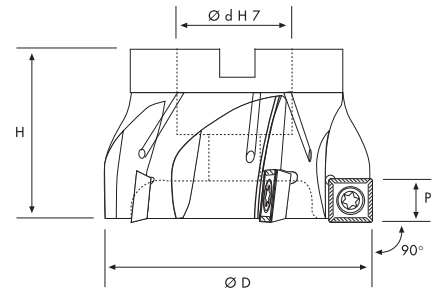
Applications

For carbide indexable inserts SD.T 1205.. For general corner and face milling, suitable for use near the clamping device. Core drilling via circular interpolation.

Note:

For cemented carbide indexable inserts SD.T 1205.. see art. no. 17833.

17742



Ø D mm	Ø d H7 mm	H mm	P mm	Z	Indexable inserts	17742	...
40	16	45	10.5	4	SD.T 1205 ..		100
50	22	40	10.5	5	SD.T 1205 ..		101
63	22	40	10.5	6	SD.T 1205 ..		102
80	27	50	10.5	6	SD.T 1205 ..		103
100	32	50	10.5	8	SD.T 1205 ..		104
125	40	63	10.5	9	SD.T 1205 ..		105

Spare parts**Clamping screw****Wrench**

For indexable inserts size	Clamping screw type	TX size T	17744	...	52529	...
SD.T 1205..	VT 40 710	15		101		406

17833

Indexable milling insert, SDMT

ATORN®**Design**

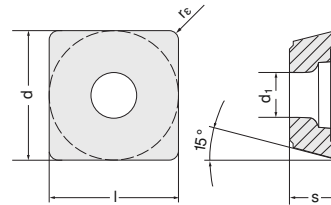
- Square
- Positive 15°

Applications

Carbide type

Coating

ISO designation	d+l mm	s mm	d ₁ mm	r	10 pcs.	17833	...
SDMT 1205 PDR69	12.7	5.00	4.40	0.8			101



17833



PM
P 25
TiAlN
17833

17662

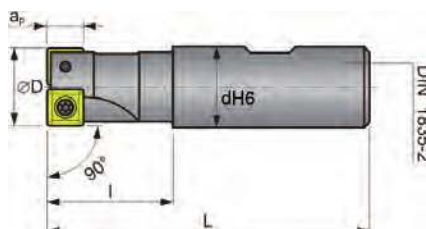
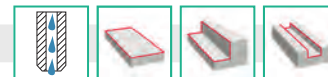
Angular milling cutter 90°

Design

- Nickel-plated milling body made of hardened special steel for **precise 90° cuts**
- **Extremely soft cut**

Applications

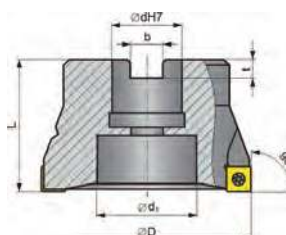
Universal use for light to medium machining.

Very good surface thanks to optimised face cutting. For indexable inserts SOMT 09T304.


17662 101-103



Cutting edge Ø mm	No. of cutting edges	Overall length mm	Shank Ø mm	Working depth L2 mm	with shank	
					17662	...
20	2	82	20	32		101
25	3	98	25	42		102
32	4	102	32	42		103



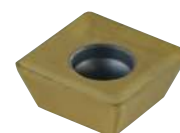
17662 120-122

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Location hole mm	with bore	
				17662	...
40	5	40	16		120
50	6	40	22		121
63	7	40	22		122



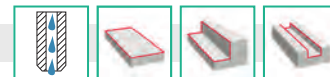
Indexable inserts and spare parts

17662 301-304



Indexable inserts		Steel		Steel roughing		UNI - soft cut		VA - soft cut	
Designation	Carbide type/ coating	17662	...	17662	...	17662	...	17662	...
SOMT 09T304	P30/TiN		301				303		
SOMT 09T304	P40/TiN				302				304

Spare parts		Clamping screw		Wrench	
For indexable inserts size	TX size T	17662	...	52529	...
SOMT 09T304	9		200		404


ATORN®
Design

- Internal coolant feed
- Multifunctional milling tool system with 4 cutting edges on a double-sided indexable insert
- Long tool life due to low cutting forces. Despite the strong cutting edge, the special chip shape geometry enables low power consumption due to the large chip angle
- Special chip geometry guarantees consistently high tool life due to the new carbide types
- Nickel-plated design offers greater protection against wear and a longer service life of the basic body

Use

For face milling, corner milling, trimming and groove milling.

17735 201-203
Screw-in milling cutter
Applications

For the use of ISO indexable milling inserts LN.X 100605 PNR art. no. 17738.

17735 101-103
End mill, 4-10 Power
Applications

For the use of ISO indexable milling inserts LN.X 100605 PNR art. no. 17738.

17735 301-303
End mill, long
Applications

For the use of ISO indexable milling inserts LN.X 100605 PNR art. no. 17738.

17736 101-103
Angular milling cutter, 4-10 Power
Applications

For the use of ISO indexable milling inserts LN.X 100605 PNR art. no. 17738.

17736 105-109
Angular milling cutter, 4-15 Power
Applications

For the use of ISO indexable inserts LN.X 151008 PNR art. no. 17738.

								with thread	
Ø D	d	L	L ₁	D ₁	M	Z	Indexable inserts	17735	...
mm	mm	mm	mm	mm					
20	10	30	20	10.5	M 10	3	LN.X 100605 PNR	201	
25	10	35	22	12.5	M 12	3	LN.X 100605 PNR	202	
32	10	43	24	17.0	M 16	4	LN.X 100605 PNR	203	

Short								with shank	
Ø D	d	L	L ₁	p	Z	Indexable inserts	17735	...	
mm	mm	mm	mm	mm					
20	20	100	30	9	3	LN.X 100605 PNR	101		
25	25	115	35	9	3	LN.X 100605 PNR	102		
32	25	115	40	9	4	LN.X 100605 PNR	103		

Long						with shank	
Ø D	d	L	L ₁	Z	Indexable inserts	17735	...
mm	mm	mm	mm				
20	20	150	50	3	LN.X 100605 PNR	301	
25	25	150	50	3	LN.X 100605 PNR	302	
32	32	200	60	4	LN.X 100605 PNR	303	

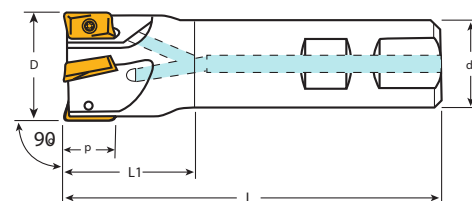
						with bore	
Ø D	d	H	p	Z	Indexable inserts	17736	...
mm	mm	mm	mm				
40	16	40	9	5	LN.X 100605 PNR	101	
50	22	40	9	7	LN.X 100605 PNR	102	
63	22	40	9	9	LN.X 100605 PNR	103	
50	22	40	14	5	LN.X 151008 PNR	105	
63	22	40	14	6	LN.X 151008 PNR	106	
80	27	50	14	7	LN.X 151008 PNR	107	
100	32	63	14	8	LN.X 151008 PNR	108	
125	40	63	14	10	LN.X 151008 PNR	109	
160	40	63	14	11	LN.X 151008 PNR	110	NEW



17735 201-203



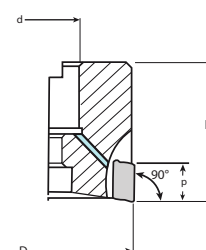
17735 101-103



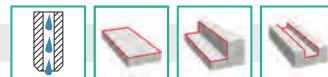
17735 301-303



17736 101-110



Continued ►



Continued ▶

Indexable inserts and spare parts

17738 101-205

Applications

- HW 4310: for aluminium machining
- HC 4630: for steel machining

- HC 4410: for cast iron machining
- HC 4535: for stainless steel machining
- HC 4635: for universal machining

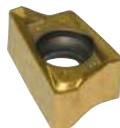
Note:

Cutting edges are marked with dots; please always use cutting edges with the same dots.

17738 101



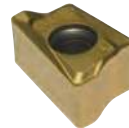
17738 102



17738 103



17738 104



Applications
Carbide type
Coating

N

HW 4310
Uncoated

P

HC 4630
Coated

K

HC 4410
Coated

M

HC 4535
Coated

P M K

HC 4635
Coated

ISO designation	r mm		17738	...	17738	...	17738	...	17738	...	17738	...
LNEX 100605 PNR-MA	0.5	10 pcs.	101									
LNMX 100605 PNR-MB	0.5	10 pcs.			102		103		104			
LNKX 100605 PNR-MB	0.5	10 pcs.									105	
LNEX 151008 PNR-MA	0.8	10 pcs.	201									
LNMX 151008 PNR-MB	0.8	10 pcs.			202		203		204			
LNKX 151008 PNR-MB	0.8	10 pcs.									205	

Spare parts

Clamping screws



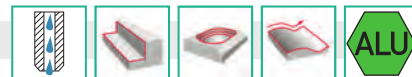
Wrench



For indexable inserts size	TX size T	17737	...	52529	...
LN.X 100605 PNR	9			101	404
LN.X 151008 PNR	15			102	406

17560

Plunge mills


ATORN®
Note:

For indexable inserts see art. no. 17563.

Applications

For non-ferrous metals and plastics.



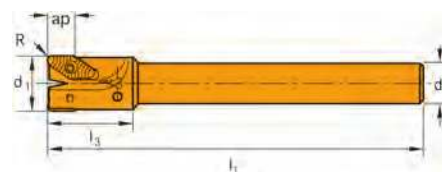
17560

Ø d ₁ mm	Z	R mm	l ₁ mm	l ₃ mm	ap mm	Ø d ₂ mm	Indexable inserts	17560	...
25	2	1.2	200	40	14	20	VPGT 160412-ALM	102	
32	2	3.0	220	50	15	25	VCVT 220530-ALM	103	

Spare parts
Clamping screws

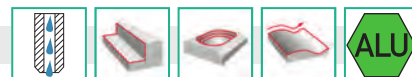
Wrench


For indexable inserts size	Screw	TX size T	17564	...	52529	...
VPGT 160412-ALM	M 4.0 x 7.5	15	102		406	
VCVT 220530-ALM	M 5.0 x 10.0	15	103		406	



17561

Screw-on mill cutters


ATORN®
Note:

For indexable inserts see art. no. 17563.

Type THR
Applications

For non-ferrous metals and plastics.

Ø d ₁ mm	Z	R mm	l ₁ mm	ap mm	d ₃ mm	Indexable inserts	17561	...
25	2	1.2	40	14	M 12	VPGT 160412-ALM	102	
32	2	3.0	50	15	M 16	VCVT 220530-ALM	103	
42	3	3.0	50	15	M 16	VCVT 220530-ALM	104	

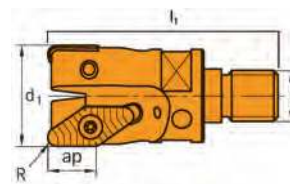
Spare parts
Clamping screws

Wrench


For indexable inserts size	Screw	TX size T	17564	...	52529	...
VPGT 160412-ALM	M 4.0 x 7.5	15	102		406	
VCVT 220530-ALM	M 5.0 x 10.0	15	103		406	

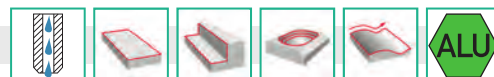


17561



17562

Shell end mills


ATORN®
Note:

For indexable inserts see art. no. 17563.

Design

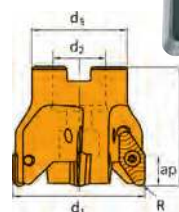
For non-ferrous metals and plastics.

Ø d ₁ mm	Z	R mm	h mm	ap mm	Ø d ₅ mm	d ₂ mm	Indexable inserts	17562	...
42	3	3.0	55	15	32	16	VCVT 220530-ALM	101	
52	3	3.0	55	15	40	22	VCVT 220530-ALM	102	
66	4	3.0	60	15	48	27	VCVT 220530-ALM	103	
80	4	3.0	60	15	60	27	VCVT 220530-ALM	104	
100	5	3.0	65	15	80	32	VCVT 220530-ALM	105	

Spare parts
Clamping screws

Wrench


For indexable inserts size	Screw	TX size T	17564	...	52529	...
VCVT 220530-ALM	M 5.0 x 10.0	15	103		406	



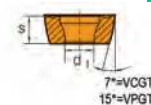
17562

17563

Indexable milling inserts, VPGT/VCVT

ATORN®


Indexable inserts							Uncoated K 10		Coated K 10	
Type	l mm	s mm	d mm	d ₁ mm	R mm		17563	...	17563	...
VPGT 160412-ALM	16.6	4.76	9.52	4.4	1.2	10 pcs.	102		202	
VCVT 220530-ALM	22.1	5.56	12.70	5.5	3.0	10 pcs.	103		203	



17563

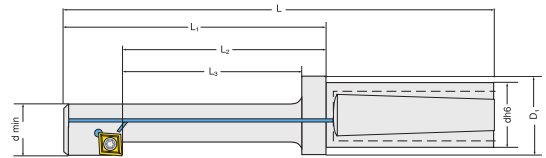
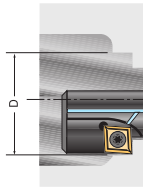


17570

Reverse milling counterbores, 180°/45°

**ATORN®****Design**- Supplied **without** indexable inserts**Applications**

For reverse countersinking of bores.



17570 101-114

Reverse milling counterbores, 180°

Ø D	d min.	L	L1	L2	L3	dh6	D1	e	Indexable inserts	17570	...
mm	mm	mm	mm	mm	mm	mm	mm	mm			
18	10.5	112	62	47	40	20	25	4.0	CC.. 0602..	101	
20	13.0	117	67	52	45	20	25	3.75	CC.. 0602..	102	
24	15.0	122	72	57	50	20	25	4.75	CC.. 0602..	103	
26	17.0	132	82	67	60	20	25	5.0	CC.. 0602..	104	
30	19.0	142	92	77	65	20	25	6.0	CC.. 0602..	105	
33	21.0	152	102	82	75	20	25	6.5	CC.. 09T3..	106	
36	23.0	173	113	93	85	32	40	7.0	CC.. 09T3..	107	
40	25.0	183	123	103	95	32	40	8.0	CC.. 09T3..	108	
43	30.0	183	123	103	95	32	40	7.0	CC.. 09T3..	109	
48	33.0	223	163	143	135	32	40	8.0	CC.. 09T3..	110	
53	36.0	210	140	40	110	40	-	9.0	CC.. 1204..	111	
57	39.0	220	150	40	120	40	-	9.5	CC.. 1204..	112	
66	45.0	245	165	50	135	50	-	11.0	CC.. 1204..	113	
76	52.0	265	185	50	155	50	-	12.5	CC.. 1204..	114	

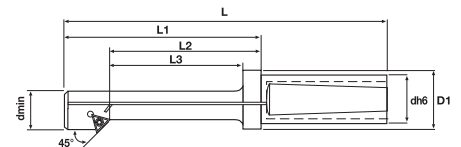
17570 101

Design

- Without internal cooling

Note:

For indexable inserts see art. no. 18550 ff.



17570 201-209

Reverse milling counterbores, 45°

Ø D	d min.	L	L1	L2	L3	dh6	D1	e	Indexable inserts	17570	...
mm	mm	mm	mm	mm	mm	mm	mm	mm			
15	10	105	55	42	35	20	25	2.7	TCMT 0802..	201	NEW
20	14	110	60	47	40	20	25	3.2	TCMT 0802..	203	NEW
23	17	120	70	57	50	20	25	3.2	TCMT 1102..	204	NEW
27	21	140	90	77	70	20	25	3.2	TCMT 1102..	207	NEW
31	24	150	100	87	80	20	25	3.7	TCMT 1102..	209	NEW

17570 201

Design

- Without internal cooling

Note:

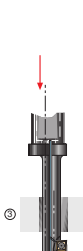
For indexable inserts see art. no. 17570 301.



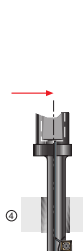
1) Position the tool on the centre of the bore. Spindle orientation 0°.



2) Offset the tool by the programming dimension (e).



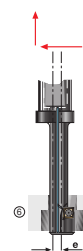
3) Plunge to the position below the lower edge of the workpiece with safety clearance.



4) Move back to the centre of the bore by the dimension (e), and then start the spindle.



5) Countersink to the desired depth.



6) Position at the safety distance below the lower edge of the workpiece. Spindle orientation at 0°. Then offset the tool by the programming dimension (e) and extend the cutter.

Applications
CoatingP M K
TIN

ISO Designation	l	d	s	d1	r		17570	...
mm	mm	mm	mm	mm	mm			
TCMT 080204	8.2	4.76	2.38	2.3	0.4	10 pcs.	301	NEW

Spare parts

Clamping screw

17528

...

Wrench

52529

...

For indexable inserts

TX size

T

TCMT 080204

7

CC.. 0602..

8

CC.. 09T3..

15

CC.. 1204..

20

100 NEW

402 NEW

101

403

102

406

103

407


ATORN®
Design

- Single-edged boring bar with internal cooling
- **Without** indexable inserts

Bore tolerances:

Indexable insert radius 0.2 mm = +0.05/-0.10 mm

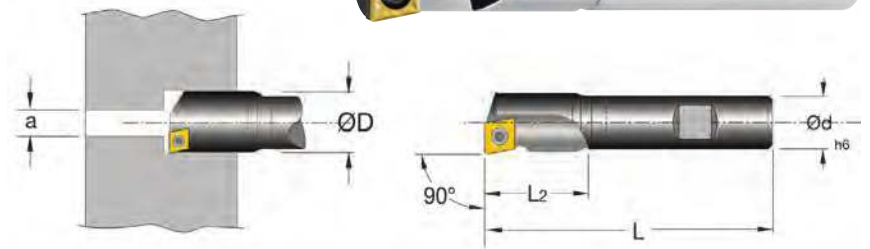
Indexable insert radius 0.4 mm = +0.03/-0.18 mm

Applications

For countersinking and core drilling.

Note:

For indexable inserts see art. no. 18550 ff.



17576

Ø D mm	Ød h6 mm	a mm	L mm	L ₂ mm	Indexable inserts	17576	...
9.8	8	4.5	90	23	CC.. 0602..	201	NEW
10	12	4	85	15	CC.. 0602..	101	
10.8	10	3.5	105	24	CC.. 0602..	202	NEW
11	12	4	85	16	CC.. 0602..	102	
11.8	10	3	105	25	CC.. 0602..	203	NEW
12	10	4	85	20	CC.. 0602..	103	
12.8	10	2.5	105	26	CC.. 0602..	204	NEW
13	12	5	85	21	CC.. 0602..	104	
13.8	12	3	110	27	CC.. 0602..	205	NEW
14	12	5	85	21	CC.. 0602..	105	
14.8	12	3.5	120	28	CC.. 0602..	206	NEW
15	12	5	85	24	CC.. 0602..	106	
15.8	12	4	125	29	CC.. 0602..	207	NEW
16	12	5	85	28	CC.. 0602..	107	
16.8	16	5	140	30	CC.. 0602..	208	NEW
17	16	5	95	40	CC.. 09T3..	108	
17.8	16	6	140	31	CC.. 0602..	209	NEW
18	16	5	95	40	CC.. 09T3..	109	
18.8	16	7	150	32	CC.. 0602..	210	NEW
19	16	5	95	40	CC.. 09T3..	110	
19.8	16	8	150	33	CC.. 09T3..	211	NEW
20	16	5	95	40	CC.. 09T3..	111	
20.8	16	9	160	34	CC.. 09T3..	212	NEW
21	16	5	95	33	CC.. 09T3..	112	

Ø D mm	Ød h6 mm	a mm	L mm	L ₂ mm	Indexable inserts	17576	...
21.8	20	10	160	35	CC.. 09T3..	213	NEW
22	16	6	95	37	CC.. 09T3..	113	
22.8	20	11	165	36	CC.. 09T3..	214	NEW
23	16	6	95	40	CC.. 09T3..	114	
23.8	20	12	170	37	CC.. 09T3..	215	NEW
24	16	6	95	34	CC.. 09T3..	115	
24.8	20	13	180	38	CC.. 09T3..	216	NEW
25	16	8	95	33	CC.. 09T3..	116	
25.8	20	14	185	39	CC.. 09T3..	217	NEW
26	20	8	120	53	CC.. 09T3..	117	
26.8	20	15	190	40	CC.. 09T3..	218	NEW
27	20	9	120	56	CC.. 09T3..	118	
27.8	20	16	190	41	CC.. 09T3..	219	NEW
28	20	10	120	53	CC.. 09T3..	119	
28.8	20	17	200	42	CC.. 09T3..	220	NEW
29	20	11	120	55	CC.. 09T3..	120	
29.8	25	18	200	43	CC.. 09T3..	221	NEW
30	20	12	121	57	CC.. 09T3..	121	
30.8	25	19	200	44	CC.. 09T3..	222	NEW
31	20	14	120	55	CC.. 09T3..	122	
31.8	25	20	200	45	CC.. 09T3..	223	NEW
32	20	15	120	54	CC.. 09T3..	123	
33	20	16	120	55	CC.. 09T3..	124	

Spare parts

 For indexable inserts
size

 TX size
T

 CC.. 0602.. 8
 CC.. 09T3.. 15

Clamping screw



17528



...

Wrench

52529

...

 101 403
 102 406

17577

Core and countersunk drills (double-edged)

**ATORN®****Design**

- Double-edged boring bar with internal cooling
- **Without** indexable inserts

Bore tolerances:

Indexable insert radius 0.2 mm = +0.05/-0.10 mm

Indexable insert radius 0.4 mm = +0.03/-0.18 mm

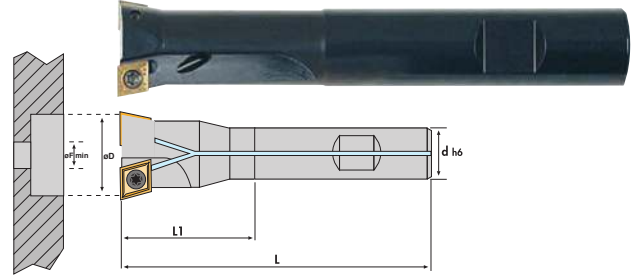
Applications

For countersinking and core drilling.

Note:

For indexable inserts see art. no. 18550 ff.

17577



Ø D mm	Ø d h6 mm	Ø F min. mm	L mm	L1 mm	Indexable inserts	17577	...
16	12	5	92	30	CC.. 0602..		101
17	16	6	94	32	CC.. 0602..		102
18	16	7	97	41	CC.. 0602..		103
19	16	8	100	41	CC.. 0602..		104
20	16	9	102	41	CC.. 0602..		105
21	16	10	105	41	CC.. 0602..		106
22	16	11	110	41	CC.. 0602..		107
23	16	12	112	41	CC.. 0602..		108
24	16	13	115	41	CC.. 0602..		109
25	16	8	120	40	CC.. 09T3..		110
26	20	9	125	55	CC.. 09T3..		111
27	20	10	128	55	CC.. 09T3..		112
28	20	11	130	55	CC.. 09T3..		113
29	20	12	132	55	CC.. 09T3..		114

Ø D mm	Ø d h6 mm	Ø F min. mm	L mm	L1 mm	Indexable inserts	17577	...
30	20	13	134	55	CC.. 09T3..		115
31	20	14	136	55	CC.. 09T3..		116
32	20	15	138	55	CC.. 09T3..		117
33	20	16	140	55	CC.. 09T3..		118
34	25	16	140	60	CC.. 09T3..		119
35	25	17	140	60	CC.. 09T3..		120
36	25	18	140	60	CC.. 09T3..		121
37	25	19	140	60	CC.. 09T3..		122
38	25	20	140	60	CC.. 09T3..		123
39	25	21	140	60	CC.. 09T3..		124
40	25	22	140	60	CC.. 09T3..		125
41	25	23	140	60	CC.. 09T3..		126
42	25	24	140	60	CC.. 09T3..		127

Spare parts

Clamping screw



Wrench



For indexable inserts size	TX size T	17528	...	52529	...
CC.. 0602..	8		101		403
CC.. 09T3..	15		102		406

17578

Adjustable fine boring bars

**ATORN®****Design**

- Special steel, nickel-plated
- Adjustment range 2–5 mm
- **Without** indexable inserts

Advantage:

- Cost-effective alternative to spindle tools

Applications

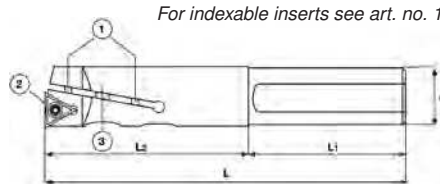
For ISO indexable inserts CCMT and CCGT.

Note:

For indexable inserts see art. no. 18550 ff.

17578

- 1 = Draw bolt
2 = Clamping screw
3 = Counter screw



D min. mm	D max. mm	d mm	L mm	L2 mm	L1 mm	Indexable inserts	Holder 17578	...	Draw bolt 17578	...	Counter screw 17578	...
10	12	10	100	30	70	CC.. 0602..		101		201		301
12	15	12	105	30	70	CC.. 0602..		102		201		302
15	20	16	110	50	60	CC.. 0602..		103		202		303
20	25	20	120	60	60	CC.. 0602..		104		203		304
25	30	25	140	70	70	CC.. 09T3..		105		204		305
30	35	25	160	90	70	CC.. 09T3..		106		205		306
35	40	32	170	100	70	CC.. 09T3..		107		206		307
40	45	32	190	120	70	CC.. 09T3..		108		207		308
45	50	32	220	160	70	CC.. 09T3..		109		208		309

Spare parts

Clamping screw



Wrench



For indexable inserts size	TX size T	17528	...	52529	...
CC.. 0602..	8		101		403
CC.. 09T3..	15		102		406

**Design**

- Nickel-plated face milling cutter head made of hardened special steel for **HPC machining**
- Dynamic cutting geometry **for maximum feed rates**
- Very soft cutting
- Reduced **cutting force minimises load on the spindle**

Applications

For face and pocket milling. Even large projection depths can be milled.



17660 101-102



with shank

Cutting edge Ø mm	No. of teeth	Overall length mm	Shank Ø mm	Working depth L2 mm	For indexable insert	17660	...
25	2	140	25	80	ZDCW 09T304		101
32	2	140	32	80	ZDCW 09T304		102

with thread

Cutting edge Ø mm	No. of teeth	Overall length mm	Clamping thread mm	For indexable insert	17660	...
25	2	54	M 12	ZDCW 09T304		110
32	3	63	M 16	ZDEW 120408		111
40	4	63	M 16	ZDEW 120408		112

17660 110-112



with bore

Cutting edge Ø mm	No. of teeth	Overall length mm	Location hole mm	For indexable insert	17660	...
40	4	40	16	ZDCW 09T304		120
50	4	40	22	ZDEW 120408		121
63	5	40	22	ZDEW 120408		122
80	5	50	27	ZDEW 120408		123

17660 120-123

**Indexable inserts and spare parts**

17660 304



17660 305



17660 306



Designation	Carbide type/ coating	Programmable radius mm	Steel 17660	...	Steel roughing 17660	...	Cast iron + hardened 17660	...
ZDCW 09T304	P25/AI203	2.27		301				
ZDCW 09T304	P40/AI203	2.27				302		
ZDCW 09T304	K10/AI203	2.27						303
ZDEW 120408	P25/AI203	3.52	304					
ZDEW 120408	P40/AI203	3.52				305		
ZDEW 120408	K10/AI203	3.52						306

Spare parts

For indexable inserts size	TX size T	Clamping screw 17660	...	Wrench 52529	...
ZDCW 09T304	9		200		404
ZDEW 120408	15		201		406



Design

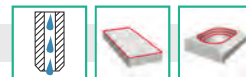
- Basic body made of special steel
- Dynamic cutting edge geometry for a soft cut

Scope of delivery:

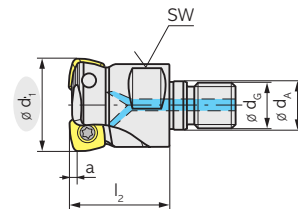
- Basic body with clamping screws
- **Without** indexable inserts

Advantages:

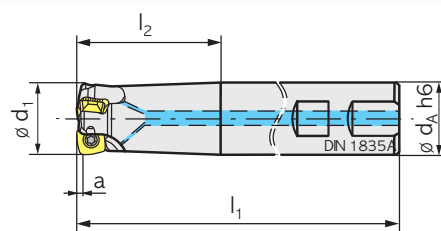
- HyperCoat coating for an extremely long service life
- Maximum running smoothness
- Maximum machining performance
- Maximum cost efficiency



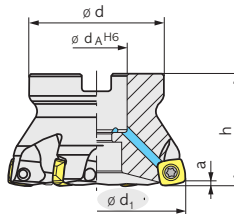
17865 101-104



17865 201-204



17865 301-304



with bore

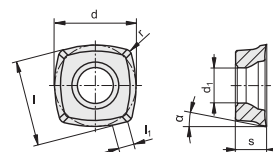
Ø d1 mm	Designation	Z	Ø dA mm	h mm	Ø d mm	a mm	Indexable inserts	17865	...
32	AHFC.32.R.03-09	3	16	40	38	1	XD.. 09..	301	
42	AHFC.42.R.05-09	5	16	40	38	1	XD.. 09..	302	
52	AHFC.52.R.06-09	6	22	40	43	1	XD.. 09..	303	
63	AHFC.63.R.06-09	6	22	40	48	1	XD.. 09..	304	

Indexable inserts and spare parts

Applications

Cemented carbide grade

Coating



17867

M P
CTPM245
PVD

P
CTPP235
PVD

Designation	d mm	l mm	s mm	l1 mm	r mm	d1 mm		17867	...	17867	...
XPLX 060305SR-M50	6.35	6.00	2.75	1.0	0.50	2.80	10 pcs.	102			
XDLX 09T308ER-F40	9.60	9.60	3.97	1.5	0.80	4.40	10 pcs.	103			
XDLX 09T308SR-M50	9.60	9.60	3.97	1.5	0.80	4.40	10 pcs.			104	

Spare parts

for indexable inserts
Clamping screw

Key

Clamping screw



Wrench



Size	Clamping screw	Key	17999	...	51932	...
XP.. 06	M 2.5 x 5.0	T 8	115		204	
XD.. 09..	M 3.5 x 8.6	T 15	116		207	

For cutters with bore

Ø d1 mm

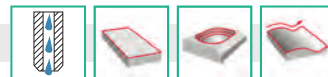
Power screw

Power screw



32-42	M 8 x 30.0	17998	...	101	
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**Design**

- **Nickel-plated** milling cutter body in hardened special steel
- Robust design for smooth running
- High **radial and axial runout accuracy**

Applications

For face and copy milling with high rotation speeds and feed rates. For **toolmaking and mould making**.

17613 104

**For indexable inserts RDHX 0702****Copy milling cutters with shank**

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Shank Ø mm	Working depth L2 mm	17613	...
15	2	90	16	20		104
15L	2	110	16	20		105
15XL	2	160	20	22		106

Copy milling cutters with thread

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Clamping thread	17613	...
15	2	23	M 8		110
20	4	30	M 10		111
25	5	35	M 12		112
32	5	42	M 12		113

Indexable inserts and spare parts

ISO designation	Type/coating	Coated	Applications	s mm	d mm	d1 mm		17824	...
RDHX 0702 MOT	Al, polished	-	N	2.38	7	2.7	10 pcs.		304
RDHX 0702 MOT	K 10/AI203	x	KH	2.38	7	2.7	10 pcs.		305
RDHX 0702 MOT	P 25/AI203	x	P	2.38	7	2.7	10 pcs.		306
RDHX 0702	ABC10T, chamfered	-	S	2.38	7	2.7	-		330
RDHX 0702	ABC25T, chamfered	-	H	2.38	7	2.7	-		331

Clamping screw



Wrench



Spare parts	TX size	17613	...	52529	...
For indexable insert	T				
RDHX 0702	7		201		402

For indexable inserts RDHX 1003**Copy milling cutters with shank**

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Shank Ø mm	Working depth L2 mm	17614	...
20	2	90	20	30		101
20L	2	110	25	22		102
20XL	2	160	25	25		103

Copy milling cutters with thread

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Clamping thread	17614	...
20	2	28	M 10		110
25	3	32	M 12		111
30	4	42	M 16		112
35	5	42	M 16		113
42	6	42	M 16		114

Copy milling cutters with bore

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Location hole mm	17614	...
42	6	40	16		120
52	7	50	22		121

Indexable inserts and spare parts

ISO designation	Type/coating	Coated	Applications	s mm	d mm	d1 mm		17824	...
RDHX 1003 MOT	Al, polished	-	N	3.18	10	3.1	10 pcs.		309
RDHX 1003 MOT	K 10/AI203	x	KH	3.18	10	3.1	10 pcs.		310
RDHX 1003 MOT	P 25/AI203	x	P	3.18	10	3.1	10 pcs.		311
RDHX 1003 MOT	P 40/AI203	x	P	3.18	10	3.1	10 pcs.		312
RDHX 1003 MOT	M 40/AI203	x	M	3.18	10	3.1	10 pcs.		313
RDHX 1003	ABC10T, chamfered	-	S	3.18	10	3.1	-		332
RDHX 1003	ABC25T, chamfered	-	H	3.18	10	3.1	-		333

Clamping screw



Wrench



Spare parts	TX size	17614	...	52529	...
For indexable insert	T				
RDHX 1003	15		201		406

17614 101



17614 110-114



17614 120-121



17824 309



17824 310



17824 311



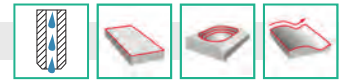
17824 312



17824 332-333



Continued



17613 - 17824

Face and copy milling cutters

Continued

Design

- Nickel-plated milling cutter body in hardened special steel
- Robust design for smooth running
- High radial and axial runout accuracy

Applications

For face and copy milling with high rotation speeds and feed rates. For toolmaking and mould making.

For indexable inserts RDHX 12T3

Copy milling cutters with thread

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Shank Ø mm	17615	...
24	2	35	M 12		110
32	3	42	M 16		111
35	3	42	M 16		112
42	5	42	M 16		113

Copy milling cutters with bore

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Location hole mm	17615	...
42	4	40	16		120
52	5	50	22		121
66	6	50	27		122
80	7	50	27		123

Indexable inserts and spare parts

ISO designation	Type/coating	Coated	Applications	s mm	d mm	d1 mm	17824	...
RDHX 12T3 MOT	Al, polished	-	N	3.97	12	3.9	10 pcs.	314
RDHX 12T3 MOT	K 10/Al2O3	x	KH	3.97	12	3.9	10 pcs.	315
RDHX 12T3 MOT	P 25/Al2O3	x	P	3.97	12	3.9	10 pcs.	316
RDHX 12T3 MOT	P 40/Al2O3	x	P	3.97	12	3.9	10 pcs.	317
RDHX 12T3 MOT	M 40/Al2O3	x	M	3.97	12	3.9	10 pcs.	318
RDHX 12T3	ABC10T, chamfered	-	S	3.97	12	3.9	-	334
RDHX 12T3	ABC25T, chamfered	-	H	3.97	12	3.9	-	335
Clamping screw				Clamping claw		Wrench		
Spare parts for indexable insert	TX size T	17615	...	17615	...	52529	...	...
RDHX 12T3	15		200		201			406

For indexable inserts RDHX 1604

Copy milling cutters with bore

Cutting edge Ø mm	No. of cutting edges	Overall length mm	Location hole mm	17616	...
52	4	50	22		120
66	5	50	27		121
80	6	50	27		122
100	7	50	32		123

Indexable inserts and spare parts

ISO designation	Carbide type/coating	Coated	Applications	s mm	d mm	d1 mm	17824	...
RDHX 1604 MOT	Al, polished	-	N	4.76	16	5.0	10 pcs.	319
RDHX 1604 MOT	K 10/Al2O3	x	KH	4.76	16	5.0	10 pcs.	320
RDHX 1604 MOT	P 25/Al2O3	x	P	4.76	16	5.0	10 pcs.	321
RDHX 1604 MOT	P 40/Al2O3	x	P	4.76	16	5.0	10 pcs.	322
RDHX 1604 MOT	M 40/Al2O3	x	M	4.76	16	5.0	10 pcs.	323
Clamping screw				Clamping claw		Wrench		
Spare parts for indexable insert	TX size T	17616	...	17616	...	52529	...	...
RDHX 1604	20		200		201			407

17615 110-113



17615 120-123



17824 314



17824 315



17824 316



17824 317



17824 334-335



17616 120-123



17824 319



17824 320



17824 321



17824 322



**Design**

- Sturdy basic body with Hard & Tough coating
- Insert seat with indexing aid
- Power screw with Ø 40 mm and Ø 50 mm

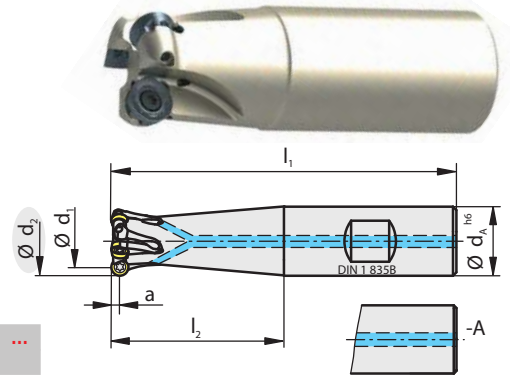
Advantages:

- Easy cutting, low-vibration cutting edge geometry
- Maximum process reliability
- Predictable wear behaviour
- Reproducible service life

Scope of delivery:

- Basic body with clamping screws
- **Without** indexable inserts

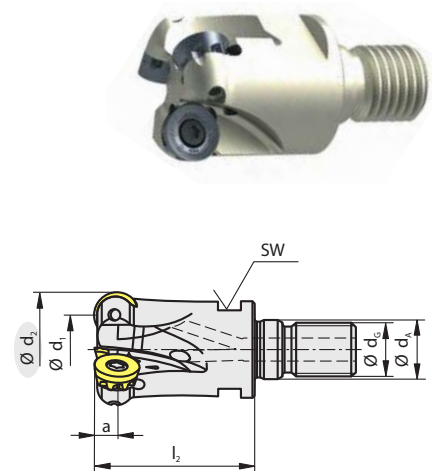
17868 101-126



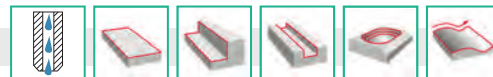
Ø d ₂ mm	Designation	Z	Ø d ₁ mm	l ₁ mm	l ₂ mm	Ø d _A mm	a mm	Indexable inserts	with shank 17868	...
10	C251.10.R.02-05-A-25-165-RS	2	5	165	25	10	2.5	RD..0501..		101
10	C251.10.R.02-05-B12-20-RS	2	5	67	20	12	2.5	RD..0501..		102
12	C251.12.R.03-05-A-32-165-RS	3	7	165	32	12	2.5	RD..0501..		103
12	C251.12.R.03-05-B16-25-RS	3	7	75	25	16	2.5	RD..0501..		104
16	C251.16.R.04-05-A-40-165-RS	4	11	165	40	16	2.5	RD..0501..		105
16	C251.16.R.04-05-B32-RS	4	11	81	32	16	2.5	RD..0501..		106
20	C251.20.R.05-05-A-50-165-RS	5	15	165	50	20	2.5	RD..0501..		107
20	C251.20.R.05-05-B40-RS	5	15	91	40	20	2.5	RD..0501..		108
16	C251.16.R.02-08-A-40-165-RS	2	8	165	40	16	4.0	RD..0802..		109
16	C251.16.R.02-08-B32-RS	2	8	81	32	16	4.0	RD..0802..		110
20	C251.20.R.03-08-A-50-200-RS	3	12	200	50	20	4.0	RD..0802..		111
20	C251.20.R.03-08-A-60-RS	3	12	110	60	20	4.0	RD..0802..		113
20	C251.20.R.03-08-B40-RS	3	12	91	40	20	4.0	RD..0802..		114
25	C251.25.R.04-08-A-60-RS	4	17	116	60	25	4.0	RD..0802..		115
25	C251.25.R.04-08-A-60-225-RS	4	17	225	60	25	4.0	RD..0802..		116
25	C251.25.R.04-08-B50-RS	4	17	107	50	25	4.0	RD..0802..		117
20	C251.20.R.02-10-A-50-RS	2	10	102	50	20	5.0	RP..10T3..		118
20	C251.20.R.02-10-A-50-200-RS	2	10	200	50	20	5.0	RP..10T3..		119
25	C251.25.R.03-10-A-60-RS	3	15	116	60	25	5.0	RP..10T3..		120
25	C251.25.R.03-10-A-60-225-RS	3	15	225	60	25	5.0	RP..10T3..		121
25	C251.25.R.03-10-B60-RS	3	15	116	60	25	5.0	RP..10T3..		122
32	C251.32.R.04-10-A-70-RS	4	22	130	70	32	5.0	RP..10T3..		123
25	C251.25.R.02-12-B30-RS	2	13	86	30	25	6.0	RP..1204..		124
32	C251.32.R.03-12-A40-RS	3	20	100	40	32	6.0	RP..1204..		125
32	C251.32.R.03-12-B40-RS	3	20	100	40	32	6.0	RP..1204..		126

17868 201-213

Ø d ₂ mm	Designation	Z	Ø d ₁ mm	l ₂ mm	a mm	Ø d _A mm	Ø d _G mm	Indexable inserts	17868	...
20	G251.20.R.05-05-RS	5	15	33	2.5	10.5	10	RD..0501..		201
25	G251.25.R.06-05-RS	6	20	35	2.5	12.5	12	RD..0501..		202
32	G251.32.R.07-05-RS	7	27	35	2.5	17.0	16	RD..0501..		203
20	G251.20.R.03-08-RS	3	12	33	4.0	10.5	10	RD..0802..		204
25	G251.25.R.04-08-RS	4	17	35	4.0	12.5	12	RD..0802..		205
32	G251.32.R.05-08-RS	5	24	35	4.0	17.0	16	RD..0802..		206
20	G251.20.R.02-10-RS	2	10	33	5.0	10.5	10	RP..10T3..		207
25	G251.25.R.03-10-RS	3	15	35	5.0	12.5	12	RP..10T3..		208
32	G251.32.R.04-10-RS	4	22	35	5.0	17.0	16	RP..10T3..		209
25	G251.25.R.02-12-35-RS	2	13	35	6.0	12.5	12	RP..1204..		210
32	G251.32.R.03-12-35-RS	3	20	35	6.0	17.0	16	RP..1204..		211
35	G251.35.R.03-12-35-RS	3	23	35	6.0	17.0	16	RP..1204..		212
42	G251.42.R.04-12-42-RS	4	30	42	6.0	17.0	16	RP..1204..		213



Continued



17868 - 17870

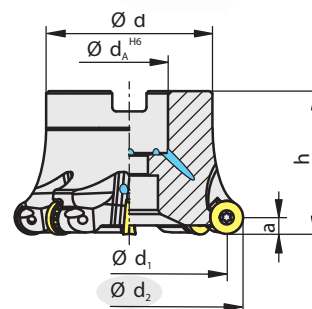
Round insert milling system, 251-RS

Continued

with bore

Ø d ₂ mm	Designation	Z	Ø d ₁ mm	h mm	Ø d mm	Ø d _A mm	a mm	Indexable inserts	17868	...
40	A251.40.R.03-10-RS	3	30	40	38	16	5	RP.. 10T3..		301
40	A251.40.R.05-10-RS	5	30	40	38	16	5	RP.. 10T3..		302
42	A251.42.R.06-10-RS	6	32	40	38	16	5	RP.. 10T3..		303
50	A251.50.R.04-10-RS	4	40	40	43	22	5	RP.. 10T3..		304
50	A251.50.R.06-10-RS	6	40	40	43	22	5	RP.. 10T3..		305
52	A251.52.R.06-10-RS	6	42	40	43	22	5	RP.. 10T3..		306
40	A251.40.R.04-12-RS	4	28	40	38	16	6	RP.. 1204..		307
50	A251.50.R.04-12-RS	4	38	40	43	22	6	RP.. 1204..		308
50	A251.50.R.05-12-RS	5	38	40	43	22	6	RP.. 1204..		309
52	A251.52.R.05-12-RS	5	40	40	43	22	6	RP.. 1204..		310
63	A251.63.R.06-12-RS	6	51	40	48	22	6	RP.. 1204..		311
66	A251.66.R.07-12-RS	7	54	40	48	22	6	RP.. 1204..		312
80	A251.80.R.05-12-RS	5	68	50	58	27	6	RP.. 1204..		313
80	A251.80.R.07-12-RS	7	68	50	58	27	6	RP.. 1204..		314
100	A251.100.R.06-12-RS	6	88	50	78	32	6	RP.. 1204..		315
100	A251.100.R.10-12-RS	10	88	50	78	32	6	RP.. 1204..		316
50	A251.50.R.04-16-RS	4	34	40	48	22	8	RP.. 1605..		317
52	A251.52.R.04-16-RS	4	36	40	48	22	8	RP.. 1605..		318
63	A251.63.R.05-16-RS	5	47	40	48	22	8	RP.. 1605..		319
80	A251.80.R.06-16-RS	6	64	50	58	27	8	RP.. 1605..		320
100	A251.100.R.07-16-RS	7	84	50	78	32	8	RP.. 1605..		321

17868 301-321



RDHX ..

RPHX ..

17870 102

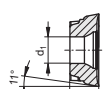
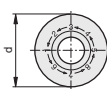
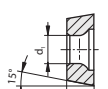
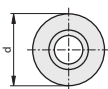
17870 105

17870 107

17870 110

17870 113

17870 116



Applications

Cemented carbide type

Coating

Designation

d

s

d₁


N

H216T

Uncoated

17870

...

PK

CTCP230

CVD

17870

...

MP

CTPM245

PVD

17870

...

Designation	d mm	s mm	d ₁ mm	
RDHX 0501MOFN	5	1.59	2.5	10 pcs.
RDHX 0501MOSN	5	1.59	2.5	10 pcs.
RDHX 0802MOFN	8	2.38	2.8	10 pcs.
RDHX 0802MOSN	8	2.38	2.8	10 pcs.
RDHX 0802MOEN-F50	8	2.38	2.8	10 pcs.
RPHX 10T3M8FN-27P	10	3.97	3.4	10 pcs.
RPHX 10T3M8SN	10	3.97	3.4	10 pcs.
RPHX 10T3M8EN-F50	10	3.97	3.4	10 pcs.
RPHX 1204M8FN-27P	12	4.76	4.4	10 pcs.
RPHX 1204M8SN	12	4.76	4.4	10 pcs.
RPHX 1204M8EN-F50	12	4.76	4.4	10 pcs.
RPHX 1605M8FN-27P	16	5.56	5.5	10 pcs.
RPHX 1605M8SN	16	5.56	5.5	10 pcs.
RPHX 1605M8EN-F50	16	5.56	5.5	10 pcs.

101

106

102

107

116

NEW

103

108

113

104

109

117

NEW

105

110

118

NEW

Spare parts

for indexable inserts

Size

Clamping screw

Key

Clamping screw



17999



Wrench

51932

...

RD.. 0501..

M 2.0 x 3.3

T 6

117

202

RD.. 0802..

M 2.5 x 5.0

T 8

115

204

RP.. 10T3..

M 3.0 x 7.3

T 10

119

206

RP.. 1204..

M 3.5 x 8.6

T 15

116

207

RP.. 1605..

M 4.5 x 10.5

T 20

120

208

Power screw



17998

...

For cutters with bore

Ø d₁ mm

Power screw

For indexable inserts

size

40

M 8 x 30.0

RP.. 10T3..

101

50

M 10 x 31.0

RP.. 1605..

102




ATORN®
Design

- Adjustable from 10–80°
- Straight shank with driving surface according to DIN 1835 B
- Includes one replaceable cassette for indexable inserts TCMT16T3... and SCMT1204...

Scope of delivery:

Counter sink milling cutter with clamping screw and wrench, **without** indexable inserts.

Applications

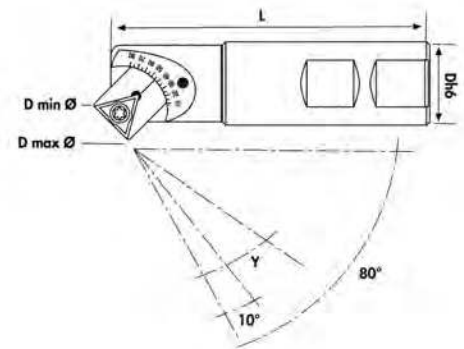
For chamfering, deburring and countersinking.
Stable, smooth running.

Note:

For indexable inserts SCMT
see art. no. 18578–18582.
For replacement cassette for TCMT,
see art. no. 17526 201.
For replacement cassette for SCMT,
see art. no. 17526 202.

Y	TCMT D min. Ø mm	TCMT D max. Ø mm	SCMT D min. Ø mm	SCMT D max. Ø mm
10°	5	32	7.5	30.0
20°	6	33	10.0	32.0
30°	7	34	13.0	32.5
40°	10	33	16.5	33.5
45°	11	33	17.5	33.5
50°	13	32	19.0	33.5
60°	16	31	22.0	33.5
70°	19	29	24.5	33.5
80°	23	27	27.0	31.0

D h6 mm	L mm	17526	...
20	100		100
25	100		101
25	150		102
25	200		103


HHW
Design

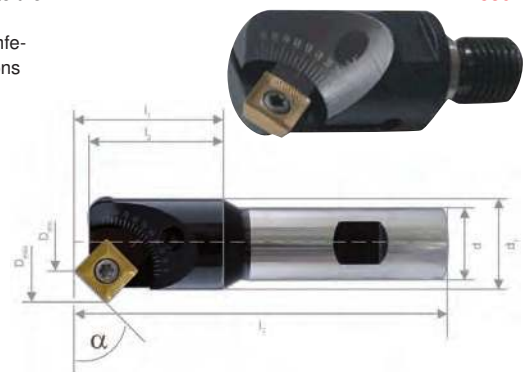
- Continuously adjustable angle range from 0° to 90°
- Stable structure enables minimal machining times due to high cutting values
- For standard indexable inserts SD...
- All four cutting edges can be used
- Clearance of two indexable insert edges enables forward and reverse chamfering
- Deep engraved scale for extra-long service life
- Straight shank with driving surface according to DIN 1835 B
- No need for special tools, complex 5-axis programming or additional clamping of the sine bar or angle table

Applications

For chamfering, deburring and countersinking to the full cutting edge length. For face milling, profile groove milling, pocket milling and circular chamfering of larger countersinks at all angular positions from 0° to 90°, and for oblique plunge milling.

Quality

Made of high-quality, heat-treated steel.



Ø D ₂ mm	d ₁ mm	l ₂ mm	l ₃ mm	D max. mm	D min. mm	L min.–max. mm	AF mm	Indexable inserts	17530	...
16	18.65	32	89.0	20.54–23.99	2.94–20.79	33.0–35.0	-	SD... 09T3		201
20	25.00	37	101.5	27.00–31.60	3.20–27.00	35.9–40.5	-	SD... 1205		301
M 16	28.50	46	73.5	27.00–31.60	3.20–27.00	44.9–49.5	24	SD... 1205		302

Applications		P	M	NK
Cemented carbide type		CTCP230	CTPM240	H216T
Coating		coated	coated	coated
ISO designation	r mm	17530	...	17530
SDHT 09T308SR-29	10.75	500		
SDHT 09T308SR-33	10.75		501	
SDHT 09T308FR-27P	10.75			502
SDMT 1205ZZSN-29	14.60	510		
SDMT 1205ZZSN-29	14.60		511	
SDHT 120508FR-27P	14.60			512

Spare parts	Clamping screw	Adjustable angle
Indexable insert	17530	17530
SD... 09T3		210
SD... 1205		310

17527

Chamfer cutters, 30°/45°/60°


ATORN®

Design

Countersink angles 30°, 45°, 60°, straight shank in accordance with DIN 1835 B, right-hand cutting.

Without indexable inserts.

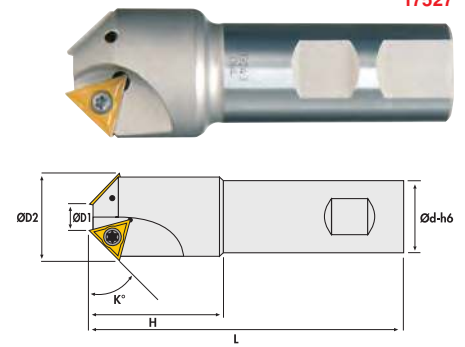
Applications

For countersinking screw heads and deburring bores and slots.

Note:

For indexable inserts see art. no. 17856.

K°	Ø D2 mm	Ø D1 mm	Ø d h6 mm	H mm	Z	L mm	Indexable inserts	17527	...
30	32.0	6.0	25	38	2	95	TCMT 16T3		100
45	16.0	1.2	12	20	1	70	TCMT 1102		101
45	21.0	6.2	20	35	2	90	TCMT 1102		102
45	32.5	10.4	25	42	2	95	TCMT 16T3		103
60	16.0	5.4	12	20	1	70	TCMT 1102		104
60	26.0	15.8	20	35	2	90	TCMT 1102		105
60	35.0	20.0	25	39	2	95	TCMT 16T3		106



Spare parts

For indexable inserts size	Clamping screw	L mm	TX size IP	Clamping screws	Wrench
TCMT 1102	M 2.5 x 0.45	6.3	8	17528	51932
TCMT 16T3	M 4.0 x 0.7	8.0	15	101	404
				102	407

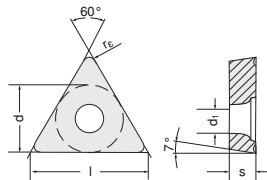
17856

Indexable milling inserts, TCMT

HHW

Design

- Triangular
- Positive 7°
- With sintered chip breaker



17856

Applications

Cemented carbide grade
Coating

ISO designation	l mm	d mm	d ₁ mm	s mm	r		17856	...
TCMT 110202	11.0	6.35	2.80	2.38	0.20	10 pcs.		101
TCMT 16T304	16.5	9.52	4.40	3.97	0.40	10 pcs.		102

P M
H 42
TiN

17529

Chamfer cutters, 45°


ATORN®

Design

Chamfer cutters, 45° with Weldon shank.

Applications

For chamfer cutting from Ø 4 mm.

Note:

For indexable inserts see
art. no. 18578 ff.



17529 (Z2 + 3)

45°								
Ø D2 mm	Ø D1 mm	L mm	H mm	Ød h6 mm	Z mm	Indexable inserts	17529	...
10.0	4	80	28	12	1	SCMT 0602		101
20.0	11	80	33	12	2	SCMT 0602		102
23.7	12	100	37	20	1	SCMT 09T3		103
28.8	16	100	31	16	2	SCMT 09T3		104
42.3	30	100	32	20	3	SCMT 09T3		105
23.7	12 L	200	37	20	1	SCMT 09T3		106
28.8	16 L	200	32	16	2	SCMT 09T3		107
42.3	30 L	200	32	20	3	SCMT 09T3		108

Spare parts

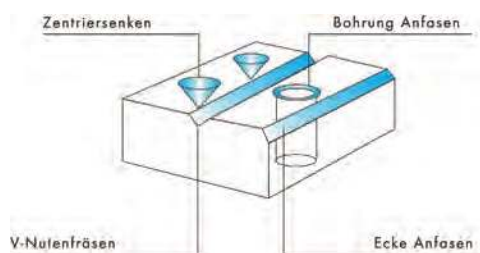
For indexable inserts size	Clamping screw	L mm	TX size IP	Clamping screws	Wrench
SCMT 0602	M 2.5 x 0.45	6.3	8	17528	51932
SCMT 09T3	M 4.0 x 0.7	8.0	15	101	404
				102	407


ATORN®
Design

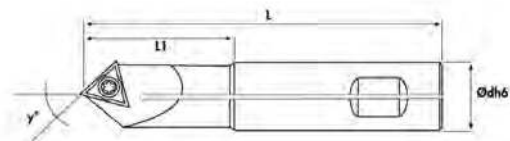
- Indexable insert holder
- Tip angle 45°
- With coolant bore
- Without indexable inserts

Applications

For NC spot drilling, chamfering and V-groove milling.



17536



d1 h6 mm	L mm	L1 mm	γ°	Z	D min. mm	D max. mm	17536	...
20	115	40	45	1	0.2	20	101	
20	150	60	45	1	0.2	20	102	
20	200	80	45	1	0.2	20	103	

Indexable inserts and spare parts
Applications

Cemented carbide grade

Coating
ISO

designation



TCMX 16T3 ZR

10 pcs.



17857

P M K
H 42
TiN
17857

...

Size	TX size T	Clamping screw 17761	Wrench 52529
M 4 x 8	15	101	406

17536
Chamfer and centring cutters, 30°/45°
ATORN®
Applications

For NC spot drilling, chamfering and engraving.

NEW

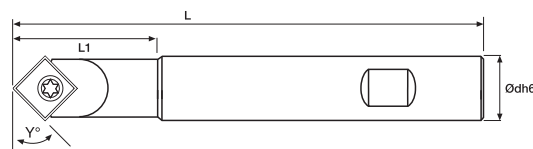
17536 201-202

Design

- With straight shank and clamping surface in accordance with DIN 1835 B
- Tip angles 30° and 45°
- Shaft tolerance h6
- **Without** indexable insert (art. no. 17536 201 + 202)

Latest technology:

- Indexable insert sits in the tool holder rotated by 180°



d1 h6 mm	Ø Ds mm	L mm	L1 mm	γ°	Z	D min. mm	D max. mm	17536	...
16	0.8	120	40	30°	1	0.8	17	201	
16	0.8	120	40	45°	1	0.8	21	202	

17536 203-204
Design

Set comprises a chamfer cutter and engraver's milling cutter 30° or 45° including five indexable inserts SEEX 12T408, 1 clamping screw, 1 wrench. In a practical tool box.

Set	17536	...
30°	203	
45°	204	



17536 203-204

17536 205


P M K
TiN/PVD
17536

...

Applications
Coating
ISO

designation

l

s

r



SEEX 12T408

12.25

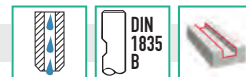
5.25

0.8

10 pcs.

Spare parts

Size	TX size T	Clamping screw 17536	Wrench 52529
M 4 x 11.0	15	206	406



17540 - 17541

T-slot cutter

ATORN®

Design

- T-slot cutter made of special steel with driving surface according to DIN 1835 B

Advantage:

For ISO indexable inserts SPMT.

Scope of delivery:

- With clamping screw and wrench
- Without indexable inserts

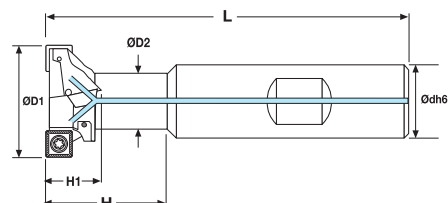
Applications

For T-slots in accordance with DIN-UNI 4788-ISO 299.



17540

Ø D1 mm	Ø D2 mm	L mm	H mm	H1 mm	Ø dh6 mm	K mm	Z	Indexable inserts	17540	...
21	11	76	26	9	16	1	2	SPMT 060304		110
25	13	82	31	11	16	2	4	SPMT 060304		111
32	17	88	38	14	20	2	4	SPMT 09T308		112
40	21	108	50	17	25	2	4	SPMT 09T308		113
50	27	120	56	22	32	2	4	SPMT 120408		114



Indexable inserts and spare parts

Applications

Cemented carbide grade

P M K

HC 4635

ISO designation	l mm	d mm	s mm	d ₁ mm	r mm	17541	...
SPMT 060304	6.35	6.35	3.18	2.8	0.4		201
SPMT 09T308	9.52	9.52	3.97	4.5	0.8		202
SPMT 120408	12.70	12.70	4.76	5.5	0.8		203

Spare parts

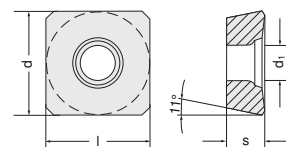
Clamping screw



Wrench



For indexable inserts size	TX size	17520	...	52529	...
SPMT 06..	8		202		403
SPMT 09..	15		206		406
SPMT 12..	20		207		407



17541

17710

Indexable milling inserts OFEX/OFMT

ATORN®

Applications

Carbide type

Coating

N

HW 4410

Uncoated

P K

HC 4635

Coated

P M

HC 4535

Coated

ISO designation	l mm	d ₁ mm	s mm	17710	...	17710	...	17710	...
OFEX 05T305	12.7	4.5	3.97		401				
OFMT 05T305	12.7	4.5	3.97				402		403

Spare parts

Clamping screw



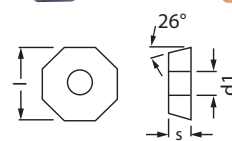
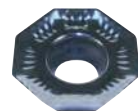
Wrench



For indexable inserts size	TX size	17710	...	52529	...
OF.. 05T3..	15		301		406

17710 401

17710 403



ATORN®**Design**

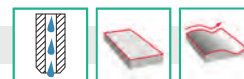
- High feed rates and smooth running
- Wide pitch means minimal power required
- Suitable for low-performance machines
- Axial and oblique plunge milling possible, suitable for excavation and pocket milling
- **Without** indexable inserts

Applications

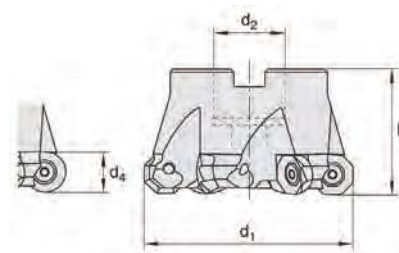
Universal use for a broad range of materials.
For face milling with 8-edge, 12-edge or round indexable inserts **OCKX**, **RCKX** or **XCKX**.

Note:

Ø 52–100 mm **with** internal cooling supply
Ø 125 mm **without** internal cooling supply



17707



Face and copy milling cutters

d ₁ mm	d ₂ mm	h mm	d ₄ mm	Z	17707	...
52	22	40	16	4		101
66	27	50	16	5		102
80	27	50	16	6		103
100	32	50	16	7		104
125	40	63	16	8		105

Indexable inserts and spare parts

17817

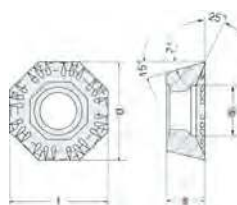
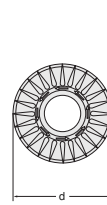
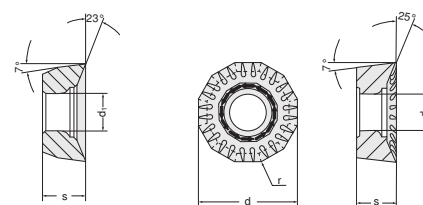
Design

- TRT with wide cutting edge chamfer

Applications

HC 4640 = roughing.

HC 4410 = aluminium/non-ferrous metals.

OCKX**RCKX****XCKX**

17817

Applications

Cemented carbide grade

Coating

PM
HC 4640
coated
17817

KN
HC 4410
coated
17817

ISO designation	s mm	l mm	d mm	d ₁ mm	r mm	10 pcs.	17817	...	17817	...
OCKX 0606 AD-TR	6.35	16	16	5.8	0.5	10 pcs.		115		105
RCKX 1606 MO-TR	6.35	-	16	5.8	-	10 pcs.		117		107
RCKX 1606 MO-TRT	6.35	-	16	5.8	-	10 pcs.				108
XCKX 1606 ZDR-TR	6.35	-	16	5.8	-	10 pcs.		119		

Clamping screw



17708



Wrench

52529

Size	TX size T	17707	...	17817	...
M 5 x 12	20		101		407

Info**The HHW colour guidance system**

With the **HHW** colour guidance system you can see at first glance which materials the tool is suitable for. In most catalogue sections, the **HHW** also informs you about the application data for the corresponding tool. The **HHW** colour guidance system is logically structured according to the steel key. This means that you can select the appropriate tools in advance of the machining process, saving you time and money.

St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA-steel<900N	VA-steel>900N	Ti alloys	GG(G)	plastics
40-50	35-40	-	-	-	-	35-45	35-45	-	80-120	-

**Use****HM grade****Coating**

Designation	W ^{+0,1} mm	R ^{+0,05} mm	10 pieces	18674	...
GTN-2	2,2	0,16	10 pieces		113
GTN-3	3,1	0,20	10 pieces		114

PMK
H 42
coated
18674



Face milling cutters

17722 - 17847

Face milling cutters, 45°

ATORN®

Design

- Double-sided indexable inserts
- Large clamping angle
- Eight cutting edges
- Cutting with low cutting force and excellent surface finish

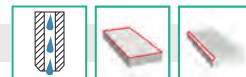
- With internal cooling
(except art. no. 17722 107-108)

Applications

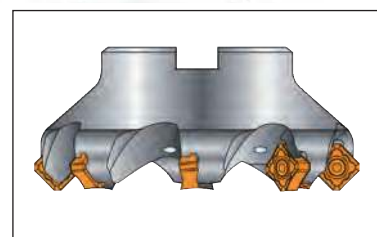
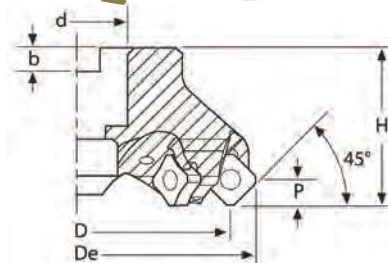
For universal use.

Note:

Supplied with clamping screw and wrench.



17722

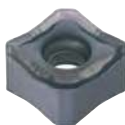


Narrow pitch							
Ø D mm	Ø De mm	d mm	b mm	H mm	p mm	Z	17722 ...
50	63	22	6.3	40	6	4	101
63	76	22	6.3	40	6	6	102
80	93	27	7.0	50	6	7	103
100	113	32	8.0	50	6	8	104
125	138	40	9.0	63	6	10	105
160	173	40	9.0	63	6	12	106
200	213	60	13.5	63	6	14	107
250	263	60	13.5	63	6	16	108

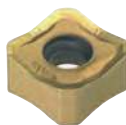
Extra narrow pitch							
Ø D mm	Ø De mm	d mm	b mm	H mm	p mm	Z	17722 ...
50	63	22	6.3	40	6	6	110
63	76	22	6.3	40	6	8	111
80	93	27	7.0	50	6	10	112
100	113	32	8.0	50	6	12	113
125	138	40	9.0	63	6	16	114
160	173	40	9.0	63	6	20	115

Indexable inserts and spare parts

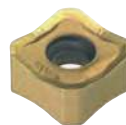
17847 101



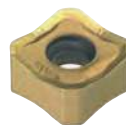
17847 103+203



17847 102+202



17847 104+204



17847 105



17847 205-207



Applications
Carbide type
Coating

N
HW 4310
Uncoated

P
HC 4630
Coated

M
HC 4535
Coated

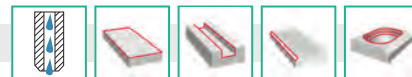
K
HC 4410
Coated

P M K
HC 4635 (UNI)
Coated

ISO designation	KF mm		17847 ...	17847 ...	17847 ...	17847 ...	17847 ...
SNEX 1206 ANN-MA	2.36	10 pcs.	101				
SNMX 1206 ANN-MB1	2.36	10 pcs.		103	102	104	
SNKX 1206 ANN-MM1	2.36	10 pcs.					105
SNMU 1206 ANER	2.36	10 pcs.		203	202	204	
ONMU 1205 ANN	2.36	10 pcs.		205 NEW	206 NEW	207 NEW	

Spare parts

For indexable inserts size	Screw	TX size T	Clamping screw  17723	Wrench  52529
SN.X 1206	M 4.0 x 11.0	20	101	407

**Design**

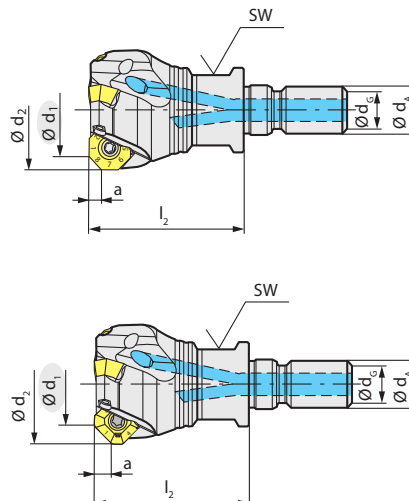
- Sturdy basic body
- Extremely positive installation position of the indexable insert
- Patented screw clamping

Advantages:

- Soft cut
- Low power requirement
- 8 usable cutting edges

Scope of delivery:

- Basic body with clamping screws
- **Without** indexable inserts



17876 101-103
(with indexable insert OF..)

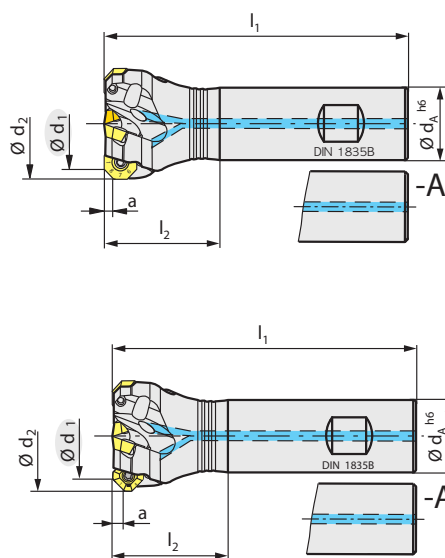


17876 101-103
(with indexable insert SF..)



$\varnothing d_1$ mm	Designation	Z	$\varnothing d_2$ mm	l_2 mm	a mm	$\varnothing d_A$ mm	$\varnothing d_G$ mm	Indexable inserts	with thread	
									17876	...
20 (18.9)	G274.20.R.03-09	3	25.6 (27.4)	35 (35.7)	2.5 (3.8)	12.5	12	OF.. 04.. / SF.. 09..		101
25 (23.8)	G274.25.R.04-09	4	30.6 (32.5)	35 (35.7)	2.5 (3.8)	12.5	12	OF.. 04.. / SF.. 09..		102
32 (30.7)	G274.32.R.05-09	5	37.7 (39.5)	35 (35.7)	2.5 (3.8)	17.0	16	OF.. 04.. / SF.. 09..		103

(*) Dimensions for indexable insert SF



17876 201-206
(with indexable insert OF..)



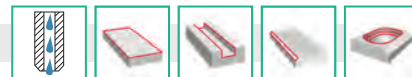
17876 201-206
(with indexable insert SF..)



$\varnothing d_1$ mm	Designation	Z	$\varnothing d_2$ mm	l_1 mm	l_2 mm	a mm	$\varnothing d_A$ mm	Indexable inserts	with shank	
									17876	...
20 (18.9)	C274.20.R.03-09-A-25	3	25.6 (27.4)	77 (77.7)	25 (25.7)	2.5 (3.8)	20	OF.. 04.. / SF.. 09..		201
20 (18.9)	C274.20.R.03-09-B-25	3	25.6 (27.4)	77 (77.7)	25 (25.7)	2.5 (3.8)	20	OF.. 04.. / SF.. 09..		202
25 (23.8)	C274.25.R.04-09-A-20-32	4	30.7 (32.5)	84 (84.7)	32 (32.7)	2.5 (3.8)	20	OF.. 04.. / SF.. 09..		203
25 (23.8)	C274.25.R.04-09-B-20-32	4	30.7 (32.5)	84 (84.7)	32 (32.7)	2.5 (3.8)	20	OF.. 04.. / SF.. 09..		204
32 (30.7)	C274.32.R.05-09-A-25-40	5	37.7 (39.5)	98 (98.7)	40 (40.7)	2.5 (3.8)	25	OF.. 04.. / SF.. 09..		205
32 (30.7)	C274.32.R.05-09-B-25-40	5	37.7 (39.5)	98 (98.7)	40 (40.7)	2.5 (3.8)	25	OF.. 04.. / SF.. 09..		206

(*) Dimensions for indexable insert SF

Continued ►



Continued



Design

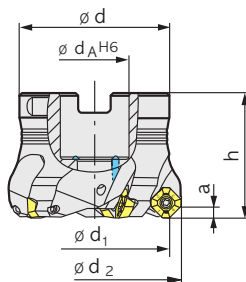
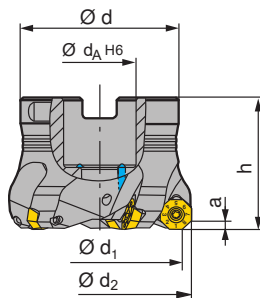
- Sturdy basic body
- Extremely positive installation position of the indexable insert
- Patented screw clamping

Advantages:

- Soft cut
- Low power requirement
- 8 usable cutting edges

Scope of delivery:

- Basic body with clamping screws
- **Without** indexable inserts



17876 301-312
(with indexable insert OF..)

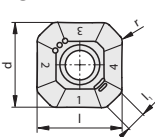


17876 301-312
(with indexable insert SF..)

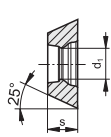
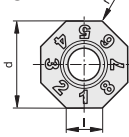
Ø d ₁ mm	Designation	Z	Ø d ₂ mm	h mm	Ø d mm	Ø d _A mm	a mm	Indexable inserts	with bore 17876	...
32 (30.7)	A274.32.R.05-09	5	37.7 (39.2)	40 (40.7)	38	16	2.5 (3.8)	OF.. 04.. / SF.. 09..		301
40 (38.7)	A274.40.R.04-09	4	45.7 (47.6)	40 (40.7)	38	16	2.5 (3.8)	OF.. 04.. / SF.. 09..		302
40 (38.7)	A274.40.R.06-09	6	45.7 (47.6)	40 (40.7)	38	16	2.5 (3.8)	OF.. 04.. / SF.. 09..		303
50 (48.7)	A274.50.R.05-09	5	55.7 (57.6)	40 (40.7)	48	22	2.5 (3.8)	OF.. 04.. / SF.. 09..		304
50 (48.7)	A274.50.R.07-09	7	55.7 (57.6)	40 (40.7)	48	22	2.5 (3.8)	OF.. 04.. / SF.. 09..		305
63 (61.7)	A274.63.R.06-09	6	68.7 (70.5)	40 (40.7)	48	22	2.5 (3.8)	OF.. 04.. / SF.. 09..		306
63 (61.7)	A274.63.R.09-09	9	68.7 (70.5)	40 (40.7)	48	22	2.5 (3.8)	OF.. 04.. / SF.. 09..		307
80 (78.7)	A274.80.R.07-09	7	85.7 (87.5)	50 (50.7)	58	27	2.5 (3.8)	OF.. 04.. / SF.. 09..		308
80 (78.7)	A274.80.R.11-09	11	85.7 (87.5)	50 (50.7)	58	27	2.5 (3.8)	OF.. 04.. / SF.. 09..		309
100 (98.7)	A274.100.R.09-09	9	105.7 (107.5)	50 (50.7)	78	32	2.5 (3.8)	OF.. 04.. / SF.. 09..		310
100 (98.7)	A274.100.R.13-09	13	105.7 (107.5)	50 (50.7)	78	32	2.5 (3.8)	OF.. 04.. / SF.. 09..		311
125 (123.7)	A274.125.R.12-09	12	130.7 (132.5)	63 (63.7)	88	40	2.5 (3.8)	OF.. 04.. / SF.. 09..		312

(*) Dimensions for indexable insert SF

SF..



OF..



17877 101

17877 104

17877 102

17877 105

17877 103

17877 106



Applications

Cemented carbide type
Coating

Designation	d mm	l mm	s mm	l ₁ mm	r mm	d ₁ mm		17877	...	17877	...	17877	...
SFHT 0903AFFR-F10	9.52	9.52	3.18	1.73	1.0	3.35	10 pcs.		101				
SFHT 0903AFSR-F50	9.52	9.52	3.18	1.73	1.0	3.35	10 pcs.				102		
SFKT 0903AFSR-M50	9.52	9.52	3.18	1.73	1.0	3.35	10 pcs.						103
OFHT 040305FN-F10	9.52	3.94	3.18	-	0.5	3.35	10 pcs.		104				
OFHT 040305SN-F50	9.52	3.94	3.18	-	0.5	3.35	10 pcs.				105		
OFHT 040305SN-M50	9.52	3.94	3.18	-	0.5	3.35	10 pcs.						106

Spare parts

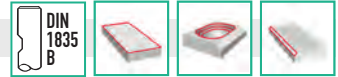
for indexable inserts	Clamping screw	Key	Clamping screw	Wrench
Size				
OF.. 04.. / SF.. 09..	M 2.5 x 7.6	IP 8	17999	51932
			122	404

For cutters with bore Ø d ₁ mm	For indexable inserts size	Power screw
32 (30.7)–40 (38.7)	OF.. 04.. / SF.. 09..	M 8 x 30.0
		17998
		101

(*) Dimensions for indexable insert SF

17534

Chamfer cutters, 45°

**ATORN®**

Design

- **Positive**
- Right cutting
- Combination shank with straight shank in accordance with DIN 1835 B
- **Without** indexable inserts

Applications

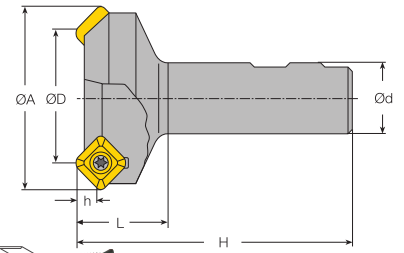
For chamfering, face milling and circular milling.

Note:

For indexable inserts see art. no. 17838 and 17845.



17534



Ø D mm	Ø d h6 mm	L mm	Z	Indexable inserts	17534	...
24	25	100	2	SE.T 1204..	102	
32	25	110	3	SE.T 1204..	103	
40	32	115	4	SE.T 1204..	104	

Spare parts

For indexable inserts size	Clamping screw	Length mm	TX size T	Clamping screw	Wrench
SE.T 1204..	M 5.0 x 0.8	11	20	17721	52529
				101	407

17720

Face milling cutter 45°

**ATORN®**

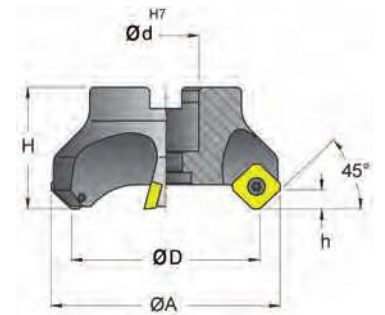
Design

- **Positive**
- Right cutting
- **Without** indexable inserts
- With internal cooling (except art. no. 17720 214–215)

Applications

For square indexable inserts SE.T 1204..
Item no. 17838 and 17845.

17720



Ø D mm	Ø d H7 mm	H mm	Ø A mm	h mm	Z	Indexable inserts	Narrow pitch	17720	...
40	16	40	53	6	3	SE.T 1204..	200		
50	22	48	63	6	4	SE.T 1204..	201		
63	22	48	76	6	5	SE.T 1204..	202		
80	27	50	93	6	6	SE.T 1204..	203		
100	32	50	113	6	6	SE.T 1204..	204		
125	40	63	138	6	7	SE.T 1204..	205		
160	40	63	173	6	8	SE.T 1204..	206		
200	60	63	213	6	12	SE.T 1204..	214		
250	60	63	263	6	16	SE.T 1204..	215		

Ø D mm	Ø d H7 mm	H mm	Ø A mm	h mm	Z	Indexable inserts	Extra narrow pitch	17720	...
40	16	40	53	6	4	SE.T 1204..	207		
50	22	48	63	6	5	SE.T 1204..	208		
63	22	48	76	6	6	SE.T 1204..	209		
80	27	50	93	6	7	SE.T 1204..	210		
100	32	50	113	6	8	SE.T 1204..	211		
125	40	63	138	6	9	SE.T 1204..	212		
160	40	63	173	6	10	SE.T 1204..	213		

Spare parts

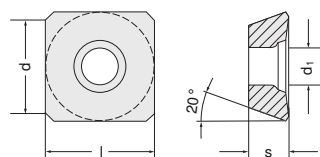
For indexable inserts size	Clamping screw	Length mm	TX size T	Clamping screw	Wrench
SE.T 1204..	M 5.0 x 0.8	11	20	17721	52529
				101	407

17838

Indexable milling inserts, SEHT

Design

- **Square**
- Positive 20°
- With chip breaker

Applications
Carbide type
Coating

ISO designation	d+l mm	d1 mm	s mm		17838 203	17838 202
SEHT 1204 AF	12.7	5.50	4.76	10 pcs.	N H 25/Al Uncoated 17838	P M H 42 TiN 17838
SEHT 1204 AF-AL	12.7	5.50	4.76	10 pcs.	203	202

N
H 25/Al
Uncoated
17838P M
H 42
TiN
17838

17845

Indexable milling inserts, SEET

ATORN®

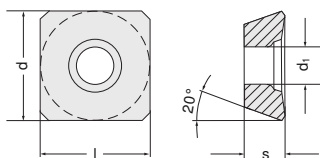
Design

- Square
- Positive 20°
- With chip breaker

Applications

Cemented carbide grade
Coating

Tolerance classes in comparison:
SEET +/- 0.025 mm,
SEKT +/- 0.130 mm.



17845 101

17845 102-103

**N**

HW 4410
uncoated

P M K

HC 4540
coated

M K

HC 4620
coated

ISO designation	d+l mm	d1 mm	s mm				
SEET 1204 AF SN	12.7	5.50	4.76	10 pcs.			
					101	103	102

17728 - 17729

Face milling cutter 45°

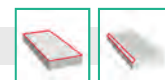
ATORN®

Design

- Positive
- Right- and left-hand cutting
- Without indexable inserts

Applications

For square indexable inserts, SEE. 1203,
art. no. 17841 + 17843.



17728

Ø D mm	Ø d mm	H mm	Ø A mm	h mm	Z	Indexable inserts	Right-hand cutting		Left-hand cutting	
							17728	...	17728	...
50	22	48	63	6	4	SEE. 1203		101		109 NEW
63	22	40	76	6	5	SEE. 1203		102		110 NEW
80	27	50	93	6	6	SEE. 1203		103		111 NEW
100	32	50	113	6	6	SEE. 1203		104		112 NEW
125	40	63	138	6	7	SEE. 1203		105		113 NEW
160	40	63	173	6	8	SEE. 1203		106		
200	60	63	213	6	10	SEE. 1203		107		
250	60	63	263	6	13	SEE. 1203		108		

Spare parts

		17729	...
Support plate	-		101
Screw for support plate	10 pcs.		102
Clamping screw for right-hand cutting face milling cutters	10 pcs.		103
Clamping screw for left-hand cutting face milling cutters	10 pcs.		104 NEW

17729 101

17729 102

17729 103



17841

Indexable milling inserts, SEEN

ATORN®

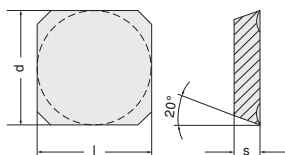
Design

- Square
- Positive 20°
- Without chip breaker

Applications

Cemented carbide grade
Coating

Tolerance classes in comparison:
SEEN +/- 0.025 mm,
SEKN +/- 0.130 mm.



17841 103

P M K

HC 4540
coated

M K

HC 4620
coated

ISO designation	d+l mm	s mm				
SEEN 1203 AF FN	12.7	3.18	10 pcs.			
SEEN 1203 AF SN	12.7	3.18	10 pcs.			
					103	102
					107	106

17843

Indexable milling inserts, SEER

ATORN®

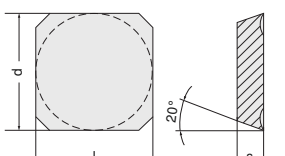
Design

- Square
- Positive 20°
- With chip breaker

Applications

Cemented carbide grade
Coating

Tolerance classes in comparison:
SEER +/- 0.025 mm,
SEKR +/- 0.130 mm.



17843 102

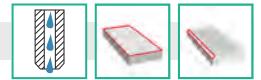
P M K

HC 4540
coated

M K

HC 4620
coated

ISO designation	d+l mm	s mm				
SEER 1203 AF SN	12.7	3.18	10 pcs.			
					102	101

**Design**

- Indexable insert tool for roughing and for medium machining
- Uneven tooth pitch for smooth running
- New material and hardening technologies for maximum tool accuracy
- Special surface treatment for optimum corrosion resistance and longer service life

Advantage:

- Favourable cutting costs due to the 12-edged indexable insert

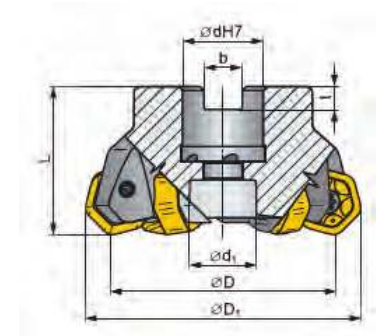
Applications

For face milling, chamfering, oblique plunge milling.

HNGJ09-S indexable insert for medium machining

HNGJ09-R indexable insert for roughing

17739 101-105

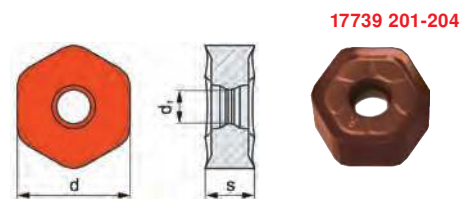


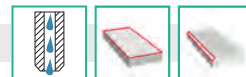
Ø D mm	Ø d H7 mm	d1 mm	L mm	D1 mm	Z	17739	...
50	22	18	40	61.7	4		101
63	22	19	41	74.7	6		102
80	27	38	50	91.7	6		103
80	27	39	51	91.7	8		104
100	32	45	52	111.7	8		105

Indexable inserts and spare parts

Applications				P M P 40 coated		P K P 30 coated		P K K 15 coated	
Carbide type				17739		17739		17739	
Coating				...		...		...	
Designation	d mm	s mm	d1 mm	17739	...	17739	...	17739	...
HNGJ09-S	16.5	6.35	4.9		201		202		
HNGJ09-R	16.5	6.35	4.9				204		203

Spare parts		Clamping screw	
Indexable insert size	Size	17739	...
HNGJ09	M4		301





17873 - 17874

Face milling cutter system 273-6



Design

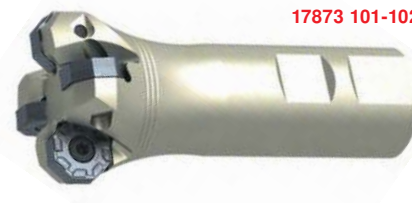
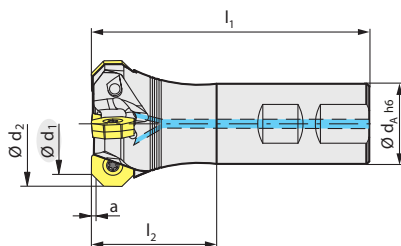
- Sturdy basic body with Hard & Tough coating
- Maximum number of cutting edges

Advantages:

- Highly economical
- Reduced power consumption
- High stability and running smoothness

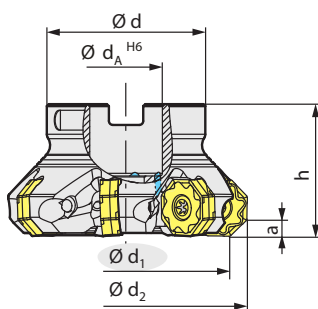
Scope of delivery:

- Basic body with clamping screws
- Without indexable inserts



17873 101-102

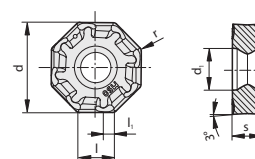
Ø d ₁ mm	Designation	Z	Ø d ₂ mm	l ₁ mm	l ₂ mm	Ø d _A mm	a mm	Indexable inserts	with shank	
									17873	...
32	C273.32.R.03-06-B-40	3	42.2	101	40	32	3.5	OAKU 06..		101
40	C273.40.R.04-06-B32-50	4	50.2	111	50	32	3.5	OAKU 06..		102



17873 201-206

Ø d ₁ mm	Designation	Z	Ø d ₂ mm	h mm	Ø d mm	Ø d _A mm	a mm	Indexable inserts	with bore	
									17873	...
40	A273.40.R.04-06	4	50.2	40	38	16	3.5	OAKU 06..		201
50	A273.50.R.05-06	5	60.2	40	48	22	3.5	OAKU 06..		202
63	A273.63.R.07-06	7	73.2	40	48	22	3.5	OAKU 06..		203
80	A273.80.R.08-06	8	90.2	50	58	27	3.5	OAKU 06..		204
100	A273.100.R.10-06	10	110.2	50	78	32	3.5	OAKU 06..		205
125	A273.125.R.12-06	12	135.2	63	88	40	3.5	OAKU 06..		206

Indexable inserts and spare parts



17874

Applications

Cemented carbide grade

Coating

M P
CTPM245
PVD

P
CTPP235
PVD

Designation	d mm	l mm	s mm	l ₁ mm	r mm	d ₁ mm				
OAKU 060508ER-F40	17.18	6.00	5.56	2.0	0.8	5.8	10 pcs.		101	
OAKU 060508SR-M50	17.18	6.00	5.56	2.0	0.8	5.8	10 pcs.			102

Spare parts

Clamping screw

Wrench

for indexable inserts	Clamping screw	Key			
Size					
OAKU 06..	M 5.0 x 14.0	T 20		121	208

Power screw

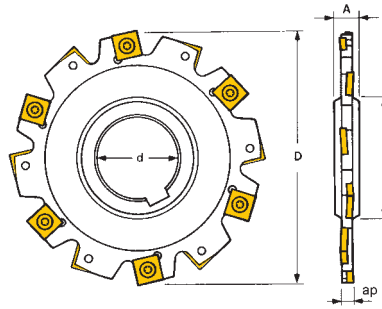
For cutters with bore	Power screw	For indexable inserts		
Ø d ₁ mm		size		
40	M 8 x 30.0	OAKU 06..		101
50	M 10 x 31.0	OAKU 06..		102


ATORN®
Design

Three-sided cutting, fixed width. Generates a slight arched shape in the groove base. Supplied with clamping screws.

Applications

For bolted indexable inserts (see art. no. 17785–17786). For slitting, cutting and grooving.


For indexable inserts SNHX 1102T

D mm	d mm	ap mm	A mm	B mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17780	...
63	22	4	8	34	8	4	14	SNHX 1102T	VTX 3503		101
80	22	4	8	34	10	5	22	SNHX 1102T	VTX 3503		104
100	27	4	12	45	12	6	24	SNHX 1102T	VTX 3503		107
125	40	4	12	58	14	7	33	SNHX 1102T	VTX 3503		114
160	40	4	12	68	18	9	45	SNHX 1102T	VTX 3503		122
200	50	4	12	72	18	9	62	SNHX 1102T	VTX 3503		131

For indexable inserts SNHX 1103T

D mm	d mm	ap mm	A mm	B mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17780	...
63	22	5	8	34	8	4	14	SNHX 1103T	VTX 3504		102
80	22	5	8	34	10	5	22	SNHX 1103T	VTX 3504		105
100	27	5	12	45	12	6	24	SNHX 1103T	VTX 3504		108
125	40	5	12	58	14	7	33	SNHX 1103T	VTX 3504		115
160	40	5	12	68	18	9	45	SNHX 1103T	VTX 3504		123
200	50	5	12	72	18	9	62	SNHX 1103T	VTX 3504		132

For indexable inserts SNHX 1203T

D mm	d mm	ap mm	A mm	B mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17780	...
63	22	6	8	34	6	3	14	SNHX 1203T	VTX 405		103
80	22	6	8	34	8	4	22	SNHX 1203T	VTX 405		106
100	27	6	12	45	10	5	24	SNHX 1203T	VTX 405		109
125	40	6	12	58	12	6	33	SNHX 1203T	VTX 405		116
160	40	6	12	68	16	8	45	SNHX 1203T	VTX 405		124
200	50	6	12	72	18	9	62	SNHX 1203T	VTX 405		133

For indexable inserts SNHX 1205T

D mm	d mm	ap mm	A mm	B mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17780	...
100	27	10	12	45	10	5	24	SNHX 1205T	VTX 408		113
125	40	10	12	58	12	6	33	SNHX 1205T	VTX 408		120
160	40	10	12	68	16	8	45	SNHX 1205T	VTX 408		128
160	40	14	14	68	15	5	45	SNHX 1205T	VTX 408		130
200	50	10	12	72	18	9	62	SNHX 1205T	VTX 408		135
200	50	14	14	72	18	6	62	SNHX 1205T	VTX 408		137
250	50	10	12	72	24	12	88	SNHX 1205T	VTX 408		139

Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
300-350	300-350	-	140-200	140-200	140-200	120-150	120-150	120-150	-	-	-	-	130-160	130-160	-	100-140	-



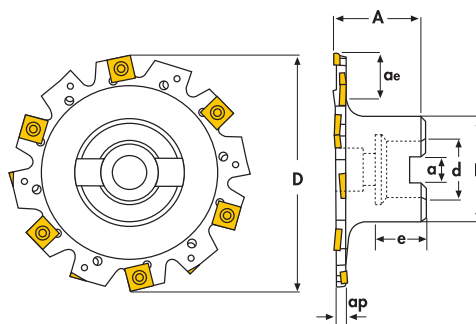
17782

ATORN®**Design**

With collar. Three-sided cutting, fixed width.
Generates a slight arched shape in the groove base.
Supplied with clamping screws.

Applications

For bolted indexable inserts.
For slitting, cutting and grooving.

**For indexable inserts SNHX 1102T**

D mm	d mm	ap mm	A mm	B mm	a mm	e mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17782	...
63	22	4	50	40	10.4	21	6	3	10.5	SNHX 1102T	VTX 3503		101
80	22	4	50	40	10.4	21	8	4	20.2	SNHX 1102T	VTX 3503		104
100	27	4	50	48	12.4	23	12	6	24.2	SNHX 1102T	VTX 3503		107

For indexable inserts SNHX 1103T

D mm	d mm	ap mm	A mm	B mm	a mm	e mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17782	...
63	22	5	50	40	10.4	21	6	3	10.5	SNHX 1103T	VTX 3504		102
80	22	5	50	40	10.4	21	8	4	20.2	SNHX 1103T	VTX 3504		105
100	27	5	50	48	12.4	23	12	6	24.2	SNHX 1103T	VTX 3504		108

For indexable inserts SNHX 1203T

D mm	d mm	ap mm	A mm	B mm	a mm	e mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17782	...
63	22	6	50	40	10.4	21	6	3	10.5	SNHX 1203T	VTX 405		103
80	22	6	50	40	10.4	21	8	4	20.2	SNHX 1203T	VTX 405		106
100	27	6	50	48	12.4	23	10	5	24.2	SNHX 1203T	VTX 405		109
125	40	6	50	70	16.4	30	12	6	23.7	SNHX 1203T	VTX 405		111
160	40	6	50	70	16.4	30	16	8	41.2	SNHX 1203T	VTX 405		113

For indexable inserts SNHX 1205T

D mm	d mm	ap mm	A mm	B mm	a mm	e mm	Z	Z eff.	Cutting depth ae max. mm	Indexable inserts	Clamping screws	17782	...
100	27	10	50	48	12.4	23	10	5	24.2	SNHX 1205T	VTX 408		110
125	40	10	50	70	16.4	30	12	6	23.7	SNHX 1205T	VTX 408		112
160	40	10	50	70	16.4	30	16	8	41.2	SNHX 1205T	VTX 408		114

Indexable inserts and spare parts

17785 - 17786

Applications
Carbide type
Coating

P M K

HC 4630
TiAlN-coated

K

HW 7415
Uncoated

ISO designation	I.C. mm	d mm	s mm		17785	...	17786	...
SNHX 1102T	11.0	4.4	2.3	10 pcs.		101		101
SNHX 1103T	11.0	4.4	2.7	10 pcs.		102		102
SNHX 1203T	12.7	5.0	3.2	10 pcs.		103		103
SNHX 1205T	12.7	5.0	5.4	10 pcs.		105		105

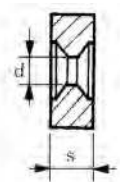
Clamping screws



Wrench



Type	Size	TX size T	17789	...	52529	...
VTX 3503	M 3.5 x 3	9		101		404
VTX 3504	M 3.5 x 4	9		102		404
VTX 405	M 4.0 x 5	15		103		406
VTX 408	M 4.0 x 8	15		104		406



Al<10%Si	Al>10%Si	Cu	St<520N	St<750N	St<900N	St<1100N	St<1200N	St<1400N	<45HRC	<55HRC	<60HRC	<67HRC	VA<900N	VA>900N	Ti alloy	GG(G)	Plastic
300-350	300-350	-	140-200	140-200	140-200	120-150	120-150	120-150	-	-	-	-	130-160	130-160	-	100-140	-





17580

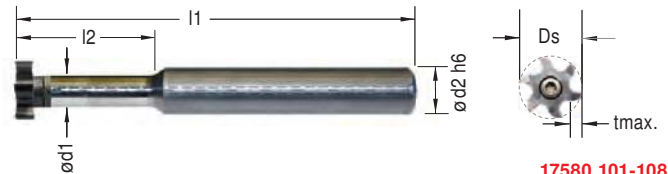
Clamp holder type ZH22

Design

- With internal coolant supply
- 3-rib toothing

Applications

For producing grooves,
Seeger ring grooves, metric ISO threads, Whitworth
pipe threads and full radius grooves, and for
chamfering and deburring.



17580 101-108

17580 101-108

Solid carbide shaft, DIN 6535 HA



Designation	Ø d2 h6 mm	Ø d1 mm	l1 mm	l2 mm	Cutting circle Ø DS mm	t max. mm	Clamping screw	TX wrench	17580	...
ZH22.1212.42.A.HM	12	-	100	42	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	101	
ZH22.1212.60.A.HM	12	-	130	60	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	102	
ZH22.1611.30.A.HM	16	11.5	90	30	21.7	3.9	M5 (17581 101)	T 20 (51932 208)	103	
ZH22.1612.42.A.HM	16	12.0	100	42	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	104	
ZH22.1612.60.A.HM	16	12.0	130	60	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	105	
ZH22.1612.85.A.HM	16	12.0	160	85	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	106	
ZH22.2016.45.A.HM	20	16.0	110	45	21.7	2.5	M5 (17581 101)	T 20 (51932 208)	107	
ZH22.2016.65.A.HM	20	16.0	130	65	21.7	2.5	M5 (17581 101)	T 20 (51932 208)	108	

17580 201-203

Steel shaft, DIN 1835

17580 201-203



Designation	Ø d2 h6 mm	Ø d1 mm	l1 mm	l2 mm	Cutting circle Ø DS mm	t max. mm	Clamping screw	TX wrench	17580	...
ZH22.1011.10.A.ST	10	11.3	60	10.7	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	201	
ZH22.1311.25.A.ST	13	11.3	70	25.7	21.7	4.0	M5 (17581 101)	T 20 (51932 208)	202	
ZH22.1612.24.A.ST	16	12.0	80	24.0	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	203	

17580 301-308

Solid carbide shaft, DIN 6535 HB

17580 301-308



Designation	Ø d2 h6 mm	Ø d1 mm	l1 mm	l2 mm	Cutting circle Ø DS mm	t max. mm	Clamping screw	TX wrench	17580	...
ZH22.1212.42.B.HM	12	-	100	42	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	301	
ZH22.1212.60.B.HM	12	-	130	60	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	302	
ZH22.1611.30.B.HM	16	11.5	90	30	21.7	3.9	M5 (17581 101)	T 20 (51932 208)	303	
ZH22.1612.42.B.HM	16	12.0	100	42	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	304	
ZH22.1612.60.B.HM	16	12.0	130	60	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	305	
ZH22.1612.85.B.HM	16	12.0	160	85	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	306	
ZH22.2016.45.B.HM	20	16.0	110	45	21.7	2.5	M5 (17581 101)	T 20 (51932 208)	307	
ZH22.2016.65.B.HM	20	16.0	130	65	21.7	2.5	M5 (17581 101)	T 20 (51932 208)	308	

17580 401

Steel shaft, DIN 1835 B

17580 401



Designation	Ø d2 h6 mm	Ø d1 mm	l1 mm	l2 mm	Cutting circle Ø DS mm	t max. mm	Clamping screw	TX wrench	17580	...
ZH22.1612.24.B.ST	16	12	80	24	21.7	4.5	M5 (17581 101)	T 20 (51932 208)	401	

Spare parts

Clamping screw

TX size

Clamping screw

17581

...

TX wrench

51932

...

M5

20

101

208

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Groove and circular form milling system

17580 - 17593

Groove and circular form milling system, MINI MILL

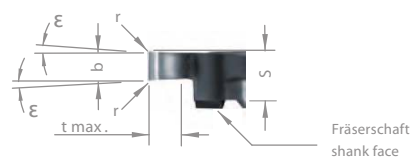
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17582

17582



- Cutting inserts for **Seeger ring grooves**, DIN 471/472 and **general groove milling**
- Cemented carbide/AL 41F TiAlN-coated

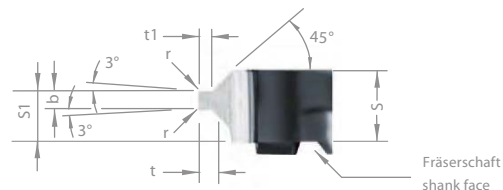


Description	Groove width mm	S mm	Clearance angle (epsilon)	r mm	b -0.02 mm	t max. mm	17582	...
Z22.0070.00	0.7	5.7	1°	-	0.74	1.5		101
Z22.0080.00	0.8	5.7	1°	-	0.84	1.7		102
Z22.0090.00	0.9	5.7	1°	-	0.94	1.9		103
Z22.0100.00	1.0	5.7	1°	-	1.04	2.1		104
Z22.0110.00	1.1	5.7	1°	-	1.21	2.5		105
Z22.0130.00	1.3	5.7	3°	0.1	1.41	4.5		106
Z22.0160.00	1.6	5.7	3°	0.1	1.71	4.5		107
Z22.0185.02	1.85	5.7	3°	0.15	1.96	4.5		108
Z22.0215.02	2.15	5.7	3°	0.15	2.26	4.5		109
Z22.0265.02	2.65	5.7	3°	0.15	2.76	4.5		110
Z22.0315.02	3.15	5.7	3°	0.15	3.26	4.5		111
Z22.0415.02	4.15	5.7	3°	0.15	4.26	4.5		112
Z22.0515.02	5.15	5.7	3°	0.15	5.26	4.5		113

17583



- Cutting inserts with groove outer edge chamfer for **Seeger ring grooves**, DIN 471/472
- Cemented carbide/AL 41F TiAlN-coated

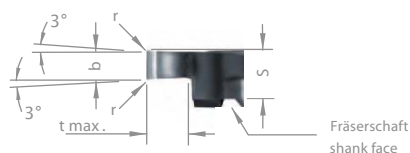


Description	Groove width mm	S mm	S1 mm	r mm	b -0.02 mm	Groove depth t mm	Forming depth t1 -0.04 mm	17583	...
Z22.1105.30	1.1	5.85	5.07	-	1.21	0.50	0.49		101
Z22.1307.30	1.3	5.85	5.17	-	1.41	0.70	0.67		102
Z22.1308.30	1.3	5.85	5.17	-	1.41	0.85	0.83		103
Z22.1609.35	1.6	5.85	5.07	-	1.71	0.85	0.83		104
Z22.1610.35	1.6	5.85	5.07	-	1.71	1.00	0.97		105
Z22.1812.35	1.85	5.85	5.19	0.15	1.96	1.25	1.23		106
Z22.2215.35	2.15	5.85	5.34	0.15	2.26	1.50	1.47		107
Z22.2616.45	2.65	5.85	5.09	0.15	2.76	1.50	1.47		108
Z22.2617.45	2.65	5.85	5.09	0.15	2.76	1.75	1.72		109
Z22.3118.45	3.15	5.85	5.34	0.20	3.26	1.75	1.72		110
Z22.4120.55	4.15	5.85	5.34	0.20	4.26	2.00	1.97		111
Z22.4125.55	4.15	5.85	5.34	0.20	4.26	2.50	2.47		112

17584



- Cutting inserts for **general groove milling**
- Cemented carbide/AL 41F TiAlN-coated



Designation	S mm	r mm	b +0.02 mm	t max. mm	17584	...
Z22.0150.02	5.7	0.2	1.5	4.5		101
Z22.0200.02	5.7	0.2	2.0	4.5		102
Z22.0250.02	5.7	0.2	2.5	4.5		103
Z22.0300.02	5.7	0.2	3.0	4.5		104
Z22.0400.02	5.7	0.2	4.0	4.5		105

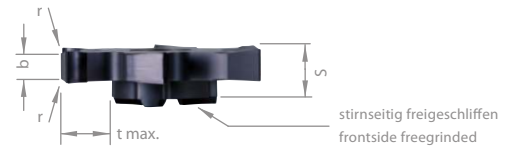
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17585



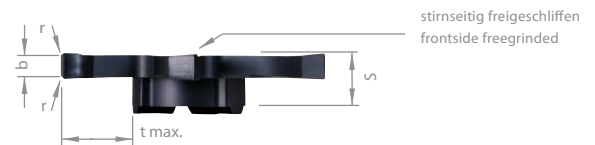
- Cutting inserts for **general groove milling with 6 teeth**
- Cemented carbide/AL 41F TiAlN-coated



Designation	S mm	r mm	b +0.02 mm	t max. mm	17585	...
Z622.0150.01	6.2	0.1	1.5	4.5		101
Z622.0200.02	6.2	0.2	2.0	4.5		102
Z622.0250.02	6.2	0.2	2.5	4.5		103
Z622.0300.02	6.2	0.2	3.0	4.5		104
Z622.0400.02	6.2	0.2	4.0	4.5		105



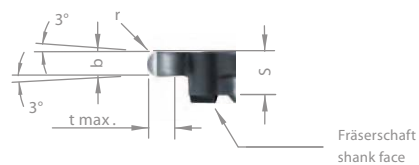
- Cutting inserts for **general groove milling with 6 teeth**
- t max. 12 mm can only be used in combination with holder ZH22
- Cemented carbide/AL 41F TiAlN-coated



Designation	S mm	r mm	b +0.02 mm	b +0.05 mm	t max. mm	D min. mm	17586	...
Z637.0050.00	5.85	-	-	0.5	12	37		101
Z637.0100.01	5.85	0.1	1.0	-	12	37		102
Z637.0150.01	5.85	0.1	1.5	-	12	37		103



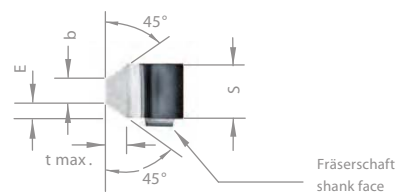
- Cutting inserts for **full radius grooving**
- Cemented carbide/AL 41F TiAlN-coated



Designation	S mm	r mm	b +0.03 mm	t max. mm	17587	...
Z22.0005.10	5.75	0.5	1.0	4.5		101
Z22.0010.20	5.75	1.0	2.0	4.5		102
Z22.0014.28	5.75	1.4	2.8	4.5		103
Z22.0015.30	5.75	1.5	3.0	4.5		104
Z22.0020.40	5.75	2.0	4.0	4.5		105



- Cutting inserts for **bore milling, forward and reverse chamfering**
- Cemented carbide/AL 41F TiAlN-coated



Designation	S mm	E mm	b +0.03 mm	t max. mm	17588	...
Z22.4545.58	5.85	2.00	2.0	1.7		101
Z22.4545.94	9.40	3.25	3.0	3.0		102

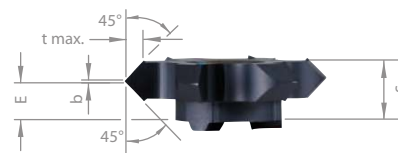
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17589



- Cutting pates for **bore milling, forward and reverse chamfering with 6 teeth**
- Cemented carbide/AL 41F TiAlN-coated



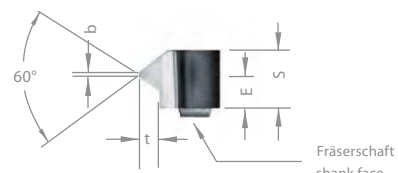
17589

Designation	S mm	E mm	b mm	t max. mm	17589	...
Z622.4545.63	6.2	3.65	0.2	1.9		101

17590



- Cutting inserts for **metric ISO threads, partial profile**
- Cemented carbide/AL 41F TiAlN-coated



17590

Designation	S mm	Pitch P mm	E mm	b mm	t max. mm	17590	...
Z22.0720.01	5.85	1.0-2.0	4.6	0.12	1.19		101
Z22.2545.01	5.85	2.0-4.5	3.7	0.31	2.71		102
Z22.0815.01	5.85	1.5-2.75	4.8	0.18	1.62		103
Z22.1020.01	5.85	2.0-3.75	4.6	0.25	2.22		104
Z22.1630.01	5.85	2.5-5.0	4.0	0.37	2.98		105

17591



- Cutting inserts for **metric ISO threads, internal partial profile with 6 teeth**
- Cemented carbide/AL 41F TiAlN-coated



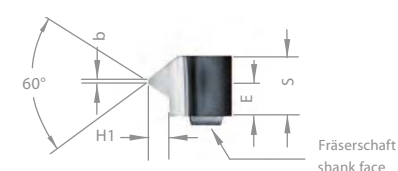
17591

Designation	S mm	Pitch P mm	E mm	Min. thread size	t max. mm	17591	...
Z622.0720.01	6.20	1.0-2.0	5.1	M 27	1.19		101
Z622.2545.01	6.05	2.0-4.5	4.3	M 27	2.71		102

17592



- Cutting inserts for **metric ISO threads, full profile**
- Cemented carbide/AL 41F TiAlN-coated



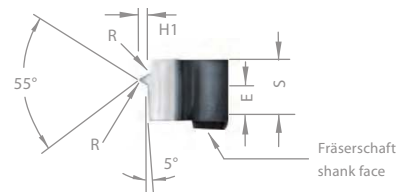
17592

Designation	S mm	Pitch P mm	E mm	b mm	H1 mm	17592	...
Z22.0815.02	5.85	1.5	4.8	0.19	0.81		101
Z22.0917.02	5.85	1.75	4.7	0.22	0.95		102
Z22.1020.02	5.85	2.0	4.6	0.25	1.08		103
Z22.1630.02	5.85	3.0	4.3	0.37	1.62		104
Z22.1835.02	5.85	3.5	4.1	0.43	1.89		105
Z22.2140.02	5.85	4.0	3.9	0.50	2.16		106
Z22.2445.02	5.85	4.5	3.7	0.56	2.43		107

17593



- Cutting inserts for **Whitworth pipe threads, DIN ISO 228(259) and 2999 full profile**
- Cemented carbide/AL 41F TiAlN-coated



17593

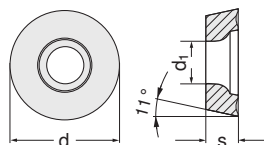
Designation	S mm	Pitch TPI	E mm	R mm	H1 mm	17593	...
Z22.5506.02	5.85	6 (4.23)	3.1	0.58	2.71		101
Z22.5508.02	5.85	8 (3.17)	3.5	0.43	2.03		102
Z22.5511.02	5.85	11 (2.30)	4.0	0.31	1.48		103

17826

Indexable milling insert, RPMT

Design

- Round
- Positive 11°
- With sintered chip breaker



17826



P M K

H 42

TiN

17826

...

Applications

Cemented carbide grade

Coating

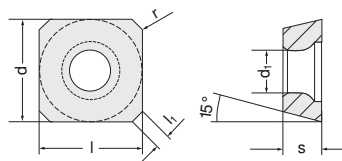
ISO designation	d mm	s mm	d ₁ mm		
RPMT 1204 MOSN	12	4.76	4.40	10 pcs.	102

17834

Indexable milling inserts, SDHT/SDNT

Design

- Square
- Positive 14°
- With chip breaker



17834



Applications

Carbide type

Coating

N

H 25/Al

Uncoated

17834

...

P M

H 42

TiN

17834

...

ISO designation	d+l mm	d ₁ mm	s mm	l ₁ mm	r		
SDHT 0903 AE	9.52	3.40	3.18	1.68	1.0	10 pcs.	102
SDNT 0903 AESN	9.52	3.40	3.18	1.68	1.0	10 pcs.	101

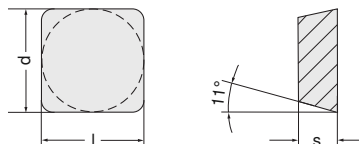
17849

Indexable milling inserts, SPKN

ATORN®

Design

- Square
- Positive 11°
- Without chip breaker
- With chamfer milling



17849



Applications

Cemented carbide grade

Coating

P M K

HC 4540

coated

17849

...

M K

HC 4620

coated

17849

...

ISO designation	d+l mm	s mm		
SPKN 1203 ED SR	12.7	3.18	10 pcs.	103 102

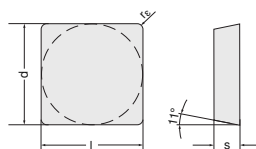
17855

Indexable milling insert, SPUN

ATORN®

Design

- Square
- Positive 11°



17855



P

HW 4640

uncoated

17855

...

ISO designation	d+l mm	s mm	r		
SPUN 120308	12.7	3.18	0.4	10 pcs.	101

