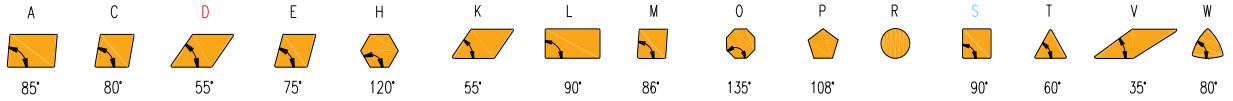
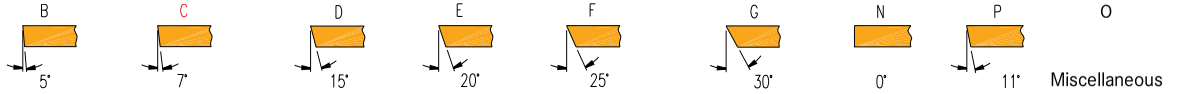
D	S	1. Insert shape



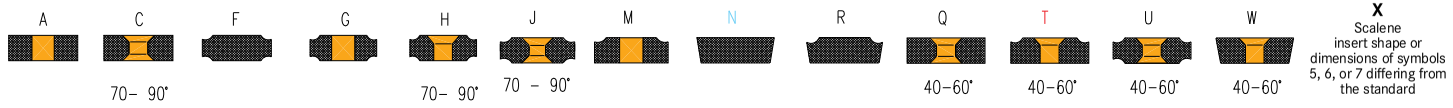
C	P	2. Clearance angle



M	K	3. Tolerance class

± tolerances (µm)	A	C	E	G	H	J	K	M	N	U
for incircle d	25	25	25	25	13	50–150	50–150	50–150	50–150	80–250
for test dimension m	5	13	25	25	13	5	13	80–200	80–200	130–380
for thickness s	25	25	25	50–130	25	25	25	50–130	25	130

T	N	4. Insert type



11	12	5. Cutter length

C	04	05	06	08	09	12	16	19	25
D			07		11	15			
S			06		09	12	15	19	25
Incircle d	4.76	5.56	6.35	7.94	9.52	12.7	15.88	19.05	25.4

T	08	09	11	13	16	22	27	33
V			11	13	16			
W		03	04	05	06	08		
Incircle d	4.76	5.56	6.35	7.94	9.52	12.7	15.88	19.05

R	05	06	08	09	10	12	12
Incircle d	5	6	8	9,52	10	12	12.7

R	15	16	19	20	25	25	32
Incircle d	15.88	16	19.05	20	25	25.4	32

T3	03	6. Insert thickness

	01	T1	02	03	T3	04	05	06	07	09
Thickness s	1.59	1.98	2.38	3.18	3.97	4.76	5.56	6.35	7.94	9.52

08	ED	7. Cutter angle

Radius r – Corner radius

00	02	04	08	12	16	20	24	32
0	0.2	0.4	0.8	1.2	1.6	2.0	2.4	3.2

00	MO
Round plate (inch)	Round plate (metr.)

Setting angle – guillotine cutter

A	D	E	F	P	Z
45°	60°	75°	85°	90°	Misc.

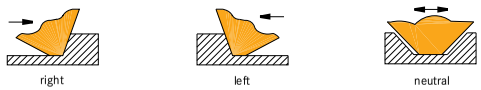
Clearance angle – guillotine cutter

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

	R	8. Cutter version

Symbol N only if required

		9. Cut direction



Symbol N only if required

-41		10. Additional indications

These indications do not form part of the standard and are facultative.
e. g. –41 for chip former geometry
01520 for chip face bezel 0.15 mm × 20°

Example: turning **DCMT 11 T3 08-41**
Example: milling **SPKN 12 03 ED R**

overview: indexable inserts

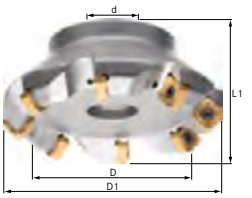
ATORN® Face milling cutter 45°

For indexable milling inserts SN.X 1206 / SNMU 1206 / ONMU 1205

Application:
The indexable milling cutter allows economical face milling at medium cutting depths and rough machining of many materials including steel, VA, cast materials and aluminium. The robust reversible tip with eight cutting edges is particularly economical and has impressive universal possible applications. 6.35 mm insert thickness improves process reliability enormously and protects the support body.

Execution:
- For milling plates SN.X 1206, SNMU 1206 and ONMU 1205
- Wear-resistant, nickel-plated version
- Normal and fine pitch

Advantage:
- Double-sided indexable insert with large chip angle and eight cutting edges
- Outstanding surface finish
- Very wide range of applications
- Approx. max. 5.5 mm
- Easy cutting with low cutting force



							Face milling cutter 45°		Clamping screw for indexable inserts	
D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16023... Ident. No.		16108... Ident. No.	
50	63	40	22	5.5	4	SN.X 1206..	050	●	173	●
50	63	40	22	5.5	6	SN.X 1206..	051	●	173	●
63	76	40	22	5.5	6	SN.X 1206..	063	●	173	●
63	76	40	22	5.5	8	SN.X 1206..	064	●	173	●
80	93	50	27	5.5	7	SN.X 1206..	080	●	173	●
80	93	50	27	5.5	10	SN.X 1206..	081	●	173	●
100	113	50	32	5.5	8	SN.X 1206..	100	●	173	●
100	113	50	32	5.5	12	SN.X 1206..	101	●	173	●
125	138	63	40	5.5	10	SN.X 1206..	125	●	173	●
125	138	63	40	5.5	16	SN.X 1206..	126	●	173	●
160	173	63	40	5.5	12	SN.X 1206..	160	●	173	●
160	173	63	40	5.5	20	SN.X 1206..	161	○	173	●
200	213	63	60	5.5	14	SN.X 1206..	200	○	173	●
250	263	63	60	5.5	16	SN.X 1206..	250	●	173	●

Prod. Gr. 108

ATORN® Indexable milling insert SN.X 1206..

For face milling cutter no. 16023

Delivery:
Ident. No. 270, 275–277: Packaging unit: 10 pieces

Ident. No. 274: Box quantity: Pack of 10

				Surface	Uncoated		Coated		Coated		Coated		Coated	
				Carbide type	HW4310		HC4410		HC4535		HC4630		HC4635	
				Material to be processed	Non-ferrous metal		Steel | Cast metal		Steel | Stainless steel		Steel		Steel | Stainless steel | Cast metal	
				Suitable for material group P			○		●		●		●	
				Suitable for material group M					●				○	
				Suitable for material group N	●									
				Suitable for material group K			●						●	
				Suitable for material group S										
				Suitable for material group H										
	ISO name	Knife edge length (mm)	Edge radius (mm)		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	SNEX 1206 ANN-MA	12.7	2.36		270	●	-	-	-	-	-	-	-	-
	SNMX 1206 ANN-MM	12.7	2.36		-	-	275	●	276	●	277	●	-	-
	SNKX 1206 ANN-MM1	12.7	2.36		-	-	-	-	-	-	-	-	274	●

Prod. Gr. 156

ATORN® Indexable milling insert ONMU

For face milling cutter no. 16023

Execution:
- Double-sided, 16 cutting edges

Delivery:
Packing unit: 10 pieces

			Surface	Coated		Coated		Coated	
			Carbide type	HC4410		HC4535		HC4630	
			Material to be processed	Steel | Cast metal		Steel | Stainless steel		Steel	
			Suitable for material group P	○		●		●	
			Suitable for material group M			●			
			Suitable for material group N						
			Suitable for material group K	●					
			Suitable for material group S						
			Suitable for material group H						
	ISO name	Knife edge length (mm)		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	ONMU 1205 ANN	4.8		320	●	-	-	-	-
	ONMU 1205 ANN	4.8		-	-	321	●	-	-
	ONMU 1205 ANN	4.8		-	-	-	-	322	●

Prod. Gr. 156

ATORN® Indexable milling insert SNMU

For face milling cutter no. 16023

Execution:
- Double-sided, 8 cutting edges
- With chip breaker

Delivery:
Packing unit: 10 pieces

			Surface	Coated		Coated		Coated	
			Carbide type	HC4410		HC4535		HC4630	
			Material to be processed	Steel | Cast metal		Steel | Stainless steel		Steel	
			Suitable for material group P	○		●		●	
			Suitable for material group M			●			
			Suitable for material group N						
			Suitable for material group K	●					
			Suitable for material group S						
			Suitable for material group H						
	ISO name	Knife edge length (mm)		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	SNMU 1206 ANER	12.7		330	●	-	-	-	-
	SNMU 1206 ANER	12.7		-	-	331	●	-	-
	SNMU 1206 ANER	12.7		-	-	-	-	332	●

Prod. Gr. 156

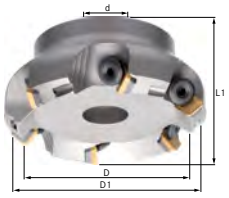
ATORN® Face milling cutter 45°

For milling cutter indexable inserts SEEN 1203, SEER 1203

Application:
Universal use in all materials.

Execution:
- Wear-resistant, nickel-plated version
- Indexable milling inserts for clamping using precision supports

Advantage:
- Safe clamping with plate screw
- High cutting performance even in low-powered machines
- Variable pitch for smooth running



							Face milling cutter 45°		Shims		Clamping screw for indexable inserts		Clamping screw for shims	
D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16022... Ident. No.		16108... Ident. No.		16108... Ident. No.		16108... Ident. No.	
50	63	48	22	6	4	SE.. 1203..	050	●	175	●	176	●	177	●
63	76	40	22	6	5	SE.. 1203..	063	●	175	●	176	●	177	●
80	93	50	27	6	6	SE.. 1203..	080	●	175	●	176	●	177	●
100	113	50	32	6	6	SE.. 1203..	100	●	175	●	176	●	177	●
125	138	63	40	6	7	SE.. 1203..	125	●	175	●	176	●	177	●
160	173	63	40	6	7	SE.. 1203..	160	●	175	●	176	●	177	●
200	213	63	60	6	10	SE.. 1203..	200	○	175	●	176	●	177	●

D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	Face milling cutter 45° 16022... Ident. No.		Shims 16108... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Clamping screw for shims 16108... Ident. No.	
250	263	63	60	6	13	SE.. 1203..	250	●	175	●	176	●	177	●

Prod. Gr. 108

ATORN® Indexable milling insert SE.. 1203..

For face milling cutter no. 16022

Application:
Ident. No. 124, 134: * Reversible tip optimised for machining steel

Delivery:
Packaging unit: 10 pieces

	ISO name	Knife edge length (mm)	Corner chamfer (mm)	Surface / Carbide type / Material to be processed	Coated HC4410 Steel | Non-ferrous metal | Cast metal 16109... Ident. No.		Coated HC4620 Steel | Stainless steel | Cast metal 16109... Ident. No.		Coated HC4620 Steel | Stainless steel | Cast metal 16109... Ident. No.		Coated HC4626 Steel | Cast metal | Hardened material 16109... Ident. No.	
				Suitable for material group P	○		●		●		●	
				Suitable for material group M			●		○			
				Suitable for material group N	○							
				Suitable for material group K	●		●		○		●	
				Suitable for material group S								
				Suitable for material group H							○	
	SEEN 1203 AF-SN	12.7	1.6		122	●	123	●	124	●	125	●
	SEEN 1203 AF-FN	12.7	1.6		-	-	121	●	-	-	-	-
	SEER 1203 AF-EN	12.7	1.6		-	-	131	●	-	-	-	-
	SEER 1203 AF-SN	12.7	1.6		-	-	133	●	134	●	135	●

Prod. Gr. 156

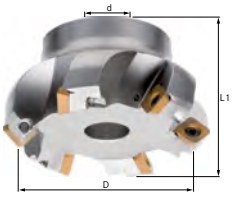
ATORN® Face milling cutter 45°

For milling cutter indexable inserts SEET 1204, SEEW 1204

Application:
Universal use in all materials.

Execution:
- Wear-resistant, nickel-plated version

- With robust support design
- Extremely soft cut
- Variable pitch for smooth running
- Clamping screw tightening torque (indexable insert) M5 = 8 Nm



D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	Face milling cutter 45° 16024... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
40	53	40	16	6	3	SE.. 1204..	040	●	130	●
50	63	48	22	6	4	SE.. 1204..	050	●	130	●
50	63	48	22	6	5	SE.. 1204..	051	●	130	●
63	76	48	22	6	5	SE.. 1204..	063	●	130	●
63	76	48	22	6	6	SE.. 1204..	064	●	130	●
80	93	50	27	6	6	SE.. 1204..	080	●	130	●
80	93	50	27	6	7	SE.. 1204..	081	●	130	●
100	113	50	32	6	6	SE.. 1204..	100	●	130	●
100	113	50	32	6	8	SE.. 1204..	101	●	130	●
125	138	63	40	6	7	SE.. 1204..	125	●	130	●
125	138	63	40	6	9	SE.. 1204..	126	●	130	●
160	173	63	40	6	8	SE.. 1204..	160	●	130	●
160	173	63	40	6	10	SE.. 1204..	161	○	130	●
200	213	63	60	6	12	SE.. 1204..	200	○	130	●
250	263	63	60	6	16	SE.. 1204..	250	○	130	●

Prod. Gr. 108

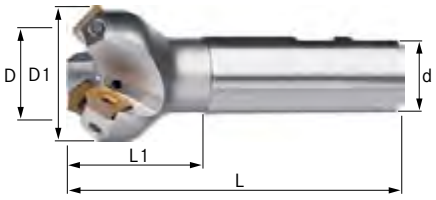
ATORN® Face milling cutter 45° with Weldon shank

For milling cutter indexable inserts SEET 1204, SEEW 1204

Application:
Universal use in all materials.

Execution:
- Weldon shank
- Wear-resistant, nickel-plated version

- With robust support design
- Extremely soft cut
- Variable pitch for smooth running
- Clamping screw tightening torque (indexable insert) M5 = 8 Nm



D (mm)	D1 max (mm)	L (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	**Face milling cutter 45° with Weldon shank** 16024... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
25	38	100	25	6	2	SE.. 1204..	325	●	130	●
32	45	110	25	6	3	SE.. 1204..	332	●	130	●

Prod. Gr. 108

ATORN® Milling insert SE.. 1204..

For face milling cutter no. 16024

Application:
Ident. No. 721: * Optimally suited for dry machining

Delivery:
Ident. No. 151–160: Packaging unit: 10 pieces
Ident. No. 713–721: Box quantity: 10 pieces

			Surface	Uncoated	Coated	Coated	Coated	Coated
			Carbide type	HW4410	HC4410	HC4640	HC4630	HC4620
			Material to be processed	Non-ferrous metal	Steel | Stainless steel | Non-ferrous metal | Cast metal | Hardened material	Steel | Stainless steel | Cast metal	Steel | Cast metal	Steel | Stainless steel | Cast metal | Special alloy | Hardened material
			Suitable for material group P		○	●	●	●
			Suitable for material group M		○	●		●
			Suitable for material group N	●	●			
			Suitable for material group K		●	○	●	●
			Suitable for material group S					○
			Suitable for material group H		●			○
	ISO name	Knife edge length (mm)	Corner chamfer (mm)	16109... Ident. No.	16109... Ident. No.	16109... Ident. No.	16109... Ident. No.	16109... Ident. No.
	SEET 1204 AF-FN	12.7	1.6	160 ●	- -	- -	- -	- -
	SEET 1204 AF-SN	12.7	1.6	- -	151 ●	152 ●	153 ●	- -
	SEEW 1204 AF-EN	12.7	1.6	- -	- -	715 ●	- -	719 ●
	SEEW 1204 AF-SN	12.7	1.6	- -	717 ●	716 ●	721 ●	713 ●

Prod. Gr. 156

ORION® Face milling cutter 45°

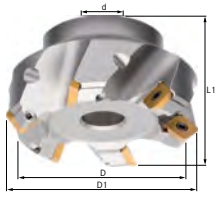
For milling cutter indexable inserts SEET 12T3..

Application:
For universal use in all materials, predestined for cast processing.

Execution:
- Nickel-plated supports
- Long-term tested support design

- Normal and fine pitch
- Clamping screw tightening torque (indexable insert) M3.5 = 3.9 Nm

Advantage:
- Highly positive indexable milling inserts for low-vibration, steady cutting
- Outstanding value for money



D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	**Face milling cutter 45°** 16003... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Shims 16108... Ident. No.		Clamping screw for shims 16108... Ident. No.	
50	61	40	22	6	3	SEET 12T3..	200	●	163	●	-	-	-	-
63	74	40	22	6	4	SEET 12T3..	201	●	163	●	-	-	-	-
63	74	40	22	6	5	SEET 12T3..	206	●	163	●	-	-	-	-
80	91	50	27	6	4	SEET 12T3..	202	●	163	●	-	-	-	-

D (mm)	D1 max (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	Face milling cutter 45° 16003... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Shims 16108... Ident. No.		Clamping screw for shims 16108... Ident. No.	
80	91	50	27	6	6	SEET 12T3..	207	●	163	●	-	-	-	-
100	107	50	32	6	5	SEET 12T3..	203	●	163	●	-	-	-	-
100	107	50	32	6	7	SEET 12T3..	208	●	163	●	-	-	-	-
125	137.5	63	40	6	6	SEET 12T3..	204	●	163	●	-	-	-	-
125	137.5	63	40	6	8	SEET 12T3..	209	●	164	●	165	●	168	●
160	170	63	40	6	10	SEET 12T3..	210	●	164	●	165	●	168	●

Prod. Gr. 148

ORION® Indexable milling insert SEET 12T3..

For face milling cutter no. 16003

Application:
Ident. No. 008: Wide finishing plates for optimised surface qualities

Delivery:
Box quantity: 10 pieces

	ISO name	Type	Knife edge length (mm)	Corner chamfer (mm)	Surface: Coated, Carbide type: OHC4540, Steel | Stainless steel | Special alloy — 16109... Ident. No.		Surface: Uncoated, Carbide type: OHW4410, Non-ferrous metal — 16109... Ident. No.		Surface: Coated, Carbide type: OHC4410, Cast metal — 16109... Ident. No.		Surface: Coated, Carbide type: OHC4620, Steel | Stainless steel — 16109... Ident. No.		Surface: Coated, Carbide type: OHC4544, Stainless steel | Special alloy — 16109... Ident. No.	
					Suitable for material group P: ● Suitable for material group M: ● Suitable for material group S: ○		Suitable for material group N: ●		Suitable for material group K: ●		Suitable for material group P: ● Suitable for material group M: ●		Suitable for material group M: ● Suitable for material group S: ○	
	SEET 12T3-DF..	Smoothing	13	2.6	001	●	-	-	-	-	-	-	-	-
	SEET 12T3-DM..	Medium machining	13	2.6	002	●	-	-	-	-	-	-	-	-
	SEET 12T3-DR..	Rough machining	13	2.6	003	●	-	-	-	-	-	-	-	-
	SEET 12T3-LH..	Smoothing, medium machining	13	2.6	-	-	004	●	-	-	-	-	-	-
	SEET 12T3-CM..	Medium machining	13	2.6	-	-	-	-	005	●	-	-	-	-
	SEET 12T3-CR..	Rough machining	13	2.6	-	-	-	-	007	●	-	-	-	-
	SEET 12T3-W..	Wide finishing	13	2.6	-	-	-	-	-	-	008	●	-	-
	SEET 12T3-EM..	Medium machining	13	2.6	-	-	-	-	-	-	-	-	010	●

Prod. Gr. 148

ATORN 90° high-performance angular milling cutter

everywhere a straight edge needs to be created in steel, cast iron, stainless steel or non-ferrous materials, ATORN makes precise angular milling cutting possible. the 90° angular milling cutters have excellent machining properties.

the entire spectrum of our new angular milling cutting tools offers basic bodies in 5 versions. the high number of teeth makes it possible to achieve large feeds. the highly positive geometry and uneven pitch ensure soft cutting and smooth operation. extra-long end mills are suitable for working with especially deep projections.

flexible complete program
- Ø range 10-100 mm
- with shaft, thread and location hole
- angular milling cutter and long edge milling cutter
- with tight and wide division

highly positive indexable inserts
- cutting depth ap max. = up to 16.5mm
- 2 geometries
- corner radii of 0.2 - 4 mm
- 6 cemented carbide grades
- low power consumption

exact 90°
- angular mill cutting without offsets during rough machining and finishing reduces post-processing efforts

high productivity
- large cutting depths
- high feed rates
- high removal rates

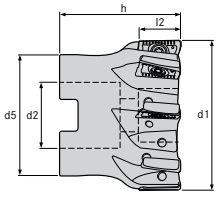
ATORN® High-performance angular milling cutter 90°

For indexable milling inserts AD.X 0602.. - AD.X 1705..

Application:
Ident. No. 052–056: High-performance angular milling cutter 90°

Execution:
- **Ident. No. 002–012:** Tightening torque for clamping screw (indexable insert) 2.25 Nm (TX 08)
- **Ident. No. 002–032:** With internal cooling
- **Ident. No. 002–032, 052–056:** Wear-resistant, nickel-plated version
- **Ident. No. 020–032:** Tightening torque for clamping screw (indexable insert) 3.5 Nm (TX 15)
- **Ident. No. 040–050:**
  - Wear-proof, nickel-plated design
  - Tightening torque for clamping screw (indexable insert) 1.2 Nm (TX 08)
- **Ident. No. 040–056:** with internal cooling
- **Ident. No. 052–056:** Tightening torque for clamping screw (indexable insert) 0.7 Nm (TX 06)

Advantage:
- Highly positive indexable insert
- Low power consumption
- **Ident. No. 002–032:** Precise 90° angular milling
- **Ident. No. 040–056:** precise 90° angular milling



						High-performance angular milling cutter 90°		Clamping screw for indexable inserts	
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16031... Ident. No.		16108... Ident. No.	
32	40	16	5.5	8	AD.X 0602..	052	●	630	●
40	40	22	5.5	10	AD.X 0602..	054	●	630	●
50	40	22	5.5	11	AD.X 0602..	056	●	630	●
40	40	16	8.5	4	AD.X 0903..	040	●	632	●
40	40	16	8.5	6	AD.X 0903..	042	●	632	●
50	40	22	8.5	5	AD.X 0903..	044	●	632	●
50	40	22	8.5	7	AD.X 0903..	046	●	632	●
63	40	22	8.5	6	AD.X 0903..	048	●	632	●
63	40	22	8.5	9	AD.X 0903..	050	●	632	●
40	40	16	11.5	4	AD.X 1204..	002	●	634	●
40	40	16	11.5	6	AD.X 1204..	004	●	634	●
50	40	22	11.5	5	AD.X 1204..	006	●	634	●
50	40	22	11.5	7	AD.X 1204..	008	●	634	●
63	40	22	11.5	6	AD.X 1204..	010	●	634	●
63	40	22	11.5	9	AD.X 1204..	012	●	634	●
40	36	16	16.5	4	AD.X 1705..	020	●	638	●
50	40	22	16.5	5	AD.X 1705..	022	●	638	●
63	40	22	16.5	6	AD.X 1705..	024	●	638	●
80	50	27	16.5	8	AD.X 1705..	026	●	638	●
100	50	32	16.5	9	AD.X 1705..	028	●	638	●
125	63	40	16.5	9	AD.X 1705..	030	●	638	●
125	63	40	16.5	11	AD.X 1705..	032	●	638	●

Prod. Gr. 108

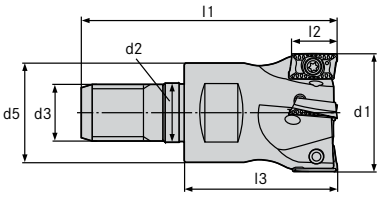
ATORN® High-performance angular milling cutter 90° with thread

For indexable milling inserts AD.X 0602.. - AD.X 1204..

Application:
Ident. No. 024–028: High-performance angular milling cutter 90° with thread

Execution:
- Wear-resistant, nickel-plated version
- **Ident. No. 002–006:** Tightening torque for clamping screw (indexable insert) 0.7 Nm (Torx 06)
- **Ident. No. 002–022:** With internal cooling
- **Ident. No. 010–014:** Tightening torque for clamping screw (indexable insert) 1.2 Nm (Torx 08)
- **Ident. No. 020–022:** Tightening torque for clamping screw (indexable insert) 2.25 Nm (TX 08)
- **Ident. No. 024–028:**
  - with internal cooling
  - Tightening torque for clamping screw (indexable insert) 0.7 Nm (TX 06)

Advantage:
- Highly positive indexable insert
- Low power consumption
- **Ident. No. 002–022:** Precise 90° angular milling
- **Ident. No. 024–028:** precise 90° angular milling



D (mm)	L3 (mm)	L1 (mm)	d	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	High-performance angular milling cutter 90° with thread 16029... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
12	28	45	M8	5.5	2	AD.X 0602..	002	●	630	●
16	28	28	M8	5.5	4	AD.X 0602..	024	●	630	●
16	28	45	M8	5.5	3	AD.X 0602..	004	●	630	●
20	30	49	M10	5.5	4	AD.X 0602..	006	●	630	●
20	30	30	M10	5.5	5	AD.X 0602..	026	●	630	●
25	33	33	M10	5.5	7	AD.X 0602..	028	●	630	●
20	30	49	M10	8.5	3	AD.X 0903..	010	●	632	●
25	33	55	M12	8.5	4	AD.X 0903..	012	●	632	●
32	43	67	M16	8.5	6	AD.X 0903..	014	●	632	●
32	43	67	M16	11.5	4	AD.X 1204..	020	●	634	●
40	43	67	M16	11.5	6	AD.X 1204..	022	●	634	●

Prod. Gr. 108

ATORN® High-performance angular milling cutter 90° with Weldon shaft

For indexable milling inserts AD.X 0602.. - AD.X 1705..

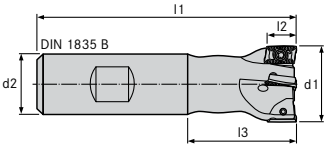
Application:
Ident. No. 072–082: High-performance angular milling cutter 90° with Weldon shaft

Execution:
- Wear-resistant, nickel-plated version
- **Ident. No. 002–010:** Tightening torque for clamping screw (indexable insert) 0.7 Nm (TX 06)
- **Ident. No. 002–066:** With internal cooling
- **Ident. No. 020–030:** Tightening torque for clamping screw (indexable insert) 1.2 Nm (TX 08)
- **Ident. No. 040–048:** Tightening torque for clamping screw (indexable insert) 2.25 Nm (TX 08)
- **Ident. No. 060–066:** Tightening torque for clamping screw (indexable insert) 3.5 Nm (TX 15)
- **Ident. No. 072–082:**
  - with internal cooling
  - Tightening torque for clamping screw (indexable insert) 0.7 Nm (TX 06)

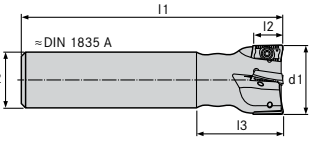
Advantage:
- Highly positive indexable insert
- Low power consumption
- **Ident. No. 002–066:** Precise 90° angular milling
- **Ident. No. 072–082:** precise 90° angular milling

Ident. No. 002–064, 072–082

Ident. No. 066



Ident. No. 002–064, 072–082



Ident. No. 066

D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	High-performance angular milling cutter 90° with Weldon shaft 16030... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
10	20	60	10	5.5	1	AD.X 0602..	002	●	630	●
12	25	70	12	5.5	2	AD.X 0602..	004	●	630	●
14	25	70	12	5.5	3	AD.X 0602..	072	●	630	●
16	28	76	16	5.5	3	AD.X 0602..	006	●	630	●
16	28	76	16	5.5	4	AD.X 0602..	074	●	630	●
18	28	76	16	5.5	4	AD.X 0602..	076	●	630	●
20	36	86	20	5.5	4	AD.X 0602..	008	●	630	●
20	36	86	20	5.5	5	AD.X 0602..	078	●	630	●

D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	High-performance angular milling cutter 90° with Weldon shaft 16030... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
25	36	86	20	5.5	6	AD.X 0602..	010	●	630	●
25	36	86	20	5.5	7	AD.X 0602..	080	●	630	●
32	40	96	25	5.5	8	AD.X 0602..	082	●	630	●
16	28	76	16	8.5	2	AD.X 0903..	020	●	632	●
20	36	86	20	8.5	3	AD.X 0903..	022	●	632	●
20	36	86	20	8.5	4	AD.X 0903..	024	●	632	●
25	36	86	20	8.5	4	AD.X 0903..	026	●	632	●
25	36	86	20	8.5	5	AD.X 0903..	028	●	632	●
32	40	86	25	8.5	6	AD.X 0903..	030	●	632	●
20	36	86	20	11.5	2	AD.X 1204..	040	●	634	●
25	36	86	20	11.5	3	AD.X 1204..	042	●	634	●
32	40	96	25	11.5	4	AD.X 1204..	044	●	634	●
32	40	96	25	11.5	5	AD.X 1204..	046	●	634	●
40	50	110	32	11.5	6	AD.X 1204..	048	●	634	●
25	40	96	25	16.5	2	AD.X 1705..	060	●	636	●
32	50	110	32	16.5	3	AD.X 1705..	062	●	638	●
40	50	110	32	16.5	4	AD.X 1705..	064	●	638	●
25	40	200	25	16.5	2	AD.X 1705..	066	●	636	●

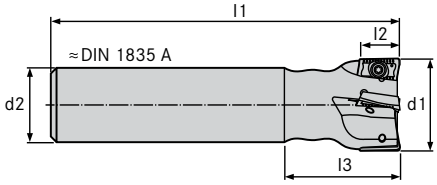
Prod. Gr. 108

ATORN® High-performance angular milling cutter 90° with shank

For indexable milling inserts AD.X 1705..

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- Tightening torque for clamping screw (indexable insert) 3.5 Nm (TX 15)

Advantage:
- Highly positive indexable insert
- Low power consumption
- Precise 90° angular milling



D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	High-performance angular milling cutter 90° with shank 16030... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
32	50	250	32	16.5	3	AD.X 1705..	068	●	638	●
40	50	250	32	16.5	4	AD.X 1705..	070	●	638	●

Prod. Gr. 108

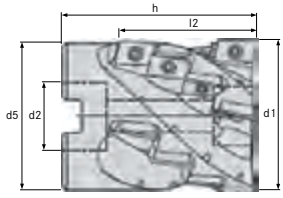
ATORN® High-performance long-edge milling cutter 90°

For indexable milling inserts AD.X 1204.. - AD.X 1705..

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- **Ident. No. 200–204:** Tightening torque for clamping screw (indexable insert) 2.25 Nm (TX 08)
- **Ident. No. 300–302:** Tightening torque for clamping screw (indexable insert) 3.5 Nm (TX 15)

Advantage:
- Highly positive indexable insert
- Low power consumption

Notes:
Slight recessing cannot be avoided on multi-row milling tools.



D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Suitable for indexable inserts	High-performance long-edge milling cutter 90° 16031... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
40	55	16	34	3	9	AD.X 1204..	200	●	634	●
50	65	22	45	4	16	AD.X 1204..	202	●	634	●
63	70	27	45	5	20	AD.X 1204..	204	●	634	●
63	70	27	48	4	12	AD.X 1705..	300	●	638	●
80	85	32	63	5	20	AD.X 1705..	302	●	638	●

Prod. Gr. 108

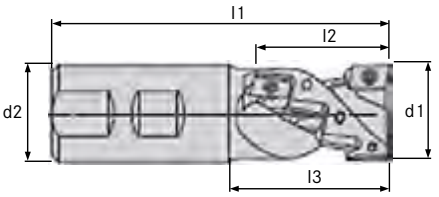
ATORN® High-performance long-edge milling cutter 90° with Weldon shank

For indexable milling inserts AD.X 0903.. - AD.X 1204..

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- **Ident. No. 200–204:** Tightening torque for clamping screw (indexable insert) 1.2 Nm (TX 08)
- **Ident. No. 300–302:** Tightening torque for clamping screw (indexable insert) 2.25 Nm (TX 08)

Advantage:
- Highly positive indexable insert
- Low power consumption

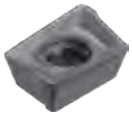
Notes:
Slight recessing cannot be avoided on multi-row milling tools.



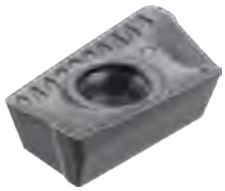
D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Suitable for indexable inserts	High-performance long-edge milling cutter 90° with Weldon shank 16030... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
20	36	86	20	25	2	6	AD.X 0903..	200	●	632	●
25	44	100	25	33	2	8	AD.X 0903..	202	●	632	●
32	55	115	32	41	3	15	AD.X 0903..	204	●	632	●
32	55	115	32	45	2	8	AD.X 1204..	300	●	634	●
40	70	140	40	55	3	15	AD.X 1204..	302	●	634	●

Prod. Gr. 108

ATORN ATORN 90° high-performance angular milling cutter
4 indexable insert sizes – ready for any task

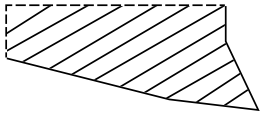
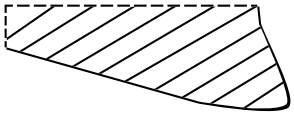

ADKX 0602..


ADKX 0903..


ADKX 1204..


ADKX 1705..

ATORN indexable insert form 90° high-performance angular milling cutter

	chip shape	description
 ADHX..	 FR-ALC (sharp edge)	**for aluminium** specially ground indexable inserts geometry with a polished chip surface and sharp cutting edges for machining non-ferrous materials (aluminium, soft copper alloys and plastics)
 ADKX..	 SR and SR-TR (chamfered and rounded)	**for universal machining** universal indexable inserts geometry with all-round protection chamfer for machining steel and cast materials as well as stainless steels. version – TR with chip surface topography.

ATORN® Indexable milling inserts AD.X 0602..
For angular milling cutter 16029 - 16031

Delivery:
Box quantity: 10 pieces

Notes:
Ident. No. 300, 306, 310: *Best suited to non-ferrous metals only with ALC geometry.

			Surface	Uncoated		Coated		Coated	
			Carbide type	HW4410		HC4410		HC4640	
			Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel | Special alloy	
			Suitable for material group P			○		●	
			Suitable for material group M					○	
			Suitable for material group N	●		●			
			Suitable for material group K			●			
			Suitable for material group S					○	
			Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	ADHX 060202 FR-ALC	6.35	0.2	302	●	-	-	-	-
	ADHX 060202 FR-ALC	6.35	0.2	-	-	300	●	-	-
	ADKX 060202 SR	6.35	0.2	-	-	306	●	304	●
	ADKX 060204 SR	6.35	0.4	-	-	310	●	308	●

Prod. Gr. 156

ATORN® Indexable milling inserts AD.X 0903..
For angular milling cutter 16029 - 16031

Delivery:
Ident. No. 330–364: Box quantity: 10 pieces
Ident. No. 366–376: Packaging unit: 10 pieces

Notes:
Ident. No. 330, 334, 340, 348, 356, 364: *Best suited to non-ferrous metals only with ALC geometry.

Ident. No. 344, 352, 360: **Suitable for dry milling
Ident. No. 346, 354, 362: ***Suitable for wet milling
Ident. No. 366–376: Polished, with a rounded cutting edge

				Surface	Uncoated		Coated		Coated		Coated		Coated	
				Carbide type	HW4410		HC4410		HC4640		HC4540		HC4544	
				Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel		Stainless steel		Stainless steel	
				Suitable for material group P			○		●					
				Suitable for material group M					○		●		●	
				Suitable for material group N	●		●							
				Suitable for material group K			●							
				Suitable for material group S										
				Suitable for material group H										
	ISO name	Knife edge length (mm)	Edge radius (mm)		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	ADHX 090308 FR-ALC	9.52	0.8		332	●	-	-	-	-	-	-	-	-
	ADHX 090312 FR-ALC	9.52	1.2		336	●	-	-	-	-	-	-	-	-
	ADHX 090308 FR-ALC	9.52	0.8		-	-	330	●	-	-	-	-	-	-
	ADHX 090312 FR-ALC	9.52	1.2		-	-	334	●	-	-	-	-	-	-
	ADHX 090302 ER	9.6	0.2		-	-	368	●	366	●	-	-	-	-
	ADHX 090304 ER	9.6	0.4		-	-	372	●	370	●	-	-	-	-
	ADHX 090308 ER	9.6	0.8		-	-	376	●	374	●	-	-	-	-
	ADKX 090304 SR-TR	9.52	0.4		-	-	340	●	338	●	-	-	-	-
	ADKX 090308 SR-TR	9.52	0.8		-	-	348	●	342	●	344	●	346	●
	ADKX 090312 SR-TR	9.52	1.2		-	-	356	●	350	●	352	●	354	●
	ADKX 090316 SR-TR	9.52	1.6		-	-	364	●	358	●	360	●	362	●

Prod. Gr. 156

ATORN® Indexable milling inserts AD.X 1204..

For angular milling cutter 16029 - 16031

Delivery:
Ident. No. 380–390, 392, 394–396, 398–420: Box quantity: 10 pieces
Ident. No. 391, 393, 397: Box quantity: Pack of 10
Ident. No. 422–436: Packaging unit: 10 pieces

Notes:
Ident. No. 380, 384, 388, 397–398, 406, 414, 418: *Best suited to non-ferrous metals only with ALC geometry.
Ident. No. 394, 402, 410, 434: **Suitable for dry milling
Ident. No. 396, 404, 412, 436: ***Suitable for wet milling
Ident. No. 422–432: Polished, with a rounded cutting edge

				Surface	Uncoated		Coated		Coated		Coated		Coated		Coated	
				Carbide type	HW4410		HC4410		HC4640		HC4540		HC4544		HC4430	
				Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel		Steel | Stainless steel		Steel | Stainless steel		Steel | Cast metal	
				Suitable for material group P			○		●		○		○		●	
				Suitable for material group M					○		●		●			
				Suitable for material group N	●		●									
				Suitable for material group K			●								○	
				Suitable for material group S												
				Suitable for material group H												
	ISO name	Knife edge length (mm)	Edge radius (mm)		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	ADHX 120408 FR-ALC	12.7	0.8		382	●	-	-	-	-	-	-	-	-	-	-
	ADHX 120412 FR-ALC	12.7	1.2		386	●	-	-	-	-	-	-	-	-	-	-
	ADHX 120416 FR-ALC	12.7	1.6		390	●	-	-	-	-	-	-	-	-	-	-
	ADHX 120408 FR-ALC	12.7	0.8		-	-	380	●	-	-	-	-	-	-	-	-
	ADHX 120412 FR-ALC	12.7	1.2		-	-	384	●	-	-	-	-	-	-	-	-
	ADHX 120416 FR-ALC	12.7	1.6		-	-	388	●	-	-	-	-	-	-	-	-
	ADHX 120404 ER	12.8	0.4		-	-	424	●	422	●	-	-	-	-	-	-
	ADHX 120406 ER	12.8	0.6		-	-	428	●	426	●	-	-	-	-	-	-
	ADHX 120408 ER	12.8	0.8		-	-	432	●	430	●	-	-	-	-	-	-

			Surface	Uncoated		Coated		Coated		Coated		Coated		Coated	
			Carbide type	HW4410		HC4410		HC4640		HC4540		HC4544		HC4430	
			Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel		Steel | Stainless steel		Steel | Stainless steel		Steel | Cast metal	
			Suitable for material group P			○		●		○		○		●	
			Suitable for material group M					○		●		●			
			Suitable for material group N	●		●									
			Suitable for material group K			●								○	
			Suitable for material group S												
			Suitable for material group H												
	ISO name	Knife edge length (mm)	Edge radius (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	ADKX 120404 SR-TR	12.7	0.4	-	-	397	●	391	●	-	-	-	-	393	●
	ADKX 120408 SR-TR	12.7	0.8	-	-	398	●	392	●	394	●	396	●	-	-
	ADKX 120412 SR-TR	12.7	1.2	-	-	406	●	400	●	402	●	404	●	-	-
	ADKX 120416 SR-TR	12.7	1.6	-	-	414	●	408	●	410	●	412	●	-	-
	ADKX 120420 SR-TR	12.7	2	-	-	418	●	416	●	434	●	436	●	-	-
	ADKX 120440 SR-TR	12.7	4	-	-	-	-	420	●	-	-	-	-	-	-

Prod. Gr. 156

ATORN® Indexable milling inserts AD.X 1705..

For angular milling cutter 16029 - 16031

Delivery:
Box quantity: 10 pieces

Notes:
Ident. No. 440, 444, 448, 456, 466, 476, 486: *Best suited to non-ferrous metals only with ALC geometry.

Ident. No. 462, 472, 482: **Suitable for dry milling
Ident. No. 464, 474, 484: ***Suitable for wet milling

			Surface	Uncoated		Coated		Coated		Coated		Coated		Coated	
			Carbide type	HW4410		HC4410		HC4640		HC4430		HC4540		HC4544	
			Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel | Special alloy		Steel | Cast metal		Stainless steel		Stainless steel	
			Suitable for material group P			○		●		●					
			Suitable for material group M					○				●		●	
			Suitable for material group N	●		●									
			Suitable for material group K			●				○					
			Suitable for material group S					○							
			Suitable for material group H												
	ISO name	Knife edge length (mm)	Edge radius (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	ADHX 170508 FR-ALC	17.5	0.8	442	●	-	-	-	-	-	-	-	-	-	-
	ADHX 170512 FR-ALC	17.5	1.2	446	●	-	-	-	-	-	-	-	-	-	-
	ADHX 170516 FR-ALC	17.5	1.6	450	●	-	-	-	-	-	-	-	-	-	-
	ADHX 170508 FR-ALC	17.5	0.8	-	-	440	●	-	-	-	-	-	-	-	-
	ADHX 170512 FR-ALC	17.5	1.2	-	-	444	●	-	-	-	-	-	-	-	-
	ADHX 170516 FR-ALC	17.5	1.6	-	-	448	●	-	-	-	-	-	-	-	-
	ADKX 170508 SR-TR	17.5	0.8	-	-	456	●	452	●	454	●	-	-	-	-
	ADKX 170512 SR-TR	17.5	1.2	-	-	466	●	458	●	460	●	462	●	464	●
	ADKX 170516 SR-TR	17.5	1.6	-	-	476	●	468	●	470	●	472	●	474	●
	ADKX 170520 SR-TR	17.5	2	-	-	486	●	478	●	480	●	482	●	484	●

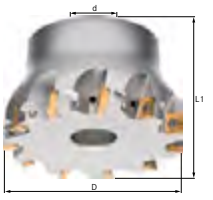
Prod. Gr. 156

ATORN® Angular milling cutter 90°

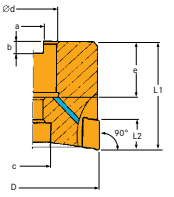
For milling inserts AP.. 0602.. / AP.. 1003.. / AP.. 1604..

Application:
For universal use in all materials.

Execution:
- Wear-resistant, nickel-plated version
- **No. 16017 341–16017 400:** Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16017 341–16017 400, 16019 020–16019 028:** With internal cooling
- **No. 16017 632–16017 650:**
  - Internal cooling
  - Clamping screw tightening torque (indexable insert) M1.8 = 0.7 Nm
- **No. 16019:** Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm



No. 16017 341–16017 400



No. 16017 341–16017 400

							Angular milling cutter 90°				Clamping screw for indexable inserts	
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	16017... Ident. No.		16019... Ident. No.		16108... Ident. No.	
32	40	16	5.2	8	-	AP.. 0602..	632	●	-	-	-	-
40	40	16	5.2	10	-	AP.. 0602..	640	●	-	-	-	-
50	40	22	5.2	11	-	AP.. 0602..	650	●	-	-	-	-
40	40	16	9.3	6	21 | 22	AP.. 1003..	341	●	-	-	225	●
50	40	22	9.3	7	21 | 22	AP.. 1003..	351	●	-	-	225	●
63	40	22	9.3	8	21 | 22	AP.. 1003..	364	●	-	-	225	●
80	50	27	9.3	11	21 | 22	AP.. 1003..	380	●	-	-	225	●
100	50	32	9.3	12	21 | 22	AP.. 1003..	400	●	-	-	225	●
40	40	16	14.9	4	27 | 28	AP.. 1604..	-	-	020	●	129	●
50	40	22	14.9	5	27 | 28	AP.. 1604..	-	-	021	●	129	●
63	40	22	14.9	6	27 | 28	AP.. 1604..	-	-	022	●	129	●
80	50	27	14.9	7	27 | 28	AP.. 1604..	-	-	023	●	129	●
100	50	32	14.9	8	27 | 28	AP.. 1604..	-	-	024	●	129	●
125	63	40	14.9	9	27 | 28	AP.. 1604..	-	-	025	●	129	●
160	63	40	14.9	10	27 | 28	AP.. 1604..	-	-	026	●	129	●
200	63	60	14.9	13	27 | 28	AP.. 1604..	-	-	027	○	129	●
250	63	60	14.9	16	27 | 28	AP.. 1604..	-	-	028	○	129	●

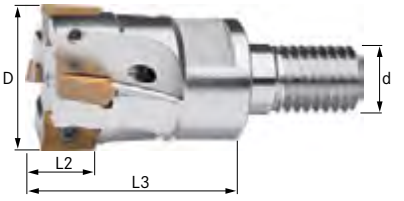
Prod. Gr. 108

ATORN® angular milling cutter, 90°, with thread

For milling inserts AP.. 0602.. / AP.. 1003.. / AP.. 1604..

Application:
For universal use in all materials.

Execution:
- With screw-in thread
- Wear-resistant, nickel-plated version
- **No. 16017 158–16017 163:** Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16017 158–16017 163, 16019 007–16019 009:** With internal cooling
- **No. 16017 710–16017 725:**
  - Internal cooling
  - Clamping screw tightening torque (indexable insert) M1.8 = 0.7 Nm
- **No. 16019:** Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm



No. 16017 158–16017 163, 16019 007–16019 009

								angular milling cutter, 90°, with thread				Clamping screw for indexable inserts	
D (mm)	L3 (mm)	L1 (mm)	d	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	16017... Ident. No.		16019... Ident. No.		16108... Ident. No.	
10	16	16	M6	5.2	2	-	AP.. 0602..	710	●	-	-	-	-
12	16	16	M6	5.2	3	-	AP.. 0602..	712	●	-	-	-	-
16	21	21	M8	5.2	4	-	AP.. 0602..	716	●	-	-	-	-
20	26	26	M10	5.2	5	-	AP.. 0602..	720	●	-	-	-	-
25	30	30	M12	5.2	7	-	AP.. 0602..	725	●	-	-	-	-
10	20	-	M6	9.3	1	21	AP.. 1003..	158	●	-	-	225	●
12	20	-	M6	9.3	1	21	AP.. 1003..	159	●	-	-	225	●
16	25	-	M8	9.3	2	21	AP.. 1003..	160	●	-	-	225	●
20	30	-	M10	9.3	3	21	AP.. 1003..	161	●	-	-	225	●
25	35	-	M12	9.3	4	21	AP.. 1003..	162	●	-	-	225	●
32	43	-	M16	9.3	5	21	AP.. 1003..	163	●	-	-	225	●
32	46	-	M16	14.9	3	27 | 28	AP.. 1604..	-	-	007	●	129	●
40	46	-	M16	14.9	4	27 | 28	AP.. 1604..	-	-	009	●	129	●

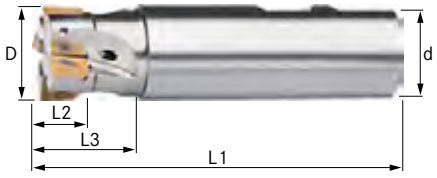
Prod. Gr. 108

ATORN® 90° angular milling cutter with Weldon shank

For milling inserts AP.. 0602.. / AP.. 1003.. / AP.. 1604..

Application:
For universal use in all materials.

Execution:
- **No. 16017 010–16017 253:**
  - with weld-on shank
  - wear-proof, nickel-plated design
  - with inner cooling
  - clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16017 510–16017 532:**
  - with straight shank
  - Internal cooling
  - Clamping screw tightening torque (indexable insert) M1.8 = 0.7 Nm
- **No. 16017 510–16019 005:** Wear-resistant, nickel-plated version
- **No. 16019:**
  - With Weldon shank
  - With internal cooling
  - Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm



No. 16017 010–16017 032, 16017 157–16017 253

								90° angular milling cutter with Weldon shank				Clamping screw for indexable inserts	
D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	16017... Ident. No.		16019... Ident. No.		16108... Ident. No.	
10	24	80	16	9.3	1	21 | 22	AP.. 1003..	010	●	-	-	225	●
10	24	150	16	9.3	1	21 | 22	AP.. 1003..	140	●	-	-	225	●
10	28	100	10	5.2	2	-	AP.. 0602..	510	●	-	-	-	-
11	24	80	16	9.3	1	21 | 22	AP.. 1003..	011	●	-	-	225	●
12	24	80	16	9.3	1	21 | 22	AP.. 1003..	012	●	-	-	225	●
12	24	150	16	9.3	1	21 | 22	AP.. 1003..	141	●	-	-	225	●
12	30	100	12	5.2	3	-	AP.. 0602..	512	●	-	-	-	-
13	24	80	16	9.3	1	21 | 22	AP.. 1003..	013	●	-	-	225	●
14	24	80	16	9.3	1	21 | 22	AP.. 1003..	014	●	-	-	225	●
14	32	120	12	5.2	3	-	AP.. 0602..	514	●	-	-	-	-
15	25	85	16	9.3	2	21 | 22	AP.. 1003..	015	●	-	-	225	●
15.7	25	85	16	9.3	2	21 | 22	AP.. 1003..	157	○	-	-	225	●
16	25	85	16	9.3	2	21 | 22	AP.. 1003..	016	●	-	-	225	●
16	100	150	16	9.3	2	21 | 22	AP.. 1003..	142	●	-	-	225	●
16	32	120	16	5.2	4	-	AP.. 0602..	516	●	-	-	-	-
17	25	85	16	9.3	2	21 | 22	AP.. 1003..	017	●	-	-	225	●
18	25	85	20	9.3	2	21 | 22	AP.. 1003..	018	●	-	-	225	●
18	25	150	16	9.3	2	21 | 22	AP.. 1003..	146	●	-	-	225	●
18	32	120	16	5.2	4	-	AP.. 0602..	518	●	-	-	-	-
19.7	25	90	20	9.3	3	21 | 22	AP.. 1003..	197	○	-	-	225	●
20	25	90	20	9.3	3	21 | 22	AP.. 1003..	020	●	-	-	225	●
20	100	150	20	9.3	3	21 | 22	AP.. 1003..	143	●	-	-	225	●
20	35	150	20	5.2	5	-	AP.. 0602..	520	●	-	-	-	-
22	25	95	25	9.3	3	21 | 22	AP.. 1003..	022	●	-	-	225	●
24.7	25	95	25	9.3	4	21 | 22	AP.. 1003..	247	○	-	-	225	●
25	25	95	25	9.3	4	21 | 22	AP.. 1003..	025	●	-	-	225	●
25	25	150	20	9.3	4	21 | 22	AP.. 1003..	144	●	-	-	225	●
25	25	95	25	9.3	3	21 | 22	AP.. 1003..	253	●	-	-	225	●
25	35	150	20	5.2	7	-	AP.. 0602..	525	●	-	-	-	-
25	44	100	25	14.9	2	27 | 28	AP.. 1604..	-	-	001	●	129	●
25	60	200	25	14.9	2	27 | 28	AP.. 1604..	-	-	002	●	129	●
28	25	95	25	9.3	4	21 | 22	AP.. 1003..	028	●	-	-	225	●
30	25	95	25	9.3	4	21 | 22	AP.. 1003..	030	●	-	-	225	●
32	26	95	25	9.3	5	21 | 22	AP.. 1003..	032	●	-	-	225	●
32	26	150	25	9.3	5	21 | 22	AP.. 1003..	145	●	-	-	225	●
32	35	150	25	5.2	8	-	AP.. 0602..	532	●	-	-	-	-
32	50	110	32	14.9	3	27 | 28	AP.. 1604..	-	-	003	●	129	●
32	60	200	32	14.9	3	27 | 28	AP.. 1604..	-	-	004	●	129	●
40	45	115	32	14.9	4	27 | 28	AP.. 1604..	-	-	005	●	129	●

Prod. Gr. 108

ATORN® Bore/counter sink milling cutter 90° with Weldon shank

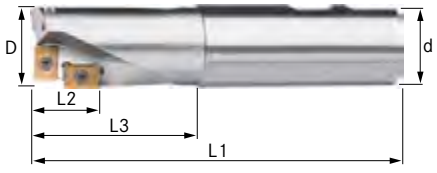
For milling inserts AP.. 1003.. / AP.. 1604..

Application:
For drilling/countersinking in all materials.

Execution:
- With Weldon shank
- Wear-resistant, nickel-plated version
- Robust supports

- **No. 16017:** Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16019:** Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm

Advantage:
- High cutting performance
- Safe chip removal thanks to positive cutting geometry



No. 16017

									Bore/counter sink milling cutter 90° with Weldon shank				Clamping screw for indexable inserts	
D (mm)	L3 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Indexable insert type	Suitable for indexable inserts	16017... Ident. No.		16019... Ident. No.		16108... Ident. No.	
20	35	90	20	17	2	3	21	AP.. 1003..	050	●	-	-	225	●
25	50	110	25	19	2	3	21	AP.. 1003..	052	●	-	-	225	●
20	30	150	20	17	2	3	21	AP.. 1003..	051	●	-	-	225	●
25	50	150	25	19	2	3	21	AP.. 1003..	053	●	-	-	225	●

D (mm)	L3 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Indexable insert type	Suitable for indexable inserts	Bore/counter sink milling cutter 90° with Weldon shank 16017... Ident. No.		16019... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
32	50	130	32	30	2	3	27	AP.. 1604..	-	-	010	●	129	●

Prod. Gr. 108

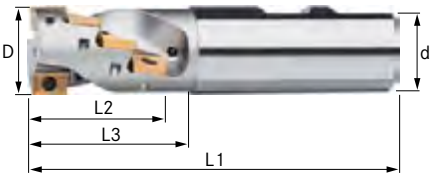
ATORN® Long edge milling cutter 90° with Weldon shank

For milling inserts AP.. 0602.. / AP.. 1003..

Application:
No. 16017–16018: For universal use in all materials for rough cutting.
No. 16019: For universal rough cutting in all materials.

Execution:
- **No. 16017:**
  - with Weldon shaft
  - Internal cooling
  - Clamping screw tightening torque (indexable insert) M1.8 = 0.7 Nm
- **No. 16017 816–16017 825, 16019 501–16019 503:** Wear-resistant, nickel-plated version
- **No. 16018:**
  - with weld-on shank
  - wear-proof, nickel-plated design
  - with inner cooling
  - clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16019:**
  - With Weldon shank
  - With internal cooling
  - Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm

Notes:
No. 16017: Slight recessing cannot be avoided on multi-row milling tools.



No. 16018

D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Index-able insert type	Suitable for in-dexable inserts	Long edge milling cutter 90° with Weldon shank 16017... Ident. No.		16018... Ident. No.		16019... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
16	19	80	16	19	2	8	-	AP.. 0602..	816	●	-	-	-	-	-	-
20	24	90	20	24	3	15	-	AP.. 0602..	820	●	-	-	-	-	-	-
25	29	100	25	29	5	30	-	AP.. 0602..	825	●	-	-	-	-	-	-
20	28	87	20	28	1	4	21	AP.. 1003..	-	-	020	●	-	-	225	●
25	37	105	25	36	2	8	21	AP.. 1003..	-	-	025	●	-	-	225	●
32	46	115	32	45	2	10	21	AP.. 1003..	-	-	032	●	-	-	225	●
40	55	130	32	54	3	18	21	AP.. 1003..	-	-	040	●	-	-	225	●
25	29	105	25	29	1	2	27	AP.. 1604..	-	-	-	-	501	○	129	●
32	44	115	32	44	2	6	27	AP.. 1604..	-	-	-	-	502	●	129	●
40	58	130	32	58	2	8	27	AP.. 1604..	-	-	-	-	503	●	129	●

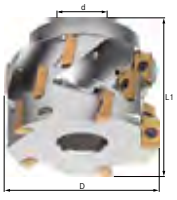
Prod. Gr. 108

ATORN® Long edge milling cutter 90°

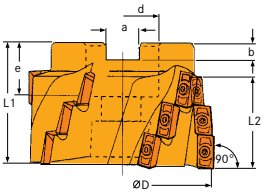
For milling inserts AP.. 1003.. / AP.. 1604..

Application:
For universal rough cutting in all materials.

Execution:
- With internal cooling
- **No. 16018:**
  - Robust support design for high-performance milling
  - Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm
- **No. 16019:**
  - Wear-resistant, nickel-plated version
  - Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm



No. 16019



No. 16019

D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Indexable insert type	Suitable for indexable inserts	Long edge milling cutter 90° 16018... Ident. No.		16019... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
40	50	16	37	3	12	21	AP.. 1003..	142	●	-	-	225	●
50	60	22	46	3	15	21	AP.. 1003..	152	●	-	-	225	●
63	60	27	46	4	20	21	AP.. 1003..	162	○	-	-	225	●
50	50	27	30	3	6	27	AP.. 1604..	-	-	510	●	129	●
63	60	27	44	4	12	27	AP.. 1604..	-	-	511	●	129	●
80	60	32	44	5	15	27	AP.. 1604..	-	-	512	●	129	●
100	60	40	44	6	18	27	AP.. 1604..	-	-	513	○	129	●

Prod. Gr. 108

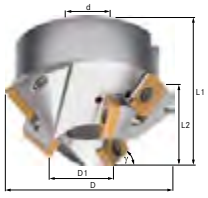
ATORN® 15°, 30°, 45°, 60°, 75° and variable x° chamfer cutters

For milling inserts AP.. 1003.. / AP.. 1604..

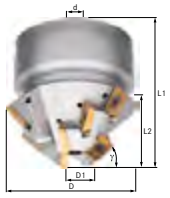
Application:
Universal use for rough cutting of chamfers. Ideal for preliminary machining of welding seams. Recess formation possible thanks to indexable insert tolerances; improved finish can be achieved using APHT indexable inserts.

Execution:
- nickel-plated support
- any required chamfer angle is available (minimum acceptance 2 pieces)
- **Ident. No. 015–075:** clamping screw tightening torque (indexable insert) M4 = 5.2 Nm
- **Ident. No. 115–175:** clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm

Delivery:
Supplied with clamping screws and wrench



Ident. No. 015–075



Ident. No. 115–175

Chamfer angle (Degree)	D (mm)	D1 (mm)	Max. chamfer width (mm)	Max. chamfer height (mm)	Max. chamfer length (mm)	L1 (mm)	d (mm)	Number of cutting edges (PCS)	Number of indexable inserts (PCS)	Indexable insert type	Suitable for indexable inserts	15°, 30°, 45°, 60°, 75° and variable x° chamfer cutters 16055... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
15	70	17	27	7	27.5	50	22	3	9	21	AP.. 1003..	115	●	225	●
30	65	17	24	13	27.5	50	22	3	9	21	AP.. 1003..	130	●	225	●
40	60	17	19	17	27.5	50	22	3	9	21	AP.. 1003..	140	●	225	●
45	56	17	19	19	27.5	50	22	3	9	21	AP.. 1003..	145	●	225	●
60	45	17	13	24	27.5	50	16	3	9	21	AP.. 1003..	160	●	225	●
75	33	19	7	27	27.5	60	16	3	9	21	AP.. 1003..	175	●	225	●
15	94	35	29.5	8	30	50	27	3	6	27	AP.. 1604..	015	●	129	●
30	88	35	26.5	15	30	50	27	3	6	27	AP.. 1604..	030	●	129	●
40	84	35	24.5	19	30	50	27	3	6	27	AP.. 1604..	040	●	129	●
45	77.8	35	21.4	21.5	30	50	27	3	6	27	AP.. 1604..	045	●	129	●
60	65	35	15.1	26.5	30	50	27	3	6	27	AP.. 1604..	060	●	129	●
75	50.7	35	8	29.5	30	60	22	3	6	27	AP.. 1604..	075	●	129	●

Prod. Gr. 155

ATORN® Indexable milling insert AP.. 06..

For cutters with indexable inserts no. 16017

Delivery:
Packing unit: 10 pieces

				Surface	Coated
				Carbide type	HC4635
				Material to be processed	Steel | Stainless steel | Cast metal
				Suitable for material group P	●
				Suitable for material group M	●
				Suitable for material group N	
				Suitable for material group K	●
				Suitable for material group S	
				Suitable for material group H	
	ISO name	Knife edge length (mm)	Edge radius (mm)	16109... Ident. No.	
	APKT 060204 PDTR-K	6	0.4	148	●

Prod. Gr. 156

ATORN® Indexable milling insert AP.. 10..

For cutters with indexable inserts no. 16017/16018/16055

Delivery:
Ident. No. 095–108: Box quantity: 10 pieces
Ident. No. 109: Packaging unit: 10 pieces

Ident. No. 280: Box quantity: Pack of 10

					Surface	Uncoated		Coated		Coated		Coated		Coated		Coated	
					Carbide type	HW4415		HC4535		HC4540		HC4615		HC4626		HC4635	
					Material to be processed	Non-ferrous metal		Steel | Stainless steel | Special alloy		Steel | Stainless steel | Cast metal | Special alloy		Steel		Steel | Cast metal | Hardened material		Steel | Cast metal	
					Suitable for material group P			●		●		●		●		●	
					Suitable for material group M			●		●							
					Suitable for material group N	●											
					Suitable for material group K					○				●		○	
					Suitable for material group S			●		●							
					Suitable for material group H									○			
	ISO name	Knife edge length (mm)	Edge radius (mm)	Index-able insert type	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	APHX 100304 FR-ALU	10.5	0.4	21	103	●	-	-	-	-	-	-	-	-	-	-	
	APKT 1003 PDFR	10.5	0.4	21	280	●	-	-	-	-	-	-	-	-	-	-	
	APKT 1003 PDER-S	10.5	0.5	21	-	-	095	●	-	-	097	●	-	-	099	●	
	APKT 1003 PDER-M	11	0.5	22	-	-	-	-	108	●	-	-	-	-	-	-	
	APKT 1003 PDER-M	11	0.5	22	-	-	-	-	-	-	-	-	109	●	-	-	

Prod. Gr. 156

ATORN® Indexable milling insert AP.. 10..

For cutters with indexable inserts no. 16017/16018/16055

Delivery:
Box quantity: 10 pieces

				Surface	Coated		Coated		Coated	
				Carbide type	HC4540		HC4410		HC4620	
				Material to be processed	Steel | Stainless steel | Cast metal | Special alloy		Non-ferrous metal | Cast metal		Steel | Cast metal	
				Suitable for material group P	●				●	
				Suitable for material group M	●					
				Suitable for material group N			●			
				Suitable for material group K	○		●		○	
				Suitable for material group S	●					
				Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	Indexable insert type	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	APKT 100308 PDER	11	0.8	22	100	●	-	-	-	-
	APKT 100312 PDER	11	1.2	22	101	●	-	-	-	-
	APKT 100320 PDER	11	2	22	102	●	-	-	-	-
	APKT 1003 PDER-M	11	0.5	22	-	-	105	●	-	-

					Surface	Coated		Coated		Coated	
					Carbide type	HC4540		HC4410		HC4620	
					Material to be processed	Steel | Stainless steel | Cast metal | Special alloy		Non-ferrous metal | Cast metal		Steel | Cast metal	
					Suitable for material group P	●				●	
					Suitable for material group M	●					
					Suitable for material group N			●			
					Suitable for material group K	○		●		○	
					Suitable for material group S	●					
					Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	Indexable insert type		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	APKT 1003 PDER-M	11	0.5	22		-	-	-	-	107	●

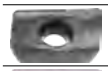
Prod. Gr. 156

ATORN® Indexable milling insert AP.. 16..

For cutters with indexable inserts no. 16019/16055

Delivery:
Ident. No. 110–119: Packaging unit: 10 pieces

Ident. No. 290–292: Box quantity: Pack of 10

					Surface	Uncoated		Coated		Coated		Coated	
					Carbide type	HW4415		HC4540		HC4620		HC4626	
					Material to be processed	Non-ferrous metal		Steel | Stainless steel | Cast metal | Special alloy		Steel | Stainless steel | Cast metal | Special alloy		Steel | Cast metal	
					Suitable for material group P			●		●		●	
					Suitable for material group M			●		○			
					Suitable for material group N	●							
					Suitable for material group K			○		●		●	
					Suitable for material group S			●		○			
					Suitable for material group H								
	ISO name	Knife edge length (mm)	Edge radius (mm)	Indexable insert type		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	APHX 160404 FR-ALU	17	0.4	27		115	●	-	-	-	-	-	-
	APKT 1604 PDFR	17	0.4	27		290	●	-	-	-	-	-	-
	APKT 1604 PDFR	17	0.8	27		292	●	-	-	-	-	-	-
	APKT 160408 PDER	17.3	0.8	28		-	-	111	●	110	●	-	-
	APKT 160404 HM	17.3	0.4	28		-	-	116	●	-	-	-	-
	APKT 160416 HM	17.3	1.6	28		-	-	117	●	-	-	-	-
	APKT 160431 HM	17.3	3.1	28		-	-	118	●	-	-	-	-
	APKT 160408 PDER	17.3	0.8	28		-	-	-	-	-	-	112	●
	APHT 160408 PDR	17	0.8	27		-	-	-	-	-	-	119	●

Prod. Gr. 156

ATORN® ORION® Indexable milling insert AP.. 16..

For cutters with indexable inserts no. 16019/16055

Delivery:
Packaging unit: 10 pieces

						ATORN®				ORION®	
					Surface	Coated		Coated	Coated	Coated	
					Carbide type	HC4535		HC4615	HC4635	HC4620	
					Material to be processed	Steel | Stainless steel		Steel	Steel | Cast metal	Steel | Stainless steel	
					Suitable for material group P	●		●	●	●	
					Suitable for material group M	●				○	
					Suitable for material group N						
					Suitable for material group K				○		
					Suitable for material group S						
					Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	Indexable insert type		16109... Ident. No.		16109... Ident. No.	16109... Ident. No.	16109... Ident. No.	
	APKT 1604 PDER-S	17	0.8	27		128	●	127	●	129	●	-	-
	APKT 160408 PDER	17.88	0.8	28		-	-	-	-	-	-	140	●

ORION = Prod. Gr. 133

ATORN® = Prod. Gr. 156

ORION® Indexable milling insert APKT 11/15

Delivery:
Packaging unit: 10 pieces

			Surface	Coated		Coated		Coated		Coated	
			Carbide type	OHC4410		OHC4620		OHC4626		OHC4540	
			Material to be processed	Steel | Non-ferrous metal | Cast metal		Steel | Stainless steel | Cast metal | Special alloy		Steel | Cast metal		Steel | Stainless steel | Cast metal | Special alloy	
			Suitable for material group P	○		●		●		●	
			Suitable for material group M			○				●	
			Suitable for material group N	○							
			Suitable for material group K	●		●		●		○	
			Suitable for material group S			○				●	
			Suitable for material group H								
	ISO name	Knife edge length (mm)	Edge radius (mm)	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	APKT 1505 PDER-M	15	0.8	429	●	430	●	428	●	-	-
	ADKT 1505 PD-ER-M	15	0.8	-	-	-	-	-	-	431	●
	APKT 1103 PDER	9.68	0.8	-	-	440	●	-	-	-	-

Prod. Gr. 156

ATORN® Angular milling cutter 90°

For indexable milling insert WNEX 0806..

Application:
Ident. No. 450–560: Powerful angular milling cutter with particularly economic, double-sided indexable insert with 6 cutting edges. Flexible use for multiple machining steps, such as face, angular, trim and groove milling.
Ident. No. 832–850: Powerful angular milling cutter with particularly economic, double-sided reversible tip with 6 cutting edges. Flexible use for multiple machining steps, such as face, angular, trim and groove milling.

Execution:
- Wear-resistant, nickel-plated version
- **Ident. No. 450–560:** With internal cooling
- **Ident. No. 832–850:** Internal cooling

Advantage:
- 6 cutting edges on double-sided indexable insert
- Large plate thickness for optimum process reliability
- Optimised plane cutting edge for high surface quality
- **Ident. No. 450–560:** Special chip shape geometry for low power consumption
- **Ident. No. 832–850:** special chip breaker geometry enables low power consumption

Ident. No. 450–560

						Angular milling cutter 90°		Clamping screw for indexable inserts	
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16020... Ident. No.		16108... Ident. No.	
32	40	16	3.5	6	WNEU 0403..	832	●	-	-
40	40	16	3.5	6	WNEU 0403..	840	●	-	-
50	50	22	3.5	8	WNEU 0403..	850	●	-	-
50	40	22	6	5	-	450	●	017	●
63	40	22	6	6	-	463	●	017	●
80	50	27	6	7	-	480	●	017	●
100	50	32	6	8	-	500	●	017	●
125	63	40	6	11	-	525	●	017	●
160	63	40	6	12	-	560	●	017	●

Prod. Gr. 108

ATORN® Angular milling cutter 90° with shank

For indexable milling insert WNEU 0403.

Application:
Powerful angular milling cutter with particularly economic, double-sided reversible tip with 6 cutting edges. Flexible use for multiple machining steps, such as face, angular, trim and groove milling.

Execution:
- Wear-resistant, nickel-plated version
- Internal cooling

Advantage:
- 6 cutting edges on double-sided indexable insert
- special chip breaker geometry enables low power consumption
- Large plate thickness for optimum process reliability
- Optimised plane cutting edge for high surface quality

D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16020... Ident. No.	
20	30	100	20	3.5	3	WNEU 0403..	620	●
25	35	115	25	3.5	4	WNEU 0403..	625	●
32	40	125	25	3.5	5	WNEU 0403..	632	●
20	40	150	20	3.5	3	WNEU 0403..	720	●
25	50	170	25	3.5	4	WNEU 0403..	725	●
32	70	195	32	3.5	5	WNEU 0403..	732	●

Prod. Gr. 108

ATORN® WNEX indexable milling plate

For angular milling cutter no. 16020

Delivery:
Ident. No. 310–312: Packing unit: 10 pieces
Ident. No. 314–317: Packaging unit: 10 pieces

Ident. No. 318: box quantity: 10 pieces

			Surface	Coated		Coated		Coated		Uncoated	
			Carbide type	HC4620		HC4630		HC4430		HW4415	
			Material to be processed	Steel | Cast metal		Steel | Stainless steel		Steel | Stainless steel | Cast metal		Non-ferrous metal	
			Suitable for material group P	●		○		●			
			Suitable for material group M			●		●			
			Suitable for material group N							●	
			Suitable for material group K	○				●			
			Suitable for material group S								
			Suitable for material group H								
	ISO name	Knife edge length (mm)	Edge radius (mm)	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	WNEX 040304-M	4	0.4	314	●	315	●	316	●	-	-
	WNEX 040308-M	4	0.8	310	●	311	●	312	●	-	-
	WNEX 080608-ALU	7.5	0.8	-	-	-	-	-	-	318	●
	WNEX 080608-M	7.5	0.8	300	●	301	●	302	●	-	-

Prod. Gr. 156

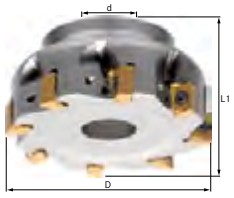
ATORN® Angular milling cutter 90°

For milling cutter indexable inserts LNMX

Application:
4 flutes per indexable milling insert and special chip shape geometry for profitability and high cutting rates when milling faces, milling corners, trimming and milling grooves.

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling

Advantage:
- 4 cutting edges on one double-sided indexable insert
- Special chip shape geometry for low power consumption
- Thick inserts



							Angular milling cutter 90°		Clamping screw for indexable inserts	
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	16016... Ident. No.		16108... Ident. No.	
40	40	16	9	5	1	LNMX 1006..	340	●	171	●
50	40	22	9	7	1	LNMX 1006..	350	●	171	●
50	40	22	14	5	2	LNMX 1510..	450	●	172	●
63	40	22	9	9	1	LNMX 1006..	363	●	171	●
63	40	22	14	6	2	LNMX 1510..	463	●	172	●
80	50	27	14	7	2	LNMX 1510..	480	●	172	●
100	50	32	14	8	2	LNMX 1510..	500	●	172	●
125	63	40	14	10	2	LNMX 1510..	525	●	172	●

Prod. Gr. 108

ATORN® Angular milling cutter 90° with Weldon shank

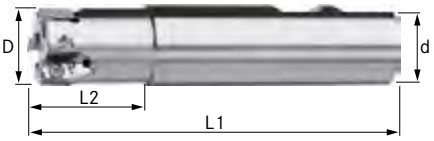
For milling cutter indexable inserts LNMX

Application:
Ident. No. 320, 325, 332: Four cutting edges per milling insert and special chip breaker geometry result in profitability and high chip removal rates during facing, angular cutting, trimming, and groove cutting.
Ident. No. 321, 326, 333: 4 flutes per indexable milling insert and special chip breaker geometry for profitability and high cutting rates when milling faces, milling corners, trimming and milling grooves.

Execution:
- wear-proof, nickel-plated design

- **Ident. No. 320, 325, 332:**
  - with weld-on shank
  - with inner cooling
- **Ident. No. 321, 326, 333:**
  - with Weldon shaft
  - with internal cooling

Advantage:
- 4 cutting edges on double-sided indexable insert
- special chip breaker geometry enables low power consumption
- **Ident. No. 320, 325, 332:** large insert thickness
- **Ident. No. 321, 326, 333:** large panel thickness



Ident. No. 320, 325, 332

D (mm)	L2 (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	**Angular milling cutter 90° with Weldon shank** 16016... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
20	30	100	20	9	3	1	LNMX 1006..	320	●	171	●
20	50	150	20	9	3	-	LNMX 1006..	321	○	171	●
25	35	115	25	9	3	1	LNMX 1006..	325	●	171	●
32	60	200	25	9	4	-	LNMX 1006..	326	●	171	●
32	40	125	25	9	4	1	LNMX 1006..	332	●	171	●
25	50	150	25	9	3	-	LNMX 1006..	333	○	171	●

Prod. Gr. 108

ATORN® Indexable milling inserts LN.X 1006.. / LN.X 1510..

For angular milling cutter no. 16016

Delivery:
Ident. No. 250–254, 260–265: Packaging unit: 10 pieces

Ident. No. 259: Box quantity: Pack of 10

					Surface	Uncoated		Coated		Coated		Coated		Coated	
					Carbide type	HW4410		HC4410		HC4630		HC4635		HC4535	
					Material to be processed	Non-ferrous metal		Steel | Cast metal		Steel		Steel | Stainless steel | Cast metal		Steel | Stainless steel	
					Suitable for material group P			○		●		●		●	
					Suitable for material group M							○		●	
					Suitable for material group N	●									
					Suitable for material group K			●				●			
					Suitable for material group S										
					Suitable for material group H										
	ISO name	Knife edge length (mm)	Edge radius (mm)	Indexable insert type	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	LNMX 100605 PNR-MM	10	0.5	1	250	●	-	-	-	-	-	-	-	-
	LNMX 100605 PNR-MM	10	0.5	-	-	-	260	●	262	●	-	-	261	●
	LNKX 100605 PNR-MM	10	0.5	1	-	-	-	-	-	-	258	●	-	-
	LNMX 151008 PNR-MM	15	0.8	2	254	●	-	-	-	-	-	-	-	-
	LNMX 151008 PNR-MM	15	0.8	-	-	-	263	●	265	●	-	-	264	●
	LNKX 151008 PNR-MM	15	0.8	2	-	-	-	-	-	-	259	●	-	-

Prod. Gr. 156

ORION® Angular milling cutter 90°

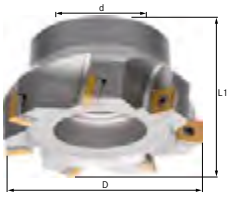
For milling cutter indexable inserts SEET 1203..

Application:
Universal use for exact 90° cuts.

Execution:
- Wear-resistant, nickel-plated version
- Precision supports ensure insert fits perfectly
- Unequal division for excellent smooth running

- Clamping screw tightening torque (indexable insert) M3.5 = 3.5 Nm

Advantage:
- Low-vibration running
- Nickel-plated for long service life
- Very high surface quality
- Excellent value for money



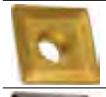
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	**Angular milling cutter 90°** 16004... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Shims 16108... Ident. No.		Clamping screw for shims 16108... Ident. No.	
50	40	22	11.4	4	SEET 1203..	001	●	163	●	-	-	-	-
63	40	22	11.4	5	SEET 1203..	002	●	163	●	167	●	168	●
80	50	27	11.4	6	SEET 1203..	003	●	163	●	167	●	168	●
100	50	32	11.4	7	SEET 1203..	004	●	163	●	167	●	168	●
125	63	40	11.4	8	SEET 1203..	005	●	163	●	167	●	168	●

Prod. Gr. 148

ORION® Indexable milling insert SEET 1203..

For angular milling cutter no. 16004

Delivery:
Box quantity: 10 pieces

				Surface	Coated		Coated		Coated		Uncoated	
				Carbide type	OHC4620		OHC4540		OHC4410		OHW4410	
				Material to be processed	Steel | Stainless steel		Steel | Stainless steel | Special alloy		Steel | Cast metal		Non-ferrous metal	
				Suitable for material group P	●		●		○			
				Suitable for material group M	●		●					
				Suitable for material group N							●	
				Suitable for material group K					●			
				Suitable for material group S			○					
				Suitable for material group H								
	ISO name	Knife edge length (mm)	Edge radius (mm)		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	SEET 120308 PDER-PF	13.3	0.8		011	●	-	-	-	-	-	-
	SEET 120308 PDER-PM	13.3	0.8		013	●	-	-	-	-	-	-
	SEET 120308 PDER-PR	13.3	0.8		-	-	015	●	-	-	-	-
	SEET 120308 PDER-PM	13.3	0.8		-	-	-	-	017	●	-	-
	SEET 120308 PDER-PR	13.3	0.8		-	-	-	-	019	●	-	-
	SEET 120308 PDER-LH	13.3	0.8		-	-	-	-	-	-	021	●

Prod. Gr. 148

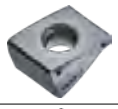
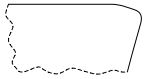
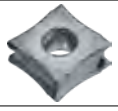
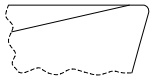
ATORN tangential milling systems
extreme performance meets high profitability

the tangential indexable milling systems with 4 and 8 cutting edges have been developed for roughing and semi-finishing operations in steel and cast iron. the program includes supports in the diameter range from 50 to 160 mm and indexable inserts with cutting depths down to 11.5 mm.

process reliability through tangential installation position
the tangential installation position of the reversible tips brings some characteristic features. the favourable supporting surface and clamping force ratio provides maximum stability. even at high cutting performance, the tools make the process extremely reliable.

profitability through good machining properties
the stable indexable inserts have a positive chip angle resulting in excellent cutting behaviour and low machine power consumption. this allows the service life of the cutting edge to be greatly increased. this has a direct and positive impact on the tool costs.

cost savings through cycle time reduction
the ratio of tool diameter to number of teeth in combination with the high realisable feed rate provides enormous material removal rates. this means much shorter cycle times are achieved, which significantly reduces process costs or cost per part.

	chip shape	description
	 SR (chamfered and rounded)	▪ 4-blade indexable insert for stable processes ▪ infeed depth to ap max 11.5 mm ▪ stable geometry for wide range of applications
	 ER (rounded)	▪ 8-blade indexable insert for a high level of profitability ▪ infeed depth to ap max 10 mm ▪ soft cutting geometry for reduced chipping forces

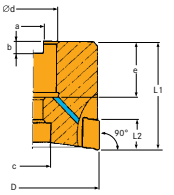
ATORN® Angular milling cutter 90° tangential - 4 cutting edges

For indexable milling insert LNMU 1306..

Application:
Milling tool with tangentially arranged indexable inserts and 4 usable cutting edges.

Execution:
- Wear-proof, nickel-plated design
- With internal cooling

Advantage:
- Cutting depth down to 11.5 mm



D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	Angular milling cutter 90° tangential - 4 cutting edges 16014... Ident. No.	
50	40	22	11.5	4	LNMU 1306..	150	●
50	40	22	11.5	6	LNMU 1306..	151	●
63	40	22	11.5	6	LNMU 1306..	163	●
63	40	22	11.5	8	LNMU 1306..	164	●
80	50	27	11.5	8	LNMU 1306..	180	●
80	50	27	11.5	10	LNMU 1306..	181	●
100	50	32	11.5	10	LNMU 1306..	200	●
100	50	32	11.5	12	LNMU 1306..	201	●
125	63	40	11.5	12	LNMU 1306..	225	●
125	63	40	11.5	16	LNMU 1306..	226	●
160	63	40	11.5	14	LNMU 1306..	260	●
160	63	40	11.5	20	LNMU 1306..	261	●

Prod. Gr. 108

ATORN® Indexable milling insert LNMU 130608..

For angular milling cutter no. 16014

Delivery:
Box quantity: Pack of 10

			Surface	Coated		Coated		Coated	
			Carbide type	HC4420		HC4430		HC4640	
			Material to be processed	Cast metal		Steel | Cast metal		Steel	
			Suitable for material group P			●		●	
			Suitable for material group M						
			Suitable for material group N						
			Suitable for material group K	●		●			
			Suitable for material group S						
			Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	LNMU 130608SR	13.5	0.8	510	●	512	●	-	-
	LNMU 130608SR	13.5	0.8	-	-	-	-	514	●

Prod. Gr. 108

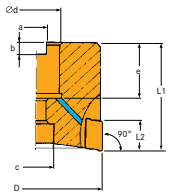
ATORN® Angular milling cutter 90° tangential - 8 cutting edges

For indexable milling insert XNMU 1206..

Application:
Milling tool with tangentially arranged indexable inserts and 8 usable cutting edges.

Execution:
- Wear-proof, nickel-plated design
- With internal cooling

Advantage:
- Cutting depth down to 10 mm



D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	Angular milling cutter 90° tangential - 8 cutting edges 16015... Ident. No.	
50	40	22	10	5	XNMU 1206..	450	●
50	40	22	10	6	XNMU 1206..	451	●
63	40	22	10	6	XNMU 1206..	463	●
63	40	22	10	8	XNMU 1206..	464	●
80	50	27	10	8	XNMU 1206..	480	●
80	50	27	10	10	XNMU 1206..	481	●
100	50	32	10	9	XNMU 1206..	500	●
100	50	32	10	12	XNMU 1206..	501	●
125	63	40	10	11	XNMU 1206..	525	●
125	63	40	10	16	XNMU 1206..	526	●
160	63	40	10	13	XNMU 1206..	560	●
160	63	40	10	20	XNMU 1206..	561	●

Prod. Gr. 108

ATORN® Indexable milling insert XNMU 120608..

For angular milling cutter no. 16015

Delivery:
Box quantity: Pack of 10

			Surface	Coated		Coated		Coated	
			Carbide type	HC4420		HC4430		HC4640	
			Material to be processed	Cast metal		Steel | Cast metal		Steel	
			Suitable for material group P			●		●	
			Suitable for material group M						
			Suitable for material group N						
			Suitable for material group K	●		●			
			Suitable for material group S						
			Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	XNMU 120508ER	12	0.8	520	●	522	●	-	-
	XNMU 120508ER	12	0.8	-	-	-	-	524	●

Prod. Gr. 108

ATORN high-feed milling cutter – small cutter very large

high material removal rate, broad field of application

the new ATORN high-feed milling cutter is the perfect application for rough machining small and medium-sized components. the positive high-feed geometry of the uniform, small indexable insert drills allows for the highest material removal rate even with less powerful machining centres. two different indexable insert geometries in two different cutting grades ensure that almost all materials commonly used in tool and mould construction can be processed. the high-feed milling cutter is available as screw-on mill cutter in diameters from 16 – 42 mm with 2 – 6 cutting edges as well as arbour milling cutters with a diameter of 40 – 80 mm with up to 9 cutting edges. all cutting edges are supplied through internal coolant supply. only one size of indexable inserts is required for all tool diameters.

advantages:

- high material removal rate even with less powerful machining centres
- high feed rates feasible
- low storage costs for the indexable inserts

features:

- universal indexable insert geometry for a wide application spectrum
- positive geometry of the indexable insert for soft cut
- uniform size of the indexable inserts
- internal cooling on all cutting edges

ATORN® High-feed milling cutter

For indexable milling inserts XDM. 0903..

Execution:

- For indexable milling inserts XDMW / XDMT 0903..
- Wear-resistant, nickel-plated version with internal cooling
- Tightening torque for clamping screw indexable insert 1.2 Nm (TX 08)

D (mm)	di (mm)	L3 (mm)	d (mm)	Theoretical radius (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	**High-feed milling cutter** 16026... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
35	26	40	16	1.3	1	5	XDM. 0903..	450	○	110	●
35	26	40	16	1.3	1	6	XDM. 0903..	452	○	110	●
40	31	40	16	1.3	1	6	XDM. 0903..	454	○	110	●
42	33	40	16	1.3	1	6	XDM. 0903..	456	●	110	●
50	41	40	22	1.3	1	7	XDM. 0903..	458	●	110	●
52	43	40	22	1.3	1	7	XDM. 0903..	460	●	110	●
63	54	50	27	1.3	1	8	XDM. 0903..	462	●	110	●
66	57	50	27	1.3	1	8	XDM. 0903..	464	●	110	●
80	71	50	27	1.3	1	9	XDM. 0903..	466	●	110	●

Prod. Gr. 155

ATORN® High-feed milling cutters with thread

For indexable milling inserts XDM. 0903..

Execution:

- For indexable milling inserts XDMW / XDMT 0903..
- Wear-resistant, nickel-plated version with internal cooling
- Tightening torque for clamping screw indexable insert 1.2 Nm (TX 08)

Advantage:

- Broad range of applications
- Minimum-vibration milling even for long mounting lengths
- Optimum roughing tool
- Tooth feed possible up to 3 mm
- Reduces production times

D (mm)	di (mm)	L3 (mm)	d1	Theoretical radius (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	**High-feed milling cutters with thread** 16026... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
16	7	28	M8	1.3	1	2	XDM. 0903..	400	●	110	●
16	7	28	M8	1.3	1	3	XDM. 0903..	402	○	110	●
20	11	30	M10	1.3	1	3	XDM. 0903..	404	●	110	●
20	11	30	M10	1.3	1	4	XDM. 0903..	406	○	110	●
25	16	33	M12	1.3	1	4	XDM. 0903..	408	●	110	●
32	23	43	M16	1.3	1	5	XDM. 0903..	410	●	110	●
35	26	43	M16	1.3	1	5	XDM. 0903..	412	●	110	●
42	33	43	M16	1.3	1	6	XDM. 0903..	414	●	110	●

Prod. Gr. 155

ATORN® Indexable milling insert XDM 0903..

for high-feed milling cutter no. 16026

Delivery:
Ident. No. 600, 602, 604: Box quantity: 10 pieces
Ident. No. 601, 603, 605: box quantity: 10 pieces

Ident. No. 606: Box quantity: Pack of 10
Ident. No. 608: Packaging unit: 10 pieces

			Surface	Coated		Coated		Coated		Coated	
			Carbide type	HC4410		HC4415		HC4640		HC4540	
			Material to be processed	Steel | Cast metal | Hardened material		Cast metal | Hardened material		Steel | Stainless steel		Steel | Stainless steel | Special alloy	
			Suitable for material group P	○				●		○	
			Suitable for material group M					○		●	
			Suitable for material group N								
			Suitable for material group K	●		○					
			Suitable for material group S							○	
			Suitable for material group H	○		●					
	ISO name	Knife edge length (mm)	Radius, theoretical (mm)	16113... Ident. No.		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	XDMW 0903 SR	9	1.5	602	●	-	-	600	●	-	-
	XDMW 0903 SR	9	2.0	-	-	608	●	601	●	603	●
	XDMT 0903 ER	9	1.5	606	○	-	-	604	●	-	-
	XDMT 0903 ER	9	2.0	-	-	-	-	605	●	-	-

Prod. Gr. 156

High-feed milling cutter

Definition: For HSC machining, the cutting speed and feed rates are significantly increased and the cutting depth is significantly reduced.
The ATORN® high-feed milling cutter is a high-performance tool with wide-ranging applications for modern tool machines. Applications in die and mould making and general mechanical engineering.

Advantages: High material removal rate, high surface quality, high dimensional and shape accuracy. Four-cutter indexable insert with large inner circle, innovative coating for robust cutting edges and wide-ranging applications, considerable indexable insert thickness for robust machining processes.

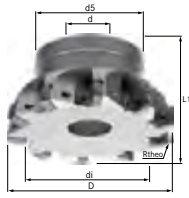
ATORN® High-feed milling cutter

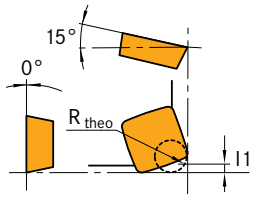
For indexable milling inserts XCNT 120520..

Application:
Dramatically increase your productivity and make great cost-savings – with the high-feed milling cutters. The unique cutting geometries provide extremely smooth running and low cutting forces at maximum feed rates. Our extensive program offers solutions for a wide range of applications in modern machine tools, whether in die and mould making or in general mechanical engineering.

Execution:
- Wear-resistant, nickel-plated version
- Robust supports
- With internal cooling
- Variable pitch
- Tightening torque (indexable insert) M3.5 = 3.5 Nm

Advantage:
- Broad range of application
- Minimum-vibration milling even for long mounting lengths
- Optimum roughing tool
- Tooth feed possible up to 3 mm
- Reduces production times





D (mm)	di (mm)	L3 (mm)	d (mm)	Theoretical radius (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	High-feed milling cutter 16026... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
42	27	40	16	2.5	1.2	4	2	XCN. 09T3..	256	●	638	●
42	27	40	16	2.5	1.2	5	2	XCN. 09T3..	257	●	638	●
52	37	40	22	2.5	1.2	5	2	XCN. 09T3..	258	●	638	●
52	37	40	22	2.5	1.2	6	2	XCN. 09T3..	259	●	638	●
42	23	40	16	3.5	1.9	3	3	XCN. 1205..	260	●	107	●
42	23	40	16	3.5	1.9	4	3	XCN. 1205..	261	●	107	●
52	33.1	40	22	3.5	1.9	4	3	XCN. 1205..	262	●	107	●
52	33.1	40	22	3.5	1.9	5	3	XCN. 1205..	263	●	107	●

D (mm)	di (mm)	L3 (mm)	d (mm)	Theoretical radius (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	High-feed milling cutter 16026... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
66	47.1	50	27	3.5	1.5	5	3	XCN. 1205..	268	●	107	●
66	47.1	50	27	3.5	1.9	6	3	XCN. 1205..	264	●	107	●
66	47.1	50	27	3.5	1.9	7	3	XCN. 1205..	265	●	107	●
80	61.2	50	27	3.5	1.5	6	3	XCN. 1205..	269	●	107	●
80	61.2	50	27	3.5	1.9	8	3	XCN. 1205..	266	●	107	●
100	81.2	50	32	3.5	1.5	7	3	XCN. 1205..	270	●	107	●
100	81.2	50	32	3.5	1.9	10	3	XCN. 1205..	267	●	107	●

Prod. Gr. 155

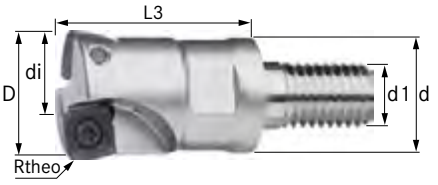
ATORN® High-feed milling cutters with thread

For indexable milling inserts: XCN 0703.., XCN. 09T3..

Application:
Dramatically increase your productivity and make great cost-savings – with the high-feed milling cutters. The unique cutting geometries provide extremely smooth running and low cutting forces at maximum feed rates. Our extensive program offers solutions for a wide range of applications in modern machine tools, whether in die and mould making or in general mechanical engineering.

Execution:
- With screw-in thread
- Wear-resistant, nickel-plated version
- Robust supports
- With internal cooling
- Variable pitch
- Tightening torque (indexable insert) M3.5 = 3.5 Nm

Advantage:
- Broad range of application
- Minimum-vibration milling even for long mounting lengths
- Tooth feed possible up to 3 mm
- Reduces production times



D (mm)	di (mm)	L3 (mm)	d1	Theoretical radius (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	High-feed milling cutters with thread 16026... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
20	6.9	30	M10	1.5	1	2	1	XCN. 0703..	250	●	161	●
25	12	33	M12	1.5	1	3	1	XCN. 0703..	251	●	161	●
32	19	43	M16	1.5	1	4	1	XCN. 0703..	245	●	161	●
35	22	43	M16	1.5	1	5	1	XCN. 0703..	247	●	161	●
32	17	43	M16	2.5	1.2	3	2	XCN. 09T3..	249	●	636	●
32	17	43	M16	2.5	1.2	4	2	XCN. 09T3..	252	●	636	●
35	20	43	M16	2.5	1.2	4	2	XCN. 09T3..	253	●	636	●
42	27	43	M16	2.5	1.2	5	2	XCN. 09T3..	254	●	636	●

Prod. Gr. 155

ATORN® Indexable milling insert XCN

for high-feed milling cutter no. 16026

Delivery:
Ident. No. 210–221, 241–247: Packaging unit: 10 pieces

Ident. No. 222–224: Box quantity: 10 pieces

						Surface	Coated		Coated		Coated	
						Carbide type	HC4410		HC4640		HC4544	
						Material to be processed	Steel | Cast metal		Steel | Stainless steel		Steel | Stainless steel | Special alloy	
						Suitable for material group P	●		●		○	
						Suitable for material group M			○		●	
						Suitable for material group N						
						Suitable for material group K	●					
						Suitable for material group S					○	
						Suitable for material group H						
	ISO name	Knife edge length (mm)	Radius, theoretical (mm)	Edge radius (mm)	Indexable insert type	16109... Ident. No.			16109... Ident. No.		16109... Ident. No.	
	XCNT 070308 SN-TR	7.94	1.5	0.8	1	210	●		211	●	-	-
	XCNT 09T312 SN-TR	9.52	2.5	1.2	2	212	●		213	●	-	-
	XCNT 120520 SN-TR	12.7	3.5	2	3	214	●		215	●	-	-
	XCNW 070308 SN	7.94	1.5	0.8	1	216	●		217	●	-	-
	XCNW 09T312 SN	9.52	2.5	1.2	2	218	●		219	●	-	-
	XCNW 120520 SN	12.7	3.5	2	3	220	●		221	●	-	-

					Surface	Coated		Coated		Coated	
					Carbide type	HC4410		HC4640		HC4544	
					Material to be processed	Steel | Cast metal		Steel | Stainless steel		Steel | Stainless steel | Special alloy	
					Suitable for material group P	●		●		○	
					Suitable for material group M			○		●	
					Suitable for material group N						
					Suitable for material group K	●					
					Suitable for material group S					○	
					Suitable for material group H						
	ISO name	Knife edge length (mm)	Radius, theoretical (mm)	Edge radius (mm)	Indexable insert type	16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	XCNT 070308 EN-TR	7.94	1.5	0.8	1	245	●	222	●	-	-
	XCNT 09T312 EN-TR	9.52	2.5	1.2	2	246	●	223	●	-	-
	XCNT 120520 EN-TR	12.7	3.5	2	3	247	●	224	●	-	-
	XCNT 09T312 EN	9.52	2.5	1.2	2	-	-	241	●	242	●
	XCNT 120520 EN	12.7	3.5	2.0	3	-	-	243	●	244	●

Prod. Gr. 155

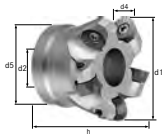
ATORN® Facing and copy milling heads

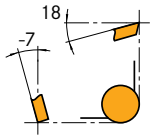
For milling cutter indexable inserts RCKX, OCKX, XCKX, XOKX, SAHT

Application:
With a total of 5 different insert types in different cemented carbide grades, there is a wide range of application possibilities. Minimum-vibration milling is guaranteed with low chipping forces and good chip removal for round, square or octagonal inserts. The low cutting force reduces the drive power required by up to 25%, which facilitates use on less efficient machines without issue.

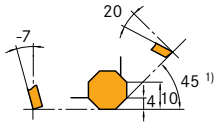
Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- Clamping screw tightening torque (indexable insert) M5 = 8 Nm

Advantage:
- Versatile with its 5 different insert types
- Low chipping forces
- Minimum-vibration milling
- Low power consumption
- High axial infeed

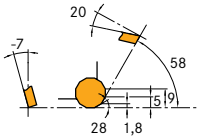




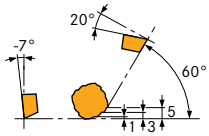
Ident. No. 152
RCKX1606



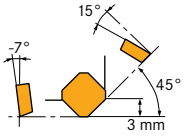
Ident. No. 166
OCKX0606



Ident. No. 180
XCKX1606



Ident. No. 200
XOKX 1606



Ident. No. 225
SAHT 1306

					Facing and copy milling heads		Clamping screw for indexable inserts	
D (mm)	L1 (mm)	d (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16027... Ident. No.		16108... Ident. No.	
52	40	22	4	RCKX 1606.. | OCKX 0606.. | XCKX 1606.. | XOKX 1606.. | SAHT 1306	152	●	115	●
66	50	27	5	RCKX 1606.. | OCKX 0606.. | XCKX 1606.. | XOKX 1606.. | SAHT 1306	166	●	115	●
80	50	27	6	RCKX 1606.. | OCKX 0606.. | XCKX 1606.. | XOKX 1606.. | SAHT 1306	180	●	115	●
100	50	32	7	RCKX 1606.. | OCKX 0606.. | XCKX 1606.. | XOKX 1606.. | SAHT 1306	200	●	115	●
125	63	40	8	RCKX 1606.. | OCKX 0606.. | XCKX 1606.. | XOKX 1606.. | SAHT 1306	225	●	115	●

Prod. Gr. 155

ATORN® Indexable milling insert RCKX, OCKX, XCKX, XOKX, SAHT

For facing and copy milling cutter no. 16027

Delivery:
Box quantity: 10 pieces

				Surface	Coated		Coated		Coated	
				Carbide type	HC4410		HC4640		HC4410	
				Material to be processed	Steel | Stainless steel | Non-ferrous metal | Cast metal		Steel | Stainless steel		Steel | Stainless steel | Cast metal	
				Suitable for material group P	○		●		●	
				Suitable for material group M	○		○		●	
				Suitable for material group N	●					
				Suitable for material group K	●				●	
				Suitable for material group S						
				Suitable for material group H						
	ISO name	Knife edge length (mm)	Edge radius (mm)		16113... Ident. No.		16113... Ident. No.		16113... Ident. No.	
	RCKX 1606 MO-TR	-	-		004	●	006	●	-	-
	RCKX 1606 MO-TRT	-	-		008	●	-	-	-	-
	RCKX 1606 MO-TT	-	-		-	-	-	-	010	●
	OCKX 0606 AD-TR	16	0.5		024	●	025	●	-	-
	OCKX 0606 AD-TRT	16	0.5		026	●	-	-	-	-
	XCKK 1606 ZDR-TR	-	-		-	-	032	●	-	-
	XOKX 1606 ZD-TR	32	0.5		037	●	-	-	035	●

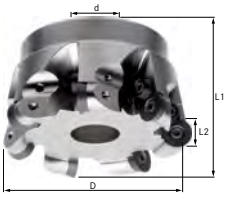
Prod. Gr. 155

ATORN® Copy and face milling cutter heads

For indexable milling inserts: RD..1003.., RD..12T3.., RD..1604..

Application:
For face milling and copy milling, light and medium chipping

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- Clamping screw tightening torque (indexable insert) M3.5 = 3.5 Nm, M4.5 = 7.6 Nm



							Copy and face milling cutter heads		Clamping screw for indexable inserts		Clamping claw	
D (mm)	L1 (mm)	d (mm)	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	16035... Ident. No.		16108... Ident. No.		16108... Ident. No.	
42	44	16	2.5	6	32	RD.. 1003..	340	●	145	●	-	-
52	50	22	3	4	34	RD.. 1604..	350	●	146	●	148	●
52	50	22	3	5	33	RD.. 12T3..	351	●	145	●	147	●
66	50	27	4	5	34	RD.. 1604..	366	●	146	●	148	●
66	50	27	4	6	33	RD.. 12T3..	367	●	145	●	147	●
80	50	27	4	6	34	RD.. 1604..	380	●	146	●	148	●
80	50	27	3	7	33	RD.. 12T3..	381	○	145	●	147	●
100	55	32	4	7	34	RD.. 1604..	400	●	146	●	148	●
125	55	40	4	8	34	RD.. 1604..	425	●	146	●	148	●
160	55	40	4	9	34	RD.. 1604..	460	●	146	●	148	●

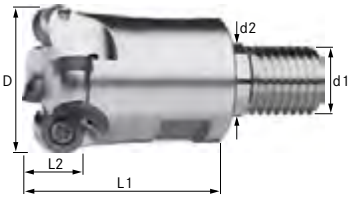
Prod. Gr. 108

ATORN® Copy and face milling cutter heads with thread

For milling cutter indexable inserts RD..0501.., RD..0702.., RD..12T3..

Application:
For face milling and copy milling, light and medium chipping

Execution:
- Wear-resistant, nickel-plated version
- With internal cooling
- Clamping screw tightening torque (indexable insert) M1.8 = 0.7 Nm, M2.5 = 1.2 Nm, M3.5 = 3.5 Nm



D (mm)	L1 (mm)	d1	max. ap (mm)	Number of cutting edges (PCS)	Indexable insert type	Suitable for indexable inserts	Copy and face milling cutter heads with thread 16035... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Clamping claw 16108... Ident. No.	
10	18	M6	1.5	2	30	RD.. 0501..	210	●	149	●	-	-
15	23	M8	2	2	31	RD.. 0702..	215	●	157	●	-	-
15	23	M8	2	3	31	RD.. 0702..	216	●	157	●	-	-
20	30	M10	2.5	2	32	RD.. 1003..	220	●	145	●	-	-
20	30	M10	2	4	31	RD.. 0702..	221	●	157	●	-	-
20	30	M10	1.5	5	30	RD.. 0501..	222	●	149	●	-	-
24	35	M12	3	2	33	RD.. 12T3..	223	●	145	●	147	●
25	35	M12	2.5	2	32	RD.. 1003..	224	●	145	●	-	-
25	35	M12	2	5	31	RD.. 0702..	225	●	157	●	-	-
25	35	M12	2.5	3	32	RD.. 1003..	226	●	145	●	-	-
30	43	M16	2.5	4	32	RD.. 1003..	230	●	145	●	-	-
30	43	M16	2	5	31	RD.. 0702..	231	●	157	●	-	-
32	43	M16	4	2	34	RD.. 1604..	232	●	146	●	148	●
35	43	M16	3	3	33	RD.. 12T3..	235	●	145	●	147	●
35	43	M16	2.5	4	32	RD.. 1003..	236	●	145	●	-	-
42	43	M16	3	4	33	RD.. 12T3..	240	●	145	●	147	●
42	43	M16	2.5	5	32	RD.. 1003..	241	●	145	●	-	-

Prod. Gr. 108

ATORN® Indexable milling insert RD..

For copying and face milling cutter no. 16035

Delivery:
Ident. No. 057–096: Box quantity: 10 pieces

Ident. No. 227–236: Packing unit: 10 pieces

			Surface	Uncoated		Coated		Coated		Coated		Coated	
			Carbide type	HW4415		HC4410		HC4640		HC4430		HC4635	
			Material to be processed	Non-ferrous metal		Steel | Non-ferrous metal | Cast metal | Special alloy		Steel | Stainless steel		Cast metal | Hardened material		Steel | Stainless steel | Cast metal | Special alloy | Hardened material	
			Suitable for material group P			●		●				●	
			Suitable for material group M					●				○	
			Suitable for material group N	●		○							
			Suitable for material group K			●				○		○	
			Suitable for material group S			○						○	
			Suitable for material group H							●		○	
	ISO name	Indexable insert type		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	RDHT 0501MOF	30		227	●	-	-	-	-	-	-	-	-
	RDHT 0702MOF	31		228	●	-	-	-	-	-	-	-	-
	RDHT 1003MOF	32		229	●	-	-	-	-	-	-	-	-
	RDHT 12T3MOF	33		230	●	-	-	-	-	-	-	-	-
	RDHT 1604MOF	34		231	●	-	-	-	-	-	-	-	-
	RDHW 0702 MOS	31		-	-	057	●	058	●	059	●	-	-
	RDHW 1003 MOS	32		-	-	061	●	062	●	063	●	-	-
	RDHW 12T3 MOS	33		-	-	071	●	072	●	073	●	-	-
	RDHW 1604 MO	34		-	-	081	●	-	-	083	●	-	-
	RDKT 1003 MOTT	32		-	-	-	-	092	●	-	-	-	-
	RDKT 12T3 MOTT	33		-	-	-	-	094	●	-	-	-	-
	RDKT 1604 MOTT	34		-	-	-	-	096	●	-	-	-	-
	RDHT 0501MOT	30		-	-	-	-	-	-	-	-	232	●
	RDHT 0702MOT	31		-	-	-	-	-	-	-	-	233	●
	RDHT 1003MOT	32		-	-	-	-	-	-	-	-	234	●
	RDHT 12T3MOT	33		-	-	-	-	-	-	-	-	235	●
	RDHT 1604MOT	34		-	-	-	-	-	-	-	-	236	●

Prod. Gr. 156

ATORN® Chamfer and centring cutters

For milling cutter indexable inserts TCMX 16T3..

Application:
centring and NC spot drilling, chamfering, V-groove milling, lathe facing

Execution:
- with straight shank and clamping surface in accordance with DIN 1835 B
- Shaft tolerance h6
- With internal cooling
- Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm

								Chamfer and centring cutters		Clamping screw for indexable inserts	
Chamfer angle (Degree)	D max. (mm)	D min. (mm)	Freistellung (mm)	Länge (mm)	Ø-Schaft (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16107... Ident. No.		16108... Ident. No.	
45	20	0.2	40	115	20	1	TCMX 16T3..	470	●	129	●
45	20	0.2	60	150	20	1	TCMX 16T3..	475	●	129	●
45	20	0.2	80	200	20	1	TCMX 16T3..	480	●	129	●

Prod. Gr. 108

ATORN® Chamfer and centring indexable insert TCMT

For angled and centring cutters no. 16107

Delivery:
Ident. No. 675: Box quantity: 10 pieces

			Surface	TiN		TiAlN	
			Carbide type	HC4625		HC4630	
			Material to be processed	Steel | Stainless steel | Cast metal		Steel | Stainless steel | Cast metal	
			Suitable for material group P	●		●	
			Suitable for material group M	○		○	
			Suitable for material group N				
			Suitable for material group K	○		○	
			Suitable for material group S				
			Suitable for material group H				
	ISO name	Knife edge length (mm)	Edge radius (mm)	16109... Ident. No.		16109... Ident. No.	
	TCMX 16T32R..	16	0.2	675	●	-	-
	TCMX 16T3ZR	16	0.8	-	-	676	●

Prod. Gr. 156

ATORN® Chamfer and centring cutters

For indexable milling inserts SEEX 12T4..

Application:
Centring and NC spot drilling, chamfering, V-groove milling, lathe facing

Execution:
- Straight shank and clamping surface in accordance with DIN 1835 B
- Shaft tolerance h6
- clamping screw tightening torque (indexable insert) M4 = 5.2 Nm

Advantage:
- Cost-effective thanks to the four usable cutting edges
- Improved installation position of the reversible tip increases process reliability

								Chamfer and centring cutters		Clamping screw for indexable inserts	
Chamfer angle (Degree)	D max. (mm)	D min. (mm)	Freistellung (mm)	Länge (mm)	Ø-Schaft (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16107... Ident. No.		16108... Ident. No.	
45	17	0.8	40	120	16	1	SEEX 12T4..	500	●	129	●
30	21	0.8	40	120	16	1	SEEX 12T4..	505	●	129	●

Prod. Gr. 108

ATORN® Chamfering and centring millers in set

For indexable milling inserts SEEX 12T4..

Application:
Centring and NC spot drilling, chamfering, V-groove milling, lathe facing

Execution:
- Including 5 indexable inserts
- Straight shank and clamping surface in accordance with DIN 1835 B
- Shaft tolerance h6
- Clamping screw tightening torque (indexable insert) M4 = 5.2 Nm

Delivery:
Set consists of a holder and five reversible tips SEEX 12T4.

Chamfer angle (Degree)	D max. (mm)	D min. (mm)	Freistel-lung (mm)	Länge (mm)	Ø-Schaft (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	16107... Ident. No.	
45	17	0.8	40	120	16	1	SEEX 12T4..	510	●
30	21	0.8	40	120	16	1	SEEX 12T4..	515	●

Prod. Gr. 108

ATORN® Chamfering and centring indexable insert SEEX

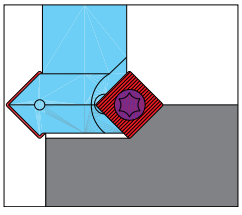
For angled and centring cutters no. 16107

Delivery:
Packaging unit: 10 pieces

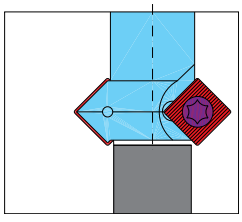
	Surface	Coated	
	Carbide type	HC4630	
	Material to be processed	Steel | Stainless steel | Cast metal	
	Suitable for material group P	●	
	Suitable for material group M	○	
	Suitable for material group N		
	Suitable for material group K	○	
	Suitable for material group S		
	Suitable for material group H		
	ISO name	Knife edge length (mm)	Edge radius (mm)	16109... Ident. No.	
	SEEX 12T408	12.25	0.8	285	●

Prod. Gr. 155

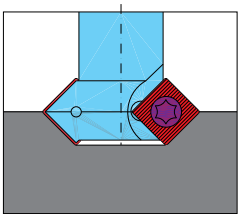
Application examples: chamfer cutter



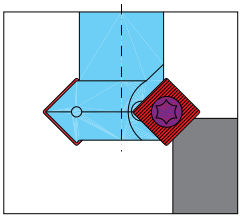
Face milling



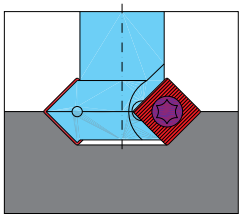
Face milling of narrow webs



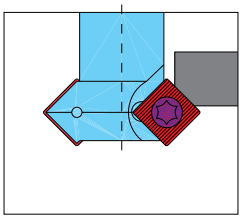
Profile milling of slots



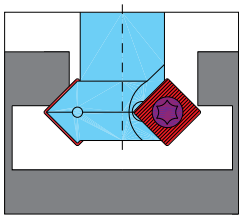
Transverse chamfering



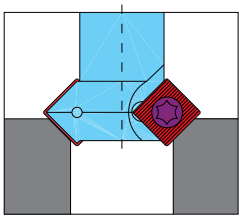
Chamfering bores, circular



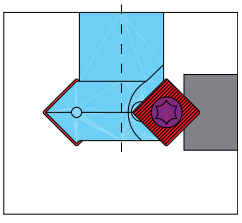
Reverse chamfering



T-slot chamfering



90° countersinking of holes, axial



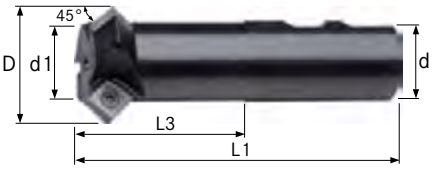
90° Vee block chamfering

ATORN® Double 45° chamfer cutter

For indexable milling inserts SDMW 0903.., SDMT 0903.., SPMW 1204.., SPMT 1204..

Application:
Universal use for chamfering and deburring.

Execution:
- with straight shank in accordance with DIN 1835 B
- clamping screw tightening torque (indexable insert) M3.5 = 3.5 Nm, M4.5 = 4.5 Nm



Chamfer angle (Degree)	D (mm)	d1 (mm)	L3 (mm)	L1 (mm)	d (mm)	Number of cutting edges (PCS)	Suitable indexable insert no.	Suitable for indexable inserts	Double 45° chamfer cutter 16107... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
45	28.8	16	37	85	16	2	4	SD.. 0903..	216	●	106	●
45	37.3	20	45	95	20	2	5 | 6	SP.. 1204..	220	●	108	●
45	42.3	25	54	110	25	2	5 | 6	SP.. 1204..	225	●	108	●
45	49.3	32	65	125	32	3	5 | 6	SP.. 1204..	232	●	108	●

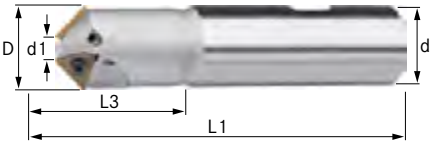
Prod. Gr. 108

ATORN® 30°, 45°, 60° chamfer cutter

For indexable milling inserts TCMT 1102.., TCMT 16T3..

Application:
Universal use for chamfering and deburring.

Execution:
- with straight shank in accordance with DIN 1835 B
- Shaft tolerance h6
- Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm, M4 = 5.2 Nm



Chamfer angle (Degree)	D (mm)	d1 (mm)	L3 (mm)	L1 (mm)	d (mm)	Number of cutting edges (PCS)	Suitable indexable insert no.	Suitable for indexable inserts	30°, 45°, 60° chamfer cutter 16107... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
45	16	1.2	20	70	12	1	1	TC.. 1102..	316	●	110	●
45	21	6.2	35	90	20	2	1	TC.. 1102..	321	●	110	●
45	32.5	10.4	42	100	25	2	2	TC.. 16T3..	332	●	129	●
60	16	5.4	20	70	12	1	1	TC.. 1102..	416	●	110	●
60	26	15.8	35	90	20	1	1	TC.. 1102..	425	●	110	●
60	35	20	39	100	25	2	2	TC.. 16T3..	435	●	129	●
30	32	6	38	100	25	2	2	TC.. 16T3..	532	●	129	●

Prod. Gr. 108

ATORN® Adjustable chamfer cutter

For indexable milling inserts TCMT, SPMW, SPMT

Application:
Universal chamfer cutter for deburring, chamfering and countersinking in rigid operating conditions. Cannot be used on drills.

Execution:
- adjustable from 10° to 80°
- with straight shank in accordance with DIN 1835 B
- nickel-plated support

- +/- 2.5° scale tolerance
- for precise adjustments, please use an adjustment device
- Clamping screw tightening torque (indexable insert) M2.5 = 1.2 Nm, M4 = 5.2 Nm
- with replacement box for using TCMT 16.. and SPM.1204 indexable inserts

Notes:
accessory tool: max. cutting depth 1 mm

D (mm)	Min./ max. chamfer angle	Min./ max. Ø at 10 degrees	Min./ max. Ø at 45 degrees	Min./ max. Ø at 80 degrees	L (mm)	d (mm)	Number of cutting edges (PCS)	Insert type	Suitable for indexable inserts	Adjustable chamfer cutter 16107... Ident. No.		Clamping screw for spare box 16108... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.		Spare box for chamfer cutter 16108... Ident. No.	
25	10-80 Degree	5-32 mm	11-33.5 mm	23-31 mm	95	25	1	2	TC.. 16T3..	166	●	153	●	156	●	515	●

Prod. Gr. 108

ORION® T-slot cutter

for indexable milling inserts SPGT.., SPMT..

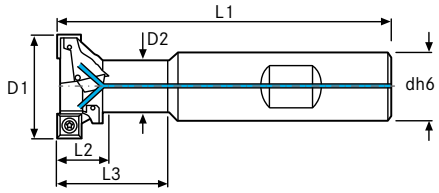
Application:
the T-slot cutter cuts at the circumference and at both sides and is suitable for milling T-slots. alternating inclined teeth (cross-toothing) achieves a high cutting performance.

Execution:
- Wear-resistant, nickel-plated version

- with weld-on shank
- Internal cooling

Delivery:
With clamping screw and wrench

Notes:
For T-slots, in accordance with DIN 650-UNI 4788-ISO 299.



Cutting edge Ø (mm)	Clearance Ø (mm)	Clearance length (mm)	Length (mm)	Shaft Ø (mm)	max. ap (mm)	Number of cutting edges (PCS)	Suitable for indexable inserts	T-slot cutter 16107... Ident. No.		Clamping screw for indexable inserts 16108... Ident. No.	
21	11	26	76	16	9	2	SP.T 0603..	250	●	225	●
25	13	31	82	16	11	4	SP.T 0603..	251	○	225	●
32	17	38	88	20	14	4	SP.T 09T3..	252	●	145	●
40	21	50	108	25	17	4	SP.T 09T3..	253	●	145	●
50	27	56	120	32	22	4	SP.T 1204..	254	●	130	●

Prod. Gr. 148

ATORN® Indexable milling insert TCMT, SDMT, SPMW, SPMT, SPGT

For cutters with indexable inserts no. 16107

Delivery:
Ident. No. 600–613, 651–704: Packaging unit: 10 pieces
Ident. No. 649: Box quantity: Pack of 10
Ident. No. 760–761: box quantity: 10 pieces

					Surface	Uncoated		Uncoated		Coated		Coated		Coated		Coated	
					Carbide type	HW4410		HW4415		HC4625		HC4410		HC4620		HC4620	
					Material to be processed	Stainless steel | Non-ferrous metal		Non-ferrous metal		Steel | Cast metal		Steel | Stainless steel | Non-ferrous metal | Cast metal		Steel		Steel | Cast metal	
					Suitable for material group P					●		○		●		●	
					Suitable for material group M	○						○					
					Suitable for material group N	●		●				●					
					Suitable for material group K					●						●	
					Suitable for material group S							●					
					Suitable for material group H												
	ISO name	Knife edge length (mm)	Edge radius (mm)	Index-able insert type	16109... Ident. No.			16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.		16109... Ident. No.	
	TCMT 110202	11	0.2	1	600	●		-	-	-	-	-	-	601	●	-	-
	TCMT 16T304	16	0.4	2	610	●		-	-	-	-	-	-	611	●	613	●
	SPGT 060304 ALU	6.35	0.4	-	-	-		702	●	-	-	-	-	-	-	-	-
	SPGT 09T308 ALU	9.52	0.8	-	-	-		703	●	-	-	-	-	-	-	-	-
	SPGT 120408 ALU	12.7	0.8	-	-	-		704	●	-	-	-	-	-	-	-	-
	SPMT 060304	6.35	0.4	-	-	-		-	-	760	●	-	-	-	-	-	-
	SPMT 09T308	9.52	0.8	-	-	-		-	-	761	●	-	-	-	-	-	-
	SPMT 120408	12.7	0.8	6	660	●		-	-	-	-	663	●	661	●	-	-
	SPMW 120408	12	0.8	5	-	-		-	-	-	-	653	●	651	●	-	-
	SDMT 090308	9	0.8	-	-	-		-	-	-	-	-	-	649	●	-	-

Prod. Gr. 156