



2024

Highlights
der ALESA AG

ALESA NUTEX STAR

Self-centring and powerful

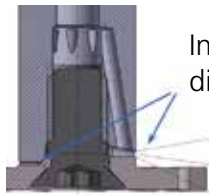
ALESA Nutex Star - The uncompromising further development of the popular Nutex Mini system. The powerful interface and small shank diameter impress with their extended application possibilities. The central screw allows easy mounting on the long solid carbide holders.



Saw and holder have the identical, ground 7-cam interface. This makes the mount self-centering and the system is backlash-free. The saws can be hollow-ground or in the known "Plus" design with side relief angle. Another advantage of the 7 cams is that the forces are transmitted very evenly and tangentially. This means that much higher forces can be transmitted than with 2, 3 or 4 driving cams. This allows reliable cuts in difficult alloys as Titanium etc.



With the sizes GS07, GS10 and GS16 the new Nutex Star system enables already a much larger cutting depth and saw width range than all previous saw systems. The internal coolant supply (IKZ) brings the medium directly into the saw gap. This creates efficient lubrication and cooling. The fastening screw plays



Internal coolant supply directly into the saw gap

a central role and must be tightened with enclosed torque wrench. The holders of the Nutex Star system are available in different diameters and lengths. All are equipped with internal coolant supply, are cylindrically ground to h6 quality and without Weldon-design. The longer holders are made entirely of solid carbide and reliably expand the possible uses.



Features

- Even torque transmission thanks to 7 cam design
- Higher power transmission than with 2, 3 or 4 cams
- Internal coolant supply directly into the saw gap
- Self-centering, easy assembly
- Long holders completely made of solid carbide

Your Benefits

- Very large cutting depth and sawing width range
- High radial and axial assembly repeat accuracy
- All holders have an internal cooling supply
- Extended solid carbide holders for expanded application
- options and improved process reliability



Nutex Star GS07 carbide, standard version

TiNox-coated

6316 GS07



Part No	d1 mm	b mm	Slot depth mm	Type		b1 mm	Holder 6018. _ _ _ _
6316.0185	15	0.5	3.5	GS07	18 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0190	15	1	3.5	GS07	18 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0195	15	1.5	3.5	GS07	18 A+	2.1	.0262, .0290, .0322, .0326, .0330
6316.0200	15	2	3.5	GS07	12 A+	2.6	.0262, .0290, .0322, .0326, .0330
6316.0245	20	0.5	6	GS07	16 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0250	20	1	6	GS07	16 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0255	20	1.5	6	GS07	10 A+	2.1	.0262, .0290, .0322, .0326, .0330
6316.0260	20	2	6	GS07	12 Aw+	2.6	.0262, .0290, .0322, .0326, .0330
6316.0262	20	2.5	6	GS07	10 Aw+	3.1	.0262, .0290, .0322, .0326, .0330
6316.0305	25	0.5	8.5	GS07	14 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0310	25	1	8.5	GS07	12 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0315	25	1.5	8.5	GS07	12 Aw+	2.1	.0262, .0290, .0322, .0326, .0330
6316.0320	25	2	8.5	GS07	10 Aw+	2.6	.0262, .0290, .0322, .0326, .0330
6316.0365	32	0.5	12	GS07	14 A+	2	.0262, .0290, .0322, .0326, .0330
6316.0370	32	1	12	GS07	14 Aw+	2	.0262, .0290, .0322, .0326, .0330
6316.0375	32	1.5	12	GS07	10 Aw+	2.1	.0262, .0290, .0322, .0326, .0330

Please adjust the cutting parameters under following condition; unstable machine and/or clamping condition, extended tool length, vibrations.

Nutex Star GS07 carbide, individually manufactured

uncoated

6315 GS07



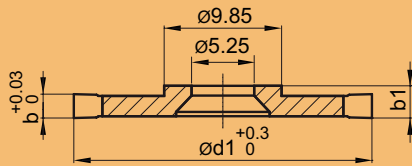
Part No	d1 mm	b mm	Slot depth mm	Type	b1 mm	Holder 6018. _ _ _ _
6315.0190	15	≤ 1	3.5	GS07	2	.0262, .0290, .0322, .0326, .0330
6315.0195	15	1.01 - 1.50	3.5	GS07	2.1	.0262, .0290, .0322, .0326, .0330
6315.0200	15	1.51 - 2.00	3.5	GS07	2.6	.0262, .0290, .0322, .0326, .0330
6315.0250	20	≤ 1	6	GS07	2	.0262, .0290, .0322, .0326, .0330
6315.0255	20	1.01 - 1.50	6	GS07	2.1	.0262, .0290, .0322, .0326, .0330
6315.0260	20	1.51 - 2.00	6	GS07	2.6	.0262, .0290, .0322, .0326, .0330
6315.0262	20	2.01 - 2.50	6	GS07	2.7 - 3.1	.0262, .0290, .0322, .0326, .0330
6315.0265	20	2.51 - 4.20	6	GS07	3.11 - 4.8	.0262, .0290, .0322, .0326, .0330
6315.0310	25	≤ 1	8.5	GS07	2	.0262, .0290, .0322, .0326, .0330
6315.0315	25	1.01 - 1.50	8.5	GS07	2.1	.0262, .0290, .0322, .0326, .0330
6315.0320	25	1.51 - 2.00	8.5	GS07	2.6	.0262, .0290, .0322, .0326, .0330
6315.0370	32	≤ 1	12	GS07	2	.0262, .0290, .0322, .0326, .0330
6315.0375	32	1.01 - 1.50	12	GS07	2.1	.0262, .0290, .0322, .0326, .0330

Please adjust the cutting parameters under following condition; unstable machine and/or clamping condition, extended tool length, vibrations.



Nutex Star GS10 carbide, standard version TiNox-coated

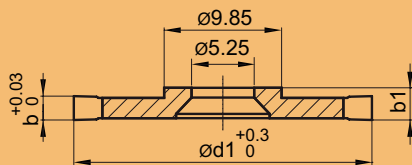
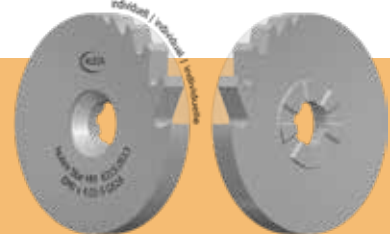
6316 GS10



Part No	d1 mm	b mm	Slot depth mm	Type (model)		b1 mm	Holder 6018. _ _ _ _
6316.0215	15	0.5	2	GS10	24 A+	2.7	.0432, .0472, .0476, .0480
6316.0220	15	1	2	GS10	24 A+	2.7	.0432, .0472, .0476, .0480
6316.0225	15	1.5	2	GS10	24 A+	2.7	.0432, .0472, .0476, .0480
6316.0230	15	2	2	GS10	24 A+	2.7	.0432, .0472, .0476, .0480
6316.0275	20	0.5	4.5	GS10	18 A+	2.7	.0432, .0472, .0476, .0480
6316.0280	20	1	4.5	GS10	18 A+	2.7	.0432, .0472, .0476, .0480
6316.0285	20	1.5	4.5	GS10	18 A+	2.7	.0432, .0472, .0476, .0480
6316.0290	20	2	4.5	GS10	18 A+	2.7	.0432, .0472, .0476, .0480
6316.0292	20	2.5	4.5	GS10	16 A+	3.2	.0432, .0472, .0476, .0480
6316.0335	25	0.5	7	GS10	16 A+	2.7	.0432, .0472, .0476, .0480
6316.0340	25	1	7	GS10	16 A+	2.7	.0432, .0472, .0476, .0480
6316.0345	25	1.5	7	GS10	16 A+	2.7	.0432, .0472, .0476, .0480
6316.0350	25	2	7	GS10	14 A+	2.7	.0432, .0472, .0476, .0480
6316.0352	25	2.5	7	GS10	12 A+	3.2	.0432, .0472, .0476, .0480
6316.0395	32	0.5	10.5	GS10	14 A+	2.7	.0432, .0472, .0476, .0480
6316.0400	32	1	10.5	GS10	14 A+	2.7	.0432, .0472, .0476, .0480
6316.0405	32	1.5	10.5	GS10	14 A+	2.7	.0432, .0472, .0476, .0480
6316.0410	32	2	10.5	GS10	10 A+	2.7	.0432, .0472, .0476, .0480
6316.0412	32	2.5	10.5	GS10	12 Aw+	3.2	.0432, .0472, .0476, .0480
6316.0414	32	3	10.5	GS10	10 Aw+	3.7	.0432, .0472, .0476, .0480
6316.0430	40	1	14.5	GS10	14 A+	2.7	.0432, .0472, .0476, .0480
6316.0440	40	2	14.5	GS10	12 Aw+	2.7	.0432, .0472, .0476, .0480
6316.0460	50	1	19.5	GS10	12 A+	2.7	.0432, .0472, .0476, .0480
6316.0470	50	2	19.5	GS10	10 Aw+	2.7	.0432, .0472, .0476, .0480

Nutex Star GS10 carbide, individually manufactured uncoated

6315 GS10



Part No	d1 mm	b mm	Slot depth mm	Type (model)	b1 mm	Holder 6018. _ _ _ _
6315.0220	15	≤ 1	2	GS10	2.7	.0432, .0472, .0476, .0480
6315.0225	15	1.01 - 1.50	2	GS10	2.7	.0432, .0472, .0476, .0480
6315.0230	15	1.51 - 2.00	2	GS10	2.7	.0432, .0472, .0476, .0480
6315.0280	20	≤ 1	4.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0285	20	1.01 - 1.50	4.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0290	20	1.51 - 2.00	4.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0292	20	2.01 - 2.50	4.5	GS10	3.2	.0432, .0472, .0476, .0480
6315.0340	25	≤ 1	7	GS10	2.7	.0432, .0472, .0476, .0480
6315.0345	25	1.01 - 1.50	7	GS10	2.7	.0432, .0472, .0476, .0480
6315.0350	25	1.51 - 2.00	7	GS10	2.7	.0432, .0472, .0476, .0480
6315.0352	25	2.01 - 2.50	7	GS10	3.2	.0432, .0472, .0476, .0480
6315.0355	25	2.51 - 4.00	7	GS10	3.7 - 4.7	.0432, .0472, .0476, .0480
6315.0356	25	4.01 - 5.50	7	GS10	4.71 - 6.2	.0432, .0472, .0476, .0480
6315.0358	25	5.51 - 7.20	7	GS10	6.21 - 7.9	.0432, .0472, .0476, .0480
6315.0400	32	≤ 1	10.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0405	32	1.01 - 1.50	10.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0410	32	1.51 - 2.00	10.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0412	32	2.01 - 2.50	10.5	GS10	3.2	.0432, .0472, .0476, .0480
6315.0414	32	2.51 - 3.00	10.5	GS10	3.7	.0432, .0472, .0476, .0480
6315.0416	32	3.01 - 5.20	10.5	GS10	3.71 - 5.9	.0432, .0472, .0476, .0480
6315.0430	40	≤ 1	14.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0440	40	1.01 - 2.00	14.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0444	40	2.01 - 3.00	14.5	GS10	3.7	.0432, .0472, .0476, .0480
6315.0445	40	3.01 - 4.20	14.5	GS10	3.71 - 4.9	.0432, .0472, .0476, .0480
6315.0460	50	≤ 1	19.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0470	50	1.01 - 2.00	19.5	GS10	2.7	.0432, .0472, .0476, .0480
6315.0474	50	2.01 - 3.20	19.5	GS10	3.7 - 3.9	.0432, .0472, .0476, .0480



Nutex Star GS16 carbide, standard version

TiNox-coated

6316 GS16



Part No	d1 mm	b mm	Slot depth mm	Type		b1 mm	Holder 6018. ----
6316.0483	32	1	7.5	GS16	18 A+	4.4	.0582, .0594
6316.0486	32	2	7.5	GS16	18 A+	4.6	.0582, .0594
6316.0489	32	3	7.5	GS16	18 A+	4.6	.0582, .0594
6316.0493	32	5	7.5	GS16	18 Ak+	5.9	.0582, .0594
6316.0503	40	1	11.5	GS16	16 A+	4.4	.0582, .0594
6316.0506	40	2	11.5	GS16	16 A+	4.6	.0582, .0594
6316.0509	40	3	11.5	GS16	16 A+	4.6	.0582, .0594
6316.0513	40	5	11.5	GS16	12 Ak+	5.9	.0582, .0594
6316.0573	50	1	16.5	GS16	14 A+	4.4	.0582, .0594
6316.0576	50	2	16.5	GS16	14 A+	4.4	.0582, .0594
6316.0579	50	3	16.5	GS16	14 A+	4.6	.0582, .0594
6316.0583	50	5	16.5	GS16	14 Awk+	5.9	.0582, .0594

Please adjust the cutting parameters under following condition; unstable machine and/or clamping condition, extended tool length, vibrations.
Ak+, Awk+ = Cross-toothed

Nutex Star GS16 carbide, individually manufactured

uncoated

6315 GS16



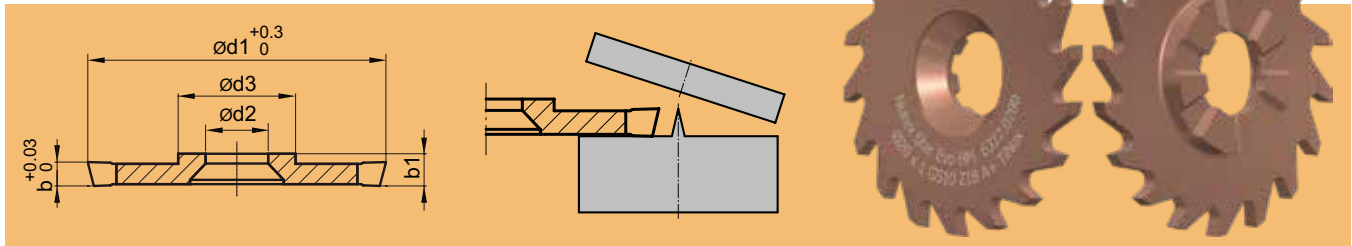
Part No	d1 mm	b mm	Slot depth mm	Type	b1 mm	Holder 6018. ----
6315.0483	32	≤ 1	7.5	GS16	4.4	.0582, .0594
6315.0486	32	1.01 - 2.00	7.5	GS16	4.4	.0582, .0594
6315.0489	32	2.01 - 3.00	7.5	GS16	4.4	.0582, .0594
6315.0491	32	3.01 - 4.00	7.5	GS16	4.9	.0582, .0594
6315.0493	32	4.01 - 5.00	7.5	GS16	5.9	.0582, .0594
6315.0503	40	≤ 1	11.5	GS16	4.4	.0582, .0594
6315.0506	40	1.01 - 2.00	11.5	GS16	4.4	.0582, .0594
6315.0509	40	2.01 - 3.00	11.5	GS16	4.4	.0582, .0594
6315.0511	40	3.01 - 4.00	11.5	GS16	4.9	.0582, .0594
6315.0513	40	4.01 - 5.00	11.5	GS16	5.9	.0582, .0594
6315.0573	50	≤ 1	16.5	GS16	4.4	.0582, .0594
6315.0576	50	1.01 - 2.00	16.5	GS16	4.4	.0582, .0594
6315.0579	50	2.01 - 3.00	16.5	GS16	4.4	.0582, .0594
6315.0581	50	3.01 - 4.00	16.5	GS16	4.9	.0582, .0594
6315.0583	50	4.01 - 5.00	16.5	GS16	5.9	.0582, .0594

Please adjust the cutting parameters under following condition; unstable machine and/or clamping condition, extended tool length, vibrations.



Nutex Star Evo carbide, standard version TiNox-coated

6317



Part No	d1 mm	b mm	Slot depth	Type (model)		b1 mm	d2 mm	d3 mm	Holder 6018. _ _ _ _
6317.0190	15	1	3.5	GS07	18 A+	2	3.75	6.85	.0262, .0290, .0322, .0326, .0330
6317.0280	20	1	4.5	GS10	18 A+	2.7	5.25	9.85	.0432, .0472, .0476, .0480
6317.0345	25	1.5	7	GS10	16 A+	2.7	5.25	9.85	.0432, .0472, .0476, .0480
6317.0405	32	1.5	10.5	GS10	14 A+	2.7	5.25	9.85	.0432, .0472, .0476, .0480
6317.0574	50	1.5	16.5	GS16	14 A+	4.4	8.25	15.85	.0582, .0594, .0670

Holder for Nutex Star and accessories / spare parts

6018



Part No	Type (model)	d1 mm	d3 mm	l1 (min.) mm	l2 mm	l3 mm	G	L mm		Material
6018.0262	GS07 / A6	6	6.85	14	12			50.3	✓	steel
6018.0290	GS07 / A5	7	6.85	14	12			50.3	✓	carbide
6018.0322	GS07 / A5	8	6.85	24	22			61.3	✓	carbide
6018.0326	GS07 / A5	8	6.85	34	32			71.3	✓	carbide
6018.0330	GS07 / A5	8	6.85	44	42			81.3	✓	carbide
6018.0432	GS10 / A5	10	9.85	20	17.3			59.7	✓	steel
6018.0472	GS10 / A5	12	9.85	35	32.3			81.6	✓	carbide
6018.0476	GS10 / A5	12	9.85	50	47.3			96.6	✓	carbide
6018.0480	GS10 / A5	12	9.85	65	62.3			111.6	✓	carbide
6018.0582	GS16 / A5	16	15.85	32	27.6			78.2	✓	steel
6018.0594	GS16 / A5	16	15.85	57	52.6			103.2	✓	carbide
6018.0670	GS16 / B4	18	15.85	24	19.6	22.1	M10	40.7	✓	steel

Scope of delivery: Nutex holder with an assembly- and a spare screw, compiled in protection box.

Accessories and spare parts

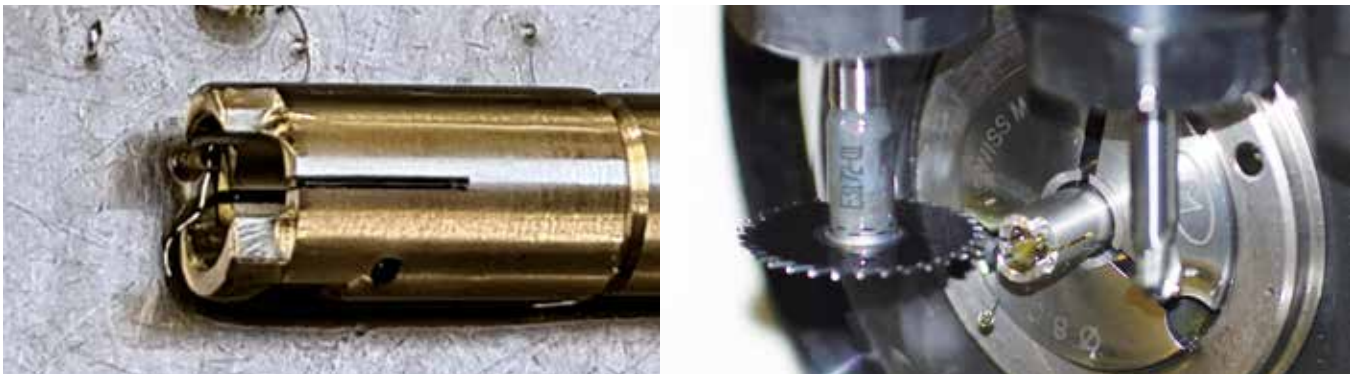
Part No	Type	Assembly screw	Type	Torque	Torx Screwdriver	Type	Spareholder
6018.0262	GS07 / A6	1490.0530	M3.5 x 7	2.2 Nm	1492.0460	T9	6018.0263
6018.0290	GS07 / A5	1490.0530	M3.5 x 7	2.2 Nm	1492.0460	T9	6018.0291
6018.0322	GS07 / A5	1490.0530	M3.5 x 7	2.2 Nm	1492.0460	T9	6018.0323
6018.0326	GS07 / A5	1490.0530	M3.5 x 7	2.2 Nm	1492.0460	T9	6018.0327
6018.0330	GS07 / A5	1490.0530	M3.5 x 7	2.2 Nm	1492.0460	T9	6018.0331
6018.0432	GS10 / A5	1490.0630	M5 x 10	5 Nm	1492.0560	T15	6018.0433
6018.0472	GS10 / A5	1490.0630	M5 x 10	5 Nm	1492.0560	T15	6018.0473
6018.0476	GS10 / A5	1490.0630	M5 x 10	5 Nm	1492.0560	T15	6018.0477
6018.0480	GS10 / A5	1490.0630	M5 x 10	5 Nm	1492.0560	T15	6018.0481
6018.0582	GS16 / A5	1490.0640	M8 x 16	20 Nm	1492.0760	T30	6018.0583
6018.0594	GS16 / A5	1490.0640	M8 x 16	20 Nm	1492.0760	T30	6018.0595

ALESA NUTEX STAR Example of use

Mazak Nexturn sliding headstock lathe

Material: 1.4305
Groove size: 0.45 mm x 8.0 mm depth

Tools used: Nutex Star Carbide, individually toothed, Holder Size GS07
 Diameter 25.0 x 0.45 mm, 32 Teeth with coating 'TiNox'



Cutting data:

Vc = 125 m/min	n = 1605 U/min	fz = 0.008 mm/U	Vf = 405 mm/min	hm = 0.006 mm
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Result:

- The machining time could be reduced by 75% from 20 seconds to 5 seconds.
- The service life of the saw for 2,500 parts is 3.5 hours.
- On a batch size of 5'000 parts, the sawing time could be reduced by more than 20 hours.

The customer is very satisfied with the processing time and the process reliability of the system and will use the new Nutex Star even more on his machines.

Tell our field service about your sawing problem and we will solve it for you!



ALESA DELTA Milling Tools

TN 11/18 - R 90° / Ø 25 - 103



Part No	Type	Type	D mm	l2 mm	d2 mm	G	l1 mm	ap mm				WSP
1306.0382	25-TN 11 R	A3	25	38	20		90	8	✓	4	R	TN 11 S4
1306.0392	25-TN 11 R	A2	25	38	20		90	8	✓	4	R	TN 11 S4
1308.0382	25-TN 11 R		25	35	12.5	M12	55	8	✓	4	R	TN 11 S4
1306.0422	32-TN 11 R	A3	32	38	25		96	8	✓	5	R	TN 11 S4
1308.0422	32-TN 11 R		32	42	17	M16	64	8	✓	5	R	TN 11 S4



Part No	Type	D mm	H mm	d1 mm	d2 mm	l1 mm	ap mm				WSP
1303.0463	43-TN 11 R	43	32	16	8.5	18	8	✓	6	R	TN 11 S4
1304.0463	43-TN 18 R	43	32	16	8.5	18	13	✓	4	R	TN 18 07
1304.0483	53-TN 18 R	53	40	22	11	20	13	✓	6	R	TN 18 07
1304.0503	66-TN 18 R	66	40	22	11	20	13	✓	7	R	TN 18 07
1304.0523	83-TN 18 R	83	50	27	14	22	13	✓	9	R	TN 18 07
1304.0543	103-TN 18 R	103	50	32	18	25	13	✓	10	R	TN 18 07



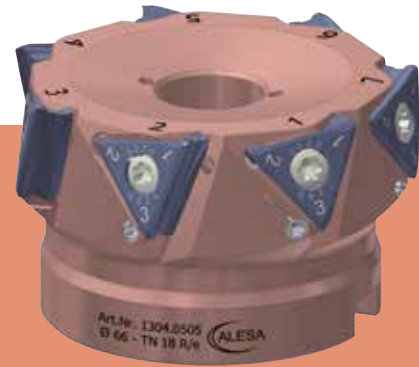
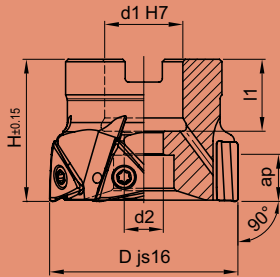
Cutting material	Coating	Part No	ISO Code	l mm	s mm	d mm	d1 mm	Detail X			Material classes					
											1	2	3	4	5	6
Carbide CTS	AlCrN-VA	1297.0200	TN 11 S4 04 FR-321	11.2	4.2	6	3.4	R 0.4	●	○	●	○	○	○		
		1297.0650	TN 11 S4 PF FR-321	11.2	4.2	6	3.4	0.2x45°	●	○	●	○	○			
		1298.0200	TN 18 07 08 FR-321	18.3	7	9.8	5.5	R 0.8	●	○	●	○	○			
		1298.0650	TN 18 07 PF FR-321	18.3	7	9.8	5.5	0.2x45°	●	○	●	○	○			
	DLC-H	1297.0201	TN 11 S4 04 FR-321	11.2	4.2	6	3.4	R 0.4	●	○	○	●	●			
		1297.0651	TN 11 S4 PF FR-321	11.2	4.2	6	3.4	0.2x45°	●	○	○	●	●			
		1298.0201	TN 18 07 08 FR-321	18.3	7	9.8	5.5	R 0.8	●	○	○	●	●			
Carbide CTS-X	TiNox	1298.0651	TN 18 07 PF FR-321	18.3	7	9.8	5.5	0.2x45°	●	○	○	●	●			
		1297.0267	TN 11 S4 04 FR-731	11.2	4.2	6	3.4	R 0.4	●	○	○	●	○			
		1297.0717	TN 11 S4 PF FR-731	11.2	4.2	6	3.4	0.2x45°	●	○	○	●	○			
		1298.0267	TN 18 07 08 FR-731	18.3	7	9.8	5.5	R 0.8	●	○	○	●	○			
Carbide CTM	TiNox	1298.0717	TN 18 07 PF FR-731	18.3	7	9.8	5.5	0.2x45°	●	○	○	●	○			
		1297.0317	TN 11 S4 04 FR-931	11.2	4.2	6	3.4	R 0.4	●	○	○	○	●			
		1298.0317	TN 18 07 08 FR-931	18.3	7	9.8	5.5	R 0.8	●	○	○	○	●			
Carbide CTS-G	TiNox-G	1298.0318	TN 18 07 08 FR-031	18.3	7	9.8	5.5	R 0.8	○	●	○	○	○			



ALESA DELTA milling cutter adjustable

TN 18 - R/e 90° / Ø 43 - 125

1304e



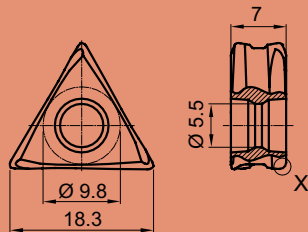
1304.0505

Part No	Type	D mm	H mm	d1 mm	d2 mm	l1 mm				WSP
1304.0465	43-TN 18 R/e	43	32	16	8.5	18	✓	4	R	TN 18 07
1304.0485	53-TN 18 R/e	53	40	22	11	20	✓	6	R	TN 18 07
1304.0505	66-TN 18 R/e	66	40	22	11	20	✓	7	R	TN 18 07
1304.0525	83-TN 18 R/e	83	50	27	14	22	✓	9	R	TN 18 07
1304.0545	103-TN 18 R/e	103	50	32	18	25	✓	10	R	TN 18 07
1304.0564	125-TN 18 R/e	125	63	40	22	29	✓	12	R	TN 18 07

Tool will be delivered with holder, all screws and torque wrench, but without indexable inserts.

Accessories:

- No 1490.0270 Adjusting screw
- No 1492.0400 Screw-driver



TN 18

Cutting material	Coating	Part No	ISO-Code	Detail X				Material classes					
								1	2	3	4	5	6
HM: CTS	AlCrN-VA DLC-H	1298.0200	TN 18 07 08 FR-321	R 0.8	R	●	○	●	○	○	○		
		1298.0201	TN 18 07 08 FR-321	R 0.8	R	●	○	○	●	○	●		
HM: CTS-X	TiNox	1298.0267	TN 18 07 08 FR-731	R 0.8	R	●	○	○	○	○	○		
HM: CTM	TiNox	1298.0317	TN 18 07 08 FR-931	R 0.8	R	●	○	○	○	●	○		
HM: CTS-G	TiNox-G	1298.0318	TN 18 07 08 FR-031	R 0.8	R	●	○	○	●	○	○		

Assembly and adjustment instructions for Alesa Delta milling head adjustable.

Basically the fine adjustment allows a maximum adjustment of 40 µm! We therefore recommend going back to the basic settings regularly.

Basic setting:(milling head mounted on tool holder)

- Carefully clean the support and pocket surfaces of the insert and milling head. Lightly grease the screws if necessary.
- Loosen the adjusting screws (AJS) until the screws can move freely.
- Mount indexable inserts and tighten the insert screws (INS) with a torque screwdriver T20 with 5Nm.
- Screw in the AJS with a T9 screwdriver until you feel a slight resistance.
- Measure and record the height of each insert on the tool presetter.
- The „basic setting“ is only carried out when the INS are released. The highest insert corner is raised by a maximum of 5µm. All other insert corners are adjusted to the same height (within approx. 5µm).
A half (1/2) turn of the AJS corresponds to about 10-12µm height adjustment.
Before measuring the height, tighten the INS again with 5Nm.
- A first cut is milled with this basic setting.
Only then is the fine adjustment made to 1µm - 2µm.
The result can only be achieved if the setting is made directly in the machine spindle. We recommend using a large flat stylus (not a ball).

Fine adjustment: 1µm dial indicator

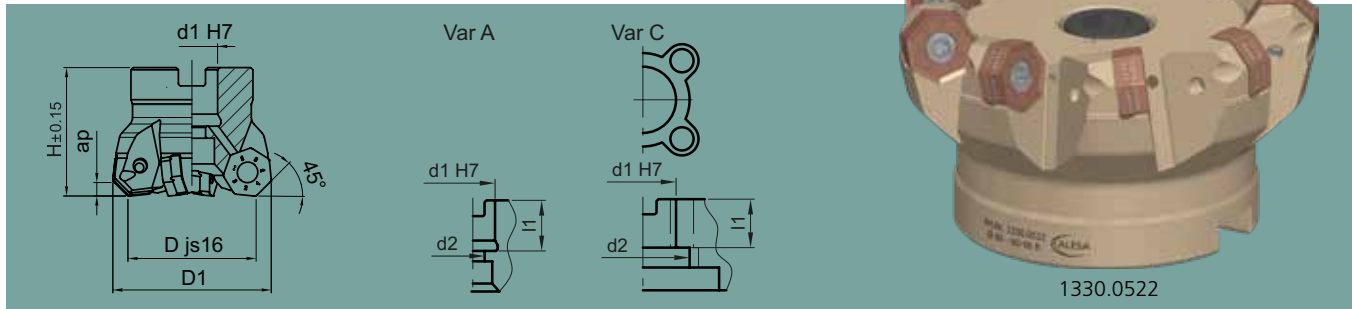
If the height difference is less than 5 µm, the inserts can be readjusted without loosening the INS. Otherwise the INS must be released. This Step must be carried out individually on each machine spindle.



ALESA HEPTA milling cutter XO 06

XO 06 R 45° / Ø 40 - 160

1330



Part No	Type	D mm	D1 mm	H mm	d1 mm	d2 mm	l1 mm	ap mm				WSP
1330.0462	40-XO 06 R / Var A	40	49.5	40	16	8.5	18	4	✓	5	R	XOFU 06 05
1330.0482	50-XO 06 R / Var A	50	59.5	44	22	11	20	4	✓	6	R	XOFU 06 05
1330.0502	63-XO 06 R / Var A	63	72.5	44	22	11	20	4	✓	7	R	XOFU 06 05
1330.0522	80-XO 06 R / Var A	80	89.5	51	27	14	22	4	✓	9	R	XOFU 06 05
1330.0542	100-XO 06 R / Var A	100	109.5	55	32	18	25	4	✓	10	R	XOFU 06 05
1330.0562	125-XO 06 R / Var A	125	134.5	67	40	22	29	4	✓	10	R	XOFU 06 05
1330.0582	160-XO 06 R / Var C	160	169.5	67	40	54	29	4	✓	14	R	XOFU 06 05
1330.0584	160-XO 06 R / Var C	160	169.5	67	40	54	29	4		14	R	XOFU 06 05

Scope of delivery: basic body with all screws and torque screwdriver, but without inserts.
Spare article KSS cover for milling head 1330.0582: Article no. 1330.0900

ALESA HEPTA milling cutter XO 06

XOFU 06



Schneidstoff	Coating	Part No	ISO Code	Detail X				Material classes					
								1	2	3	4	5	6
Carbide CTS	AlCrN-VA	1279.0200	XOFU 06 05 08 FR-322	R 0.8	R	●	○	●	○	○	○	○	
Carbide CTS-X	TiNox	1279.0267	XOFU 06 05 08 FR-732	R 0.8	R	●	○	○	○	○	○	○	
Carbide CTM	TiNox	1279.0317	XOFU 06 05 08 FR-932	R 0.8	R	●	○	○	○	○	○	○	

Info Excellent tool for face milling.

! Recommended application range: ae < 40% or ae > 60% of the tool diameter.

Info Better surface due to a ground face cutting edge.

! ap (max) = 3 mm for multipass milling.

Face milling

Chamfering

Circular
plunge milling

Circular
interpolation

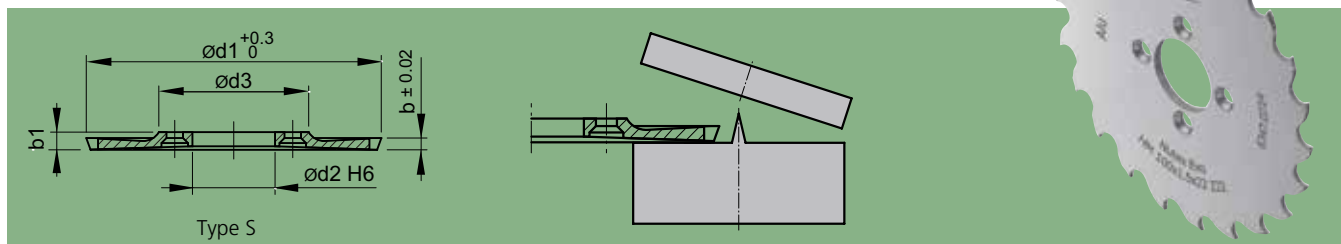
Multipass
milling


Ramping



Nutex Evo carbide, standard version uncoated / polished

6347

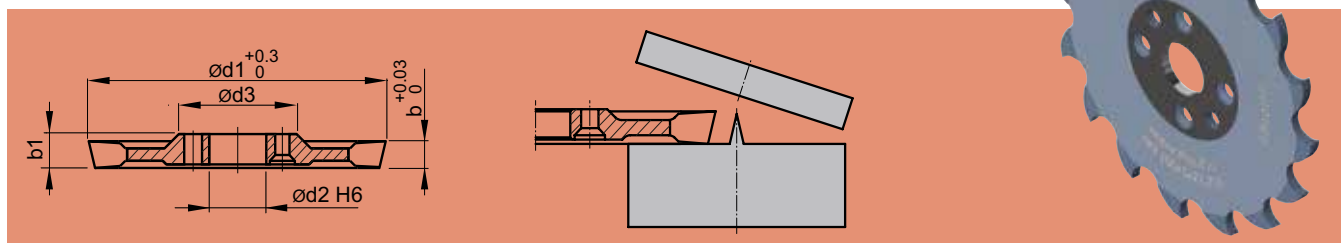



Part No	d1 mm	b mm	b1 mm		Slot depth mm	d2 mm	d3 mm	Coating	Material	Holder 6048. _ _ _
6347.0538	63	1.00	2.55	18 Bw	14.5	16	32	uncoated, polished	Aluminium	.0440, .0540, .0640
6347.0604	80	1.50	2.55	16 Bw	23.0	16	32	uncoated, polished	Aluminium	.0440, .0540, .0640
6347.0724	100	1.50	2.55	16 Bw	29.0	22	40	uncoated, polished	Aluminium	.0650
6347.0790	125	2.00	2.55	14 Bw	41.5	22	40	uncoated, polished	Aluminium	.0650



Nutex Plus Evo carbide, standard version uncoated / coated

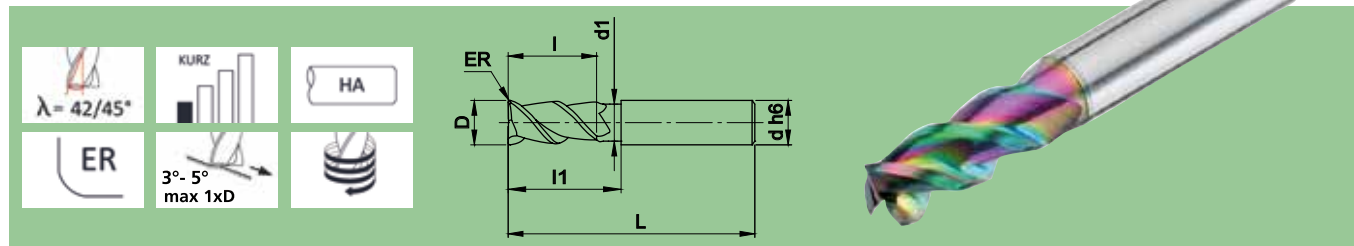
6353 / 6354




Part No	d1 mm	b mm	b1 mm		Slot depth mm	d2 mm	d3 mm	Coating	Material	Holder 6058. _ _ _ _
6353.0629	63	2	2.73	18 BS	14.5	16	32	-		.0440, .0540, .0640
6354.0629	63	2	2.73	18 BS	14.5	16	32	AlCrN	universal	.0440, .0540, .0640
6354.0644	63	2	2.73	18 BS	14.5	16	32	DLC-H	Aluminium	.0440, .0540, .0640
6353.0661	80	2.5	2.73	16 BS	23.5	16	32	-		.0440, .0540, .0640
6354.0661	80	2.5	2.73	16 BS	23.5	16	32	AlCrN	universal	.0440, .0540, .0640
6354.0676	80	2.5	2.73	16 BS	23.5	16	32	DLC-H	Aluminium	.0440, .0540, .0640
6353.0723	100	3	3.08	16 BS	29.5	22	40	-		.0650
6354.0723	100	3	3.08	16 BS	29.5	22	40	AlCrN	universal	.0650
6354.0738	100	3	3.08	16 BS	29.5	22	40	DLC-H	Aluminium	.0650
6353.0753	125	3	3.08	16 BS	42.0	22	40	-		.0650
6354.0753	125	3	3.08	16 BS	42.0	22	40	AlCrN	universal	.0650
6354.0768	125	3	3.08	16 BS	42.0	22	40	DLC-H	Aluminium	.0650

ALESA HPC aluminium end mill with corner radius extra short solid carbide, polished and coated for aluminium

2200



Part No	D mm	l mm	L mm	d mm	l1 mm	d1 mm	Corner radius mm	
2200.0030	3	8	57	6	18	2.5	0.13	3
2200.0031	3	8	57	6	18	2.5	0.5	3
2200.0032	3	8	57	6	18	2.5	1	3
2200.0040	4	11	57	6	21	3.5	0.18	3
2200.0041	4	11	57	6	21	3.5	0.5	3
2200.0042	4	11	57	6	21	3.5	1	3
2200.0050	5	13	57	6	21	4.5	0.2	3
2200.0051	5	13	57	6	21	4.5	0.5	3
2200.0052	5	13	57	6	21	4.5	1	3
2200.0053	5	13	57	6	21	4.5	1.5	3
2200.0065	6	13	57	6	21	5.5	0.1	3
2200.0060	6	13	57	6	21	5.5	0.2	3
2200.0061	6	13	57	6	21	5.5	0.5	3
2200.0062	6	13	57	6	21	5	1	3
2200.0063	6	13	57	6	21	5.5	1.5	3
2200.0064	6	13	57	6	21	5	2	3
2200.0085	8	21	63	8	27	7.5	0.1	3
2200.0080	8	21	63	8	27	7.5	0.25	3
2200.0081	8	21	63	8	27	7.5	0.5	3
2200.0082	8	21	63	8	27	7.5	1	3
2200.0083	8	21	63	8	27	7.5	1.5	3
2200.0084	8	21	63	8	27	7.5	2	3
2200.0105	10	22	72	10	32	9.5	0.15	3
2200.0100	10	22	72	10	32	9.5	0.3	3
2200.0101	10	22	72	10	32	9.5	0.5	3
2200.0102	10	22	72	10	32	9.5	1	3
2200.0103	10	22	72	10	32	9.5	1.5	3
2200.0104	10	22	72	10	32	9.5	2	3
2200.0125	12	26	83	12	38	11.5	0.15	3
2200.0120	12	26	83	12	38	11.5	0.3	3
2200.0121	12	26	83	12	38	11.5	0.5	3
2200.0122	12	26	83	12	38	11.5	1	3
2200.0123	12	26	83	12	38	11.5	1.5	3
2200.0124	12	26	83	12	38	11.5	2	3
2200.0165	16	36	92	16	44	15.5	0.15	3
2200.0160	16	36	92	16	44	15.5	0.4	3
2200.0161	16	36	92	16	44	15.5	1	3
2200.0162	16	36	92	16	44	15.5	1.5	3
2200.0163	16	36	92	16	44	15.5	2	3
2200.0164	16	36	92	16	44	15.5	2.5	3

Cutting data - maximum average chip thickness hm

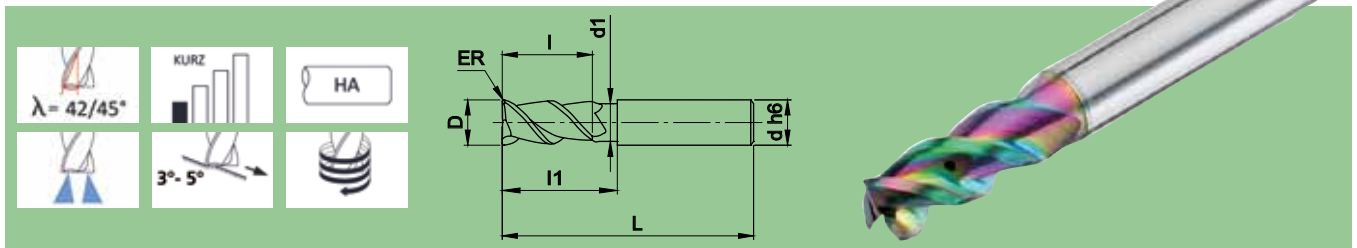
ALESA Material class	Cutting speed		Maximum average chip thickness hm [mm]								
	Vc 1 * m/min	Vc 2 * m/min	≤ Ø 3 mm	Ø 4 mm	Ø 5 mm	Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	≥ Ø 20 mm
3e Aluminium cast material > 6% Si	180	360	0.009	0.017	0.023	0.028	0.037	0.046	0.057	0.080	0.081
4a NE-Metals 1 Brass	400	1200	0.009	0.012	0.016	0.020	0.026	0.032	0.040	0.057	0.055
4b NE-Metals 2 Bronze	400	1200	0.009	0.011	0.014	0.017	0.023	0.028	0.035	0.049	0.060
4c NE-Metals 3 Pure aluminium	600	1500	0.009	0.011	0.015	0.018	0.024	0.030	0.038	0.053	0.065
4d NE-Metals 4 Hardening aluminium	600	1200	0.009	0.014	0.018	0.022	0.030	0.036	0.046	0.064	0.080
4e Aluminium cast material < 6% Si	400	975	0.009	0.017	0.023	0.028	0.037	0.046	0.057	0.080	0.080
6a Plastics Thermoplastics	1000	2000	0.010	0.019	0.025	0.031	0.041	0.050	0.063	0.088	0.100


* Vc 1 for ap = 1xD / ae = 1xD, * Vc 2 for ap = 1.5xD / ae ≤ 0.15xD

ALESA HPC aluminium end mill with corner radius short, internal cooling

solid carbide, polished and coated for aluminium

2202



Part No	D mm	I mm	L mm	d mm	I1 mm	d1 mm	Corner radius mm	
2202.0060	6	13	57	6	21	5.5	0.2	3
2202.0080	8	21	63	8	27	7.5	0.25	3
2202.0100	10	22	72	10	32	9.5	0.3	3
2202.0120	12	26	83	12	38	11.5	0.3	3
2202.0160	16	36	92	16	44	15.5	0.4	3

Cutting data - maximum mean chip thickness hm

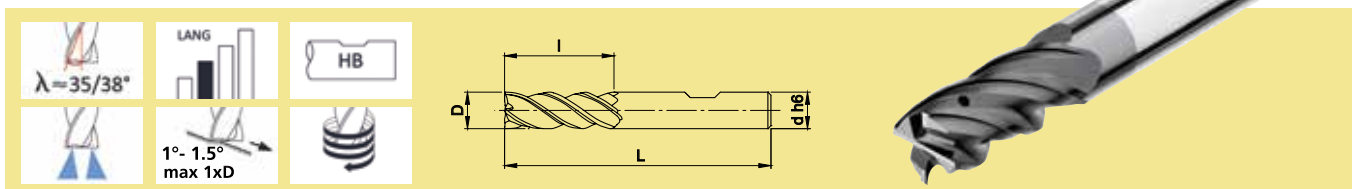
ALESAs Material class	Cutting speed		Maximum average chip thickness hm [mm]				
	Vc 1 * m/min	Vc 2 * m/min	Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm
3e Aluminium cast material > 6% Si	180	360	0.028	0.037	0.046	0.057	0.08
4a NE-Metals 1 Brass	400	1200	0.022	0.029	0.036	0.045	0.063
4b NE-Metals 2 Bronze	400	1200	0.019	0.025	0.031	0.039	0.054
4c NE-Metals 3 Pure aluminium	600	1500	0.024	0.031	0.039	0.048	0.067
4d NE-Metals 4 Hardening aluminium	600	1200	0.026	0.034	0.042	0.053	0.074
4e Cast aluminium < 6% Si	400	975	0.029	0.038	0.047	0.059	0.082
6a Plastics Thermoplastics	1000	2000	0.034	0.045	0.056	0.07	0.098


* Vc 1 for ap = 1.5xD / ae = 1xD, * Vc 2 for ap = 2xD / ae = 0.35xD

ALESA HPC end mill with protective chamfer long, internal cooling

solid carbide, coated for stainless

2332



Part No	D mm	I mm	L mm	d mm	
2332.0060	6	13	58	6	4
2332.0080	8	19	64	8	4
2332.0100	10	22	73	10	4
2332.0120	12	26	84	12	4
2332.0160	16	32	93	16	4
2332.0200	20	38	105	20	4

Cutting data - maximum mean chip thickness hm

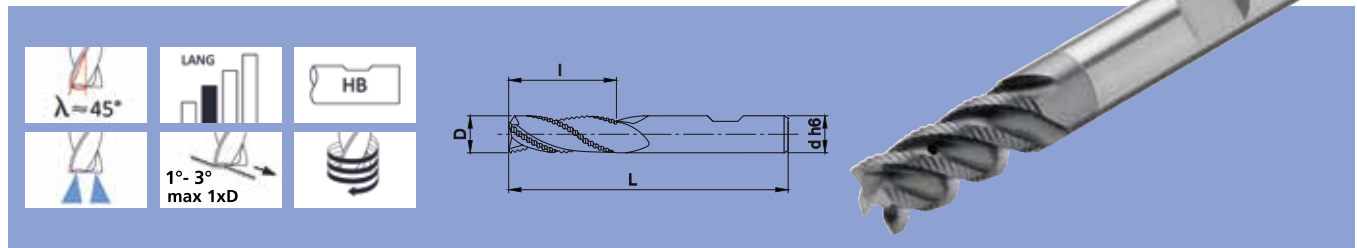
ALESAs Material class	Cutting speed		Maximum average chip thickness hm [mm]					
	Vc 1 * m/min	Vc 2 * m/min	Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	≥ Ø 20 mm
1a Steels < 650 N/mm ²	170	300	0.016	0.022	0.027	0.033	0.047	0.059
1b Steels < 800 N/mm ²	135	280	0.015	0.02	0.025	0.031	0.044	0.054
1c Steels 800 - 1200 N/mm ²	100	180	0.014	0.018	0.022	0.028	0.039	0.045
1d Steels > 1200 N/mm ²	80	125	0.012	0.016	0.02	0.025	0.035	0.041
2a Stainless steels < 800 N/mm ²	100	170	0.017	0.022	0.027	0.034	0.048	0.059
2b Stainless steels > 800 N/mm ²	70	120	0.015	0.019	0.024	0.03	0.042	0.054
3a Cast < 200 HB	150	280	0.017	0.022	0.027	0.034	0.047	0.063
3b Tempered cast iron < 200 HB	100	180	0.017	0.022	0.027	0.034	0.047	0.059
3c Cast steel < 800 N/mm ²	135	280	0.015	0.02	0.025	0.031	0.044	0.054
3d Cast steel > 800 N/mm ²	100	180	0.014	0.018	0.022	0.028	0.039	0.045
5a Ni / Ti non-alloyed < 650 N/mm ²	80	125	0.016	0.021	0.026	0.032	0.044	0.05
5b Ni-/Ti-BL < 900 N/mm ² , Duplex	40	60	0.014	0.019	0.023	0.029	0.041	0.045
5c Ni-/Ti-BL 900 - 1200 N/mm ²	30	45	0.014	0.019	0.023	0.029	0.041	0.045


* Vc 1 for ap = 1xD / ae = 1xD, * Vc 2 for ap = 1.5xD / ae ≤ 0.15xD

ALESA Roughing End Mill 45° long, internal cooling

Solid carbide, coated for steel materials and stainless steel

2138



Part No	D mm	I mm	L mm	d mm	
2138.0080	8	16	63	8	4
2138.0100	10	22	72	10	4
2138.0120	12	26	83	12	4
2138.0160	16	32	92	16	4

Cutting data - maximum mean chip thickness hm

ALESA Material class	Cutting speed		Maximum average chip thickness hm [mm]			
	Vc 1 * m/min	Vc 2 * m/min	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm
1a Steels < 650 N/mm ²	150	270	0.022	0.027	0.033	0.047
1b Steels < 800 N/mm ²	130	250	0.02	0.025	0.031	0.044
1c Steels 800 - 1200 N/mm ²	90	160	0.018	0.022	0.028	0.039
1d Steels > 1200 N/mm ²	70	120	0.016	0.02	0.025	0.035
2a Stainless steels < 800 N/mm ²	80	150	0.022	0.027	0.034	0.048
2b Stainless steels > 800 N/mm ²	65	110	0.02	0.024	0.03	0.042
3a Cast < 200 HB	135	225	0.022	0.027	0.034	0.047
3b Tempered cast iron < 200 HB	90	145	0.022	0.027	0.034	0.047
3c Cast steel < 800 N/mm ²	135	225	0.02	0.025	0.031	0.044
3d Cast steel > 800 N/mm ²	90	145	0.018	0.022	0.028	0.039
5a Ni / Ti non-alloyed < 650 N/mm ²	70	110	0.021	0.026	0.032	0.045
5b Ni-/Ti-BL < 900 N/mm ² , Duplex	25	55	0.019	0.023	0.029	0.041
5c Ni-/Ti-BL 900 - 1200 N/mm ²	20	40	0.019	0.023	0.029	0.041

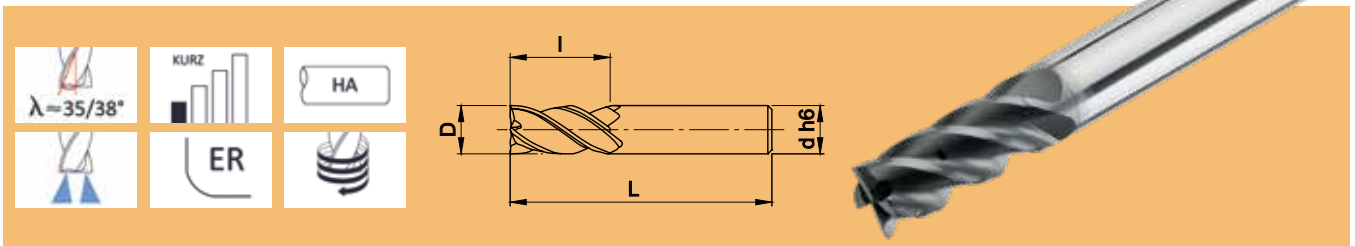
* Vc 1 for ap = 1xD / ae = 1xD, * Vc 2 for ap = 1.5xD / ae ≤ 0.25xD




ALESA HPC / HSC end mill with corner radius, internal cooling

Solid carbide, coated for titanium

2354



Part No	D mm	L mm	L mm	d mm	Corner radius mm	
2354.0060	6	13	57	6	0.2	4
2354.0080	8	19	63	8	0.25	4
2354.0100	10	22	72	10	0.3	4
2354.0120	12	26	83	12	0.3	4
2354.0160	16	32	92	16	0.4	4
2354.0200	20	38	104	20	0.5	4

Cutting data - maximum mean chip thickness hm

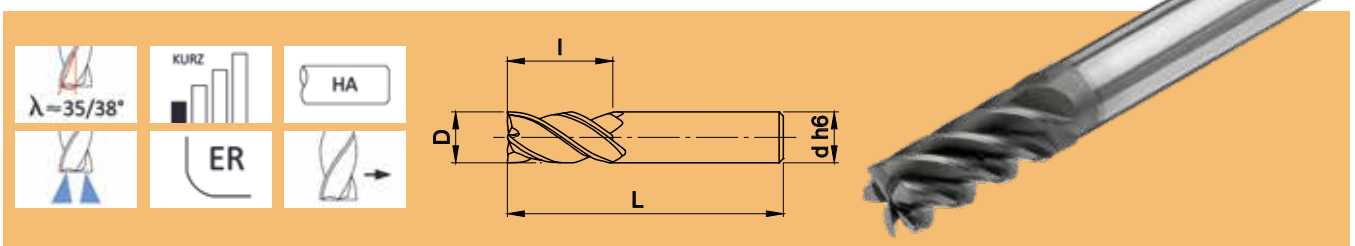
ALESA Material class	Cutting speed		Maximum average chip thickness hm [mm]						
	Vc 1 * m/min	Vc 2 * m/min	Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	≥ Ø 20 mm	
2b Stainless steels > 800 N/mm ²	80	150	0.018	0.024	0.029	0.037	0.051	0.066	
5a Ni / Ti non-alloyed < 650 N/mm ²	80	150	0.019	0.025	0.031	0.039	0.055	0.061	
5b Ni-/Ti-BL < 900 N/mm ² , Duplex	40	100	0.017	0.023	0.028	0.035	0.05	0.055	
5c Ni-/Ti-BL 900 - 1200 N/mm ²	30	80	0.017	0.023	0.028	0.035	0.05	0.055	


* Vc 1 for ap = 1xD / ae = 0.25xD, * Vc 2 for ap = 2xD / ae ≤ 0.1xD

ALESA HPC / HSC end mill with corner radius, internal cooling

Solid carbide, coated for titanium

2358



Part No	D mm	L mm	L mm	d mm	Corner radius mm	
2358.0060	6	13	57	6	0.2	5
2358.0080	8	19	63	8	0.25	5
2358.0100	10	22	72	10	0.3	5
2358.0120	12	26	83	12	0.3	5
2358.0160	16	32	92	16	0.4	5
2358.0200	20	38	104	20	0.5	5

Cutting data - maximum mean chip thickness hm

ALESA Material class	Cutting speed		Maximum average chip thickness hm [mm]						
	Vc 1 * m/min	Vc 2 * m/min	Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	≥ Ø 20 mm	
2b Stainless steels > 800 N/mm ²	100	150	0.018	0.024	0.029	0.037	0.051	0.066	
5a Ni / Ti non-alloyed < 650 N/mm ²	100	150	0.019	0.025	0.031	0.039	0.055	0.061	
5b Ni-/Ti-BL < 900 N/mm ² , Duplex	60	100	0.017	0.023	0.028	0.035	0.05	0.055	
5c Ni-/Ti-BL 900 - 1200 N/mm ²	45	80	0.017	0.023	0.028	0.035	0.05	0.055	

* Vc 1 for ap = 1xD / ae = 0.25xD, * Vc 2 for ap = 2xD / ae ≤ 0.1xD

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ALESA Ltd.
Schulstrasse 11
CH-5707 Seengen
Phone +41 62 767 62 62
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Metal cutting with creativity

Milling: The ALESA indexable inserts which are developed and patented by us are distinguished by a high-tech cutting geometry and are being used to great success all over the world.

The extensive range of ISO standard indexable inserts is of course also equipped with our highly positive, extremely sharp ground cutting edge. ALESA indexable inserts are available in HSS-E and fine grain metal carbide. Various hard material coatings ensure a long tool life. It goes without saying that almost all our toolholders are prepared for internal coolant supply.

Turning/parting: In this area, too, we have an extensive range of toolholders for external and internal turning with the matching indexable inserts in HSS-E to ISO standard.

Our ALESA GOLD high-precision ISO toolbits and cutting tools are also world-renowned. Similarly, the Minicut and Duocut parting inserts and cutting-off tools in HSS-E are a byword in the trade.

Sawing: The ALESA metal-cutting

circular saws in HSS and carbide give top performance all around. Our circular saws with steam-tempered surface or hard-material coating achieve even better life expectancy.

Nutex: The extraordinary combination of circular saw blade and holder in one tool indicates the system Nutex, Nutex Mini, Nutex Mono and Nutex Plus. With this tool it is possible to machine on CNC centres without fixings protruding out of the tool face.

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