

NEW INSERTS AND TOOLS FOR MILLING ADMX 11

- **Highly Positive Geometry (rake angle 23°)**
 - lower machine power
- **Optimized Cutting Edge Shape**
 - higher impact resistance
 - lower cutting forces
 - smooth machining
- **Smooth Cutting Edge Continuity**
 - higher tool life
 - better roughness quality



Geometry of ADMX 11



ADMX 11-F



ADMX 11-M



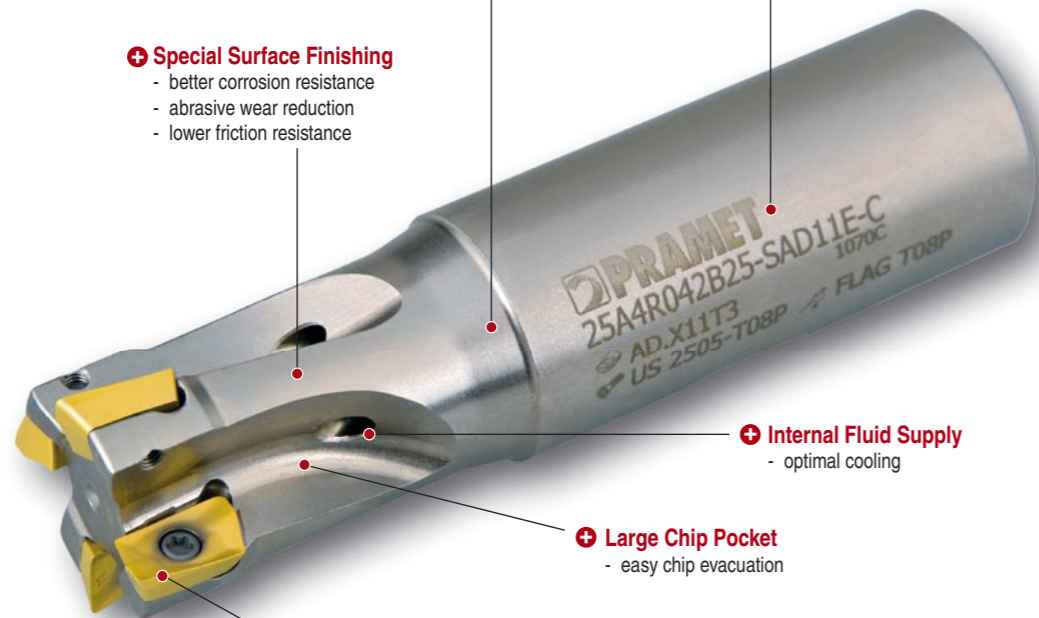
ADMX 11-R



ADEX 11-FA

New generation of milling tools with inserts ADMX11 / ADEX 11

- **New Technology and Heat Treatment**
 - higher tool accuracy
- **Special Surface Finishing**
 - better corrosion resistance
 - abrasive wear reduction
 - lower friction resistance
- **Long-Life Laser Marking**
 - identification of inserts and spare parts
- **Internal Fluid Supply**
 - optimal cooling
- **Large Chip Pocket**
 - easy chip evacuation
- **Highly Positive Geometry**
 - cutting forces reduction
 - higher productivity



Wide area of applications of new milling cutters with inserts ADMX11

FACE MILLING
currently achieved roughness by geometry F
Ra ≤ 0,5 [µm]

SHOULDER MILLING
areas link-up
x_{max} ≤ 0,03 [mm]

SLOT MILLING
achieved roughness
Ra ≤ 1,6 [µm]

RAMPING

cutter ø	α _{max}
ø 16	13,5°
ø 20	9,0°
ø 25	6,0°
ø 32	5,3°
ø 40	3,8°
ø 50	2,8°
ø 63	1,8°
ø 80	1,6°
ø 100	1,2°

PLUNGE MILLING
a_{emax} = 4,5 [mm]

PROGRESSIVE PLUNGING
a_{pmax} = 1,7 [mm]

MILLING BY HELICAL INTERPOLATION

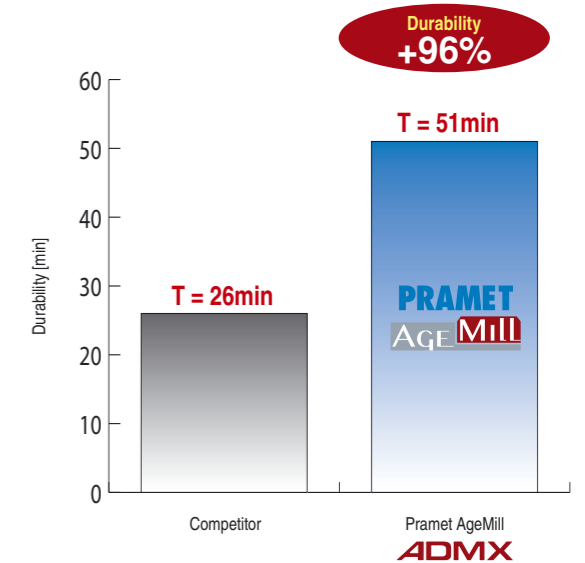
cutter ø	d _{min}	s _{max}	d _{max}	s _{min}
16	27	8,3	30	9,0
20	35	7,5	38	9,0
25	45	6,5	48	7,5
32	59	4,0	62	4,5
40	75	1,5	78	2,0

Practical example of milling cutters with inserts ADMX11

EXAMPLE 1:

Machine: VSC1-M
 Operation: slotting
 Tool: 16A2R027B16-SAD11E-C
 Workpiece: St52-3
 Inserts: ASMT11T308PDDR-M - competitor
 ADMX 11T308SR-M; 8240 Pramet
 Cooling: with cooling

Cutting conditions		Competitor	Pramet	
Cutting speed	v _c	175	240	m.min ⁻¹
Feed per tooth	f _z	0,12	0,13	mm.Zahn ⁻¹
Axial depth of cut	a _p	2,0	2,0	mm
Radial depth of cut	a _e	16	16	mm
Durability	T	26	51	min



Assortment of inserts ADMX11 / ADEX 11

Basic shape of insert	Cutting condition		Initial cutting conditions					
			P	M	K	N	S	H
ADMX 11T304SR-F 8230	feed	[mm.teeth ⁻¹]	0,07 ÷ 0,12	0,07 ÷ 0,09	0,07 ÷ 0,12	0,07 ÷ 0,12	0,07 ÷ 0,07	-
	depth of cut	[mm]	0,5 ÷ 9,0	0,5 ÷ 6,8	0,5 ÷ 9,0	0,5 ÷ 9,0	0,5 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	175 ÷ 265	105 ÷ 155	165 ÷ 250	260 ÷ 925	35 ÷ 75	-
ADMX 11T304SR-F 8240	feed	[mm.teeth ⁻¹]	0,07 ÷ 0,12	0,07 ÷ 0,09	0,07 ÷ 0,12	-	0,07 ÷ 0,07	-
	depth of cut	[mm]	0,5 ÷ 9,0	0,5 ÷ 6,8	0,5 ÷ 9,0	-	0,5 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	145 ÷ 210	85 ÷ 125	135 ÷ 195	-	25 ÷ 60	-
ADMX 11T308SR-F 8230	feed	[mm.teeth ⁻¹]	0,07 ÷ 0,12	0,07 ÷ 0,09	0,07 ÷ 0,12	0,07 ÷ 0,12	0,07 ÷ 0,07	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	1,0 ÷ 9,0	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	210 ÷ 290	125 ÷ 170	195 ÷ 275	315 ÷ 1015	40 ÷ 85	-
ADMX 11T308SR-F 8240	feed	[mm.teeth ⁻¹]	0,07 ÷ 0,12	0,07 ÷ 0,09	0,07 ÷ 0,12	-	0,07 ÷ 0,07	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	175 ÷ 230	105 ÷ 135	165 ÷ 215	-	35 ÷ 65	-
ADMX 11T304SR-M 8230	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	0,10 ÷ 0,11	-
	depth of cut	[mm]	0,5 ÷ 9,0	0,5 ÷ 6,8	0,5 ÷ 9,0	-	0,5 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	160 ÷ 245	95 ÷ 145	150 ÷ 230	-	30 ÷ 70	-
ADMX 11T304SR-M 8240	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	0,10 ÷ 0,11	-
	depth of cut	[mm]	0,5 ÷ 9,0	0,5 ÷ 6,8	0,5 ÷ 9,0	-	0,5 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	145 ÷ 205	85 ÷ 120	135 ÷ 190	-	25 ÷ 60	-
ADMX 11T308SR-M 2230	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	-	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	-	-
	cutting speed	[m.min ⁻¹]	200 ÷ 285	120 ÷ 170	190 ÷ 270	-	-	-
ADMX 11T308SR-M 8016	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	0,10 ÷ 0,11	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	165 ÷ 240	95 ÷ 140	155 ÷ 225	-	30 ÷ 70	-
ADMX 11T308SR-M 8230	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	0,10 ÷ 0,11	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	195 ÷ 275	115 ÷ 165	185 ÷ 260	-	35 ÷ 80	-
ADMX 11T308SR-M 8240	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,18	0,10 ÷ 0,14	0,10 ÷ 0,18	-	0,10 ÷ 0,11	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	170 ÷ 225	100 ÷ 135	160 ÷ 210	-	30 ÷ 65	-
ADMX 11T316SR-M 8230	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,22	0,10 ÷ 0,17	0,10 ÷ 0,22	-	0,10 ÷ 0,13	-
	depth of cut	[mm]	1,8 ÷ 9,0	1,8 ÷ 6,8	1,8 ÷ 9,0	-	1,8 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	210 ÷ 285	125 ÷ 170	195 ÷ 270	-	40 ÷ 85	-
ADMX 11T316SR-M 8240	feed	[mm.teeth ⁻¹]	0,10 ÷ 0,22	0,10 ÷ 0,17	0,10 ÷ 0,22	-	0,10 ÷ 0,13	-
	depth of cut	[mm]	1,8 ÷ 9,0	1,8 ÷ 6,8	1,8 ÷ 9,0	-	1,8 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	185 ÷ 230	110 ÷ 135	175 ÷ 215	-	35 ÷ 65	-
ADMX 11T308PR-R 2215	feed	[mm.teeth ⁻¹]	0,15 ÷ 0,25	-	0,15 ÷ 0,25	-	0,10 ÷ 0,20	-
	depth of cut	[mm]	1,0 ÷ 9,0	-	1,0 ÷ 9,0	-	0,3 ÷ 1,5	-
	cutting speed	[m.min ⁻¹]	240 ÷ 320	-	225 ÷ 300	-	45 ÷ 60	-
ADMX 11T308PR-R 2230	posuv	[mm.zub ⁻¹]	0,15 ÷ 0,25	0,15 ÷ 0,19	0,15 ÷ 0,25	-	0,10 ÷ 0,20	-
	hloubka řezu	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	0,3 ÷ 1,5	-
	řezná rychlost	[m.min ⁻¹]	190 ÷ 265	110 ÷ 155	180 ÷ 250	-	35 ÷ 50	-
ADMX 11T308PR-R 8016	feed	[mm.teeth ⁻¹]	0,15 ÷ 0,25	0,15 ÷ 0,19	0,15 ÷ 0,25	-	0,15 ÷ 0,19	0,10 ÷ 0,20
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	0,3 ÷ 1,5
	cutting speed	[m.min ⁻¹]	155 ÷ 220	90 ÷ 130	145 ÷ 205	-	30 ÷ 65	30 ÷ 40
ADMX 11T308PR-R 8230	feed	[mm.teeth ⁻¹]	0,15 ÷ 0,25	0,15 ÷ 0,19	0,15 ÷ 0,25	-	0,15 ÷ 0,19	0,10 ÷ 0,20
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	0,3 ÷ 1,5
	cutting speed	[m.min ⁻¹]	185 ÷ 255	110 ÷ 150	175 ÷ 240	-	35 ÷ 75	35 ÷ 50
ADMX 11T308PR-R 8240	feed	[mm.teeth ⁻¹]	0,15 ÷ 0,25	0,15 ÷ 0,19	0,15 ÷ 0,25	-	0,15 ÷ 0,19	-
	depth of cut	[mm]	1,0 ÷ 9,0	1,0 ÷ 6,8	1,0 ÷ 9,0	-	1,0 ÷ 5,4	-
	cutting speed	[m.min ⁻¹]	165 ÷ 220	95 ÷ 130	155 ÷ 205	-	30 ÷ 65	-
ADEX 11T304FR-FA HF7	feed	[mm.teeth ⁻¹]	-	-	-	0,03 ÷ 0,20	-	-
	depth of cut	[mm]	-	-	-	0,5 ÷ 9,0	-	-
	cutting speed	[m.min ⁻¹]	-	-	-	90 ÷ 505	-	-
ADEX 11T308FR-FA HF7	feed	[mm.teeth ⁻¹]	-	-	-	0,03 ÷ 0,20	-	-
	depth of cut	[mm]	-	-	-	1,0 ÷ 9,0	-	-
	cutting speed	[m.min ⁻¹]	-	-	-	110 ÷ 560	-	-

Overview of geometries ADMX11 / ADEX 11

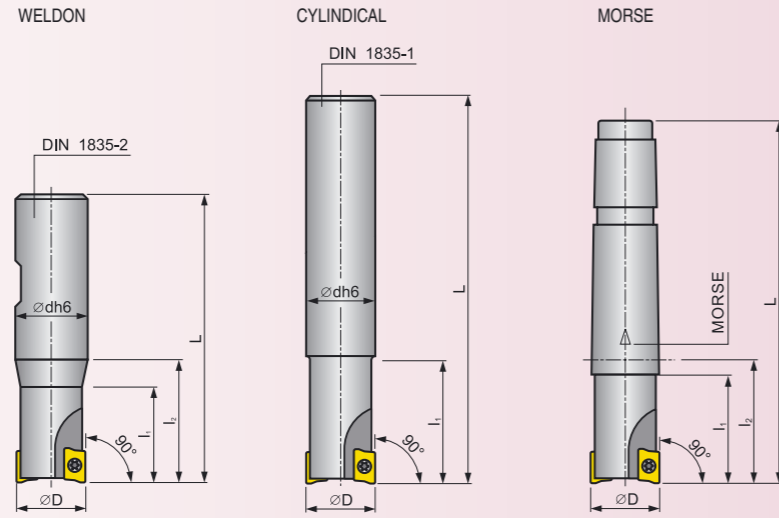
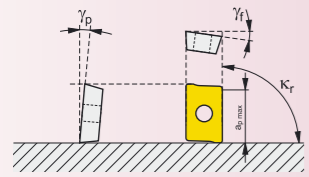
Geometry	Photo	Workpiece material group	Diagram of application	Description								
					Milling	P	M	K	N	S	H	
ADMX11-F		<table border="1"> <tr><th>Workpiece material group</th></tr> <tr><td>Milling</td></tr> <tr><td>P</td></tr> <tr><td>M</td></tr> <tr><td>K</td></tr> <tr><td>N</td></tr> <tr><td>S</td></tr> <tr><td>H</td></tr> </table>	Workpiece material group	Milling	P	M	K	N	S	H		Applied to inserts: ADMX 11T308SR-F ADMX 11T304SR-F - High positive geometry with narrow T-land - Suitable for machining of materials all groups except group H - Especially for light-duty machining conditions Range of cutting conditions: f _z 0,07 ÷ 0,12 [mm.teeth ⁻¹] a _p (0,5) 1,0 ÷ 9,0 [mm]
			Workpiece material group									
			Milling									
P												
M												
K												
N												
S												
H												
Finishing												
Medium												
ADMX11-M		<table border="1"> <tr><th>Workpiece material group</th></tr> <tr><td>Milling</td></tr> <tr><td>P</td></tr> <tr><td>M</td></tr> <tr><td>K</td></tr> <tr><td>N</td></tr> <tr><td>S</td></tr> <tr><td>H</td></tr> </table>	Workpiece material group	Milling	P	M	K	N	S	H		Applied to inserts: ADMX 11T308SR-M ADMX 11T304SR-M , ADMX 11T316SR-M - High positive geometry with medium T-land - Suitable for machining of materials groups P, M, K and S - For medium machining conditions - Available also with corner radiuses 0,4 and 1,6 Range of cutting conditions: f _z 0,1 ÷ 0,18 (0,22) [mm.teeth ⁻¹] a _p (0,5) 1,0 (1,8) ÷ 9,0 [mm]
			Workpiece material group									
			Milling									
P												
M												
K												
N												
S												
H												
Finishing												
Medium												
ADMX11-R		<table border="1"> <tr><th>Workpiece material group</th></tr> <tr><td>Milling</td></tr> <tr><td>P</td></tr> <tr><td>M</td></tr> <tr><td>K</td></tr> <tr><td>N</td></tr> <tr><td>S</td></tr> <tr><td>H</td></tr> </table>	Workpiece material group	Milling	P	M	K	N	S	H		Applied to inserts: ADMX 11T308PR-R - Positive geometry with duple T-land - Suitable for machining of materials groups P, M, K and S - Geometry suitable also for less stable working conditions Range of cutting conditions: f _z 0,15 ÷ 0,25 [mm.teeth ⁻¹] a _p 1,0 ÷ 9,0 [mm]
			Workpiece material group									
			Milling									
P												
M												
K												
N												
S												
H												
Finishing												
Medium												
ADEX11-FA		<table border="1"> <tr><th>Workpiece material group</th></tr> <tr><td>Milling</td></tr> <tr><td>P</td></tr> <tr><td>M</td></tr> <tr><td>K</td></tr> <tr><td>N</td></tr> <tr><td>S</td></tr> <tr><td>H</td></tr> </table>	Workpiece material group	Milling	P	M	K	N	S	H		Applied to inserts: ADEX 11T308FR-FA ADEX 11T304FR-FA - Geometry with positive rake angle and minimum honing of cutting edge - Suitable for machining of non-ferrous metals (ISO Group N) Range of cutting conditions: f _z 0,03 ÷ 0,20 [mm.teeth ⁻¹] a _p 0,5 (1,0) ÷ 9,0 [mm]
			Workpiece material group									
			Milling									
P												
M												
K												
N												
S												
H												
Finishing												
Medium												

SAD11E

Shoulder end milling cutters with inserts ADMX11 / ADEX 11



γ_p	$+4^\circ \div +8^\circ$	κ_r	90°
γ_f	$-9^\circ \div -12,8^\circ$	$a_{p\max}$	9 mm



Z* - Number of teeth

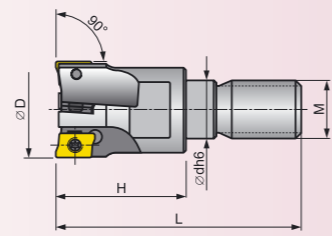
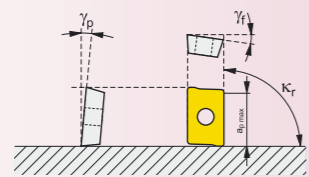
ISO	Assortment	Dimensions							[kg]	Cooling	Spare parts			Inserts
		D	L	l_1	l_2	dh6	Morse	Z*						
WELDON	16A2R027B16-SAD11E-C	●	16	75	27	-	16	-	2	0,1	+	US2505-T08P	FLAG T08P	AD.X 11T3
	20A2R032B20-SAD11E-C	●	20	82	32	-	20	-	2	0,2	+			
	20A3R032B20-SAD11E-C	●	20	82	32	-	20	-	3	0,2	+			
	25A3R042B25-SAD11E-C	●	25	98	42	-	25	-	3	0,3	+			
	25A4R042B25-SAD11E-C	●	25	98	42	-	25	-	4	0,3	+			
	32A4R042B32-SAD11E-C	●	32	102	42	-	32	-	4	0,4	+			
	32A5R042B32-SAD11E-C	●	32	102	42	-	32	-	5	0,4	+			
CYLINDRICAL	16A2R024A16-SAD11E-C	●	16	135	24,0	-	16	-	2	0,2	+			
	20A2R029A20-SAD11E-C	●	20	150	29,0	-	20	-	2	0,3	+			
	20A3R029A20-SAD11E-C	●	20	150	29,0	-	20	-	3	0,3	+			
	25A3R034A25-SAD11E-C	●	25	170	34,0	-	25	-	3	0,5	+			
	25A4R034A25-SAD11E-C	●	25	170	34,0	-	25	-	4	0,5	+			
32A5R034A32-SAD11E-C	●	32	195	34,0	-	32	-	5	0,9	+				
MORSE	16A2R030E02-SAD11E-C	●	16	94	25	30	-	2	2	0,1	+			
	20A3R035E03-SAD11E-C	●	20	116	30	35	-	3	3	0,2	+			
	25A4R043E03-SAD11E-C	●	25	124	38	43	-	3	4	0,3	+			

SAD11E

Exchangable heads for modular system with inserts ADMX11 / ADEX 11



γ_p	$+4^\circ \div +11^\circ$	κ_r	90°
γ_f	$-8,1^\circ \div -12,8^\circ$	$a_{p\max}$	9 mm



Z* - Number of teeth

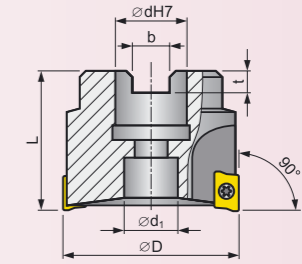
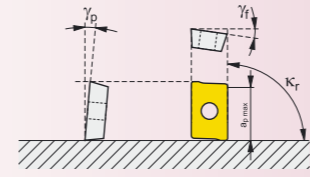
ISO	Assortment	Dimensions					[kg]	Cooling	Spare parts			Inserts
		D	L	H	M	dh6			Z*			
16A2R024M08-SAD11E-C	●	16	38	24	M8	8,5	2	0,1	+	US2505-T08P	FLAG T08P	AD.X 11T3
20A3R026M10-SAD11E-C	●	20	45	26	M10	10,5	3	0,1	+			
25A4R033M12-SAD11E-C	●	25	55	33	M12	12,5	4	0,1	+			
32A5R043M16-SAD11E-C	●	32	66	43	M16	17,0	5	0,1	+			
40A6R043M16-SAD11E-C	●	40	66	43	M16	17,0	6	0,2	+			

S90AD11E

Shoulder milling cutters with inserts ADMX11 / ADEX 11



γ_p	$+11^\circ \div +12^\circ$	κ_r	90°
γ_f	$-5,2^\circ \div -8,1^\circ$	$a_{p\max}$	9 mm

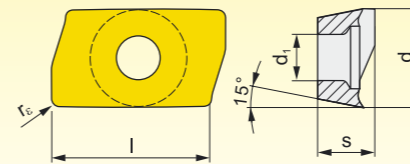


Z* - Number of teeth

ISO	Assortment	Dimensions							[kg]	Cooling	Spare parts			Inserts
		D	dH7	d_1	L	b	t	Z*						
40A04R-S90AD11E-C	●	40	16	14	40	8,4	5,6	4	0,2	+	US2505-T08P	D-T08P/T16P	FG-15	AD.X 11T3
40A06R-S90AD11E-C	●	40	16	14	40	8,4	5,6	6	0,2	+				
50A05R-S90AD11E-C	●	50	22	18	40	10,4	6,3	5	0,3	+				
50A07R-S90AD11E-C	●	50	22	18	40	10,4	6,3	7	0,3	+				
63A06R-S90AD11E-C	●	63	22	18	40	10,4	6,3	6	0,5	+				
63A09R-S90AD11E-C	●	63	22	18	40	10,4	6,3	9	0,5	+				
80A10R-S90AD11E-C	●	80	27	38	50	12,4	7,0	10	1,0	+				
100A11R-S90AD11E-C	●	100	32	45	50	14,4	8,0	11	1,7	+				
125A12R-S90AD11E-C	●	125	40	56	63	16,4	9,0	12	3,5	+				

Indexable cutting inserts ADMX11 / ADEX11

ADMX 11 / ADEX 11



Size	(l)	d	s	d_1	r_e
11T3	11,000	6,530	3,97	2,9	0,4 - 1,6

Geometry	ISO	ANSI	Grades						Radius
			2215	2230	8016	8230	8240	HF7	
	ADMX 11T304SR-F	ADMX -(2.5)1SR-F			●	●			0,4
	ADMX 11T308SR-F	ADMX -(2.5)2SR-F			●	●			0,8
	ADMX 11T304SR-M	ADMX -(2.5)1SR-M			●	●			0,4
	ADMX 11T308SR-M	ADMX -(2.5)2SR-M	●	●	●	●			0,8
	ADMX 11T316SR-M	ADMX -(2.5)4SR-M			●	●			1,6
	ADMX 11T308PR-R	ADMX -(2.5)2PR-R	●	●	●	●			0,8
	ADEX 11T304FR-FA	ADMX -(2.5)1FR-FA					●		0,4
	ADEX 11T308FR-FA	ADMX -(2.5)2FR-FA					●		0,8

● Stock Assortment ○ Non-stock Assortment

All dimensions in [mm]