

43APR-3

METRIC SERIES

TOLERANCES (mm)

12–25 DIAMETER

DC = -0,010/-0,100

DCON = h_6

RE = +/-0,05

NON-FERROUS

For patent
information visit
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mm							EDP NO.
CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	CORNER RADIUS RE	Ti-NAMITE-B (TiB ₂)
12,0	26,0	83,0	12,0	39,0	11,4	1,0	44976*
12,0	26,0	83,0	12,0	39,0	11,4	2,0	44977*
12,0	26,0	83,0	12,0	39,0	11,4	3,0	44978*
12,0	26,0	83,0	12,0	39,0	11,4	4,0	44979*
12,0	26,0	95,0	12,0	—	—	—	44975*
16,0	35,0	92,0	16,0	—	—	—	44980
16,0	35,0	92,0	16,0	51,0	15,2	2,0	44981*
16,0	35,0	92,0	16,0	51,0	15,2	3,0	44982*
16,0	35,0	92,0	16,0	51,0	15,2	4,0	44983*
16,0	35,0	108,0	16,0	67,0	15,2	2,0	44985*
16,0	35,0	108,0	16,0	67,0	15,2	3,0	44986*
16,0	35,0	108,0	16,0	67,0	15,2	4,0	44987*
16,0	35,0	124,0	16,0	—	—	—	44984
20,0	35,0	86,0	20,0	—	—	—	44990
20,0	35,0	86,0	20,0	45,0	19,4	3,0	44991
20,0	35,0	86,0	20,0	45,0	19,4	4,0	44992
20,0	35,0	106,0	20,0	—	—	—	44993
20,0	35,0	106,0	20,0	65,0	19,4	2,0	44994*
20,0	35,0	106,0	20,0	65,0	19,4	3,0	44995*
20,0	35,0	106,0	20,0	65,0	19,4	4,0	44996*
20,0	35,0	106,0	20,0	65,0	19,4	5,0	44997*
20,0	35,0	125,0	20,0	84,0	19,0	2,0	45021*
20,0	35,0	125,0	20,0	84,0	19,0	3,0	45022*
20,0	35,0	125,0	20,0	84,0	19,0	4,0	45023*
20,0	35,0	145,0	20,0	—	—	—	45020
25,0	43,0	108,0	25,0	—	—	—	44998
25,0	43,0	108,0	25,0	60,0	24,4	2,0	44999
25,0	43,0	108,0	25,0	60,0	24,4	3,0	45000
25,0	43,0	108,0	25,0	60,0	24,4	4,0	45001
25,0	35,0	140,0	25,0	—	—	—	45002
25,0	35,0	140,0	25,0	80,0	24,4	3,0	45003*
25,0	35,0	140,0	25,0	90,0	24,4	3,0	45004*
25,0	35,0	151,0	25,0	—	—	—	45024
25,0	35,0	151,0	25,0	105,0	23,7	3,0	45025*

*Variable Helix

- Ultra high-productivity rougher for Aluminum alloys, specifically for aircraft components
- Designed for machine tools with capability of 12 l³ per minute material removal rates
- New 3 flute variable geometry with side exit coolant holes
- Open fluting for deep slotting and profiling
- Recommended for materials ≤ 150 Bhn (≤ 7 HRC)

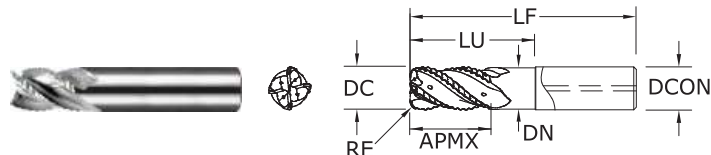
METRIC

S-Carb APR®



43APR-4

METRIC SERIES



- Ultra high-productivity rougher for Aluminum alloys, specifically for aircraft components
- Designed for machine tools with capability of 12 l³ per minute material removal rates
- 4 flute variable geometry with side exit coolant holes
- Open fluting for deep slotting and profiling
- Recommended for materials ≤ 150 Bhn (≤ 7 HRC)

mm							EDP NO.
CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	CORNER RADIUS RE	Ti-NAMITE-B (TiB ₂)
20,0	35,0	86,0	20,0	—	18,97	—	45005
20,0	35,0	86,0	20,0	45,0	19,00	3,0	45006
20,0	35,0	86,0	20,0	45,0	19,00	4,0	45007
20,0	35,0	106,0	20,0	—	19,00	—	45008
20,0	35,0	106,0	20,0	65,0	19,00	2,0	45009
20,0	35,0	106,0	20,0	65,0	19,00	3,0	45010
20,0	35,0	106,0	20,0	65,0	19,00	4,0	45011
20,0	35,0	106,0	20,0	65,0	19,00	5,0	45012
25,0	43,0	108,0	25,0	—	23,75	—	45013
25,0	43,0	108,0	25,0	60,0	23,75	2,0	45014
25,0	43,0	108,0	25,0	60,0	23,75	3,0	45015
25,0	43,0	108,0	25,0	60,0	23,75	4,0	45016
25,0	35,0	140,0	25,0	—	23,75	—	45017
25,0	35,0	140,0	25,0	80,0	23,75	3,0	45018
25,0	35,0	140,0	25,0	90,0	23,75	3,0	45019

TOLERANCES (mm)

20–25 DIAMETER

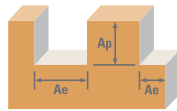
DC = −0,010/−0,100

DCON = h₆

RE = ±0,050

NON-FERROUS

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Series 43APR-3 43APR-4 Metric		Ae x DC		Ap x DC		Vc (m/min)		DC • mm			
								APR-3		APR-4	
								20	25	20	25
N	ALUMINIUM ALLOYS 6068, 7075		1	≤ 1	1600	RPM	25461	20369	25461	20369	
					(300-2100)	Fz	0.14	0.15	0.12	0.13	
						Feed (mm/min)	10694	9166	12222	10592	
			≤ 0.5	≤ 1.5	1800	RPM	28644	22915	28644	22915	
					(300-2100)	Fz	0.16	0.17	0.14	0.15	
						Feed (mm/min)	13749	11687	16041	13749	
			≤ 0.1	≤ 2	2100	RPM	33418	26735	33418	26735	
					(300-2100)	Fz	0.19	0.20	0.16	0.17	
						Feed (mm/min)	19048	16041	21388	18180	

Series 43APR-3 43APR-4 Metric						DC • mm				
						APR-3 LONG				
						12	16	20	25	
N	ALUMINIUM ALLOYS 6068, 7075		1	≤ 1	1600	RPM	26522	19892	15913	12731
					(300-2100)	Fz	0.10	0.11	0.12	0.13
					Feed (mm/min)	7957	6564	5729	4965	
			≤ 0.5	≤ 1.5	1800	RPM	31827	23870	19096	15277
					(300-2100)	Fz	0.12	0.13	0.14	0.15
					Feed (mm/min)	11458	9309	8020	6875	
			≤ 0.1	≤ 2	2100	RPM	37131	27849	22279	17823
					(300-2100)	Fz	0.14	0.15	0.16	0.17
					Feed (mm/min)	15595	12532	10694	9090	

RPM stated may be outside of most machine tools in the smaller sizes, adjust the surface speed but maintain the Fz
For best results use the peak power of the specific machine torque chart.
Typically 10kw is required to remove 1 litre of material (MMR).
Eg. >> (Ae x Ap x Feed) / 1000000 >> Therefore Full slotting Ø25: 25 x 25 x 7333 = 4.58 Litres so it needs a min of 46Kw.
Larger cuts and chip load consume more power.
Review the power chart of each machine to determine MAX power for ultimate performance.
Example below shows peak power @ 10,000 rpm.
The APR-4 design is for ultimate metal removal but typically requires more power, and is also better suited to horizontal machines.
The new coolant supply is designed for MQL as well as normal emulsion coolant on the same data.
Ensure max MQL flow prior to cutting.
Refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgtool.com).

