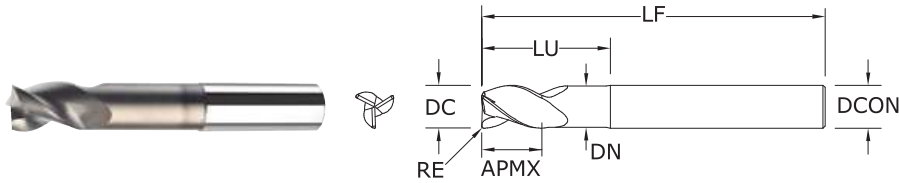


**43M •  
43MCR**  
METRIC SERIES



- Circular land allows for increased control at various speed and feed rates and reduces chatter
- Symmetrical end gashing for excellent balance at high speeds and aggressive plunging capability
- Open fluting for deep slotting and profiling
- Polished flutes maximize chip evacuation and provides enhanced finish
- Enhanced corner geometry with tight tolerance corner radii
- Recommended for materials  $\leq 150$  Bhn ( $\leq 7$  HRC)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	mm				REACH LU	NECK DIAMETER DN	POLISHED FLUTE	EDP NO.	
			SHANK DIAMETER DCON	CORNER RADIUS RE	UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )					
3,0	8,0	52,0	6,0	—	—	—	—	•	—	44890	
4,0	11,0	55,0	6,0	—	—	—	—	•	—	44891	
5,0	13,0	57,0	6,0	—	—	—	—	•	—	44892	
6,0	13,0	57,0	6,0	—	—	—	—	—	44701	44715	
6,0	13,0	57,0	6,0	1,5	—	—	—	—	—	44732	
6,0	13,0	57,0	6,0	0,5	—	—	—	•	—	44902	
6,0	13,0	57,0	6,0	1,0	—	—	—	•	—	44894	
6,0	13,0	72,0	6,0	—	—	—	—	—	44702	44716	
6,0	13,0	72,0	6,0	0,8	—	—	—	•	—	44842	
6,0	13,0	72,0	6,0	1,2	—	—	—	•	—	44843	
6,0	24,0	75,0	6,0	—	—	—	—	•	—	44893	
6,0	24,0	75,0	6,0	0,5	—	—	—	•	—	44844	
6,0	24,0	75,0	6,0	1,0	—	—	—	•	—	44845	
8,0	19,0	63,0	8,0	—	—	—	—	—	44703	44717	
8,0	19,0	63,0	8,0	0,3	—	—	—	•	—	44846	
8,0	19,0	63,0	8,0	0,5	—	—	—	•	—	44847	
8,0	19,0	63,0	8,0	1,0	—	—	—	•	—	44848	
8,0	19,0	63,0	8,0	1,5	—	—	—	•	—	44849	
8,0	32,0	75,0	8,0	—	—	—	—	•	—	44895	
8,0	32,0	75,0	8,0	0,5	—	—	—	•	—	44850	
8,0	32,0	75,0	8,0	1,0	—	—	—	•	—	44851	
8,0	32,0	75,0	8,0	1,5	—	—	—	•	—	44852	
8,0	32,0	75,0	8,0	2,0	—	—	—	•	—	44853	
10,0	22,0	72,0	10,0	—	—	—	—	—	44705	44719	
10,0	22,0	72,0	10,0	0,3	—	—	—	•	—	44854	
10,0	22,0	72,0	10,0	0,5	—	—	—	•	—	44855	
10,0	22,0	72,0	10,0	1,0	—	—	—	•	—	44856	
10,0	22,0	72,0	10,0	1,5	—	—	—	•	—	44857	
10,0	40,0	100,0	10,0	—	—	—	—	•	—	44896	
10,0	40,0	100,0	10,0	0,5	—	—	—	•	—	44858	
10,0	40,0	100,0	10,0	1,0	—	—	—	•	—	44859	
10,0	40,0	100,0	10,0	1,5	—	—	—	•	—	44860	
10,0	40,0	100,0	10,0	2,0	—	—	—	•	—	44861	
12,0	26,0	83,0	12,0	—	—	—	—	—	44708	44722	
12,0	26,0	83,0	12,0	1,5	—	—	—	—	44814	44733	
12,0	26,0	83,0	12,0	2,0	—	—	—	—	44815	44826	
12,0	26,0	83,0	12,0	2,5	—	—	—	—	44816	44827	
12,0	26,0	83,0	12,0	3,0	—	—	—	—	44817	44734	
12,0	48,0	100,0	12,0	—	—	—	—	•	—	44897	
12,0	48,0	100,0	12,0	0,5	—	—	—	•	—	44862	

continued on next page

**TOLERANCES (mm)**

**6 DIAMETER**

DC = +0,000/-0,008

DCON = h<sub>6</sub>

RE = +0,000/-0,050

**>6-10 DIAMETER**

DC = +0,000/-0,009

DCON = h<sub>6</sub>

RE = +0,000/-0,050

**>10-18 DIAMETER**

DC = +0,000/-0,011

DCON = h<sub>6</sub>

RE = +0,000/-0,050

**>18-20 DIAMETER**

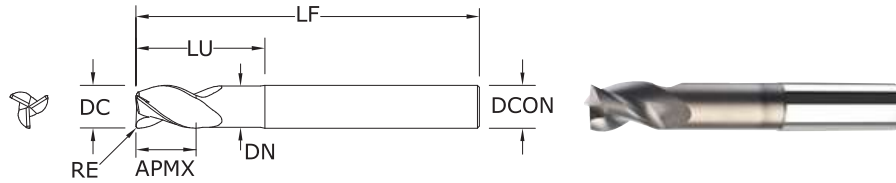
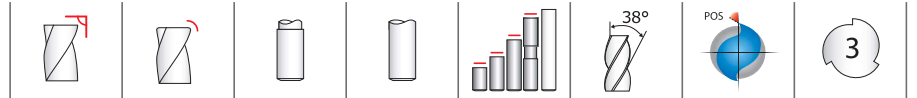
DC = +0,000/-0,013

DCON = h<sub>6</sub>

RE = +0,000/-0,050

**NON-FERROUS**  
**PLASTICS/COMPOSITES**

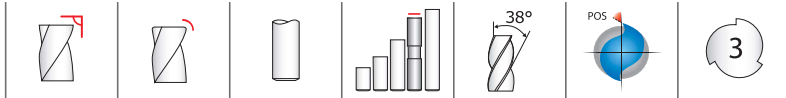
For patent information visit [www.ksptpatents.com](http://www.ksptpatents.com)



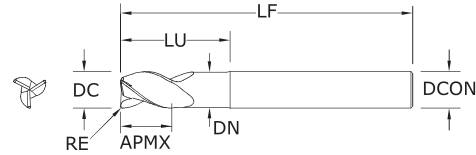
**43M •  
43MCR**  
METRIC SERIES

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	mm					POLISHED FLUTE	EDP NO.	
			SHANK DIAMETER DCON	CORNER RADIUS RE	REACH LU	NECK DIAMETER DN	UNCOATED		Ti-NAMITE-B (TiB <sub>2</sub> )	
12,0	48,0	100,0	12,0	1,0	—	—	•	—	44863	
12,0	48,0	100,0	12,0	1,5	—	—	•	—	44864	
12,0	48,0	100,0	12,0	2,0	—	—	•	—	44865	
12,0	48,0	100,0	12,0	2,5	—	—	•	—	44866	
12,0	48,0	100,0	12,0	3,0	—	—	•	—	44867	
14,0	30,0	89,0	14,0	—	—	—	•	—	44898	
14,0	30,0	89,0	14,0	1,0	—	—	•	—	44868	
14,0	30,0	89,0	14,0	2,0	—	—	•	—	44869	
14,0	30,0	89,0	14,0	3,0	—	—	•	—	44870	
14,0	18,0	125,0	14,0	—	45,0	13,49	•	—	44899	
16,0	32,0	92,0	16,0	—	—	—	•	44711	44725	
16,0	32,0	92,0	16,0	1,5	—	—	•	44818	44735	
16,0	32,0	92,0	16,0	2,0	—	—	•	44819	44828	
16,0	32,0	92,0	16,0	2,5	—	—	•	44820	44829	
16,0	32,0	92,0	16,0	3,0	—	—	•	44821	44736	
16,0	32,0	92,0	16,0	4,0	—	—	•	—	44871	
16,0	64,0	125,0	16,0	—	—	—	•	—	44900	
16,0	64,0	125,0	16,0	0,5	—	—	•	—	44872	
16,0	64,0	125,0	16,0	1,0	—	—	•	—	44873	
16,0	64,0	125,0	16,0	1,5	—	—	•	—	44874	
16,0	64,0	125,0	16,0	2,0	—	—	•	—	44875	
16,0	64,0	125,0	16,0	2,5	—	—	•	—	44876	
16,0	64,0	125,0	16,0	3,0	—	—	•	—	44877	
16,0	64,0	125,0	16,0	4,0	—	—	•	—	44878	
20,0	38,0	104,0	20,0	—	—	—	•	44714	44728	
20,0	38,0	104,0	20,0	2,0	—	—	•	44822	44830	
20,0	38,0	104,0	20,0	2,5	—	—	•	44823	44831	
20,0	38,0	104,0	20,0	3,0	—	—	•	44824	44737	
20,0	38,0	104,0	20,0	4,0	—	—	•	—	44879	
20,0	80,0	150,0	20,0	—	—	—	•	—	44901	
20,0	80,0	150,0	20,0	0,5	—	—	•	—	44880	
20,0	80,0	150,0	20,0	1,0	—	—	•	—	44881	
20,0	80,0	150,0	20,0	1,5	—	—	•	—	44882	
20,0	80,0	150,0	20,0	2,0	—	—	•	—	44883	
20,0	80,0	150,0	20,0	2,5	—	—	•	—	44884	
20,0	80,0	150,0	20,0	3,0	—	—	•	—	44885	
20,0	80,0	150,0	20,0	4,0	—	—	•	—	44886	
25,0	50,0	125,0	25,0	—	—	—	•	—	44731	

CONTINUED



**43ML •  
43MLC**  
METRIC SERIES



- Circular land allows for increased control at various speed and feed rates and reduces chatter
- Symmetrical end gashing for excellent balance at high speeds and aggressive plunging capability
- Open fluting for deep slotting and profiling
- Polished flutes maximize chip evacuation and provides enhanced finish
- Necked design with blended diameter transitions provide clearance to reach
- Enhanced corner geometry with tight tolerance corner radii
- Recommended for materials  $\leq 150$  Bhn ( $\leq 7$  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	POLISHED FLUTE	UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
6,0	10,0	63,0	6,0	20,0	5,49	0,5		44769	44789
6,0	10,0	63,0	6,0	20,0	5,49	1,0		44770	44790
6,0	10,0	75,0	6,0	20,0	5,49	–		–	42706
6,0	13,0	72,0	6,0	30,0	5,49	0,5		44771	44791
6,0	13,0	72,0	6,0	30,0	5,49	1,0		44772	44792
8,0	12,0	75,0	8,0	25,0	7,49	–		–	44792
8,0	12,0	75,0	8,0	25,0	7,49	–		–	42707
8,0	12,0	75,0	8,0	25,0	7,49	0,3		44773	44793
8,0	12,0	75,0	8,0	25,0	7,49	0,5		44774	44794
8,0	12,0	75,0	8,0	25,0	7,49	0,8	•	–	44950
8,0	12,0	75,0	8,0	25,0	7,49	1,0		44775	44795
8,0	12,0	75,0	8,0	25,0	7,49	1,2	•	–	44951
8,0	12,0	75,0	8,0	25,0	7,49	1,5		44776	44796
8,0	12,0	75,0	8,0	25,0	7,49	1,6	•	–	44952
10,0	14,0	100,0	10,0	35,0	9,48	–		–	42708
10,0	14,0	100,0	10,0	35,0	9,48	0,3		44777	44797
10,0	14,0	100,0	10,0	35,0	9,48	0,5		44778	44798
10,0	14,0	100,0	10,0	35,0	9,48	1,0		44779	44799
10,0	14,0	100,0	10,0	35,0	9,48	1,5		44780	44800
10,0	14,0	100,0	10,0	35,0	9,50	0,8	•	–	44953
10,0	14,0	100,0	10,0	35,0	9,50	1,2	•	–	44954
10,0	14,0	100,0	10,0	35,0	9,50	1,6	•	–	44955
10,0	14,0	100,0	10,0	35,0	9,50	2,4	•	–	44956
12,0	16,0	100,0	12,0	40,0	11,48	–		–	42709
12,0	16,0	100,0	12,0	40,0	11,48	0,5		44781	44801
12,0	16,0	100,0	12,0	40,0	11,48	0,8	•	–	44957
12,0	16,0	100,0	12,0	40,0	11,48	1,0		44782	44802
12,0	16,0	100,0	12,0	40,0	11,48	1,2	•	–	44958
12,0	16,0	100,0	12,0	40,0	11,48	1,5		44783	44803
12,0	16,0	100,0	12,0	40,0	11,48	1,6	•	–	44959
12,0	16,0	100,0	12,0	40,0	11,48	2,0		44784	44804
12,0	16,0	100,0	12,0	40,0	11,48	2,4	•	–	44960
12,0	16,0	100,0	12,0	40,0	11,48	2,5		44832	44839
12,0	16,0	100,0	12,0	40,0	11,48	3,0		44833	44738

**TOLERANCES (mm)**

**6 DIAMETER**

DC = +0,000/–0,008  
DCON = h<sub>6</sub>

**>6–10 DIAMETER**

DC = +0,000/–0,009  
DCON = h<sub>6</sub>  
RE = +0,000/–0,050

**>10–18 DIAMETER**

DC = +0,000/–0,011  
DCON = h<sub>6</sub>  
RE = +0,000/–0,050

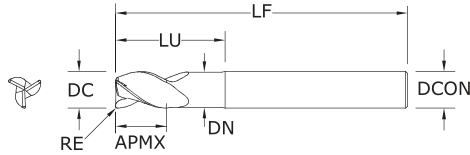
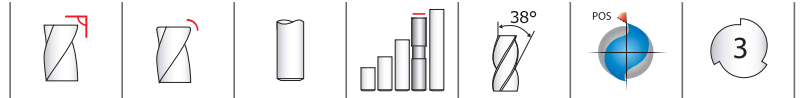
**>18–20 DIAMETER**

DC = +0,000/–0,013  
DCON = h<sub>6</sub>  
RE = +0,000/–0,050



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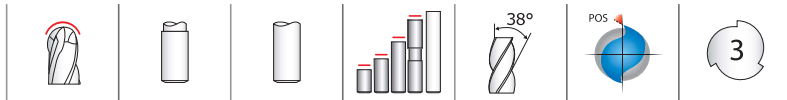
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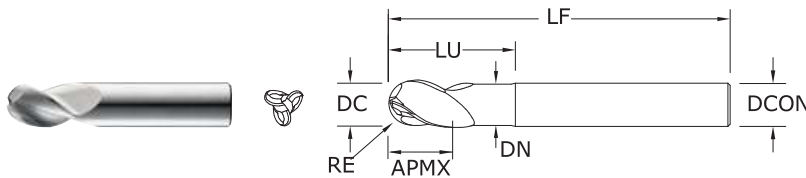
**43ML •**  
**43MLC**  
METRIC SERIES

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	CORNER RADIUS RE	POLISHED FLUTE	EDP NO.	
								UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
12,0	16,0	100,0	12,0	40,0	11,48	4,0		44834	44741
14,0	18,0	125,0	14,0	45,0	13,49	1,0	•	–	44961
14,0	18,0	125,0	14,0	45,0	13,49	2,0	•	–	44962
14,0	18,0	125,0	14,0	45,0	13,49	3,0	•	–	44963
14,0	18,0	125,0	14,0	45,0	13,49	4,0	•	–	44964
16,0	20,0	125,0	16,0	50,0	15,47	–		–	42710
16,0	20,0	125,0	16,0	50,0	15,47	2,0		44785	44805
16,0	20,0	125,0	16,0	50,0	15,47	2,5		44835	44840
16,0	20,0	125,0	16,0	50,0	15,47	3,0		44836	44739
16,0	20,0	125,0	16,0	50,0	15,47	4,0		44786	44806
16,0	20,0	125,0	16,0	50,0	15,49	0,8	•	–	44965
16,0	20,0	125,0	16,0	50,0	15,49	1,2	•	–	44966
16,0	20,0	125,0	16,0	50,0	15,49	1,6	•	–	44967
16,0	20,0	125,0	16,0	50,0	15,49	2,4	•	–	44968
16,0	20,0	125,0	16,0	50,0	15,49	3,2	•	–	44969
20,0	25,0	150,0	20,0	65,0	19,46	–		–	42711
20,0	25,0	150,0	20,0	65,0	19,46	2,0		44787	44807
20,0	25,0	150,0	20,0	65,0	19,46	2,4	•	–	44973
20,0	25,0	150,0	20,0	65,0	19,46	2,5		44837	44841
20,0	25,0	150,0	20,0	65,0	19,46	3,0		44838	44740
20,0	25,0	150,0	20,0	65,0	19,46	4,0		44788	44808
20,0	25,0	150,0	20,0	65,0	19,48	0,8	•	–	44970
20,0	25,0	150,0	20,0	65,0	19,48	1,2	•	–	44971
20,0	25,0	150,0	20,0	65,0	19,48	1,6	•	–	44972
20,0	25,0	150,0	20,0	65,0	19,48	3,2	•	–	44974

CONTINUED



**43MB**  
METRIC SERIES



- Circular land allows for increased control at various speed and feed rates and reduces chatter
- Open fluting for deep slotting and profiling
- Polished flutes maximize chip evacuation and provides enhanced finish
- Ball nose design ideal for finishing operations in complex workpieces
- Recommended for materials  $\leq 150$  Bhn ( $\leq 7$  HRC)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	mm				POLISHED FLUTE	EDP NO.
			SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	Ti-NAMITE-B (TiB <sub>2</sub> )		
3,0	4,5	57,0	6,0	—	—	•	44916	
3,0	6,0	57,0	6,0	10,0	2,74	•	44917	
3,0	9,0	57,0	6,0	16,0	2,74	•	44918	
4,0	6,0	57,0	6,0	—	—	•	44919	
4,0	8,0	57,0	6,0	13,0	3,73	•	44920	
4,0	12,0	57,0	6,0	21,0	3,73	•	44921	
5,0	7,5	57,0	6,0	—	—	•	44922	
5,0	10,0	63,0	6,0	16,0	4,50	•	44923	
5,0	15,0	63,0	6,0	26,0	4,50	•	44924	
6,0	9,0	57,0	6,0	—	—	•	44925	
6,0	12,0	63,0	6,0	19,0	5,49	•	44926	
6,0	18,0	75,0	6,0	31,0	5,49	•	44927	
8,0	12,0	63,0	8,0	—	—	•	44928	
8,0	16,0	75,0	8,0	25,0	7,49	•	44929	
8,0	24,0	83,0	8,0	41,0	7,49	•	44930	
10,0	15,0	75,0	10,0	—	—	•	44931	
10,0	20,0	83,0	10,0	31,0	9,50	•	44932	
10,0	30,0	100,0	10,0	51,0	9,50	•	44933	
12,0	18,0	83,0	12,0	—	—	•	44934	
12,0	24,0	100,0	12,0	37,0	11,48	•	44935	
12,0	36,0	130,0	12,0	61,0	11,48	•	44936	
16,0	24,0	100,0	16,0	—	—	•	44937	
16,0	32,0	130,0	16,0	49,0	15,49	•	44938	
16,0	48,0	150,0	16,0	81,0	15,49	•	44939	
20,0	30,0	108,0	20,0	—	—	•	44940	
20,0	40,0	130,0	20,0	61,0	19,48	•	44941	
20,0	60,0	150,0	20,0	101,0	19,48	•	44942	
25,0	37,5	127,0	25,0	—	—	•	44943	
25,0	50,0	152,0	25,0	76,0	24,49	•	44944	
25,0	75,0	170,0	25,0	126,0	24,49	•	44945	

RE = 1/2 Cutting Diameter (DC)

**TOLERANCES (mm)**

**3 DIAMETER**

DC = +0,000/-0,006  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

**>3-6 DIAMETER**

DC = +0,000/-0,008  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

**>6-10 DIAMETER**

DC = +0,000/-0,009  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

**>10-18 DIAMETER**

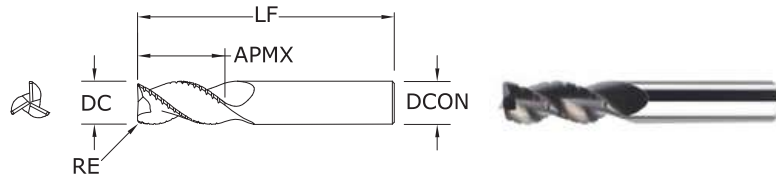
DC = +0,000/-0,011  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

**>18-25 DIAMETER**

DC = +0,000/-0,013  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127



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**43MCB**  
METRIC SERIES

**TOLERANCES (mm)**

**>6–10 DIAMETER**

DC = +0,000/–0,009

DCON = h<sub>6</sub>

RE = +0,000/–0,050

**>10–18 DIAMETER**

DC = +0,000/–0,011

DCON = h<sub>6</sub>

RE = +0,000/–0,050

**>18–20 DIAMETER**

DC = +0,000/–0,013

DCON = h<sub>6</sub>

RE = +0,000/–0,050

NON-FERROUS

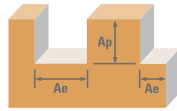
PLASTICS/COMPOSITES

For patent  
information visit  
[www.ksptpatents.com](http://www.ksptpatents.com)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	mm			EDP NO.	
		OVERALL LENGTH LF	SHANK DIAMETER DCON	CORNER RADIUS RE	UNCOATED	TI-NAMITE-B (TiB <sub>2</sub> )
6,0	19,0	63,0	6,0	0,5	44298	44299
8,0	19,0	63,0	8,0	0,3	44300	44305
10,0	22,0	72,0	10,0	0,3	44301	44306
12,0	26,0	83,0	12,0	1,0	44302	44307
16,0	32,0	92,0	16,0	1,0	44303	44308
20,0	38,0	104,0	20,0	1,0	44304	44309

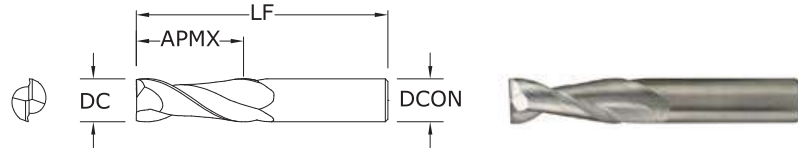
- Circular land allows for increased control at various speed and feed rates and reduces chatter
- Symmetrical end gashing for excellent balance at high speeds and aggressive plunging capability
- Chip breakers reduce machine loads up to 15% for increased roughing feed rate capability
- Open fluting for deep slotting and profiling
- Recommended for materials ≤ 150 Bhn (≤ 7 HRC)

Series  
43M, 43MB,  
43MCR, 43ML,  
43MLC, 43MCB  
Metric



Material	Hardness	Ae x DC	Ap x DC	Vc (m/min)	DC • mm								
					3	6	10	12	16	20	25		
ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6073, 7075	≤ 150 Bhn or ≤ 7 HRc	Slot 	1	≤ 1	490	RPM	52022	26011	15607	13005	9754	7803	6243
					(392-588)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	3371	4682	5618	5618	4869	4370	3980	
		Profile 	≤ 0.5	≤ 1.5	610	RPM	64762	32381	19429	16190	12143	9714	7771
					(488-732)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	4196	5828	6994	6994	6061	5440	4955	
		HSM 	≤ 0.05	≤ 2	1005	RPM	106698	53349	32009	26674	20006	16005	12804
					(804-1206)	Fz	0.050	0.132	0.280	0.336	0.384	0.440	0.488
					Feed (mm/min)	16131	21124	26888	26885	23046	21126	18726	
ALUMINUM DIE CAST ALLOYS (HIGH SILICONE) A-390, A-392, B- 390	≤ 125 Bhn or ≤ 77 HRb	Slot 	1	≤ 1	185	RPM	19641	9820	5892	4910	3683	2946	2357
					(148-222)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	1273	1768	2121	2121	1838	1650	1503	
		Profile 	≤ 0.5	≤ 1.5	230	RPM	24418	12209	7326	6105	4578	3663	2930
					(184-276)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	1582	2197	2637	2637	2285	2051	1868	
		HSM 	≤ 0.05	≤ 2	380	RPM	40343	20172	12103	10086	7564	6052	4841
					(304-456)	Fz	0.050	0.132	0.280	0.336	0.384	0.440	0.488
					Feed (mm/min)	6099	7987	10166	10166	8714	7988	7081	
COPPER ALLOYS Aluminum Bronze Brass Naval Brass Red Brass	≤ 140 Bhn or ≤ 3 HRc	Slot 	1	≤ 1	265	RPM	28134	14067	8440	7034	5275	4220	3376
					(212-318)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	1620	2025	2701	2532	2228	2026	1773	
		Profile 	≤ 0.5	≤ 1.5	330	RPM	35035	17518	10511	8759	6569	5255	4204
					(264-396)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	2018	2522	3363	3153	2775	2523	2207	
		HSM 	≤ 0.05	≤ 2	545	RPM	57861	28930	17358	14465	10849	8679	6943
					(436-654)	Fz	0.041	0.108	0.227	0.276	0.320	0.373	0.400
					Feed (mm/min)	7082	9373	11804	11976	10415	9721	8332	
COPPER ALLOYS Beryllium Copper C110, Manganese Bronze, Tin Bronze	≤ 200 Bhn or ≤ 23 HRc	Slot 	1	≤ 1	105	RPM	11148	5574	3344	2787	2090	1672	1338
					(84-126)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	642	803	1070	1003	883	803	702	
		Profile 	≤ 0.5	≤ 1.5	130	RPM	13802	6901	4141	3450	2588	2070	1656
					(104-156)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	795	994	1325	1242	1093	994	870	
		HSM 	≤ 0.05	≤ 2	215	RPM	22826	11413	6848	5706	4280	3424	2739
					(172-258)	Fz	0.041	0.108	0.227	0.276	0.320	0.373	0.400
					Feed (mm/min)	2794	3697	4656	4725	4109	3835	3287	
PLASTICS ABS, Polycarbonate, PVC, Polypropylene		Slot 	1	≤ 1	490	RPM	52022	26011	15607	13005	9754	7803	6243
					(392-588)	Fz	0.036	0.096	0.200	0.240	0.282	0.320	0.350
					Feed (mm/min)	5618	7490	9364	9363	8240	7491	6555	
		Profile 	≤ 0.5	≤ 1.5	610	RPM	64762	32381	19429	16190	12143	9714	7771
					(488-732)	Fz	0.036	0.096	0.200	0.240	0.282	0.320	0.350
					Feed (mm/min)	6994	9325	11657	11656	10258	9326	8160	
		HSM 	≤ 0.05	≤ 2	1005	RPM	106698	53349	32009	26674	20006	16005	12804
					(804-1206)	Fz	0.082	0.216	0.453	0.552	0.640	0.733	0.800
					Feed (mm/min)	26117	34567	43532	44169	38410	35210	30730	

Bhn (Brinell)    HRc (Rockwell C)    HRb (Rockwell B)    HSM (High Speed Machining)  
 $rpm = (Vc \times 1000) / (DC \times 3.14)$   
 $mm/min = Fz \times 3 \times rpm$   
 reduce speed and feed for materials harder than listed  
 reduce cut depth and feed by 50% for long flute and long reach tools  
 reduce feed and Ae when finish milling (.02 x DC maximum)  
 refer to the SGS Tool Wizard® for complete technical information ([www.kyocera-sgstool.com](http://www.kyocera-sgstool.com))



**47M**  
METRIC SERIES

**TOLERANCES (mm)**

**3 DIAMETER**

DC = +0,000/-0,006  
DCON = h<sub>6</sub>

**>3-6 DIAMETER**

DC = +0,000/-0,008  
DCON = h<sub>6</sub>

**>6-10 DIAMETER**

DC = +0,000/-0,009  
DCON = h<sub>6</sub>

**>10-18 DIAMETER**

DC = +0,000/-0,012  
DCON = h<sub>6</sub>

**>18-25 DIAMETER**

DC = +0,000/-0,013  
DCON = h<sub>6</sub>

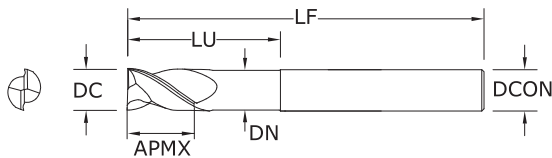
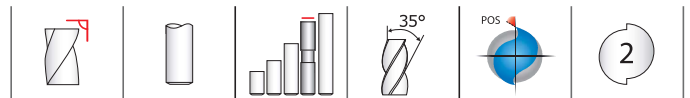
NON-FERROUS

PLASTICS/COMPOSITES

For patent information visit [www.ksptpatents.com](http://www.ksptpatents.com)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	EDP NO.	
				UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
3,0	8,0	38,0	3,0	44550	44587
4,0	11,0	50,0	4,0	44551	44588
5,0	13,0	50,0	5,0	44552	44589
6,0	13,0	57,0	6,0	44553	44590
8,0	19,0	63,0	8,0	44554	44591
10,0	22,0	72,0	10,0	44555	44592
12,0	26,0	83,0	12,0	44556	44593
14,0	26,0	83,0	14,0	44557	44594
16,0	32,0	92,0	16,0	44558	44595
20,0	38,0	104,0	20,0	44559	44596
25,0	38,0	104,0	25,0	44560	44597

- Circular land reduces edge aggressiveness for varied speed and feed rates
- 2 Flutes effectively manage the large size and volume of chips produced during the aggressive machining process
- Excellent balance at high speeds and aggressive plunging capability
- Recommended for materials ≤ 150 Bhn (≤ 7 HRC)



**47ML**  
METRIC SERIES

**TOLERANCES (mm)**

**6 DIAMETER**

DC = +0,000/-0,008  
DCON = h<sub>6</sub>

**>6-10 DIAMETER**

DC = +0,000/-0,009  
DCON = h<sub>6</sub>

**>10-18 DIAMETER**

DC = +0,000/-0,011  
DCON = h<sub>6</sub>

**>18-20 DIAMETER**

DC = +0,000/-0,013  
DCON = h<sub>6</sub>

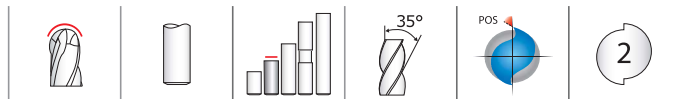
NON-FERROUS

PLASTICS/COMPOSITES

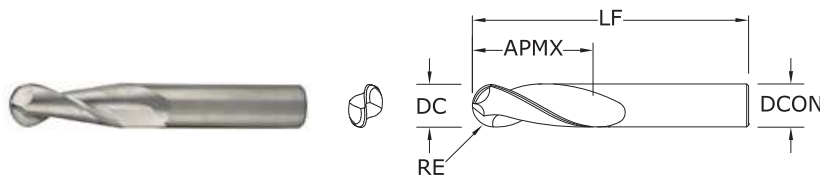
For patent information visit [www.ksptpatents.com](http://www.ksptpatents.com)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	EDP NO.	
						UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
6,0	10,0	100,0	6,0	54,0	5,62	44561	44609
8,0	12,0	100,0	8,0	54,0	7,62	44562	44610
10,0	12,0	100,0	10,0	54,0	9,62	44563	44611
12,0	16,0	150,0	12,0	80,0	11,62	44564	44612
16,0	20,0	150,0	16,0	80,0	15,62	44565	44613
20,0	25,0	150,0	20,0	80,0	19,62	44566	44614

- Circular land reduces edge aggressiveness for varied speed and feed rates
- 2 Flutes effectively manage the large size and volume of chips produced during the aggressive machining process
- Excellent balance at high speeds and aggressive plunging capability
- Necked design with blended diameter transitions provide clearance to reach
- Recommended for materials ≤ 150 Bhn (≤ 7 HRC)



**47MB**  
METRIC SERIES



- Circular land reduces edge aggressiveness for varied speed and feed rates
- 2 Flutes effectively manage the large size and volume of chips produced during the aggressive machining process
- Excellent balance at high speeds and aggressive plunging capability
- Ball nose design ideal for finishing operations in complex workpieces
- Recommended for materials  $\leq 150$  Bhn ( $\leq 7$  HRC)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	EDP NO.	
				UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
3,0	8,0	38,0	3,0	44570	44598
4,0	11,0	50,0	4,0	44571	44599
5,0	13,0	50,0	5,0	44572	44600
6,0	13,0	57,0	6,0	44573	44601
8,0	19,0	63,0	8,0	44574	44602
10,0	22,0	72,0	10,0	44575	44603
12,0	26,0	83,0	12,0	44576	44604
14,0	26,0	83,0	14,0	44577	44605
16,0	32,0	92,0	16,0	44578	44606
20,0	37,3	104,0	20,0	44579	44607
25,0	38,0	104,0	25,0	44580	44608

RE = 1/2 Cutting Diameter (DC)

**TOLERANCES (mm)**

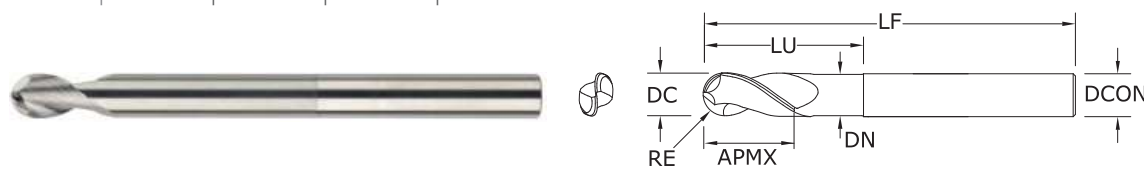
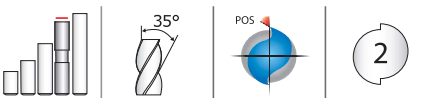
- 3 DIAMETER**  
DC = +0,000/-0,006  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >3-6 DIAMETER**  
DC = +0,000/-0,008  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >6-10 DIAMETER**  
DC = +0,000/-0,009  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >10-18 DIAMETER**  
DC = +0,000/-0,012  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >18-25 DIAMETER**  
DC = +0,000/-0,013  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

NON-FERROUS

PLASTICS/COMPOSITES

For patent information visit [www.ksptpatents.com](http://www.ksptpatents.com)

**47MLB**  
METRIC SERIES



- Circular land reduces edge aggressiveness for varied speed and feed rates
- 2 Flutes effectively manage the large size and volume of chips produced during the aggressive machining process
- Excellent balance at high speeds and aggressive plunging capability
- Necked design with blended diameter transitions provide clearance to reach
- Ball nose design ideal for finishing operations in complex workpieces
- Recommended for materials  $\leq 150$  Bhn ( $\leq 7$  HRC)

CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	REACH LU	NECK DIAMETER DN	EDP NO.	
						UNCOATED	Ti-NAMITE-B (TiB <sub>2</sub> )
6,0	10,0	100,0	6,0	54,0	5,62	44581	44615
8,0	12,0	100,0	8,0	54,0	7,62	44582	44616
10,0	12,0	100,0	10,0	54,0	9,62	44583	44617
12,0	16,0	150,0	12,0	80,0	11,62	44584	44618
16,0	20,0	150,0	16,0	80,0	15,62	44585	44619
20,0	25,0	150,0	20,0	80,0	19,62	44586	44620

RE = 1/2 Cutting Diameter (DC)

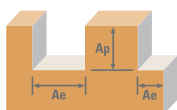
**TOLERANCES (mm)**

- 6 DIAMETER**  
DC = +0,000/-0,008  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >6-10 DIAMETER**  
DC = +0,000/-0,009  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >10-18 DIAMETER**  
DC = +0,000/-0,011  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127
- >18-20 DIAMETER**  
DC = +0,000/-0,013  
DCON = h<sub>6</sub>  
RE = +0,0127/-0,0127

NON-FERROUS

PLASTICS/COMPOSITES

For patent information visit [www.ksptpatents.com](http://www.ksptpatents.com)



Series 47M, 47MB, 47ML, 47MLB Metric	Hardness	Ae x DC	Ap x DC	Vc (m/min)	DC • mm								
					3	6	10	12	16	20	25		
ALUMINUM ALLOYS 2024, 5052, 5086, 6061, 6073, 7075	Slot 	1	≤ 1	490	RPM	52022	26011	15607	13005	9754	7803	6243	
				(392-588)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213	
				Feed (mm/min)	2247	3121	3746	3745	3246	2913	2653		
	≤ 150 Bhn or ≤ 7 HRc	Profile 	≤ 0.5	≤ 1.5	610	RPM	64762	32381	19429	16190	12143	9714	7771
					(488-732)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	2797	3885	4663	4662	4041	3627	3303	
	HSM 	≤ 0.05	≤ 2	1005	RPM	106698	53349	32009	26674	20006	16005	12804	
				(804-1206)	Fz	0.050	0.132	0.280	0.336	0.384	0.440	0.488	
				Feed (mm/min)	10754	14083	17925	17924	15364	14084	12484		
ALUMINUM DIE CAST ALLOYS (HIGH SILICONE) A-390, A-392, B-390	Slot 	1	≤ 1	185	RPM	19641	9820	5892	4910	3683	2946	2357	
				(148-222)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213	
				Feed (mm/min)	848	1178	1414	1414	1226	1100	1002		
	≤ 125 Bhn or ≤ 77 HRb	Profile 	≤ 0.5	≤ 1.5	230	RPM	24418	12209	7326	6105	4578	3663	2930
					(184-276)	Fz	0.022	0.060	0.120	0.144	0.166	0.187	0.213
					Feed (mm/min)	1055	1465	1758	1758	1524	1367	1245	
	HSM 	≤ 0.05	≤ 2	380	RPM	40343	20172	12103	10086	7564	6052	4841	
				(304-456)	Fz	0.050	0.132	0.280	0.336	0.384	0.440	0.488	
				Feed (mm/min)	4066	5325	6778	6777	5809	5325	4720		
COPPER ALLOYS Aluminum Bronze Brass Naval Brass Red Brass	Slot 	1	≤ 1	265	RPM	28134	14067	8440	7034	5275	4220	3376	
				(212-318)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175	
				Feed (mm/min)	1080	1350	1801	1688	1485	1350	1182		
	≤ 140 Bhn or ≤ 3 HRc	Profile 	≤ 0.5	≤ 1.5	330	RPM	35035	17518	10511	8759	6569	5255	4204
					(264-396)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	1345	1682	2242	2102	1850	1682	1472	
	HSM 	≤ 0.05	≤ 2	545	RPM	57861	28930	17358	14465	10849	8679	6943	
				(436-654)	Fz	0.041	0.108	0.227	0.276	0.320	0.373	0.400	
				Feed (mm/min)	4721	6248	7869	7984	6943	6480	5555		
COPPER ALLOYS Beryllium Copper C110, Manganese Bronze, Tin Bronze	Slot 	1	≤ 1	105	RPM	11148	5574	3344	2787	2090	1672	1338	
				(84-126)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175	
				Feed (mm/min)	428	535	713	669	589	535	468		
	≤ 200 Bhn or ≤ 23 HRc	Profile 	≤ 0.5	≤ 1.5	130	RPM	13802	6901	4141	3450	2588	2070	1656
					(104-156)	Fz	0.019	0.048	0.107	0.120	0.141	0.160	0.175
					Feed (mm/min)	530	662	883	828	729	662	580	
	HSM 	≤ 0.05	≤ 2	215	RPM	22826	11413	6848	5706	4280	3424	2739	
				(172-258)	Fz	0.041	0.108	0.227	0.276	0.320	0.373	0.400	
				Feed (mm/min)	1862	2465	3104	3150	2739	2556	2191		
PLASTICS ABS, Polycarbonate, PVC, Polypropylene	Slot 	1	≤ 1	490	RPM	52022	26011	15607	13005	9754	7803	6243	
				(392-588)	Fz	0.036	0.096	0.200	0.240	0.282	0.320	0.350	
				Feed (mm/min)	3745	4994	6243	6242	5493	4994	4370		
	Profile 	≤ 0.5	≤ 1.5	610	RPM	64762	32381	19429	16190	12143	9714	7771	
				(488-732)	Fz	0.036	0.096	0.200	0.240	0.282	0.320	0.350	
				Feed (mm/min)	4662	6217	7771	7771	6839	6217	5440		
	HSM 	≤ 0.05	≤ 2	1005	RPM	106698	53349	32009	26674	20006	16005	12804	
				(804-1206)	Fz	0.082	0.216	0.453	0.552	0.640	0.733	0.800	
				Feed (mm/min)	17412	23045	29022	29446	25607	23473	20487		

Bhn (Brinell)    HRc (Rockwell C)    HRb (Rockwell B)    HSM (High Speed Machining)  
 $rpm = (Vc \times 1000) / (DC \times 3.14)$   
 $mm/min = Fz \times 2 \times rpm$   
 reduce speed and feed for materials harder than listed  
 reduce cut depth and feed by 50% for long flute and long reach tools  
 reduce feed and Ae when finish milling (.02 x DC maximum)  
 refer to the SGS Tool Wizard® for complete technical information ([www.kyocera-sgstool.com](http://www.kyocera-sgstool.com))