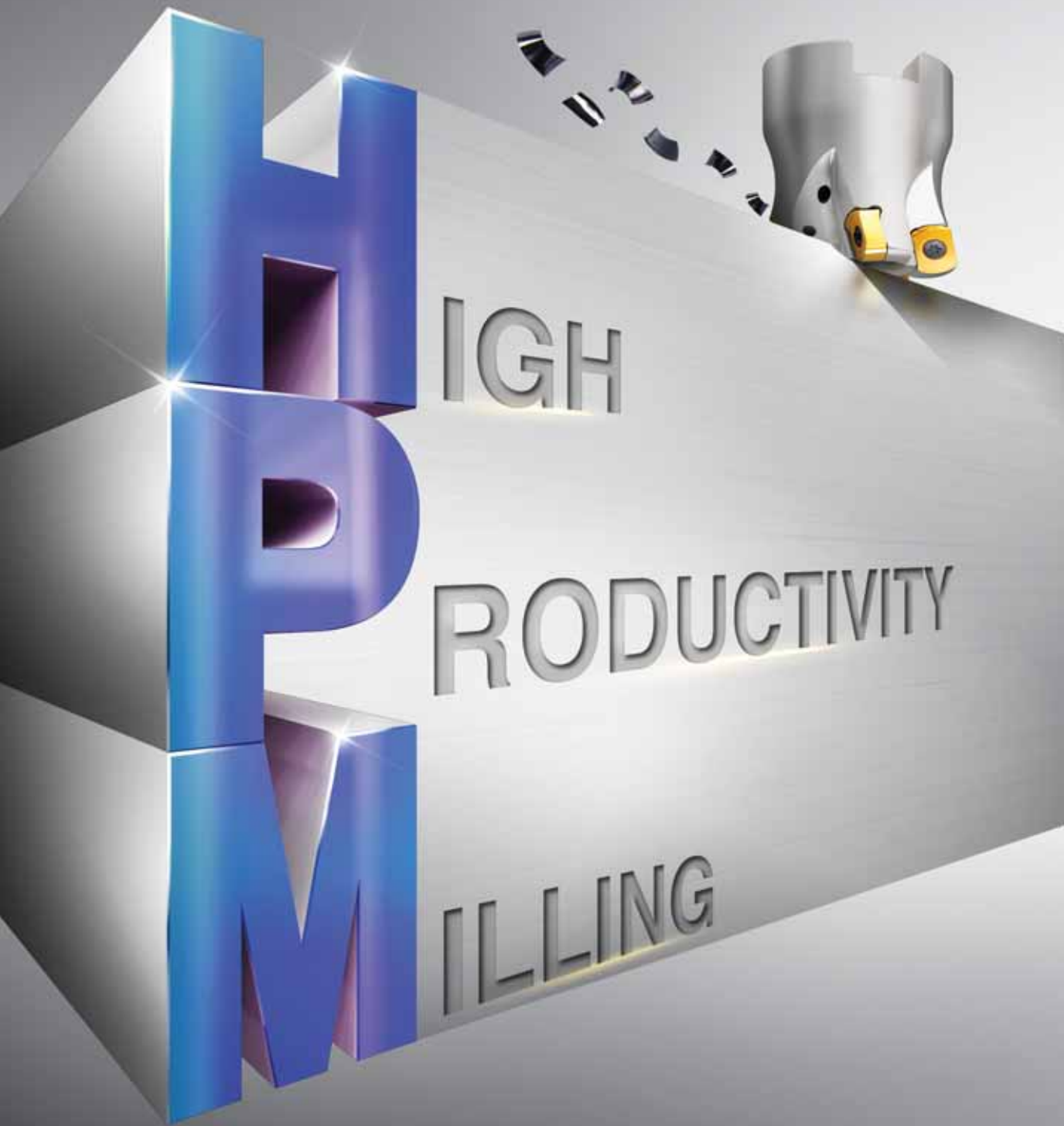


Fast Metal Removal Solutions



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HighFeed Family





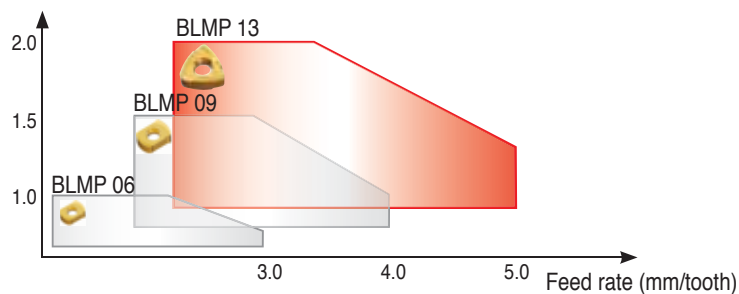
CHASE²FEED

High feed machining with BLMP inserts

- Particularly suitable for high feed machining
- Low cutting forces
- 4 or 6 corner inserts for cost effective machining
- Low chipping tendency

CHASE2FEED high feed application guide

Depth of cut (mm)



BLMP 06



BLMP 09



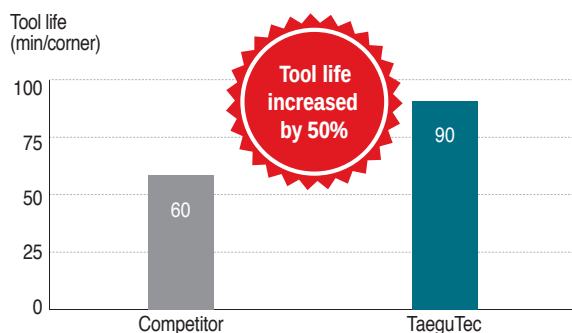
BLMP 13



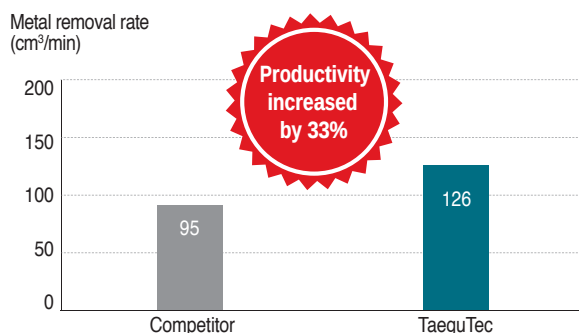
Case study 1_BLMP06

		Competitor	TaeguTec
Workpiece material		Tool steel (X165CrMoV12, D2, SKD11)	
Cutter		D21 end mill cutter (2 teeth)	TEBL 321-20-06-L200 (3 teeth)
Insert		Single-sided 3corners insert	BLMP 0603R-M TT9080
Cutting speed	V (m/min)	158	165
	N (rpm)	2400	2500
Feed rate	Fz (mm/tooth)	0.93	0.73
	F (mm/min)	4500	6000
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	1	1
Coolant		Air	Air
Metal removal rate (cm³/min)		95	126
Tool life (min/corner)		60	90

Tool life
(min/corner)



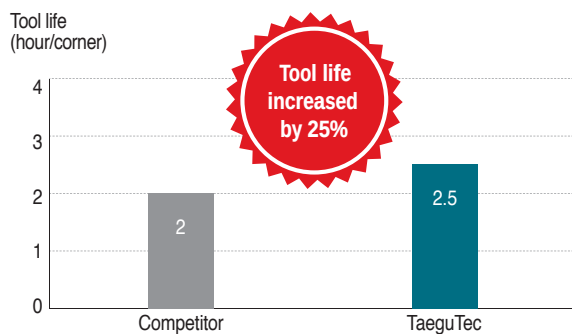
Metal removal rate
(cm³/min)



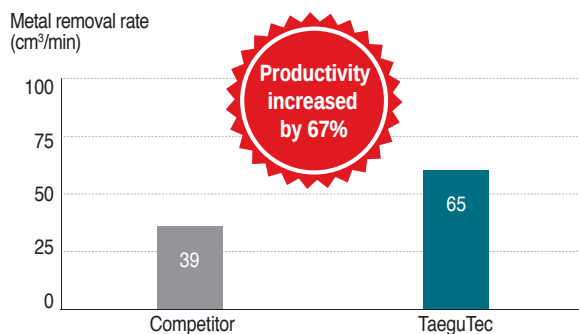
Case study 2_BLMP06

		Competitor	TaeguTec
Workpiece material		Mold steel (X40CrMoV51, P20, SCM, HP4MA)	
Cutter		D26 end mill cutter (2 teeth)	TEBL 426-25-06-L200 (4 teeth)
Insert		Single-sided 3corners insert	BLMP 0603R-M TT9080
Cutting speed	V (m/min)	204	204
	N (rpm)	2500	2500
Feed rate	Fz (mm/tooth)	0.6	0.5
	F (mm/min)	3000	5000
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	0.5	0.5
Coolant		Air	Air
Metal removal rate (cm³/min)		39	65
Tool life (hour/corner)		2	2.5

Tool life
(hour/corner)



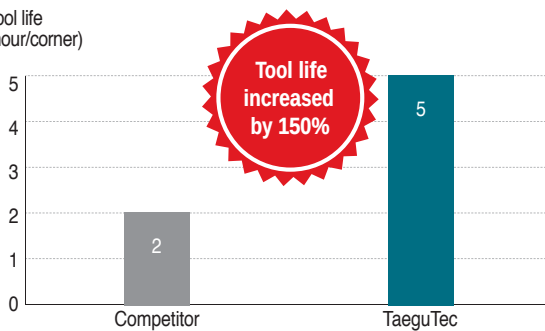
Metal removal rate
(cm³/min)



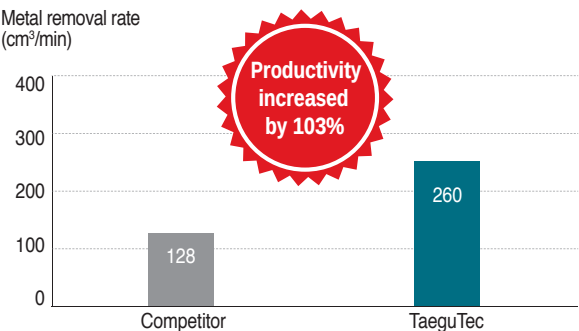
Case study 1_BLMP09

		Competitor	TaeguTec
Workpiece material		Mold steel (42CrMo4, 4140, SCM440, HP4A)	
Cutter		D50 face mill cutter (3 teeth)	TFMBL 650-22R-09 (6 teeth)
Insert		Single-sided 3corners insert	BLMP 0904R-M TT9080
Cutting speed	V (m/min)	173	173
	N (rpm)	1100	1100
Feed rate	Fz (mm/tooth)	0.97	0.98
	F (mm/min)	3200	6500
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	0.8	0.8
Coolant		Air	Air
Metal removal rate (cm³/min)		128	260
Tool life (hour/corner)		2	5

Tool life
(hour/corner)



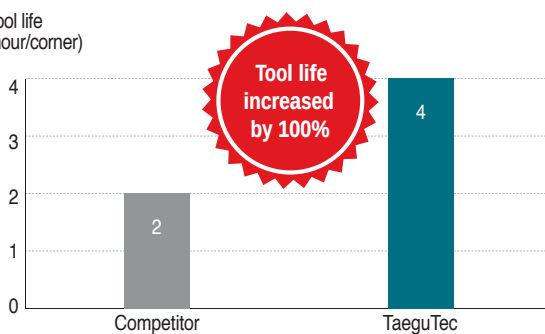
Metal removal rate
(cm³/min)



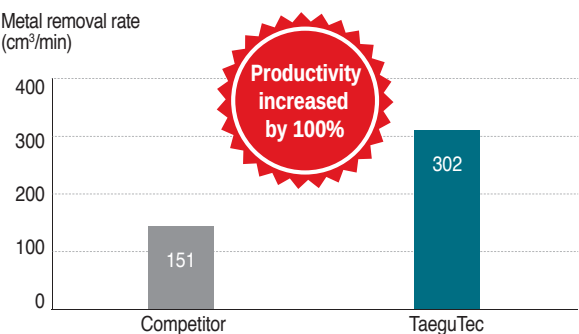
Case study 2_BLMP09

		Competitor	TaeguTec
Workpiece material		Tool steel	
Cutter		D63 high feed mill (5 teeth)	TFMBL 663-22R-09 (6 teeth)
Insert		Single-sided 3corners insert	BLMP 09043R-M TT9080
Cutting speed	V (m/min)	178	143
	N (rpm)	900	725
Feed rate	Fz (mm/tooth)	0.53	0.91
	F (mm/min)	2400	4000
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	1	1.2
Coolant		Air	Air
Metal removal rate (cm³/min)		151	302
Tool life (hour/corner)		2	4

Tool life
(hour/corner)



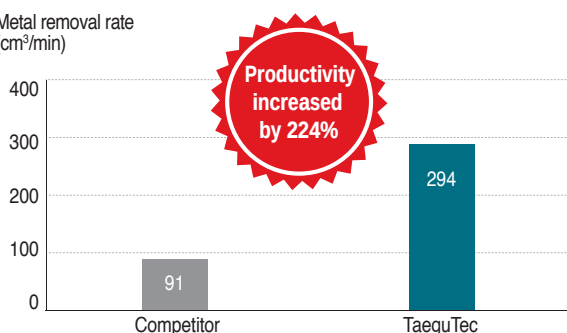
Metal removal rate
(cm³/min)



Case study 1_BLMP13

		Competitor	TaeguTec
Workpiece material		M12100(HB220)	
Cutter		D80 face mill (5 teeth)	TFMBL 563-22R-13
Insert		Single-sided 4corners insert	BLMP 1306R-M TT9080
Cutting speed	V (m/min)	171	251
	N (rpm)	681	1,268
Feed rate	Fz (mm/tooth)	0.82	1.03
	F (mm/min)	2791	6,531
Width of cut	ae (mm)	65	45
Depth of cut	ap (mm)	0.5	1.0
Coolant		Mist	Mist
Metal removal rate (cm³/min)		91	294

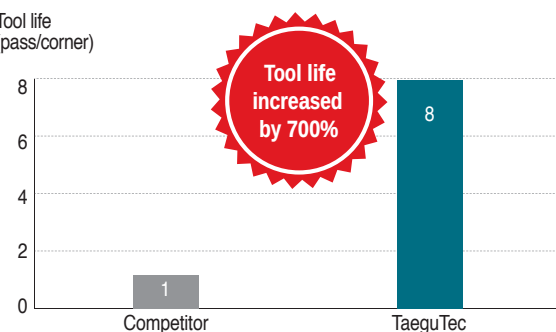
Metal removal rate
(cm³/min)



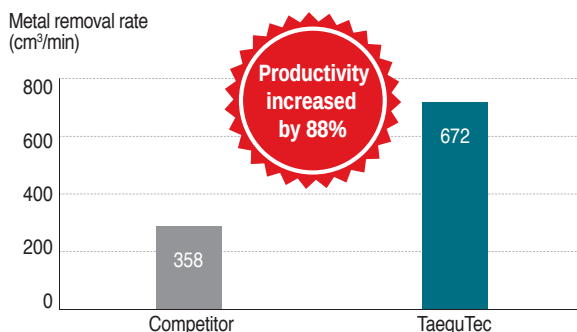
Case study 2_BLMP13

		Competitor	TaeguTec
Workpiece material		Alloy structural steel (4340, 1.6582, SNCM8)	
Cutter		D160 ISO face mill (8 teeth)	TFMBL 8160-40R-13 (8 teeth)
Insert		Single-sided 4corners insert	BLMP 1306R-M TT9080
Cutting speed	V (m/min)	250	140
	N (rpm)	500	279
Feed rate	Fz (mm/tooth)	0.2	1.35
	F (mm/min)	800	3000
Width of cut	ae (mm)	112	112
Depth of cut	ap (mm)	4	2
Coolant		Air	Air
Metal removal rate (cm³/min)		358	672
Tool life (pass/corner)		1	8

Tool life
(pass/corner)



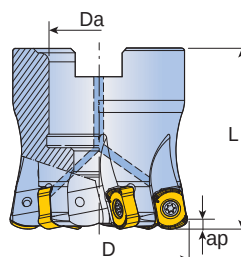
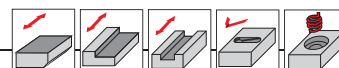
Metal removal rate
(cm³/min)



TFMBL-06

CHASE²FEED

Face mill

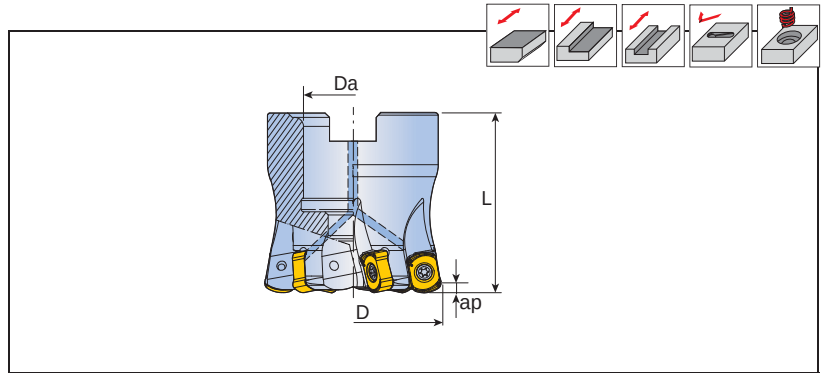
[illegible]

- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

TFMBL-09



Face mill

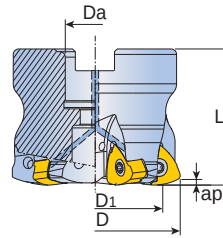
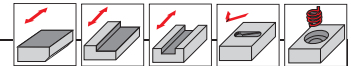


Designation		Dimension (mm)				Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap				
TFMBL 432-16R-09	4	32	16	40	1.5	E	0.1	KTB 32B	BLMP 0904...
440-16R-09	4	40	16	40	1.5	A	0.2	SH M8x1.25x25	
540-16R-09	5	40	16	40	1.5	A	0.2	SH M8x1.25x25	
550-22R-09	5	50	22	50	1.5	A	0.4	SH M10x1.5x30	
650-22R-09	6	50	22	50	1.5	A	0.4	SH M10x1.5x30	
750-22R-09	7	50	22	50	1.5	A	0.4	SH M10x1.5x30	
652-22R-09	6	52	22	40	1.5	A	0.4	SH M10x1.5x30	
752-22R-09	7	52	22	40	1.5	A	0.4	SH M10x1.5x30	
663-22R-09	6	63	22	50	1.5	A	0.6	SH M10x1.5x30	
763-22R-09	7	63	22	50	1.5	A	0.6	SH M10x1.5x30	
863-22R-09	8	63	22	50	1.5	A	0.6	SH M10x1.5x30	
766-27R-09	7	66	27	50	1.5	A	0.7	SH M12x1.75x35	
866-27R-09	8	66	27	50	1.5	A	0.8	SH M12x1.75x35	
780-27R-09	7	80	27	50	1.5	A	1.2	SH M12x1.75x35	
880-27R-09	8	80	27	50	1.5	A	1.2	SH M12x1.75x35	
980-27R-09	9	80	27	50	1.5	A	1.2	SH M12x1.75x35	
1080-27R-09	10	80	27	50	1.5	A	1.2	SH M12x1.75x35	
8100-32R-09	8	100	32	60	1.5	A	2.3	SH M16x2.0x35	
9100-32R-09	9	100	32	60	1.5	A	2.3	SH M16x2.0x35	
10100-32R-09	10	100	32	60	1.5	A	2.3	SH M16x2.0x35	
11100-32R-09	11	100	32	60	1.5	A	2.3	SH M16x2.0x35	
12100-32R-09	12	100	32	60	1.5	A	2.3	SH M16x2.0x35	
12125-40R-09	12	125	40	60	1.5	A	2.7	SH M20x2.5x40	
14125-40R-09	14	125	40	60	1.5	A	2.7	SH M20x2.5x40	

- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

TFMBL-13

Face mill



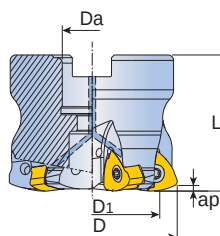
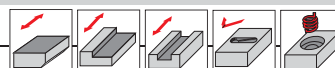
Designation		Dimension (mm)					Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	D1	Da	L	ap					
TFMBL 340-16R-13	3	40	20.7	16	50	2	•	A	0.2	KTB 32B	BLMP 1306...
350-22R-13	3	50	31.0	22	40	2	•	A	0.3	LH M10x1.5x25	
450-22R-13	4	50	31.0	22	40	2	•	A	0.3	LH M10x1.5x25	
452-22R-13	4	52	32.2	22	40	2	•	A	0.3	SH M10x1.5x30	
463-22R-13	4	63	45.8	22	50	2	•	A	0.8	SH M10x1.5x30	
563-22R-13	5	63	45.8	22	50	2	•	A	0.8	SH M10x1.5x30	
466-22R-13	4	66	45.9	22	50	2	•	A	0.8	SH M10x1.5x30	
566-22R-13	5	66	45.9	22	50	2	•	A	0.8	SH M10x1.5x30	
463-27R-13	4	63	45.8	27	50	2	•	A	0.7	SH M12x1.75x30	
566-27R-13	5	66	45.9	27	50	2	•	A	0.7	SH M12x1.75x30	
580-27R-13	5	80	59.8	27	60	2	•	A	1.4	SH M12x1.75x30	
680-27R-13	6	80	59.8	32	60	2	•	A	1.4	SH M12x1.75x30	
580-32R-13	5	80	59.8	32	60	2	•	A	1.4	SH M16x2x35	
5100-32R-13	5	100	79.7	32	60	2	•	A	1.9	SH M16X2X35	
6100-32R-13	6	100	79.7	32	60	2	•	A	2.0	SH M16x2x35	
7100-32R-13	7	100	79.7	32	60	2	•	A	2.0	SH M16x2x35	
6125-32R-13	6	125	104.5	32	60	2	•	A	3.0	SH M16x2x35	
7125-40R-13	7	125	104.5	40	60	2	•	A	2.9	SH M20x2.5x40	
7160-40R-13	7	160	139.5	40	60	2	x	B	3.6	-	
8160-40R-13	8	160	139.5	40	60	2	x	B	3.6	-	
9160-40R-13	9	160	139.5	40	60	2	x	B	3.8	-	
8200-60R-13	8	200	179.5	60	60	2	x	B	5.4	-	
9200-60R-13	9	200	179.5	60	60	2	x	B	5.3	-	
11200-60R-13	11	200	179.5	60	60	2	x	B	5.5	-	
9250-60R-13	9	250	229.5	60	60	2	x	B	10.6	-	
10250-60R-13	10	250	229.5	60	60	2	x	B	10.6	-	
12250-60R-13	12	250	229.5	60	60	2	x	B	10.7	-	

• Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

TFMBL-13

CHASE²FEED

Face mill (inch)

[illegible]

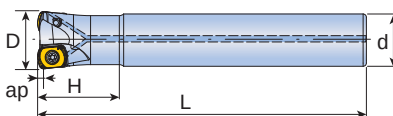
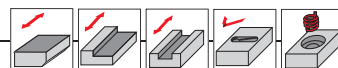
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
					
TFMBL-06	TS 25064I/HG-P	TD 8P			
TFMBL-09	TS 35A088I/HG	TD 10P			
TFMBL-13	TS50B106I/HG	T-T20			

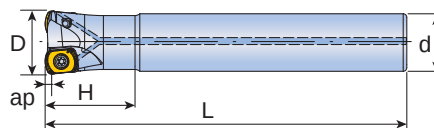
TEBL-06

End mill



Designation		Dimension (mm)					Insert
		D	d	L	H	ap	
TEBL 216-15-06-L150	2	16	15	150	40	0.7	BLMP 0603...
216-16-06	2	16	16	150	40	0.7	
216-16-06-S	2	16	16	100	30	0.7	
217-16-06-S	2	17	16	100	30	0.7	
217-16-06	2	17	16	150	40	0.7	
217-16-06-L200	2	17	16	200	20	0.7	
218-16-06	2	18	16	150	25	0.7	
220-20-06-L200	2	20	20	200	80	1.0	
320-19-06-L180	3	20	19	180	80	1.0	
320-20-06-S	3	20	20	130	50	1.0	
320-20-06	3	20	20	160	80	1.0	
321-20-06-S	3	21	20	150	20	1.0	
321-20-06-L200	3	21	20	200	20	1.0	
325-25-06-L220	3	25	25	220	50	1.0	
425-24-06-L180	4	25	24	180	60	1.0	
425-25-06-S	4	25	25	140	60	1.0	
425-25-06	4	25	25	180	60	1.0	
425-25-06-L250	4	25	25	250	40	1.0	
326-25-06-L200	3	26	25	200	30	1.0	
326-25-06-L250	3	26	25	250	30	1.0	
426-25-06-S	4	26	25	150	30	1.0	
426-25-06-L200	4	26	25	200	30	1.0	
426-25-06-L250	4	26	25	250	30	1.0	
530-32-06-S	5	30	32	150	70	1.0	
530-32-06-L200	5	30	32	200	120	1.0	
432-32-06-S	4	32	32	150	70	1.0	
532-32-06-S	5	32	32	150	70	1.0	
532-32-06-L200	5	32	32	200	120	1.0	
433-32-06-L220	4	33	32	220	40	1.0	
433-32-06-L300	4	33	32	300	50	1.0	
533-32-06-S	5	33	32	150	30	1.0	
533-32-06-L200	5	33	32	200	40	1.0	
533-32-06-L250	5	33	32	250	40	1.0	
435-32-06-L200	4	35	32	200	50	1.0	
435-32-06-L300	4	35	32	300	50	1.0	

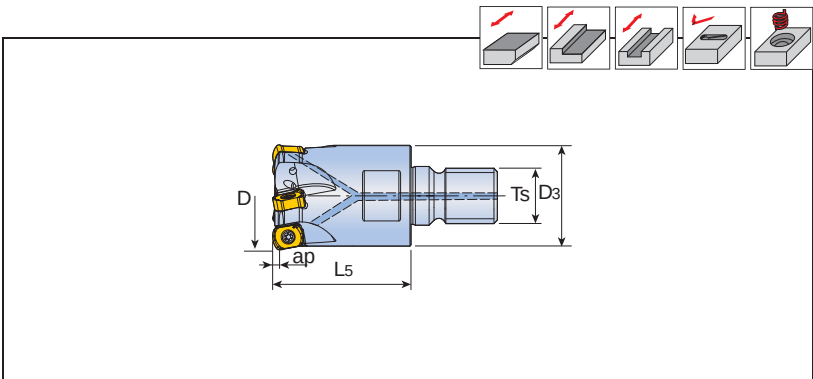
CHASE²FEED

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- Coolant through type

TEBL...-M...-06

Modular

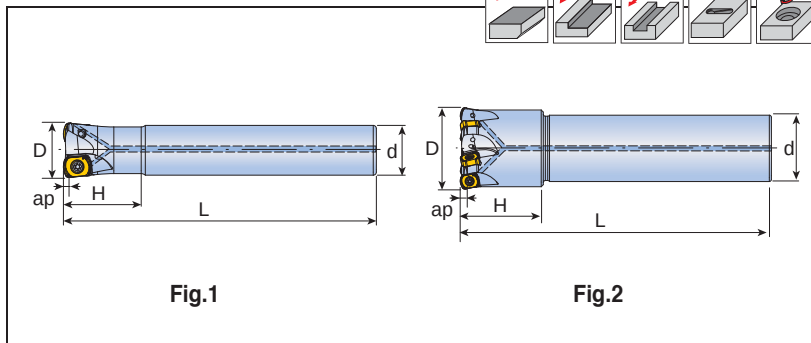


Designation		Dimension (mm)					Insert
		D	D ₃	L ₅	T _s	ap	
TEBL 216-M08-06	2	16	13	25	08	0.7	BLMP 0603...
217-M08-06	2	17	13	25	08	0.7	
218-M08-06	2	18	13	25	08	0.7	
220-M10-06	2	20	18	30	10	1.0	
320-M10-06	3	20	18	30	10	1.0	
321-M10-06	3	21	18	30	10	1.0	
322-M10-06	3	22	18	30	10	1.0	
325-M12-06	3	25	21	35	12	1.0	
425-M12-06	4	25	21	35	12	1.0	
326-M12-06	3	26	21	35	12	1.0	
426-M12-06	4	26	21	35	12	1.0	
530-M16-06	5	30	29	40	16	1.0	
432-M16-06	4	32	29	40	16	1.0	
532-M16-06	5	32	29	40	16	1.0	
433-M16-06	4	33	29	40	16	1.0	
533-M16-06	5	33	29	40	16	1.0	
435-M16-06	4	35	29	43	16	1.0	
535-M16-06	5	35	29	43	16	1.0	
640-M16-06	6	40	29	43	16	1.0	
542-M16-06	5	42	29	43	16	1.0	
642-M16-06	6	42	29	43	16	1.0	

• Coolant through type

Spare parts

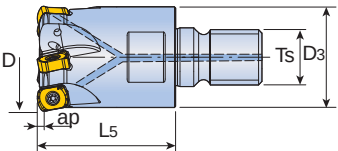
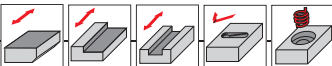
Designation	Screw	Wrench			
TEBL-06	TS 25064I/HG-P	TD 8P			

[illegible]

HIGH PRODUCTIVITY MILLING

TEBL...-M...-09

Modular



Designation		Dimension (mm)					Insert
		D	D3	L5	Ts	ap	
TEBL 225-M12-09	2	25	21	35	12	1.5	BLMP 0904...
325-M12-09	3	25	21	35	12	1.5	
326-M12-09	3	26	21	35	12	1.5	
330-M16-09	3	30	29	43	16	1.5	
332-M16-09	3	32	29	43	16	1.5	
432-M16-09	4	32	29	43	16	1.5	
433-M16-09	4	33	29	43	16	1.5	
335-M16-09	3	35	29	43	16	1.5	
435-M16-09	4	35	29	43	16	1.5	
440-M16-09	4	40	29	43	16	1.5	
540-M16-09	5	40	29	43	16	1.5	
542-M16-09	5	42	29	43	16	1.5	

• Coolant through type

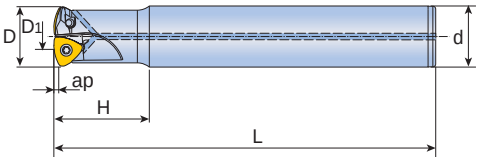
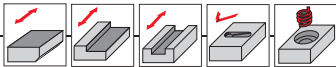
Spare parts

Designation	Screw	Wrench			
TEBL-09	TS 35A088I/HG	TD 10P			

TEBL-13



End mill



Designation		Dimension (mm)						Insert
		D	D ₁	d	L	H	ap	
TEBL 232-32-13-L150	2	32	12.9	32	150	50	2	BLMP 1306...
232-32-13-L200	2	32	12.9	32	200	80	2	
232-32-13-L	2	32	12.9	32	200	120	2	
233-32-13-L200	2	33	14.3	32	200	50	2	
233-32-13-L250	2	33	14.3	32	250	50	2	
235-32-13-L200	2	35	16.1	32	200	30	2	
240-42-13-XL	2	40	20.7	42	300	120	2	
340-32-13-L150	3	40	20.7	32	150	40	2	
340-32-13-L200	3	40	20.7	32	200	70	2	
340-42-13-S	3	40	20.7	42	150	70	2	

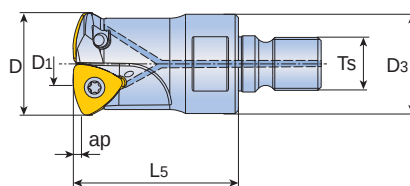
• Coolant through type

High Feed Family

Chip Splitter Family

Technical Guide

CHASE²FEED

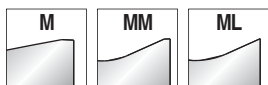
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High Feed Family

Chip Splitter Family

Designation	Screw	Wrench			
					
TEBL-13	TS50B106I/HG	T-T20			

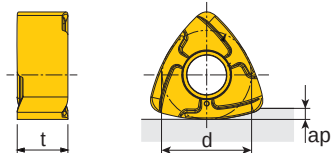
Size	Dimension (mm)					
	l	d1	t	ap		
06	9.0	6.39	3.73	1.0		
09	11.9	9.18	4.80	1.5		

[illegible]

●: Standard item

BLMP 13

Insert

[illegible][illegible]

●: Standard item

CHASEFEED

High feed machining with high positive SBMT 13 inserts

- Single sided, 4 corner high positive insert for high feed cutting conditions
- Lower cutting force than double sided inserts
- High helix geometry for smooth cutting
- Increased insert thickness for better endurance under high feed conditions



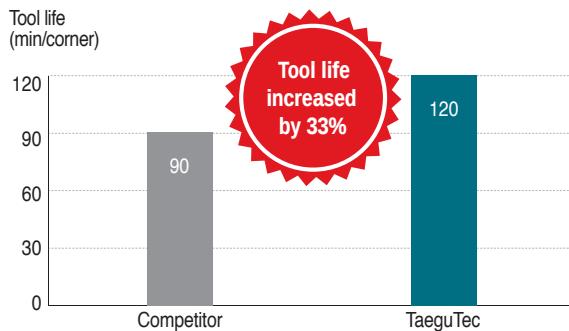
SBMT 13



Case study 1

		Competitor	TaeguTec
Workpiece material		Mold steel (XPM)	
Cutter		D50 face mill cutter (3 teeth)	TFMSB 350-22R-13 (3 teeth)
Insert		Single-sided 4corners insert	SBMT 130625R-M TT9080
Cutting speed	V (m/min)	140	140
	N (rpm)	892	892
Feed rate	Fz (mm/tooth)	1.6	1.6
	F (mm/min)	4281	4281
Width of cut	ae (mm)	30	30
Depth of cut	ap (mm)	0.8	0.8
Coolant		Dry	Dry
Metal removal rate (cm³/min)		102.7	102.7
Tool life (min/corner)		90	120

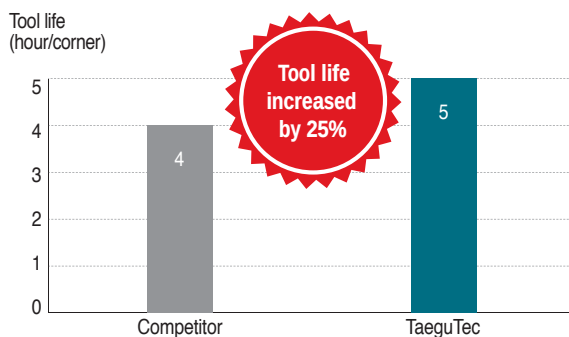
Tool life
(min/corner)



Case study 2

		Competitor	TaeguTec
Workpiece material		Ductile cast iron (GGG50, 80-55-08, FCD500, GCD500)	
Cutter		D50 face mill (4 teeth)	TFMSB 450-22R-13 (4 teeth)
Insert		Single-sided 4corners insert	SBMT 130628R-M TT9080
Cutting speed	V (m/min)	157	157
	N (rpm)	1000	1000
Feed rate	Fz (mm/tooth)	1.63	1.63
	F (mm/min)	6500	6500
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	0.4	0.4
Coolant		Air	Air
Tool life (hour/corner)		4	5

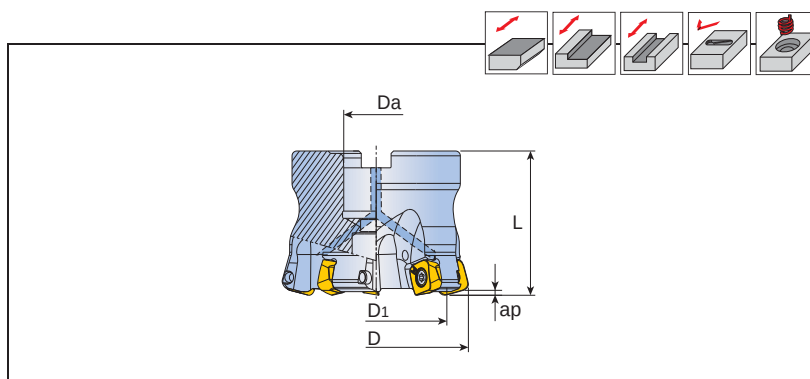
Tool life
(hour/corner)



TFMSB-13

CHASEFEED

Face mill



Designation		Dimension (mm)					Coolant	Arbor style	 Kg	Mounting bolt	Insert	
		D	D1	Da	L	ap						
TFMSB	350-22R-13	3	50	29.3	22	40	2	●	A	0.3	LH M10x1.5x25	SBMT 1306...
	450-22R-13	4	50	29.3	22	40	2	●	A	0.2	LH M10x1.5x25	
	452-22R-13	4	52	31.3	22	40	2	●	A	0.3	LH M10x1.5x25	
	552-22R-13	5	52	31.3	22	40	2	●	A	0.2	LH M10x1.5x25	
	463-22R-13	4	63	42.4	22	50	2	●	A	0.6	SH M10x1.5x30	
	563-22R-13	5	63	42.4	22	50	2	●	A	0.5	SH M10x1.5x30	
	463-27R-13	4	63	42.4	27	50	2	●	A	0.5	SH M12x1.75x35	
	580-27R-13	5	80	59.4	27	60	2	●	A	1.3	SH M12x1.75x35	
	580-32R-13	5	80	59.4	32	60	2	●	A	1.3	SH M16x2x35	
	6100-32R-13	6	100	79.4	32	60	2	●	A	1.9	SH M16x2x35	
	7125-40R-13	7	125	104.7	40	60	2	●	A	2.5	SH M20x2.5x40	
	8160-40R-13	8	160	139.4	40	60	2	x	B	3.5	-	
	9200-60R-13	9	200	179.4	60	60	2	x	B	5.1	-	
10250-60R-13	10	250	229.4	60	60	2	x	B	9.1	-		
TFMSB	463-25.4R-13	4	63	42.4	25.4	50	2	●	A	0.5	SH M12x1.75x35	SBMT 1306...
	580-25.4R-13	5	80	59.4	25.4	60	2	●	A	1.3	SH M12x1.75x35	
	580-31.75R-13	5	80	59.4	31.75	60	2	●	A	1.3	SH M16x2x35	
	7125-38.1R-13	7	125	104.7	38.1	60	2	x	B	2.2	-	

• Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

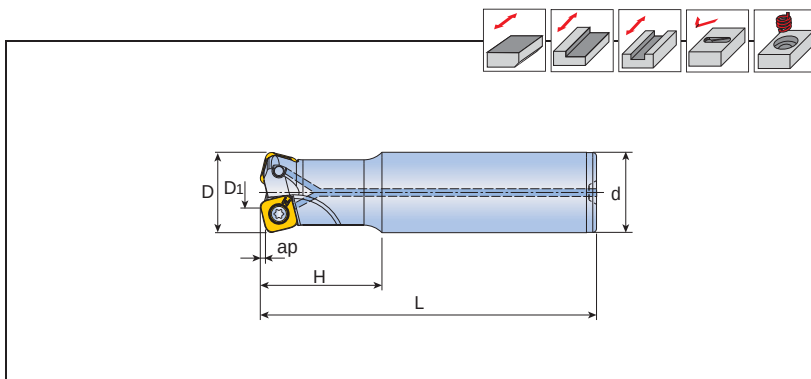
Spare parts

Designation	Screw	Wrench			
					
TFMSB-13	TS 50115I	T-T20			

TESB-13

CHASEFEED

End mill

[illegible]

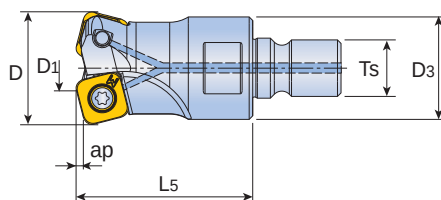
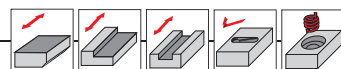
- Coolant through type

High Feed Family

Chip Splitter Family



HIGH PRODUCTIVITY MILLING

[illegible]

Spare parts

Designation	Screw	Wrench			
					
TESB-13	TS 50115I	T-T20			

Insert

Size	Dimension (mm)					
	d	t	ap	r		
13	13.05	6.65	2	2.5		

[illegible]

●: Standard item



CHASEALU

XEVT line for excellence in aluminum high speed machining

- XEVT 16 is specifically dedicated to aluminum and non-ferrous material machining
- Wide application range: Shouldering, Slotting, Face milling, Step down milling, Profiling, Straight ramping, Helical ramping
- Stronger insert design including a "V" shape bottom and unique stopper system mean higher performance under high-speed cutting conditions



Stable "V" shape



Safe stopper design

- High positive helical cutting edge and polished surface finish enable high precision and excellent surface roughness
- Available in several corner "R" options

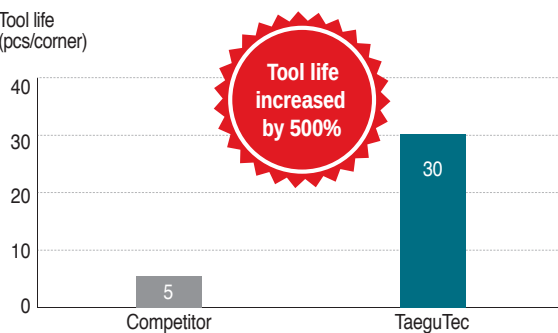


HIGH PRODUCTIVITY MILLING

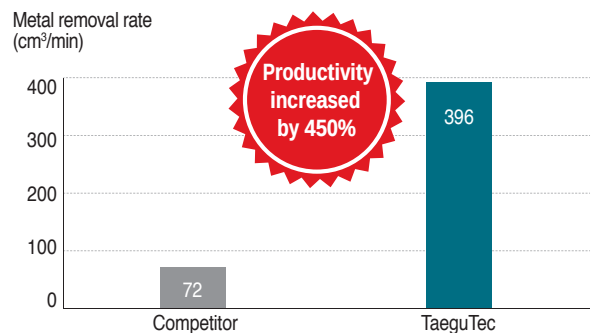
Case study 1

		Competitor	TaeguTec
Workpiece material		Al alloy (A6061)	
Cutter		D63 face mill (2 teeth)	TFM90XEY 563-22R-16 (5 teeth)
Insert		Single-sided 2corners insert	XEVT 160516R-AL K10
Cutting speed	V (m/min)	700	1200
	N (rpm)	3500	6000
Feed rate	Fz (mm/tooth)	0.1	0.1
	F (mm/min)	800	3000
Width of cut	ae (mm)	30	44
Depth of cut	ap (mm)	2.5-3.0	2.5-3.0
Coolant		Wet	Wet
Metal removal rate (cm³/min)		72	396
Tool life (pcs/corner)		5	30

Tool life
(pcs/corner)



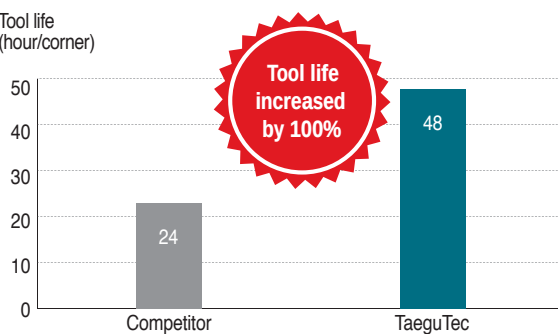
Metal removal rate
(cm³/min)



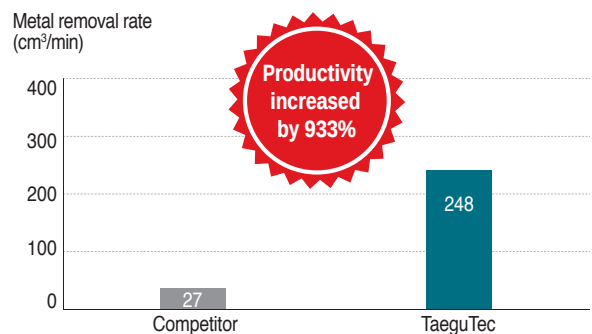
Case study 2

		Competitor	TaeguTec
Workpiece material		Al alloy (A6061)	
Cutter		TE90AP 232-32-17-L (2 teeth)	TE90XEY 332-32-16 (3 teeth)
Insert		APKT 1705 PER-AL K10	XEVT 160516R-AL K10
Cutting speed	V (m/min)	300	600
	N (rpm)	2985	6000
Feed rate	Fz (mm/tooth)	0.1	0.2
	F (mm/min)	600	3600
Width of cut	ae (mm)	15	23
Depth of cut	ap (mm)	2.5-3.0	2.5-3.0
Coolant		Wet	Wet
Metal removal rate (cm³/min)		27	248
Tool life (hour/corner)		24	48

Tool life
(hour/corner)



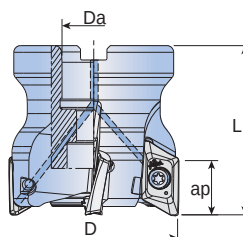
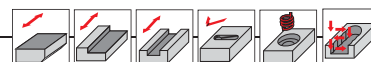
Metal removal rate
(cm³/min)



TFM90XEV-16/22

CHASEALU

Face mill



Designation		Dimension (mm)				Coolant	Arbor style	Max RPM	 Kg	Mounting bolt	Insert	
		D	Da	L	ap							
TFM90XEV	340-16R-16	3	40	16	50	16	●	A	41,200	0.2	SH M8x1.25x35-C	XEVT 1605..
	450-22R-16	4	50	22	50	16	●	A	36,800	0.3	SH M10x1.5x30-C	
	563-22R-16	5	63	22	50	16	●	A	32,700	0.5	SH M10x1.5x30-C	
	580-27R-16	5	80	27	50	16	●	A	29,000	0.9	LH M12x1.75x30-C	
	680-27R-16	6	80	27	50	16	●	A	29,000	0.8	LH M12x1.75x30-C	
	6100-32R-16	6	100	32	63	16	●	A	26,000	1.6	SH M16Xx2x35-C	
	7125-40R-16	7	125	40	63	16	●	A	23,200	2.5	SH M20x2.5x40-C	
	8160-40R-16	8	160	40	63	16	x	C	20,000	3.8	-	
	10200-60R-16	10	200	60	63	16	x	C	18,300	5.3	-	
TFM90XEV	350-22R-22	3	50	22	55	21	●	A	31,400	0.4	SH M10x1.5x30-C	XEVT 2206..
	463-22R-22	4	63	22	55	21	●	A	28,000	0.6	SH M10x1.5x30-C	
	580-27R-22	5	80	27	55	21	●	A	24,800	1.0	LH M12x1.75x30-C	
	6100-32R-22	6	100	32	63	21	●	A	22,200	2.1	SH M16x2x35-C	
	7125-40R-22	7	125	40	63	21	●	A	19,900	2.8	SH M20x2.5x40-C	
	10200-60R-22	10	200	60	63	21	x	C	15,700	5.9	-	

- Cutter body for inserts with corner radii more than 3.2mm (XEVT 16) and 3.0mm (XEVT 22) should be modified as follows:
body "R"=insert "R"-0.3mm
- Table's ap refers to XEVT 160504 and XEVT 220605 insert.

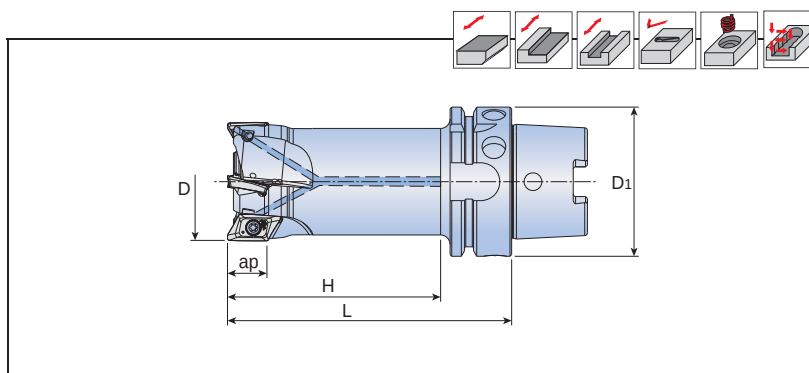
Spare parts

Designation	Screw	Wrench		
TFM90XEV-16	TS 40093I/HG	T-T15		
TFM90XEV-22	TS 50115I	T-T20		

TE90XEV-HSK63A-16

CHASEALU

End mill for HSK toolholder



Designation			Dimension (mm)					Max RPM	Kg	Insert
			D	D1	L	H	ap			
TE90XEV	225-100-HSK63A-16	2	25	63	100	70	16	52,000	0.8	XEVT 1605...
	232-125-HSK63A-16	2	32	63	125	95	16	46,000	1.1	
	332-90-HSK63A-16	3	32	63	90	60	16	46,000	0.9	
	340-105-HSK63A-16	3	40	63	105	75	16	41,200	1.1	
	450-105-HSK63A-16	4	50	63	105	75	16	36,800	1.5	
	450-120-HSK63A-16	4	50	63	120	90	16	36,800	1.7	

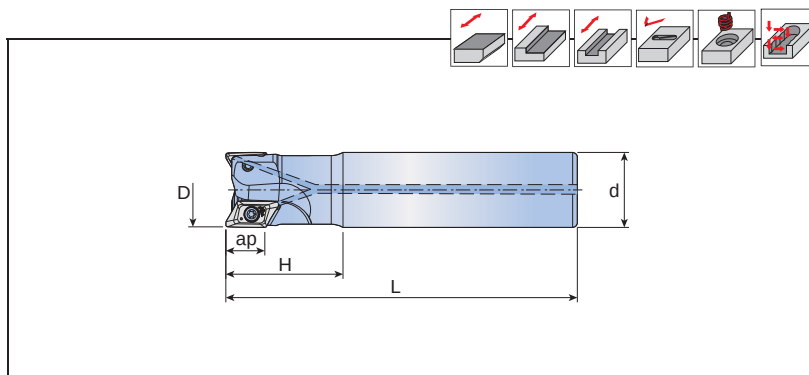
- Coolant through type
- Cutter body for inserts with corner radii more than 3.2mm (XEVT 16) should be modified as follows: body "R"=insert "R"-0.3mm
- Table's ap refers to XEVT 160504 insert.

Spare parts

Designation	Screw	Wrench		
TE90XEV 225-16	TS 40085/HG	T-T15		
TE90XEV 232/332/340/450-16	TS 40093/HG	T-T15		

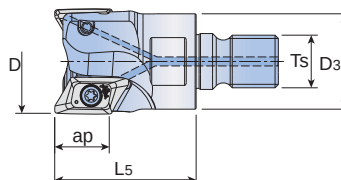
High Feed Family

Chip Splitter Family



- Coolant through type
- Cutter body for inserts with corner radii more than 3.2mm (XEVT 16) and 3.0mm (XEVT 22) should be modified as follows:
body "R"=insert "R"-0.3mm
- Table's ap refers to XEVT 160504 and XEVT 220605 insert.

CHASEALÚ



90°

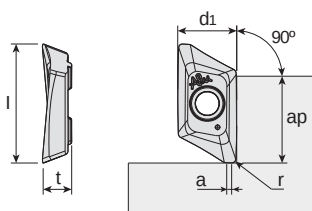
- Coolant through type
- Cutter body for inserts with corner radii more than 3.2mm (XEVT 16) should be modified as follows: body "R"=insert "R"-0.3mm
- Table's ap refers to XEVT 160504 insert.

Designation	Screw	Wrench			
TE90XEV 225-16	TS 40085I/HG	T-T 15			
TE90XEV 232/332/340-16	TS 40093I/HG	T-T 15			
TE90XEV 232-32-22	TS 50105I	T-T 20			
TE90XEV 340-40-22	TS 50115I	T-T 20			

XEVT 16/22-AL

CHASEALU

Insert



Size	Dimension (mm)					
	l	d1	t	ap	a	r
16	18.3-22.2	11.2	5.1-5.5	14-16	0.6-1.5	0.4-5.0
22	22.4-28	13.6	6.8-7.4	18.5-21	1.2-1.7	0.5-6.4

Insert	Designation	Recommended Machining Conditions		Coated								Uncoated	
		Feed (mm/tooth)	ap (mm)	TT9080	TT8080	TT8020	TT7800	TT7080	TT7515	TT6080	TT2510	K10	
	XEVT 160504R-AL	0.1-0.4	3.5-12.0									●	
	160508R-AL	0.1-0.4	3.5-12.0									●	
	160512R-AL	0.1-0.4	3.5-12.0									●	
	160516R-AL	0.1-0.4	3.5-12.0									●	
	160520R-AL	0.1-0.4	3.5-12.0									●	
	160524R-AL	0.1-0.4	3.5-12.0									●	
	160530R-AL	0.1-0.4	3.5-12.0									●	
	160532R-AL	0.1-0.4	3.5-12.0									●	
	160540R-AL	0.1-0.4	3.5-12.0									●	
	160550R-AL	0.1-0.4	3.5-12.0									●	
	220605R-AL	0.1-0.6	3.5-18.0									●	
	220608R-AL	0.1-0.6	3.5-18.0									●	
	220616R-AL	0.1-0.6	3.5-18.0									●	
	220620R-AL	0.1-0.6	3.5-18.0									●	
	220630R-AL	0.1-0.6	3.5-18.0									●	
	220640R-AL	0.1-0.6	3.5-18.0									●	
	220650R-AL	0.1-0.6	3.5-18.0									●	
	220664R-AL	0.1-0.6	3.5-18.0									●	

●: Standard item



CHASEMILL

AXMT 06-HF & APKT 09/12-HF for high feed machining

- HF type insert for high feed machining
- Small insert size enables high number of teeth
- Durable insert cutting edge - Maximum feed rate 1mm/tooth
- Low cutting resistance by positive helical cutting edge
- Maximum depth of cut: 0.5mm - 1.2mm
- Ramp down capabilities



AXMT 0602R-HF

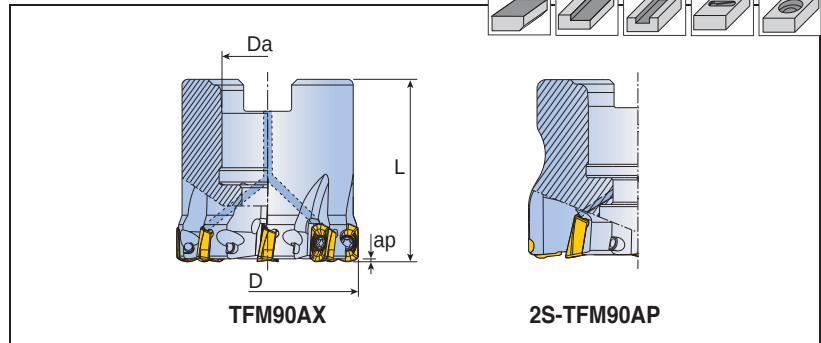


APKT 09-HF



APKT 12-HF

CHASEMILL

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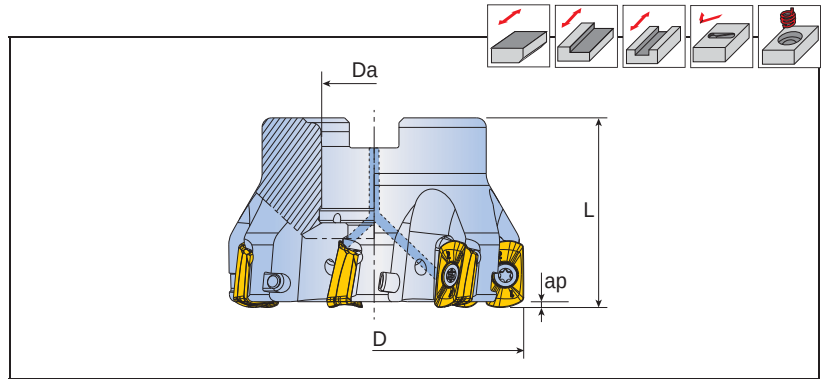
Spare parts

Designation	Screw	Wrench		
				
TFM90AX	TS 18041I/HG	TD6P		
2S-TFM90AP	TS 25075I/HG	TD8		

TFM90AP-12

CHASEMILL

Face mill



Designation		Dimension (mm)				Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap					
TFM90AP 440-16R-12	4	40	16	40	1.2	•	A	0.2	SH M8x1.25x25	APKT 1204R-HF
540-16R-12	5	40	16	40	1.2	•	A	0.2	SH M8x1.25x25	
550-22R-12	5	50	22	40	1.2	•	A	0.3	SH M10x1.5x30	
650-22R-12	6	50	22	40	1.2	•	A	0.3	SH M10x1.5x30	
563-22R-12	5	63	22	40	1.2	•	A	0.5	SH M10x1.5x30	
663-22R-12	6	63	22	40	1.2	•	A	0.5	SH M10x1.5x30	
763-22R-12	7	63	22	40	1.2	•	A	0.5	SH M10x1.5x30	
680-27R-12	6	80	27	50	1.2	•	A	1.0	SH M12x1.75x30	
880-27R-12	8	80	27	50	1.2	•	A	1.0	SH M12x1.75x30	
TFM90AP 880-25.4R-12	8	80	25.4	50	1.2	•	A	1.0	SH M12x1.75x30	APKT 1204R-HF

• Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

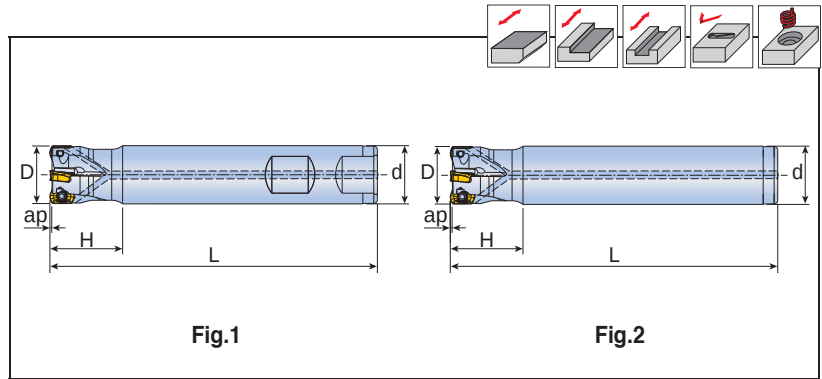
Spare parts

Designation	Screw	Wrench		
TFM90AP-12	TS 35A088/HG	TD10P		

TE90AX-06

CHASEMILL

End mill

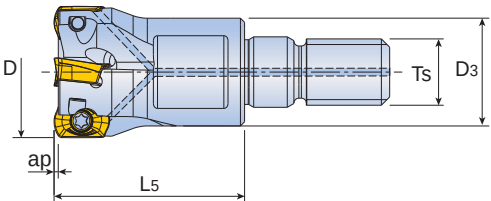
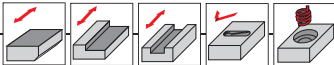


Designation		Dimension (mm)					Coolant	Fig.	Insert
		D	d	L	H	ap			
TE90AX 108-08-06-C	1	8	8	80	17	0.5	•	2	AXMT 0602R-HF
210-09-06-L120	2	10	9	120	17	0.5	x	2	
210-10-06	2	10	10	80	17	0.5	x	2	
210-10-06-C	2	10	10	80	17	0.5	•	2	
211-10-06	2	11	10	80	17	0.5	x	2	
212-12-06	2	12	12	80	18	0.5	x	2	
212-12-06-C	2	12	12	80	18	0.5	•	2	
212-12-06-L	2	12	12	130	18	0.5	x	2	
212-11-06-L120	2	12	11	120	20	0.5	x	2	
312-12-06	3	12	12	80	18	0.5	x	2	
312-12-06-C	3	12	12	80	18	0.5	•	2	
313-12-06-C	3	13	12	90	20	0.5	•	2	
314-12-06	3	14	12	80	18	0.5	x	2	
415-12-06	4	15	12	80	18	0.5	x	2	
316-16-06	3	16	16	110	20	0.5	x	2	
316-16-06-C	3	16	16	110	20	0.5	•	2	
316-16-06-L	3	16	16	150	20	0.5	x	2	
416-W16-06	4	16	16	90	20	0.5	x	1	
416-W16-06-C	4	16	16	90	20	0.5	•	1	
417-16-06	4	17	16	90	20	0.5	x	2	
418-W16-06	4	18	16	90	20	0.5	x	1	
418-W16-06-C	4	18	16	90	20	0.5	•	1	
418-16-06-L	4	18	16	150	20	0.5	x	2	
419-W16-06	4	19	16	90	20	0.5	x	1	
420-20-06	4	20	20	160	25	0.5	x	2	
420-W20-06-C	4	20	20	160	25	0.5	•	1	
520-19-06-L	5	20	19	160	25	0.5	x	1	
520-W20-06	5	20	20	105	25	0.5	x	1	
520-W20-06-C	5	20	20	105	25	0.5	•	1	
521-20-06	5	21	20	105	25	0.5	x	2	
725-W20-06	7	25	20	115	25	0.5	x	1	
725-W20-06-C	7	25	20	115	25	0.5	•	1	
725-W25-06	7	25	25	120	30	0.5	x	1	
832-W25-06	8	32	25	130	32	0.5	x	1	
832-W25-06-C	8	32	25	130	32	0.5	•	1	
1040-W32-06	10	40	32	140	40	0.5	x	1	
1040-W32-06-C	10	40	32	140	40	0.5	•	1	

TE90AX ...-M...-06

CHASEMILL

Modular



90°

Designation			Dimension (mm)					Insert
			D	D3	L5	Ts	ap	
TE90AX	210-M06-06	2	10	9.68	23	6	0.5	AXMT 0602R-HF
	312-M06-06	3	12	9.68	23	6	0.5	
	416-M08-06	4	16	13	23	8	0.5	
	520-M10-06	5	20	18	30	10	0.5	
	725-M12-06	7	25	21	35	12	0.5	
	832-M16-06	8	32	29	43	16	0.5	
	1040-M16-06	10	40	29	43	16	0.5	

• Coolant through type

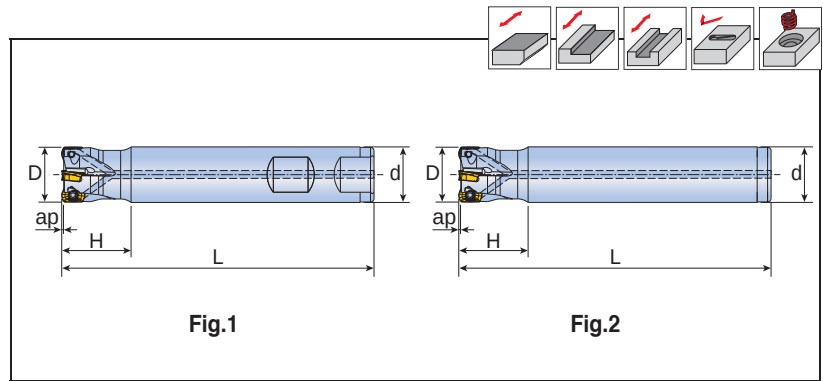
Spare parts

Designation	Screw	Wrench			
TE90AX-06	TS 18041/HG	TD6P			

2S-TE90AP-09

CHASEMILL

End mill

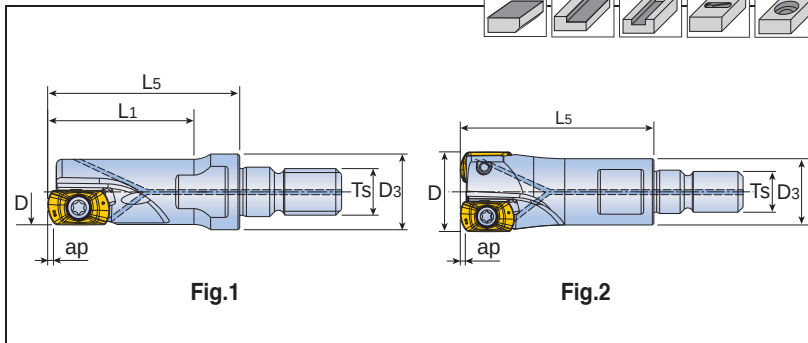
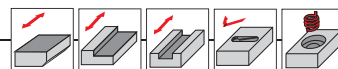


Designation		Dimension (mm)					Coolant	Fig.	Insert
		D	d	L	H	ap			
2S-TE90AP 110-W10-09	1	10	10	80	23.5	1.0	x	1	APKT 09T3R-HF
110-W10-09-C	1	10	10	80	23.5	1.0	●	1	
112-W12-09	1	12	12	80	23.0	1.0	x	1	
112-W16-09-C	1	12	16	80	21.7	1.0	●	1	
114-W12-09	1	14	12	80	25.0	1.0	x	1	
216-15-09-L	2	16	15	170	30.0	1.0	x	2	
216-W16-09	2	16	16	90	22.1	1.0	x	1	
216-W16-09-C	2	16	16	90	22.1	1.0	●	1	
216-16-09-L	2	16	16	145	27.1	1.0	x	2	
217-16-09-L	2	17	16	180	25.0	1.0	x	2	
218-W16-09	2	18	16	90	25.0	1.0	x	1	
218-W16-09-C	2	18	16	90	25.0	1.0	●	1	
220-19-09-L	2	20	19	170	25.0	1.0	x	2	
220-20-09-L	2	20	20	170	37.1	1.0	x	2	
320-W20-09	3	20	20	110	27.1	1.0	x	1	
320-W20-09-C	3	20	20	110	27.1	1.0	●	1	
221-20-09-L	2	21	20	200	25.0	1.0	x	2	
322-W20-09	3	22	20	110	30.0	1.0	x	1	
322-W20-09-C	3	22	20	110	30.0	1.0	●	1	
225-24-09-L	2	25	24	210	28.0	1.0	x	2	
225-25-09-L	2	25	25	210	37.1	1.0	x	2	
325-W20-09	3	25	20	110	30.0	1.0	x	1	
325-W20-09-C	3	25	20	110	30.0	1.0	●	1	
325-W25-09	3	25	25	110	26.6	1.0	x	1	
425-W20-09-C	4	25	20	110	30.0	1.0	●	1	
226-25-09-L	2	26	25	250	28.0	1.0	x	2	
430-W25-09	4	30	25	130	32.0	1.0	x	1	
430-W25-09-C	4	30	25	130	30.0	1.0	●	1	
232-32-09-L	2	32	32	250	62.0	1.0	x	2	
432-W25-09	4	32	25	130	32.0	1.0	x	1	
432-W25-09-C	4	32	25	130	32.0	1.0	●	1	
532-W25-09-C	5	32	25	130	32.0	1.0	●	1	
333-32-09-L	3	33	32	250	40.0	1.0	x	2	
240-32-09-L	2	40	32	250	32.0	1.0	x	2	
540-W32-09	5	40	32	130	32.0	1.0	x	1	
540-W32-09-C	5	40	32	130	32.0	1.0	●	1	
640-W32-09	6	40	32	130	32.0	1.0	x	1	

2S-TE90AP ...-M...-09

CHASEMILL

Modular

[illegible]

- Coolant through type

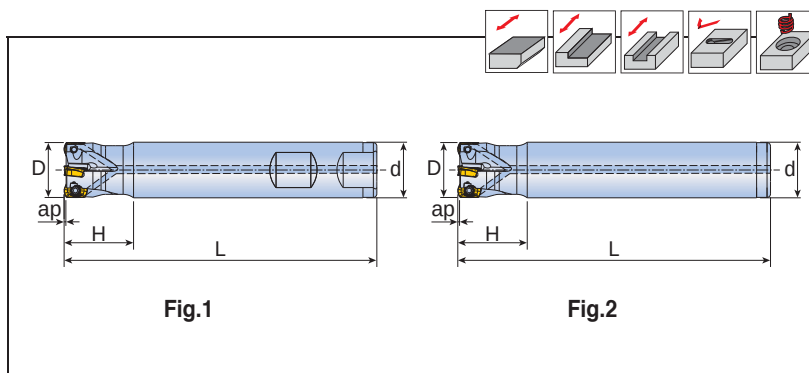
Spare parts

Designation	Screw	Wrench			
					
2S-TE90AP-09	TS 25055I/HG	TD8			

TE90AP-12

CHASEMILL

End mill



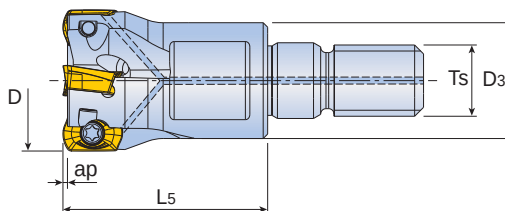
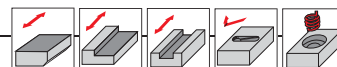
Designation			Dimension (mm)					Fig.	Insert
			D	d	L	H	ap		
TE90AP 116-W16-12-C	1		16	16	85	26	1.2	1	APKT 1204R-HF
218-W20-12-C	2		18	20	85	26	1.2	1	
220-19-12-L	2		20	19	170	30	1.2	2	
220-W20-12-C	2		20	20	90	30	1.2	1	
220-W20-12-L-C	2		20	20	125	30	1.2	1	
220-20-12-L	2		20	20	170	30	1.2	2	
220-20-12-L200	2		20	20	200	30	1.2	2	
221-20-12-L200	2		21	20	200	30	1.2	2	
221-20-12-L250	2		21	20	250	30	1.2	2	
225-24-12-L	2		25	24	200	40	1.2	2	
225-W25-12-L-C	2		25	25	145	40	1.2	1	
225-25-12-L	2		25	25	210	40	1.2	2	
225-25-12-L200	2		25	25	200	40	1.2	2	
325-W25-12-C	3		25	25	100	40	1.2	1	
226-25-12-L200	2		26	25	200	40	1.2	2	
226-25-12-L250	2		26	25	250	40	1.2	2	
232-25-12-L	2		32	25	250	40	1.2	2	
332-W25-12-L-C	3		32	25	155	35	1.2	1	
332-W32-12-C	3		32	32	110	40	1.2	1	
332-32-12-L	3		32	32	250	40	1.2	2	
332-32-12-L150	3		32	32	150	40	1.2	2	
432-W25-12-C	4		32	25	100	40	1.2	1	
233-32-12-L200	2		33	32	200	40	1.2	2	
233-32-12-L250	2		33	32	250	40	1.2	2	
333-32-12-L200	3		33	32	200	40	1.2	2	
333-32-12-L250	3		33	32	250	40	1.2	2	
435-W25-12	4		35	25	100	40	1.2	1	
440-W32-12-C	4		40	32	115	45	1.2	1	
440-32-12-L	4		40	32	250	40	1.2	2	
540-W32-12-C	5		40	32	115	45	1.2	1	

• Coolant through type

TE90AP...-M...-12

CHASEMILL

Modular



90°

[illegible]

- Coolant through type

Spare parts

Designation	Screw	Wrench			
					
TE90AP-12(Ø16-Ø26)	TS 35A070I/HG	TD10P			
TE90AP-12(Ø32-)	TS 35A088I/HG	TD10P			

High Feed Family

Chip Splitter Family

CHASEMILL

Size	Dimension (mm)					
	l	d ₁	t	ap	r	
06	6.7	4.04	2.6	0.5	3.0	
09	10.7	5.94	3.9	1.0	5.25	
12	14.2	8.0	5.0	1.2	8.35	

[illegible]

●: Standard item



CHASEMILLPOWER

Small but powerful positive insert
with dovetail design

- 2 cutting edges and 90° shoulder milling
- 2PKT 05 insert's high axial, positive geometry generates lower cutting force
- Double dovetail geometries for strong clamping force
- Bigger screw than the competitor's



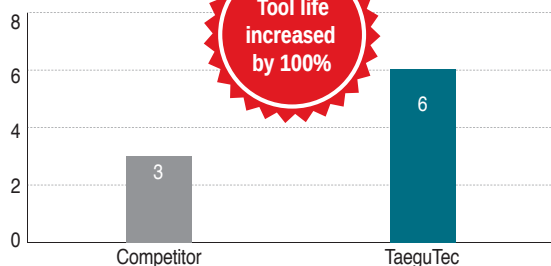
2PKT



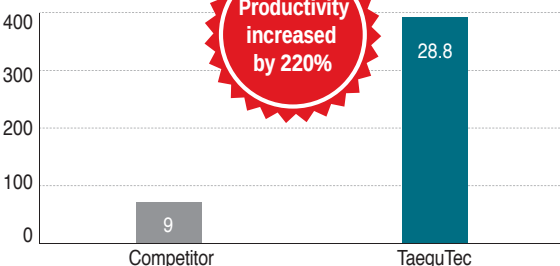
Case study 1

	Competitor	TaeguTec
Workpiece material	Carbon steel (S55C, 1055)	
Cutter	Competitor cutter	2P-TE90-212-12-05
Insert	Similar size insert (PVD coating)	2PKT 050304R-M TT9080
No. of teeth	1	2
Cutting speed	V (m/min)	170
	N (rpm)	4500
Feed rate	Fz (mm/tooth)	0.09
	F (mm/min)	800
Width of cut	ae (mm)	12
Depth of cut	ap (mm)	3
Coolant	Air	Air
Tool life (pcs)	3	6
MRR (cm³/min)	9	28.8

Tool life
(pcs/corner)



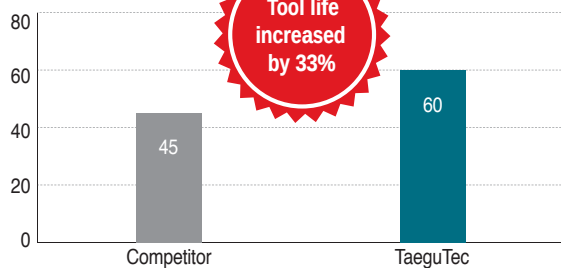
Metal removal rate
(cm³/min)



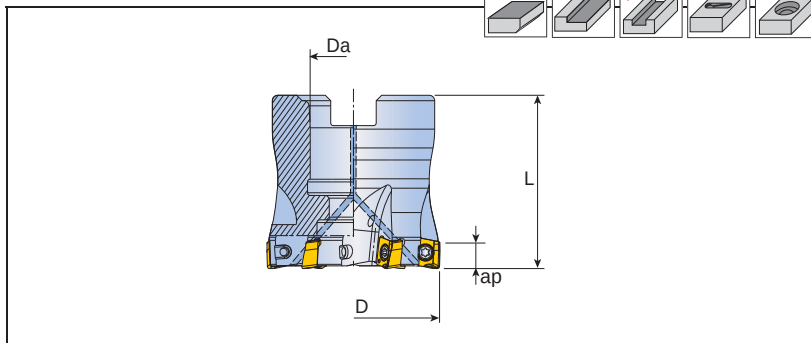
Case study 2

	Competitor	TaeguTec
Workpiece material	stainless steel (SUS 309S, 1.4828)	
Cutter	Competitor cutter	2P-TE90 316-W16 05
Insert	Similar size insert (PVD coating)	2PKT 050304R-M TT9080
No. of teeth	3	3
Cutting speed	V (m/min)	75
	N (rpm)	1500
Feed rate	Fz (mm/tooth)	0.15
	F (mm/min)	670
Depth of cut	ap (mm)	2.5 ~ 3
Coolant	Yes	Yes
Tool life (pcs)	45	60

Tool life
(hour/corner)



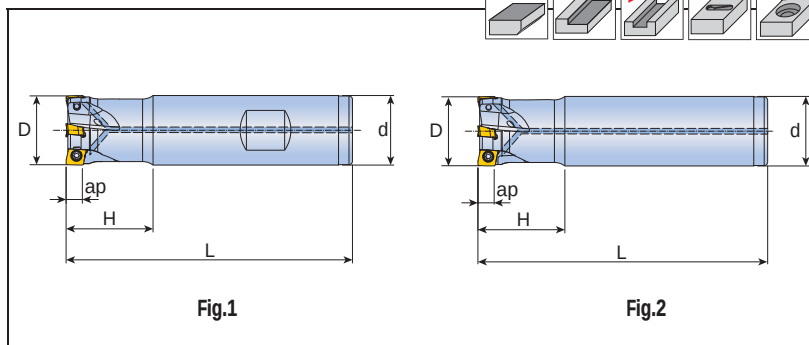
CHASEMILLPOWER

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Spare parts

Designation	Screw	Wrench		
				
2P-TF90...-05	TS 20043I/HG-P	TD 6P		

CHASEMILLPOWER

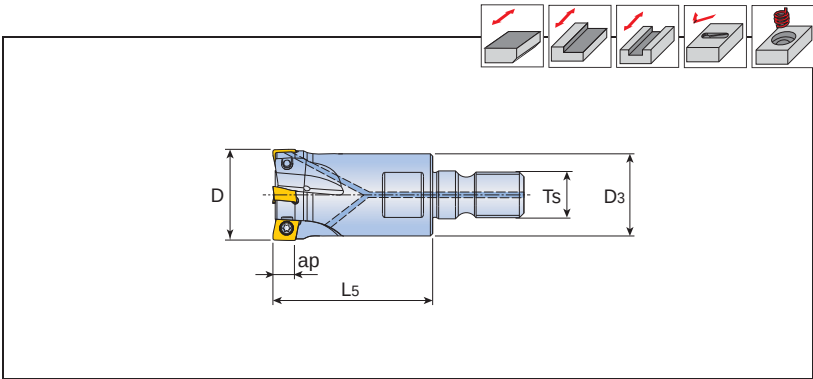


High Feed Family

2P-TE90...-M...-05

CHASEMILLPOWER

Modular



Designation		Dimension (mm)					Coolant	Insert
		D	D3	L5	Ts	ap		
2P-TE90- 212-M06-05	2	12	9.7	23	6	4.7	•	2PKT 0503...
213-M06-05	2	13	11	23	6	4.7	•	
316-M08-05	3	16	13	23	8	4.7	•	
317-M08-05	3	17	13	23	8	4.7	•	
420-M10-05	4	20	18	35	10	4.7	•	
421-M12-05	4	21	21	35	12	4.7	•	
525-M12-05	5	25	21	35	12	4.7	•	
625-M12-05	6	25	21	35	12	4.7	•	
626-M12-05	6	26	21	35	12	4.7	•	
732-M16-05	7	32	29	43	16	4.7	•	
733-M16-05	7	33	29	43	16	4.7	•	

Spare parts

Designation	Screw	Wrench		
2P-TE90-05	TS 20043I/HG-P	TD 6P		

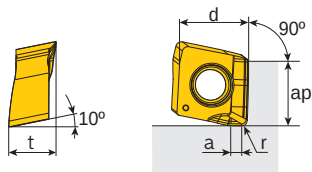
High Feed Family

Chip Splitter Family

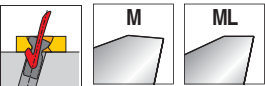
Technical Guide

2PKT 05

Insert

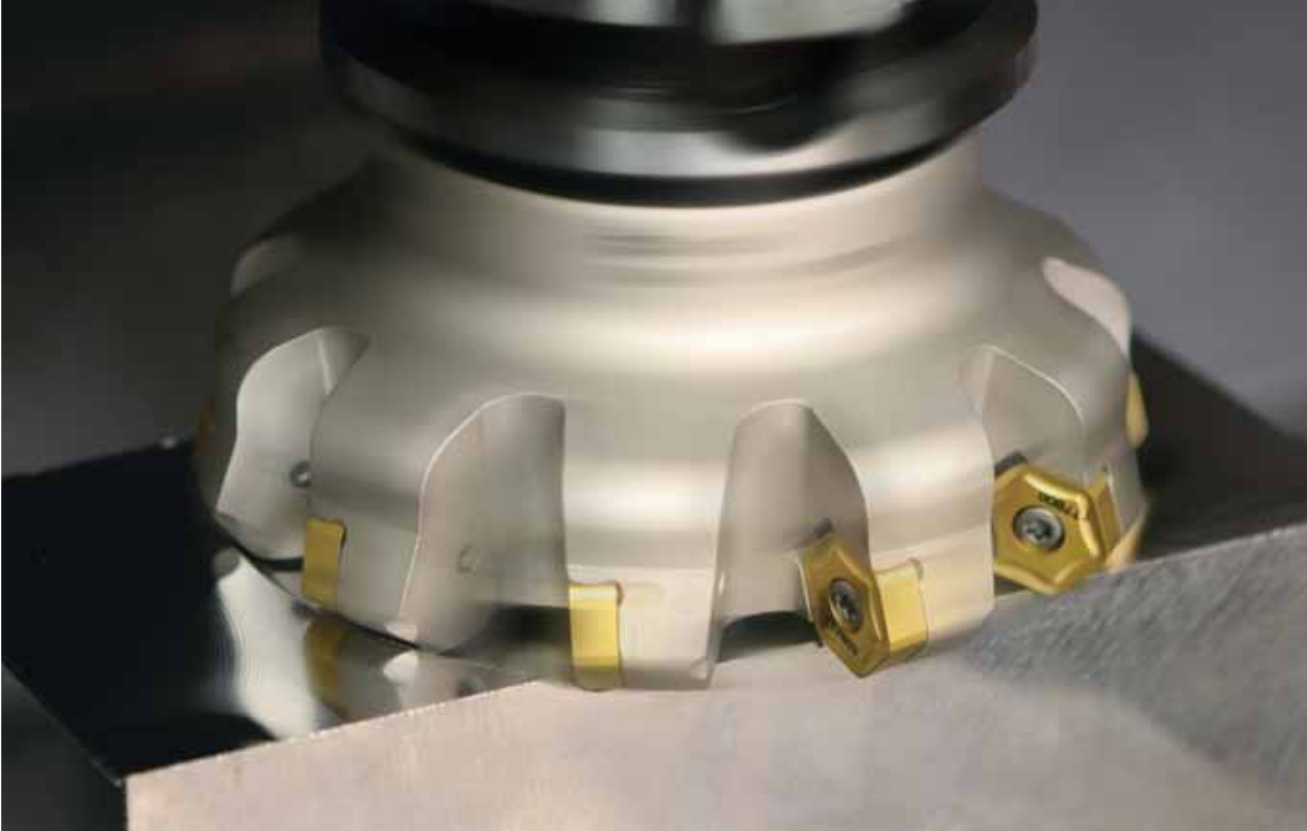


Size	Dimension (mm)				
	d	t	ap	a	r
05	5.17	3.4	4.7	0.4-0.8	0.4-1.6



Insert	Designation	Recommended Machining Conditions		Coated								Uncoated		
		Feed (mm/tooth)	ap (mm)	TT9080	TT9030	TT8080	TT8020	TT7800	TT7080	TT7515	TT6080	TT2510	K10	
	2PKT 050304R-M	0.06-0.18	0.5-4.2	●		●				●	●	●		
	050308R-M	0.06-0.18	0.5-4.2	●		●				●	●	●		
	050316R-M	0.06-0.18	0.5-4.2	●		●				●	●	●		
	2PKT 050304R-ML	0.02-0.12	0.5-4.2	●		●					●			
	050308R-ML	0.06-0.18	0.5-4.2	●		●				●	●			
	050316R-ML	0.06-0.18	0.5-4.2	●		●				●	●			

●: Standard item



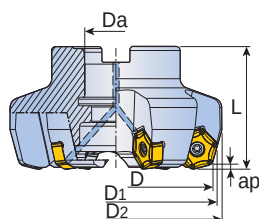
HEXA²MILL

The optimum solution for cast iron and steel machining

- Economical 12 cutting edge insert with simple screw clamping
- 15 degree cutter for high feed applications
- The angled approach of the screw-clamping system makes for more rigid and strong clamping with fine pitch option
- Increased insert thickness (6.35 mm) for a more robust insert designed for higher feed rates



HEXA2MILL

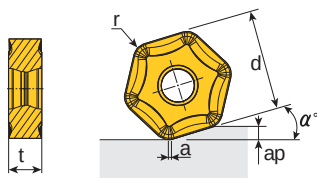


- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

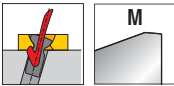
Designation	Screw	Wrench			
TFM15HNS	TS 50C130I/HG	T-T20			

HNHX 10

Insert



Size	Dimension (mm)					
	d	t	ap	a	r	α°
10	19.05	6.35	2.0	1.0	1.0	15



Insert	Designation	Recommended Machining Conditions		Ceramic	Cermet	Coated						Uncoated	
		Feed (mm/tooth)	ap (mm)	AS10	CT7000	TT9080	TT8080	TT7800	TT7080	TT7515	TT6080	K10	
	HNHX 1006 ANT-N-M	0.10-0.20	1.5-2.0			●	●	●	●	●	●		

●: Standard item

**SOLIDFEED**

Solid carbide end mill
for high feed machining

- Efficient and reduces cycle time with extremely high feed machining capability
- Lowers cutting forces with unique corner geometry
- Designed for rough machining applications including slotting, shouldering, pocketing and helical ramping
- Excellent wear resistance when machining general and hardened steel (submicron base + AlTiN coating)
- Cutter rigidity allows for high speed machining even in long overhang operation conditions
- Maximum feed per tooth 1.0 mm/tooth



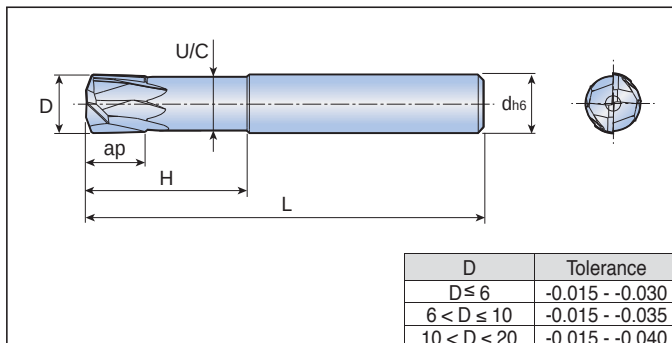
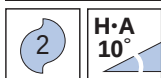
HFM 2

SOLIDFEED

2 flute high feed flat



• High Feed Machining (H.F.M)



Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		D	L	ap	H	U/C	d	TT5515
HFM 2040	0.2-0.4	4	47	4	10	3.9	6	•
2060	0.3-0.6	6	52	6	16	5.5	6	•
2080	0.4-0.7	8	60	8	22	7.3	8	•
2100	0.5-0.9	10	68	10	28	9.2	10	•
2120	0.5-1.0	12	76	12	33	11.0	12	•

• Standard item

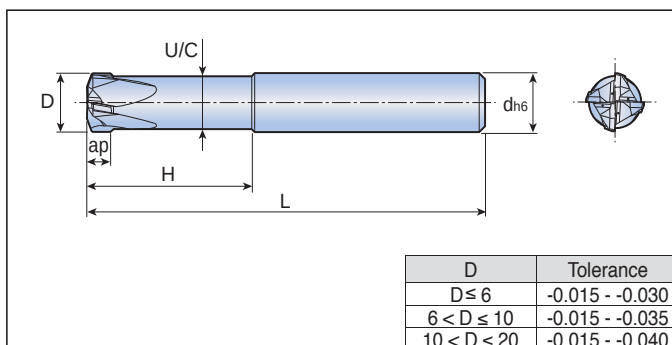
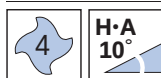
HFM 4

SOLIDFEED

4 flute high feed flat



• High Feed Machining (H.F.M)



Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		D	L	ap	H	U/C	d	TT5515
HFM 4060	0.3-0.5	6	52	2.5	16	5.4	6	•
4080	0.3-0.6	8	60	3.5	24	7.2	8	•
4100	0.4-0.8	10	68	4.0	28	9.2	10	•
4120	0.4-1.0	12	76	5.0	33	11.0	12	•

• Standard item

ChipSplitter

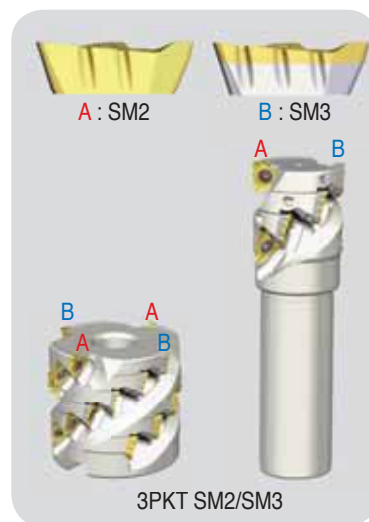
Family





MILL-RUSH Splitter Insert

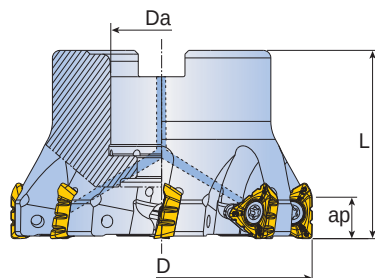
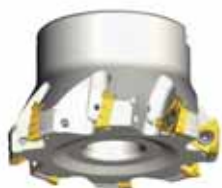
- Chip splitter design generates low cutting force enabling increased feed rates resulting in higher productivity machining
- Stable machining in long overhang and unstable fixture operations
- Smooth cutting



3P TF90-15/19

MILL-RUSH

Face mill

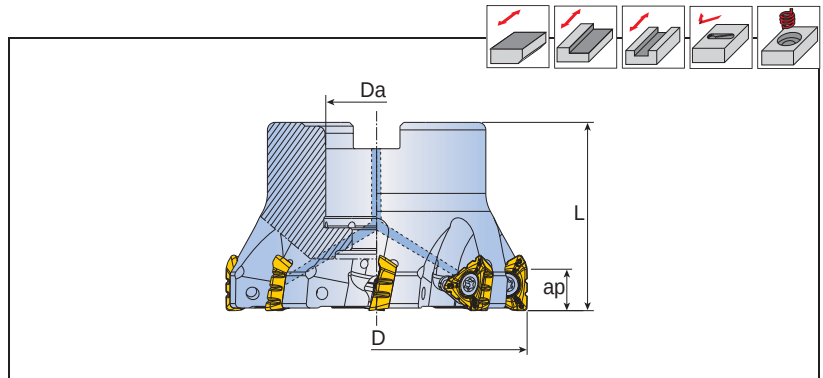
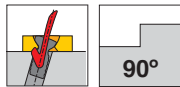
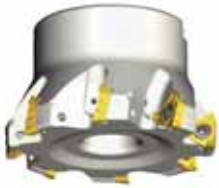


Designation		Dimension (mm)				Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap					
3P TF90- 450-22R-15	4	50	22	40	11	•	A	0.3	SH M10x1.5x30	3PKT 150508R-SM2 / SM3
550-22R-15	5	50	22	40	11	•	A	0.3	SH M10x1.5x30	
463-22R-15-B	4	63	22	40	11	•	A	0.5	SH M10x1.5x30	
663-22R-15	6	63	22	40	11	•	A	0.5	SH M10x1.5x30	
480-27R-15-B	4	80	27	50	11	•	A	1.0	SH M12x1.75x35	
780-27R-15	7	80	27	50	11	•	A	1.0	SH M12x1.75x35	
880-27R-15	8	80	27	50	11	•	A	1.0	SH M12x1.75x35	
6100-32R-15-B	6	100	32	50	11	•	A	1.8	LH M16x2x35	
8100-32R-15	8	100	32	50	11	•	A	1.9	LH M16x2x35	
10100-32R-15	10	100	32	50	11	•	A	1.9	LH M16x2x35	
7125-40R-15-B	7	125	40	63	11	•	A	3.0	SH M20x2.5x40	
10125-40R-15	10	125	40	63	11	•	A	3.1	SH M20x2.5x40	
12125-40R-15	12	125	40	63	11	•	A	3.1	SH M20x2.5x40	
12160-40R-15	12	160	40	63	11	x	C	4.4	-	
15160-40R-15	15	160	40	63	11	x	C	4.4	-	
15200-60R-15	15	200	60	63	11	x	C	6.0	-	
18200-60R-15	18	200	60	63	11	x	C	5.8	-	
3P TF90- 463-22R-19	4	63	22	40	15	•	A	0.4	SH M10x1.5x30	3PKT 190608R-SM2 / SM3
663-22R-19	6	63	22	40	15	•	A	0.9	SH M10x1.5x30	
480-27R-19	4	80	27	50	15	•	A	0.9	SH M12x1.75x35	
780-27R-19	7	80	27	50	15	•	A	1.0	SH M12x1.75x35	
6100-32R-19	6	100	32	50	15	•	A	1.8	LH M16x2x35	
8100-32R-19	8	100	32	50	15	•	A	2.6	LH M16x2x35	
8125-40R-19	8	125	40	63	15	•	A	3.0	SH M20x2.5x40	
10125-40R-19	10	125	40	63	15	•	A	3.1	SH M20x2.5x40	
8160-40R-19	8	160	40	63	15	x	C	4.2	-	
12160-40R-19	12	160	40	63	15	x	C	4.3	-	
10200-60R-19	10	200	60	63	15	x	C	6.0	-	
14200-60R-19	14	200	60	63	15	x	C	6.0	-	
12250-60R-19	12	250	60	63	15	x	C	10.5	-	
16250-60R-19	16	250	60	63	15	x	C	10.5	-	

3P TF90-15/19

MILL-RUSH

Face mill (inch)



Designation		Dimension (mm)				Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap					
3P TF90- 780-25.4R-15	7	80	25.4	50	11	•	A	1.0	SH M12x1.75x35	3PKT 150508R-SM2 / SM3
880-25.4R-15	8	80	25.4	50	11	•	A	1.0	SH M12x1.75x35	
8100-31.75R-15	8	100	31.75	50	11	x	B	1.9	-	
10100-31.75R-15	10	100	31.75	50	11	x	B	1.9	-	
10125-38.1R-15	10	125	38.1	63	11	x	B	3.1	-	
12125-38.1R-15	12	125	38.1	63	11	x	B	3.1	-	
12160-50.8R-15	12	160	50.8	63	11	x	B	4.4	-	
15160-50.8R-15	15	160	50.8	63	11	x	B	4.4	-	
15200-47.625R-15	15	200	47.625	63	11	x	C	6.0	-	
3P TF90- 480-25.4R-19	4	80	25.4	50	15	•	A	0.9	SH M12x1.75x35	3PKT 190608R-SM2 / SM3
780-25.4R-19	7	80	25.4	50	15	•	A	1.0	SH M12x1.75x35	
6100-31.75R-19	6	100	31.75	50	15	x	B	1.8	-	
8100-31.75R-19	8	100	31.75	50	15	x	B	2.6	-	
8125-38.1R-19	8	125	38.1	63	15	x	B	3.0	-	
10125-38.1R-19	10	125	38.1	63	15	x	B	3.1	-	
8160-50.8R-19	8	160	50.8	63	15	x	B	4.2	-	
12160-50.8R-19	12	160	50.8	63	15	x	B	4.3	-	
10200-47.625R-19	10	200	47.625	63	15	x	C	6.0	-	
14200-47.625R-19	14	200	47.625	63	15	x	C	6.0	-	

• Mounting bolts with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

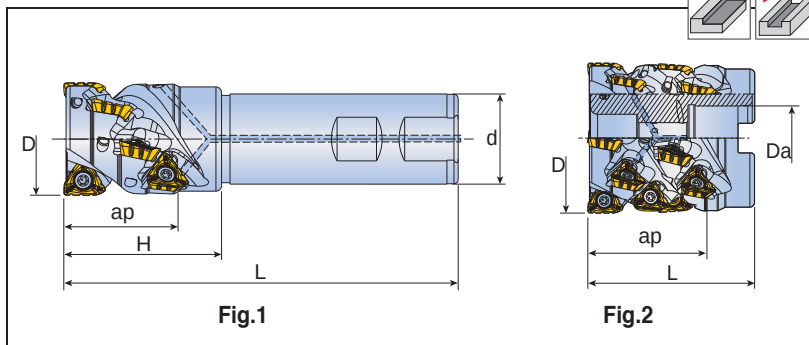
Spare parts

Designation	Screw	Wrench			
3P TF90-15	TS 40B100I	TD15			
3P TF90-19	TS 45120I	T-T20			

3P TEF/TES-15

MILL-RUSH

Extended flute cutter



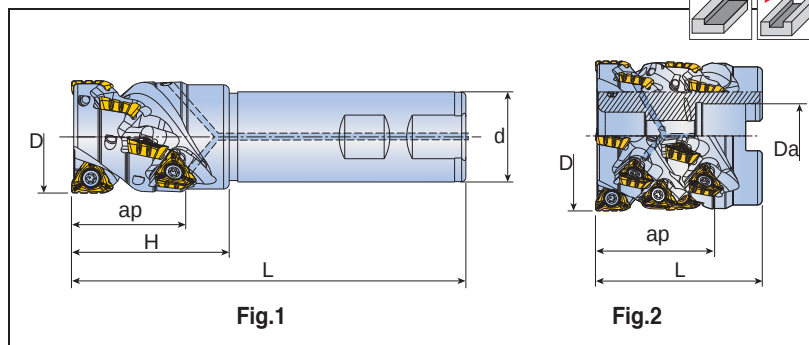
Designation		No. of insert	Dimension (mm)							 Kg	Fig.	Mounting bolt	Insert
			D	d	Da	L	H	ap					
3P TEF D40-40-W32-15		2	8	40	40	-	140	56	40	-	1	-	3PKT 150508R-SM2 / SM3
3P TES D50-40-22R-15-2F		2	8	50	-	22	65	-	40	0.6	2	SH M10x1.5x50	
D50-40-22R-15		3	12	50	-	22	65	-	40	0.6	2	SH M10x1.5x50	
D63-50-27R-15		4	20	63	-	27	70	-	50	1.0	2	SH M12x1.75x50	
D80-60-32R-15		4	24	80	-	32	75	-	60	2.0	2	SH M16x2x50	

• Coolant through type

Spare parts

Designation	Screw	Wrench			
					
3P TEF/TES-15	TS 40B100I	TD15			

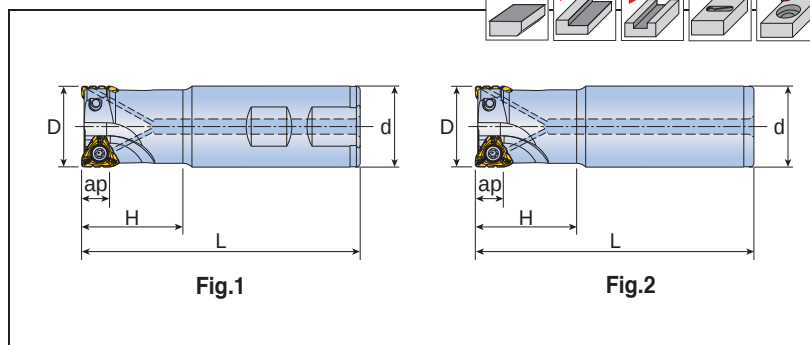
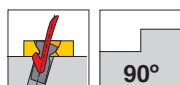
MILL-RUSH



- Coolant through type

Designation	Screw	Wrench			
3P TEF/TES-19	TS 45120I	T-T20			

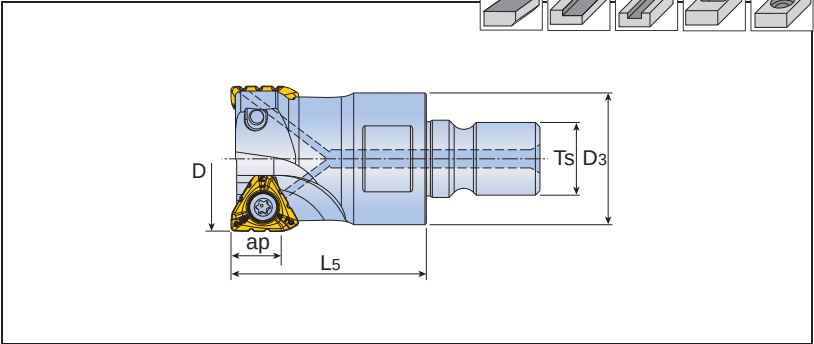
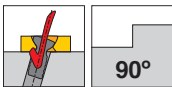
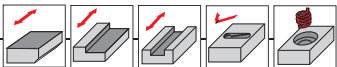
MILL•RUSH

[illegible]

3P TE90-...-M...-15/19

MILL-RUSH

Modular



Designation		Dimension (mm)					Insert
		D	D3	L5	Ts	ap	
3P TE90- 232-M16-15	2	32	29	43	16	11	3PKT 150508R-SM2 / SM3
332-M16-15	3	32	29	43	16	11	
340-M16-15	3	40	29	43	16	11	
440-M16-15	4	40	29	43	16	11	
3P TE90- 340-M16-19	3	40	29	43	16	15	3PKT 190608R-SM2 / SM3

• Coolant through type

Spare parts

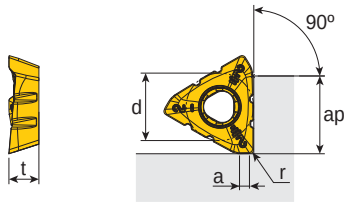
Designation	Screw	Wrench			
3P TE90-15	TS 40B100I	TD15			
3P TE90-19	TS 45120I	T-T20			

High Feed Family

Chip Splitter Family

Technical Guide

Insert



Size	Dimension (mm)					
	d	t	ap	a	r	
15	10.7	5.0	11.0	1.6	0.8	
19	13.5	6.0	15.0	2.0	0.8	

[illegible]

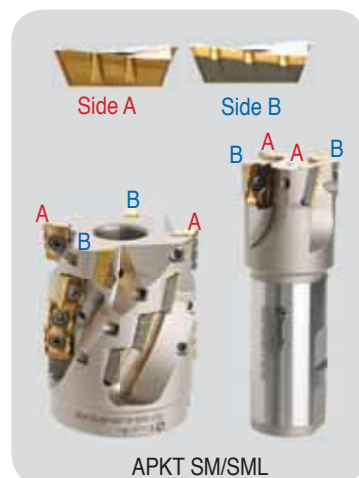
●: Standard item



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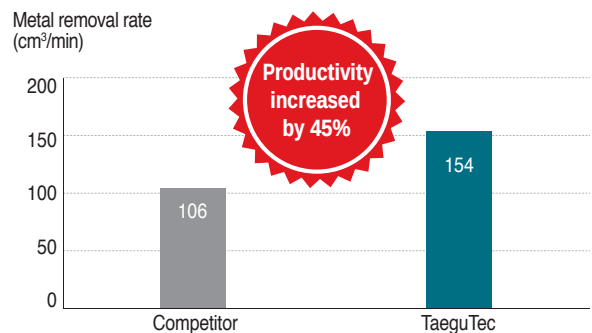
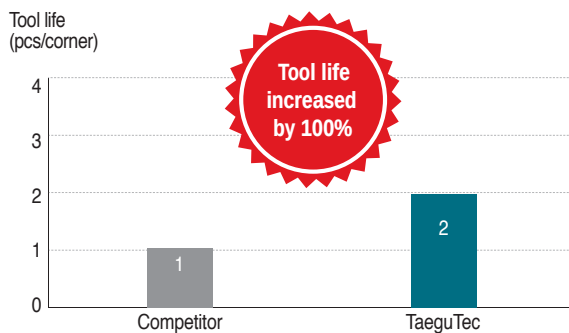
New chip splitter insert for top productivity with reduced cutting force

- Chip splitter type insert reduces cutting load for heavy milling applications
- Reduces cutting load – High table feed can be achieved
- Reduces vibration (chatter free) and noise
- Insert's helical cutting edge geometry enables double feed rate
- Improves chip evacuation (Chip split into small pieces)
- Reduces heat generation
- Suitable for long overhang machining (weak machining and fixture applications)



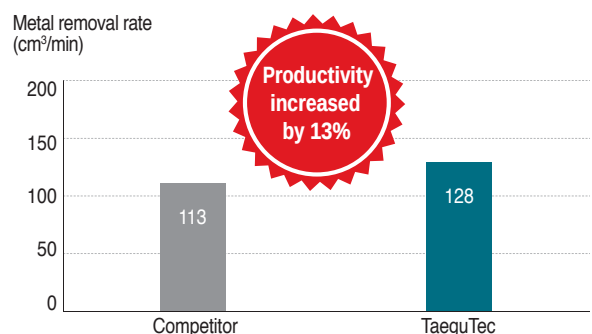
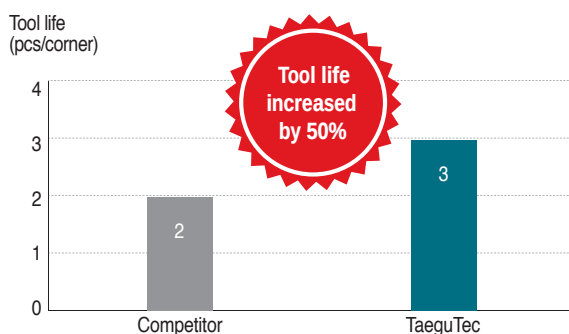
Case study 1_ APKT-SM

		Competitor	TaeguTec
Workpiece material		Medium carbon steel (AISI 1045, S45C)	
Cutter		TE90AP 232-32-17-L (2 teeth)	TE90AP 232-32-17-L (2 teeth)
Insert		APKT 1705 PER-EML TT9080	APKT 1705 PER-SM TT9080
Cutting speed	V (m/min)	140	140
	N (rpm)	1400	1400
Feed rate	Fz (mm/tooth)	0.078	0.114
	F (mm/min)	440	640
Width of cut	ae (mm)	40	40
Depth of cut	ap (mm)	6	6
Coolant		Wet	Wet
Metal removal rate (cm³/min)		106	154
Tool life (pcs/corner)		1	2



Case study 2_ APKT-SM

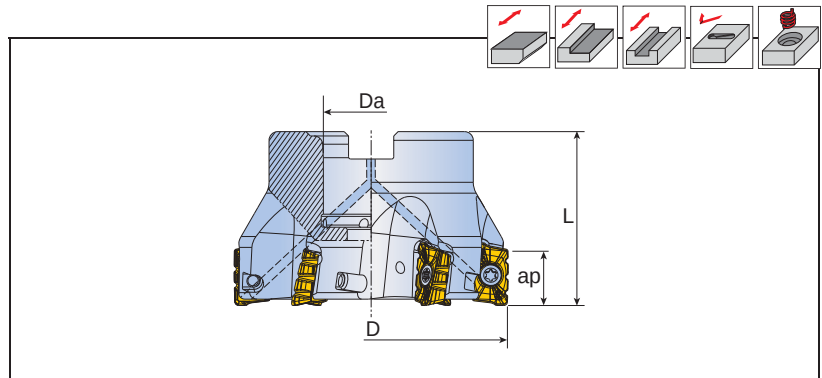
		Competitor	TaeguTec
Workpiece material		Forged steel	
Cutter		D80 extended flute cutter (6 flutes)	TES D80-58-32-AP17 (4 flutes)
Insert		Single-sided 4corners insert	APKT 1705 PER-SM TT9080
Cutting speed	V (m/min)	188	160
	N (rpm)	750	630
Feed rate	Fz (mm/tooth)	0.2	0.2
	F (mm/min)	450	510
Width of cut	ae (mm)	5	5
Depth of cut	ap (mm)	50	50
Coolant		Wet	Wet
Metal removal rate (cm³/min)		113	128
Tool life (pcs/corner)		2	3



TFM90AP-12/17

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Face mill



Designation			Dimension (mm)				Coolant	Arbor style	 Kg	Mounting bolt	Insert
			D	Da	L	ap					
TFM90AP	440-16R-12	4	40	16	40	12	●	A	0.2	SH M8x1.25x25	APKT 1204 PER-SM / SML
	540-16R-12	5	40	16	40	12	●	A	0.2	SH M8x1.25x25	
	550-22R-12	5	50	22	40	12	●	A	0.3	SH M10x1.5x30	
	650-22R-12	6	50	22	40	12	●	A	0.3	SH M10x1.5x30	
	563-22R-12	5	63	22	40	12	●	A	0.5	SH M10x1.5x30	
	663-22R-12	6	63	22	40	12	●	A	0.5	SH M10x1.5x30	
	763-22R-12	7	63	22	40	12	●	A	0.5	SH M10x1.5x30	
	680-27R-12	6	80	27	50	12	●	A	1.0	SH M12x1.75x30	
	880-27R-12	8	80	27	50	12	●	A	1.0	SH M12x1.75x30	
TFM90AP	440-16R-17	4	40	16	40	16.1	●	A	0.3	SH M8x1.25x30	APKT 1705 PER-SM / SML
	350-22R-17-B	3	50	22	40	16.1	●	A	0.4	SH M10x1.5x30	
	450-22R-17-B	4	50	22	40	16.1	●	A	0.3	SH M10x1.5x30	
	550-22R-17	5	50	22	40	16.1	●	A	0.4	SH M10x1.5x30	
	463-22R-17-B	4	63	22	40	16.1	●	A	0.5	SH M10x1.5x30	
	663-22R-17	6	63	22	40	16.1	●	A	0.5	SH M10x1.5x30	
	480-27R-17-B	4	80	27	50	16.1	●	A	0.8	SH M12x1.75x35	
	680-27R-17	6	80	27	50	16.1	●	A	0.9	SH M12x1.75x35	
	780-27R-17	7	80	27	50	16.1	●	A	0.9	SH M12x1.75x35	
	6100-32R-17-B	6	100	32	50	16.1	●	A	1.3	LH M16x2x35	
	8100-32R-17	8	100	32	50	16.1	●	A	1.5	LH M16x2x35	
	7125-40R-17-B	7	125	40	63	16.1	●	A	2.9	SH M20x2.5x40	
	8125-40R-17	8	125	40	63	16.1	●	A	3.0	SH M20x2.5x40	
	9125-40R-17	9	125	40	63	16.1	●	A	3.1	SH M20x2.5x40	
	8160-40R-17-B	8	160	40	63	16.1	x	C	4.1	-	
	10160-40R-17	10	160	40	63	16.1	x	C	4.2	-	
	12200-60R-17	12	200	60	63	16.1	x	C	6.1	-	

High Feed Family

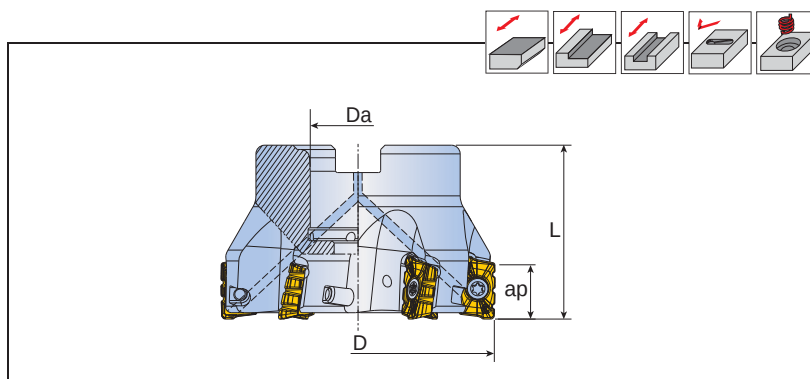
Chip Splitter Family

Technical Guide

TFM90AP-12/17

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Face mill (inch)

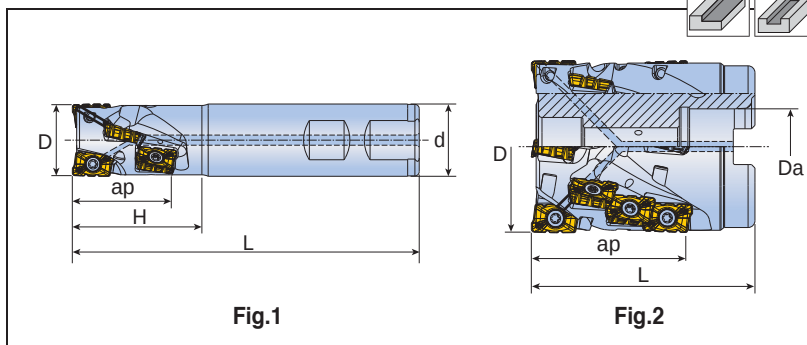
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- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench		
				
TFM90AP-12	TS 35A088I/HG	TD10P		
TFM90AP-17 (Ø40-Ø63)	TS 40093I/HG	T-T15		
TFM90AP-17 (Ø80-)	TS 40120I/HG	T-T15		

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- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

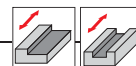
Designation	Screw	Wrench			
TEF/TES-AP12 (Ø16-Ø25)	TS 35A070I/HG	TD10P			
TEF/TES-AP12 (Ø32-)	TS 35A088I/HG	TD10P			

High Feed Family

Chip Splitter Family



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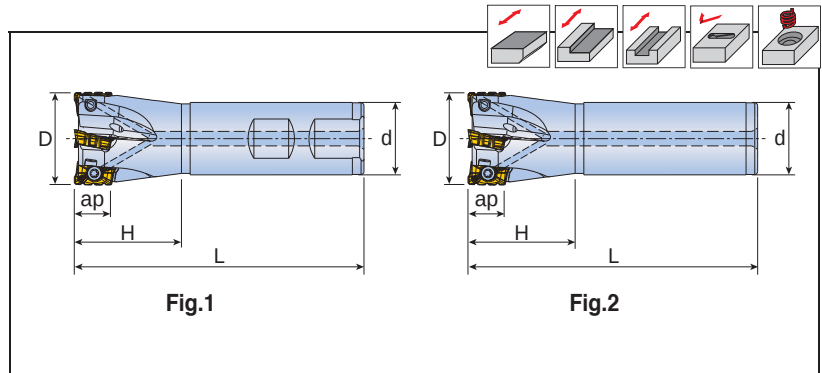
- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Designation	Screw	Wrench			
TEF-AP17	TS 40093I/HG	TD15			
TES-AP17	TS 40093I/HG	T-T15			

TE90AP-12

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End mill



Designation		Dimension (mm)					Fig.	Insert
		D	d	L	H	ap		
TE90AP 116-W16-12-C	1	16	16	85	26	12	1	APKT 1204 PER-SM / SML
218-W20-12-C	2	18	20	85	26	12	1	
220-19-12-L	2	20	19	170	30	12	2	
220-W20-12-C	2	20	20	90	30	12	1	
220-W20-12-L-C	2	20	20	125	30	12	1	
220-20-12-L	2	20	20	170	30	12	2	
220-20-12-L200	2	20	20	200	30	12	2	
221-20-12-L200	2	21	20	200	30	12	2	
221-20-12-L250	2	21	20	250	30	12	2	
225-24-12-L	2	25	24	200	40	12	2	
225-W25-12-L-C	2	25	25	145	40	12	1	
225-25-12-L	2	25	25	210	40	12	2	
225-25-12-L200	2	25	25	200	40	12	2	
325-W25-12-C	3	25	25	100	40	12	1	
226-25-12-L200	2	26	25	200	40	12	2	
226-25-12-L250	2	26	25	250	40	12	2	
232-25-12-L	2	32	25	250	40	12	2	
332-W25-12-L-C	3	32	25	155	35	12	1	
332-W32-12-C	3	32	32	110	40	12	1	
332-32-12-L	3	32	32	250	40	12	2	
332-32-12-L150	3	32	32	150	40	12	2	
432-W25-12-C	4	32	25	100	40	12	1	APKT 1204 PER-SM / SML
233-32-12-L200	2	33	32	200	40	12	2	
233-32-12-L250	2	33	32	250	40	12	2	
333-32-12-L200	3	33	32	200	40	12	2	
333-32-12-L250	3	33	32	250	40	12	2	
435-W25-12	4	35	25	100	40	12	1	
440-W32-12-C	4	40	32	115	45	12	1	
440-32-12-L	4	40	32	250	40	12	2	
540-W32-12-C	5	40	32	115	45	12	1	

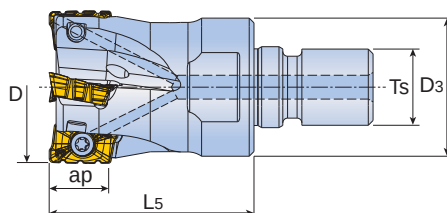
• Coolant through type

High Feed Family

Chip Splitter Family

Technical Guide

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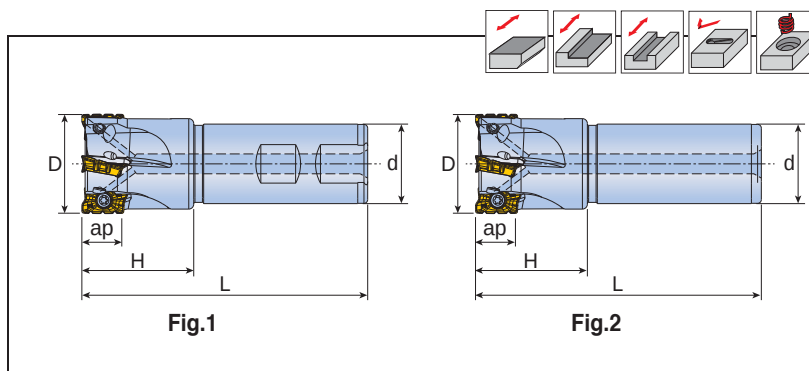
- Coolant through type
- Cutter body for 'APKT 12' insert with corner radius more than 1.6mm should be modified accordingly body "R"=Insert "R"-0.5mm

Designation	Screw	Wrench			
TE90AP-12(Ø16-Ø26)	TS 35A070I/HG	TD10P			
TE90AP-12(Ø32-)	TS 35A088I/HG	TD10P			

TE90AP-17

CHASEMILL

End mill



Designation		Dimension (mm)					Coolant	Fig.	Insert
		D	d	L	H	ap			
TE90AP 120-W20-17	1	20	20	90	32	16.1	x	1	APKT 1705 PER-SM / SML
120-W20-17-C	1	20	20	90	32	16.1	●	1	
225-24-17-L	2	25	24	210	40	16.1	x	2	
225-W25-17	2	25	25	100	39	16.1	x	1	
225-W25-17-C	2	25	25	100	39	16.1	●	1	
225-25-17-L	2	25	25	210	40	16.1	x	2	
226-25-17-L200	2	26	25	200	40	16.1	●	2	
226-25-17-L250	2	26	25	250	40	16.1	●	2	
232-32-17-L	2	32	32	250	65	16.1	x	2	
233-32-17-L250	2	33	32	250	40	16.1	●	2	
233-32-17-L300	2	33	32	300	40	16.1	●	2	
332-W32-17	3	32	32	110	40	16.1	x	1	
332-W32-17-C	3	32	32	110	40	16.1	●	1	
332-32-17-L	3	32	32	200	65	16.1	x	2	
333-32-17-L200	3	33	32	200	55	16.1	●	2	
333-32-17-L250	3	33	32	250	55	16.1	●	2	
240-32-17-L	2	40	32	250	54	16.1	x	2	
340-W32-17	3	40	32	110	40	16.1	x	1	
340-32-17-L	3	40	32	200	54	16.1	x	2	
440-W32-17	4	40	32	115	45	16.1	x	1	
440-W32-17-C	4	40	32	115	45	16.1	●	1	
440-32-17-L	4	40	32	200	57	16.1	x	2	

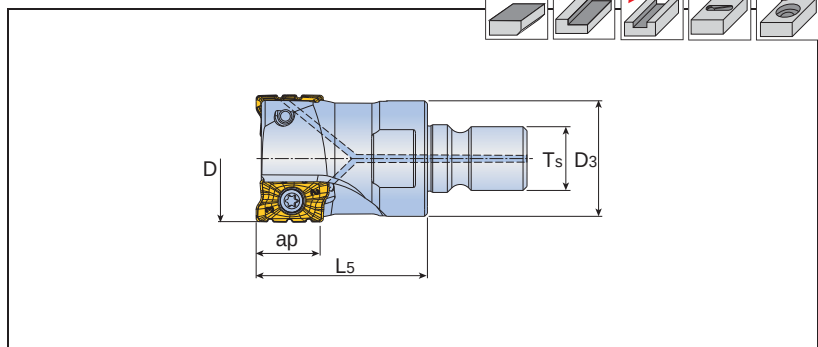
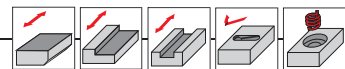
High Feed Family

Chip Splitter Family

Technical Guide

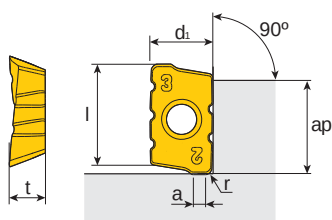
High Feed Family

Chip Splitter Family

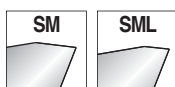


- Coolant through type
- Cutter body for 'APKT 17' insert with corner radius more than 1.6mm should be modified accordingly Body "R"=Insert "R"-0.8mm

Designation	Screw	Wrench			
TE90AP-17 (Ø20-Ø25)	TS 40085I/HG	TD15			
TE90AP-17 (Ø26-Ø63)	TS 40093I/HG	TD15			



Size	Dimension (mm)					
	l	d ₁	t	ap	a	r
12	14.6	8.3	4.76	12.5	1.6	0.8
17	18.5	10.7	5.56	16.4	2.26	0.8

[illegible]

●: Standard item



CHASE² MILL

New chip splitter insert for top productivity with reduced cutting force

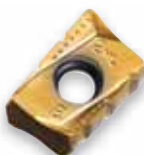
- Reduces cutting load - High table feed can be achieved
- Reduces vibration (chatter free) and noise
- Improves chip evacuation (chip split into small pieces)
- Suitable for long overhang machining (weak machining and fixture applications)



ANHX 16-SM



ANHX 11-SML



ANHX 16-SML

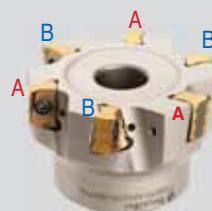


ANHX



Side A

Side B



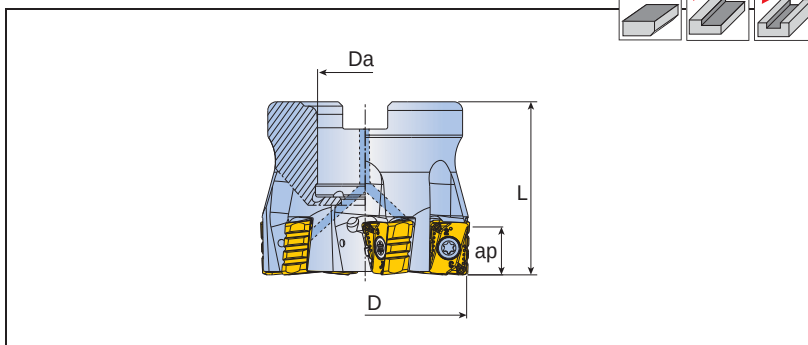
ANHX SM/SML



TFM90AN-11/16

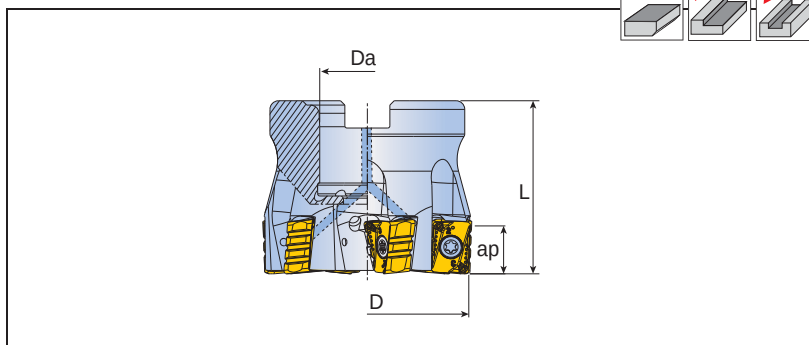


Face mill



Designation		Dimension (mm)					Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap						
TFM90AN	440-16R-11	4	40	16	40	11	•	A	0.2	SH M8x1.25x30	ANHX 110608R-SM / SML
	450-22R-11	4	50	22	40	11	•	A	0.3	SH M10x1.5x30	
	650-22R-11	6	50	22	40	11	•	A	0.3	SH M10x1.5x30	
	563-22R-11	5	63	22	40	11	•	A	0.6	SH M10x1.5x30	
	763-22R-11	7	63	22	40	11	•	A	0.6	SH M10x1.5x30	
	880-27R-11	8	80	27	50	11	•	A	1.1	SH M12x1.75x35	
	1080-27R-11	10	80	27	50	11	•	A	1.1	SH M12x1.75x35	
	9100-32R-11	9	100	32	50	11	•	A	2.0	SH M16x2x35	
	12100-32R-11	12	100	32	50	11	•	A	2.0	SH M16x2x35	
	10125-40R-11	10	125	40	63	11	•	A	3.3	SH M20x2.5x40	
	14125-40R-11	14	125	40	63	11	•	A	3.4	SH M20x2.5x40	
TFM90AN	350-22R-16	3	50	22	40	15	•	A	0.4	SH M10x1.5x30	ANHX 160708R-SM / SML
	450-22R-16	4	50	22	40	15	•	A	0.4	SH M10x1.5x30	
	463-22R-16	4	63	22	40	15	•	A	0.5	SH M10x1.5x30	
	663-22R-16	6	63	22	40	15	•	A	0.5	SH M10x1.5x30	
	580-27R-16	5	80	27	50	15	•	A	0.8	SH M12x1.75x35	
	780-27R-16	7	80	27	50	15	•	A	0.9	SH M12x1.75x35	
	5100-32R-16	5	100	32	50	15	•	A	1.3	SH M16x2x35	
	8100-32R-16	8	100	32	50	15	•	A	1.5	SH M16x2x35	
	7125-40R-16	7	125	40	63	15	•	A	3.9	SH M20x2.5x40	
	10125-40R-16	10	125	40	63	15	•	A	3.7	SH M20x2.5x40	
	8160-40R-16	8	160	40	63	15	x	C	5.0	-	
	12160-40R-16	12	160	40	63	15	x	C	5.3	-	
	14200-60R-16	14	200	60	63	15	x	C	7.0	-	

Face mill (inch)

[illegible]

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

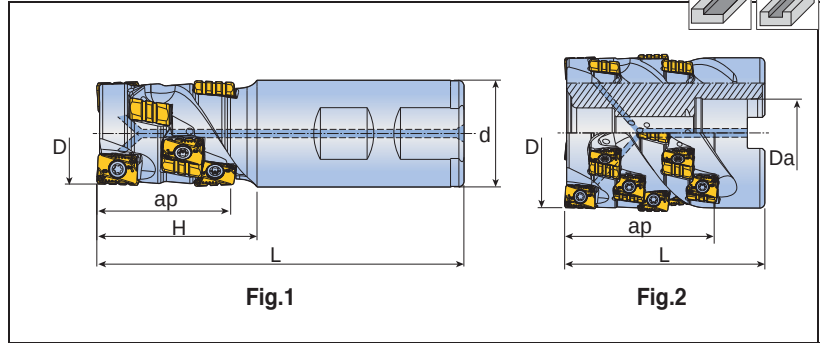
Spare parts

Designation	Screw	Wrench			
					
TFM90AN-11	TS 35A088I/HG	TD10P			
TFM90AP-16	TS 40120I	T-T15			

TEF/TES-AN11

CHASE²MILL

Extended flute cutter

[illegible]

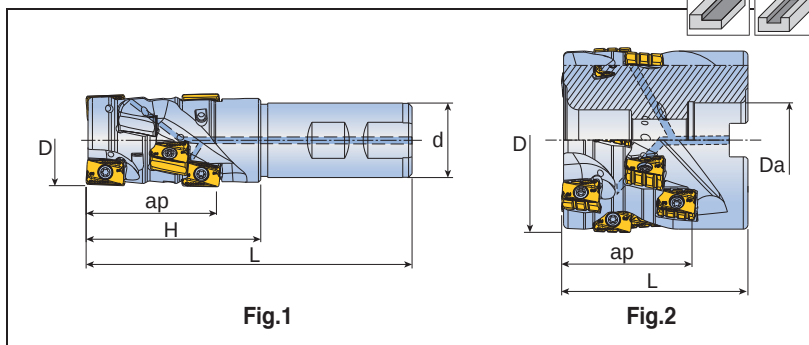
- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
					
TEF/TES-AN11	TS 35A088I/HG	TD 10P			

TEF/TES-AN16

Extended flute cutter



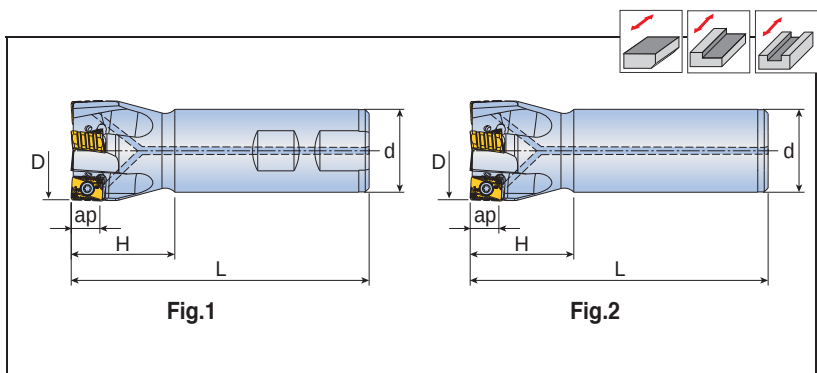
Designation		No. of insert	Dimension (mm)						Kg	Fig.	Mounting bolt	Insert
			D	d	Da	L	H	ap				
TEF D40-42-W32-AN16	2	6	40	32	-	120	55	42	-	1	-	ANHX 160708R-SM / SML
D40-56-W32-AN16	2	8	40	32	-	140	75	56	-	1	-	
D50-56-W40-AN16	3	12	50	40	-	140	70	56	-	1	-	
TES D50-42-22R-AN16	2	6	50	-	22	65	-	42	0.7	2	SH M10x1.5x40	
D63-42-27R-AN16	3	9	63	-	27	70	-	42	1.1	2	SH M12x1.75x50	
D63-56-27R-AN16	3	12	63	-	27	80	-	56	1.3	2	SH M12x1.75x50	
D80-56-32R-AN16	4	16	80	-	32	80	-	56	2.2	2	SH M16x2x50	
D100-69-40R-AN16	5	25	100	-	40	100	-	69	4.5	2	SH M20x2.5x60	

- Coolant through type
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TEF/TES-AN16	TS 40120I/HG	T-T15			

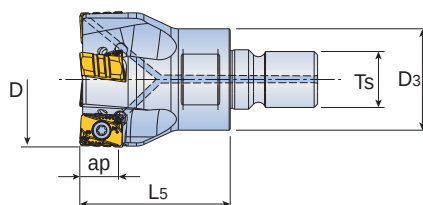
CHASE² MILL

[illegible]

High Feed Family

Chip Splitter Family

CHASE² MILL

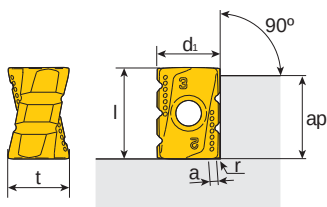


90°

- Coolant through type

Designation	Screw	Wrench			
TE90AN-11	TS 35A088I/HG	TD10P			
TE90AN-16	TS 40120I	TD15			

Insert



Size	Dimension (mm)					
	l	d1	t	ap	a	r
11	12	9.2	8.5	11	1.1	0.8
16	16	11	10.6	15	1.4	0.8



Insert	Designation	Recommended Machining Conditions		Cermet	Coated								
		Feed (mm/tooth)	ap (mm)		CT7000	TT9080	TT8080	TT8020	TT7800	TT7080	TT7515	TT6080	TT2510
	ANHX 110608R-SM	0.08-0.15	3.0-9.0		•	•		•			•		
	160708R-SM	0.10-0.20	4.5-12.0		•	•		•			•		
	ANHX 110608R-SML	0.06-0.15	3.0-9.5		•	•							
	160708R-SML	0.06-0.20	4.5-13.5		•	•							

• Standard item

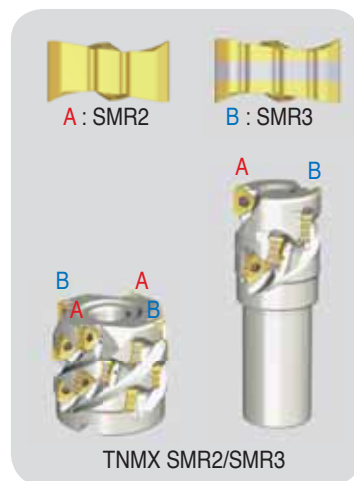


MILL2RUSH

TNMX 18 Line

Splitter insert

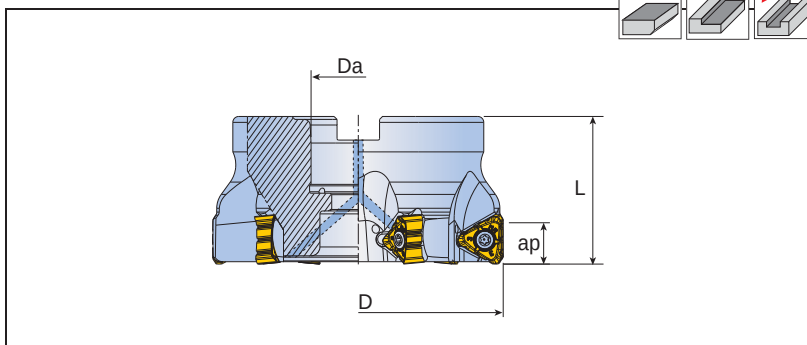
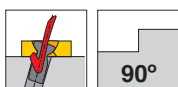
- Chip splitter design generates low cutting force enabling increased feed rates resulting in higher productivity machining
- Stable machining in long overhang and unstable fixture operations
- Smooth machining



SCRM90TN-18



Face mill



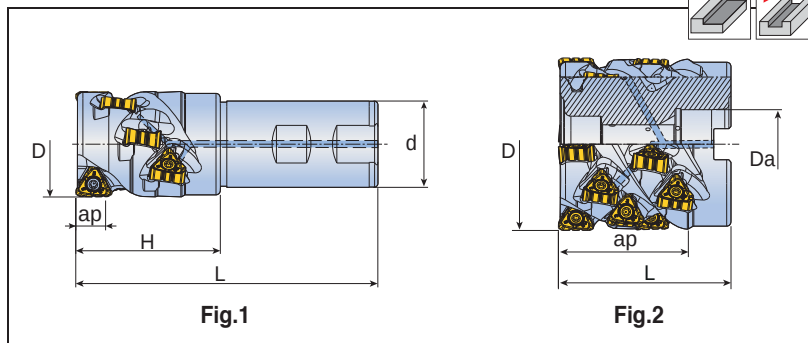
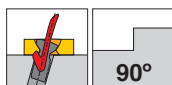
Designation		Dimension (mm)				Coolant	Arbor style		Mounting bolt	Insert	
		D	Da	L	ap						
SCRM90TN	450-16R-18	4	50	16	40	13	●	A	0.3	SH M8x1.25x30	TNMX 1806 PNTR-SMR2 / SMR3
	563-22R-18	5	63	22	40	13	●	A	0.5	SH M10x1.5x30	
	580-27R-18	5	80	27	50	13	●	A	1.1	SH M12x1.75x35	
	780-27R-18	7	80	27	50	13	●	A	1.1	SH M12x1.75x35	
	6100-32R-18-B	6	100	32	50	13	●	A	2.0	SH M16x2x35	
	8100-32R-18	8	100	32	50	13	●	A	2.0	SH M16x2x35	
	7125-40R-18-B	7	125	40	63	13	●	A	3.4	SH M20x2.5x40	
	10125-40R-18	10	125	40	63	13	●	A	3.3	SH M20x2.5x40	
	10160-40R-18	10	160	40	63	13	x	C	4.5	-	
	14160-40R-18	14	160	40	63	13	x	C	4.5	-	
16200-60R-18	16	200	60	63	13	x	C	6.2	-		
SCRM90TN	580-25.4R-18	5	80	25.4	50	13	●	A	1.1	SH M12x1.75x35	
	780-25.4R-18	7	80	25.4	50	13	●	A	1.1	SH M12x1.75x35	
	6100-31.75R-18-B	6	100	31.75	50	13	x	B	2.0	-	
	8100-31.75R-18	8	100	31.75	50	13	x	B	2.0	-	
	7125-38.1R-18-B	7	125	38.1	63	13	x	B	3.4	-	
	10125-38.1R-18	10	125	38.1	63	13	x	B	3.3	-	
	10160-50.8R-18	10	160	50.8	63	13	x	C	4.5	-	
	14160-50.8R-18	14	160	50.8	63	13	x	C	4.5	-	
	16200-47.625R-18	16	200	47.625	63	13	x	C	6.2	-	

• Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
SCRM90TN-18	TS 40B100I	T-T15			

MILL CRUSH



- Coolant through type

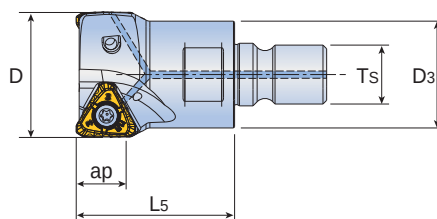
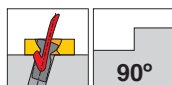
Designation	Screw	Wrench			
TEF/TES-TN18	TS 40B100I	T-T15			

MILL CRUSH



- Coolant through type

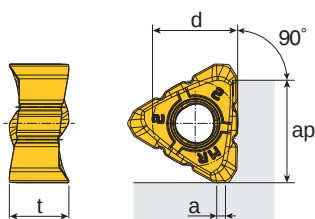
MILL CRUSH

[illegible]

- Coolant through type

Designation	Screw	Wrench			
SCRM90TN-18	TS 40B100I	T-T15			

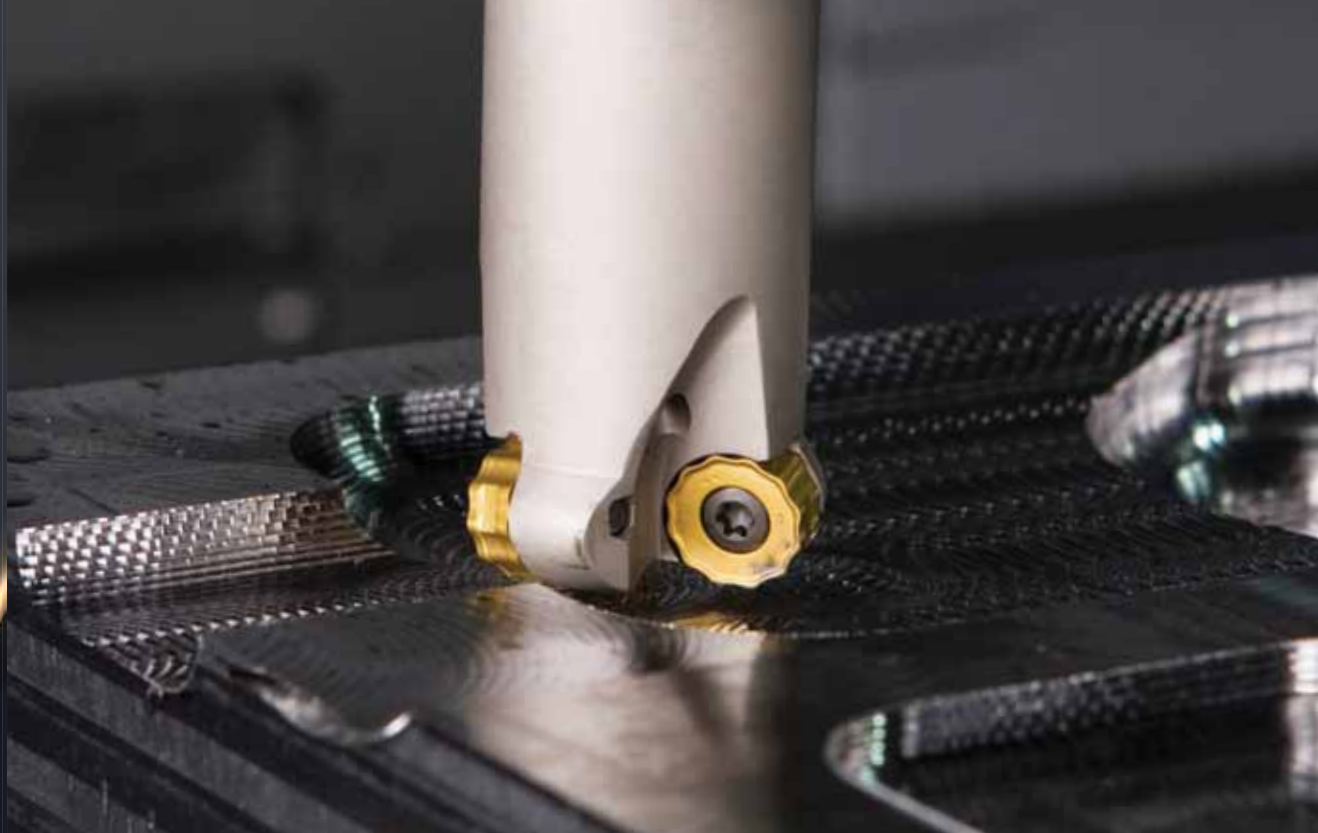
Insert



Size	Dimension (mm)				
	d	t	ap	a	
18	11.65	8	13	1.4	

Insert	Designation	Recommended Machining Conditions		Coated								Uncoated		
		Feed (mm/tooth)	ap (mm)	TT9080	TT9030	TT8080	TT8020	TT7800	TT7080	TT7515	TT6080	TT2510	K10	
	TNMX 1806 PNTR-SMR2	0.10-0.20	2.7-11.0	●		●		●		●	●			
	TNMX 1806 PNTR-SMR3	0.10-0.20	2.7-11.0	●		●		●		●	●			

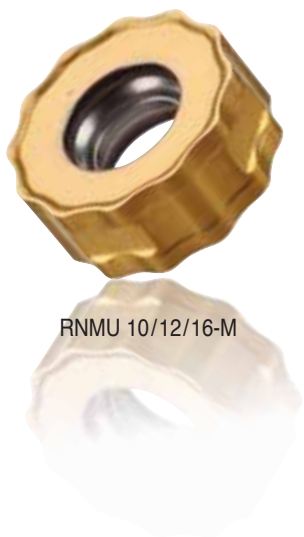
●: Standard item



CHASE² MOLD

Economical solution with double-sided round inserts

- Unique double-sided round inserts
- New insert and cutter pocket structure for strong & robust clamping (Anti-rotating system)
- When machining with a long overhang cutter, it is recommended that the shred type insert is used to reduce the cutting load



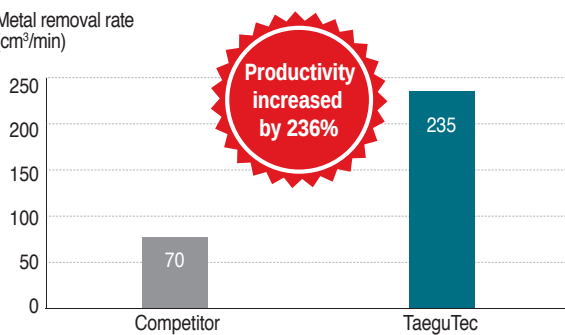
RNMU 10/12/16-M



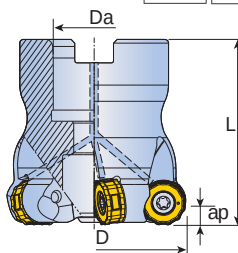
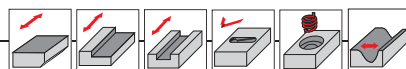
Case study 1

		Competitor	TaeguTec
Workpiece material		Tool steel (X40CrMoV51, H13, SDK61)	
Cutter		D50 round insert cutter (5 teeth)	TFMRNS 550-22R-12 (5 teeth)
Insert		Single-sided round insert	RNMU 1205S-M TT9080
Cutting speed	V (m/min)	236	150
	N (rpm)	1500	955
Feed rate	Fz (mm/tooth)	0.17	0.47
	F (mm/min)	1000	2244
Width of cut	ae (mm)	Variable	Variable
Depth of cut	ap (mm)	2	3
Coolant		Dry	Dry
Metal removal rate (cm ³ /min)		70	235
Tool life (hour/corner)		1.5	1.5

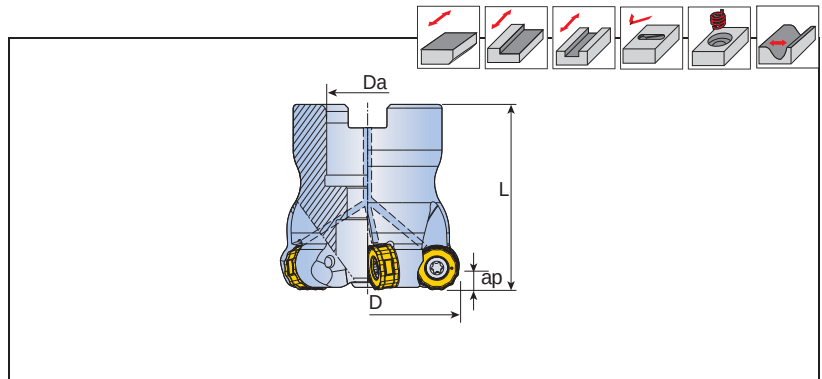
Metal removal rate
(cm³/min)



High Feed Family

92

Face mill



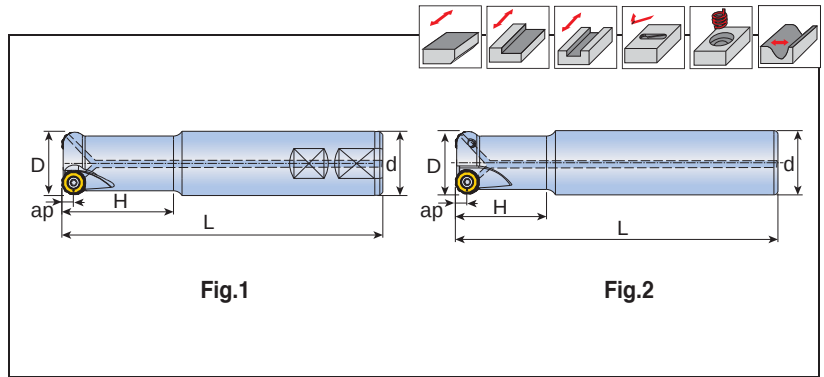
Designation		Dimension (mm)				Coolant	Arbor style	Kg	Mounting bolt	Insert
		D	Da	L	ap					
TFMRNS 340-16R-16	3	40	16	55	8	•	E	0.3	KTB 32B	RNMU 1606S-M
350-16R-16	3	50	16	50	8	•	A	0.2	SH M8x1.25x30	
450-16R-16	4	50	16	50	8	•	A	0.2	SH M8x1.25x30	
452-22R-16	4	52	22	50	8	•	A	0.3	SH M10x1.5x30	
463-22R-16	4	63	22	50	8	•	A	0.5	SH M10x1.5x30	
566-27R-16	5	66	27	50	8	•	A	0.6	LH M12x1.75x30	
580-27R-16	5	80	27	50	8	•	A	0.9	LH M12x1.75x30	
680-27R-16	6	80	27	50	8	•	A	0.8	LH M12x1.75x30	
6100-32R-16	6	100	32	50	8	•	A	1.7	LH M16x2.0x35	
7125-40R-16	7	125	40	63	8	•	A	3.0	SH M20x2.5x40	
8125-40R-16	8	125	40	63	8	•	A	2.9	SH M20x2.5x40	
9160-40R-16	9	160	40	63	8	x	C	3.8	-	
10200-60R-16	10	200	60	63	8	x	C	5.6	-	

• Mounting bolts with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TFMRNS-10	TS 35085I/HG	T-T15			
TFMRNS-12	TS 40G110I	T-T15			
TFMRNS-16	TS 50A121I/HG	T-T20			

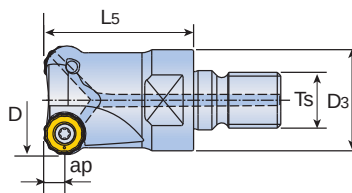
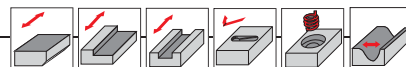
End mill



Designation		Dimension (mm)					Fig.	Insert
		D	d	L	H	ap		
TERNS 225-25-10-L160	2	25	25	160	60	5	2	RNMU 1004S-M
225-32-10-L250	2	25	32	250	40	5	2	
325-25-10-L160	3	25	25	160	60	5	2	
226-25-10-L200	2	26	25	200	80	5	2	
332-32-10-L180	3	32	32	180	70	5	2	
332-32-10-L250	3	32	32	250	100	5	2	
432-32-10-L180	4	32	32	180	70	5	2	
432-32-10-L250	4	32	32	250	100	5	2	
433-32-10-L200	4	33	32	200	80	5	2	
433-32-10-L250	4	33	32	250	100	5	2	
232-32-12-L150	2	32	32	150	50	6	2	RNMU 1205S-M
232-32-12-L200	2	32	32	200	60	6	2	
232-32-12-L	2	32	32	250	50	6	2	
332-W32-12	3	32	32	160	60	6	1	
332-32-12-L200	3	32	32	200	70	6	2	
332-32-12-L250	3	32	32	250	60	6	2	
233-32-12-L200	2	33	32	200	50	6	2	
233-32-12-L250	2	33	32	250	60	6	1	
333-32-12-L200	3	33	32	200	70	6	2	
333-32-12-L250	3	33	32	250	60	6	2	
340-W32-12	3	40	32	160	50	6	1	RNMU 1606S-M
340-32-12-L250	3	40	32	250	50	6	2	
440-W32-12	4	40	32	160	50	6	1	
440-32-12-L250	4	40	32	250	60	6	2	
450-32-12-L200	4	50	32	200	70	6	2	
550-32-12-L250	5	50	32	250	60	6	2	
240-32-16-L180	2	40	32	180	70	8	2	
240-32-16-L250	2	40	32	250	100	8	2	
340-32-16-L180	3	40	32	180	70	8	2	
340-32-16-L250	3	40	32	250	100	8	2	

• Coolant through type

Modular



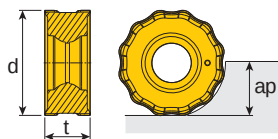
Designation		Dimension (mm)					Insert
		D	D3	L5	Ts	ap	
TERNS 225-M12-10	2	25	21	35	12	5	RNMU 1004S-M
325-M12-10	3	25	21	35	12	5	
432-M16-10	4	32	29	43	16	5	
542-M16-10	5	42	29	43	16	5	
232-M16-12	2	32	29	43	16	6	RNMU 1205S-M
332-M16-12	3	32	29	43	16	6	
233-M16-12	2	33	29	43	16	6	
333-M16-12	3	33	29	43	16	6	
340-M16-12	3	40	29	43	16	6	RNMU 1606S-M
440-M16-12	4	40	29	43	16	6	
240-M16-16	2	40	29	43	16	8	
340-M16-16	3	40	29	43	16	8	

• Coolant through type

Spare parts

Designation	Screw	Wrench			
					
TERNS-10	TS 35085I/HG	TD 15			
TERNS-12	TS 40G110I	T-T15			
TERNS-16	TS 50A121I/HG	TD 20			

Insert



Size	Dimension (mm)				
	r	d	t	ap	
10	5	10	4.5	5	
12	6	12	5.0	6	
16	8	16	6.3	8	



Insert	Designation	Feed (mm/tooth)	ap (mm)	Coated								Uncoated		
				TT9080	TT9030	TT8080	TT8020	TT7800	TT7080	TT7515	TT6080	TT2510	K10	
	RNMU 1004S-M	0.05-0.35	1.5-4.0	●		●	●	●				●		
	1205S-M	0.05-0.40	1.5-5.0	●		●	●	●				●		
	1606S-M	0.05-0.45	2.0-6.5	●		●	●	●				●		

●: Standard item



Chip splitter type solid end mills for roughing

APEXMILL _ REL

- Roughing end mill, 3 & 4 flutes, 20 helix
- For HSM of hardened steel
- Long length, AlTiN coating

STARMILL _ REH

- Roughing end mill, 4 & 6 flutes, 45 helix
- For roughing of low hardened steel
- Short / medium / long length, TiAlN coating

ALUMILL _ REA

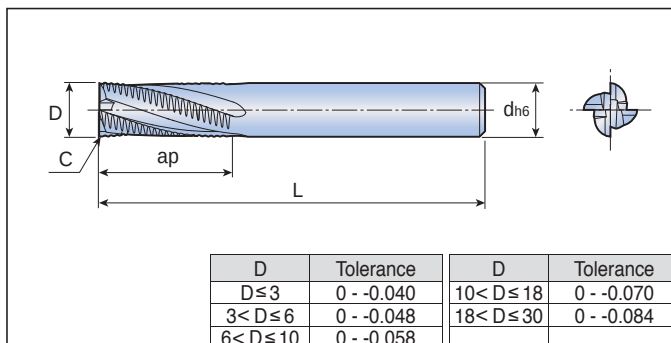
- Roughing end mill, 3 flutes, 30 helix
- Roughing of aluminum
- Long length, uncoated



REL ...L

APEXMILL

3-4 flute rough long flat



Designation	Feed (mm/tooth)	Dimension (mm)						Grade
			D	C	L	ap	d	
REL 3060L	0.03-0.06	3	6	0.38	57	16	6	•
3080L	0.03-0.08	3	8	0.38	63	16	8	•
4100L	0.03-0.09	4	10	0.61	72	22	10	•
4120L	0.04-0.10	4	12	0.61	83	26	12	•
4140L-14	0.05-0.11	4	14	0.61	83	26	14	•
4160L	0.05-0.11	4	16	0.61	92	32	16	•
4200L	0.05-0.11	4	20	0.61	104	38	20	•

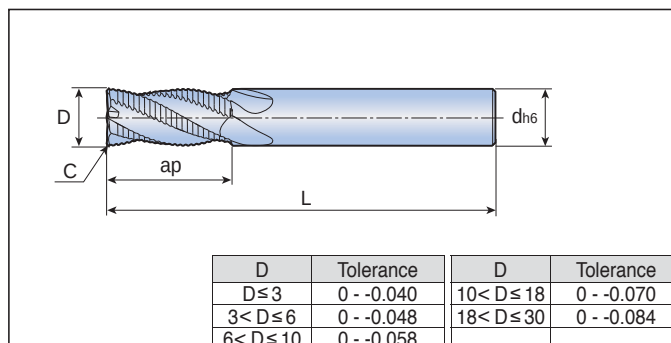
• Weldon shank is available on request (Ordering example: RELW L)

• Standard item

REH ...S

STARMILL

4-6 flute rough short corner chamfer

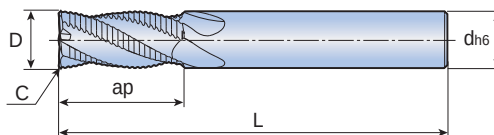


Designation	Feed (mm/tooth)	Dimension (mm)						Grade
			D	C	L	ap	d	
REH 4060S	0.04-0.12	4	6	0.25	54	7	6	•
4080S	0.05-0.16	4	8	0.30	58	9	8	•
4100S	0.06-0.18	4	10	0.36	66	14	10	•
4120S	0.06-0.20	4	12	0.36	73	16	12	•
5160S	0.08-0.22	5	16	0.36	82	22	16	•
6200S	0.08-0.22	6	20	0.36	92	26	20	•

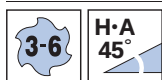
• Weldon shank is available on request (Ordering example: REHW S)

• Standard item

3-6 flute rough medium corner chamfer



D	Tolerance	D	Tolerance
$D \leq 3$	0 - -0.040	$10 < D \leq 18$	0 - -0.070
$3 < D \leq 6$	0 - -0.048	$18 < D \leq 30$	0 - -0.084
$6 < D \leq 10$	0 - -0.058		

[illegible]

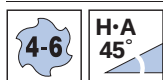
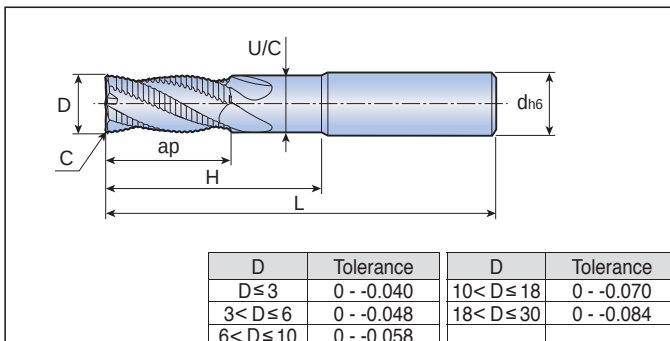
- Weldon shank is available on request (Ordering example: REHW M)

●: Standard item

REH ...L

STARMILL

4-6 flute rough long neck corner chamfer



Designation	Feed (mm/tooth)	Dimension (mm)								Grade
			D	C	L	ap	H	U/C	d	
REH 4060L	0.04-0.12	4	6	0.25	57	16	20	5.5	6	●
4080L	0.05-0.16	4	8	0.30	63	16	26	7.5	8	●
4100L	0.06-0.18	4	10	0.36	72	22	31	9.5	10	●
4120L	0.06-0.20	4	12	0.36	83	26	37	11.5	12	●
5160L	0.08-0.22	5	16	0.36	100	32	51	15.5	16	●
6200L	0.08-0.22	6	20	0.36	110	38	59	19.2	20	●

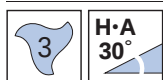
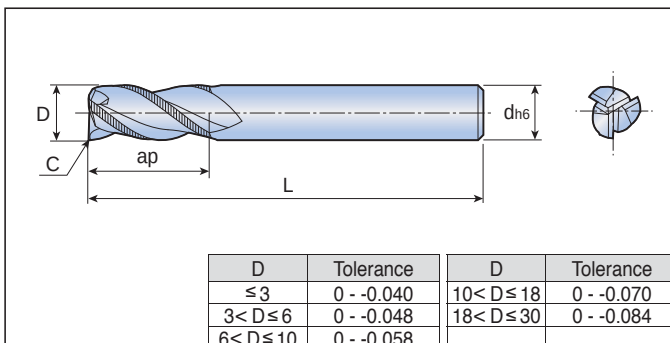
• Weldon shank is available on request (Ordering example: REHW L)

●: Standard item

REA 3...L

ALUMILL

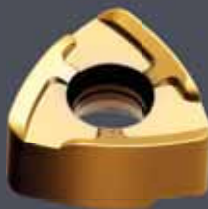
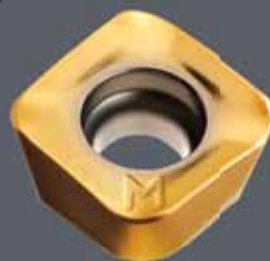
3 flute rough corner chamfer



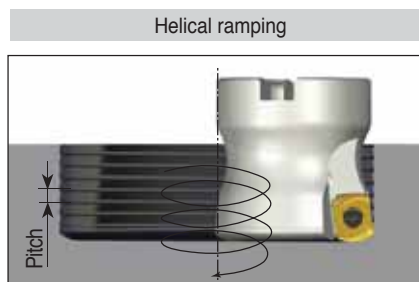
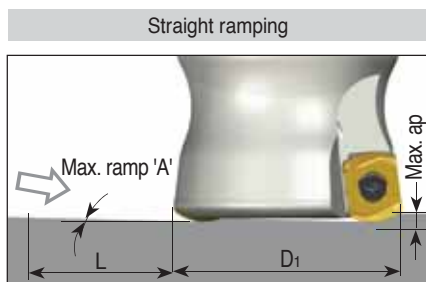
Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		D	C	L	ap	d	
REA 3060L	0.03-0.07	6	0.61	57	16	6	●
3080L	0.03-0.15	8	0.61	63	16	8	●
3100L	0.05-0.20	10	0.61	72	22	10	●
3120L	0.07-0.22	12	0.66	83	26	12	●
3140L-14	0.07-0.22	14	0.99	83	26	14	●
3160L	0.07-0.25	16	0.99	92	32	16	●
3200L	0.07-0.25	20	0.99	104	38	20	●

●: Standard item

Technical Guide



Ramping Data



BLMP 06

Cutter dia. (D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø16	3.0	0.7	13	23	32	0.7
Ø17	2.7	0.7	15	25	34	0.7
Ø18	2.5	0.7	16	27	36	0.7
Ø20	1.5	1.0	38	31	40	0.8
Ø21	1.5	1.0	38	33	42	0.8
Ø25	1.4	1.0	41	41	50	1.0
Ø26	1.3	1.0	44	43	52	1.0
Ø30	1.1	1.0	52	51	60	1.0
Ø32	1.0	1.0	57	55	64	1.0
Ø33	1.0	1.0	57	57	66	1.0
Ø40	0.9	1.0	64	71	80	1.0
Ø50	0.6	1.0	96	91	100	1.0
Ø63	0.5	1.0	115	117	126	1.0

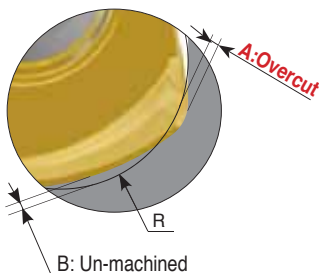
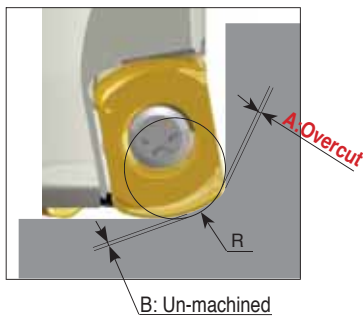
BLMP 09

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø25	2.2	1.5	39	42	50	1.5
Ø26	2.2	1.5	39	44	52	1.5
Ø30	2.0	1.5	43	52	60	1.5
Ø32	2.0	1.5	43	56	64	1.5
Ø33	2.0	1.5	43	58	66	1.5
Ø40	1.5	1.5	57	72	80	1.5
Ø42	1.5	1.5	57	76	84	1.5
Ø50	1.0	1.5	86	92	100	1.5
Ø52	1.0	1.5	86	96	104	1.5
Ø63	0.9	1.5	96	118	126	1.5
Ø66	0.9	1.5	96	124	132	1.5
Ø80	0.8	1.5	107	152	160	1.5
Ø100	0.7	1.5	123	192	200	1.5

Programming technical data

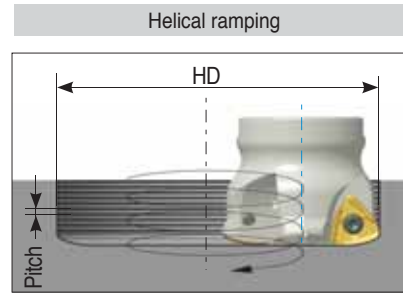
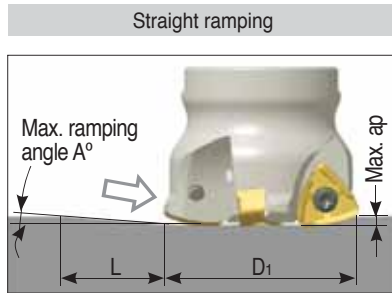
When CNC programming specify tools with 'R' for the each insert, this will result un-machined material thickness of approximately 'B' mm along the corner.

When applying CNC program with 'R', over-cut area is 'A' mm. To avoid over-cut, please add to set up roughing stock 'A' mm. For other program R data, please refer to diagram below.



	R Program	A Over cut	B Un-machined material thickness
BLMP 06	2.0	0	0.42
	2.5	0.12	0.26
	3.0	0.29	0.17
BLMP 09	2.5	0	0.61
	3.0	0.09	0.45
	3.5	0.24	0.30
	4.0	0.41	0.17
	3.0	0.36	0.04

 : Recommended program 'R'



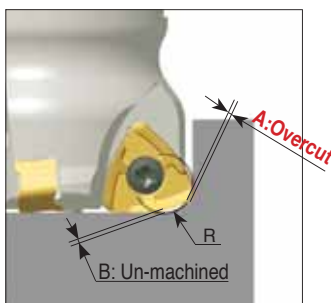
BLMP 13

Cutter dia. (D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø32	0.8	2	143	50	64	0.7
Ø33	1.1	2	104	52	66	0.9
Ø40	1.2	2	96	66	80	1.0
Ø50	0.8	2	143	86	100	1.3
Ø63	0.6	2	191	112	126	1.4
Ø80	0.5	2	229	146	160	1.7
Ø100	0.4	2	287	186	200	1.2
Ø125	0.3	2	382	236	250	1.4
Ø160	0.3	2	382	306	320	1.3
Ø200	0.2	2	573	386	400	1.6
Ø250	0.2	2	573	486	500	1.7

Programming technical data

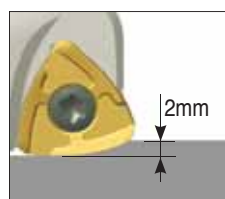
When performing CNC programming operations, specify tools with "Corner R" value for the BLMP 13 insert. This will achieve un-machined material thickness of approximately "B" mm along the corner.

When applying the CNC program with "Corner R," the over cut area is indicated as "A" mm. For other program "Corner R" data, please refer to the diagram below.

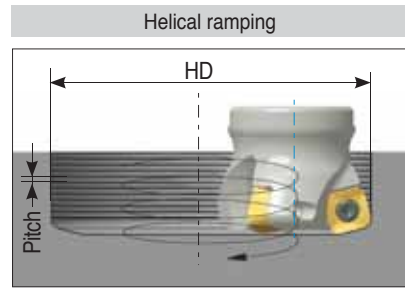
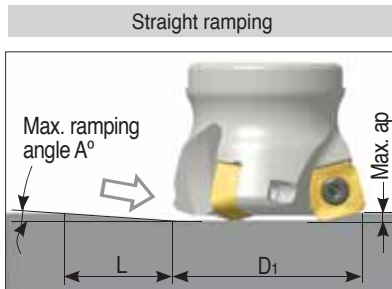


	R Program	A Over cut	B Un-machined material thickness
BLMP 13	3.0	0	1.31
	3.5	0	1.17
	4.0	0.04	1.03
	4.5	0.15	0.89
	5.0	0.3	0.76

 : Recommended program 'R'



Max. depth of cut



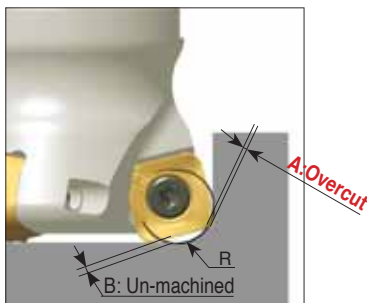
SBMT 13

Cutter dia. (D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø32	7.0	2	16	47	64	2.0
Ø33	6.9	2	17	49	66	2.0
Ø40	5.3	2	22	63	80	2.0
Ø50	4.3	2	27	83	100	2.0
Ø63	2.9	2	40	109	126	2.0
Ø80	2.0	2	57	143	160	2.0
Ø100	1.5	2	76	183	200	2.0
Ø125	1.1	2	104	233	250	2.0

Programming technical data

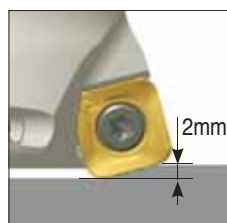
When performing CNC programming operations, specify tools with the “Corner R” value for the SBMT 13 insert. This will achieve un-machined material thickness of approximately “B” mm along the corner.

When applying the CNC program with “Corner R,” the over cut area is indicated as “A” mm. For other program “Corner R” data, please refer to the diagram below.

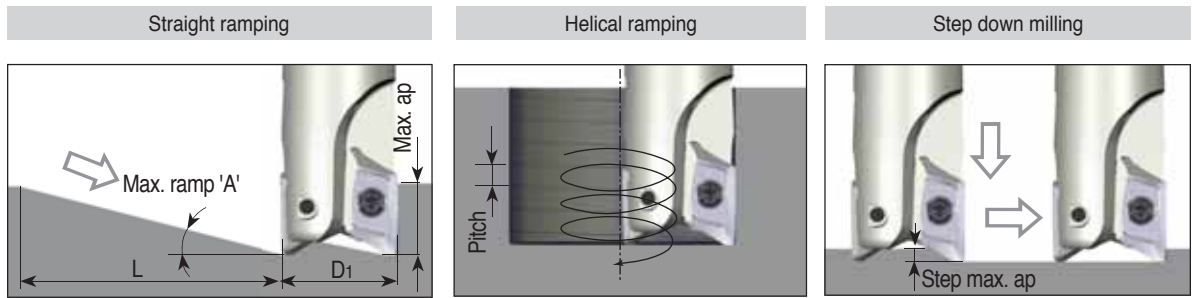


	R Program	A Over cut	B Un-machined material thickness
SBMT 13	4.0	0	1.62
	4.5	0	1.51
	5.0	0.04	1.4
	5.5	0.14	1.29
	6.0	0.28	1.18

 :Recommended program 'R'



Max. depth of cut

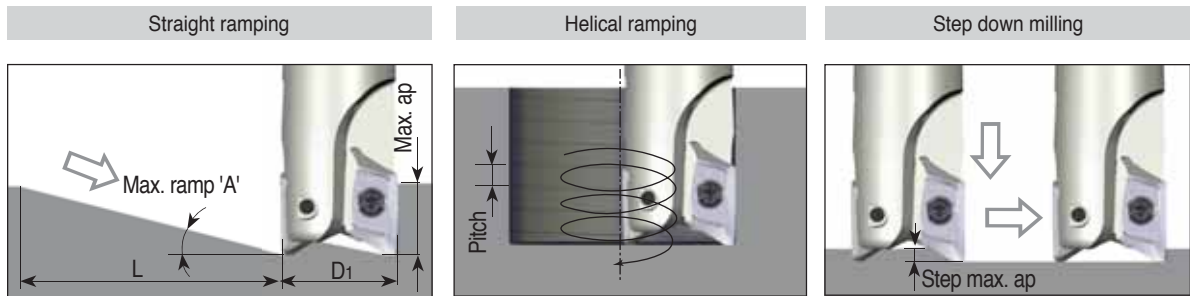


XEVT 16: 0.4R-1.6R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø25	23.5	16	37	29.1	50	4.8	4
Ø32	14.5	16	62	43.1	64	7.7	4
Ø40	10.0	16	91	59.1	80	9.0	4
Ø50	7.5	16	122	79.1	100	10.2	4
Ø63	5.5	16	166	105.1	126	10.8	4
Ø80	4.5	16	203	139.1	160	12.4	4
Ø100	3.3	16	278	179.1	200	12.2	4
Ø125	2.5	16	367	229.1	250	13.6	4
Ø160	1.5	16	611	299.1	320	9.7	4
Ø200	1.0	16	917	379.1	400	8.3	4

XEVT 16: 2.0R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø25	23.5	15.5	36	29.1	50	4.8	3.5
Ø32	14.5	15.5	60	43.1	64	7.7	3.5
Ø40	10.0	15.5	88	59.1	80	9.0	3.5
Ø50	7.5	15.5	118	79.1	100	10.2	3.5
Ø63	5.5	15.5	161	105.1	126	10.8	3.5
Ø80	4.5	15.5	197	139.1	160	12.4	3.5
Ø100	3.3	15.5	269	179.1	200	12.2	3.5
Ø125	2.5	15.5	355	229.1	250	13.2	3.5
Ø160	1.5	15.5	592	299.1	320	9.7	3.5
Ø200	1.0	15.5	888	379.1	400	8.3	3.5

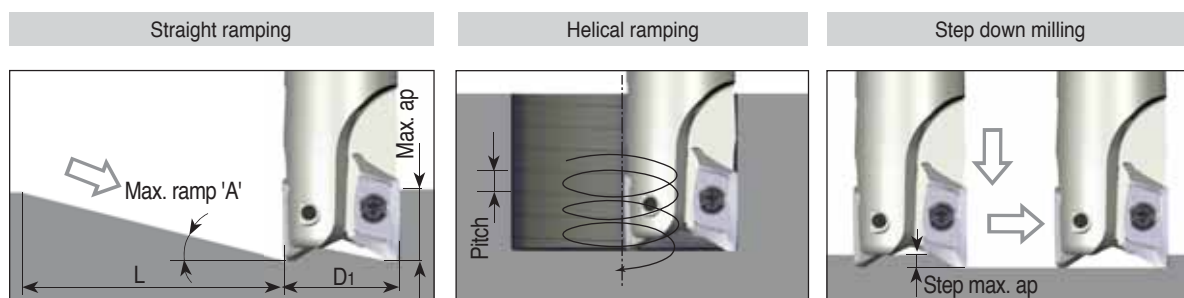


XEVT 16: 3.0R-3.2R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø25	22.5	14.5	35	29.1	50	4.5	2.8
Ø32	13.5	14.5	60	43.1	64	7.1	2.8
Ø40	9.0	14.5	92	59.1	80	8.1	2.8
Ø50	6.5	14.5	127	79.1	100	12.3	2.8
Ø63	5.0	14.5	166	105.1	126	9.8	2.8
Ø80	4.0	14.5	207	139.1	160	12.3	2.8
Ø100	3.0	14.5	277	179.1	200	11.1	2.8
Ø125	2.0	14.5	415	229.1	250	12.3	2.8
Ø160	1.1	14.5	756	299.1	320	9.7	2.8
Ø200	0.8	14.5	1039	379.1	400	11.6	2.8
						7.1	2.8
						8.2	2.8
						6.7	2.8
						7.4	2.8

XEVT 16: 4.0R-5.0R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø25	20.0	14.5	40	29.1	50	4.0	2.4
Ø32	12.0	14.5	68	43.1	64	12.3	2.4
Ø40	7.5	14.5	110	59.1	80	6.3	2.4
Ø50	5.5	14.5	151	79.1	100	12.3	2.4
Ø63	4.5	14.5	184	105.1	126	6.7	2.4
Ø80	3.5	14.5	237	139.1	160	12.3	2.4
Ø100	3.0	14.5	277	179.1	200	9.6	2.4
Ø125	2.0	14.5	415	229.1	250	12.3	2.4
Ø160	1.0	14.5	831	299.1	320	11.1	2.4
Ø200	0.7	14.5	1187	379.1	400	12.3	2.4
						7.5	2.4
						5.8	2.4
						6.5	2.4

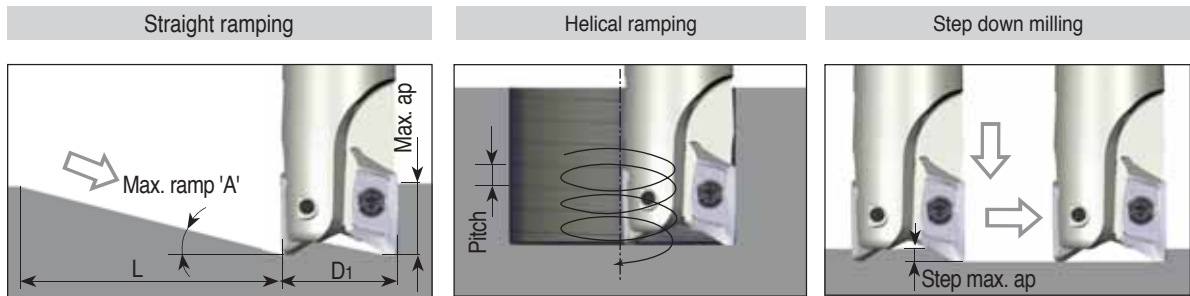


XEVT 22: 0.5R-0.8R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø32	20.0	21	58	38.5	64	6.3	4.7
Ø40	14.0	21	84	54.5	80	9.6	4.7
Ø50	9.5	21	126	74.5	100	10.9	4.7
Ø63	7.0	21	171	100.5	126	12.3	4.7
Ø80	5.0	21	240	134.5	160	12.7	4.7
Ø100	3.7	21	325	174.5	200	12.9	4.7
Ø125	2.6	21	463	224.5	250	13.0	4.7
Ø200	1.6	21	752	374.5	400	14.9	4.7

XEVT 22: 1.6R-2.0R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø32	19.5	20.3	57	38.5	64	6.1	4.2
Ø40	13.5	20.3	85	54.5	80	9.3	4.2
Ø50	9.5	20.3	121	74.5	100	10.9	4.2
Ø63	6.7	20.3	173	100.5	126	11.8	4.2
Ø80	4.7	20.3	247	134.5	160	12.0	4.2
Ø100	3.5	20.3	332	174.5	200	12.2	4.2
Ø125	2.5	20.3	465	224.5	250	11.6	4.2
Ø200	1.5	20.3	776	374.5	400	12.2	4.2



XEVT 22: 3.0R-4.0R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø32	18.5	19.5	58	38.5	64	5.8	3.3
Ø40	12.5	19.5	88	54.5	80	16.6	3.3
Ø50	8.5	19.5	131	74.5	100	8.6	3.3
Ø63	5.5	19.5	203	100.5	126	16.6	3.3
Ø80	4.0	19.5	279	134.5	160	9.8	3.3
Ø100	3.0	19.5	372	174.5	200	16.2	3.3
Ø125	2.0	19.5	559	224.5	250	10.2	3.3
Ø200	1.0	19.5	1118	374.5	400	14.9	3.3
						10.4	3.3
						14.0	3.3
						9.3	3.3
						11.6	3.3
						8.1	3.3
						9.3	3.3

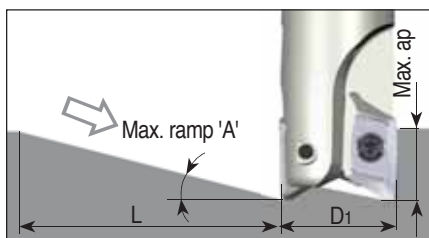
XEVT 22: 5.0R

Cutter dia.(D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø32	17.5	19	60	38.5	64	5.5	2.8
Ø40	11.5	19	93	54.5	80	16.2	2.8
Ø50	7.5	19	144	74.5	100	7.9	2.8
Ø63	5.0	19	217	100.5	126	16.2	2.8
Ø80	3.5	19	311	134.5	160	8.6	2.8
Ø100	2.5	19	435	174.5	200	14.7	2.8
Ø125	1.7	19	641	224.5	250	8.9	2.8
Ø200	0.8	19	1361	374.5	400	13.1	2.8
						8.7	2.8
						11.6	2.8
						7.9	2.8
						9.9	2.8
						6.5	2.8
						7.4	2.8

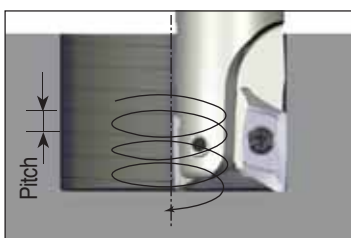
Ramping Data

CHASEALU

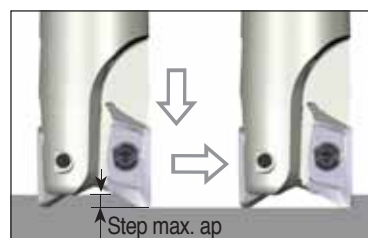
Straight ramping



Helical ramping

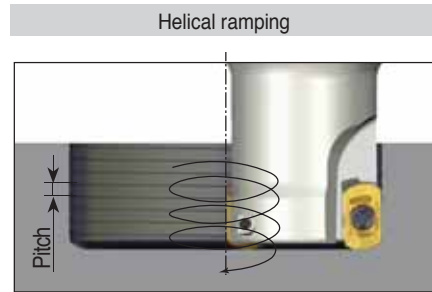
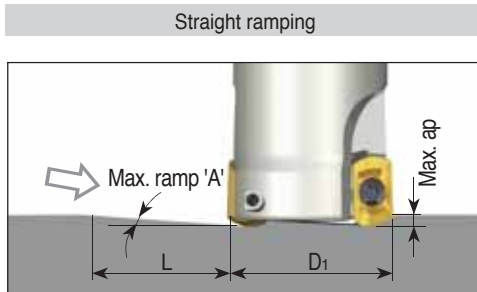


Step down milling



XEVT 22: 6.4R

Cutter dia. (D1)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.	Max. ap
Ø32	16.0	18.2	64	38.5		5.0	2.1
					64	15.5	2.1
Ø40	10.0	18.2	103	54.5		6.8	2.1
					80	15.5	2.1
Ø50	6.5	18.2	160	74.5		7.4	2.1
					100	15.2	2.1
Ø63	4.5	18.2	231	100.5		7.9	2.1
					126	13.2	2.1
Ø80	3.0	18.2	347	134.5		7.6	2.1
					160	11.2	2.1
Ø100	2.0	18.2	521	174.5		6.9	2.1
					200	9.3	2.1
Ø125	1.5	18.2	695	224.5		7.0	2.1
					250	8.7	2.1
Ø200	0.7	18.2	1490	374.5		5.7	2.1
					400	6.5	2.1



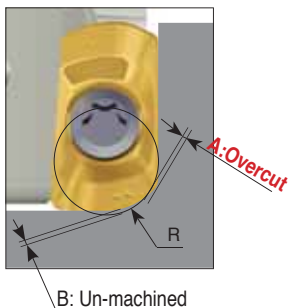
AXMT 0602R-HF

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø8	0.3	0.5	96	14	16	0.1
Ø10	0.5	0.5	57	14	20	0.1
Ø11	1.0	0.5	29	18	22	0.2
Ø12	2.3	0.5	12	18	24	0.3
Ø13	4.5	0.5	6	18	26	0.5
Ø14	3.5	0.5	8	18	28	0.5
Ø15	3.0	0.5	10	26	30	0.5
Ø16	2.8	0.5	10	26	32	0.5
Ø17	2.5	0.5	11	26	34	0.5
Ø18	2.3	0.5	12	26	36	0.5
Ø19	2.2	0.5	13	26	38	0.5
Ø20	1.9	0.5	15	34	40	0.5
Ø21	1.7	0.5	17	34	42	0.5
Ø25	1.4	0.5	20	44	50	0.5
Ø32	1.0	0.5	29	58	64	0.5
Ø40	0.7	0.5	41	74	80	0.5

Programming technical data

When CNC programming specify tools with 'R' for the each insert, this will result un-machined material thickness of approximately 'B' mm along the corner.

When applying CNC program with 'R', over-cut area is 'A' mm. To avoid over-cut, please add to set up roughing stock 'A' mm. For other program R data, please refer to diagram below.



	R Program	A Over cut	B Un-machined material thickness
AXMT 0602R-HF	0.9	0	0.22
	1.0	0.01	0.19
	1.5	0.16	0.05
	2.0	0.35	0
	1.5	0	0.47
APKT 09T3R-HF	1.7	0	0.29
	2.0	0.04	0.3
	2.5	0.18	0.15
	3.0	0.36	0.04
	2	0	0.57
APKT 1204R-HF	2.5	0.07	0.42
	3	0.21	0.28
	3.5	0.39	0.15
	4	0.58	0.06

 :Recommended program 'R'

Ramping Data

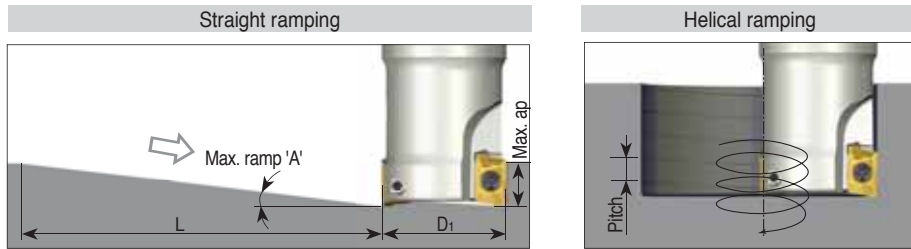
CHASEMILL

APKT 09T3R-HF

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø16	3.8	1.0	15	22	32	1.0
Ø17	3.5	1.0	16	24	34	1.0
Ø18	3.4	1.0	17	26	36	1.0
Ø20	3.0	1.0	19	30	40	1.0
Ø21	2.3	1.0	25	32	42	1.0
Ø22	2.0	1.0	29	34	44	1.0
Ø25	2.1	1.0	27	40	50	1.0
Ø26	2.0	1.0	29	42	52	1.0
Ø30	1.8	1.0	32	50	60	1.0
Ø32	1.6	1.0	36	54	64	1.0
Ø33	1.5	1.0	38	56	66	1.0
Ø40	1.2	1.0	48	70	80	1.0
Ø50	0.9	1.0	64	90	100	1.0
Ø63	0.5	1.0	115	116	126	1.0
Ø80	0.4	1.0	143	150	160	1.0

APKT 1204R-HF

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø16	3.8	1.2	18	21	32	0.8
Ø18	4.0	1.2	17	24	36	1.1
Ø20	4.0	1.2	17	27	40	1.2
Ø21	3.5	1.2	20	29	42	1.2
Ø25	2.5	1.2	27	37	50	1.2
Ø26	2.3	1.2	30	39	52	1.2
Ø32	1.7	1.2	40	51	64	1.2
Ø33	1.7	1.2	40	53	66	1.2
Ø40	1.5	1.2	46	67	80	1.2
Ø50	1.1	1.2	63	86	100	1.2
Ø63	1.0	1.2	69	112	126	1.2
Ø80	0.8	1.2	86	146	160	1.2

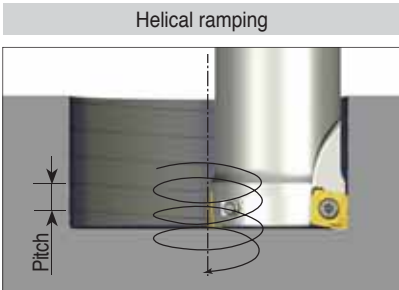
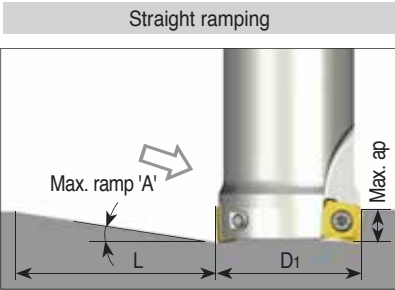


APKT 12

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø16	12.5	12.0	54	17.5	32	0.5
Ø18	9.7	12.0	70	20.9	36	9.5
Ø20	6.8	12.0	101	24.9	40	1.3
Ø21	6.2	12.0	111	26.9	42	1.6
Ø25	8.0	12.0	85	34.9	50	6.4
Ø26	7.5	12.0	91	36.9	52	1.7
Ø32	5.0	12.0	137	48.9	64	6.1
Ø33	4.6	12.0	149	50.9	66	3.7
Ø40	3.5	12.0	196	64.9	80	9.4
Ø50	2.5	12.0	275	84.9	100	3.8
Ø63	1.7	12.0	405	110.9	126	9.1
Ø80	1.3	12.0	529	144.9	160	3.9
						7.5
						3.8
						7.1
						4.1
						6.5
						4.8
						5.8
						4.5
						5.0
						4.6
						4.8

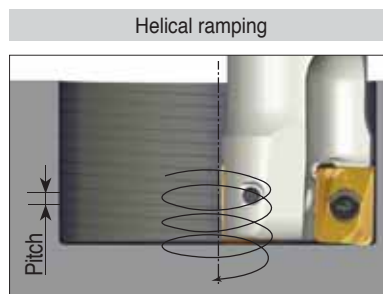
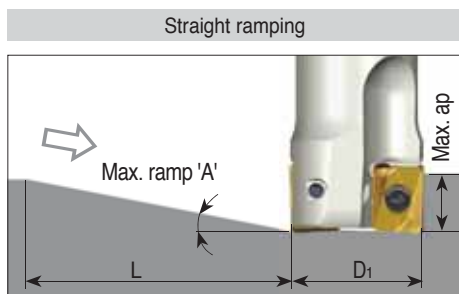
APKT 17

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø20	8.0	16.1	115	22	40	0.7
Ø25	5.0	16.1	184	30.6	50	7.5
Ø26	4.0	16.1	230	32.6	52	1.3
Ø32	9.0	16.1	102	44.6	64	5.8
Ø33	9.0	16.1	102	46.6	66	1.2
Ø40	5.0	16.1	184	60.6	80	4.9
Ø50	4.4	16.1	209	80.6	100	5.3
Ø63	3.2	16.1	288	106.6	126	13.5
Ø80	2.3	16.1	401	140.6	160	5.7
Ø100	1.8	16.1	513	180.6	200	13.9
Ø125	1.4	16.1	659	230.6	250	4.8
Ø160	1.0	16.1	923	300.6	320	9.3
Ø200	0.7	16.1	1318	380.6	400	6.3
						10.3
						6.5
						9.4
						6.5
						8.6
						6.8
						8.4
						6.9
						8.1
						6.5
						7.5
						5.9
						6.5



2PKT 05

Cutter dia. (D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø12	7.5	4.7	36	15.9	24	1.4
Ø16	4.4	4.7	61	23.9	32	1.6
						3.3
Ø20	3	4.7	90	31.9	40	1.7
						2.8
Ø25	2.2	4.7	122	41.9	50	1.7
						4.7
Ø32	1.6	4.7	168	55.9	64	1.8
						4.7
Ø40	1.2	4.7	224	71.9	80	4.7
						4.7



ANH(M)X 11

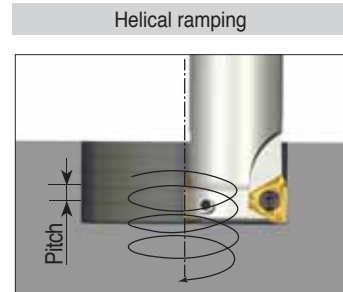
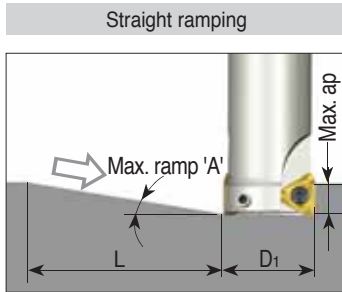
Cutter dia.(D ₁)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø25	1.5	11.0	420	30	50	0.3 1.7
Ø26	1.4	11.0	450	32	52	0.4 1.7
Ø32	1.1	11.0	573	44	64	0.6 1.6
Ø33	1.0	11.0	631	46	66	0.6 1.5
Ø40	0.8	11.0	788	60	80	0.7 1.5
Ø50	0.6	11.0	1051	80	100	0.8 1.4
Ø63	0.4	11.0	1576	106	126	0.8 1.2
Ø80	0.3	11.0	2102	140	160	0.8 1.1
Ø100	0.2	11.0	3153	180	200	0.7 0.9
Ø125	0.2	11.0	3153	230	250	1.0 1.2

ANH(M)X 16

Cutter dia.(D ₁)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø32	1.2	15.0	716	44	64	0.7 1.8
Ø33	1.0	15.0	560	46	66	0.6 1.5
Ø40	0.9	15.0	955	60	80	0.8 1.7
Ø50	0.8	15.0	1075	80	100	1.1 1.9
Ø63	0.6	15.0	1433	106	126	1.2 1.8
Ø80	0.45	15.0	1911	140	160	1.3 1.7
Ø100	0.35	15.0	2457	180	200	1.3 1.6
Ø125	0.25	15.0	3439	230	250	1.2 1.5
Ø160	0.15	15.0	5732	300	320	1.0 1.1
Ø200	0.1	15.0	8599	380	400	0.8 0.9

Ramping Data

MILL-RUSH

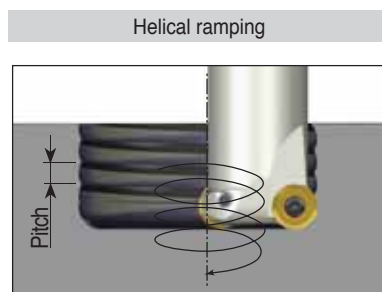
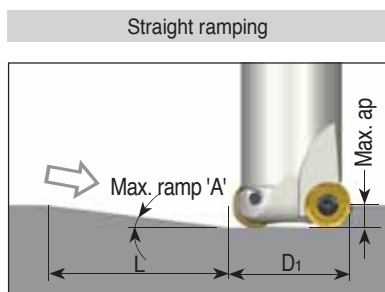


3PK(H)T 15

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø32	3.2	11.0	197	53.5	64	3.2
Ø33	3.1	11.0	203	55.5	66	3.3
						4.8
Ø35	3.1	11.0	203	59.5	70	3.5
						5.1
Ø40	2.0	11.0	315	70.1	80	2.8
						3.7
Ø50	1.5	11.0	420	90.1	100	2.8
						3.5
Ø63	1.1	11.0	573	116.1	126	2.7
						3.2
Ø80	0.8	11.0	788	150.3	160	2.6
						3.0
Ø100	0.6	11.0	1051	190.5	200	2.5
						2.8
Ø125	0.5	11.0	1261	240.3	250	2.7
						2.9
Ø160	0.3	11.0	2102	310.3	320	2.1
						2.2
Ø200	0.2	11.0	3153	390.3	400	1.8
						1.9

3PK(H)T 19

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø40	3.6	15.0	239	66.7	80	4.5
						6.7
Ø50	2.2	15.0	391	87.9	100	3.9
						5.1
Ø63	1.7	15.0	506	113.9	126	4
						5
Ø80	1.3	15.0	661	147.9	160	4.1
						4.8
Ø100	1.0	15.0	860	187.9	200	4.1
						4.7
Ø125	0.8	15.0	1075	237.9	250	4.2
						4.7
Ø160	0.6	15.0	1433	307.9	320	4.1
						4.5
Ø200	0.4	15.0	2150	387.9	400	3.5
						3.7
Ø250	0.3	15.0	2866	487.9	500	3.3
						3.5



RNMU 1004S-M ,RNMU 1004-ML: 8 corners

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø25	1.1	5.0	261	33		0.4
					50	1.3
Ø26	1.1	5.0	261	35		0.5
					52	1.3
Ø32	0.9	5.0	318	47		0.6
					64	1.3
Ø33	0.9	5.0	318	49		0.7
					66	1.4
Ø40	0.9	5.0	318	63		1.0
					80	1.7
Ø42	0.9	5.0	318	67		1.0
					84	1.8
Ø50	0.7	5.0	409	83		1.1
					100	1.6
Ø52	0.8	5.0	358	87		1.3
					104	1.9

RNMU 1205S-M ,RNMU 1205-ML: 8 corners

Cutter dia.(D1)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap (mm)	Min. length (L)	Min. dia.	Max. dia.	Max. pitch/rev.
Ø32	1.4	6.0	246	42		0.7
					64	2.1
Ø33	1.4	6.0	246	44		0.7
					66	2.2
Ø40	1.3	6.0	265	58		1.1
					80	2.4
Ø50	1.0	6.0	344	78		1.3
					100	2.3
Ø52	1.0	6.0	344	82		1.4
					104	2.4
Ø63	1.0	6.0	344	104		1.9
					126	2.9
Ø66	1.0	6.0	344	110		2.0
					132	3.1
Ø80	0.9	6.0	382	138		2.4
					160	3.4
Ø100	0.7	6.0	491	178		2.5
					200	3.3

Recommended Cutting Conditions

Milling

ISO	Material		Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	
							Uncoated	
							K10	P30
P	Non-alloy steel, cast steel, free cutting steel	< 0.25%C	Annealed	420	125	1		60-170
		>= 0.25%C	Annealed	650	190	2		60-130
		< 0.55%C	Quenched and tempered	850	250	3		60-100
		>= 0.55%C	Annealed	750	220	4		60-120
			Quenched and tempered	1000	300	5		50-100
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6		60-130
			Quenched and tempered	930	275	7		60-100
				1000	300	8		50-100
				1200	350	9		40-90
	High alloy steel, cast steel and tool steel		Annealed	680	200	10		60-130
			Quenched and tempered	1100	325	11		50-100
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12		
			Martensitic	820	240	13		
			Austenitic	600	180	14		
K	Gray cast iron (GG)		Ferritic		160	15	70-130	
			Pearlitic		250	16	50-110	
	Cast iron nodular (GGG)		Ferritic		180	17	45-90	
			Pearlitic		260	18	40-85	
	Malleable cast iron		Ferritic		130	19	70-140	
			Pearlitic		230	20	55-115	
N	Aluminum - wrought alloy		Not cureable		60	21	550-700	
			Cured		100	22	600-750	
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	800-900	
			Cured		90	24	650-800	
		>12% Si	High temp.		130	25	250-320	
	Copper alloys	>1% Pb	Free cutting		110	26	300-400	
			Brass		90	27	300-400	
			Electrolitic copper		100	28	210-280	
	Non-metallic		Duroplastics, fiber plastics			29		
			Hard rubber			30		
S	High temp. alloys	Fe based	Annealed		200	31	50-70	
			Cured		280	32	40-50	
		Ni or Co based	Annealed		250	33	50-70	
			Cured		350	34	35-40	
			Cast		320	35	45-50	
	Titanium, Ti alloys			Rm 400		36	120-145	
			Alpha+beta alloys cured	Rm 1050		37	35-45	
H	Hardened steel		Hardened		55HRC	38		
			Hardened		60HRC	39		
	Chilled cast iron		Cast		400	40		
	Cast iron nodular		Hardened		55HRC	41		

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

Milling

Cutting speed Vc(m/min)											
Coated									Ceramic		Cermet
TT9080	TT9030	TT7080	TT7800	TT8080	TT8020	TT7515	TT6080	TT2510	AS10	AS20	CT7000
220-370	190-310	250-410	160-270	170-250	150-210						270-510
180-310	160-260	200-380	140-210	130-220	120-200						230-450
115-195	105-185	140-230	90-160	90-170	70-140						150-370
130-210	120-200	160-250	100-170	100-190	90-150						210-430
115-175	95-160	135-195	80-140	70-160	60-130						150-280
175-265	160-250	190-290	140-200	150-220	130-170						150-285
130-215	120-200	150-240	90-160	110-190	70-150						100-190
105-185	95-175	135-225	70-150	80-160	60-110						90-170
95-160	80-150	120-190	60-110	70-120	50-100						80-130
85-155	75-135	100-150	60-90	70-110	50-80						100-170
75-135	65-120	90-140	50-90	60-100	40-80						80-120
115-270	100-250			90-200	75-170						
100-230	80-200			70-160	60-130						
120-275	110-260			100-210	80-180						
						180-350	200-390		400-900		
						140-280	160-300		250-600		
						115-230	130-250		350-800		
						100-200	110-210		250-600		
						190-310	210-330		360-540		
						120-260	130-280		300-440		
											800-1200
											700-110
											800-1200
											650-850
											250-400
											500-600
											500-600
											350-400
40-80				30-65						500-900	
30-60				20-45						500-900	
35-70				25-50						500-900	
30-60				20-40						500-900	
35-65				20-45						500-900	
90-130				60-100						500-900	
35-70				25-55						500-900	
40-75								70-180			
30-55								50-130			

Recommended Cutting Conditions

Endmill

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1
		>=0.25%C	Annealed	650	190	2
		<0.55%C	Quenched and tempered	850	250	3
		>=0.55%C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
				930	275	7
			Quenched and tempered	1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	
		Quenched and tempered	1100	325	11	
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	
		Martensitic	820	240	13	
		Austenitic	600	180	14	
K	Gray cast iron (GG)	Ferritic		160	15	
		Pearlitic		250	16	
	Cast iron nodular (GGG)	Ferritic		180	17	
		Pearlitic		260	18	
	Malleable cast iron	Ferritic		130	19	
		Pearlitic		230	20	
N	Aluminum - Wrought alloy	Not cureable		60	21	
		Cured		100	22	
	Aluminum- cast, alloyed	<=12% Si	Not cureable	75	23	
			Cured	90	24	
		>12% Si	High temp.	130	25	
	Copper alloys	>1% Pb	Free cutting	110	26	
			Brass	90	27	
			Electrolitic copper	100	28	
	Non-metallic		Duroplastics, graphite		29	
			Hard rubber		30	
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys		Rm 400		36	
		Alpha+beta alloys cured	Rm 1050		37	
H	Hardened steel	Hardened		55HRC	38	
		Hardened		60HRC	39	
	Chilled cast iron	Cast		400	40	
	Cast iron nodular	Hardened		55HRC	41	

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

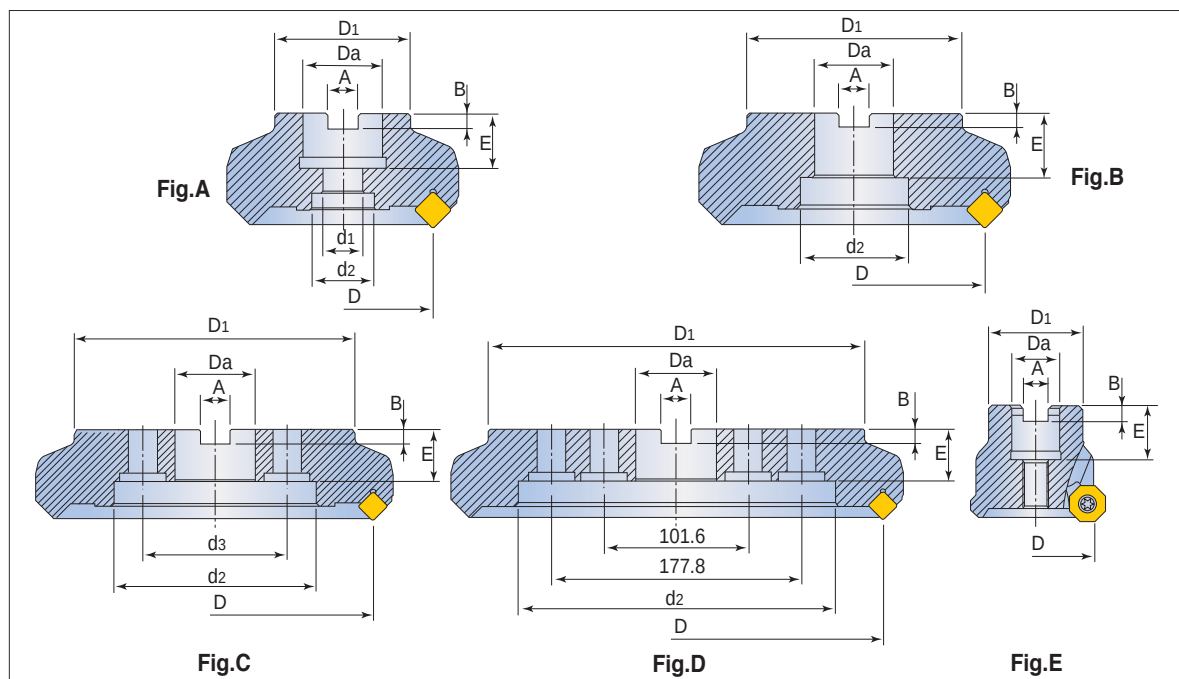
Recommended Cutting Conditions

Endmill

Cutting speed Vc(m/min)				
Coated				Uncoated
TT5505	TT5515	TT5525	TT6050	UF10N/UF10
260-300	260-280	210-220		180-200
200-250	200-230	160-180		140-160
160-230	160-220	130-180		110-150
160-230	160-220	130-180		110-150
140-200	140-180	110-140		100-130
160-230	160-220	130-180		110-150
120-200	120-180	100-140		80-130
140-200	130-180	100-140		90-130
140-200	140-180	110-140		100-130
140-200	130-180	100-140		90-130
80-150	70-120	60-100		50-80
	80-160	60-130		60-110
	60-150	50-120		40-100
	60-120	50-100		40-80
100-300	80-260	60-210		60-180
130-280	130-140	100-190		90-170
150-280	150-270	120-220		100-200
90-280	90-270	70-220		60-200
150-280	150-270	120-220		100-200
140-250	140-240	110-190		100-170
				800-900
				700-800
				800-900
				750-850
			400-550	400-450
				500-550
				500-550
				350-380
			300-500	
20-40	20-40	20-30		10-20
20-30	20-40	20-20		10-20
20-30	20-50	20-20		20-50
20-30	20-70	20-20		20-50
30-80	30-70	20-60		20-50
	30-70	20-60		20-30
	30-70	20-60		20-30
30-60				40-60
30-40				20-30
70-90	60-80			65-75
30-60	30-50			40-45

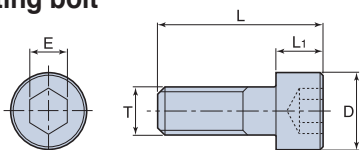
Mounting Reference

Metric arbor style



Dimension (mm)										Fig.	Arbor
D	Da	A	B	E	D1		d1	d2	d3		
					For mold & die	For general					
32	16	8.4	5.6	20	30	-	-	-	-	E	SEM16
32	16	8.4	5.6	20	30	-	9	13.5	-	A	SEM16
40	16	8.4	5.6	20	38	-	9	13.5	-	A	SEM16
40	22	10.4	6.3	22	38	-	11	17	-	A	SEM22
50	22	10.4	6.3	22	40	45	11	17	-	A	SEM22
63	22	10.4	6.3	22	47	-	11	17	-	A	SEM22
80	27	12.4	7	28	58	70	13	22	-	A	SEM27
100	32	14.4	8	26	66	85	18	26	-	A	SEM32
100	32	14.4	8	26	66	85	-	46	-	B	SEM32
125	40	16.4	9	32	85	-	22	32	-	A	SEM40
125	40	16.4	9	32	85	-	-	56	-	B	SEM40
160	40	16.4	9	32	110	-	-	90	66.7	C	FM40
200	60	25.7	14	40	130	-	-	132	101.6	C	FM60
250	60	25.7	14	40	160	-	-	150	101.6	C	FM60
315	60	25.7	14	40	220	-	-	220	-	D	-

Mounting bolt



SH type

Designation	Dimension (mm)					Cutter size
	D	L	L1	T	E	
SH M8x1.25x30(-C)	13	38	8	8	6	40
SH M10x1.5x30(-C)	16	40	10	10	8	50, 63
SH M12x1.75x35(-C)	18	47	12	12	10	80
SH M16x2x35(-C)	24	51	16	16	14	100

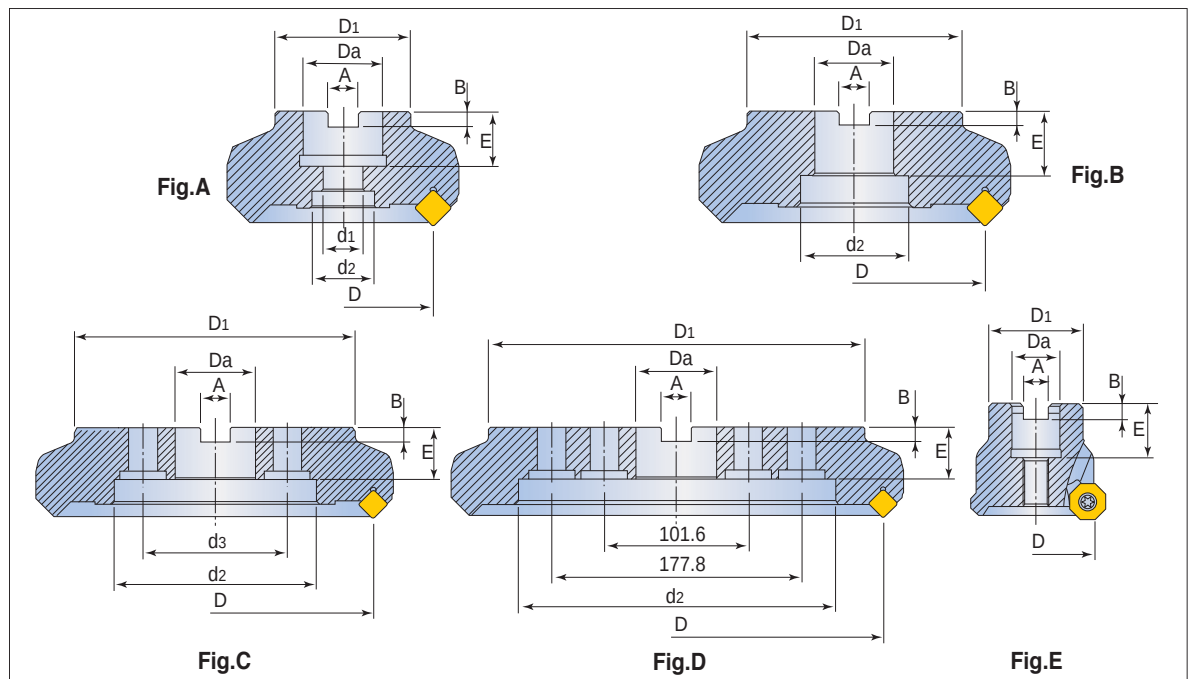
LH type

Designation	Dimension (mm)					Cutter size
	D	L	L1	T	E	
LH M10x1.5x25(-C)	16	31.5	6.5	10	8	50, 63
LH M12x1.75x30(-C)	18	36.9	6.9	12	8	80
LH M16x2x35(-C)	24	45	10	16	12	100

• "-C": Bolt with hole for internal coolant

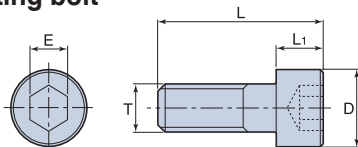
Mounting Reference

Inch arbor style



Dimension (mm)									Fig.	Arbor
D	Da	A	B	E	D1	d1	d2	d3		
32	16	8.4	5.6	20	30	-	-	-	E	SEM16
32	16	8.4	5.6	20	30	9	13.5	-	A	SEM16
40	16	8.4	5.6	20	38	9	13.5	-	A	SEM16
40	22	10.4	6.3	22	38	11	17	-	A	SEM22
50	22	10.4	6.3	22	45	11	17	-	A	SEM22
63	22	10.4	6.3	22	47	11	17	-	A	SEM22
80	25.4	9.526	6	26	70	13	20	-	A	FMA25.4
100	31.75	12.7	8	32	80	18	26	-	A	FMA31.75
100	31.75	12.7	8	32	80	-	46	-	B	FMA31.75
125	38.1	15.875	10	38	80	-	56	-	B	FMA38.1
160	50.8	19.05	11	38	100	-	72	-	B	FMA50.8
200	47.625	25.4	14	38	130	-	132	101.6	C	FMA47.625
250	47.625	25.4	14	38	160	-	150	101.6	C	FMA47.625
315	47.625	25.4	14	38	220	-	224	-	D	-

Mounting bolt



SH type

Designation	Dimension (mm)					Cutter size
	D	L	L1	T	E	
SH M8x1.25x30(-C)	13	38	8	8	6	40
SH M10x1.5x30(-C)	16	40	10	10	8	50, 63
SH M12x1.75x35(-C)	18	47	12	12	10	80
SH M16x2x35(-C)	24	51	16	16	14	100

LH type

Designation	Dimension (mm)					Cutter size
	D	L	L1	T	E	
LH M10x1.5x25(-C)	16	31.5	6.5	10	8	50, 63
LH M12x1.75x30(-C)	18	36.9	6.9	12	8	80
LH M16x2x35(-C)	24	45	10	16	12	100

• "-C": Bolt with hole for internal coolant

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