



Face Milling

Radius Milling

Slotting

Pocketing

Ramping

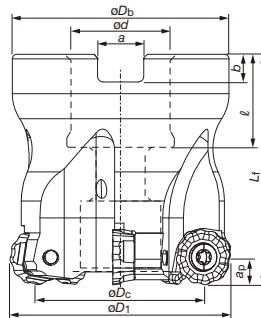
Profiling

Enlarging Hole

Die engraving of various work materials



Fig. A



Max. ap:
T/ERC12 = 6.0 mm
T/ERC16 = 8.0 mm

Rake angle: A.R. +0° R.R. -1° ~ -5°

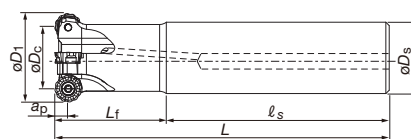


Fig. B

TRC12, 16 (Fig. A: bore type)

Cat. No.	Stock	No. of Inserts	Dimensions (mm)								Weight (kg)	Air hole	Cutter mounting screw	Inserts	Mounting details
			øD1	øDc	øDb	ød	l	Lf	b	a					
TRC12R040M16.0E04	●	4	40	28	35	16	19	40	5.6	8.4	0.2	With	FSHM8-30H	RCMT1204*N-***	9-107(A)
TRC12R050M22.0E05	●	5	50	38	47	22	20	50	6.3	10.4	0.4	With	CM10X30H		
TRC12R052M22.0E05	●	5	52	40	49	22	20	50	6.3	10.4	0.4	With	CM10X30H		
TRC12R063M22.0E06	●	6	63	51	59	22	20	50	6.3	10.4	0.7	With	CM10X30H		
TRC12R066M22.0E06	●	6	66	54	62	22	20	50	6.3	10.4	0.7	With	CM10X30H		
TRC12R080M27.0E07	●	7	80	68	76	27	22	50	7	12.4	1.1	With	CM12X30H		
TRC16R050M22.0E04	●	4	50	34	47	22	20	50	6.3	10.4	0.3	With	FSHM10-40H	RCMT1606*N-***	9-107(A)
TRC16R052M22.0E04	●	4	52	36	49	22	20	50	6.3	10.4	0.4	With	FSHM10-40H		
TRC16R063M22.0E05	●	5	63	47	59	22	20	50	6.3	10.4	0.6	With	CM10X30H		
TRC16R066M22.0E05	●	5	66	50	62	22	20	50	6.3	10.4	0.7	With	CM10X30H		
TRC16R080M27.0E06	●	6	80	64	76	27	22	50	7	12.4	1.0	With	CM12X30H		
TRC16R100M32.0E07	●	7	100	84	96	32	25	63	8	14.4	2.4	With	CM16X40H		
TRC16R125M40.0E08	●	8	125	109	98	40	32	63	9	16.4	3.0	With	TMBA-M20H		9-107(B)

ERC12, 16 (Fig. B: shank type)

type	Cat. No.	Stock	No. of Inserts	Dimensions (mm)						Weight (kg)	Air hole	Inserts
				øD1	øDc	øDs	ls	Lf	L			
Standard	ERC12R032M32.0-03	●	3	32	20	32	80	70	150	0.8	With	RCMT1204*N-***
	ERC12R033M32.0-03	●	3	33	21	32	80	70	150	0.8	With	
	ERC12R040M32.0-04	●	4	40	28	32	100	50	150	0.8	With	
	ERC12R050M42.0-05	●	5	50	38	42	100	50	150	1.5	With	RCMT1606*N-***
	ERC16R040M32.0-02	●	2	40	24	32	100	50	150	0.8	With	
	ERC16R050M42.0-03	●	3	50	34	42	100	50	150	1.4	With	
Long	ERC12R032M32.0-03L	●	3	32	20	32	100	150	250	1.3	With	RCMT1204*N-***
	ERC12R033M32.0-03L	●	3	33	21	32	100	150	250	1.4	With	
	ERC12R040M32.0-04L	●	4	40	28	32	200	50	250	1.5	With	
	ERC12R050M42.0-05L	●	5	50	38	42	200	50	250	2.6	With	RCMT1606*N-***
	ERC16R040M32.0-02L	●	2	40	24	32	200	50	250	1.4	With	
	ERC16R050M42.0-03L	●	3	50	34	42	200	50	250	2.4	With	
Extra long	ERC12R032M32.0-03LL	●	3	32	20	32	120	180	300	1.6	With	RCMT1204*N-***
	ERC12R033M32.0-03LL	●	3	33	21	32	230	70	300	1.7	With	
	ERC12R040M32.0-04LL	●	4	40	28	32	250	50	300	1.8	With	
	ERC12R050M42.0-05LL	●	5	50	38	42	250	50	300	3.0	With	RCMT1606*N-***
	ERC16R040M32.0-02LL	●	2	40	24	32	250	50	300	1.7	With	
	ERC16R050M42.0-03LL	●	3	50	34	42	250	50	300	3.0	With	

● : Stocked items

Inserts

For general machining
with serrated cutting edge

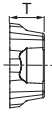
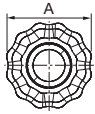


Fig. 1 NMJ

For general machining
Round insert

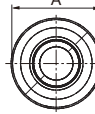


Fig. 2 MJ

For aluminium machining
with serrated cutting edge

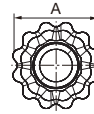
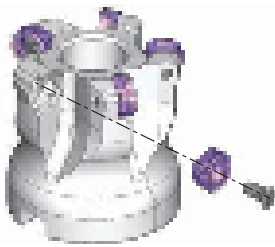


Fig. 3 NAJ

● : Stocked items

Cat. No.	Accuracy	Honing	Stock				Dimensions (mm)		Shape	Cutter
			Coated grades			Carbide				
			AH725	AH120	AH140	KS15F	A	T		
RCMT1204EN-NMJ	M	with	●	●	●		12	4.8	Fig. 1	E/TRC12
RCMT1204EN-MJ	M	with	●	●	●		12	4.8	Fig. 2	
RCMT1204FN-NAJ	M	without				●	12	4.8	Fig. 3	
RCMT1606EN-NMJ	M	with	●	●	●		16	6.5	Fig. 1	E/TRC16
RCMT1606EN-MJ	M	with	●	●	●		16	6.5	Fig. 2	
RCMT1606FN-NAJ	M	without				●	16	6.5	Fig. 3	

Replacement Parts



Descriptions		Cat. No.		
Applicable cutter		TRC12R...	TRC16R050~100...	TRC16R125...
Clamping screw		CSTB-4L090	CSTB-5L120	CSTB-5L120
Wrench	Torx bit	BT15S	BT20S	BT20M
	Grip	H-TBS	H-TB	H-TB
Mono block type wrench (substitution)		T-15D	T-20D	T-20D
Descriptions		Cat. No.		
Applicable cutter		ERC12R...	ERC16R...	ERC16R040M32.0-02
Clamping screw		CSTB-4L090	CSTB-5L120	CSTB-5L105
Wrench (substitution)		T-15DB (T-15D)	T-20DB (T-20D)	T-20DB (T-20D)

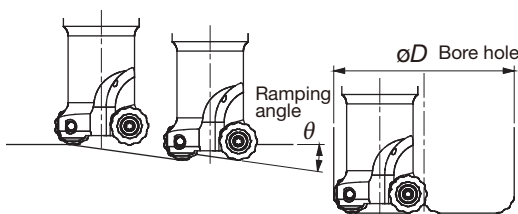
Standard cutting conditions

Work material	Brinell hardness HB	Grades	Cutting Speed Vc (m/min)	Feed per tooth fz (mm/t) each chipbreaker		
				NMJ	MJ	NAJ
Low carbon steels (C15E etc.)	~ 200	AH725	100 - 160 - 220	0.17 - 0.25 - 0.3	0.2 - 0.5 - 0.7	-
High carbon steels (C45, C55 etc.)	200 ~ 300		100 - 150 - 200	0.17 - 0.2 - 0.25		
Alloyed steels (42CrMo4, 17Cr3 etc.)	150 ~ 300					
Tool steels (X155CrVMo121 etc.)	~ 300		100 - 140 - 180			
Stainless steels (300 Series, X5CrNi189 etc.)	-	AH140	90 - 150 - 180	0.15 - 0.2 - 0.25	0.2 - 0.4 - 0.6	-
Grey cast irons	150 ~ 250	AH120	140 - 180 - 250	0.17 - 0.25 - 0.3	0.2 - 0.5 - 0.7	-
Ductile cast irons						
Aluminium alloys (Si < 13%)	-	KS15F	500 - 800 - 1200	-	-	0.1 - 0.25 - 0.3
Aluminium alloys (Si ≥ 13%)	-		100 - 200 - 300			
Heat-resisting alloy (Ti-6Al-4V, Inconel718 etc.)	-	AH725	20 - 35 - 50	0.15 - 0.2 - 0.25	0.2 - 0.4 - 0.6	-

- To remove excessive chip accumulation use an air blast.
- When chips stick to the cutting edges (aluminium machining), use a water soluble cutting fluid.

- Cutting conditions are limited by machine power and material rigidity. When the cutting width or depth is large, set Vc and fz below the recommended values and check the machine vibration and spindle load.

Ramping & helical feed drilling



Cat. No.	Tool dia. øD1 (mm)	Ramping angle θ	Min. bore hole øD (mm)	Max. bore hole øD (mm)	Flat bottom øD (mm)
ERC12R032...	32	10°	41	64	52
ERC12R033...	33	9°	43	66	54
T/ERC12R040...	40	7°	56	80	68
T/ERC12R050...	50	5.5°	76	100	88
TRC12R063...	63	3.5°	102	126	114
TRC12R080...	80	2.5°	138	160	148
ERC16R040...	40	16°	52	80	64
T/ERC16R050...	50	9.5°	72	100	84
TRC16R063...	63	6.5°	98	126	110
TRC16R080...	80	4.5°	132	160	144
TRC16R100...	100	3°	172	200	184
TRC16R125...	125	2.5°	222	250	234