

Indexable End Mill for Deep Shoulder Milling

DCCC Series

**Suitable for heavy cutting
due to holder rigidity.**



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DEEP SHOULDER MILLING

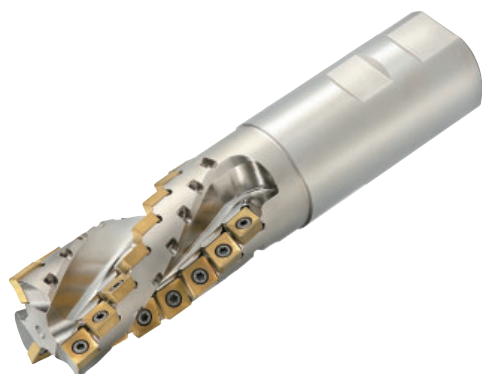


Roughing



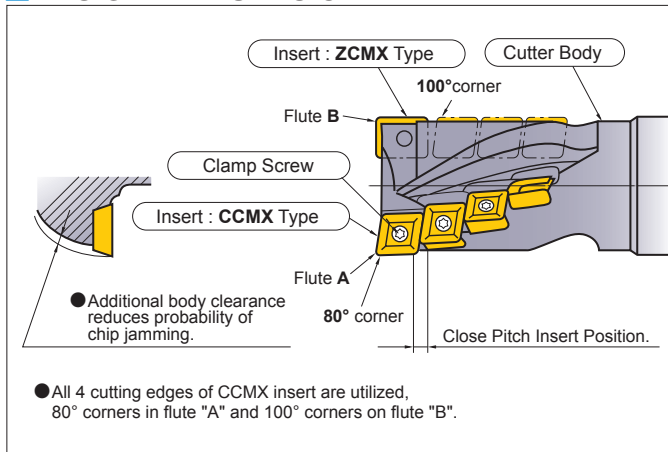
DCCC

- P
- M
- K
- N
- S
- H

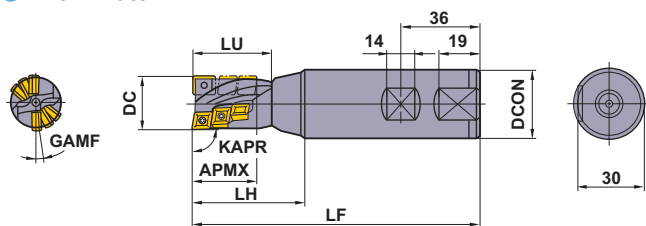


- Different helical flute angles prevents chattering.
- Suitable for heavy cutting due to holder rigidity.

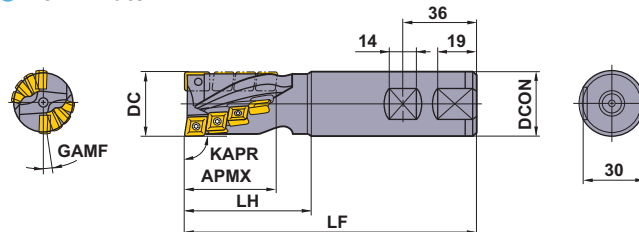
DESIGN FEATURES OF DCCC TYPE END MILL



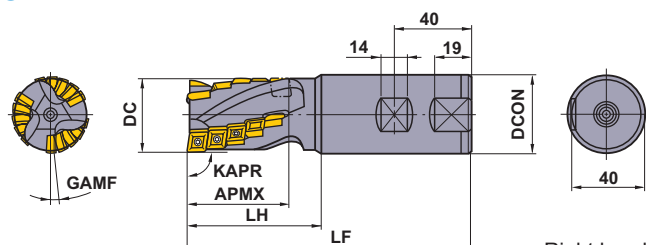
● $\phi 25$ 2 flute



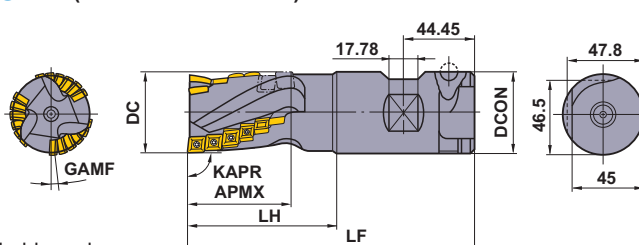
● $\phi 32$ 2 flute



● $\phi 40$ 3 flute



● $\phi 50$ (Combination Shank) 3 flute



KAPR : 90°

Right hand tool holder only.

(mm)

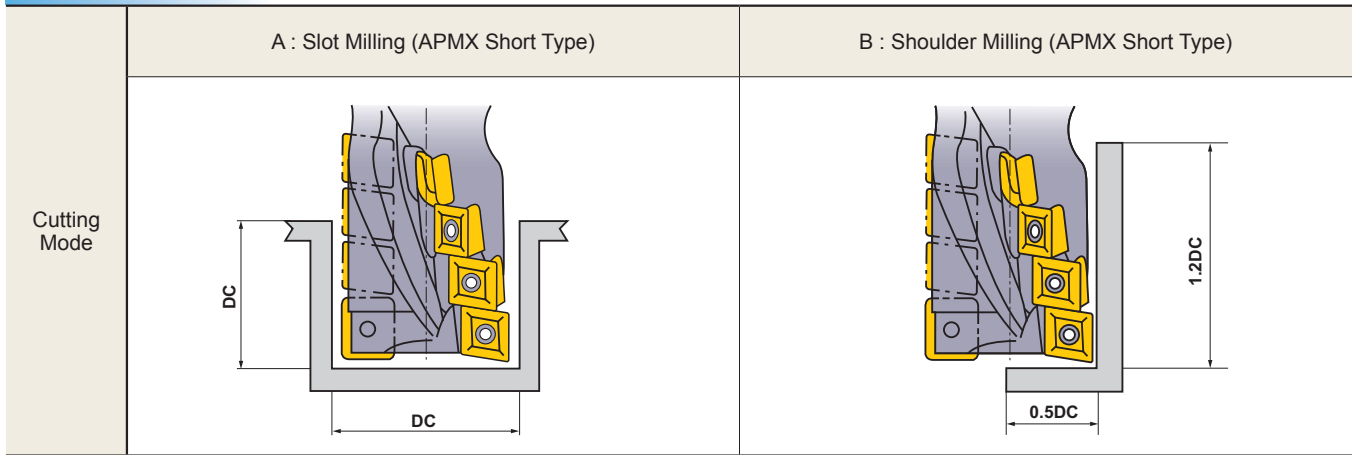
DC	Order Number	Stock	LF	DCON	LH	LU	APMX	GAMF	*1 WT	No. of Teeth		Peripheral and Bottom		Bottom insert only	
										Bottom	Total	Type	*2 N	Type	*2 N
25	DCCCR2506S32	●	130	32	50	36	27	8°	0.6	2	6	CCMX08	5	ZCMX08	1
25	DCCCR2510S32	●	150	32	70	56	44	8°	0.7	2	10	CCMX08	9	ZCMX08	1
32	DCCCR3208S32	●	140	32	60	—	43	8°36'	0.8	2	8	CCMX09	7	ZCMX09	1
32	DCCCR3212S32	●	160	32	80	—	63	8°36'	0.8	2	12	CCMX09	11	ZCMX09	1
40	DCCCR4015S42	●	150	42	70	—	53	5°31'	1.3	3	15	CCMX09	14	ZCMX09	1
40	DCCCR4024S42	●	180	42	100	—	83	5°31'	1.4	3	24	CCMX09	23	ZCMX09	1
50	DCCCR5018S508	●	175	50.8	90	—	63	5°51'	2.3	3	18	CCMX09	17	ZCMX09	1
50	DCCCR5027S508	●	205	50.8	120	—	93	5°51'	2.6	3	27	CCMX09	26	ZCMX09	1

*1 WT : Tools Weight (Kg)

*2 N : Number of Inserts

● : Inventory maintained in Japan.

RECOMMENDED CUTTING CONDITIONS



Work Material	Hardness	Grade	Cutting Mode	Cutting Speed (m/min)	Table Feed (mm/min)			
					φ25	φ32	φ40	φ50
P Mild Steel	≤180HB	F7030	A	200 (160–240)	120 (100–140)	120 (100–140)	120 (100–140)	120 (100–140)
		F7030	B	200 (160–240)	200 (180–220)	200 (180–220)	230 (200–250)	230 (200–250)
Carbon Steel Alloy Steel	180–280HB	F7030	A	160 (130–180)	120 (100–140)	120 (100–140)	140 (120–150)	140 (120–150)
		F7030	B	160 (130–180)	150 (120–180)	150 (120–180)	180 (150–200)	180 (150–200)
	280–350HB	F7030	A	160 (130–180)	100 (80–120)	100 (80–120)	130 (100–150)	130 (100–150)
		F7030	B	160 (130–180)	120 (100–140)	120 (100–140)	150 (120–180)	150 (120–180)
M Stainless Steel	≤200HB	F7030	A	80 (60–100)	70 (50–90)	70 (50–90)	70 (50–90)	70 (50–90)
		F7030	B	130 (100–160)	100 (80–120)	100 (80–120)	120 (100–140)	120 (100–140)
K Cast Iron	Tensile Strength ≤450MPa	UT120T	A	120 (100–140)	200 (180–220)	200 (180–220)	230 (200–250)	230 (200–250)
		UT120T	B	120 (100–140)	230 (200–250)	230 (200–250)	260 (240–280)	260 (240–280)

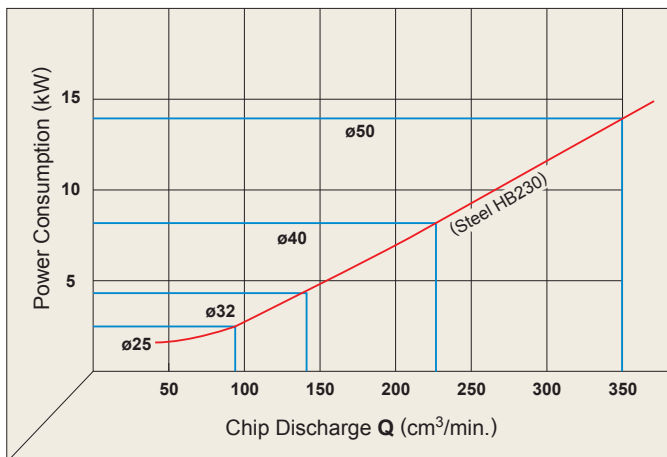
● Revolution (min⁻¹)=(1000 x Cutting Speed)÷(3.14 x DC)

● Table Feed (mm/min)=Feed per Tooth x Number of Teeth x Cutter Revolution

POWER CONSUMPTION

● Please use the chart below for reference, please select the conditions that suits the machines power.

● Chip Discharge Q (mm³/min.)=Table Feed x Depth of Cut x Cutting Width÷1000

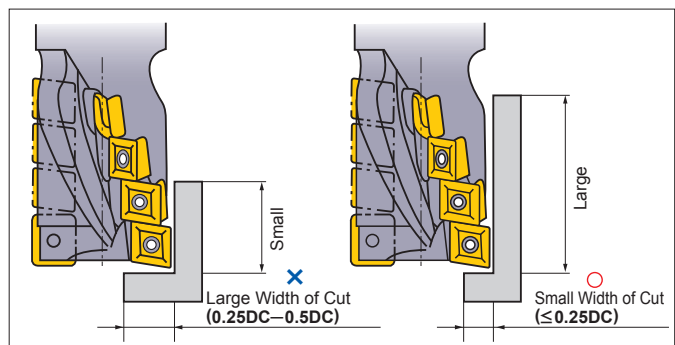


FOR USE OF APMX LONG TYPE

● Since the overhang from the milling chuck is long, a large width of cut will cause chattering and tool breakage.

● Keep the width of cut small and the depth of cut in axial direction large. (See the following illustration.)

● For slot milling, keep the table feed at not more than half the value listed in the above table. (Use the APMX Short type as much as possible.)



INSERTS

Work Material	P	Steel	Cutting Conditions (Guide) :				Cutting Conditions (Guide) :					Geometry		
	M	Stainless Steel	●	●	●	●	●	●	●	●	●		●	
	K	Cast Iron	Honing : E : Round				Honing : E : Round							
Shape	Order Number	Class	Honing	Coated				Carbide					Dimensions (mm)	Geometry
				F7030	VP15TF	UP20M	UTi20T	LE	W1	IC	S	RE		
	CCMX083508EN-A	M	E	●	●	●	●	-	-	7.94	3.5	0.8		
	CCMX09T308EN-A	M	E	●	●	●	●	-	-	9.525	3.97	0.8		
Strong Cutting Edge Type 	CCMX09T308EN-B	M	E	●			●	-	-	9.525	3.97	0.8		
	ZCMX083508ER-A	M	E	●			●	10.4	7.94	-	3.5	0.8		
	ZCMX09T308ER-A	M	E	●	●	●	●	12	9.525	-	3.97	0.8		
Strong Cutting Edge Type 	ZCMX09T308ER-B	M	E	●	●	●	●	12	9.525	-	3.97	0.8		

● : Inventory maintained in Japan. (10 inserts in one case)

SPARE PARTS

Tool Holder Number	*			Insert	
	Clamp Screw	Wrench	Wrench	Peripheral and Bottom Insert	Bottom Insert (One Pocket Only)
DCCCR25	CS300890T	TKY08F	TKY08DS	CCMX083508EN-A	ZCMX083508ER-A
DCCCR32					
DCCCR40	CS350990T	TKY10F	TKY10DS	CCMX09T308EN-A or B	ZCMX09T308ER-A or B
DCCCR50					

* Clamp Torque (N · m) : CS300890T=1.0, CS350990T=2.5

For Your Safety

●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or driver. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

MITSUBISHI MATERIALS CORPORATION

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(Tools specifications subject to change without notice.)