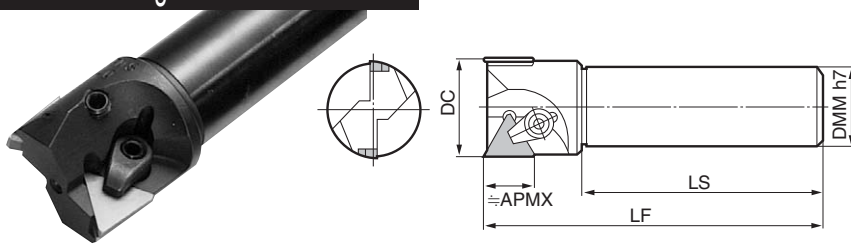




Shoulder Milling for Steel & Cast Iron



Body

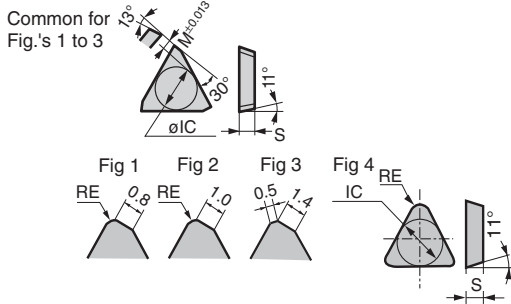
Dimensions (mm)

Cat. No.	Stock	Diameter		Total Length		Shank		No. of Teeth	Axial Rake	Radial Rake	Applicable Insert
		DC	LF	DMM	APMX	LS					
FMS 216	●	16	70	16	8	50	1	+3°	-6°	TPKN 22TR	
220	●	20	100	20	8	75	2	+3°	-4°		
225	●	25	110	25	8	80	2	+7°	-4°		
FMS 330	●	30	160	32	13	120	2	+7°	-4°	TPKN 32TR	
332	●	32	160	32	13	120	2	+7°	-4°		
335	●	35	160	32	13	120	2	+7°	-4°		
FMS 440	●	40	160	32	19	120	2	+7°	-4°	TPCH 43TR	
450	●	50	160	32	19	120	2	+7°	-4°		
460	●	60	160	32	19	120	3	+7°	-4°		
440B	●	40	160	42	19	120	2	+7°	-4°		

Inserts are not included.

Inserts

P Steel
 M Stainless Steel
 K Cast Iron
 N Non-Ferrous Metal
 S Exotic Alloy
 H Hardened Steel



Grade	Coated Carbide		Carbide	Cermet	Dimensions (mm)	Applicable Endmill									
	High Speed/Light	General Purpose													
Application	P	M	K	N											
	P	M	K	N											
	P	M	K	N											
Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	A30N	A30	G10E	T1500A	T250A	IC	S	RE	Fig	
TPKN 22TR											6.35	3.18	0.8	1	FMS 216 to FMS 225
22R											6.35	3.18	0.8	1	
TPMN 222											6.35	3.18	0.8	4	
TPKN 32TR											9.525	3.18	0.8	2	FMS 330 to FMS 335
32R											9.525	3.18	0.8	2	
TPMN 322											9.525	3.18	0.8	4	
TPCH 43TR	●	●	●								12.70	4.76	—	3	FMS 440(B) to FMS 460
43R											12.70	4.76	—	3	
TPMN 432											12.70	4.76	0.8	4	
433											12.70	4.76	1.2	4	

H10E grade is also available for TPCH43TR.
EH10Z and EH20Z grades are also available for TPCH43R.

Recommended Cutting Conditions

Diameter ø16 to ø25 mm

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	Low Carbon Steel	180 to 280HB	50- 75 -100	0.03- 0.06 -0.10	ACP200
	Alloy Steel	180 to 280HB	50- 65 -80	0.03- 0.05 -0.08	ACP200
K	Cast Iron	250HB	40- 70 -100	0.03- 0.10 -0.15	ACK200

Diameter ø30 to ø35 mm

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	Low Carbon Steel	180 to 280HB	60- 90 -120	0.04- 0.08 -0.15	ACP200
	Alloy Steel	180 to 280HB	60- 80 -100	0.04- 0.08 -0.13	ACP200
K	Cast Iron	250HB	60- 90 -120	0.04- 0.12 -0.20	ACK200

Diameter ø40 to ø60 mm

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	Low Carbon Steel	180 to 280HB	60- 100 -150	0.05- 0.15 -0.20	ACP200
	Alloy Steel	180 to 280HB	60- 90 -120	0.05- 0.12 -0.18	ACP200
K	Cast Iron	250HB	60- 90 -120	0.05- 0.15 -0.25	ACK200

Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, cutting depth, and other factors.

Parts

Clamp	Double Screw	Shim	Spring Pin	Wrench	Applicable Endmill
CCM5BSL	WB5-10 M5 5.0	—	—	TH025	FMS216 / FMS220
	WB5-12 M5 5.0	—	—	TH025	FMS225
CCM6BL	WB6-16 M6 5.0	—	—	LH030	FMS330 to FMS335
CCM8UL	WB8-20 M8 8.0	STPL42	SPP308	LH040	FMS440(B) to FMS460

Recommended Tightening Torque (N·m)