

MILLING INSERTS

Milling Inserts without Hole

Usage Classification

- ★ Roughing / 1st Choice
- ☆ Roughing / 2nd Choice
- Finishing / 1st Choice
- Finishing / 2nd Choice (Hardness Under 45HRC)

P	Free-Cutting Steel Carbon/Alloy Steel	■						★	★	
M	Stainless Steel							★		
K	Gray Cast Iron Nodular Cast Iron								★	☆
N	Non-ferrous Metals									★
S	Heat-Resistant Alloys Titanium Alloy								★	☆
H	Hard Materials								■	□

Insert (Right-hand Shown)	Part Number (ANSI)	Part Number (ISO)	Dimensions (in)					Angle (°)			Cermet		CVD Coated Carbide	MN*	MEGA COAT	PVD*	Carbide	Toolholder Page			
			A	T	X	Z	rE	α	β	γ	TN60	TN100M	TC60	CA6535	CA420M	PR1535	PR1225		PR1210	PR830	KW10
	TEKN 32PTTR	TEKN 1603PTTR	0.375	0.125	R0.031	0.039	-	20°	22°	30°		○									E69
	32PTFR	1603PTFR	0.375	0.125	R0.028	0.055	-	20°	22°	30°		○									
	TEEN 43PTTR	TEEN 2204PTTR	0.500	0.187	R0.039	0.055	-	20°	22°	30°		○									E48
	TEKN 43PTTR	TEKN 2204PTTR	0.500	0.187	R0.039	0.055	-	20°	22°	30°		○									E49
	43PTFR	2204PTFR	0.500	0.187	0.028	0.055	-	20°	22°	30°											
	TEKR 43PTER-S	TEKR 2204PTER-S	0.500	0.187	R0.039	0.055	-	20°	22°	30°		○									E48
	TEMR 32PTER-H	TEMR 1603PTER-H	0.375	0.125	R0.031	0.047	-	20°	22°	30°											E69
	TEMR 43PTER-H	TEMR 2204PTER-H	0.500	0.187	R0.039	0.055	-	20°	22°	30°											E48
	TPK 32PDTR	TPKN 1603PDTR	0.375	0.125	0.028	0.047	-	11°	15°	30°		○									E49
	TPK 32PDR	1603PDR																			
	TPK 43PDTR	TPKN 2204PDTR	0.500	0.187	0.028	0.063	-	11°	15°	30°		○	●								E49
	TPK 43PDR	2204PDR																			
	TPKR 43PDER-S	TPKR 2204PDER-S	0.500	0.187	R0.039	0.055	-	11°	15°	30°		○									E49
	TPMR 32PDER-H	TPMR 1603PDER-H	0.375	0.125	R0.031	0.047	-	11°	15°	30°											E49
	TPMR 43PDER-H	TPMR 2204PDER-H	0.500	0.187	R0.039	0.055	-	11°	15°	30°											E49
	TPM 221	TPMN 110304	0.250				0.016														E49
	222	110308					0.031														E69
	321	160304		0.125			0.016					○									E49
	322	160308	0.375				0.031					○	●								E49
	323	160312					0.047					○	●								-
	432	220408	0.500	0.187			0.031					○	●								-
	TPG 181505	TPGN 090202					0.008					○									
	18151	090204	0.219	0.094	-	-	0.016	11°	-	-		●									-
	18152	090208					0.031					○									
	2205	110302					0.008					○									
	221	110304	0.250				0.016					○									E49
	222	110308					0.031					○									E69
	321	160304		0.125			0.016					○									
	322	160308	0.375				0.031					○	●								E49
	323	160312					0.047					○	●								

Cutting Range	Chipbreaker	Features
Finishing-Roughing	S	S chipbreaker for general-purpose machining. Low cutting resistance due to 13° chipbreaker rake angle. Recommended for various depths of cut with 3-step chipbreaker design. Ground wiper edge enables good surface finishes.
Medium-Finishing	H	H chipbreaker for general-purpose machining. Smooth chip evacuation due to the chipbreaker's smooth rake face. 20% less cutting force than flat-top inserts due to a 25° rake angle chipbreaker.