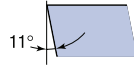


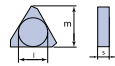
T P K R



Shape
Triangle 60°



Clearance Angle
11°



Tolerance
l ± 0.05 m ± 0.013
s ± 0.025



Insert Type
Clamping
Chip breaker

Insert designation	Grade	l	s	P/r	D	Direction	Catalog Nr.	Page
TPKR 1603 PDTR	LT 30	16	3,18	90°	15°	Right	M000053	217
TPKR 2204 PDTR	LT 30	22	4,76	90°	15°	Right	M000983	218

Application Guide

Slotting

Sholder Milling

Surfacing

Multi purpose 90° milling insert, with 3 cutting edges, designed for materials that generate long chips. Suitable for Roughing to Finishing - Slotting, Shoulder Face milling operations.

TPKR

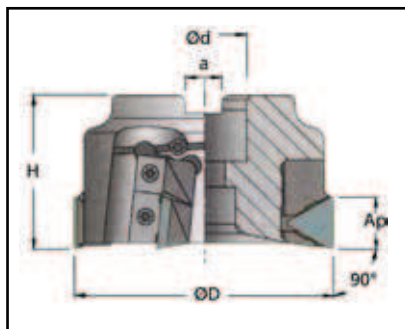
Machining Recommendation Guide - Please see Pg. 8



Catalog Nr.	Description	D	d	H	Ap	z
M2000699	LT 310 M-D63	63	22	50	14	6
M2000700	LT 310 M-D80	80	27	50	14	6
M2000701	LT 310 M-D100	100	32	50	14	7
M2000702	LT 310 M-D125	125	40	63	14	8

TPKR 2204 PDTR

Catalog Nr.	Description	D	d	H	Ap	z
M2000703	LT 320 M-D80	80	27	50	20	5
M2000704	LT 320 M-D100	100	32	50	20	6
M2000705	LT 320 M-D125	125	40	63	20	7
M2000706	LT 320 M-D160	160	40	63	20	9



Material Group	Group No	Material Examples*	Brinell hardness	d.o.c [mm]		feed [mm/tooth]		V _c [m/min]	
				min	max	min	max	min	max
Low Carbon Steel	1	Ck15, Ck45 1020, 1045	150	0.5	12.0	0.15	0.22	180	300
			180		12.0		0.22		260
			210		12.0		0.22		220
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.5	12.0	0.15	0.18	130	200
			230		12.0		0.18		180
			280	0.5	12.0	0.15	0.18	100	160
			320		12.0		0.18		140
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.5	7.0	0.12	0.18	90	130
			280		7.0		0.18		120
			320	0.5	7.0	0.12	0.18	90	110
			350		7.0		0.18		100
			400	0.5	5.0	0.10	0.18	40	80
			480		3.0		0.16		70
			550		1.5		0.14		60
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.5	12.0	0.12	0.21	190	250
	5	X2 CrNiMo 17 2 2 316	230 to 270	0.5	12.0	0.12	0.18	160	210
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-----	0.5	10.0	0.12	0.18	70	120
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.5	5.0	0.12	0.23	150	230
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.5	5.0	0.12	0.23	130	210
			Treated	0.5	5.0	0.12	0.18	90	150
Grey Cast Iron	9	GG 20	140 to 230	0.5	7.0	0.15	0.23	150	240
		GG 25							220
		GG 30							190
Nodular Cast Iron	10	GGG 40	210	0.5	7.0	0.12	0.18	100	200
		GGG 50	260						160
		GGG 70	310	0.5	3.0	0.10	0.16	30	130
		G-X260NiCr42	450						60
Nickel Based Alloys	11	Inconel 625	-----	0.5	10.0	0.12	0.18	25	35
		Inconel 718						28	38
		Hastelloy C						40	65
Titanium Based Alloys	12	TiAl 6 V4	-----	0.5	10.0	0.12	0.20	35	60
		T40					0.18	28	40

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Material Group	Group No	Material Examples*	Brinell hardness	d.o.c [mm]		feed [mm/tooth]		V _c [m/min]	
				min	max	min	max	min	max
Low Carbon Steel	1	Ck15, Ck45 1020, 1045	150	0.5	18.0	0.18	0.25	180	300
			180		18.0		0.40		260
			210		18.0		0.35		220
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.5	18.0	0.15	0.23	130	200
			230		18.0		0.23		180
			280	0.5	18.0	0.15	0.20	100	160
			320		18.0		0.20		140
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.5	12.0	0.12	0.18	90	130
			280		12.0		0.18		110
			320	0.5	12.0	0.12	0.18	60	95
			350		12.0		0.18		80
			400	0.5	5.0	0.10	0.18	40	80
			480		3.0		0.16		70
			550		1.5		0.14		60
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.5	18.0	0.18	0.25	190	250
	5	X2 CrNiMo 17 2 2 316	230 to 270	0.5	18.0	0.18	0.23	160	210
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-----	0.5	10.0	0.12	0.18	70	120
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.5	15.0	0.18	0.28	150	230
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.5	15.0	0.18	0.28	130	210
			Treated	0.5	15.0	0.18	0.23	90	150
Grey Cast Iron	9	GG 20	140 to 230	0.5	18.0	0.18	0.25	150	240
		GG 25							220
		GG 30							190
Nodular Cast Iron	10	GGG 40	210	0.5	18.0	0.18	0.20	100	200
		GGG 50	260						160
		GGG 70	310	0.5	3.0	0.10	0.16	30	130
		G-X260NiCr42	450						60
Nickel Based Alloys	11	Inconel 625	-----	0.5	10.0	0.12	0.18	25	35
		Inconel 718						28	38
		Hastelloy C						40	65
Titanium Based Alloys	12	TiAl 6 V4	-----	0.5	10.0	0.12	0.20	35	60
		T40					0.18	28	40