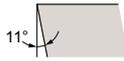




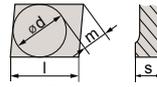
A P K T



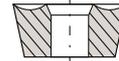
Shape



Clearance Angle



Tolerance
 $d \pm 0.05$
 $m \pm 0.013$
 $s \pm 0.025$



Fixing
Chip breaker

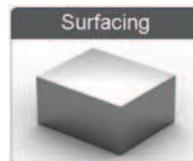
	Insert Designation	Grade	l	s	r	Direction	Catalog Nr.
From Q1-2013 NEW	APKT 1604 PDTR	LT 30	15.3	4.76	0.8	Right	M0000022
	APKT 1604 PDTR*	LT 30	15.3	4.76	0.95	Right	M0000021
	APKT 160424 ER	LT 30	15.3	4.76	2.4	Right	M0000300
	APKT 1705 PETR	LT 30	15.8	5.12	0.8	Right	M0001810

* This item is available until mid 2013 including its cutter bodies (LT 730 serie) and will be phased out after.

Surfacing Insert Lead angle 90°

Multi purpose 90° Milling insert. Suitable for Roughing to Finishing-Slotting, Shoulder and Face Milling operations.

Application Guide



F ⇒
Productivity

Coolant

1, 2, 3, 4	No
7, 8, 11	No
10, 12	Yes
5, 6, 9	Yes

Stainless Steel

V_C

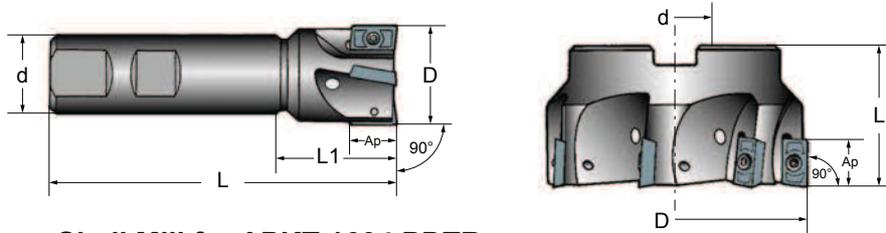
Machine Recommendations Guide. Details on page 10

End Mill for APKT 1604 PDTR

Cutter Designation	D	d	L1	L	Ap	z	α	Catalog Nr.
LT 731 WL-W-D025/2	25	25	90	220	15	2	5	M2002965
LT 731 W-W-D025/2	25	25	44	100	15	2	5	M2002966
LT 731 WL-W-D032/3	32	32	90	220	15	3	3	M2002967
LT 731 W-W-D032/3	32	32	50	110	15	3	3	M2002968
LT 731 WL-W-D040/4	40	32	90	220	15	4	2.5	M2002969
LT 731 W-W-D040/4	40	32	50	115	15	4	2.5	M2002970

Screw: M2000597

Key: M2000602



Shell Mill for APKT 1604 PDTR

Cutter Designation	D	d	L	Ap	z	α	Catalog Nr.
LT 731 M-W-D040/4	40	16	40	15	4	2.5	M2002971
LT 731 M-W-D050/5	50	22	40	15	5	2.2	M2002972
LT 731 M-W-D063/6	63	22	40	15	6	1.8	M2002973
LT 731 M-W-D080/7	80	27	50	15	7	1.4	M2002974
LT 731 M-W-D100/8	100	32	50	15	8	1.1	M2002975
LT 731 M-W-D125/9	125	40	63	15	9	0.8	M2002976
LT 731 M-W-D160/10*	160	40	63	15	10	-	M2002977

* On request

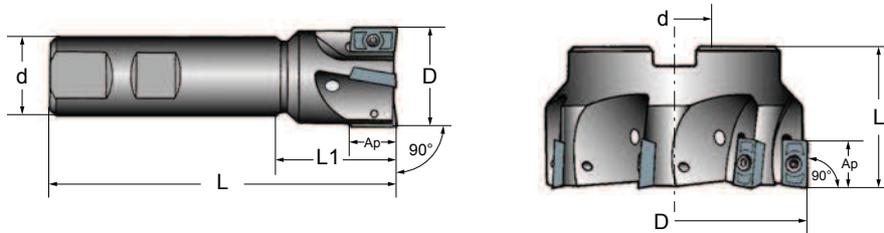
Screw: M2000597

Key: M2000602

End Mill for APKT 1705 PETR

Cutter Designation	D	D1	d	L1	L	Ap	z	α	Catalog Nr.
LT 737 W-W-D025/2	25	25	20	32	100	14	2	5	M2001833
LT 737 WL-W-D025/2	25	25	25	40	210	14	2	5	M2001836
LT 737 W-W-D032/3	32	32	32	40	110	14	3	3	M2001834
LT 737 WL-W-D032/3	32	32	32	65	200	14	3	3	M2001837
LT 737 W-W-D040/4	40	40	32	45	115	14	4	2.5	M2001982
LT 737 WL-W-D040/4	40	40	32	45	115	14	4	2.5	M2001835

Screw: M2000597 Key: M2000602



Shell Mill for APKT 1705 PETR

Cutter Designation	D	D1	d	L	Ap	z	α	Catalog Nr.
LT 737 M-W-D040/4	40	40	16	40	14	4	2.5	M2001838
LT 737 M-W-D50/5	50	50	22	40	14	5	2.2	M2001839
LT 737 M-W-D63/6	63	63	22	40	14	6	1.8	M2001841
LT 737 M-W-D80/7	80	80	27	50	14	7	1.4	M2001842
LT 737 M-W-D100/7	100	100	32	50	14	7	1.1	M2001843
LT 737 M-W-D125/9	125	125	40	63	14	9	0.8	M2001844
LT 737 M-W-D160/10	160	160	40	63	14	10	-	M2001845

Screw: M2000597 Key: M2000602

APKT 1604 PDTR LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V _c [m/min]		Optimal cutting conditions				
					min	max	min	max	min	max	D.O.C.	Feed	V _c		
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.5	15.0	0.18	0.32	330	4.0	0.23	250		
		2	2	1045, 1060,	190 HB		15.0		0.32	190			300		
		3	3	28Mn6	250 HB		15.0		0.32	250			200		
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	15.0	0.15	0.25	150	240	4.0	0.20	200	
			4,6		230 HB		15.0		0.25	150	210				
			5,7		280 HB		15.0		0.22	130	190				
			8		350 HB		15.0		0.22	130	170				
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	10.7	0.12	0.22	90	150	3.0	0.18	130	
			10		280 HB		10.7		0.22	90	130				
			11		320 HB		10.7		0.18	60	110				
			11		350 HB		10.7		0.18	60	90				
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	15.0	0.15	0.25	190	250	4.0	0.20	220		
		14		240 HB		15.0		0.22	160	210					
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	10.7	0.12	0.18	70	130	3.0	0.16	100		
		14		310 HB		10.7		0.18	70	120					
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	15.0	0.15	0.25	150	210	4.0	0.20	190		
				13		42 HRc		10.7	0.20	90			150		
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	15.0	0.18	0.32	240	4.0	0.23	180			
		15		200 HB		15.0		0.32	150			220			
		16		250 HB		15.0		0.32	190			160			
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	15.0	0.15	0.28	200	4.0	0.20	180			
		17,19		200 HB		15.0		0.28	100			180			
		18,20		250 HB		15.0		0.28	150			130			
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800 Inconel 700 Stellite 21	240 HB	0.5	10.7	0.12	0.18	45	45	3.0	0.16	32		
		33		250 HB		10.7		0.18	25	45					
		34		350 HB		10.7		0.18	45	30					
	Ti based	10	TiAl6V4 T40	-	0.5	10.7	0.12	0.20	40	65	3.0	0.18	55		
		37		-		10.7		0.18	30	55					
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	5.4	0.10	0.16	80	80	2.0	0.14	60		
		38		50 HRc		3.2		0.16	40	70			1.5	0.13	55
		38		55 HRc		1.6		0.14	60	1.0			0.12	50	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	4.3	0.10	0.18	40	80	1.5	0.14	50		
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.5	1.6	0.10	0.14	30	60	1.0	0.12	40		
MF	Al (>8%Si)	12	25	AISI12	130 HB	0.5	15.0	0.18	0.32	200	400	4.0	0.25	280	

APKT 160424 ER LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V _c [m/min]		Optimal cutting conditions			
					min	max	min	max	min	max	D.O.C.	Feed	V _c	
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.5	15.0	0.18	0.32	190	330	5.0	0.23	250
		2	1045, 1060,	190 HB	220									
		3	28Mn6	250 HB	200									
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	15.0	0.15	0.25	150	240	5.0	0.20	200
		4,6	230 HB		180									
		5,7	280 HB		150									
		8	350 HB		140									
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	10.7	0.12	0.22	90	150	3.8	0.18	130
		10	280 HB		120									
		11	320 HB		100									
		11	350 HB		80									
Stainless Steel	Austenitic	4	14	304, 316,	180 HB	0.5	15.0	0.15	0.25	190	250	5.0	0.20	220
		14	X5CrNi18-9	240 HB	190									
	Duplex	5	14	X2CrNiN23-4,	290 HB	0.5	10.7	0.12	0.18	70	130	3.8	0.16	100
		14	S31500	310 HB	90									
	Ferritic & Martensitic	6	12	410, X6Cr17,	200 HB	0.5	15.0	0.15	0.25	150	210	5.0	0.20	190
		13	17-4 PH, 430	42 HRc	130									
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.5	15.0	0.18	0.32	150	240	5.0	0.23	200
		15	EN-GJL-250,	200 HB	180									
		16	No30B	250 HB	160									
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	15.0	0.15	0.28	100	180	5.0	0.20	180
		17,19	200 HB		150									
		18,20	250 HB		130									
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.5	10.7	0.12	0.18	25	45	3.8	0.16	32
		33	Inconel 700	250 HB	30									
		34	Stellite 21	350 HB	30									
Ti based	10	36	TiAl6V4	-	0.5	10.7	0.12	0.20	40	65	3.8	0.18	55	
	37	T40	-	40										
Hardened Mat.	Steel	11	38	X100CrMo13,	45 HRc	0.5	3.2	0.10	0.18	40	80	2.5	0.13	60
		38	440C,	50 HRc	55									
		38	G-X260NiCr42	55 HRc	50									
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	4.3	0.10	0.18	40	80	1.9	0.14	50	
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.5	1.6	0.10	0.14	30	60	1.3	0.12	40	
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	15.0	0.18	0.32	200	400	5.0	0.25	280

APKT 1705 PETR LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V _c [m/min]		Optimal cutting conditions			
					min	max	min	max	min	max	D.O.C.	Feed	V _c	
Steel	Non-alloyed	1	1	C35, Ck45, 1020,	125 HB	0.5	15.0	0.18	0.40	190	4.0	0.28	250	
		2	2	1045, 1060,	190 HB		15.0		0.40	300			220	
		3	3	28Mn6	250 HB		15.0		0.40	250			200	
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	15.0	0.15	0.31	150	4.0	0.24	200	
			4,6		230 HB		15.0		0.31	150			180	
			5,7		280 HB		15.0		0.27	130			150	
			8		350 HB		15.0		0.27	130			140	
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	10.7	0.12	0.27	90	3.0	0.22	130	
			10		280 HB		10.7		0.27	90			120	
			11		320 HB		10.7		0.22	60			100	
			11		350 HB		10.7		0.22	60			80	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	15.0	0.15	0.31	190	4.0	0.24	220		
		14		240 HB		15.0		0.27	160			210	190	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	10.7	0.12	0.22	70	3.0	0.19	100		
		14		310 HB		10.7		0.22	120			90		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	15.0	0.15	0.31	150	4.0	0.24	190		
				13		42 HRc		10.7	0.25			90	150	3.0
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	15.0	0.18	0.40	150	4.0	0.28	200		
				200 HB		15.0		0.40	220			180		
				250 HB		15.0		0.40	190			160		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	15.0	0.15	0.35	100	4.0	0.24	180		
				200 HB		15.0		0.35	180			150		
				250 HB		15.0		0.35	150			130		
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800 Inconel 700 Stellite 21	240 HB	0.5	10.7	0.12	0.22	25	3.0	0.19	32		
				250 HB		10.7		0.22	45			30		
				350 HB		10.7		0.22	45			30		
	Ti based	10	TiAl6V4 T40	-	0.5	10.7	0.12	0.25	40	3.0	0.22	55		
				-		10.7		0.22	30			55	40	
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	5.4	0.10	0.22	40	2.0	0.17	60		
				50 HRc		3.2		0.20	70			55		
				55 HRc		1.6		0.17	60			50		
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	4.3	0.10	0.22	40	80	1.5	0.17	50	
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.5	1.6	0.10	0.17	30	60	1.0	0.14	40	
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	15.0	0.18	0.40	200	400	4.0	0.30	280