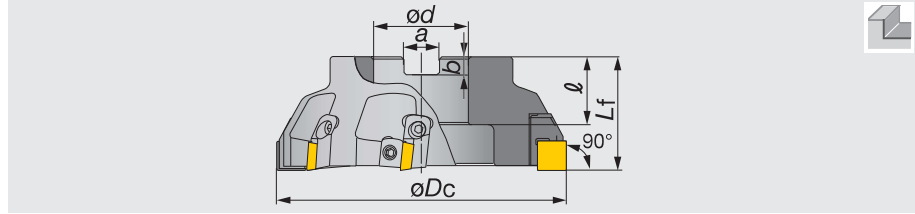


TPP16

Square shoulder mills with wedge clamped SPMR16 inserts in large depth of cut.

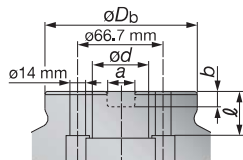
A.R.=+6°,R.R.=-8°



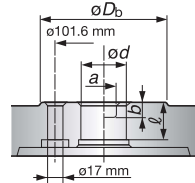
Designation	Max. ap	ϕD_c	z	L_f	ϕd	ℓ	a	b	Kg	Insert
TPP16080RI-E	12	80	4	50	27	26	12,4	7	1	SPMR1605...
TPP16100RI-E	12	100	5	63	32	32	14,4	8	1.8	SPMR1605...
TPP16125RI-E	12	125	6	63	40	32	16,4	9	2.8	SPMR1605...
TPP16160RI-E	12	160	8	63	40	29	16,4	9	4,6	SPMR1605...
TPP16200RI-E	12	200	10	63	60	38	25,7	14	6,9	SPMR1605...
TPP16250RI-E	12	250	12	63	60	38	25,7	14	13	SPMR1605...
TPP16315RI-E	12	315	14	63	60	38	25,7	14	22,2	SPMR1605...

Arbor type

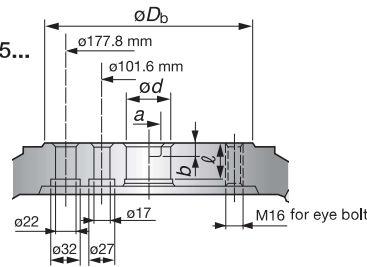
TPP16160...



TPP16200/250...



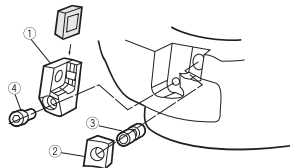
TPP16315...



Shoulder Milling

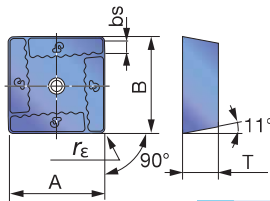
SPARE PARTS

Designation	① Locator	② Wedge	③ Right-left screw	④ Locator fixing screw	Wrench
TPP16080, 100RI-E	LPP16R	WPP16R	FDS-8SS	CM5X0,8X12	TP-4
TPP16125 - 315RI-E	LPP16R	WPP16R	FDS-8S	CM5X0,8X12	TP-4

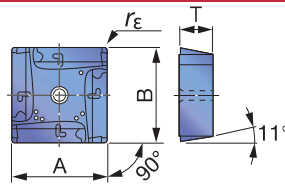


INSERT

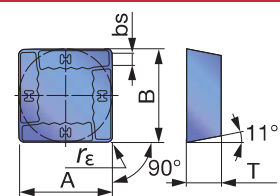
SPMR16-MJ



SPMR16-ML



SPMR16-MH



	P	M	K	N	S	H
Steel	★		★			☆
Stainless						
Cast iron			★			
Non-ferrous						
Superalloys						
Hard materials						

★ : First choice
☆ : Second choice

Designation	r_ϵ	Max. ap	Coating				Un-coated	A	B	T	bs
			GH330	T1115	T3130	UX30					
SPMR1605PPTR-MJ	0,8	12	●	●	●	●	16	16	5,56	2	
SPMR1605PPPR-ML	0,8	12	●	●	●	●	16	16	5,56	-	
SPMR1605PPTR-MH	0,8	12	●	●	●	●	16	16	5,56	2	

● : Line-up

STANDARD CUTTING CONDITIONS

For MJ-chipbreaker inserts (General purpose)

ISO	Workpiece material	Grade	Roughing (Depth of cut: $a_p > 1.5$ mm)		Finishing (Depth of cut: $a_p = 0.3 \sim 0.7$ mm)	
			Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)	Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)
P	Mild steels Unhardened steels < 180 HB	GH330	100 ~ 230	0.1 ~ 0.25	130 ~ 250	0.1 ~ 0.3
		T3130	130 ~ 300	0.1 ~ 0.28	180 ~ 300	0.1 ~ 0.3
		UX30	100 ~ 180	0.1 ~ 0.25	130 ~ 200	0.1 ~ 0.3
	Carbon steels Alloy steels < 300 HB	GH330	100 ~ 180	0.1 ~ 0.2	130 ~ 200	0.1 ~ 0.28
		T3130	130 ~ 280	0.1 ~ 0.25	180 ~ 280	0.1 ~ 0.28
		UX30	80 ~ 130	0.1 ~ 0.2	100 ~ 150	0.1 ~ 0.28
Die steels < 30 HRC	GH330	100 ~ 150	0.1 ~ 0.18	100 ~ 150	0.1 ~ 0.2	
	UX30	80 ~ 130	0.1 ~ 0.18	80 ~ 130	0.1 ~ 0.2	
M	Stainless steels < 250 HB	GH330	150 ~ 200	0.15 ~ 0.23	200 ~ 250	0.15 ~ 0.25
K	Cast irons Ductile cast irons	T1115	100 ~ 200	0.1 ~ 0.2	100 ~ 200	0.1 ~ 0.25
		UX30	80 ~ 130	0.1 ~ 0.2	80 ~ 130	0.1 ~ 0.25

For ML-chipbreaker inserts (Sharpness-priority)

ISO	Workpiece material	Grade	Roughing (Depth of cut: $a_p > 1.5$ mm)		Finishing (Depth of cut: $a_p = 0.3 \sim 0.7$ mm)	
			Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)	Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)
P	Mild steels Unhardened steels < 180 HB	GH330	130 ~ 230	0.05 ~ 0.17	150 ~ 250	0.05 ~ 0.2
		AH330	130 ~ 370	0.05 ~ 0.17	150 ~ 400	0.05 ~ 0.2
	Carbon steels Alloy steels < 300 HB	GH330	150 ~ 180	0.05 ~ 0.12	150 ~ 200	0.05 ~ 0.15
M	Stainless steels < 250 HB	GH330	150 ~ 200	0.05 ~ 0.12	200 ~ 250	0.05 ~ 0.15

For MH-chipbreaker inserts (Toughness-priority)

ISO	Workpiece material	Grade	Roughing (Depth of cut: $a_p > 1.5$ mm)		Finishing (Depth of cut: $a_p = 0.3 \sim 0.7$ mm)	
			Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)	Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)
P	Mild steels Unhardened steels < 180 HB	GH330	100 ~ 230	0.15 ~ 0.3	130 ~ 250	0.15 ~ 0.35
		T3130	130 ~ 300	0.15 ~ 0.33	180 ~ 300	0.15 ~ 0.38
		UX30	100 ~ 180	0.15 ~ 0.3	130 ~ 200	0.15 ~ 0.35
	Carbon steels Alloy steels < 300 HB	GH330	100 ~ 180	0.15 ~ 0.24	130 ~ 200	0.15 ~ 0.35
		T3130	130 ~ 280	0.15 ~ 0.3	180 ~ 280	0.15 ~ 0.35
		UX30	80 ~ 130	0.15 ~ 0.24	100 ~ 150	0.15 ~ 0.35
Die steels < 30 HRC	GH330	100 ~ 150	0.15 ~ 0.22	100 ~ 150	0.15 ~ 0.28	
	UX30	80 ~ 130	0.15 ~ 0.22	80 ~ 130	0.15 ~ 0.28	
K	Cast irons Ductile cast irons	T1115	100 ~ 200	0.15 ~ 0.24	100 ~ 200	0.15 ~ 0.3
		UX30	80 ~ 130	0.15 ~ 0.24	80 ~ 130	0.15 ~ 0.3

Notes:

- As a rule, dry cutting (or air-blowing) is generally recommended.
- If a cutting fluid is used, the cutting speed should be set to the lower side of the values shown in the above table.
- When being used in square shoulder milling, climb milling is recommended.
- In square shoulder milling of stainless steel, when chips tend to be recut during cutting, change to up-milling mode.
- When wet machining mild steels, carbon steels and alloy steels, use T3130 at lower cutting conditions.

