

Shoulder and face milling cutter

TECMILL

Tungaloy Report No. 374S1-G

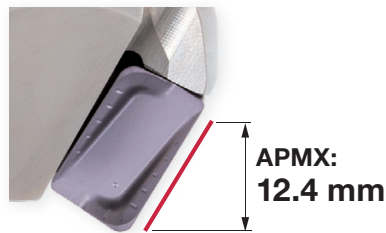
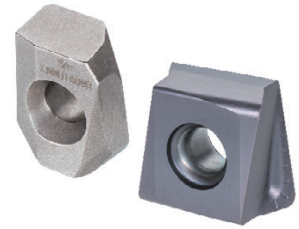
New **face milling cutters with unique insert shims**
for extra tool reliability





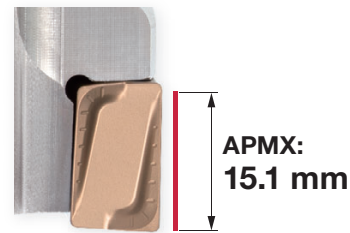
New tangential face milling cutters with shims for better tool reliability

- Carries double-sided tangential inserts with 4 cutting edges for superior tool reliability.
- Thick insert shims minimize the impact in case of insert rupture during machining and protect the cutter body from damage. Ideal for machining cast steel.



TGM16SA**
60° cutter

For increased feed rates



TPM16SA**
90° cutter

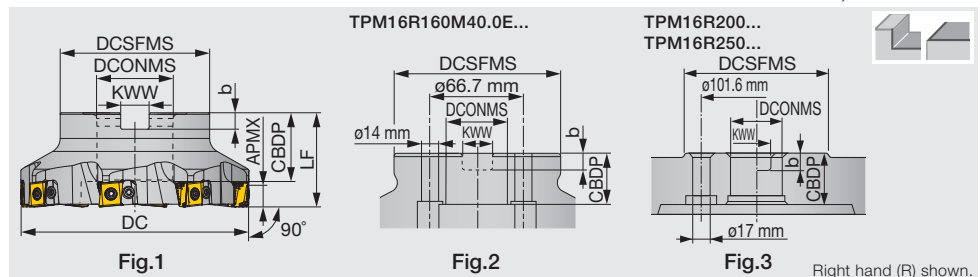
Allows aggressive depths of cut.
Minimum interference with workpiece
and fixture

New

TPM16-SA

Square shoulder mill (shell mill), for LMMU double-sided tangential inserts, with screw insert clamping, shims for extra reliability

GAMP = +4.9° ~ +5°, GAMF = -17.5°



Designation	APMX	DC	CICT	DCSFMS	LF	DCONMS	CBDP	KWW	b	WT(kg)	Air hole	Insert	Fig.
TPM16R160M50.8-08SA	15.1	160	8	100	63	50.8	46	19	11	4.6	Without	LMMU1609...	1
TPM16R160M40.0E08SA	15.1	160	8	100	63	40	29	16.4	9	4.37	Without	LMMU1609...	2
TPM16R200M47.6-10SA	15.1	200	10	130	63	47.625	38	25.4	14	6.4	Without	LMMU1609...	3
TPM16R200M60.0E10SA	15.1	200	10	130	63	60	38	25.7	14	5.9	Without	LMMU1609...	3
TPM16R250M47.6-12SA	15.1	250	12	130	63	47.625	38	25.4	14	13.2	Without	LMMU1609...	3
TPM16R250M60.0E12SA	15.1	250	12	130	63	60	38	25.7	14	12.7	Without	LMMU1609...	3

SPARE PARTS

Designation	Clamping screw	Shim	Shim screw	Grip	Torx bit
TPM16...	CSTB-5L159	SA-LMMU1609R	CSTB-5L159	H-TB	BT20S

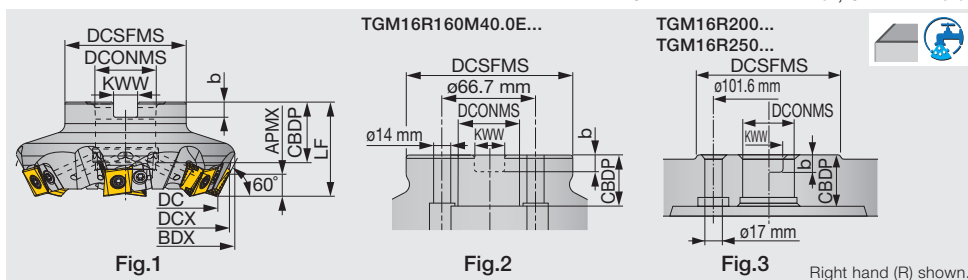
*Recommended clamping torque (N·m) : CSTB-5L159 = 5

New

TGM16-SA

60° face mill (shell mill), for LMMU double-sided tangential inserts, with screw insert clamping, shims for extra reliability

GAMP = +11.4° ~ +11.5°, GAMF = -13.5°



Designation	APMX*	DC*	DCX*	BDX	CICT	DCSFMS	LF*	DCONMS	CBDP	KWW	b	WT(kg)	Air hole	Insert	Fig.
TGM16R100M31.7-06SA	12.4	100	115.3	115.5	6	64	50	31.75	32	12.7	8	1.8	With	LMMU1609...	1
TGM16R100M32.0E06SA	12.4	100	115.3	115.5	6	66	50	32	28.5	14.4	8	1.8	With	LMMU1609...	1
TGM16R125M38.1-07SA	12.4	125	140.3	140.6	7	80	63	38.1	38	15.9	10	3.5	With	LMMU1609...	1
TGM16R125M40.0E07SA	12.4	125	140.3	140.6	7	85	63	40	32	16.4	9	3.4	With	LMMU1609...	1
TGM16R160M50.8-08SA	12.4	160	175.3	174.9	8	100	63	50.8	46	19	11	5.8	Without	LMMU1609...	1
TGM16R160M40.0E08SA	12.4	160	175.3	174.9	8	100	63	40	29	16.4	9	5.5	Without	LMMU1609...	2
TGM16R200M47.6-10SA	12.4	200	215.3	217.2	10	130	63	47.625	38	25.4	14	7.7	Without	LMMU1609...	3
TGM16R200M60.0E10SA	12.4	200	215.3	217.2	10	130	63	60	38	25.7	14	7.2	Without	LMMU1609...	3
TGM16R250M47.6-12SA	12.4	250	265.3	267	12	130	63	47.625	38	25.4	14	14.8	Without	LMMU1609...	3
TGM16R250M60.0E12SA	12.4	250	265.3	267	12	130	63	60	38	25.7	14	14.4	Without	LMMU1609...	3

*The dimensions are true with 1.6 mm-radius inserts

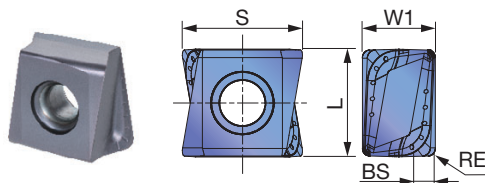
SPARE PARTS

Designation	Clamping screw	Shim	Shim screw	Grip	Torx bit	Shell locking bolt
TGM16R100...	CSTB-5L159	SA-LMMU1609R	CSTB-5L159	H-TB	BT20S	TMBA-M16H
TGM16R125...	CSTB-5L159	SA-LMMU1609R	CSTB-5L159	H-TB	BT20S	TMBA-M20H
TGM16R160 - 250...	CSTB-5L159	SA-LMMU1609R	CSTB-5L159	H-TB	BT20S	-

*Recommended clamping torque (N·m) : CSTB-5L159 = 5

INSERT

LMMU16-MJ



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

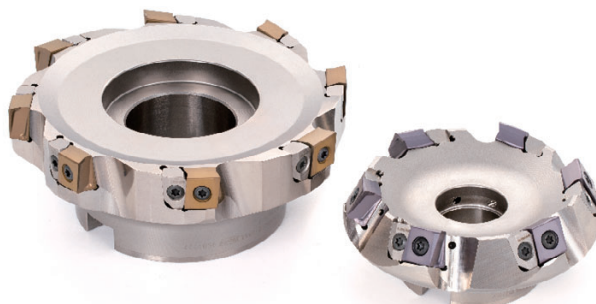
★ : First choice
☆ : Second choice

Designation	RE	APMX	Coated						S	L	W1	BS
			AH3135	AH725	AH120	AH140	T1215	T3225				
LMMU160908PNER-MJ	0.8	15.1	●	●	●	●	●	●	17.3	16	9.5	2.4
LMMU160916PNER-MJ	1.6	15.1	●	●	●	●	●	●	17.1	16	9.5	1.6
LMMU160924PNER-MJ	2.4	15.1	●	●	●	●	●	●	16.9	16	9.5	0.8
LMMU160932PNER-MJ	3.2	15.1	●	●	●	●	●	●	16.8	16	9.5	-

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Hardness	Priority	Grades	Cutting speed Vc (m/min)	Feed per tooth: fz (mm/t)	
						TPM16...	TGM16...
P	Low carbon steel S15C, SS400, etc. C15E4, E275A, etc.	- 200HB	First choice	AH3135	80 - 250	0.08 - 0.3	0.1 - 0.4
		- 200HB	Wear resistance	T3225	100 - 350	0.08 - 0.3	0.1 - 0.4
	Carbon steel and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc.	- 300HB	First choice	AH3135	80 - 250	0.08 - 0.3	0.1 - 0.4
		- 300HB	Wear resistance	T3225	100 - 350	0.08 - 0.3	0.1 - 0.4
	Prehardened steel NAK80, PX5, etc.	30 - 40HRC	First choice	AH3135	80 - 250	0.05 - 0.25	0.08 - 0.3
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	- 200HB	First choice	AH3135	80 - 200	0.05 - 0.25	0.08 - 0.3
		- 200HB	Wear resistance	T3225	100 - 250	0.05 - 0.25	0.08 - 0.3
K	Grey cast iron FC250, etc. 250, etc.	150 - 250HB	First choice	T1215	100 - 350	0.08 - 0.3	0.1 - 0.4
		150 - 250HB	Fracture resistance	AH120	80 - 250	0.08 - 0.3	0.1 - 0.4
	Ductile cast iron FCD400, FCD600, etc. 400-15S, 600-3, etc.	150 - 250HB	First choice	AH120	80 - 250	0.05 - 0.3	0.1 - 0.4
		150 - 250HB	Wear resistance	T1215	100 - 350	0.08 - 0.3	0.1 - 0.4
S	Titanium alloys Ti-6Al-4V, etc.	- 45HRC	First choice	AH3135	30 - 60	0.05 - 0.2	0.08 - 0.25
		- 45HRC	Wear resistance	AH725	30 - 60	0.05 - 0.2	0.08 - 0.25
	Superalloys Inconel718, etc.	- 45HRC	First choice	AH725	20 - 50	0.04 - 0.14	0.05 - 0.18
		- 45HRC	Wear resistance	AH725	20 - 50	0.04 - 0.14	0.05 - 0.18
H	Hardened steel	SKD61, etc. X40CrMoV5-1, etc.	40 - 55HRC	First choice	AH3135	50 - 130	0.03 - 0.17
		SKD61, etc. X40CrMoV5-1, etc.	40 - 55HRC	Wear resistance	AH725	50 - 130	0.03 - 0.17
		SKD11, etc. X153CrMoV12, etc.	55 - 60HRC	First choice	AH725	40 - 70	0.03 - 0.1



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