



Diameters

Metric: 25.0 mm - 250 mm

Inch: 1.0" - 10.0"

Bodies

Cylindrical

Shell Type

Integral on request



Member IMC Group [®]
IT.TE.DI.

TEDIFEED

PCD & CBN Tangential Milling

TEDIFEED is the newest line of mill with tangential inserts available with PCD and CBN inserts, single, double and full cutting edges. TEDIFEED is designed for machining operations from heavy roughing to superfinishing. Available with all holders, with cylindrical shank, monoblock or shell type configurations. A wide range of diameters, lengths and number of cutting edges guarantee the best results in every applications.

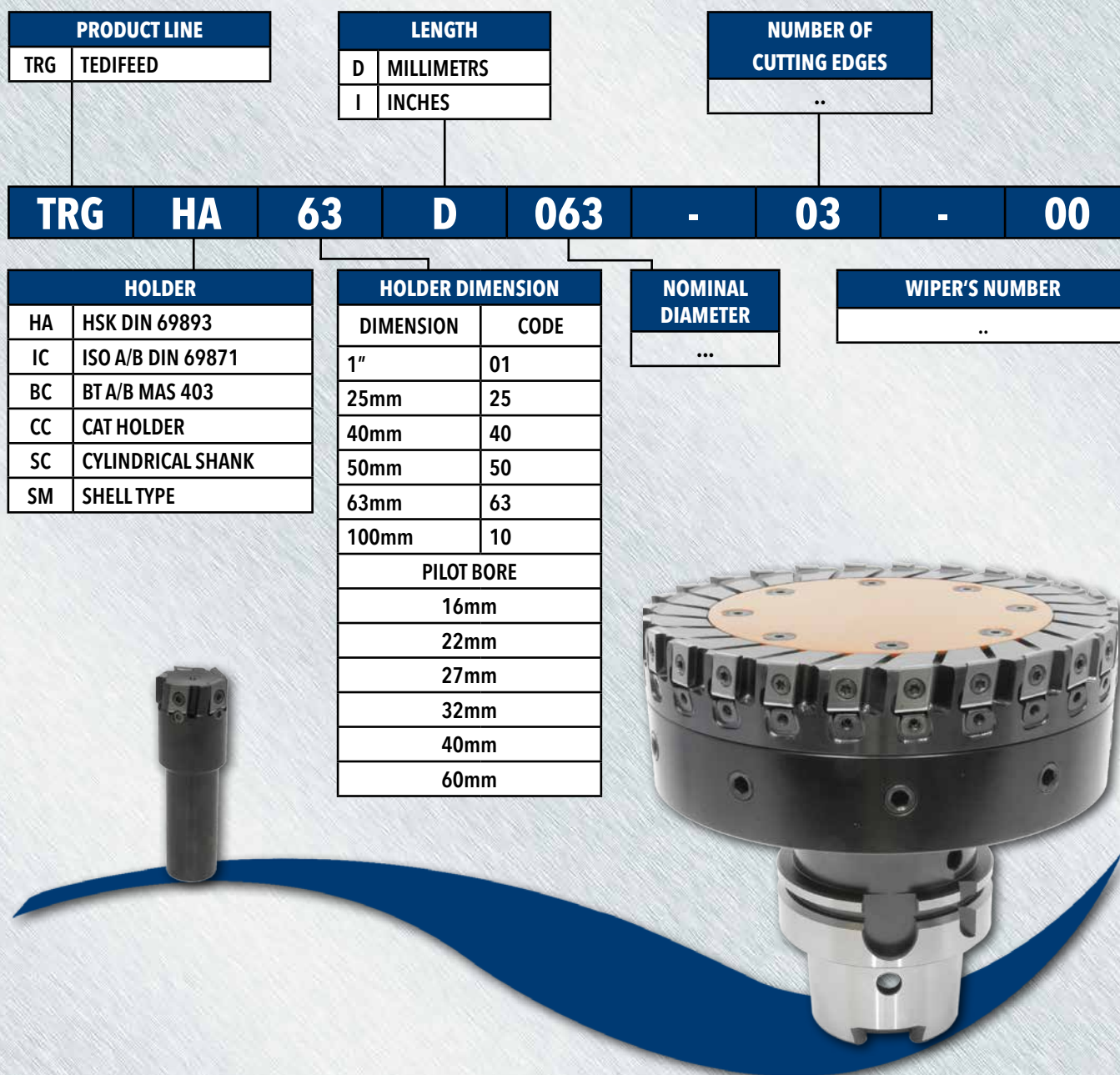
Features:

- Suitable for high feed machining
- Low cutting forces
- Insert available with single tip, double tip and full edge
- High number of cutting edges for high productivity





DESIGNATION SYSTEM FOR CUTTER BODIES



Order examples:

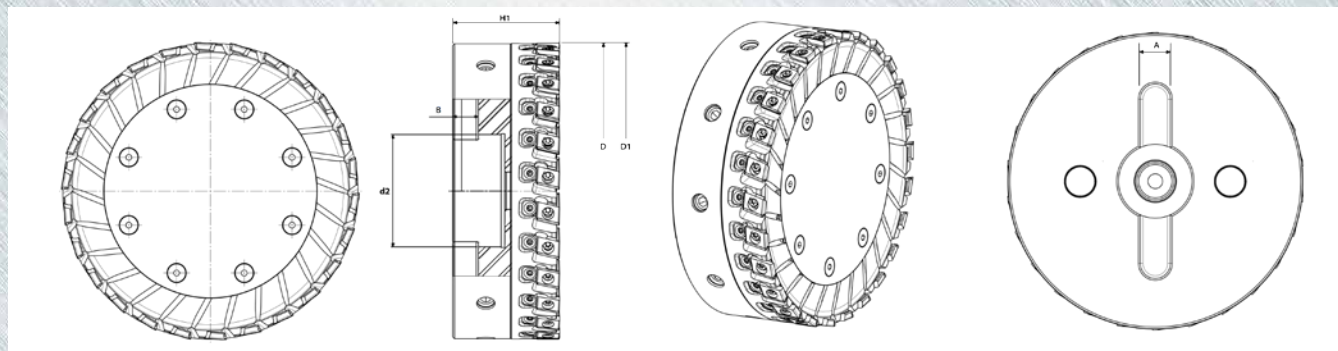
For placing an order of a cutter body shell type $\varnothing 125$ with Z=18 milling + 2 wiper, please indicate the code:

TRGSM40D125-18-02

or the ITEM:

2716837

The following codes are referred only to the cutter body not assembled with inserts.



Drive notch measure (A, B) according to ISO 6462-1983

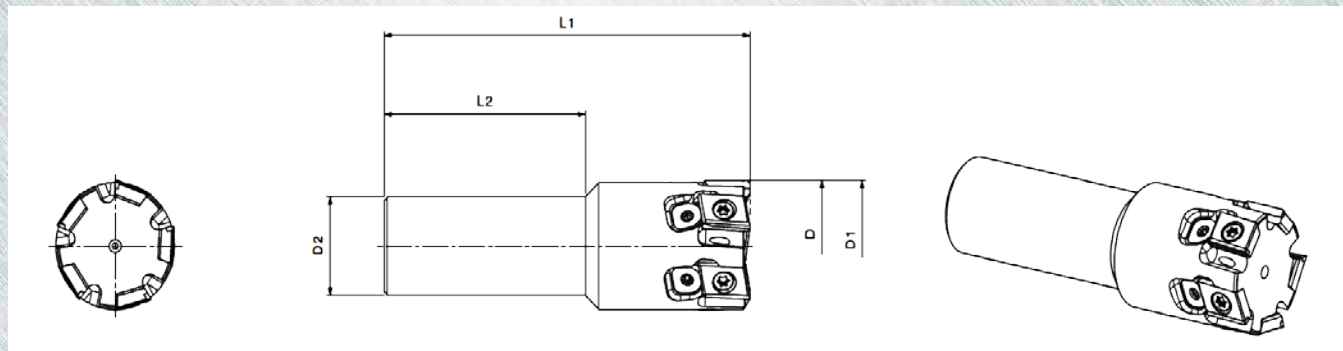
	PRODUCT CODE ¹	d2	HOLDER SHAPE	D * ø nom.	D1	Z	H1	MATERIAL	WEIGHT (kg) ³	ITEM
MM	TUGSM16D040-06-00 ²	16mm	A	40	38.6	6	48	Steel	0,7	2726291
	TUGSM22D050-08-00	22mm	A	50	48.6	8	55	Steel	0,9	2726292
	TUGSM22D063-10-00	22mm	B	63	61.6	10	55	Steel	1,3	2726293
	TUGSM27D080-12-00	27mm	A	80	78.6	12	58	Steel	2,2	2726294
	TUGSM32D100-16-00	32mm	A	100	98.6	16	58	Aluminum + Steel	1,9	2726295
	TUGSM40D125-20-00	40mm	A	125	123.6	20	58	Aluminum + Steel	2,9	2726296
	TUGSM40D125-18-02	40mm	A	125	123.6	18+2	58	Aluminum + Steel	2,9	2726316
	TUGSM40D160-26-00	40mm	C	160	158.6	26	58	Aluminum + Steel	5,1	2726297
	TUGSM40D160-24-02	40mm	C	160	158.6	24+2	58	Aluminum + Steel	5,1	2726317
	TUGSM60D200-30-00	60mm	C	200	198.6	30	63	Aluminum + Steel	8,2	2726298
	TUGSM60D200-28-02	60mm	C	200	198.6	28+2	63	Aluminum + Steel	8,2	2726318
	TUGSM60D250-34-00	60mm	C	250	248.6	34	63	Aluminum + Steel	13,0	2726299
	TUGSM60D250-32-02	60mm	C	250	248.6	32+2	63	Aluminum + Steel	13,0	2726319
INCHES	TRGSM16I015-06-00 ²	16mm	A	1,5"	1,55"	6	2.165"	Steel	0,7	2718082
	TRGSM22I020-08-00	22mm	A	2"	2,05"	8	2.165"	Steel	0,9	2718081
	TRGSM22I025-10-00	22mm	B	2,5"	2,55"	10	2.165"	Steel	1,3	2718083
	TRGSM27I030-12-00	27mm	A	3"	3,05"	12	2,283"	Steel	2,1	2708084
	TRGSM32I040-16-00	32mm	A	4"	4,05"	16	2,283"	Aluminum + Steel	1,9	2718085
	TRGSM40I050-20-00	40mm	A	5"	5,05"	20	2,283"	Aluminum + Steel	3,0	2718086
	TRGSM40I050-18-02	40mm	A	5"	126,4	18+2	2,283"	Aluminum + Steel	3,0	-
	TRGSM40I060-24-00	40mm	C	6"	6,05"	24	2,283"	Aluminum + Steel	4,8	2717864
	TRGSM40I060-22-02	40mm	C	6"	6,05"	22+2	2,283"	Aluminum + Steel	4,8	-
	TRGSM60I080-30-00	60mm	C	8"	8,05"	30	2,480"	Aluminum + Steel	8,4	2718087
	TRGSM60I080-28-02	60mm	C	8"	8,05"	28+2	2,480"	Aluminum + Steel	8,4	-
	TRGSM60I100-34-00	60mm	C	10"	10,05"	34	2,480"	Aluminum + Steel	13,3	2718088
	TRGSM60I100-32-02	60mm	C	10"	10,05"	32+2	2,480"	Aluminum + Steel	13,3	-

* Minimum diameter guaranteed with standard inserts. Refer to related table of available cutting geometry for more detail

¹ Item number refers to body only, without inserts.

² Without internal coolant.

³ The weight is referred to the assembled part (cutter body with inserts).



	PRODUCT CODE ¹	D2	D * ø nom.	D1	Z	L1	L2	WEIGHT (kg) ³	ITEM
MM	TUGSC25D025N03-00**	25	25	23.6	3	100	50	0,4	2726332
	TUGSC25D025-03-00	25	25	23.6	3	100	50	0,4	2726335
	TUGSC25D032-05-00	25	32	30.6	5	100	55	0,5	2726333
INCHES	TRGSC01I010N03-00**	1"	1"	1,05"	3	4"	2"	0,4	2718069
	TRGSC01I010-03-00	1"	1"	1,05"	3	4"	2"	0,4	2718079
	TRGSC01I012-05-00	1"	1,25"	1,30"	5	4"	2"	0,5	2718080

* Minimum diameter guaranteed with standard inserts. Refer to related table of available cutting geometry for more detail

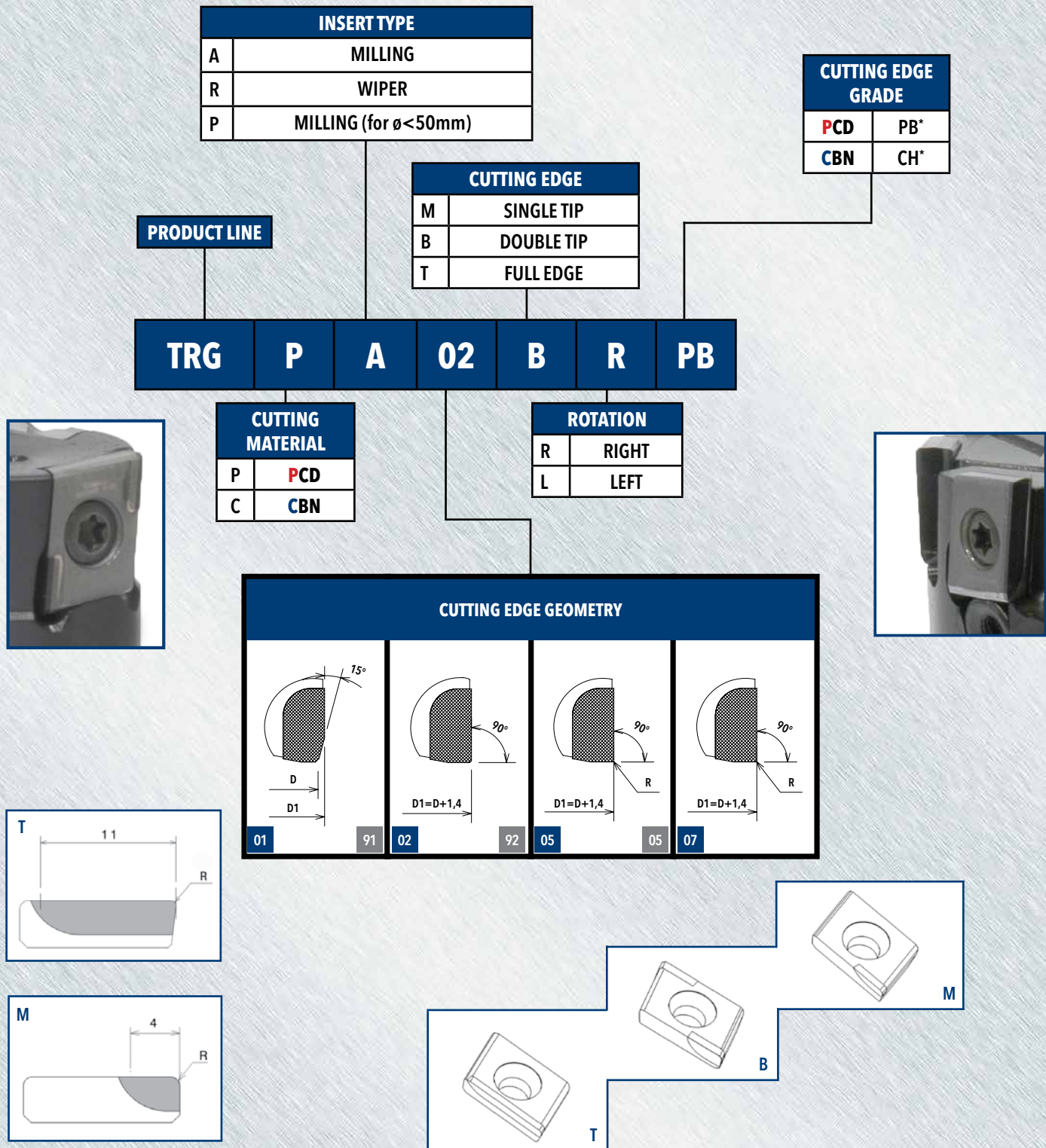
** Without axial adjustment

¹ Item number refers to body only, without inserts.

³ The weight is referred to the assembled part (cutter body with inserts).



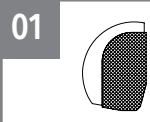
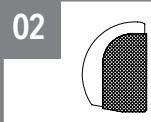
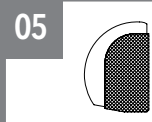
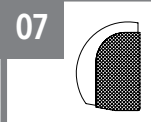
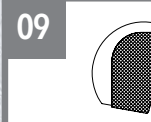
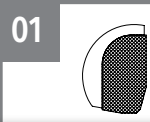
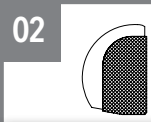
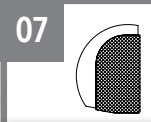
Inserts are screw clamped in mill body to help assembling process. Several combination of insert are available to cover a wide range of material and applications.



*Alternative grades available, please contact IT.TE.DI. for choosing the best grade.

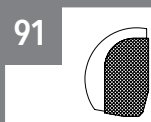
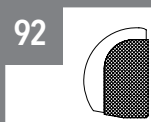
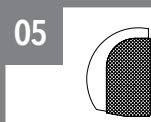
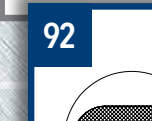
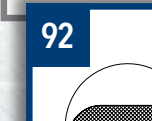
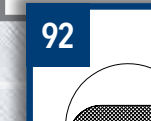


PCD - Recommended grade for Aluminum alloys with Si < 12 - 14% and Magnesium alloys

GEOMETRY 01 	GEOMETRY 02 	GEOMETRY 05 	GEOMETRY 07 	GEOMETRY 09 
Recommended for finishing not square shoulder surfaces. Suitable for roughing too. Achievable surface: $0.3 \leq Ra \leq 0.8$	Recommended for finishing square shoulder surfaces. Suitable for roughing too. Achievable surface: $0.3 \leq Ra \leq 0.8$	Suitable for roughing or for cutting material with a high impurity content. Achievable surface: $0.4 \leq Ra \leq 1$	Suitable for finishing or roughing Achievable surface: $0.4 \leq Ra < 1$	Suitable for finishing rough (gasket) surfaces Achievable surface: $0.8 \leq Ra \leq 3.2$
01 	02 		07 	
01 	02 		02 	
WIPER Achievable Surface: $0.1 \leq Ra \leq 0.5$	WIPER Achievable Surface: $0.1 \leq Ra \leq 0.5$		WIPER Achievable Surface: $0.1 \leq Ra \leq 0.5$	



CBN - Recommended grade for Grey Cast Irons and non ferrous Cast Irons

GEOMETRY 91 	GEOMETRY 92 	GEOMETRY 05 
Recommended for finishing not square shoulder surfaces. Achievable surface: $0.4 \leq Ra \leq 0.8$	Recommended for finishing square shoulder surfaces. Achievable surface: $0.4 \leq Ra \leq 0.8$	Recommended for finishing/roughing square shoulder surfaces. Achievable surface: $0.4 \leq Ra \leq 0.8$
91 	92 	05 
92 	92 	92 
WIPER Achievable Surface: $0.2 \leq Ra \leq 0.5$	WIPER Achievable Surface: $0.2 \leq Ra \leq 0.5$	WIPER Achievable Surface: $0.2 \leq Ra \leq 0.5$



SINGLE TIP

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPA01MRPB	▲	01	R	PB	2717188
TRGPA02MRPB	▲	02	R	PB	2717189
TRGPA05MRPB	▲	05	R	PB	2717190
TRGPA07MRPB	▲	07	R	PB	2717191



DOUBLE TIP

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPA01BRPB	▲	01	R	PB	2717192
TRGPA02BRPB	▲	02	R	PB	2717193
TRGPA05BRPB	▲	05	R	PB	2717194
TRGPA07BRPB	▲	07	R	PB	2717195



FULL EDGE

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPA01TRPB	○	01	R	PB	2717196
TRGPA02TRPB	○	02	R	PB	2717197
TRGPA05TRPB	▲	05	R	PB	2717198
TRGPA07TRPB	▲	07	R	PB	2717199



WIPER

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPR01TRPB	○	01	R	PB	2717200
TRGPR02TRPB	○	02	R	PB	2717201

- ▲ Available in stock
- Available upon request



SINGLE TIP

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGCA91MRCH	○	91	R	CH	2717530
TRGCA92MRCH	○	92	R	CH	2717531
TRGCA05MRCH	○	05	R	CH	2717532



DOUBLE TIP

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGCA91BRCH	○	91	R	CH	2717533
TRGCA92BRCH	○	92	R	CH	2717534
TRGCA05BRCH	○	05	R	CH	2717535

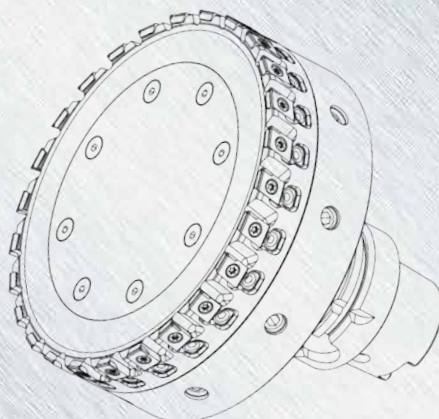


WIPER

Sample shown: right mode.

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGCR91TRCH	○	91	R	CH	2717536
TRGCR92TRCH	○	92	R	CH	2717537

- ▲ Available in stock
- Available upon request





SINGLE TIP

Immagine di riferimento: rotazione destra

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPP01MRPB	▲	01	R	PB	2717465
TRGPP02MRPB	▲	02	R	PB	2717466
TRGPP05MRPB	▲	05	R	PB	2717467
TRGPP07MRPB	▲	07	R	PB	2717468



DOUBLE TIP

Immagine di riferimento: rotazione destra

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPP01BRPB	▲	01	R	PB	2717469
TRGPP02BRPB	▲	02	R	PB	2717470
TRGPP05BRPB	▲	05	R	PB	2717471
TRGPP07BRPB	▲	07	R	PB	2717472



FULL EDGE

Immagine di riferimento: rotazione destra

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGPP01TRPB	▲	01	R	PB	2717473
TRGPP02TRPB	○	02	R	PB	2717474
TRGPP05TRPB	▲	05	R	PB	2717475
TRGPP07TRPB	▲	07	R	PB	2717476

- ▲ Available in stock
- Available upon request


SINGLE TIP

Immagine di riferimento: rotazione destra

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGCP91MRCH	○	91	R	CH	2717541
TRGCP92MRCH	○	92	R	CH	2717542
TRGCP05MRCH	○	05	R	CH	2717543

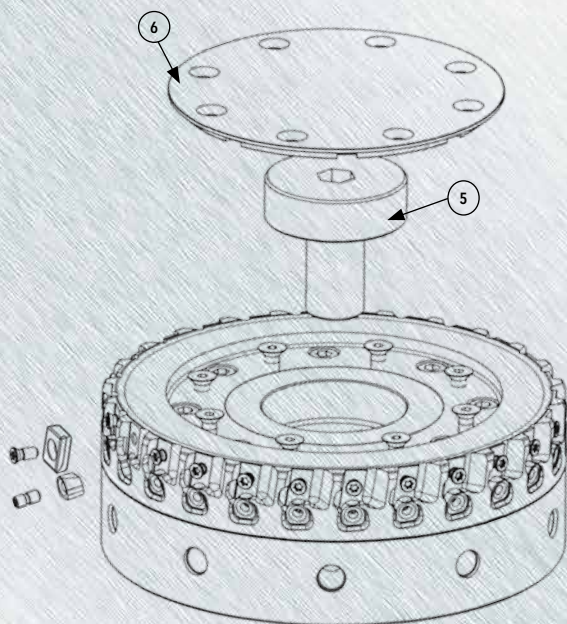

DOUBLE TIP

Immagine di riferimento: rotazione destra

PRODUCT CODE	AVAILABILITY	GEOMETRY	ROTATION	GRADE	ITEM
TRGCP91BRCH	○	91	R	CH	2717544
TRGCP92BRCH	○	92	R	CH	2717545
TRGCP05BRCH	○	05	R	CH	2717546

- ▲ Available in stock
 ○ Available upon request





NB: For insert mounting procedures refer to the next page

1. Assemble the mill holder with the cutter referring to the drivers;
2. Tighten the clamping screw (5) that you find with the cutter using the right torque (see the label)
3. Put the cover (6) on its seat
4. Tighten the cover's screws

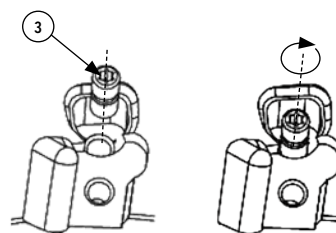
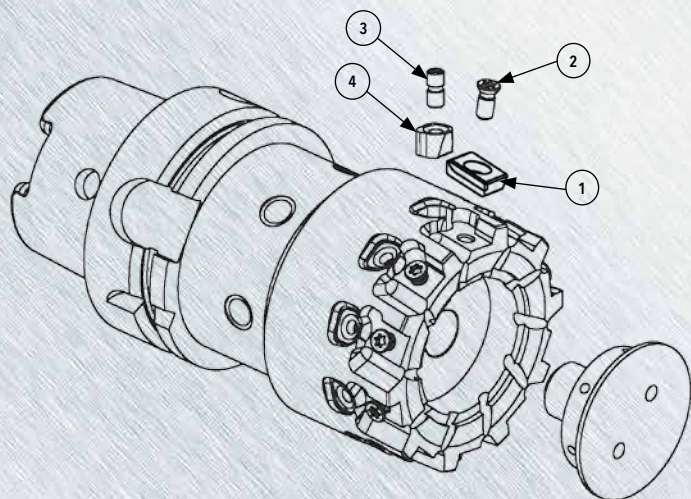
CUTTER DIAMETER	THREAD	TORQUE
ø40	M6	23Nm
ø50÷ø250	M10÷M20	60Nm



To properly use the coolant system on the shell type cutters ø50 and ø63 on TEDIMILL's holder, it's necessary to assemble on the cutter the dedicated kit composed of:

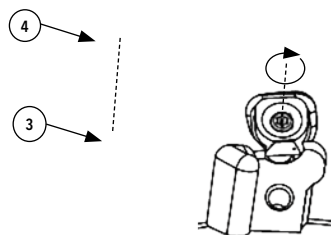
- n°2 pcs. of the item 2717081 (des. RSFTC1012) - included in the box
- n°2 pcs. of the item 4300414 (des. VC010642I04015) - included in the box

PCD/CBN SETTING PROCEDURE (FOR INSERTS)



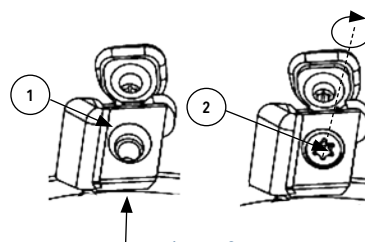
Picture A

Insert the no. 3 diff screw into its own seat and screw it down partially (1-2 threads).



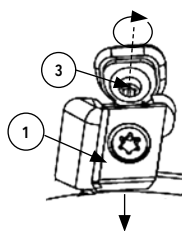
Picture B

Connect the no. 4 wedge with its own diff screw (no. 3) and screw it until the maximum gap over the cutter body is approximately 1mm.



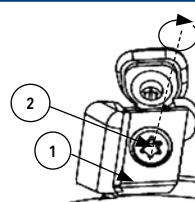
Picture C

Put the insert no. 1 into its own seat pushing as per the arrow in the cutter body. Clamp slightly the clamping screw no. 2.



Picture D

Act on diff screw no. 3 and if needed on clamping screw no. 2 (unscrew little bit) for adjusting axially the height of the insert (no. 1).

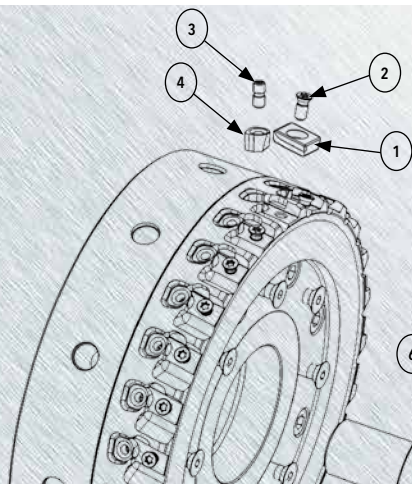


Picture E

When you reach the axial measure you need, tighten the clamping screw at 4.5Nm (no.2). Repeat the procedure for each insert.

IT.TE.DI. recommends to replace the screw (n°2) every two changes of the insert.

SPARE PARTS (SHELL TYPE MM)

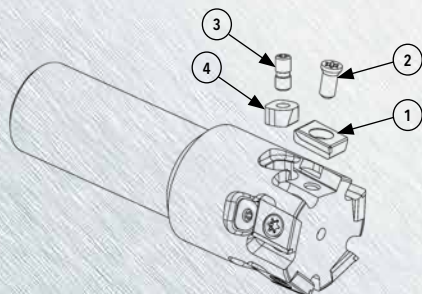


TYPE			ITEM NUMBER	DESCRIPTION
			2706376	Std kit supplied with the cutter
T15	T8	GREASE		

*S=MILLING
W=WIPER

PRODUCT CODE	2	3	4*	5	6
TRGSM16D040-06-00	VX040024A	RSRGR5M40	S=RSFTC1009	-	VC004762I06035
TRGSM22D050-08-00	VX040024A	RSRGR5M40	S=RSFTC1008	-	RSFTS4050M
TRGSM22D063-10-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4063M	VC004762I10035F
TRGSM27D080-12-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4080	VC00TEDI12040F
TRGSM32D100-16-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4100	VC00TANG16040F
TRGSM40D125-20-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4125	VC00TEDI20040F
TRGSM40D125-18-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4125W	VC00TEDI20040F
TRGSM40D160-26-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4160	4xVC004762I12050
TRGSM40D160-24-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4160W	4xVC004762I12050
TRGSM60D200-30-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4200	4xVC004762I16060
TRGSM60D200-28-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4200W	4xVC004762I16060
TRGSM60D250-34-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4250	4xVC004762I16060
TRGSM60D250-32-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4250W	4xVC004762I16060

SPARE PARTS (CYLINDRICAL MM)

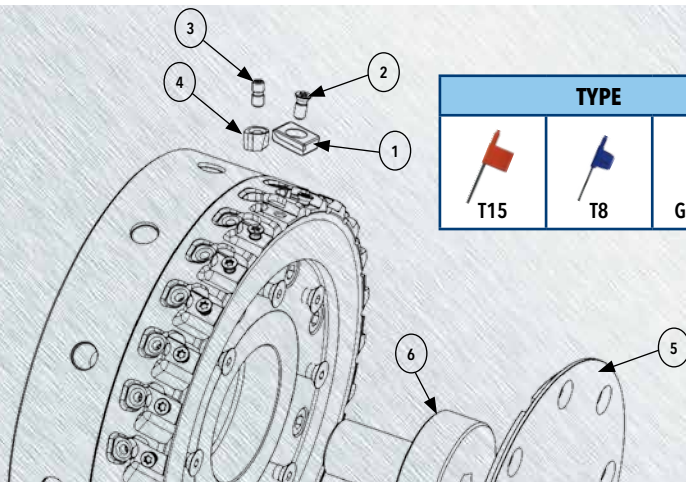


TYPE			ITEM NUMBER	DESCRIPTION
			2706376	Std kit supplied with the cutter
T15	T8	GREASE		

PRODUCT CODE	2	3	4
TRGSC25D025N03-00	VX040024A	-	-
TRGSC25D025-03-00	VX040024A	VX040028A	RSFTC1011
TRGSC25D032-05-00	VX040024A	RSRGR5M40	RSFTC1009



SPARE PARTS (SHELL TYPE INCHES)



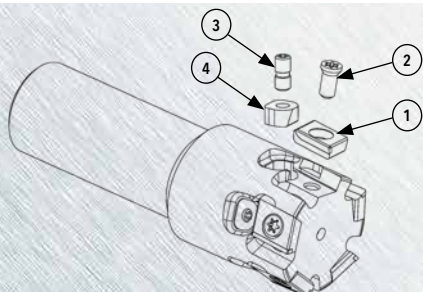
TYPE			ITEM NUMBER	DESCRIPTION
			2706376	Std kit supplied with the cutter
T15	T8	GREASE		

*S=MILLING
W=WIPER

PRODUCT CODE	2	3	4*	5	6
TRGSM16I015-06-00	VX040024A	RSRGR5M40	S=RSFTC1009	-	VC004762I06035
TRGSM22I020-08-00	VX040024A	RSRGR5M40	S=RSFTC1008	-	RSFTS4050M
TRGSM22I025-10-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4063M	VC004762I10035F
TRGSM27I030-12-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4080	VC00TEDI12040F
TRGSM32I040-16-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4100	VC00TANG16040F
TRGSM40I050-20-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4125	VC00TEDI20040F
TRGSM40I050-18-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4125W	VC00TEDI20040F
TRGSM40I060-24-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4160	4xVC004762I12050
TRGSM40I060-22-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4160W	4xVC004762I12050
TRGSM60I080-30-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4200	4xVC004762I16060
TRGSM60I080-28-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4200W	4xVC004762I16060
TRGSM60I100-34-00	VX040024A	RSRGR5M40	S=RSFTC1008	RSFTS4250	4xVC004762I16060
TRGSM60I100-32-02	VX040024A	RSRGR5M40	S=RSFTC1008 / W=RSFTC1010	RSFTS4250W	4xVC004762I16060



SPARE PARTS (CYLINDRICAL INCHES)



TYPE			ITEM NUMBER	DESCRIPTION
			2706376	Std kit supplied with the cutter
T15	T8	GREASE		

PRODUCT CODE	2	3	4
TRGSC01I010N03-00	VX040024A	-	-
TRGSC01I010-03-00	VX040024A	VX040028A	RSFTC1011
TRGSC01I012-05-00	VX040024A	RSRGR5M40	RSFTC1009



RECOMMENDED CUTTING PARAMETERS

The below cutting data is purely an indication and are calculated assuming optimal working conditions; they can vary depending on stability of the fixture, the machine and the workpiece.

For more detailed information and for choosing the best grade, you should contact IT.TE.DI's offices.

MATERIAL	GRADE	V _c (sfm)	f _z (in/z)
Aluminum casting alloys (Si < 12%)	PCD	≤ 19,000	0.002 - 0.010
Aluminum casting alloys (Si > 12%)	PCD	≤ 5,000	0.002 - 0.010
Aluminum forging alloys	PCD	≤ 19,000	0.002 - 0.010
Copper, bronze, brass, zinc and magnesium alloys	PCD	≤ 6,500	0.002 - 0.010
Non metallic materials	PCD	≤ 10,000	0.002 - 0.010
Grey Cast Iron	CBN	3,200 - 6,500	0.002 - 0.010
Nodular Cast Iron (ferritic)	CBN	1,300 - 2,000	0.002 - 0.010
Malleable Cast Iron (ferritic)	CBN	1,600 - 2,600	0.002 - 0.010
Hardened Steel	CBN	500 - 1,000	0.002 - 0.010

FORMULA AND ABBREVIATION:			CALCULATION OF:
Ø	Milling cutter - diameter	[in]	$V_c = n \times \phi \times .262$
a _p	Axial depth of cut	[in]	
a _e	Width of cut	[in]	$n = (V_c \div \phi) \div .262$
V _c	Cutting speed	[sfm]	
n	RPM	[min ⁻¹]	$V_f = f_z \times n \times z$
z	Number of teeth		
f _z	Feed rate per tooth	[in]	$f_z = V_f \div (n \times z)$
V _f	Feed rate	[in/min]	