

New Product Announcement

June 22nd, 2023_NPAI 2306

Y/G SM3 **MILL**



The Expansion of 3-Corner 90° shoulder milling

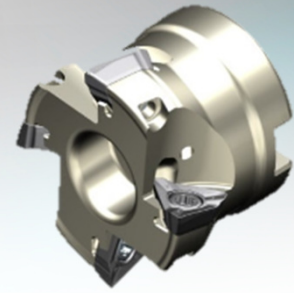
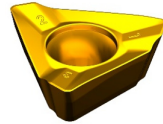
New technology developed with 3 cutting edges by YG-1 can provide very smooth cutting and exceptional performance for high productivity





New Product Announcement

Expansion of 3-Corner 90° Shoulder Mill



SMB

Expansion of 90° shoulder milling



YG-1 is introducing a new line of TPKT11 which are 90° 3-corner shoulder milling inserts.

The TPKT16 insert has received positive feedback in the market and we're expanding the TPKT11 insert and cutter in order to cover various machining sizes.

The TPKT11 is designed with a high-helix cutting edge to reduce cutting force and provide smooth cutting, the high positive rake angle geometry provides optimized chip curl and minimized burrs, and the newly designed curved cutting edge can minimize mismatching in step machining.

Additionally, we offer the -GN, and -ST geometry to cover various workpiece materials. YG-1 also provides end mills, modular type end mills and face mill cutters with coolant supply.

For detailed information about the TPKT inserts, please refer to the previous TPKT16 NPA.



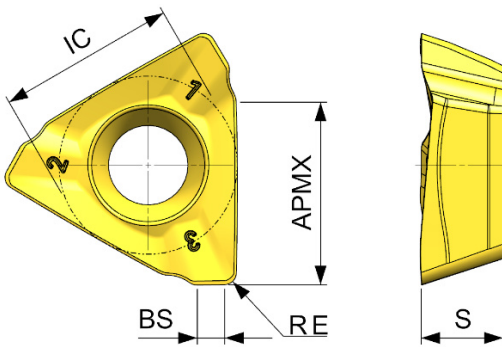
New Product Announcement

TPKT1104

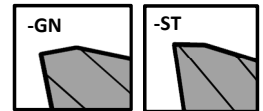


Insert dimension and item list (Metric)

(mm)



Insert	IC	S	APMX	RE	BS
TPKT1104	7.54	4.28	7.0	0.4	1.6
				0.8	1.15
			6.5	1.6	0.6



Insert item List

(mm)

Insert	Designation	Cutting Conditions		Grade				
		Ap (mm)	Feed (mm/z)	YG613	YG612	YG012	YG712	YG5020
	TPKT110404R-GN	0.5-7.0	0.24-0.05		● 0801	● 0802	● 0807	● 0808
	TPKT110408R-GN	1.0-7.0	0.24-0.05		● 0803	● 0804	● 0811	● 0812
	TPKT110416R-GN	2.0-6.5	0.24-0.05		● 0805	● 0806	● 0815	● 0816
	TPKT110404R-ST	0.5-7.0	0.15-0.05	● 0810	● 0809			
	TPKT110408R-ST	1.0-7.0	0.15-0.05	● 0814	● 0813			

EDP 1200..

● : Stock

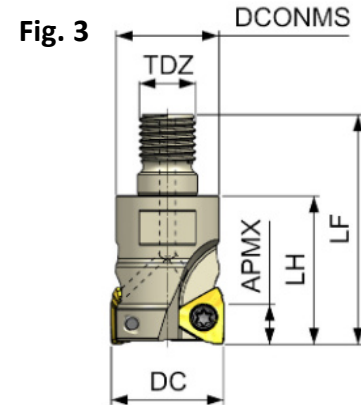
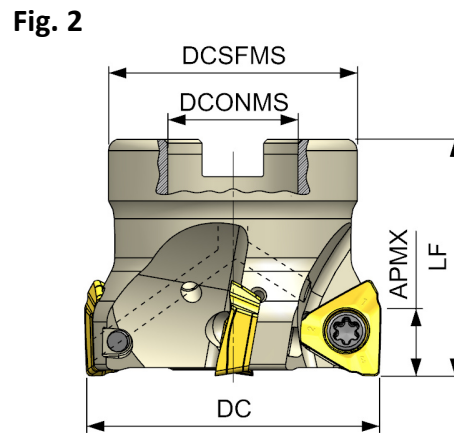
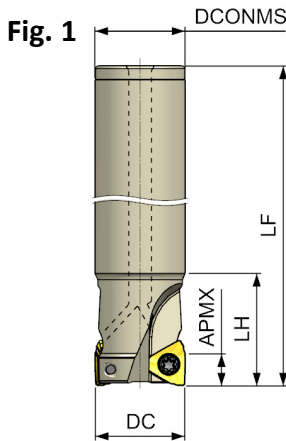


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TPKT1104



Cutter item list (Metric)



(mm)

EDP No.	Description	CICT	Dimension						Coolant	Fig.
			DC	DCSFMS	DCONMS	LH	LF	APMX		
17000995	E90-TP11-D20Z2W20-L90	2	20	-	20	40	90	7	●	1
17001037	E90-TP11-D20Z2C20-L170	2	20	-	20	40	170	7	●	1
17001038	E90-TP11-D21Z2C20-L150	2	21	-	20	40	150	7	●	1
17001039	E90-TP11-D21Z2C20-L200	2	21	-	20	40	200	7	●	1
17001040	E90-TP11-D25Z3W25-L100	3	25	-	25	40	100	7	●	1
17001026	E90-TP11-D25Z3C25-L200	3	25	-	25	60	200	7	●	1
17001041	E90-TP11-D26Z2C25-L200	2	26	-	25	40	200	7	●	1
17001042	E90-TP11-D26Z2C25-L250	2	26	-	25	40	200	7	●	1
17001043	E90-TP11-D26Z3C25-L150	3	26	-	25	40	150	7	●	1
17001044	E90-TP11-D26Z3C25-L200	3	26	-	25	40	200	7	●	1
17001045	E90-TP11-D32Z3C32-L230	3	32	-	32	60	230	7	●	1
17001046	E90-TP11-D32Z4W32-L110	4	32	-	32	40	110	7	●	1
17001047	E90-TP11-D33Z3C32-L200	3	33	-	32	40	200	7	●	1
17001048	E90-TP11-D40Z4C32-L200	4	40	-	32	60	200	7	●	1
17001049	E90-TP11-D40Z5W32-L115	5	40	-	32	40	115	7	●	1
17001050	F90-TP11-D40Z5S16	5	40	38	16	-	40	7	●	2
17001051	F90-TP11-D50Z6S22	6	50	42	22	-	40	7	●	2
17001052	F90-TP11-D63Z7S22	7	63	48	22	-	40	7	●	2
17001053	F90-TP11-D63Z8S22	8	63	48	22	-	40	7	●	2

*CICT: Cutting item count

Spare part list

< B.O.M of Wrench >

Part	EDP No.	Description
Screw (Ø25~)	18000259	TP082506-GS
Screw (~Ø21)	18000265	TP082562-GS
Wrench	18000218	TPWBTP08

Part	EDP No.	Description
Handle	18000189	DT-G4
Bit	18000190	DB-TP08

※ Clamping Torque = 1.2Nm

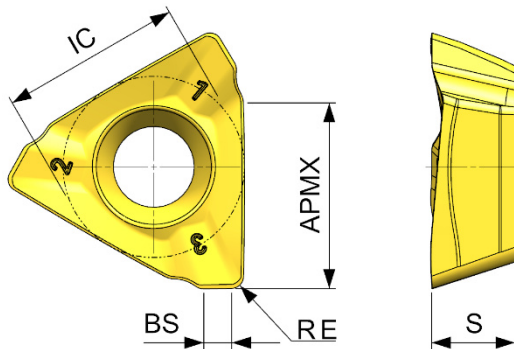


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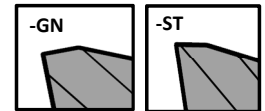
TPKT1104



Insert dimension and item list (Inch)



(inch)					
Insert	IC	S	APMX	RE	BS
TPKT1104	0.296	0.168	0.275	0.016	0.063
			0.256	0.031	0.045
				0.063	0.023



Insert item List

Insert	Designation	Cutting Conditions		Grade				
		Ap (inch)	Feed (inch/z)	YG613	YG612	YG012	YG712	YG5020
	TPKT110404R-GN	0.019-0.275	0.009-0.002		●	●	●	●
	TPKT110408R-GN	0.039-0.275	0.009-0.002		●	●	●	●
	TPKT110416R-GN	0.078-0.256	0.009-0.002		●	●	●	●
	TPKT110404R-ST	0.019-0.275	0.006-0.002	●	●			
	TPKT110408R-ST	0.039-0.275	0.006-0.002	●	●			

EDP 1200..
● : Stock

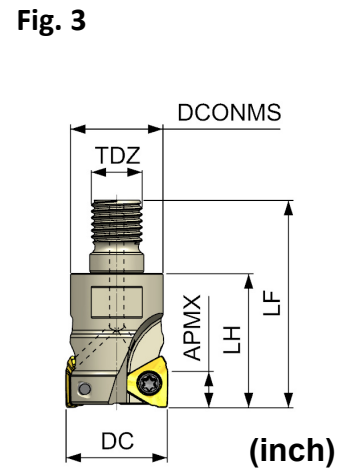
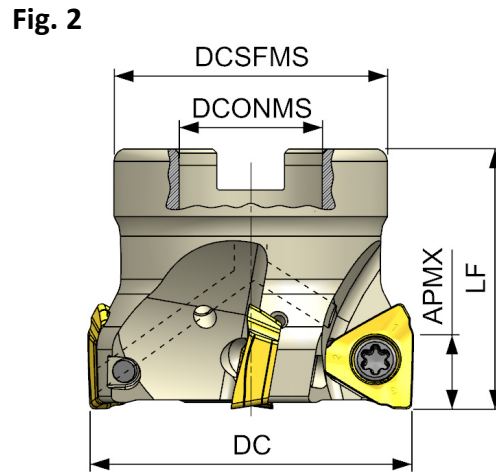
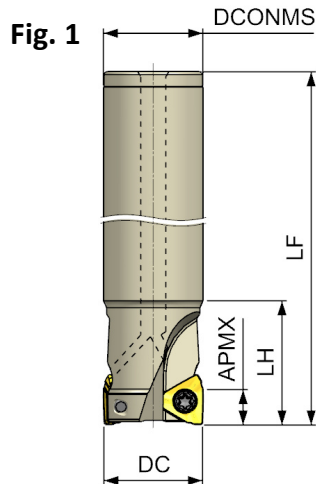


New Product Announcement

TPKT1605



Cutter item list (Inch)



EDP No.	Description	CICT	Dimension						Coolant	Fig.
			DC	DCSFMS	DCONMS	LH	LF	APMX		
17001054	E90-TP11-D125Z3W125-L450I	3	1.25	-	1.25	1.5	4.5	0.275	●	1
17001055	E90-TP11-D125Z3W125-L650I	3	1.25	-	1.25	2.5	6.5	0.275	●	1
17001056	E90-TP11-D150Z3W125-L450I	3	1.5	-	1.25	2.25	4.5	0.275	●	1
17001057	E90-TP11-D150Z4W125-L450I	4	1.5	-	1.25	2.25	4.5	0.275	●	1
17001058	E90-TP11-D200Z5W125-L450I	5	2	-	1.25	2.25	4.5	0.275	●	1
17001059	F90-TP11-D150Z4S050I	4	1.5	35	0.5	-	1.375	0.275	●	2
17001060	F90-TP11-D200Z5S075I	5	2	44.45	0.75	-	1.75	0.275	●	2
17001061	F90-TP11-D250Z6S075I	6	2.5	44.45	0.75	-	1.75	0.275	●	2
17001062	F90-TP11-D300Z5S100I	5	3	55.6	1	-	1.75	0.275	●	2
17001063	F90-TP11-D300Z8S100I	8	3	55.6	1	-	1.75	0.275	●	2
17001065	F90-TP11-D400Z8S150I	8	4	73	1.5	-	2.375	0.275	●	2
17001064	F90-TP11-D400Z10S150I	10	4	73	1.5	-	2.375	0.275	●	2
17001066	F90-TP11-D500Z11S150I	11	5	96.7	1.5	-	2.375	0.275	●	2
17001067	M90-TP11-D125Z3M16I	3	1.25	1.13	M16	1.5	-	0.275	●	3
17001068	M90-TP11-D150Z4M16I	4	1.5	1.13	M16	1.75	-	0.275	●	3

*CICT: Cutting item count

Spare part list

Part	EDP No.	Description
Screw (Ø25~)	18000259	TP082506-GS
Screw (~Ø21)	18000265	TP082562-GS
Wrench	18000218	TPWBTP08

< B.O.M of Wrench >

Part	EDP No.	Description
Handle	18000189	DT-G4
Bit	18000190	DB-TP08

※ Clamping Torque = 1.2Nm

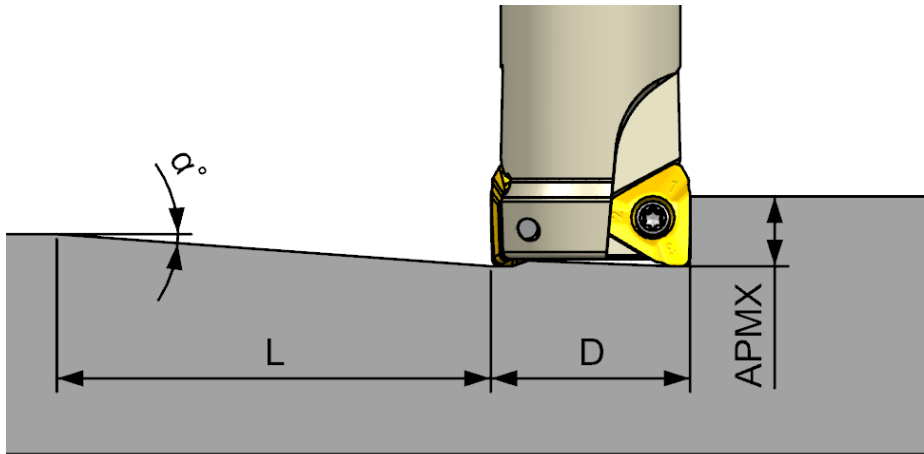


New Product Announcement

TPKT1104



Linear Ramping data by cutter size



Type	ØD	Max. Ramping Angle (α°)	APMX	Min. Length (L)
Metric (mm)	20	1.6	7	251
	21	1.4	7	287
	25	1.2	7	334
	26	1.1	7	365
	32	0.9	7	446
	33	0.8	7	501
	40	0.8	7	501
	50	0.6	7	668
Inch	1.25"	0.9	.275	17.545"
	1.5"	0.8	.275	19.738"
	2.0"	0.6	.275	26.317"
	2.5"	0.5	.275	31.581"
	3.0"	0.4	.275	39.476"
	4.0"	0.3	.275	52.634"
	5.0"	0.2	.275	78.951"

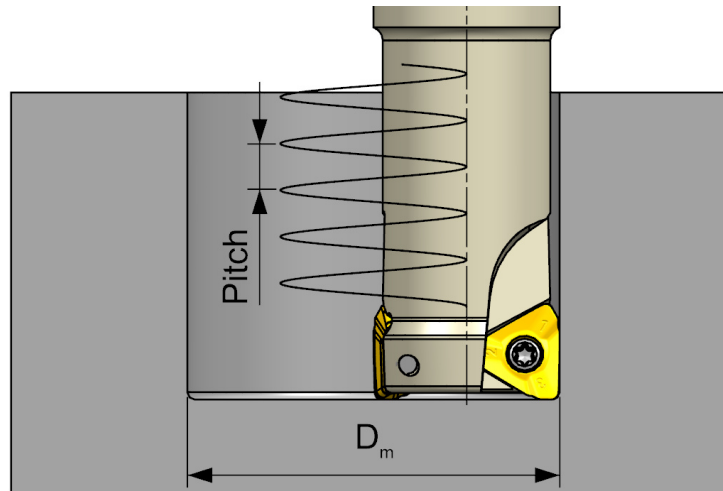


New Product Announcement

TPKT1104



Helical interpolation data by cutter size



Type	ØD	Max Dia. (D _m)	Max Pitch	Min Dia. (D _m)	Max Pitch
Metric (mm)	20	40	1.8	34	1.2
	21	42	1.6	36	1.2
	25	50	1.6	44	1.2
	26	52	1.6	46	1.2
	32	64	1.6	58	1.3
	33	66	1.4	60	1.2
	40	80	1.8	74	1.5
	50	100	1.6	94	1.4
	63	126	1.7	120	1.6
Inch	1.25"	2.5"	.062"	2.3"	.050"
	1.5"	3"	.066"	2.8"	.055"
	2.0"	4"	.066"	3.8"	.058"
	2.5"	5"	.069"	4.8"	.062"
	3.0"	6"	.066"	5.8"	.061"
	4.0"	8"	.066"	7.8"	.062"
	5.0"	10"	.055"	9.8"	.052"



New Product Announcement

TPKT1104



Recommendation cutting speed by work-piece material

Unit : m/min
() : SFM

Material	VDI	YG612	YG613	YG012	YG5020	YG712
Non-alloyed steel	1~5	180~280 (591~919)	100~210 (328~689)	180~280 (591~919)	-	220~320 (722~1050)
Low-alloyed steel	6~9	150~250 (492~820)	70~180 (230~591)	150~250 (492~820)	-	190~290 (623~951)
High-alloyed steel	10~11	70~140 (230~459)	40~90 (131~295)	80~150 (262~492)	-	90~155 (295~509)
Ferritic & Martensitic stainless steel	12~13	120~200 (394~656)	70~180 (230~591)		-	-
Austenitic stainless steel	14	130~250 (427~820)	70~200 (230~656)		-	-
Grey cast iron	15~16	120~250 (394~820)			200~350 (656~1148)	-
Nodular cast iron	17~18	130~220 (427~722)			150~300 (492~984)	-
Malleable cast iron	19~20	-			-	-
Non-ferrous metals (Al)	21~30	-			-	-
Super alloys & Titanium	31~37	25~45 (82~148)			-	-
Hardened steel	38~41			70~120 (230~394)	-	-

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