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Close-pitch

Expansion of close-pitch cutters and PCD inserts for complete application coverage

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TUNGSPPEEDMILL

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Tungaloy Report No. 524-US

High Speed Face Milling Cutter for finishing aluminum



INDUSTRY 4.0
FEED the SPEED!



TPYD06J100B31.7R22  8953355
N_{max}=15000min⁻¹

ACCELERATED MACHINING

MillLine

TUNGSPPEED
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TUNGALOY

TUNG ACCELERATED MACHINING **FORCE**
MILL



Super high density PCD cutter

with innovative insert clamp design for quick and easy insert setting

Super high density cutter for efficient aluminum finishing

Significantly higher number of PCD cutting edges

Ensures machining efficiency

22 inserts per $\varnothing 4"$ cutter diameter.

Allows for higher cutting feeds over the competition.



Unique axial adjusting mechanism - CamAdjust

A single key wrench is all it takes for mounting the inserts and fine-adjusting for precision, reducing time spent on presetting work. Setting range: 0.039" (1mm)



Internal coolant in each pocket

Coolant is directed to the cutting edge, facilitating smooth chip evacuation

Steel body

the cutter body is made of durable steel

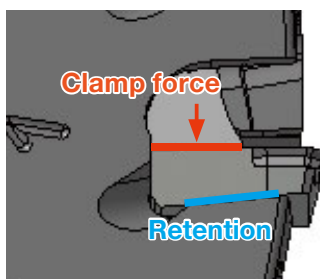
Exceptionally high balancing quality for high speed milling

Balance level = G6.3 (ISO1940/1)

Safety measures for high speed milling

The insert is safely locked against centrifugal forces

Inserts are securely retained in place, preventing them from being dislocated by centrifugal force during high speed milling



Wedge shape design prevents the insert from breaking off the seat induced by centrifugal inertia force.

Note: Do not exceed the maximum rotation (n max) inscribed on the cutter body.

Cutter diameter (Inch)	Max num. of teeth	Max. rotation number (rpm)	Cutter weight (lb)
2	8	20,000	1.92
2.5	10	19,000	1.34
3	16	17,000	2.56
4	22	15,000	4.30
5	26	14,000	8.03
6	34	12,000	10.76

CamAdjust system - innovative insert axial adjusting mechanism

- The same key is used for mounting and adjusting the inserts
- The key wrench is operated in a single direction making insert adjustment easy on the pre-setter
- Significantly reduced insert setting time

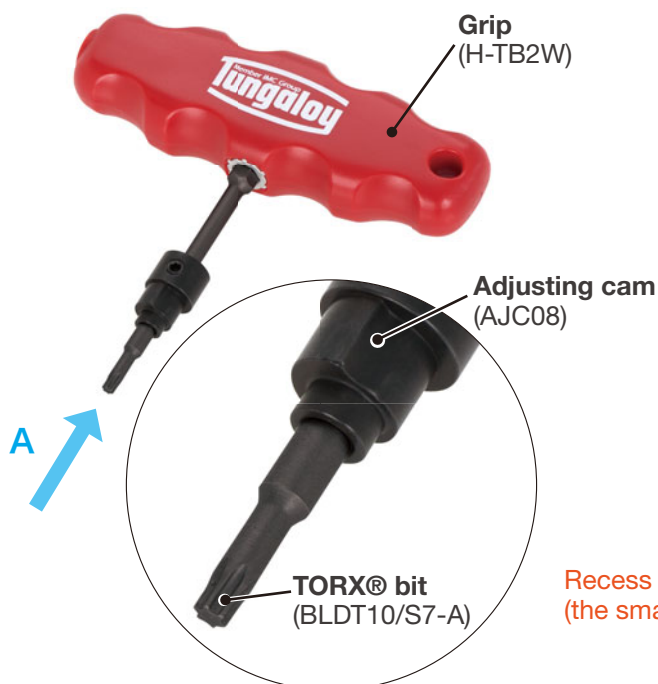
TORX bit
for clamping insert



Eccentric cam
for adjusting axial runout

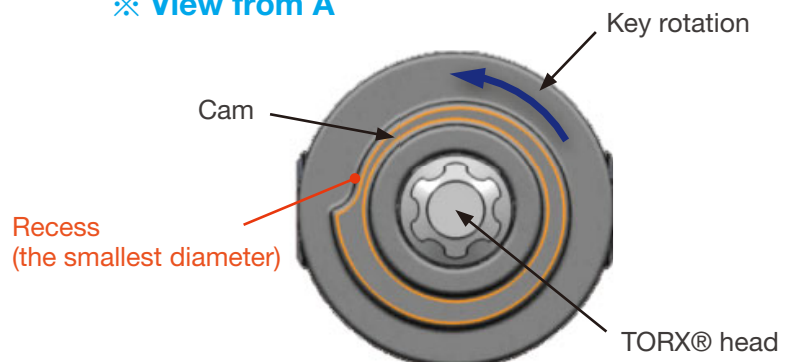


Special key wrench with adjusting cam



Insert's axial runout is adjusted with the eccentric cam profile. Insert the key with the smallest cam diameter in contact with the insert bottom and rotate for larger cam diameter to obtain the required height.

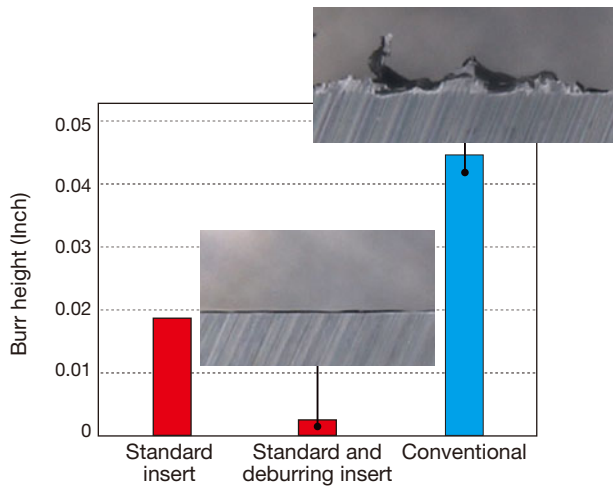
※ View from A



CUTTING PERFORMANCE

Reduced burr formation

2 types of deburring inserts for burr-free milling



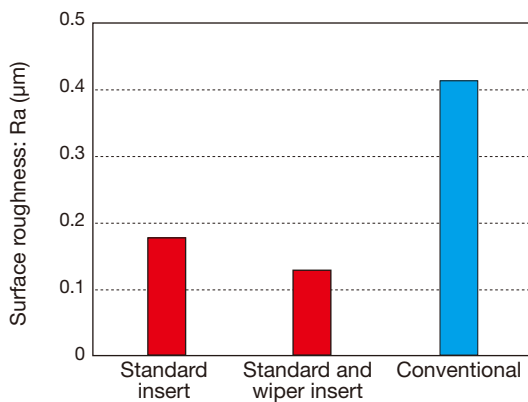
Cutter : TPYD06U3.00B1.00R16 ($\phi = 3"$, $z = 16$)
 Insert : YDEN0603PDFR-D DX110 (Standard insert)
 : YDEN0603PDFR-BD DX110 (Deburring insert)

Workpiece : 1100
 Cutting speed : $V_c = 8245$ sfm
 Number of revolutions : $n = 10,000$ rpm
 Feed per tooth : $f_z = 0.004$ ipt
 Feed speed : $V_f = 640$ ipm (Standard insert)
 : $V_f = 320$ ipm (Standard and deburring insert)

Insert runout : $< 1 \mu\text{m}$
 Depth of cut : $a_p = 0.020"$
 Depth of width : $a_e = 1.181"$
 Coolant : Wet
 Machining : Face milling (on center)
 Machine : Vertical M/C, CAT40

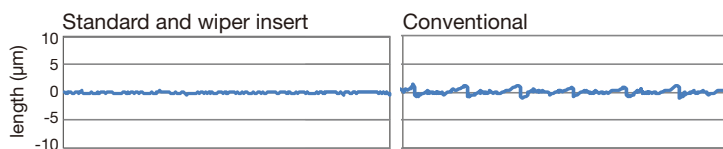
Better surface roughness

Wiper inserts improve surface roughness



Cutter : TPYD06U3.00B1.00R16 ($\phi = 3"$, $z = 16$)
 Insert : YDEN0603PDFR-D DX110 (Standard insert)
 : YDEN0603PDFR-WD DX110 (Wiper insert)

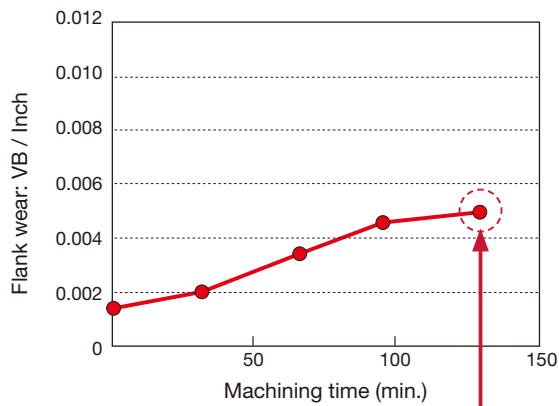
Workpiece : 1100
 Cutting speed : $V_c = 8245$ sfm
 Number of revolutions : $n = 10,000$ rpm
 Feed per tooth : $f_z = 0.004$ ipt
 Feed speed : $V_f = 640$ ipm
 Insert runout : $< 1 \mu\text{m}$ ($< 0.00004"$)
 Depth of cut : $a_p = 0.020"$
 Depth of width : $a_e = 1.181"$
 Coolant : Wet
 Machining : Face milling (on center)
 Machine : Vertical M/C, CAT40



CUTTING PERFORMANCE

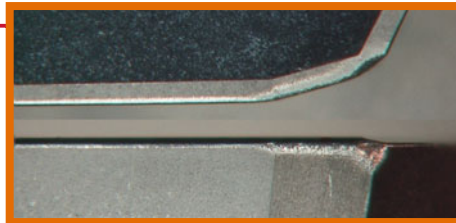
Strong cutting edge

Optimized edge preparation ensures machining security during heavy interrupted cutting



Cutter : TPYD06U4.00B1.25R22 ($\phi = 4''$, $z = 1$)
 Insert : YDEN0603PDSR-D DX110 (with edge preparation)
 Workpiece : 380 (with holes)
 Cutting speed : $V_c = 10472$ sfm
 Number of revolutions: $n = 10,000$ rpm
 Feed per tooth : $f_z = 0.0035$ ipt
 Insert runout : $< 1 \mu\text{m}$ ($< 0.00004''$)
 Depth of cut : $a_p = 0.008''$
 Depth of width : $a_e = 3''$
 Coolant : Wet
 Machining : Face milling (down cut)
 Machine : Vertical M/C, CAT40

After 130 min.



Mounting of deburring inserts

To make the best of the cutter's deburring ability, make sure to place a deburring insert immediately behind every standard insert on the cutter. Note that, since a deburring insert has no cutting edge on the periphery, the effective cutting edges of the cutter will be divided by 2.

Example:

For $\varnothing 4"$ cutter with $Z = 22$, number of effective cutting edges would be $Z = 11$. (standard inserts x 11 and deburring inserts x 11)

The order of insert installation is as follows:

Standard \rightarrow Deburring \rightarrow Standard \rightarrow Deburring...

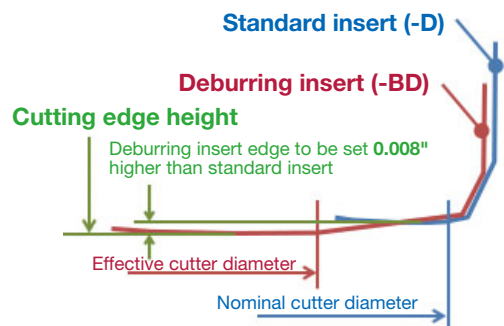
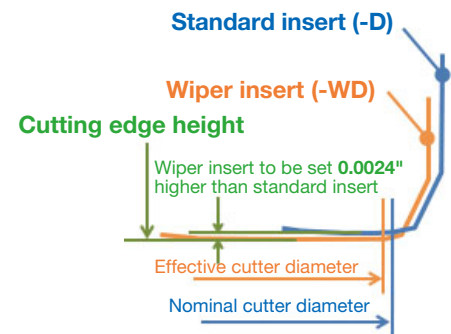
Location of deburring inserts on the cutter



- **Standard insert**
(YDEN0603PDF/SR-D)
- **Deburring insert**
(YDEN0603PDFR-BD)

Proper cutting edge setting

- For the best surface finishing results, wiper insert's (-WD) cutting edge should be set 0.0024" higher than that of the standard insert's (-D). For deburring inserts (-BD), set 0.008" higher than that of the standard insert (-D).
- Effective cutter diameter will vary in accordance with wiper insert (-WD) or deburring insert (-BD) dimensions. Refer to the table below for an effective cutter diameter in each specific case.

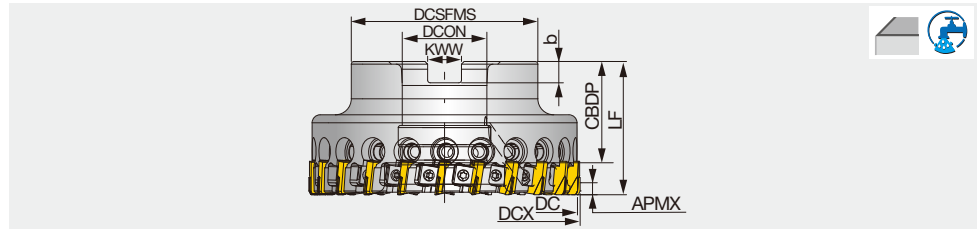


Cutter diameter (Inch)	Effective cutter diameter (Inch)		
	Standard (-D) only	Standard (-D) and wipers (-WD)	Standard (-D) and deburrers (-BD)
2	2	1.976	1.740
2.5	2.5	2.476	2.240
3	3	2.976	2.740
4	4	3.976	3.740
5	5	4.976	4.740
6	6	5.976	5.740

TPYD06

Face milling cutter for non-ferrous applications, bore type, with PCD inserts

GAMP = +9°, GAMF = +4°



Inch	APMX	DC	DCX	CICT	DCSFMS	LF	DCON	CBDP	KWW	b	WT(lb)	Air hole	RPMX(rpm)	Insert
TPYD06U2.50B0.75R10	0.177	2.500	2.579	10	1.772	1.575	0.750	0.750	0.315	0.197	1.340	with	19000	YDEN0603...
TPYD06U3.00B1.00R16	0.177	3.000	3.079	16	2.362	1.969	1.000	1.024	0.374	0.236	2.560	with	17000	YDEN0603...
TPYD06U4.00B1.25R22	0.177	4.000	4.079	22	2.756	1.969	1.250	0.827	0.500	0.315	4.300	with	15000	YDEN0603...
TPYD06U5.00B1.50R26	0.177	5.000	5.079	26	3.543	2.362	1.500	1.299	0.626	0.394	8.030	with	14000	YDEN0603...
TPYD06U6.00B1.50R34	0.177	6.000	6.079	34	3.543	2.362	1.500	1.299	0.626	0.394	10.760	with	12000	YDEN0603...

SPARE PARTS

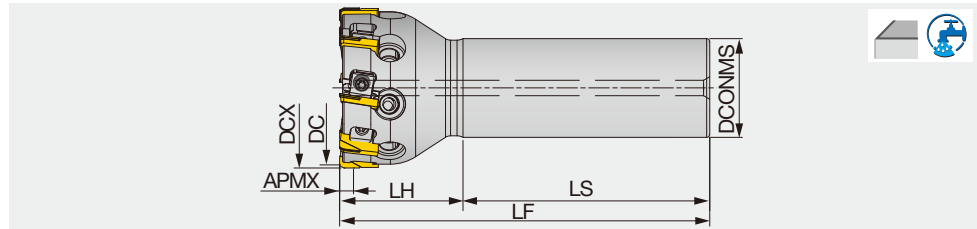


Designation	Insert locking wedge	Wedge fixing screw	Adjusting cam	Torx bit	Cam tightening screw	Wrench	Grip
TPYD06U2.50B0.75R10	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W
TPYD06U3.00B1.00R16	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W
TPYD06U4.00B1.25R22	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W
TPYD06U5.00B1.50R26	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W
TPYD06U6.00B1.50R34	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W

EPYD06

Face milling cutter for non-ferrous applications, shank type, with PCD inserts

GAMP = +9°, GAMF = +4°



Inch	APMX	DC	DCX	CICT	DCONMS	LF	LH	LS	WT(lb)	Air hole	RPMX(rpm)	Insert
EPYD06U2.00C1.25R08	0.177	2.000	2.079	8	1.250	4.500	1.575	2.925	1.920	with	20000	YDEN0603...

SPARE PARTS

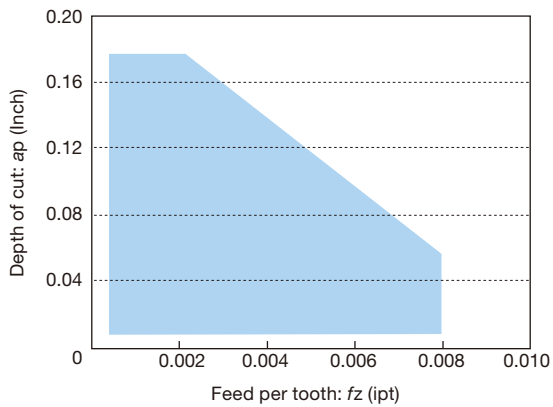
Designation	Insert locking wedge	Wedge fixing screw	Adjusting cam	Torx bit	Cam tightening screw	Wrench	Grip
EPYD06U2.00C1.25R08	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grades	Designation	Cutting speed Vc (sfm)	Feed per tooth fz (ipt)
N	Cast aluminum alloy / Die-cast (Si < 13%)	DX110	YDEN0603PDFR-D	1640 - 13123	0.002 - 0.008
	Cast aluminum alloy / Die-cast (Si > 13%)	DX110	YDEN0603PDFR-D	656 - 2625	0.002 - 0.008
	Aluminum alloy	DX110	YDEN0603PDFR-D	1640 - 13123	0.002 - 0.008
	Copper alloy	DX110	YDEN0603PDFR-D	656 - 1640	0.002 - 0.008

- The values in the above list are of standard recommendations and may require adjustments in consideration with cutting depths and/or workpiece/machine rigidity.
- Use wiper inserts (-WD) for better surface requirements and deburring inserts (-BD) to remove burrs.
- Always use wet cutting (emulsion coolant) for machining aluminum or copper alloys.

APPLICATION RANGE



Cutter : TPYD06U3.00B1.00R16 ($\phi = 3''$, $z = 16$)
 Insert : YDEN0603PDFR-D DX110
 Workpiece material : 383 (Die-cast)
 Cutting speed : $V_c = 7854$ sfm
 Coolant : Wet
 Machine : Vertical M/C, CAT40, 18.5 kW

INSERT SETTING PROCEDURE

1 Mounting the inserts

Place the insert in the pocket and LIGHTLY tighten the screw at 0.74 ft·lb (1 N·m).

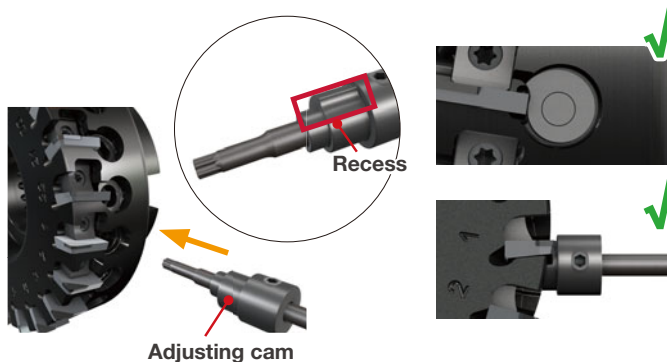
Do not fully tighten the screw at this point.

Note: Press the insert firmly to the pocket while clamping to eliminate the gap.



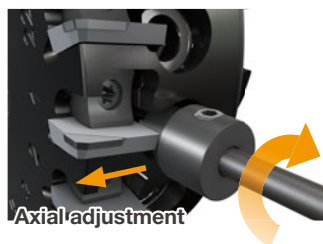
2 House to utilize the key

The recessed part of the cam should be placed on the insert bottom. Make sure to place the cam all the way in.



3 Adjusting the axial height

Place the adjusting cam in the hole located at the bottom of the pocket. Make sure that the cam is in contact with the insert bottom. Adjust the insert axial height by rotating the cam in the CW direction to gradually increase the axial measure. Stop when it reaches 30-40 μm (0.0012" - 0.0016") just below the desired position. Then, slightly rotate the cam in the CCW direction before removing the cam from the cutter body.



4 Tighten the insert clamping screws

Firmly tighten the insert clamping screws at 2.58 ft·lb (3.5 N·m). In order to prevent the body deformation by tightening, it is recommended that the final tightening is done by alternating. (e.g. For $\phi 4''$, z22cutter, 1,3,5,7...21, then 2,4,6,8,...22). For the best balanced insert installation, repeat this tightening procedure for every other insert until all inserts are securely fixed.



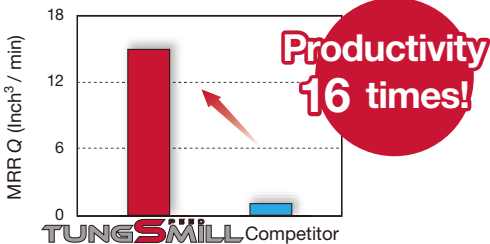
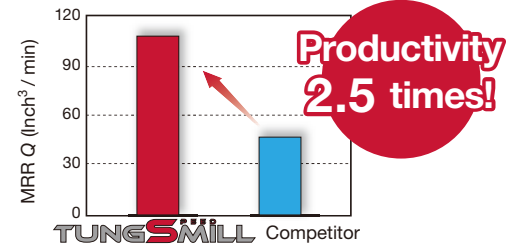


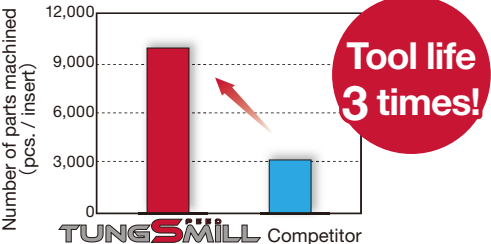
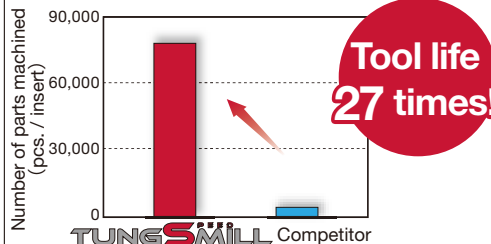


5 Final adjustments

For the final axial adjustment, instead of setting the insert height close to the target position, set so that it reaches approximately 8 μm (0.0003") above the target. Slightly rotate the cam CCW to remove the key off the body. The insert will go down by 8 μm (0.0003") to the target height when the cam is removed.

The inserts are recommended to set to < 5 μm (0.0002") axially in relation to one another.

PRACTICAL EXAMPLES

Workpiece type		Hoist body part	Crank casing	
Cutter		TPYD06U3.00B1.00R16 (ø3", z = 16)	TPYD06U4.00B1.25R2 (ø4", z = 22)	
Insert		YDEN0603PDFR-D	YDEN0603PDFR-D	
Grade		DX110	DX110	
Workpiece material		High pressure aluminum die cast (383)  N	High pressure aluminum die cast (383)  N	
Cutting conditions	Cutting speed: Vc (sfm)	6598	10300	
	Feed per tooth: fz (ipt)	0.004	0.035	
	Feed speed: Vf (ipm)	504	770	
	Depth of cut: ap (Inch)	0.04 - 0.16	0.06 - 0.18	
	Width of cut: ae (Inch)	0.197 - 0.787	0.394 - 2.756	
	Machining	Face milling	Face milling	
	Coolant	Wet (External)	Wet (Internal)	
Machine		Vertical M/C, CAT50	Vertical M/C, CAT40	
Results	 <p>Productivity 16 times!</p> <p>MRR was improved by 16x, with increased table feed and reduced number of passes. Deburring inserts eliminated burr formation.</p>		 <p>Productivity 2.5 times!</p> <p>MRR was improved by 2.5x thanks to super high density cutter design.</p>	
	<p>MRR Q (Inch³ / min)</p> <p>TUNGSMILL Competitor</p>		<p>MRR Q (Inch³ / min)</p> <p>TUNGSMILL Competitor</p>	
Workpiece type		Cam housing	Cylinder head	
Cutter		Special TPYD06 body (ø61 mm, z = 10)	Special TPYD06 body (ø75 mm, z = 15)	
Insert		YDEN0603PDSR-D	YDEN0603PDSR-D	
Grade		DX110	DX110	
Workpiece material		High pressure aluminum die cast (383)  N	Cast aluminum alloy (380)  N	
Cutting conditions	Cutting speed: Vc (sfm)	6286	3248	
	Feed per tooth: fz (ipt)	0.004	0.0016	
	Feed speed: Vf (ipm)	449	112	
	Depth of cut: ap (Inch)	0.020	0.020	
	Width of cut: ae (Inch)	0.197	2.756	
	Machining	Face milling	Face milling	
	Coolant	Wet (Internal)	Wet (Internal)	
Machine		Vertical M/C, CAT30	Specialized machine	
Results	 <p>Tool life 3 times!</p> <p>Thanks to high tooth density, more teeth are engaged in cut, reducing the load per insert, and as a result, the insert life tripled.</p>		 <p>Tool life 27 times!</p> <p>Wear resistant DX110 PCD grade dramatically improved the tool life by 27x.</p>	
	<p>Number of parts machined (pcs. / insert)</p> <p>TUNGSMILL Competitor</p>		<p>Number of parts machined (pcs. / insert)</p> <p>TUNGSMILL Competitor</p>	

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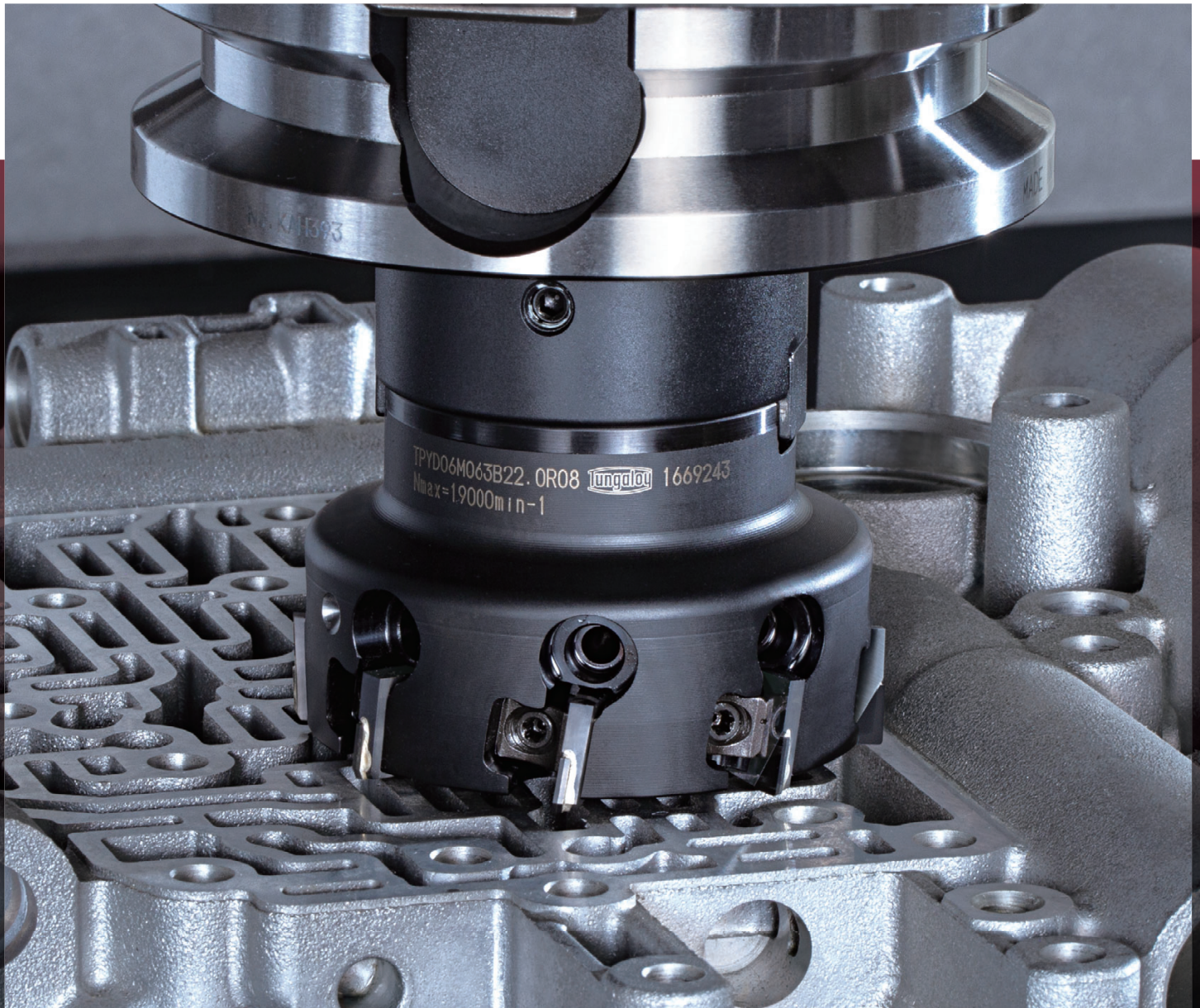
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TUNG^S^{PEED}MILL

Tungaloy Report No. 524S1-US

Expansion of close-pitch cutters and PCD inserts for complete application coverage





New close pitch design is added to extra close pitch cutter line

■ Ideal for face milling wide cutting widths

Fewer number of cutting edges are in the cut, reducing chatter for improved surface finish.

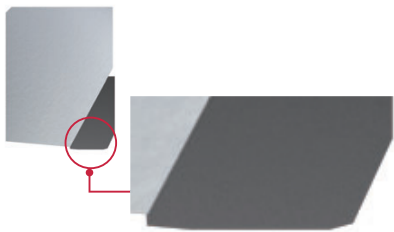
DC (in)	Number of inserts on the cutter	
	New Close pitch	Extra close pitch
2.000	6	8
2.500	8	10
3.000	10	16
4.000	12	22
5.000	14	26
6.000	20	34



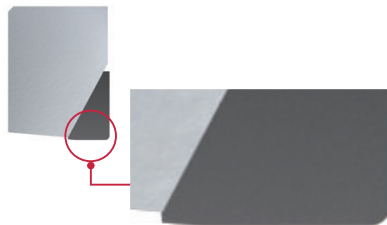
New insert geometries

■ Nose radius (with R0.4 or R0.8)

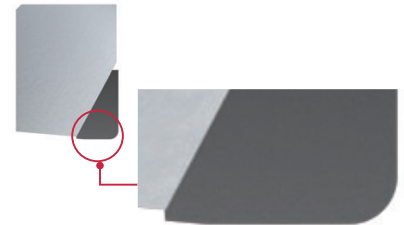
Ideal for applications where corner radius on the workpiece is specified. Rounded nose corner can also protect the edge from fracture during challenging interrupted cutting.



Double-angle design (YDEN0603PDFR-D)



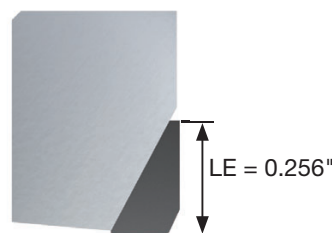
R0.4 (YDEN0603**04**PDFR-D)



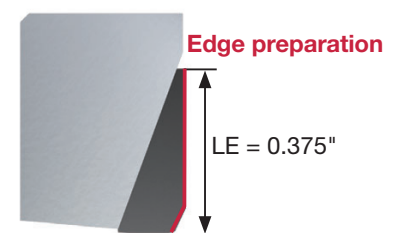
R0.8 (YDEN0603**08**PDFR-D)

■ Long edged insert

Featuring 0.375" in length, the cutting edge can effectively remove gates and risers left on the workpiece without damaging the carbide insert base. The peripheral cutting edge is prepared with chamfer to protect the edge from fracture and also to eliminate burr generation.



Standard geometry (YDEN0603PDFR-D)

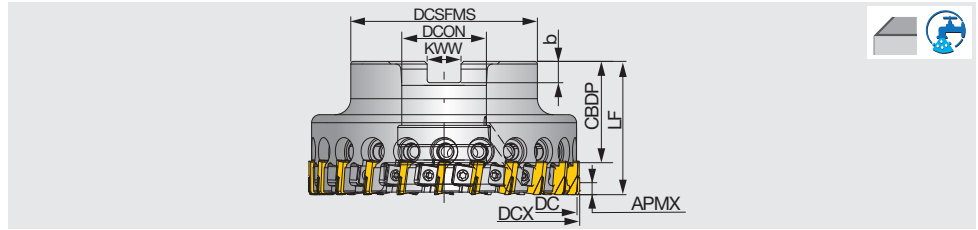


Long edge version (YDEN0603PDCR-**LD**)

TPYD06

Face milling cutter for non-ferrous applications, bore type, with PCD inserts

GAMP = +9°, GAMF = +4°



Inch	APMX	DC	DCX	CICT	DCSFMS	LF	DCON	CBDP	KWW	b	WT(lb)	Air hole	RPMX(min ⁻¹)	Insert
TPYD06U2.50B0.75R10	0.177	2.500	2.579	10	1.772	1.575	0.750	0.750	0.315	0.197	1.340	With	19,000	YDEN0603...
TPYD06U3.00B1.00R16	0.177	3.000	3.079	16	2.362	1.969	1.000	1.024	0.374	0.236	2.560	With	17,000	YDEN0603...
TPYD06U4.00B1.25R22	0.177	4.000	4.079	22	2.756	1.969	1.250	0.827	0.500	0.315	4.300	With	15,000	YDEN0603...
TPYD06U5.00B1.50R26	0.177	5.000	5.079	26	3.543	2.362	1.500	1.299	0.626	0.394	8.030	With	14,000	YDEN0603...
TPYD06U6.00B1.50R34	0.177	6.000	6.079	34	3.543	2.362	1.500	1.299	0.626	0.394	10.760	With	12,000	YDEN0603...

	Metric	APMX	DC	DCX	CICT	DCSFMS	LF	DCON	CBDP	KWW	b	WT(kg)	Air hole	RPMX(min ⁻¹)	Insert
New	TPYD06M063B22.0R08	4.5	63	65	8	45	40	22	20	10.4	6.3	0.59	With	19,000	YDEN0603...
	TPYD06M063B22.0R10	4.5	63	65	10	45	40	22	20	10.4	6.3	0.57	With	19,000	YDEN0603...
New	TPYD06M080B27.0R10	4.5	80	82	10	60	50	27	22	12.4	7	1.3	With	17,000	YDEN0603...
	TPYD06M080B27.0R16	4.5	80	82	16	60	50	27	22	12.4	7	1.24	With	17,000	YDEN0603...
New	TPYD06J080B25.4R10	4.5	80	82	10	60	50	25.4	26	9.5	6	1.31	With	17,000	YDEN0603...
	TPYD06J080B25.4R16	4.5	80	82	16	60	50	25.4	26	9.5	6	1.26	With	17,000	YDEN0603...
New	TPYD06M100B32.0R12	4.5	100	102	12	70	50	32	25	14.4	8	1.85	With	15,000	YDEN0603...
	TPYD06M100B32.0R22	4.5	100	102	22	70	50	32	25	14.4	8	1.78	With	15,000	YDEN0603...
New	TPYD06J100B31.7R12	4.5	100	102	12	70	50	31.75	32	12.7	8	1.84	With	15,000	YDEN0603...
	TPYD06J100B31.7R22	4.5	100	102	22	70	50	31.75	32	12.7	8	1.76	With	15,000	YDEN0603...
New	TPYD06M125B40.0R14	4.5	125	127	14	90	60	40	32	16.4	9	3.59	With	14,000	YDEN0603...
	TPYD06M125B40.0R26	4.5	125	127	26	90	60	40	32	16.4	9	3.48	With	14,000	YDEN0603...
New	TPYD06J125B38.1R14	4.5	125	127	14	90	60	38.1	38	15.9	10	3.61	With	14,000	YDEN0603...
	TPYD06J125B38.1R26	4.5	125	127	26	90	60	38.1	38	15.9	10	3.56	With	14,000	YDEN0603...
New	TPYD06M160B40.0R20	4.5	160	162	20	90	60	40	32	16.4	9	5.34	With	12,000	YDEN0603...
	TPYD06M160B40.0R34	4.5	160	162	34	90	60	40	32	16.4	9	5.2	With	12,000	YDEN0603...
New	TPYD06J160B38.1R20	4.5	160	162	20	90	60	38.1	38	15.9	10	5.43	With	12,000	YDEN0603...
	TPYD06J160B38.1R34	4.5	160	162	34	90	60	38.1	38	15.9	10	5.29	With	12,000	YDEN0603...

SPARE PARTS

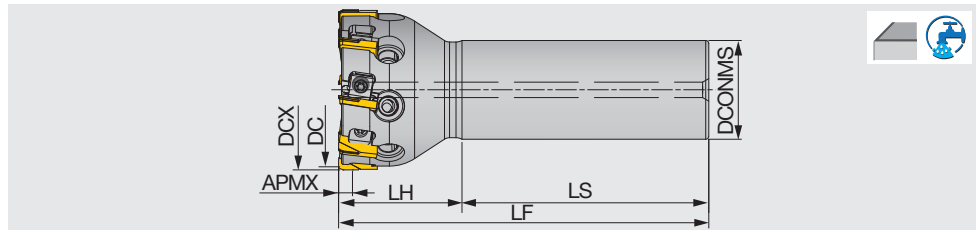


Designation	Insert locking wedge	Wedge fixing screw	Adjusting cam	Torx bit	Cam tightening screw	Wrench	Grip	Shell locking bolt	Shell locking bolt (Optional parts)
TPYD06U2.50B0.75R10	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	-	(C0.375X1.125H)
TPYD06U3.00B1.00R16	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	-	(C0.500X1.375H)
TPYD06U4.00B1.25R22	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	-	-
TPYD06U5.00..., 6.00...	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	-	(TMBA-0.750H)
TPYD06M063B22.0R10	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	CM10X30H	-
TPYD06*080B2*.R16	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	CM12X30H	-
TPYD06*100B32.0R22	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	CM16X40H	-
TPYD06*100B31.7R22	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	TMBA-M16H	-
TPYD06*125B**.R26	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	TMBA-M20H	-
TPYD06*160B**.R34	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W	TMBA-M20H	-

EPYD06

Face milling cutter for non-ferrous applications, shank type, with PCD inserts

GAMP = +9°, GAMF = +4°



Inch	APMX	DC	DCX	CICT	DCONMS	LF	LH	LS	WT(lb)	Air hole	RPMX(min ⁻¹)	Insert
EPYD06U2.00C1.25R08	0.177	2.000	2.079	8	1.250	4.500	1.575	2.925	1.920	With	22,000	YDEN0603...

New

Metric	APMX	DC	DCX	CICT	DCONMS	LF	LH	LS	WT(kg)	Air hole	RPMX(min ⁻¹)	Insert
EPYD06M050C32.0R06	4.5	50	52	6	32	120	40	80	0.91	With	20,000	YDEN0603...
EPYD06M050C32.0R08	4.5	50	52	8	32	120	40	80	0.9	With	20,000	YDEN0603...

SPARE PARTS



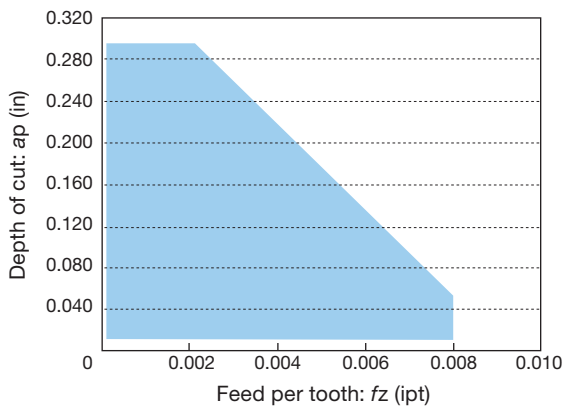
Designation	Insert locking wedge	Wedge fixing screw	Adjusting cam	Torx bit	Cam tightening screw	Wrench	Grip
EPYD06...	WF875N	DS-5T	AJC08	BLDT10/S7-A	SSHM4-4	P-2	H-TB2W

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grades	Cutting speed Vc (sfm)	Feed per tooth fz (ipt)
N	Cast aluminum alloy / Die-cast (Si < 13%)	DX110	1640 - 13123	0.002 - 0.008
	Cast aluminum alloy / Die-cast (Si ≥ 13%)	DX110	656 - 2625	0.002 - 0.008
	Aluminum alloy (1000 - 7000 series)	DX110	1640 - 13123	0.002 - 0.008
	Copper alloy	DX110	656 - 1640	0.002 - 0.008

- The values in the above list are of standard recommendations and may require adjustments in consideration with cutting depths and/or workpiece/machine rigidity.
- Use wiper inserts (-WD) for better surface requirements and deburring inserts (-BD) to remove burrs.
- Always use wet cutting (emulsion coolant) for machining aluminum or copper alloys.

APPLICATION RANGE



Cutter : TPYD06U3.00B1.00R16 ($\phi = 3.150''$ z = 16)
 Insert : YDEN0603PDCR-LD DX110
 Workpiece material : ADC12
 Cutting speed : Vc = 8245 sfm
 Coolant : Wet
 Machine : Vertical M/C, BT40, 18.5 kW

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