MITSUBISHI

MITSUBISHI CARBIDE

TOOLS NEWS

2006.9. Update B027G

For Aluminum and Difficult-to-cut Materials

BXD

Series expansion, GL breaker!

Multi functional milling cutters

BXD range of milling cutters for high performance machining of aluminum alloys and heat resistant materials.

- Low resistance geometry and inserts with a rigid tool body. High aluminum removal rates of more than 3,000 cc/min.
- **LC15TF** New DLC-coated inserts for outstanding aluminum alloy machining performance.
- New offset shank type for deeper milling!
- New low resistance GL breaker for aluminium alloys!

GL breaker

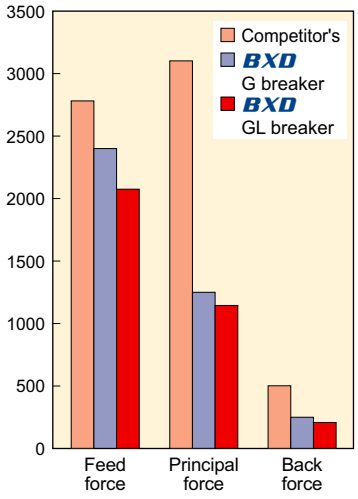
Milling Cutters for Aluminum and Difficult-to-cut Materials

BXD

Features

Low Resistance & High Rigidity Inserts

Specially designed inserts for **BXD** cutters to give excellent performance and high efficiency milling on a wide range of materials.

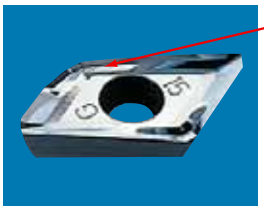


Cutting resistance of BXD

<Cutting conditions>
Workpiece : JIS A6061
Cutting speed: 1,000m/min
Width of cut : 60mm
Depth of cut : 2.0mm

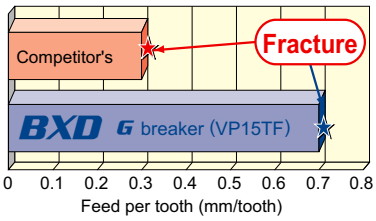
GL breaker NEW

GL breaker achieved a 20% lower cutting resistance compared to the G type breaker.
(When machining aluminium alloys)



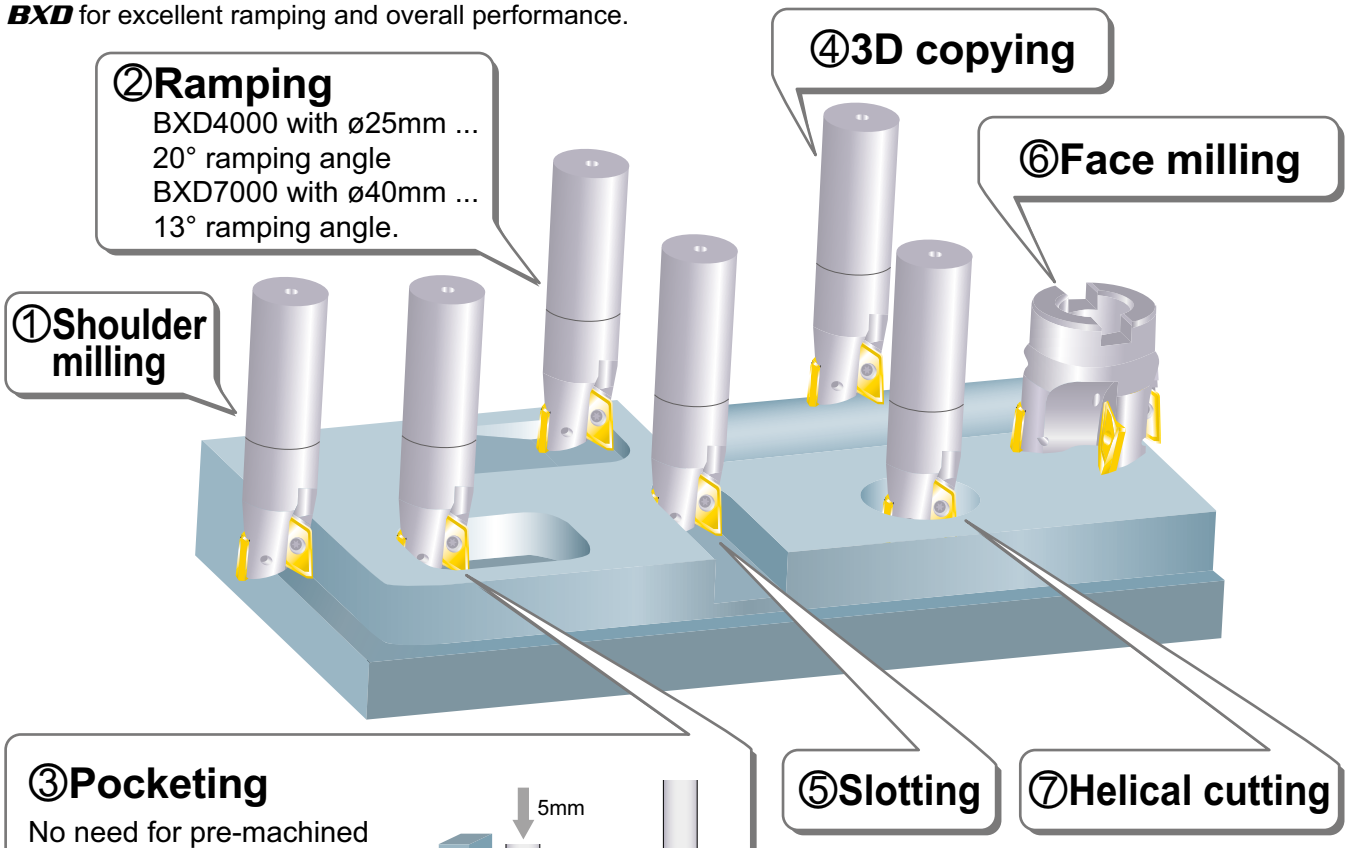
Fracture resistance of BXD

<Cutting conditions>
Workpiece : JIS S55C
Cutting speed: 160m/min
Width of cut : 5mm
Depth of cut : 5mm
Insert : XDGT1550PDER-G08 (VP15TF)



Multi functional milling

BXD for excellent ramping and overall performance.

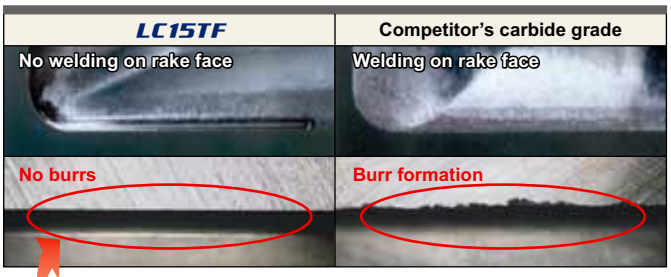


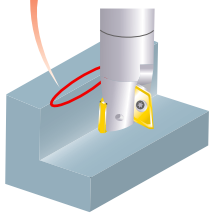
Grade Features

LC15TF

Highly wear and fracture resistant micro-grain cemented carbide ***TF15*** coupled with Mitsubishi's unique, weld resistant DLC coating provides better surface finishes and enables stable, high-grade machining without burrs. ***LC15TF*** for both wet and dry machining.

Dry machining example in A5052

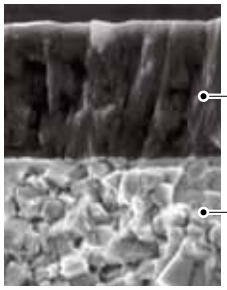




<Cutting conditions>

Holder : BXD4000R322SA32S
Insert : XDGT1550PDFR-G08
Workpiece : JIS A5052
Cutting speed : 200m/min
Feed per tooth : 0.10mm/tooth
Depth of cut : ap=5.0mm, ae=8.0mm
Cutting time : 30 min
Dry, Down cutting

MIRACLE® coated VP15TF



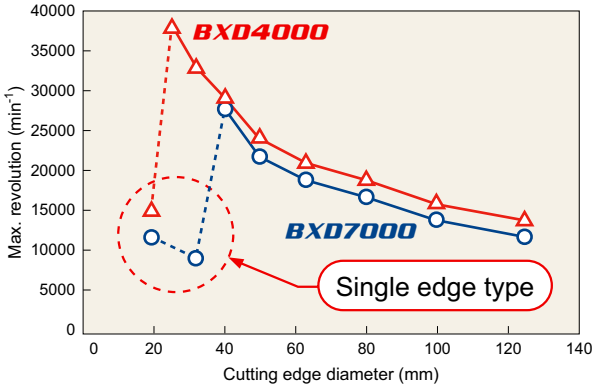
Wear and fracture resistant ***TF15*** substrate coupled with MIRACLE coating. For high oxidation resistance and adhesion strength to improve tool life on a wide range of difficult to cut materials.

TF15

Micro-grain cemented carbide with superior resistance to wear and fracturing. ***TF15*** ensures stable cutting and efficient machining of aluminum alloy. The special mirror treatment on the rake face prevents chip welding for reliability and longer tool life.

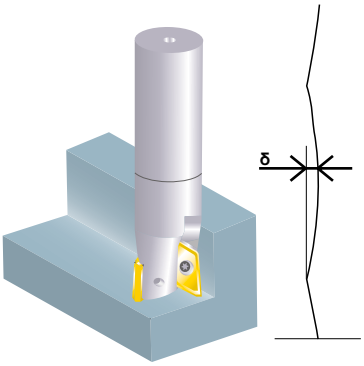
Secure High-revolution Milling!

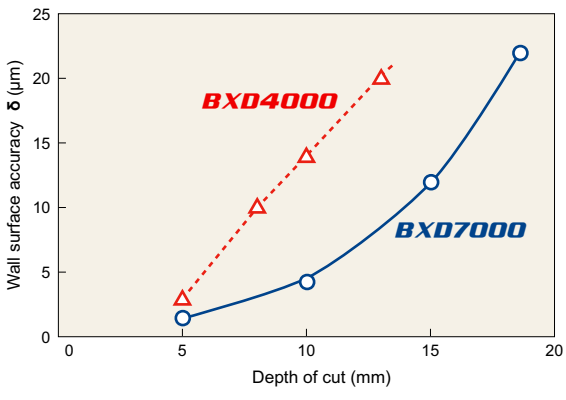
Specially designed screws and Mitsubishi's proprietary "Anti Fly Insert" mechanism (AFI mechanism) guarantees secure and safe high revolution milling.



Excellent Wall Accuracy

Specially designed G-class inserts with a helical cutting edge for excellent wall accuracy.





Data obtained from performance tests with BXD4000R252SA25 and BXD7000R402SA20S
Nose radius : R1.6
Revolution : 20,000min-1
Feed per tooth : 0.2mm/tooth
Width of cut : 3mm
Workpiece : JIS A7075-T6
Wet cutting
Wall surface accuracy varies depending on the diameter of the tool.

BXD

Arbor type

Fig. 1 ø40

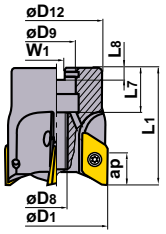


Fig. 2 ø50 ø63 ø80 ø100

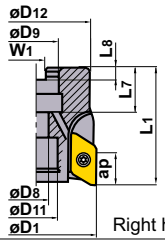
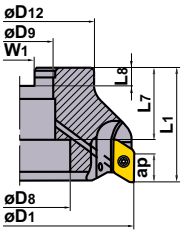


Fig. 3 ø125

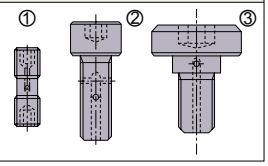


Right hand tool holder (R) only.

Set bolt

● The following clamp bolts are supplied with respective cutter

Diameter BXD4000	Diameter BXD7000	Set Bolt Order Number	Geometry
ø40	–	LS24H	①
–	ø50	HSC08030H	②
ø50, ø63	ø63	10030H	
ø80	ø80	12035H	
ø100	ø100	16040H	
ø125	ø125	MBA20040H	③



Light Alloy	Cast Iron	General Steel	Stainless Steel	Hardened Steel

Type		Insert Corner Re	Order Number	Stock R	Number of Teeth	Dimensions (mm) D1	L1	L7	L8	D8	W1	D9	D11	D12	Weight (kg)	Max. Depth of Cut ap	Ramping Angle (°)	Max. Allowable Revolution (min-1)	Figure	Clamp Screw	Wrench	Insert
BXD4000	A	0.4 I 3.2	BXD4000-040A03RA	●	3	40	50	18	5.6	M8	8.4	16	–	32	0.3	15	9	29,000	1	TS4SL	①TKY15W	
			-050A04RA	●	4	50	50	20	6.5	11	10.4	22	17	41	0.4	15	6	24,000	2	TS4SL	①TKY15W	XDGT1550 PD□R-G□□
			-063A05RA	●	5	63	50	20	6.5	11	10.4	22	17	50	0.7	15	5	21,000	2	TS4SL	①TKY15W	
			R08005CA	●	5	80	50	26	6	13	9.5	25.4	20	60	1.1	15	3	19,000	2	TS4SL	①TKY15W	XDGT1550 PD□R-GL□□
			R10006DA	●	6	100	63	32	8	17	12.7	31.75	26	70	2.0	15	3	16,000	2	TS4SL	①TKY15W	
			R12507EA	●	7	125	63	40	10	56	15.9	38.1	–	80	2.8	15	2	14,000	3	TS4SL	①TKY15W	
	B	4.0 I 5.0	BXD4000-040A03RB	●	3	40	50	18	5.6	M8	8.4	16	–	32	0.3	15	9	29,000	1	TS4SL	①TKY15W	
			-050A04RB	●	4	50	50	20	6.5	11	10.4	22	17	41	0.4	15	6	24,000	2	TS4SL	①TKY15W	
			-063A05RB	●	5	63	50	20	6.5	11	10.4	22	17	50	0.7	15	5	21,000	2	TS4SL	①TKY15W	XDGT1550 PD□R-G□□
			R08005CB	●	5	80	50	26	6	13	9.5	25.4	20	60	1.1	15	3	19,000	2	TS4SL	①TKY15W	
			R10006DB	●	6	100	63	32	8	17	12.7	31.75	26	70	2.0	15	3	16,000	2	TS4SL	①TKY15W	
			R12507EB	●	7	125	63	40	10	56	15.9	38.1	–	80	2.8	15	2	14,000	3	TS4SL	①TKY15W	
BXD7000	A	0.8 I 3.0	BXD7000-050A02RA	●	2	50	50	18	5.6	9	8.4	16	14	41	0.4	21	9	22,000	2	TS5SL	②TKY25D	
			-063A03RA	●	3	63	50	20	6.5	11	10.4	22	17	45	0.5	21	7	19,000	2	TS5SL	②TKY25D	
			R08004CA	●	4	80	60	26	6	13	9.5	25.4	20	55	1.1	21	5	17,000	2	TS5SL	②TKY25D	XDGT2206 PDFR-G□□
			R10005DA	●	5	100	63	32	8	17	12.7	31.75	26	70	1.8	21	4	14,000	2	TS5SL	②TKY25D	
			R12506EA	●	6	125	63	40	10	56	15.9	38.1	–	90	3.0	21	3	12,000	3	TS5SL	②TKY25D	
	B	4.0 I 5.0	BXD7000-050A02RB	●	2	50	50	18	5.6	9	8.4	16	14	41	0.4	21	9	22,000	2	TS5SL	②TKY25D	
			-063A03RB	●	3	63	50	20	6.5	11	10.4	22	17	45	0.5	21	7	19,000	2	TS5SL	②TKY25D	
			R08004CB	●	4	80	60	26	6	13	9.5	25.4	20	55	1.1	21	5	17,000	2	TS5SL	②TKY25D	XDGT2206 PDFR-G□□
			R10005DB	●	5	100	63	32	8	17	12.7	31.75	26	70	1.8	21	4	14,000	2	TS5SL	②TKY25D	
			R12506EB	●	6	125	63	40	10	56	15.9	38.1	–	90	3.0	21	3	12,000	3	TS5SL	②TKY25D	

Note) Arbor types for attachment to the D9 cutter dimension

Centering Location Diameter (D9)	ø16	ø22	ø25.4	ø31.75	ø38.1
Arbor Type	SM1, SMA	FMC, SM1	FMA, FMC	FMA, SMB	FMA, FMB SMB, SMC

Note 1) The maximum allowed revolutions are set to ensure tool and insert stability.
Note 2) When using the tool at high revolutions, ensure that the tool and arbor are correctly balanced.

● : Inventory maintained.

Shank type

Fig. 1: Straight shank

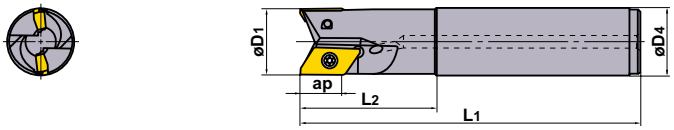
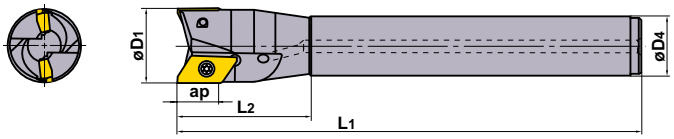


Fig. 2: Offset shank



Right hand tool holder only.

Type		Insert Corner Re	Type	Order Number	Stock R	Number of Teeth	Dimensions (mm) D1	ap	L1	L2	D4	Ramping Angle (°)	Max. Allowable Revolution (min-1)	Figure	Clamp Screw	Wrench	Insert
BXD4000	A	0.4 – 3.2	Standard	BXD4000R201SA20SA	●	1	20	15	110	35	20	28	15,000	1	TS4SL	①TKY15W	XDGT1550 PD□R-G□□
				252SA25SA	●	2	25	15	125	50	25	20	38,000	1	TS4SL	①TKY15W	
				282SA25SA	●	2	28	15	125	50	25	17	35,000	2	TS4SL	①TKY15W	
				322SA32SA	●	2	32	15	150	50	32	13	33,000	1	TS4SL	①TKY15W	
				352SA32SA	●	2	35	15	150	50	32	11	31,000	2	TS4SL	①TKY15W	
				403SA32SA	●	3	40	15	170	80	32	9	29,000	2	TS4SL	①TKY15W	
				403SA42SA	●	3	40	15	170	80	42	9	29,000	1	TS4SL	①TKY15W	XDGT1550 PD□R-GL□□
			Long	BXD4000R252SA25LA	●	2	25	15	170	80	25	20	38,000	1	TS4SL	①TKY15W	
				322SA32LA	●	2	32	15	200	80	32	13	33,000	1	TS4SL	①TKY15W	
			Extra long	BXD4000R282SA25ELA	●	2	28	15	220	50	25	17	35,000	2	TS4SL	①TKY15W	
				352SA32ELA	●	2	35	15	250	50	32	11	31,000	2	TS4SL	①TKY15W	
				403SA32ELA	●	3	40	15	250	65	32	9	29,000	2	TS4SL	①TKY15W	
	B	4.0 – 5.0	Standard	BXD4000R201SA20SB	●	1	20	15	110	35	20	28	15,000	1	TS4SL	①TKY15W	XDGT1550 PD□R-G□□
				252SA25SB	●	2	25	15	125	50	25	20	38,000	1	TS4SL	①TKY15W	
				282SA25SB	●	2	28	15	125	50	25	17	35,000	2	TS4SL	①TKY15W	
				322SA32SB	●	2	32	15	150	50	32	13	33,000	1	TS4SL	①TKY15W	
				352SA32SB	●	2	35	15	150	50	32	11	31,000	2	TS4SL	①TKY15W	
				403SA32SB	●	3	40	15	170	80	32	9	29,000	2	TS4SL	①TKY15W	
				403SA42SB	●	3	40	15	170	80	42	9	29,000	1	TS4SL	①TKY15W	
			Long	BXD4000R252SA25LB	●	2	25	15	170	80	25	20	38,000	1	TS4SL	①TKY15W	
				322SA32LB	●	2	32	15	200	80	32	13	33,000	1	TS4SL	①TKY15W	
			Extra long	BXD4000R282SA25ELB	●	2	28	15	220	50	25	17	35,000	2	TS4SL	①TKY15W	
				352SA32ELB	●	2	35	15	250	50	32	11	31,000	2	TS4SL	①TKY15W	
				403SA32ELB	●	3	40	15	250	65	32	9	29,000	2	TS4SL	①TKY15W	
BXD7000	A	0.8 – 3.0	Standard	BXD7000R251SA25SA	●	1	25	21	170	80	25	28	12,000	1	TS5S	②TKY25D	XDGT2206 PDFR-G□□
				321SA32SA	●	1	32	21	170	80	32	19	9,500	1	TS5S	②TKY25D	
				402SA42SA	●	2	40	21	170	80	42	13	28,000	1	TS5SL	②TKY25D	
	B	4.0 – 5.0	Long	BXD7000R251SA25SB	●	1	25	21	170	80	25	28	12,000	1	TS5S	②TKY25D	XDGT2206 PDFR-G□□
				321SA32SB	●	1	32	21	170	80	32	19	9,500	1	TS5S	②TKY25D	
				402SA42SB	●	2	40	21	170	80	42	13	28,000	1	TS5SL	②TKY25D	

Note 1) The maximum allowed revolutions are set to ensure tool and insert stability.
Note 2) When using the tool at high revolutions, ensure that the tool and arbor are correctly balanced.

Holder and insert corner radius combination

Holder	A Holder							B Holder	
	BXD4000R□□□□□□□A	BXD4000R□□□□□□□A BXD7000R□□□□□□□A					BXD4000R□□□□□□□A	BXD4000R□□□□□□□B BXD7000R□□□□□□□B	
Applicable insert Corner R (Re)	R 0.4	R 0.8	R 1.2	R 1.6	R 2.0	R 3.0	R 3.2	R 4.0	R 5.0
	XDGT.....-G04 XDGT.....-GL04	XDGT.....-G08 XDGT.....-GL08	XDGT.....-G12	XDGT.....-G16	XDGT.....-G20	XDGT.....-G30	XDGT.....-G32	XDGT.....-G40	XDGT.....-G50

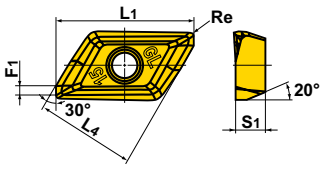
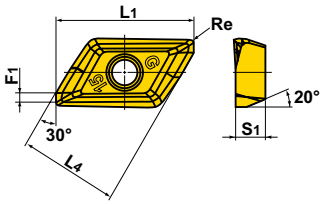
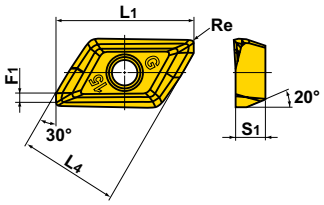
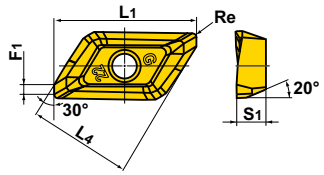
Note 1) Please only use the holder and insert corner radius combinations shown above.
Note 2) XDGT….-GL08 and -G12 inserts are compatible only with the BXD4000R □□□□□□□A type holder.

Insert

Work Material		
P	Steel	●
M	Stainless Steel	◔
K	Cast Iron	✱
N	Non-ferrous Metal	✱
S	Heat-resistant Alloy, Titanium Alloy	◔
H	Hardened Steel	◔

Cutting Conditions (guide) :
●: Stable Cutting ◔: General Cutting ✱: Unstable Cutting

Honing :
E : Round **F** : Sharp

Cutter Type	Shape	Order Number	Class	Honing	Stock: Coated VP15TF	Stock: Coated LC15TF	Stock: Carbide TF15	Dimensions (mm) L1	L4	S1	F1	Re	Geometry
BXD4000		NEW XDGT1550PDFR-GL04	G	F			●	22	16	5	1.5	0.4	
		NEW 1550PDFR-GL08	G	F			●	22	16	5	1.1	0.8	
		XDGT1550PDFR-G04	G	F		●	●	22	16	5	1.5	0.4	
		1550PDFR-G08	G	F		●	●	22	16	5	1.1	0.8	
		1550PDFR-G12	G	F		●	●	22	16	5	0.7	1.2	
		1550PDFR-G16	G	F		●	●	22	16	5	0.4	1.6	
		1550PDFR-G20	G	F		●	●	21.7	16	5	0.2	2.0	
		1550PDFR-G30	G	F		●	●	20	16	5	0.6	3.0	
		1550PDFR-G32	G	F		●	●	20	16	5	0.4	3.2	
		1550PDFR-G40	G	F		●	●	19	16	5	0.5	4.0	
		1550PDFR-G50	G	F		●	●	18	16	5	0.4	5.0	
		XDGT1550PDER-G04	G	E	●			22	16	5	1.5	0.4	
		1550PDER-G08	G	E	●			22	16	5	1.1	0.8	
		1550PDER-G12	G	E	●			22	16	5	0.7	1.2	
		1550PDER-G16	G	E	●			22	16	5	0.4	1.6	
		1550PDER-G20	G	E	●			21.7	16	5	0.2	2.0	
		1550PDER-G30	G	E	●			20	16	5	0.6	3.0	
		1550PDER-G32	G	E	●			20	16	5	0.4	3.2	
		1550PDER-G40	G	E	●			19	16	5	0.5	4.0	
		1550PDER-G50	G	E	●			18	16	5	0.4	5.0	
BXD7000		XDGT2206PDFR-G08	G	F		□	●	30	22	6.35	2.0	0.8	
		2206PDFR-G16	G	F		□	●	30	22	6.35	1.2	1.6	
		2206PDFR-G20	G	F		□	●	30	22	6.35	0.8	2.0	
		2206PDFR-G30	G	F		□	●	29	22	6.35	0.6	3.0	
		2206PDFR-G40	G	F		□	●	27.5	22	6.35	0.9	4.0	
		2206PDFR-G50	G	F		□	●	27	22	6.35	0.4	5.0	

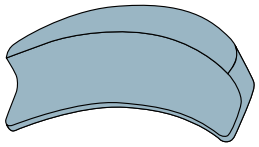
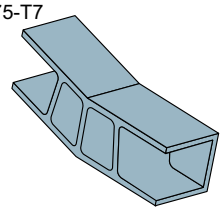
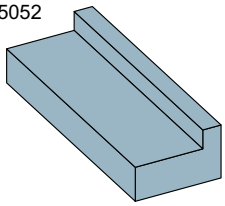
● : Inventory maintained. □ : Non stock, produced to order only.

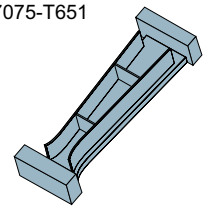
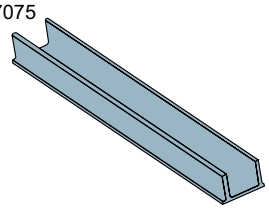
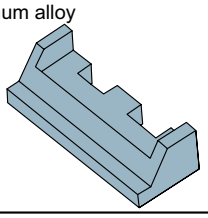
Recommended Cutting Conditions

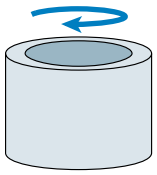
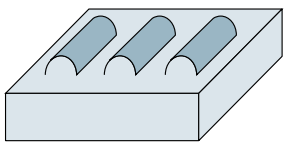
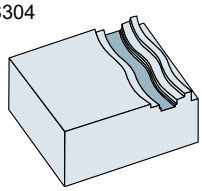
	Work Material	Hardness	Insert Grade	Cutting Speed (m/min)	Feed per Tooth (mm/tooth)
N	Aluminum Alloy	–	**LC15TF TF15**	1000 (200–3000)	0.3 (0.1–0.5)
S	Titanium Alloy	–	**VP15TF**	40 (30–60)	0.1 (0.1–0.3)
	Heat-resistant Alloy (Inconel etc.)	–	**VP15TF**	30 (20–40)	0.15 (0.1–0.2)
M	Stainless Steel (JIS SUC304 etc.)	≤270HB	**VP15TF**	140 (120–160)	0.2 (0.1–0.3)
P	Mild Steel (JIS SS400, S10C etc.)	≤180HB	**VP15TF**	180 (150–200)	0.15 (0.1–0.2)
	Carbon Steel, Alloy Steel (S45C, SCM440 etc.)	≤280HB	**VP15TF**	150 (120–200)	0.15 (0.1–0.2)
		280–350HB	**VP15TF**	140 (120–160)	0.15 (0.1–0.2)
	Hardened Steel (JIS SKD etc.)	40–60HRC	**VP15TF**	70 (50–100)	0.1 (0.05–0.15)

- Figures above are a guide lines for optimum general use. They may vary depending on machine rigidity, work clamping and length of tool overhang.
- When using ø20 shank type, set the table feed at under 0.05mm/tooth and maintain observation during cutting.
- Please adjust the table feed when using long- and extra-long-shank types.
- Please adjust the table feed when ramp machining (Recommended feed: 0.05mm/tooth under).

Application Examples

Holder	BXD4000R202SA20SA (ϕ31.75)	BXD4000R0204(ø50.8)	BXD7000R08004CA
Insert (Grade)	XDGT1550PDFR-GL04(TF15)	XDGT1550PDFR-G08(TF15)	XDGT2206PDFR-G08(TF15)
Workpiece	JIS A6061 	JIS A7075-T7 	JIS A5052 
Machine	BT40	M/C (M/C (BT50 30KW))	M/C (BT50 75KW)
Cutting Conditions: Revolution (min^{-1})	10,000	10,000	15,000
Cutting Conditions: Cutting Speed (m/min)	997	1,596	3,768
Cutting Conditions: Depth of Cut (mm)	4.5	5.1	6
Cutting Conditions: Width of Cut (mm)	32	50.8	70
Cutting Conditions: Feed per Tooth (mm/tooth)	0.38	0.20	0.33
Cutting Conditions: Chip Discharge (cc/min)	1,077	2,064	8,400
Result	The spindle load reading of the **G** breaker was only 60%, but the **GL** breaker was even lower at 40%, therefore demonstrating lower cutting resistance.	**BXD** achieved more than 12 times longer tool life.	No vibration and no insert fracturing.

Holder	BXD4000R252SA25SA	BXD4000R322SA325SA	BXD4000R252SA25SA
Insert (Grade)	XDGT1550PDFR-G20(TF15)	XDGT1550PDFR-G30(TF15)	XDGT1550PDFR-G04(TF15)
Workpiece	JIS A7075-T651 	JIS A7075 	Aluminum alloy 
	M/C (BT40 30KW)	M/C (BT50 20KW)	M/C (BT50 22KW)
Cutting Conditions: Revolution (min^{-1})	30,000	7,000	7,500
Cutting Conditions: Cutting Speed (m/min)	2,360	703	589
Cutting Conditions: Depth of Cut (mm)	16	5	3
Cutting Conditions: Width of Cut (mm)	16	32	25
Cutting Conditions: Feed per Tooth (mm/tooth)	0.23	0.16	0.10
Cutting Conditions: Chip Discharge (cc/min)	3,584	358	113
Result	**BXD** obtained excellent wall surface accuracy.	**BXD** achieved more than 10 times longer tool life.	**BXD** displayed low resistance and achieved long tool life.

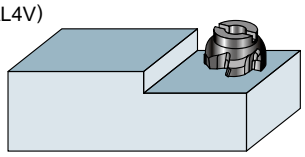
Holder	BXD4000-063A05RA	BXD4000-050A04RA	BXD4000R252SA25SA
Insert (Grade)	XDGT1550PDFR-G04(LC15TF)	XDGT1550PDFR-G08(LC15TF)	XDGT1550PDFR-G08(VP15TF)
Workpiece	JIS A5078 	JIS A5052 	JIS SUS304 
	M/C (BT40 11KW)	M/C (BT40 11KW)	M/C (BT40 18.5KW)
Cutting Conditions: Revolution (min^{-1})	5,600	12,000	1,783
Cutting Conditions: Cutting Speed (m/min)	1,108	1,884	140
Cutting Conditions: Depth of Cut (mm)	4	2	7
Cutting Conditions: Width of Cut (mm)	1.5	25	20
Cutting Conditions: Feed per Tooth (mm/tooth)	0.34	0.52	0.1
Cutting Conditions: Chip Discharge (cc/min)	57	1,250	50
Result	LC15TF produced a superior surface finish compared to the competitors non-coated carbide grade that generated a dull surface finish.	Less welding and longer tool life after more than 1 hour duration of machining time with air blow.	The tool could be used on a smaller BT40 type spindle machining center because of the low cutting resistance of inserts.

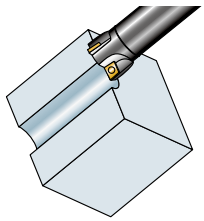
Milling Cutters for Aluminum and Difficult-to-cut Materials

MITSUBISHI

BXD

Application Examples

Holder	BXD4000R12507EA	Competitor's
Insert (Grade)	XDGT1550PDER-G16(VP15TF)	
Workpiece	JIS Ti (6AL4V) 	
Machine	M/C (BT50 15KW)	M/C (BT50 15KW)
Cutting Conditions: Revolution (min^{-1})	102	38
Cutting Conditions: Cutting Speed (m/min)	40	15
Cutting Conditions: Depth of Cut (mm)	12	5
Cutting Conditions: Width of Cut (mm)	110	110
Cutting Conditions: Feed per Tooth (mm/tooth)	1.10	0.06
Cutting Conditions: Chip Discharge (cc/min)	94	11
Result	 Normal chips 10mm	 Irregular chips 10mm
	• Improved chip control. • Lower cutting resistance. • Excellent surface accuracy and finish.	

Holder	BXD4000-050A04RA
Insert (Grade)	XDGT1550PDER-G04(VP15TF)
Workpiece	JIS S55C 
Machine	M/C (BT50 11KW)
Cutting Conditions: Revolution (min^{-1})	1,230
Cutting Conditions: Cutting Speed (m/min)	193
Cutting Conditions: Depth of Cut (mm)	5
Cutting Conditions: Width of Cut (mm)	5
Cutting Conditions: Pick feed (mm)	5
Cutting Conditions: Feed per Tooth (mm/tooth)	0.10
Result	• Wall surface accuracy is 0.005mm. • Lower cutting resistance and higher surface finishes.

Please note that the machining performed in the application examples is dependent on the rigidity of the machine used and the rigidity of the workpiece and clamping.

Operational Guidance

- Use only prescribed inserts and parts.
- The maximum allowed revolutions are set to ensure tool and insert stability.
- Ensure that the cutter operates under the maximum allowable revolution. Even when operating under the maximum allowable revolution, if the spindle revolution is equal to or higher than the values shown in the following table, we recommend that the balance quality grade (with arbor) conforms to G40 or higher based on "JIS B 0905".

Cutting Edge Diameter (mm)	Type	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125
Revolution (min^{-1})	BXD4000	12,000	9,500	7,600	6,000	4,800	3,800	3,000	2,400
	BXD7000	—	—						

- Please use a special clamping bolt when using the arbor type with through coolant holes.
- Cutting tools have sharp cutting edges and handling them with bare hands may cause injuries. Always wear protectors such as gloves in handling indexable inserts.
- Always apply the recommended clamp torque values as shown below.

BXD4000 : 4—5N·m (41—51kgf·cm)
BXD7000 : 7—8N·m (71—82kgf·cm)

For Your Safety
●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or spanner. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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(Tools specifications subject to change without notice.)

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