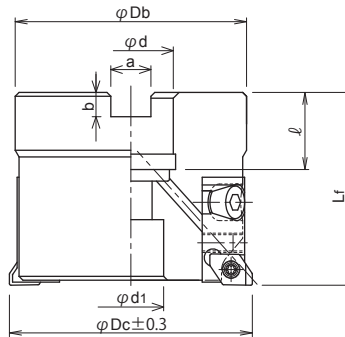


Back & Forth Cutter

PFC/MPF_{TYPE}

■ Facemill type



■ PARTS

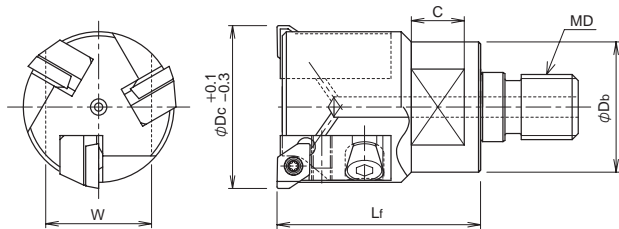
Clamp screw	Wrench
DSW-307H	A-10SD

Cat. No.	Stock	No. of flutes	Dimensions (mm)								Weight (kg)	Inserts
			φDc	Lf	φDb	φd	φd1	a	b	ℓ		
PFC-4050R-22	□	4	50	50	47	22	17	10.4	6.3	20	0.6	DPGT0903-W3
PFC-4063R-22	□	4	50	60	22	17	10.4	6.3	20	1.0		
PFC-6063R-22	□	6	63	50	60	22	17	10.4	6.3	20	0.9	
PFC-6063R-27	□	6	50	60	27	20	12.4	7	22	0.9		
PFC-4080R-27	□	4	80	50	76	27	20	12.4	7	22	1.8	

Note) All cutters are supplied without inserts or wrenches.

Recommended cutting conditions → page 3

■ Modular head type



Cat. No.	Stock	No. of flutes	Dimensions (mm)						Inserts
			φDc	Lf	φDb	MD	C	W	
MPF-2030-M16	□	2	30	50	28	M16	12.5	22	DPGT0903-W3
MPF-2033-M16	□		33		32				
MPF-3040-M16	□	3	40	32	M16	13	26		

Note) All cutters are supplied without inserts or wrenches.

Recommended cutting conditions → page 3

■ Carbide shank arbor



Scan here for product detail

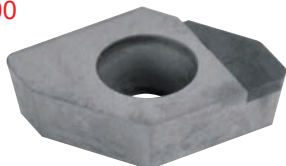


Back & Forth Cutter

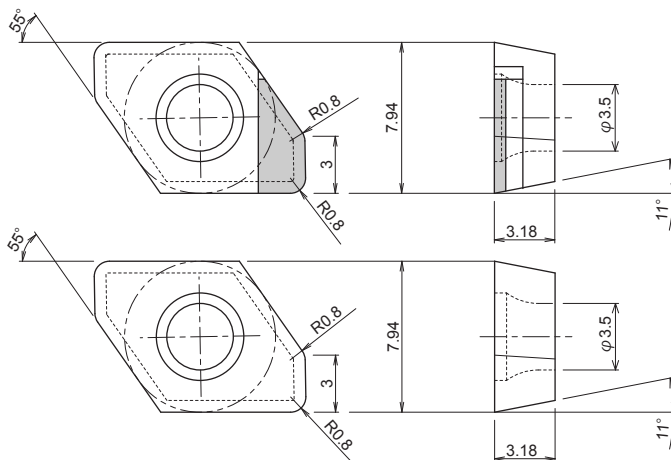
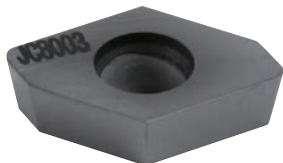
PFC_{TYPE}

■ INSERTS

DPGT0903-W3
JBN795, JBN500




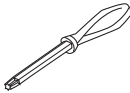

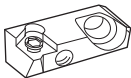



DPGT0903-W3
DH102



Cat. No.	Tolerance	PVD coated		CBN	
		DH102 (Semi finishing · Finishing)		JBN500 (Super finishing)	JBN795 (Super finishing)
DPGT0903-W3	G	●		□	□

10 inserts per case, but grade JBN500, JBN795 insert is packed in 1 piece

■ PARTS

Clamp screw	Wrench	Set bolt for arbor	
			
Recommended torque: 1.8Nm		for $\phi d=27$ mm cutter	
DSW-307H	A-10SD	M12x1.75x30	
Cartridge	Screw for radial adjustments	Set bolt for cartridge	Wrench for cartridge
			
SDGPR09CA-PFC	RSW-05008	HCS5-10	LW-040

Back & Forth Cutter

PFC/MPF_{TYPE}

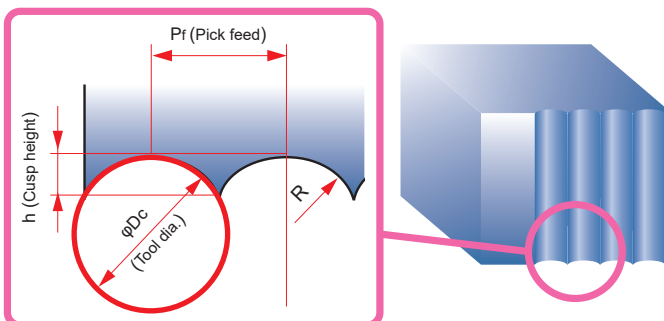
RECOMMENDED CUTTING CONDITIONS

Work Materials	Insert Grades	Cutting speed V_c (m/min)	Feed per tooth f_z (mm/t)	Depth of cut a_e (mm)
Cast iron FC250 160-260HB	JBN500	1,200 (800~2,000)	0.1 (0.05~0.15)	0.05~0.1
	DH102 JC8003	400 (300~500)	0.15 (0.05~0.20)	0.05~0.5
Nodularcast iron FCD600 170 - 200HB	JBN500	1,000 (600~1,500)	0.1 (0.05~0.15)	0.05~0.1
	DH102 JC8003	300 (200~400)	0.15 (0.05~0.20)	0.05~0.5
Carbon & Alloy steel S50C, SCM440	DH102 JC8003	200 (100~300)	0.15 (0.05~0.20)	0.05~0.2
Mold steel HPM7, PX5, P20 30-36HRC	JBN795	400 (300~600)	0.1 (0.05~0.15)	0.05~0.1
	JC8003	150 (100~250)	0.1 (0.05~0.15)	0.05~0.1
	DH102	280 (230~330)	0.1 (0.05~0.15)	0.05~0.1
Mold steel NAK80, HPM1, P21 38-43HRC	JBN795	300 (250~400)	0.1 (0.05~0.15)	0.05~0.1
	DH102	250 (200~300)	0.1 (0.05~0.15)	0.05~0.1
Hard (SKD61, DAC, DHA等) 硬さ42-52HRC	JBN795	280 (230~350)	0.1 (0.05~0.15)	0.05~0.1
	DH102	230 (180~280)	0.1 (0.05~0.15)	0.05~0.1

NOTE

- 1) In case chatter occurs and unsatisfactory surface quality due to machine and work rigidity, recommend to reduce spindle speed or feed per tooth.
- 2) In case of using as face mill, recommend to reduce feed per tooth up to 0.05mm.

SURFACE ROUGHNESS



$$h \text{ (Cusp height) } \mu\text{m} = \frac{(Pr)^2}{8R} \times 1000$$

$$R: \frac{\phi Dc \text{ (Tool dia.)}}{2}$$

It is efficient to use large diameter cutter to increase the pick feed. But large diameter cutter may cause interference problem in case of complex work, so to be considered.

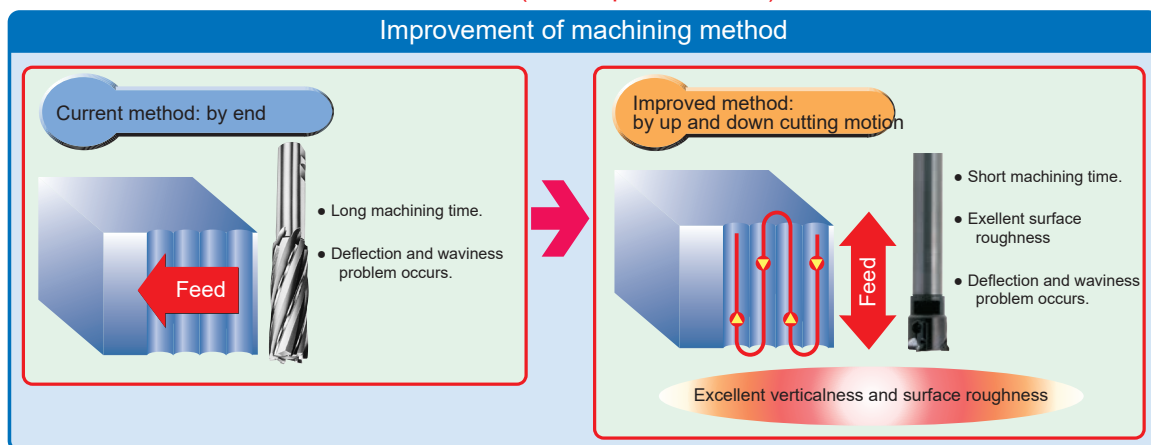
Back & Forth Cutter

PFC/MPF_{TYPE}

High speed up and down two way cutting can improve the efficiency and accuracy.

1 High speed & high accuracy

➔ Surface roughness and Parallelism/Perpendicularity: 0.01mm or less (feed & pick direction).



2 Suitable to use with extra overhung length

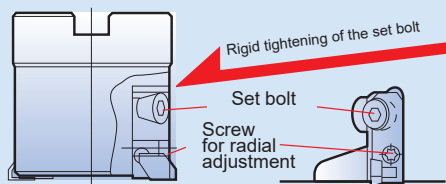
DSA arbor: total 43 items

Available maximum overhung length: 400mm

3 Easy to adjust the O.D.run

Instructions for adjusting the O.D. run out

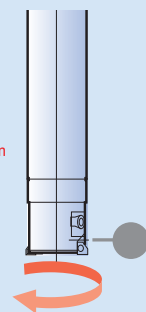
STEP 1



- ① Loosen all the screws for radial adjustment.
- ② Tighten the set bolt as pushing the cartridge to axial direction.
Tighten the set bolt firmly.
- ③ Set the cutter body to arbor.

STEP 2 On the machine

- Measure the O.D. run out on the machine.
- Adjust the lower inserts to reach the same height as highest insert by tightening the screw for radial adjustment.
- Never loosen set bolt while the adjustment.
- Adjust O.D. run out 0.01mm or less. Target 0.005mm



4 CBN insert and JC8003 DV-coated insert are available as standard

CBN: JBN500 is the best grade for high speed machining and accuracy finishing and longer tool life.
DV coated: JC8003 is suitable for semi-finishing to finishing.

5 Consolidating of parts.

Easy setting by using same wrench for insert clamp screw and screw for radial adjustments.
And the same parts are used from smallest diameter to biggest diameter.