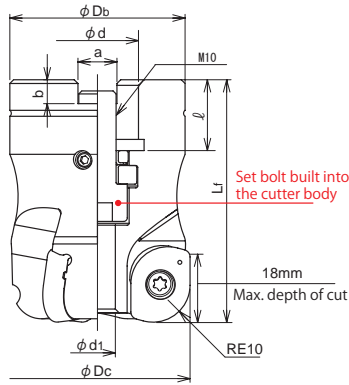


Wild Radius

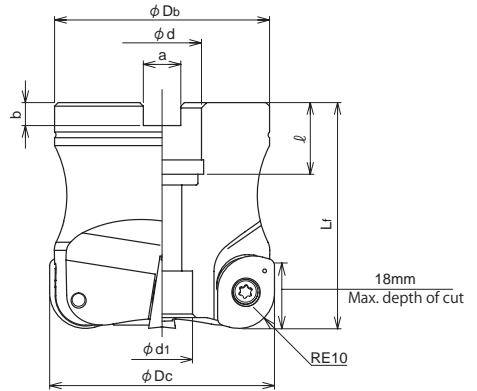
WDR_{TYPE}



● Fig 1



● Fig 2



■ BODY

Cat. No.	Stock	No. of flutes	Dimensions(mm)							Set Bolt	Weight (kg)	Inserts	Fig.	
			φDc	Lf	φDb	φd	φd1	a	b					ℓ
WDR-3050R-22	□	3	50	65	47	22	9.6	10.4	6.3	19	M10X1.5X25*	0.7	YDM*1505***Z*R	1
WDR-4063R-22	□	4	63	63	60		17							

Note) 1. All cutters are supplied without inserts.

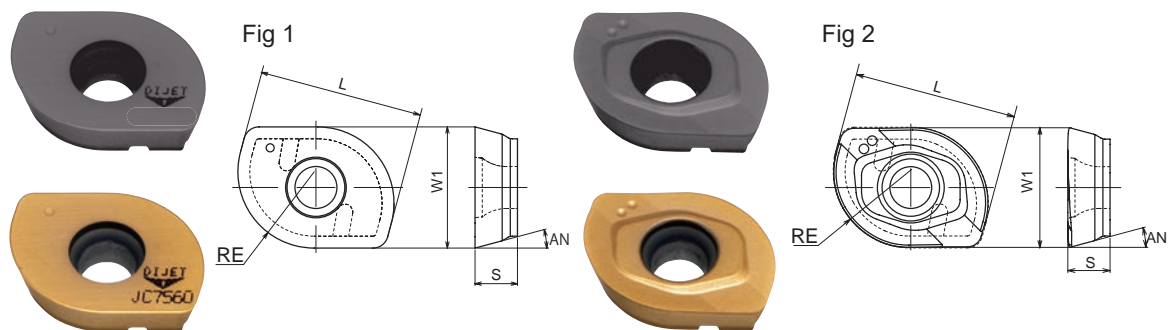
2. ★ mark shows: these cutter bodies are equipped with the set bolt because of the specified bolt size.
 Except for these cutter bodies, please use the set bolt equipped with arbor.

■ PARTS

Clamp screw	Wrench
CSW-513H	A-20
Clamp screw	Recommended Torque N·m
CSW-513H	5.5

Recommended cutting conditions → page 4

Wild Radius

WDR_{TYPE}

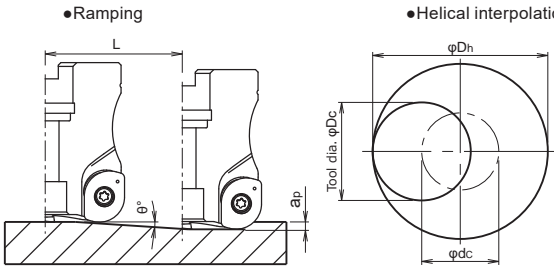
■INSERT

Cat. No.	Tolerance	PVD coated		Dimensions(mm)					Fig.
		JC7560	JC8118	RE	L	W1	S	AN	
YDMW1505100ZTR	M	□	●	10	21.5	15.875	5.56	15°	1
YDMT1505100ZER		□	□						2

NOTE) 10 inserts per case.

Wild Radius WDR_{TYPE}

■ Instructions for profile milling



● Calculation of tool pass dia.

$$\phi_{Dc} = \phi_{Dh} - \phi_{Dc}$$

Tool pass dia.
Bore dia.
Tool dia.

● Depth of cut per one circle should not exceed max. depth of cut ap.

● Down cutting is recommended & tool pass rotation should be counterclockwise.

- In case of ramping and helical interpolation, apply 70% or less feed speed from standard cutting condition table.
- In case of drilling, apply 50% or less Z axis feed from standard cutting condition table.
- Long continuous chips may come out in case of drilling, confirm the safe cutting conditions.

Cat. No.	Tool dia. φDc (mm)	Effective Cutting dia. (mm)	Ramping(at ap = 3mm)	Helical interpolation		Max drilling depth Z (mm)
			Max. ramping angle θ°	Min. bore dia. Dh min. (mm)	Max. bore dia. Dh max. (mm)	
WDR-3050	50	30.7	2°48'	76	98	2
WDR-4063	63	43.4	1°48'	102	124	2

NOTE) Recommended ramping angle is 1° or less. (tool dia. φ50 - φ63)

Recommended Cutting Conditions

Work materials	Grades	Tool dia(mm)									
		50					63				
		No. of teeth 3N					No. of teeth 4N				
ℓ (mm)	a_p (mm)	n (min ⁻¹)	V_f (mm/min)	P_c (kW)	ℓ (mm)	a_p (mm)	n (min ⁻¹)	V_f (mm/min)	P_c (kW)		
Carbon steel S50C, S55C $\leq 250\text{HB}$	JC7560 (JC8118)	~150	3	960	2,020	10.1	~150	3	910	2,550	16.1
		200	3	830	1,500	7.5	200	3	760	2,130	13.4
		250	2.5	640	1,150	4.8	250	3	660	1,590	10.0
		300	2	580	870	2.9	300	2.5	510	1,220	6.4
		350	1.5	580	870	2.2	350	2	510	1,020	4.3
Die steel SKD61, SKD11 $\leq 255\text{HB}$	JC7560 (JC8118)	~150	3	960	2,020	10.1	~150	3	910	2,550	16.1
		200	3	830	1,500	7.5	200	3	760	2,130	13.4
		250	2.5	640	1,150	4.8	250	3	660	1,590	10.0
		300	2	580	870	2.9	300	2.5	510	1,220	6.4
		350	1.5	580	870	2.2	350	2	510	1,020	4.3
Mold steel HPM7, PX5, P20 30-36HRC	JC7560 (JC8118)	~150	3	960	2,020	11.4	~150	3	910	2,550	18.1
		200	3	830	1,500	8.4	200	3	760	2,130	15.1
		250	2.5	640	1,150	5.4	250	3	660	1,590	11.3
		300	2	580	870	3.3	300	2.5	510	1,220	7.2
		350	1.5	580	870	2.4	350	2	510	1,020	4.8
Mold steel NAK80, HPM1, P21 38-43HRC	JC8118	~150	2	760	1,370	9.1	~150	2	610	1,100	9.2
		200	2	660	1,200	8.0	200	2	510	920	7.7
		250	1.5	500	900	4.5	250	2	440	800	6.7
		300	1.5	460	860	4.3	300	1.5	360	650	4.1
		350	1	460	860	2.9	350	1.2	360	650	3.3
Hardened die steel SKD61, DAC, DHA 42-52HRC	JC8118	~150	1.5	510	380	2.4	~150	1.5	400	400	3.2
		200	1.5	430	320	2.1	200	1.5	330	330	2.7
		250	1	370	280	1.2	250	1.5	290	290	2.3
		300	1	260	200	0.9	300	1	200	200	1.1
		350	0.5	260	200	0.4	350	0.8	200	200	0.9
Gray cast iron FC250, FC300 $\leq 300\text{HB}$	JC8118 (JC7560)	~150	3	960	2,300	8.6	~150	3	910	2,910	13.7
		200	3	830	1,750	6.6	200	3	760	2,280	10.8
		250	2.5	640	1,250	3.9	250	3	660	1,720	8.1
		300	2	580	1,050	2.6	300	2.5	510	1,220	4.8
		350	1.5	580	1,050	2.0	350	2	510	1,220	3.8
Nodular cast iron FCD500, FCD700 $\leq 300\text{HB}$	JC8118	~150	3	960	2,300	8.6	~150	3	910	2,910	13.7
		200	3	830	1,750	6.6	200	3	760	2,280	10.8
		250	2.5	640	1,250	3.9	250	3	660	1,720	8.1
		300	2	580	1,050	2.6	300	2.5	510	1,220	4.8
		350	1.5	580	1,050	2.0	350	2	510	1,220	3.8
Stainless steel SUS304 $\leq 250\text{HB}$	JC7560	~150	2	760	1,370	6.9	~150	2	610	1,100	6.9
		200	2	660	1,200	6.0	200	2	510	920	5.8
		250	1.5	500	900	3.4	250	2	440	800	5.0
		300	1.5	460	860	3.2	300	1.5	360	650	3.1
		350	1	460	860	2.2	350	1.5	360	650	3.1
		400	0.5	460	660	0.8	400	1	360	550	1.7

ℓ : Overhung length, a_p : Depth of cut, n : Spindle speed, V_f : Feed speed, P_c : Net power consumption

NOTE

- 1) The figure to be adjusted according to the machine rigidity or work rigidity.
- 2) In case of chatter occurring, recommend to reduce depth of cut a_p or Feed speed.
- 3) If machine does not have enough power, recommend to reduce depth of cut a_p or Spindle speed and Feed speed.
- 4) Use air blow.