

CUTTING CONDITIONS

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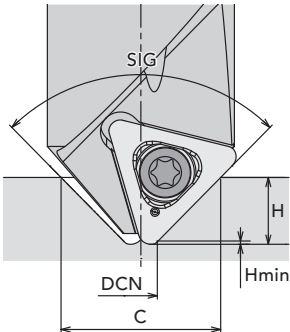
PLDS

Centering and Chamfering Cutter

Work Material		Tensile Strength / Hardness	Vc (m/min) Cutting Speed	(min ⁻¹) S	(mm/rev) Feed Rate	
					Centering	Countersinking (Side Feed)
P	Mild Steel-Carbon Steel (SS400-S10C)	~180HB	80 (60~120)	1.500 ~ 3.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
	Carbon Steel-Alloy Steel (S50C-SCM440)	~280HB	80 (60~120)	1.500 ~ 3.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
	Die Steel (SKD11-SKD61)	~280HB	80 (60~120)	1.500 ~ 3.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
M	Stainless Steel (Coolant) (SUS304-SUS420)	~250HB	80 (60~120)	1.500 ~ 2.500	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
K	Cast Iron (FC250)	~350N/mm ²	100 (60~140)	1.500 ~ 3.500	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
	Ductile Cast Iron (FCD400)	~800N/mm ²	100 (60~140)	1.500 ~ 3.500	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
N	Aluminium Alloys	~13%Si	150 (100~200)	2.500 ~ 5.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
S	Heat Resistant Alloys (Wet) (Inconel 718)	—	35 (25~60)	600 ~ 1.500	0,04 (0,03 ~ 0,06)	0,08 (0,05 ~ 0,12)
	Titanium Alloy (Wet) (Ti-6Al-4V)	—	40 (30~100)	700 ~ 2.500	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
H	Pre-hardened Steel (NAK80)	40~43HRC	80 (60~100)	1.500 ~ 3.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)
	Steel for Die Casting (DAC-MAGIC, DH31)	43~48HRC	60 (50~80)	1.200 ~ 2.000	0,06 (0,03 ~ 0,08)	0,08 (0,05 ~ 0,12)

1. The above cutting conditions are to be used as general guidelines. Adjustments may be necessary depending on actual cutting condition.
2. Inserts should be attached to the holder tightly in a very neat condition.
3. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
4. For the feed of V slotting, use 80% of the countersinking (side feed) shown in the above table.

Standard centering depth (H)

	<p>SIG = 90° Hmin = 0,25 DCN = Ø 2,5 (minimum machined hole diameter)</p> <p>H = (C-DCN) / 2 + Hmin</p> <p>H = Centering depth C = Countersink diameter</p> <p>Example: When SIG=90°C=φ10 (Countersink diameter) The value of H will be 4 mm instead of 5 mm.</p>	<p>SIG = 120° Hmin = 0,1 DCN = Ø 2,4 (minimum machined hole diameter)</p> <p>H = (C-DCN) / 3,46 + Hmin</p> <p>H = Centering depth C = Countersink diameter</p>