

RECOMMENDED CUTTING CONDITIONS

Workpiece Material		Drill Diameter	$\phi 18.5 - \phi 21.4$		$\phi 21.5 - \phi 24.4$	
		Conditions Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	$\leq 180\text{HB}$	90 (70—110)	0.25 (0.20—0.30)	100 (80—120)	0.30 (0.25—0.35)
	Carbon Steel Alloy Steel	180—280HB	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.30 (0.25—0.35)
		280—350HB	70 (50—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)
M	Stainless Steel	$\leq 200\text{HB}$	60 (50—70)	0.20 (0.15—0.22)	60 (50—70)	0.20 (0.15—0.22)
K	Gray Cast Iron	Tensile Strength $\leq 350\text{MPa}$	120 (60—140)	0.25 (0.20—0.30)	130 (80—150)	0.35 (0.25—0.40)
	Ductile Cast Iron	Tensile Strength $\leq 450\text{MPa}$	80 (60—90)	0.25 (0.20—0.30)	90 (60—100)	0.30 (0.25—0.35)

Workpiece Material		Drill Diameter	$\phi 24.5 - \phi 27.4$		$\phi 27.5 - \phi 30.4$	
		Conditions Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	$\leq 180\text{HB}$	110 (80—120)	0.30 (0.25—0.35)	110 (80—120)	0.30 (0.25—0.35)
	Carbon Steel Alloy Steel	180—280HB	100 (80—120)	0.30 (0.25—0.35)	100 (80—120)	0.30 (0.25—0.35)
		280—350HB	90 (70—110)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)
M	Stainless Steel	$\leq 200\text{HB}$	70 (60—80)	0.25 (0.20—0.28)	70 (60—80)	0.25 (0.20—0.28)
K	Gray Cast Iron	Tensile Strength $\leq 350\text{MPa}$	140 (90—160)	0.35 (0.25—0.40)	140 (90—160)	0.40 (0.30—0.45)
	Ductile Cast Iron	Tensile Strength $\leq 450\text{MPa}$	100 (80—110)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)

Note 1) When using the DC×8 type holder, reduce the cutting speed by approx. 20%.

Note 2) When using DC×8, it is recommended to pre-drill a pilot hole of the same size.

Note 3) H type honing is recommended when machining mild steel and stainless steel.

Workpiece Material			Drill Diameter	$\phi 24.5, \phi 24.6, \phi 24.7$		$\phi 26.5, \phi 26.7$	
			Conditions Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Structural Steel	JIS SS400	Tensile Strength $\leq 400-500\text{MPa}$	70 (60—80)	0.30 (0.25—0.35)	70 (60—80)	0.30 (0.25—0.35)
		JIS SM490	Tensile Strength $\leq 490-610\text{MPa}$	65 (55—75)	0.30 (0.25—0.35)	65 (55—75)	0.30 (0.25—0.35)
		JIS SM570	Tensile Strength $\leq 570-720\text{MPa}$	60 (50—70)	0.30 (0.25—0.35)	60 (50—70)	0.30 (0.25—0.35)