

## RECOMMENDED CUTTING CONDITIONS

Work Material	Drill Diameter D1	$\phi.5625''-\phi.6094''$ $\phi 14.0-\phi 15.4\text{mm}$		$\phi.6250''-\phi.7188''$ $\phi 15.5-\phi 18.4\text{mm}$		$\phi.7344''-\phi.8438''$ $\phi 18.5-\phi 21.4\text{mm}$		
	Conditions Hardness	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	
<b>P</b> Mild Steel	$\leq 180\text{HB}$	230 (195–295)	.008 (.006–.010)	260 (195–330)	.010 (.008–.012)	295 (230–360)	.010 (.008–.012)	
	Carbon Steel Alloy Steel	180–280HB	230 (195–295)	.008 (.006–.010)	260 (195–330)	.010 (.008–.012)	260 (195–330)	.010 (.008–.012)
		280–350HB	195 (165–260)	.006 (.005–.007)	230 (165–295)	.008 (.006–.010)	230 (165–295)	.008 (.006–.010)
<b>M</b> Stainless Steel	$\leq 200\text{HB}$	165 (130–195)	.006 (.005–.007)	165 (130–195)	.006 (.005–.007)	195 (165–230)	.008 (.006–.009)	
<b>K</b> Gray Cast Iron	Tensile Strength $\leq 350\text{MPa}$	230 (165–295)	.008 (.006–.010)	330 (195–395)	.010 (.008–.012)	390 (195–460)	.010 (.008–.012)	
Ductile Cast Iron	Tensile Strength $\leq 450\text{MPa}$	230 (165–295)	.008 (.006–.010)	260 (195–295)	.010 (.008–.012)	260 (195–295)	.010 (.008–.012)	

Work Material	Drill Diameter D1	$\phi.8594''-\phi.9531''$ $\phi 21.5-\phi 24.4\text{mm}$		$\phi.9688''-\phi 1.0781''$ $\phi 24.5-\phi 27.4\text{mm}$		$\phi 1.0938''-\phi 1.1875''$ $\phi 27.5-\phi 30.4\text{mm}$		
	Conditions Hardness	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)	
<b>P</b> Mild Steel	$\leq 180\text{HB}$	330 (260–390)	.012 (.010–.014)	360 (260–390)	.012 (.010–.014)	360 (260–390)	.012 (.010–.014)	
	Carbon Steel Alloy Steel	180–280HB	295 (230–360)	.012 (.010–.014)	330 (260–390)	.012 (.010–.014)	330 (260–390)	.012 (.010–.014)
		280–350HB	260 (195–330)	.010 (.008–.012)	295 (230–360)	.010 (.008–.012)	295 (230–360)	.010 (.008–.012)
<b>M</b> Stainless Steel	$\leq 200\text{HB}$	195 (165–230)	.008 (.006–.009)	230 (195–260)	.010 (.008–.011)	230 (195–260)	.010 (.008–.011)	
<b>K</b> Gray Cast Iron	Tensile Strength $\leq 350\text{MPa}$	425 (260–490)	.014 (.010–.016)	460 (295–525)	.014 (.010–.016)	460 (295–525)	.016 (.012–.018)	
Ductile Cast Iron	Tensile Strength $\leq 450\text{MPa}$	295 (195–330)	.012 (.010–.014)	330 (260–360)	.012 (.010–.014)	330 (260–360)	.012 (.010–.014)	