Drill Dia. D1 (mm)	Hole Depth (l/d)	Coolant (Int./Ext.)	Stock VP15TF	Order Number	Dimensions (mm) L3	L2	L1	D4
24.0	3	Int.	★	**MWS2400MB**	120	120	194	24.0
	5	Int.	★	**MWS2400LB**	192	192	266	24.0
24.5	3	Int.	★	**MWS2450MB**	123	125	200	25.0
	5	Int.	★	**MWS2450LB**	198	200	270	25.0

Drill Dia. D1 (mm)	Hole Depth (l/d)	Coolant (Int./Ext.)	Stock VP15TF	Order Number	Dimensions (mm) L3	L2	L1	D4
25.0	3	Int.	★	**MWS2500MB**	125	125	200	25.0
	5	Int.	★	**MWS2500LB**	200	200	270	25.0

RECOMMENDED CUTTING CONDITIONS

MWE (External coolant)

Work Material		Drill Diameter / Conditions / Hardness	ϕ3.0—ϕ6.0 mm ϕ.1181"—ϕ.2362" Cutting Speed (SFM)	Feed (IPR)	ϕ6.1—ϕ10.0 mm ϕ.2362"—ϕ.3937" Cutting Speed (SFM)	Feed (IPR)	ϕ10.1—ϕ14.0 mm ϕ.3937"—ϕ.5511" Cutting Speed (SFM)	Feed (IPR)	ϕ14.1—ϕ20.0 mm ϕ.5511"—ϕ.7874" Cutting Speed (SFM)	Feed (IPR)
P	Mild Steel	≤180HB	280 (115—330)	.008 (.006—.012)	280 (145—390)	.010 (.006—.014)	295 (180—390)	.012 (.008—.014)	330 (195—425)	.014 (.008—.016)
P	Carbon Steel Alloy Steel	180—280HB	260 (130—310)	.008 (.006—.012)	295 (165—390)	.010 (.006—.014)	295 (195—425)	.012 (.006—.014)	295 (195—425)	.014 (.008—.016)
P	Carbon Steel Alloy Steel	280—350HB	245 (115—260)	.006 (.006—.008)	260 (145—375)	.008 (.006—.010)	280 (180—375)	.010 (.006—.012)	280 (180—375)	.012 (.008—.014)
M	Stainless Steel	≤200HB	65 (50—100)	.004 (.002—.006)	80 (50—100)	.005 (.002—.006)	80 (50—100)	.006 (.004—.008)	80 (50—100)	.008 (.004—.010)
K	Cast Iron	Tensile Strength ≤350MPa	230 (130—280)	.010 (.006—.012)	245 (165—295)	.012 (.008—.014)	260 (165—310)	.014 (.008—.016)	280 (180—310)	.016 (.012—.018)
K	Ductile Cast Iron	Tensile Strength ≤450MPa	210 (115—260)	.008 (.006—.010)	230 (145—280)	.010 (.006—.012)	245 (145—295)	.012 (.008—.014)	260 (165—295)	.014 (.008—.016)
N	Aluminum Alloy	—	260 (230—295)	.008 (.004—.010)	295 (260—330)	.010 (.006—.012)	330 (295—360)	.012 (.008—.014)	360 (330—390)	.014 (.008—.016)
S	Heat Resistant Alloy	—	65 (30—80)	.004 (.002—.006)	80 (50—100)	.005 (.002—.006)	80 (50—100)	.006 (.004—.008)	100 (80—115)	.008 (.004—.010)
H	Hardened Material	40—60HRC	65 (50—80)	.004 (.002—.006)	80 (50—100)	.005 (.002—.006)	80 (50—100)	.006 (.004—.008)	100 (50—115)	.008 (.004—.010)

MWS (Internal coolant)

Work Material		Drill Diameter / Conditions / Hardness	ϕ3.0—ϕ6.0 mm ϕ.1181"—ϕ.2362" Cutting Speed (SFM)	Feed (IPR)	ϕ6.1—ϕ10.0 mm ϕ.2362"—ϕ.3937" Cutting Speed (SFM)	Feed (IPR)	ϕ10.1—ϕ14.0 mm ϕ.3937"—ϕ.5511" Cutting Speed (SFM)	Feed (IPR)	ϕ14.1—ϕ25.0 mm ϕ.5511"—ϕ.9843" Cutting Speed (SFM)	Feed (IPR)
P	Mild Steel	≤180HB	360 (160—390)	.008 (.006—.012)	430 (260—460)	.010 (.008—.014)	490 (300—560)	.012 (.008—.016)	520 (330—590)	.014 (.008—.016)
P	Carbon Steel Alloy Steel	180—280HB	300 (160—330)	.008 (.006—.012)	360 (230—390)	.010 (.008—.014)	430 (260—460)	.010 (.008—.016)	460 (330—490)	.012 (.008—.016)
P	Carbon Steel Alloy Steel	280—350HB	260 (130—300)	.008 (.006—.010)	300 (200—360)	.010 (.006—.012)	360 (230—430)	.010 (.006—.014)	390 (300—460)	.012 (.006—.014)
M	Stainless Steel	≤200HB	200 (70—330)	.004 (.002—.006)	260 (130—390)	.008 (.004—.010)	300 (160—390)	.010 (.006—.012)	330 (200—390)	.010 (.006—.012)
K	Cast Iron	Tensile Strength ≤350MPa	330 (230—390)	.010 (.006—.012)	430 (330—460)	.012 (.006—.014)	490 (360—520)	.014 (.010—.016)	520 (390—560)	.014 (.010—.016)
K	Ductile Cast Iron	Tensile Strength ≤450MPa	200 (100—260)	.008 (.006—.010)	230 (130—300)	.008 (.006—.012)	300 (160—360)	.010 (.008—.016)	330 (200—360)	.012 (.008—.016)
N	Aluminum Alloy	—	390 (260—490)	.010 (.008—.014)	490 (330—560)	.012 (.008—.020)	520 (330—560)	.016 (.008—.032)	560 (330—590)	.020 (.008—.040)
S	Heat Resistant Alloy	—	70 (30—80)	.004 (.002—.006)	80 (50—100)	.005 (.002—.006)	80 (50—100)	.006 (.004—.008)	100 (80—110)	.008 (.004—.010)