

MV1000 SERIES

RECOMMENDED CUTTING CONDITIONS

WSF406W

DRY CUTTING

Material	Properties	Conditions	ap	Vc		fz	ae
				MV1020	MV1030		
Gray cast iron	Tensile strength ≤350MPa	●	ap ≤ 0.5 mm	300 (250 – 300)	150 (100 – 200)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	250 (210 – 300)	150 (100 – 200)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	220 (190 – 260)	140 (80 – 200)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	200 (180 – 230)	110 (60 – 160)	0.10 (0.08 – 0.15)	≤0.8DC
		●	ap ≤ 0.5 mm	250 (210 – 300)	150 (100 – 200)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	220 (190 – 260)	150 (100 – 200)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	200 (180 – 230)	140 (80 – 200)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	180 (160 – 210)	110 (60 – 160)	0.10 (0.08 – 0.15)	≤0.8DC
		✱	ap ≤ 0.5 mm	220 (190 – 260)	140 (80 – 200)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	200 (180 – 230)	140 (80 – 200)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	180 (160 – 210)	110 (60 – 160)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	150 (100 – 180)	80 (40 – 120)	0.10 (0.08 – 0.15)	≤0.8DC
K Ductile cast iron	Tensile strength ≤450MPa	●	ap ≤ 0.5 mm	230 (200 – 250)	110 (60 – 160)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	200 (170 – 230)	110 (60 – 160)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	180 (150 – 210)	90 (50 – 130)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	160 (130 – 190)	70 (40 – 100)	0.10 (0.08 – 0.15)	≤0.8DC
		●	ap ≤ 0.5 mm	200 (170 – 230)	110 (60 – 160)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	180 (150 – 210)	110 (60 – 160)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	160 (130 – 190)	90 (50 – 130)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	140 (110 – 170)	70 (40 – 100)	0.10 (0.08 – 0.15)	≤0.8DC
		✱	ap ≤ 0.5 mm	180 (150 – 200)	90 (50 – 130)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	160 (130 – 190)	90 (50 – 130)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	140 (110 – 170)	70 (40 – 100)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	120 (90 – 150)	60 (30 – 90)	0.10 (0.08 – 0.15)	≤0.8DC
Ductile cast iron	Tensile strength ≤800MPa	●	ap ≤ 0.5 mm	230 (200 – 250)	110 (60 – 160)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	200 (170 – 230)	110 (60 – 160)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	180 (150 – 210)	90 (50 – 130)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	160 (130 – 190)	70 (40 – 100)	0.10 (0.08 – 0.15)	≤0.8DC
		●	ap ≤ 0.5 mm	200 (170 – 230)	110 (60 – 160)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	180 (150 – 210)	110 (60 – 160)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	160 (130 – 190)	90 (50 – 130)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	140 (110 – 170)	70 (40 – 100)	0.10 (0.08 – 0.15)	≤0.8DC
		✱	ap ≤ 0.5 mm	180 (150 – 210)	90 (50 – 130)	0.13 (0.08 – 0.20)	≤0.8DC
			ap ≤ 2.0 mm	160 (130 – 190)	90 (50 – 130)	0.15 (0.10 – 0.25)	≤0.8DC
			2.0 mm < ap ≤ 4.0 mm	140 (110 – 170)	70 (40 – 100)	0.13 (0.10 – 0.20)	≤0.8DC
			4.0 mm < ap ≤ 7.5 mm	120 (90 – 150)	60 (30 – 90)	0.10 (0.08 – 0.15)	≤0.8DC

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