

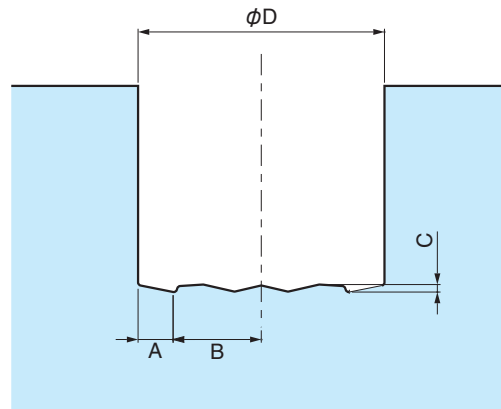
MagicDrill® DRZ type

DRZ type Hole Bottom Shape (Available for 2xD, 3xD, 4xD, 5xD type) (mm)

øD	A	B	C	øD	A	B	C	øD	A	B	C
13.0	2.1	4.4	0.4	21.5	3.1	7.7	0.6	33.0	5.7	10.8	0.8
13.5		4.7		22.0		7.9		34.0		11.3	
14.0		4.9		22.5		8.2		35.0		11.8	
14.5		5.2	0.5	23.0		8.4	0.7	36.0		12.3	0.9
15.0		5.4		23.5		8.7		37.0		12.8	
15.5		5.7		24.0		8.9		38.0		13.3	
16.0	2.7	5.3	0.6	24.5	4.0	9.2	0.7	39.0	6.5	13.8	1.0
16.5		5.6		25.0		9.4		40.0		14.3	
17.0		5.8		25.5		9.7		41.0		14.0	1.1
17.5		6.1	0.7	26.0		9.9	0.7	42.0		14.5	
18.0		6.3		26.5		10.2		43.0		15.0	
18.5		6.6		27.0		9.5	0.8	44.0		15.5	1.2
19.0	2.7	6.8	0.7	27.5		9.8		45.0		16.0	
19.5		7.1		28.0		10.0		46.0		16.5	
20.0		7.3		28.5		10.3	0.8	47.0		17.0	1.1
20.5		7.6	0.8	29.0		10.5		48.0		17.5	
21.0		7.8		29.5		10.8		49.0		18.0	
				30.0		11.0	0.8	50.0		18.5	1.2
				30.5		11.3		51.0		19.0	
				31.0		11.5		52.0		19.5	
				31.5		11.8	0.8	53.0		20.0	1.2
				32.0		12.0		54.0		18.5	
				32.5		12.3		55.0		19.0	
								56.0	8.5	19.5	1.2
								57.0		20.0	
								58.0		20.5	
								59.0		21.0	

* Above amount is standard value

(Varies within ±0.1mm depending on workpiece materials and cutting conditions)



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Required Power

■ ø20 Cutting Power Comparison

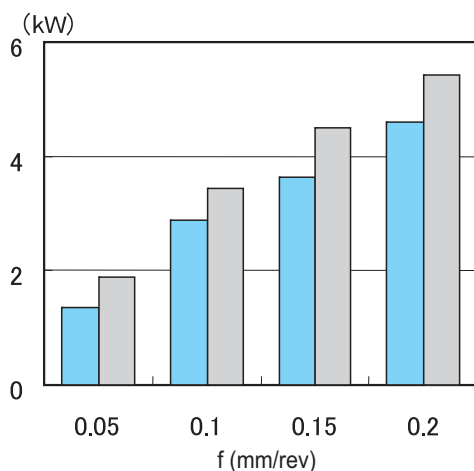
■ MagicDrill

■ Competitor A

$V_c = 100 \text{ m/min}$, ($n = 1600 \text{ min}^{-1}$)

ø 20 Drill

15CrMo5 Internal coolant supply



■ Case Study

Magic Drill Dia.		ø16	ø27		ø50	ø50	
Machine		Competitor A	Competitor B		Competitor C	Competitor D	
Machine Power		AC 5.5 / 7.5 kW	AC 5.5 / 7.5 kW		AC 5.5 / 7.5 kW	AC 5.5 / 7.5 kW	
Cutting Conditions	Vc (m/min)	150	130	150	120	110	157
	f (mm/rev)	0.06	0.13		0.1	0.08	0.12
Workpiece Material		1.0040 - St42-2	1.7220 - 34CrMo4		1.7262 - 15CrMo5	1.0040 - St42-2	
Required Power (Load Meter values)		60%	80%	95%	100%	60%	100%
Remarks		-	-		With conventional drill, limited up to ø40	-	

Formula for calculating required power (approximate value) ➡ R33