

Optimum drilling and lubrication with BDS products.

Recommended cutting speed

Core drill series	Material	m/min
HSS-Co 8	Fine-grained steel	
	< 700 N/m ²	10 – 15
	< 1000 N/m ²	10 – 15
	Stainless steel	10 – 15
	Cast iron (depending on type)	15 – 20
HSS-VarioPLUS	Fine-grained steel	
	< 700 N/m ²	10 – 15
	< 1000 N/m ²	10 – 15
HSS-Standard	Aluminium	20 – 30
	Steel	25
	Cast iron	10 – 20
Carbide	Steel/fine-grained steel	
	< 500 N/m ²	35
	< 700 N/m ²	25
	< 1,000 N/m ²	20
	Rustproof, stainless steel	20
Carbide-PLUS	Steel/fine-grained steel	
	< 500 N/m ²	35
	< 700 N/m ²	25
	< 1,000 N/m ²	20
	Rustproof, stainless steel	20
Carbide-RAIL	Railway rails	15 – 20

Cutting speed:

$$V_c = \frac{d \times \pi \times n}{1,000} = \text{m/min.}$$

Table of speeds

Diame-ter	Vc 15 m/ min	Vc 20 m/ min	Vc 25 m/ min	Vc 30 m/ min	Vc 35 m/ min
Ø	rpm	rpm	rpm	rpm	rpm
14	340	460	570	690	800
18	260	360	450	540	620
22	220	300	370	440	510
26	180	250	310	370	430
30	160	220	270	320	380
35	140	190	230	280	320
40	120	160	200	240	280
45	110	150	180	220	250
50	100	130	160	200	230
55	90	120	150	180	210
60	80	110	140	160	190
65	75	100	130	150	180
70	70	90	120	140	160
75	65	85	110	130	150
80	60	80	100	120	140
85	55	75	95	110	130
90	55	70	90	110	120
95	50	65	85	100	120
100	50	65	80	100	110
110	45	60	80	90	100
120	40	60	70	80	100
130	40	50	60	80	90

Speed:

$$n = \frac{v \times 1,000}{d \times \pi} = \text{rpm}$$

Assignment of BDS drill series and the appropriate BDS cooling lubricants to the material.

	Cutting oil BDS 5000	Lubrication spray BDS 5200	Cutting paste BDS 5500	Paste ZHS 570	BDS 6000 cooling lubricant concentrate
Aluminium, non-ferrous metals					
HSS-Standard	•	•			
Steel < 500 N/m²					
HSS-Standard	•	•			
Carbide					•
Carbide-PLUS					•
Fine-grained steel < 700 N/m²					
HSS-Co 8	•	•	•	•	
HSS-VarioPLUS	•	•	•	•	
Carbide					•
Carbide-PLUS					•
Fine-grained steel < 1,000 N/m²					
HSS-Co 8	•	•	•	•	
HSS-VarioPLUS	•	•	•	•	
Carbide					•
Carbide-PLUS					•
Rustproof steels, stainless steel					
HSS-Co 8	•	•	•	•	
Carbide					•
Carbide-PLUS					•
Cast iron					
HSS-Co 8					•
HSS-Standard					•
Railway rails					
Carbide-RAIL					•

