



DH451, DH452, DH453 SERIES

with COOLANT HOLES

RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)		Vc (m/min)	Parameter	Drill Diameter (mm)			
					1.0	2.0			3.0	4.0	5.0	6.0
P	1	Non-alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310
	2			FEED	0.02-0.04	0.04-0.06		FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20
	3			RPM	22280	11140		RPM	10610	7960	6370	5310
	4		70	FEED	0.02-0.04	0.04-0.06	FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20	
	5											
	6	Low alloy steel		RPM	22280	11140	100	RPM	10610	7960	6370	5310
	7	50	FEED	0.02-0.04	0.04-0.06	FEED		0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20	
	8		RPM	15920	7960	RPM		7430	5570	4460	3710	
	9		FEED	0.02-0.04	0.04-0.06	FEED	0.04-0.10	0.06-0.12	0.12-0.18	0.14-0.20		
	10	High alloyed steel, and tool steel										
	11											
M	12	Stainless steel	40	RPM	12730	6370	50	RPM	5310	3980	3180	2650
	13		FEED	0.02-0.04	0.02-0.04	FEED	0.03-0.05	0.05-0.09	0.07-0.11	0.09-0.13		
	14		RPM	7960	3980	40	RPM	4240	3180	2550	2120	
K	15	Grey cast iron	25	FEED	0.02-0.04	0.02-0.04	60	FEED	0.03-0.05	0.05-0.09	0.07-0.11	0.09-0.13
	16		RPM	14320	7160	RPM	6370	4770	3820	3180		
	17	Nodular cast iron	45	FEED	0.02-0.04	0.02-0.04	FEED	0.04-0.06	0.06-0.10	0.08-0.12	0.10-0.14	
	18											
	19	Malleable cast iron										
	20											
N	21	Aluminum-wrought alloy										
	22											
	23	Aluminum-cast, alloyed	130	RPM	41380	20690	180	RPM	19100	14320	11460	9550
	24		FEED	0.04-0.10	0.08-0.14	180	FEED	0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	25		110	RPM	35010	17510	160	RPM	16980	12730	10190	8490
	26		FEED	0.04-0.10	0.08-0.14	160	FEED	0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	27	Copper and Copper Alloys (Bronze / Brass)	90	RPM	28650	14320	130	RPM	13790	10350	8280	6900
	28		FEED	0.04-0.08	0.06-0.10	FEED	0.12-0.18	0.16-0.22	0.17-0.23	0.19-0.25		
	29	Non Metallic Materials										
	30											
S	31	Heat Resistant Super Alloys										
	32											
	33											
	34											
	35											
	36	Titanium Alloys										
	37		25	RPM	7960	3980	40	RPM	4240	3180	2550	2120
H	38	Hardened steel										
	39											
	40	Chilled Cast Iron										
	41	Hardened Cast Iron										

► Recommend to reduce the feed rate as following

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Feed 100% : DH451(3xD), DH452(5xD) **Feed 85%** : DH453(8xD)


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ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)						
					8.0	10.0	12.0	14.0	16.0	18.0	20.0
P	1	Non-alloy steel	100	RPM							
	2			FEED	3980	3180	2650	2270	1990	1770	1590
	3			RPM	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38
	4			FEED	3980	3180	2650	2270	1990	1770	1590
	5			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38
	6	Low alloy steel	100	RPM							
	7			FEED	3980	3180	2650	2270	1990	1770	1590
	8			RPM	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38
	9			FEED	2790	2230	1860	1590	1390	1240	1110
	10			FEED	0.16-0.22	0.20-0.26	0.18-0.28	0.20-0.30	0.22-0.32	0.26-0.36	0.28-0.38
	11	High alloyed steel, and tool steel									
M	12	Stainless steel	50	RPM	1990	1590	1330	1140	990	880	800
	13		40	FEED	0.09-0.13	0.10-0.15	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19	0.15-0.20
	14		60	RPM	1590	1270	1060	910	800	710	640
K	15	Grey cast iron									
	16										
	17	Nodular cast iron									
	18										
	19	Malleable cast iron									
	20										
N	21	Aluminum-wrought alloy	180	RPM	7160	5730	4770	4090	3580	3180	2860
	22		180	FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45
	23	Aluminum-cast, alloyed	160	RPM	7160	5730	4770	4090	3580	3180	2860
	24		160	FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45
	25		160	RPM	6370	5090	4240	3640	3180	2830	2550
	26		160	FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45
	27	Copper and Copper Alloys (Bronze / Brass)	130	RPM	6370	5090	4240	3640	3180	2830	2550
	28		130	FEED	0.24-0.30	0.29-0.35	0.29-0.35	0.30-0.40	0.30-0.40	0.33-0.43	0.35-0.45
	29	Non Metallic Materials			5170	4140	3450	2960	2590	2300	2070
	30				0.22-0.28	0.24-0.30	0.24-0.30	0.25-0.35	0.25-0.35	0.28-0.38	0.30-0.40
S	31	Heat Resistant Super Alloys									
	32										
	33										
	34										
	35										
	36	Titanium Alloys									
	37		40	RPM	1590	1270	1060	910	800	710	640
H	38	Hardened steel			0.08-0.12	0.09-0.14	0.10-0.15	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19
	39										
	40	Chilled Cast Iron									
	41	Hardened Cast Iron									

► Recommend to reduce the feed rate as following

Feed 100% : DH451(3xD), DH452(5xD) **Feed 85% :** DH453(8xD)