

RECOMMENDED CUTTING CONDITIONS

DH451, DH452, DH453 SERIES with COOLANT HOLES

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

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)		Vc	Parameter	Drill Diameter (mm)			
					1.0	2.0			3.0	4.0	5.0	6.0
P	2	Non-alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310
	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	Low alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310
	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	
6	Low alloy steel	70	RPM	22280	11140	100	RPM	10610	7960	6370	5310	
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		
7	Low alloy steel	50	RPM	15920	7960	70	RPM	7430	5570	4460	3710	
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		
M	12	Stainless steel	40	RPM	12730	6370	50	RPM	5310	3980	3180	2650
	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	
	13		Stainless steel	25	RPM	7960	3980	40	RPM	4240	3180	2550
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	Stainless steel	45	RPM	14320	7160	60	RPM	6370	4770	3820	3180	
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		
N	21	Aluminum-wrought alloy	130	RPM	41380	20690	180	RPM	19100	14320	11460	9550
	FEED			0.04-0.10	0.08-0.14	FEED		0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	22	Aluminum-wrought alloy	130	RPM	41380	20690	180	RPM	19100	14320	11460	9550
	FEED			0.04-0.10	0.08-0.14	FEED		0.14-0.20	0.19-0.25	0.20-0.26	0.22-0.28	
	23	Aluminum-cast, alloyed	110	RPM	35010	17510	160	RPM	16980	12730	10190	8490
FEED	0.04-0.10			0.08-0.14	FEED	0.14-0.20		0.19-0.25	0.20-0.26	0.22-0.28		
24	Aluminum-cast, alloyed			110	RPM	35010		17510	160	RPM	16980	12730
FEED		0.04-0.10	0.08-0.14		FEED	0.14-0.20	0.19-0.25	0.20-0.26		0.22-0.28		
25	Aluminum-cast, alloyed	90	RPM	28650	14320	130	RPM	13790	10350	8280	6900	
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		
S	37	Titanium Alloys	25	RPM	7960	3980	40	RPM	4240	3180	2550	2120
				FEED	0.01-0.03	0.01-0.03		FEED	0.02-0.04	0.04-0.08	0.06-0.10	0.08-0.12

ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)						
					8.0	10.0	12.0	14.0	16.0	18.0	20.0
P	2	Non-alloy steel	100	RPM	3980	3180	2650	2270	1990	1770	1590
				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
	3		100	RPM	3980	3180	2650	2270	1990	1770	1590
				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	3980	3180	2650	2270	1990	1770	1590
				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
7		70	RPM	2790	2230	1860	1590	1390	1240	1110	
			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	
M	12	Stainless steel	50	RPM	1990	1590	1330	1140	990	880	800
				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
	13		40	RPM	1590	1270	1060	910	800	710	640
				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	2390	1910	1590	1360	1190	1060	950
				FEED	0.10-0.14	0.11-0.16	0.12-0.17	0.13-0.18	0.14-0.19	0.15-0.20	0.16-0.21
N	21	Aluminum-wrought alloy	180	RPM	7160	5730	4770	4090	3580	3180	2860
				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
	22		180	RPM	7160	5730	4770	4090	3580	3180	2860
				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	6370	5090	4240	3640	3180	2830	2550
				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
	24		160	RPM	6370	5090	4240	3640	3180	2830	2550
				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		130	RPM	5170	4140	3450	2960	2590	2300	2070
				FEED	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	37	Titanium Alloys	40	RPM	1590	1270	1060	910	800	710	640
				FEED	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

► Recommend to reduce the feed rate as following

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