Cutting Conditions

NACHI นาชิ

• AQUA Drills EX Stub L9600

High-Speed Drilling in Wet Condition

Work Material / Drilling Condition	Structural Steels Carbon Steels Cast Irons SS400 S50C FC250		Alloy Steels Heat treated Steels SCM400 NAK HPM		Mold Steels Hardended Steels SKD61 NAK HPM		Hardened Steels		Cast Iron FCD400	
	~200HB		20~30HRC		(30~40HRC)		(40~50HRC)			
Dia. of Drill mm	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
2	19100	900	15900	750	8000	330	6400	230	14000	670
3	12700	1000	10500	830	5300	370	4250	260	9500	750
5	7600	1000	6400	830	3200	370	2550	260	5700	750
8	4800	100	4000	830	2000	370	1600	260	3600	750
10	3800	940	3200	790	1600	350	1250	240	2900	710
12	3200	890	2650	750	1300	330	1050	230	2400	670
16	2400	820	2000	690	1000	300	800	210	1800	620

Drilling in Dry Condition

Work Material / Drilling Condition	Structural Steels Carbon Steels Cast Irons SS400 S50C FC250		Alloy Steels Heat treated Steels SCM400 NAK HPM		Mold Steels Hardended Steels SKD61 NAK HPM		Hardened Steels		Cast Iron FCD400		Stainless Steels SUS304 SUS3 16	
	~200HB		20~30HRC		(30~40HRC)		(40~50HRC)					
Dia. of Drill mm	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
2	127000	600	10500	480	5600	230	4000	140	9500	450	4800	140
3	8500	660	7000	540	3700	260	2650	160	6400	500	3200	150
5	5100	660	4100	540	2200	260	1600	160	3800	500	1900	150
8	3200	660	2600	540	1400	260	1000	160	2400	500	1200	150
10	2550	630	2100	510	1100	250	800	150	1900	470	950	140
12	2100	600	1700	480	950	230	650	140	1600	440	800	130
16	1600	550	1300	440	700	210	500	130	1200	410	600	120

• AQUA Drills EX Regular L9620

High-Speed Drilling in Wet Condition

Work Material / Drilling Condition	Structural Steels Carbon Steels Cast Irons SS400 S50C FC250		Alloy Steels Heat treated Steels SCM400 NAK HPM		Mold Steels Hardended Steels SKD61 NAK HPM		Hardened Steels		Cast Iron FCD400	
	~200HB		20~30HRC		(30~40HRC)		(40~50HRC)			
Dia. of Drill mm	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
2	19100	790	15900	660	8000	290	6400	210	14000	590
3	12700	880	10500	730	5300	320	4250	230	9500	660
5	7600	880	6400	730	3200	320	2550	230	5700	660
8	4800	880	4000	730	2000	320	1600	230	3600	660
10	3800	840	3200	700	1600	300	1250	220	2900	630
12	3200	790	2650	660	1300	280	1050	210	2400	600
16	2400	730	2000	610	1000	260	800	190	1800	550

Drilling in Dry Condition

Work Material / Drilling Condition	Structural Steels Carbon Steels Cast Irons SS400 S50C FC250		Alloy Steels Heat treated Steels SCM400 NAK HPM		Mold Steels Hardended Steels SKD61 NAK HPM		Hardened Steels		Cast Iron FCD400		Stainless Steels SUS304 SUS3 16	
	~200HB		20~30HRC		(30~40HRC)		(40~50HRC)					
Dia. of Drill mm	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min	Rotation min^{-1}	Feed mm/min
2	12700	530	10500	430	5600	200	4000	130	9500	400	4800	130
3	8500	590	7000	480	3700	220	2650	140	6400	440	3200	140
5	5100	590	4100	480	2200	220	1600	140	3800	440	1900	140
8	3200	590	2600	480	1400	220	1000	140	2400	440	1200	140
10	2550	560	2100	460	1100	210	800	140	1900	420	950	130
12	2100	530	1700	430	950	200	650	130	1600	400	800	120
16	1600	490	1300	390	700	180	500	120	1200	370	600	110