Cutting Conditions

NACHI นาชิ

• Taper Shank Drills L602/L650

Work Material / Drilling Condition / Dia. of Drill mm	Rolled Steels Carbon Steels SS, S C		Alloy Steels SCM Pre-Hardended Steels NAK, HPM		Mold Steels Stainless Steels Hardended Steels (35~45HRC)		Cast Irons FC, FCD		Aluminium Nonferrous Alloys	
	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
1	4800	100	3800	65	2900	44	5300	130	8100	200
2	2900	120	2300	78	1700	51	3200	160	4900	250
3	2100	150	1700	100	1300	68	2300	200	3600	320
5	1300	140	1000	94	760	63	1400	190	2200	300
8	800	120	640	82	480	54	900	170	1400	260
10	640	110	510	74	380	48	700	150	1100	230
12	530	100	420	68	320	46	580	140	900	210
16	400	92	320	63	240	41	440	130	680	200
20	320	83	250	55	190	37	350	110	540	180
25	250	75	200	51	150	34	280	110	430	160
30	210	67	170	46	130	31	230	90	360	140
40	160	58	130	40	100	27	180	81	270	120
50	130	52	100	34	80	24	140	70	220	110

As for the upper table, it is the value when it lubricates fully with the Vertical machine. In horizontal machine, use step process.
Adjust drilling condition when an unusual vibration, different sound occur by cutting.

หมายเหตุ : สำหรับ Taper shank long drills L650 (ดอกสว่านยาวพิเศษ) ใช้ความเร็วรอบเท่าตารางด้านบน แล้วลด Feed ลง 30% ⟸ **L650**

• SG-ESS Drills L7572P

Work Material / Drilling Condition / Dia. of Drill mm	Rolled Steels Carbon Steels SS, S C		Alloy Steels SCM Pre-Hardended Steels NAK, HPM		Mold Steels Stainless Steels Hardended Steels (35~45HRC)		Cast Irons FC, FCD		Aluminium Nonferrous Alloys	
	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	5700	360	4600	240	2400	135	6300	490	9700	760
3	4200	460	3400	320	1600	145	4700	640	7200	980
5	2500	430	2000	290	960	100	2800	600	4300	920
8	1600	370	1300	250	600	100	1800	530	2700	790
10	1300	340	1000	230	480	100	1400	460	2200	730
12	1100	310	850	210	400	90	1200	430	1800	670
16	800	290	640	200	300	80	880	390	1400	610
20	640	260	510	180	240	75	700	350	1100	550
25	510	240	410	160	200	70	560	330	870	510
32	400	180	320	120	150	60	440	250	680	380

As for the upper table, it is the value when it lubricates fully with the Vertical machine. In horizontal machine, use step process.
Adjust drilling condition when an unusual vibration, different sound occur by cutting.

• SG-ES Drills L7570P

Work Material / Drilling Condition / Dia. of Drill mm	Carbon Steels S C		Structural Steels SS		Alloy Steels SCM Pre-Hardended Steels NAK, HPM		Mold Steels Stainless Steels Hardended Steels (35~45HRC)		Cast Irons FC, FCD		Aluminium Nonferrous Alloys	
	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	5700	300	5300	340	4600	200	2400	85	6300	410	9700	630
3	4200	380	3500	340	3400	260	1600	90	4700	530	7200	820
5	2500	380	2100	340	2000	240	960	90	2800	500	4300	770
8	1600	310	1300	340	1300	210	600	90	1800	440	2700	660
10	1300	280	1050	340	1000	190	480	90	1400	390	2200	610
12	1100	260	880	300	850	180	400	80	1200	360	1800	560
16	800	240	660	240	640	160	300	75	880	330	1400	500
20	640	220	530	200	510	150	240	70	700	300	1100	460
25	510	200	420	170	410	140	200	65	560	270	870	420
32	400	150	330	150	320	100	150	55	440	210	680	330

As for the upper table, it is the value when it lubricates fully with the Vertical machine. In horizontal machine, use step process.
Adjust drilling condition when an unusual vibration, different sound occur by cutting.
SG-ES is not applied to Austenitic Stainless Steels.