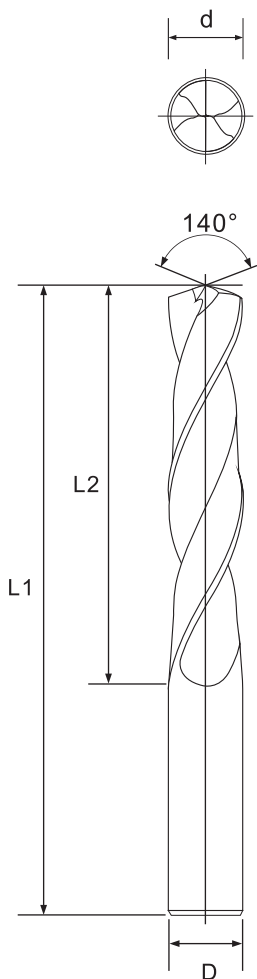




nACro 3SD Solid Jet Drill

Mode	Diameter d	Length of Cut L2	Shank Diameter D	Full Length L1
3SD0302	3	20	6	62L
3SD0332	3.3	20	6	62L
3SD0352	3.5	20	6	62L
3SD0362	3.6	20	6	62L
3SD0372	3.7	20	6	62L
3SD0382	3.8	24	6	66L
3SD0402	4	24	6	66L
3SD0422	4.2	24	6	66L
3SD0452	4.5	24	6	66L
3SD0462	4.6	24	6	66L
3SD0482	4.8	28	6	66L
3SD0502	5	28	6	66L
3SD0552	5.5	28	6	66L
3SD0572	5.7	28	6	66L
3SD0582	5.8	28	6	66L
3SD0602	6	28	6	66L
3SD0642	6.4	34	8	79L
3SD0652	6.5	34	8	79L
3SD0682	6.8	34	8	79L
3SD0702	7	34	8	79L
3SD0742	7.4	41	8	79L
3SD0752	7.5	41	8	79L
3SD0782	7.8	41	10	79L
3SD0802	8	41	10	79L
3SD0852	8.5	47	10	89L
3SD0882	8.8	47	10	89L
3SD0902	9	47	10	89L
3SD0932	9.3	47	10	89L
3SD0952	9.5	47	10	89L
3SD0982	9.8	47	10	89L
3SD1002	10	47	10	89L
3SD1022	10.2	55	12	102L
3SD1032	10.3	55	12	102L
3SD1052	10.5	55	12	102L
3SD1102	11	55	12	102L
3SD1122	11.2	55	12	102L
3SD1152	11.5	55	12	102L
3SD1172	11.7	55	12	102L
3SD1202	12	55	12	102L
3SD1252	12.5	60	14	107L
3SD1302	13	60	14	107L
3SD1352	13.5	60	14	107L
3SD1372	13.7	60	14	107L
3SD1402	14	60	14	107L
3SD1452	14.5	65	16	115L
3SD1502	15	65	16	115L
3SD1552	15.5	65	16	115L
3SD1602	16	65	16	115L
3SD1652	16.5	73	18	123L
3SD1702	17	73	18	123L
3SD1802	18	73	18	123L
3SD1902	19	79	20	131L
3SD2002	20	79	20	131L



nACro nACro Drills 3SD & 5SD

3SD Cutting condition

High speed drilling in wet condition

Work Material Drilling Condition Drill Dia. (mm)	Structural Steels, Carbon Steels, Cast Irons SS, SC, FC		Alloy Steels, Pre-hardened Steels SCM, NAK		Mold Steels, Hardened Steels (30~40HRC)		Hardened Steels (40~50HRC)		Ductile Cast Irons (FCD450)	
	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
3	16000	1700	11000	1100	7400	780	5300	480	11000	660
5	9600	1700	6400	1100	4500	780	3200	480	6400	640
8	6000	1600	4000	1100	2800	750	2000	460	4000	640
10	4800	1500	3200	1000	2200	710	1600	440	3200	640
12	4000	1500	2700	1000	1900	700	1300	410	2700	640
16	3000	1300	2000	900	1400	630	1000	380	2000	620

Drilling in dry condition

Work Material Drilling Condition Drill Dia. (mm)	Structural Steels, Carbon Steels, Cast Irons SS, SC, FC		Alloy Steels, Pre-hardened Steels SCM, NAK		Mold Steels, Hardened Steels (30~40HRC)		Hardened Steels (40~50HRC)		Ductile Cast Irons (FCD450)	
	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
3	8500	640	6900	520	3700	280	2700	160	6900	410
5	5100	640	4100	520	2200	280	1600	160	4100	410
8	3200	610	2600	500	1400	270	1000	150	2600	410
10	2500	590	2100	480	1100	260	800	150	2100	400
12	2100	560	1700	460	900	250	700	140	1700	400
16	1600	510	1300	420	700	200	500	130	1300	400

5SD Cutting condition

High speed drilling in wet condition

Work Material Drilling Condition Drill Dia. (mm)	Structural Steels, Carbon Steels, Cast Irons SS, SC, FC		Alloy Steels, Pre-hardened Steels SCM, NAK		Mold Steels, Hardened Steels (30~40HRC)		Hardened Steels (40~50HRC)		Ductile Cast Irons (FCD450)	
	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
3	16000	1550	11000	1000	7400	700	5300	430	11000	600
5	9600	1550	6400	1000	4500	700	3200	430	6400	580
8	6000	1450	4000	1000	2800	680	2000	420	4000	580
10	4800	1350	3200	900	2200	640	1600	400	3200	580
12	4000	1350	2700	900	1900	630	1300	370	2700	580
16	3000	1100	2000	800	1400	570	1000	340	2000	560

Drilling in dry condition

Work Material Drilling Condition Drill Dia. (mm)	Structural Steels, Carbon Steels, Cast Irons SS, SC, FC		Alloy Steels, Pre-hardened Steels SCM, NAK		Mold Steels, Hardened Steels (30~40HRC)		Hardened Steels (40~50HRC)		Ductile Cast Irons (FCD450)	
	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
3	8500	580	6900	470	3700	250	2700	150	6900	370
5	5100	580	4100	470	2200	250	1600	150	4100	370
8	3200	550	2600	450	1400	240	1000	140	2600	370
10	2500	530	2100	430	1100	240	800	140	2100	360
12	2100	500	1700	410	900	230	700	130	1700	360
16	1600	460	1300	380	700	200	500	120	1300	360

1. Use air blow for cooling and the chip exclusion in dry condition.
2. Aluminum alloys, Light metals, Stainless steels are not recommended.
3. Adjust drilling condition when an unusual vibration, different sound occur by cutting.
4. When using low speed machines, use the maximum speed and adjust the feed rate.