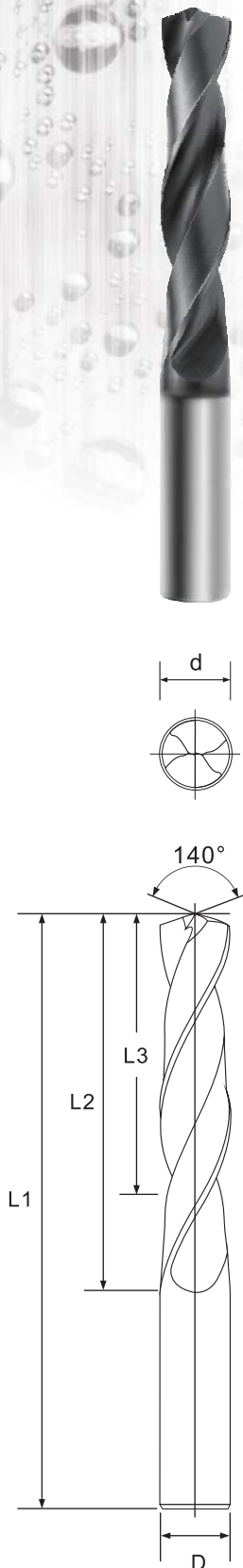




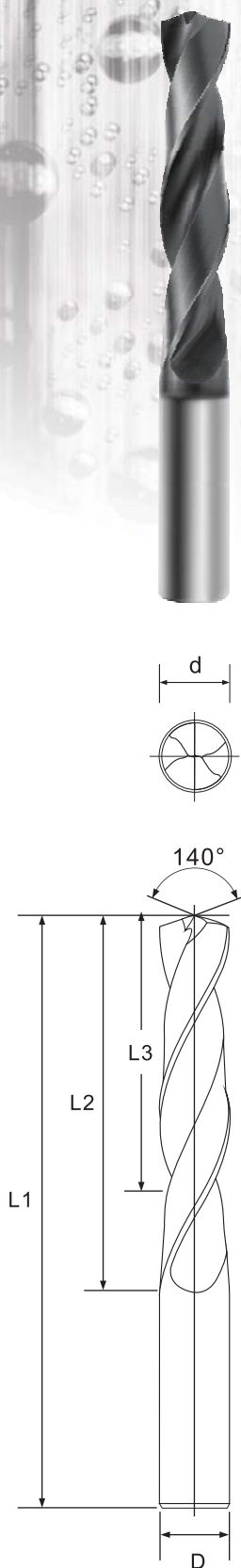
nACro 5SD Solid Jet Drill



Mode	Diameter d	Flute Length L3	Length of Cut L2	Shank Diameter D	Full Length L1
5SD0302	3	15	20	4	55L
5SD0312	3.1	15	20	4	55L
5SD0322	3.2	15	20	4	55L
5SD0332	3.3	15	20	4	55L
5SD0342	3.4	15	20	4	55L
5SD0352	3.5	15	20	4	55L
5SD0362	3.6	19	25	4	55L
5SD0372	3.7	19	25	4	55L
5SD0382	3.8	19	25	4	55L
5SD0392	3.9	19	25	4	55L
5SD0402	4	19	25	4	55L
5SD0412	4.1	19	25	4	55L
5SD0422	4.2	25	32	5	62L
5SD0432	4.3	25	32	5	62L
5SD0442	4.4	25	32	5	62L
5SD0452	4.5	25	32	5	62L
5SD0462	4.6	25	32	5	62L
5SD0472	4.7	25	32	5	62L
5SD0482	4.8	25	32	5	62L
5SD0492	4.9	25	32	5	62L
5SD0502	5	25	32	5	62L
5SD0512	5.1	25	32	5	62L
5SD0522	5.2	27	36	6	66L
5SD0532	5.3	27	36	6	66L
5SD0542	5.4	27	36	6	66L
5SD0552	5.5	27	36	6	66L
5SD0562	5.6	27	36	6	66L
5SD0572	5.7	27	36	6	66L
5SD0582	5.8	27	36	6	66L
5SD0592	5.9	27	36	6	66L
5SD0602	6	27	36	6	66L
5SD0612	6.1	27	36	6	66L
5SD0622	6.2	32	42	7	74L
5SD0632	6.3	32	42	7	74L
5SD0642	6.4	32	42	7	74L
5SD0652	6.5	32	42	7	74L
5SD0662	6.6	32	42	7	74L
5SD0672	6.7	32	42	7	74L
5SD0682	6.8	32	42	7	74L
5SD0692	6.9	32	42	7	74L
5SD0702	7	32	42	7	74L
5SD0712	7.1	32	42	7	74L
5SD0722	7.2	34	46	8	79L
5SD0732	7.3	34	46	8	79L
5SD0742	7.4	34	46	8	79L
5SD0752	7.5	34	46	8	79L
5SD0762	7.6	34	46	8	79L
5SD0772	7.7	34	46	8	79L
5SD0782	7.8	34	46	8	79L
5SD0792	7.9	34	46	8	79L
5SD0802	8	34	46	8	79L
5SD0812	8.1	34	46	8	79L
5SD0822	8.2	37	50	9	84L



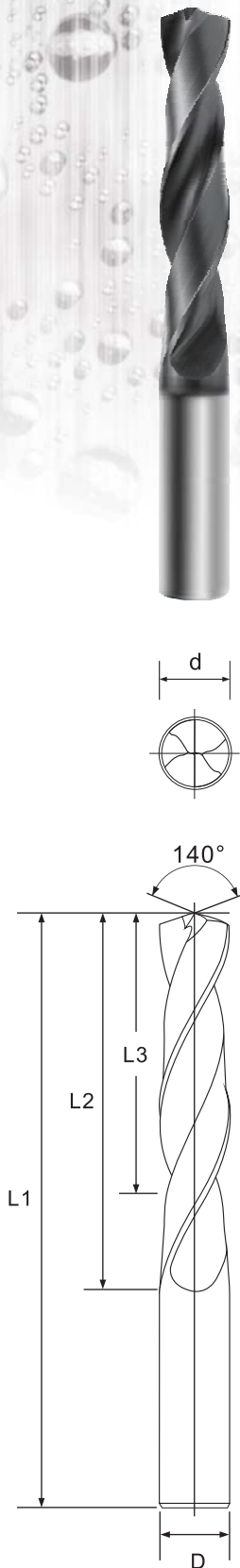
nAcro 5SD Solid Jet Drill



Mode	Diameter d	Flute Length L3	Length of Cut L2	Shank Diameter D	Full Length L1
5SD0832	8.3	37	50	9	84L
5SD0842	8.4	37	50	9	84L
5SD0852	8.5	37	50	9	84L
5SD0862	8.6	37	50	9	84L
5SD0872	8.7	37	50	9	84L
5SD0882	8.8	37	50	9	84L
5SD0892	8.9	37	50	9	84L
5SD0902	9	37	50	9	84L
5SD0912	9.1	37	50	9	84L
5SD0922	9.2	38	53	10	89L
5SD0932	9.3	38	53	10	89L
5SD0942	9.4	38	53	10	89L
5SD0952	9.5	38	53	10	89L
5SD0962	9.6	38	53	10	89L
5SD0972	9.7	38	53	10	89L
5SD0982	9.8	38	53	10	89L
5SD0992	9.9	38	53	10	89L
5SD1002	10	38	53	10	89L
5SD1012	10.1	38	53	10	89L
5SD1022	10.2	40	55	11	95L
5SD1032	10.3	40	55	11	95L
5SD1042	10.4	40	55	11	95L
5SD1052	10.5	40	55	11	95L
5SD1062	10.6	40	55	11	95L
5SD1072	10.7	40	55	11	95L
5SD1082	10.8	40	55	11	95L
5SD1092	10.9	40	55	11	95L
5SD1102	11	40	55	11	95L
5SD1112	11.1	40	55	11	95L
5SD1122	11.2	44	62	12	102L
5SD1132	11.3	44	62	12	102L
5SD1142	11.4	44	62	12	102L
5SD1152	11.5	44	62	12	102L
5SD1162	11.6	44	62	12	102L
5SD1172	11.7	44	62	12	102L
5SD1182	11.8	44	62	12	102L
5SD1192	11.9	44	62	12	102L
5SD1202	12	44	62	12	102L
5SD1212	12.1	44	62	12	102L
5SD1222	12.2	42	62	13	102L
5SD1232	12.3	42	62	13	102L
5SD1242	12.4	42	62	13	102L
5SD1252	12.5	42	62	13	102L
5SD1262	12.6	42	62	13	102L
5SD1272	12.7	42	62	13	102L
5SD1282	12.8	42	62	13	102L
5SD1292	12.9	42	62	13	102L
5SD1302	13	42	62	13	102L
5SD1312	13.1	42	62	13	102L
5SD1322	13.2	43	64	14	107L
5SD1332	13.3	43	64	14	107L
5SD1342	13.4	43	64	14	107L
5SD1352	13.5	43	64	14	107L



nACro 5SD Solid Jet Drill



Model	Diameter d	Flute Length L3	Length of Cut L2	Shank Diameter D	Full Length L1
5SD1362	13.6	43	64	14	107L
5SD1372	13.7	43	64	14	107L
5SD1382	13.8	43	64	14	107L
5SD1392	13.9	43	64	14	107L
5SD1402	14	43	64	14	107L
5SD1412	14.1	43	64	14	107L
5SD1422	14.2	45	67	15	111L
5SD1432	14.3	45	67	15	111L
5SD1442	14.4	45	67	15	111L
5SD1452	14.5	45	67	15	111L
5SD1462	14.6	45	67	15	111L
5SD1472	14.7	45	67	15	111L
5SD1482	14.8	45	67	15	111L
5SD1492	14.9	45	67	15	111L
5SD1502	15	45	67	15	111L
5SD1512	15.1	45	67	15	111L
5SD1522	15.2	45	69	16	115L
5SD1532	15.3	45	69	16	115L
5SD1542	15.4	45	69	16	115L
5SD1552	15.5	45	69	16	115L
5SD1562	15.6	45	69	16	115L
5SD1572	15.7	45	69	16	115L
5SD1582	15.8	45	69	16	115L
5SD1592	15.9	45	69	16	115L
5SD1602	16	45	69	16	115L
5SD1612	16.1	45	69	16	115L
5SD1622	16.2	46	71	17	119L
5SD1632	16.3	46	71	17	119L
5SD1642	16.4	46	71	17	119L
5SD1652	16.5	46	71	17	119L
5SD1662	16.6	46	71	17	119L
5SD1672	16.7	46	71	17	119L
5SD1682	16.8	46	71	17	119L
5SD1692	16.9	46	71	17	119L
5SD1702	17	46	71	17	119L
5SD1712	17.1	46	71	17	119L
5SD1722	17.2	47	74	18	123L
5SD1732	17.3	47	74	18	123L
5SD1742	17.4	47	74	18	123L
5SD1752	17.5	47	74	18	123L
5SD1762	17.6	47	74	18	123L
5SD1772	17.7	47	74	18	123L
5SD1782	17.8	47	74	18	123L
5SD1792	17.9	47	74	18	123L
5SD1802	18	47	74	18	123L
5SD1812	18.1	47	74	18	123L
5SD1822	18.2	48	76	19	127L
5SD1832	18.3	48	76	19	127L
5SD1842	18.4	48	76	19	127L
5SD1852	18.5	48	76	19	127L
5SD1862	18.6	48	76	19	127L
5SD1872	18.7	48	76	19	127L
5SD1882	18.8	48	76	19	127L
5SD1892	18.9	48	76	19	127L
5SD1902	19	48	76	19	127L
5SD1912	19.1	48	76	19	127L
5SD1922	19.2	50	80	20	131L
5SD1932	19.3	50	80	20	131L
5SD1942	19.4	50	80	20	131L
5SD1952	19.5	50	80	20	131L
5SD1962	19.6	50	80	20	131L
5SD1972	19.7	50	80	20	131L
5SD1982	19.8	50	80	20	131L
5SD1992	19.9	50	80	20	131L
5SD2002	20	50	80	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.