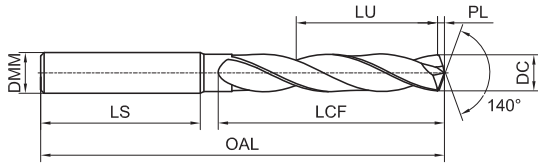


D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0100	1.00	9	45	4	28	7.5	0.18	●
D938-A5N-0105	1.05	9	45	4	28	7.4	0.19	○
D938-A5N-0110	1.10	9	45	4	28	7.4	0.20	○
D938-A5N-0120	1.20	9	45	4	28	7.2	0.22	○
D938-A5N-0130	1.30	9	45	4	28	7.1	0.24	○
D938-A5N-0140	1.40	9	45	4	28	6.9	0.25	○
D938-A5N-0145	1.45	9	45	4	28	6.8	0.26	○
D938-A5N-0150	1.50	12	55	4	35	9.8	0.27	○
D938-A5N-0155	1.55	12	55	4	35	9.7	0.28	○
D938-A5N-0160	1.60	12	55	4	35	9.6	0.29	●
D938-A5N-0165	1.65	12	55	4	35	9.5	0.30	●
D938-A5N-0170	1.70	12	55	4	35	9.5	0.31	○
D938-A5N-0175	1.75	12	55	4	35	9.4	0.32	○
D938-A5N-0180	1.80	12	55	4	35	9.3	0.33	○
D938-A5N-0185	1.85	12	55	4	35	9.2	0.34	○
D938-A5N-0190	1.90	12	55	4	35	9.2	0.35	●
D938-A5N-0195	1.95	12	55	4	35	9.1	0.35	○
D938-A5N-0200	2.00	18	62	4	38	15.0	0.36	●
D938-A5N-0205	2.05	18	62	4	38	14.9	0.37	○
D938-A5N-0210	2.10	18	62	4	38	14.9	0.38	●
D938-A5N-0215	2.15	18	62	4	38	14.8	0.39	○
D938-A5N-0220	2.20	18	62	4	38	14.7	0.40	○
D938-A5N-0230	2.30	18	62	4	38	14.6	0.42	●
D938-A5N-0235	2.35	18	62	4	38	14.5	0.43	●
D938-A5N-0240	2.40	22	62	4	35	18.4	0.44	●
D938-A5N-0250	2.50	22	62	4	35	18.3	0.45	●
D938-A5N-0255	2.55	22	62	4	35	18.2	0.46	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0260	2.60	22	62	4	35	18.1	0.47	●
D938-A5N-0265	2.65	22	62	4	35	18.0	0.48	○
D938-A5N-0270	2.70	22	62	4	35	18.0	0.49	●
D938-A5N-0275	2.75	22	62	4	35	17.9	0.50	○
D938-A5N-0280	2.80	22	62	4	35	17.8	0.51	●
D938-A5N-0290	2.90	22	62	4	35	17.7	0.53	●
D938-A5N-0295	2.95	22	62	4	35	17.6	0.54	○
D938-A5N-0300	3.00	28	66	6	36	23.5	0.55	●
D938-A5N-0305	3.05	28	66	6	36	23.4	0.56	○
D938-A5N-0310	3.10	28	66	6	36	23.4	0.56	●
D938-A5N-0315	3.15	28	66	6	36	23.3	0.57	●
D938-A5N-0320	3.20	28	66	6	36	23.2	0.58	●
D938-A5N-0325	3.25	28	66	6	36	23.1	0.59	○
D938-A5N-0330	3.30	28	66	6	36	23.1	0.60	●
D938-A5N-0335	3.35	28	66	6	36	23.0	0.61	○
D938-A5N-0340	3.40	28	66	6	36	22.9	0.62	●
D938-A5N-0350	3.50	28	66	6	36	22.8	0.64	●
D938-A5N-0355	3.55	28	66	6	36	22.7	0.65	○
D938-A5N-0360	3.60	28	66	6	36	22.6	0.66	●
D938-A5N-0365	3.65	28	66	6	36	22.5	0.66	●
D938-A5N-0370	3.70	28	66	6	36	22.5	0.67	●
D938-A5N-0380	3.80	36	74	6	36	30.3	0.69	●
D938-A5N-0385	3.85	36	74	6	36	30.2	0.70	○
D938-A5N-0390	3.90	36	74	6	36	30.2	0.71	●
D938-A5N-0395	3.95	36	74	6	36	30.1	0.72	○
D938-A5N-0400	4.00	36	74	6	36	30.0	0.73	●
D938-A5N-0405	4.05	36	74	6	36	29.9	0.74	●

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D1-D20 tools

Unit (mm)

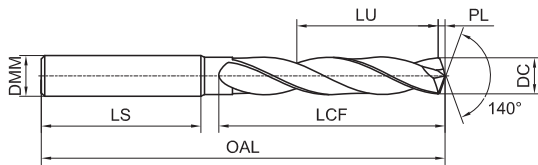
Workpiece Material													
P			M	K		N				S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminium Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
○	○	○		○	○								

○ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Continued

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0410	4.10	36	74	6	36	29.9	0.75	●
D938-A5N-0415	4.15	36	74	6	36	29.8	0.76	○
D938-A5N-0420	4.20	36	74	6	36	29.7	0.76	●
D938-A5N-0425	4.25	36	74	6	36	29.6	0.77	○
D938-A5N-0430	4.30	36	74	6	36	29.6	0.78	●
D938-A5N-0435	4.35	36	74	6	36	29.5	0.79	○
D938-A5N-0440	4.40	36	74	6	36	29.4	0.80	●
D938-A5N-0445	4.45	36	74	6	36	29.3	0.81	○
D938-A5N-0450	4.50	36	74	6	36	29.3	0.82	●
D938-A5N-0455	4.55	36	74	6	36	29.2	0.83	○
D938-A5N-0460	4.60	36	74	6	36	29.1	0.84	●
D938-A5N-0465	4.65	36	74	6	36	29.0	0.85	●
D938-A5N-0470	4.70	36	74	6	36	29.0	0.86	●
D938-A5N-0475	4.75	44	82	6	36	36.9	0.86	○
D938-A5N-0480	4.80	44	82	6	36	36.8	0.87	●
D938-A5N-0485	4.85	44	82	6	36	36.7	0.88	○
D938-A5N-0490	4.90	44	82	6	36	36.7	0.89	●
D938-A5N-0495	4.95	44	82	6	36	36.6	0.90	○
D938-A5N-0500	5.00	44	82	6	36	36.5	0.91	●
D938-A5N-0505	5.05	44	82	6	36	36.4	0.92	●
D938-A5N-0510	5.10	44	82	6	36	36.4	0.93	●
D938-A5N-0515	5.15	44	82	6	36	36.3	0.94	○
D938-A5N-0520	5.20	44	82	6	36	36.2	0.95	●
D938-A5N-0525	5.25	44	82	6	36	36.1	0.96	○
D938-A5N-0530	5.30	44	82	6	36	36.1	0.96	●
D938-A5N-0535	5.35	44	82	6	36	36.0	0.97	○
D938-A5N-0540	5.40	44	82	6	36	35.9	0.98	●

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0545	5.45	44	82	6	36	35.8	0.99	○
D938-A5N-0550	5.50	44	82	6	36	35.8	1.00	●
D938-A5N-0555	5.55	44	82	6	36	35.7	1.01	●
D938-A5N-0560	5.60	44	82	6	36	35.6	1.02	●
D938-A5N-0565	5.65	44	82	6	36	35.5	1.03	○
D938-A5N-0570	5.70	44	82	6	36	35.5	1.04	●
D938-A5N-0575	5.75	44	82	6	36	35.4	1.05	○
D938-A5N-0580	5.80	44	82	6	36	35.3	1.06	●
D938-A5N-0585	5.85	44	82	6	36	35.2	1.06	○
D938-A5N-0590	5.90	44	82	6	36	35.2	1.07	●
D938-A5N-0595	5.95	44	82	6	36	35.1	1.08	○
D938-A5N-0600	6.00	44	82	6	36	35.0	1.09	●
D938-A5N-0605	6.05	44	82	6	36	34.9	1.10	○
D938-A5N-0610	6.10	53	91	8	36	43.9	1.11	●
D938-A5N-0620	6.20	53	91	8	36	43.7	1.13	●
D938-A5N-0625	6.25	53	91	8	36	43.6	1.14	○
D938-A5N-0630	6.30	53	91	8	36	43.6	1.15	●
D938-A5N-0635	6.35	53	91	8	36	43.5	1.16	○
D938-A5N-0640	6.40	53	91	8	36	43.4	1.16	●
D938-A5N-0645	6.45	53	91	8	36	43.3	1.17	○
D938-A5N-0650	6.50	53	91	8	36	43.3	1.18	●
D938-A5N-0655	6.55	53	91	8	36	43.2	1.19	○
D938-A5N-0660	6.60	53	91	8	36	43.1	1.20	●
D938-A5N-0665	6.65	53	91	8	36	43.0	1.21	○
D938-A5N-0670	6.70	53	91	8	36	43.0	1.22	●
D938-A5N-0675	6.75	53	91	8	36	42.9	1.23	○
D938-A5N-0680	6.80	53	91	8	36	42.8	1.24	●

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D1-D20 tools

Unit (mm)

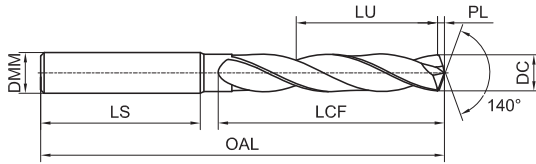
Workpiece Material													
P			M	K		N				S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminum Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
◎	◎	◎		○	○								

◎ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Continued

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0685	6.85	53	91	8	36	42.7	1.25	○
D938-A5N-0690	6.90	53	91	8	36	42.7	1.26	●
D938-A5N-0695	6.95	53	91	8	36	42.6	1.26	○
D938-A5N-0700	7.00	53	91	8	36	42.5	1.27	●
D938-A5N-0705	7.05	53	91	8	36	42.4	1.28	○
D938-A5N-0710	7.10	53	91	8	36	42.4	1.29	●
D938-A5N-0720	7.20	53	91	8	36	42.2	1.31	●
D938-A5N-0730	7.30	53	91	8	36	42.1	1.33	●
D938-A5N-0735	7.35	53	91	8	36	42.0	1.34	○
D938-A5N-0740	7.40	53	91	8	36	41.9	1.35	●
D938-A5N-0745	7.45	53	91	8	36	41.8	1.36	●
D938-A5N-0750	7.50	53	91	8	36	41.8	1.36	●
D938-A5N-0755	7.55	53	91	8	36	41.7	1.37	●
D938-A5N-0760	7.60	53	91	8	36	41.6	1.38	●
D938-A5N-0765	7.65	53	91	8	36	41.5	1.39	○
D938-A5N-0770	7.70	53	91	8	36	41.5	1.40	●
D938-A5N-0775	7.75	53	91	8	36	41.4	1.41	○
D938-A5N-0780	7.80	53	91	8	36	41.3	1.42	●
D938-A5N-0785	7.85	53	91	8	36	41.2	1.43	○
D938-A5N-0790	7.90	53	91	8	36	41.2	1.44	●
D938-A5N-0795	7.95	53	91	8	36	41.1	1.45	○
D938-A5N-0800	8.00	53	91	8	36	41.0	1.46	●
D938-A5N-0805	8.05	53	91	8	36	40.9	1.46	○
D938-A5N-0810	8.10	61	103	10	40	48.9	1.47	●
D938-A5N-0815	8.15	61	103	10	40	48.8	1.48	●
D938-A5N-0820	8.20	61	103	10	40	48.7	1.49	●
D938-A5N-0825	8.25	61	103	10	40	48.6	1.50	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0830	8.30	61	103	10	40	48.6	1.51	●
D938-A5N-0840	8.40	61	103	10	40	48.4	1.53	●
D938-A5N-0845	8.45	61	103	10	40	48.3	1.54	○
D938-A5N-0850	8.50	61	103	10	40	48.3	1.55	●
D938-A5N-0855	8.55	61	103	10	40	48.2	1.56	○
D938-A5N-0860	8.60	61	103	10	40	48.1	1.57	●
D938-A5N-0870	8.70	61	103	10	40	48.0	1.58	●
D938-A5N-0880	8.80	61	103	10	40	47.8	1.60	●
D938-A5N-0885	8.85	61	103	10	40	47.7	1.61	○
D938-A5N-0890	8.90	61	103	10	40	47.7	1.62	●
D938-A5N-0895	8.95	61	103	10	40	47.6	1.63	○
D938-A5N-0900	9.00	61	103	10	40	47.5	1.64	●
D938-A5N-0905	9.05	61	103	10	40	47.4	1.65	○
D938-A5N-0910	9.10	61	103	10	40	47.4	1.66	●
D938-A5N-0915	9.15	61	103	10	40	47.3	1.67	○
D938-A5N-0920	9.20	61	103	10	40	47.2	1.67	●
D938-A5N-0925	9.25	61	103	10	40	47.1	1.68	●
D938-A5N-0930	9.30	61	103	10	40	47.1	1.69	●
D938-A5N-0935	9.35	61	103	10	40	47.0	1.70	●
D938-A5N-0940	9.40	61	103	10	40	46.9	1.71	●
D938-A5N-0945	9.45	61	103	10	40	46.8	1.72	○
D938-A5N-0950	9.50	61	103	10	40	46.8	1.73	●
D938-A5N-0955	9.55	61	103	10	40	46.7	1.74	●
D938-A5N-0960	9.60	61	103	10	40	46.6	1.75	●
D938-A5N-0965	9.65	61	103	10	40	46.5	1.76	○
D938-A5N-0970	9.70	61	103	10	40	46.5	1.77	●
D938-A5N-0975	9.75	61	103	10	40	46.4	1.77	○

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D1-D20 tools

Unit (mm)

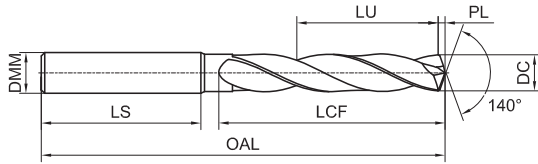
Workpiece Material													
P			M	K		N				S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminum Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
○	○	○		○	○								

○ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Continued

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-0980	9.80	61	103	10	40	46.3	1.78	●
D938-A5N-0985	9.85	61	103	10	40	46.2	1.79	○
D938-A5N-0990	9.90	61	103	10	40	46.2	1.80	●
D938-A5N-0995	9.95	61	103	10	40	46.1	1.81	○
D938-A5N-1000	10.00	61	103	10	40	46.0	1.82	●
D938-A5N-1005	10.05	61	103	10	40	45.9	1.83	●
D938-A5N-1010	10.10	71	118	12	45	55.9	1.84	●
D938-A5N-1015	10.15	71	118	12	45	55.8	1.85	○
D938-A5N-1020	10.20	71	118	12	45	55.7	1.86	●
D938-A5N-1025	10.25	71	118	12	45	55.6	1.87	●
D938-A5N-1030	10.30	71	118	12	45	55.6	1.87	●
D938-A5N-1035	10.35	71	118	12	45	55.5	1.88	○
D938-A5N-1040	10.40	71	118	12	45	55.4	1.89	●
D938-A5N-1050	10.50	71	118	12	45	55.3	1.91	●
D938-A5N-1060	10.60	71	118	12	45	55.1	1.93	●
D938-A5N-1070	10.70	71	118	12	45	55.0	1.95	●
D938-A5N-1080	10.80	71	118	12	45	54.8	1.97	●
D938-A5N-1085	10.85	71	118	12	45	54.7	1.97	●
D938-A5N-1090	10.90	71	118	12	45	54.7	1.98	●
D938-A5N-1100	11.00	71	118	12	45	54.5	2.00	●
D938-A5N-1105	11.05	71	118	12	45	54.4	2.01	○
D938-A5N-1110	11.10	71	118	12	45	54.4	2.02	●
D938-A5N-1115	11.15	71	118	12	45	54.3	2.03	○
D938-A5N-1120	11.20	71	118	12	45	54.2	2.04	●
D938-A5N-1125	11.25	71	118	12	45	54.1	2.05	○
D938-A5N-1130	11.30	71	118	12	45	54.1	2.06	●
D938-A5N-1135	11.35	71	118	12	45	54.0	2.07	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-1140	11.40	71	118	12	45	53.9	2.07	●
D938-A5N-1145	11.45	71	118	12	45	53.8	2.08	○
D938-A5N-1150	11.50	71	118	12	45	53.8	2.09	●
D938-A5N-1155	11.55	71	118	12	45	53.7	2.10	○
D938-A5N-1160	11.60	71	118	12	45	53.6	2.11	●
D938-A5N-1170	11.70	71	118	12	45	53.5	2.13	●
D938-A5N-1180	11.80	71	118	12	45	53.3	2.15	●
D938-A5N-1190	11.90	71	118	12	45	53.2	2.17	●
D938-A5N-1195	11.95	71	118	12	45	53.1	2.17	○
D938-A5N-1200	12.00	71	118	12	45	53.0	2.18	●
D938-A5N-1205	12.05	71	118	12	45	52.9	2.19	○
D938-A5N-1210	12.10	77	124	14	45	58.9	2.20	○
D938-A5N-1215	12.15	77	124	14	45	58.8	2.21	○
D938-A5N-1220	12.20	77	124	14	45	58.7	2.22	●
D938-A5N-1225	12.25	77	124	14	45	58.6	2.23	○
D938-A5N-1230	12.30	77	124	14	45	58.6	2.24	●
D938-A5N-1240	12.40	77	124	14	45	58.4	2.26	○
D938-A5N-1245	12.45	77	124	14	45	58.3	2.27	○
D938-A5N-1250	12.50	77	124	14	45	58.3	2.27	●
D938-A5N-1255	12.55	77	124	14	45	58.2	2.28	○
D938-A5N-1260	12.60	77	124	14	45	58.1	2.29	●
D938-A5N-1270	12.70	77	124	14	45	58.0	2.31	●
D938-A5N-1275	12.75	77	124	14	45	57.9	2.32	○
D938-A5N-1280	12.80	77	124	14	45	57.8	2.33	●
D938-A5N-1285	12.85	77	124	14	45	57.7	2.34	○
D938-A5N-1290	12.90	77	124	14	45	57.7	2.35	●
D938-A5N-1300	13.00	77	124	14	45	57.5	2.37	●

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D1-D20 tools

Unit (mm)

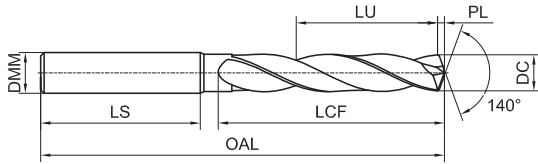
Workpiece Material													
P			M	K			N			S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminium Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
◎	◎	◎		○	○								

◎ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Continued

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-1305	13.05	77	124	14	45	57.4	2.37	○
D938-A5N-1310	13.10	77	124	14	45	57.4	2.38	○
D938-A5N-1315	13.15	77	124	14	45	57.3	2.39	○
D938-A5N-1320	13.20	77	124	14	45	57.2	2.40	●
D938-A5N-1325	13.25	77	124	14	45	57.1	2.41	○
D938-A5N-1330	13.30	77	124	14	45	57.1	2.42	○
D938-A5N-1335	13.35	77	124	14	45	57.0	2.43	○
D938-A5N-1340	13.40	77	124	14	45	56.9	2.44	○
D938-A5N-1350	13.50	77	124	14	45	56.8	2.46	●
D938-A5N-1355	13.55	77	124	14	45	56.7	2.47	○
D938-A5N-1360	13.60	77	124	14	45	56.6	2.47	○
D938-A5N-1370	13.70	77	124	14	45	56.5	2.49	●
D938-A5N-1375	13.75	77	124	14	45	56.4	2.50	●
D938-A5N-1380	13.80	77	124	14	45	56.3	2.51	●
D938-A5N-1390	13.90	77	124	14	45	56.2	2.53	●
D938-A5N-1395	13.95	77	124	14	45	56.1	2.54	○
D938-A5N-1400	14.00	77	124	14	45	56.0	2.55	●
D938-A5N-1405	14.05	77	124	14	45	55.9	2.56	○
D938-A5N-1410	14.10	83	133	16	48	61.9	2.57	○
D938-A5N-1420	14.20	83	133	16	48	61.7	2.58	●
D938-A5N-1425	14.25	83	133	16	48	61.6	2.59	○
D938-A5N-1430	14.30	83	133	16	48	61.6	2.60	○
D938-A5N-1440	14.40	83	133	16	48	61.4	2.62	○
D938-A5N-1450	14.50	83	133	16	48	61.3	2.64	●
D938-A5N-1460	14.60	83	133	16	48	61.1	2.66	●
D938-A5N-1470	14.70	83	133	16	48	61.0	2.68	○
D938-A5N-1475	14.75	83	133	16	48	60.9	2.68	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-1480	14.80	83	133	16	48	60.8	2.69	●
D938-A5N-1490	14.90	83	133	16	48	60.7	2.71	○
D938-A5N-1500	15.00	83	133	16	48	60.5	2.73	●
D938-A5N-1505	15.05	83	133	16	48	60.4	2.74	○
D938-A5N-1510	15.10	83	133	16	48	60.4	2.75	○
D938-A5N-1515	15.15	83	133	16	48	60.3	2.76	○
D938-A5N-1520	15.20	83	133	16	48	60.2	2.77	○
D938-A5N-1525	15.25	83	133	16	48	60.1	2.78	○
D938-A5N-1530	15.30	83	133	16	48	60.1	2.78	○
D938-A5N-1535	15.35	83	133	16	48	60.0	2.79	○
D938-A5N-1540	15.40	83	133	16	48	59.9	2.80	○
D938-A5N-1550	15.50	83	133	16	48	59.8	2.82	●
D938-A5N-1555	15.55	83	133	16	48	59.7	2.83	○
D938-A5N-1560	15.60	83	133	16	48	59.6	2.84	○
D938-A5N-1570	15.70	83	133	16	48	59.5	2.86	●
D938-A5N-1580	15.80	83	133	16	48	59.3	2.88	●
D938-A5N-1590	15.90	83	133	16	48	59.2	2.89	○
D938-A5N-1600	16.00	83	133	16	48	59.0	2.91	●
D938-A5N-1605	16.05	83	133	16	48	58.9	2.92	○
D938-A5N-1610	16.10	93	143	18	48	68.9	2.93	○
D938-A5N-1620	16.20	93	143	18	48	68.7	2.95	○
D938-A5N-1625	16.25	93	143	18	48	68.6	2.96	○
D938-A5N-1630	16.30	93	143	18	48	68.6	2.97	○
D938-A5N-1640	16.40	93	143	18	48	68.4	2.98	○
D938-A5N-1650	16.50	93	143	18	48	68.3	3.00	●
D938-A5N-1660	16.60	93	143	18	48	68.1	3.02	●
D938-A5N-1670	16.70	93	143	18	48	68.0	3.04	○

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D1-D20 tools

Unit (mm)

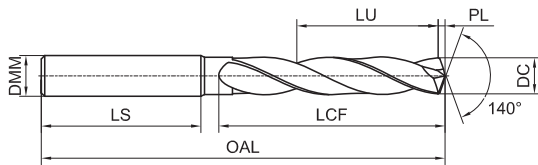
Workpiece Material													
P			M	K		N				S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminium Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
○	○	○		○	○								

○ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

D938-A5N

5D External Coolant Twist Drill for Plain Steel Machining



Continued

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-1675	16.75	93	143	18	48	67.9	3.05	○
D938-A5N-1680	16.80	93	143	18	48	67.8	3.06	○
D938-A5N-1690	16.90	93	143	18	48	67.7	3.08	○
D938-A5N-1695	16.95	93	143	18	48	67.6	3.08	●
D938-A5N-1700	17.00	93	143	18	48	67.5	3.09	●
D938-A5N-1710	17.10	93	143	18	48	67.4	3.11	○
D938-A5N-1720	17.20	93	143	18	48	67.2	3.13	○
D938-A5N-1730	17.30	93	143	18	48	67.1	3.15	○
D938-A5N-1740	17.40	93	143	18	48	66.9	3.17	○
D938-A5N-1750	17.50	93	143	18	48	66.8	3.18	●
D938-A5N-1760	17.60	93	143	18	48	66.6	3.20	○
D938-A5N-1770	17.70	93	143	18	48	66.5	3.22	○
D938-A5N-1780	17.80	93	143	18	48	66.3	3.24	○
D938-A5N-1790	17.90	93	143	18	48	66.2	3.26	○
D938-A5N-1795	17.95	93	143	18	48	66.1	3.27	○
D938-A5N-1800	18.00	93	143	18	48	66.0	3.28	●
D938-A5N-1810	18.10	101	153	20	50	73.9	3.29	○
D938-A5N-1820	18.20	101	153	20	50	73.7	3.31	○
D938-A5N-1830	18.30	101	153	20	50	73.6	3.33	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D938-A5N-1840	18.40	101	153	20	50	73.4	3.35	○
D938-A5N-1850	18.50	101	153	20	50	73.3	3.37	●
D938-A5N-1860	18.60	101	153	20	50	73.1	3.38	●
D938-A5N-1870	18.70	101	153	20	50	73.0	3.40	○
D938-A5N-1880	18.80	101	153	20	50	72.8	3.42	○
D938-A5N-1890	18.90	101	153	20	50	72.7	3.44	○
D938-A5N-1900	19.00	101	153	20	50	72.5	3.46	●
D938-A5N-1910	19.10	101	153	20	50	72.4	3.48	○
D938-A5N-1915	19.15	101	153	20	50	72.3	3.49	○
D938-A5N-1920	19.20	101	153	20	50	72.2	3.49	○
D938-A5N-1930	19.30	101	153	20	50	72.1	3.51	○
D938-A5N-1940	19.40	101	153	20	50	71.9	3.53	○
D938-A5N-1950	19.50	101	153	20	50	71.8	3.55	●
D938-A5N-1960	19.60	101	153	20	50	71.6	3.57	○
D938-A5N-1970	19.70	101	153	20	50	71.5	3.59	○
D938-A5N-1980	19.80	101	153	20	50	71.3	3.60	○
D938-A5N-1990	19.90	101	153	20	50	71.2	3.62	○
D938-A5N-2000	20.00	101	153	20	50	71.0	3.64	○

● Stock ○ Available Upon Order

Notes: Non-standard customization is available for D2-D20 tools

Unit (mm)

Range of Sizes	DC(m7)	DMM(h6)
≥2—3	+0.002/+0.012	0.000/-0.006
>3—6	+0.004/+0.016	0.000/-0.008
>6—10	+0.006/+0.021	0.000/-0.009
>10—18	+0.007/+0.025	0.000/-0.011
>18—20	+0.008/+0.029	0.000/-0.013

Workpiece Material													
P			M	K			N			S	H		
1 2 3 4	5	6 7	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
Carbon Steel, Alloy Steel	Alloy Steel, Tool Steel	PH and Ferritic/Martensitic Steel	Stainless Steel	Gray Cast Iron, Nodular Cast Iron	High Alloy Cast Iron	Forged Aluminum Alloy, Cast Aluminum Alloy	Cast Aluminum Alloy	Copper Alloy	Composite Material	High-temperature Alloy	Titanium Alloy	Hardened Steel	Hardened Steel
<35HRC	35-48HRC			<32HRC	35-45HRC	Si<12%	Si>12%	<HB200		<HB450	<HB400	45-55HRC	55-60HRC
◎	◎	◎		○	○								

◎ Most Suitable ○ Suitable

Recommended Cutting Data ※ P126

Recommended Cutting Data

D938 Plain Steel Machining Twist Drill 3D/5D

Workpiece Material		Cutting speed Vc (m/min)		Feed fn (mm/rev)			
				Φ1	Φ1.5	Φ2	Φ2.5
P	Low-carbon Steel, Long Chips (<125HB)	120-80-50	140-100-60	0.06-0.08-0.12	0.08-0.15-0.18	0.10-0.15-0.20	0.10-0.15-0.20
	Low-carbon Steel, Short Chips, Free Cutting Steel (<125HB)	120-75-50	140-100-60	0.06-0.08-0.12	0.08-0.15-0.18	0.10-0.15-0.20	0.10-0.15-0.20
	High-carbon Steel and Medium-carbon Steel (<25HRC)	120-70-45	120-80-60	0.06-0.08-0.12	0.08-0.15-0.18	0.10-0.15-0.20	0.10-0.15-0.20
	Alloy Steel, Tool Steel (<35HRC)	100-70-45	110-80-60	0.05-0.07-0.11	0.08-0.13-0.16	0.08-0.13-0.16	0.09-0.13-0.16
	Alloy Steel, Tool Steel (35-48HRC)	80-60-35	90-60-35	0.05-0.07-0.11	0.08-0.10-0.14	0.08-0.11-0.14	0.08-0.11-0.14
	PH and Ferritic, Martensitic Steel (<35HRC)	70-50-30	90-60-30	0.04-0.07-0.10	0.05-0.08-0.11	0.05-0.08-0.11	0.05-0.08-0.11
	High Strength PH and Ferritic, Martensitic Steel (35-48HRC)	70-45-25	80-50-30	0.03-0.05-0.07	0.04-0.06-0.08	0.04-0.06-0.08	0.04-0.06-0.08
M	Austenitic Stainless Steels (130- 200HB)	—	80-60-40	0.02-0.04-0.06	0.03-0.05-0.07	0.03-0.06-0.08	0.03-0.06-0.08
	High Strength Austenitic and Cast Stainless Steel (<25HRC)	—	80-60-40	0.02-0.04-0.06	0.03-0.05-0.07	0.03-0.06-0.08	0.03-0.06-0.08
	Duplex Stainless Steel (<30HRC)	—	60-45-30	0.03-0.04-0.07	0.03-0.05-0.07	0.03-0.06-0.08	0.03-0.06-0.08
K	Gray Cast Iron (<32HRC)	140-100-60	160-120-60	0.08-0.10-0.14	0.10-0.13-0.16	0.12-0.15-0.18	0.13-0.17-0.20
	Alloy Cast Iron with Medium Machining Difficulty, Nodular Cast Iron (<28HRC)	120-80-60	140-100-60	0.06-0.09-0.13	0.09-0.12-0.15	0.11-0.14-0.17	0.11-0.15-0.18
	Difficult-to-machine High Alloy Cast Iron, Nodular Cast Iron (<45HRC)	100-70-50	100-80-50	0.04-0.07-0.09	0.05-0.08-0.10	0.06-0.09-0.11	0.06-0.09-0.11

[Notes]

1. Please use a machine with relatively high rigidity. It is recommended to adopt hydraulic tool holders, thermal expansion tool holders and powerful handles with spring collets.
2. When installing the tool, it is necessary to ensure that the radial bounce of the drill bit tip is less than 0.02mm.
3. This standard cutting condition table is suitable for water-soluble cutting fluids
4. For the tool edge diameter specifications not listed in the table, please refer to the closest edge diameter specifications in the table to select the cutting data. Meanwhile, during the machining process, please adjust the cutting data appropriately according to the actual machining situation.

Recommended Cutting Data

D938 Plain Steel Machining Twist Drill 3D/5D

Workpiece Material		Cutting speed Vc (m/min)		Feed fn (mm/rev)				
				Φ3	Φ4	Φ6	Φ8	Φ10
P	Low-carbon Steel, Long Chips (<125HB)	120-80-50	140-100-60	0.10-0.15-0.20	0.10-0.15-0.20	0.14-0.19-0.25	0.16-0.22-0.32	0.16-0.22-0.35
	Low-carbon Steel, Short Chips, Free Cutting Steel (<125HB)	120-75-50	140-100-60	0.10-0.15-0.20	0.10-0.15-0.20	0.14-0.19-0.25	0.16-0.22-0.32	0.16-0.22-0.35
	High-carbon Steel and Medium-carbon Steel (<25HRC)	120-70-45	120-80-60	0.10-0.15-0.20	0.10-0.15-0.20	0.14-0.19-0.25	0.16-0.22-0.30	0.16-0.22-0.32
	Alloy Steel, Tool Steel (<35HRC)	100-70-45	110-80-60	0.09-0.13-0.16	0.09-0.13-0.16	0.12-0.17-0.23	0.14-0.20-0.28	0.14-0.20-0.30
	Alloy Steel, Tool Steel (35-48HRC)	80-60-35	90-60-35	0.08-0.11-0.14	0.08-0.11-0.14	0.08-0.14-0.20	0.09-0.16-0.25	0.09-0.16-0.28
	PH and Ferritic, Martensitic Steel (<35HRC)	70-50-30	90-60-30	0.05-0.08-0.11	0.05-0.08-0.11	0.07-0.12-0.17	0.08-0.14-0.20	0.08-0.14-0.23
	High Strength PH and Ferritic, Martensitic Steel (35-48HRC)	70-45-25	80-50-30	0.04-0.06-0.08	0.04-0.06-0.08	0.06-0.10-0.14	0.08-0.13-0.18	0.08-0.13-0.20
M	Austenitic Stainless Steels (130-200HB)	—	80-60-40	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.12-0.14	0.08-0.13-0.18	0.09-0.15-0.20
	High Strength Austenitic and Cast Stainless Steel (<25HRC)	—	80-60-40	0.03-0.06-0.08	0.04-0.08-0.10	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.11-0.14
	Duplex Stainless Steel (<30HRC)	—	60-45-30	0.03-0.06-0.08	0.04-0.08-0.10	0.05-0.08-0.10	0.06-0.10-0.12	0.07-0.11-0.14
K	Gray Cast Iron (<32HRC)	140-100-60	160-120-60	0.13-0.17-0.20	0.15-0.20-0.23	0.17-0.25-0.30	0.20-0.27-0.35	0.23-0.30-0.40
	Alloy Cast Iron with Medium Machining Difficulty, Nodular Cast Iron (<28HRC)	120-80-60	140-100-60	0.11-0.15-0.18	0.13-0.17-0.20	0.15-0.20-0.25	0.17-0.25-0.32	0.20-0.28-0.36
	Difficult-to-machine High Alloy Cast Iron, Nodular Cast Iron (<45HRC)	100-70-50	100-80-50	0.06-0.09-0.11	0.08-0.10-0.13	0.10-0.13-0.16	0.12-0.16-0.20	0.14-0.20-0.26

[Notes]

1. Please use a machine with relatively high rigidity. It is recommended to adopt hydraulic tool holders, thermal expansion tool holders and powerful handles with spring collets.
2. When installing the tool, it is necessary to ensure that the radial bounce of the drill bit tip is less than 0.02mm.
3. This standard cutting condition table is suitable for water-soluble cutting fluids
4. For the tool edge diameter specifications not listed in the table, please refer to the closest edge diameter specifications in the table to select the cutting data. Meanwhile, during the machining process, please adjust the cutting data appropriately according to the actual machining situation.

Recommended Cutting Data

D938 Plain Steel Machining Twist Drill 3D/5D

Workpiece Material		Cutting speed Vc (m/min)		Feed fn (mm/rev)				
				Φ12	Φ14	Φ16	Φ18	Φ20
P	Low-carbon Steel, Long Chips (<125HB)	120-80-50	140-100-60	0.18-0.28-0.40	0.22-0.32-0.45	0.22-0.32-0.45	0.25-0.38-0.50	0.25-0.38-0.50
	Low-carbon Steel, Short Chips, Free Cutting steel (<125HB)	120-75-50	140-100-60	0.18-0.28-0.40	0.22-0.32-0.45	0.22-0.32-0.45	0.25-0.38-0.50	0.25-0.38-0.50
	High-carbon Steel and Medium-carbon Steel (<25HRC)	120-70-45	120-80-60	0.18-0.28-0.38	0.22-0.32-0.45	0.22-0.32-0.45	0.25-0.38-0.50	0.25-0.38-0.50
	Alloy Steel, Tool Steel (<35HRC)	100-70-45	110-80-60	0.15-0.23-0.34	0.18-0.25-0.38	0.18-0.25-0.38	0.20-0.30-0.40	0.20-0.30-0.40
	Alloy Steel, Tool Steel (35-48HRC)	80-60-35	90-60-35	0.11-0.19-0.30	0.12-0.22-0.32	0.12-0.22-0.32	0.14-0.24-0.34	0.14-0.24-0.34
	PH and Ferritic, Martensitic Steel (<35HRC)	70-50-30	90-60-30	0.10-0.18-0.28	0.12-0.20-0.30	0.12-0.20-0.30	0.14-0.24-0.32	0.14-0.24-0.32
	High strength PH and Ferritic, Martensitic Steel (35-48HRC)	70-45-25	80-50-30	0.10-0.18-0.28	0.12-0.20-0.30	0.12-0.20-0.30	0.14-0.24-0.32	0.14-0.24-0.32
M	Austenitic Stainless Steels (130- 200HB)	—	80-60-40	0.10-0.17-0.22	0.11-0.18-0.24	0.12-0.20-0.24	0.13-0.22-0.26	0.14-0.24-0.28
	High Strength Austenitic and Cast Stainless Steel (<25HRC)	—	80-60-40	0.08-0.13-0.16	0.09-0.13-0.18	0.10-0.14-0.18	0.10-0.14-0.20	0.12-0.16-0.22
	Duplex Stainless Steel (<30HRC)	—	60-45-30	0.08-0.13-0.16	0.09-0.13-0.18	0.10-0.14-0.18	0.10-0.14-0.20	0.12-0.16-0.22
K	Gray Cast Iron (<32HRC)	140-100-60	160-120-60	0.25-0.33-0.45	0.28-0.36-0.48	0.30-0.40-0.50	0.32-0.42-0.52	0.35-0.45-0.55
	Alloy Cast Iron with Medium Machining Difficulty, Nodular Cast Iron (<28HRC)	120-80-60	140-100-60	0.22-0.30-0.42	0.24-0.33-0.45	0.25-0.35-0.48	0.28-0.38-0.48	0.30-0.40-0.50
	Difficult-to-machine High Alloy Cast Iron, Nodular Cast Iron (<45HRC)	100-70-50	100-80-50	0.16-0.22-0.28	0.18-0.24-0.30	0.20-0.26-0.32	0.22-0.28-0.34	0.23-0.28-0.35

[Notes]

1. Please use a machine with relatively high rigidity. It is recommended to adopt hydraulic tool holders, thermal expansion tool holders and powerful handles with spring collets.
2. When installing the tool, it is necessary to ensure that the radial bounce of the drill bit tip is less than 0.02mm.
3. This standard cutting condition table is suitable for water-soluble cutting fluids
4. For the tool edge diameter specifications not listed in the table, please refer to the closest edge diameter specifications in the table to select the cutting data. Meanwhile, during the machining process, please adjust the cutting data appropriately according to the actual machining situation.