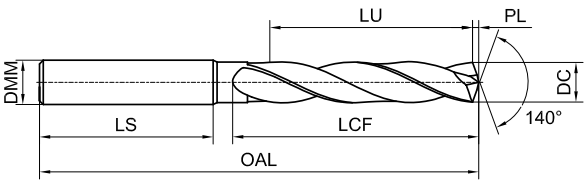
D966-A5N

SHANK DIN 6535HA 5D

5D External Coolant Twist Drill for Aluminum Alloy Machining



Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-0200	2.00	18	62	4	38	15.0	0.36	○
D966-A5N-0250	2.50	22	62	4	34	18.3	0.45	○
D966-A5N-0270	2.70	22	62	4	34	18.0	0.49	○
D966-A5N-0290	2.90	22	62	4	34	17.7	0.53	○
D966-A5N-0300	3.00	28	66	6	36	23.5	0.55	●
D966-A5N-0310	3.10	28	66	6	36	23.4	0.56	○
D966-A5N-0320	3.20	28	66	6	36	23.2	0.58	○
D966-A5N-0330	3.30	28	66	6	36	23.1	0.60	●
D966-A5N-0340	3.40	28	66	6	36	22.9	0.62	○
D966-A5N-0350	3.50	28	66	6	36	22.8	0.64	○
D966-A5N-0360	3.60	28	66	6	36	22.6	0.66	○
D966-A5N-0370	3.70	28	66	6	36	22.5	0.67	○
D966-A5N-0380	3.80	36	74	6	36	30.3	0.69	○
D966-A5N-0390	3.90	36	74	6	36	30.2	0.71	○
D966-A5N-0400	4.00	36	74	6	36	30.0	0.73	●
D966-A5N-0410	4.10	36	74	6	36	29.9	0.75	○
D966-A5N-0420	4.20	36	74	6	36	29.7	0.76	●
D966-A5N-0430	4.30	36	74	6	36	29.6	0.78	○
D966-A5N-0440	4.40	36	74	6	36	29.4	0.80	○
D966-A5N-0450	4.50	36	74	6	36	29.3	0.82	○
D966-A5N-0460	4.60	36	74	6	36	29.1	0.84	○
D966-A5N-0470	4.70	36	74	6	36	29.0	0.86	○
D966-A5N-0475	4.75	44	82	6	36	36.9	0.86	○
D966-A5N-0480	4.80	44	82	6	36	36.8	0.87	○
D966-A5N-0490	4.90	44	82	6	36	36.7	0.89	○
D966-A5N-0500	5.00	44	82	6	36	36.5	0.91	●
D966-A5N-0510	5.10	44	82	6	36	36.4	0.93	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-0520	5.20	44	82	6	36	36.2	0.95	○
D966-A5N-0530	5.30	44	82	6	36	36.1	0.96	○
D966-A5N-0540	5.40	44	82	6	36	35.9	0.98	○
D966-A5N-0550	5.50	44	82	6	36	36.5	1.00	●
D966-A5N-0560	5.60	44	82	6	36	35.6	1.02	○
D966-A5N-0570	5.70	44	82	6	36	35.5	1.04	○
D966-A5N-0580	5.80	44	82	6	36	35.3	1.06	○
D966-A5N-0590	5.90	44	82	6	36	35.2	1.07	○
D966-A5N-0595	5.95	44	82	6	36	35.1	1.08	○
D966-A5N-0600	6.00	44	82	6	36	35.0	1.09	●
D966-A5N-0610	6.10	53	91	8	36	43.9	1.11	○
D966-A5N-0620	6.20	53	91	8	36	43.7	1.13	○
D966-A5N-0630	6.30	53	91	8	36	43.6	1.15	○
D966-A5N-0635	6.35	53	91	8	36	43.5	1.16	○
D966-A5N-0640	6.40	53	91	8	36	43.4	1.16	○
D966-A5N-0650	6.50	53	91	8	36	43.3	1.18	○
D966-A5N-0660	6.60	53	91	8	36	43.1	1.20	○
D966-A5N-0670	6.70	53	91	8	36	43.0	1.22	○
D966-A5N-0675	6.75	53	91	8	36	42.9	1.23	○
D966-A5N-0680	6.80	53	91	8	36	42.8	1.24	●
D966-A5N-0685	6.85	53	91	8	36	42.7	1.25	○
D966-A5N-0690	6.90	53	91	8	36	42.7	1.26	○
D966-A5N-0700	7.00	53	91	8	36	42.5	1.27	●
D966-A5N-0710	7.10	53	91	8	36	42.4	1.29	○
D966-A5N-0720	7.20	53	91	8	36	42.2	1.31	○
D966-A5N-0730	7.30	53	91	8	36	42.1	1.33	○
D966-A5N-0740	7.40	53	91	8	36	41.9	1.35	○

●Stock ○Available Upon Order

Notes: Non-standard customization is available for D2-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
						◎	◎	○	○				

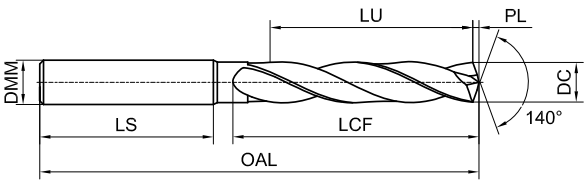
◎ Most Suitable ○ Suitable

Recommended Cutting Data ※ P133

D966-A5N

SHANK DIN 6535HA 5D

5D External Coolant Twist Drill for Aluminum Alloy Machining



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Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-0750	7.50	53	91	8	36	41.8	1.36	○
D966-A5N-0760	7.60	53	91	8	36	41.6	1.38	○
D966-A5N-0770	7.70	53	91	8	36	41.5	1.40	○
D966-A5N-0780	7.80	53	91	8	36	41.3	1.42	○
D966-A5N-0790	7.90	53	91	8	36	41.2	1.44	○
D966-A5N-0800	8.00	53	91	8	36	41.0	1.46	○
D966-A5N-0810	8.10	61	103	10	40	48.9	1.47	○
D966-A5N-0820	8.20	61	103	10	40	48.7	1.49	○
D966-A5N-0830	8.30	61	103	10	40	48.6	1.51	○
D966-A5N-0840	8.40	61	103	10	40	48.4	1.53	○
D966-A5N-0850	8.50	61	103	10	40	48.3	1.55	●
D966-A5N-0860	8.60	61	103	10	40	48.1	1.57	○
D966-A5N-0870	8.70	61	103	10	40	48.0	1.58	○
D966-A5N-0880	8.80	61	103	10	40	47.8	1.60	○
D966-A5N-0890	8.90	61	103	10	40	47.7	1.62	○
D966-A5N-0900	9.00	61	103	10	40	47.5	1.64	●
D966-A5N-0910	9.10	61	103	10	40	47.4	1.66	○
D966-A5N-0920	9.20	61	103	10	40	47.2	1.67	○
D966-A5N-0930	9.30	61	103	10	40	47.1	1.69	○
D966-A5N-0940	9.40	61	103	10	40	46.9	1.71	○
D966-A5N-0950	9.50	61	103	10	40	46.8	1.73	○
D966-A5N-0960	9.60	61	103	10	40	46.6	1.75	○
D966-A5N-0970	9.70	61	103	10	40	46.5	1.77	○
D966-A5N-0980	9.80	61	103	10	40	46.3	1.78	○
D966-A5N-0990	9.90	61	103	10	40	46.2	1.80	○
D966-A5N-1000	10.00	61	103	10	40	46.0	1.82	○
D966-A5N-1010	10.10	71	118	12	45	55.9	1.84	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-1020	10.20	71	118	12	45	55.7	1.86	○
D966-A5N-1030	10.30	71	118	12	45	55.6	1.87	○
D966-A5N-1040	10.40	71	118	12	45	55.4	1.89	○
D966-A5N-1050	10.50	71	118	12	45	55.3	1.91	●
D966-A5N-1060	10.60	71	118	12	45	55.1	1.93	○
D966-A5N-1070	10.70	71	118	12	45	55.0	1.95	○
D966-A5N-1080	10.80	71	118	12	45	54.8	1.97	○
D966-A5N-1090	10.90	71	118	12	45	54.7	1.98	○
D966-A5N-1100	11.00	71	118	12	45	54.5	2.00	●
D966-A5N-1110	11.10	71	118	12	45	54.4	2.02	○
D966-A5N-1120	11.20	71	118	12	45	54.2	2.04	○
D966-A5N-1130	11.30	71	118	12	45	54.1	2.06	○
D966-A5N-1140	11.40	71	118	12	45	53.9	2.07	○
D966-A5N-1150	11.50	71	118	12	45	53.8	2.09	○
D966-A5N-1160	11.60	71	118	12	45	53.6	2.11	○
D966-A5N-1170	11.70	71	118	12	45	53.5	2.13	○
D966-A5N-1180	11.80	71	118	12	45	53.3	2.15	○
D966-A5N-1190	11.90	71	118	12	45	53.2	2.17	○
D966-A5N-1200	12.00	71	118	12	45	53.0	2.18	○
D966-A5N-1210	12.10	77	124	14	45	58.9	2.20	○
D966-A5N-1220	12.20	77	124	14	45	58.7	2.22	○
D966-A5N-1230	12.30	77	124	14	45	58.6	2.24	○
D966-A5N-1240	12.40	77	124	14	45	58.4	2.26	○
D966-A5N-1250	12.50	77	124	14	45	58.3	2.27	○
D966-A5N-1260	12.60	77	124	14	45	58.1	2.29	○
D966-A5N-1270	12.70	77	124	14	45	58.0	2.31	○
D966-A5N-1280	12.80	77	124	14	45	57.8	2.33	○

●Stock ○Available Upon Order

Notes: Non-standard customization is available for D2-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
						◎	◎	○	○				

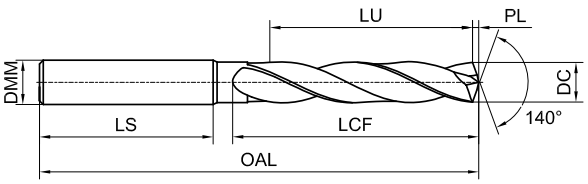
◎ Most Suitable ○ Suitable

Recommended Cutting Data ※ P133

D966-A5N

SHANK DIN 6535HA 5D

5D External Coolant Twist Drill for Aluminum Alloy Machining



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Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-1290	12.90	77	124	14	45	57.7	2.35	○
D966-A5N-1300	13.00	77	124	14	45	57.5	2.37	○
D966-A5N-1320	13.20	77	124	14	45	57.2	2.40	○
D966-A5N-1350	13.50	77	124	14	45	56.8	2.46	○
D966-A5N-1370	13.70	77	124	14	45	56.5	2.49	○
D966-A5N-1380	13.80	77	124	14	45	56.3	2.51	○
D966-A5N-1390	13.90	77	124	14	45	56.2	2.53	○
D966-A5N-1400	14.00	77	124	14	45	56.0	2.55	○
D966-A5N-1420	14.20	83	133	16	48	61.7	2.58	○
D966-A5N-1430	14.30	83	133	16	48	61.6	2.60	○
D966-A5N-1450	14.50	83	133	16	48	61.3	2.64	○
D966-A5N-1460	14.60	83	133	16	48	61.1	2.66	○
D966-A5N-1480	14.80	83	133	16	48	60.8	2.69	○
D966-A5N-1500	15.00	83	133	16	48	60.5	2.73	○
D966-A5N-1510	15.10	83	133	16	48	60.4	2.75	○
D966-A5N-1550	15.50	83	133	16	48	59.8	2.82	○

Order No.	DC (m7)	LCF	OAL	DMM (h6)	LS	LU	PL	In Stock
D966-A5N-1570	15.70	83	133	16	48	59.5	2.86	○
D966-A5N-1580	15.80	83	133	16	48	59.3	2.88	○
D966-A5N-1600	16.00	83	133	16	48	59.0	2.91	○
D966-A5N-1650	16.50	93	143	18	48	68.3	3.00	○
D966-A5N-1660	16.60	93	143	18	48	68.1	3.02	○
D966-A5N-1680	16.80	93	143	18	48	67.8	3.06	○
D966-A5N-1700	17.00	93	143	18	48	67.5	3.09	○
D966-A5N-1750	17.50	93	143	18	48	66.8	3.18	○
D966-A5N-1780	17.80	93	143	18	48	66.3	3.24	○
D966-A5N-1800	18.00	93	143	18	48	66.0	3.28	○
D966-A5N-1850	18.50	101	153	20	50	73.3	3.37	○
D966-A5N-1860	18.60	101	153	20	50	73.1	3.38	○
D966-A5N-1900	19.00	101	153	20	50	72.5	3.46	○
D966-A5N-1950	19.50	101	153	20	50	71.8	3.55	○
D966-A5N-2000	20.00	101	153	20	50	71.0	3.64	○

Unit (mm)

●Stock ○Available Upon Order

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

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 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 ※ P133

Recommended Cutting Data

D966 Aluminum Alloy Machining Twist Drill

Workpiece Material		Cutting Speed Vc (m/min)		Feed Fn (mm/rev)				
				Φ3	Φ4	Φ6	Φ8	Φ10
N	Forged Aluminum Alloy (Si<12%)	250-150-80	315-230-90	0.06-0.09-0.11	0.13-0.20-0.26	0.16-0.22-0.28	0.18-0.26-0.32	0.20-0.30-0.38
	Cast Aluminum Alloy (Si<12%)	230-150-80	315-230-90	0.06-0.09-0.11	0.13-0.20-0.26	0.16-0.22-0.28	0.18-0.26-0.32	0.20-0.30-0.38
	Cast Aluminum Alloy (Si>12%)	230-150-80	270-180-90	0.06-0.09-0.11	0.13-0.20-0.26	0.16-0.22-0.28	0.18-0.26-0.32	0.20-0.30-0.38
	Copper, Copper Alloy (＜200HB)	160-120-70	180-135-90	0.06-0.09-0.11	0.13-0.20-0.26	0.16-0.22-0.28	0.18-0.26-0.32	0.20-0.30-0.38

Workpiece Material		Cutting Speed Vc (m/min)		Feed Fn (mm/rev)				
				Φ12	Φ14	Φ16	Φ18	Φ20
N	Forged Aluminum Alloy (Si<12%)	250-150-80	315-230-90	0.22-0.34-0.42	0.24-0.36-0.44	0.28-0.38-0.46	0.32-0.40-0.48	0.34-0.42-0.48
	Cast Aluminum Alloy (Si<12%)	230-150-80	315-230-90	0.22-0.34-0.42	0.24-0.36-0.44	0.28-0.38-0.46	0.32-0.40-0.48	0.34-0.42-0.48
	Cast Aluminum Alloy (Si>12%)	230-150-80	270-180-90	0.22-0.34-0.42	0.24-0.36-0.44	0.28-0.38-0.46	0.32-0.40-0.48	0.34-0.42-0.48
	Copper, Copper Alloy (＜200HB)	160-120-70	180-135-90	0.22-0.34-0.42	0.24-0.36-0.44	0.28-0.38-0.46	0.32-0.40-0.48	0.34-0.42-0.48

[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.