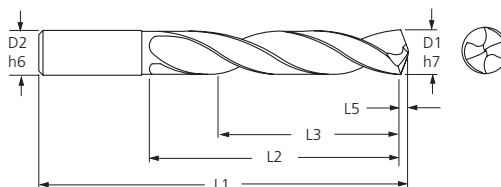


Twister® HPD Performance Drill

Series HPDSS & HPDCS 3xD

Series HPDSS	3X		140°	30°	ALtima®	DIN 6537L 4.1-16.0mm	
Series HPDCS	3X		140°	30°	ALtima®	DIN 6537L 4.1-16.0mm	



Features

- Self centring point
- h7 tolerance
- h6 shank tolerance
- Wide material application area
- Economical choice

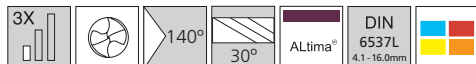
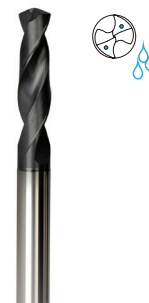
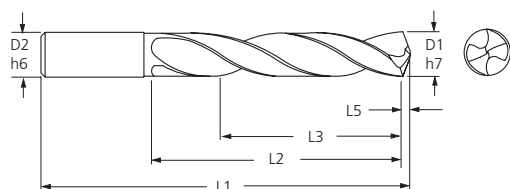
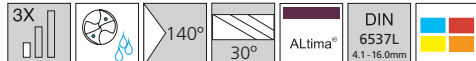
Benefits

- Eliminates the need for spot drilling
- Precision holes
- Shrink fit applications
- Steels, Stainless Steels, Cast Irons, Titanium & Heat resistant alloys
- Perfect for contract machining and small batch production requiring a high-performance drill



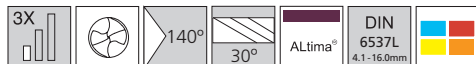
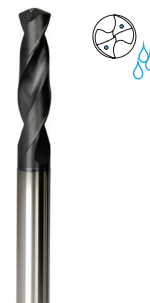
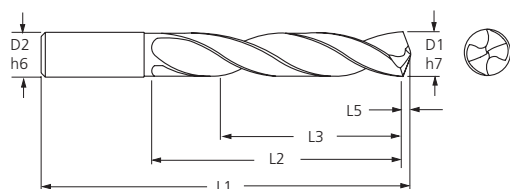
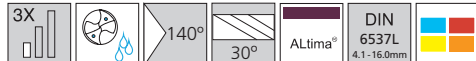
Tool Dimensions						Series HPDSS		Series HPDCS	
Ø D1 (h7)	Ø D2 (h6)	L1	L2 (Max.)	L3	L5	Tool No.	GBP	Tool No.	GBP
3.0	3.0	62.0	20.0	14.0	0.46	HPDSS 0300A	£18.00	HPDCS 0300A	£26.00
3.1	4.0	62.0	20.0	14.0	0.48	HPDSS 0310A	£18.00	HPDCS 0310A	£26.00
3.2	4.0	62.0	20.0	14.0	0.49	HPDSS 0320A	£18.00	HPDCS 0320A	£26.00
3.3	4.0	62.0	20.0	14.0	0.51	HPDSS 0330A	£18.00	HPDCS 0330A	£26.00
3.4	4.0	62.0	20.0	14.0	0.52	HPDSS 0340A	£18.00	HPDCS 0340A	£26.00
3.5	4.0	62.0	20.0	14.0	0.54	HPDSS 0350A	£18.00	HPDCS 0350A	£26.00
3.6	4.0	62.0	20.0	14.0	0.55	HPDSS 0360A	£18.00	HPDCS 0360A	£26.00
3.7	4.0	62.0	20.0	14.0	0.57	HPDSS 0370A	£18.00	HPDCS 0370A	£26.00
3.8	4.0	66.0	24.0	17.0	0.58	HPDSS 0380A	£18.00	HPDCS 0380A	£26.00
3.9	4.0	66.0	24.0	17.0	0.60	HPDSS 0390A	£18.00	HPDCS 0390A	£26.00
4.0	4.0	66.0	24.0	17.0	0.61	HPDSS 0400A	£18.00	HPDCS 0400A	£26.00
4.1	6.0	66.0	24.0	17.0	0.64	HPDSS 0410A	£21.00	HPDCS 0410A	£26.00
4.2	6.0	66.0	24.0	17.0	0.64	HPDSS 0420A	£21.00	HPDCS 0420A	£26.00
4.3	6.0	66.0	24.0	17.0	0.66	HPDSS 0430A	£21.00	HPDCS 0430A	£26.00
4.4	6.0	66.0	24.0	17.0	0.67	HPDSS 0440A	£21.00	HPDCS 0440A	£26.00
4.5	6.0	66.0	24.0	17.0	0.69	HPDSS 0450A	£21.00	HPDCS 0450A	£26.00
4.6	6.0	66.0	24.0	17.0	0.71	HPDSS 0460A	£21.00	HPDCS 0460A	£26.00
4.7	6.0	66.0	24.0	17.0	0.72	HPDSS 0470A	£21.00	HPDCS 0470A	£26.00
4.8	6.0	66.0	28.0	20.0	0.74	HPDSS 0480A	£21.00	HPDCS 0480A	£26.00
4.9	6.0	66.0	28.0	20.0	0.75	HPDSS 0490A	£21.00	HPDCS 0490A	£26.00
5.0	6.0	66.0	28.0	20.0	0.77	HPDSS 0500A	£21.00	HPDCS 0500A	£26.00
5.1	6.0	66.0	28.0	20.0	0.78	HPDSS 0510A	£21.00	HPDCS 0510A	£26.00
5.2	6.0	66.0	28.0	20.0	0.80	HPDSS 0520A	£21.00	HPDCS 0520A	£26.00
5.3	6.0	66.0	28.0	20.0	0.81	HPDSS 0530A	£21.00	HPDCS 0530A	£26.00
5.4	6.0	66.0	28.0	20.0	0.83	HPDSS 0540A	£21.00	HPDCS 0540A	£26.00
5.5	6.0	66.0	28.0	20.0	0.84	HPDSS 0550A	£21.00	HPDCS 0550A	£26.00
5.6	6.0	66.0	28.0	20.0	0.86	HPDSS 0560A	£21.00	HPDCS 0560A	£26.00
5.7	6.0	66.0	28.0	20.0	0.87	HPDSS 0570A	£21.00	HPDCS 0570A	£26.00

Twister® HPD Performance Drill Series HPDSS & HPDCS 3xD

Series
HPDSS

Series
HPDCS


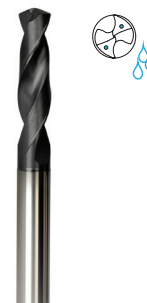
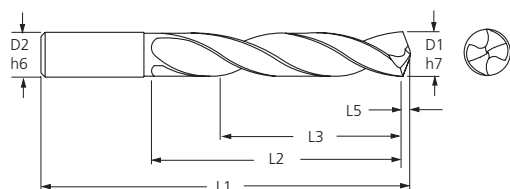
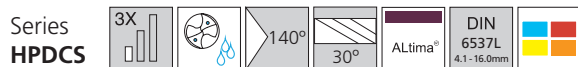
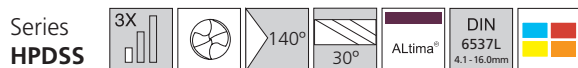
Tool Dimensions						Series HPDSS		Series HPDCS	
Ø D1 (h7)	Ø D2 (h6)	L1	L2 (Max.)	L3	L5	Tool No.	GBP	Tool No.	GBP
5.8	6.0	66.0	28.0	20.0	0.89	HPDSS 0580A	£21.00	HPDCS 0580A	£26.00
5.9	6.0	66.0	28.0	20.0	0.90	HPDSS 0590A	£21.00	HPDCS 0590A	£26.00
6.0	6.0	66.0	28.0	20.0	0.92	HPDSS 0600A	£21.00	HPDCS 0600A	£26.00
6.1	8.0	79.0	34.0	24.0	0.94	HPDSS 0610A	£21.00	HPDCS 0610A	£31.50
6.2	8.0	79.0	34.0	24.0	0.95	HPDSS 0620A	£21.00	HPDCS 0620A	£31.50
6.3	8.0	79.0	34.0	24.0	0.97	HPDSS 0630A	£21.00	HPDCS 0630A	£31.50
6.4	8.0	79.0	34.0	24.0	0.98	HPDSS 0640A	£21.00	HPDCS 0640A	£31.50
6.5	8.0	79.0	34.0	24.0	1.00	HPDSS 0650A	£21.00	HPDCS 0650A	£31.50
6.6	8.0	79.0	34.0	24.0	1.01	HPDSS 0660A	£21.00	HPDCS 0660A	£31.50
6.7	8.0	79.0	34.0	24.0	1.03	HPDSS 0670A	£21.00	HPDCS 0670A	£31.50
6.8	8.0	79.0	34.0	24.0	1.04	HPDSS 0680A	£21.00	HPDCS 0680A	£31.50
6.9	8.0	79.0	34.0	24.0	1.06	HPDSS 0690A	£21.00	HPDCS 0690A	£31.50
7.0	8.0	79.0	34.0	24.0	1.07	HPDSS 0700A	£21.00	HPDCS 0700A	£31.50
7.1	8.0	79.0	41.0	29.0	1.09	HPDSS 0710A	£21.00	HPDCS 0710A	£31.50
7.2	8.0	79.0	41.0	29.0	1.10	HPDSS 0720A	£21.00	HPDCS 0720A	£31.50
7.3	8.0	79.0	41.0	29.0	1.12	HPDSS 0730A	£21.00	HPDCS 0730A	£31.50
7.4	8.0	79.0	41.0	29.0	1.13	HPDSS 0740A	£21.00	HPDCS 0740A	£31.50
7.5	8.0	79.0	41.0	29.0	1.15	HPDSS 0750A	£21.00	HPDCS 0750A	£31.50
7.6	8.0	79.0	41.0	29.0	1.17	HPDSS 0760A	£21.00	HPDCS 0760A	£31.50
7.7	8.0	79.0	41.0	29.0	1.18	HPDSS 0770A	£21.00	HPDCS 0770A	£31.50
7.8	8.0	79.0	41.0	29.0	1.20	HPDSS 0780A	£21.00	HPDCS 0780A	£31.50
7.9	8.0	79.0	41.0	29.0	1.21	HPDSS 0790A	£21.00	HPDCS 0790A	£31.50
8.0	8.0	79.0	41.0	29.0	1.23	HPDSS 0800A	£21.00	HPDCS 0800A	£31.50
8.1	10.0	89.0	47.0	35.0	1.24	HPDSS 0810A	£23.00	HPDCS 0810A	£36.50
8.2	10.0	89.0	47.0	35.0	1.26	HPDSS 0820A	£23.00	HPDCS 0820A	£36.50
8.3	10.0	89.0	47.0	35.0	1.27	HPDSS 0830A	£23.00	HPDCS 0830A	£36.50
8.4	10.0	89.0	47.0	35.0	1.29	HPDSS 0840A	£23.00	HPDCS 0840A	£36.50
8.5	10.0	89.0	47.0	35.0	1.30	HPDSS 0850A	£23.00	HPDCS 0850A	£36.50
8.6	10.0	89.0	47.0	35.0	1.32	HPDSS 0860A	£23.00	HPDCS 0860A	£36.50
8.7	10.0	89.0	47.0	35.0	1.33	HPDSS 0870A	£23.00	HPDCS 0870A	£36.50
8.8	10.0	89.0	47.0	35.0	1.35	HPDSS 0880A	£23.00	HPDCS 0880A	£36.50
8.9	10.0	89.0	47.0	35.0	1.36	HPDSS 0890A	£23.00	HPDCS 0890A	£36.50
9.0	10.0	89.0	47.0	35.0	1.38	HPDSS 0900A	£23.00	HPDCS 0900A	£36.50
9.1	10.0	89.0	47.0	35.0	1.40	HPDSS 0910A	£23.00	HPDCS 0910A	£36.50
9.2	10.0	89.0	47.0	35.0	1.41	HPDSS 0920A	£23.00	HPDCS 0920A	£36.50
9.3	10.0	89.0	47.0	35.0	1.43	HPDSS 0930A	£23.00	HPDCS 0930A	£36.50
9.4	10.0	89.0	47.0	35.0	1.44	HPDSS 0940A	£23.00	HPDCS 0940A	£36.50
9.5	10.0	89.0	47.0	35.0	1.46	HPDSS 0950A	£23.00	HPDCS 0950A	£36.50
9.6	10.0	89.0	47.0	35.0	1.47	HPDSS 0960A	£23.00	HPDCS 0960A	£36.50

Twister® HPD Performance Drill Series HPDSS & HPDCS 3xD

Series
HPDSS

Series
HPDCS


Tool Dimensions						Series HPDSS		Series HPDCS	
Ø D1 (h7)	Ø D2 (h6)	L1	L2 (Max.)	L3	L5	Tool No.	GBP	Tool No.	GBP
9.7	10.0	89.0	47.0	35.0	1.49	HPDSS 0970A	£23.00	HPDCS 0970A	£36.50
9.8	10.0	89.0	47.0	35.0	1.50	HPDSS 0980A	£23.00	HPDCS 0980A	£36.50
9.9	10.0	89.0	47.0	35.0	1.52	HPDSS 0990A	£23.00	HPDCS 0990A	£36.50
10.0	10.0	89.0	47.0	35.0	1.53	HPDSS 1000A	£23.00	HPDCS 1000A	£36.50
10.1	12.0	102.0	55.0	40.0	1.55	HPDSS 1010A	£34.50	HPDCS 1010A	£49.30
10.2	12.0	102.0	55.0	40.0	1.56	HPDSS 1020A	£34.50	HPDCS 1020A	£49.30
10.3	12.0	102.0	55.0	40.0	1.58	HPDSS 1030A	£34.50	HPDCS 1030A	£49.30
10.4	12.0	102.0	55.0	40.0	1.59	HPDSS 1040A	£34.50	HPDCS 1040A	£49.30
10.5	12.0	102.0	55.0	40.0	1.61	HPDSS 1050A	£34.50	HPDCS 1050A	£49.30
10.6	12.0	102.0	55.0	40.0	1.63	HPDSS 1060A	£34.50	HPDCS 1060A	£49.30
10.7	12.0	102.0	55.0	40.0	1.64	HPDSS 1070A	£34.50	HPDCS 1070A	£49.30
10.8	12.0	102.0	55.0	40.0	1.66	HPDSS 1080A	£34.50	HPDCS 1080A	£49.30
10.9	12.0	102.0	55.0	40.0	1.67	HPDSS 1090A	£34.50	HPDCS 1090A	£49.30
11.0	12.0	102.0	55.0	40.0	1.69	HPDSS 1100A	£34.50	HPDCS 1100A	£49.30
11.1	12.0	102.0	55.0	40.0	1.70	HPDSS 1110A	£34.50	HPDCS 1110A	£49.30
11.2	12.0	102.0	55.0	40.0	1.72	HPDSS 1120A	£34.50	HPDCS 1120A	£49.30
11.3	12.0	102.0	55.0	40.0	1.73	HPDSS 1130A	£34.50	HPDCS 1130A	£49.30
11.4	12.0	102.0	55.0	40.0	1.75	HPDSS 1140A	£34.50	HPDCS 1140A	£49.30
11.5	12.0	102.0	55.0	40.0	1.76	HPDSS 1150A	£34.50	HPDCS 1150A	£49.30
11.6	12.0	102.0	55.0	40.0	1.78	HPDSS 1160A	£34.50	HPDCS 1160A	£49.30
11.7	12.0	102.0	55.0	40.0	1.79	HPDSS 1170A	£34.50	HPDCS 1170A	£49.30
11.8	12.0	102.0	55.0	40.0	1.81	HPDSS 1180A	£34.50	HPDCS 1180A	£49.30
11.9	12.0	102.0	55.0	40.0	1.82	HPDSS 1190A	£34.50	HPDCS 1190A	£49.30
12.0	12.0	102.0	55.0	40.0	1.84	HPDSS 1200A	£34.50	HPDCS 1200A	£49.30
12.1	14.0	107.0	60.0	43.0	1.86	HPDSS 1210A	£46.00	HPDCS 1210A	£68.00
12.2	14.0	107.0	60.0	43.0	1.87	HPDSS 1220A	£46.00	HPDCS 1220A	£68.00
12.3	14.0	107.0	60.0	43.0	1.89	HPDSS 1230A	£46.00	HPDCS 1230A	£68.00
12.4	14.0	107.0	60.0	43.0	1.90	HPDSS 1240A	£46.00	HPDCS 1240A	£68.00
12.5	14.0	107.0	60.0	43.0	1.92	HPDSS 1250A	£46.00	HPDCS 1250A	£68.00
12.6	14.0	107.0	60.0	43.0	1.93	HPDSS 1260A	£46.00	HPDCS 1260A	£68.00
12.7	14.0	107.0	60.0	43.0	1.95	HPDSS 1270A	£46.00	HPDCS 1270A	£68.00
12.8	14.0	107.0	60.0	43.0	1.96	HPDSS 1280A	£46.00	HPDCS 1280A	£68.00
12.9	14.0	107.0	60.0	43.0	1.99	HPDSS 1290A	£46.00	HPDCS 1290A	£68.00
13.0	14.0	107.0	60.0	43.0	1.98	HPDSS 1300A	£46.00	HPDCS 1300A	£68.00
13.1	14.0	107.0	60.0	43.0	2.01	HPDSS 1310A	£46.00	HPDCS 1310A	£68.00
13.2	14.0	107.0	60.0	43.0	2.02	HPDSS 1320A	£46.00	HPDCS 1320A	£68.00
13.3	14.0	107.0	60.0	43.0	2.04	HPDSS 1330A	£46.00	HPDCS 1330A	£68.00
13.4	14.0	107.0	60.0	43.0	2.05	HPDSS 1340A	£46.00	HPDCS 1340A	£68.00
13.5	14.0	107.0	60.0	43.0	2.07	HPDSS 1350A	£46.00	HPDCS 1350A	£68.00

Twister® HPD Performance Drill Series HPDSS & HPDCS 3xD



Tool Dimensions						Series HPDSS		Series HPDCS	
Ø D1 (h7)	Ø D2 (h6)	L1	L2 (Max.)	L3	L5	Tool No.	GBP	Tool No.	GBP
13.6	14.0	107.0	60.0	43.0	2.09	HPDSS 1360A	£46.00	HPDCS 1360A	£68.00
13.7	14.0	107.0	60.0	43.0	2.10	HPDSS 1370A	£46.00	HPDCS 1370A	£68.00
13.8	14.0	107.0	60.0	43.0	2.12	HPDSS 1380A	£46.00	HPDCS 1380A	£68.00
13.9	14.0	107.0	60.0	43.0	2.13	HPDSS 1390A	£46.00	HPDCS 1390A	£68.00
14.0	14.0	107.0	60.0	43.0	2.15	HPDSS 1400A	£46.00	HPDCS 1400A	£68.00
14.1	16.0	115.0	65.0	45.0	2.16	HPDSS 1410A	£54.50	HPDCS 1410A	£72.00
14.2	16.0	115.0	65.0	45.0	2.18	HPDSS 1420A	£54.50	HPDCS 1420A	£72.00
14.3	16.0	115.0	65.0	45.0	2.19	HPDSS 1430A	£54.50	HPDCS 1430A	£72.00
14.4	16.0	115.0	65.0	45.0	2.21	HPDSS 1440A	£54.50	HPDCS 1440A	£72.00
14.5	16.0	115.0	65.0	45.0	2.22	HPDSS 1450A	£54.50	HPDCS 1450A	£72.00
14.6	16.0	115.0	65.0	45.0	2.24	HPDSS 1460A	£54.50	HPDCS 1460A	£72.00
14.7	16.0	115.0	65.0	45.0	2.25	HPDSS 1470A	£54.50	HPDCS 1470A	£72.00
14.8	16.0	115.0	65.0	45.0	2.27	HPDSS 1480A	£54.50	HPDCS 1480A	£72.00
14.9	16.0	115.0	65.0	45.0	2.28	HPDSS 1490A	£54.50	HPDCS 1490A	£72.00
15.0	16.0	115.0	65.0	45.0	2.30	HPDSS 1500A	£54.50	HPDCS 1500A	£72.00
15.1	16.0	115.0	65.0	45.0	2.32	HPDSS 1510A	£54.50	HPDCS 1510A	£72.00
15.2	16.0	115.0	65.0	45.0	2.33	HPDSS 1520A	£54.50	HPDCS 1520A	£72.00
15.3	16.0	115.0	65.0	45.0	2.35	HPDSS 1530A	£54.50	HPDCS 1530A	£72.00
15.4	16.0	115.0	65.0	45.0	2.36	HPDSS 1540A	£54.50	HPDCS 1540A	£72.00
15.5	16.0	115.0	65.0	45.0	2.38	HPDSS 1550A	£54.50	HPDCS 1550A	£72.00
15.6	16.0	115.0	65.0	45.0	2.39	HPDSS 1560A	£54.50	HPDCS 1560A	£72.00
15.7	16.0	115.0	65.0	45.0	2.41	HPDSS 1570A	£54.50	HPDCS 1570A	£72.00
15.8	16.0	115.0	65.0	45.0	2.42	HPDSS 1580A	£54.50	HPDCS 1580A	£72.00
15.9	16.0	115.0	65.0	45.0	2.44	HPDSS 1590A	£54.50	HPDCS 1590A	£72.00
16.0	16.0	115.0	65.0	45.0	2.45	HPDSS 1600A	£54.50	HPDCS 1600A	£72.00

Twister® HPD Performance Drill

Series HPDSS & HPDCS 3xD, Series HPDSR & HPDCR 5xD

Recommended cutting data

Workpiece Material Group		Material Type	HPDSS			HPDCS		
			3xD			3xD - Through Coolant		
			Low	Mid	High	Low	Mid	High
			Vc-m/min			Vc-m/min		
Steels	P	Low Carbon Steels ≤180HB	140	160	180	170	190	210
		Med Carbon / Alloy Steels 180-350HB	80	90	100	90	110	130
		Pre-Hardened Steels 35-45HRC	40	50	60	60	70	80
Stainless Steels	M	Martensitic Stainless - 400 Series	90	100	110	100	120	140
		Austenitic Stainless - 300 Series	40	50	60	60	70	80
Cast Irons	K	Grey Cast Iron	100	120	140	130	150	170
		Ductile Cast Iron	50	60	70	70	80	90

RPM Formula For Metric Drills - $RPM = (Vc \times 318) / \text{Drill } \varnothing D1$

Workpiece Material Group		Material Type	HPDSR			HPDCR		
			5xD			5xD - Through Coolant		
			Low	Mid	High	Low	Mid	High
			Vc-m/min			Vc-m/min		
Steels	P	Low Carbon Steels ≤180HB	130	150	170	160	180	200
		Med Carbon / Alloy Steels 180-350HB	70	80	90	90	100	110
		Pre-Hardened Steels 35-45HRC	40	50	60	50	60	70
Stainless Steels	M	Martensitic Stainless - 400 Series	80	90	100	90	110	130
		Austenitic Stainless - 300 Series	40	50	60	50	60	70
Cast Irons	K	Grey Cast Iron	90	110	130	120	140	160
		Ductile Cast Iron	40	50	60	60	70	80

RPM Formula For Metric Drills - $RPM = (Vc \times 318) / \text{Drill } \varnothing D1$

Workpiece Material Group		Material Type	Drill Diameter (mm)							
			3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
			Feed (mm/rev)							
Steels	P	Low Carbon Steels ≤180HB	0.145	0.181	0.181	0.226	0.285	0.362	0.3632	0.453
		Med Carbon / Alloy Steels 180-350HB								
		Pre-Hardened Steels 35-45HRC								
Stainless Steels	M	Martensitic Stainless - 400 Series	0.07	0.09	0.09	0.11	0.14	0.18	0.18	0.225
		Austenitic Stainless - 300 Series								
Cast Irons	K	Grey Cast Iron	0.155	0.193	0.217	0.305	0.305	0.386	0.435	0.532
		Ductile Cast Iron								

Feedrate Formula For Metric Drills - $\text{Feed} = RPM \times \text{mm/rev}$