



**Diameters:**  
3.0mm-12.0mm  
in 0.1mm increments

**Length to Dia. Ratio:**  
3xD, 4-5xD

**No of Flutes:**  
2

**Carbide Grade:**  
IN2005



## Improved Solid Carbide Drills - DH/DJ

The new Drill-In™ line improves drilling stability due to its optimized cutting edges. A sharp straight cutting edge with precise web thinning generates low cutting force and excellent self-centering capability for higher accuracy holes. The drill's wide chip gullet with polished flute enables smooth chip evacuation.

DJ and DH drills are offered in 3.0mm-12.0mm diameter range and available in 3xD and 4-5xD depth of cut range and are available with or without coolant holes.

The existing solid carbide drills will be phased out and replaced with the new drill as current stock is depleted. Tailor-made drills, such as over 12mm diameter are available upon request.

### Features

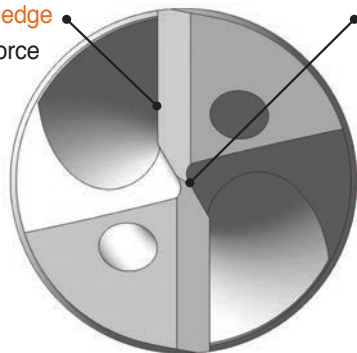
- Optimized cutting edge design for improved drilling stability
- Low cutting force & excellent self-centering capability due to the sharp straight cutting edge with precise web thinning
- Wide chip gullet with polished flute for smooth chip evacuation
- Drill diameter range: 3.0mm-12.0mm (0.1mm increments)
- Drilling depth of cut: 3xD, 4-5xD



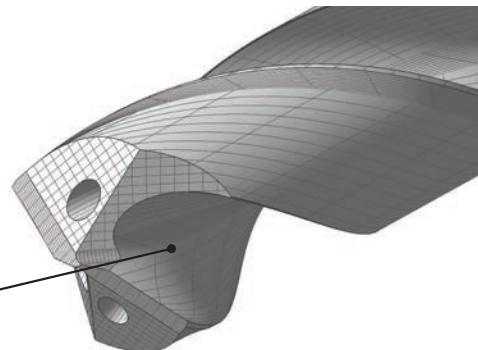


## NEW GEOMETRY

Sharp straight edge  
- Low cutting force

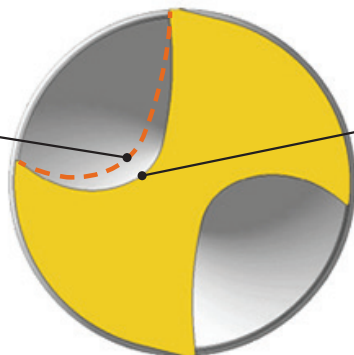


Precise web thinning  
- Excellent self-centering capability



Polished flute  
- Smooth chip flow

Existing flute

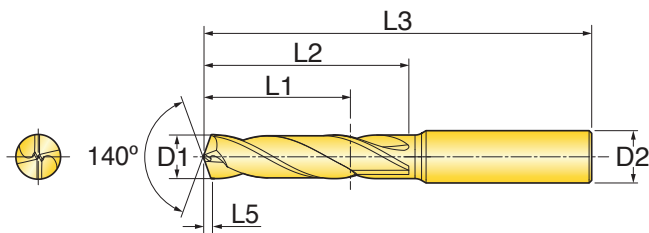


Wide flute design  
- Improved chip evacuation



## SERIES DJ - 3XD

Solid Carbide Drills: 3xD, External Coolant



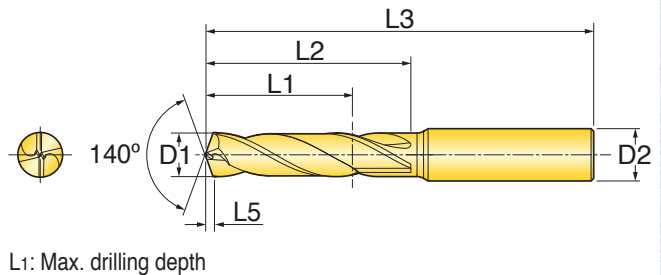
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0300014T7R01	0.118	3.000	6.000	14	20	62	0.500
DJ0310014T7R01	0.122	3.100	6.000	14	20	62	0.500
DJ0320014T7R01	0.126	3.200	6.000	14	20	62	0.500
DJ0330014T7R01	0.130	3.300	6.000	14	20	62	0.500
DJ0340014T7R01	0.134	3.400	6.000	14	20	62	0.500
DJ0350014T7R01	0.138	3.500	6.000	14	20	62	0.600
DJ0360014T7R01	0.142	3.600	6.000	14	20	62	0.600
DJ0370017T7R01	0.146	3.700	6.000	14	20	62	0.600
DJ0380017T7R01	0.150	3.800	6.000	17	24	66	0.600
DJ0390017T7R01	0.154	3.900	6.000	17	24	66	0.600
DJ0400017T7R01	0.157	4.000	6.000	17	24	66	0.600
DJ0410017T7R01	0.161	4.100	6.000	17	24	66	0.700
DJ0420017T7R01	0.165	4.200	6.000	17	24	66	0.700
DJ0430017T7R01	0.169	4.300	6.000	17	24	66	0.700
DJ0440017T7R01	0.173	4.400	6.000	17	24	66	0.700
DJ0450017T7R01	0.177	4.500	6.000	17	24	66	0.700
DJ0460017T7R01	0.181	4.600	6.000	17	24	66	0.800
DJ0470017T7R01	0.185	4.700	6.000	17	24	66	0.800
DJ0480020T7R01	0.189	4.800	6.000	20	28	66	0.800
DJ0490020T7R01	0.193	4.900	6.000	20	28	66	0.800
DJ0500020T7R01	0.197	5.000	6.000	20	28	66	0.800
DJ0510020T7R01	0.201	5.100	6.000	20	28	66	0.800
DJ0520020T7R01	0.205	5.200	6.000	20	28	66	0.800
DJ0530020T7R01	0.209	5.300	6.000	20	28	66	0.800
DJ0540020T7R01	0.213	5.400	6.000	20	28	66	0.800
DJ0550020T7R01	0.217	5.500	6.000	20	28	66	0.900
DJ0560020T7R01	0.220	5.600	6.000	20	28	66	0.900
DJ0570020T7R01	0.224	5.700	6.000	20	28	66	0.900
DJ0580020T7R01	0.228	5.800	6.000	20	28	66	0.900
DJ0590020T7R01	0.232	5.900	6.000	20	28	66	0.900



## SERIES DJ - 3XD (cont.)

Solid Carbide Drills: 3xD, External Coolant

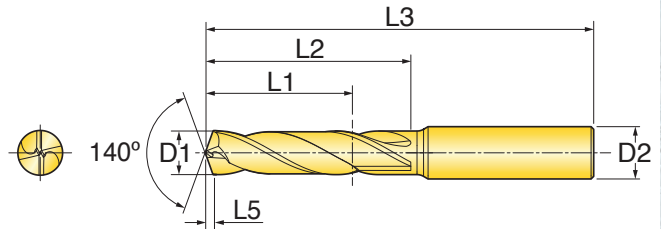


Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0600020T7R01	0.236	6.000	6.000	20	28	66	0.900
DJ0610024T0R01	0.240	6.100	8.000	24	34	79	1.000
DJ0620024T0R01	0.244	6.200	8.000	24	34	79	1.000
DJ0630024T0R01	0.248	6.300	8.000	24	34	79	1.000
DJ0640024T0R01	0.252	6.400	8.000	24	34	79	1.000
DJ0650024T0R01	0.256	6.500	8.000	24	34	79	1.000
DJ0660024T0R01	0.260	6.600	8.000	24	34	79	1.000
DJ0670024T0R01	0.264	6.700	8.000	24	34	79	1.100
DJ0680024T0R01	0.268	6.800	8.000	24	34	79	1.100
DJ0690024T0R01	0.272	6.900	8.000	24	34	79	1.100
DJ0700024T0R01	0.276	7.000	8.000	24	34	79	1.100
DJ0710029T0R01	0.280	7.100	8.000	29	41	79	1.100
DJ0720029T0R01	0.283	7.200	8.000	29	41	79	1.100
DJ0730029T0R01	0.287	7.300	8.000	29	41	79	1.100
DJ0740029T0R01	0.291	7.400	8.000	29	41	79	1.200
DJ0750029T0R01	0.295	7.500	8.000	29	41	79	1.200
DJ0760029T0R01	0.299	7.600	8.000	29	41	79	1.200
DJ0770029T0R01	0.303	7.700	8.000	29	41	79	1.200
DJ0780029T0R01	0.307	7.800	8.000	29	41	79	1.200
DJ0790029T0R01	0.311	7.900	8.000	29	41	79	1.300
DJ0800029T0R01	0.315	8.000	8.000	29	41	79	1.300
DJ0810035T1R01	0.319	8.100	10.000	35	47	89	1.300
DJ0820035T1R01	0.323	8.200	10.000	35	47	89	1.300
DJ0830035T1R01	0.327	8.300	10.000	35	47	89	1.300
DJ0840035T1R01	0.331	8.400	10.000	35	47	89	1.300
DJ0850035T1R01	0.335	8.500	10.000	35	47	89	1.300
DJ0860035T1R01	0.339	8.600	10.000	35	47	89	1.400
DJ0870035T1R01	0.343	8.700	10.000	35	47	89	1.400
DJ0880035T1R01	0.346	8.800	10.000	35	47	89	1.400
DJ0890035T1R01	0.350	8.900	10.000	35	47	89	1.400



## SERIES DJ - 3XD (cont.)

Solid Carbide Drills: 3xD, External Coolant



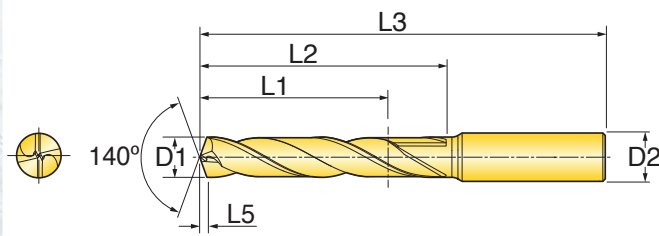
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0900035T1R01	0.354	9.000	10.000	35	47	89	1.400
DJ0910035T1R01	0.358	9.100	10.000	35	47	89	1.400
DJ0920035T1R01	0.362	9.200	10.000	35	47	89	1.400
DJ0930035T1R01	0.366	9.300	10.000	35	47	89	1.500
DJ0940035T1R01	0.370	9.400	10.000	35	47	89	1.500
DJ0950035T1R01	0.374	9.500	10.000	35	47	89	1.500
DJ0960035T1R01	0.378	9.600	10.000	35	47	89	1.500
DJ0970035T1R01	0.382	9.700	10.000	35	47	89	1.500
DJ0980035T1R01	0.386	9.800	10.000	35	47	89	1.600
DJ0990035T1R01	0.390	9.900	10.000	35	47	89	1.600
DJ1000035T1R01	0.394	10.000	10.000	35	47	89	1.600
DJ1010040T2R01	0.398	10.100	12.000	40	55	101	1.600
DJ1020040T2R01	0.402	10.200	12.000	40	55	101	1.600
DJ1030040T2R01	0.406	10.300	12.000	40	55	101	1.600
DJ1040040T2R01	0.409	10.400	12.000	40	55	101	1.600
DJ1050040T2R01	0.413	10.500	12.000	40	55	101	1.600
DJ1060040T2R01	0.417	10.600	12.000	40	55	101	1.700
DJ1070040T2R01	0.421	10.700	12.000	40	55	101	1.700
DJ1080040T2R01	0.425	10.800	12.000	40	55	101	1.700
DJ1090040T2R01	0.429	10.900	12.000	40	55	101	1.700
DJ1100040T2R01	0.433	11.000	12.000	40	55	101	1.700
DJ1110040T2R01	0.437	11.100	12.000	40	55	101	1.700
DJ1120040T2R01	0.441	11.200	12.000	40	55	101	1.800
DJ1130040T2R01	0.445	11.300	12.000	40	55	101	1.800
DJ1140040T2R01	0.449	11.400	12.000	40	55	101	1.800
DJ1150040T2R01	0.453	11.500	12.000	40	55	101	1.800
DJ1160040T2R01	0.457	11.600	12.000	40	55	101	1.800
DJ1170040T2R01	0.461	11.700	12.000	40	55	101	1.900
DJ1180040T2R01	0.465	11.800	12.000	40	55	101	1.900
DJ1190040T2R01	0.469	11.900	12.000	40	55	101	1.900
DJ1200040T2R01	0.472	12.000	12.000	40	55	101	1.900



## SERIES DJ - 5XD

Solid Carbide Drills: 4-5xD, External Coolant



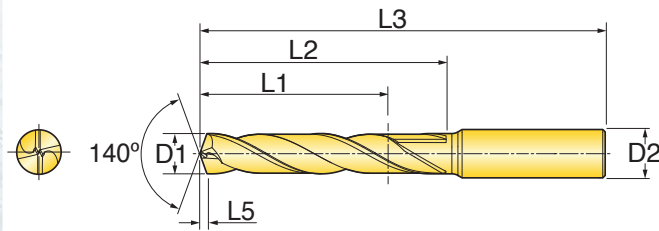
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0300023T7R01	0.118	3.00	6.00	66	23	28	0.50
DJ0310023T7R01	0.122	3.10	6.00	66	23	28	0.50
DJ0320023T7R01	0.126	3.20	6.00	66	23	28	0.50
DJ0330023T7R01	0.130	3.30	6.00	66	23	28	0.50
DJ0340023T7R01	0.134	3.40	6.00	66	23	28	0.50
DJ0350023T7R01	0.138	3.50	6.00	66	23	28	0.60
DJ0360023T7R01	0.142	3.60	6.00	66	23	28	0.60
DJ0370023T7R01	0.146	3.70	6.00	66	23	28	0.60
DJ0380029T7R01	0.150	3.80	6.00	74	29	36	0.60
DJ0390029T7R01	0.154	3.90	6.00	74	29	36	0.60
DJ0400029T7R01	0.157	4.00	6.00	74	29	36	0.60
DJ0410029T7R01	0.161	4.10	6.00	74	29	36	0.70
DJ0420029T7R01	0.165	4.20	6.00	74	29	36	0.70
DJ0430029T7R01	0.169	4.30	6.00	74	29	36	0.70
DJ0440029T7R01	0.173	4.40	6.00	74	29	36	0.70
DJ0450029T7R01	0.177	4.50	6.00	74	29	36	0.70
DJ0460029T7R01	0.181	4.60	6.00	74	29	36	0.70
DJ0470029T7R01	0.185	4.70	6.00	74	29	36	0.80
DJ0480035T7R01	0.189	4.80	6.00	74	35	44	0.80
DJ0490035T7R01	0.193	4.90	6.00	82	35	44	0.80
DJ0500035T7R01	0.197	5.00	6.00	82	35	44	0.80
DJ0510035T7R01	0.201	5.10	6.00	82	35	44	0.80
DJ0525035T7R01	0.205	5.20	6.00	82	35	44	0.80
DJ0530035T7R01	0.209	5.30	6.00	82	35	44	0.80
DJ0540035T7R01	0.213	5.40	6.00	82	35	44	0.80
DJ0550035T7R01	0.217	5.50	6.00	82	35	44	0.90
DJ0560035T7R01	0.220	5.60	6.00	82	35	44	0.90
DJ0570035T7R01	0.224	5.70	6.00	82	35	44	0.90
DJ0580035T7R01	0.228	5.80	6.00	82	35	44	0.90
DJ0590035T7R01	0.232	5.90	6.00	82	35	44	0.90



## SERIES DJ - 5XD (cont.)

Solid Carbide Drills: 4-5xD, External Coolant



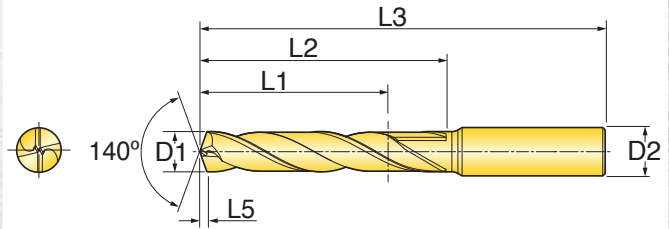
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0900049T1R01	0.354	9.00	10.00	103	49	61	1.40
DJ0910049T1R01	0.358	9.10	10.00	103	49	61	1.40
DJ0920049T1R01	0.362	9.20	10.00	103	49	61	1.40
DJ0930049T1R01	0.366	9.30	10.00	103	49	61	1.50
DJ0940049T1R01	0.370	9.40	10.00	103	49	61	1.50
DJ0950049T1R01	0.374	9.50	10.00	103	49	61	1.50
DJ0960049T1R01	0.378	9.60	10.00	103	49	61	1.50
DJ0970049T1R01	0.382	9.70	10.00	103	49	61	1.50
DJ0980049T1R01	0.386	9.80	10.00	103	49	61	1.60
DJ0990049T1R01	0.390	9.90	10.00	103	49	61	1.60
DJ1000049T1R01	0.394	10.00	10.00	103	49	61	1.60
DJ1010056T2R01	0.398	10.10	12.00	118	56	71	1.60
DJ1020056T2R01	0.402	10.20	12.00	118	56	71	1.60
DJ1030056T2R01	0.406	10.30	12.00	118	56	71	1.60
DJ1046056T2R01	0.409	10.40	12.00	118	56	71	1.60
DJ1050056T2R01	0.413	10.50	12.00	118	56	71	1.60
DJ1060056T2R01	0.417	10.60	12.00	118	56	71	1.70
DJ1070056T2R01	0.421	10.70	12.00	118	56	71	1.70
DJ1080056T2R01	0.425	10.80	12.00	118	56	71	1.70
DJ1090056T2R01	0.429	10.90	12.00	118	56	71	1.70
DJ1100056T2R01	0.433	11.00	12.00	118	56	71	1.70
DJ1110056T2R01	0.437	11.10	12.00	118	56	71	1.70
DJ1120056T2R01	0.441	11.20	12.00	118	56	71	1.80
DJ1130056T2R01	0.445	11.30	12.00	118	56	71	1.80
DJ1140056T2R01	0.449	11.40	12.00	118	56	71	1.80
DJ1150056T2R01	0.453	11.50	12.00	118	56	71	1.80
DJ1160056T2R01	0.457	11.60	12.00	118	56	71	1.80
DJ1170056T2R01	0.461	11.70	12.00	118	56	71	1.90
DJ1180056T2R01	0.465	11.80	12.00	118	56	71	1.90
DJ1190056T2R01	0.469	11.90	12.00	118	56	71	1.90
DJ1200056T2R01	0.472	12.00	12.00	118	56	71	1.90



## SERIES DJ - 5XD (cont.)

Solid Carbide Drills: 4-5xD, External Coolant



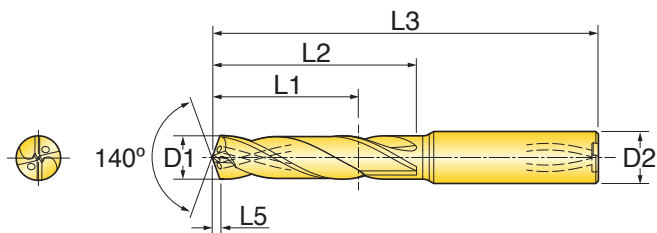
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DJ0600035T7R01	0.236	6.00	6.00	82	35	44	0.90
DJ0610043TOR01	0.240	6.10	8.00	91	43	53	1.00
DJ0620043TOR01	0.244	6.20	8.00	91	43	53	1.00
DJ0630043TOR01	0.248	6.30	8.00	91	43	53	1.00
DJ0640043TOR01	0.252	6.40	8.00	91	43	53	1.00
DJ0650043TOR01	0.256	6.50	8.00	91	43	53	1.00
DJ0660043TOR01	0.260	6.60	8.00	91	43	53	1.00
DJ0670043TOR01	0.264	6.70	8.00	91	43	53	1.10
DJ0680043TOR01	0.268	6.80	8.00	91	43	53	1.10
DJ0690043TOR01	0.272	6.90	8.00	91	43	53	1.10
DJ0700043TOR01	0.276	7.00	8.00	91	43	53	1.10
DJ0710043TOR01	0.280	7.10	8.00	91	43	53	1.10
DJ0720043TOR01	0.283	7.20	8.00	91	43	53	1.10
DJ0730043TOR01	0.287	7.30	8.00	91	43	53	1.10
DJ0740043TOR01	0.291	7.40	8.00	91	43	53	1.20
DJ0750043TOR01	0.295	7.50	8.00	91	43	53	1.20
DJ0760043TOR01	0.299	7.60	8.00	91	43	53	1.20
DJ0770043TOR01	0.303	7.70	8.00	91	43	53	1.20
DJ0780043TOR01	0.307	7.80	8.00	91	43	53	1.20
DJ0790043TOR01	0.311	7.90	8.00	91	43	53	1.30
DJ0800043TOR01	0.315	8.00	8.00	91	43	53	1.30
DJ0810049T1R01	0.319	8.10	10.00	103	49	61	1.30
DJ0820049T1R01	0.323	8.20	10.00	103	49	61	1.30
DJ0830049T1R01	0.327	8.30	10.00	103	49	61	1.30
DJ0840049T1R01	0.331	8.40	10.00	103	49	61	1.30
DJ0850049T1R01	0.335	8.50	10.00	103	49	61	1.30
DJ0860049T1R01	0.339	8.60	10.00	103	49	61	1.40
DJ0870049T1R01	0.343	8.70	10.00	103	49	61	1.40
DJ0880049T1R01	0.346	8.80	10.00	103	49	61	1.40
DJ0890049T1R01	0.350	8.90	10.00	103	49	61	1.40



## SERIES DH - 3XD

Solid Carbide Drills: 3xD, Internal Coolant



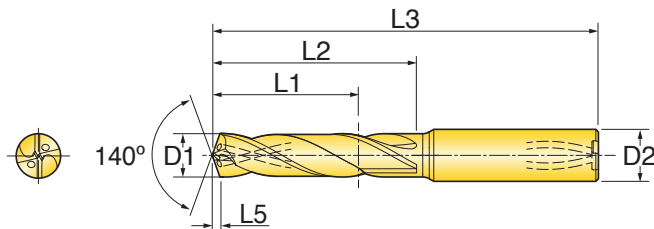
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0300014T7R01	0.118	3.00	6.00	14	20	62	0.50
DH0310014T7R01	0.122	3.10	6.00	14	20	62	0.50
DH0320014T7R01	0.126	3.20	6.00	14	20	62	0.50
DH0330014T7R01	0.130	3.30	6.00	14	20	62	0.50
DH0340014T7R01	0.134	3.40	6.00	14	20	62	0.50
DH0350014T7R01	0.138	3.50	6.00	14	20	62	0.60
DH0360014T7R01	0.142	3.60	6.00	14	20	62	0.60
DH0370017T7R01	0.146	3.70	6.00	14	20	62	0.60
DH0380017T7R01	0.150	3.80	6.00	17	24	66	0.60
DH0390017T7R01	0.154	3.90	6.00	17	24	66	0.60
DH0400017T7R01	0.157	4.00	6.00	17	24	66	0.60
DH0410017T7R01	0.161	4.10	6.00	17	24	66	0.70
DH0420017T7R01	0.165	4.20	6.00	17	24	66	0.70
DH0430017T7R01	0.169	4.30	6.00	17	24	66	0.70
DH0440017T7R01	0.173	4.40	6.00	17	24	66	0.70
DH0450017T7R01	0.177	4.50	6.00	17	24	66	0.70
DH0460017T7R01	0.181	4.60	6.00	17	24	66	0.70
DH0470017T7R01	0.185	4.70	6.00	17	24	66	0.80
DH0480020T7R01	0.189	4.80	6.00	20	28	66	0.80
DH0490020T7R01	0.193	4.90	6.00	20	28	66	0.80
DH0500020T7R01	0.197	5.00	6.00	20	28	66	0.80
DH0510020T7R01	0.201	5.10	6.00	20	28	66	0.80
DH0520020T7R01	0.205	5.20	6.00	20	28	66	0.80
DH0530020T7R01	0.209	5.30	6.00	20	28	66	0.80
DH0540020T7R01	0.213	5.40	6.00	20	28	66	0.80
DH0550020T7R01	0.217	5.50	6.00	20	28	66	0.90
DH0560020T7R01	0.220	5.60	6.00	20	28	66	0.90
DH0570020T7R01	0.224	5.70	6.00	20	28	66	0.90
DH0580020T7R01	0.228	5.80	6.00	20	28	66	0.90
DH0590020T7R01	0.232	5.90	6.00	20	28	66	0.90



## SERIES DH - 3XD (cont.)

Solid Carbide Drills: 3xD, Internal Coolant



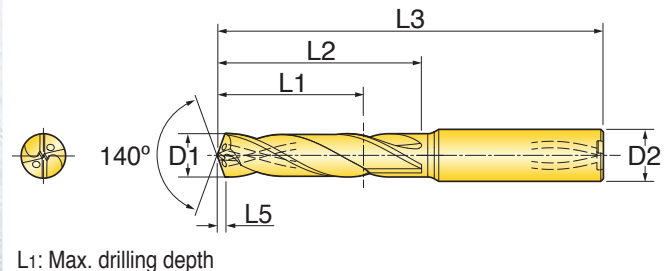
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0610020T7R01	0.236	6.00	6.00	20	28	66	0.90
DH0610024TOR01	0.240	6.10	8.00	24	34	79	1.00
DH0620024TOR01	0.244	6.20	8.00	24	34	79	1.00
DH0630024TOR01	0.248	6.30	8.00	24	34	79	1.00
DH0640024TOR01	0.252	6.40	8.00	24	34	79	1.00
DH0650024TOR01	0.256	6.50	8.00	24	34	79	1.00
DH0660024TOR01	0.260	6.60	8.00	24	34	79	1.00
DH0670024TOR01	0.264	6.70	8.00	24	34	79	1.10
DH0680024TOR01	0.268	6.80	8.00	24	34	79	1.10
DH0690024TOR01	0.272	6.90	8.00	24	34	79	1.10
DH0700024TOR01	0.276	7.00	8.00	24	34	79	1.10
DH0710029TOR01	0.280	7.10	8.00	29	41	79	1.10
DH0720029TOR01	0.283	7.20	8.00	29	41	79	1.10
DH0730029TOR01	0.287	7.30	8.00	29	41	79	1.10
DH0740029TOR01	0.291	7.40	8.00	29	41	79	1.20
DH0750029TOR01	0.295	7.50	8.00	29	41	79	1.20
DH0760029TOR01	0.299	7.60	8.00	29	41	79	1.20
DH0770029TOR01	0.303	7.70	8.00	29	41	79	1.20
DH0780029TOR01	0.307	7.80	8.00	29	41	79	1.20
DH0790029TOR01	0.311	7.90	8.00	29	41	79	1.30
DH0800029TOR01	0.315	8.00	8.00	29	41	79	1.30
DH0810035T1R01	0.319	8.10	10.00	35	47	89	1.30
DH0820035T1R01	0.323	8.20	10.00	35	47	89	1.30
DH0830035T1R01	0.327	8.30	10.00	35	47	89	1.30
DH0840035T1R01	0.331	8.40	10.00	35	47	89	1.30
DH0850035T1R01	0.335	8.50	10.00	35	47	89	1.30
DH0860035T1R01	0.339	8.60	10.00	35	47	89	1.40
DH0870035T1R01	0.343	8.70	10.00	35	47	89	1.40
DH0880035T1R01	0.346	8.80	10.00	35	47	89	1.40
DH0890035T1R01	0.350	8.90	10.00	35	47	89	1.40



## SERIES DH - 3XD (cont.)

Solid Carbide Drills: 3xD, Internal Coolant

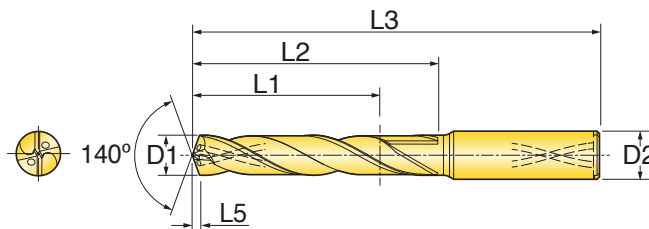


Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0900035T1R01	0.354	9.00	10.00	35	47	89	1.40
DH0910035T1R01	0.358	9.10	10.00	35	47	89	1.40
DH0920035T1R01	0.362	9.20	10.00	35	47	89	1.40
DH0930035T1R01	0.366	9.30	10.00	35	47	89	1.50
DH0940035T1R01	0.370	9.40	10.00	35	47	89	1.50
DH0950035T1R01	0.374	9.50	10.00	35	47	89	1.50
DH0960035T1R01	0.378	9.60	10.00	35	47	89	1.50
DH0970035T1R01	0.382	9.70	10.00	35	47	89	1.50
DH0980035T1R01	0.386	9.80	10.00	35	47	89	1.60
DH0990035T1R01	0.390	9.90	10.00	35	47	89	1.60
DH1000035T1R01	0.394	10.00	10.00	35	47	89	1.60
DH1010040T2R01	0.398	10.10	12.00	40	55	102	1.60
DH1020040T2R01	0.402	10.20	12.00	40	55	102	1.60
DH1030040T2R01	0.406	10.30	12.00	40	55	102	1.60
DH1040040T2R01	0.409	10.40	12.00	40	55	102	1.60
DH1050040T2R01	0.413	10.50	12.00	40	55	102	1.60
DH1060040T2R01	0.417	10.60	12.00	40	55	102	1.70
DH1070040T2R01	0.421	10.70	12.00	40	55	102	1.70
DH1080040T2R01	0.425	10.80	12.00	40	55	102	1.70
DH1090040T2R01	0.429	10.90	12.00	40	55	102	1.70
DH1100040T2R01	0.433	11.00	12.00	40	55	102	1.70
DH1110040T2R01	0.437	11.10	12.00	40	55	102	1.70
DH1120040T2R01	0.441	11.20	12.00	40	55	102	1.80
DH1130040T2R01	0.445	11.30	12.00	40	55	102	1.80
DH1140040T2R01	0.449	11.40	12.00	40	55	102	1.80
DH1150040T2R01	0.453	11.50	12.00	40	55	102	1.80
DH1160040T2R01	0.457	11.60	12.00	40	55	102	1.80
DH1170040T2R01	0.461	11.70	12.00	40	55	102	1.90
DH1180040T2R01	0.465	11.80	12.00	40	55	102	1.90
DH1190040T2R01	0.469	11.90	12.00	40	55	102	1.90
DH1200040T2R01	0.472	12.00	12.00	40	55	102	1.90



## SERIES DH - 5XD

Solid Carbide Drills: 4-5xD, Internal Coolant



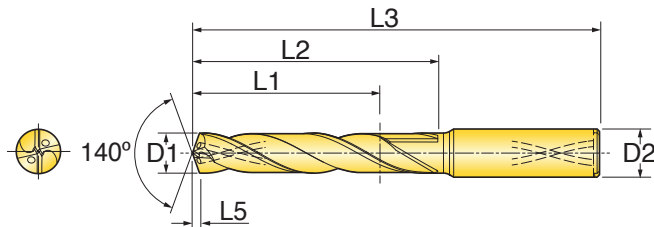
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0300023T7R01	0.118	3.00	6.00	23	28	66	0.50
DH0310023T7R01	0.122	3.10	6.00	23	28	66	0.50
DH0320023T7R01	0.126	3.20	6.00	23	28	66	0.50
DH0330023T7R01	0.130	3.30	6.00	23	28	66	0.50
DH0340023T7R01	0.134	3.40	6.00	23	28	66	0.50
DH0350023T7R01	0.138	3.50	6.00	23	28	66	0.60
DH0360023T7R01	0.142	3.60	6.00	23	28	66	0.60
DH0370023T7R01	0.146	3.70	6.00	23	28	66	0.60
DH0380029T7R01	0.150	3.80	6.00	29	36	74	0.60
DH0390029T7R01	0.154	3.90	6.00	29	36	74	0.60
DH0400029T7R01	0.157	4.00	6.00	29	36	74	0.60
DH0410029T7R01	0.161	4.10	6.00	29	36	74	0.70
DH0420029T7R01	0.165	4.20	6.00	29	36	74	0.70
DH0430029T7R01	0.169	4.30	6.00	29	36	74	0.70
DH0440029T7R01	0.173	4.40	6.00	29	36	74	0.70
DH0450029T7R01	0.177	4.50	6.00	29	36	74	0.70
DH0460029T7R01	0.181	4.60	6.00	29	36	74	0.70
DH0470029T7R01	0.185	4.70	6.00	29	36	74	0.80
DH0480035T7R01	0.189	4.80	6.00	35	44	74	0.80
DH0490035T7R01	0.193	4.90	6.00	35	44	82	0.80
DH0500035T7R01	0.197	5.00	6.00	35	44	82	0.80
DH0510035T7R01	0.201	5.10	6.00	35	44	82	0.80
DH0520035T7R01	0.205	5.20	6.00	35	44	82	0.80
DH0530035T7R01	0.209	5.30	6.00	35	44	82	0.80
DH0540035T7R01	0.213	5.40	6.00	35	44	82	0.80
DH0550035T7R01	0.217	5.50	6.00	35	44	82	0.90
DH0560035T7R01	0.220	5.60	6.00	35	44	82	0.90
DH0570035T7R01	0.224	5.70	6.00	35	44	82	0.90
DH0580035T7R01	0.228	5.80	6.00	35	44	82	0.90
DH0590035T7R01	0.232	5.90	6.00	35	44	82	0.90



## SERIES DH - 5XD (cont.)

Solid Carbide Drills: 4-5xD, Internal Coolant



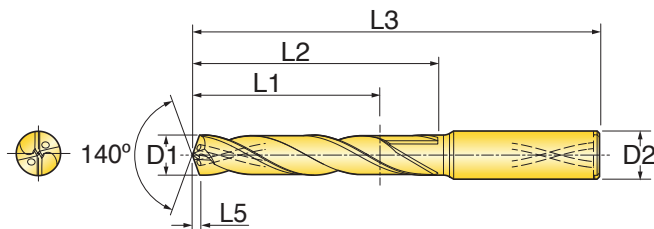
L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0610035T7R01	0.236	6.00	6.00	35	44	82	0.90
DH0610043TOR01	0.240	6.10	8.00	43	53	91	1.00
DH0620043TOR01	0.244	6.20	8.00	43	53	91	1.00
DH0630043TOR01	0.248	6.30	8.00	43	53	91	1.00
DH0640043TOR01	0.252	6.40	8.00	43	53	91	1.00
DH0650043TOR01	0.256	6.50	8.00	43	53	91	1.00
DH0660043TOR01	0.260	6.60	8.00	43	53	91	1.00
DH0670043TOR01	0.264	6.70	8.00	43	53	91	1.10
DH0680043TOR01	0.268	6.80	8.00	43	53	91	1.10
DH0690043TOR01	0.272	6.90	8.00	43	53	91	1.10
DH0700043TOR01	0.276	7.00	8.00	43	53	91	1.10
DH0710043TOR01	0.280	7.10	8.00	43	53	91	1.10
DH0720043TOR01	0.283	7.20	8.00	43	53	91	1.10
DH0730043TOR01	0.287	7.30	8.00	43	53	91	1.10
DH0740043TOR01	0.291	7.40	8.00	43	53	91	1.20
DH0750043TOR01	0.295	7.50	8.00	43	53	91	1.20
DH0760043TOR01	0.299	7.60	8.00	43	53	91	1.20
DH0770043TOR01	0.303	7.70	8.00	43	53	91	1.20
DH0780043TOR01	0.307	7.80	8.00	43	53	91	1.20
DH0790043TOR01	0.311	7.90	8.00	43	53	91	1.30
DH0800043TOR01	0.315	8.00	8.00	43	53	91	1.30
DH0810049T1R01	0.319	8.10	10.00	49	61	103	1.30
DH0820049T1R01	0.323	8.20	10.00	49	61	103	1.30
DH0830049T1R01	0.327	8.30	10.00	49	61	103	1.30
DH0840049T1R01	0.331	8.40	10.00	49	61	103	1.30
DH0850049T1R01	0.335	8.50	10.00	49	61	103	1.30
DH0860049T1R01	0.339	8.60	10.00	49	61	103	1.40
DH0870049T1R01	0.343	8.70	10.00	49	61	103	1.40
DH0880049T1R01	0.346	8.80	10.00	49	61	103	1.40
DH0890049T1R01	0.350	8.90	10.00	49	61	103	1.40



## SERIES DH - 5XD (cont.)

Solid Carbide Drills: 4-5xD, Internal Coolant



L1: Max. drilling depth

Cutter Number	D1 Maximum Dia. of Spot (inch)	D1 Maximum Dia. of Spot (mm)	D2 Shank Dia. (mm)	L1 Max. Depth of Cut (mm)	L2 Flute Length (mm)	L3 Overall Length (mm)	L5 Drill Point Length (mm)
DH0900049T1R01	0.354	9.00	10.00	49	61	103	1.40
DH0910049T1R01	0.358	9.10	10.00	49	61	103	1.40
DH0920049T1R01	0.362	9.20	10.00	49	61	103	1.40
DH0930049T1R01	0.366	9.30	10.00	49	61	103	1.50
DH0940049T1R01	0.370	9.40	10.00	49	61	103	1.50
DH0950049T1R01	0.374	9.50	10.00	49	61	103	1.50
DH0960049T1R01	0.378	9.60	10.00	49	61	103	1.50
DH0970049T1R01	0.382	9.70	10.00	49	61	103	1.50
DH0980049T1R01	0.386	9.80	10.00	49	61	103	1.60
DH0990049T1R01	0.390	9.90	10.00	49	61	103	1.60
DH1000049T1R01	0.394	10.00	10.00	49	61	103	1.60
DH1010056T2R01	0.398	10.10	12.00	56	71	118	1.60
DH1020056T2R01	0.402	10.20	12.00	56	71	118	1.60
DH1030056T2R01	0.406	10.30	12.00	56	71	118	1.60
DH1040056T2R01	0.409	10.40	12.00	56	71	118	1.60
DH1050056T2R01	0.413	10.50	12.00	56	71	118	1.60
DH1060056T2R01	0.417	10.60	12.00	56	71	118	1.70
DH1070056T2R01	0.421	10.70	12.00	56	71	118	1.70
DH1080056T2R01	0.425	10.80	12.00	56	71	118	1.70
DH1090056T2R01	0.429	10.90	12.00	56	71	118	1.70
DH1100056T2R01	0.433	11.00	12.00	56	71	118	1.70
DH1110056T2R01	0.437	11.10	12.00	56	71	118	1.70
DH1120056T2R01	0.441	11.20	12.00	56	71	118	1.80
DH1130056T2R01	0.445	11.30	12.00	56	71	118	1.80
DH1156056T2R01	0.449	11.40	12.00	56	71	118	1.80
DH1150056T2R01	0.453	11.50	12.00	56	71	118	1.80
DH1160056T2R01	0.457	11.60	12.00	56	71	118	1.80
DH1170056T2R01	0.461	11.70	12.00	56	71	118	1.90
DH1180056T2R01	0.465	11.80	12.00	56	71	118	1.90
DH1190056T2R01	0.469	11.90	12.00	56	71	118	1.90
DH1200056T2R01	0.472	12.00	12.00	56	71	118	1.90



## RECOMMENDED CUTTING CONDITIONS

ISO	Material	Condition	Tensile strength (N/mm <sup>2</sup> )	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter			
							Ø3 - Ø5	Ø5.1 - Ø8	Ø8.1 - Ø12	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-120	0.10-0.20	0.15-0.25	0.20-0.30
		>=0.25%C	Annealed	650	190	2	80-110	0.10-0.20	0.15-0.25	0.20-0.30
		<0.55%C	Quenched and tempered	850	250	3	70-100	0.10-0.20	0.15-0.25	0.20-0.30
		>=0.55%C	Annealed	750	220	4	70-100	0.10-0.20	0.15-0.25	0.20-0.30
		>=0.55%C	Quenched and tempered	1000	300	5	70-100	0.10-0.20	0.15-0.25	0.20-0.30
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Quenched and tempered	600	200	6	70-90	0.10-0.20	0.15-0.25	0.20-0.30	
			930	275	7	70-90	0.10-0.20	0.15-0.25	0.20-0.30	
			1000	300	8	50-80	0.10-0.20	0.15-0.25	0.20-0.30	
			1200	350	9	40-70	0.10-0.20	0.15-0.25	0.20-0.30	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	50-80	0.08-0.18	0.10-0.20	0.15-0.25	
Quenched and tempered		1100	325	11	40-70	0.08-0.18	0.10-0.20	0.15-0.25		
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	30-60	0.06-0.12	0.10-0.15	0.12-0.18	
		Martensitic	820	240	13	30-60	0.06-0.12	0.10-0.15	0.12-0.18	
		Austenitic	600	180	14	30-60	0.06-0.12	0.10-0.15	0.12-0.18	
K	Gray cast iron (GG)	Ferritic	160	15	65-80	0.10-0.20	0.15-0.25	0.20-0.30		
		Pearlitic	250	16	65-80	0.10-0.20	0.15-0.25	0.20-0.30		
	Cast iron nodular (GGG)	Ferritic	180	17	85-105	0.10-0.20	0.15-0.25	0.20-0.30		
		Pearlitic	260	18	75-90	0.10-0.20	0.15-0.25	0.20-0.30		
	Malleable cast iron	Ferritic	130	19	65-80	0.10-0.20	0.15-0.25	0.20-0.30		
		Pearlitic	230	20	65-80	0.10-0.20	0.15-0.25	0.20-0.30		
N	Aluminum - Wrought alloy	Not cureable	60	21	70-200	0.10-0.25	0.15-0.35	0.25-0.45		
		Cured	100	22	70-200	0.10-0.25	0.15-0.35	0.25-0.45		
	Aluminum-cast, alloyed	<=12% Si	Not cureable	75	23	70-200	0.10-0.25	0.15-0.35	0.25-0.45	
		Cured	90	24	70-200	0.10-0.25	0.15-0.35	0.25-0.45		
	Copper alloys	>12% Si	High temp.	130	25	70-150	0.10-0.25	0.15-0.35	0.25-0.45	
		>1% Pb	Free cutting	110	26	70-200	0.08-0.18	0.15-0.25	0.20-0.35	
			Brass	90	27	70-200	0.08-0.18	0.15-0.25	0.20-0.35	
	Electrolitic copper	100	28	70-200	0.08-0.18	0.15-0.25	0.20-0.35			
		Duroplastics, fiber plastics		29						
	Hard rubber		30							
S	High temp. alloys	Fe based	Annealed	200	31	15-40	0.02-0.08	0.04-0.10	0.06-0.12	
			Cured	280	32	15-40	0.02-0.08	0.04-0.10	0.06-0.12	
		Ni or Co based	Annealed	250	33	15-40	0.02-0.08	0.04-0.10	0.06-0.12	
			Cured	350	34	15-40	0.02-0.08	0.04-0.10	0.06-0.12	
			Cast	320	35	15-40	0.02-0.08	0.04-0.10	0.06-0.12	
	Titanium, Ti alloys		Rm 400	36						
		Alpha+beta alloys cured	Rm 1050	37						
H	Hardened steel	Hardened	55HRC	38	10-40	0.02-0.08	0.04-0.10	0.06-0.12		
		Hardened	60HRC	39	10-40	0.02-0.08	0.04-0.10	0.06-0.12		
	Chilled cast iron	Cast	400	40						
	Cast iron nodular	Hardened	55HRC	41						

\* Feed Rates are Based on Two-Effective - DO NOT DOUBLE

■ Steel   
 ■ Stainless steel   
 ■ Cast iron   
 ■ Nonferrous   
 ■ High temp. alloys   
 ■ Hardened steel