

HOW TO USE THE CATALOG

Please note that products in this catalog are continuously under study and are improved.

The products therefore may be changed in the future and thus become different from the catalog.

Stock status is mentioned for the products in this catalog. However, please note that the products here may be replaced by the new grades and products in the future.









Regarding stock status:

- Stock standard items (NOTE: Some items may be stocked in Japan - delivery approximately 2 weeks.)
- Non stock standard items (Production after order received)

CUTTING STYLES




Face Milling	Shoulder Milling	Shoulder Milling	Slotting	Slotting	Copy Milling	Pocket Milling	Under Milling	Chamfering	Helical Interpolation	
Shoulder Milling	Shoulder Milling	Slotting	Slotting	Copy Milling		Chamfering	Spot Facing			
Side Milling		T - Slotting				Drilling				
Up & Down Milling		V - Slotting				Plunge Milling				
Up & Down Milling						Plunging				
Machining Type					Corner Shape					
										Centering
Rough Machining	Semi Finish Machining	Finish Machining			True 90°	Corner Radius	With Gash			

Drills

Product Name	Strike Drill							
Type	Solid Carbide							
								
Page	A-5	A-7	A-9	A-11	A-13	A-15	A-15	A-16
Catalog Number	EZN2D	EZN4D	EZN3D	EZN5D	EZN8D	EZN2D-M EZN3D-M	EZN2DCH-M EZN3DCH-M	EZT3D
Diameters	1 ~ 14mm	3 ~ 14mm	3 ~ 16mm	3 ~ 16mm	3 ~ 14mm	3.4 ~ 10.3mm	3.4 ~ 10.3mm	1.81 ~ 5.5mm
Depth of Cut	2XD	4XD	3XD	5XD	8XD	2XD 3XD	2XD 3XD	3XD
Coolant	External		Internal			External	Internal	External
Coating	Value Coating							
Mild Steel	◎	◎	◎	◎	◎	◎	◎	◎
Carbon, Alloy Steel	◎	◎	◎	◎	◎	◎	◎	◎
Hardened Steel: ~50HRC	○	○	○	○	○	○	○	○
~65HRC								
Inconel, Titanium			○	○	○		○	
Stainless Steel	○	○	◎	◎	◎	○	◎	○
Cast Iron	◎	◎	◎	◎	◎	◎	◎	◎
Aluminum						○	○	
Graphite, Carbon, Ceramics								
Features	High accuracy solid carbide drill, 2XD.	High accuracy solid carbide drill, 4XD.	High accuracy solid carbide drill with coolant thru, 3XD.	High accuracy solid carbide drill with coolant thru, 5XD.	High accuracy solid carbide drill with coolant thru, 8XD.	Solid carbide prehole drill for tap drill with chamfer, 2XD & 3XD.	Solid carbide prehole drill, coolant thru for tap drill with chamfer, 2XD & 3XD.	High accuracy (-0.01mm-0mm) prehole drill for roll tap, 3XD.

◎ = First Choice ○ = Second Choice

Drills








Strike	EZ Hard Drill		Spot Facing Drill			TA Spot Facing Drill	
Solid Carbide						Indexable	
							
A-16	A-33	A-33	A-23	A-27	A-29	A-59	A-59
EZT4D	EZH	EZH-LS	TLDM	TLD3D	TLD5D	TLZD	TLZD
2.78 ~ 5.55mm	2 ~ 16.1mm	3 ~ 5mm	1 ~ 14mm	3 ~ 14mm	3 ~ 14mm	14 ~ 32mm	14 ~ 32mm
4XD	5XD	5XD	2XD	3XD	5XD	1.5XD	.7 ~ 1XD
Internal	External		Internal				
Value Coating	DH Coating		TiAlN	Value Coating		JC7500	
◎	○	○	◎	◎	◎	◎	◎
◎	○	○	◎	◎	◎	◎	◎
○	◎	◎	○	○	○	○ \sim 40 HRC	○ \sim 40 HRC
	◎	◎					
○				○	○	○	○
◎				◎	◎	◎	◎
◎	○	○	◎	◎	◎	◎	◎
			○	○	○	○	○
High accuracy (-0.01mm-0mm) prehole drill for roll tap, 3XD.	Solid carbide drill for high hardened material, 5XD.	Solid carbide drill for high hardened material with long shank, 5XD.	Solid carbide spot face drill with 180° point, 2XD (flat face).	Solid carbide spot face drill with 180° point, double margin, 3XD (flat face).	Solid carbide spot face drill with 180° point, double margin, 5XD (flat face).	Indexable spot face drill with 180° point, 1.5XD.	Indexable spot face modular head drill with 180° point, .70-1XD.

◎ = First Choice

○ = Second Choice

Drills

Drills

Product Name	TA-EZ						Finish Hard Reamer
Type	Indexable						Solid Carbide
							
Page	A-43	A-43	A-43	A-43	A-43	A-43	A-35
Catalog Number	TEZD-MS	TEZD-ML	TEZD-XL	TEZDF-MS TEZD-MS	TEZDF-ML TEZD-ML	TEZDF-XL TEZD-XL	DH-FHR
Diameters	13.5 ~ 32.5mm	13.5 ~ 32.5mm	13.5 ~ 32.5mm	13.5 ~ 32.5mm .531" ~ 1.2795"	13.5 ~ 32.5mm .531" ~ 1.2795"	13.5 ~ 32.5mm .531" ~ 1.2795"	3 ~ 16.02mm
Depth of Cut	3XD	5XD	8XD	3XD	5XD	8XD	5XD (~12.1mm)
Coolant	Internal						External
Coating	Value Coating						DH Coating
Mild Steel	⊙	⊙	⊙	⊙	⊙	⊙	
Carbon, Alloy Steel	⊙	⊙	⊙	⊙	⊙	⊙	
Hardened Steel: ~50HRC	○	○	○	○	○	○	○
~65HRC							⊙
Inconel, Titanium	⊙	⊙	⊙	⊙	⊙	⊙	
Stainless Steel	⊙	⊙	⊙	⊙	⊙	⊙	
Cast Iron	⊙	⊙	⊙	⊙	⊙	⊙	○
Aluminum	○	○	○	○	○	○	
Graphite, Carbon, Ceramics							
Features	Indexable one piece carbide tip with low cutting force EZ geometry, 3XD.	Indexable one piece carbide tip with low cutting force EZ geometry, 5XD.	Indexable one piece carbide tip with low cutting force EZ geometry, 8XD.	Indexable one piece carbide tip with low cutting force EZ geometry & flange shank, 3XD.	Indexable one piece carbide tip with low cutting force EZ geometry & flange shank, 5XD.	Indexable one piece carbide tip with low cutting force EZ geometry & flange shank, 8XD.	For high hardened steel with high accurate roundness, 5XD.

⊙ = First Choice ○ = Second Choice

Drills

V Point Drill		Helical Cutting for Aluminum	
Solid Carbide			
A-40	A-40	A-38	
VSD VSDL	VSD VSDL	AL-OCHE	
3 ~ 25mm	3 ~ 25mm	4 ~ 16mm	
		2 flute	
External		Internal	
None	TiN	DLC Coating	
○	○		
○	○		
◎	◎		
		◎	
Standard and long shank type center drill.	Standard and long shank type coated center drill.	30° Helix angle, high efficient cutting with standard length of cut.	

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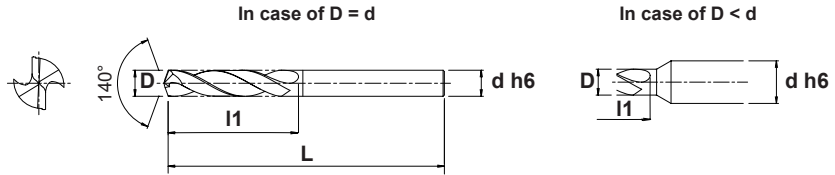
Strike Drill

METRIC

EZN2D Type

- Solid Carbide drill with high accuracy
- Drilling depth 2xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN2D0100S03	•	1.0	4	49	3
EZN2D0110S03	•	1.1	5	49	3
EZN2D0120S03	•	1.2	5	49	3
EZN2D0130S03	•	1.3	6	49	3
EZN2D0140S03	•	1.4	6	49	3
EZN2D0150S03	•	1.5	6	49	3
EZN2D0160S03	•	1.6	7	49	3
EZN2D0170S03	•	1.7	7	49	3
EZN2D0180S03	•	1.8	8	49	3
EZN2D0190S03	•	1.9	8	49	3
EZN2D0200S03	•	2.0	8	49	3
EZN2D0210S03	•	2.1	9	49	3
EZN2D0220S03	•	2.2	9	49	3
EZN2D0230S03	•	2.3	10	49	3
EZN2D0240S03	•	2.4	10	49	3
EZN2D0250S03	•	2.5	10	49	3
EZN2D0260S03	•	2.6	11	49	3
EZN2D0270S03	•	2.7	11	49	3
EZN2D0280S03	•	2.8	12	49	3
EZN2D0290S03	•	2.9	12	49	3
EZN2D0300S04	•	3.0	13	49	4
EZN2D0310S04	•	3.1	15	49	4
EZN2D0320S04	•	3.2	15	49	4
EZN2D0330S04	•	3.3	15	49	4
EZN2D0340S04	•	3.4	15	49	4
EZN2D0350S04	•	3.5	15	49	4
EZN2D0360S04	•	3.6	17	49	4
EZN2D0370S04	•	3.7	17	49	4
EZN2D0380S04	•	3.8	17	49	4
EZN2D0390S04	•	3.9	17	49	4
EZN2D0400S04	•	4.0	17	49	4
EZN2D0410S06	•	4.1	19	64	6
EZN2D0420S06	•	4.2	19	64	6
EZN2D0430S06	•	4.3	19	64	6
EZN2D0440S06	•	4.4	19	64	6
EZN2D0450S06	•	4.5	19	64	6
EZN2D0460S06	•	4.6	21	64	6
EZN2D0470S06	•	4.7	21	64	6
EZN2D0480S06	•	4.8	21	64	6
EZN2D0490S06	•	4.9	21	64	6

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN2D0500S06	•	5.0	21	64	6
EZN2D0510S06	•	5.1	23	68	6
EZN2D0520S06	•	5.2	23	68	6
EZN2D0530S06	•	5.3	23	68	6
EZN2D0540S06	•	5.4	23	68	6
EZN2D0550S06	•	5.5	23	68	6
EZN2D0560S06	•	5.6	25	68	6
EZN2D0570S06	•	5.7	25	68	6
EZN2D0580S06	•	5.8	25	68	6
EZN2D0590S06	•	5.9	25	68	6
EZN2D0600S06	•	6.0	25	68	6
EZN2D0610S08	•	6.1	27	73	8
EZN2D0620S08	•	6.2	27	73	8
EZN2D0630S08	•	6.3	27	73	8
EZN2D0640S08	•	6.4	27	73	8
EZN2D0650S08	•	6.5	27	73	8
EZN2D0660S08	•	6.6	28	73	8
EZN2D0670S08	•	6.7	28	73	8
EZN2D0680S08	•	6.8	28	73	8
EZN2D0690S08	•	6.9	28	73	8
EZN2D0700S08	•	7.0	28	73	8
EZN2D0710S08	•	7.1	30	73	8
EZN2D0720S08	•	7.2	30	73	8
EZN2D0730S08	•	7.3	30	73	8
EZN2D0740S08	•	7.4	30	73	8
EZN2D0750S08	•	7.5	30	73	8
EZN2D0760S08	•	7.6	32	73	8
EZN2D0770S08	•	7.7	32	73	8
EZN2D0780S08	•	7.8	32	73	8
EZN2D0790S08	•	7.9	32	73	8
EZN2D0800S08	•	8.0	32	73	8
EZN2D0810S10	•	8.1	34	78	10
EZN2D0820S10	•	8.2	34	78	10
EZN2D0830S10	•	8.3	34	78	10
EZN2D0840S10	•	8.4	34	78	10
EZN2D0850S10	•	8.5	34	78	10
EZN2D0860S10	•	8.6	36	78	10
EZN2D0870S10	•	8.7	36	78	10
EZN2D0880S10	•	8.8	36	78	10
EZN2D0890S10	•	8.9	36	78	10



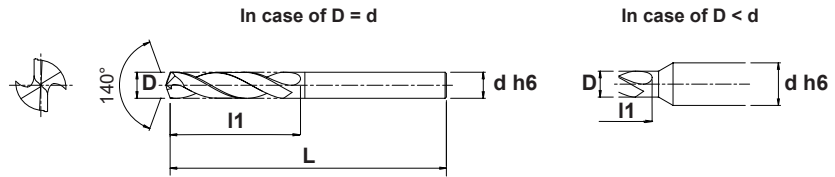
METRIC

Strike Drill

EZN2D Type

- Solid Carbide drill with high accuracy
- Drilling depth 2xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
EZN2D0900S10	•	9.0	36	78	10
EZN2D0910S10	•	9.1	38	88	10
EZN2D0920S10	•	9.2	38	88	10
EZN2D0930S10	•	9.3	38	88	10
EZN2D0940S10	•	9.4	38	88	10
EZN2D0950S10	•	9.5	38	88	10
EZN2D0960S10	•	9.6	40	88	10
EZN2D0970S10	•	9.7	40	88	10
EZN2D0980S10	•	9.8	40	88	10
EZN2D0990S10	•	9.9	40	88	10
EZN2D1000S10	•	10.0	40	88	10
EZN2D1010S12	•	10.1	42	98	12
EZN2D1020S12	•	10.2	42	98	12
EZN2D1030S12	•	10.3	42	98	12
EZN2D1040S12	•	10.4	42	98	12
EZN2D1050S12	•	10.5	42	98	12
EZN2D1060S12	•	10.6	44	98	12
EZN2D1070S12	•	10.7	44	98	12
EZN2D1080S12	•	10.8	44	98	12
EZN2D1090S12	•	10.9	44	98	12
EZN2D1100S12	•	11.0	44	98	12
EZN2D1110S12	•	11.1	46	98	12
EZN2D1120S12	•	11.2	46	98	12
EZN2D1130S12	•	11.3	46	98	12
EZN2D1140S12	•	11.4	46	98	12
EZN2D1150S12	•	11.5	46	98	12
EZN2D1160S12	•	11.6	48	98	12
EZN2D1170S12	•	11.7	48	98	12
EZN2D1180S12	•	11.8	48	98	12
EZN2D1190S12	•	11.9	48	98	12
EZN2D1200S12	•	12.0	48	98	12
EZN2D1210S14	•	12.1	52	110	14
EZN2D1220S14	•	12.2	52	110	14
EZN2D1230S14	•	12.3	52	110	14
EZN2D1240S14	•	12.4	52	110	14
EZN2D1250S14	•	12.5	52	110	14
EZN2D1260S14	•	12.6	52	110	14
EZN2D1270S14	•	12.7	52	110	14
EZN2D1280S14	•	12.8	52	110	14
EZN2D1290S14	•	12.9	52	110	14

CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
EZN2D1300S14	•	13.0	52	110	14
EZN2D1310S14	•	13.1	56	115	14
EZN2D1320S14	•	13.2	56	115	14
EZN2D1330S14	•	13.3	56	115	14
EZN2D1340S14	•	13.4	56	115	14
EZN2D1350S14	•	13.5	56	115	14
EZN2D1360S14	•	13.6	56	115	14
EZN2D1370S14	•	13.7	56	115	14
EZN2D1380S14	•	13.8	56	115	14
EZN2D1390S14	•	13.9	56	115	14
EZN2D1400S14	•	14.0	56	115	14

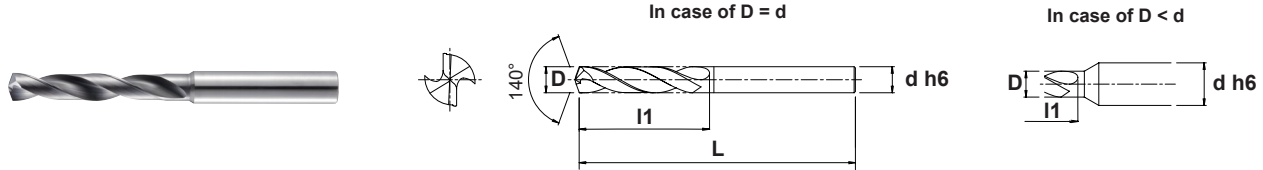
Strike Drill

METRIC

EZN4D Type

- Solid Carbide drill with high accuracy
- Drilling depth 4xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN4D0300S04	•	3.0	19	59	4
EZN4D0310S04	•	3.1	22	59	4
EZN4D0320S04	•	3.2	22	59	4
EZN4D0330S04	•	3.3	22	59	4
EZN4D0340S04	•	3.4	22	59	4
EZN4D0350S04	•	3.5	22	59	4
EZN4D0360S04	•	3.6	25	59	4
EZN4D0370S04	•	3.7	25	59	4
EZN4D0380S04	•	3.8	25	59	4
EZN4D0390S04	•	3.9	25	59	4
EZN4D0400S04	•	4.0	25	59	4
EZN4D0410S06	•	4.1	28	74	6
EZN4D0420S06	•	4.2	28	74	6
EZN4D0430S06	•	4.3	28	74	6
EZN4D0440S06	•	4.4	28	74	6
EZN4D0450S06	•	4.5	28	74	6
EZN4D0460S06	•	4.6	31	74	6
EZN4D0470S06	•	4.7	31	74	6
EZN4D0480S06	•	4.8	31	74	6
EZN4D0490S06	•	4.9	31	74	6
EZN4D0500S06	•	5.0	31	74	6
EZN4D0510S06	•	5.1	34	79	6
EZN4D0520S06	•	5.2	34	79	6
EZN4D0530S06	•	5.3	34	79	6
EZN4D0540S06	•	5.4	34	79	6
EZN4D0550S06	•	5.5	34	79	6
EZN4D0560S06	•	5.6	37	79	6
EZN4D0570S06	•	5.7	37	79	6
EZN4D0580S06	•	5.8	37	79	6
EZN4D0590S06	•	5.9	37	79	6
EZN4D0600S06	•	6.0	37	79	6
EZN4D0610S08	•	6.1	40	88	8
EZN4D0620S08	•	6.2	40	88	8
EZN4D0630S08	•	6.3	40	88	8
EZN4D0640S08	•	6.4	40	88	8
EZN4D0650S08	•	6.5	40	88	8
EZN4D0660S08	•	6.6	42	88	8
EZN4D0670S08	•	6.7	42	88	8
EZN4D0680S08	•	6.8	42	88	8
EZN4D0690S08	•	6.9	42	88	8

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN4D0700S08	•	7.0	42	88	8
EZN4D0710S08	•	7.1	45	93	8
EZN4D0720S08	•	7.2	45	93	8
EZN4D0730S08	•	7.3	45	93	8
EZN4D0740S08	•	7.4	45	93	8
EZN4D0750S08	•	7.5	45	93	8
EZN4D0760S08	•	7.6	48	93	8
EZN4D0770S08	•	7.7	48	93	8
EZN4D0780S08	•	7.8	48	93	8
EZN4D0790S08	•	7.9	48	93	8
EZN4D0800S08	•	8.0	48	93	8
EZN4D0810S10	•	8.1	51	98	10
EZN4D0820S10	•	8.2	51	98	10
EZN4D0830S10	•	8.3	51	98	10
EZN4D0840S10	•	8.4	51	98	10
EZN4D0850S10	•	8.5	51	98	10
EZN4D0860S10	•	8.6	54	98	10
EZN4D0870S10	•	8.7	54	98	10
EZN4D0880S10	•	8.8	54	98	10
EZN4D0890S10	•	8.9	54	98	10
EZN4D0900S10	•	9.0	54	98	10
EZN4D0910S10	•	9.1	57	108	10
EZN4D0920S10	•	9.2	57	108	10
EZN4D0930S10	•	9.3	57	108	10
EZN4D0940S10	•	9.4	57	108	10
EZN4D0950S10	•	9.5	57	108	10
EZN4D0960S10	•	9.6	60	108	10
EZN4D0970S10	•	9.7	60	108	10
EZN4D0980S10	•	9.8	60	108	10
EZN4D0990S10	•	9.9	60	108	10
EZN4D1000S10	•	10.0	60	108	10
EZN4D1010S12	•	10.1	63	118	12
EZN4D1020S12	•	10.2	63	118	12
EZN4D1030S12	•	10.3	63	118	12
EZN4D1040S12	•	10.4	63	118	12
EZN4D1050S12	•	10.5	63	118	12
EZN4D1060S12	•	10.6	66	118	12
EZN4D1070S12	•	10.7	66	118	12
EZN4D1080S12	•	10.8	66	118	12
EZN4D1090S12	•	10.9	66	118	12



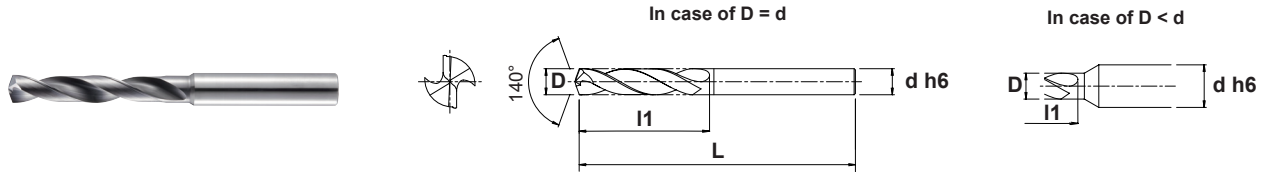
METRIC

Strike Drill

EZN4D Type

- Solid Carbide drill with high accuracy
- Drilling depth 4xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN4D1100S12	•	11.0	66	118	12
EZN4D1110S12	•	11.1	69	118	12
EZN4D1120S12	•	11.2	69	118	12
EZN4D1130S12	•	11.3	69	118	12
EZN4D1140S12	•	11.4	69	118	12
EZN4D1150S12	•	11.5	69	118	12
EZN4D1160S12	•	11.6	72	118	12
EZN4D1170S12	•	11.7	72	118	12
EZN4D1180S12	•	11.8	72	118	12
EZN4D1190S12	•	11.9	72	118	12
EZN4D1200S12	•	12.0	72	118	12
EZN4D1210S14	•	12.1	78	137	14
EZN4D1220S14	•	12.2	78	137	14
EZN4D1230S14	•	12.3	78	137	14
EZN4D1240S14	•	12.4	78	137	14
EZN4D1250S14	•	12.5	78	137	14
EZN4D1260S14	•	12.6	78	137	14
EZN4D1270S14	•	12.7	78	137	14
EZN4D1280S14	•	12.8	78	137	14
EZN4D1290S14	•	12.9	78	137	14
EZN4D1300S14	•	13.0	78	137	14
EZN4D1310S14	•	13.1	84	147	14
EZN4D1320S14	•	13.2	84	147	14
EZN4D1330S14	•	13.3	84	147	14
EZN4D1340S14	•	13.4	84	147	14
EZN4D1350S14	•	13.5	84	147	14
EZN4D1360S14	•	13.6	84	147	14
EZN4D1370S14	•	13.7	84	147	14
EZN4D1380S14	•	13.8	84	147	14
EZN4D1390S14	•	13.9	84	147	14
EZN4D1400S14	•	14.0	84	147	14

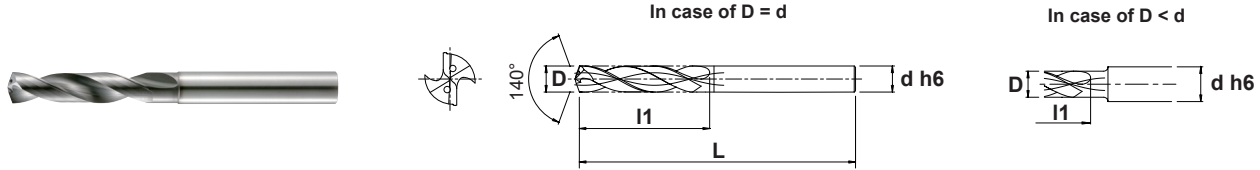
Strike Drill

METRIC

EZN3D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth 3xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN3DCH0300S03	•	3.0	15	68	3
EZN3DCH0310S04	•	3.1	18	71	4
EZN3DCH0320S04	•	3.2	18	71	4
EZN3DCH0330S04	•	3.3	18	71	4
EZN3DCH0340S04	•	3.4	18	71	4
EZN3DCH0350S04	•	3.5	18	71	4
EZN3DCH0360S04	•	3.6	20	73	4
EZN3DCH0370S04	•	3.7	20	73	4
EZN3DCH0380S04	•	3.8	20	73	4
EZN3DCH0390S04	•	3.9	20	73	4
EZN3DCH0400S04	•	4.0	20	73	4
EZN3DCH0410S05	•	4.1	23	78	5
EZN3DCH0420S05	•	4.2	23	78	5
EZN3DCH0430S05	•	4.3	23	78	5
EZN3DCH0440S05	•	4.4	23	78	5
EZN3DCH0450S05	•	4.5	23	78	5
EZN3DCH0460S05	•	4.6	25	80	5
EZN3DCH0470S05	•	4.7	25	80	5
EZN3DCH0480S05	•	4.8	25	80	5
EZN3DCH0490S05	•	4.9	25	80	5
EZN3DCH0500S05	•	5.0	25	80	5
EZN3DCH0510S06	•	5.1	28	82	6
EZN3DCH0520S06	•	5.2	28	82	6
EZN3DCH0530S06	•	5.3	28	82	6
EZN3DCH0540S06	•	5.4	28	82	6
EZN3DCH0550S06	•	5.5	28	82	6
EZN3DCH0560S06	•	5.6	30	82	6
EZN3DCH0570S06	•	5.7	30	82	6
EZN3DCH0580S06	•	5.8	30	82	6
EZN3DCH0590S06	•	5.9	30	82	6
EZN3DCH0600S06	•	6.0	30	82	6
EZN3DCH0610S07	•	6.1	33	86	7
EZN3DCH0620S07	•	6.2	33	86	7
EZN3DCH0630S07	•	6.3	33	86	7
EZN3DCH0640S07	•	6.4	33	86	7
EZN3DCH0650S07	•	6.5	33	86	7
EZN3DCH0660S07	•	6.6	35	88	7
EZN3DCH0670S07	•	6.7	35	88	7
EZN3DCH0680S07	•	6.8	35	88	7
EZN3DCH0690S07	•	6.9	35	88	7

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN3DCH0700S07	•	7.0	35	88	7
EZN3DCH0710S08	•	7.1	38	92	8
EZN3DCH0720S08	•	7.2	38	92	8
EZN3DCH0730S08	•	7.3	38	92	8
EZN3DCH0740S08	•	7.4	38	92	8
EZN3DCH0750S08	•	7.5	38	92	8
EZN3DCH0760S08	•	7.6	40	94	8
EZN3DCH0770S08	•	7.7	40	94	8
EZN3DCH0780S08	•	7.8	40	94	8
EZN3DCH0790S08	•	7.9	40	94	8
EZN3DCH0800S08	•	8.0	40	94	8
EZN3DCH0810S09	•	8.1	43	100	9
EZN3DCH0820S09	•	8.2	43	100	9
EZN3DCH0830S09	•	8.3	43	100	9
EZN3DCH0840S09	•	8.4	43	100	9
EZN3DCH0850S09	•	8.5	43	100	9
EZN3DCH0860S09	•	8.6	45	100	9
EZN3DCH0870S09	•	8.7	45	100	9
EZN3DCH0880S09	•	8.8	45	100	9
EZN3DCH0890S09	•	8.9	45	100	9
EZN3DCH0900S09	•	9.0	45	100	9
EZN3DCH0910S10	•	9.1	48	106	10
EZN3DCH0920S10	•	9.2	48	106	10
EZN3DCH0930S10	•	9.3	48	106	10
EZN3DCH0940S10	•	9.4	48	106	10
EZN3DCH0950S10	•	9.5	48	106	10
EZN3DCH0960S10	•	9.6	50	106	10
EZN3DCH0970S10	•	9.7	50	106	10
EZN3DCH0980S10	•	9.8	50	106	10
EZN3DCH0990S10	•	9.9	50	106	10
EZN3DCH1000S10	•	10.0	50	106	10
EZN3DCH1010S11	•	10.1	53	116	11
EZN3DCH1020S11	•	10.2	53	116	11
EZN3DCH1030S11	•	10.3	53	116	11
EZN3DCH1040S11	•	10.4	53	116	11
EZN3DCH1050S11	•	10.5	53	116	11
EZN3DCH1060S11	•	10.6	55	116	11
EZN3DCH1070S11	•	10.7	55	116	11
EZN3DCH1080S11	•	10.8	55	116	11
EZN3DCH1090S11	•	10.9	55	116	11



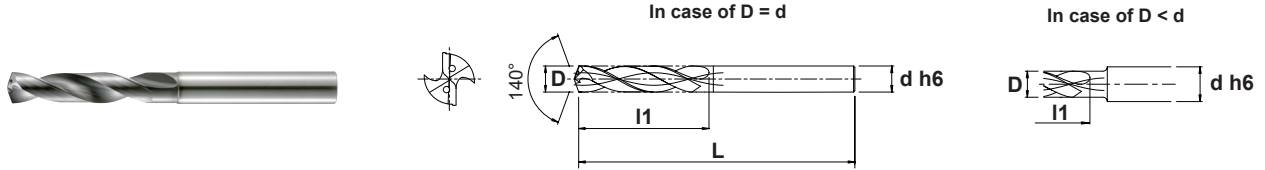
METRIC

Strike Drill

EZN3D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth 3xD with 30° helix

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN3DCH1100S11	•	11.0	55	116	11
EZN3DCH1110S12	•	11.1	58	122	12
EZN3DCH1120S12	•	11.2	58	122	12
EZN3DCH1130S12	•	11.3	58	122	12
EZN3DCH1140S12	•	11.4	58	122	12
EZN3DCH1150S12	•	11.5	58	122	12
EZN3DCH1160S12	•	11.6	60	122	12
EZN3DCH1170S12	•	11.7	60	122	12
EZN3DCH1180S12	•	11.8	60	122	12
EZN3DCH1190S12	•	11.9	60	122	12
EZN3DCH1200S12	•	12.0	60	122	12
EZN3DCH1210S13	•	12.1	65	128	13
EZN3DCH1220S13	•	12.2	65	128	13
EZN3DCH1230S13	•	12.3	65	128	13
EZN3DCH1240S13	•	12.4	65	128	13
EZN3DCH1250S13	•	12.5	65	128	13
EZN3DCH1260S13	•	12.6	65	128	13
EZN3DCH1270S13	•	12.7	65	128	13
EZN3DCH1280S13	•	12.8	65	128	13
EZN3DCH1290S13	•	12.9	65	128	13
EZN3DCH1300S13	•	13.0	65	128	13
EZN3DCH1310S14	•	13.1	70	134	14
EZN3DCH1320S14	•	13.2	70	134	14
EZN3DCH1330S14	•	13.3	70	134	14
EZN3DCH1340S14	•	13.4	70	134	14
EZN3DCH1350S14	•	13.5	70	134	14
EZN3DCH1360S14	•	13.6	70	134	14
EZN3DCH1370S14	•	13.7	70	134	14
EZN3DCH1380S14	•	13.8	70	134	14
EZN3DCH1390S14	•	13.9	70	134	14
EZN3DCH1400S14	•	14.0	70	134	14
EZN3DCH1450S15	•	14.5	75	140	15
EZN3DCH1500S15	•	15.0	75	140	15
EZN3DCH1550S16	•	15.5	80	146	16
EZN3DCH1600S16	•	16.0	80	146	16

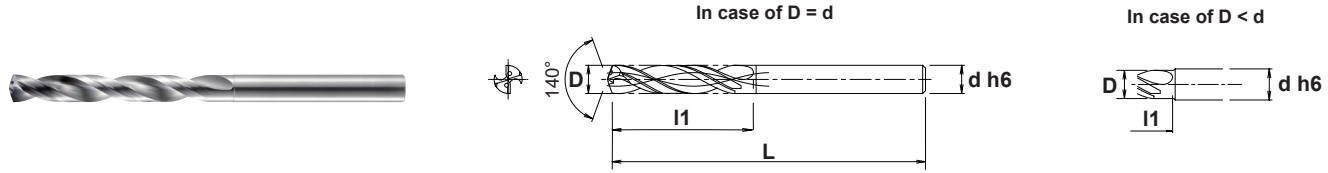
Strike Drill

METRIC

EZN5D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth 5xD, 30° helix and double margin

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN5DCH0300S03	•	3.0	24	77	3
EZN5DCH0310S04	•	3.1	28	81	4
EZN5DCH0320S04	•	3.2	28	81	4
EZN5DCH0330S04	•	3.3	28	81	4
EZN5DCH0340S04	•	3.4	28	81	4
EZN5DCH0350S04	•	3.5	28	81	4
EZN5DCH0360S04	•	3.6	32	85	4
EZN5DCH0370S04	•	3.7	32	85	4
EZN5DCH0380S04	•	3.8	32	85	4
EZN5DCH0390S04	•	3.9	32	85	4
EZN5DCH0400S04	•	4.0	32	85	4
EZN5DCH0410S05	•	4.1	36	91	5
EZN5DCH0420S05	•	4.2	36	91	5
EZN5DCH0430S05	•	4.3	36	91	5
EZN5DCH0440S05	•	4.4	36	91	5
EZN5DCH0450S05	•	4.5	36	91	5
EZN5DCH0460S05	•	4.6	40	94	5
EZN5DCH0470S05	•	4.7	40	94	5
EZN5DCH0480S05	•	4.8	40	94	5
EZN5DCH0490S05	•	4.9	40	94	5
EZN5DCH0500S05	•	5.0	40	94	5
EZN5DCH0510S06	•	5.1	44	96	6
EZN5DCH0520S06	•	5.2	44	96	6
EZN5DCH0530S06	•	5.3	44	96	6
EZN5DCH0540S06	•	5.4	44	96	6
EZN5DCH0550S06	•	5.5	44	96	6
EZN5DCH0560S06	•	5.6	48	100	6
EZN5DCH0570S06	•	5.7	48	100	6
EZN5DCH0580S06	•	5.8	48	100	6
EZN5DCH0590S06	•	5.9	48	100	6
EZN5DCH0600S06	•	6.0	48	100	6
EZN5DCH0610S07	•	6.1	52	105	7
EZN5DCH0620S07	•	6.2	52	105	7
EZN5DCH0630S07	•	6.3	52	105	7
EZN5DCH0640S07	•	6.4	52	105	7
EZN5DCH0650S07	•	6.5	52	105	7
EZN5DCH0660S07	•	6.6	56	109	7
EZN5DCH0670S07	•	6.7	56	109	7
EZN5DCH0680S07	•	6.8	56	109	7
EZN5DCH0690S07	•	6.9	56	109	7

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN5DCH0700S07	•	7.0	56	109	7
EZN5DCH0710S08	•	7.1	60	114	8
EZN5DCH0720S08	•	7.2	60	114	8
EZN5DCH0730S08	•	7.3	60	114	8
EZN5DCH0740S08	•	7.4	60	114	8
EZN5DCH0750S08	•	7.5	60	114	8
EZN5DCH0760S08	•	7.6	64	118	8
EZN5DCH0770S08	•	7.7	64	118	8
EZN5DCH0780S08	•	7.8	64	118	8
EZN5DCH0790S08	•	7.9	64	118	8
EZN5DCH0800S08	•	8.0	64	118	8
EZN5DCH0810S09	•	8.1	68	127	9
EZN5DCH0820S09	•	8.2	68	127	9
EZN5DCH0830S09	•	8.3	68	127	9
EZN5DCH0840S09	•	8.4	68	127	9
EZN5DCH0850S09	•	8.5	68	127	9
EZN5DCH0860S09	•	8.6	72	127	9
EZN5DCH0870S09	•	8.7	72	127	9
EZN5DCH0880S09	•	8.8	72	127	9
EZN5DCH0890S09	•	8.9	72	127	9
EZN5DCH0900S09	•	9.0	72	127	9
EZN5DCH0910S10	•	9.1	76	136	10
EZN5DCH0920S10	•	9.2	76	136	10
EZN5DCH0930S10	•	9.3	76	136	10
EZN5DCH0940S10	•	9.4	76	136	10
EZN5DCH0950S10	•	9.5	76	136	10
EZN5DCH0960S10	•	9.6	80	136	10
EZN5DCH0970S10	•	9.7	80	136	10
EZN5DCH0980S10	•	9.8	80	136	10
EZN5DCH0990S10	•	9.9	80	136	10
EZN5DCH1000S10	•	10.0	80	136	10
EZN5DCH1010S11	•	10.1	84	149	11
EZN5DCH1020S11	•	10.2	84	149	11
EZN5DCH1030S11	•	10.3	84	149	11
EZN5DCH1040S11	•	10.4	84	149	11
EZN5DCH1050S11	•	10.5	84	149	11
EZN5DCH1060S11	•	10.6	88	149	11
EZN5DCH1070S11	•	10.7	88	149	11
EZN5DCH1080S11	•	10.8	88	149	11
EZN5DCH1090S11	•	10.9	88	149	11



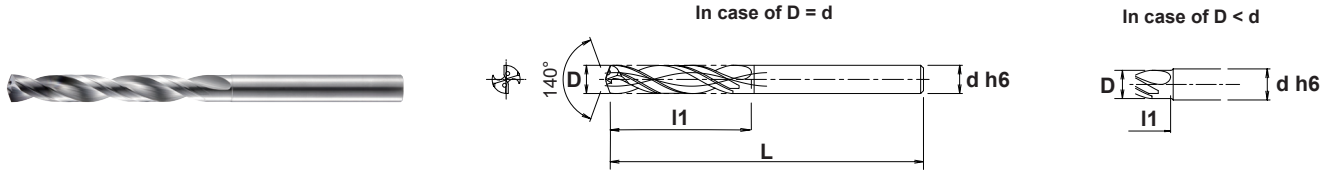
METRIC

Strike Drill

EZN5D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth $5xD$, 30° helix and double margin

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
EZN5DCH1100S11	•	11.0	88	149	11
EZN5DCH1110S12	•	11.1	92	158	12
EZN5DCH1120S12	•	11.2	92	158	12
EZN5DCH1130S12	•	11.3	92	158	12
EZN5DCH1140S12	•	11.4	92	158	12
EZN5DCH1150S12	•	11.5	92	158	12
EZN5DCH1160S12	•	11.6	96	158	12
EZN5DCH1170S12	•	11.7	96	158	12
EZN5DCH1180S12	•	11.8	96	158	12
EZN5DCH1190S12	•	11.9	96	158	12
EZN5DCH1200S12	•	12.0	96	158	12
EZN5DCH1210S13	•	12.1	104	167	13
EZN5DCH1220S13	•	12.2	104	167	13
EZN5DCH1230S13	•	12.3	104	167	13
EZN5DCH1240S13	•	12.4	104	167	13
EZN5DCH1250S13	•	12.5	104	167	13
EZN5DCH1260S13	•	12.6	104	167	13
EZN5DCH1270S13	•	12.7	104	167	13
EZN5DCH1280S13	•	12.8	104	167	13
EZN5DCH1290S13	•	12.9	104	167	13
EZN5DCH1300S13	•	13.0	104	167	13
EZN5DCH1310S14	•	13.1	112	176	14
EZN5DCH1320S14	•	13.2	112	176	14
EZN5DCH1330S14	•	13.3	112	176	14
EZN5DCH1340S14	•	13.4	112	176	14
EZN5DCH1350S14	•	13.5	112	176	14
EZN5DCH1360S14	•	13.6	112	176	14
EZN5DCH1370S14	•	13.7	112	176	14
EZN5DCH1380S14	•	13.8	112	176	14
EZN5DCH1390S14	•	13.9	112	176	14
EZN5DCH1400S14	•	14.0	112	176	14
EZN5DCH1450S15	•	14.5	120	185	15
EZN5DCH1500S15	•	15.0	120	185	15
EZN5DCH1550S16	•	15.5	128	194	16
EZN5DCH1600S16	•	16.0	128	194	16

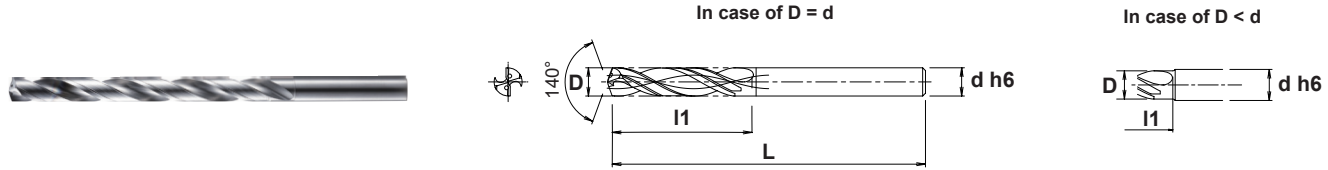
Strike Drill

METRIC

EZN8D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth 8xD, 30° helix and double margin

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN8DCH0300S03	•	3.0	33	81	3
EZN8DCH0310S04	•	3.1	39	87	4
EZN8DCH0320S04	•	3.2	39	87	4
EZN8DCH0330S04	•	3.3	39	87	4
EZN8DCH0340S04	•	3.4	39	87	4
EZN8DCH0350S04	•	3.5	39	87	4
EZN8DCH0360S04	•	3.6	44	92	4
EZN8DCH0370S04	•	3.7	44	92	4
EZN8DCH0380S04	•	3.8	44	92	4
EZN8DCH0390S04	•	3.9	44	92	4
EZN8DCH0400S04	•	4.0	44	92	4
EZN8DCH0410S05	•	4.1	50	100	5
EZN8DCH0420S05	•	4.2	50	100	5
EZN8DCH0430S05	•	4.3	50	100	5
EZN8DCH0440S05	•	4.4	50	100	5
EZN8DCH0450S05	•	4.5	50	100	5
EZN8DCH0460S05	•	4.6	55	105	5
EZN8DCH0470S05	•	4.7	55	105	5
EZN8DCH0480S05	•	4.8	55	105	5
EZN8DCH0490S05	•	4.9	55	105	5
EZN8DCH0500S05	•	5.0	55	105	5
EZN8DCH0510S06	•	5.1	61	114	6
EZN8DCH0520S06	•	5.2	61	114	6
EZN8DCH0530S06	•	5.3	61	114	6
EZN8DCH0540S06	•	5.4	61	114	6
EZN8DCH0550S06	•	5.5	61	114	6
EZN8DCH0560S06	•	5.6	66	118	6
EZN8DCH0570S06	•	5.7	66	118	6
EZN8DCH0580S06	•	5.8	66	118	6
EZN8DCH0590S06	•	5.9	66	118	6
EZN8DCH0600S06	•	6.0	66	118	6
EZN8DCH0610S07	•	6.1	71	125	7
EZN8DCH0620S07	•	6.2	71	125	7
EZN8DCH0630S07	•	6.3	71	125	7
EZN8DCH0640S07	•	6.4	71	125	7
EZN8DCH0650S07	•	6.5	71	125	7
EZN8DCH0660S07	•	6.6	77	130	7
EZN8DCH0670S07	•	6.7	77	130	7
EZN8DCH0680S07	•	6.8	77	130	7
EZN8DCH0690S07	•	6.9	77	130	7

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN8DCH0700S07	•	7.0	77	130	7
EZN8DCH0710S08	•	7.1	82	136	8
EZN8DCH0720S08	•	7.2	82	136	8
EZN8DCH0730S08	•	7.3	82	136	8
EZN8DCH0740S08	•	7.4	82	136	8
EZN8DCH0750S08	•	7.5	82	136	8
EZN8DCH0760S08	•	7.6	88	142	8
EZN8DCH0770S08	•	7.7	88	142	8
EZN8DCH0780S08	•	7.8	88	142	8
EZN8DCH0790S08	•	7.9	88	142	8
EZN8DCH0800S08	•	8.0	88	142	8
EZN8DCH0810S09	•	8.1	93	154	9
EZN8DCH0820S09	•	8.2	93	154	9
EZN8DCH0830S09	•	8.3	93	154	9
EZN8DCH0840S09	•	8.4	93	154	9
EZN8DCH0850S09	•	8.5	93	154	9
EZN8DCH0860S09	•	8.6	99	154	9
EZN8DCH0870S09	•	8.7	99	154	9
EZN8DCH0880S09	•	8.8	99	154	9
EZN8DCH0890S09	•	8.9	99	154	9
EZN8DCH0900S09	•	9.0	99	154	9
EZN8DCH0910S10	•	9.1	104	166	10
EZN8DCH0920S10	•	9.2	104	166	10
EZN8DCH0930S10	•	9.3	104	166	10
EZN8DCH0940S10	•	9.4	104	166	10
EZN8DCH0950S10	•	9.5	104	166	10
EZN8DCH0960S10	•	9.6	110	166	10
EZN8DCH0970S10	•	9.7	110	166	10
EZN8DCH0980S10	•	9.8	110	166	10
EZN8DCH0990S10	•	9.9	110	166	10
EZN8DCH1000S10	•	10.0	110	166	10
EZN8DCH1010S11	•	10.1	115	182	11
EZN8DCH1020S11	•	10.2	115	182	11
EZN8DCH1030S11	•	10.3	115	182	11
EZN8DCH1040S11	•	10.4	115	182	11
EZN8DCH1050S11	•	10.5	115	182	11
EZN8DCH1060S11	•	10.6	121	182	11
EZN8DCH1070S11	•	10.7	121	182	11
EZN8DCH1080S11	•	10.8	121	182	11
EZN8DCH1090S11	•	10.9	121	182	11



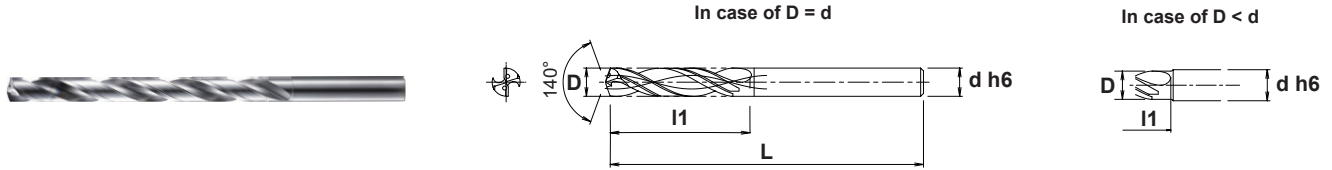
METRIC

Strike Drill

EZN8D Type

- Solid Carbide drill with coolant thru & high accuracy
- Drilling depth $8xD$, 30° helix and double margin

Diameter	Tolerance
up to 3mm	+0 / -0.014
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 12mm	+0 / -0.027



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZN8DCH1100S11	•	11.0	121	182	11
EZN8DCH1110S12	•	11.1	126	194	12
EZN8DCH1120S12	•	11.2	126	194	12
EZN8DCH1130S12	•	11.3	126	194	12
EZN8DCH1140S12	•	11.4	126	194	12
EZN8DCH1150S12	•	11.5	126	194	12
EZN8DCH1160S12	•	11.6	132	194	12
EZN8DCH1170S12	•	11.7	132	194	12
EZN8DCH1180S12	•	11.8	132	194	12
EZN8DCH1190S12	•	11.9	132	194	12
EZN8DCH1200S12	•	12.0	132	194	12
EZN8DCH1210S13	•	12.1	137	206	13
EZN8DCH1220S13	•	12.2	137	206	13
EZN8DCH1230S13	•	12.3	137	206	13
EZN8DCH1240S13	•	12.4	137	206	13
EZN8DCH1250S13	•	12.5	137	206	13
EZN8DCH1260S13	•	12.6	143	206	13
EZN8DCH1270S13	•	12.7	143	206	13
EZN8DCH1280S13	•	12.8	143	206	13
EZN8DCH1290S13	•	12.9	143	206	13
EZN8DCH1300S13	•	13.0	143	206	13
EZN8DCH1310S14	•	13.1	148	218	14
EZN8DCH1320S14	•	13.2	148	218	14
EZN8DCH1330S14	•	13.3	148	218	14
EZN8DCH1340S14	•	13.4	148	218	14
EZN8DCH1350S14	•	13.5	148	218	14
EZN8DCH1360S14	•	13.6	154	218	14
EZN8DCH1370S14	•	13.7	154	218	14
EZN8DCH1380S14	•	13.8	154	218	14
EZN8DCH1390S14	•	13.9	154	218	14
EZN8DCH1400S14	•	14.0	154	218	14

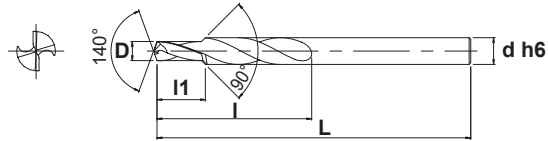
Strike Drill

METRIC

EZN2D-M & EZN3D-M Type

- Solid Carbide chamfer drill
- Drilling depth 2xD & 3xD with 30° helix

Diameter	Tolerance
over 3mm - up to 6mm	+0 / -0.018
over 6mm - up to 10mm	+0 / -0.022
over 10mm - up to 16mm	+0 / -0.027



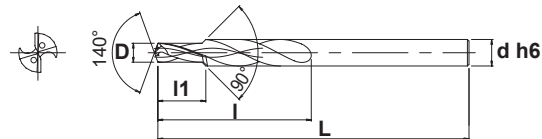
CATALOG NUMBER	STK	DIMENSIONS				
		D	I1	I	L	d
EZN2D0340S06-M4	□	3.4	8	25	78	6
EZN2D0430S07-M5	□	4.3	10	30	82	7
EZN2D0510S08-M6	□	5.1	12	35	88	8
EZN2D0680S10-M8	□	6.8	16	45	108	10
EZN2D0850S12-M10	□	8.5	20	50	118	12
EZN2D1030S14-M12	□	10.3	24	60	137	14

CATALOG NUMBER	STK	DIMENSIONS				
		D	I1	I	L	d
EZN3D0340S06-M4	□	3.4	12	30	78	6
EZN3D0430S07-M5	□	4.3	15	35	82	7
EZN3D0510S06-M6	□	5.1	18	40	88	8
EZN3D0680S10-M8	□	6.8	24	50	108	10
EZN3D0850S12-M10	□	8.5	30	60	118	12
EZN3D1030S14-M12	□	10.3	36	70	137	14

Drills

EZN2DCH-M & EZN3DCH-M Type

- Solid Carbide chamfer drill with coolant thru
- Drilling depth 2xD & 3xD with 30° helix



CATALOG NUMBER	STK	DIMENSIONS				
		D	I1	I	L	d
EZN2DCH0340S06-M4	□	3.4	8	25	78	6
EZN2DCH0430S07-M5	□	4.3	10	30	82	7
EZN2DCH0510S08-M6	□	5.1	12	35	88	8
EZN2DCH0680S10-M8	□	6.8	16	45	108	10
EZN2DCH0850S12-M10	□	8.5	20	50	118	12
EZN2DCH1030S14-M12	□	10.3	24	60	137	14

CATALOG NUMBER	STK	DIMENSIONS				
		D	I1	I	L	d
EZN3DCH0340S06-M4	□	3.4	12	30	78	6
EZN3DCH0430S07-M5	□	4.3	15	35	82	7
EZN3DCH0510S08-M6	□	5.1	18	40	88	8
EZN3DCH0680S10-M8	□	6.8	24	50	108	10
EZN3DCH0850S12-M10	□	8.5	30	60	118	12
EZN2DCH1030S14-M12	□	10.3	36	70	137	14

□ Inquire regarding delivery

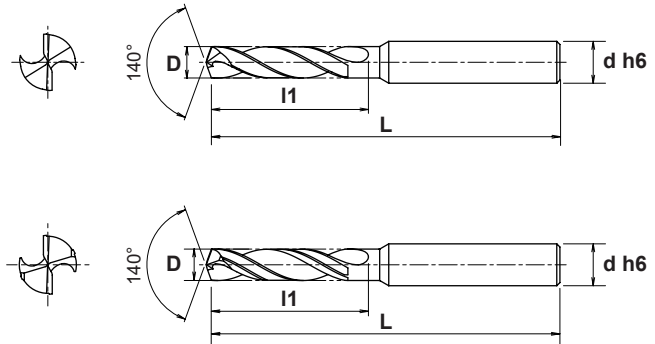


METRIC

Strike Drill

EZT3D Type

- Solid Carbide prehole drill for roll taps, high accuracy (-0.01~0mm)
- Drilling depth 3xD with 30° helix

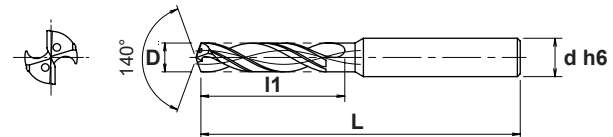


Thread Size	CATALOG NUMBER	STK	DIMENSIONS			
			D	I1	L	d
M2X0.4	EZT3D0181S03	•	1.81	9	49	3
M2X0.4	EZT3D0182S03	•	1.82	9	49	3
M2X0.4	EZT3D0183S03	•	1.83	9	49	3
M3X0.5	EZT3D0278S03	•	2.78	13	49	3
M3X0.5	EZT3D0279S03	•	2.79	13	49	3
M3X0.5	EZT3D0280S03	•	2.80	13	49	3
M4X0.7	EZT3D0368S04	•	3.68	18	49	4
M4X0.7	EZT3D0369S04	•	3.69	18	49	4
M4X0.7	EZT3D0370S04	•	3.70	18	49	4

Thread Size	CATALOG NUMBER	STK	DIMENSIONS			
			D	I1	L	d
M5X0.8	EZT3D0463S06	•	4.63	22	64	6
M5X0.8	EZT3D0464S06	•	4.64	22	64	6
M5X0.8	EZT3D0465S06	•	4.65	22	64	6
M6X1.0	EZT3D0553S06	•	5.53	24	68	6
M6X1.0	EZT3D0554S06	•	5.54	24	68	6
M6X1.0	EZT3D0555S06	•	5.55	24	68	6

EZT4D Type

- Solid Carbide coolant thru prehole for roll taps, high accuracy (-0.01~0mm)
- Drilling depth 4xD with 30° helix and double margin



Thread Size	CATALOG NUMBER	STK	DIMENSIONS			
			D	I1	L	d
M3X0.5	EZT4DCH0278S03	•	2.78	16	68	3
M3X0.5	EZT4DCH0279S03	•	2.79	16	68	3
M3X0.5	EZT4DCH0280S03	•	2.80	16	68	3
M4X0.7	EZT4DCH0368S04	•	3.68	21	73	4
M4X0.7	EZT4DCH0369S04	•	3.69	21	73	4
M4X0.7	EZT4DCH0370S04	•	3.70	21	73	4

Thread Size	CATALOG NUMBER	STK	DIMENSIONS			
			D	I1	L	d
M5X0.8	EZT4DCH0463S05	•	4.63	26	80	5
M5X0.8	EZT4DCH0464S05	•	4.64	26	80	5
M5X0.8	EZT4DCH0465S05	•	4.65	26	80	5
M6X1.0	EZT4DCH0553S06	•	5.53	29	82	6
M6X1.0	EZT4DCH0554S06	•	5.54	29	82	6
M6X1.0	EZT4DCH0555S06	•	5.55	29	82	6

Strike Drill

Recommended Cutting Data for EZN2D, EZN4D, EZT3D Type

Work Material	Structure Steel				Carbon Steel			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	9,500	15.4	49-148	.0008-.0024	9,550	15.4	49-148	.0008-.0024
2	8,760	14.2	131-328	.0008-.0024	8,760	14.2	131-328	.0008-.0024
3	7,430	38.2	131-328	.0032-.0071	7,430	38.2	131-328	.0032-.0071
4	5,580	31.1	131-328	.0032-.0071	5,580	31.1	131-328	.0032-.0071
5	4,460	26.4	131-328	.0032-.0071	4,460	26.4	131-328	.0032-.0071
6	3,720	24.4	131-328	.0032-.0087	3,720	24.4	131-328	.0032-.0087
7	3,530	24.0	131-328	.0032-.0087	3,530	24.0	131-328	.0032-.0087
8	3,190	22.8	197-394	.0059-.0110	3,190	22.8	197-394	.0059-.0110
9	3,010	22.0	197-394	.0059-.0110	3,010	22.0	197-394	.0059-.0110
10	2,710	22.0	197-394	.0059-.0110	2,710	22.0	197-394	.0059-.0110
11	2,480	22.0	197-394	.0059-.0110	2,460	22.0	197-394	.0059-.0110
12	2,390	21.3	197-394	.0059-.0110	2,260	20.1	197-394	.0059-.0110
13	2,330	21.3	197-394	.0079-.0130	2,210	20.1	197-394	.0079-.0130
14	2,160	20.5	197-394	.0079-.0130	2,050	19.7	197-394	.0079-.0130

Work Material	Alloy Steel				Mold Steel (38-43HRC)			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	9,550	15.4	49-148	.0008-.0024	9,550	11.4	49-148	.0008-.0024
2	8,760	14.2	131-262	.0008-.0024	7,170	8.7	98-197	.0008-.0024
3	6,370	32.7	131-262	.0032-.0071	4,780	24.8	98-197	.0032-.0071
4	4,780	26.4	131-262	.0032-.0071	3,590	20.1	98-197	.0032-.0071
5	3,820	22.8	131-262	.0032-.0071	2,870	17.3	98-197	.0032-.0071
6	3,190	20.9	131-262	.0032-.0087	2,390	15.7	98-197	.0032-.0087
7	2,730	18.5	131-262	.0032-.0087	2,050	13.4	98-197	.0032-.0087
8	2,390	17.3	131-262	.0059-.0110	1,800	11.8	98-197	.0059-.0110
9	2,130	15.7	131-262	.0059-.0110	1,600	10.6	98-197	.0059-.0110
10	1,910	15.7	131-262	.0059-.0110	1,440	9.4	98-197	.0059-.0110
11	1,740	15.7	131-262	.0059-.0110	1,310	8.7	98-197	.0059-.0110
12	1,600	14.2	131-262	.0059-.0110	1,200	7.9	98-197	.0059-.0110
13	1,470	13.4	131-262	.0079-.0130	1,110	7.9	98-197	.0079-.0130
14	1,370	13.0	131-262	.0079-.0130	1,030	7.5	98-197	.0079-.0130

- Notes:**
1. Above cutting conditions are for drilling flat surface.
 2. Adjust cutting conditions according to machine rigidity, work clamping and shape of machining part.
 3. Above cutting conditions are for drilling with water soluble (external coolant).
 4. We expect 2D type's depth of hole is less than 2D, 4D type is less than 4D.
 5. In case of long chips, adjust above conditions by increasing feed speed or using step feed for breaking chips.
 6. If having difficulty getting the cutting fluid inside hole deep enough with horizontal machining centers, EZN3D and EZN5D type with internal coolant is recommended.
 7. When drilling austenitic stainless steel, EZN3D and EZN5D type with internal coolant is recommended - if machining with external lubrication, please be sure to follow the following precautions:
 - a. use an oil-based cutting fluid
 - b. when drilling with $\Phi 10\text{mm}$ dia. or larger, or drilling more than 2D with a 4D drill, step drilling is recommended.
 8. When using Forming Tap Strike Drill, reduce 20% of the above data.



Strike Drill

Recommended Cutting Data for EZN2D, EZN4D, EZT3D Type

Work Material	Grey Cast Iron				Nodular Cast Iron			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	9,550	15.4	49-148	.0008-.0024	9,550	15.4	49-148	.0008-.0024
2	8,760	14.2	131-328	.0008-.0024	8,760	14.2	131-262	.0008-.0024
3	9,020	48.0	131-328	.0032-.0071	6,370	33.9	131-262	.0032-.0071
4	6,770	39.0	131-328	.0032-.0071	4,780	27.6	131-262	.0032-.0071
5	5,420	33.5	131-328	.0032-.0071	3,820	23.6	131-262	.0032-.0071
6	4,510	30.3	131-328	.0032-.0087	3,190	21.7	131-262	.0032-.0087
7	3,870	26.0	131-328	.0032-.0087	2,730	18.5	131-262	.0032-.0087
8	3,590	25.6	262-394	.0059-.0110	2,590	18.5	164-328	.0059-.0110
9	3,540	25.2	262-394	.0059-.0110	2,300	16.5	164-328	.0059-.0110
10	3,190	25.2	262-394	.0059-.0110	2,070	16.5	164-328	.0059-.0110
11	2,900	24.8	262-394	.0059-.0110	1,890	16.1	164-329	.0059-.0110
12	2,060	23.6	262-394	.0059-.0110	1,860	16.5	164-328	.0059-.0110
13	2,450	22.4	262-394	.0079-.0130	1,720	15.7	164-328	.0079-.0118
14	2,280	21.7	262-394	.0079-.0130	1,600	15.4	164-328	.0079-.0118

Work Material	Stainless Steel (Austenitic - 304, 316L)				Stainless Steel (Martensitic)			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	3,180	3.7	32-49	.0008-.0020	4,780	5.5	32-98	.0008-.0020
2	1,590	2.6	32-49	.0008-.0020	3,180	5.1	32-98	.0008-.0020
3	1,050	2.6	32-49	.0020-.0031	2,650	8.3	65-131	.0020-.0031
4	810	2.0	32-49	.0020-.0031	2,150	10.2	65-131	.0020-.0031
5	660	2.0	32-49	.0020-.0031	1,780	9.8	65-131	.0020-.0031
6	550	2.0	32-49	.0023-.0047	1,490	9.4	65-131	.0023-.0090
7	465	2.0	32-49	.0023-.0047	1,370	9.1	65-131	.0023-.0090
8	405	2.0	32-49	.0039-.0079	1,200	8.5	65-147	.0031-.0098
9	355	2.0	32-49	.0039-.0079	1,170	8.3	65-147	.0031-.0098
10	335	2.0	32-49	.0039-.0079	1,050	8.3	65-147	.0031-.0098
11	320	2.2	32-49	.0039-.0079	1,010	8.1	65-147	.0031-.0098
12	305	2.2	32-49	.0039-.0079	960	7.9	65-147	.0031-.0098
13	305	2.2	32-49	.0059-.0090	910	7.9	65-147	.0041-.0098
14	295	2.2	32-49	.0059-.0090	865	7.5	65-147	.0041-.0098

- Notes:**
1. Above cutting conditions are for drilling flat surface.
 2. Adjust cutting conditions according to machine rigidity, work clamping and shape of machining part.
 3. Above cutting conditions are for drilling with water soluble (external coolant).
 4. We expect 2D type's depth of hole is less than 2D, 4D type is less than 4D.
 5. In case of long chips, adjust above conditions by increasing feed speed or using step feed for breaking chips.
 6. If having difficulty getting the cutting fluid inside hole deep enough with horizontal machining centers, EZN3D and EZN5D type with internal coolant is recommended.
 7. When drilling austenitic stainless steel, EZN3D and EZN5D type with internal coolant is recommended - if machining with external lubrication, please be sure to follow the following precautions:
 - a. use an oil-based cutting fluid
 - b. when drilling with ϕ 10mm dia. or larger, or drilling more than 2D with a 4D drill, step drilling is recommended.
 8. When using Forming Tap Strike Drill, reduce 20% of the above data.

Strike Drill

Recommended Cutting Data for EZN3D, EZN5D, EZN8D, EZT4D Type

Work Material	Structure Steel				Carbon Steel			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
up to 3	9,020	53.5	164-393	.0039-.0079	9,020	53.5	164-393	.0039-.0079
4	6,770	40.2	164-393	.0039-.0079	6,770	40.2	164-393	.0039-.0079
5	5,420	37.4	164-393	.0039-.0079	5,420	37.4	164-393	.0039-.0079
6	4,780	35.8	164-393	.0051-.0098	4,780	35.8	164-393	.0051-.0098
7	4,550	34.3	164-393	.0051-.0098	4,550	34.3	164-393	.0051-.0098
8	4,380	34.6	262-524	.0059-.0126	4,380	34.6	262-459	.0059-.0126
9	3,900	32.3	262-524	.0059-.0126	3,900	32.3	262-459	.0059-.0126
10	3,510	30.7	262-524	.0059-.0126	3,510	30.7	262-459	.0059-.0126
11	3,190	29.5	262-524	.0059-.0126	3,190	29.5	262-459	.0059-.0126
12	3,060	29.5	262-524	.0059-.0126	3,060	29.5	262-459	.0059-.0126
13	2,940	29.1	262-524	.0079-.0138	2,700	26.8	262-459	.0079-.0138
14	2,730	27.2	262-524	.0079-.0138	2,510	24.8	262-459	.0079-.0126
15	2,550	26.4	262-527	.0079-.0138	2,340	24.0	262-459	.0079-.0138
16	2,390	26.0	262-524	.0079-.0138	2,190	24.0	262-459	.0079-.0138

Work Material	Alloy Steel				Mold Steel (38-43 HC)			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
up to 3	6,370	37.8	131-262	.0039-.0079	4,780	26.4	98-196	.0039-.0070
4	4,780	28.3	131-262	.0039-.0079	3,590	20.9	98-196	.0039-.0070
5	3,820	25.2	131-262	.0039-.0079	2,870	18.1	98-196	.0039-.0070
6	3,450	24	131-262	.0051-.0090	2,390	16.5	98-196	.0051-.0090
7	3,190	23.6	131-262	.0051-.0090	2,280	15.7	98-196	.0051-.0090
8	2,990	23.6	164-328	.0059-.0126	1,990	14.2	131-229	.0059-.0110
9	2,660	22.8	164-328	.0059-.0126	1,770	13.4	131-229	.0059-.0110
10	2,390	21.7	164-328	.0059-.0126	1,680	13.4	131-229	.0059-.0110
11	2,180	20.5	164-328	.0059-.0126	1,520	13.0	131-229	.0059-.0110
12	1,990	19.7	164-328	.0059-.0126	1,460	12.6	131-229	.0059-.0110
13	1,960	19.7	164-328	.0079-.0138	1,350	12.2	131-229	.0059-.0118
14	1,820	18.5	164-328	.0079-.0138	1,260	11.4	131-229	.0059-.0118
15	1,700	17.7	164-328	.0079-.0138	1,170	10.6	131-229	.0059-.0118
16	1,600	17.7	164-328	.0079-.0138	1,100	9.8	131-229	.0059-.0118

- Notes:**
1. Above cutting conditions are for drilling flat surface.
 2. Adjust cutting conditions according to machine rigidity, work clamping and shape of machining part.
 3. Above cutting conditions are for drilling with water soluble (internal coolant).
 4. We expect 3D type's depth of hole is less than 3D, 5D type is less than 5D, 8D type is less than 8D.
 5. In case of long chips, adjust above conditions by increasing feed speed or using step feed for breaking chips.
 6. When using Forming Tap Strike Drill, reduce 20% of the above data.



Strike Drill

Recommended Cutting Data for EZN3D, EZN5D, EZN8D, EZT4D Type

Work Material	Stainless Steel (Austenitic - 304, 316L)				Gray Cast Iron			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
up to 3	6,370	29.9	131-262	.0039-.0079	10,080	63.8	229-393	.0047-.0079
4	4,780	28.3	131-262	.0039-.0079	7,560	47.6	229-393	.0047-.0079
5	3,820	25.6	131-262	.0039-.0079	6,050	42.9	229-393	.0047-.0079
6	3,190	22.0	131-262	.0047-.0090	5,040	39.8	229-393	.0059-.0098
7	2,960	21.7	131-262	.0047-.0090	4,550	39.8	229-393	.0059-.0098
8	2,790	20.5	196-328	.0059-.0110	4,380	39.0	262-524	.0070-.0125
9	2,480	19.3	196-328	.0059-.0110	3,900	35.4	262-524	.0070-.0125
10	2,230	18.5	196-328	.0059-.0110	3,510	32.7	262-524	.0070-.0125
11	2,030	18.5	196-328	.0059-.0110	3,190	30.3	262-524	.0070-.0125
12	1,990	18.1	196-328	.0059-.0110	3,060	30.3	262-524	.0070-.0125
13	1,960	15.7	196-328	.0070-.0118	2,940	30.3	262-524	.0078-.0138
14	1,820	16.9	196-328	.0070-.0118	2,730	28.7	262-524	.0078-.0138
15	1,700	16.1	196-328	.0070-.0118	2,660	28.3	262-524	.0078-.0138
16	1,600	15.4	196-328	.0070-.0118	2,590	28.3	262-524	.0078-.0138

Work Material	Nodular Cast Iron			
	Dia. Metric	RPM	IPM	SFM
up to 3	6,370	37.8	131-262	.0039-.0079
4	4,780	28.3	131-262	.0039-.0079
5	3,820	25.2	131-262	.0039-.0079
6	3,450	24.0	131-262	.0047-.0090
7	3,190	23.6	131-262	.0047-.0090
8	2,990	23.6	164-328	.0059-.0118
9	2,660	21.3	164-328	.0059-.0118
10	2,390	21.3	164-328	.0059-.0118
11	2,180	19.7	164-328	.0059-.0118
12	1,990	18.5	164-328	.0059-.0118
13	1,960	18.5	164-328	.0078-.0130
14	1,820	17.7	164-328	.0078-.0130
15	1,700	17.7	164-328	.0078-.0130
16	1,600	16.9	164-328	.0078-.0130

- Notes:**
1. Above cutting conditions are for drilling flat surface.
 2. Adjust cutting conditions according to machine rigidity, work clamping and shape of machining part.
 3. Above cutting conditions are for drilling with water soluble (internal coolant).
 4. We expect 3D type's depth of hole is less than 3D, 5D type is less than 5D, 8D type is less than 8D.
 5. In case of long chips, adjust above conditions by increasing feed speed or using step feed for breaking chips.
 6. When using Forming Tap Strike Drill, reduce 20% of the above data.

Strike Drill

Recommended Cutting Data for EZN2D-M and EZN3D-M Type

Work Material	Structure Steel				Carbon Steel			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	4,690	12.2	164	0.0026	4,690	12.2	164	0.0026
4.3	3,930	12.2	174	0.0031	3,930	12.2	174	0.0031
5.1	3,440	16.5	181	0.0048	3,440	16.5	181	0.0048
6.8	2,720	16.1	191	0.0059	2,720	16.1	191	0.0059
8.5	2,180	16.1	191	0.0074	2,180	16.1	191	0.0074
10.3	1,860	15.7	197	0.0085	1,860	15.7	197	0.0085

Work Material	Alloy Steel				Mold Steel (38-43 HRC)			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	4,690	11.4	164	0.0024	2,810	6.7	98	0.0024
4.3	3,710	11.4	164	0.0031	2,230	6.7	99	0.0030
5.1	3,130	15.0	165	0.0048	2,190	10.6	115	0.0049
6.8	2,350	14.2	165	0.0060	1,640	9.8	115	0.0060
8.5	1,880	12.6	165	0.0067	1,500	9.8	131	0.0066
10.3	1,550	12.2	165	0.0079	1,240	9.1	132	0.0073

Work Material	Gray Cast Iron				Nodular Cast Iron			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	4,690	15.7	164	0.0034	4,690	11.8	164	0.0025
4.3	4,080	15.7	181	0.0039	3,710	11.8	164	0.0032
5.1	3,750	18.9	197	0.0050	3,130	15.7	165	0.0050
6.8	3,050	18.9	214	0.0062	2,350	14.6	165	0.0062
8.5	2,630	18.9	230	0.0072	1,880	13.0	165	0.0069
10.3	2,170	18.9	230	0.0087	1,550	12.2	165	0.0079

- Notes:**
1. This tool performs drilling and chamfering in one operation. The large diameter has no back taper, therefore drilling up to large diameter part is not possible.
 2. The chamfer width can be up to C1.0mm for applicable screw size M4~M6 and up to C1.5mm for M8~M12.
 3. In case of long chips evacuated and interfering while machining, use step feed to break up the chips.
 4. If chattering occurs on inner wall of hole or chamfer surface, adjust above cutting conditions by reducing Feed speed (ipm).
 5. Above cutting conditions are for drilling with water soluble (external coolant).
 6. When machining stainless steel, coolant thru type, EZN2DCH-M & EZN3DCH-M are recommended.



Strike Drill

Recommended Cutting Data for EZN2DCH-M and EZN3DCH-M Type

Work Material	Structure Steel				Carbon Steel			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	5,620	17.7	197	0.0032	5,620	17.7	197	0.0032
4.3	4,450	17.7	197	0.0040	4,450	17.7	197	0.0040
5.1	4,370	26.0	230	0.0059	4,370	26.0	230	0.0059
6.8	3,280	23.6	230	0.0072	3,280	23.6	230	0.0072
8.5	3,000	22.4	263	0.0075	3,000	22.4	263	0.0075
10.3	2,480	21.7	263	0.0087	2,480	21.7	263	0.0087

Work Material	Alloy Steel				Mold Steel (38-43 HRC)			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	5,150	14.6	180	0.0028	3,750	9.4	131	0.0025
4.3	4,080	14.6	181	0.0036	2,970	9.4	132	0.0032
5.1	3,440	17.7	181	0.0052	2,500	12.6	131	0.0050
6.8	2,580	16.5	181	0.0064	1,880	11.8	132	0.0063
8.5	2,250	16.1	197	0.0072	1,500	10.6	131	0.0071
10.3	1,860	15.7	197	0.0085	1,240	9.4	132	0.0076

Work Material	Stainless Steel (304)				Gray Cast Iron			
	Dia. Metric	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3.4	3,750	9.8	131	0.0026	5,620	21.7	197	0.0039
4.3	2,970	9.8	132	0.0033	4,450	21.7	197	0.0049
5.1	2,500	12.6	131	0.0050	4,060	24.4	213	0.0060
6.8	1,880	11.8	132	0.0063	3,280	24.4	230	0.0074
8.5	1,500	10.6	131	0.0071	3,260	24.4	286	0.0075
10.3	1,240	9.4	132	0.0076	2,790	24.4	296	0.0087

Work Material	Nodular Cast Iron			
	Dia. Metric	RPM	IPM	SFM
3.4	5,150	13.4	180	0.0026
4.3	4,080	13.4	181	0.0033
5.1	3,440	17.7	181	0.0052
6.8	2,580	16.5	181	0.0064
8.5	2,250	16.1	197	0.0072
10.3	1,860	15.7	197	0.0085

- Notes:**
1. This tool performs drilling and chamfering in one operation. The large diameter has no back taper, therefore drilling up to large diameter part is not possible.
 2. The chamfer width can be up to C1.0mm for applicable screw size M4~M6 and up to C1.5mm for M8~M12.
 3. In case of long chips evacuated and interfering while machining, use step feed to break up the chips.
 4. If chattering occurs on inner wall of hole or chamfer surface, adjust above cutting conditions by reducing Feed speed (ipm).
 5. Use water soluble internal coolant.



TLDM Drill

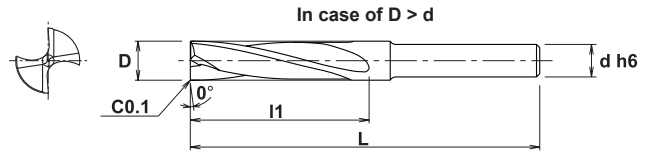
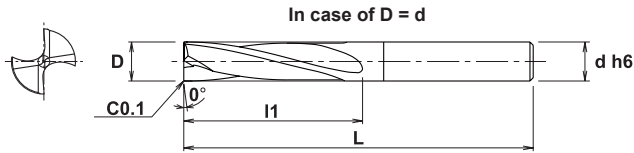
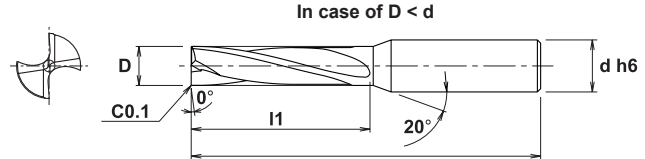
METRIC

TLDM Type (2XD)-

- Spot facing with 180° point & 30° helix



Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLDM010	•	1.0	3.0	60	3
TLDM011	•	1.1	3.3	60	3
TLDM012	•	1.2	3.6	60	3
TLDM013	•	1.3	3.9	60	3
TLDM014	•	1.4	4.2	60	3
TLDM015	•	1.5	4.5	60	3
TLDM016	•	1.6	4.8	60	3
TLDM017	•	1.7	5.1	60	3
TLDM018	•	1.8	5.4	60	3
TLDM019	•	1.9	5.7	60	3
TLDM020	•	2.0	7.0	60	4
TLDM021	•	2.1	7.5	60	4
TLDM022	•	2.2	8.0	60	4
TLDM023	•	2.3	8.5	60	4
TLDM024	•	2.4	9.0	60	4
TLDM025	•	2.5	9.5	60	4
TLDM026	•	2.6	10	60	4
TLDM027	•	2.7	10.5	60	4
TLDM028	•	2.8	11	60	4
TLDM029	•	2.9	11.5	60	4
TLDM030	•	3.0	12	60	4
TLDM030-S6	•	3.0	12	60	6
TLDM031	•	3.1	12	60	4
TLDM031-S6	•	3.1	12	60	6
TLDM032	•	3.2	12	60	4
TLDM032-S6	•	3.2	12	60	6
TLDM033	•	3.3	13	60	4
TLDM033-S6	•	3.3	13	60	6
TLDM034	•	3.4	13	60	4
TLDM034-S6	•	3.4	13	60	6
TLDM035	•	3.5	13	60	4
TLDM035-S6	•	3.5	13	60	6
TLDM036	•	3.6	14	60	4
TLDM036-S6	•	3.6	14	60	6
TLDM037	•	3.7	14	60	4
TLDM037-S6	•	3.7	15	60	6
TLDM038	•	3.8	15	60	4
TLDM038-S6	•	3.8	15	60	6

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLDM039	•	3.9	15	60	4
TLDM039-S6	•	3.9	15	60	6
TLDM040	•	4.0	15	60	4
TLDM040-S6	•	4.0	15	60	6
TLDM041	•	4.1	16	60	6
TLDM042	•	4.2	16	60	6
TLDM043	•	4.3	17	60	6
TLDM044	•	4.4	17	60	6
TLDM045	•	4.5	17	60	6
TLDM046	•	4.6	18	65	6
TLDM047	•	4.7	18	65	6
TLDM048	•	4.8	18	65	6
TLDM049	•	4.9	19	65	6
TLDM050	•	5.0	19	65	6
TLDM051	•	5.1	20	65	6
TLDM052	•	5.2	20	65	6
TLDM053	•	5.3	20	65	6
TLDM054	•	5.4	21	65	6
TLDM055	•	5.5	21	65	6
TLDM056	•	5.6	22	70	6
TLDM057	•	5.7	22	70	6
TLDM058	•	5.8	22	70	6
TLDM059	•	5.9	23	70	6
TLDM060	•	6.0	23	70	6
TLDM061	•	6.1	23	70	8
TLDM062	•	6.2	24	70	8
TLDM063	•	6.3	24	70	8
TLDM064	•	6.4	25	70	8
TLDM065	•	6.5	25	70	8
TLDM066	•	6.6	25	75	8
TLDM067	•	6.7	26	75	8
TLDM068	•	6.8	26	75	8
TLDM069	•	6.9	27	75	8
TLDM070	•	7.0	27	75	8
TLDM071	•	7.1	27	75	8
TLDM072	•	7.2	28	75	8
TLDM073	•	7.3	28	75	8
TLDM074	•	7.4	28	75	8



METRIC

TLDM Drill

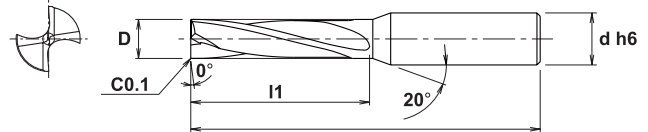
TLDM Type (2XD)-

- Spot facing with 180° point & 30° helix

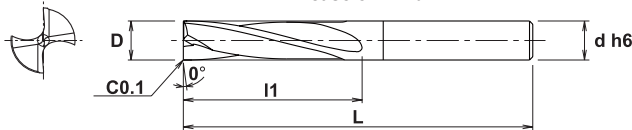


Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018

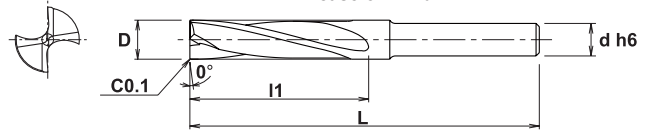
In case of $D < d$



In case of $D = d$



In case of $D > d$



CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
TLDM075	•	7.5	29	75	8
TLDM076	•	7.6	29	75	8
TLDM077	•	7.7	30	75	8
TLDM078	•	7.8	30	75	8
TLDM079	•	7.9	30	75	8
TLDM080	•	8.0	31	75	8
TLDM081	•	8.1	31	75	10
TLDM082	•	8.2	32	75	10
TLDM083	•	8.3	32	75	10
TLDM084	•	8.4	32	75	10
TLDM085	•	8.5	32	75	10
TLDM086	•	8.6	33	80	10
TLDM087	•	8.7	33	80	10
TLDM088	•	8.8	34	80	10
TLDM089	•	8.9	34	80	10
TLDM090	•	9.0	35	80	10
TLDM091	•	9.1	35	80	10
TLDM092	•	9.2	35	80	10
TLDM093	•	9.3	36	80	10
TLDM094	•	9.4	36	80	10
TLDM095	•	9.5	37	80	10
TLDM096	•	9.6	37	80	10
TLDM097	•	9.7	37	80	10
TLDM098	•	9.8	38	80	10
TLDM099	•	9.9	38	80	10
TLDM100	•	10.0	39	80	10
TLDM101	•	10.1	39	85	12
TLDM102	•	10.2	39	85	12
TLDM103	•	10.3	40	85	12
TLDM104	•	10.4	40	85	12
TLDM105	•	10.5	40	85	12
TLDM106	•	10.6	41	85	12
TLDM107	•	10.7	41	85	12
TLDM108	•	10.8	42	85	12
TLDM109	•	10.9	42	85	12
TLDM110	•	11.0	42	85	12
TLDM111	•	11.1	43	85	12
TLDM112	•	11.2	43	85	12

CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
TLDM113	•	11.3	44	85	12
TLDM114	•	11.4	44	85	12
TLDM115	•	11.5	44	85	12
TLDM116	•	11.6	45	90	12
TLDM117	•	11.7	45	90	12
TLDM118	•	11.8	45	90	12
TLDM119	•	11.9	46	90	12
TLDM120	•	12.0	46	90	12
TLDM125	•	12.5	48	95	12
TLDM130	•	13.0	50	100	12
TLDM135	•	13.5	52	100	12
TLDM140	•	14.0	54	100	12



TLDM

Recommended Cutting Data for TLDM type

Work Material	Mild Steel ○				Carbon Steel ○			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	19,100	15.0	197	0.0008	19,100	15.0	197	0.0008
2	11,100	15.0	229	0.0013	11,100	15.0	229	0.0013
3	8,500	20.1	263	0.0024	8,500	20.1	263	0.0024
4	6,375	20.1	263	0.0031	6,375	20.1	263	0.0031
5	5,100	20.1	263	0.0039	5,100	20.1	263	0.0039
6	4,250	20.1	263	0.0047	4,250	20.1	263	0.0047
7	3,650	20.1	263	0.0055	3,650	20.1	263	0.0055
8	3,175	20.1	262	0.0063	3,175	20.1	262	0.0063
9	2,825	20.1	262	0.0071	2,825	20.1	262	0.0071
10	2,550	20.1	263	0.0079	2,550	20.1	263	0.0079
11	2,325	18.3	264	0.0079	2,325	18.3	264	0.0079
12	2,125	16.7	263	0.0079	2,125	16.7	263	0.0079
13	1,950	15.4	261	0.0079	1,950	15.4	261	0.0079
14	1,825	14.4	263	0.0079	1,825	14.4	263	0.0079

Work Material	Stainless Steel (304) ○				Cast Iron ○			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	9,500	3.9	98	0.0004	19,100	15.0	197	0.0008
2	4,800	3.9	99	0.0008	11,100	15.0	229	0.0013
3	3,175	12.6	98	0.0040	8,500	20.1	263	0.0024
4	2,375	9.4	98	0.0040	6,375	20.1	263	0.0031
5	1,900	7.9	98	0.0041	5,100	20.1	263	0.0039
6	1,600	6.7	99	0.0042	4,250	20.1	263	0.0047
7	1,375	5.9	99	0.0043	3,650	20.1	263	0.0055
8	1,200	5.5	99	0.0046	3,175	20.1	262	0.0063
9	1,050	4.7	97	0.0045	2,825	20.1	262	0.0071
10	950	4.3	98	0.0046	2,550	20.1	263	0.0079
11	875	4.3	99	0.0049	2,325	18.3	264	0.0079
12	800	3.9	99	0.0049	2,125	16.7	263	0.0079
13	725	3.5	97	0.0049	1,950	15.4	261	0.0079
14	675	3.5	97	0.0052	1,825	14.4	263	0.0079

Work Material	Alloy Steel ○				Mold Steel (40 HRC) ○			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	12,700	9.8	131	0.0008	9,500	3.9	98	0.0004
2	8,000	9.8	165	0.0012	4,800	3.9	99	0.0008
3	6,375	15.0	197	0.0023	3,175	12.6	98	0.0040
4	4,775	15.0	197	0.0031	2,375	9.4	98	0.0040
5	3,825	15.0	197	0.0039	1,900	7.9	98	0.0041
6	3,175	15.0	196	0.0047	1,600	6.7	99	0.0042
7	2,725	15.0	197	0.0055	1,375	5.9	99	0.0043
8	2,375	15.0	196	0.0063	1,200	5.5	99	0.0046
9	2,125	15.0	197	0.0070	1,050	4.7	97	0.0045
10	1,900	15.0	196	0.0079	950	4.3	98	0.0046
11	1,725	13.6	196	0.0079	875	4.3	99	0.0049
12	1,600	12.6	198	0.0079	800	3.9	99	0.0049
13	1,475	11.6	198	0.0079	725	3.5	97	0.0049
14	1,375	10.8	198	0.0079	675	3.5	97	0.0052

- Notes:**
- Above cutting conditions are for drilling flat surface. If drilling slope, adjust figures: angle under 30°, reduce 40-80%.
 - Above cutting conditions are for drilling with water soluble coolant, if dry cutting, use air to remove chips.
 - Recommend drilling depth 2xd or less.
 - Horizontal milling is not advised.
 - In case of long chips, increase feed speed or step feed.

Suitability
○ = Very Good
● = Good



TLDM

Recommended Cutting Data for TLDM type

Work Material	Aluminum Alloy ●				Hardened Steel (~50 HRC) ●			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	25,500	31.5	263	0.0012	6,400	2.0	66	0.0003
2	15,900	31.5	328	0.0020	3,200	2.0	66	0.0006
3	12,725	30.3	393	0.0024	2,125	3.9	66	0.0019
4	9,550	30.3	394	0.0032	1,600	3.1	66	0.0020
5	7,650	30.3	394	0.0040	1,275	2.8	66	0.0022
6	6,375	30.3	394	0.0048	1,050	2.4	65	0.0022
7	5,450	30.3	393	0.0056	900	2.4	65	0.0026
8	4,775	30.3	394	0.0063	800	2.0	66	0.0025
9	4,250	30.3	394	0.0071	700	2.0	65	0.0028
10	3,825	30.3	394	0.0079	625	2.0	64	0.0031
11	3,475	27.4	394	0.0079	575	2.0	65	0.0034
12	3,175	25.0	393	0.0079	525	1.6	65	0.0030
13	2,950	23.2	395	0.0079	500	1.6	67	0.0031
14	2,725	21.5	393	0.0079	450	1.6	65	0.0035

Work Material	Titanium (30~42 HRC) ●				Inconel (30~42 HRC) ●			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
1	9,500	3.9	98	0.0004	3,800	1.5	39	0.0004
2	4,800	3.9	99	0.0008	1,900	0.7	39	0.0004
3	3,175	12.6	98	0.0040	1,275	1.0	39	0.0008
4	2,375	9.4	98	0.0040	950	0.7	39	0.0008
5	1,900	7.9	98	0.0041	775	0.6	40	0.0008
6	1,600	6.7	99	0.0042	625	0.5	39	0.0008
7	1,375	5.9	99	0.0043	550	0.4	40	0.0008
8	1,200	5.5	99	0.0046	475	0.4	39	0.0008
9	1,050	4.7	97	0.0045	425	0.4	39	0.0008
10	950	4.3	98	0.0046	375	0.3	39	0.0008
11	875	4.3	99	0.0049	350	0.3	40	0.0008
12	800	3.9	99	0.0049	325	0.3	40	0.0008
13	725	3.5	97	0.0049	300	0.2	40	0.0008
14	675	3.5	97	0.0052	275	0.2	40	0.0009

- Notes:**
- Above cutting conditions are for drilling flat surface. If drilling slope, adjust figures: angle under 30°, reduce 40-80%.
 - Above cutting conditions are for drilling with water soluble coolant, if dry cutting, use air to remove chips.
 - Recommend drilling depth 2xd or less.
 - Horizontal milling is not advised.
 - In case of long chips, increase feed speed or step feed.

Suitability
○ = Very Good
● = Good



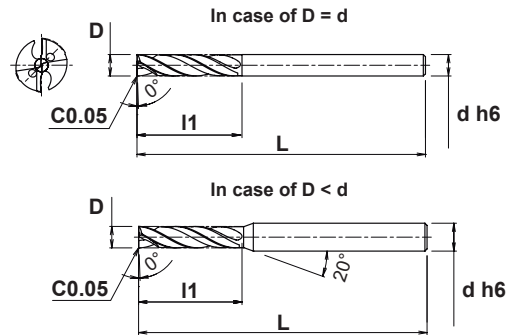
TLD3D

METRIC

TLD3D Type

- Solid Carbide Spot facing drill with point angle of 180° & coolant thru
- Drilling depth 3xD with 30 degree helix & double margin

Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLD3DCH0300S03	•	3.0	14	60	3
TLD3DCH0310S04	•	3.1	14	60	4
TLD3DCH0320S04	•	3.2	15	60	4
TLD3DCH0330S04	•	3.3	15	60	4
TLD3DCH0340S04	•	3.4	16	60	4
TLD3DCH0350S04	•	3.5	16	60	4
TLD3DCH0360S04	•	3.6	17	60	4
TLD3DCH0370S04	•	3.7	17	60	4
TLD3DCH0380S04	•	3.8	18	60	4
TLD3DCH0390S04	•	3.9	18	60	4
TLD3DCH0400S04	•	4.0	18	60	4
TLD3DCH0410S05	•	4.1	19	65	5
TLD3DCH0420S05	•	4.2	19	65	5
TLD3DCH0430S05	•	4.3	20	65	5
TLD3DCH0440S05	•	4.4	20	65	5
TLD3DCH0450S05	•	4.5	21	65	5
TLD3DCH0460S05	•	4.6	21	65	5
TLD3DCH0470S05	•	4.7	22	65	5
TLD3DCH0480S05	•	4.8	22	65	5
TLD3DCH0490S05	•	4.9	23	65	5
TLD3DCH0500S05	•	5.0	23	65	5
TLD3DCH0510S06	•	5.1	23	70	6
TLD3DCH0520S06	•	5.2	24	70	6
TLD3DCH0530S06	•	5.3	24	70	6
TLD3DCH0540S06	•	5.4	25	70	6
TLD3DCH0550S06	•	5.5	25	70	6
TLD3DCH0560S06	•	5.6	26	70	6
TLD3DCH0570S06	•	5.7	26	70	6
TLD3DCH0580S06	•	5.8	27	70	6
TLD3DCH0590S06	•	5.9	27	70	6
TLD3DCH0600S06	•	6.0	27	70	6
TLD3DCH0610S07	•	6.1	28	75	7
TLD3DCH0620S07	•	6.2	28	75	7
TLD3DCH0630S07	•	6.3	29	75	7
TLD3DCH0640S07	•	6.4	29	75	7
TLD3DCH0650S07	•	6.5	30	75	7
TLD3DCH0660S07	•	6.6	30	75	7
TLD3DCH0670S07	•	6.7	31	75	7
TLD3DCH0680S07	•	6.8	31	75	7
TLD3DCH0690S07	•	6.9	32	75	7

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLD3DCH0700S07	•	7.0	32	75	7
TLD3DCH0710S08	•	7.1	32	80	8
TLD3DCH0720S08	•	7.2	33	80	8
TLD3DCH0730S08	•	7.3	33	80	8
TLD3DCH0740S08	•	7.4	34	80	8
TLD3DCH0750S08	•	7.5	34	80	8
TLD3DCH0760S08	•	7.6	35	80	8
TLD3DCH0770S08	•	7.7	35	80	8
TLD3DCH0780S08	•	7.8	36	80	8
TLD3DCH0790S08	•	7.9	36	80	8
TLD3DCH0800S08	•	8.0	36	80	8
TLD3DCH0810S09	•	8.1	37	90	9
TLD3DCH0820S09	•	8.2	37	90	9
TLD3DCH0830S09	•	8.3	38	90	9
TLD3DCH0840S09	•	8.4	38	90	9
TLD3DCH0850S09	•	8.5	39	90	9
TLD3DCH0860S09	•	8.6	39	90	9
TLD3DCH0870S09	•	8.7	40	90	9
TLD3DCH0880S09	•	8.8	40	90	9
TLD3DCH0890S09	•	8.9	41	90	9
TLD3DCH0900S09	•	9.0	41	90	9
TLD3DCH0910S10	•	9.1	41	95	10
TLD3DCH0920S10	•	9.2	42	95	10
TLD3DCH0930S10	•	9.3	42	95	10
TLD3DCH0940S10	•	9.4	43	95	10
TLD3DCH0950S10	•	9.5	43	95	10
TLD3DCH0960S10	•	9.6	44	95	10
TLD3DCH0970S10	•	9.7	44	95	10
TLD3DCH0980S10	•	9.8	45	95	10
TLD3DCH0990S10	•	9.9	45	95	10
TLD3DCH1000S10	•	10.0	45	95	10
TLD3DCH1010S11	•	10.1	46	105	11
TLD3DCH1020S11	•	10.2	46	105	11
TLD3DCH1030S11	•	10.3	47	105	11
TLD3DCH1040S11	•	10.4	47	105	11
TLD3DCH1050S11	•	10.5	48	105	11
TLD3DCH1060S11	•	10.6	48	105	11
TLD3DCH1070S11	•	10.7	49	105	11
TLD3DCH1080S11	•	10.8	49	105	11
TLD3DCH1090S11	•	10.9	50	105	11



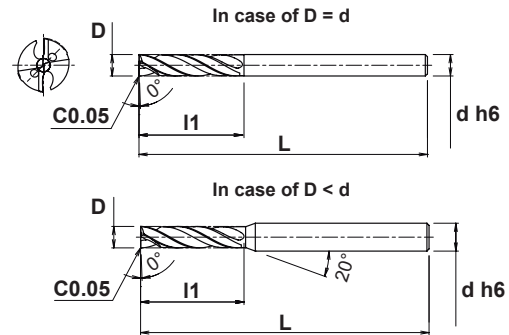
METRIC

TLD3D

TLD3D Type

- Solid Carbide Spot facing drill with point angle of 180° & coolant thru
- Drilling depth 3xD with 30 degree helix & double margin

Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLD3DCH1100S11	•	11.0	50	105	11
TLD3DCH1110S12	•	11.1	50	115	12
TLD3DCH1120S12	•	11.2	51	115	12
TLD3DCH1130S12	•	11.3	51	115	12
TLD3DCH1140S12	•	11.4	52	115	12
TLD3DCH1150S12	•	11.5	52	115	12
TLD3DCH1160S12	•	11.6	53	115	12
TLD3DCH1170S12	•	11.7	53	115	12
TLD3DCH1180S12	•	11.8	54	115	12
TLD3DCH1190S12	•	11.9	54	115	12
TLD3DCH1200S12	•	12.0	54	115	12
TLD3DCH1250S13	•	12.5	57	125	13
TLD3DCH1300S13	•	13.0	59	125	13
TLD3DCH1350S14	•	13.5	61	130	14
TLD3DCH1400S14	•	14.0	63	130	14

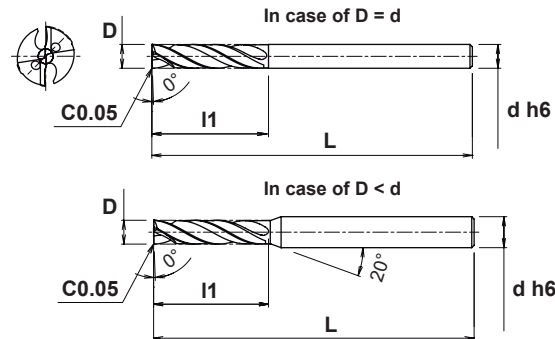
TLD5D

METRIC

TLD5D Type

- Solid Carbide Spot facing drill with point angle of 180° & coolant thru
- Drilling depth 5xD with 30 degree helix & double margin

Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLD5DCH0300S03	•	3.0	20	70	3
TLD5DCH0310S04	•	3.1	21	70	4
TLD5DCH0320S04	•	3.2	22	70	4
TLD5DCH0330S04	•	3.3	22	70	4
TLD5DCH0340S04	•	3.4	23	70	4
TLD5DCH0350S04	•	3.5	24	70	4
TLD5DCH0360S04	•	3.6	24	70	4
TLD5DCH0370S04	•	3.7	25	70	4
TLD5DCH0380S04	•	3.8	26	70	4
TLD5DCH0390S04	•	3.9	26	70	4
TLD5DCH0400S04	•	4.0	27	70	4
TLD5DCH0410S05	•	4.1	28	80	5
TLD5DCH0420S05	•	4.2	28	80	5
TLD5DCH0430S05	•	4.3	29	80	5
TLD5DCH0440S05	•	4.4	30	80	5
TLD5DCH0450S05	•	4.5	30	80	5
TLD5DCH0460S05	•	4.6	31	80	5
TLD5DCH0470S05	•	4.7	32	80	5
TLD5DCH0480S05	•	4.8	32	80	5
TLD5DCH0490S05	•	4.9	33	80	5
TLD5DCH0500S05	•	5.0	34	80	5
TLD5DCH0510S06	•	5.1	34	85	6
TLD5DCH0520S06	•	5.2	35	85	6
TLD5DCH0530S06	•	5.3	36	85	6
TLD5DCH0540S06	•	5.4	36	85	6
TLD5DCH0550S06	•	5.5	37	85	6
TLD5DCH0560S06	•	5.6	38	85	6
TLD5DCH0570S06	•	5.7	38	85	6
TLD5DCH0580S06	•	5.8	39	85	6
TLD5DCH0590S06	•	5.9	40	85	6
TLD5DCH0600S06	•	6.0	40	85	6
TLD5DCH0610S07	•	6.1	41	95	7
TLD5DCH0620S07	•	6.2	42	95	7
TLD5DCH0630S07	•	6.3	42	95	7
TLD5DCH0640S07	•	6.4	43	95	7
TLD5DCH0650S07	•	6.5	44	95	7
TLD5DCH0660S07	•	6.6	44	95	7
TLD5DCH0670S07	•	6.7	45	95	7
TLD5DCH0680S07	•	6.8	46	95	7
TLD5DCH0690S07	•	6.9	46	95	7

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
TLD5DCH0700S07	•	7.0	47	95	7
TLD5DCH0710S08	•	7.1	48	100	8
TLD5DCH0720S08	•	7.2	48	100	8
TLD5DCH0730S08	•	7.3	49	100	8
TLD5DCH0740S08	•	7.4	50	100	8
TLD5DCH0750S08	•	7.5	50	100	8
TLD5DCH0760S08	•	7.6	51	100	8
TLD5DCH0770S08	•	7.7	52	100	8
TLD5DCH0780S08	•	7.8	52	100	8
TLD5DCH0790S08	•	7.9	53	100	8
TLD5DCH0800S08	•	8.0	54	100	8
TLD5DCH0810S09	•	8.1	54	110	9
TLD5DCH0820S09	•	8.2	55	110	9
TLD5DCH0830S09	•	8.3	56	110	9
TLD5DCH0840S09	•	8.4	56	110	9
TLD5DCH0850S09	•	8.5	57	110	9
TLD5DCH0860S09	•	8.6	58	110	9
TLD5DCH0870S09	•	8.7	58	110	9
TLD5DCH0880S09	•	8.8	59	110	9
TLD5DCH0890S09	•	8.9	60	110	9
TLD5DCH0900S09	•	9.0	60	110	9
TLD5DCH0910S10	•	9.1	61	120	10
TLD5DCH0920S10	•	9.2	62	120	10
TLD5DCH0930S10	•	9.3	62	120	10
TLD5DCH0940S10	•	9.4	63	120	10
TLD5DCH0950S10	•	9.5	64	120	10
TLD5DCH0960S10	•	9.6	64	120	10
TLD5DCH0970S10	•	9.7	65	120	10
TLD5DCH0980S10	•	9.8	66	120	10
TLD5DCH0990S10	•	9.9	66	120	10
TLD5DCH1000S10	•	10.0	67	120	10
TLD5DCH1010S11	•	10.1	68	130	11
TLD5DCH1020S11	•	10.2	68	130	11
TLD5DCH1030S11	•	10.3	69	130	11
TLD5DCH1040S11	•	10.4	70	130	11
TLD5DCH1050S11	•	10.5	70	130	11
TLD5DCH1060S11	•	10.6	71	130	11
TLD5DCH1070S11	•	10.7	72	130	11
TLD5DCH1080S11	•	10.8	72	130	11
TLD5DCH1090S11	•	10.9	73	130	11



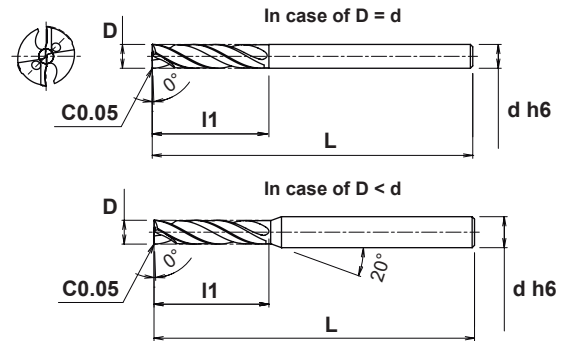
METRIC

TLD5D

TLD5D Type

- Solid Carbide Spot facing drill with point angle of 180° & coolant thru
- Drilling depth 5xD with 30 degree helix & double margin

Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018



CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
TLD5DCH1100S11	•	11.0	74	130	11
TLD5DCH1110S12	•	11.1	74	145	12
TLD5DCH1120S12	•	11.2	75	145	12
TLD5DCH1130S12	•	11.3	76	145	12
TLD5DCH1140S12	•	11.4	76	145	12
TLD5DCH1150S12	•	11.5	77	145	12
TLD5DCH1160S12	•	11.6	78	145	12
TLD5DCH1170S12	•	11.7	78	145	12

CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
TLD5DCH1180S12	•	11.8	79	145	12
TLD5DCH1190S12	•	11.9	80	145	12
TLD5DCH1200S12	•	12.0	80	145	12
TLD5DCH1250S13	•	12.5	84	155	13
TLD5DCH1300S13	•	13.0	87	155	13
TLD5DCH1350S14	•	13.5	90	160	14
TLD5DCH1400S14	•	14.0	94	160	14



TLD

Recommended Cutting Data for TLD3D and TLD5D Type

Work Material	Structure Steel				Carbon Steel			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3	8,500	20.1	263	0.0024	8,500	20.1	263	0.0024
4	6,375	20.1	263	0.0031	6,375	20.1	263	0.0031
5	5,100	20.1	263	0.0039	5,100	20.1	263	0.0039
6	4,250	20.1	263	0.0047	4,250	20.1	263	0.0047
7	3,650	20.1	263	0.0055	3,650	20.1	263	0.0055
8	3,175	20.1	262	0.0063	3,175	20.1	262	0.0063
9	2,825	20.1	262	0.0071	2,825	20.1	262	0.0071
10	2,550	20.1	263	0.0079	2,550	20.1	263	0.0079
11	2,325	18.3	264	0.0079	2,325	18.3	264	0.0079
12	2,125	16.7	263	0.0079	2,125	16.7	263	0.0079
13	1,950	15.4	261	0.0079	1,950	15.4	261	0.0079
14	1,825	14.4	263	0.0079	1,825	14.4	263	0.0079

Work Material	Alloy Steel				Mold Steel (38~43 HRC)			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3	6,375	15.0	197	0.0023	3,175	12.6	98	0.0040
4	4,775	15.0	197	0.0031	2,375	9.4	98	0.0040
5	3,825	15.0	197	0.0039	1,900	7.9	98	0.0041
6	3,175	15.0	196	0.0047	1,600	6.7	99	0.0042
7	2,725	15.0	197	0.0055	1,375	5.9	99	0.0043
8	2,375	15.0	196	0.0063	1,200	5.5	99	0.0046
9	2,125	15.0	197	0.0070	1,050	4.7	97	0.0045
10	1,900	15.0	196	0.0079	950	4.3	98	0.0046
11	1,725	13.6	196	0.0079	875	4.3	99	0.0049
12	1,600	12.6	198	0.0079	800	3.9	99	0.0049
13	1,475	11.6	198	0.0079	725	3.5	97	0.0049
14	1,375	10.8	198	0.0079	675	3.5	97	0.0052

Work Material	Hardened Die Steel (~50HC)				Titanium Alloy			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3	3,700	11.8	114	0.0032	3,175	12.6	98	0.0040
4	2,790	10.2	115	0.0037	2,375	9.4	98	0.0040
5	2,230	7.9	115	0.0035	1,900	7.9	98	0.0041
6	1,860	6.3	115	0.0034	1,600	6.7	99	0.0042
7	1,590	5.9	115	0.0037	1,375	5.9	99	0.0043
8	1,390	5.5	115	0.0040	1,200	5.5	99	0.0046
9	1,340	5.5	124	0.0041	1,050	4.7	97	0.0045
10	1,110	5.1	114	0.0046	950	4.3	98	0.0046
11	1,010	4.7	115	0.0047	875	4.3	99	0.0049
12	930	4.7	115	0.0051	800	3.9	99	0.0049
13	860	4.7	115	0.0055	725	3.5	97	0.0049
14	800	4.7	115	0.0059	675	3.5	97	0.0052

**Recommended Cutting Data for TLD3D and TLD5D Type**

Work Material	Stainless Steel (304)				Gray Cast Iron			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3	3,175	12.6	98	0.0040	8,500	20.1	263	0.0024
4	2,375	9.4	98	0.0040	6,375	20.1	263	0.0031
5	1,900	7.9	98	0.0041	5,100	20.1	263	0.0039
6	1,600	6.7	99	0.0042	4,250	20.1	263	0.0047
7	1,375	5.9	99	0.0043	3,650	20.1	263	0.0055
8	1,200	5.5	99	0.0046	3,175	20.1	262	0.0063
9	1,050	4.7	97	0.0045	2,825	20.1	262	0.0071
10	950	4.3	98	0.0046	2,550	20.1	263	0.0079
11	875	4.3	99	0.0049	2,325	18.3	264	0.0079
12	800	3.9	99	0.0049	2,125	16.7	263	0.0079
13	725	3.5	97	0.0049	1,950	15.4	261	0.0079
14	675	3.5	97	0.0052	1,825	14.4	263	0.0079

Work Material	Nodular Cast Iron				Aluminum Alloy			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
3	8,500	20.1	263	0.0024	16,980	66.9	525	0.0039
4	6,375	20.1	263	0.0031	12,730	50.1	525	0.0039
5	5,100	20.1	263	0.0039	10,190	40.1	525	0.0039
6	4,250	20.1	263	0.0047	8,490	33.4	525	0.0039
7	3,650	20.1	263	0.0055	7,280	28.7	525	0.0039
8	3,175	20.1	262	0.0063	6,370	25.1	525	0.0039
9	2,825	20.1	262	0.0071	5,660	22.3	525	0.0039
10	2,550	20.1	263	0.0079	5,090	20.0	525	0.0039
11	2,325	18.3	264	0.0079	4,630	18.2	525	0.0039
12	2,125	16.7	263	0.0079	4,240	16.7	524	0.0039
13	1,950	15.4	261	0.0079	3,920	15.4	525	0.0039
14	1,825	14.4	263	0.0079	3,640	14.3	525	0.0039

Notes for TLD3D:

- Above cutting conditions are for drilling flat surface.
- For inclined angle under 30°, reduce Feed speed (ipm) to 40-80%, and for inclined angle of 30° or more reduce Feed speed to 20-50%, but keep spindle speed (rpm).
- Above cutting conditions are for drilling with water soluble (internal coolant). If using external coolant, use step feed to remove the chips. Dry drilling is not recommended.
- Recommend drill depth under 3D or less. If drilling depth if over 3D, recommend using TLD5D type.
- Endmilling is impossible.
- In case of long chips evacuated, adjust above conditions by increasing Feed speed (ipm) or using step feed to break chips.

Notes for TLD5D:

- The above cutting condition are with guide hole drilling of the same diameter drill (guide hold drilling depth: 0.5D-1.0D).
- Cutting conditions are for drilling with water soluble (internal coolant). External coolant or dry drilling is not recommended.
- Recommended drilling depth under 5D or less. Drilling depth over 5D is not recommended.
- Endmilling is impossible.
- In case of long chips evacuated, adjust above conditions by increasing Feed speed (ipm) or using step feed to break chips.
- Drilling on inclined angle is not recommended.

EZH

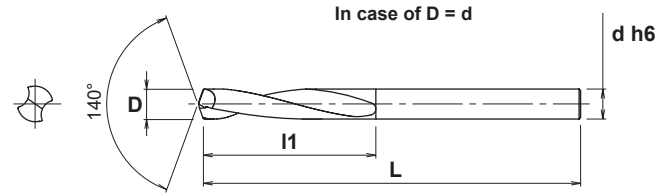
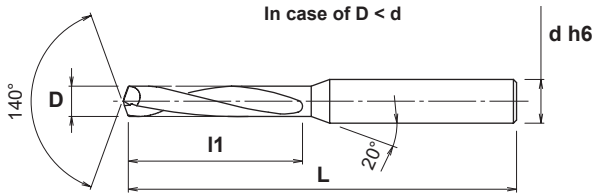
METRIC

EZH Type

- Solid Carbide drill for high hardened materials
- Drilling depth 5xD with 15 degree helix



Diameter	Tolerance
up to 3mm	+0 / -0.010
over 3mm - up to 6mm	+0 / -0.012
over 6mm - up to 10mm	+0 / -0.015
over 10mm - up to 16mm	+0 / -0.018

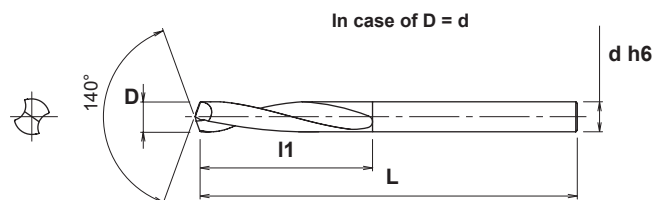
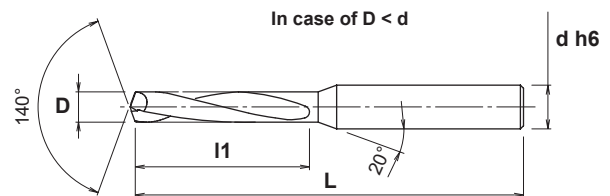


CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZH5D0200S03	•	2.0	16	55	3
EZH5D0200S03-12	•	2.0	12	55	3
EZH5D0200S03-21	•	2.0	21	55	3
EZH5D0210S03	•	2.1	16	55	3
EZH5D0220S03	•	2.2	16	55	3
EZH5D0230S03	•	2.3	16	55	3
EZH5D0240S03	•	2.4	16	55	3
EZH5D0250S03	•	2.5	16	55	3
EZH5D0250S03-21	•	2.5	21	55	3
EZH5D0260S03	•	2.6	16	55	3
EZH5D0270S03	•	2.7	16	55	3
EZH5D0280S03	•	2.8	16	55	3
EZH5D0290S03	•	2.9	16	55	3
EZH5D0300S04	•	3.0	21	59	4
EZH5D0330S04	•	3.3	24	59	4
EZH5D0340S04	•	3.4	24	59	4
EZH5D0350S04	•	3.5	24	59	4
EZH5D0380S04	•	3.8	27	59	4
EZH5D0390S04	•	3.9	27	59	4
EZH5D0400S04	•	4.0	27	59	4
EZH5D0420S06	•	4.2	29	74	6
EZH5D0430S06	•	4.3	29	74	6
EZH5D0440S06	•	4.4	29	74	6

CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZH5D0450S06	•	4.5	29	74	6
EZH5D0490S06	•	4.9	32	74	6
EZH5D0500S06	•	5.0	32	74	6
EZH5D0510S06	•	5.1	34	79	6
EZH5D0520S06	•	5.2	34	79	6
EZH5D0590S06	•	5.9	36	79	6
EZH5D0600S06	•	6.0	41	79	6
EZH5D0680S08	•	6.8	43	88	8
EZH5D0690S08	•	6.9	43	88	8
EZH5D0700S08	•	7.0	43	88	8
EZH5D0790S08	•	7.9	48	93	8
EZH5D0800S08	•	8.0	48	93	8
EZH5D0850S10	•	8.5	53	98	10
EZH5D0860S10	•	8.6	55	98	10
EZH5D0900S10	•	9.0	55	98	10
EZH5D0990S10	•	9.9	60	108	10
EZH5D1000S10	•	10.0	60	108	10
EZH5D1030S12	•	10.3	66	117	12
EZH5D1040S12	•	10.4	66	117	12
EZH5D1100S12	•	11.0	68	117	12
EZH5D1190S12	•	11.9	73	117	12
EZH5D1200S12	•	12.0	73	117	12

EZH-LS Type

- Solid Carbide drill for high hardened materials
- Drilling depth 5xD with 15 degree helix and long shank



CATALOG NUMBER	STK	DIMENSIONS			
		D	l1	L	d
EZH5D0300S04-LS	•	3.0	25	69	4
EZH5D0330S04-LS	•	3.3	25	79	4
EZH5D0380S04-LS	•	3.8	30	79	4
EZH5D0400S04-LS	•	4.0	30	79	4



Recommended Cutting Data for EZH5D Type

Work Material	Hardened Steel (48~56 HRC)				Hardened Steel (57~62HRC)			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
2	2,860	4.5	59	0.0016	2,070	3.4	43	0.0016
2.5	2,550	4.0	66	0.0016	1,660	2.6	43	0.0016
3	2,110	3.3	65	0.0016	1,380	2.2	43	0.0016
4	1,590	2.5	66	0.0016	1,035	1.6	43	0.0016
5	1,270	2.4	65	0.0019	830	1.6	43	0.0019
6	1,060	2.9	66	0.0027	690	1.6	43	0.0023
7	910	2.5	66	0.0027	590	1.4	43	0.0023
8	795	2.4	66	0.0030	520	1.3	43	0.0026
9	710	2.1	66	0.0030	460	1.2	43	0.0026
10	640	2.0	66	0.0031	415	1.1	43	0.0028
11	580	1.8	66	0.0031	375	1.0	43	0.0027
12	530	1.9	66	0.0035	345	1.0	43	0.0030
13	370	1.3	50	0.0035	250	0.8	33	0.0031
14	330	1.2	48	0.0036	220	0.8	32	0.0036
15	320	1.2	49	0.0037	210	0.8	32	0.0037
16	320	1.2	53	0.0037	200	0.7	33	0.0037

Work Material	HSS (63~70 HRC)			
	Dia. (mm)	RPM	IPM	SFM
2	1,270	1.5	26	0.0012
2.5	1,270	1.5	33	0.0012
3	1,060	1.2	33	0.0012
4	795	0.9	33	0.0011
5	635	1.0	33	0.0016
6	530	1.0	33	0.0019
7	455	0.9	33	0.0019
8	400	0.8	33	0.0020
9	355	0.7	33	0.0020
10	320	0.7	33	0.0021
11	290	0.6	33	0.0022
12	265	0.6	33	0.0024
13	200	0.5	27	0.0026
14	180	0.5	26	0.0028
15	170	0.5	26	0.0030
16	160	0.5	26	0.0030

- Notes:**
1. Use water soluble coolant.
 2. Not recommended for use on non-heat treated materials.
 3. Recommended for materials over 48 HRC to 70 HRC.
 4. Use on rigid machine with a precision holder.
 5. Above data recommended for cutting depth of 3xD. Peck drilling is recommended if drilling deeper.
 6. Recommended for drilling blind hold, if drill thru hole, use back up material underneath.
 7. If using -LS type, reduce above data.

Finish-Hard Reamer

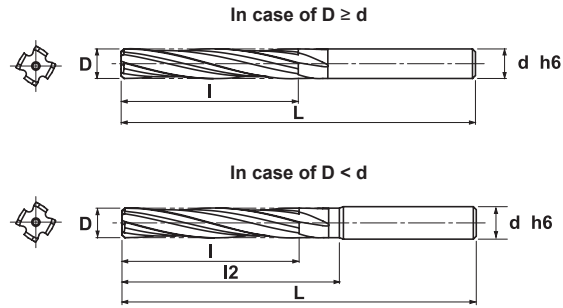
METRIC

DH-FHR Type

- For precise reaming on high hardened material
- Helix angle: 15 degrees, drilling depth 5XD



Diameter	Tolerance
under 3.1mm	+0.007 +0.002
3.1mm up to 6.1mm	+0.009 +0.003
6.1mm up to 10.1mm	+0.011 +0.004
10.1mm and up	+0.013 +0.006



CATALOG NUMBER	STK	DIMENSIONS				
		D	I	I2	L	d
DH-FHR0300	•	3	20	28.6	70	4
DH-FHR0301	□	3.01	20	28.6	70	4
DH-FHR0302	□	3.02	20	28.6	70	4
DH-FHR0310	□	3.1	27	33.7	75	4
DH-FHR0320	□	3.2	27	33.9	75	4
DH-FHR0330	□	3.3	27	34	75	4
DH-FHR0340	□	3.4	27	34.1	75	4
DH-FHR0350	□	3.5	27	34.3	75	4
DH-FHR0360	□	3.6	27	34.4	75	4
DH-FHR0370	□	3.7	27	34.5	75	4
DH-FHR0380	□	3.8	27	34.7	75	4
DH-FHR0390	□	3.9	27	34.8	75	4
DH-FHR0400	•	4	27	-	75	4
DH-FHR0401	□	4.01	27	-	75	4
DH-FHR0402	□	4.02	27	-	75	4
DH-FHR0410	□	4.1	35	42.3	85	6
DH-FHR0420	□	4.2	35	42.5	85	6
DH-FHR0430	□	4.3	35	42.6	85	6
DH-FHR0440	□	4.4	35	42.8	85	6
DH-FHR0450	□	4.5	35	42.9	85	6
DH-FHR0460	□	4.6	35	43	85	6
DH-FHR0470	□	4.7	35	43.2	85	6
DH-FHR0480	□	4.8	35	43.3	85	6
DH-FHR0490	□	4.9	35	43.4	85	6
DH-FHR0500	•	5	35	43.6	85	6
DH-FHR0501	□	5.01	35	43.6	85	6
DH-FHR0502	□	5.02	35	43.6	85	6
DH-FHR0510	□	5.1	42	48.7	90	6
DH-FHR0520	□	5.2	42	48.9	90	6
DH-FHR0530	□	5.3	42	49	90	6
DH-FHR0540	□	5.4	42	49.1	90	6
DH-FHR0550	□	5.5	42	49.3	90	6
DH-FHR0560	□	5.6	42	49.4	90	6
DH-FHR0570	□	5.7	42	49.5	90	6
DH-FHR0580	□	5.8	42	49.7	90	6
DH-FHR0590	□	5.9	42	49.8	90	6
DH-FHR0600	•	6	42	-	90	6
DH-FHR0601	□	6.01	42	-	90	6
DH-FHR0602	•	6.02	42	-	90	6
DH-FHR0610	□	6.1	47	57.3	100	8
DH-FHR0620	□	6.2	47	57.5	100	8
DH-FHR0630	□	6.3	47	57.6	100	8
DH-FHR0640	□	6.4	47	57.8	100	8

CATALOG NUMBER	STK	DIMENSIONS				
		D	I	I2	L	d
DH-FHR0650	□	6.5	47	57.9	100	8
DH-FHR0660	□	6.6	47	58	100	8
DH-FHR0670	□	6.7	47	58.2	100	8
DH-FHR0680	□	6.8	47	58.3	100	8
DH-FHR0690	□	6.9	47	58.4	100	8
DH-FHR0700	•	7	47	58.6	100	8
DH-FHR0701	□	7.01	47	58.6	100	8
DH-FHR0702	□	7.02	47	58.6	100	8
DH-FHR0710	□	7.1	50	60	100	8
DH-FHR0720	□	7.2	50	60	100	8
DH-FHR0730	□	7.3	50	60	100	8
DH-FHR0740	□	7.4	50	60	100	8
DH-FHR0750	□	7.5	50	60	100	8
DH-FHR0760	□	7.6	50	60	100	8
DH-FHR0770	□	7.7	50	60	100	8
DH-FHR0780	□	7.8	50	60	100	8
DH-FHR0790	□	7.9	50	60	100	8
DH-FHR0800	•	8	50	-	100	8
DH-FHR0801	□	8.01	50	-	100	8
DH-FHR0802	•	8.02	50	-	100	8
DH-FHR0810	□	8.1	60	72.3	120	10
DH-FHR0820	□	8.2	60	72.5	120	10
DH-FHR0830	□	8.3	60	72.6	120	10
DH-FHR0840	□	8.4	60	72.8	120	10
DH-FHR0850	□	8.5	60	72.9	120	10
DH-FHR0860	□	8.6	60	73	120	10
DH-FHR0870	□	8.7	60	73.2	120	10
DH-FHR0880	□	8.8	60	73.3	120	10
DH-FHR0890	□	8.9	60	73.4	120	10
DH-FHR0900	•	9	60	73.6	120	10
DH-FHR0901	□	9.01	60	73.6	120	10
DH-FHR0902	□	9.02	60	73.6	120	10
DH-FHR0910	□	9.1	60	75	120	10
DH-FHR0920	□	9.2	60	75	120	10
DH-FHR0930	□	9.3	60	75	120	10
DH-FHR0940	□	9.4	60	75	120	10
DH-FHR0950	□	9.5	60	75	120	10
DH-FHR0960	□	9.6	60	75	120	10
DH-FHR0970	□	9.7	60	75	120	10
DH-FHR0980	□	9.8	60	75	120	10
DH-FHR0990	□	9.9	60	75	120	10

• Stocked standard □ Inquire regarding delivery



METRIC

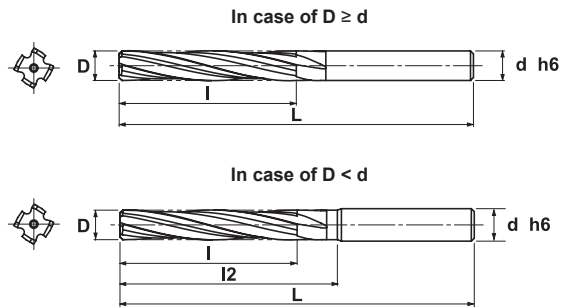
Finish-Hard Reamer

DH-FHR Type

- For precise reaming on high hardened material
- Helix angle: 15 degrees, drilling depth 5XD



Diameter	Tolerance
under 3.1mm	+0.007 +0.002
3.1mm up to 6.1mm	+0.009 +0.003
6.1mm up to 10.1mm	+0.011 +0.004
10.1mm and up	+0.013 +0.006



CATALOG NUMBER	STK	DIMENSIONS				
		D	l	l2	L	d
DH-FHR1000	•	10	60	-	120	10
DH-FHR1001	□	10.01	60	-	120	10
DH-FHR1002	□	10.02	60	-	120	10
DH-FHR1010	□	10.1	70	87.3	140	12
DH-FHR1020	□	10.2	70	87.5	140	12
DH-FHR1030	□	10.3	70	87.6	140	12
DH-FHR1040	□	10.4	70	87.8	140	12
DH-FHR1050	□	10.5	70	87.9	140	12
DH-FHR1060	□	10.6	70	88	140	12
DH-FHR1070	□	10.7	70	88.2	140	12
DH-FHR1080	□	10.8	70	88.3	140	12
DH-FHR1090	□	10.9	70	88.4	140	12
DH-FHR1100	•	11	70	88.6	140	12
DH-FHR1101	□	11.01	70	88.6	140	12
DH-FHR1102	□	11.02	70	88.6	140	12
DH-FHR1110	□	11.1	70	90	140	12
DH-FHR1120	□	11.2	70	90	140	12
DH-FHR1130	□	11.3	70	90	140	12
DH-FHR1140	□	11.4	70	90	140	12

CATALOG NUMBER	STK	DIMENSIONS				
		D	l	l2	L	d
DH-FHR1150	□	11.5	70	90	140	12
DH-FHR1160	□	11.6	70	90	140	12
DH-FHR1170	□	11.7	70	90	140	12
DH-FHR1180	□	11.8	70	90	140	12
DH-FHR1190	□	11.9	70	90	140	12
DH-FHR1200	•	12	70	-	140	12
DH-FHR1201	□	12.01	70	-	140	12
DH-FHR1202	□	12.02	70	-	140	12
DH-FHR1210	□	12.1	70	90	140	12
DH-FHR1300	•	13	70	88.6	140	14
DH-FHR1301	□	13.01	70	88.6	140	14
DH-FHR1302	□	13.02	70	88.6	140	14
DH-FHR1600	•	16	70	-	140	16
DH-FHR1601	□	16.01	70	-	140	16
DH-FHR1600	□	16.02	70	-	140	16

• Stocked standard □ Inquire regarding delivery

Finish-Hard Reamer

Recommended Cutting Data for DH-FHR Type

Work Material	Die Steel (48~56 HRC)				Stock Amount Inch
Dia. (mm)	RPM	IPM	SFM	IPR	
3	2,120	4.1	66	0.0019	Φ.004-.008
4	1,590	3.1	66	0.0020	Φ.004-.008
5	1,270	2.5	65	0.0020	Φ.004-.008
6	1,060	2.5	66	0.0024	Φ.004-.008
7	910	2.2	66	0.0024	Φ.004-.008
8	795	1.9	66	0.0024	Φ.004-.008
9	710	1.9	66	0.0027	Φ.004-.008
10	640	1.8	66	0.0028	Φ.004-.008
11	580	1.6	66	0.0027	Φ.004-.008
12	530	1.5	66	0.0027	Φ.004-.008
13	370	1.0	50	0.0028	Φ.004-.008
16	300	0.8	49	0.0028	Φ.004-.008

Work Material	Die Steel (57~62 HRC)				Stock Amount Inch
Dia. (mm)	RPM	IPM	SFM	IPR	
3	1,380	2.7	43	0.0020	Φ.004-.008
4	1,040	2.0	43	0.0020	Φ.004-.008
5	830	1.6	43	0.0019	Φ.004-.008
6	690	1.6	43	0.0023	Φ.004-.008
7	590	1.3	43	0.0023	Φ.004-.008
8	520	1.2	43	0.0023	Φ.004-.008
9	460	1.2	43	0.0026	Φ.004-.008
10	415	1.1	43	0.0027	Φ.004-.008
11	375	1.0	43	0.0026	Φ.004-.008
12	345	0.9	43	0.0026	Φ.004-.008
13	245	0.7	33	0.0027	Φ.004-.008
16	200	0.6	33	0.0028	Φ.004-.008

Work Material	Die Steel (63~70 HRC)				Stock Amount Inch
Dia. (mm)	RPM	IPM	SFM	IPR	
3	1,010	1.6	31	0.0016	Φ.004-.008
4	755	1.2	31	0.0016	Φ.004-.008
5	605	0.9	31	0.0016	Φ.004-.008
6	500	0.8	31	0.0016	Φ.004-.008
7	430	0.8	31	0.0018	Φ.004-.008
8	375	0.7	31	0.0019	Φ.004-.008
9	335	0.6	31	0.0019	Φ.004-.008
10	300	0.6	31	0.0020	Φ.004-.008
11	275	0.5	31	0.0019	Φ.004-.008
12	250	0.5	31	0.0019	Φ.004-.008
13	195	0.4	26	0.0020	Φ.004-.008
16	160	0.3	26	0.0020	Φ.004-.008

Notes: 1. Above cutting conditions are for drilling flat surface.

2. Adjust cutting conditions according to machine rigidity, work clamping and shape of machining part.

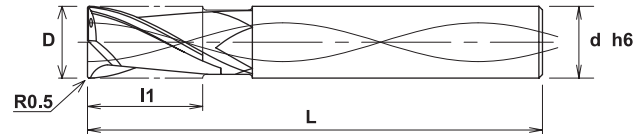
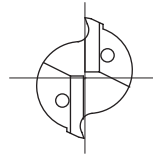
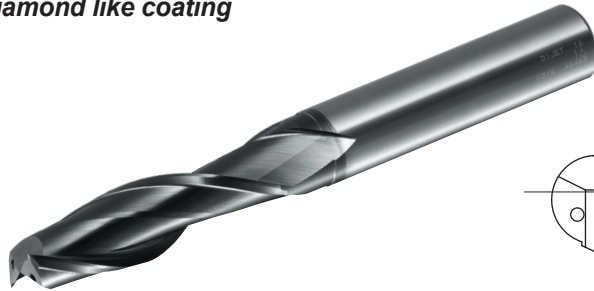


METRIC

Helical Cutting Drill

AL-OCHE Type

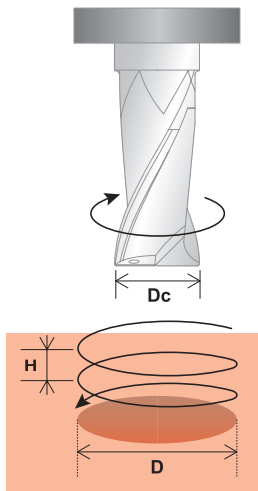
- 2 Flute with 30° Helix and coolant thru
- Diamond like coating



CATALOG NUMBER	STK	DIMENSIONS			
		D	I1	L	d
AL-OCHE2040	•	4	16	60	4
AL-OCHE2060	•	6	22	74	6
AL-OCHE2080	•	8	31	90	8
AL-OCHE2100	•	10	37	105	10
AL-OCHE2120	•	12	43	113	12
AL-OCHE2160	•	16	55	130	16

Recommended Cutting Data

Helical Milling

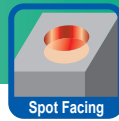


Work Material	Aluminum Alloy (A5052, A7075)			
Tool Dia. Dc (mm)	Hole Dia. D (mm)	Maximum Depth T (inch)	Spindle Speed n (rpm)	Feed Speed (ipm)
4	5 ~ 7	.590	16,000	37.8
6	7 ~ 11	.826	10,600	41.7
8	10 ~ 15	1.181	8,000	78.7
10	12 ~ 19	1.417	6,400	63.0
12	14 ~ 23	1.653	5,300	51.1
16	18 ~ 31	2.125	4,000	39.3

Work Material	Cast Aluminum Alloy (Up to 13% Si)			
Tool Dia. Dc (mm)	Hole Dia. D (mm)	Maximum Depth T (inch)	Spindle Speed n (rpm)	Feed Speed (ipm)
4	5 ~ 7	.590	14,400	33.8
6	7 ~ 11	.826	9,500	37.4
8	10 ~ 15	1.181	7,200	70.8
10	12 ~ 19	1.417	5,700	55.1
12	14 ~ 23	1.653	4,800	47.2
16	18 ~ 31	2.125	3,600	35.4

Tool Path Diameter Dk (mm)	Helical Interpolation Depth/Tool Path Rev. H (inch)
1	.102
2	.196
3	.251
4	.291
5	.322
6	.346
7	.370
8	.385
9	.401
10	.417
11	.433
12	.444
13	.452
14	.464
15	.472

- Notes:**
1. Tool path diameter: Dk = Hole diameter D - Tool diameter Dc.
 2. In case of blind hole, last revolution of H should be reduced to 0.8-2.0mm.
 3. In case of through hole, top of tool must come through by 1mm or more due to the tools corner radius of 0.5mm.
 4. Use internal coolant.
 5. Above data applies to solid work piece, when enlarging core hole ae should be 75% of Dc or less and recommend using flood coolant also.
 6. If machine or work piece lack rigidity or chatter occurs, reduce speed and feed with the same ratio to H.



Helical Cutting Drill

Recommended Cutting Data for AL-OCHE type

Work Material	Aluminum Alloy (A5052)		Aluminum Alloy (A7075)		Cast Aluminum Alloy (Up to 13% Si)	
	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
Type of Machining - Shoulder Cutting						
Diameter	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
4	16,000	70.8	16,000	70.8	14,000	66.9
6	10,000	70.8	10,000	70.8	9,500	66.9
8	8,000	63.0	8,000	63.0	7,000	59.1
10	6,000	51.1	6,000	51.1	5,700	47.2
12	5,000	51.1	5,000	51.1	4,700	47.2
16	4,000	47.2	4,000	47.2	3,500	43.3

Work Material	Aluminum Alloy (A5052)		Aluminum Alloy (A7075)		Cast Aluminum Alloy (Up to 13% Si)	
	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
Type of Machining - Slotting						
Diameter	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
4	14,000	39.3	14,000	39.3	12,000	33.4
6	9,500	39.3	9,500	39.3	8,500	33.4
8	7,000	39.3	7,000	39.3	6,400	33.4
10	5,700	39.3	5,700	39.3	5,000	33.4
12	4,700	39.3	4,700	39.3	4,200	33.4
16	3,500	39.3	3,500	39.3	3,200	33.4

High Speed Cutting Data for AL-OCHE

Work Material	Aluminum Alloy (A5052)		Aluminum Alloy (A7075)		Cast Aluminum Alloy (Up to 13% Si)	
	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
Type of Machining - Shoulder Cutting						
Diameter	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
4	32,000	149.6	32,000	149.6	28,000	129.9
6	21,000	149.6	21,000	149.6	18,000	129.9
8	16,000	125.9	16,000	125.9	14,000	129.9
10	12,000	125.9	12,000	125.9	11,000	118.1
12	10,000	125.9	10,000	125.9	9,000	106.3
16	8,000	110.2	8,000	110.2	7,000	96.4

Work Material	Aluminum Alloy (A5052)		Aluminum Alloy (A7075)		Cast Aluminum Alloy (Up to 13% Si)	
	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
Type of Machining - Slotting						
Diameter	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)	n (rpm)	Vf (ipm)
4	28,000	74.8	28,000	74.8	24,000	63.0
6	19,000	74.8	19,000	74.8	16,000	63.0
8	14,000	74.8	14,000	74.8	12,000	63.0
10	11,000	74.8	11,000	74.8	9,500	63.0
12	9,500	74.8	9,500	74.8	8,000	63.0
16	7,000	70.8	7,000	70.8	6,000	63.0

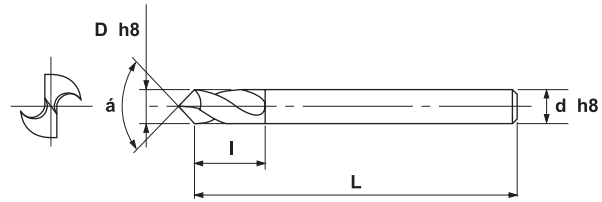
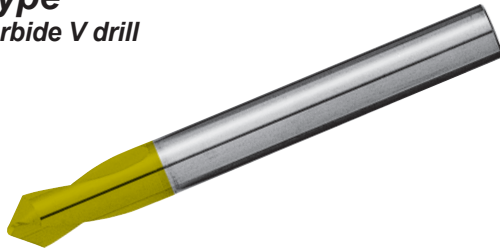
- Notes:**
1. Use water soluble oil.
 2. Use caution when handling, tools are extremely sharp.
 3. Figures should be adjusted according to machining shape, rigidity of machine and work clamping.
 4. If machine does not have enough spindle speed, reduce the feed speed to the same ratio as above.
 5. In case of ramping, recommend reducing the above data by 30-60%.

**METRIC**

V Point Drill

VSD Type

- Solid carbide V drill



VSD

CATALOG NUMBER	UNCOATED	COATED	DIMENSIONS				
	CR1	JC3521	á	D	I	L	d
VSD-030-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	3	8	50	3
VSD-040-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	4	10	50	4
VSD-050-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	5	13	60	5
VSD-060-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	6	15	70	6
VSD-080-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	8	20	80	8
VSD-100-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	10	25	90	10
VSD-120-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	12	27	100	12
VSD-160-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	16	40	145	16
VSD-200-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	20	50	165	20
VSD-250-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	25	60	180	25
VSD-030-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	3	8	50	3
VSD-040-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	4	10	50	4
VSD-050-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	5	13	60	5
VSD-060-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	6	15	70	6
VSD-080-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	8	20	80	8
VSD-100-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	10	25	90	10
VSD-120-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	12	27	100	12
VSD-160-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	16	40	145	16
VSD-200-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	20	50	165	20
VSD-250-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	25	60	180	25

VSDL

CATALOG NUMBER	UNCOATED	COATED	DIMENSIONS				
	CR1	JC3521	á	D	I	L	d
VSDL-030-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	3	8	100	3
VSDL-040-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	4	10	100	4
VSDL-050-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	5	13	110	5
VSDL-060-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	6	15	120	6
VSDL-080-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	8	20	140	8
VSDL-100-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	10	25	160	10
VSDL-120-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	12	27	180	12
VSDL-160-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	16	40	230	16
VSDL-200-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	20	50	250	20
VSDL-250-90°	<input type="checkbox"/>	<input type="checkbox"/>	90°	25	60	280	25
VSDL-030-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	3	8	100	3
VSDL-040-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	4	10	100	4
VSDL-050-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	5	13	110	5
VSDL-060-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	6	15	120	6
VSDL-080-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	8	20	140	8
VSDL-100-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	10	25	160	10
VSDL-120-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	12	27	180	12
VSDL-160-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	16	40	230	16
VSDL-200-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	20	50	250	20
VSDL-250-120°	<input type="checkbox"/>	<input type="checkbox"/>	120°	25	60	280	25

• Stocked standard Inquire regarding delivery



V Point Drill

Recommended Cutting Data for VSD and VSDL type

Diameter	Work Material					
	Cast Iron		Carbon Steel		Alloy Steel	
	Vc (sfm)	f (ipr)	Vc (sfm)	f (ipr)	Vc (sfm)	f (ipr)
3	160 ~ 230	.004" ~ .006"	130 ~ 200	.002" ~ .004"	130 ~ 200	.002" ~ .004"
4	160 ~ 230	.004" ~ .006"	130 ~ 200	.002" ~ .004"	130 ~ 200	.002" ~ .004"
5	160 ~ 230	.004" ~ .006"	130 ~ 200	.002" ~ .004"	130 ~ 200	.002" ~ .004"
6	200 ~ 260	.004" ~ .008"	160 ~ 230	.004" ~ .006"	160 ~ 230	.004" ~ .006"
8	200 ~ 260	.004" ~ .008"	160 ~ 230	.004" ~ .006"	160 ~ 230	.004" ~ .006"
10	200 ~ 260	.006" ~ .010"	160 ~ 230	.004" ~ .008"	160 ~ 230	.004" ~ .008"
12	230 ~ 300	.006" ~ .010"	160 ~ 230	.004" ~ .008"	160 ~ 230	.004" ~ .008"
16	230 ~ 300	.006" ~ .010"	200 ~ 260	.004" ~ .008"	200 ~ 260	.004" ~ .008"
20	230 ~ 300	.006" ~ .010"	200 ~ 260	.004" ~ .008"	200 ~ 260	.004" ~ .008"
25	230 ~ 300	.006" ~ .010"	200 ~ 260	.004" ~ .008"	200 ~ 260	.004" ~ .008"

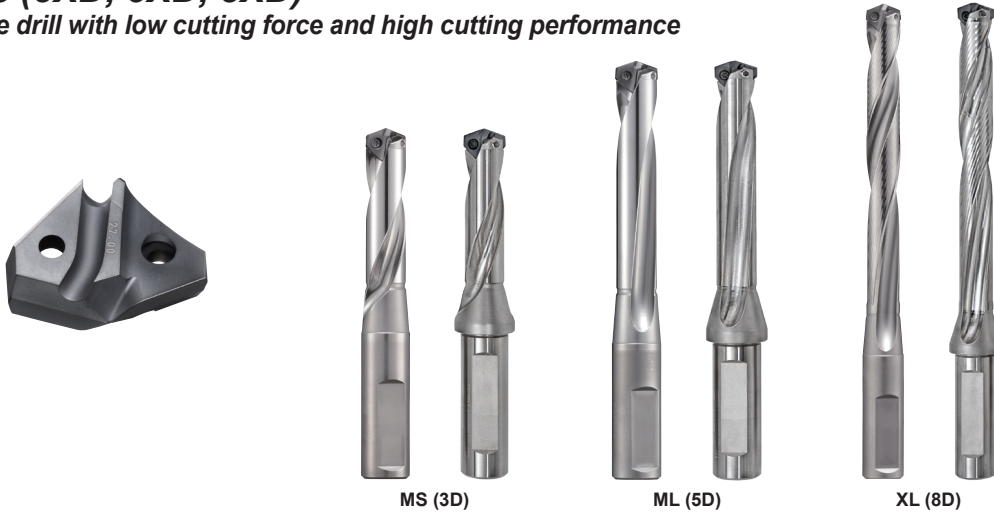
Indexable EZ Drill

METRIC

INCH

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance



MS (3D)

ML (5D)

XL (8D)

DIAMETER RANGE		APPLICABLE INSERT	CATALOG NUMBER	STK	DIMENSIONS						Fig.
mm	inch				l	l2	ls	L	d	Df	
13.5	.5315	TEZ1350	TEZD1400S16-MS	•	51	65	48	113	16	-	2
thru		thru	TEZD1400S16F-MS	•						20	1
14.5	.5709	TEZ1450	TEZD1400S062-MS	•	2.01"	2.56"	1.89"	4.45"	.625"	.787"	1
14.6	.5748	TEZ1460	TEZD1500S20-MS	•	54	69	54	119	20	-	2
thru		thru	TEZD1500S20F-MS	•						24.9	1
15.5	.6102	TEZ1550	TEZD1500S075-MS	•	2.13"	2.72"	1.97"	4.68"	.750"	.980"	1
15.6	.6142	TEZ1560	TEZD1600S20-MS	•	58	74	50	124	20	-	2
thru		thru	TEZD1600S20F-MS	•						24.9	1
16.5	.6496	TEZ1650	TEZD1600S075-MS	•	2.28"	2.91"	1.97"	4.88"	.750"	.980"	1
16.6	.6535	TEZ1660	TEZD1700S20-MS	•	61	78	50	128	20	-	2
thru		thru	TEZD1700S20F-MS	•						24.9	1
17.5	.6890	TEZ1750	TEZD1700S075-MS	•	2.40"	3.07"	1.97"	5.04"	.750"	.980"	1
17.6	.6929	TEZ1760	TEZD1800S20-MS	•	65	83	50	133	20	-	2
thru		thru	TEZD1800S20F-MS	•						24.9	1
18.5	.7283	TEZ1850	TEZD1800S075-MS	•	2.56"	3.27"	1.97"	5.24"	.750"	.980"	1
18.6	.7323	TEZ1860	TEZD1900S25-MS	•	68	87	56	143	25	-	2
thru		thru	TEZD1900S25F-MS	•						32	1
19.5	.7677	TEZ1950	TEZD1900S100-MS	•	2.68"	3.43"	2.21"	5.63"	1.00"	1.26"	1
19.6	.7717	TEZ1960	TEZD2000S25-MS	•	72	92	56	148	25	-	2
thru		thru	TEZD2000S25F-MS	•						32	1
20.5	.8071	TEZ2050	TEZD2000S100-MS	•	2.84"	3.62"	2.21"	5.83"	1.00"	1.26"	1



METRIC

INCH

Indexable EZ Drill

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance

MS (3D) / ML (5D)

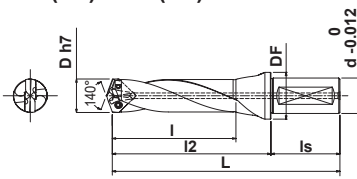


Fig. 1

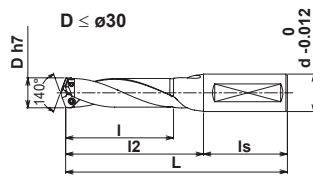


Fig. 2

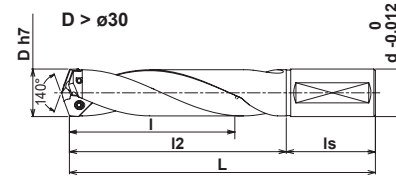


Fig. 3

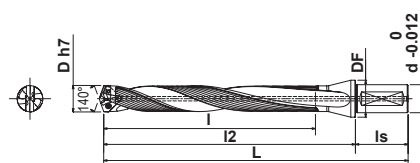


Fig. 4

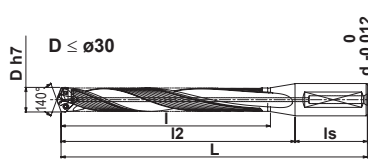


Fig. 5

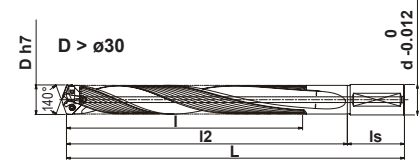


Fig. 6

BODY ML (5D)								Fig.	BODY XL (8D)								Fig.	PARTS SCREW WRENCH
PART NUMBER	STK	DIMENSIONS							PART NUMBER	STK	DIMENSIONS							
		l	l2	ls	L	d	Df			l	l2	ls	L	d	Df			
TEZD1400S16-ML	•	80	97	48	145	16	-	2	TEZD1400S16-XL	•	119	133	48	181	16	-	5	DSW-2045H T-07
TEZD1400S16F-ML	•						20	1	TEZD1400S16F-XL	•					20	4		
TEZD1400S062-ML	•	3.15"	3.82"	1.89"	5.71"	.625"	.787"	1	TEZD1400S062-XL	•	4.68"	5.24"	1.89"	7.13"	.625"	.787"	4	
TEZD1500S20-ML	•	85	103	50	153	20	-	2	TEZD1500S20-XL	•	128	143	50	193	20	-	5	DSW-2045H T-07
TEZD1500S20F-ML	•						24.9	1	TEZD1500S20F-XL	•					24.9	4		
TEZD1500S075-ML	•	3.35"	4.06"	1.97"	6.02"	.750"	.980"	1	TEZD1500S075-XL	•	5.04"	5.63"	1.97"	7.60"	.750"	.980"	4	
TEZD1600S20-ML	•	91	110	50	160	20	-	2	TEZD1600S20-XL	•	136	152	50	202	20	-	5	TSW-2556H T-08
TEZD1600S20F-ML	•						24.9	1	TEZD1600S20F-XL	•					24.9	4		
TEZD1600S075-ML	•	3.58"	4.33"	1.97"	6.30"	.750"	.980"	1	TEZD1600S075-XL	•	5.36"	5.99"	1.97"	7.95"	.750"	.980"	4	
TEZD1700S20-ML	•	96	117	50	167	20	-	2	TEZD1700S20-XL	•	145	162	50	212	20	-	5	TSW-2556H T-08
TEZD1700S20F-ML	•						24.9	1	TEZD1700S20F-XL	•					24.9	4		
TEZD1700S075-ML	•	3.78"	4.61"	1.97"	6.57"	.750"	.980"	1	TEZD1700S075-XL	•	5.71"	6.38"	1.97"	8.35"	.750"	.980"	4	
TEZD1800S20-ML	•	102	103	50	173	20	-	2	TEZD1800S20-XL	•	153	171	50	221	20	-	5	TSW-2556H T-08
TEZD1800S20F-ML	•						24.9	1	TEZD1800S20F-XL	•					24.9	4		
TEZD1800S075-ML	•	4.02"	4.84"	1.97"	6.81"	.750"	.980"	1	TEZD1800S075-XL	•	6.02"	6.73"	1.97"	8.70"	.750"	.980"	4	
TEZD1900S25-ML	•	107	130	56	186	25	-	2	TEZD1900S25-XL	•	162	181	56	237	25	-	5	TSW-2567H T-08
TEZD1900S25F-ML	•						32	1	TEZD1900S25F-XL	•					32	4		
TEZD1900S100-ML	•	4.21"	5.12"	2.21"	7.32"	1.00"	1.26"	1	TEZD1900S100-XL	•	6.38"	7.13"	2.21"	9.33"	1.00"	1.26"	4	
TEZD2000S25-ML	•	113	137	56	193	25	-	2	TEZD2000S25-XL	•	170	190	56	246	25	-	5	TSW-2567H T-08
TEZD2000S25F-ML	•						32	1	TEZD2000S25F-XL	•					32	4		
TEZD2000S100-ML	•	4.45"	5.39"	2.21"	7.60"	1.00"	1.26"	1	TEZD2000S100-XL	•	6.69"	7.48"	2.21"	9.69"	1.00"	1.26"	4	

Note: All holders supplied without inserts or wrench.

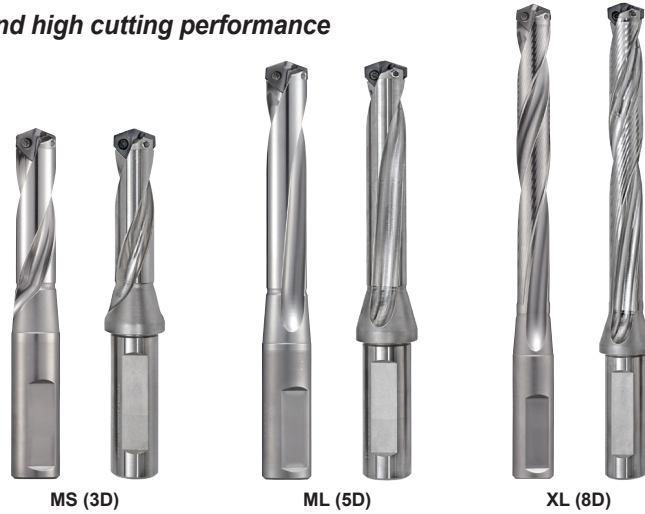
Indexable EZ Drill

METRIC

INCH

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance



MS (3D)

ML (5D)

XL (8D)

DIAMETER RANGE		APPLICABLE INSERT	CATALOG NUMBER	STK	DIMENSIONS						Fig.
mm	inch				l	l2	ls	L	d	Df	
20.6	.8110	TEZ2060	TEZD2100S25-MS	•	75	96	56	152	25	-	2
thru		thru	TEZD2100S25F-MS	•						32	1
21.5	.8465	TEZ2150	TEZD2100S100-MS	•	2.95"	3.78"	2.21"	5.99"	1.00"	1.26"	1
21.6	.8504	TEZ2160	TEZD2200S25-MS	•	79	101	56	157	25	-	2
thru		thru	TEZD2200S25F-MS	•						32	1
22.5	.8858	TEZ2250	TEZD2200S100-MS	•	3.11"	3.98"	2.21"	6.18"	1.00"	1.26"	1
22.6	.8898	TEZ2260	TEZD2300S25-MS	•	82	105	56	161	25	-	2
thru		thru	TEZD2300S25F-MS	•						32	1
23.5	.9252	TEZ2350	TEZD2300S100-MS	•	2.68"	3.43"	2.21"	5.63"	1.00"	1.26"	1
23.6	.9291	TEZ2360	TEZD2400S32-MS	•	86	110	60	170	32	-	2
thru		thru	TEZD2400S32F-MS	•						41.9	1
24.5	.9646	TEZ2450	TEZD2400S125-MS	•	3.39"	4.33"	2.36"	6.69"	1.25"	1.65"	1
24.6	.9685	TEZ2460	TEZD2500S32-MS	•	89	114	60	174	32	-	2
thru		thru	TEZD2500S32F-MS	•						41.9	1
25.5	1.0039	TEZ2550	TEZD2500S125-MS	•	3.50"	4.49"	2.36"	6.85"	1.25"	1.65"	1
25.6	1.0079	TEZ2560	TEZD2600S32-MS	•	93	119	60	179	32	-	2
thru		thru	TEZD2600S32F-MS	•						41.9	1
26.5	1.0433	TEZ2650	TEZD2600S125-MS	•	3.66"	4.68"	2.36"	7.05"	1.25"	1.65"	1
26.6	1.0472	TEZ2660	TEZD2700S32-MS	•	96	123	60	183	32	-	2
thru		thru	TEZD2700S32F-MS	•						41.9	1
27.5	1.0827	TEZ2750	TEZD2700S125-MS	•	3.78"	4.84"	2.36"	7.21"	1.25"	1.65"	1



METRIC

INCH

Indexable EZ Drill

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance

MS (3D) / ML (5D)

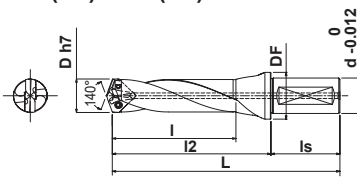


Fig. 1

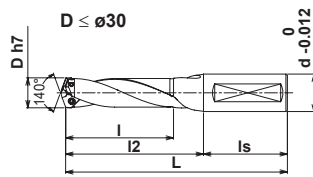


Fig. 2

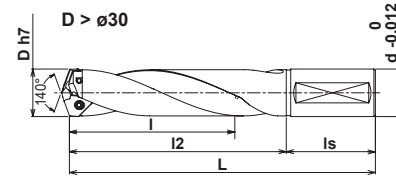


Fig. 3

XL (8D)

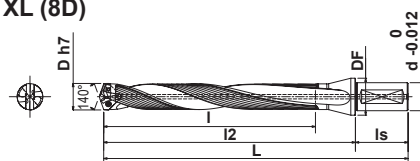


Fig. 4

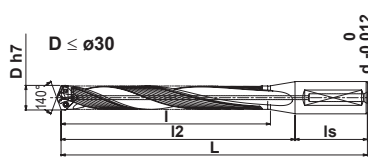


Fig. 5

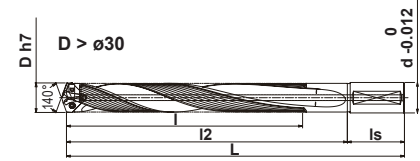


Fig. 6

BODY ML (5D)								Fig.	BODY XL (8D)								Fig.	PARTS SCREW WRENCH
PART NUMBER	STK	DIMENSIONS							PART NUMBER	STK	DIMENSIONS							
		l	l2	Is	L	d	Df				l	l2	Is	L	d	Df		
TEZD2100S25-ML	•						-	2	TEZD2100S25-XL	•						-	5	TSW-2567H T-08
TEZD2100S25F-ML	•	118	143	56	199	25	32	1	TEZD2100S25F-XL	•	179	200	56	256	25	32	4	
TEZD2100S100-ML	•	4.57"	5.63"	2.21"	7.84"	.00"	1.26"	1	TEZD2100S100-XL	•	7.05"	7.87"	2.21"	10.08"	1.00"	1.26"	4	
TEZD2200S25-ML	•						-	2	TEZD2200S25-XL	•						-	5	DSW-307H T-10
TEZD2200S25F-ML	•	124	150	56	206	25	32	1	TEZD2200S25F-XL	•	187	209	56	265	25	32	4	
TEZD2200S100-ML	•	4.88"	5.91"	2.21"	8.81"	1.00"	1.26"	1	TEZD2200S100-XL	•	7.36"	8.23"	2.21"	10.43"	1.00"	1.26"	4	
TEZD2300S25-ML	•						-	2	TEZD2300S25-XL	•						-	5	DSW-307H T-10
TEZD2300S25F-ML	•	129	157	56	213	25	32	1	TEZD2300S25F-XL	•	196	219	56	275	25	32	4	
TEZD2300S100-ML	•	5.08"	6.18"	2.21"	8.39"	1.00"	1.26"	1	TEZD2300S100-XL	•	7.71"	8.62"	2.21"	10.83"	1.00"	1.26"	4	
TEZD2400S32-ML	•						-	2	TEZD2400S32-XL	•						-	5	DSW-307H T-10
TEZD2400S32F-ML	•	135	164	60	224	32	41.9	1	TEZD2400S32F-XL	•	204	228	60	288	32	41.9	4	
TEZD2400S125-ML	•	5.32"	6.46"	2.36"	8.82"	1.25"	1.65"	1	TEZD2400S125-XL	•	8.03"	8.98"	2.36"	11.34"	1.25"	1.65"	4	
TEZD2500S32-ML	•						-	2	TEZD2500S32-XL	•						-	5	DSW-309H T-10
TEZD2500S32F-ML	•	140	170	60	230	32	41.9	1	TEZD2500S32F-XL	•	213	238	60	298	32	41.9	4	
TEZD2500S125-ML	•	5.51"	6.69"	2.36"	9.06"	1.25"	1.65"	1	TEZD2500S125-XL	•	8.39"	9.37"	2.36"	11.74"	1.25"	1.65"	4	
TEZD2600S32-ML	•						-	2	TEZD2600S32-XL	•						-	5	DSW-309H T-10
TEZD2600S32F-ML	•	146	177	60	237	32	41.9	1	TEZD2600S32F-XL	•	221	247	60	307	32	49	4	
TEZD2600S125-ML	•	5.75"	6.97"	2.36"	9.33"	1.25"	1.65"	1	TEZD2600S125-XL	•	8.70"	9.73"	2.36"	12.09"	1.25"	1.65"	4	
TEZD2700S25-ML	•						-	2	TEZD2700S32-XL	•						-	5	DSW-309H T-10
TEZD2700S25F-ML	•	151	184	60	244	32	41.9	1	TEZD2700S32F-XL	•	230	257	60	317	32	41.9	4	
TEZD2700S125-ML	•	5.95"	7.25"	2.36"	9.61"	1.25"	1.65"	1	TEZD2700S125-XL	•	9.06"	10.12"	2.36"	12.43"	1.25"	1.65"	4	

Note: All holders supplied without inserts or wrench.

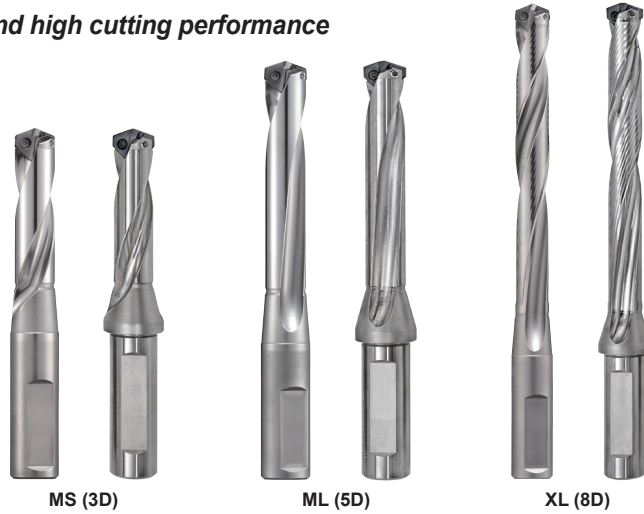
Indexable EZ Drill

METRIC

INCH

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance



MS (3D)

ML (5D)

XL (8D)

DIAMETER RANGE		APPLICABLE INSERT	CATALOG NUMBER	STK	DIMENSIONS						Fig.
mm	inch				l	l2	ls	L	d	Df	
27.6	1.0866	TEZ2760	TEZD2800S32-MS	•	100	128	60	118	32	-	2
thru		thru	TEZD2800S32F-MS	•						41.9	1
28.5	1.1220	TEZ2850	TEZD2800S125-MS	•	3.94"	5.04"	2.36"	7.40"	1.25"	1.65"	1
28.6	1.1260	TEZ2860	TEZD2900S32-MS	•	103	132	60	192	32	-	2
thru		thru	TEZD2900S32F-MS	•						41.9	1
29.5	1.1614	TEZ2950	TEZD2900S125-MS	•	4.06"	5.20"	2.36"	7.56"	1.25"	1.65"	1
29.6	1.1654	TEZ2960	TEZD3000S32-MS	•	107	137	60	197	32	-	2
thru		thru	TEZD3000S32F-MS	•						41.9	1
30.5	1.2008	TEZ3050	TEZD3000S125-MS	•	4.21"	5.39"	2.36"	7.76"	1.25"	1.65"	1
30.6	1.2047	TEZ3060	TEZD3100S32-MS	•	110	141	60	201	32	-	3
thru		thru	TEZD3100S32F-MS	•						41.9	1
31.5	1.2402	TEZ3150	TEZD3100S125-MS	•	4.33"	5.55"	2.36"	7.91"	1.25"	1.65"	1
31.6	1.2441	TEZ3160	TEZD3200S32-MS	•	114	146	60	206	32	-	3
thru		thru	TEZD3200S32F-MS	•						41.9	1
32.5	1.2795	TEZ3250	TEZD3200S125-MS	•	4.89"	5.75"	2.36"	8.11"	1.25"	1.65"	1



METRIC

INCH

Indexable EZ Drill

TEZD Type (3XD, 5XD, 8XD)

- Indexable style drill with low cutting force and high cutting performance

MS (3D) / ML (5D)

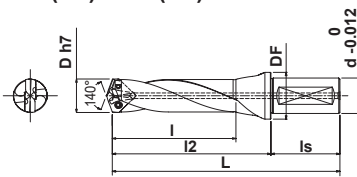


Fig. 1

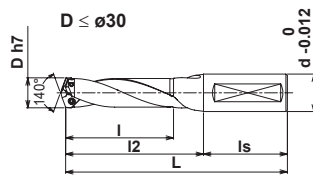


Fig. 2

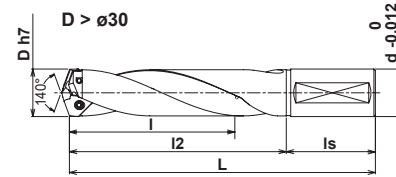


Fig. 3

XL (8D)

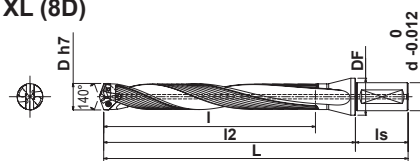


Fig. 4

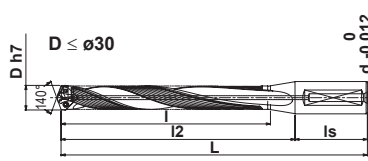


Fig. 5

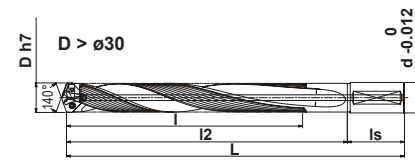


Fig. 6

BODY ML (5D)								Fig.	BODY XL (8D)								Fig.	PARTS SCREW WRENCH
PART NUMBER	STK	DIMENSIONS							PART NUMBER	STK	DIMENSIONS							
		l	l2	ls	L	d	Df			l	l2	ls	L	d	Df			
TEZD2800S32-ML	•	157	190	60	250	32	-	2	TEZD2800S32-XL	•	238	266	60	326	32	-	5	TSW-3510H T-15
TEZD2800S32F-ML	•						41.9	1	TEZD2800S32F-XL	•					41.9	4		
TEZD2800S125-ML	•	6.15"	7.48"	2.36"	9.84"	1.25"	1.65"	1	TEZD2800S125-XL	•	9.37"	10.43"	2.36"	12.84"	1.25"	1.65"	4	
TEZD2900S32-ML	•	162	197	60	257	32	-	2	TEZD2900S32-XL	•	247	276	60	336	32	-	5	TSW-3510H T-15
TEZD2900S32F-ML	•						41.9	1	TEZD2900S32F-XL	•					41.9	4		
TEZD2900S125-ML	•	6.38"	7.76"	2.36"	11.12"	1.25"	1.65"	1	TEZD2900S125-XL	•	9.73"	10.87"	2.36"	13.23"	1.25"	1.65"	4	
TEZD3000S32-ML	•	168	204	60	264	32	-	2	TEZD3000S32-XL	•	255	285	60	345	32	-	5	TSW-3510H T-15
TEZD3000S32F-ML	•						41.9	1	TEZD3000S32F-XL	•					41.9	4		
TEZD3000S125-ML	•	6.62"	8.05"	2.36"	10.40"	1.25"	1.65"	1	TEZD3000S125-XL	•	10.04"	11.22"	2.36"	13.58"	1.25"	1.65"	4	
TEZD3100S32-ML	•	173	210	60	270	32	-	3	TEZD3100S32-XL	•	248	295	60	355	32	-	6	TSW-3512H T-15
TEZD3100S32F-ML	•						41.9	1	TEZD3100S32F-XL	•					41.9	4		
TEZD3100S125-ML	•	6.81"	8.27"	2.36"	10.63"	1.25"	1.65"	1	TEZD3100S125-XL	•	9.77"	11.62"	2.36"	13.98"	1.25"	1.65"	4	
TEZD3200S32-ML	•	179	217	60	277	32	-	3	TEZD3200S32-XL	•	256	304	60	364	32	-	6	TSW-3512H T-15
TEZD3200S32F-ML	•						41.9	1	TEZD3200S32F-XL	•					41.9	4		
TEZD3200S125-ML	•	7.05"	8.54"	2.36"	10.91"	1.25"	1.65"	1	TEZD3200S125-XL	•	10.08"	11.97"	2.36"	14.33"	1.25"	1.65"	4	

Note: All holders supplied without inserts or wrench.

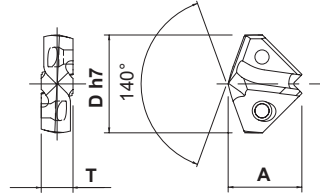
Indexable EZ Drill

METRIC

INCH

TEZ Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ1350	JC8050	•	13.5	.5315"	11.4	4.5	TEZD1400...
TEZ1360	JC8050	•	13.6	.5354"			
TEZ1370	JC8050	•	13.7	.5394"			
TEZ1380	JC8050	•	13.8	.5433"			
TEZ1390	JC8050	•	13.9	.5472"			
TEZ1400	JC8050	•	14.0	.5512"			
TEZ1410	JC8050	•	14.1	.5551"			
TEZ1420	JC8050	•	14.2	.5591"			
TEZ1430	JC8050	•	14.3	.5630"			
TEZ1440	JC8050	•	14.4	.5669"			
TEZ1450	JC8050	•	14.5	.5709"	11.5	4.8	TEZD1500...
TEZ1460	JC8050	•	14.6	.5748"			
TEZ1470	JC8050	•	14.7	.5787"			
TEZ1480	JC8050	•	14.8	.5827"			
TEZ1490	JC8050	•	14.9	.5866"			
TEZ1500	JC8050	•	15.0	.5906"			
TEZ1510	JC8050	•	15.1	.5945"			
TEZ1520	JC8050	•	15.2	.5984"			
TEZ1530	JC8050	•	15.3	.6024"			
TEZ1540	JC8050	•	15.4	.6063"			
TEZ1550	JC8050	•	15.5	.6102"	12.5	5.0	TEZD1600...
TEZ1560	JC8050	•	15.6	.6142"			
TEZ1570	JC8050	•	15.7	.6181"			
TEZ1580	JC8050	•	15.8	.6220"			
ITEZ0625	JC8050	•	15.87	.6250"			
TEZ1590	JC8050	•	15.9	.6260"			
TEZ1600	JC8050	•	16.0	.6299"			
TEZ1610	JC8050	•	16.1	.6339"			
TEZ1620	JC8050	•	16.2	.6378"			
TEZ1630	JC8050	•	16.3	.6417"			
TEZ1640	JC8050	•	16.4	.6457"			
TEZ1650	JC8050	•	16.5	.6496"	13.2	5.5	TEZD1700...
TEZ1660	JC8050	•	16.6	.6535"			
TEZ1670	JC8050	•	16.7	.6575"			
TEZ1680	JC8050	•	16.8	.6614"			
TEZ1690	JC8050	•	16.9	.6654"			
TEZ1700	JC8050	•	17.0	.6693"			



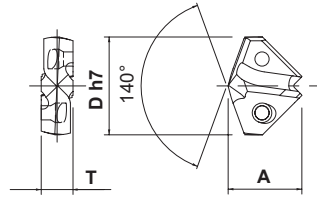
METRIC

INCH

Indexable EZ Drill

TEZ Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ1710	JC8050	•	17.1	.6732"	13.2	5.5	TEZD1700...
TEZ1720	JC8050	•	17.2	.6772"			
TEZ1730	JC8050	•	17.3	.6811"			
TEZ1740	JC8050	•	17.4	.6850"			
TEZ1750	JC8050	•	17.5	.6890"			
TEZ1760	JC8050	•	17.6	.6929"	13.5	5.8	TEZD1800...
TEZ1770	JC8050	•	17.7	.6969"			
TEZ1780	JC8050	•	17.8	.7008"			
TEZ1790	JC8050	•	17.9	.7047"			
TEZ1800	JC8050	•	18.0	.7087"			
TEZ1810	JC8050	•	18.1	.7126"			
TEZ1820	JC8050	•	18.2	.7165"			
TEZ1830	JC8050	•	18.3	.7205"			
TEZ1840	JC8050	•	18.4	.7244"			
TEZ1850	JC8050	•	18.5	.7283"			
TEZ1860	JC8050	•	18.6	.7323"	14.2	6.0	TEZD1900...
TEZ1870	JC8050	•	18.7	.7362"			
TEZ1880	JC8050	•	18.8	.7402"			
TEZ1890	JC8050	•	18.9	.7441"			
TEZ1900	JC8050	•	19.0	.7480"			
ITEZ0750	JC8050	•	19.05	.7500"			
TEZ1910	JC8050	•	19.1	.7520"			
TEZ1920	JC8050	•	19.2	.7559"			
TEZ1930	JC8050	•	19.3	.7598"			
TEZ1940	JC8050	•	19.4	.7639"			
TEZ1950	JC8050	•	19.5	.7677"	15.1	6.5	TEZD2000...
TEZ1960	JC8050	•	19.6	.7717"			
TEZ1970	JC8050	•	19.7	.7756"			
TEZ1980	JC8050	•	19.8	.7795"			
TEZ1990	JC8050	•	19.9	.7835"			
TEZ2000	JC8050	•	20.0	.7874"			
TEZ2010	JC8050	•	20.1	.7913"			
TEZ2020	JC8050	•	20.2	.7953"			
TEZ2030	JC8050	•	20.3	.7992"			
TEZ2040	JC8050	•	20.4	.8031"			
TEZ2050	JC8050	•	20.5	.8071"			

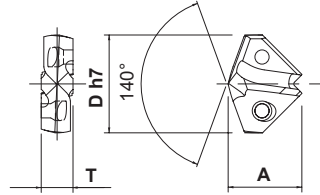
Indexable EZ Drill

METRIC

INCH

TEZ Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ2060	JC8050	•	20.6	.8110"	15.7	6.7	TEZD2100...
TEZ2070	JC8050	•	20.7	.8150"			
TEZ2080	JC8050	•	20.8	.8189"			
TEZ2090	JC8050	•	20.9	.8229"			
TEZ2100	JC8050	•	21.0	.8268"			
TEZ2110	JC8050	•	21.1	.8307"			
TEZ2120	JC8050	•	21.2	.8346"			
TEZ2130	JC8050	•	21.3	.8386"			
TEZ2140	JC8050	•	21.4	.8425"			
TEZ2150	JC8050	•	21.5	.8465"			
TEZ2160	JC8050	•	21.6	.8504"	16.6	7.5	TEZD2200...
TEZ2170	JC8050	•	21.7	.8543"			
TEZ2180	JC8050	•	21.8	.8583"			
TEZ2190	JC8050	•	21.9	.8622"			
TEZ2200	JC8050	•	22.0	.8661"			
TEZ2210	JC8050	•	22.1	.8701"			
TEZ2220	JC8050	•	22.2	.8740"			
TEZ2230	JC8050	•	22.3	.8780"			
TEZ2240	JC8050	•	22.4	.8819"			
TEZ2250	JC8050	•	22.5	.8858"			
TEZ2260	JC8050	•	22.6	.8898"	17.4	7.5	TEZD2300...
TEZ2270	JC8050	•	22.7	.8937"			
TEZ2280	JC8050	•	22.8	.8976"			
TEZ2290	JC8050	•	22.9	.9016"			
TEZ2300	JC8050	•	23.0	.9055"			
TEZ2310	JC8050	•	23.1	.9094"			
TEZ2320	JC8050	•	23.2	.9134"			
TEZ2330	JC8050	•	23.3	.9173"			
TEZ2340	JC8050	•	23.4	.9213"			
TEZ2350	JC8050	•	23.5	.9252"			
TEZ2360	JC8050	•	23.6	.9291"	18.2	8.0	TEZD2400...
TEZ2370	JC8050	•	23.7	.9331"			
TEZ2380	JC8050	•	23.8	.9370"			
TEZ2390	JC8050	•	23.9	.9409"			
TEZ2400	JC8050	•	24.0	.9449"			
TEZ2410	JC8050	•	24.1	.9488"			



Drilling

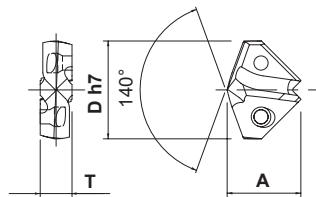
METRIC

INCH

Indexable EZ Drill

TEZdsd Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ2420	JC8050	•	24.2	.9528"	18.2	8.0	TEZD2400...
TEZ2430	JC8050	•	24.3	.9567"			
TEZ2440	JC8050	•	24.4	.9606"			
TEZ2450	JC8050	•	24.5	.9646"			
TEZ2460	JC8050	•	24.6	.9685"	19.1	8.0	TEZD2500...
TEZ2470	JC8050	•	24.7	.9724"			
TEZ2480	JC8050	•	24.8	.9764"			
TEZ2490	JC8050	•	24.9	.9803"			
TEZ2500	JC8050	•	25.0	.9843"			
TEZ2510	JC8050	•	25.1	.9882"			
TEZ2520	JC8050	•	25.2	.9921"			
TEZ2530	JC8050	•	25.3	.9961"			
TEZ2540	JC8050	•	25.4	1.0000"			
ITEZ1000	JC8050	•	25.4	1.0000"			
TEZ2550	JC8050	•	25.5	1.0039"			
TEZ2560	JC8050	•	25.6	1.0079"			
TEZ2570	JC8050	•	25.7	1.0118"			
TEZ2580	JC8050	•	25.8	1.0157"			
TEZ2590	JC8050	•	25.9	1.0197"			
TEZ2600	JC8050	•	26.0	1.0236"			
TEZ2610	JC8050	•	26.1	1.0276"			
TEZ2620	JC8050	•	26.2	1.0315"			
TEZ2630	JC8050	•	26.3	1.0354"			
TEZ2640	JC8050	•	26.4	1.0394"			
TEZ2650	JC8050	•	26.5	1.0433"			
TEZ2660	JC8050	•	26.6	1.0472"	20.4	8.5	TEZD2700...
TEZ2670	JC8050	•	26.7	1.0512"			
TEZ2680	JC8050	•	26.8	1.0551"			
TEZ2690	JC8050	•	26.9	1.0591"			
TEZ2700	JC8050	•	27.0	1.0630"			
TEZ2710	JC8050	•	27.1	1.0669"			
TEZ2720	JC8050	•	27.2	1.0709"			
TEZ2730	JC8050	•	27.3	1.0748"			
TEZ2740	JC8050	•	27.4	1.0787"			
TEZ2750	JC8050	•	27.5	1.0827"			

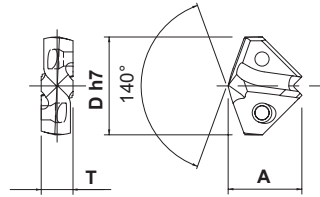
Indexable EZ Drill

METRIC

INCH

TEZ Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ2760	JC8050	•	27.6	1.0866"	21.2	9.0	TEZD2800...
TEZ2770	JC8050	•	27.7	1.0906"			
TEZ2780	JC8050	•	27.8	1.0945"			
TEZ2790	JC8050	•	27.9	1.0984"			
TEZ2800	JC8050	•	28.0	1.1024"			
TEZ2810	JC8050	•	28.1	1.1063"			
TEZ2820	JC8050	•	28.2	1.1102"			
TEZ2830	JC8050	•	28.3	1.1142"			
TEZ2840	JC8050	•	28.4	1.1181"			
TEZ2850	JC8050	•	28.5	1.1220"			
TEZ2860	JC8050	•	28.6	1.1260"	22.1	9.0	TEZD2900...
TEZ2870	JC8050	•	28.7	1.1229"			
TEZ2880	JC8050	•	28.8	1.1339"			
TEZ2890	JC8050	•	28.9	1.1378"			
TEZ2900	JC8050	•	29.0	1.1417"			
TEZ2910	JC8050	•	29.1	1.1457"			
TEZ2920	JC8050	•	29.2	1.1496"			
TEZ2930	JC8050	•	29.3	1.1535"			
TEZ2940	JC8050	•	29.4	1.1575"			
TEZ2950	JC8050	•	29.5	1.1614"			
TEZ2960	JC8050	•	29.6	1.1654"	22.5	9.5	TEZD3000...
TEZ2970	JC8050	•	29.7	1.1693"			
TEZ2980	JC8050	•	29.8	1.1732"			
TEZ2990	JC8050	•	29.9	1.1772"			
TEZ3000	JC8050	•	30.0	1.1811"			
TEZ3010	JC8050	•	30.1	1.1850"			
TEZ3020	JC8050	•	30.2	1.1890"			
TEZ3030	JC8050	•	30.3	1.1929"			
TEZ3040	JC8050	•	30.4	1.1969"			
TEZ3050	JC8050	•	30.5	1.2008"			
TEZ3060	JC8050	•	30.6	1.2047"	23.4	10.0	TEZD3100...
TEZ3070	JC8050	•	30.7	1.2087"			
TEZ3080	JC8050	•	30.8	1.2126"			
TEZ3090	JC8050	•	30.9	1.2165"			
TEZ3100	JC8050	•	31.0	1.2205"			
TEZ3110	JC8050	•	31.1	1.2244"			



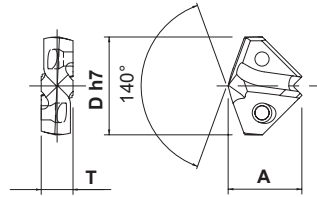
METRIC

INCH

Indexable EZ Drill

TEZ Type

- Indexable EZ drill insert for general purpose
- Suitable for all types of materials



CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ3120	JC8050	•	31.2	1.2284"	23.4	10.0	TEZD3100...
TEZ3130	JC8050	•	31.3	1.2323"			
TEZ3140	JC8050	•	31.4	1.2362"			
TEZ3150	JC8050	•	31.5	1.2402"			
TEZ3160	JC8050	•	31.6	1.2411"	24.3	10.0	TEZD3200...
TEZ3170	JC8050	•	31.7	1.2480"			
TEZ3180	JC8050	•	31.8	1.2520"			
TEZ3190	JC8050	•	31.9	1.2559"			
TEZ3200	JC8050	•	32.0	1.2598"			
TEZ3210	JC8050	•	32.1	1.2638"			
TEZ3220	JC8050	•	32.2	1.2677"			
TEZ3230	JC8050	•	32.3	1.2717"			
TEZ3240	JC8050	•	32.4	1.2756"			
TEZ3250	JC8050	•	32.5	1.2795"			

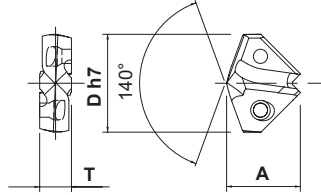
Indexable EZ Drill

METRIC

INCH

TEZ-S Type

- Indexable EZ drill insert for stainless & titanium



Features:

- First choice for stainless steels & titanium alloys
- Small margin with large k-land improves machined surface finish & tool life by reducing cutting heat
- Sharp tip shape & wide thinning pocket gives stable drilling with improved centripetal & chip evacuation
- Carbide grade has long tool life with excellent heat crack, chip & oxidation resistance

CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ1350S	JC7515	•	13.5	.5315"	11.4	4.5	TEZD1400...
TEZ1360S	JC7515	•	13.6	.5354"			
TEZ1370S	JC7515	•	13.7	.5394"			
TEZ1380S	JC7515	•	13.8	.5433"			
TEZ1390S	JC7515	•	13.9	.5472"			
TEZ1400S	JC7515	•	14.0	.5512"			
TEZ1410S	JC7515	•	14.1	.5551"			
TEZ1420S	JC7515	•	14.2	.5591"			
TEZ1430S	JC7515	•	14.3	.5630"			
TEZ1440S	JC7515	•	14.4	.5669"			
TEZ1450S	JC7515	•	14.5	.5709"	11.5	4.8	TEZD1500...
TEZ1460S	JC7515	•	14.6	.5748"			
TEZ1470S	JC7515	•	14.7	.5787"			
TEZ1480S	JC7515	•	14.8	.5827"			
TEZ1490S	JC7515	•	14.9	.5866"			
TEZ1500S	JC7515	•	15.0	.5906"			
TEZ1510S	JC7515	•	15.1	.5945"			
TEZ1520S	JC7515	•	15.2	.5984"			
TEZ1530S	JC7515	•	15.3	.6024"			
TEZ1540S	JC7515	•	15.4	.6063"			
TEZ1550S	JC7515	•	15.5	.6102"	12.4	5.0	TEZD1600...
TEZ1560S	JC7515	•	15.6	.6142"			
TEZ1570S	JC7515	•	15.7	.6181"			
TEZ1580S	JC7515	•	15.8	.6220"			
TEZ1590S	JC7515	•	15.9	.6260"			
TEZ1600S	JC7515	•	16.0	.6299"			
TEZ1610S	JC7515	•	16.1	.6339"			
TEZ1620S	JC7515	•	16.2	.6378"			
TEZ1630S	JC7515	•	16.3	.6417"			
TEZ1640S	JC7515	•	16.4	.6457"			
TEZ1650S	JC7515	•	16.5	.6496"	13.2	5.5	TEZD1700...
TEZ1660S	JC7515	•	16.6	.6535"			
TEZ1670S	JC7515	•	16.7	.6575"			
TEZ1680S	JC7515	•	16.8	.6614"			
TEZ1690S	JC7515	•	16.9	.6654"			



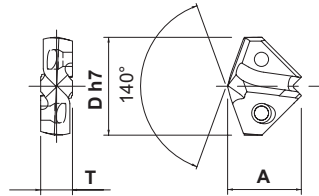
METRIC

INCH

Indexable EZ Drill

TEZ-S Type

- Indexable EZ drill insert for stainless & titanium



Features:

- First choice for stainless steels & titanium alloys
- Small margin with large k-land improves machined surface finish & tool life by reducing cutting heat
- Sharp tip shape & wide thinning pocket gives stable drilling with improved centripetal & chip evacuation
- Carbide grade has long tool life with excellent heat crack, chip & oxidation resistance

CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ1700S	JC7515	•	17.0	.6693"	13.2	4.5	TEZD1700...
TEZ1710S	JC7515	•	17.1	.6732"			
TEZ1720S	JC7515	•	17.2	.6772"			
TEZ1730S	JC7515	•	17.3	.6811"			
TEZ1740S	JC7515	•	17.4	.6850"			
TEZ1750S	JC7515	•	17.5	.6890"			
TEZ1760S	JC7515	•	17.6	.6929"	13.5	5.8	TEZD1800...
TEZ1770S	JC7515	•	17.7	.6969"			
TEZ1780S	JC7515	•	17.8	.7008"			
TEZ1790S	JC7515	•	17.9	.7047"			
TEZ1800S	JC7515	•	18.0	.7087"			
TEZ1810S	JC7515	•	18.1	.7126"			
TEZ1820S	JC7515	•	18.2	.7165"			
TEZ1830S	JC7515	•	18.3	.7205"			
TEZ1840S	JC7515	•	18.4	.7244"			
TEZ1850S	JC7515	•	18.5	.7283"			
TEZ1860S	JC7515	•	18.6	.7323"	14.2	5.0	TEZD1900...
TEZ1870S	JC7515	•	18.7	.7362"			
TEZ1880S	JC7515	•	18.8	.7402"			
TEZ1890S	JC7515	•	18.9	.7441"			
TEZ1900S	JC7515	•	19.0	.7480"			
TEZ1910S	JC7515	•	19.1	.7520"			
TEZ1920S	JC7515	•	19.2	.7559"			
TEZ1930S	JC7515	•	19.3	.7598"			
TEZ1940S	JC7515	•	19.4	.7639"			
TEZ1950S	JC7515	•	19.5	.7677"			
TEZ1960S	JC7515	•	19.6	.7717"	15.1	6.5	TEZD2000...
TEZ1970S	JC7515	•	19.7	.7756"			
TEZ1980S	JC7515	•	19.8	.7795"			
TEZ1990S	JC7515	•	19.9	.7835"			
TEZ2000S	JC7515	•	20.0	.7874"			
TEZ2050S	JC7515	•	20.5	.7913"			

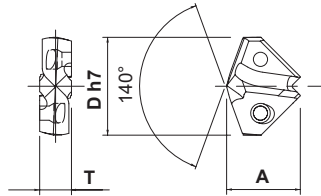
Indexable EZ Drill

METRIC

INCH

TEZ-H Type

- Indexable EZ drill insert for hard materials



Features:

- First choice for hardened steel (under 52HRC) & mold steel
- Small margin with large k-land improves machined surface finish & tool life by reducing cutting heat
- Strong corner edge to prevent corner fractures
- Optimized geometry for hardened materials
- Carbide grade has excellent heat resistance for hard materials

CATALOG NUMBER	GRADE	STK	D		A	T	APPLICABLE HOLDERS
			MM	INCH			
TEZ1350H	DH115	•	13.5	.5315"	11.4	4.5	TEZD1400...
TEZ1400H	DH115	•	14.0	.5512"			
TEZ1410H	DH115	•	14.1	.5551"			
TEZ1420H	DH115	•	14.2	.5591"			
TEZ1430H	DH115	•	14.3	.5630"			
TEZ1450H	DH115	•	14.5	.5709"			
TEZ1500H	DH115	•	15.0	.5906"	11.5	4.8	TEZD1500...
TEZ1510H	DH115	•	15.1	.5945"			
TEZ1520H	DH115	•	15.2	.6984"			
TEZ1550H	DH115	•	15.5	.6102"			
TEZ1580H	DH115	•	15.8	.6220"	12.4	5.0	TEZD1600...
TEZ1600H	DH115	•	16.0	.6299"			
TEZ1610H	DH115	•	16.1	.6339"			
TEZ1620H	DH115	•	16.2	.6378"			
TEZ1630H	DH115	•	16.3	.6417"			
TEZ1650H	DH115	•	16.5	.6496"			
TEZ1700H	DH115	•	17.0	.6693"	13.2	5.5	TEZD1700...
TEZ1710H	DH115	•	17.1	.6732"			
TEZ1750H	DH115	•	17.5	.6890"			
TEZ1760H	DH115	•	17.6	.6929"	13.5	5.8	TEZD1800...
TEZ1770H	DH115	•	17.7	.6969"			
TEZ1780H	DH115	•	17.8	.7008"			
TEZ1800H	DH115	•	18.0	.7087"			
TEZ1810H	DH115	•	18.1	.7126"			
TEZ1850H	DH115	•	18.5	.7283"			
TEZ1900H	DH115	•	19.0	.7480"	14.2	6.0	TEZD1900...
TEZ1950H	DH115	•	19.5	.7677"			
TEZ1980H	DH115	•	19.8	.7795"	15.1	6.5	TEZD2000...
TEZ2000H	DH115	•	20.0	.7874"			
TEZ2020H	DH115	•	20.2	.7953"			
TEZ2050H	DH115	•	20.5	.8071"			

Indexable EZ Drill

Procedure for mounting insert for TEZD

1. Removing used insert

Make sure to remove any chips or dust off the tip before removing the used insert.

Remove used insert and clean insert pocket using a brush or air blowing before loading the new insert.

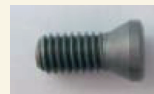


2. Loading new insert

Place new insert in pocket, lightly tighten the two screws while pressing the top of the insert (see photo). After confirming there is no gap between the drill body and insert, tighten the insert screws, starting with the same screw you first lightly tightened, to the recommended torque while still pressing the top of the insert.



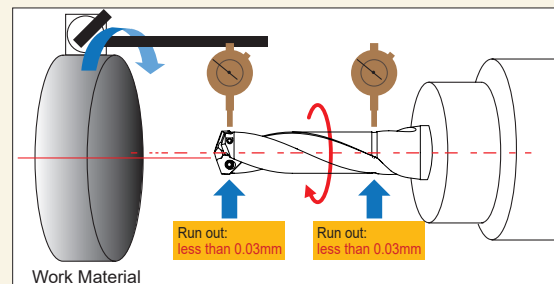
Note: Clamp screws need to be changed out after replacing the insert approximately 10 times or if you see any issues with the screws.



Clamp Screw

If using lathe machine

1. Check run-out of insert O.D. within 0.03mm (off set of center within 0.015mm) and flute O.D. of shank side within approximately 0.03mm.
2. Due to large thrust of cutting forces, make sure drill is fully seated in holder.
3. Reduce the cutting speed and feed rate 20% of recommended cutting conditions. In case of long chips increase feed rate only.



Indexable EZ Drill

Recommended Cutting Data for TEZD-MS/ML/XL type

Work Material		Carbon Steel Up to 280HB		Alloy Steel Up to 350HB		Gray Cast Iron		Nodular Cast Iron		Stainless Steel		Titanium Alloy		Mold Steel (P20) 30-36 HRC		Mold Steel (HHP20, P21) 38-43 HRC		Hardened Steel (H13, D2) 42-52 HRC			
GRADE		JC8050		JC8050		JC8050		JC8050		JC7515		JC7515		DH115		DH115		DH115			
SFM		240-300		240-300		280-360		200-300		130-260		115-200		160-230		130-200		130-200			
IPR (inch/rev)		.012"-.014"		.009"-.010"		.012"-.016"		.006"-.011"		.006"-.008"		.006"-.008"		.006"-.010"		.004"-.008"		.004"-.008"			
Drill Diameter		RPM		IPM		RPM		IPM		RPM		IPM		RPM		IPM		RPM		IPM	
Metric	Inch																				
14	.5512"	1,700	20	1,600	14	1,900	22	1,500	18	1,360	8	1,130	7	1,360	11	1,140	7	1,140	6		
15	.5906"	1,600	19	1,500	14	1,900	22	1,400	17	1,270	8	1,060	7	1,270	10	1,060	7	1,060	5		
16	.6299"	1,500	18	1,400	13	1,900	22	1,350	16	1,190	7	990	6	1,190	9	1,000	6	1,000	5		
17	.6693"	1,400	18	1,300	13	1,800	22	1,250	16	1,120	7	930	6	1,120	9	940	6	940	5		
18	.7087"	1,300	18	1,250	12	1,700	22	1,000	14	1,060	7	880	6	1,060	8	880	6	880	4		
19	.7480"	1,250	17	1,200	12	1,600	22	1,000	14	1,000	7	830	6	1,010	8	840	5	840	4		
20	.7874"	1,200	17	1,100	11	1,600	22	1,000	14	950	7	790	6	960	7	800	5	800	4		
21	.8268"	1,200	17	1,100	11	1,550	21	1,000	14	905	7	750	6	910	7	760	5	760	4		
22	.8661"	1,200	17	1,050	10	1,500	21	1,000	14	865	7	720	6	870	7	730	4	730	4		
23	.9055"	1,200	17	1,050	10	1,450	20	1,000	14	830	6	690	5	830	7	700	4	700	4		
24	.9449"	1,200	17	1,050	10	1,400	19	1,000	14	795	6	660	5	800	6	670	4	670	4		
25	.9843"	1,150	16	1,050	10	1,350	19	1,000	14	760	6	635	5	770	6	640	4	640	4		
26	1.0236"	1,110	15	1,050	10	1,300	18	1,000	14	735	6	610	5	740	6	620	4	620	4		
27	1.0630"	1,070	15	1,000	10	1,250	18	950	13	705	6	585	5	710	6	590	4	590	3		
28	1.1024"	1,030	14	1,000	10	1,200	18	950	13	680	5	565	4	680	5	570	3	570	3		
29	1.1417"	990	14	950	9	1,150	18	950	13	655	5	545	4	660	5	550	3	550	3		
30	1.1811"	960	13	950	9	1,150	18	950	13	635	5	530	4	640	5	530	3	530	3		
31	1.2205"	930	13	900	9	1,100	17	850	12	615	5	510	4	620	5	520	3	520	3		
32	1.2598"	900	12	900	9	1,100	17	850	12	595	5	495	4	600	5	500	3	500	3		

- NOTE:**
1. Above cutting conditions are for general guidance.
 2. The figures should be adjusted according to machining shape, purpose and rigidity of machine and work clamping.
 3. If using TEZD-XL type (8D), recommend to reduce both RPM & IPM from above. Recommend guide hole drill first with TEZD-MS type (3D) of the same diameter. (depth of guide hole -.5D).



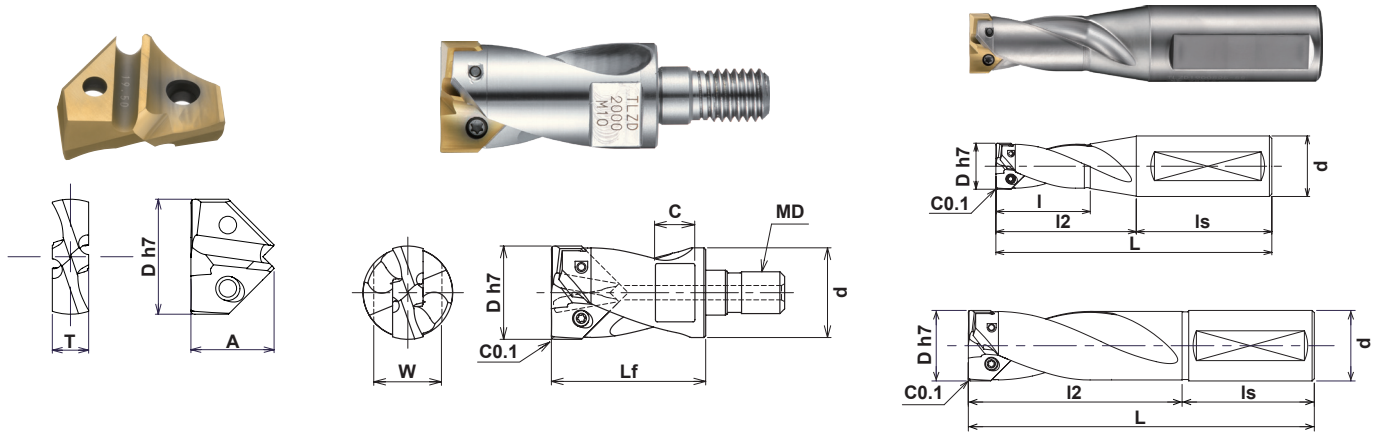
METRIC

Indexable Spot Facing Drill

TLZD-SS Type (1.5XD) & TLZD-M Modular Head Type

- Indexable spot face drill

- Able to drill without pilot hole (even on sloped surfaces & cross holes)



DIA. (mm)	INSERT			DIAMETER RANGE	CATALOG NUMBER	STK	DIMENSIONS							PARTS		
	INSERT NUMBER	PVD JC7550	DIMENSIONS A T				I	I2	L	d	db	w	c	MD	SCREW WRENCH	
14.0	TLZ1400	•	10.6	4.5	14.0~14.5	TLZD-1400S16-SS	•	29	43	91	16	-	-	-	-	DSW-2045H T-07
14.1	TLZ1410	•														
14.2	TLZ1420	•														
14.3	TLZ1430	•														
14.4	TLZ1440	•														
14.5	TLZ1450	•	11.3	4.8	14.6~15.5	TLZD-1500S20-SS	•	31	46	96	20	-	-	-	-	DSW-2045H T-07
14.6	TLZ1460	•														
14.7	TLZ1470	•														
14.8	TLZ1480	•														
14.9	TLZ1490	•														
15.0	TLZ1500	•														
15.1	TLZ1510	•														
15.2	TLZ1520	•														
15.3	TLZ1530	•														
15.4	TLZ1540	•														
15.5	TLZ1550	•	12.1	5.0	15.6~16.5	TLZD-1600S20-SS	•	33	49	99	20	-	-	-	-	TSW-2556H T-08
15.6	TLZ1560	•														
15.7	TLZ1570	•														
15.8	TLZ1580	•														
15.9	TLZ1590	•														
16.0	TLZ1600	•														
16.1	TLZ1610	•														
16.2	TLZ1620	•														
16.3	TLZ1630	•														
16.4	TLZ1640	•														
16.5	TLZ1650	•	12.6	5.5	16.6~17.5	TLZD-1700S20-SS	•	35	52	102	20	-	-	-	-	TSW-2556H T-08
16.6	TLZ1660	•														
16.7	TLZ1670	•														
16.8	TLZ1680	•														
16.9	TLZ1690	•														
17.0	TLZ1700	•														
17.1	TLZ1710	•														
17.2	TLZ1720	•														
17.3	TLZ1730	•														
17.4	TLZ1740	•														
17.5	TLZ1750	•	TLZD-1700-M8	•	-	-	30.5	-	16	12	8	M8				

Note: All holders supplied without inserts or wrench.

See page A-65 for Modular Head Shanks



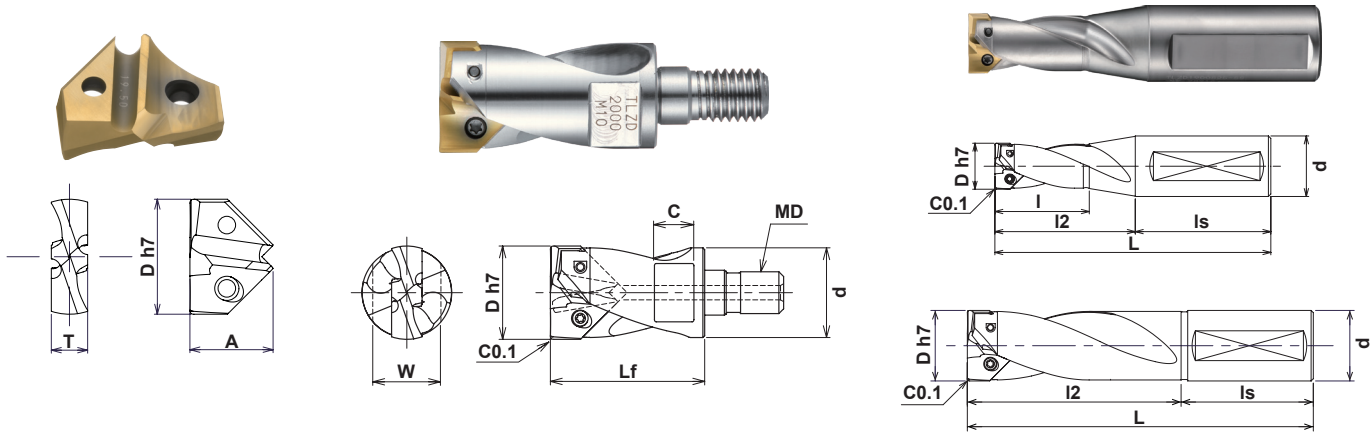
Indexable Spot Facing Drill

METRIC

TLZD-SS Type (1.5XD) & TLZD-M Modular Head Type

- Indexable spot face drill

- Able to drill without pilot hole (even on sloped surfaces & cross holes)



DIA. (mm)	INSERT			DIAMETER RANGE	CATALOG NUMBER	STK	DIMENSIONS							PARTS		
	INSERT NUMBER	PVD JC7550	DIMENSIONS A T				I	I2	L	d	db	w	c	MD	SCREW WRENCH	
17.6	TLZ1760	•	13.2	5.8	17.5~18.5	TLZD-1800S20-SS	•	37	55	105	20	-	-	-	-	TSW-2556H T-08
17.7	TLZ1770	•														
17.8	TLZ1780	•														
17.9	TLZ1790	•														
18.0	TLZ1800	•														
18.1	TLZ1810	•														
18.2	TLZ1820	•														
18.3	TLZ1830	•														
18.4	TLZ1840	•														
18.5	TLZ1850	•	13.6	6.0	18.5~19.5	TLZD-1800-M8	•	-	-	30.5	-	17	12	8	M8	TSW-2567H T-08
18.6	TLZ1860	•														
18.7	TLZ1870	•														
18.8	TLZ1880	•														
18.9	TLZ1890	•														
19.0	TLZ1900	•														
19.1	TLZ1910	•														
19.2	TLZ1920	•														
19.3	TLZ1930	•														
19.4	TLZ1940	•	14.6	6.5	19.5~20.5	TLZD-1900S25-SS	•	39	58	114	25	-	-	-	-	TSW-2567H T-08
19.5	TLZ1950	•														
19.6	TLZ1960	•														
19.7	TLZ1970	•														
19.8	TLZ1980	•														
19.9	TLZ1990	•														
20.0	TLZ2000	•														
20.5	TLZ2050	•														
21.0	TLZ2100	•														
21.5	TLZ2150	•														
22.0	TLZ2200	•														
22.5	TLZ2250	•														
23.0	TLZ2300	•														
23.5	TLZ2350	•														
21.0	TLZ2100	•														
21.5	TLZ2150	•														
22.0	TLZ2200	•														
22.5	TLZ2250	•														
23.0	TLZ2300	•	15.9	7.5	21.5~22.5	TLZD-2000S25-SS	•	41	61	117	25	-	-	-	-	TSW-2567H T-08
23.5	TLZ2350	•														
21.0	TLZ2100	•	15.9	7.5	21.5~22.5	TLZD-2000-M10	•	-	-	38.5	-	19	14	9	M10	DSW-307H T-10
21.5	TLZ2150	•														
22.0	TLZ2200	•	16.7	7.5	22.5~23.5	TLZD-2100S25-SS	•	43	64	120	25	-	-	-	-	DSW-307H T-10
22.5	TLZ2250	•														
23.0	TLZ2300	•	16.7	7.5	22.5~23.5	TLZD-2100-M10	•	-	-	38.5	-	20	14	9	M10	DSW-307H T-10
23.5	TLZ2350	•														
22.0	TLZ2200	•	15.9	7.5	21.5~22.5	TLZD-2200S25-SS	•	45	67	123	25	-	-	-	-	DSW-307H T-10
22.5	TLZ2250	•														
23.0	TLZ2300	•	16.7	7.5	22.5~23.5	TLZD-2200-M10	•	-	-	38.5	-	21	14	9	M10	DSW-307H T-10
23.5	TLZ2350	•														
23.0	TLZ2300	•	16.7	7.5	22.5~23.5	TLZD-2300S25-SS	•	47	70	126	25	-	-	-	-	DSW-307H T-10
23.5	TLZ2350	•														

Note: All holders supplied without inserts or wrench.

See page A-65 for Modular Head Shanks



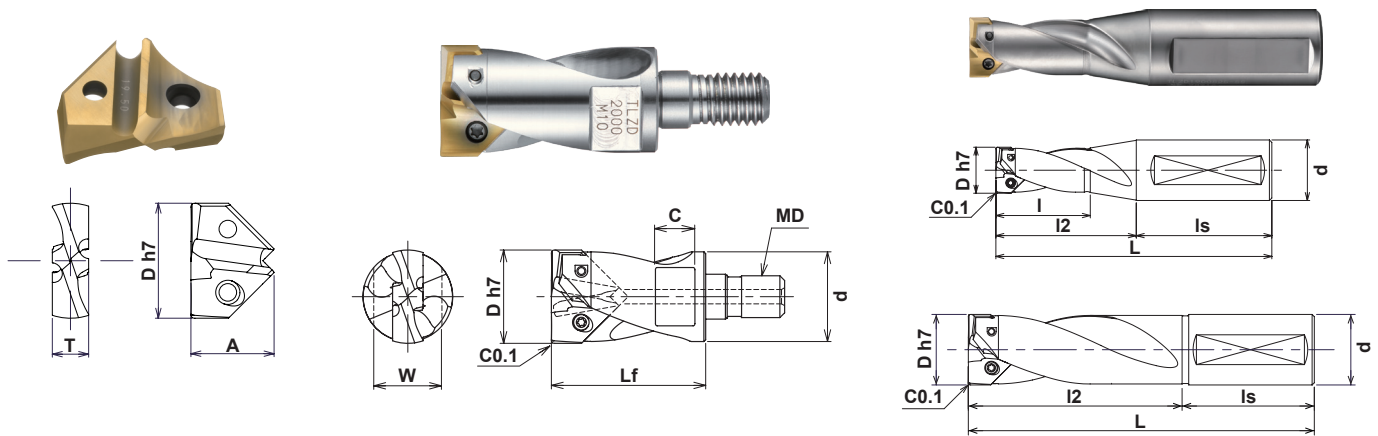
METRIC

Indexable Spot Facing Drill

TLZD-SS Type (1.5XD) & TLZD-M Modular Head Type

- Indexable spot face drill

- Able to drill without pilot hole (even on sloped surfaces & cross holes)



DIA. (mm)	INSERT				DIAMETER RANGE	CATALOG NUMBER	STK	DIMENSIONS							PARTS	
	INSERT NUMBER	PVD JC7550	DIMENSIONS A T					I	I2	L	d	db	w	c	MD	SCREW WRENCH
24.0	TLZ2400	•	17.4	8.0	23.5~24.5	TLZD2400S32-SS	•	49	73	133	32	-	-	-	-	DSW-307H T-10
24.5	TLZ2450	•				TLZD2400-M12	•	-	-	43	-	23	19	11	M12	
25.0	TLZ2500	•	18.3	8.0	24.5~25.5	TLZD2500S32-SS	•	51	76	136	32	-	-	-	-	DSW-309H T-10
25.5	TLZ2550	•				TLZD2500-M12	•	-	-	43	-	24	19	11	M12	
26.0	TLZ2600	•	18.8	8.5	25.5~26.5	TLZD2600S32-SS	•	53	79	139	32	-	-	-	-	DSW-309H T-10
26.5	TLZ2650	•				TLZD2600-M12	•	-	-	43	-	24	19	11	M12	
27.0	TLZ2700	•	19.5	8.5	27.0~27.5	TLZD2700S32-SS	•	55	82	142	32	-	-	-	-	DSW-309H T-10
27.5	TLZ2750	•				TLZD2700-M12	•	-	-	43	-	26	19	11	M12	
28.0	TLZ2800	•	20.3	9.0	27.5~28.5	TLZD2800S32-SS	•	57	85	145	32	-	-	-	-	DSW-3510H T-15
28.5	TLZ2850	•				TLZD2800-M12	•	-	-	43	-	27	19	11	M12	
29.0	TLZ2900	•	21.1	9.0	28.5~29.5	TLZD2900S32-SS	•	59	88	148	32	-	-	-	-	DSW-3510H T-15
29.5	TLZ2950	•				TLZD2900-M16	•	-	-	51	-	28	22	12	M16	
30.0	TLZ3000	•	21.5	9.5	29.5~30.5	TLZD3000S32-SS	•	61	91	151	32	-	-	-	-	DSW-3510H T-15
30.5	TLZ3050	•				TLZD3000-M16	•	-	-	51	-	29	22	12	M16	
31.0	TLZ3100	•	22.3	10	30.5~31.5	TLZD3100S32-SS	•	-	94	154	32	-	-	-	-	DSW-3512H T-15
31.5	TLZ3150	•				TLZD3100-M16	•	-	-	51	-	30	22	12	M16	
32.0	TLZ3200	•	23.1	10	31.5~32.5	TLZD3200S32-SS	•	-	97	157	32	-	-	-	-	DSW-3512H T-15
						TLZD3200-M16	•	-	-	51	-	31	26	14	M16	

Note: All holders supplied without inserts or wrench.

See page A-65 for Modular Head Shanks



Indexable Spot Facing Drill

Recommended Cutting Data for TLZD Type

Work Material	Mild Steel ○				Carbon Steel ○			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
14	1,590	7.5	229	0.0047	1,590	7.5	229	0.0047
15	1,490	7.1	230	0.0048	1,490	7.1	230	0.0048
16	1,390	6.7	229	0.0048	1,390	6.7	229	0.0048
17	1,310	6.7	230	0.0051	1,310	6.7	230	0.0051
18	1,240	6.3	230	0.0051	1,240	6.3	230	0.0051
19	1,170	5.9	229	0.0050	1,170	5.9	229	0.0050
20	1,110	5.9	229	0.0053	1,110	5.9	229	0.0053
21	1,060	5.9	229	0.0056	1,060	5.9	229	0.0056
22	1,010	5.5	229	0.0055	1,010	5.5	229	0.0055
23	970	5.5	230	0.0057	970	5.5	230	0.0057
24	930	5.1	230	0.0055	930	5.1	230	0.0055
25	890	5.1	229	0.0058	890	5.1	229	0.0058
26	860	5.1	230	0.0060	860	5.1	230	0.0060
27	830	4.7	231	0.0057	830	4.7	231	0.0057
28	800	4.7	231	0.0059	800	4.7	231	0.0059
29	770	4.7	230	0.0061	770	4.7	230	0.0061
30	740	4.7	229	0.0064	740	4.7	229	0.0064
31	720	4.7	230	0.0066	720	4.7	230	0.0066
32	700	4.3	231	0.0062	700	4.3	231	0.0062

Work Material	Mild Steel ○				Carbon Steel ○			
	Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM
14	1,140	5.5	165	0.0048	680	1.6	98	0.0023
15	1,060	5.1	164	0.0048	640	1.6	99	0.0025
16	990	4.7	163	0.0048	600	1.6	99	0.0026
17	940	4.7	165	0.0050	560	1.6	98	0.0028
18	880	4.3	163	0.0049	530	1.6	98	0.0030
19	840	4.3	165	0.0052	500	1.6	98	0.0031
20	800	4.3	165	0.0054	480	1.6	99	0.0033
21	760	4.3	165	0.0057	450	1.6	97	0.0035
22	720	3.9	163	0.0055	430	1.2	98	0.0027
23	690	3.9	164	0.0057	420	1.2	100	0.0028
24	660	3.5	163	0.0054	400	1.2	99	0.0030
25	640	3.5	165	0.0055	380	1.2	98	0.0031
26	610	3.5	163	0.0058	370	1.2	99	0.0032
27	590	3.5	164	0.0060	350	1.2	97	0.0034
28	570	3.5	165	0.0062	340	1.2	98	0.0035
29	550	3.1	164	0.0057	330	1.2	99	0.0036
30	530	3.1	164	0.0059	320	1.2	99	0.0037
31	510	3.1	163	0.0062	310	1.2	99	0.0038
32	500	3.1	165	0.0063	300	1.2	99	0.0039

- Notes:**
- Above cutting conditions are for drilling flat surface. If drilling slope, adjust figures: angle under 30°, reduce IPM 40-80%, and for inclined angle 30° or more, reduce IPM 20-50%.
 - Above cutting conditions are for drilling with water soluble coolant, if dry cutting use air to remove chips.
 - Recommended drilling depth 1.5D or less. Drilling depth over 1.5D in not recommended.
 - Horizontal milling is not advised.
 - In case of long chips, adjust above conditions by increasing IPM or using step feed for breaking chips. If cutting stainless steel, not recommended to increase IPM for breaking chips. Increase SFM and reduce IPM so that bellows-shaped chips can occur.

Suitability
○ = Very Good
● = Good



Indexable Spot Facing Drill

Recommended Cutting Data for TLZD Type

Work Material	Stainless Steel (304) ○				Cast Iron ○			
Dia. (mm)	RPM	IPM	SFM	IPR	RPM	IPM	SFM	IPR
14	2,270	3.5	328	0.0016	1,590	7.5	229	0.0047
15	2,120	3.5	328	0.0017	1,490	7.1	230	0.0048
16	1,990	3.1	328	0.0016	1,390	6.7	229	0.0048
17	1,870	3.1	328	0.0017	1,310	6.7	230	0.0051
18	1,770	3.1	328	0.0018	1,240	6.3	230	0.0051
19	1,840	3.1	360	0.0017	1,170	5.9	229	0.0050
20	1,750	3.1	361	0.0018	1,110	5.9	229	0.0053
21	1,670	3.1	361	0.0019	1,060	5.9	229	0.0056
22	1,590	3.1	361	0.0020	1,010	5.5	229	0.0055
23	1,520	3.1	360	0.0021	970	5.5	230	0.0057
24	1,460	3.1	361	0.0022	930	5.1	230	0.0055
25	1,400	3.1	361	0.0022	890	5.1	229	0.0058
26	1,350	3.1	362	0.0023	860	5.1	230	0.0060
27	1,300	3.1	362	0.0024	830	4.7	231	0.0057
28	1,360	3.1	392	0.0023	800	4.7	231	0.0059
29	1,320	3.1	395	0.0024	770	4.7	230	0.0061
30	1,270	3.1	393	0.0025	740	4.7	229	0.0064
31	1,230	3.1	393	0.0026	720	4.7	230	0.0066
32	1,190	3.1	392	0.0026	700	4.3	231	0.0062

Work Material	Aluminum Alloy ●			
Dia. (mm)	RPM	IPM	SFM	IPR
14	2,270	10.6	328	0.0047
15	2,120	9.8	328	0.0046
16	1,990	9.4	328	0.0047
17	1,870	9.4	328	0.0051
18	1,770	9.4	328	0.0053
19	1,840	9.4	360	0.0051
20	1,750	9.1	361	0.0052
21	1,670	9.1	361	0.0054
22	1,590	8.7	361	0.0054
23	1,520	8.3	360	0.0054
24	1,460	7.9	361	0.0054
25	1,400	7.9	361	0.0056
26	1,350	7.9	362	0.0058
27	1,300	7.9	362	0.0061
28	1,360	7.9	392	0.0058
29	1,320	7.9	395	0.0060
30	1,270	7.9	393	0.0062
31	1,230	7.9	393	0.0064
32	1,190	7.5	392	0.0063

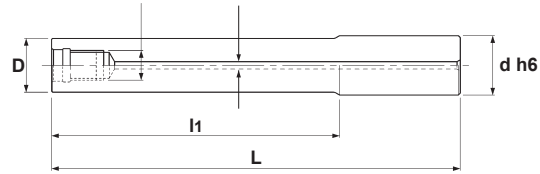
- Notes:**
- Above cutting conditions are for drilling flat surface. If drilling slope, adjust figures: angle under 30°, reduce IPM 40-80%, and for inclined angle 30° or more, reduce IPM 20-50%.
 - Above cutting conditions are for drilling with water soluble coolant, if dry cutting use air to remove chips.
 - Recommended drilling depth 1.5D or less. Drilling depth over 1.5D in not recommended.
 - Horizontal milling is not advised.
 - In case of long chips, adjust above conditions by increasing IPM or using step feed for breaking chips. If cutting stainless steel, not recommended to increase IPM for breaking chips. Increase SFM and reduce IPM so that bellows-shaped chips can occur.

Suitability
○ = Very Good
● = Good

Modular Head Holders

INCH

MSN Type
Solid Carbide with coolant thru



Specifications

CATALOG NUMBER	STK	DIMENSIONS					
		D	l1	L	d	MD	D2
MSN-M8-0.5-S062C	•	.591	.500	3.50	.625	M8	.157
MSN-M8-1.0-S062C	•	.591	1.00	4.00	.625	M8	.157
MSN-M8-2.0-S062C	•	.591	2.00	5.00	.625	M8	.157
MSN-M8-4.0-S062C	•	.591	4.00	7.00	.625	M8	.157
MSN-M8-6.0-S062C	•	.591	6.00	9.00	.625	M8	.157
MSN-M10-0.5-S075C	•	.728	.500	3.50	.750	M10	.157
MSN-M10-1.0-S075C	•	.728	1.00	4.00	.750	M10	.157
MSN-M10-2.0-S075C	•	.728	2.00	5.00	.750	M10	.157
MSN-M10-3.0-S075C	•	.728	3.00	6.00	.750	M10	.157
MSN-M10-4.0-S075C	•	.728	4.00	7.00	.750	M10	.157
MSN-M10-5.0-S075C	•	.728	5.00	8.00	.750	M10	.157
MSN-M10-6.0-S075C	•	.728	6.00	9.00	.750	M10	.157
MSN-M10-8.0-S075C	•	.728	8.00	10.63	.750	M10	.157
MSN-M12-0.5-S100C	•	.945	.500	3.50	1.00	M12	.236
MSN-M12-1.0-S100C	•	.945	1.00	4.00	1.00	M12	.236
MSN-M12-2.0-S100C	•	.945	2.00	5.00	1.00	M12	.236
MSN-M12-3.0-S100C	•	.945	3.00	6.00	1.00	M12	.236
MSN-M12-4.0-S100C	•	.945	4.00	7.00	1.00	M12	.236
MSN-M12-5.0-S100C	•	.945	5.00	8.00	1.00	M12	.236
MSN-M12-6.0-S100C	•	.945	6.00	9.00	1.00	M12	.236
MSN-M12-8.0-S100C	•	.945	8.00	11.00	1.00	M12	.236
MSN-M12-10.0-S100C	•	.945	10.00	12.60	1.00	M12	.236
MSN-M16-0.5-S125C	•	1.14	.500	3.50	1.25	M16	.315
MSN-M16-1.0-S125C	•	1.14	1.00	4.00	1.25	M16	.315
MSN-M16-2.0-S125C	•	1.14	2.00	5.00	1.25	M16	.315
MSN-M16-4.0-S125C	•	1.14	4.00	7.00	1.25	M16	.315
MSN-M16-6.0-S125C	•	1.14	6.00	9.00	1.25	M16	.315
MSN-M16-8.0-S125C	•	1.14	8.00	11.00	1.25	M16	.315
MSN-M16-10.0-S125C	•	1.14	10.00	13.00	1.25	M16	.315
MSN-M16-12.0-S125C	•	1.14	12.00	15.00	1.25	M16	.315



METRIC

Modular Head Holders

MSN Type
Solid Carbide with coolant thru

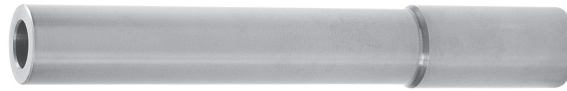


Fig. 1

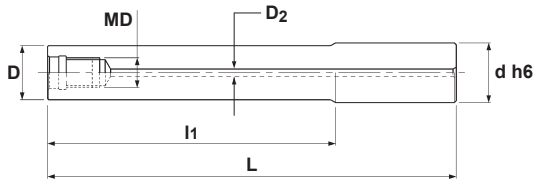
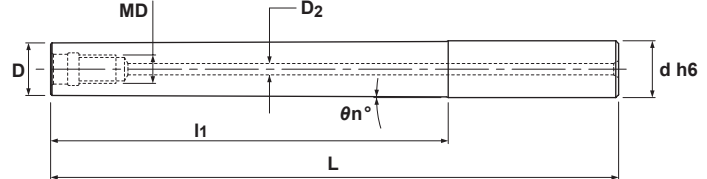


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS							FIG.
		D	l1	L	d	θn°	MD	D2	
MSN-M8-20-S16C	•	15.5	20	75	16	-	M8	4	1
MSN-M8-40-S16C	•	15.5	40	95	16	-	M8	4	1
MSN-M8-40T-S20C	•	14.5	40	100	20	3°30'	M8	4	2
MSN-M8-77T-S20C	•	14.5	77	143	20	1°45'	M8	4	2
MSN-M8-80-S16C	•	15.5	80	135	16	-	M8	4	1
MSN-M8-120-S16C	•	15.5	120	175	16	-	M8	4	1
MSN-M8-152-S16C	•	15.5	152	207	16	-	M8	4	1
MSN-M10-20-S20C	•	19.5	20	80	20	-	M10	4	1
MSN-M10-40-S20C	•	19.5	40	100	20	-	M10	4	1
MSN-M10-40T-S20C	•	18.5	40	100	20	0°43'	M10	4	2
MSN-M10-70-S20C	•	19.5	70	130	20	-	M10	4	1
MSN-M10-85T-S25C	•	18.5	85	161	25	2°	M10	4	2
MSN-M10-90-S20C	•	19.5	90	150	20	-	M10	4	1
MSN-M10-90T-S20C	•	18.5	90	150	20	0°19'	M10	4	2
MSN-M10-140-S20C	•	19.5	140	200	20	-	M10	4	1
MSN-M10-140T-S20C	•	18.5	140	200	20	0°12'	M10	4	2
MSN-M10-160-S20C	•	19.5	160	220	20	-	M10	4	1
MSN-M10-210-S20C	•	19.5	210	270	20	-	M10	4	1
MSN-M12-25-S25C	•	24	25	90	25	-	M12	6	1
MSN-M12-55-S25C	•	24	55	120	25	-	M12	6	1
MSN-M12-70-S25C	•	25	70	135	24	-	M12	6	1
MSN-M12-100T-S32C	•	23.5	100	180	32	2°	M12	6	2
MSN-M12-105-S25C	•	24	105	170	25	-	M12	6	1
MSN-M12-135-S25C	•	24	135	215	25	-	M12	6	1
MSN-M12-155-S25C	•	24	155	220	25	-	M12	6	1
MSN-M12-200-S25C	•	24	200	265	25	-	M12	6	1
MSN-M12-255-S25C	•	24	255	320	25	-	M12	6	1

Modular Head Holders

METRIC

MSN Type
Solid Carbide with coolant thru



Fig. 1

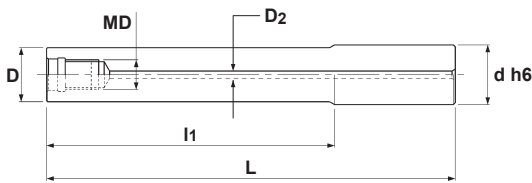
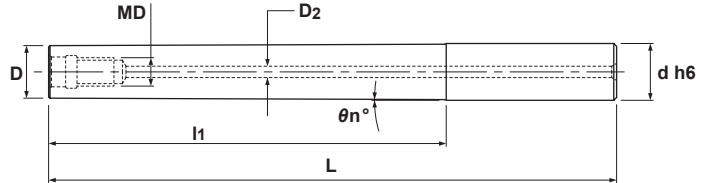


Fig. 2



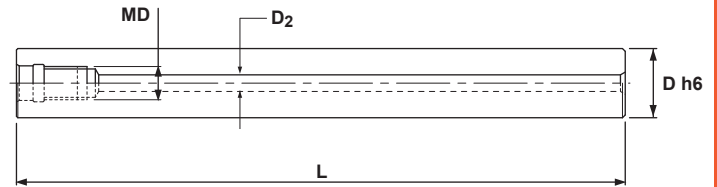
Specifications

CATALOG NUMBER	STK	DIMENSIONS							FIG.
		D	I1	L	d	θ_n°	MD	D2	
MSN-M16-25-S32C	•	29	25	90	32	-	M16	8	1
MSN-M16-55-S32C	•	29	55	120	32	-	M16	8	1
MSN-M16-77-S32C	•	29	77	157	32	-	M16	8	1
MSN-M16-97-S32C	•	29	97	177	32	-	M16	8	1
MSN-M16-105-S32C	•	29	105	170	32	-	M16	8	1
MSN-M16-117T-S32C	•	29	117	197	32	0°38'	M16	8	2
MSN-M16-127-S32C	•	29	127	207	32	-	M16	8	1
MSN-M16-127T-S32C	•	29	127	207	32	0°30'	M16	8	2
MSN-M16-155-S32C	•	29	155	220	32	-	M16	8	1
MSN-M16-177-S32C	•	29	177	257	32	-	M16	8	1
MSN-M16-177T-S32C	•	29	177	257	32	0°23'	M16	8	2
MSN-M16-195-S32C	•	29	195	260	32	-	M16	8	1
MSN-M16-197T-S32C	•	29	197	277	32	0°23'	M16	8	2
MSN-M16-225-S32C	•	29	225	290	32	-	M16	8	1
MSN-M16-245-S32C	•	29	245	310	32	-	M16	8	1
MSN-M16-295-S32C	•	29	295	360	32	-	M16	8	1
MSN-M16-315-S32C	•	29	315	380	32	-	M16	8	1

**METRIC**

Modular Head Holders

MSN Type - Straight Solid Carbide with coolant thru



Specifications

CATALOG NUMBER	STK	DIMENSIONS			
		D	L	MD	D2
MSN-M8-87S-S14C	•	14	87	M8	3
MSN-M8-137S-S14C	•	14	137	M8	3
MSN-M8-97S-S15C	•	15	97	M8	4
MSN-M8-147S-S15C	•	15	147	M8	4
MSN-M8-197S-S15C	•	15	197	M8	4
MSN-M8-107S-S16C	•	16	107	M8	4
MSN-M8-157S-S16C	•	16	157	M8	4
MSN-M8-217S-S15C	•	15	217	M8	4
MSN-M8-220S-S16C	•	16	220	M8	4
MSN-M10-130S-S18C	•	18	130	M10	4
MSN-M10-190S-S18C	•	18	190	M10	4
MSN-M10-240S-S18C	•	18	240	M10	4
MSN-M10-130S-S20C	•	20	130	M10	4
MSN-M10-190S-S20C	•	20	190	M10	4
MSN-M10-250S-S20C	•	20	250	M10	4
MSN-M10-270S-S18C	•	18	270	M10	4
MSN-M10-270S-S20C	•	20	270	M10	4
MSN-M12-185S-S23C	•	23	185	M12	6
MSN-M12-265S-S23C	•	23	265	M12	6
MSN-M12-185S-S24C	•	24	185	M12	6
MSN-M12-265S-S24C	•	24	265	M12	6
MSN-M12-145S-S25C	•	25	145	M12	6
MSN-M12-215S-S25C	•	25	215	M12	6
MSN-M12-285S-S25C	•	25	285	M12	6
MSN-M12-320S-S25C	•	25	320	M12	6
MSN-M16-160S-S28C	•	28	160	M16	8
MSN-M16-230S-S28C	•	28	230	M16	8
MSN-M16-310S-S28C	•	28	310	M16	8
MSN-M16-157S-S32C	•	32	157	M16	8
MSN-M16-217S-S32C	•	32	217	M16	8
MSN-M16-287S-S32C	•	32	287	M16	8
MSN-M16-357S-S32C	•	32	357	M16	8
MSN-M16-380S-S28C	•	28	380	M16	8
MSN-M16-380S-S32C	•	32	380	M16	8

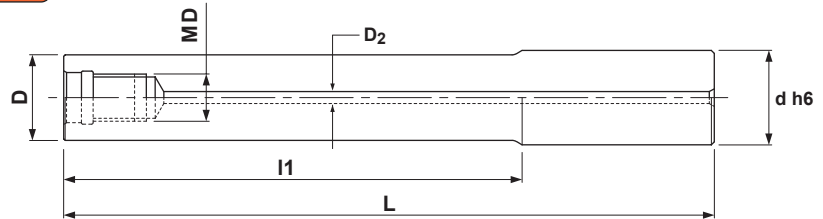
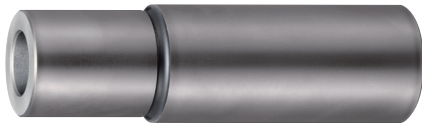
Modular Head Holders

METRIC

INCH

MGN Type
G-Body with coolant thru

G-Body



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS					
		D	I1	L	d	MD	D2
MGN-M8-0.5-S062	•	.591	.500	3.50	.625	M8	.157
MGN-M8-1.0-S062	•	.591	1.00	4.00	.625	M8	.157
MGN-M8-2.0-S062	•	.591	2.00	5.00	.625	M8	.157
MGN-M10-0.5-S075	•	.728	.500	3.50	.750	M10	.157
MGN-M10-1.0-S075	•	.728	1.00	4.00	.750	M10	.157
MGN-M10-2.0-S075	•	.728	2.00	5.00	.750	M10	.157
MGN-M12-0.5-S100	•	.945	.500	3.50	1.00	M12	.236
MGN-M12-1.0-S100	•	.945	1.00	4.00	1.00	M12	.236
MGN-M12-2.0-S100	•	.945	2.00	5.00	1.00	M12	.236
MGN-M12-3.0-S100	•	.945	3.00	6.00	1.00	M12	.236
MGN-M16-0.5-S125	•	1.14	.500	3.50	1.25	M16	.315
MGN-M16-1.0-S125	•	1.14	1.00	4.00	1.25	M16	.315
MGN-M16-2.0-S125	•	1.14	2.00	5.00	1.25	M16	.315
MGN-M16-3.0-S125	•	1.14	3.00	6.00	1.25	M16	.315

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS					
		D	I1	L	d	MD	D2
MGN-M8-17-S16	•	15.5	17	97	16	M8	4
MGN-M10-30-S20	•	19	30	100	20	M10	4
MGN-M12-35-S25	•	24	35	105	25	M12	4
MGN-M12-85-S25	•	24	85	165	25	M12	4
MGN-M16-37-S32	•	29	37	107	32	M16	6
MGN-M16-77-S32	•	29	77	157	32	M16	6

PROPER MOUNTING OF MODULAR HEADS

■ Cleaning

Remove dirt and chips with air from the connecting thread and face of modular head and MSN/MGN shank holder.

■ Initial Tightening

Tighten by hand until the head and the shank holder faces touch.

■ Final Tightening

Tighten slowly with torque control spanner wrench or DIJET DS type spanner wrench and confirm that there is no gap.

Attention: Final tightening without initial tightening cause connecting thread damage.



Thread	Tightening torque	Spanner size
M6	8N·m	8 ✧
M8	16N·m	10, 12 ✧
M10	16N·m	14, 15
M12	20N·m	17, 19
M16	25N·m	22, 26

Modular heads are supplied without spanner wrench.

In case of choosing torque control spanner wrench, confirm that the wrench size is matched to the dimensions W & C of each modular head. (There are some cases that modifying the thickness of spanner wrench is necessary)

✧ = DIJET stocks DS-8 and DS-12 type spanner wrenches.

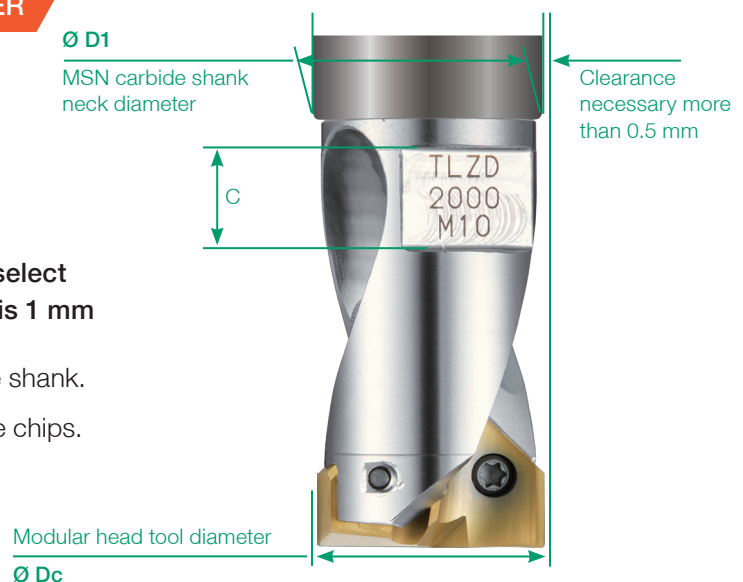
SELECTION OF MSN CARBIDE SHANK HOLDER

$$\varnothing D_c - \varnothing D_1 \geq 1\text{mm}$$

When using modular head over $\varnothing 16\text{mm}$, **please select MSN carbide shank which the diameter ($\varnothing D_1$) is 1 mm or smaller than modular head ($\varnothing D_c$).**

Wrong selection can cause damage to the carbide shank.

Coolant or air blow is recommended to remove the chips.



Caution for mounting in shrink fit holder.

When you use a carbide shank and a modular head on a shrink fit holder, please shrink fit the carbide shank without mounting the modular head. Mount the modular head on the shank after shrink fit operation is complete.

In case of shrink fit MSN shank + modular head together, it will be difficult to loosen due to heat dissipation.