DEEP TRIO™

An Extensive Family of Deep Hole Drilling Tools

DEEP TRIO MC - Conventional style drill for lathes or mills,
Conventional cross-hole style drill for lathes or mills
Standard Lengths 10xD, 15xD and 25xD
Dia. Range: .472" - 1.260" (12 mm - 32 mm)

DEEP TRIO GD - Gundrill style
Gundrill cross-hole style
Both styles offer lengths up to 94.488" OAL (2400mm)
Dia. Range: .472" - 1.260" (12 mm - 32 mm)

DEEP TRIO BTA - BTA drilling head available for STS & DTS systems
Dia. Range: .629" - 1.575" (16 mm - 40 mm)

Drilling Range:
Ø .472 - 1.575" (12mm - 40mm)

Thread Types:
STS Outer four start thread
STS Inner single start thread
DTS Outer four start thread

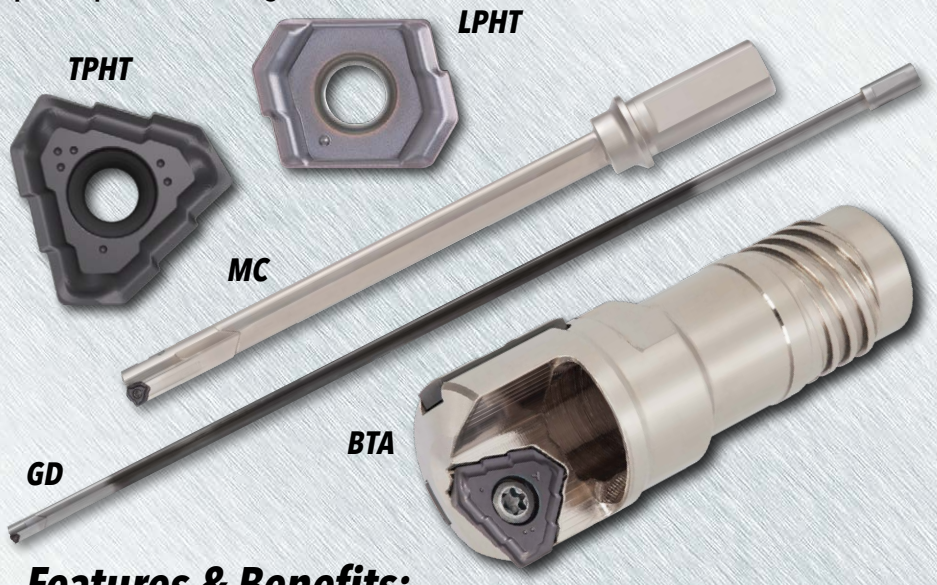
Insert Grades*:
IN2005

Chip breakers:
"DT" - Standard
"ML" - Low Feed/Power Applications

Guide Pads*:
IN2040 (CD-SA) - Solid carbide pad
High wear resistance
IN2005 (CD-SB) - Solid carbide pad
High toughness
IN2030 (CD-SC) - Solid carbide pad
Higher toughness

Two Insert Styles

TPHT inserts offer 3 full cutting edges, and the new LPHT inserts for smaller diameter tools offer 2 cutting edges. All inserts feature chip splitters and two unique chip breaker designs.



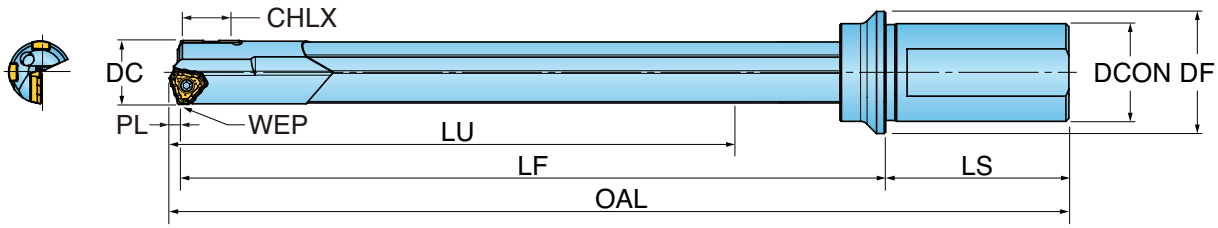
Features & Benefits:

- Expanded Diameter Range: .472" (12 mm) - 1.575" (40 mm)
- Excellent Hole Accuracy (IT10) and Surface Finish
- Very High Feed Rates
- Replaceable Inserts Provide Long Tool Life and Eliminate Regrinding
- Cross-holes up to 1.259" (32 mm) Diameter
- Diameter Adjusting Shims
- Available in Two Chip Breakers
- TRH Replacement Heads for Brazing

**Guide Pads and inserts must be purchased separately.*

INDUSTRY 4.0 UPDATE PRODUCT ANNOUNCEMENT 2022

Member IMC Group Ingersoll Cutting Tools



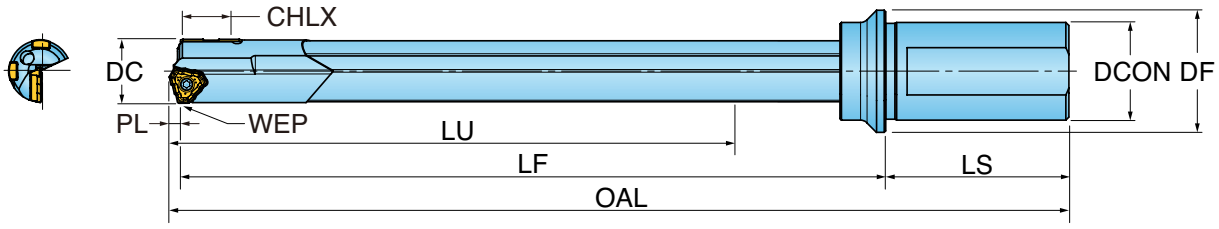
INCH

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT14680146N5R01	0.578	0.079	0.63	5.91	7.36	2.21	9.65	1.000	1.26	10
GT15060146N5R01	0.593	0.079	0.63	6.30	7.80	2.21	10.08	1.000	1.26	10
GT15880160N5R01	0.625	0.079	0.63	6.30	7.84	2.21	10.12	1.000	1.26	10
GT17450175N5R01	0.687	0.087	0.63	7.17	8.66	2.21	10.95	1.000	1.26	10
GT18240182N5R01	0.718	0.118	0.63	7.60	9.13	2.21	11.46	1.000	1.26	10
GT18640186N5R01	0.734	0.118	0.63	7.60	9.13	2.21	11.46	1.000	1.26	10
GT19050191N5R01	0.750	0.118	0.63	7.99	9.57	2.21	11.89	1.000	1.26	10
GT20620206N6R01	0.812	0.126	0.63	8.39	10.04	2.72	12.52	1.250	1.26	10
GT22230222N6R01	0.875	0.134	0.63	9.19	10.95	2.72	13.44	1.250	1.26	10
GT23800238N6R01	0.937	0.134	0.63	9.98	11.85	2.72	14.35	1.250	1.26	10
GT25400254N6R01	1.000	0.134	0.63	10.38	12.28	2.72	14.79	1.250	1.26	10
GT26970270N6R01	1.062	0.146	0.63	11.17	13.19	2.72	16.09	1.250	1.26	10
GT28580285N6R01	1.125	0.181	0.63	11.42	14.17	2.72	17.07	1.250	1.26	10
GT29360285N6R01	1.156	0.181	0.63	11.81	14.65	2.72	17.54	1.250	1.57	10
GT31750318N6R01	1.250	0.181	0.63	12.60	15.55	2.72	18.45	1.250	1.57	10

METRIC

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT16000160JFR02	16.00	2.20	16.0	172.2	209.0	56.0	267.2	25.00	32	10
GT16500160JFR02	16.50	2.20	16.0	172.2	209.0	56.0	267.2	25.00	32	10
GT17000170JFR02	17.00	2.20	16.0	182.2	220.0	56.0	278.2	25.00	32	10
GT18000180JFR02	18.00	2.20	16.0	192.2	232.0	56.0	290.2	25.00	32	10
GT19000190JFR01	19.00	3.00	16.0	203.0	243.0	56.0	302.0	25.00	32	10
GT20000200JGR01	20.00	3.00	16.0	213.0	255.0	60.0	318.0	32.00	40	10
GT21000210JGR01	21.00	3.20	16.0	223.2	266.0	60.0	329.2	32.00	40	10
GT22000220JGR01	22.00	3.40	16.0	233.4	278.0	60.0	341.4	32.00	40	10
GT23000230JGR01	23.00	3.40	16.0	243.4	289.0	60.0	352.4	32.00	40	10
GT24000240JGR01	24.00	3.40	16.0	253.4	301.0	60.0	364.4	32.00	40	10
GT25000250JGR01	25.00	3.40	16.0	263.4	312.0	60.0	375.4	32.00	40	10
GT26000260JHR01	26.00	3.60	16.0	273.7	324.0	70.0	397.6	40.00	50	10
GT27000270JHR01	27.00	3.60	16.0	283.7	335.0	70.0	408.6	40.00	50	10
GT28000280JHR01	28.00	3.60	16.0	283.7	337.0	70.0	410.6	40.00	50	10

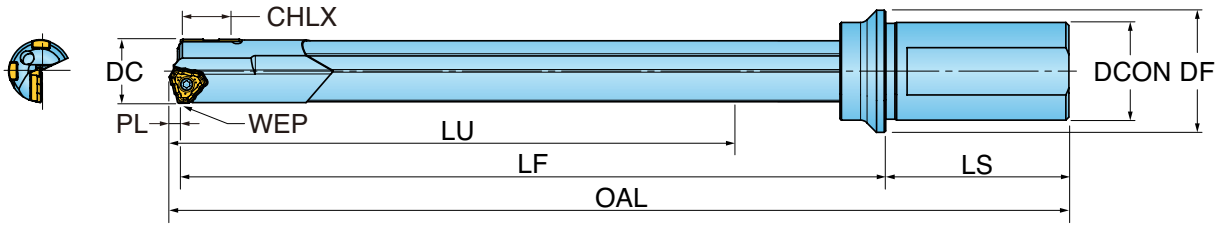
CONVENTIONAL DRILLS: 15XD (INCH)



INCH

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT12700190N5R01	0.500	0.071	0.63	7.75	9.02	2.21	11.29	1.000	1.26	15
GT13490202N5R01	0.531	0.071	0.63	8.34	9.65	2.21	11.92	1.000	1.26	15
GT14270225N5R01	0.562	0.079	0.63	8.94	10.28	2.21	12.56	1.000	1.26	15
GT14680225N5R01	0.578	0.079	0.63	8.94	10.32	2.21	12.60	1.000	1.26	15
GT15060225N5R01	0.593	0.079	0.63	9.53	10.95	2.21	13.23	1.000	1.26	15
GT15880240N5R01	0.625	0.079	0.63	9.53	10.98	2.21	13.27	1.000	1.26	15
GT17450262N5R02	0.687	0.087	0.63	10.72	12.21	2.21	14.50	1.000	1.26	15
GT18240274N5R01	0.718	0.118	0.63	11.34	12.87	2.21	15.20	1.000	1.26	15
GT18640280N5R01	0.734	0.118	0.63	11.34	12.87	2.21	15.20	1.000	1.26	15
GT19050286N5R01	0.750	0.118	0.63	11.93	13.50	2.21	15.83	1.000	1.26	15
GT20620309N6R01	0.812	0.126	0.63	12.53	14.17	2.72	16.66	1.250	1.57	15
GT22230333N6R01	0.875	0.134	0.63	13.72	15.47	2.72	17.97	1.250	1.57	15
GT23800357N6R01	0.937	0.134	0.63	10.96	16.77	2.72	19.27	1.250	1.57	15
GT25400381N6R01	1.000	0.146	0.63	15.50	17.40	2.72	19.91	1.250	1.57	15
GT26970405N6R01	1.062	0.146	0.63	16.68	18.70	2.72	21.21	1.250	1.57	15
GT28580428N6R01	1.125	0.181	0.63	17.13	19.88	2.72	22.78	1.250	1.57	15
GT29360429N6R01	1.156	0.181	0.63	17.72	20.55	2.72	23.45	1.250	1.57	15
GT31750476N6R01	1.250	0.181	0.63	18.90	21.85	2.72	24.75	1.250	1.57	15

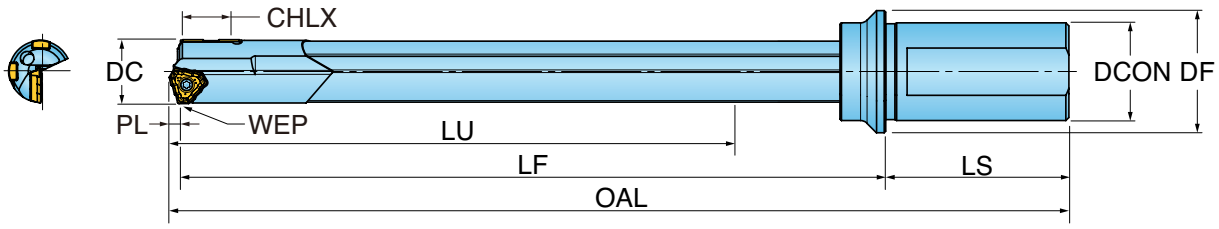
CONVENTIONAL DRILLS: 15XD (METRIC)



METRIC

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT12000197JER01	12.00	1.80	16.0	196.8	225.0	50.0	276.8	20.00	25	15
GT12500197JER01	12.50	1.80	16.0	196.8	226.0	50.0	277.8	20.00	25	15
GT13000212JFR01	13.00	1.80	16.0	211.8	245.0	56.0	302.8	25.00	32	15
GT13500212JFR01	13.50	1.80	16.0	211.8	245.0	56.0	302.8	25.00	32	15
GT14000225JFR01	14.00	2.00	16.0	227.0	245.0	56.0	303.0	25.00	32	15
GT14500225JFR01	14.50	2.00	16.0	227.0	262.0	56.0	320.0	25.00	32	15
GT15000240JFR01	15.00	2.00	16.0	242.0	278.0	56.0	336.0	25.00	32	15
GT16000240JFR02	16.00	2.20	16.0	257.2	294.0	56.0	352.2	25.00	32	15
GT16500248JFR02	16.50	2.20	16.0	257.2	294.0	56.0	352.2	25.00	32	15
GT17000255JFR02	17.00	2.20	16.0	272.2	310.0	56.0	368.2	25.00	32	15
GT17500263JFR02	17.50	2.20	16.0	272.2	310.0	56.0	368.2	25.00	32	15
GT18000270JFR02	18.00	2.20	16.0	287.2	327.0	56.0	385.2	25.00	32	15
GT18500278JFR01	18.50	3.00	16.0	288.0	327.0	56.0	386.0	25.00	32	15
GT19000285JFR01	19.00	3.00	16.0	303.0	343.0	56.0	402.0	25.00	32	15
GT19500293JFR01	19.50	3.00	16.0	303.0	343.0	56.0	402.0	25.00	32	15
GT20000300JGR01	20.00	3.00	16.0	318.0	360.0	60.0	423.0	32.00	40	15
GT21000315JGR01	21.00	3.20	16.0	333.2	376.0	60.0	439.2	32.00	40	15
GT22000330JGR01	22.00	3.40	16.0	348.4	393.0	60.0	456.4	32.00	40	15
GT23000345JGR01	23.00	3.40	16.0	363.4	409.0	60.0	472.4	32.00	40	15
GT24000360JGR01	24.00	3.40	16.0	378.4	426.0	60.0	489.4	32.00	40	15
GT25000375JGR01	25.00	3.40	16.0	393.4	442.0	60.0	505.4	32.00	40	15
GT26000390JHR01	26.00	3.60	16.0	408.7	459.0	70.0	532.6	40.00	50	15
GT27000405JHR01	27.00	3.60	16.0	423.7	475.0	70.0	548.6	40.00	50	15
GT28000420JHR01	28.00	3.60	16.0	423.7	477.0	70.0	550.6	40.00	50	15

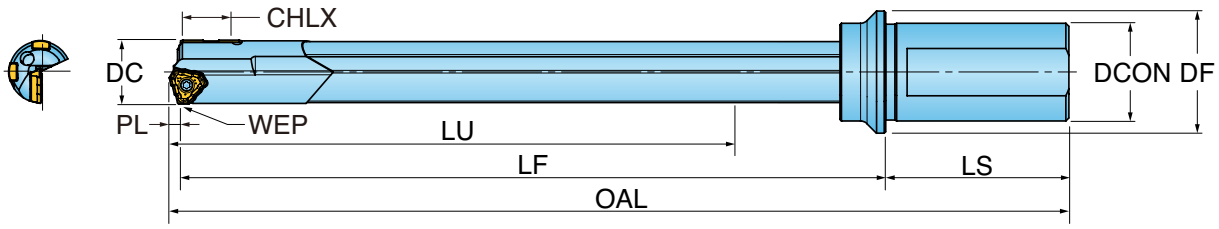
CONVENTIONAL DRILLS: 25XD (INCH)



INCH

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT12700317N5R01	0.500	0.071	0.63	12.87	14.13	2.21	16.41	1.000	1.26	25
GT13490337N5R01	0.531	0.071	0.63	13.85	15.16	2.21	17.43	1.000	1.26	25
GT14270357N5R01	0.562	0.079	0.63	14.84	16.18	2.21	18.47	1.000	1.26	25
GT14680375N5R01	0.578	0.079	0.63	14.84	16.22	2.21	18.50	1.000	1.26	25
GT15060400N5R01	0.593	0.079	0.63	15.83	17.24	2.21	19.53	1.000	1.26	25
GT15880400N5R01	0.625	0.079	0.63	15.83	17.28	2.21	19.57	1.000	1.26	25
GT17450436N5R02	0.687	0.087	0.63	17.80	19.29	2.21	21.58	1.000	1.26	25
GT18240456N5R01	0.718	0.118	0.63	18.82	20.35	2.21	22.68	1.000	1.26	25
GT18640466N5R01	0.734	0.118	0.63	18.82	20.35	2.21	22.68	1.000	1.26	25
GT19050476N5R01	0.750	0.118	0.63	19.80	21.38	2.21	23.70	1.000	1.26	25
GT20620516N6R01	0.812	0.126	0.63	20.80	22.44	2.72	24.93	1.250	1.57	25
GT22230556N6R01	0.875	0.134	0.63	22.77	24.53	2.72	27.02	1.250	1.57	25
GT23800595N6R01	0.937	0.134	0.63	24.74	26.61	2.72	29.11	1.250	1.57	25
GT26970674N6R01	1.062	0.146	0.63	27.71	29.72	2.72	32.23	1.250	1.57	25
GT26970675N6R01	1.062	0.146	0.63	27.71	29.72	2.72	32.63	1.500	1.57	25
GT28580715N6R01	1.125	0.181	0.63	28.54	31.30	2.72	34.20	1.250	1.57	25
GT29360715N6R01	1.156	0.181	0.63	29.53	32.36	2.72	35.26	1.250	1.57	25
GT31750806N6R01	1.250	0.181	0.63	31.50	34.45	2.72	37.35	1.250	1.57	25

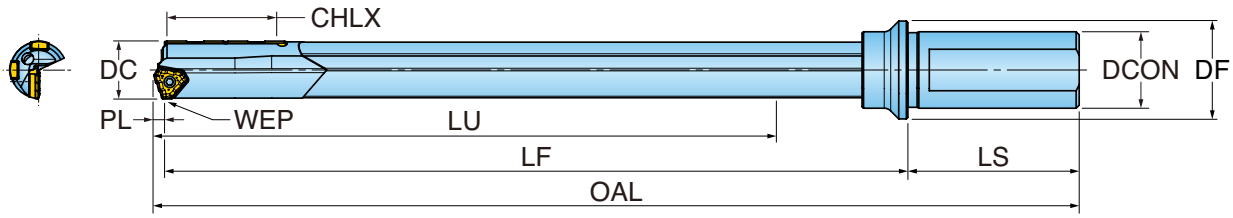
CONVENTIONAL DRILLS: 25XD (METRIC)



METRIC

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GT12000327JER01	12.00	1.8	16.0	326.8	355.0	50.0	406.8	20.00	25	25
GT12500327JER01	12.50	1.8	16.0	326.8	356.0	50.0	407.8	20.00	25	25
GT13000352JFR01	13.00	1.8	16.0	351.8	385.0	56.0	442.8	25.00	32	25
GT13500352JFR01	13.50	1.8	16.0	351.8	385.0	56.0	442.8	25.00	32	25
GT14000375JFR01	14.00	2.0	16.0	377.0	411.0	56.0	469.0	25.00	32	25
GT14500375JFR01	14.50	2.0	16.0	377.0	412.0	56.0	470.0	25.00	32	25
GT15000400JFR01	15.00	2.0	16.0	402.0	438.0	56.0	496.0	25.00	32	25
GT16000400JFR02	16.00	2.2	16.0	427.2	464.0	56.0	522.2	25.00	32	25
GT16500413JFR02	16.50	2.2	16.0	427.2	464.0	56.0	522.2	25.00	32	25
GT17000425JFR02	17.00	2.2	16.0	452.2	490.0	56.0	548.2	25.00	32	25
GT17500445JFR02	17.50	2.2	16.0	452.2	490.0	56.0	548.2	25.00	32	25
GT18000450JFR02	18.00	2.2	16.0	477.2	517.0	56.0	575.2	25.00	32	25
GT18500463JFR01	18.50	3.0	16.0	478.0	517.0	56.0	576.0	25.00	32	25
GT19000475JFR01	19.00	3.0	16.0	503.0	543.0	56.0	602.0	25.00	32	25
GT19500488JFR01	19.5	3.0	0.63	503	543	56	602	25	32	25
GT20000500JGR01	20.00	3.0	16.0	528.0	570.0	60.0	633.0	32.00	40	25
GT21000525JGR01	21.00	3.2	16.0	553.2	596.0	60.0	659.2	32.00	40	25
GT22000550JGR01	22.00	3.4	16.0	578.4	623.0	60.0	686.4	32.00	40	25
GT23000575JGR01	23.00	3.4	16.0	603.4	649.0	60.0	712.4	32.00	40	25
GT24000600JGR01	24.00	3.4	16.0	628.4	676.0	60.0	739.4	32.00	40	25
GT25000625JGR01	25.00	3.4	16.0	653.4	702.0	60.0	765.4	32.00	40	25
GT26000650JHR01	26.00	3.7	16.0	678.7	729.0	70.0	802.7	40.00	50	25
GT27000675JHR01	27.00	3.7	16.0	703.7	755.0	70.0	828.7	40.00	50	25
GT28000700JHR01	28.00	3.7	16.0	703.7	757.0	70.0	830.7	40.00	50	25

DEEP TRIO MC™ CONVENTIONAL CROSS-HOLE DRILLS (INCH)

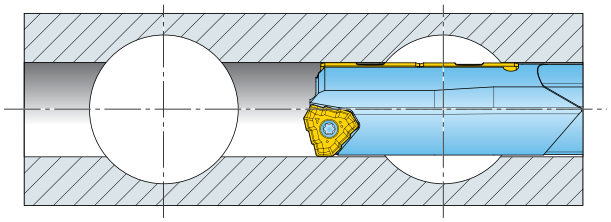


INCH

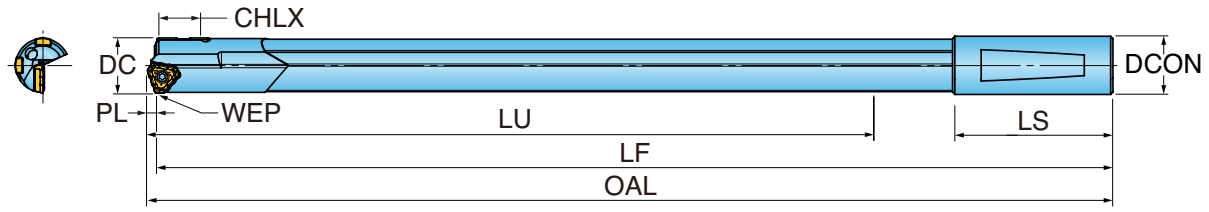
Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GTADP14680147N5R01	0.578	0.079	1.26	5.91	7.36	2.205	9.646	1.000	1.26	10
GTADP15060151N5R01	0.593	0.079	1.26	6.30	7.79	2.205	10.079	1.000	1.26	10
GTADP18240182N5R01	0.718	0.118	1.26	7.48	9.13	2.205	11.457	1.000	1.26	10
GTADP18640186N5R01	0.734	0.118	1.26	7.48	9.13	2.205	11.457	1.000	1.26	10
GTADP23800238N6R01	0.937	0.134	1.26	9.84	11.85	2.717	14.701	1.250	1.57	10
GTADP29360293N6R01	1.156	0.181	1.26	11.81	14.65	2.717	17.543	1.250	1.57	10

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GTADP14680220N5R01	0.578	0.079	1.26	8.86	10.31	2.205	12.598	1.000	1.26	15
GTADP15060226N5R01	0.593	0.079	1.26	9.45	10.94	2.205	13.228	1.000	1.26	15
GTADP18240274N5R01	0.718	0.118	1.26	11.22	12.87	2.205	15.197	1.000	1.26	15
GTADP18640280N5R01	0.734	0.118	1.26	11.22	12.87	2.205	15.197	1.000	1.26	15
GTADP23800357N6R01	0.937	0.134	1.26	14.76	16.77	2.717	19.622	1.250	1.57	15
GTADP29360440N6R01	1.156	0.181	1.26	17.72	20.55	2.717	23.449	1.250	1.57	15

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.	DF Flange Dia.	ULDR Usable Length Dia. Ratio
GTADP14680367N5R01	0.578	0.079	1.26	14.84	16.22	2.205	18.504	1.000	1.26	25
GTADP15060377N5R01	0.593	0.079	1.26	15.83	17.24	2.205	19.528	1.000	1.26	25
GTADP18240456N5R01	0.718	0.118	1.26	18.82	20.35	2.205	22.677	1.000	1.26	25
GTADP18640466N5R01	0.734	0.118	1.26	18.82	20.35	2.205	22.677	1.000	1.26	25
GTADP23800507N6R01	0.937	0.134	1.26	21.27	23.15	2.362	25.645	1.250	1.57	21
GTADP23800595N6R01	0.937	0.134	1.26	24.74	26.61	2.362	29.110	1.250	1.57	25
GTADP29360734N6R01	1.156	0.102	1.26	28.90	31.55	2.362	34.270	1.250	1.57	25
GTADP-2936-1219-N6-R01	1.156	0.102	1.260	42.54	48.00	2.716	48.090	1.250	1.57	36
GTADP-2936-1524-N6-R01	1.156	0.102	1.260	54.55	60.00	2.716	60.100	1.250	1.57	47



For Cross-Hole Applications:
Deep-Trio BTA, MC and GD with single row of guide pads can cross up to a .63" (16 mm) hole.
Deep-Trio MC and GD with a double row of guide pads can cross up to a 1.26" (32 mm) hole.



Deep-Trio Gundrills are made to order per application.
Use the following guideline to determine the Description:

GT	XXXX	YYYY	ZZ	RXX
Series	Drill Dia. (mm)	Drill Length (OAL) (mm)	Driver	Variation

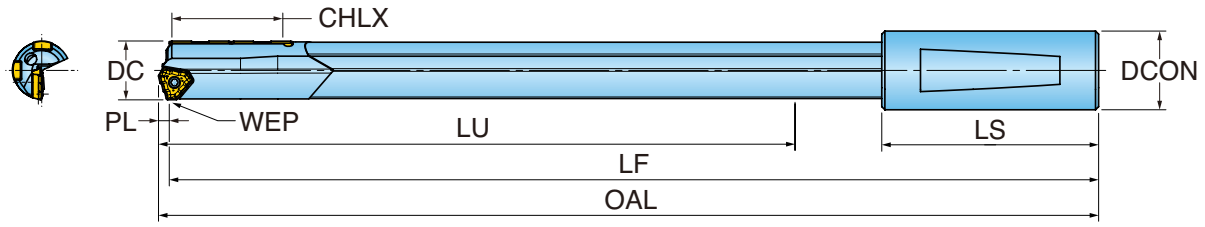
Example:
.75" diameter drill with 72" OAL and 1.00" driver = GT-1905-1828-58-RXX

Reference pages 12-15 for Insert and Guide Pad information.
Reference page 9 for Driver information.

SEMI-STANDARD ITEMS

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.
GT-1270-1219-58-R01	0.500	0.071	0.630	43.78	48.00	2.204	48.070	1.000
GT-1270-1524-58-R01	0.500	0.071	0.630	55.78	60.00	2.204	60.070	1.000
GT-1348-1219-58-R01	0.531	0.071	0.630	43.66	48.00	2.204	48.070	1.000
GT-1348-1527-58-R01	0.531	0.071	0.630	55.66	60.00	2.204	60.070	1.000
GT-1745-1500-58-R01	0.687	0.086	0.630	55.40	59.05	2.204	59.140	1.000
GT-1824-1500-58-R01	0.718	0.118	0.630	55.35	59.05	2.204	59.170	1.000
GT-1864-1500-58-R01	0.734	0.118	0.630	55.81	59.05	2.204	59.170	1.000
GT-1905-1500-59-R01	0.750	0.118	0.630	55.35	59.05	2.756	59.170	1.250
GT-2062-1500-59-R01	0.812	0.118	0.630	55.24	59.05	2.756	59.180	1.250
GT-2223-1500-59-R01	0.875	0.134	0.630	55.13	59.05	2.756	59.190	1.250
GT-2380-1500-59-R01	0.937	0.134	0.630	55.02	59.05	2.756	59.190	1.250
GT-2540-1500-59-R01	1.000	0.146	0.630	54.98	59.05	2.756	59.201	1.250

CROSS-HOLE GUNDRILLS (INCH)



Deep-Trio Gundrills are made to order per application.
Use the following guideline to determine the Description:

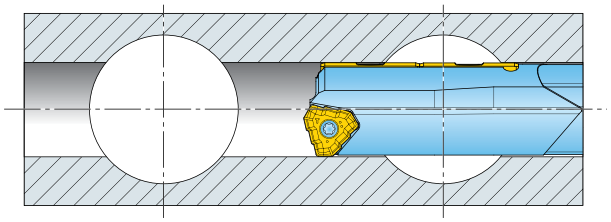
GTADP	XXXX	YYYY	ZZ	RXX
Series	Drill Dia. (mm)	Drill Length (OAL) (mm)	Driver	Variation

Example:
.75" diameter drill with 72" OAL and 1.00" driver = GTADP-1905-1828-58-RXX

Reference pages 12-15 for Insert and Guide Pad information.
Reference page 9 for Driver information.

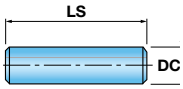
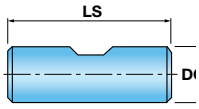
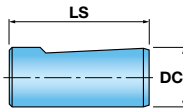
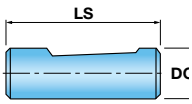
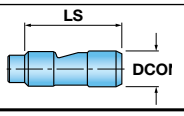
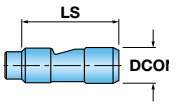
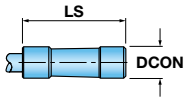
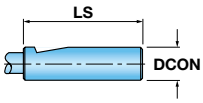
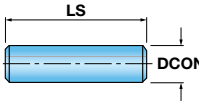
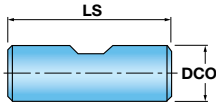
STANDARD ITEMS

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LU Usable Length Max.	LF Functional Length	LS Shank Length	OAL Overall Length	DCON Connection Dia.
GTADP-1427-1828-S9-R10	0.562	0.079	1.26	57.79	56.14	2.756	71.968	1.25
GTADP-1468-1524-S9-R01	0.578	0.079	1.26	46.10	60.20	2.756	60.275	1.25
GTADP-1468-1828-S9-R01	0.578	0.079	1.26	57.79	56.14	2.756	71.968	1.25
GTADP-1468-2286-S9-R01	0.578	0.079	1.26	75.83	89.91	2.756	90.000	1.25
GTADP-1506-1500-S9-R01	0.593	0.079	1.26	44.88	58.85	2.756	59.055	1.25
GTADP-1506-1828-S9-R01	0.593	0.079	1.26	57.79	56.14	2.756	71.968	1.25
GTADP-1824-1524-S9-R01	0.718	0.118	1.26	46.14	60.20	2.756	60.315	1.25
GTADP-1824-1828-S9-R01	0.718	0.118	1.26	57.59	71.65	2.756	71.768	1.25
GTADP-1824-2286-S9-R01	0.718	0.118	1.26	75.83	89.88	2.756	90.000	1.25
GTADP-1864-1500-S9-R01	0.734	0.118	1.26	44.89	58.94	2.756	59.055	1.25
GTADP-1864-1828-S9-R01	0.734	0.118	1.26	57.80	71.85	2.756	71.969	1.25
GTADP-2380-1500-S9-R01	0.937	0.126	1.26	44.88	58.93	2.756	59.055	1.25
GTADP-2380-1524-S9-R01	0.937	0.126	1.26	45.94	59.99	2.756	60.118	1.25
GTADP-2380-1828-S9-R01	0.937	0.126	1.26	57.80	71.84	2.756	71.969	1.25
GTADP-2380-2286-S9-R01	0.937	0.126	1.26	75.83	89.87	2.756	90.000	1.25
GTADP-2936-1828-S9-R01	1.156	0.102	1.26	66.52	71.97	2.756	72.070	1.25

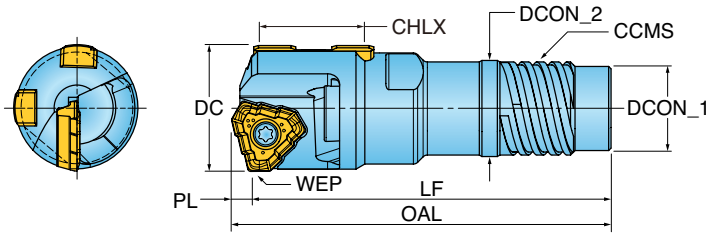


For Cross-Hole Applications:
Deep-Trio BTA, MC and GD with single row of guide pads can cross up to a .63" (16 mm) hole.
Deep-Trio MC and GD with a double row of guide pads can cross up to a 1.26" (32 mm) hole.

DEEP TRIO GD™ STANDARD GUNDRILL DRIVERS

	Driver Type	Drawing	DCON	LS	Driver Code	Carbide Tipped Gun Drills	Solid Carbide Gun Drills
METRIC	Cylindrical DIN1835A DIN6535HA		10	40	05	●	●
			12	45	06	●	●
			16	48	08	●	●
			20	50	10	●	
			25	56	11	●	
	Weldon DIN1835B DIN6535HB		10	40	18	●	●
			12	45	19	●	●
			16	48	20	●	●
			20	50	22	●	●
			25	56	23	●	
	Whistle Notch DIN1835E		10	40	30	●	●
			12	45	31	●	●
			16	48	32	●	●
			20	50	34	●	●
			25	56	35	●	
	Whistle Notch DIN6535HE		10	40	40	●	●
			12	45	41	●	●
			16	48	42	●	●
			18	50	44	●	●
	Central clamping surface 15°		10	40	54	●	●
			16	45	55	●	
			25	70	57	●	
INCH	Central clamping surface 15°		.750	2.748	56	●	
			1.00	2.748	58	●	
	Central clamping tapered		.750	2.748	76	●	
	Frontal clamping surface 2°		.750	2.748	79	●	
			1.00	2.748	80	●	
	Cylindrical DIN1835A DIN6535HA		.500	1.781	94	●	
			.750	2.031	95	●	
			1.000	2.281	96	●	
			1.250	2.281	97	●	
			1.250	2.755	S9	●	
	Weldon DIN1835B DIN6535HB		.500	1.781	98	●	
			.750	2.031	99	●	
			1.000	2.281	100	●	
			1.250	2.281	101	●	

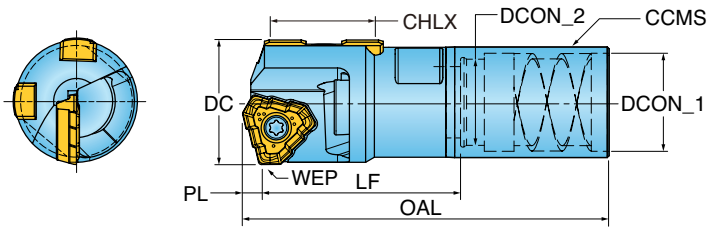
● Recommended design



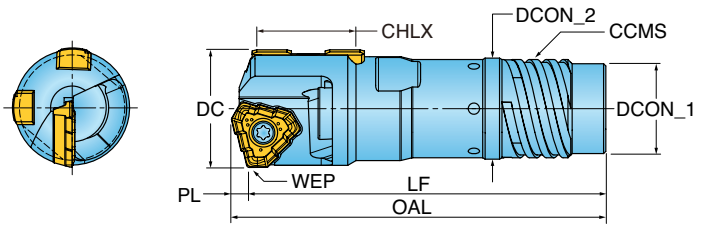
Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LF Functional Length	OAL Overall Length	DCON Shank Dia.	DCON2 Shank Dia.	CCMS Connection Code	TUBE Part Number
TBTA-DTX.XXXSE4-14	.630 - .657	0.087	0.63	2.17	2.25	0.425	0.496	BTA SE4-14	BTSI014
TBTA-DTX.XXXSE4-15	.658 - .696	0.087	0.63	2.17	2.25	0.465	0.535	BTA SE4-15	BTSI015
TBTA-DTX.XXXSE4-16	.697 - .744	0.118	0.63	2.21	2.32	0.492	0.571	BTA SE4-16	BTSI016
TBTA-DTX.XXXSE4-17	.745 - .787	0.118	0.63	2.21	2.32	0.531	0.610	BTA SE4-17	BTSI017
TBTA-DTX.XXXSE4-18	.788 - .858	0.126	0.63	2.36	2.49	0.551	0.630	BTA SE4-18	BTSI018
TBTA-DTX.XXXSE4-20	.859 - .866	0.126	0.63	2.50	2.63	0.630	0.709	BTA SE4-20	BTSI020
TBTA-DTX.XXXSE4-20	.867 - .948	0.134	0.63	2.58	2.71	0.630	0.709	BTA SE4-20	BTSI020
TBTA-DTX.XXXSE4-22	.949 - .984	0.134	0.63	2.58	2.71	0.689	0.768	BTA SE4-22	BTSI020
TBTA-DTX.XXXSE4-22	.985 - 1.039	0.142	0.63	2.66	2.80	0.689	0.768	BTA SE4-22	BTSI022
TBTA-DTX.XXXSE4-24	1.040 - 1.102	0.142	0.63	2.66	2.80	0.748	0.827	BTA SE4-24	BTSI024
TBTA-DTX.XXXSE4-24	1.103 - 1.130	0.180	0.63	2.76	2.94	0.748	0.827	BTA SE4-24	BTSI024
TBTA-DTX.XXXSE4-26	1.130 - 1.220	0.180	0.63	2.95	3.13	0.827	0.925	BTA SE4-26	BTSI026
TBTA-DTX.XXXSE4-28	1.221 - 1.260	0.180	0.63	2.95	3.13	0.906	1.004	BTA SE4-28	BTSI028
TBTA-DTX.XXXSE4-28	1.261 - 1.311	0.214	0.63	2.95	3.13	0.906	1.004	BTA SE4-28	BTSI028
TBTA-DTX.XXXSE4-30	1.312 - 1.425	0.214	0.63	3.13	3.34	1.004	1.102	BTA SE4-30	BTSI030
TBTA-DTX.XXXSE4-33	1.426 - 1.559	0.214	0.63	3.52	3.74	1.063	1.181	BTA SE4-33	BTSI033
TBTA-DTX.XXXSE4-36	1.560 - 1.575	0.214	0.63	3.72	3.93	1.181	1.299	BTA SE4-36	BTSI036

STANDARD ITEMS

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LF Functional Length	OAL Overall Length	DCON Shank Dia.	DCON2 Shank Dia.	CCMS Connection Code	TUBE Part Number
TBTA-DT.687SE4-15	0.687	0.087	0.566	2.165	2.252	0.465	0.535	BTA SE4-15	BTSI014
TBTA-DT.718SE4-16	0.718	0.118	0.629	2.205	2.323	0.492	0.571	BTA SE4-16	BTSI015
TBTA-DT.734SE4-16	0.734	0.118	0.629	2.205	2.323	0.492	0.571	BTA SE4-16	BTSI016
TBTA-DT.750SE4-17	0.750	0.118	0.629	2.205	2.323	0.531	0.610	BTA SE4-17	BTSI017
TBTA-DT.812SE4-18	0.812	0.126	0.629	2.362	2.488	0.531	0.630	BTA SE4-18	BTSI018
TBTA-DT.875SE4-20	0.875	0.134	0.629	2.579	2.713	0.630	0.709	BTA SE4-20	BTSI020
TBTA-DT.937SE4-20	0.937	0.134	0.629	2.579	2.713	0.630	0.709	BTA SE4-20	BTSI020
TBTA-DT1.000SE4-22	1.000	0.142	0.629	2.657	2.799	0.689	0.768	BTA SE4-22	BTSI022
TBTA-DT1.031SE4-22	1.031	0.142	0.629	2.657	2.799	0.689	0.768	BTA SE4-22	BTSI022
TBTA-DT1.250SE4-28	1.250	0.214	0.629	2.933	2.950	0.906	1.004	BTA SE4-28	BTSI028
TBTA-DT1.299SE4-28	1.299	0.214	0.629	2.933	2.950	0.906	1.004	BTA SE4-28	BTSI028
TBTA-DT1.375SE4-30	1.375	0.214	0.629	3.130	3.344	1.004	1.102	BTA SE4-30	BTSI030
TBTA-DT1.378SE4-30	1.378	0.214	0.629	3.130	3.344	1.004	1.102	BTA SE4-30	BTSI030
TBTA-DT1.456SE4-33	1.456	0.214	0.629	3.524	3.737	1.063	1.181	BTA SE4-33	BTSI033
TBTA-DT1.496SE4-33	1.496	0.214	0.629	3.524	3.737	1.063	1.181	BTA SE4-33	BTSI033
TBTA-DT1.500SE4-33	1.500	0.214	0.629	3.524	3.737	1.063	1.181	BTA SE4-33	BTSI033
TBTA-DT1.575SE4-36	1.575	0.214	0.629	3.720	3.934	1.181	1.299	BTA SE4-36	BTSI036



Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LF Functional Length	OAL Overall Length	DCON1 Shank Dia.	DCON2 Shank Dia.	CCMS Connection Code	TUBE Part Number
TBTA-DTX.XXXSI1-13A	0.629	0.087	0.63	2.11	2.19	0.488	0.425	BTA SI1-13A	BTSE013A
TBTA-DTX.XXXSI1-13B	.630 - .649	0.087	0.63	2.11	2.19	0.500	0.437	BTA SI1-13B	BTSE013B
TBTA-DTX.XXXSI1-14A	.650 - .679	0.087	0.63	2.11	2.19	0.528	0.465	BTA SI1-14A	BTSE014A
TBTA-DTX.XXXSI1-14B	.680 - .708	0.087	0.63	2.11	2.19	0.539	0.476	BTA SI1-14B	BTSE014B
TBTA-DTX.XXXSI1-15	.709 - .748	0.118	0.63	2.11	2.22	0.567	0.504	BTA SI1-15	BTSE015
TBTA-DTX.XXXSI1-16.5	.749 - .787	0.126	0.63	2.11	2.23	0.606	0.543	BTA SI1-16.5	BTSE016.5
TBTA-DTX.XXXSI1-18	.788 - .866	0.126	0.63	2.28	2.41	0.650	0.571	BTA SI1-18	BTSE018
TBTA-DTX.XXXSI1-20	.867 - .984	0.134	0.63	2.36	2.50	0.748	0.630	BTA SI1-20	BTSE020
TBTA-DTX.XXXSI1-22	.985 - 1.062	0.142	0.63	2.56	2.70	0.787	0.669	BTA SI1-22	BTSE022
TBTA-DTX.XXXSI1-24	1.063 - 1.102	0.142	0.63	2.56	2.70	0.866	0.748	BTA SI1-24	BTSE024
TBTA-DTX.XXXSI1-24	1.103 - 1.181	0.181	0.63	2.76	2.94	0.866	0.748	BTA SI1-24	BTSE024
TBTA-DTX.XXXSI1-26	1.182 - 1.259	0.181	0.63	2.95	3.13	0.945	0.827	BTA SI1-26	BTSE026
TBTA-DTX.XXXSI1-28	1.260 - 1.260	0.181	0.63	2.95	3.13	1.024	0.906	BTA SI1-28	BTSE028
TBTA-DTX.XXXSI1-28	1.261 - 1.338	0.213	0.63	2.93	3.15	1.024	0.906	BTA SI1-28	BTSE028
TBTA-DTX.XXXSI1-30	1.339 - 1.456	0.212	0.63	3.52	3.74	1.063	0.945	BTA SI1-30	BTSE030
TBTA-DTX.XXXSI1-33	1.457 - 1.535	0.213	0.63	3.72	3.93	1.181	1.063	BTA SI1-33	BTSE033
TBTA-DTX.XXXSI1-33	1.536 - 1.574	0.213	0.98	3.72	3.93	1.181	1.063	BTA SI1-33	BTSE033
TBTA-DTX.XXXSI1-36	1.575 - 1.575	0.213	0.98	3.92	4.13	1.299	1.181	BTA SI1-36	BTSE036

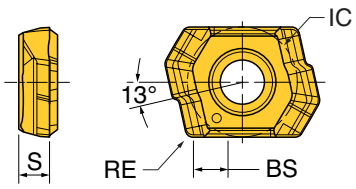


Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LF Functional Length	OAL Overall Length	DCON1 Shank Dia.	DCON2 Shank Dia.	CCMS Connection Code	TUBE Part No. (Outer)	TUBE Part No. (Inner)
TBTA-DTX.XXXDE4-18	.725 - .787	0.118	0.63	2.40	2.19	0.551	0.630	BTA DE4-18	BTDO018	BTDI012
TBTA-DTX.XXXDE4-19.5	.788 - .858	0.126	0.63	2.50	2.19	0.630	0.709	BTA DE4-19.5	BTDO019.5	BTDI014
TBTA-DTX.XXXDE4-21.5	.859 - .866	0.126	0.63	2.50	2.19	0.689	0.768	BTA DE4-21.5	BTDO021.5	BTDI015
TBTA-DTX.XXXDE4-21.5	.867 - .948	0.134	0.63	2.58	2.19	0.689	0.768	BTA DE4-21.5	BTDO021.5	BTDI015
TBTA-DTX.XXXDE4-23.5	.949 - .984	0.134	0.63	2.58	2.22	0.748	0.837	BTA DE4-23.5	BTDO023.5	BTDI016
TBTA-DTX.XXXDE4-23.5	.985 - 1.039	0.142	0.63	2.66	2.23	0.748	0.837	BTA DE4-23.5	BTDO023.5	BTDI016
TBTA-DTX.XXXDE4-26	1.040 - 1.102	0.142	0.6Z3	2.78	2.41	0.827	0.925	BTA DE4-26	BTDO026	BTDI018
TBTA-DTX.XXXDE4-26	1.103 - 1.130	0.181	0.63	2.95	3.13	0.827	0.925	BTA DE4-26	BTDO026	BTDI018
TBTA-DTX.XXXDE4-28	1.131 - 1.181	0.181	0.63	2.95	3.13	0.906	1.004	BTA DE4-28	BTDO028	BTDI020
TBTA-DTX.XXXDE4-28	1.182 - 1.220	0.181	0.63	2.95	3.13	0.906	1.004	BTA DE4-28	BTDO028	BTDI020
TBTA-DTX.XXXDE4-30.5	1.221 - 1.260	0.181	0.63	3.15	3.33	1.004	1.102	BTA DE4-30.5	BTDO030.5	BTDI022
TBTA-DTX.XXXDE4-30.5	1.261 - 1.311	0.213	0.63	3.13	3.34	1.004	1.102	BTA DE4-30.5	BTDO030.5	BTDI022
TBTA-DTX.XXXDE4-33	1.312 - 1.425	0.212	0.63	3.52	3.74	1.063	1.181	BTA DE4-33	BTDO033	BTDI024
TBTA-DTX.XXXDE4-35.5	1.426 - 1.535	0.213	0.63	3.72	3.93	1.181	1.299	BTA DE4-35.5	BTDO035.5	BTDI026
TBTA-DTX.XXXDE4-35.5	1.536 - 1.559	0.213	0.98	3.72	3.93	1.181	1.299	BTA DE4-35.5	BTDO035.5	BTDI026
TBTA-DTX.XXXDE4-39	1.560 - 1.575	0.213	0.98	3.92	4.13	1.299	1.417	BTA DE4-39	BTDO039	BTDI029

STANDARD ITEMS

Part Number	DC Cutting Dia.	PL Point Length	CHLX Cross-Hole Length Max.	LF Functional Length	OAL Overall Length	DCON1 Shank Dia.	DCON2 Shank Dia.	CCMS Connection Code	TUBE Part No. (Outer)	TUBE Part No. (Inner)
TBTA-DT.750DE4-18	0.750	0.118	0.629	2.402	2.193	0.551	0.630	BTA DE4-18	BTDO018	BTDI012
TBTA-DT1.000DE4-23.5	1.000	0.142	0.629	2.657	2.232	0.748	0.837	BTA DE4-23.5	BTDO023.5	BTDI016

DEEP TRIO™ LPHT INSERTS

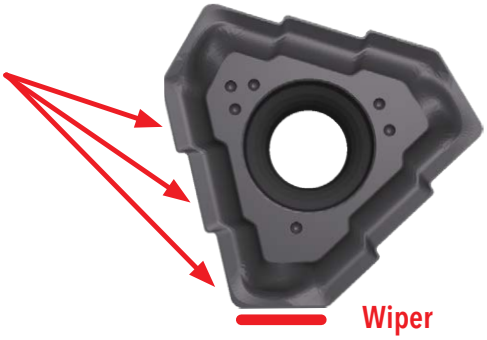


Drill Diameter - inch (mm)	Insert Number	Dims (inch)		Grade
		IC Inscribed Circle	S Thickness	IN2005
.472 - .550" (12.00mm - 13.99mm)	LPHT060204R-DT	0.278	0.078	•

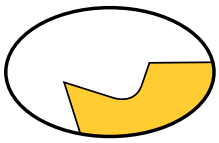
• = Stocked Items

DEEP TRIO™ TPHT INSERT FEATURES

Chip Splitter

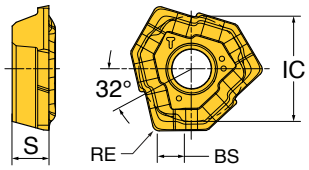


Positive Chipbreaker

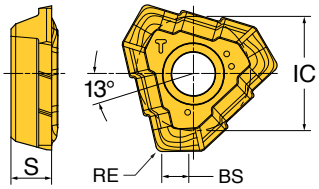


DEEP TRIO™ TPHT...-DT INSERTS

TPHT07...-DT - TPHT08...-DT



TPHT09...-DT - TPHT13...-DT

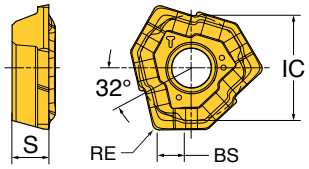


Drill Diameter - inch (mm)	Insert Number	Dims (inch)		Grade
		IC Inscribed Circle	S Thickness	IN2005
.551 - .629" (14.00mm - 15.99mm)	TPHT070304R-DT	0.302	0.090	•
.630 - .708" (16.00mm - 18.00mm)	TPHT080304R-DT	0.336	0.090	•
.709 - .787" (18.01mm - 20.00mm)	TPHT090305R-DT	0.328	0.118	•
.788 - .865" (20.01mm - 21.99mm)	TPHT100305R-DT	0.363	0.130	•
.866 - 984" (22.00mm - 25.00mm)	TPHT110405R-DT	0.409	0.150	•
.985 - 1.102" (25.01mm - 28.00mm)	TPHT120405R-DT	0.456	0.169	•
1.103 - 1.260" (28.01mm - 32.00mm)	TPHT130408R-DT	0.506	0.187	•
1.261 - 1.575" (32.01mm - 40.00mm)	TPHT140510R-DT	0.663	0.207	•

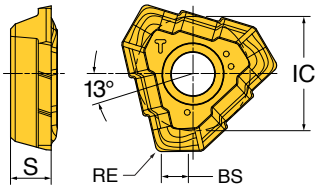
• = Stocked Items

DEEP TRIO™ TPHT...-ML INSERTS

TPHT07...-DT - TPHT08...-DT

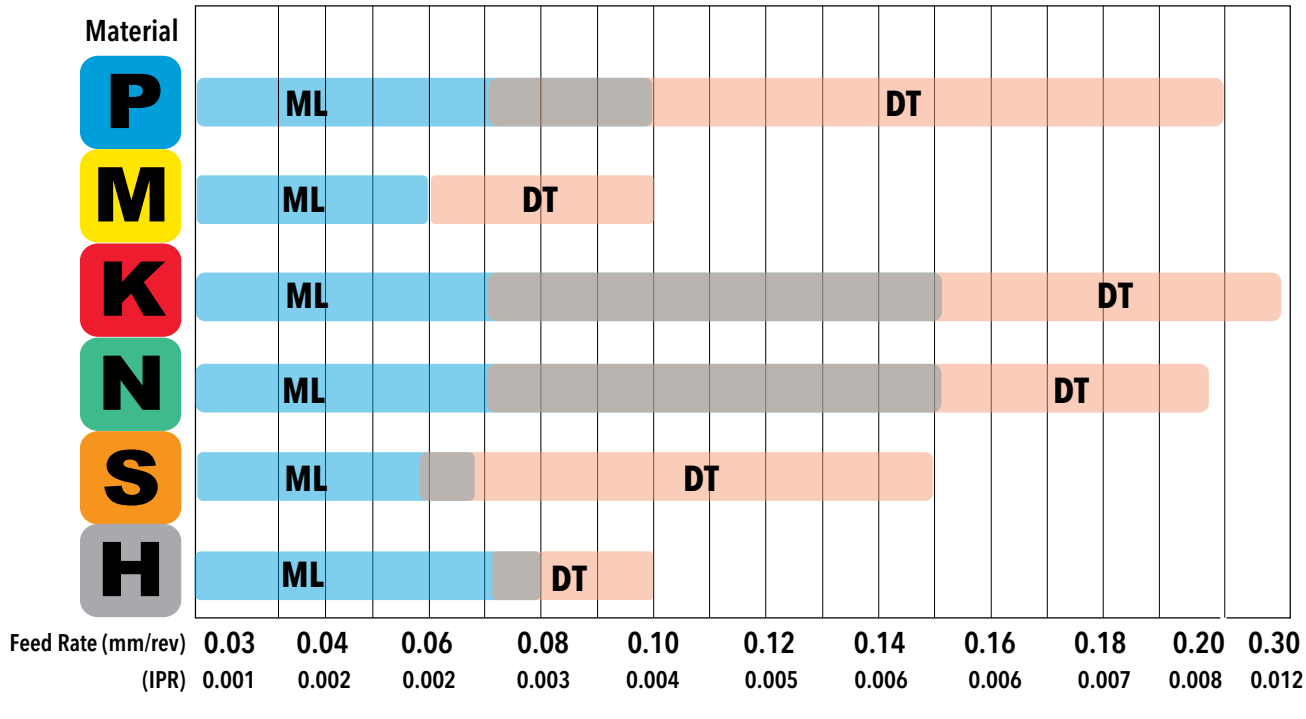


TPHT09...-DT - TPHT13...-DT

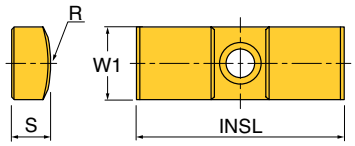


Drill Diameter - inch (mm)	Insert Number	Dims (inch)		Grade
		IC Inscribed Circle	S Thickness	IN2005
.551 - .629" (14.00mm - 15.99mm)	TPHT070304R-ML	0.302	0.090	•
.630 - .708" (16.00mm - 18.00mm)	TPHT080304R-ML	0.336	0.090	•
.709 - .787" (18.01mm - 20.00mm)	TPHT090305R-ML	0.328	0.118	•
.788 - .865" (20.01mm - 21.99mm)	TPHT100305R-ML	0.363	0.130	•
.866 - 984" (22.00mm - 25.00mm)	TPHT110405R-ML	0.409	0.150	•
.985 - 1.102" (25.01mm - 28.00mm)	TPHT120405R-ML	0.456	0.169	•
1.103 - 1.260" (28.01mm - 32.00mm)	TPHT130408R-ML	0.506	0.187	•

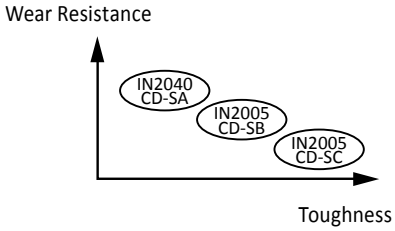
• = Stocked Items



DEEP TRIO™ GUIDE PADS - MC/GD



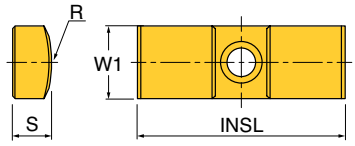
GRADE APPLICATION



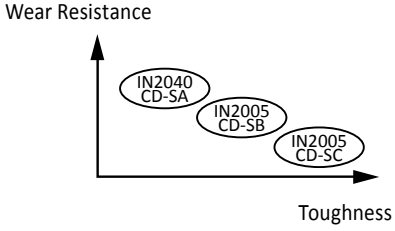
Drill Diameter - inch (mm)	Guide Pad Size	Dims (inch)				Grades		
		W1	S	INSL	R	IN2040 (CD-SA)	IN2005 (CD-SB)	IN2030 (CD-SC)
.472 - .550" (12.00mm - 13.99mm)	**PAD-GP04-016-055**	0.157	0.078	0.629	0.216	•	•	•
.551 - .708" (14.00mm - 18.00mm)	**PAD-GP05-018-060**	0.196	0.098	0.708	0.295	•	•	•
.709 - .826" (18.01mm - 20.99mm)	**PAD-GP06-020-085**	0.236	0.118	0.787	0.346	•	•	•
.827 - .865" (21.00mm - 21.99mm)	**PAD-GP06-020-100**	0.236	0.118	0.787	0.394	•	•	•
.866 - 1.180" (22.00mm - 29.99mm)	**PAD-GP06-020-120**	0.236	0.118	0.787	0.472	•	•	•
1.181 - 1.535" (30.00mm - 38.99mm)	**PAD-GP07-020-120**	0.276	0.138	0.787	0.472	•	•	•
1.536 - 1.575" (39.00mm - 40.00mm)	**PAD-GP08-025-155**	0.315	0.177	0.984	0.610	•	•	•

• = Stocked Items

DEEP TRIO™ GUIDE PADS - BTA

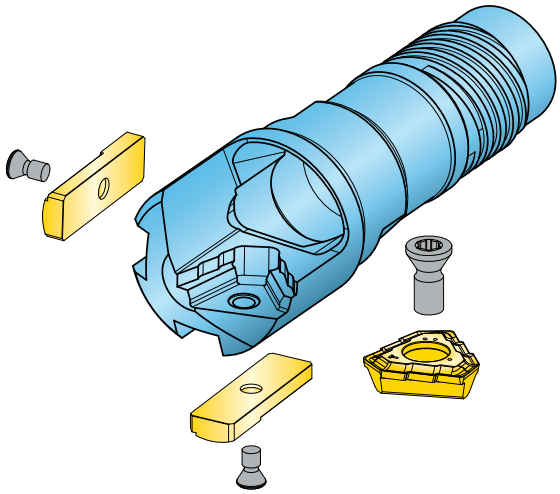


GRADE APPLICATION



Drill Diameter - inch (mm)	Guide Pad Size	Dims (inch)				Grades		
		W1	S	INSL	R	IN2040 (CD-SA)	IN2005 (CD-SB)	IN2030 (CD-SC)
630 - 709" (16.00mm - 18.00mm)	**PAD-GP06-020-075**	0.236	0.118	0.787	0.295	•	•	•
.710 - .858" (18.01mm - 21.79mm)	**PAD-GP06-020-085**	0.236	0.118	0.787	0.346	•	•	•
.859 - 1.039" (21.80mm - 26.39mm)	**PAD-GP06-020-100**	0.236	0.118	0.787	0.394	•	•	•
1.040 - 1.180" (26.40mm - 29.99mm)	**PAD-GP06-020-120**	0.236	0.118	0.787	0.472	•	•	•
1.181 - 1.260" (30.00mm - 32.00mm)	**PAD-GP07-020-120**	0.276	0.138	0.787	0.472	•	•	•

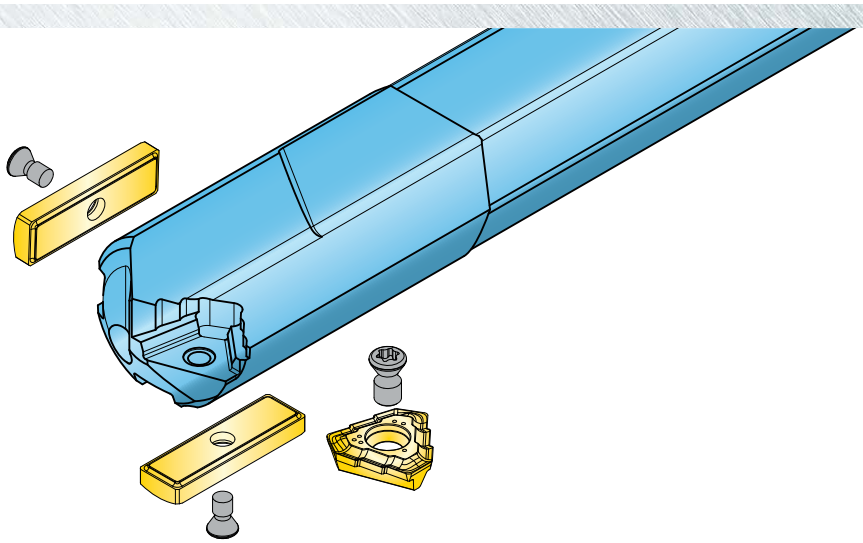
• = Stocked Items



Components		Drill Diameter (inch)				
		.630 - .697	.698 - .709	.710 - .787	.788 - 858	.859 - 1.039
Insert	Part No.	TPHT080305R	TPHT090305R	TPHT090305R	TPHT100305R	TPHT110405R
	Screw	CSTB2.5S	CSTB2.5S	CSTB2.5S	CSTB3S	CSTB3.5H
	Wrench	T-8F	T-8F	T-8F	T-9F	T-15F
Guide Pads	Part No.	PAD-GP06-020-075	PAD-GP06-020-075	PAD-GP06-020-085	PAD-GP06-020-085	PAD-GP06-020-100
	Screw	CSTB2.2S	CSTB2.2S	CSTB2.2S	CSTB2.2S	CSTB2.2S
	Wrench	T-7F	T-7F	T-7F	T-7F	T-7F

Components		Drill Diameter (inch)		
		1.040 - 1.102	1.103 - 1.180	1.181 - 1.260
Insert	Part No.	TPHT120405R	TPHT130408R	TPHT130408R
	Screw	CSTB-4S	SR16-212/L10	SR16-212/L10
	Wrench	T-15F	T-20/5	T-20/5
Guide Pads	Part No.	PAD-GP06-020-120	PAD-GP06-020-120	PAD-GP07-020-120
	Screw	CSTB2.2S	CSTB2.2S	CSTB3S
	Wrench	T-7F	T-7F	T-9F

DEEP TRIO™ PARTS LIST - MC/GD

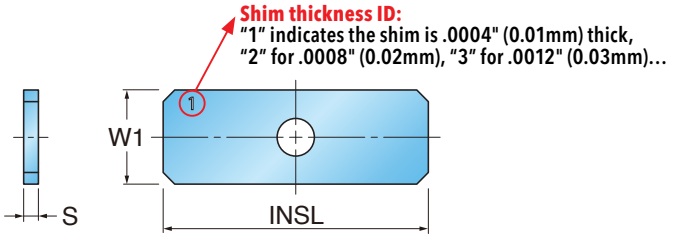


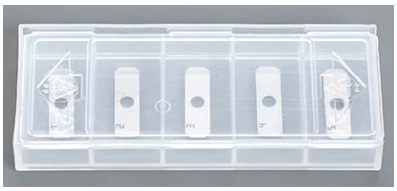
Components		Drill Diameter (inch)				
		.472 - .550	.551 - .629	.630 - .708	.709 - .787	.788 - .826
Insert	Part No.	LPHT060204R	TPHT070304R	TPHT080305R	TPHT090305R	TPHT100305R
	Screw	SR10503833L040	SR14-560/S	SR14-560/S	SR14-560/S	SR34-506
	Wrench	T-7F	T-8F	T-8F	T-8F	T-9F
Guide Pads	Part No.	PAD-GP04-016-055	PAD-GP05-018-060	PAD-GP05-018-060	PAD-GP06-020-085	PAD-GP06-020-085
	Screw	CSPB-2L043	SR34-508	SR34-508	SR34-508	SR34-508
	Wrench	IP-6F	T-7F	T-7F	T-7F	T-7F

Components		Drill Diameter (inch)				
		.827 - .865	.866 - .984	.985 - 1.102	1.103 - 1.180	1.181 - 1.260
Insert	Part No.	TPHT100305R	TPHT110405R	TPHT120405R	TPHT130408R	TPHT130408R
	Screw	SR34-506	SR14-571/S	SR14-506	SR16-212/L10	SR16-212/L10
	Wrench	T-9F	T-10F	T-15F	T-20/5	T-20/5
Guide Pads	Part No.	PAD-GP06-020-100	PAD-GP06-020-120	PAD-GP06-020-120	PAD-GP06-020-120	PAD-GP07-020-120
	Screw	SR34-508	SR34-508	SR34-508	SR34-508	CSTB-3L065
	Wrench	T-7F	T-7F	T-7F	T-7F	T-9F

Components		Drill Diameter (inch)	
		1.261 - 1.535	1.536 - 1.575
Insert	Part No.	TPHT140510R	TPHT140510R
	Screw	SR16-212/L10	SR16-212/L10
	Wrench	T-20/5	T-20/5
Guide Pads	Part No.	PAD-GP07-020-120	PAD-GP08-025-155
	Screw	CSTB-3S	CSTB-3S
	Wrench	T-9F	T-9F

DEEP TRIO™ DIAMETER ADJUSTING SHIMS



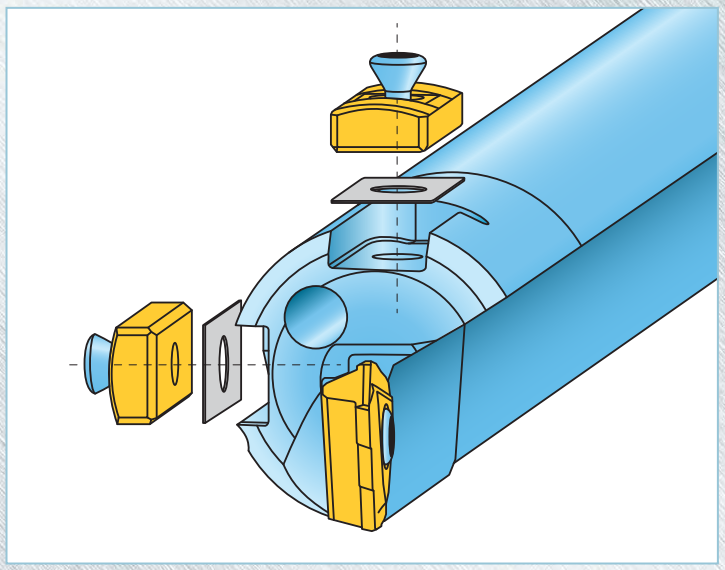


0.01mm / 0.02mm / 0.03mm / 0.04mm / 0.05mm
.0004" / .0008" / .0012" / .0016" / .0020"

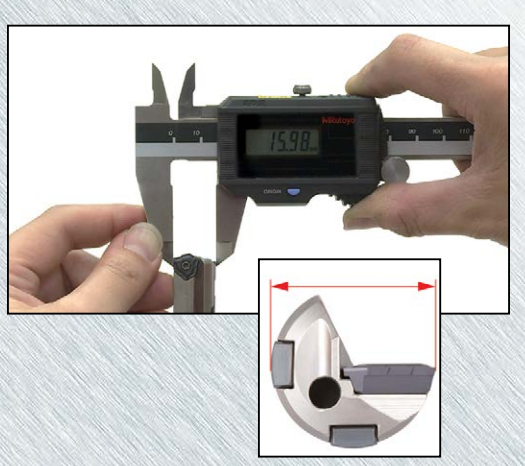
Part Number	W1 Width inch (mm)	INSL Length inch (mm)	S Thickness inch (mm)	Application Guide Pad Size
SHIMSET-GP04	.157 (4)	.626 (15.9)	.0004 - .0020 (0.01 - 0.05)	PAD-GO04
SHIMSET-GP05	.197 (5)	.709 (18)	.0004 - .0020 (0.01 - 0.05)	PAD-GO05
SHIMSET-GP06	.236 (6)	.787 (20)	.0004 - .0020 (0.01 - 0.05)	PAD-GO06

- A shim set contains 5 shims in thicknesses of .0004" (0.01mm), .0008" (0.02mm), .0012" (0.03mm), .0016" (0.04mm) and .0020" (0.05mm), respectively.
- **Adjusting shims are sold by set only, not to be sold separately.**

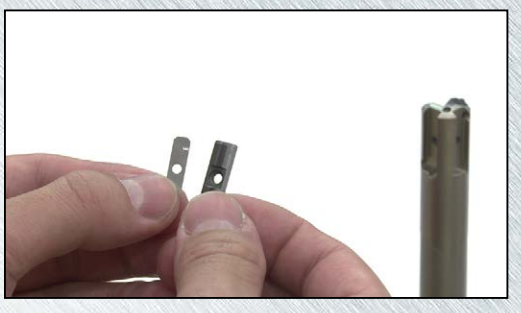
Diameter Adjustments inch (mm)	Shim(s) for measuring guide pad inch (mm)	Shim(s) for supporting guide pad inch (mm)	Number of shim sets needed
+.0004 (+0.01)	.0004 (0.01)	-	1
+.0008 (+0.02)	.0008 (0.02)	.0004 (0.01)	1
+.0012 (+0.03)	.0012 (0.03)	.0004 + .0008 (0.01 + 0.02)	1
+.0016 (+0.04)	.0016 (0.04)	.0004 + .0012 (0.01 + 0.03)	1
+.0020 (+0.05)	.0020 (0.05)	.0008 + .0012 (0.02 + 0.03)	1
+.0024 (+0.06)	.0004 + .0020 (0.01 + 0.05)	.0008 + .0016 (0.02 + 0.04)	1
+.0028 (+0.07)	.0008 + .0020 (0.02 + 0.05)	.0012 + .0016 (0.03 + 0.04)	1
+.0031 (+0.08)	.0012 + .0020 (0.03 + 0.05)	.0016 + .0016 (0.04 + 0.04)	2
+.0035 (+0.09)	.0016 + .0020 (0.04 + 0.05)	.0016 + .0020 (0.04 + 0.05)	2
+.0039 (+0.010)	.0020 + .0020 (0.05 + 0.05)	.0016 + .0016 + .0008 (0.04 + 0.04 +0.02)	2



DEEP•TRIO™ HOW TO INSTALL ADJUSTING SHIMS



STEP 1:
Measure the Deep•Trio drill diameter between the measuring guide pad and the insert cutting edge. If a presetter is not available, use a micrometer or caliper.
For a precise drill diameter measurement, it is recommended to test-drill a hole and measure the hole diameter.



STEP 2:
Select the shim combinations according to the chart on Page 15 to obtain the required hole diameter. Take into consideration that the actual diameter of the drilled hole tends to be slightly larger (usually +.0008" to +.0012") than the drill's nominal diameter – i.e. add .0008"-.0012" to the measured drill diameter in Step 1 above before the final drill diameter.

STEP 3:
Remove the guide pads.

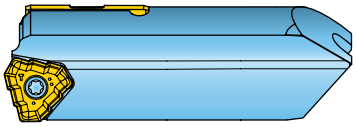
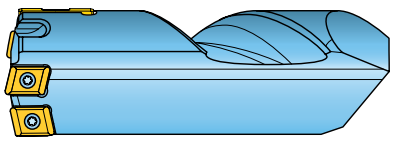
STEP 4:
Install the adjusting shims underneath the guide pads, respectively. Put the guide pads back on the tool.

STEP 5:
Measure the drill diameter again to confirm the required diameter is obtained on the Deep•Trio.

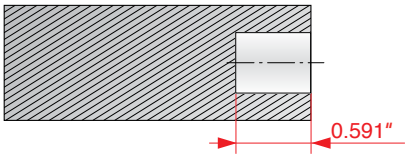
STEP 6:
Test drill a hole to confirm that the required hole diameter is achieved.

DEEP TRIO™ TRH HEAD

Now Available! The TRH brazed head of the Deep Trio tools are now available as a separate item which allows customers to repair their Deep Trio tools by brazing a new head onto the body after removing the old one.

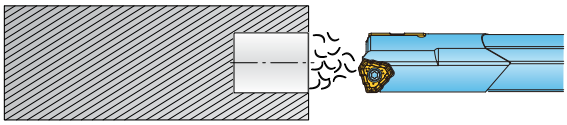
	Type	Tool Dia(mm)	Tool Dia(in)	Part Number
	1 insert type (metric)	12.70	0.500	TRH-12.70MKT
		14.00	0.551	TRH-14.00 MKT
		14.50	0.571	TRH-14.50 MKT
		15.00	0.591	TRH-15.00 MKT
		16.00	0.630	TRH-16.00 MKT
		16.50	0.650	TRH-16.50 MKT
		17.00	0.669	TRH-17.00 MKT
		17.50	0.689	TRH-17.50 MKT
		18.00	0.709	TRH-18.00 MKT
		18.50	0.728	TRH-18.50 MKT
		19.00	0.748	TRH-19.00 MKT
		19.50	0.768	TRH-19.50 MKT
		20.00	0.787	TRH-20.00 MKT
		21.00	0.827	TRH-21.00 MKT
		22.00	0.866	TRH-22.00 MKT
		22.50	0.886	TRH-22.50 MKT
		23.00	0.906	TRH-23.00 MKT
		23.50	0.925	TRH-23.50 MKT
		24.00	0.945	TRH-24.00 MKT
		25.00	0.984	TRH-25.00 MKT
		26.00	1.024	TRH-26.00 MKT
		27.00	1.063	TRH-27.00 MKT
		28.00	1.102	TRH-28.00 MKT
	1 insert type (inch)	12.70	0.500	TRH-12.70 MKT
		14.30	0.563	TRH-14.30 MKT
		15.90	0.626	TRH-15.90 MKT
		17.50	0.689	TRH-17.50 MKT
		19.10	0.752	TRH-19.10 MKT
		20.60	0.811	TRH-20.60 MKT
		22.20	0.874	TRH-22.20 MKT
		23.80	0.937	TRH-23.80 MKT
		25.40	1.000	TRH-25.40 MKT
		28.60	1.126	TRH-28.60 MKT
		31.80	1.252	TRH-31.80 MKT
	Cross hole type	14.00	0.551	TRH-14.00CH MKT
		15.00	0.591	TRH-15.00CH MKT
		16.00	0.630	TRH-16.00CH MKT
		17.00	0.669	TRH-17.00CH MKT
		18.00	0.709	TRH-18.00CH MKT
		19.00	0.748	TRH-19.00CH MKT
		20.00	0.787	TRH-20.00CH MKT
		21.00	0.827	TRH-21.00CH MKT
		22.00	0.866	TRH-22.00CH MKT
		23.00	0.906	TRH-23.00CH MKT
		24.00	0.945	TRH-24.00CH MKT
		25.00	0.984	TRH-25.00CH MKT
		26.00	1.024	TRH-26.00CH MKT
		27.00	1.063	TRH-27.00CH MKT
		28.00	1.102	TRH-28.00CH MKT
	3 Insert Type	29.00	1.142	TRH-29.00-FB MKT
		30.00	1.181	TRH-29.00-FB MKT
		31.00	1.220	TRH-29.00-FB MKT
		32.00	1.260	TRH-29.00-FB MKT
		33.00	1.299	TRH-29.00-FB MKT
		34.00	1.339	TRH-29.00-FB MKT
		35.00	1.378	TRH-29.00-FB MKT
		36.00	1.417	TRH-29.00-FB MKT

DEEP TRIO™ DRILLING PROCESS (STARTING)



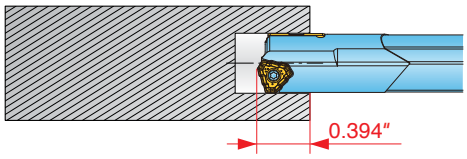
1. Pilot Hole

Drill Diameter +0.0039" ~ +0.0012"
Depth = 0.591"



2. Approach - Rapid, Coolant On

Vc = 16 ~ 32 SFM
f = 0.02" ~ 0.039"/rev
Depth = 0.394"

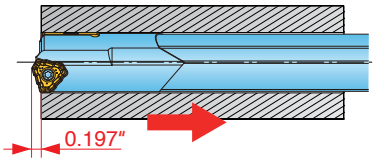


3. Enter Pilot Hole, Begin Drilling
0.394" ~ 0.984"

Vc: 100 %
f: 80 %

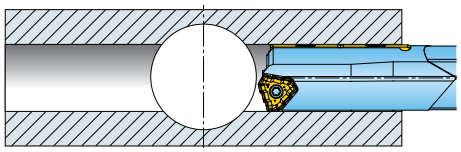
4. Drill Feed After 1.00"

Vc: 100 %
f: 100 %



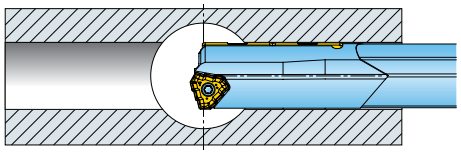
5. Retract. Stop rotation and coolant before moving the drill back to starting position.

DEEP TRIO™ DRILLING PROCESS (CROSS-HOLES)



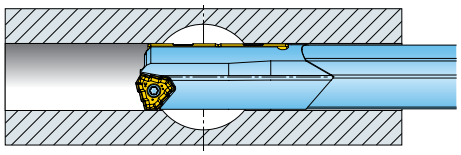
1. 1 - 2 mm before cross-hole

Reduce feed by 30 – 50%
Maintain same RPM



2. Cross through hole

Maintain same RPM



3. 1 - 2 mm after cross-hole.

Resume original feed rate and RPM

***NOTE:**
Possible risks: To prevent injuries, do NOT operate any deep hole drill, which uses pre-drilled pilot hole, at full speed before entering the pilot hole. The deep hole drill may fracture due to vibration and cause injuries.
Counter measures: Do NOT operate the deep hole drill at full speed before engaging the pilot hole. Enter the pilot hole slowly at a speed of 50 - 100 RPM.

DEEP TRIO BTA™ DRILL HEAD OPERATING PARAMETERS

ISO	Material	Condition	ML Chip Breaker		
			Speed (SFM)	Feed (in/rev)	Feed (in/rev)
				.551 - .708	.709 - 1.260
P	1, 2	Low carbon steels (C <0.3)	164 - 328	.001 - .004	.001 - .004
	3, 4, 5	Carbon steels (C>0.3)	164 - 328	.001 - .004	.001 - .005
	6, 10	Low alloy steels	164 - 328	.001 - .004	.001 - .004
	7, 8, 9, 11	Alloy steels	164 - 328	.001 - .004	.001 - .005
M	12, 13	Stainless steels (Matensitic and ferritic)	164 - 328	.001 - .002	.001 - .002
	14	Stainless steels (Austenitic)			
		Stainless steels (Precipitation hardening)			
K	15, 16, 19, 20	Ductile cast iron	164 - 328	.001 - .006	.001 - .007
	17, 18	Gray cast iron			
N	21, 22, 23, 24	Aluminum Alloy	262 - 525	.001 - .006	.001 - .006
S	31, 32, 33, 34, 35	High Temp Alloy, Inconel 718, etc.	66 - 164	.001 - .002	.001 - .003
	36, 37	Titanium Alloy, Ti-Al-4V etc...	98 - 197	.001 - .004	.001 - .005
H	38, 39, 40, 41	Hardened steel >40HRC	131 - 328	.001 - .003	.001 - .004

ISO	Material	Condition	DT Chip Breaker				
			Speed (SFM) .472 - .551	Speed (SFM) .551 - .700"	Feed (in/rev)	Feed (in/rev)	Feed (in/rev)
					.472 - .551	.551 - .708	.709 - 1.260
P	1, 2	Low carbon steels (C <0.3)	262 - 459	262 - 394	.002 - .004	.003 - .004	.003 - .004
	3, 4, 5	Carbon steels (C>0.3)	262 - 459	262 - 394	.002 - .006	.003 - .006	.003 - .008
	6, 10	Low alloy steels	262 - 459	262 - 394	.002 - .004	.003 - .004	.003 - .004
	7, 8, 9, 11	Alloy steels	262 - 459	262 - 394	.002 - .006	.003 - .006	.003 - .008
M	12, 13	Stainless steels (Matensitic and ferritic)	197 - 328	197 - 328	.002 - .004	.003 - .004	.003 - .004
	14	Stainless steels (Austenitic)					
		Stainless steels (Precipitation hardening)					
K	15, 16, 19, 20	Ductile cast iron	262 - 459	197 - 459	.002 - .010	.003 - .010	.003 - .012
	17, 18	Gray cast iron					
N	21, 22, 23, 24	Aluminum Alloy	328 - 656	328 - 656	.002 - .008	.003 - .008	.003 - .008
S	31, 32, 33, 34, 35	High Temp Alloy, Inconel 718, etc.	66 - 164	66 - 164	.002 - .003	.002 - .003	.002 - .004
	36, 37	Titanium Alloy, Ti-Al-4V etc...	98 - 197	98 - 197	.002 - .005	.003 - .005	.003 - .006
H	38, 39, 40, 41	Hardened steel >40HRC	164 - 328	131 - 328	.002 - .003	.002 - .003	.002 - .004