

TOTIME



BTA DRILL HEADS

チューブシート加工専用
ドリルヘッド



TOTIME
BTA-BTS



TOTIME
BTA-BCT



TOTIME
BTA-BRS (TiAIN)



TOTIME
BTA-BPO (TiN)

Best Recommendation for Tube Sheet Drilling (Alternative to Taegutec, Unitac Drill Heads)

Deep Hole Drilling

A deep hole is defined by its depth-to-diameter ratio (D:d), and typically holes greater than 10:1 are considered deep holes. Deep hole drilling into metal has a range of applications across several industries, with its origins tracing back to the need for straighter, more accurate gun barrels, and expanding as other industries integrated deep hole drilling processes to improve their own applications.

Deep hole drilling consists of BTA drilling and gun drilling, with additional processes designed for specific tolerance objectives and generally performed on BTA-style deep hole drilling machines. Deep hole drilling is used in a variety of materials from aluminum to super-alloys, and is capable of achieving tight diameter control, straightness, and superior surface finish into workpieces.

Deep hole drilling processes work by using special tools and setups to deliver high pressure coolant, evacuate chips cleanly, and achieve depth-to-diameter holes into metal beyond what a common CNC machine can reach. This allows manufacturers to achieve their manufacturing tolerances and production requirements reliably, accurately, and efficiently.

BTA Drilling

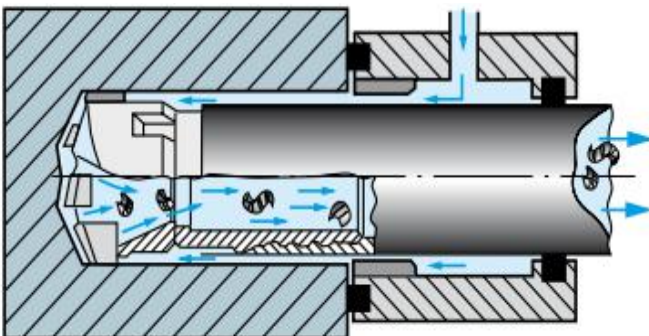
BTA deep hole drilling is used for larger hole drilling, typically 20 – 200 mm [0.80 – 8.00 in] in diameter. High-pressure coolant is introduced around the outside of the tool through the pressure head assembly. Chips are discharged through the tool center, through the drill tube and machine spindle.

BTA drilling typically performs 5-7 times faster than gundrilling, and requires higher power. Additional extended diameters can be drilled on BTA machines with secondary deep hole operations, such as counter-boring.

There is 2 types of drilling which are DTS systems and STS systems. We will only focus on STS systems as all our drill heads are for STS system.

The BTA—STS Drill is a single Tube Drilling system used in Deep Hole Drilling applications where fast metal removal is needed. Drill sizes in BTA Drills are from 0.312"-2.559" diameter. New drills are manufactured in a number of grades to fit individual customer requirements. BTA (STS) Drills of brazed construction can be re-tipped in our plant to an "as new" condition at a significant cost reduction and savings to the customer. These drills require high pressure coolant to flush the chips through the tube to the chip box. The STS may also be referred to as the BTA system in the deep hole drilling process.

STS DRILLING SYSTEM

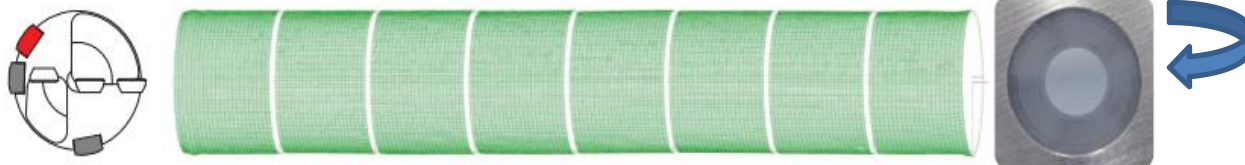


CT Coated Drills: Suitable for Medium and High speed drilling with highly accuracy and longer tool's life. (CT coating is a very special Japanese technology coating)

Drill Heads Design with 3 Guide Pads(CT Coating)

A. Unique Design of 3 Flutes with 3 Guide Pads Drill Head(CT Coating)

Feature: Reduced vibration during drilling and highly improved the roundness of the drilling holes
Holes with perfect roundness after drilling

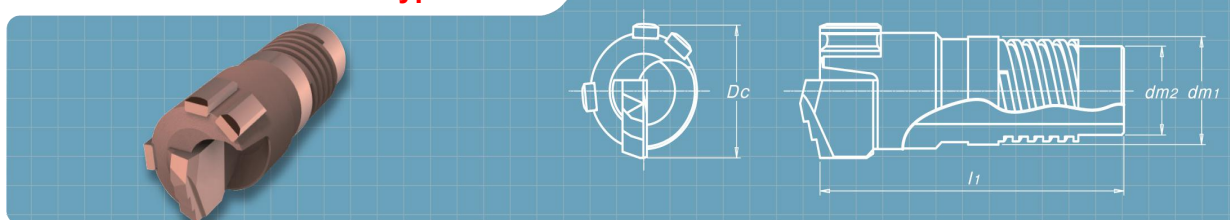


3 Flutes with 3 Guide Pads Type Drill Head



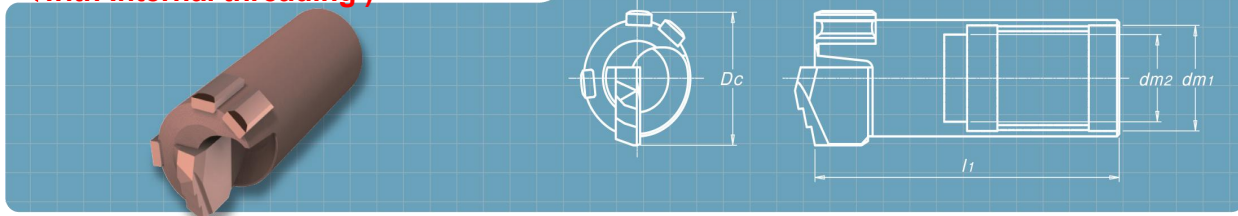
Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT-3	15.60-16.70	BA4S-0097	14	12.6	10.8	40
BTA-Dxxxx-CT-3	17.71-18.90	BA4S-0099	16	14.5	12.5	40
BTA-Dxxxx-CT-3	18.91-20.00	BA4S-0000	17	15.5	13.5	44

1 Flute with 3 Guide Pads Type Drill Head



Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT-T-3	15.60-16.70	BA4S-0097	14	12.6	10.8	40

1 Flute with 3 Guide Pads Type Drill Head (with Internal threading)



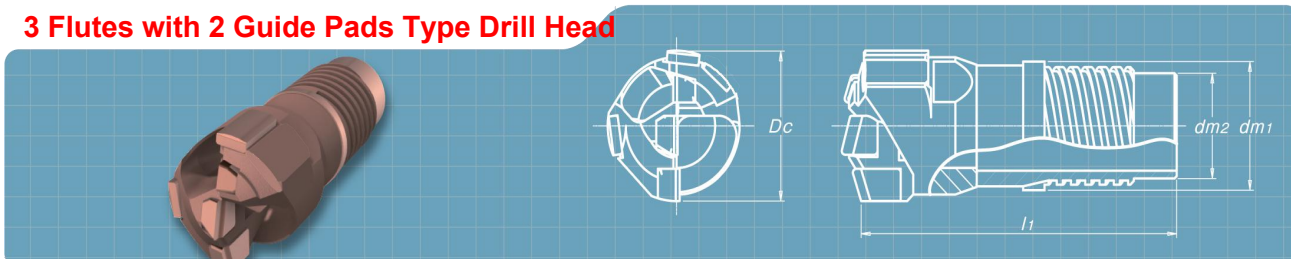
Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT-E-3	15.51-16.00	BA1S-1301	13	12.4	10.8	40
BTA-Dxxxx-CT-E-3	16.01-16.50	BA1S-1302	13	12.7	11.1	40
BTA-Dxxxx-CT-E-3	16.51-17.25	BA1S-1401	14	13.4	11.8	40
BTA-Dxxxx-CT-E-3	17.26-18.00	BA1S-1402	14	13.7	12.1	40
BTA-Dxxxx-CT-E-3	18.01-19.00	BA1S-1500	15	14.4	12.8	40
BTA-Dxxxx-CT-E-3	19.01-19.50	BA1S-1650	16.5	15.4	13.8	40

Drill Heads Design with 2 Guide Pads(CT Coating)

B. Drill Heads Design with 2 Guide Pads(CT Coating)

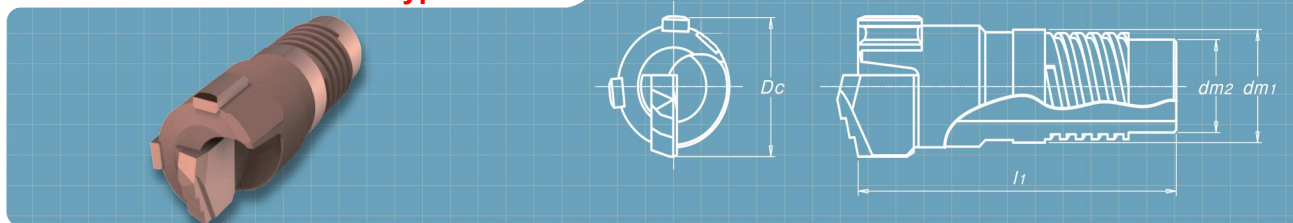
Feature : With 2 guide pads, drill is able to reduce machining resistance, achieving fast and high-precision machining.

3 Flutes with 2 Guide Pads Type Drill Head



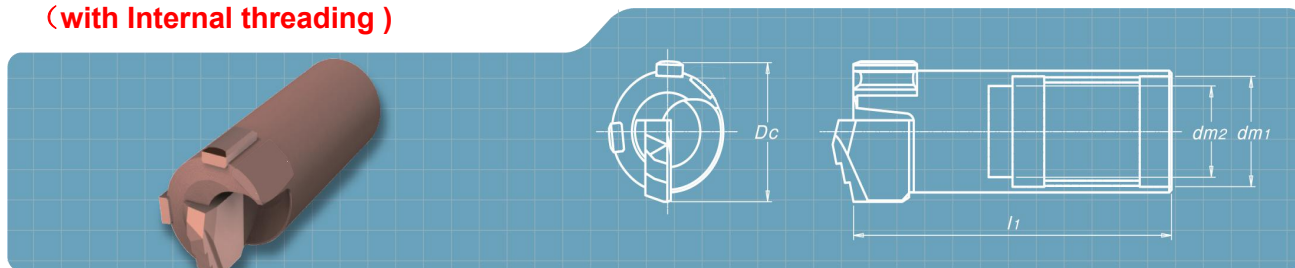
Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT	15.60-16.70	BA4S-0097	14	12.6	10.8	40
BTA-Dxxxx-CT	17.71-18.90	BA4S-0099	16	14.5	12.5	40
BTA-Dxxxx-CT	18.91-20.00	BA4S-0000	17	15.5	13.5	44

1 Flute with 2 Guide Pads Type Drill Head



Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT-T	15.60-16.70	BA4S-0097	14	12.6	10.8	40

1 Flute with 3 Guide Pads Type Drill Head (with Internal threading)



Drill Head Model	Drilling Range	Suitable Tube		Dimention		
		Tube Model	Tube Dia mm	dm1 mm	dm2 mm	L1
BTA-Dxxxx-CT-E	15.51-16.00	BA1S-1301	13	12.4	10.8	40
BTA-Dxxxx-CT-E	16.01-16.50	BA1S-1302	13	12.7	11.1	40
BTA-Dxxxx-CT-E	16.51-17.25	BA1S-1401	14	13.4	11.8	40
BTA-Dxxxx-CT-E	17.26-18.00	BA1S-1402	14	13.7	12.1	40
BTA-Dxxxx-CT-E	18.01-19.00	BA1S-1500	15	14.4	12.8	40
BTA-Dxxxx-CT-E	19.01-19.50	BA1S-1650	16.5	15.4	13.8	40

