DRILL DEEP
INTO THE FUTURE

UNITAC Supporting Deep Drilling Worldwide

UNITAC
Member IMC Group

UNITAC New Products

UNITAC Member IMC Group

DRILL DEEP INTO THE FUTURE

FINE TRITON

STS Single Tube System | DTS Double Tube System

The world's smallest drill with 3 corner insert!

ø16 ~ 24.99 (mm)

- Economic — 3 corner insert, low running cost
- High Productivity — Positive chipbreaker allows very high feed drilling
- High Accuracy — Highly accurate hole achieved by precisely produced insert

FINE BEAM

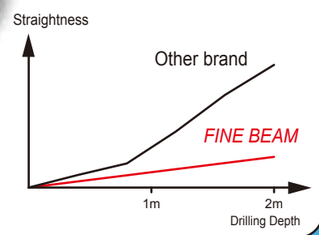
STS Single Tube System | DTS Double Tube System

Evolutionary New Direct Mount Tool!

- Wide Range — Diameter available from ø25 to 65mm
- High Accuracy — Highly accurate hole achieved by precisely produced insert
- Economic — Longer tool life with the latest carbide grade
- High Accuracy — Improved straightness with new design

ø25 ~ 65 (mm)

Straightness improved by 75%!



Full-Carbide Guide Pad

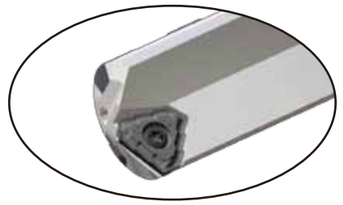
- Economic — Longer tool life with the latest carbide grade and coating
- High Quality — Finely ground cylindrical geometry for better hole quality

*Guide pad is spare part of UNITAC indexable tools

New Generation

TRIGUN

Indexable Gundrill



ø16 ~ 24.99 (mm)

Advanced Gundrill!

- Economic — 3 corner insert, low running cost
- Economic — Long tool life with coated insert
- High Efficiency — Quick insert change
- High Efficiency — No regrinding needed

HF BEAM

HF DRILL

- High Quality — Burnishing effect by guide pads for super hole finish
- Wide Range — BTA deep drilling know-how available on M/C and conventional lathes

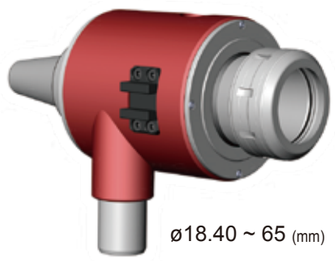
ø25 ~ 71 (mm)

L/D=Max 15, High Accuracy Drilling!

NEW Double Tube Connector

DTS Double Tube System

Faster and Easier Deep Hole Drilling!



ø18.40 ~ 65 (mm)

- Wide Range — Enables deep hole drilling on your M/C
- Wide Range — Easy-to-use compact body
- High Accuracy — Rigid all-in-one shaft

Tooling example

Please contact us for more details.

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DRILL DEEP INTO THE FUTURE

Steel

Billet

Super stainless steel

Solid drilling
Drilling Depth: 800mm
L/D=26

BTU drill

High productivity, long tool life and good chip evacuation were achieved in super stainless steel drilling of ø31X800mm with the best combination of carbide grade and PVD coating.

Oil&Gas

Drill collar

Low alloyed steel

Trepanning
Drilling Depth: 4000mm
L/D=34

Trepanning Head

Trepanning of ø120 x 4000mm required only 63% of the power compared to solid drilling of the same size hole achieving high productivity and high accuracy.

Automotive

Power steering shaft

Low alloyed steel

Solid drilling
Drilling Depth: 500mm
L/D=40

BTU drill

Drilling ø12.6X500mm, reduced machining time significantly from 4.5 min. to 2 min. per workpiece with STS (BTA) drilling which replaced gundrilling. Also better hole accuracy was achieved.

Wind Power

Wind power generator, main shaft

Low alloyed steel

Solid drilling
Drilling Depth: 2600mm
L/D=12

UNIDEX

Drilling ø220X2600mm, achieved high productivity and high accuracy in one pass solid drilling

Machine

Machine spindle

Low alloyed steel

Counterboring
Drilling Depth: 735mm
L/D=12

Indexable Counterboring Head

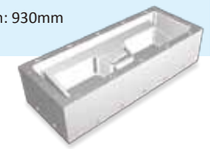
Achieved high productivity and high accuracy (coaxiality 0.02mm and circularity 0.02mm) reaming ø62.5 x 735mm with CBN insert. Process was reduced from two to only one pass.

Die&Mold

Cooling hole

Die steel

Solid drilling
Drilling Depth: 930mm
L/D=52



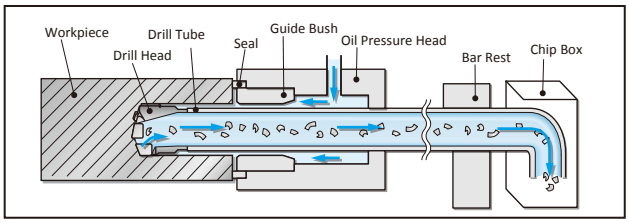
BTU drill

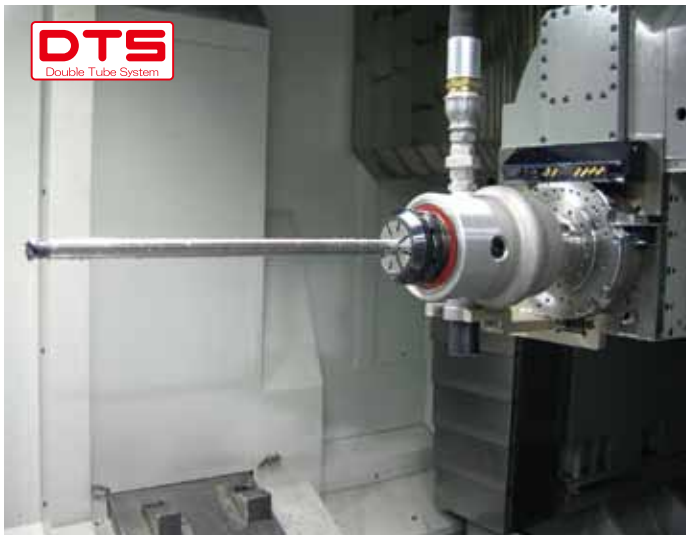
High productivity and high accuracy were achieved in drilling ø18X930mm with STS (BTA) drilling replacing gundrilling. Drilling time was reduced to one third of gundrilling.

STS (Single Tube System)

Dia. ø8 ~ (mm)
L/D 10 ~ 300

The STS system may also be referred to as the BTA system in the deep hole drilling process.
A large volume of coolant is pumped under high pressure to the cutting area in the workpiece. Chips are then forced out through the drill tube at the back and they do not touch workpiece allowing super surface finish.
STS is a very good method to obtain holes of high productivity and high accuracy by using a dedicated drilling machine and a sealing with the workpiece.

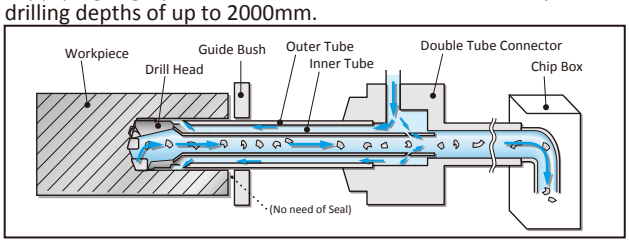




DTS (Double Tube System)

Dia. ø18.40 ~ 183.99(mm)
L/D 10 ~100

The DTS is characterized by its two tube construction and is therefore known as the double tube system. A sealing system and pressure head, which is required in the Single Tube System (STS) is not necessary for the DTS and it is therefore suitable for conventional general purpose machines such as lathes or machining centers.
In general, because of less efficient chip evacuation than the STS the recommended max drilling depth is 1000mm. However, Unitac has a coolant inducer (the DTC-R) that is capable of supplying high pressure coolant and can successfully achieve drilling depths of up to 2000mm.



HF Drill

Dia. ø25 ~ 71(mm)
L/D ~ 15

The HF drill enables deep hole drilling on machining centers or lathes without the need for coolant inducers or dedicated deep hole drilling machine. Drilling depths of up to 15 times the diameter of the hole can be achieved with the HF drill. Holes can be drilled in one seamless pass in faster and higher feed conditions compared to traditional drilling. Also deep holes can be drilled in one set-up without moving workpiece.

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Deep hole tooling Manufacturer
UNITAC INCORPORATED

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ISO 9001
JQA-QM6991
KYUSHU PLANT

Tool specifications are subject to change without notice for the purpose of improvement of the products.