



DHMS

Multi Spindle BTA Drilling

For Drilling of Tube Sheets

The DHMS Multiple Spindle BTA Drilling Machine solves a big problem as a result of its clever design.

TubeSheets have thousands of small diameter holes drilled very close to each other at fixed distances referred to as "pitch". Adding multiple spindles increases drilling productivity, but as the spindles near the edge of the TubeSheet, not all the spindles are able to drill without conflicting with the lip.

Most other Multiple Spindle Drilling Machines drive the Drill Feeds of all the spindles simultaneously. In order to disengage a drill to avoid conflict near the edge of the TubeSheet, the drill that is not to be used must be physically removed. Further, the drill bushing nosepiece must be removed.

The TARUS DHMS is different... the drill feeds and bushing nosepieces are independently driven and controlled by the CNC and can be programmed to be used in any combination for any cycle. For example, all five spindles can run for one cycle, and the very next cycle can extend any chosen nosepiece and drill / drills.

To make this function even more useful, TARUS developed sophisticated Tool Life Management System to keep track of when a drill was changed and when it is due to be changed again even if the use of the spindles is not uniform and also in the event that a drill was changed out of cycle due to wear or damage.

This machine is available with 2 to 5 spindles. Spindle vertical spacing (pitch) is manually adjusted as needed.

Customer Specified Travels and Number of Spindles

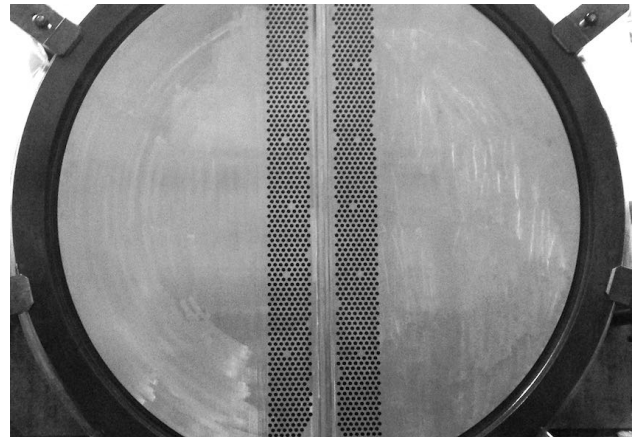
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Performance Features

- Hydraulic Actuation of Nose Pieces as Needed
- Direct Drive Drill Spindles
- Planetary Roller Screws for Drill Feed
- Dual Scale Read Heads for each axis to protect against drilling in wrong position
- Individual Coolant Pumps
- Multi Stage Filtration including paper roll to reduce maintenance interruption
- Box Ways, Ballscrew Drive Vertical, Rack and Pinion X Axis
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Available CNC

- FANUC
- Siemens 840d





**DHDM S5 Specifications for Example
Normally built to CustomerSpec.**

Metric

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| Hole Pattern Diameter | 4572 |
| Drilling Depth | 889 mm |
| Hole Diameter | 16 mm through 25.4 mm |
| Drilling Spindles | 25 kw, 275 Nm, 0-2000 rpm |
| Feed Force | 5338 Nm each spindle |
| Spindle Spacing | 254 mm through 304 mm |
| Spindle Adjustment | Horizontal Spacing Adjusted Manually with Gauge Blocks as needed |
| Coolant Pumps | 1 pump for each drill, 15kW, 132 liters per minute each |
| Chip Processing | Fully automatic, 84 kg/hr capacity |
| CNC System | FANUC CNC is Standard, others upon request |
| Position Feedback | Heidenhain Enclosed / Purged Linear Scales on X and Y Axes, |
| Position Feedback (continued) | Direct Angle Encoder for Drill Feed Axis |