DT42/52/65 Machine Highlights

Front Machining
- BMT45 12-Stations
- Up to 24 tools
- 7.5 / 11 kW Spindle Power
- 65 mm Through Hole

Back Machining
- VDI 25 8-Stations Sub-Turret
- 3.7 / 5.5 kW Spindle Power
- 32 mm Through Hole

Capabilities
This multi-tasking turning center is an advanced machine designed for precision complex parts processed in one setup.

Power & Versatility
It has Double Spindles and Turrets with back machining provided by an 8-station sub-turret and sub-spindle with a total tool capacity of up to 32 tools. This solution is a powerful combination of power, precision and versatility.

Key Features
A. Boxways on all axes are oversized and precision ground to a near mirror finish for smooth, fast precision movements providing dynamic rigidity and heavy-duty cutting ability.
B. The sub-turret for back machining can reduce cycle times significantly with superimposed cutting to complete parts in one setup. Driven tools at all 8 stations are possible.
C. Heavy-duty precision spindle design for enhanced thermal stability & power.
D. The main turret has 12 stations and with multi-tool holders up to 24 tools can be equipped. Driven tools at all 12 stations are possible.
E. Meehanite cast material is used and stress relieved to provide the best possible rigidity and vibration dampening base for machining parts with excellent surface finishes.
F. Y-axis travel +/- 35mm is supported by two slides, distributing the machining force evenly to ensure accuracy and rigidity.
G. 45 degree wedge design for fast chip flow and removal from the machining area for a thermally stable work platform.
H. Z-axis is equipped with precision high-rigidity 32mm ball screws and all other axes use 28mm ball screws to ensure fast feed rates and extended long-term durability for trouble free machining.
Turrets/Backmachining

SAUTER BMT45-12 Stations Main Turret

The main turret has 12 stations, but with multi-tool holders up to 24 tools are possible. Fanuc Alpha 2 motors provide driven tools up to 6000 rpm with high power and speed. Bidirectional turret indexing allows the shortest path to the next tool for faster cycle times. A 20 bar high pressure coolant system provides fast chip removal and longer tool life.

BMT45
- Fanuc Alpha 2 Motor-High torque, resolution & precision
- Driven tools: 2.2/3.75 kW & 23.5 N.m
- Optional 50/100 bar High Pressure Coolant Systems

SAUTER VDI 25-8 Stations Sub-turret

The sub-turret for back machining can help reduce idle time. Cycle times can also be significantly reduced with superimposed cutting utilizing the sub-spindle and sub-turret. Optional Sub Turret types: Power Turret, Servo Turret and Hydraulic Turret

VDI 25
- Fanuc Alpha 8 Motor-High torque, resolution & precision
- Driven tool power: 2.2 kW & 22 N.m
- Turrets designed for faster indexing time and outstanding thermal stability

Y-axis travel +/- 35 mm

Supported by two slides, distributing the machining force evenly to ensure accuracy and rigidity.
### Workpiece Applications

<table>
<thead>
<tr>
<th>Industry</th>
<th>Aerospace</th>
<th>Machining Applications</th>
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<tbody>
<tr>
<td>Material</td>
<td>Aluminum 7005</td>
<td>Spindle 1, Turret 1 ID Turning</td>
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<tr>
<td>Size</td>
<td>66 x 16 mm</td>
<td>Cutoff &amp; Transfer to Spindle 2</td>
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<td>Cycle time</td>
<td>240 sec</td>
<td>Superimposed Machining</td>
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<tr>
<td>Operations</td>
<td>Turning, Milling, Engraving, Back machining</td>
<td>Turret 1 Back Machining</td>
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<th>Industry</th>
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<th>Machining Applications</th>
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<tr>
<td>Material</td>
<td>SUS 340</td>
<td>Spindle 1 &amp; 2 Milling</td>
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<td>Size</td>
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<td>Turret 1 OD Turning &amp; Sub-turret Back Machining</td>
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<td>Operations</td>
<td>Turning and Wrap Contour Milling</td>
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<th>Machining Applications</th>
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<tr>
<td>Material</td>
<td>Aluminum 7005</td>
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<td>Size</td>
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<td>Operations</td>
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Precision Spindles

- Extremely rigid main and sub-spindles with purpose built roller bearings on the front and rear to concentrate power directly to the cutting surface and resist axial and radial forces.
- Higher speeds and heavy-cuts are possible with this bearing arrangement.
- Simultaneous independent machining of the front and back of the workplace and C-axis with resolution of 0.001 degrees allows for complex contouring of parts.

Machine Dimensions

Tool Interference Diagrams

Tooling System

VDI 25.8 Tooling System
### Tooling System

**VDI 30.12 Tooling System**

- **O.D. Tool Holder**: [Diagram]
  - Face Tool Holder: 20 (2 x 10)
  - O.D. Tool Holder (Double Hole): [Diagram]
  - Cut-Off Tool Holder:
  - Bar Gripper:

**BMT45 12-Station Live Turret**

- **O.D. Tool Holder**: [Diagram]
  - Face Tool Holder: 20 (2 x 10)
  - O.D. Tool Holder (Double Hole): [Diagram]
  - Cut-Off Tool Holder:
  - Bar Gripper:

### Specifications

#### Swing Over Saddle
- **DT42**: 260
- **DT65**: 260

**Chuck Type**
- **DT42**: DIN173E DIN177E DIN1858E DIN1711E
- **DT65**: DIN1711E

**Max. Bar Turning Length**
- **DT42**: 135 150 150 90
- **DT65**: 150

**Max. Turning**
- **DT42**: 350 350 350
- **DT65**: 150

**Max. Turning Bar Diameter**
- **DT42**: Ø42 Ø51 Ø58 Ø65 Ø82
- **DT65**: Ø82

**X1 / X2 Axis Travel**
- **DT42**: 175 (X1) 175 (X1) 175 (X1) 240 (X2)
- **DT65**: 240 (X2)

**Y1 Axis Travel**
- **DT42**: 135 (Y1) 135 (Y1) 135 (Y1) 135 (Y1)
- **DT65**: 135 (Y1)

**Spindle Motor Speed**
- **A2.5**: 1423, 1423, 1423, 1423
- **A2.6**: 1423, 1423, 1423, 1423
- **A2.7**: 1423, 1423, 1423, 1423

**Drill Capacity**
- **A2.5**: Ø7 Ø7 Ø7 Ø7
- **A2.6**: Ø7 Ø7 Ø7 Ø7
- **A2.7**: Ø7 Ø7 Ø7 Ø7

**Tap Capacity**
- **A2.5**: M6 M6 M6 M6
- **A2.6**: M6 M6 M6 M6
- **A2.7**: M6 M6 M6 M6

**Motor Power**
- **DT42 / DT65**: [Diagram]

**Tank Capacity**
- **A2.5**: [Diagram]
  - Hydraulic Capacity: 65 65 65 65
  - Connection Tank Capacity: 65 65 65 65
  - Coolant Tank Capacity: 65 65 65 65

**Machine Dimension**
- **A2.5**: 270x190x1850 270x190x1850 270x190x1850 270x190x1850

**Machine Weight**
- **A2.5**: 5600 5600 5600 5600

### Standard Accessories:
- Fanuc Controller
- Cadet Chuck
- Workpiece Ejector
- 12-Station Power Turret
- 8-Station Sub Turret
- Auto Lubrication System
- Coolant System
- Sub-Spindle Inner Coolant & Air Blow
- Coolant Level Sensor
- Auto Power Shu-Off
- Signal Tower
- Parts Catcher
- Parts Conveyor

### Optional Accessories:
- Live Tool Holder
- Static Tool Holder
- 6" Power Chuck for SP1
- 6" Power Chuck for SP2
- High Pressure Coolant System (20 Bar / 50 Bar / 100 Bar)
- Chip Conveyor
- Oil Mist Collector
- Bar Feeder
- Transformer
- Regulator
- Mitsubishi Controller

*We reserve the right to modify the above specifications without notice.*