DMU 200 Gantry
DMU 340 Gantry

LARGE MACHINING CENTERS IN GANTRY DESIGN

Gantry series
GANTRY SERIES

The right machine concept for any application

+ Constant moving masses and fixed workpiece for highest level of contour accuracy
+ 4th and 5th axis in the milling head for highly dynamic 5-axis simultaneous machining

**DMU 200 Gantry**
Light to medium machining of composite materials, and from aluminum to tool steel

**DMU 340 Gantry**
Medium to heavy machining of aluminum up to tool steel
GANTRY SERIES

Economical machining of any material

Component: Tool mold
Dimensions: 600 × 1,050 × 540 mm
Material: Tool steel

Component: Steel frame
Dimensions: 1,760 × 780 × 840 mm
Material: Steel

Component: Wingrib
Dimensions: 1,800 × 640 × 150 mm
Material: Aluminum

Component: Center console
Dimensions: 650 × 400 × 150 mm
Material: CFRP

Component: Model
Dimensions: 1,700 × 400 × 350 mm
Material: Ureol

DMU 200 Gantry
DMU 340 Gantry
GANTRY SERIES

Largest working area with smallest space requirement

The machines of the Gantry series have been specifically developed for highly dynamic universal applications of large components.

<table>
<thead>
<tr>
<th>Applications and parts</th>
<th>Machine and technology</th>
<th>Control technology</th>
<th>Technical data</th>
</tr>
</thead>
</table>

DMU 200 Gantry

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DMU 200 Gantry</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-travel [mm]</td>
<td>2,000 (4,000)</td>
</tr>
<tr>
<td>Y-travel [mm]</td>
<td>2,000</td>
</tr>
<tr>
<td>Z-travel [mm]</td>
<td>1,200</td>
</tr>
<tr>
<td>Table size [mm]</td>
<td>2,250 × 2,000 (4,300 × 2,000)</td>
</tr>
<tr>
<td>Load capacity [kg]</td>
<td>10,000 (20,000)</td>
</tr>
<tr>
<td>Max. workpiece dimensions [mm]</td>
<td>2,250 × 2,000 × 1,230</td>
</tr>
<tr>
<td></td>
<td>4,300 × 2,000 × 1,230</td>
</tr>
</tbody>
</table>
DMU 340 Gantry

| X-travel (mm) | 2,000 (4,000) |
| Y-travel (mm) | 2,000          |
| Z-travel (mm) | 1,200          |
| Table size (mm) | 2,250 × 2,000 (4,300 × 2,000) |
| Load capacity (kg) | 10,000 (20,000) |
| Max. workpiece dimensions (mm) | 2,250 × 2,000 × 1,230 |
|              | 4,300 × 2,000 × 1,230 |
|              | 4,400 × 3,162 × 1,540 |
|              | 7,000 × 3,162 × 1,790 |
DMU 200 Gantry

- **High rigidity and dynamic milling characteristic** (5 m/s² acceleration in all linear axes) due to portal gantry design
- **Consistent milling characteristics** thanks to constant guideway conditions over the entire Z-travel
- **Low-Gantry design** for automation from the front, left and rear side of the machine
- **Fully enclosed cabin with integrated chip removal** and visibility from the side

HIGHLIGHTS OF THE DMU 200 Gantry

1. **Dynamic and constant milling performance**
   with gantry drives in the X-axis
   with up to 50 m/min rapid traverse

2. **Innovative cast iron machine bed**
   with integrated chip removal and optimized guideway layout for best possible utilization of space

3. **Kinematics optimally tailored**
   for various applications due to alternative 45° B-axes and 90° A-axes milling heads

4. **C-axis with ±300° rotation range**
   and proven gearbox technology
   for highly dynamic 5-axis simultaneous machining

5. **Efficient damping**
   with up to 4 guide shoes per linear guide

6. **Application-specific spindle options**
   glass fiber reinforced plastic, carbon fiber, aluminum and tool steel finishing
DMU 340 Gantry

- **Constant moving masses** due to movable crossbeam with ram and resting workpiece
- **Large cubic work area** with up to 17.4 m³ and electrical folding roof for simple loading
- **Maximum rigidity** due to inherently rigid machine bed and large ram cross-section (500 × 500 mm)

HIGHLIGHTS OF THE DMU 340 Gantry

1. **Double pinion rack and pinion drive** in X- and Y-axis or optional linear drive for highest surface quality (up to Ra 0.3 µm)
2. **C-axis with ±300° rotation range** and direct drive for highly dynamic 5-axis simultaneous machining with up to 40 rpm
3. **Inherently rigid machine bed** made from cast iron for highest stability and good damping characteristics
4. **Modular wheel magazine** for up to 653 tools and chip-to-chip times ≤ 15 s at maximum tool length of 650 mm
5. **B-axis with 50° swivel plane** and direct drive for machining angles of up to −10° with high rigidity at the same time
6. **Powerful motor spindles** with up to 430 Nm or 30,000 rpm for efficient roughing and finishing
GANTRY SERIES

Highest thermal stability

Maximum long-term accuracy thanks to extensive cooling measures.

COOLING MEASURES
DMU 200 Gantry

1. Cooling of the linear guides via pressure plates
2. Cooling of the bearing blocks and ball screw nuts
3. Cooling of the A-/B-axis bearings as well as C-axis bearing of the 45° and 90° milling head
4. Cooling of the motor spindle – optionally also with shaft cooling
5. Cooled feed motors in all axes
COOLING MEASURES
DMU 340 Gantry

1. Cooling of the ball screw drives in the Z-axis
2. Structure cooling of the ram at front and rear
3. Cooled feed motors in all linear axes
4. Cooled direct drives in B- and C-axis
5. Cooled guides in all axes
6. Cooled motor spindles
GANTRY SERIES

Modular design

Both machines can be individually tailored to customer requirements with numerous configuration options.

DMU 200 Gantry

5-axis milling heads
- 90° milling head
  - 20,000 compactMASTER
  - 24,000 Fischer
  - 28,000 Fischer
  - 30,000 Fischer
- 45° milling head
  - 20,000 compactMASTER

3-axis milling head
- Vertical head
  - 20,000 speedMASTER

Cast iron bed versions
- X4000
  - Rack and pinion drive
- X2000
  - Ball screw drive

toolSTAR
- iTM120
- iTM60
- iTM30
### Tool magazines
- Wheel magazine
  - 63/93/123/183/.../453

### Milling heads
- 5l° α-axis milling head

### Cast bed versions
- X-travel
  - 3,400 mm
- X-travel
  - 6,000 mm

### Drives
- Rack & Pinion drive
- Linear motor
- Z'-Axis travel
  - 1,250 mm
- Z'-Axis travel
  - 1,500 mm

### Ram
- CELIS SIEMENS
- 840 D sl operate

### Control
- CELIS HEIDENHAIN
- TNC 640
GANTRY SERIES

The right milling head for any application

Spindle speeds and performance ranges tailored to various machining requirements and materials.

<table>
<thead>
<tr>
<th></th>
<th>DMU 200 Gantry</th>
<th>DMU 340 Gantry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical head (3-axis)</td>
<td>•</td>
<td>–</td>
</tr>
<tr>
<td>50° B-axis milling head (5-axis)</td>
<td>–</td>
<td>•</td>
</tr>
<tr>
<td>90° A-axis milling head (5-axis)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>45° B-axis milling head (5-axis)</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

• Standard • option — not available

DMU 340 Gantry

50° B-AXIS MILLING HEAD

+ Direct drives in B- and C-axis
+ C-axis ±300° rotation range
+ B-Axis with ±200° swivel range for machining at angles up to −10°
+ Low interference contour with maximum rigidity
+ Maximum utilization of the work area
+ Large range of spindles
+ Hydraulic clamping in B- and C-axis
DMU 200 Gantry

VERTICAL MILLING HEAD
+ Very high rigidity
+ 130 Nm torque for universal 3-axis machining

45° B-AXIS MILLING HEAD
+ C-axis: ±300° rotation range as well as B-axis
  200° swivel range
+ Low interference contour with maximum rigidity
+ Maximum utilization of the working area based
  on short pivot length
+ B-axis kinematics for less compensation movement
  during 5-axis simultaneous machining

90° A-AXIS MILLING HEAD
+ C-axis ±300° rotation range as well as
  A-axis ±120° swivel range
+ Machining of negative angles up to −30° possible
+ Application-specific spindles for example
  for composite workpieces and aluminum
  structural components
+ Optionally integrated dust extraction at
  the spindle nose through the milling head
Powerful and high-speed motor spindles for all applications

<table>
<thead>
<tr>
<th>Rotational speed</th>
<th>Torque [40% / 100%]</th>
<th>Power [40% / 100%]</th>
<th>Interface</th>
<th>DMU 200 Gantry</th>
<th>DMU 340 Gantry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>HSK-A63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>speedMASTER 15,000 rpm</td>
<td>130 / 86 Nm</td>
<td>35 / 25 kW</td>
<td>SK40/HSK-A63</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>speedMASTER 15,000 rpm</td>
<td>200 / 130 Nm</td>
<td>46 / 30 kW</td>
<td>SK40/HSK-A63</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>compactMASTER 20,000 rpm</td>
<td>115 / 87 Nm</td>
<td>26 / 19 kW</td>
<td>HSK-A63</td>
<td>*</td>
<td>–</td>
</tr>
<tr>
<td>speedMASTER 20,000 rpm</td>
<td>130 / 86 Nm</td>
<td>35 / 25 kW</td>
<td>SK40/HSK-A63</td>
<td>*</td>
<td>–</td>
</tr>
<tr>
<td>24,000 rpm</td>
<td>36 / 25 Nm</td>
<td>46 / 33 kW</td>
<td>HSK-A63</td>
<td>*</td>
<td>–</td>
</tr>
<tr>
<td>28,000 rpm</td>
<td>40 / 27 Nm</td>
<td>30 / 20 kW</td>
<td>HSK-A63</td>
<td>*</td>
<td>–</td>
</tr>
<tr>
<td>30,000 rpm</td>
<td>40 / 31 Nm</td>
<td>81 / 63 kW</td>
<td>HSK-A63</td>
<td>*</td>
<td>–</td>
</tr>
<tr>
<td>speedMASTER 30,000 rpm</td>
<td>59 / 47 Nm</td>
<td>79 / 66 kW</td>
<td>HSK-A63/HSK-A63/80</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HSK-A100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>powerMASTER 12,000 rpm</td>
<td>288 / 187 Nm</td>
<td>44 / 32 kW</td>
<td>SK50/HSK-A100</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>powerMASTER 12,000 rpm</td>
<td>430 / 300 Nm</td>
<td>52 / 42 kW</td>
<td>SK50/HSK-A100</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>powerMASTER 16,000 rpm</td>
<td>404 / 280 Nm</td>
<td>52 / 42 kW</td>
<td>HSK-A100</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>15,000 rpm</td>
<td>179 / 143 Nm</td>
<td>100 / 80 kW</td>
<td>HSK-A100</td>
<td>–</td>
<td>*</td>
</tr>
</tbody>
</table>

* Standard  * option  — not available

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SOLUTIONS FOR ALL SECTORS

+ Composite machining
+ Die & Mold
+ Aerospace
+ General mechanical engineering
**Motor spindle for aerospace applications**

**speedMASTER**

- 15,000 rpm / 35 kW / 130 Nm
- 15,000 rpm / 44 kW / 200 Nm
- 20,000 rpm / 35 kW / 130 Nm

**High-speed spindles HSK-A63**

- 20,000 rpm / 26 kW / 115 Nm
- 24,000 rpm / 46 kW / 36 Nm
- 28,000 rpm / 40 kW / 30 Nm

**compactMASTER**

- 12,000 rpm / 44 kW / 288 Nm
- 12,000 rpm / 52 kW / 430 Nm
- 16,000 rpm / 52 kW / 404 Nm

**powerMASTER SK50/ HSK-A100**

- 15,000 rpm / 179 kW / 100 Nm
- 30,000 rpm / 79 kW / 51 Nm
GANTRY SERIES

Innovative tool handling

+ Flexible manufacturing capabilities based on large magazine capacities
+ The right magazine for any application and requirement

### DMU 200 Gantry

<table>
<thead>
<tr>
<th>Magazine</th>
<th>iTM</th>
<th>Chain magazine</th>
<th>Pick-up magazine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tools</td>
<td>30</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>Tool holder</td>
<td>HSK 63</td>
<td>HSK 63</td>
<td>HSK 63</td>
</tr>
<tr>
<td>Diameter free adjacent pockets</td>
<td>130 mm</td>
<td>130 mm</td>
<td>130 mm</td>
</tr>
<tr>
<td>Diameter occupied adjacent pockets</td>
<td>80 mm</td>
<td>80 mm</td>
<td>80 mm</td>
</tr>
<tr>
<td>Tool length</td>
<td>400 mm</td>
<td>400 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td>Tool weight max.</td>
<td>8 kg</td>
<td>8 kg</td>
<td>8 kg</td>
</tr>
<tr>
<td>Tool tilting moment</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

### DMU 340 Gantry

<table>
<thead>
<tr>
<th>Magazine</th>
<th>SK 40/ HSK-A63</th>
<th>SK 50/ HSK-A100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion options</td>
<td>63/93/123/183/*</td>
<td>63/123/183/*</td>
</tr>
<tr>
<td>Diameter free adjacent pockets</td>
<td>80 mm</td>
<td>110 mm</td>
</tr>
<tr>
<td>Diameter occupied adjacent pockets</td>
<td>160 mm</td>
<td>280 mm</td>
</tr>
<tr>
<td>Tool length (mm)</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td>Tool weight max.</td>
<td>15 kg</td>
<td>30 kg</td>
</tr>
<tr>
<td>Tool tilting moment</td>
<td>25</td>
<td>70</td>
</tr>
</tbody>
</table>
DMU 340 Gantry

5 wheels with up to 453 tool pockets (HSK-A63) available on request!
DMU 200/340 GANTRY

Individual automation possibility for maximum efficiency

The Gantry series has been developed consistently for all requirements to the individual automation solutions for all industrial sectors.

+ Automation integration from the front side, rear side or the top of the machine as well as from the left side (only for DMU 200 Gantry)
+ Significant reduction of idle times – increase of productivity of up to 95%
+ Customer individual solutions for almost all industrial areas, e.g. Aerospace, Automotive or Die & Mold

HIGHLIGHTS ROBOT-AUTOMATION*

+ **Workpiece handling** with loading through a sideway automation door (option)
+ **Unrestricted access** in connection with the automated solution
+ **Best chip management** based on diagonal adjustment of the workpiece in the working area
+ **Individual clamping solution** optionally available

* Individual customer solution
DMU 340 Gantry

Advantages linear drive

- **Highest surface quality** up to Ra 0.3 µm due to great rigidity and missing gear meshing frequencies
- **Radical reduction of machining time** up to 30% due to higher drive parameters (rapid traverse, acceleration, jerk)
- **Low tool wear** due to less vibrations
- **Highest contour accuracy** due to low contouring error
- **Better dynamics due to linear drives** also for the same acceleration and rapid traverse parameters
- **Long-term accuracy and maintenance-free** due to contactless drive
- **Short idle times due to rapid traverse** of up to 90 m/min
- **Better dynamics due to linear drives** also for the same acceleration and rapid traverse parameters

**Conventional drive**

**linear**

<table>
<thead>
<tr>
<th>Way [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>5,000 mm/min</td>
</tr>
</tbody>
</table>

**Acceleration time** min. 3 × shorter

**Acceleration distance** approx. 9 × shorter
DMU 200/340 GANTRY

ULTRASONIC integration for machining of advanced materials

The integration of ULTRASONIC technology by SAUER GmbH offers the opportunity of economical machining of materials such as ceramics, glass or zerodur by ULTRASONIC supported grinding. ULTRASONIC Milling (Milling with defined cutting edge) ensures a highly productive milling process of all types of fiber composites in highest quality.

HIGHLIGHTS

+ Integration of the ULTRASONIC spindle in the 90° and 45° head possible
+ Up to 40 % reduced process forces for highest productivity, surface quality, precision, edge quality and longer tool life
+ Automatic detection and tracking of ULTRASONIC frequency and amplitude for optimum process stability
+ Powerful ULTRASONIC with optimized inductive transmission
+ Strengthened actuator for even higher rigidity
+ Stronger ULTRASONIC booster for up to 2- to 3-times higher amplitudes
+ Tools with undefined as well as defined cutting edge
+ Vibration amplitude 0 – 15 µm/depending on tools and parameters

Optical industry:
Mirror mounts made of zerodur

Aerospace:
Camera housing made of SiC

Automotive:
Centre console made of CRP
DMU 340 Gantry

Thanks to the inherently ridged machine bed and the large working area even machining press tools up to 30 t. is possible.
Applications and parts
Machine and technology
Control technology
Technical data

Simplified machine operation.
Complete integration of the machine in the operating organization.

MEASURABLE
With the DMG MORI MESSENGER all status information of the linked machines and devices is available at a glance. Regular and automated reports boost transparency in production.

FUTURE-PROOF
Simple PLC-independent CELOS update to the latest version from every existing version. The data is reliably migrated and all functions supported by the PLC will then be available to the full extent.

SMARTkey
Personalized authorization of the operator: Individually adapted access rights to the control system and the machine.

CELOS ON THE ERGOLINE CONTROL WITH 21.5” MULTI-TOUCH SCREEN

STANDARDIZED
Simple machine operation for all new high-tech machines made by DMG MORI.

END-TO-END
End-to-end administration, documentation and visualization of order, process and machine data.

OPEN
Direct data import from MES and ERP systems. Integration of any external program and web contents.
CELOS – From the idea to the finished product

CELOS offers a standardized user interface for all new high-tech DMG MORI machines. CELOS APPs enable end-to-end administration, documentation and visualization of order, process and machine data. This also simplifies, standardizes and automates machine operation. Standard APPs support the machine operator during preparation, optimization and systematic processing of production orders.

CELOS APPs – 3 EXAMPLES

**JOB MANAGER**
Systematic planning, administration and preparation of orders.
- Machine-based creation and configuration of new orders
- Structured saving of all production-relevant data and documents
- Automatic order data import with the help of the job import function

**APPLICATION CONNECTOR**
Your application directly on the machine.
- Integration of own systems (e.g. MES, ERP) and access to Intranet/Internet directly on the CELOS machine
- Creation of up to 20 own connections as CELOS APPs on the CELOS user interface
- Simple remote control (RDP or VNC) or web connections directly from CELOS

**MESSENGER**
Current status data from networked machines and devices in production at a glance.
- DMG MORI Monitoring for all machines and devices in production networked via DMG MORI Connectivity
- Automatically generated one-page reports
- Maximum flexibility thanks to the creation of customized dashboards
Exclusive, optionally available DMG MORI technology cycles

Complex machining operations are realized with ease thanks to dialogue-assisted programming instead of classical DIN programming!

Dialogue-assisted programming
+ Up to 60% faster
+ Visualized, interactive and user friendly
+ Machining functions are generated automatically

MPC 2.0 – MACHINE PROTECTION CONTROL
Machine protection achieved by fast switch-off
+ Vibration sensor on the milling spindle
+ Shutdown function with teach function
+ Process monitoring using bar chart display
+ State of bearing diagnostics of the milling spindle

3D quickSET
Achieving highest accuracy quickly and simply
+ Tool kit for checking and correcting the kinematic accuracy of 4 and 5-axis machine configurations
+ All head variants and any table axis

ATC – APPLICATION TUNING CYCLE
Process optimisation at the touch of a button
+ Process-oriented tuning of the feed-drives
+ Minimization of machining time while maximizing the relevant component quality, also depending on the workpiece weight
SIEMENS 840D SOLUTIONLINE OPERATE

+ Simple interactive programming thanks to identical Look & Feel for turning and milling
+ New SINUMERIK Operate user interface
+ Powerful 32 BIT multiprocessor system
+ Fast serial processing time of approx. 0.6 ms
+ Look-ahead function for up to 150 NC blocks (parameterizable)
+ Graphical simulation of the machining process with plan view, projection in three planes and 3D display, synchronous graphical display during machining
+ DECKEL MAHO package MDynamics for improved surface quality with shortened machining time for the smoothing of surfaces etc.

* Optional

HEIDENHAIN TNC 640

+ Unique 3D simulation graphics, accurate down to the last detail
+ New, optimized TNC operator interface
+ HSCI – HEIDENHAIN Serial Controller Interface
+ Workshop or DIN-ISO programming
+ Fast program creation thanks to plain text programming
+ Graphical programming
+ CollisionMonitoring (DCM)
+ Powerful processor (Intel i/seven, 2 cores)
+ New optimized movement guidance ADP for improved surface finish and faster machining (serial processing time less than 0.5 ms)
+ Dynamic look-ahead function without block limit
+ Dynamic Efficiency with Adaptive Feed Control AFC and trochoidal milling as standard (Active Chatter Control ACC optional)

* Optional

GANTRY SERIES

High-end CNCs for safe processes and maximum precision.

The new Gantry series of DMG MORI is available with the SIEMENS 840D solutionline and the HEIDENHAIN TNC 640. Also available are various exclusive software cycles such as ATC, MPC 2.0, 3D quickSET and DMG MORI Virtual Machine which directly affect either the workpiece quality or process optimization.
DMU 200 Gantry

Working areas

45° milling head, X-Axis 2,000 mm

Front view  Side view

90° milling head, X-Axis 2,000 mm

Front view  Side view

* information given in millimeters
DMU 340 Gantry

Working areas

50° milling head, X-Axis 3,400 mm
Front view

Side view

50° milling head, X-Axis 3,400 mm
Front view

Side view

* information given in millimeters
50" milling head, X-Axis 6,000 mm

Front view

Side view

50" milling head, X-Axis 6,000 mm

Front view

Side view
DMU 200 Gantry

Layouts

**Side view, X-Axis 2,000 mm**
(Information given in millimeters)

**Plan view, X-Axis 2,000 mm**
(Information given in millimeters)
Peripheral zone

<table>
<thead>
<tr>
<th>SPF</th>
<th>SPF</th>
<th>SPF</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,300</td>
<td>3,500</td>
<td>Minimal transport width</td>
</tr>
<tr>
<td>4,800</td>
<td>1,570</td>
<td>Minimal transport height</td>
</tr>
</tbody>
</table>

Travel: 4,937 mm

Plan view, X-Axis 4,000 mm

Side view, X-Axis 4,000 mm

Information given in millimeters
DMU 340 Gantry

Layouts

Side view, X-Axis 3,400 mm
(Information given in millimeters)

Plan view, X-Axis 3,400 mm
(Information given in millimeters)
GANTRY SERIES

Technical data

<table>
<thead>
<tr>
<th></th>
<th>DMU 200 Gantry</th>
<th>DMU 340 Gantry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Working area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X/Y/Z-axis mm</td>
<td>2,000/2,000/1,200</td>
<td>3,400/2,800/1,500</td>
</tr>
<tr>
<td></td>
<td>(4,000/2,000/1,200)</td>
<td>(6,000/2,800/1,500)</td>
</tr>
<tr>
<td><strong>Working table</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table size mm</td>
<td>2,250 × 2,000 (4,300 × 2,000)</td>
<td>4,400 × 2,700 (7,000 × 2,700)</td>
</tr>
<tr>
<td>Max. Table load kg</td>
<td>10,000 (20,000)</td>
<td>10,000 (30,000)</td>
</tr>
<tr>
<td><strong>Main drive (standard)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>HSK 63</td>
<td>SK40</td>
</tr>
<tr>
<td>Spindle speed rpm</td>
<td>20,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Power (40% / 100% DC) kW</td>
<td>35 / 25</td>
<td>35 / 25</td>
</tr>
<tr>
<td>Torque (40% / 100% DC) Nm</td>
<td>130 / 86</td>
<td>130 / 86</td>
</tr>
<tr>
<td><strong>Tool magazine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number pockets</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Max. Diameter mm</td>
<td>130</td>
<td>160 / 280</td>
</tr>
<tr>
<td>Max. Length mm</td>
<td>400</td>
<td>650</td>
</tr>
<tr>
<td>Max. Weight kg</td>
<td>8</td>
<td>15 / 30</td>
</tr>
<tr>
<td><strong>Technical data (optional)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feed rate mm/min</td>
<td>50,000 / 50,000 / 50,000</td>
<td>70,000 / 70,000 / 60,000 (90,000 / 90,000 / 60,000)</td>
</tr>
<tr>
<td>Rapid traverse m/min</td>
<td>50 / 50 / 50</td>
<td>70 / 70 / 60 (90 / 90 / 60)</td>
</tr>
<tr>
<td>Acceleration m/sec²</td>
<td>5 / 5 / 5</td>
<td>3 / 3 / 5 (4 / 4 / 5)</td>
</tr>
<tr>
<td>P max. µm</td>
<td>10 / 10 / 10</td>
<td>15 / 15 / 12 (12 / 12 / 12)</td>
</tr>
<tr>
<td>Machine weight kg</td>
<td>34,000 (48,000)</td>
<td>65,000 (95,000)</td>
</tr>
</tbody>
</table>
# Options

<table>
<thead>
<tr>
<th>Options for working area</th>
<th>DMU 200 Gantry</th>
<th>DMU 340 Gantry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension X-travel</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Extension Z-travel</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Full-protection safety cabin with roof</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Through-loading option</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>Linear drive for X- and Y-axis</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Increased table load</td>
<td>–</td>
<td>●</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Tool holder</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SK40/HSK-A63</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>SK50/HSK-A100</td>
<td>–</td>
<td>●</td>
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</table>

<table>
<thead>
<tr>
<th>Milling head</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical milling head</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>50° B-axis milling head</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>90° A-axis milling head</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>45° B-axis milling head</td>
<td>●</td>
<td>–</td>
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</table>

<table>
<thead>
<tr>
<th>Magazine</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>iTM magazine</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>Chain magazine</td>
<td>●</td>
<td>–</td>
</tr>
<tr>
<td>Rotary magazine</td>
<td>–</td>
<td>●</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Automating / measuring / monitoring</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool measurement in the working area</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tool breakage monitoring mechanical</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>4-color signal lamp</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Control panel for loading station</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coolant chip removal</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>ICS cooling unit 40 bar</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>ICS cooling unit 80 bar frequency-controlled</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Rinsing pistol</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Chip conveyor</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Oil and emulsion separator unit</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Dust extraction system at the milling head</td>
<td>●</td>
<td>–</td>
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<table>
<thead>
<tr>
<th>Options HEIDENHAIN TNC 640</th>
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<tbody>
<tr>
<td>Application Tuning Cycle</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Electronic wireless handwheel</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>ACC – Active Chatter Control</td>
<td>●</td>
<td>●</td>
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<table>
<thead>
<tr>
<th>Options SIEMENS 840D solutionline</th>
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</thead>
<tbody>
<tr>
<td>Application Tuning Cycle</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>DECKEL MAHO MDynamics</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

* Standard ● option — not available
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