Milling at its best: Hermle machines are often at the forefront when it comes to optimized results. The proverbial Hermle precision in combination with process consulting and project management has made us an important machine manufacturer in nearly all key sectors: From large complex components to the very smallest components in the high-tech sector. Versatile applications, uncompromising results Hermle – the original.

www.hermle.de/milling
Contents.

01 Industry Sectors  6
02 The machine  10
03 Technical data  32
04 Precision  38
05 Energy efficiency  40
06 Services  42
01
Sectors

Hermle is at home in all sectors. For us, ensuring the highest precision and reliable machining is always paramount. Our machines are built for daily use.

www.hermle.de/sectors

Machine construction

Precision mechanics

Medical engineering

Energy technology
Dynamic, precise and reliable: Hermle’s C 400 can provide dynamic processing of workpieces up to 600 kg in weight simultaneously on 5 axes. In particular, materials which are difficult to machine can be milled in record time and with perfect precision. Our systems are always extremely precise and ensure high machine availability.

www.hermle.de/applications
02
The machine

The C 400: a dynamic machining center designed for entry-level 5-axis/5-side machining. Features galore to ensure high-precision, economical parts production.

www.hermle.de/c400/facts

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse path X-Y-Z:</td>
<td>850 – 700 – 500 mm</td>
</tr>
<tr>
<td>Speed:</td>
<td>15000 / 18000 rpm</td>
</tr>
<tr>
<td>Rapid linear traverses X-Y-Z:</td>
<td>35 m/min</td>
</tr>
<tr>
<td>Linear acceleration X-Y-Z:</td>
<td>6 m/s²</td>
</tr>
<tr>
<td>Control unit:</td>
<td>iTNC 530</td>
</tr>
<tr>
<td>Rigid clamping table:</td>
<td>1070 x 700 mm</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>2000 kg</td>
</tr>
<tr>
<td>NC swivelling rotary tables:</td>
<td></td>
</tr>
<tr>
<td>Table with worm:</td>
<td>0 440 mm</td>
</tr>
<tr>
<td>Swivelling range:</td>
<td>+ 91° / - 139°</td>
</tr>
<tr>
<td>A-axis speed:</td>
<td>0 650 x 540 mm</td>
</tr>
<tr>
<td>One-sided drive:</td>
<td>+ 91° / - 139°</td>
</tr>
<tr>
<td>C-axis speed:</td>
<td>25 rpm</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>25 rpm</td>
</tr>
<tr>
<td></td>
<td>30 rpm</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>600 kg</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>400 kg</td>
</tr>
</tbody>
</table>
02.1
New dimensions in dynamics
3 axes in one tool for workpiece-independent dynamics

Pickup magazine integrated into the base body to save space

Stainless steel lining of entire working area

Optimized swarf ejection in working area during dry machining

Swivelling range of NC swivelling rotary table +91° to -139°

Largest working area relative to the support surface

Accessibility, excellent ergonomics

Force characteristics: 3 guideways with one guide shoe for ideal force balance

Linear axes above the working area

Modified gantry design with optimum main axis support

Worm gear (C-axis)

One-sided drive (A-axis) Avoidance of torsion and high accuracy

Mineral casting design with excellent vibration damping properties

Largest working area relative to the support surface

Optimized swarf ejection in working area during dry machining

Swivelling range of NC swivelling rotary table +91° to -139°

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Linear axes above the working area

Modified gantry design with optimum main axis support

Worm gear (C-axis)

One-sided drive (A-axis) Avoidance of torsion and high accuracy

Mineral casting design with excellent vibration damping properties
02.2
The workpiece

Many important points must be observed in order to guarantee that every workpiece is machined perfectly. For this reason, Hermle has been working on perfecting and optimizing the machining process for many years. This is the reason that the C 400 is now equipped with:
- the largest working area relative to the installation area.
- the largest swivelling range of workpieces in the working area.
- utilization of the entire traverse range.
- a large collision circle between the table flanges.

www.hermle.de/c400/workpiece
3-axis machining

5-axis machining
Ergonomics

Built for daily use: The Hermle C 400 can be ergonomically adapted for every machine operator for optimum ease of use, simple operation and uncomplicated maintenance.

www.hermle.de/c400/ergonomics

HIGHLIGHTS

- Ergonomic control panel:
  - 19” screen
  - Control panel pivotable from the tool loading point to the working area
- Optimum loading height
- Crane loading possible
- Minimum interval between table and operator
- Large door opening

Practical, slide-in tray
Door opening 900 mm

Loading height 925 mm

Control panel, pivotable
Hermle’s NC swivelling rotary table has revolutionised the concept of 5-axis machining. The C 400 also relies on 5-axis operation, and the table with worm gear makes full use of its advantages. All tables are manufactured exclusively and entirely at our plant in Gosheim.

www.hermle.de/C400/tables

**TECHNICAL DATA**

High degree of freedom in working area
- Very high table loading (up to 2000 kg with the highest accuracy)
- No accumulation of swarf on the table (swivel table)
- Swivelling axis A and rotary axis C are located within the workpiece (U-shape)
- Wide flange spacing results in a very large collision circle in the working area
- High swivelling range for undercuts

**Worm table**
- Generously dimensioned worm gear
- Low torsion attachment
- Direct, absolute measuring system

**DRIVE TECHNOLOGY**
- Centrical table load
- Drive directly on table housing = low torsion A axis
- Direct, absolute measuring system
- Good maintenance accessibility
- A axis integrated in machine bed

**One-sided drive**
- Mechanical drive on right of table housing
Uncompromised perfection: this drive design accesses the gearwheel on the table housing directly and so completely eliminates shaft torsion on the table. This is the only way to achieve the highest precision.

Made in Germany – made in Gosheim: The C 400 table variants stand for the highest quality and optimum material usage from the cast housing to the installed gear motors. At our main plant in Gosheim, these tables are laying the foundations for the precision, accuracy and quality of the machined surfaces. Hermle’s tables are equipped with cutting-edge drive technology for high dynamic during 5-axis machining as the slowest axis determines the speed of 5-axis simultaneous milling. High-torque motors and the adapted gear can position loads of up to 600 kg rapidly and, most importantly, with exceptional precision.
Rigid clamping table
Clamping surface: 1070 x 700 mm

Equipped with the rigid clamping table, the machine can deal with clamping weights of up to 2000 kg – ideal for 3-axis machining of large, bulky and heavy workpieces.

T grooves: parallel 10 / 14 H7
**NC swivelling rotary table**

**Drive type C axis: Worm**

The "Worm" NC swivelling rotary table provides the ideal entry into 5-axis technology.

www.hermle.de/c400/tables

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamping surface:</td>
<td>Ø 440 mm</td>
</tr>
<tr>
<td>T grooves:</td>
<td>parallel 5 / 14 H7</td>
</tr>
<tr>
<td>Swivelling range:</td>
<td>+ 91° / - 139°</td>
</tr>
<tr>
<td>Drive type - rotary C axis:</td>
<td>worm</td>
</tr>
<tr>
<td>Speed rotary axis C:</td>
<td>30 rpm</td>
</tr>
<tr>
<td>Speed swivelling axis A:</td>
<td>25 rpm</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>400 kg</td>
</tr>
<tr>
<td>Secondary clamping plates (optional)</td>
<td></td>
</tr>
<tr>
<td>T grooves:</td>
<td>parallel 7 / 14 H7</td>
</tr>
</tbody>
</table>

Secondary clamping plates: 920 x 490 mm

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamping surface:</td>
<td>Ø 650 x 540 mm</td>
</tr>
<tr>
<td>T grooves:</td>
<td>parallel 7 / 14 H7</td>
</tr>
<tr>
<td>Swivelling range:</td>
<td>+ 91° / - 139°</td>
</tr>
<tr>
<td>Drive type rotary axis C:</td>
<td>worm</td>
</tr>
<tr>
<td>Speed rotary axis C:</td>
<td>30 rpm</td>
</tr>
<tr>
<td>Speed swivelling axis A:</td>
<td>25 rpm</td>
</tr>
<tr>
<td>Max. table load:</td>
<td>600 kg</td>
</tr>
</tbody>
</table>
Spindles

The C 400 is equipped with two-part spindles. Both spindles can be replaced quickly and easily when servicing. The spindles feature 2 speed ranges and different tool holding fixtures making them suitable for a wide variety of machining tasks. Like the tables, all spindles are manufactured exclusively and entirely at our plant in Gosheim.

www.hermle.de/c400/spindles

TECHNICAL DATA

- High-tech spindles for demanding milling processes
- Slim-end spindle for machining deep cavities
- Few projecting edges (prevention of collision)
- Two-part spindle (faster, easier replacement)
- Collision protection [collision sleeves] prevents damage in 50% of collisions

Collision protection with collision inquiry

Each spindle has six collision sleeves which compensate collision energy in the Z direction.
**Spindle 15000 rpm**

- Maximum spindle speed: 15000 rpm
- Output 20% c.d.f.: 20 kW
- Torque 20% c.d.f.: 180 Nm
- Tool holding fixture: SK 40 / HSK A 63
- Spindle: Two-piece
- Collision protection: Collision sleeves

**Spindle 18000 rpm**

- Maximum spindle speed: 18000 rpm
- Output 20% c.d.f.: 20 kW
- Torque 20% c.d.f.: 180 Nm
- Tool holding fixture: HSK A 63
- Spindle: Two-piece
- Collision protection: Collision sleeves
The magazine

The C 400’s tool magazine holds up to 38 tools in the standard version and is integrated into the machine bed to save space. It can be filled from the side by swivelling the control panel to the loading point.

www.hermle.de/c400/magazine

---

**TECHNICAL DATA**

**Pick-up magazine**

**Integration into the machine bed**

**Excellent accessibility**

**Control panel pivotable to the loading point**

**Covers for tool holding fixture**

**Tool changer (pick-up)**

<table>
<thead>
<tr>
<th>Interface</th>
<th>SK 40 / HSK A 63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine pockets</td>
<td>38</td>
</tr>
<tr>
<td>Max. tool weight</td>
<td>8 kg</td>
</tr>
<tr>
<td>Max. tool diameter</td>
<td>0 80 with empty adjacent pockets Ø 125 mm</td>
</tr>
<tr>
<td>Max. tool length</td>
<td>300 mm</td>
</tr>
<tr>
<td>Max. magazine load</td>
<td>152 kg</td>
</tr>
<tr>
<td>Chip-to-chip time*</td>
<td>6.5 s</td>
</tr>
</tbody>
</table>

*Chip-to-chip times for 3-axis units calculated in keeping with German standard VDI 2852, page 1*
### Additional magazine ZM 43

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine pockets:</td>
<td>43</td>
</tr>
<tr>
<td>Max. tool weight:</td>
<td>8 kg</td>
</tr>
<tr>
<td>Max. tool diameter:</td>
<td>Ø 80, with empty adjacent pockets Ø 125 mm</td>
</tr>
<tr>
<td>Max. tool length:</td>
<td>300 mm</td>
</tr>
</tbody>
</table>

### Additional magazine ZM 87

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine pockets:</td>
<td>87</td>
</tr>
<tr>
<td>Max. tool weight:</td>
<td>8 kg</td>
</tr>
<tr>
<td>Max. tool diameter:</td>
<td>Ø 80, with empty adjacent pockets Ø 125 mm</td>
</tr>
<tr>
<td>Max. tool length:</td>
<td>300 mm</td>
</tr>
</tbody>
</table>
02.7
Control unit

The C 400 is equipped with a Heidenhain iTNC 530. The control unit provides diverse program functions. Hermle simplifies programming and operation still further with comprehensive extra features.

www.hermle.de/control

Heidenhain iTNC 530 HSCI

- 19” TFT colour flat screen
- Keyboard unit with full keyboard, integrated trackball, USB and Ethernet interfaces
- Fully digital with HSCI interface and EnDat interface
- Programming in Heidenhain plain text with smart.NC or per DIN/ISO
- Standard drilling and milling cycles
- Touch probe system cycles
- Free contour programming
- Special functions for fast 3D machining
- Automatic calculation of cutting data
- Software option Kinematic Opt (Measurement cycle for improving accuracy of rotational and swivelling operations)

For further advantages and detailed technical data, please see the Heidenhain brochures.

Hermle setups

<table>
<thead>
<tr>
<th>Standard</th>
<th>Heavy duty machining</th>
<th>High production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Heavy duty machining</td>
<td>Production</td>
</tr>
<tr>
<td>- Standard setting.</td>
<td>- For roughing in conjunction with high milling power.</td>
<td>- Used for quicker machining with programs which have many cycle calls or subprograms.</td>
</tr>
<tr>
<td>- Switches back to the standard setting after a different setup has been used.</td>
<td>- Greater machining performance possible thanks to reduced machine vibration (depending on the tool and the selected technology data).</td>
<td></td>
</tr>
</tbody>
</table>
### Hermle control tools

<table>
<thead>
<tr>
<th>Tool Management Control</th>
<th>Adaptive Feed Control</th>
<th>Wear Diagnosis System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple, Hermle tool management system for Heidenhain control units.</td>
<td>In adaptive feed control (AFC), the feed rate is automatically controlled (depending on the percentage of spindle output).</td>
<td>Machine status is continually monitored by the Hermle wear diagnosis system. It facilitates rapid machine diagnostics and status-oriented detection of maintenance tasks.</td>
</tr>
</tbody>
</table>

### 3D contour tolerance max.
- For 3D roughing with low machining performance.
- Very high machining speed, mainly for free-form surfaces.

### 3D contour tolerance min.
- For very high demands of machining accuracy, mainly for free-form surfaces.
- Can also be used with conventional programs.

### 3D path smoothing
- For very high demands on the surface quality, mainly for free-form surfaces.
02.8
The details

The C 400’s details are packed with know-how. All attachments and operating devices of the C 400 have been smartly optimized for users and designed specifically for respective machining tasks. The machining center can be transported without any disassembly and set up without a foundation. Furthermore, all units are arranged for easy maintenance and servicing.

www.hermle.de/details

**HIGHLIGHTS**

- Comprehensive fluid technology
- Optimized chip management
- Diverse coolant equipment
- Scraper belt conveyor
- Hinged belt conveyor

*We provide the correct method of swarf removal from the working area for all kinds of swarf*
Chip pan

Chip conveyor

Chip conveyor, internal cooling lubricant supply ICS 40
03
Technical data. C 400

www.hermle.de/c400
### Technical data. C 400

#### Working area

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse X axis</td>
<td>850 mm</td>
</tr>
<tr>
<td>Traverse Y axis</td>
<td>700 mm</td>
</tr>
<tr>
<td>Traverse Z axis</td>
<td>500 mm</td>
</tr>
<tr>
<td>Rapid linear traverses XY-Z</td>
<td>35 - 35 - 35 m/min</td>
</tr>
<tr>
<td>Linear acceleration XY-Z</td>
<td>6 m/s²</td>
</tr>
<tr>
<td>Linear feed force XY-Z</td>
<td>7000 N</td>
</tr>
</tbody>
</table>

#### Main spindle drive

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>15000 rpm 20% c.d.f. SK 40 / HSK A 63 20 kW / 180 Nm</td>
</tr>
<tr>
<td>Speed</td>
<td>18000 rpm 20% c.d.f. HSK A 63 20 kW / 180 Nm ●</td>
</tr>
</tbody>
</table>

#### Control unit

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heidenhain</td>
<td>iTNC 530 ●</td>
</tr>
</tbody>
</table>

#### Tool changer (pick-up)

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine pockets</td>
<td>38 items ●</td>
</tr>
<tr>
<td>Chip-to-chip time*</td>
<td>approx. 6.5 s ●</td>
</tr>
<tr>
<td>(chip-to-chip times for 3-axis unit calculated in keeping with German standard VDI 2852, page 1)</td>
<td></td>
</tr>
<tr>
<td>Maximum tool length</td>
<td>300 mm ●</td>
</tr>
<tr>
<td>Max. tool diameter with empty adjacent pockets</td>
<td>Ø 80 mm ○</td>
</tr>
<tr>
<td>Max. magazine load</td>
<td>152 kg ●</td>
</tr>
</tbody>
</table>

#### Extension of tool storage capacity

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional magazine</td>
<td>additional 43 pockets ○</td>
</tr>
<tr>
<td>Additional magazine</td>
<td>additional 87 pockets ○</td>
</tr>
<tr>
<td>Max. tool diameter in the additional magazine</td>
<td>Ø 80 mm ○</td>
</tr>
<tr>
<td>Maximum tool diameter with corresponding adjacent pocket</td>
<td>Ø 125 mm ○</td>
</tr>
<tr>
<td>Max. tool weight</td>
<td>8 kg ○</td>
</tr>
</tbody>
</table>

#### Chip pan

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removable chip pan</td>
<td>●</td>
</tr>
</tbody>
</table>

#### Chip conveyor

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>scraper belt or hinged belt conveyor</td>
<td>1100 mm 450 l ○</td>
</tr>
<tr>
<td>Ejection height</td>
<td>●</td>
</tr>
<tr>
<td>Chip cart</td>
<td>●</td>
</tr>
</tbody>
</table>

#### Internal coolant supply with paper band filter

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity of base container</td>
<td>250 l ○</td>
</tr>
<tr>
<td>Capacity of cooling lubricant tank</td>
<td>570 l ○</td>
</tr>
<tr>
<td>Pressure (manually adjustable up to)</td>
<td>max. 40 bar / 27 l/min ○</td>
</tr>
</tbody>
</table>
### Table variants

<table>
<thead>
<tr>
<th>NC swivelling rotary table</th>
<th>Ø 440</th>
<th>Ø 650</th>
<th>Rigid clamping table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamping surface</td>
<td>Ø 440 mm</td>
<td>Ø 650 x 540 mm</td>
<td>Ø 1020 mm</td>
</tr>
<tr>
<td>Collision circle</td>
<td>Ø 1020 mm</td>
<td>Ø 1020 mm</td>
<td>1070 x 700 mm</td>
</tr>
<tr>
<td>Swivelling range</td>
<td>+ 91° / - 139°</td>
<td>+ 91° / - 139°</td>
<td>-</td>
</tr>
<tr>
<td>C axis drive mode</td>
<td>Worm</td>
<td>Worm</td>
<td>-</td>
</tr>
<tr>
<td>Swivelling axis A speed:</td>
<td>One-sided drive</td>
<td>25 rpm</td>
<td>25 rpm</td>
</tr>
<tr>
<td>Speed rotary axis C:</td>
<td>30 rpm</td>
<td>30 rpm</td>
<td>-</td>
</tr>
<tr>
<td>Max. table load</td>
<td>-</td>
<td>-</td>
<td>2000 kg</td>
</tr>
<tr>
<td>One-sided drive</td>
<td>400 kg</td>
<td>600 kg</td>
<td>-</td>
</tr>
<tr>
<td>T grooves parallel</td>
<td>5 / 14 H7</td>
<td>7 / 14 H7</td>
<td>10 / 14 H7</td>
</tr>
<tr>
<td>Secondary clamping plates</td>
<td>920 x 490 mm</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>T grooves parallel</td>
<td>7 / 14 H7</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Position measuring system, direct

- Resolution: 0.0001 mm

### Positional tolerance

- Tp in X-Y-Z axes according to VDI/DGQ 3441: 0.008 mm

(calculated at a constant ambient temperature of 20 °C +/-1 °C. Our products are subject to the German Export Law and require authorization since the attainable precision may be less/greater than 6 µm.)

### Hydraulics

- Operating pressure: 120 bar

### Central lubrication

- Minimum grease lubrication quantity

### Connected loads (machine)

- Mains connection: 400 V / 50 Hz
- Power consumption: 43 kVA
- Compressed air: 6 bar

### Weight

(standard version without optional extras, attachments, workpieces and coolant)

- approx. 9.5 t

- Included in standard delivery
- Available upon request
03.2
Options

The C 400 is prepared for anything: numerous optional extras make machining even more efficient and powerful in real applications and enable you to optimize your work with the machining center still further.

www.hermle.de/options

C 400 standard machine dimensions

1 Machine
2 Emulsion mist extractor
3 Chip pan
Options

- Blow-off unit
- Control panel with 19" screen
- BDE signal
- Blow air through spindle centre
- Elec. manual control module
- Elec. heat compensation
- Accuracy packages
- Graphite machining packages
- Touch probe with preparation
- Emulsion mist extractor
- Rotating transparent window
- Coolant nozzle
- Sealing air for scales
- Status lamp
- Laminated safety glass panes
- Button preparation
- Tool breakage monitoring/measuring
- 6x rotary feedthrough

C 400 dimensions . Additional magazine ZM 87

1  Machine
2  Emulsion mist extractor
4  Chip conveyor
5  Chip cart
6  Internal coolant supply
7  Recooling unit
8  Additional magazine ZM 43/87
PRECISION IN EVERY DIMENSION: Hermle has a thorough understanding of the requirements for manufacturing high-precision machining centers for processing smaller and larger workpieces of up to 2.0 t in weight. For this reason, “The Original” only uses German machines for production and materials from European suppliers. Furthermore, the entire machining production department is fully air conditioned and kept clean by a central swarf disposal system. Hermle machining centers have also been thoroughly tested by intensive endurance tests and in manufacture-oriented machining processes in our own machining manufacturing department. Our meticulous manufacturing processes allow Hermle to set new precision standards which undercut those demanded by the DIN/ISO 10791 standard in every way. At Hermle, we distinguish between positioning precision (accuracy with which a certain position within the working area can be pinpointed on one axis) and geometric precision. The latter is significant for the precision of the entire machine – it encompasses the following factors:
- Positioning of linear and rotary axes.
- Straightness and angular deviation of the linear axes.
- Rectangularity and parallel alignment of all axes to one other.
- Concentricity and axial run-out of the table.
- Concentricity of the working spindle.

The precision of Hermle machining centers originates during mechanical production and is not produced by subsequent electronic compensation.

www.hermle.de/precision
**PRECISION LEVELS**

**Hermle standard:**

- X-Y-Z: Pos. tolerance ≤ 8 µ
- A: Pos. tolerance ≤ 16"
- C: Pos. tolerance ≤ 9"

Ovality test of a standard machine
Both manufacturer and customer benefit from efficient production processes. Therefore, Hermle has focused on integrated resource sustainability and energy efficiency for many years. We can rightly claim pioneer status in the “bluecompetence” initiative founded by the VDW (German Machine Tool Builders Association).

From development to low-energy manufacturing (with a high level of in-house production) to the operation of CNC machining centres – Hermle has stood for a principle of sustainable environmental protection combined with economic considerations for many years. Energy recovery is just one of the advantages enjoyed by our customers.

www.hermle.de/energy-efficiency
**EFFICIENT MANUFACTURING**

We use energy efficient manufacturing methods not because it is the current trend or because it is required of us, but on principle. And we always have.

- Low energy component manufacture
  - Mineral casting technology
  - Lightweight construction

Virtual machine optimization / machine development

Reduction of transport energy consumption
- High levels of in-house production
- Just one production plant
- Locally sourced components and materials
- No material tourism

High-quality, high-efficiency components
- Ball screws
- Guideways
- Antifriction bearing etc.

**EFFICIENT OPERATION**

Our machining centers are energy efficient both during their manufacture and during operation.

- Energy recovery has been standard at Hermle for over 20 years
- High quality servo axes
- Ideal drive design for the respective application
- Demand-based cooling technology both for dimensioning and in application
- De-energize system:
  - Up to 80% less energy consumption in stand-by mode
- Very long machine service life
06 Services

The perfection we insist on for the development and production of our machines is also mirrored by our service department. Our service team provides more than just spare parts and rapid response support within hours. At Hermle, we see ourselves as a comprehensive service provider which provides customers with numerous benefits.

Alongside standard services, these include:
- Our superior, cost-effective, practical and flexible training programs carried out by sales representatives directly at the customers’ premises.
- Our continual pursuit of optimization and perfection. Our motto – those who stop improving today will not make the grade tomorrow.
- Intensive expert consultation on milling in general, programming and handling of our products.
- Our application technicians who are experts in machining processes and who are quick to assist and advise our customers.

www.hermle.de/services
The machining examples used in this leaflet are published with the explicit and kind permission of our customers. The information in this brochure only contains general descriptions and/or performance features that, in a concrete application, may not always apply in the form described or represented here or may have changed due to further development of the products. The performance features desired shall only be binding if they have been expressly agreed upon in writing at the time of the contract. The machines shown may incorporate options, accessories and control variants.