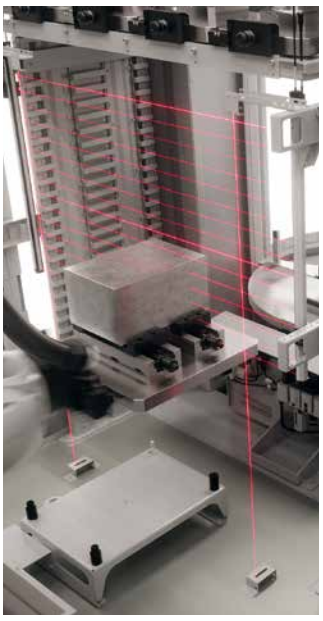
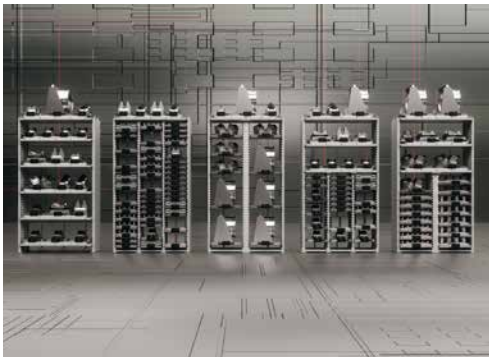
Robot system RS 2 GEN2

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HERMLE

We're ready for the future: With the new robot generation.

Industry sectors. Products. Automation.

When absolute precision and long-term accuracy are essential, HERMLE is the ideal choice in most key industry sectors. And that's the way it should stay. We have therefore launched the GEN2. Our products are universally applicable, especially in combination with our highly flexible automation solutions.

Customers. Employees. Service.

At HERMLE, everything is centred around the success of our customers, and with over 30,000 of our machines installed, they experience milling at its best every day. But how do we achieve this? Through process consulting, outstanding service and the proverbial HERMLE precision in manufacturing. And, above all, through a constant supply of new ideas provided by our many employees. One of these ideas: the GEN2 machines and automation solutions.

Of course, the next generation of precision is also being developed in Gosheim. A town that has long been home to precision and mechanical engineering. It's from here that our sales and service network spans the globe.

The future. Already here. GEN2.

The most important thing first: with GEN2, you're prepared for the challenges of tomorrow, today. However, the mechanics, which ensure the precision and long-term accuracy of our machines, have not changed. Nor is its dominance in the 5-axis area. A new feature is the entire electrical architecture which sets new standards in terms of future-proofing and reliability in both software and hardware.

The good news for both our customers and the environment is that we've further enhanced the energy efficiency of our machining centres. As you can see: the name HERMLE will continue to guarantee precision and long-term accuracy far into the future.



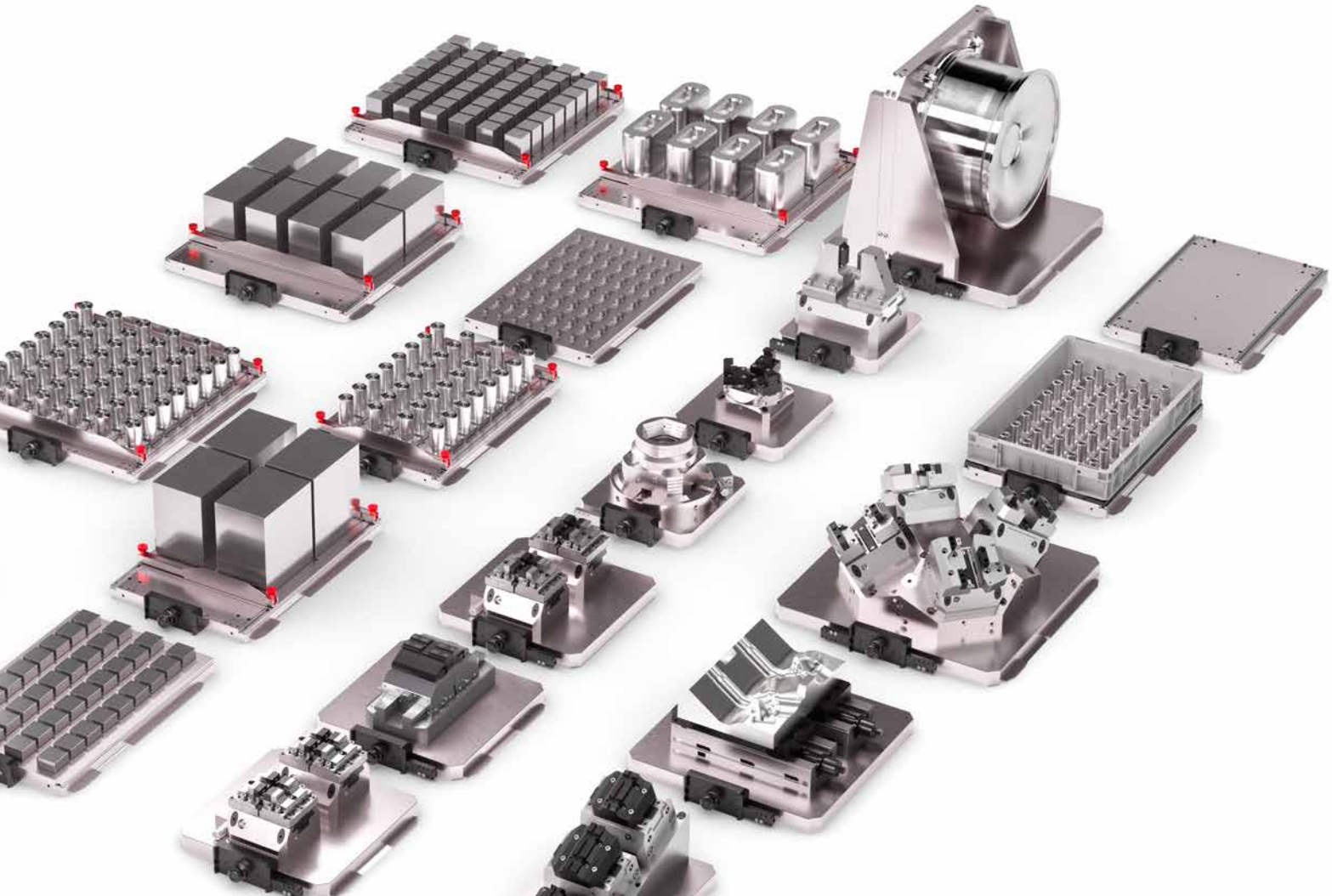
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01 Combined cell for pallet and workpiece automation

The RS 2 robot system is a fully fledged combination cell for pallet and workpiece automation. The robot operates fully automatically, and can flexibly grip, clamp and store workpieces up to 25 kg and pallets up to 210 kg. The RS 2 guarantees process-secure production round the clock, while winning customers over with maximum flexibility and productivity! The rack storage concept makes for an unusually high degree of autonomous running; gripper and device changing is fully automatic and the fully functional setup station allows for pallets, workpiece carriers and workpieces to be set up in parallel with the main operation. This makes the RS 2 the ideal automation solution for a wide variety of machining tasks.







WE OFFER

- Everything from a single source
- Single-item and batch production
- Automated pallet handling
- integrated parts handling
- Setup during production
- Automatic gripper and clamping device change
- Integrated jaw station for maximum flexibility thanks to automatic jaw change on the clamping device
- Smart rack system with dynamic assignment
- Integrated measurement technology for reliable loading
- High flexibility when components change
- Scalable machine connection
- Smart storage and control concept
- Compact design with full functionality

YOUR ADVANTAGES

- Flexible scheduling of your orders
- Tackling the skills shortage
- Low spindle hourly rate
- High spindle running time
- Short response times
- Flexible working hours
- Fast setup times
- High availability
- Flexible manufacturing
- Future-oriented
- The high service quality and availability HERMLE is known for
- Extensive expertise, with almost 1,000 robot systems on the market

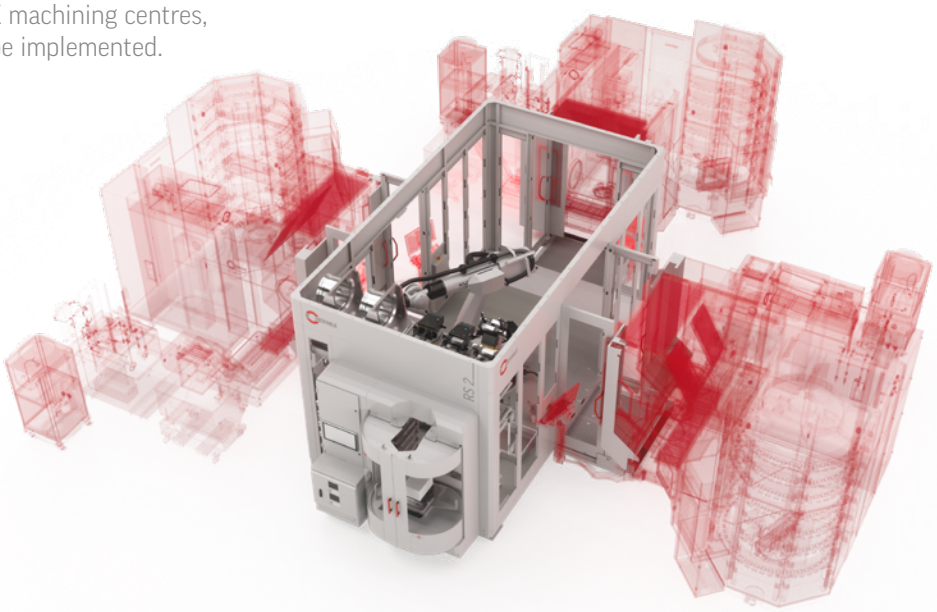
02 One- / two- / three-machine system

Scalable system architecture

A key feature of the RS 2 robot system is its modular and scalable system architecture.

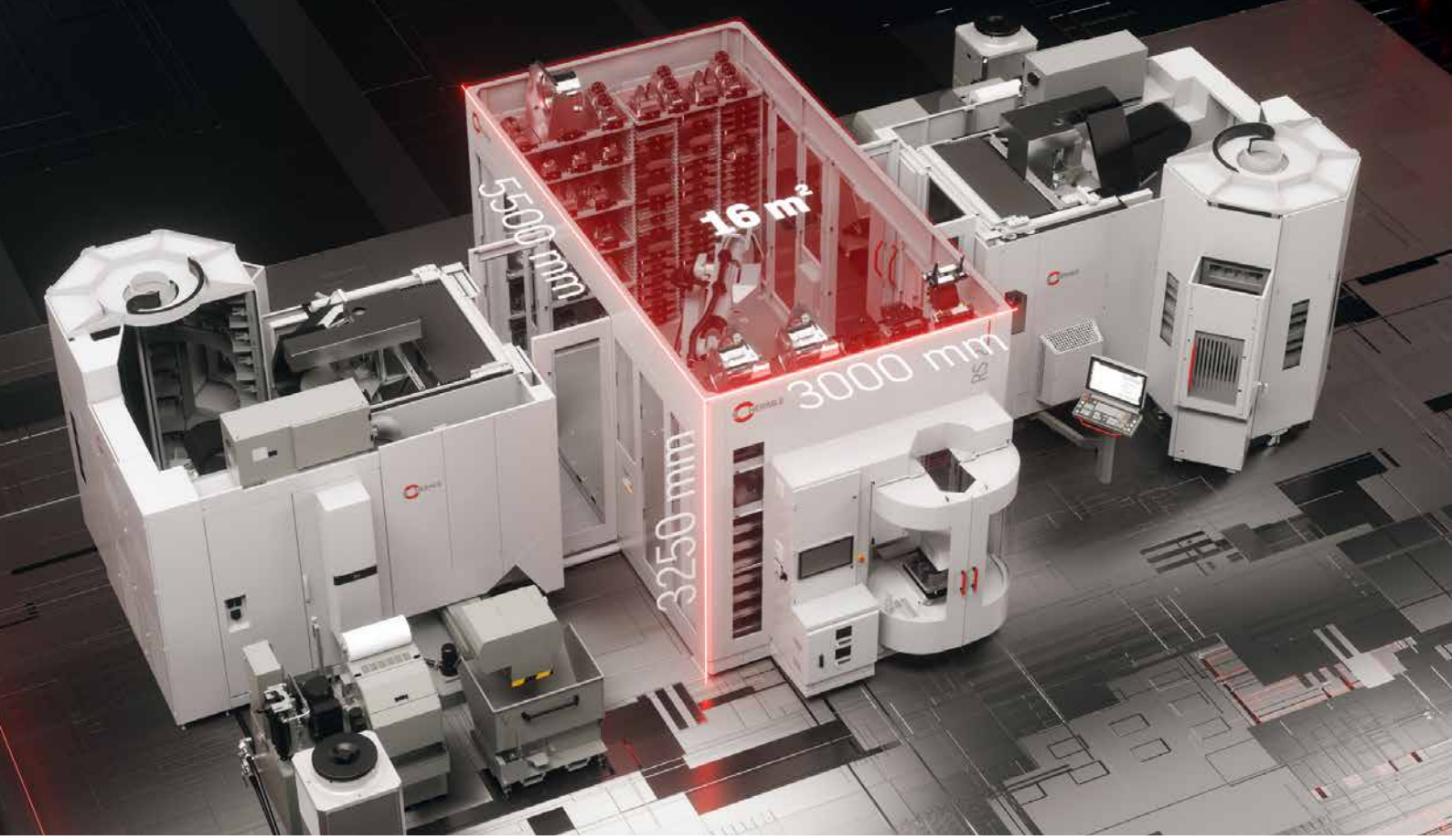
The system can:
- be operated with one, two or three machines
- be upgraded from single-machine to multi-machine operation at a later date
- be supplemented with additional peripherals such as rack modules, measuring machines, washing equipment or AGV systems

It can be connected to various HERMLE machining centres, enabling flexible cell configurations to be implemented.



One-machine system





Space required

One- / two-machine system – space required for the robot system 16 m².

Three-machine system – space required for the robot system 12.6 m².

ADAPTATION

Machine models to which the RS 2 robot system can be adapted:

One / two-machine system

C 22 | C 32 | C 42 | C 250 | C 400 | C 650
(Machine models can be combined in various ways)

Two-machine system



03
Details

Access

Free access to the machine. Easily accessible, capable of autonomous operation, offering ergonomically optimal freedom of movement and machining, and good accessibility for the operator.

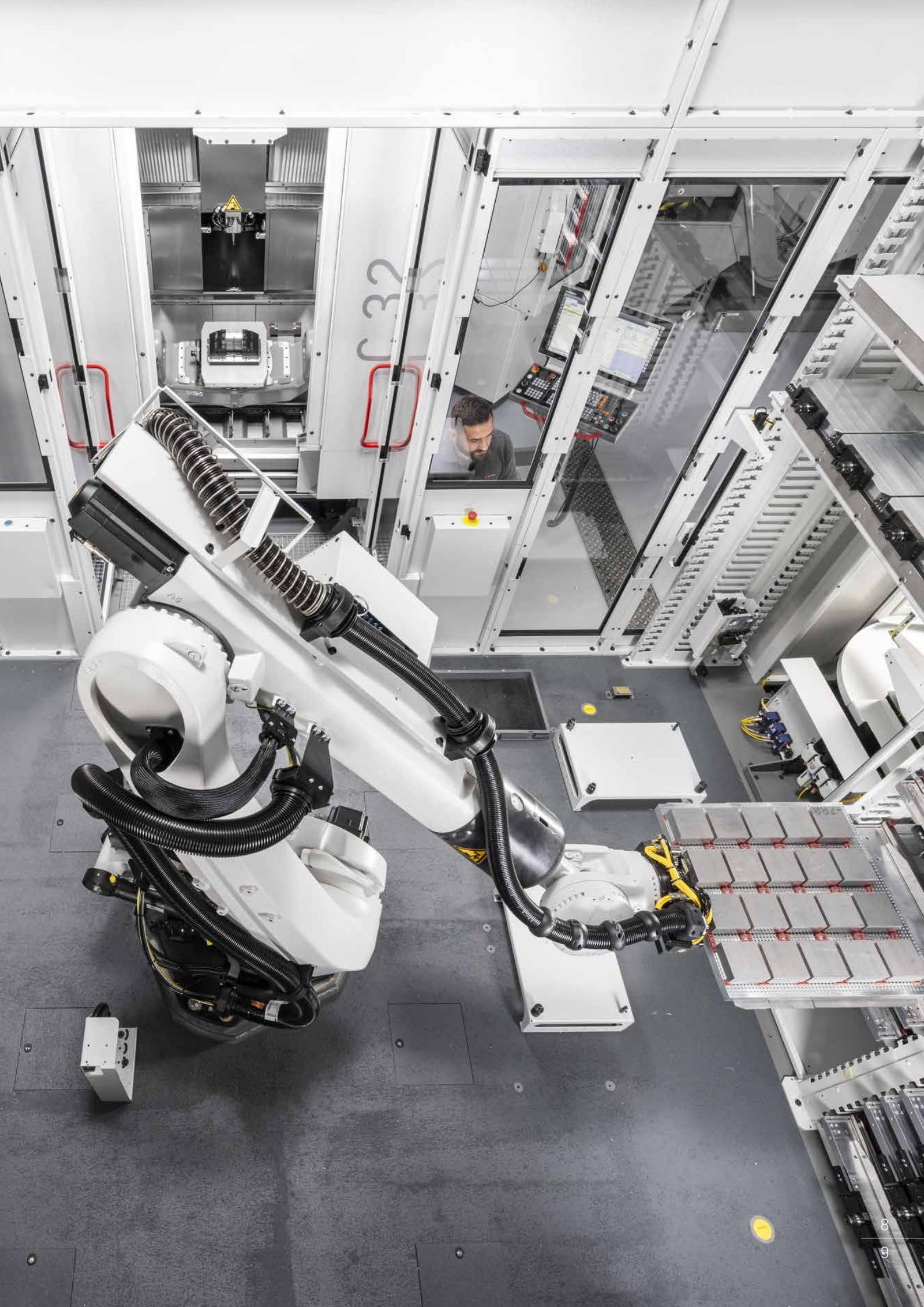


Setup station

The setup station can be designed as fixed or rotatable.

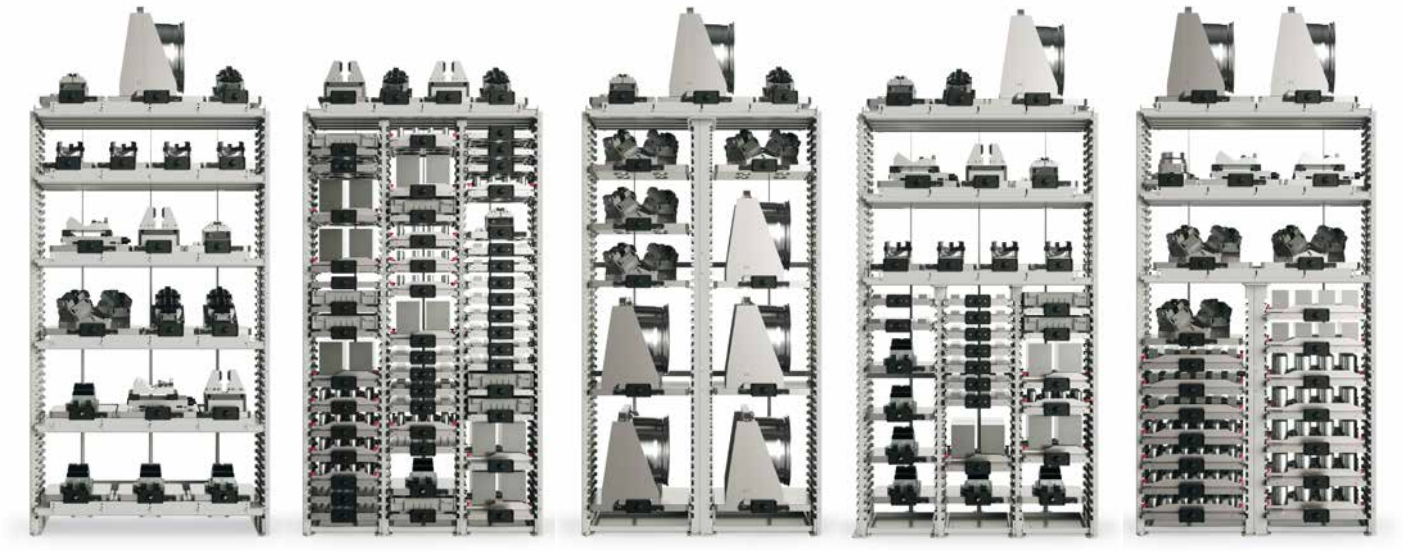
With a collision circle of max. Ø 930 mm, not only pallets with workpieces but also matrices and blanks can be fed into the robot system during production. Without rotating the setup station, even larger objects can be loaded.

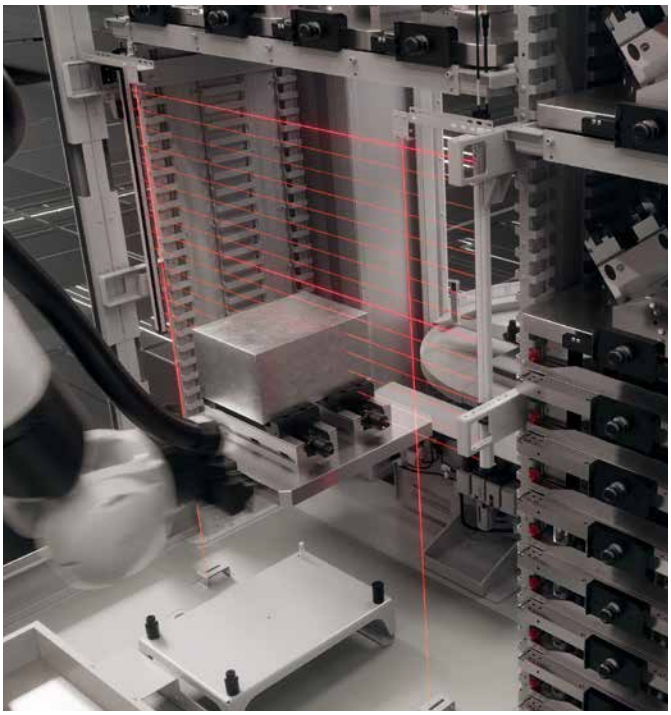




04
Rack storage variants

Always ready and waiting: Pallets, workpieces, interchangeable grippers, clamping devices, clamping jaws.
Up to five different rack modules can be integrated: The foundation for unrivalled flexibility.





Integrated measuring technology

The setup station system features a laser monitoring system which measures the height and checks the width of workpieces before they are stored. This ensures that only validated components enter the automated material flow. At the same time, the control identifies available storage capacity and, for every active transport operation, checks whether there might be a more suitable storage location.

VIDEO

Intelligent rack system

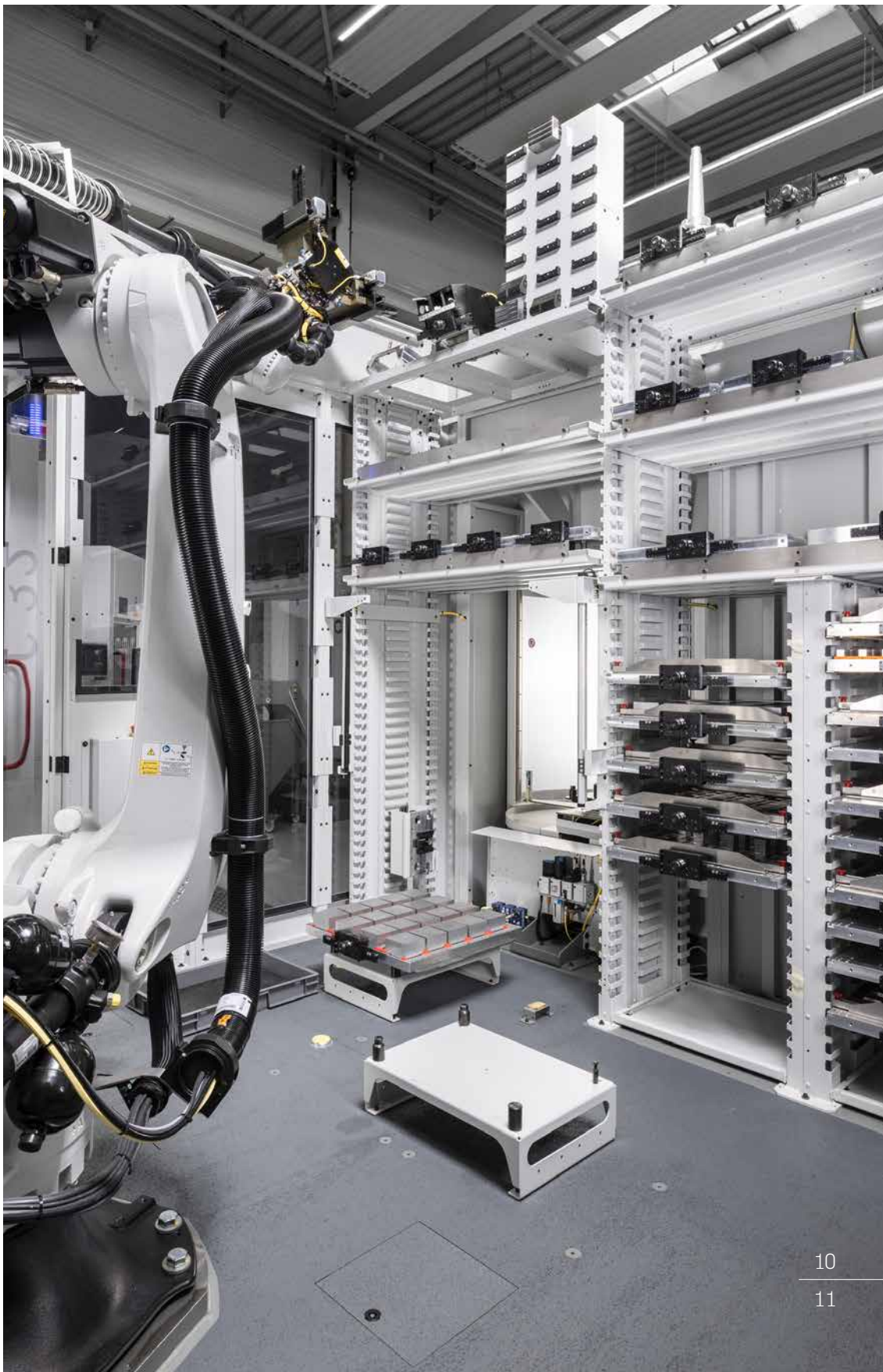
Intelligent rack system with dynamic assignment
The rack system is based on a software-supported, adaptive storage strategy. Workpieces and pallets are sorted automatically and in a space-optimised manner without any fixed assignment ("chaotic storage").

THE ADVANTAGES

- *maximum use of the available storage space*
- *reduced setup times*
- *no manual rack configuration*

The number of available rack modules is adapted to the specific system configuration.





VIDEO

05
Pallets

Pallets for large and heavy workpieces up to max. 210 kg total weight (including pallet).
The number of pallets per storage module depends on the configuration of the storage module.

Different pallets are available for individual machining tasks (Deviating pallet dimensions available on request).

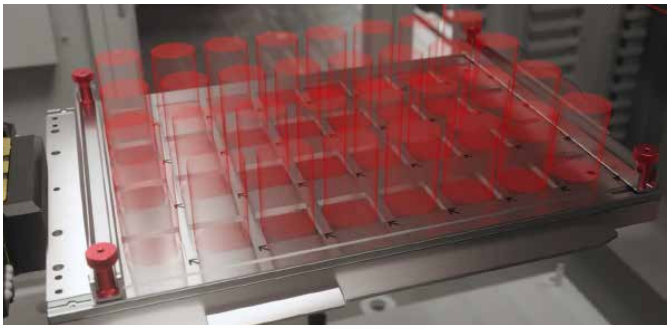


Technical data . Pallet dimensions:

298 x 298 mm
298 x 398 mm
318 x 318 mm
398 x 398 mm
398 x 598 mm
498 x 498 mm
598 x 598 mm

06
Matrices

Two matrice carriers are available as standard. The matrice carrier can accommodate universal matrices with base dimensions of 400 x 600 mm and 600 x 600 mm, designed to hold various cubic or cylindrical workpiece blanks. It is also possible to use customised matrices, of course.



Technical data . Die carrier:

400 x 600 mm
600 x 600 mm



VIDEO

07
Clamping devices

Flexible and universally applicable automatic clamping solutions, combined with the equally flexible gripping systems, provide the optimum overall package for workpiece handling – whether blank, semi-finished or finished parts. To provide fully automated and process-reliable machining and parts handling, the clamping jaws of the vices can also be changed fully automatically in the RS 2. This enables an even greater number of workpieces and is the ideal addition in the area of six-sided machining.

Universal clamping jaws

Uniform base jaws and a range of adapter jaws – cubic and round, adjustable in 2 mm steps using a setting scale. Continuous gripper bars for variable workpiece widths and diameters.

Various base jaws
- 6 variants for square & round
- Clamping range square: 4–60 mm or 60–120 mm
- Clamping range round: 35–60 mm or 50–100 mm
- Uniform base jaws for clamping blocks size 160

Long-stroke clamping device

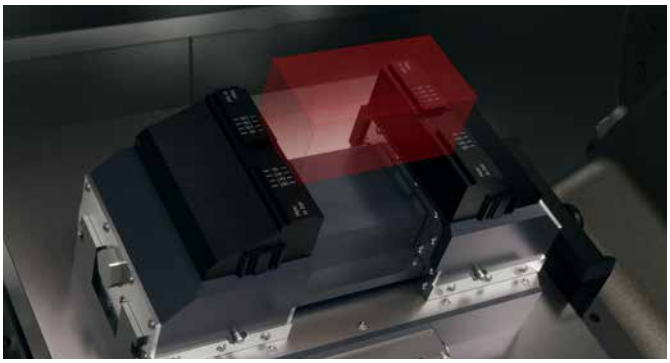
The long-stroke clamping device, with its very large clamping range, automatically adapts to the workpiece dimensions, just like the flexible gripper portfolio. Together, they form an unbeatable duo which virtually eliminates the need for manual intervention, even when working with a wide variety of workpieces.

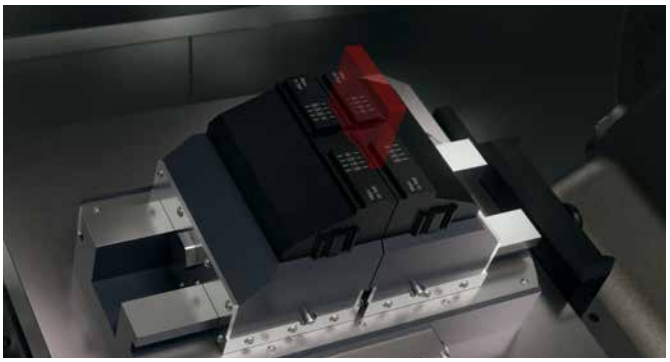
Various clamping jaws
- for square and round
- Clamping range square: 20–110 mm or 110–200 mm

Jaw station

Up to 10 pairs of clamping jaws can be stored in the jaw magazine. The clamping jaws can be conveniently stored via the setup station and the storage area provided for this purpose.



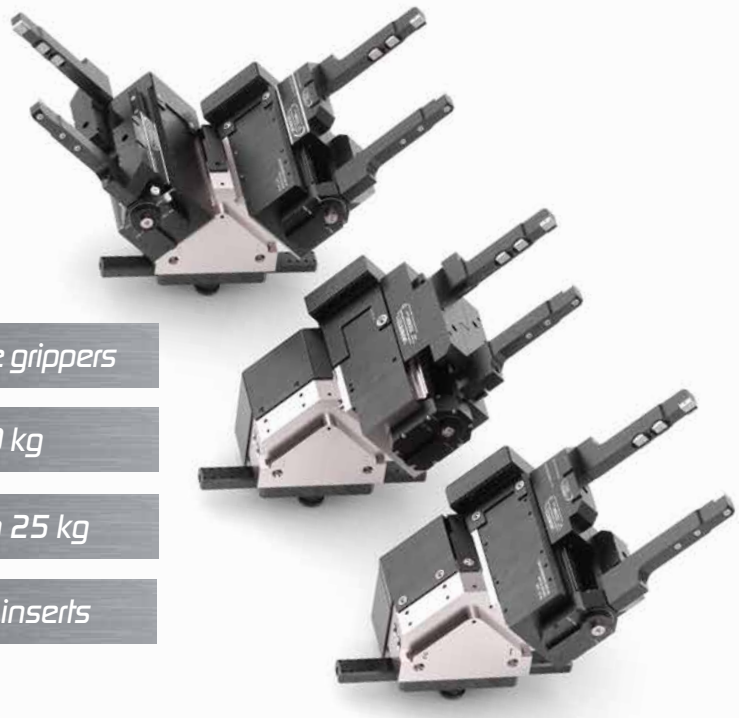




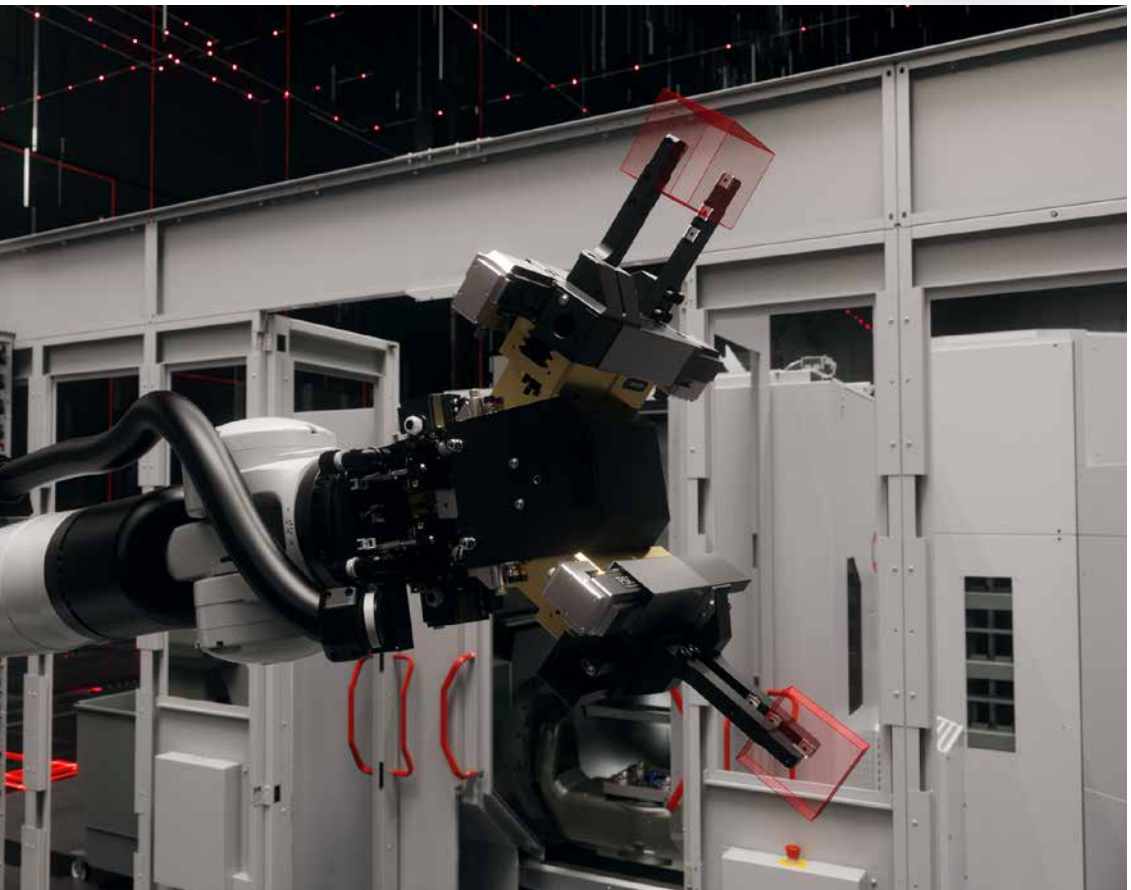
VIDEO

08
Gripper solutions

All the required grippers are ergonomically integrated into the robot system and changed automatically by the 6-axis robot. An extensive portfolio is available for adapting to different component geometries and production strategies. This allows both pallet and single-part processes to be combined within a single cell – even in parallel on separate machines.



- *Flexible single and double grippers*
- *Pallet grippers up to 210 kg*
- *Workpiece grippers up to 25 kg*
- *A wide variety of gripper inserts*



VIDEO

09 Adaptive control software

The adaptive control software was specially developed and integrated for robot control and the entire automation process. The system control takes over the complete coordination of the following processes:

- Order management
- Material flow control
- Status monitoring
- Dynamic prioritisation

In the event of faults, such as a tool breakage, the system implements automatic contingency strategies and continues with alternative machining jobs. An integrated preview helps the operator to plan several days ahead. Furthermore, the software offers a wide range of options to meet individual requirements, such as interfaces for the automated transfer of NC programs and order data, as well as other special processes for setting up components and orders.



FEATURES

- *Production orders according to priority/deadline*
- *Shift model: unattended / operator / night shift*
- *Simulation of the production run incl. preview*
- *Equipment availability view*
- *Visualisation of plant states*
- *Workshop mode for operator*
- *21.5" touchscreen*

APPS

- *ToDo app – all operating tasks in an overview*
- *Setup station app – guided setup process*
- *Controller app – plant state and work preview*
- *Recorder app – statistics and plant data*
- *Comprehensive customisation options*

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