

CHRONO 3-5AX

CNC-AUTOMATION

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CHRONO 3-SAX

3- and 5-Axis CNC Automation
Workpiece Size: 200-500 mm
Max. Weight: 20 kg

- ▶ Pallet and Workpiece Handling
- ▶ Pallet Size: 200 kg
- ▶ Maximum Stroke: 2000 mm

▶ Power: 11 kW (Kawasaki) and 15 kW (Siemens)

▶ Robust Construction: Steel and Cast Iron Frame for High Accuracy and Long Life

▶ SIMOTION 6ES7-0 Control: Ensuring maximum efficiency and easy operation

▶ High Safety Standards: Enclosed cabinet for safe production of both loaded and machine

SIDELOAD

The CHRONO 3 is positioned to load the tooling machine via the side hatch for side load.

With a length of 2400 mm and a width of 2000 mm, a load capacity of up to 2000 kg is available for loading every workpiece for loading workpieces on pallets.

PALLET

CLAMPED-TOOL GRABBER

▶ Pallet handling, pre-processed workpieces and tooling are loaded and unloaded with the CHRONO 3. The pallet is held in place by the high-precision magnetic clamping system. Additionally, a fix base for clamping workpieces is available for loading.

The CHRONO 3 has a path of 2000 x 2000 mm, which corresponds to the size of a Euro pallet. It is available in 2000 mm stroke for the workpiece.

GRIPPER

NO CONTACT GRABBER

▶ No contact, no pressure, no necessary force applied for removal from the workpiece and tooling.

▶ Clamping and clamping with the CHRONO 3 system.

▶ Pallet handling, pre-processed workpieces and tooling are loaded and unloaded with the CHRONO 3 system.

STORAGE

STORAGE SYSTEM

▶ With a total path of 2000 x 2000 mm, the CHRONO 3 is available in 2000 mm stroke for the workpiece. The workpiece can be stored in a storage system with a capacity of up to 2000 kg.

[Datasheet](#)

CHRONO 3-SAX

TECHNICAL DATA SHEET

| System | Configuration | Control System |
|------------|--------------------------------------|------------------------|
| Machine | Siemens SIMOTION 6ES7-0 | Siemens SIMATIC 6ES7-0 |
| Drive | Siemens SIMOTION 6ES7-0 | Siemens SIMATIC 6ES7-0 |
| Motor | Siemens SIMOTION 6ES7-0 | Siemens SIMATIC 6ES7-0 |
| Power | 11 kW (Kawasaki) and 15 kW (Siemens) | Siemens SIMATIC 6ES7-0 |
| Stroke | 2000 mm | Siemens SIMATIC 6ES7-0 |
| Accuracy | ±0.01 mm | Siemens SIMATIC 6ES7-0 |
| Speed | 10000 mm/min | Siemens SIMATIC 6ES7-0 |
| Weight | 2000 kg | Siemens SIMATIC 6ES7-0 |
| Dimensions | 2400 mm x 2000 mm x 2000 mm | Siemens SIMATIC 6ES7-0 |

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CHRONO 3-5AX

CNC-AUTOMATION

Front- and Side-Load
Automation for 3- and 5-axis
milling machines.

- ▶ Pallet and Workpiece Handling
- ▶ Payload: Up to 30 kg
- ▶ Maximum Stroke: 1200 mm

- 1 Powerful Linear Kinematics: Precise and reliable motion control
- 2 Robust Construction: Welded steel frame for maximum stability and durability
- 3 SIEMENS SIMATIC S7 Controlled: Ensuring maximum efficiency and easy operation
- 4 Highest Safety Standards: Enclosed system for optimal protection of both operator and machine

1840 mm

1500 mm

2150 mm

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OVERVIEW

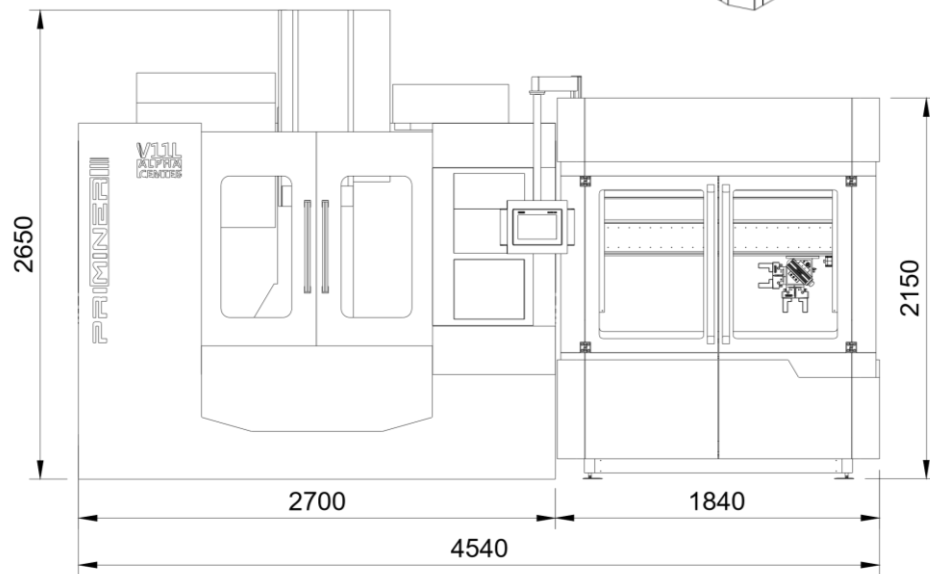
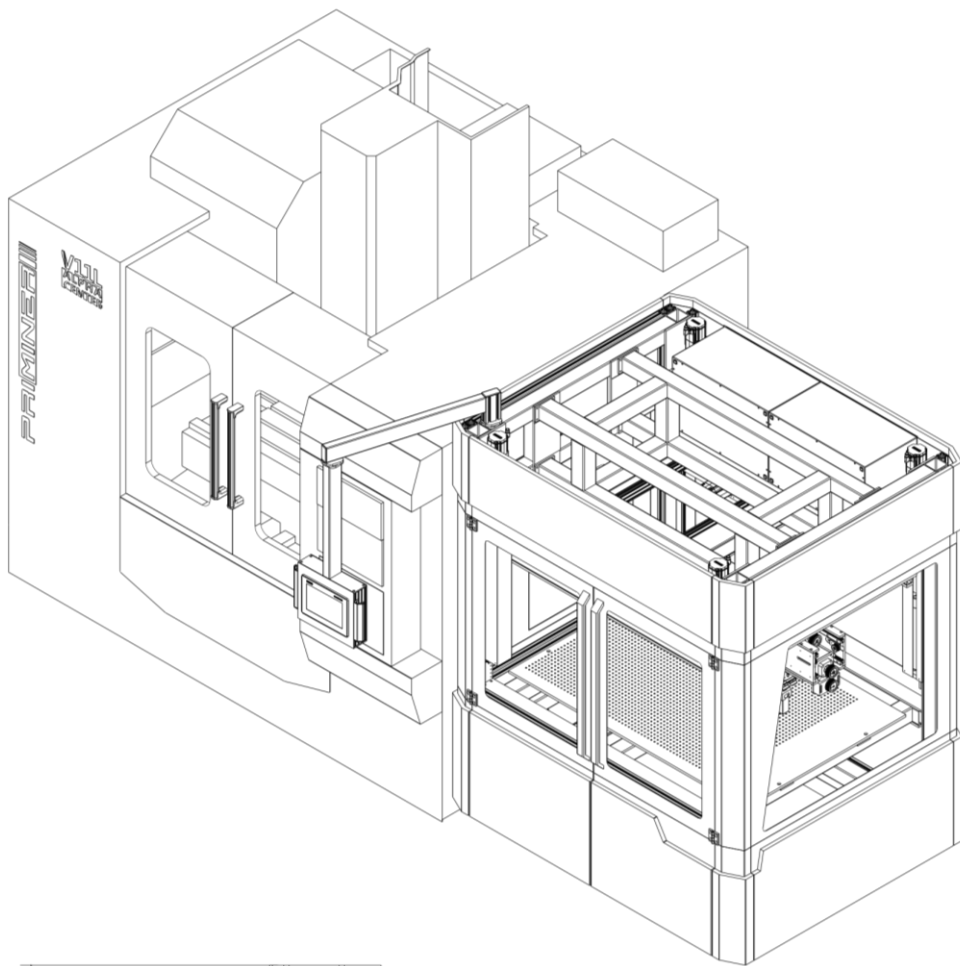
SETUP PLANNING

WORKPIECE
PALLET

GRIPPER
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STORAGE

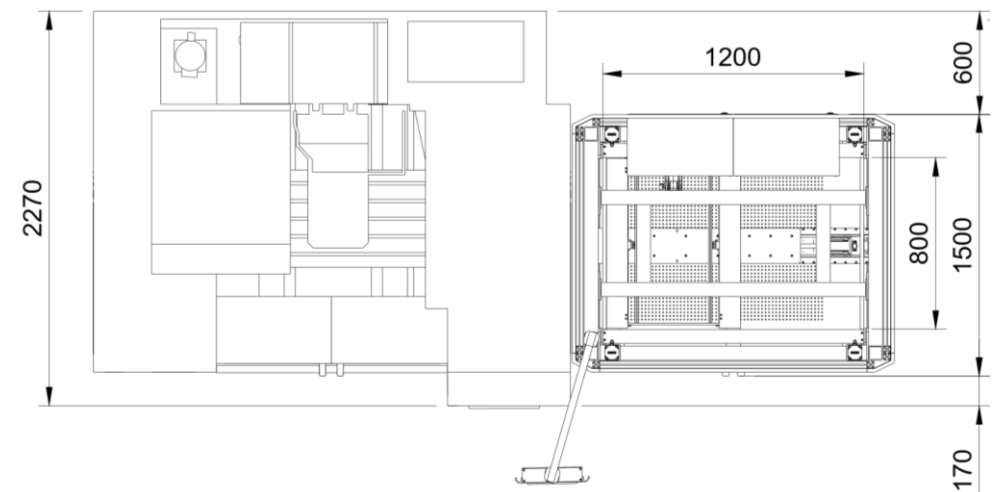
DATASHEET



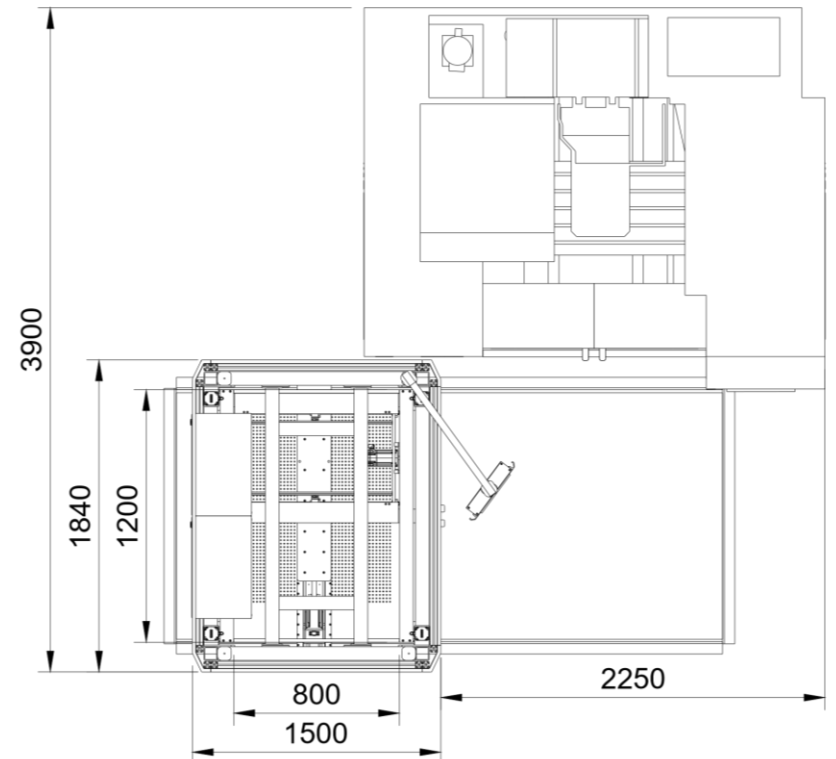
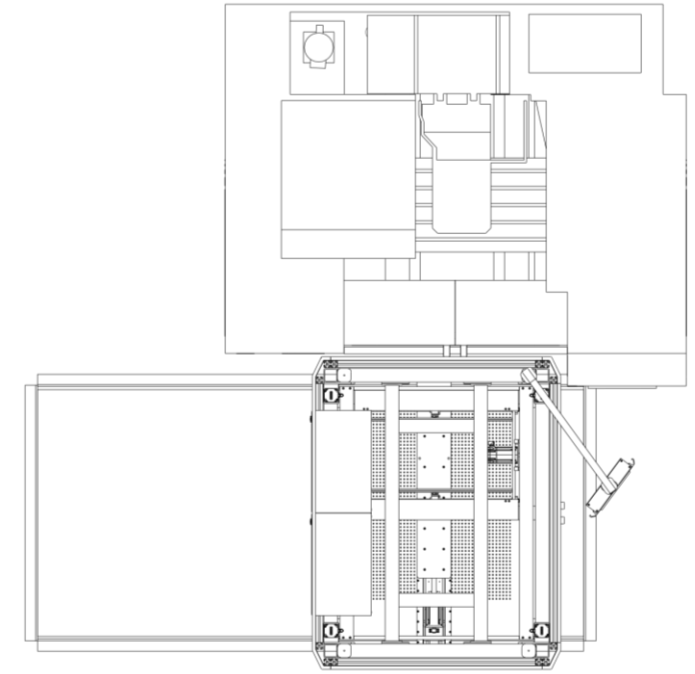
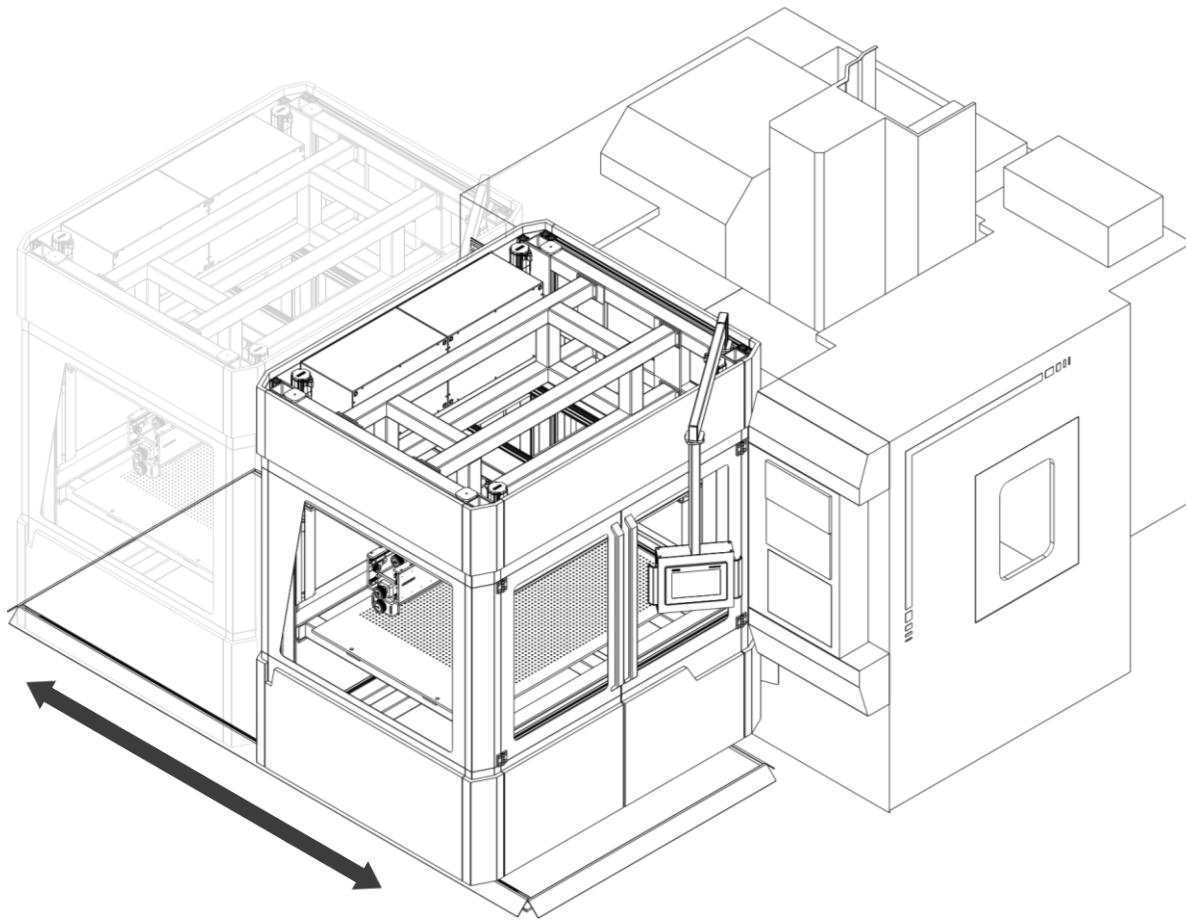
SIDELOAD POSITION

The CHRONO is positioned flush next to the milling machine via the side hatch for loading.

With a length of 1,840 mm and a width of 1,500 mm, it is extremely compact while simultaneously achieving a very high capacity for storing workpieces and pallets.



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FRONTLOAD POSITION

If space constraints or retrofitting an automated side hatch is technically or economically unfeasible, the CHRONO loads through the front door.

For a tool change, it can be effortlessly moved aside on rails within seconds.

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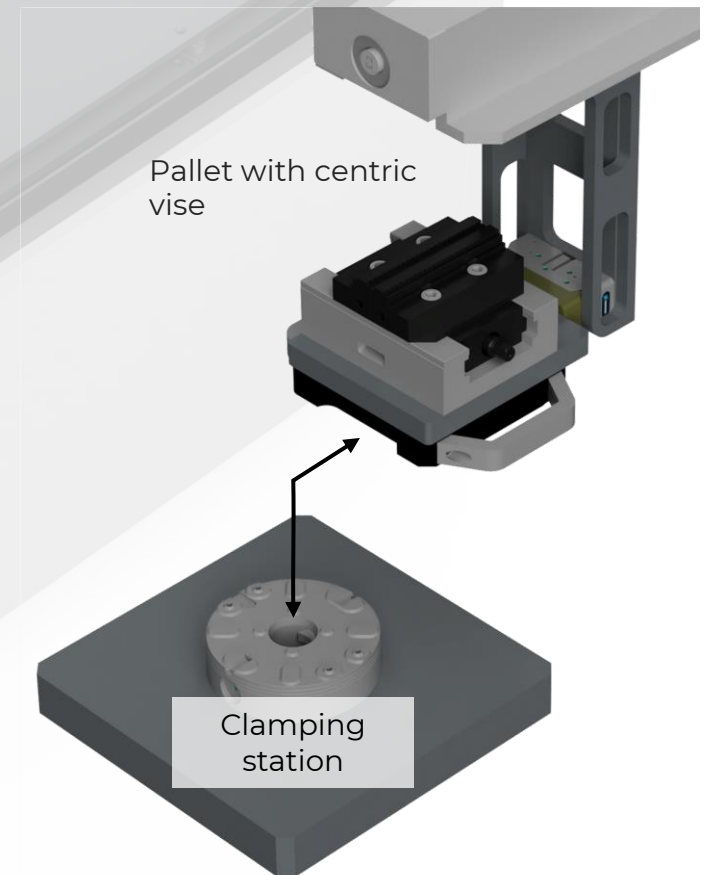


PALLET

CLAMPING DEVICE USAGE

Pallet handling (zero-point clamping technology) or gripping and clamping with the Gressel RC2 system is used whenever the highest accuracy requirements must be met.

Additionally, it is ideal for loading varying workpieces and increasing autonomy time.

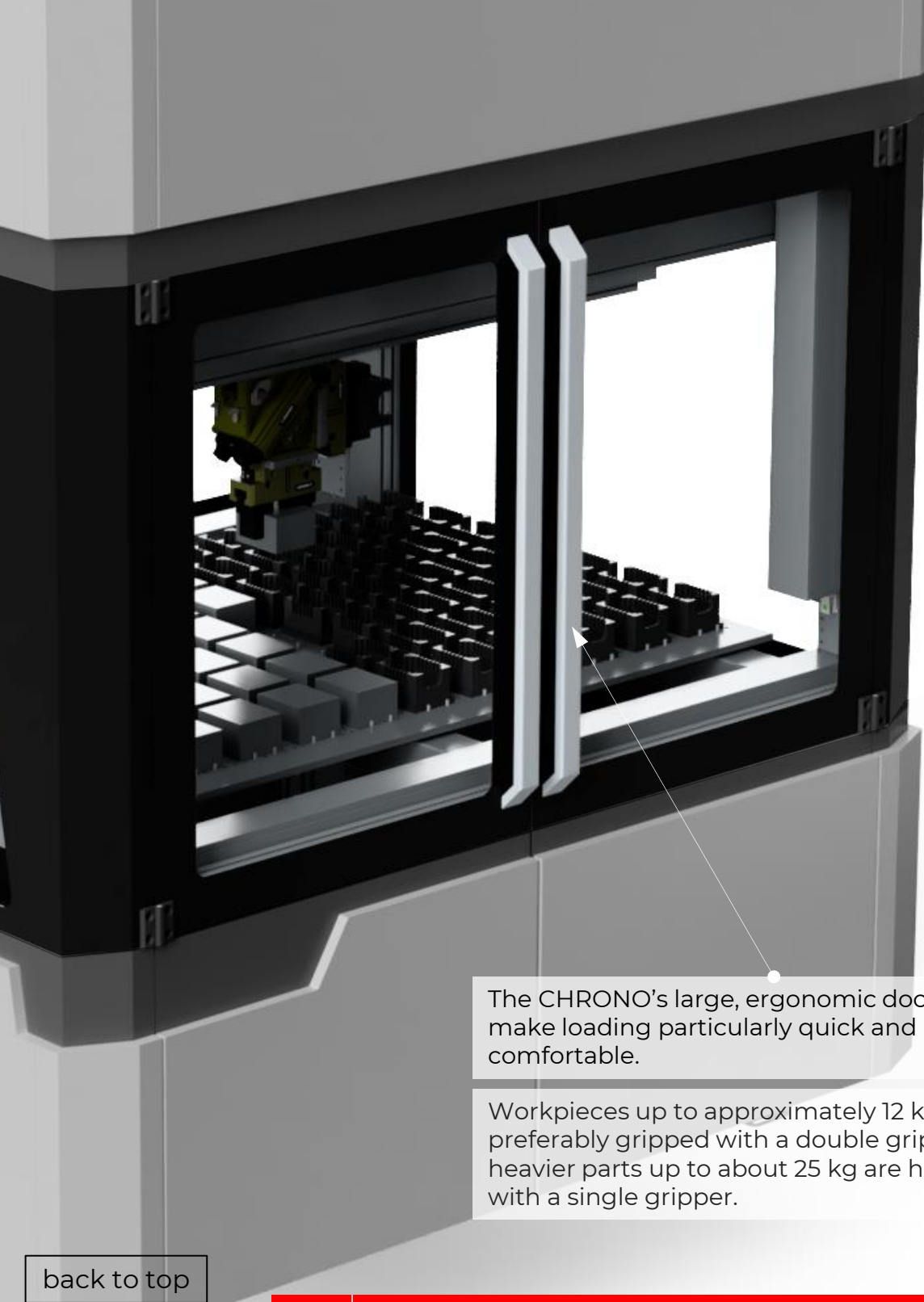


800 mm

1200 mm

The CHRONO's travel path is 800 x 1200 mm, which corresponds exactly to the size of a Euro pallet. In this example, 16 storage spaces are available. The dimensions of the pallets are 180 x 240 mm.

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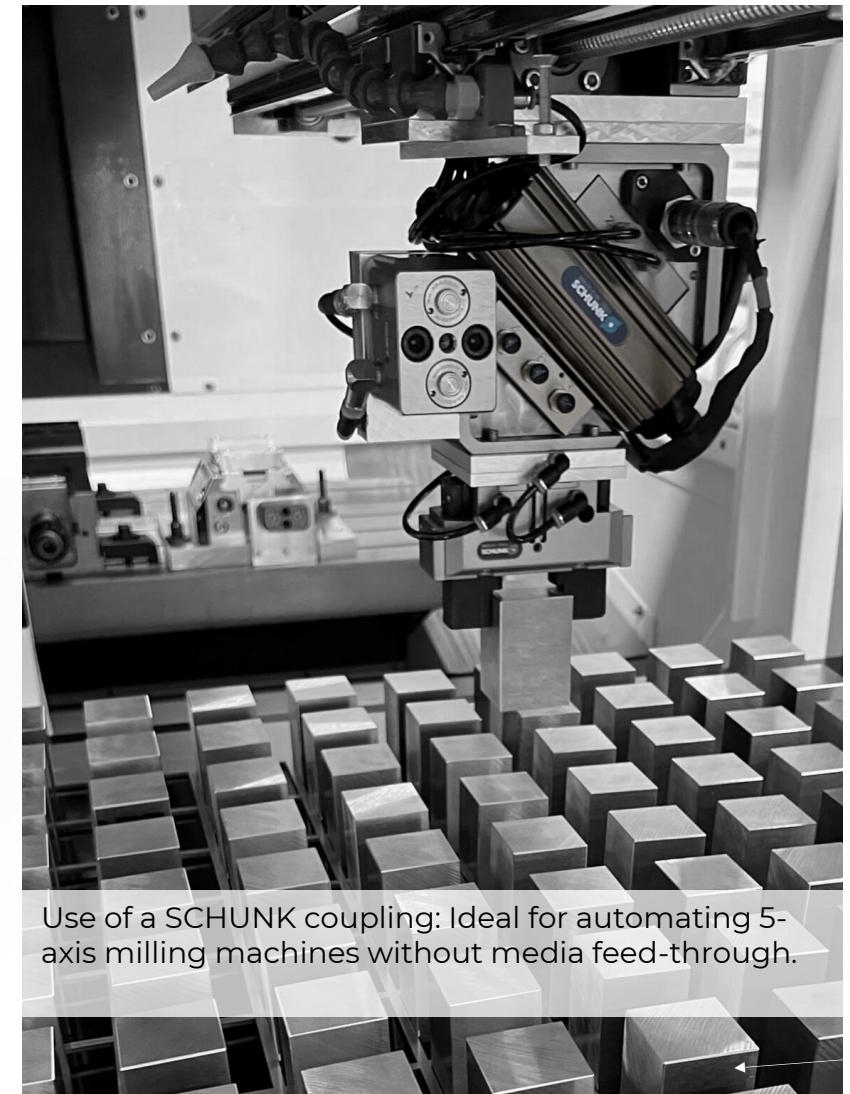


WORKPIECE CLAMPING DEVICE USAGE

The CHRONO offers options such as flipping, centering, and measuring to process directly gripped components on both sides, precisely center them, or inspect them within the process.

The CHRONO's large, ergonomic door openings make loading particularly quick and comfortable.

Workpieces up to approximately 12 kg are preferably gripped with a double gripper, while heavier parts up to about 25 kg are handled with a single gripper.



Use of a SCHUNK coupling: Ideal for automating 5-axis milling machines without media feed-through.

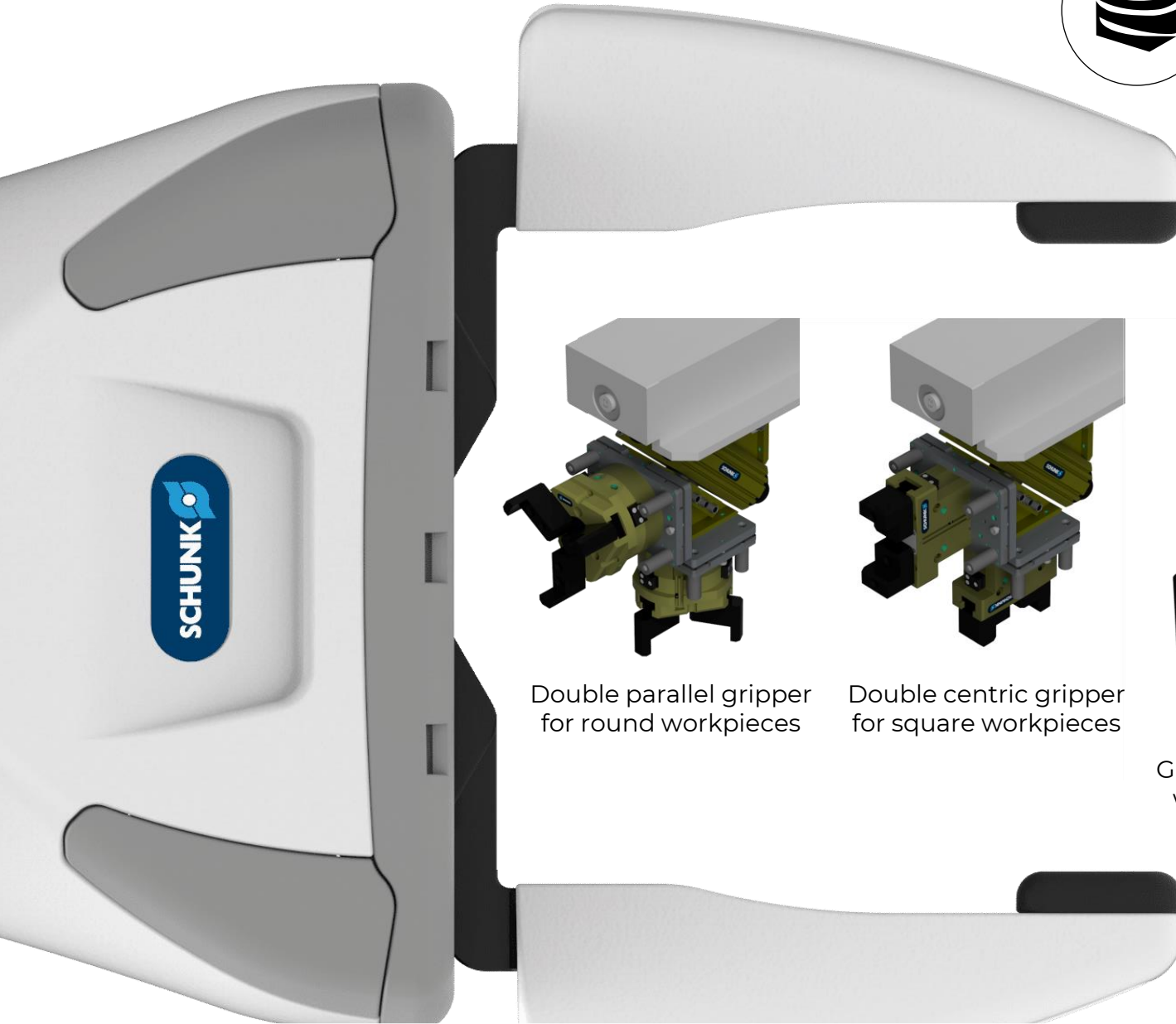
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GRIPPER

FULL FLEXIBILITY

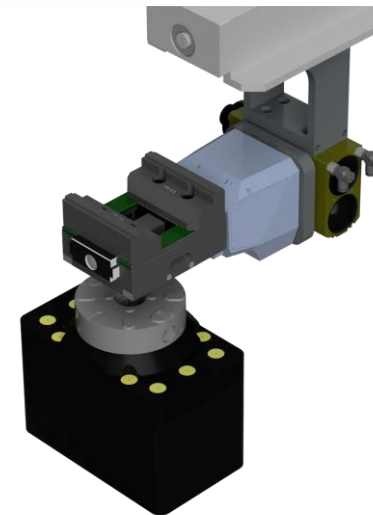
As universal as possible, as precise as necessary:
Only grippers from renowned manufacturers are used.



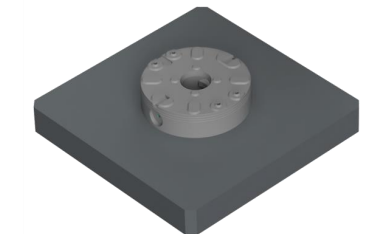
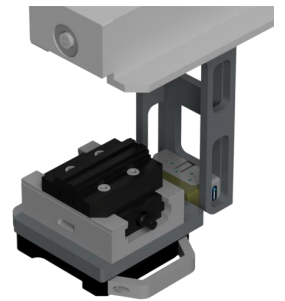
Double parallel gripper
for round workpieces



Double centric gripper
for square workpieces



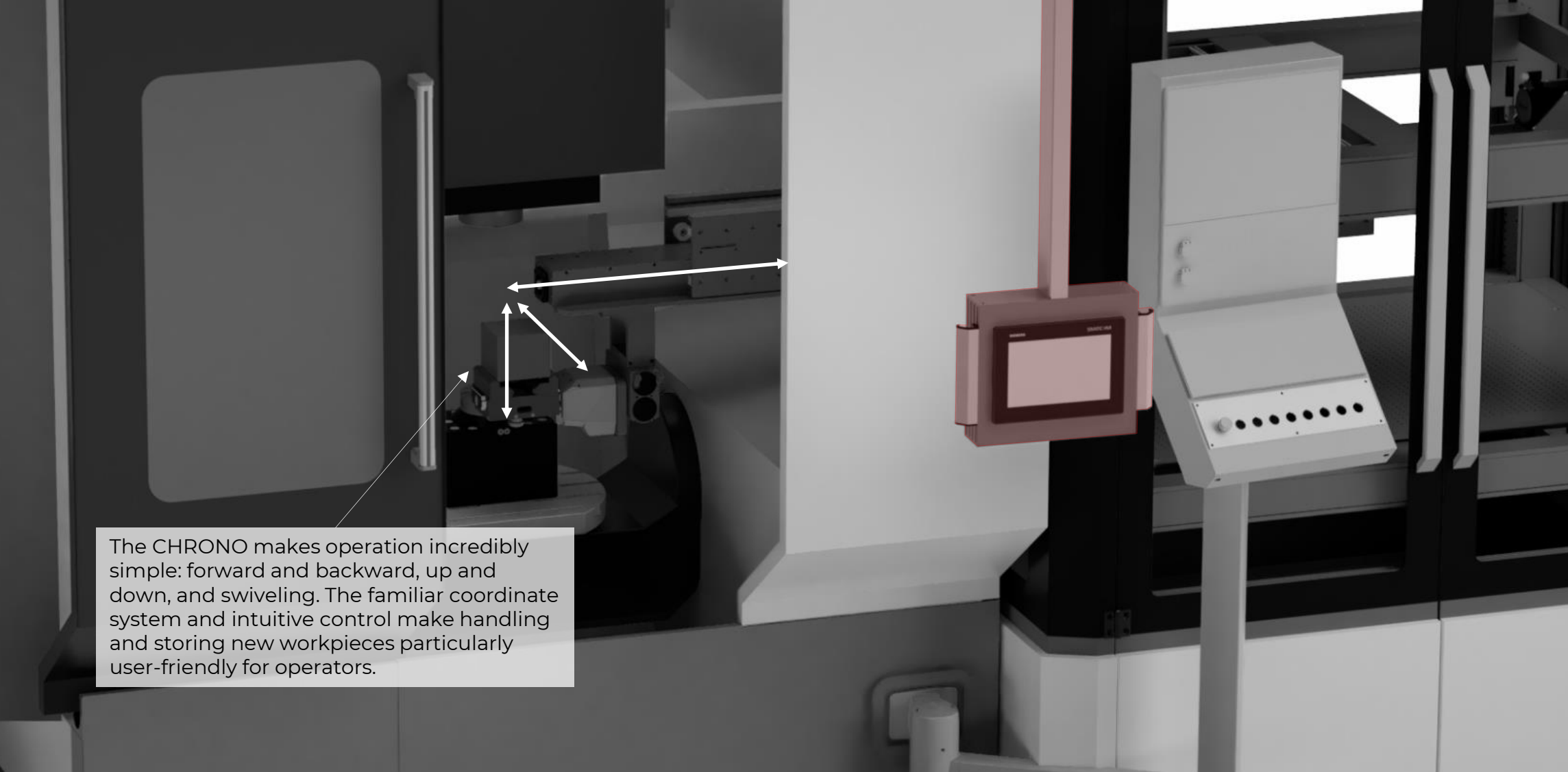
Gripping and clamping
with the Gressel RC2
system



Pallet handling / zero-point
clamping technology for
handling vises or fixtures
(SCHUNK)

Single gripper for heavy components and double gripper for fast loading.
Optional: Quick-change systems for switching gripper fingers, grippers, or switching between grippers and zero-point clamping technology.

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The CHRONO makes operation incredibly simple: forward and backward, up and down, and swiveling. The familiar coordinate system and intuitive control make handling and storing new workpieces particularly user-friendly for operators.



OPERATION

SIMPLE & INTUITIVE

The connection to the CNC machine is established either via a digital interface or alternatively via push buttons, even without a digital interface.

The CHRONO is controlled via the Siemens HMI. Workpiece processes are loaded from the program memory.

Setting up a new workpiece is particularly easy: Similar to a gantry milling machine, the operator can move the axes in jog mode or via coordinates and store them.

The pickup and drop-off positions of a workpiece, along with the number of workpieces in the X and Y directions, automatically provide all necessary parameters for calculating the remaining components.

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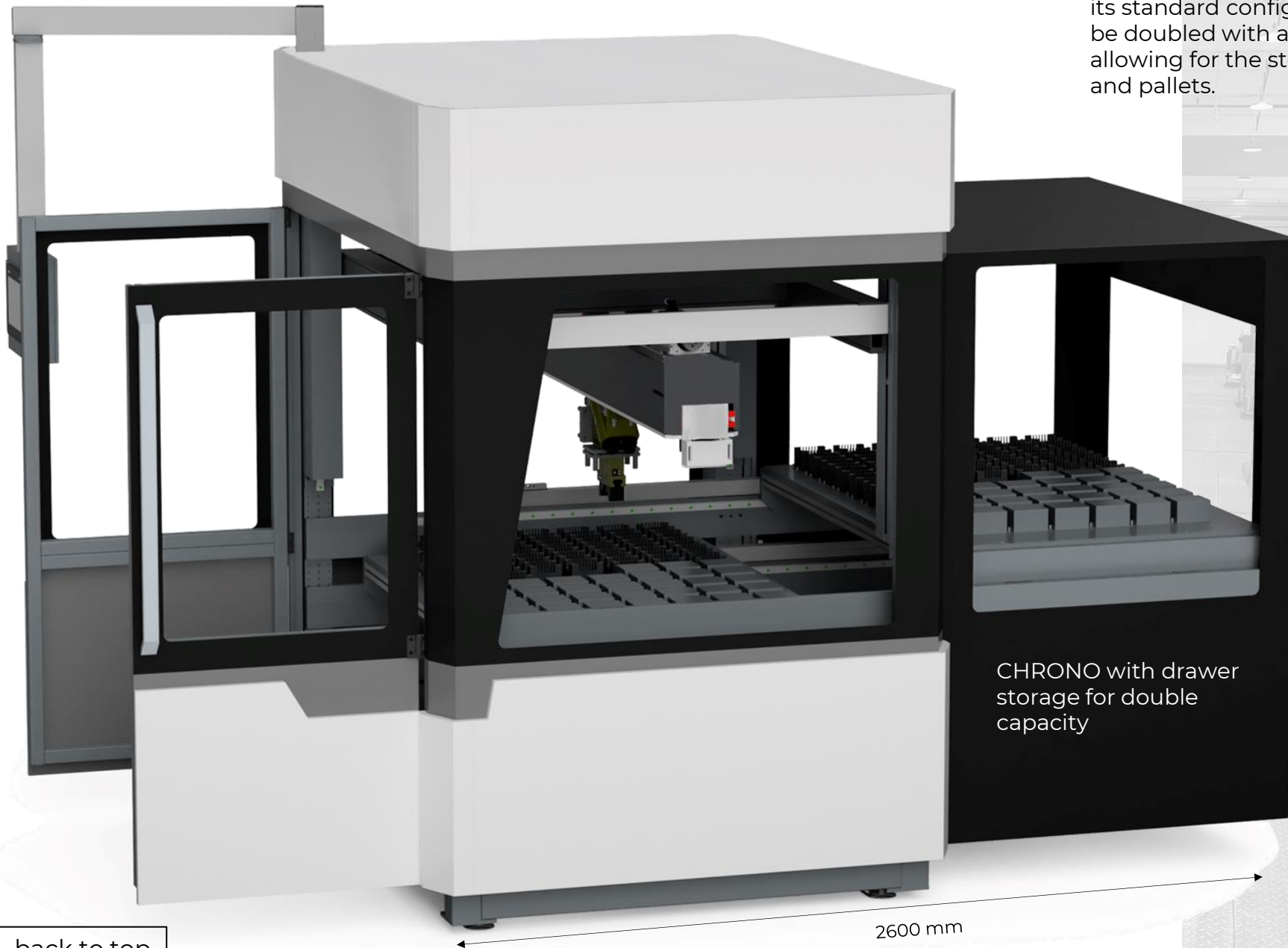
DATASHEET



STORAGE

MAXIMUM AUTONOMY

With a travel path of 800 x 1200 mm, the CHRONO already offers impressive capacity in its standard configuration. This capacity can be doubled with a drawer storage system, allowing for the storage of both workpieces and pallets.



CHRONO with drawer storage for double capacity

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CHRONO 3-5AX

TECHNICAL DATA SHEET

January 2025.

System

| | |
|-----------------------------------|--------------------------|
| Robust steel construction | ✓ |
| Highest safety through box layout | ✓ |
| Dimensions (L x W x H) | 1840 x 1500 x 2150 mm |
| Total weight | 950 kg (w/o accessories) |
| Protection class | IP54 |
| Noise level | < 70 dB (A) |
| Power supply | 3 AC, 400 V, 50 Hz |
| Pneumatic supply | 6 bar |
| Ambient temperature | 5-40 °C |
| Digital interface | ✓ |
| Buttons without interface | ✓ |

Workpiece Handling Specifications

| | |
|---------------------------------|---------------|
| Maximum square size (L x W) | 580 x 580 mm |
| Maximum round size | 580 mm |
| Maximum height | 310 mm |
| Maximum weight (Single gripper) | approx. 25 kg |
| Maximum weight (Double gripper) | approx. 12 kg |
| Maximum stacking height | 310 mm |
| Maximum total workpiece weight | 1200 kg |

Pallet Handling Specifications

| | |
|---------------------------------------|---------------------------|
| Max. workpiece size on pallet (L x W) | 400 x 400 mm |
| Round pallet sizes | e.g. 200, 148, 120 mm |
| Square pallet sizes | e.g. 320 x 320, 240 x 240 |
| | 180 x 240, 80 x 145 mm |
| Maximum height pallet with workpiece | 250 mm |

Performance

| | |
|----------------------------|---------------------|
| Payload | 30 kg |
| Maximum stroke | 1200 mm |
| Travel distance in the box | 800 x 1200 mm |
| Positions | Front- and Sideload |

Control System

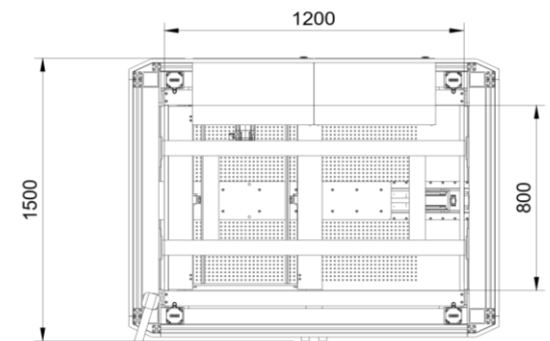
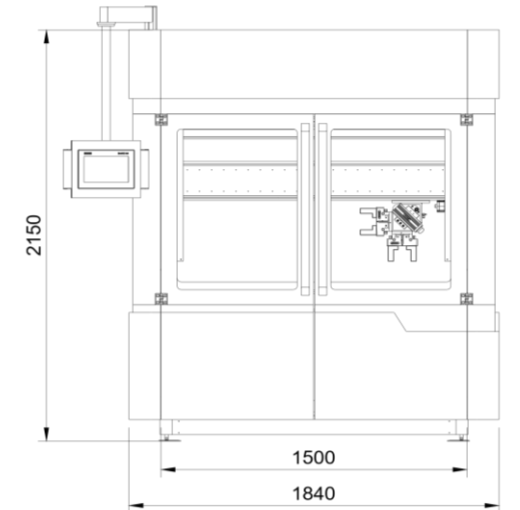
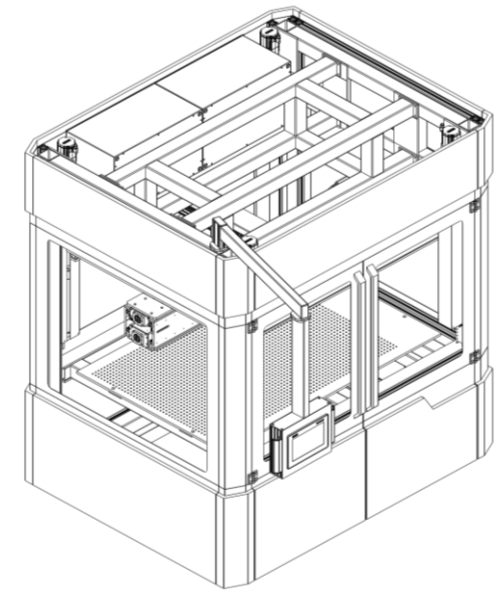
| | |
|-----------------------------|---|
| Siemens SIMATIC S7 | ✓ |
| Siemens SIMATIC Panel 10" | ✓ |
| Flexible swivel arm | ✓ |
| Integrated safety functions | ✓ |

Functions

| | |
|--|---|
| Workpiece handling with grid plate | ✓ |
| Internal and external gripping of workpieces | ✓ |
| Stacking function | ✓ |
| Swivel function (Double gripper) | ✓ |
| Pallet handling / Zero-point clamping | ✓ |
| Gripping and clamping with Gressel RC2 | ✓ |
| Blow-off function | ✓ |
| Status signals | ✓ |
| Program storage | ✓ |

Additional Functions

| | |
|---------------------------------|----------|
| Centering station | optional |
| Rotating unit | optional |
| Measuring station | optional |
| Ejection station | optional |
| Cleaning basin (Liquid) | optional |
| Blow-off basin (Compressed air) | optional |
| Automatic door system | optional |
| Automated side hatch | optional |
| Messenger service (via app) | optional |



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