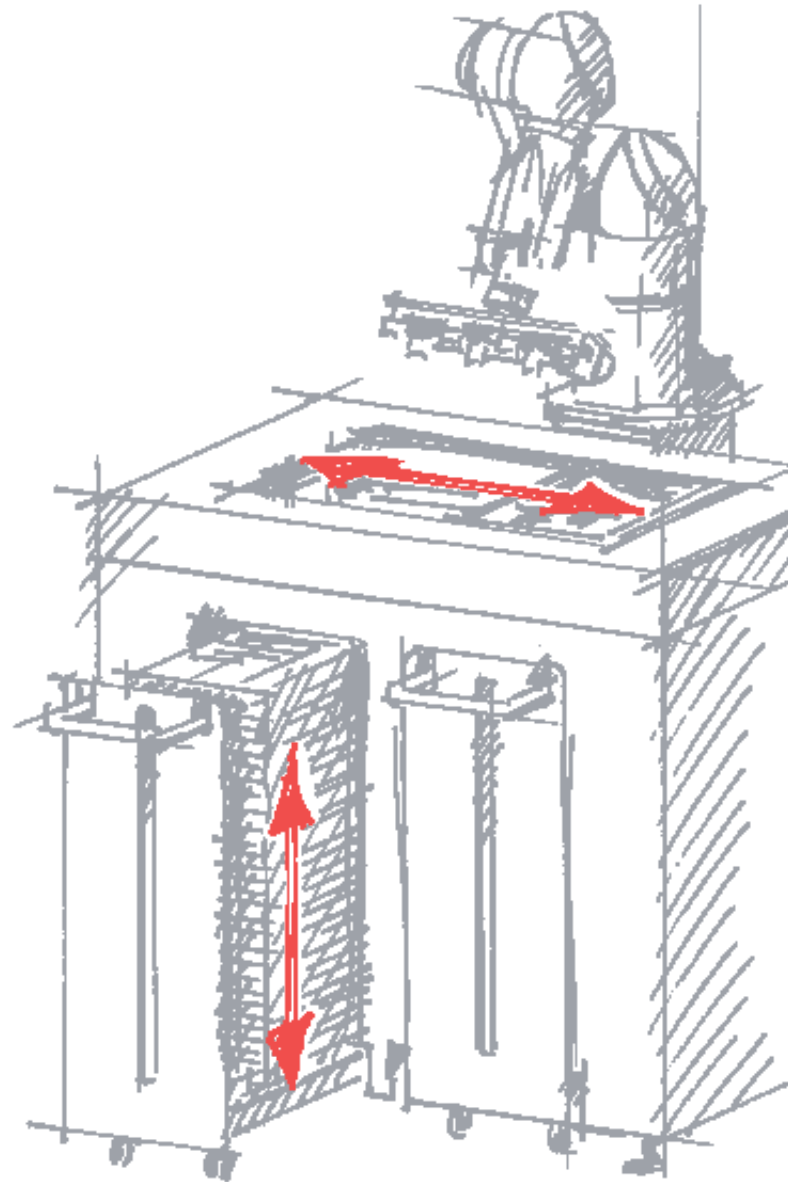


Tray supply

VARIO Line

- ✓ Efficient provision and buffering of products and components
- ✓ High availability
- ✓ Easy integration
- ✓ Individual configuration due to modular design
- ✓ Robust and compact design
- ✓ Maintenance-free and user-friendly
- ✓ Ideal for medical, pharmaceutical, automotive, electronic and consumer good products



The system

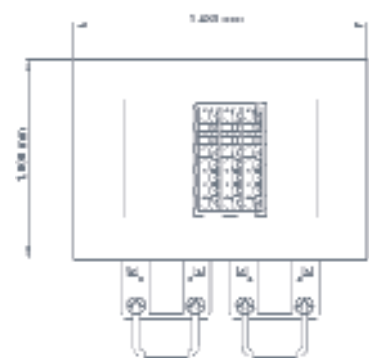
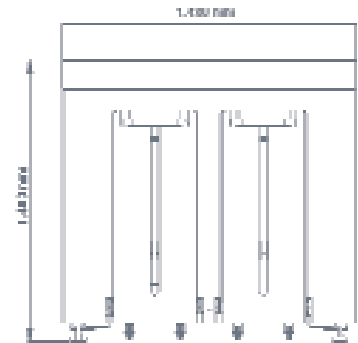
VARIO Line serves the efficient provision and buffering of products and components in load carriers, such as plastic trays, plastic pallets or blisters, for existing handling systems. The standardized interface enables fast and easy integration/connection to existing customer handling systems. VARIO Line is the optimum supplement for a production environment with high output and ensures gentle and reliable transport, particularly for sensitive products.

Infeed of trays can be over conveyor belts, gravity rollers or transport trolley. Due to the modular design of the VARIO Line, infeed and discharge of trays can be implemented from all sides. Thus, VARIO Line allows easy and flexible adaptation to individual logistic requirements.

Whether you are using reusable or disposable trays, deep-drawn trays of material thicknesses 0.3 – 7 mm, injection-molded, steel or stainless steel trays, FLG has the optimum solution for all products.

Optional modules

- Gravity roller module: For the infeed and discharge of trays over conveyor belts
- Handling module: Integrated loading/unloading for trays
- Clean room or ESD version



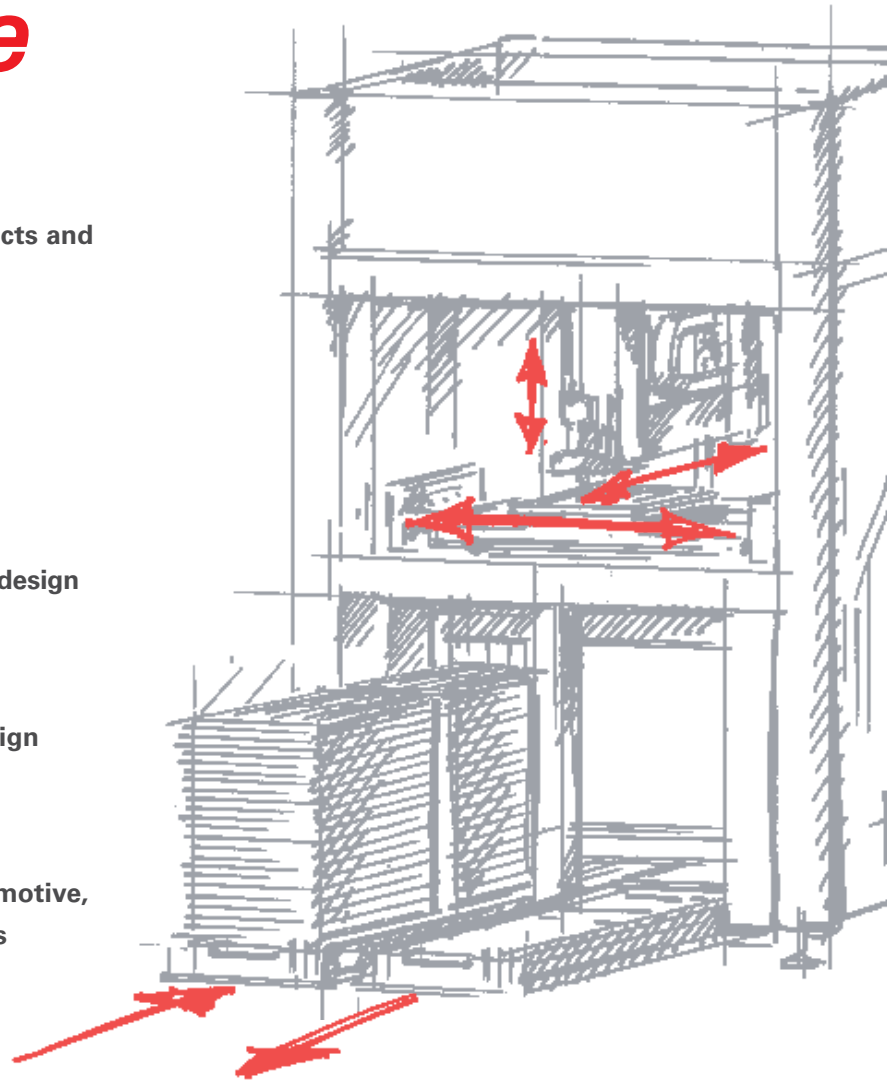
Technical data

Dimensions (L x W x H)	1,480 x 1,000 x 1,400 mm
Tray size:	200 x 300 to 400 x 600 mm
Tray weight:	35 kg
Tray stacking height:	1,000 mm
Tray change time:	4.5 sec
Transfer height:	880 – 1,400 mm
Drive technology:	NC axes, servo-electric
Control:	PC control, Simatic S7-300
Interfaces:	MPI, Profibus, Ethernet, digital I/O

Palletizing system

SPEED Line

- ✓ Efficient feeding and buffering of products and components
- ✓ High plant capacity and availability
- ✓ Gentle and reliable product handling
- ✓ Maintenance-free and user-friendly
- ✓ Individual configuration due to modular design
- ✓ Robust and compact design
- ✓ Optimum accessibility due to open design
- ✓ Clean room and ESD version
- ✓ Ideal for medical, pharmaceutical, automotive, electronic and consumer good products



The system

The SPEED Line palletizing system is ideal for the space-saving and efficient feeding and buffering of oriented products and modules. SPEED Line offers all the advantages of a modern and reliable production system and ensures gentle and reliable handling, particularly of sensitive products. Design reserves and a powerful control system in conjunction with a modern user interface enable easy integration of additional handling, control and assembly tasks and make SPEED Line an absolute all-rounder. Many years of experience in the manufacture of palletizing systems and the design of trays ensure that our customers benefit from the efficient and problem-free interaction of all components, which are specially designed to suit all logistic and product-specific requirements. Whether you are using reusable or disposable trays, deep-drawn trays of material thicknesses 0.3 – 7 mm, injection-molded trays, steel or stainless steel trays, FLG has the optimum solution for all products.



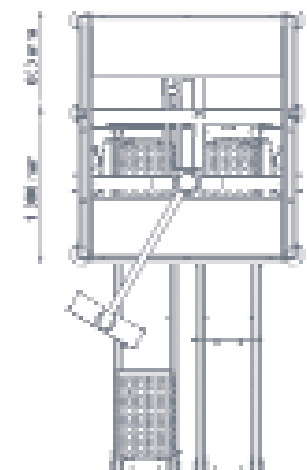
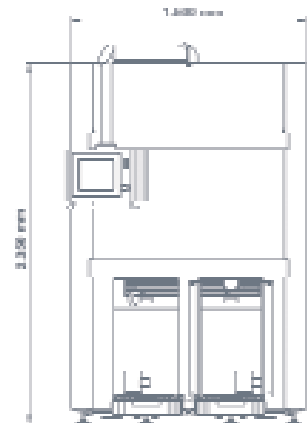
Optional modules

Hardware

- Add-on module: Protective enclosure for customer-provided transfer unit
- Assembly module: Additional assembly or handling tasks
- Trolley module: Tray feed over transport trolley, scope of delivery: 3 units
- Position sensor: Tray pile is checked to ensure it is not in the incorrect position
- Gripper quick-change system: Acceleration of change-over time for product changes
- Rotator/Expander gripper module: Adaptation to the different orientations/grids of products in the tray or of customer-provided transfer unit

Software

- Diagnostic and BDE module
- Tray configurator



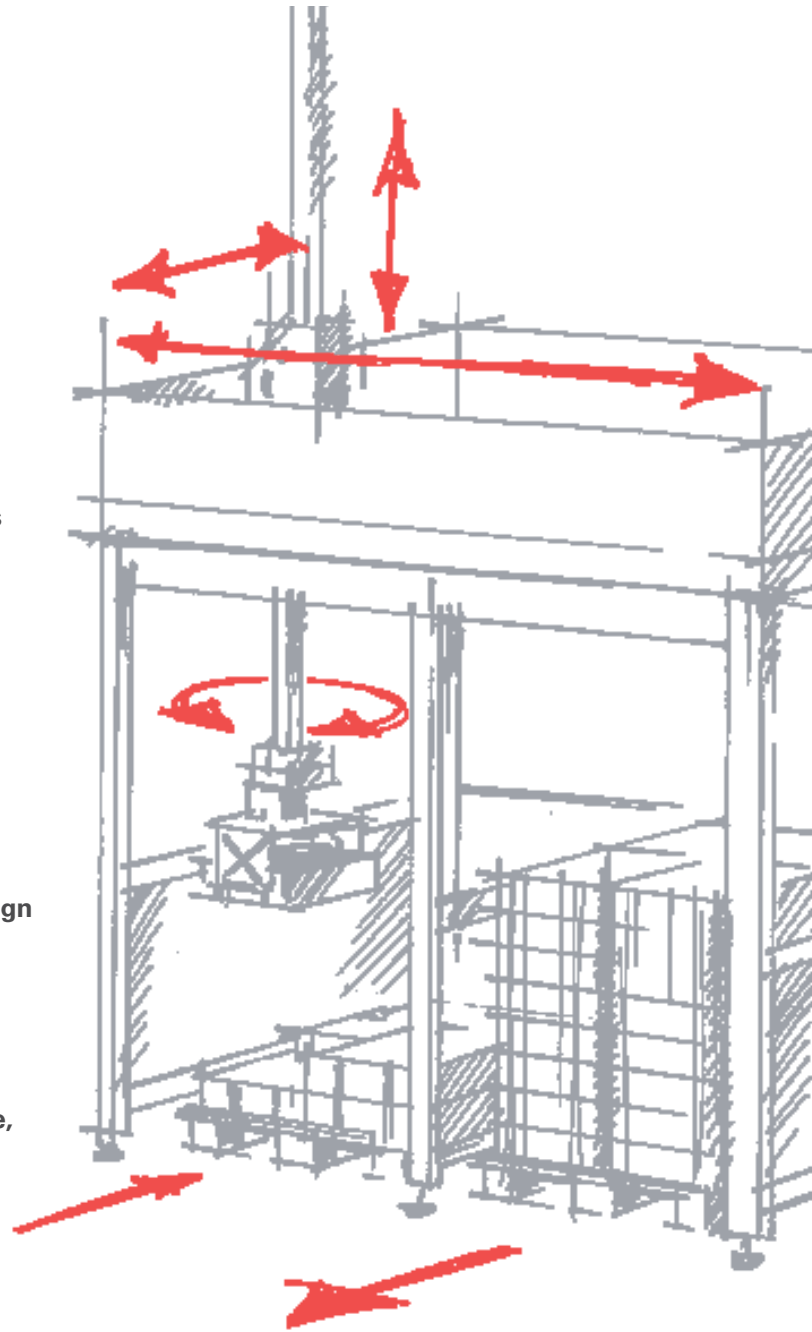
Technical data

Dimensions of basic unit (L x W x H)	1,000 x 1,500 x 2,350 mm
Tray size:	200 x 300 to 400 x 600 mm
Tray weight:	35 kg
Tray change time (eff.):	> 2 sec
Tray stacking height:	Max. 900 mm
Plant capacity:	Max. 300 items/min
Transfer height:	800 – 1,400 mm
Drive technology:	NC axes servo-electric
Control:	PC control, Simatic S7-300
Interfaces:	MPI, Profibus, Ethernet, digital I/O

Palletizing system

EURO Line

- ✓ Efficient feeding and direct buffering of ISO/EURO pallets
- ✓ Pallet change without production downtimes
- ✓ Able to accommodate multiple pallet spaces 1 – 4 pallet spaces
- ✓ Ultimate load up to 75 kg
- ✓ High autonomy and availability
- ✓ Integrated workpiece loading/unloading
- ✓ Maintenance-free and user-friendly
- ✓ Individual configuration due to modular design
- ✓ Robust and compact design
- ✓ Clean room and ESD versions
- ✓ Ideal for medical, pharmaceutical, automotive, electronic and consumer good products



The system

EURO Line is ideal for the depalletizing and palletizing of trays, containers and KLTs that are supplied on pallets, and autonomously depalletizes transport containers on the pallet. Robust pallet feeding aids and a pneumatically driven pile alignment ensure a fast and smooth pallet change. The transport of the trays from the individual pallet spaces to the workpiece loading/unloading position is executed by a portal gantry system with a gripper system that is specially adapted to the respective transport container. The autonomous loading/unloading, even in the event of a pallet change, ensures the nonstop handling of the products/modules with continued precision and reliability. Thanks to its modular and compact design, the EURO Line can be operated on a minimum of floor space and easily adapted to accommodate a wide range of pallet formats and transport container.



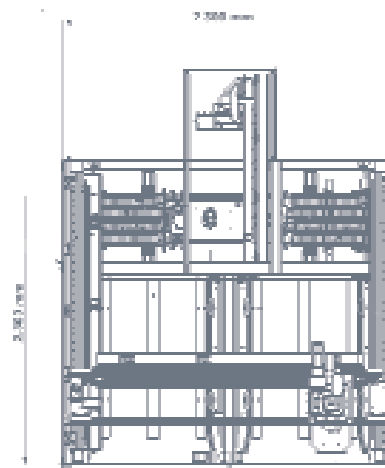
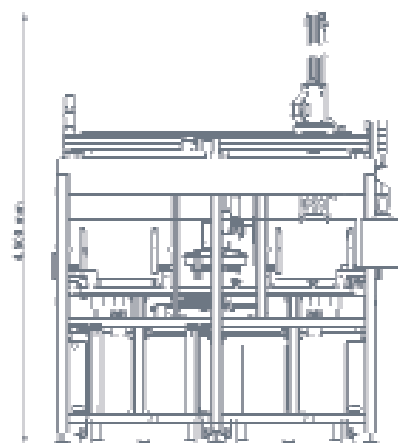
Optional modules

Hardware

- Handling module: Integrated workpiece loading/unloading
- Safety module: Integrated collision protection for portal gantry
- Active pile module: Active pneumatic pile alignment
- Pallet space module: Supplementary 4th pallet space
- Roller shutter module: High-speed door for pallet loading
- Telescopic module: Portal Z axis, telescopic version for lower room heights
- Clean room or ESD version

Software

- Diagnostic and BDE module
- Tray configurator
- Pack scheme generator



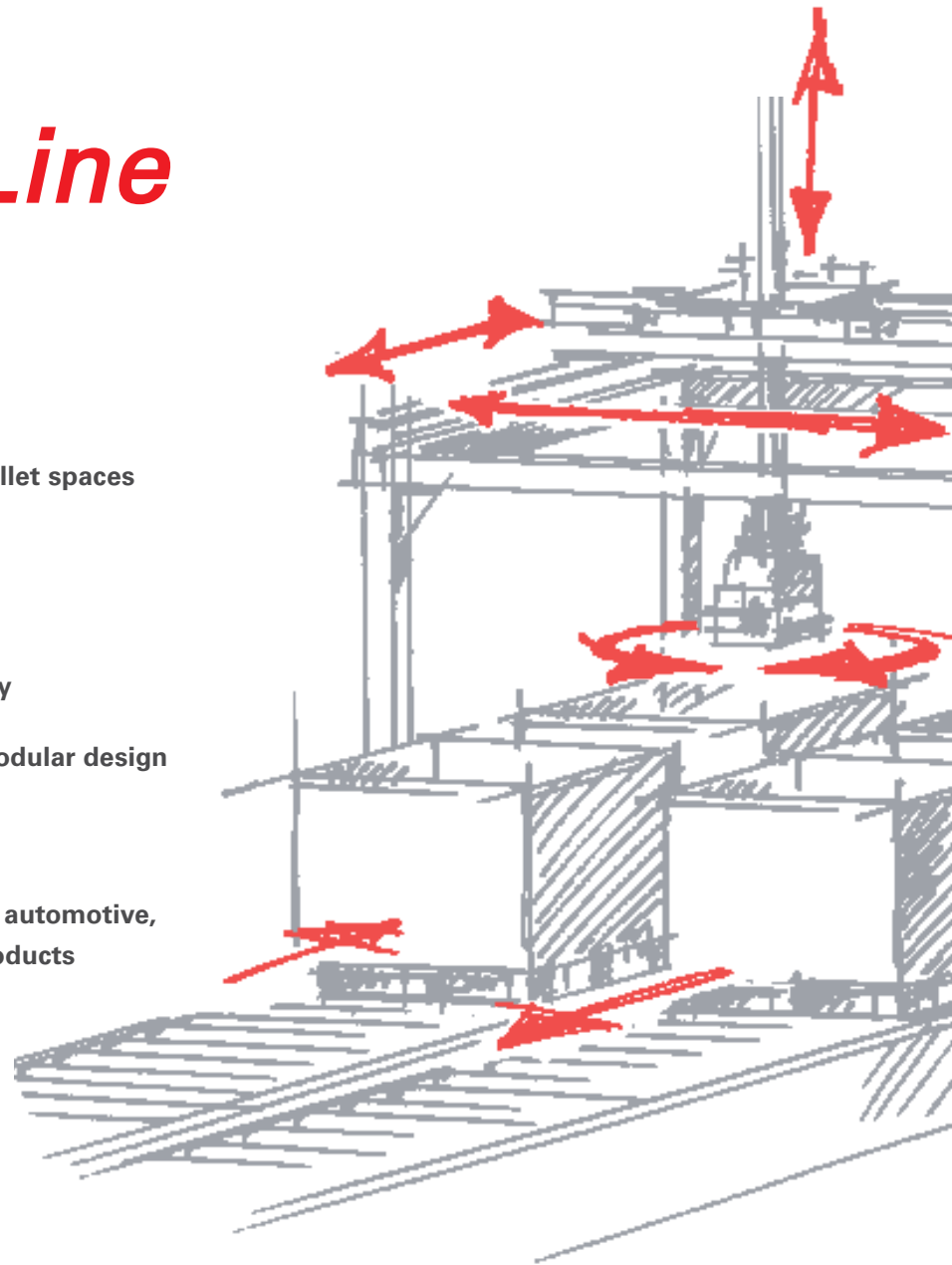
Technical data

Dimensions (L x W x H)	2,300 x 2,300 x 4,500 mm
Pallet types:	800 x 1,200 mm, 1,000 x 1,200 mm, special formats
Tray types:	Deep-drawn trays and customized trays, KLT, cartons, canisters, etc.
Ultimate load of portal:	Max. 75 kg
Tray stacking height:	Max. 1,800 mm
Handling cycle time:	> 2 sec, reduction through use of multiple grippers
Pallet feed:	Lift truck or stacker
Drive technology:	NC axes, servo-electric
Control:	PC control, Simatic S7-300
Interfaces:	MPI, Profibus, Ethernet, digital I/O

Portal robot

PORTAL Line

- ✓ Provision and buffering of large volumes of items
- ✓ Able to accommodate multiple pallet spaces
- ✓ Ultimate load up to 150 kg
- ✓ High autonomy and availability
- ✓ Maintenance-free and user-friendly
- ✓ Individual configuration due to modular design
- ✓ Robust and compact design
- ✓ Ideal for medical, pharmaceutical, automotive, electronic and consumer good products



The system

PORTAL Line is the flexible and standardized portal robot that is able to handle heavy weights at high speed and still ensure exact positioning. Through the use of belt-driven portal axes, PORTAL Line ensures the dynamic, reliable and precise handling of products, even at an ultimate load of 150 kg. The portal robot is also able to handle large travel areas of 2 or more pallet spaces without any problems. Furthermore, use of the respective pallet conveyor technology ensures a continuous and smooth material flow and optimum connection to production. Used in combination with the optionally available three-part telescopic Z axes, the PORTAL Line is the perfect solution for low room heights and an additional fourth axis of rotation can be added to enable the processing of packing items with different orientations.

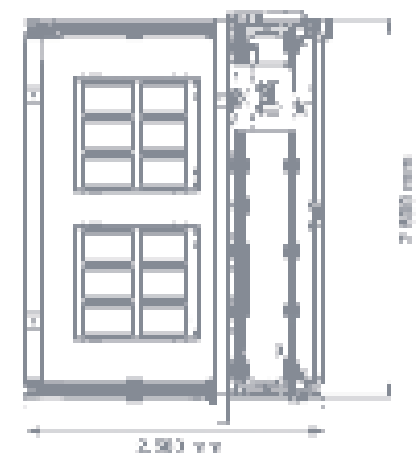
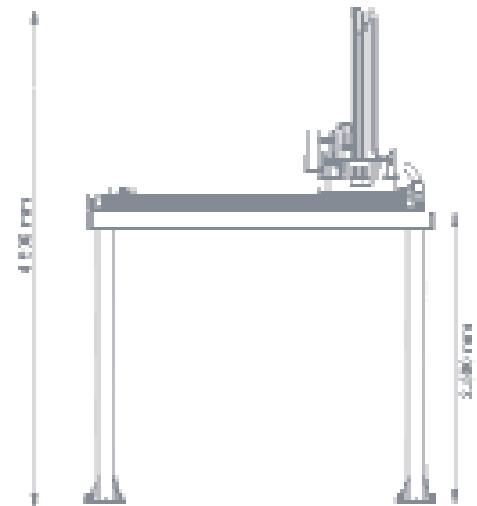
Optional modules

Hardware

- Handling module: Integrated workpiece loading/unloading
- Safety module: Integrated collision protection for portal gantry
- Active pile module: Active pneumatic pile alignment
- Pallet memory module: Provision of empty pallets over a pallet magazine
- Axis of rotation module: Additional axis of rotation for packing items of different orientations
- Telescopic module: Portal Z axis, telescopic version for lower room heights

Software

- Diagnostic and BDE module
- Packing template generator



Technical data

Dimensions (L x W x H), (2 pallet spaces with feed)	from 2,500 x 2,500 x 4,500 mm
Pallet types:	800 x 1,200 mm, 1,000 x 1,200 mm, special formats
Packaging types:	Deep-drawn and customized trays, KLT, cartons, canisters, barrels, etc.
No. of pallet spaces:	2–6 pallet loading/unloading spaces
Ultimate load:	Max. 150 kg
Lift, vertical axis:	Max. 2,000 mm
Pallet feed:	Rolling surface, lift truck or stacker
Plant capacity:	> 300 packing items / h
Drive technology:	NC axes, servo-electric
Control:	PC control, Simatic S7-300
Interfaces:	MPI, Profibus, Ethernet, digital I/O