



**BEUMER**  
technology in motion

CONVEYING TECHNOLOGY  
LOADING TECHNOLOGY  
**PALLETIZING TECHNOLOGY**  
PACKAGING TECHNOLOGY  
SORTATION AND  
DISTRIBUTION SYSTEMS



Equipment/Installation/Plant  
**BEUMER robotpac®**

## The BEUMER robotpac® system was employed to automate the plant palletizing process.

The BEUMER robotpac® system from BERNHARD BEUMER MASCHINENFABRIK KG has long been used to solve complex palletizing and depalletizing tasks. This is one of the most essential steps in the design of a warehouse.

Until now there has been no palletizing equipment on the market capable of meeting the challenge of stacking different sized parcels on one pallet without using tier-stack

palletizing. The integration of complex control mechanisms in the BEUMER robotpac® system concept has solved this problem. BEUMER is the first company to offer a palletizing system with variable gripping.

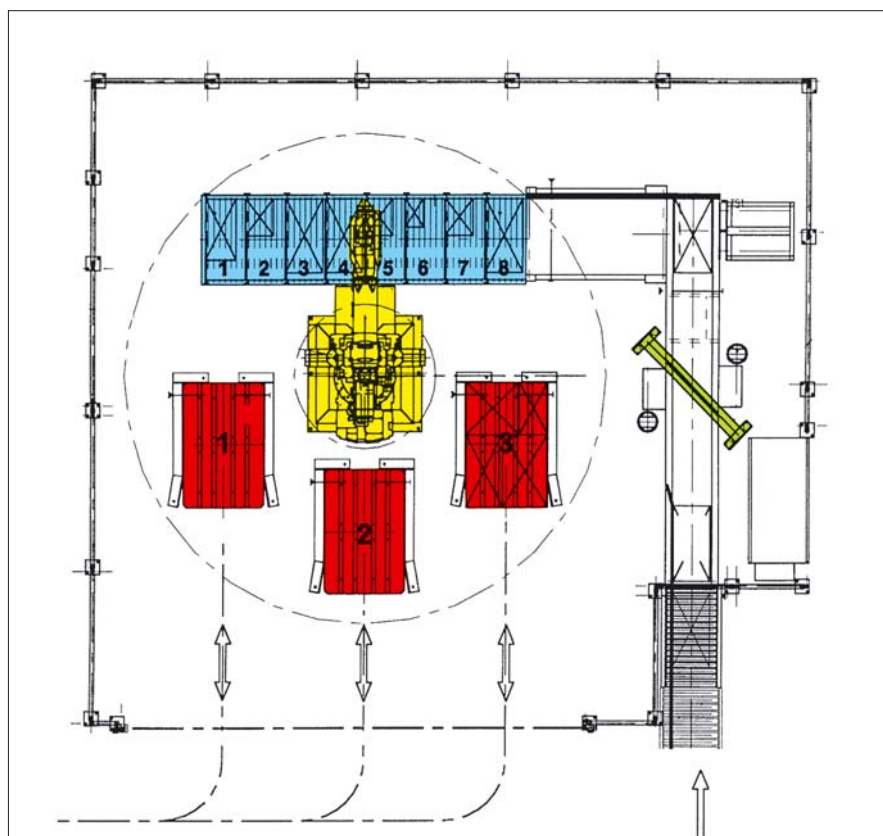
The BEUMER robotpac® can be equipped with different gripping devices, as well as with a fully automatic, interchangeable gripping system. The flexibility and perfor-

mance of the BEUMER robotpac® system is virtually unlimited. Using gripping modules that are able to pack spaces from above the pallet, it is possible to stack pieces of different sizes on one pallet. It makes no difference in which order the parcels are fed into the palletizing cubicle. Packing densities of 80 percent or more can be reached.





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Every day nearly 13,000 parcels on 1,700 pallets filled with screws, adhesives, tools and other products, for mounting and fastening, leave Würth's central warehouse in Künzelsau. At the end of the order picking process, the individual parcels are stacked on pallets. Parcel dimensions vary between a minimum of 180 x 280 x 115 mm and a maximum of 730 x 370 x 300 mm. The parcel weight ranges between 0.5 and 35 kgs. Individual parcels are fed by roller conveyor into the pallet cubicle where they are dimensionally checked. Then they are held in a buffer with eight bays. The robot then has three pallet positions

available for palletizing. The complex control software with the integrated palletizing algorithm, PALGO, from the Fraunhofer Institute for Production Technology and Automation (IPA) determines the optimal packing position for each of the eight parcels from the three available pallets. As soon as a parcel is removed from the buffer, the next parcel takes its place. 400 cartons per hour can be automatically palletized using this cubicle. With the palletizing cubicle installed at Würth, it is possible for the first time to employ a palletizing robot in actual production. This allows cartons of any size to be fed in any order into the palletizing cubical and palletized automatically.

**Machine type:**  
Knickarm-Robot

**Stack height:**  
max. 1.800 mm

**Capacity:**  
max. 400 cartons/h

**Gripper:**  
Pneumatic-operated tongs

**Carton weight:**  
min. 0,5 kg, max. 35 kg

**Carton dimensions:**  
min. 180 x 280 x 115 mm,  
max. 730 x 370 x 300 mm.



## PROGRAM OF SUPPLY

### CONVEYING TECHNOLOGY

- Conventional and closed belt conveyor systems
- Overland conveyors also in curved design
- High capacity belt and chain bucket elevators
- Apron conveyor systems with chains or steel cable reinforced belts as traction element
- Bag handling systems for packing plants
- Screw conveyors in various designs

### LOADING TECHNOLOGY

- Plants for loading of bulk or bagged material onto trucks, into railroad vehicles and ships
- Semiautomatic railcar unloading machines
- Automatic bag loading systems for trucks and containers

### PALLETIZING TECHNOLOGY

- Palletizing robots
- Automatic high capacity palletizers
- Automatic depalletizers
- Pallet conveying systems

### PACKAGING TECHNOLOGY

- Stretch wrapping
- Shrink wrapping
- Stretch hood wrapping
- Palletless shrink wrapping

### SORTATION AND DISTRIBUTION SYSTEMS

- Computer-controlled handling, sorting and distributing systems for piece goods
- Routing controlled conveying of pallets and collected loads



The information contained in this brochure merely serves as a non-binding description of our products and is without guarantee. Binding information, in particular relating to capacity data and suitability for specific applications, can only be provided within the framework of concrete inquiries.

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