



**System Solutions**





# Content

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FAB plans, manufactures and assembles process-oriented system solutions for the optimum flow of goods in the manufacturing and processing industry. The following pages provide you with an interesting selection of systems we have realized in different industries.

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# Conveyor system for engine blocks

## TASK:

Conveying, bulking, separating, turning and processing of engine blocks



## Material to be conveyed

Cast aluminum engine blocks

- Length: 500 mm
- Width: 400 mm
- Weight: 40 kg

## The FAB solution

- Foundry-compatible conveyor technology with high positioning accuracy
- Robust belt conveyor with rubberized roller base
- Positioning down to the millimeter for belt conveyor with mechanical safety lock.



Belt conveyor with mechanical safety lock

## FAB components

- Belt conveyor
- Roller conveyor
- Rotary table
- Vertical conveyor
- Turning station
- Plant control based on PLC S7

## Features/Advantages

- Continuous robust lateral guide
- Vertical conveyor with high running smoothness and conveyor speed
- Maintenance-free flat belt as lifting element
- Rubberized rollers for high drive force
- Robust conveyor components for sharp-edged goods
- Integration into the customer's production processes

# Conveying equipment for the finishing, palletizing and packaging of wood fiberboards

## TASK:

Feeding of wood fiberboards for profiling, stacking and packaging, as well as empty pallet supply



## Material to be conveyed

Wood fiberboards, single and stack

- Dimensions, W × L: 390–1,500 mm × 1,000–3,200 mm
- Weight: max. 340 kg

Disposable wooden pallets, single and stack

- Dimensions, W × L: max. 750–1,500 mm × 1,000–3,100 mm
- Weight: max. 800 kg

## The FAB solution

- Feeding of boards from the sawing line to the double-end tenoner
- Automatic feeding of empty pallet stacks
- Automated packaging process
- Plate separation with different plate thickness
- Palletization of different board formats as one-, two- or three-board layers with robot



Automatic robot palletization

## FAB components

- Roller, chain, toothed belt conveyor
- Right angle transfer deck
- Vertical conveyor
- Automatic packaging device
- Plant control based on PLC S7

## Features/Advantages

- Optimized space utilization
- Variable use of the plant: both for wood fiberboards and for pallets
- Identical system components for different transport tasks

# Automatic high-bay warehouse with connection to dispatch

## TASK:

Connection of the aluminum slugs production to an automatic high-bay warehouse and to the dispatch department. Automation of the storage and retrieval processes and increase in capacity.



## Material to be conveyed

EURO pallets according to DIN, disposable pallets, mesh boxes

- Dimensions W × L: max. 850 × 1,250 mm
- Height: max. 1,150 mm
- Weight: max. 1,100 kg

## The FAB solution

- Storage line with barcode reader
- Automatic high-bay warehouse with an ASRS
- Retrieval line
- Integration into the customer's process control system
- Plant control based on PLC S7



High-bay warehouse with an ASRS

## FAB components

- Roller conveyor
- Walk-in chain conveyor
- Automated storage and retrieval system (ASRS)
- Fire protection door with door clearance control
- Weight and contour check
- Pallet foot check
- Plant control based on PLC S7 with interface to host

## Features/Advantages

- Significantly higher storage capacity
- Improved warehouse transparency
- Reduction of throughput time
- High efficiency in slugs pallet handling
- Easy truck loading, short loading distances
- Storage and retrieval with a capacity of 40 double cycles per hour

# Automated flow of goods between production and finished goods warehouse

## TASK:

Optimization and automation of the transport of finished goods from 2 production buildings by factory truck to the high-bay warehouse



## Material to be conveyed

EURO pallets according to DIN

- Dimensions W × L: 800 × 1,200 mm
- Weight: max. 1,100 kg

CP1/CP2 pallets

- Dimensions W × L: ca. 1,000 × 1,200 mm
- Weight: max. 1,250 kg

## The FAB solution

- System semi-trailer with transport carpet system
- Provision of the goods with different pallets on a stationary conveyor system.
- Automated loading of the system semi-trailer
- Separation of the different pallets and feeding by means of automatic traversing carriage to the storage point in the high-bay warehouse.



Automatic traversing carriage

## FAB components

- Automated truck loading/unloading system, equipped with transport carpet
- Stationary equipment with support profile conveyors
- Automatic traversing carriage with right angle transfer deck
- ASC (automatic system coupling) for automatic docking of the truck to the stationary equipment and starting the loading/unloading process
- Plant control based on PLC S7

## Features/Advantages

- Automated system from loading to storage in the automatic high-bay warehouse
- Reduced use of trucks
- No forklift use after production up until the warehouse/dispatch.
- Truck loading and unloading in just 3,5 minutes
- Environmentally friendly system solution
- Remote maintenance modem enables fast remote access by FAB technicians in case of malfunctions.

# Individual load securing in factory traffic

## TASK:

Realization of a load securing system for the FAB system semi-trailer for the safe transport of load carriers of different sizes



## Material to be conveyed

EURO pallets according to DIN

- Dimensions W × L: 800 × 1,200 mm
- Height: max. 1,800 mm
- Weight: max. 1,000 kg

Pallet provided by customer

- Dimensions W × L: 660 × 970 mm
- Height: max. 1,300 mm
- Weight: max. 950 kg

## The FAB solution

- Load securing in the system semi-trailer by means of swing-in floor profiles and ceiling suspension. Control via a control module outside the system semi-trailer.
- The lateral fixing and, at the same time, the contact pressure on the pallets from above meet the requirements for certification.



Load provided for a system semi-trailer

### FAB components

- Pneumatically operated floor profiles over a length of 11 meters, which are raised or lowered depending on the type of pallet.
- Ceiling suspension by means of guided aluminum profiles which can be lowered or raised with a cable pull system.

### Features/Advantages

- Transport of different load carriers with only one system semi-trailer
- Simple handling
- The system meets the legal requirements and has been tested, approved and certified by an independent expert.

# Conveyor and packing system for aluminum coils

## TASK:

Automated packaging of aluminum coils and preparation for dispatch



## Material to be conveyed

Aluminum foil coils on transport racks

- Roller diameter: 450 – max. 1,250 mm
- Roller width: 470 – 1,650 mm
- Weight: max. 5,500 kg

## The FAB solution

- Handling of the coils by special handling equipment
- Placing the coils in transport racks with the coil handling device
- Automatic coil pick-up and stretching process
- Recording of weight, order and delivery data
- Transport to the dispatch area



Conveyor and packing system for thin strip production

### FAB components

- Automatic coil handling equipment
- Stretch line with foil separating device
- Weighing equipment
- Roller conveyor
- Troughed-belt conveyor
- Plastic link belt
- Plant control based on PLC S7

### Features/Advantages

- Highest process safety
- Efficient process
- Automation of cumbersome process steps
- Optimized personnel deployment
- Simple handling
- Increased safety
- Dust and splash-proof stretching of the coils
- Integration into the customer's process control system

# Material flow in potentially explosive atmospheres

## TASK:

Optimization and automation of the picking area for production in potentially explosive atmospheres, zone 2



## Material to be conveyed

EURO pallets according to DIN

- Dimensions W × L: 800 × 1,200 mm
- Weight: max. 1,000 kg

IBC container 910/911, sub-standard palletizing

- Dimensions W × L: 1,000 × 1,200 mm
- Weight: max. 1,200 kg

Industrial pallets according to DIN

- Dimensions W × L: 1,000 × 1,200 mm

## The FAB solution

- On the storage side, containers are placed on a roller conveyor, guided fully automatically through the fire protection door and transferred to the cross traversing carriage in the explosion-proof picking area.
- The cross traversing carriage automatically distributes the containers to the assigned inclined roller conveyors.
- The further transport takes place by forklift/hand pallet truck.
- Return track for empty containers



Inclined roller conveyors with provided containers

## FAB components

- Inclined roller conveyors
- Accumulating conveyor
- Cross traversing carriage
- Fire protection door
- Risk assessment according to DIN ISO/14121-2, ignition source analysis
- Plant control based on PLC S7

## Features/Advantages

- Faster, more efficient picking
- Optimized personnel deployment
- Avoidance of errors through allocation to the production area
- The system fulfils the legal requirements for potentially explosive atmospheres



## Customers (extract)





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