



ErmaSmart #B

# Star conveyor for 90° connection

*Ermasmart pot direction change system.*

## Description of the system

The **Star Conveyor** system is a **stand-alone system** that **creates** a 90° link to reduce the linear footprint of the Ermasmart line. It incorporates a **rotating star system** often used in industrial packaging operations. The functions and components are based on real industrial components used in the food, pharmaceutical or cosmetic industry (jars/vials),

This **90° star link conveyor** system (ref **CE41**), designed with the **packaging industry** in mind, meets the main requirements for intelligence and evolution of production methods:

- ✓ **Flexibility & Customisation** with the possibility of packaging customised items to the customer's order.
- ✓ **Multi-format tooling**.

This **automated** system can be **used on the Ermasmart line** with different pots, but can also be **integrated with other conveyors**.

The **main functions of the Star Conveyor** are:

- ✓ **Convey** the made objects (different sizes of pots) on a 90° trajectory
- ✓ **Carry out** maintenance activities on mechanical parts.
- ✓ **Accepting a change of pot size**.

This training system is mainly intended for **system control, industrial maintenance, electrical engineering, automation and mechanical** training.

This product is accompanied by a technical and educational file in digital format.

CAP CIP - Bac PRO PLP / MELEC / MSPC  
BTS CRSA / Electrical engineering / MS  
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## Main Themes

Industrial Maintenance  
Production Control  
Multi-technology Systems Design  
Electrical Engineering and Automation

## General

The **90° Star Link Conveyor (Ref: CE41)** consists mainly of :

- ✓ A welded frame with epoxy paint on 4 adjustable feet to adapt to different conveyor heights.
- ✓ A different coloured star for each pot size.
- ✓ An electrical cabinet attached to the chassis.
- ✓ A 24/48V stepper motor driven by its controller.
- ✓ 4 knurled screws for quick size change.
- ✓ A torque limiter created with spring washers to ensure safety in case of jamming.
- ✓ A sensor at the entrance to detect the presence of a pot.
- ✓ Mechanical parts (flange bearings, flexible couplings) that will enable maintenance activities to be created.



## Educational activities

The **90° star conveyor system** allows for the following **educational activities**, among others:

- ✓ **Electrical engineering**
  - **Discovery and handling of the system** (functional analysis and study of system technologies)
  - **Control of the system's electrical parameters** (network, power supply, drive)
  - **Commissioning and validation of system operation**
  - **Adjustment and parameterisation of the installation** components (stepper motor with its control board)
- ✓ **Production control**
  - **Change of production format**,
- ✓ **Industrial maintenance**
  - **Preventive maintenance**: elastic coupling between the motor and the axis of rotation, applied bearing (change of bearing, greasing and reference search).
  - **Improved maintenance** (addition of sensors on the conveyor)
- ✓ **Mechanics**
  - Assembly of the system in kit form, assembly and disassembly
  - Study of a new star to change the speed of the conveyor.

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# Curved conveyor for 90° connection

*Ermasmart pot or box/pallet direction change system.*

## Description of the system

The **Curved Conveyor** system is a **stand-alone system** that **creates** a 90° link to reduce the linear footprint of the Ermasmart line. It incorporates a **modular belt system** that is widely used in industrial packaging operations for all types of products. The functions and components are based on real industrial components used in the food, pharmaceutical or cosmetic industry (jars/vials),

This **Curved Conveyor** system for 90° link (ref **CE42**) designed in the spirit of the **packaging industry** meets the main requirements on intelligence and evolution of production methods:

- ✓ **Flexibility & Customisation** with the possibility of packaging customised items to the customer's order.
- ✓ **Speed variation.**

This **automated** system can be **used on the Ermasmart line** with different pots or cans/pallets, but can also be **integrated with other conveyors.**

The **main functions of the Curved Conveyor** are:

- ✓ **Conveying** the made objects (different sizes of pots or boxes/pallets) on a 90° trajectory
- ✓ **Carry out** maintenance activities on mechanical parts.

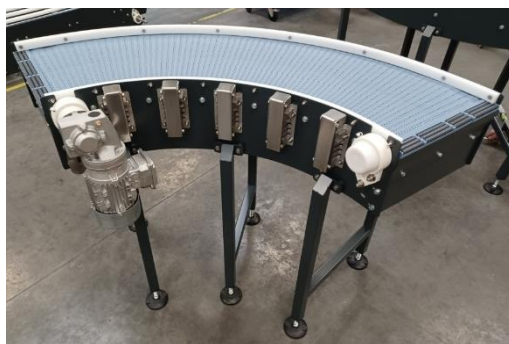
This training system is mainly intended for **system control, industrial maintenance, electrical engineering, automation and mechanical** training.

This product is accompanied by a technical and educational file in digital format.

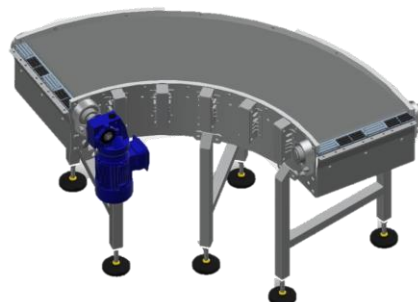
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## Main Themes

Industrial Maintenance  
 Production Control  
 Multi-technology Systems Design  
 Electrical Engineering and Automation



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## General

The **Curved Conveyor for 90° link** (Ref: **CE42**) is mainly composed of :

- ✓ A welded frame with epoxy paint on 6 height-adjustable castors to adapt to different conveyor heights.
- ✓ A modular PVC belt.
- ✓ An electrical box attached to the chassis.
- ✓ A 230/400V motor controlled by its drive, which will be the subject of a position change activity.
- ✓ Mechanical parts (bearings, modular belt) that will enable the creation of maintenance activities.

## Educational activities

The **Curved Conveyor System for 90° linkage** allows the following educational activities, among others:

### ✓ Electrical engineering

- **Discovery and handling of the system** (functional analysis and study of system technologies)
- **Control of the system's electrical parameters** (network, power supply, drive)
- **Commissioning and validation of system operation**
- **Adjustment and parameterisation of the installation** components (three-phase asynchronous motor and its

frequency converter).

### ✓ Industrial maintenance

- **Preventive maintenance:** Replacement of one or more links in the modular belt, bearing change, lubrication and reference search.
- Changing the position of the motor

### ✓ Mechanics

- Change of motor position with possibility of rewiring according to the direction of rotation of the conveyor.