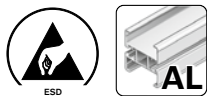
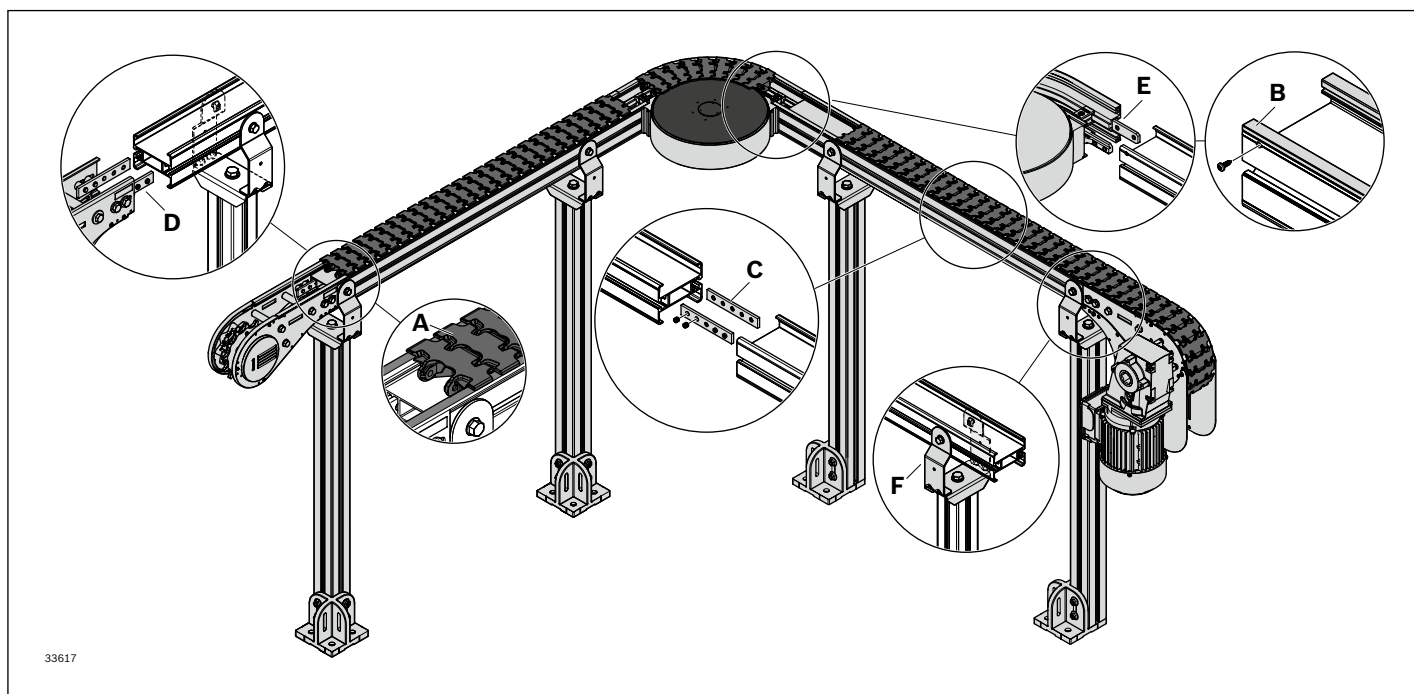


## Design of an ESD system



The ESD system comprises a combination of AL, STS and special ESD components.



33617

- ▶ **A:** The ESD conveyor chain is deflected to the ESD slide rail via the extensive support.
- ▶ **B:** The ESD slide rail is deflected to the AL section profile (see page 54) via the side standard mount<sup>1)</sup>
- ▶ **C:** The AL section profile is mounted using the AL profile connector<sup>1)</sup>
- ▶ **D:** The STS drive/return unit are mounted on the AL section profile using the AL-STS adapter<sup>1)</sup>.  
The use of the STS drive/return unit instead of the AL version is necessary to minimize the load creation
- ▶ **E:** The AL ESD curve wheel (see page 180) is screwed with the AL section profile<sup>1)</sup>
- ▶ **F:** The AL leg sets are mounted on the AL section profile via STS holders (screws in the slot)<sup>1)</sup>

<sup>1)</sup> T-bolts, nuts and self-tapping screws break through the anodized layer and form a connection to the conductive aluminum core.

**Note:**

When assembling an ESD system, ensure that all components are conductively connected to each other. Horizontal sliding curves are not suitable for use in EPAs due to the high friction.

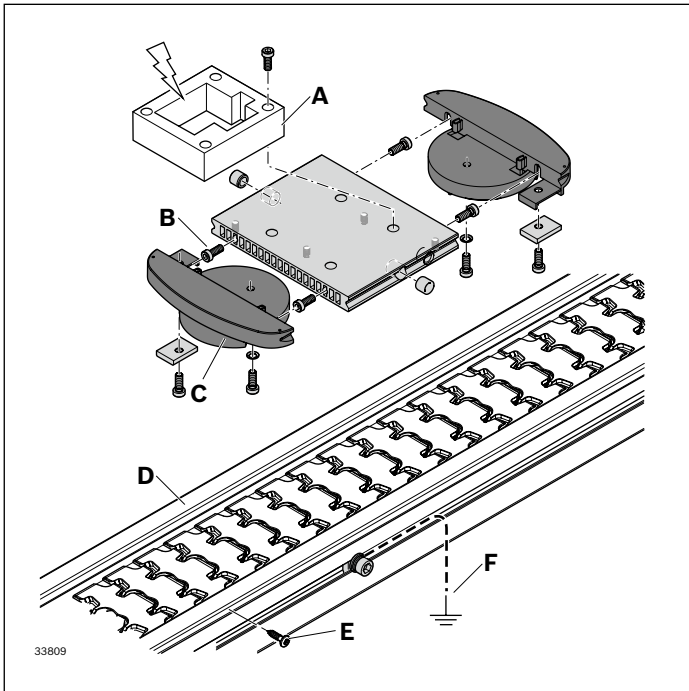
In an environment designed for ESD, all components should be made from volume or surface conductive material. Since this is not always possible in the VarioFlow *plus* system for technical and economic reasons, the occurrence of charges (that are strongly dependent on the humidity - 40% minimum should not be fallen short of) cannot be completely excluded for certain components.

No ESD critical processes should be carried out in the vicinity of components such as drives, return units, or bridges. You should move processing-related processes into straight sections and design the complete system according to what your ESD coordinator thinks.

Charges occurring can be discharged through the use of conductive brushes. For machining processes involving particularly sensitive parts, there are numerous components that can be found in Rexroth's Manual Production Systems product range with which individual workstations can be integrated in a VarioFlow *plus* system. These workstations can be implemented, both simply and economically, as completely conductive "islands" according to the ESD requirements.

**Caution:**

Personal safety always comes before ESD safety!

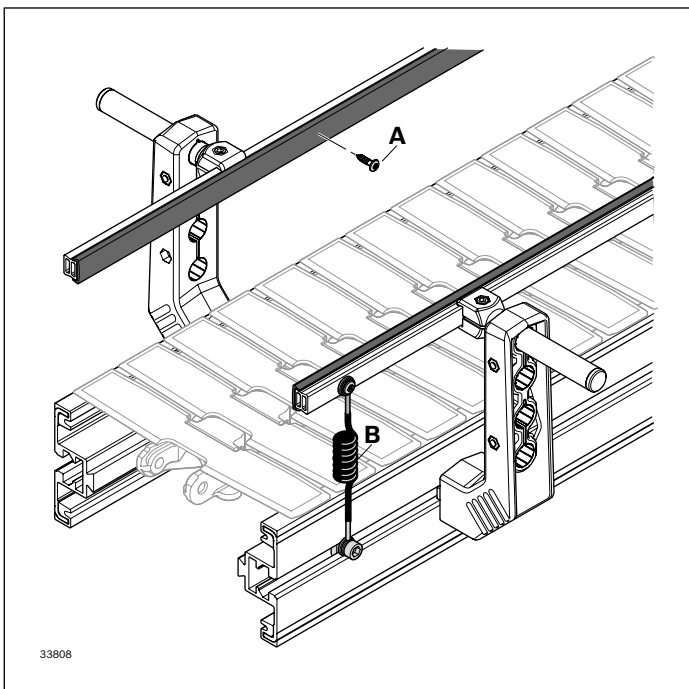


### Workpiece pallet

- Product carrier connection made of metal or conductive plastic connections to the WT plate via screw **(A)** (pierced anodized coating)
- Connection to the end caps and the steel sole via screws **(B)**
- Connection to the conveyor chain via a large contact area **(C)**
- Connection between the conveyor chain and the slide rail via a large contact area **(D)**
- Slide rail connection with section profile via screws **(E)**
- Example connection to the hall potential equalization with a 1 MΩ protective resistor **(F)**

### Note:

Only the steel outer sole is ESD capable.



### Lateral guide

- Slide rail connection narrow with AL profile rail via sheet metal screw (3 842 547 908) **(A)**
- Connection between AL profile rail - section profile using a screw (3 842 547 908 or 3 842 533 915), cable and T-nut **(B)** (piercing through the anodized coating and establishing a connection to the conductive aluminum core)

### Note:

The extension of the AL profile rail is only permitted with the profile connector on the outside (see page 204).