

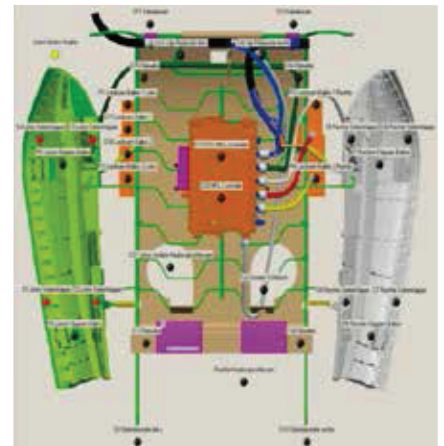
Assembly and test device for drive dynamic seat

The assembly and test device is designed, constructed and produced for the assembling and testing of drive dynamic seat (DDS) assembly groups. The components of the seat (felt fleece, hoses, air cushions, control units etc.) have to be placed in the adapter trays according to a defined chronological order. Supported by various sensors and optical displays, hoses and supply lines have to be installed according to the displayed specifications and fixed with cable straps. Subsequently hoses have to be clipped pneumatically to the control unit by using freely suspended tools.

During the final test, the control unit is electrically contacted and the air cushions are successively filled. Correct connection and tightness are tested. After a successful test, vacuum depletes the air cushions. The assembly is released.

Basic setup of the assembly and test device

The assembly and test device for the DDS consists of a base frame, which carries loose oscillating manual control gears. Depending on the model of the DDS the height adjustable adapter tray of the frame is prepared for receiving different adapters. Through easily created plugins and lockings the operator is able to rebuild the system in a few minutes. The compressed air receiver and the vacuum pump for the filling and the depleting of the air cushions are placed in a separate creeper.



Displayed assembly- and test steps

Dimensions in mm (WxHxD)

1500 x 2800 x 1200

Voltage

230 / 115 V AC

Weight

120 kg

Basic frame

- Height adjustable lift table (lifting 15 mm/s)
- 2 pneumatic manual control gears
- 1 Hellermann cable tie tension tool
- 1 GE Sensing pressure absorber
- Beckhoff firmware (cap rail-PC, diverse digital in- and outputs, potential clamps)
- Integrated, secured electric control cabinet
- 1 Festo valve cluster / system

Adapter

- Beckhoff firmware
- 36 proximity switches
- 8 reflectance sensors
- 4 photoelectric sensors
- 2 light barriers
- 2 barcode readers
- Diverse short stroke cylinders
- 1 Festo valve cluster

Creeper

- 1 Festo compressed air receiver
- 1 Becker vacuum pump

Application of the DDS

DDS provides the highest of ergonomics, driving comfort and occupant protection. In cases of cornering the DDS generates for a counter pressure (filling of the air cushions) on the backrest side which is oriented to the outside of the turn. This ensures that the passengers are optimally held by their seats. Modern DDS are equipped by practical massage functions, which enable relaxed travelling over longer distances.



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