# **Train Toilet System**

## **Std Toilet**





### **Product description**

Train toilet modules are state-of-the-art solutions that are delivered to a customer as a ready-to-install module. All necessary assembly work is completed in Joptek's factory, including automation and electrics, sewage and water supply systems. These modules can be manufactured either from sandwich structures or composites.

Laminating these modules to a mould means different shapes can be designed for the module, without reducing functionality. If compared to traditional materials, composite allows more efficient use of space in very tight surroundings, because technical equipment has been inserted into the structure of the module.

#### Key benefits of choosing our module:

- Lightweight structure
- Long lifecycle
- Easy to maintain and clean
- Several equipment options
- Tested and ready to install





#### Technical characteristics

#### Requirements and Standards

Manufacturing and and assembly under supervising of ISO 9001 and ISO 14001 and IRIS quality standards.



Adhesive Bonding process according to DIN 6701-2 Class A2 standard ISO 3834-2 and EN15085 standards are followed in welding process.



ISO 3834-2

Toilet cabin fullfills mechanical requirements of UIC 566 standards

DIN 5510-2:2009-05 and CEN TS 45545 standards compliance for fire protection

#### **Delivery contents**

- Complete tested Toilet cabin including
- Sanitary system integration
- Tanks and piping integration
- Filling / emptying piping (option)
- Electrical systems
- Controls and Push buttons
- Door
- Hatches
- Furnishing
- Lightning
- Ventilation
- Fixing to the carbody
- Testings and product samples
- FEM calculation
- Documentation
- Packing and delivery



**Dimensions** 

Typically L 1000 mm, W 1700 mm, H 2200 Various options of layout and dimensions.

Weight

Typically approx. 300 kg, will be optimized together with chosen dimensions, furnishing and equipment.

Strenght

Structure fulfills requirement of UIC 566-standard.

Water proofness

Seamless / carefully designed seams

Surfaces

Easy to clean and durable Visible surfaces typically HPL – GRP laminates Various options of surfaces and colors Visually attractive

Fire resistance

DIN 5510-2:2009-05 and CEN TS 45545 standards compliance for fire protection Tested according to UIC-, DIN- and UNE-standards. National special requirements are taken account in projects.

Noise isolation

15-40dB (to be specified in design phase)

Heat insulation

To be designed according to requirements

Life time

Special attention is focused to durability. Structure is designed for 40 years life time.



#### **Terms**

**Price** 

Products will be offered based on request.

Delivery time

To be agreed based on request

**Prototypes** 

FAI's delivered according to customer's need.

Assembly

Assembly service can be agreed to be part of delivery.

Training

Training on customer's site can be agreed to be part of delivery.

Technical support

Technical support is provided during whole build up time and warranty time.

**Documentation** 

Product, project and testing documentation available

Spare parts

Spareparts available

#### For more information

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