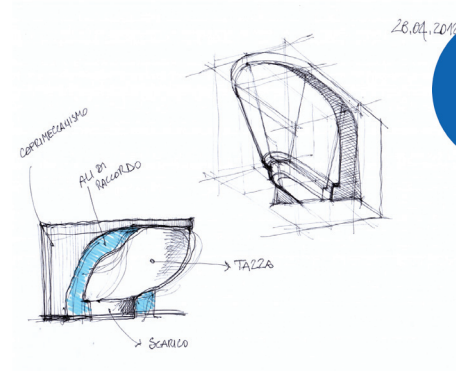
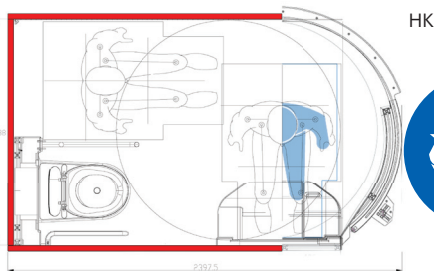
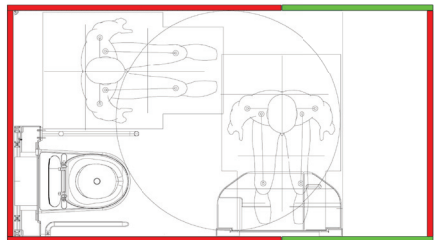
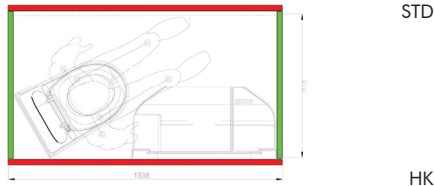
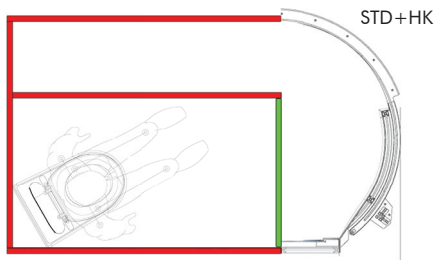




MODULARITY



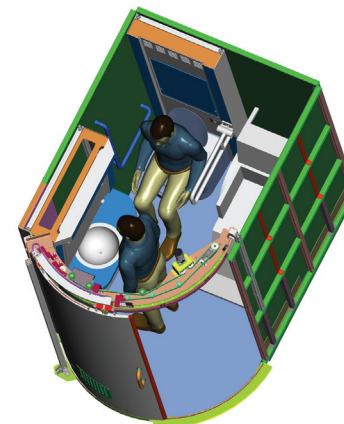
- Designed with modular concepts according to TSI PRM and UIC requests.
- Easy to assemble
- Immediate response time.
- High level of standardization



ERGONOMICS



- Designed for an easy use
- Ergonomic interior layout
- Comfortable for all the users particularly for the persons with a disability
- All functions on hand
- Easy accessibility
- Pleasant lighting

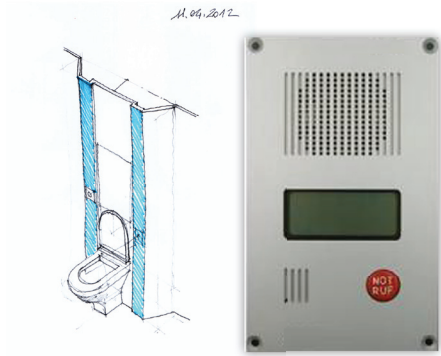


- ALUMINIUM
- VARICOR

- Realized with materials which preserve the environment
- Ecological
- 100% recyclable



ENVIRONMENT FRIENDLY



- Designed to assure the highest level of safety
- Essential interior layout
- Fireproof materials
- Passenger's Intercom Systems
- Fire alarm system
- Fire extinguishing system



SAFETY



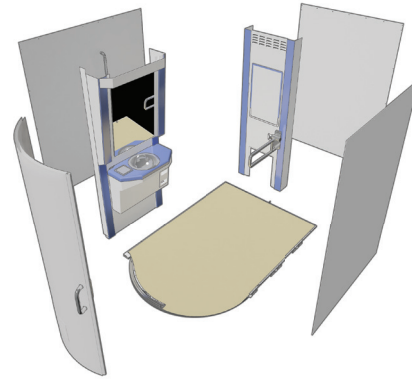
CAR BUILDER

REDUCED ASSEMBLY TIME

Due to modularity concept the assembly time is reduced and consequently also the full cost of the manufacturing process is reduced.

The TS module can be assembled and tested directly on board. With this new concept we can avoid:

- The in house TS module assembling phase (the concept is based on modular fully equipped panels which are shipped separately).
- The necessity of disassembling the TS module before installing the TS on board the coach.



COST SAVING FOR LOGISTICS AND MAINTENANCE

The time for both maintenance and component logistics is reduced. The modularity and the simple assembly procedure allow to reduce the transit time in warehouse.

The standardization of key components both for STD and HK Toilet allow to reduce the value of stock and the cost of maintenance.

- Reduced purchasing time
- Reduced lead time
- Reduced maintenance time



RELIABILITY

MB Elettronica srl is a leader in electronic manufacturing and electromechanical equipment offering a variety of services. Its Mechanical Division has competence in design and development of railway components and systems.

The ECOTOILET is equipped with Knorr-Bremse best in class technological system.

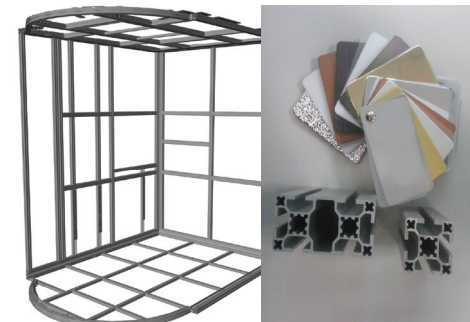


CLEANING

The internal layout, the material selection, the roundness of internal shape, are the key points for maximizing the cleanliness and the hygiene.

WEIGHT

All the main parts of the toilet module are realized in aluminum to obtain a significant weight reduction.



USER

ERGONOMIC FUNCTIONALITY

Full compliance with the latest European standards and recommendations for rolling stock: EN, UIC, TSI, TSI (PRM) .

The components are assembled in order to be highly visible and reachable by the user.



↘ A SMART CONTROL SOLUTION

The control of the toilet's functions is implemented by a decentralized electronics. There are distributed modules on each wall of the toilet all connected by serial data bus and 2 power lines.

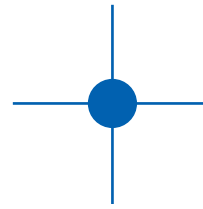
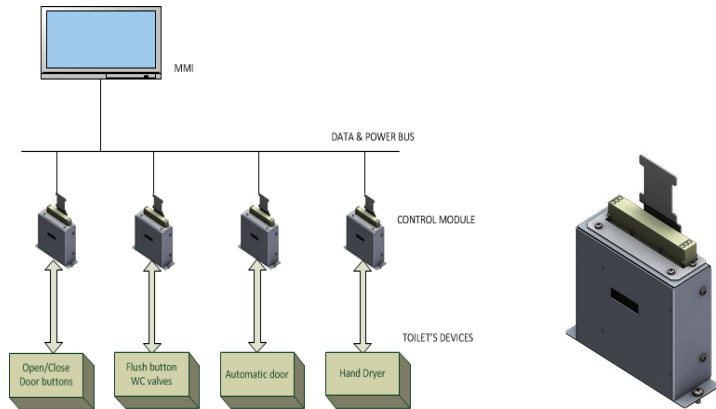
Every module is programmed to manage the functions of the devices installed on a wall. The cabling is installed during the manufacturing process, thus each wall of the toilet is shipped with its own controller and relevant cabling.

The installation aboard the car is very simple because it is limited to the connection of the bus and relevant power lines to each module.

A MMI is tied to the toilet bus as well. There are mainly two types of MMI. The most complex one consists of a touch screen PC with advanced functionality for maintenance and data logging. The simplest one consists of an alphanumerical LCD display and 3 function buttons.

The electrical panel is extremely compact, it hosts the wide range main power supply which is tied to the battery voltage (24-110Vdc), a circuit breaker, the MMI and the terminal block for the data and power supply bus.

The MMI can be connected also to the TCMS via vehicle bus depending on the application (CAN, MVB, Ethernet).



MB ELETTRONICA

43° 28' 24" N

11° 52' 12" E



43° 28' 24" N
11° 52' 12" E



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