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TEST BOARDS

WORKING AS IF YOU WERE WORKING ON A VEHICLE – BUT WITH FULL COMFORT

FROM A COMPACT TEST BOARD AT YOUR DESK TO A FUNCTIONAL MOCK-UP (FMU) – INDIVIDUAL BREADBOARD ASSEMBLIES FOR MAXIMUM RELIABILITY IN ENGINEERING AND TESTING

A range of original components can be conveniently attached and connected to each other on test boards according to their target arrangement in the vehicle. This is the perfect way to subject, in particular, the cable harness and ECUs to complex networking and function tests in conjunction with real sensors, actuators and other subsystems. Test boards thus enable flexible tests for series validation – long before tests are possible on real vehicles.

Due to the suitable mechanical construction with variable T-slot profiles, all essential parts of a test board are easily accessible for engineers and testers at any time. Drilled boards allow for the simple, fast and structured mounting of all components. This is how original parts can very easily be substituted by spare parts or simulations at any time – and vice versa.

From test boards for individual control units to function clusters and complete vehicle FMUs – we would be glad to advise you in accordance with your individual tasks, and engineer and design the appropriate test setup.

PORTFOLIO

- Test boards
- Breadboards, component carriers
- Diagnostic assemblies
- Test tables
- Real load cabinets
- 2- & 3-dimensional test boards
- Functional models, demonstrators
- Functional Mock-Up Units (FMU)
- CAN Mobile
- Master jigs
- LabCars
- Test and simulation technology

AREAS OF APPLICATION

- ECU and component engineering
- Testing and validation (HiL testing, FMUs)
- Test benches
- Testing and approval
- Repair shop and manufacturing
- Quality assurance

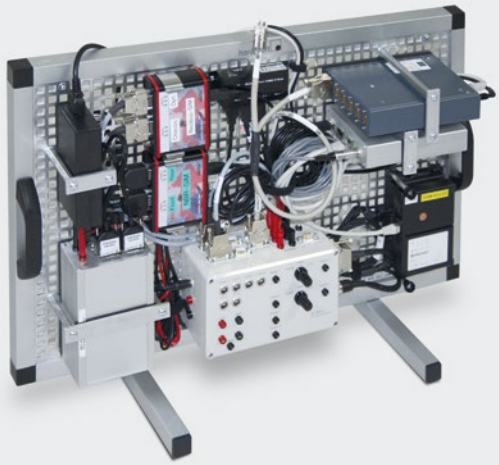
BENEFITS

- Top quality through comprehensive know-how and many years of experience
- Highly flexible, individual assemblies with T-slot profiles, drilled boards and special designs
- Space for additional components
- Ergonomic support for display ECUs
- Simple cable routing with full pull-outs using drag chains on drawers
- High-quality, permanently engraved/printed lettering
- Fast, flexible implementation and on-site support

TEST BOARDS FOR THE WORKPLACE

Board setup for tests directly at the desk or workplace

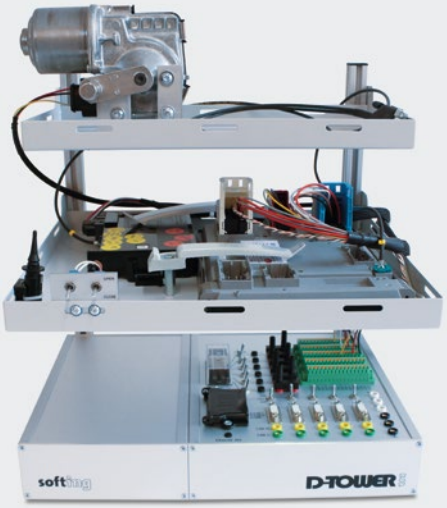
- Small, compact and clearly arranged
- Can be used reliably long term
- Stackable versions
- Lying, standing - universal



ECUs DIAGNOSTIC TOWER

Compact design with minimum space requirement

- Freely assignable compartments (variable number)
- Clear device and component structure with structured cable routing
- Integrated power supply
- Tapping for ECU communication interfaces: LIN, CAN, CAN-FD, FlexRay, BroadR-Reach 100 MBit and 1 GBit Ethernet



TEST TABLES

Mobile board assembly with integrated work table – among other things for networking and diagnostic tests

- Space-saving
- Ergonomic
- Designed and manufactured for reliable and long-term use
- Individually adapted to customer wishes and requirements

REAL LOAD CABINETS

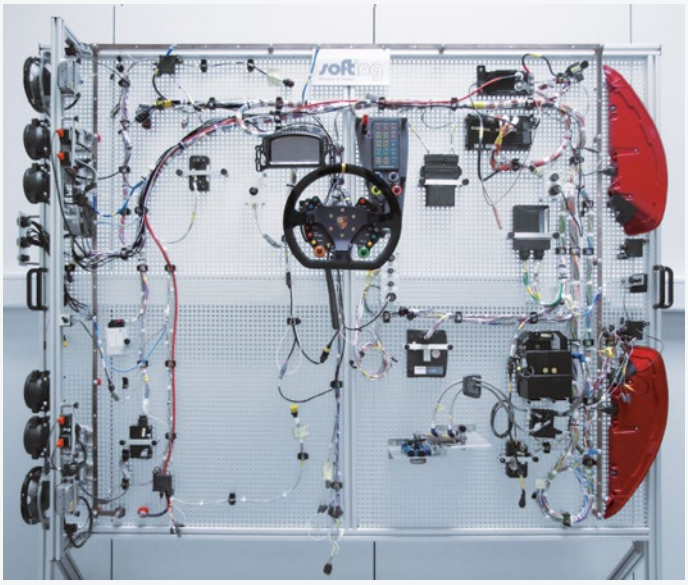
Cabinets and shelving for component storage with individual and 19-inch mounts

- Freely assignable drawers and shelves
- Soundproofed load chambers
- Cooling circuits for real loads
- Touch-proof high temperature chambers for heating elements
- Ergonomic display instruments

2- & 3-DIMENSIONAL TEST BOARDS

Component carriers consisting of vertical test boards with full extensions to accommodate control units, actuators, sensors

- Vehicle-similar assemblies
- If desired, with original cable harness
- Individual, according to your wishes – with our experience
- High clarity with 2-dimensional assembly
- Compact and space-saving with 3-dimensional assembly



FUNCTION MODELS DEMONSTRATORS

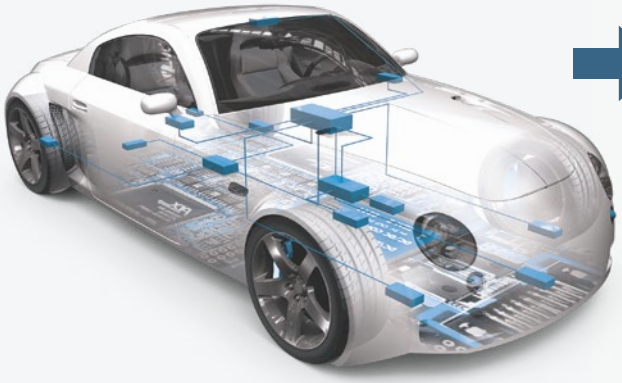
System assemblies with focus on the visibility of functionality with an attractive appearance

- Functional models for the presentation of the components and their functionality
- Focus on visualization and clarity
- For presentations, fairs, training sessions and courses

FUNCTIONAL MOCK-UP (FMU) – SETUP FOR COMPLETE VEHICLE TESTS

Three-dimensional test boards in vehicle size for simulations and complex networking tests with original components

In functional mock-up systems, test boards are arranged three-dimensionally in the characteristic shape and size of a vehicle. In this way, up to 200 control units and original components, such as seats, steering wheel, center console, interior and exterior lighting as well as the entire wiring harness, can be tested in combination. FMUs enable high-quality flexible tests for series validation long before the test is possible within real vehicles.



TEST AND SIMULATION TECHNOLOGY – ALL COMPONENTS FROM ONE SOURCE

- Measuring adapters and break-out boxes
- Signal conditioning
- Simulation of electro-mechanical variables
- Error simulation
- Residual bus simulation
- HV adaptations and HV testing equipment for electric and hybrid vehicles
- Testing facilities for telematics and infotainment
- Accessories and aids for ECU engineering
- Diagnostic and test software

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