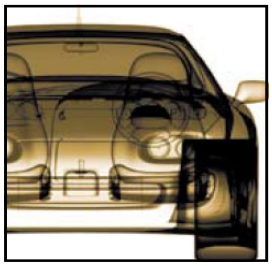
Test Systems

Brake Organs Test System

TEST ENGINEERING

- TEST SYSTEMS
- SOFTWARE
- CONSULTING
- PROJECT MANAGMENT
- SYSTEM COMPLIANCE
- TESTS
- TRAINING
- RETROFIT

SDI's Brake Organs Test Systems are designed to provide equipment manufacturers with high quality and cost effective solution to test endurance and performance of brake organs such as calipers, discs and brake pads. The tested products are put under mechanical stress using regulated thrust and braking



Endurance Tests by Electrical Actuation

Clean electrical solution

The electrical push actuators of SDI's test systems can generate braking couples up to 800 m.daN. An electrical solution simplifies maintenance of equipment compared to the more expensive hydraulic solutions generally used.

SDI's electrical actuators are also entirely regulated and allow precise control and repeatability of the constraints applied to the test products.

Independent multi-stations

The command bay is equipped with a real-time controller allowing regulation of two stations simultaneously. Programming test cycles is simple and fully managed by an intuitive conversation Windows interface. The cycles of running-in the brake pads are automatically managed by continuous monitoring of the braking torque.

After the run-in process, the system automatically starts the test cycles without intervention of the operator thanks to a follow-up algorithm that determines the end of the run-in.

Traceability of the product

The entire test history of the product is accounted for in a logbook. Permanent monitoring of the system allows the test to be stopped right when the product breaks to facilitates the analysis of the weakness.

At the end of the trial, trend curves can be edited to see the evolution of performance of the product throughout its life.

SDI
Développement Industriel

TEST ENGINEERING, MECHATRONICS AND EMBEDDED SYSTEMS

X'SPARe Software Suite

By plugging X'SPARe to the Brake Organs Test System, the control and execution of test sequences is effortless. The real-time software commands and controls the equipment and allows adaptation of the system to different products and specifications by the operator. X'SPARe is norm oriented and automatically generates an analysis of the test results.

- ☐Real-time command /control of test systems
- ☐Complex system control rules are integrated
- ☐Real-time graphical visualization of the results
- ☐Norm-oriented input allows easy and rapid creation of test sequences by the operator

Technical characteristics

Force, velocity and position regulation

Regulation loops associated with each unit driven by the system allow for precise repeatability of your tests.

These regulation solutions ensure that the product is stressed the exact way that has been defined.

All parameters can be adjusted in the test sequences to replicate precisely the descriptions of standards set by manufacturers.

Effortless operations

The comprehensive monitoring of the product's life is verifiable through SDI's real-time software.

Once a product is mounted on the system, launching the test sequence automatically generates cycles of thrust and torque and simulates an endurance life cycle of the product.

Full control

A maintenance mode has been created to allow you to test independently all of the system's functions. The operator can then validate the product's reaction before launching an automatic test cycles.

In maintenance mode the operator can also use the remote controller to test the product by staying in visual control to observe the specimen's response.

Purge mode allows the operator to easily perform the purge operations that are otherwise complicated and burdensome.

Safety

No matter what mode is used, the system permanently monitors and control the equipment to ensure total safety of the operator and of your products.

Safety guards are locked during the operation as additional safety for user.

They Trust SDI

With 18 years of experience, SDI has already implemented over 500 test systems in the automotive, aeronautics and defense sectors.

ROBERT BOSCH - HUTCHINSON -

VALEO - SANDEN - FAURECIA -

RENAULT - PSA - EADS - MESSIER

BUGATTI - VALUTEC – VISTEON -

WESTAFLEX - TRELLEBORG ....

Specifications

Operating System	XP, Windows 2000 RTX
Torque Actuators **(2 actuators)**	Permanent maximum torque: 820 m.daN Short time maximum torque (5 s) : 1650 m.daN Stroke: 200 mm Maximum speed : 375 mm/s Displacement Angle +/- 11 °
Force Actuator **(2 actuators)**	Permanent maximum force: 190 bar Short time maximum force(5s): 380 bar Stroke:50 mm Velocity: 250 mm/s
Parking Brake Actuator **(2 actuators)**	Cable traction: 195 daN Stroke 50 mm Velocity: 250 mm/s
Characteristics	Power: 51 kVA Weight: 3,8 tons Length: 3600mm Depth: 1400mm Height: 1990mm

SDI is a test engineering company offering reliable and innovative solutions in test systems, mechatronics and embedded system.

Our solutions include the provisions of test systems, software and services ranging from your needs' definition to the installation and the analysis of the test's results. We are here to help you conceive products that precisely answer norms, quality and reliability constraints set by your clients. SDI complies with the ISO - 9001 : 2000 norm.

SDI is also committed to sustainable development. The company is an active member of the Environmental Managers Network and has put in place ISO

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