



Test Systems

Pulsed Air Test System

TEST ENGINEERING

TEST SYSTEMS

SOFTWARE

CONSULTING

PROJECT MANAGEMENT

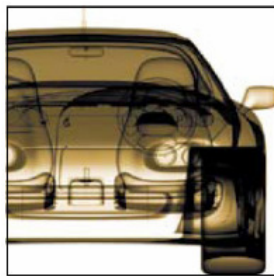
SYSTEM COMPLIANCE

TESTS

TRAINING

RETROFIT

SDI's pulsed air test systems are designed for the global equipment suppliers involved in the production of air ducts and pipes. Our solutions allow prototyping, characterization and endurance testing to ensure quality and compliance with automotive and aerospace industries standards.



For your Prototyping, Characterization and Endurance Tests

Simulation of the engine's environment

Pipes and ducts test systems from SDI are designed to recreate precisely the environment in which your products are used.

SDI's systems allow characterization and endurance testing of your ducts and pipes by generating pulsed air cycles through the tested product and by controlling all of the environment's variables: temperature and pressure of the air, displacement of the product, optional injection of oil mist to simulate real-life conditions, temperature and hygrometry of the climatic chamber, leak measurement, etc.

Norm oriented

The norm orientation of the X'SPARE software suite allows the user to easily create a test sequence to validate the conformity of its product. This rapid configuration of the test

system means that the bench is adaptable to your different needs.

Cost efficient and reliable

SDI's standard solution allows for a rapid return on investment. The time needed for adaptation and configuration of the system to new products is reduced by the flexibility of the test bench and the price of a standard solution is without comparison. SDI's test system are also experiencing extraordinary uptimes!

Compact and clean

All of SDI's realization answer the ISO 14001 environmental standards. The air and fluid pipes test benches are equipped with cooling and filtration solutions of the pulsed fluid before evacuation.

This system is also a compact solution and it has been designed to minimize its impact in the work area.



TEST ENGINEERING,
MECHATRONICS AND
EMBEDDED SYSTEMS

Powered by X'SPARE, Controlled by You

By plugging X'SPARE to the Pulsed Air Test System, the control and execution of test sequences is effortless. The real-time software commands and controls the system 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

Environment

- Regulated thermal chamber
- Regulation of air temperature inside the tested products
- Oil mist injection in the pipes
- Positioning of the pipes to recreate vehicle position
- Position displacement of the pipes
- Programmable cycles (by the client) based on norms or temporary needs
- Released air treatment (ISO 14000)

Pulsed Air

- Generator and regulator of pulsed air
- Generator and regulator of depressurization
- Programmable cycles of pressurization and depressurization

Cooling and filtration of released air

Pipes Displacement

- Translation displacement
- Pendulum movement displacement
- Displacement by 6-axis robot
- Regulation rules are programmable with force and position control

Surveillances

- Automatic detection of pipes rupture
- Static leak measurement under pressure
- Dynamic leak measurement using a flowmeter (real-time statistical analysis)
- Dynamic surveillance
- Total traceability of measurements and test surveillances

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

Regulation of thermal chamber	-40°C to 200°C
Volume of thermal chamber	1 to 3 m ³
Air temperature in the pipes	Room temperature to 250°C
Pressurization and depressurization cycles	From -0.9 to 9 bars
Pressurization and depressurization time	As fast as 100ms (depending on the volume)
Oil mist injection	5g/h (configurable)
Electro-pneumatic displacement	0.1 to 10 Hertz— 2 500 N— 150 mm
Option: 6-axis robot for displacement	Complex displacement up to 2 Hertz
Volume of tested products	1 to 10 liters
Quantity of products tested simultaneously	Up to 4
Leak measurement	Static and dynamic
Adjustable sampling of input channels	From 10 Hz to 10 kHz
Adjustable input surveillance	Burst, static and dynamic leaks

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 14001 environmental measures.



271, Chaussée Jules César
95250 BEAUCHAMP
FRANCE

>> + 33 (0)1 34 18 78 28
>> info@sdi-tech.com
www.sdi-tech.com