



Giussani, founded in 1947 by Luigi Giussani, has been in business for over 75 years.

The business started with the production of thermometers and electronic devices. Later, the need to test its products led the company to develop testing systems, acquiring considerable expertise in the field, so much so that it has since built more than 600 test benches to simulate and measure temperature, pressure and electronic process signals.

Since the 1980s, Giussani has designed temperature calibration devices such as portable calibrators and laboratory thermostatic baths. Since 1982 Giussani has developed and produced a new range of hydraulic test benches initially aimed at testing sanitary fittings and subsequently for testing performance hydraulic components, with now more than 500 benches installed around the world.

In March 1996, Giussani obtained certification of its quality system for the installation and servicing of temperature, pressure, process signal, calibration benches and hydro-sanitary fitting test benches.

In 2002, the headquarters were relocated to a new 6000 sqm area, 2400 of which are indoors, with spaces in keeping with the large company that Giussani now represents on the international market; the new premises are equipped with large open-space offices, a production department with a closed-circuit hydraulic network to feed the test benches, a laboratory for carrying out hydraulic tests, a metrology room and computerised testing systems.

Currently, Giussani is one of the most qualified European manufacturers of portable thermostatic calibrators and is the

leader in the production of test benches for hydro-sanitary fittings and hydraulic components.

The production line includes:

- **Portable Temperature Calibrators** with a temperature range of -50° to +1200°C
- **Thermostatic baths** with a temperature range of -40° to +300°C
- **Hydraulic pressure generators** from 1 to 3000 BAR
- **Combitest modules** allowing calibration and maintenance of pressure switches, pneumatic/electric signals and process instrumentation.
- **Sanitary fittings test benches** for performing laboratory and life tests on sanitary fittings and accessories, execution according to EN-CSA standard
- **Hydraulic test benches** used to perform laboratory and life tests on hydraulic components, pipes, fittings, filters, heat exchangers, etc.

The experience we have gained over the years also allows us to offer a design system dedicated to the specific needs of the individual customer, ensuring a periodic control/verification service for all the instruments produced, also with service at the customer site for test benches and test lines.



TEMPERATURE CALIBRATION



PORTABLE THERMOSTATIC CALIBRATORS

ENTRY LEVEL

PYROS Models 140-375-650
(range: -28/+650°C) resolution: 0.1°C
Ideal for industrial applications, maritime sector, DNV approved, compact and lightweight

PROFESSIONAL

FLUID 100 - FLUID 200 - QUARTZ - PULSAR - SOLAR
(range: -30/+1100°) resolution: 0.01°C
For laboratory, professional applications, automatic controls, external probe reading with the possibility of Accredia certification

ELITE

FLUID 100-45 - QUARTZ 50 - SOLAR 1200
(range: -50/+1200°C) resolution: 0.01°C
For laboratory, professional applications, uses in extreme temperatures, automatic controls with the possibility of Accredia certification

CUSTOM

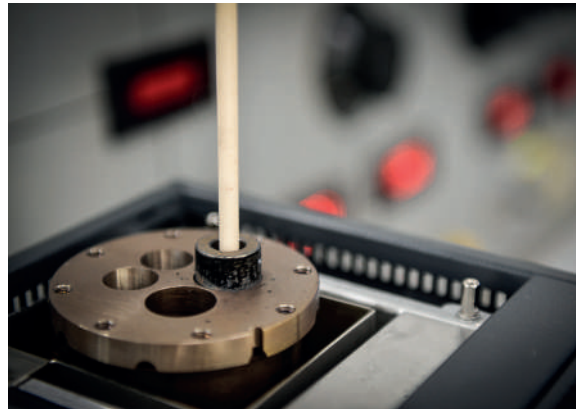
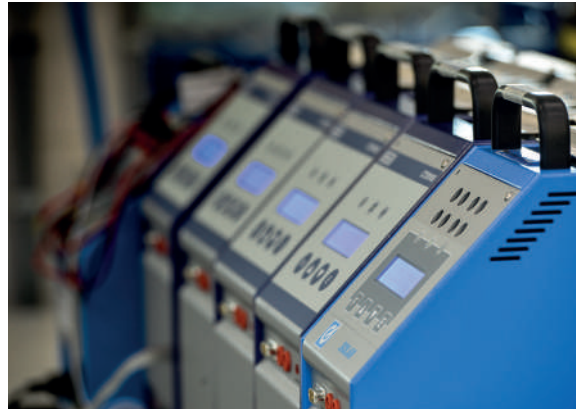
PULSAR-80 for calibrations of very long bulbs at high temperature
PULSAR C399 for the controlling aircraft turbine engine probes
PULSAR - HT + BT 400 combined pressure and temperature Dynisco probe calibration system
QUARTZ-2691 for calibrations of gas probes used in nuclear plants.

DEDICATED CALIBRATORS

Design on demand

THERMOSTATIC BATHS

BK40M - TB300M
(range: -40/+300°C) resolution: 0.01°C high stability
Used in the laboratory for calibrating temperature probes, equipped with a ducted propeller stirring device to ensure high axial and radial uniformity



HYDRAULIC TEST BENCHES



Giussani test benches are designed to test hydro-sanitary fittings and hydraulic components. The test benches are designed to carry out tests on flow rate, regulation, stability, response time, hysteresis, leakage, thermal cycles, life cycles, pulsing and burst pressure in compliance with the most important international standards: NF, KIWA, EN, UNI, ASME, ASSE, JAPMO, ect. The use of specific software allows continuous monitoring of ongoing tests, subsequent analysis of results and report management in accordance with standards. Depending on the type of test and the component being tested, the software guides the user through the selection of all significant parameters that characterise the test.

MAIN TESTS THAT CAN BE PERFORMED

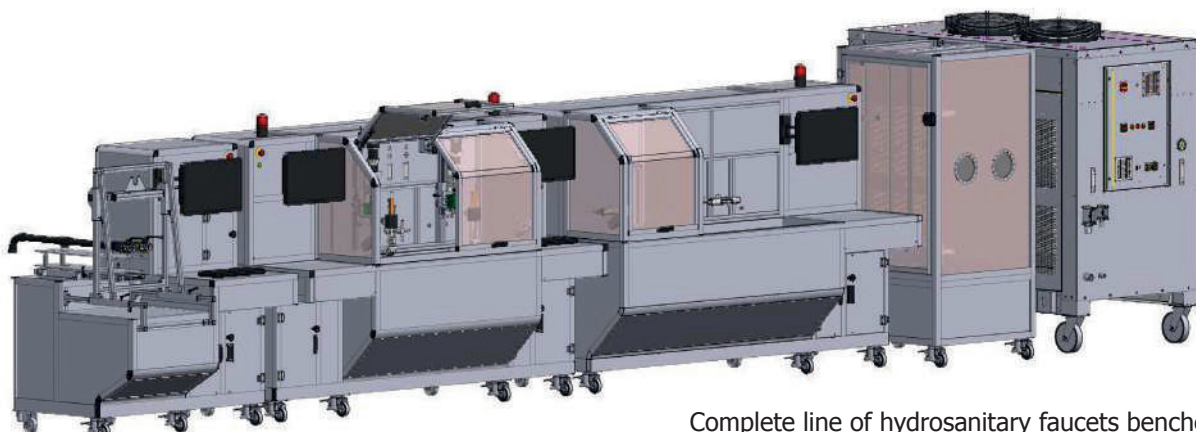
Characterisation tests on single-lever and thermostatic mixers including: life test, safety test, sensitivity and fidelity test, mixed temperature stability test

- Thermal cycles on hydraulic components
- Water hammer resistance tests (max. 150 bar - 2 Hz)
- Hydrostatic pressure test up to 1000 bar
- Flow rate tests and Kv (0÷100 L/min)
- Tensile and bending tests on shower hoses
- Acoustic measurement of hydraulic components while water flowing



OPERATING RANGES AND MEASUREMENT ACCURACY

● Water temperature	10÷95°C	±0.3°C
● Flow rate:	1÷1000 L/min	±0.5%
● Mix. flowing pressure	10 bar	±0.5%
● Test chamber mx Temperature	110°C	±2°C
● Static pressure	1-1000 bar	±0.5%
● Pulsing pressure	1÷150 bar	±0.5%
● Maximum frequency	2Hz	
● Torque	0.5-10 Nm	±0.1Nm
● Linear Force	0.1-100 N	±0.1 N
● Acoustic test	0÷45 dB	±1 dB



Complete line of hydrosanitary faucets benches



Giussani has set up a laboratory to perform hydraulic tests and tests in accordance with the main industry standards. This service allows our customers to verify conformity and test their products using the most advanced testing equipment with traceability to primary samples.

THE TESTING SERVICE INCLUDES

- Use of the laboratory with assistance of our staff for preparing equipment and carrying our tests
- Assembly of specific equipment for fixing components
- Issuing of reports in digital form

TESTING SERVICE WITH CONFORMITY AND PERFORMANCE CHECKS

- Testing of hydro-sanitary fittings in accordance with the main industry standards: EN, NF, ASME, CSA
- Acoustic testing of hydro-sanitary fittings and hydraulic components in accordance with EN 3822

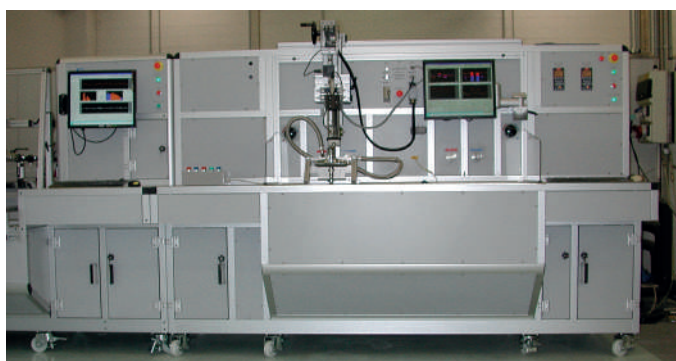
- Tests on hydraulic and thermo-hydraulic components with leak, burst and water hammer tests and measurement of hydraulic characteristics with flow and pressure drop measurements.

MECHANICAL DURABILITY AND THERMAL STRESS TESTING SERVICE

- Handling tests of taps, mixers, shower diverters, moving spouts, thermostats subjected to mechanical stress with pressure, temperature and flow control carried out in accordance with EN and NF standards
- Ageing tests of hydraulic components with thermal cycles alternating with temperature, pressure and flow control.

GIUSSANI LABORATORY STANDARD OPERATING RANGES

● Water temperature	10-95°C	+/-0,3°C
● Flow rate	1-100 L/min	+/-0,5%
● Mx. flowing pressure	10 bar	+/-0,5%
● Static pressure	1-1000 bar	+/- 0,5%
● Pulsing pressure	1-150 bar	√/- 0,5%
● Mx frequency	3 Hz	
● Torque	0,5-10 Nm	+/- 0,1 Nm
● Linear Force	0,1-100 N	+/- 0,1 N
● Acoustic test	0-45 dB	+/- 1 db±1



CERTIFICATION:

All instruments are supplied with final testing, stability and accuracy report traceable to Accredia standards

GIUSSANI S.r.l.

Via dei Crederi, 411
 24045 Fara Gera d'Adda (BG) - Italy
 Tel.: 0363/399019 - Fax.: 0363/398725