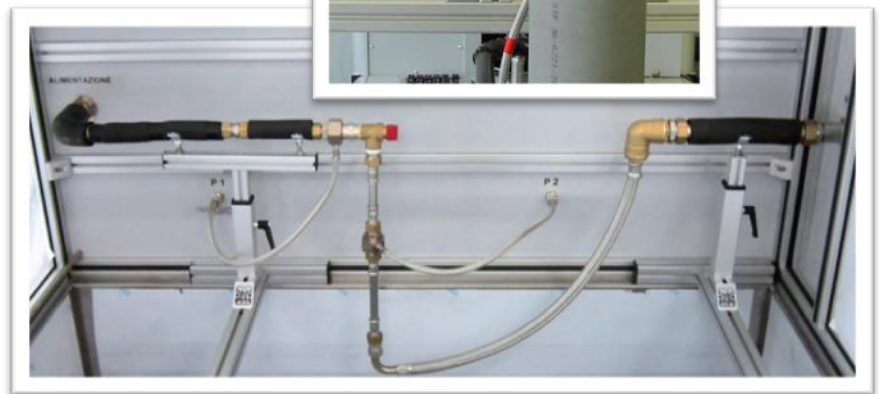
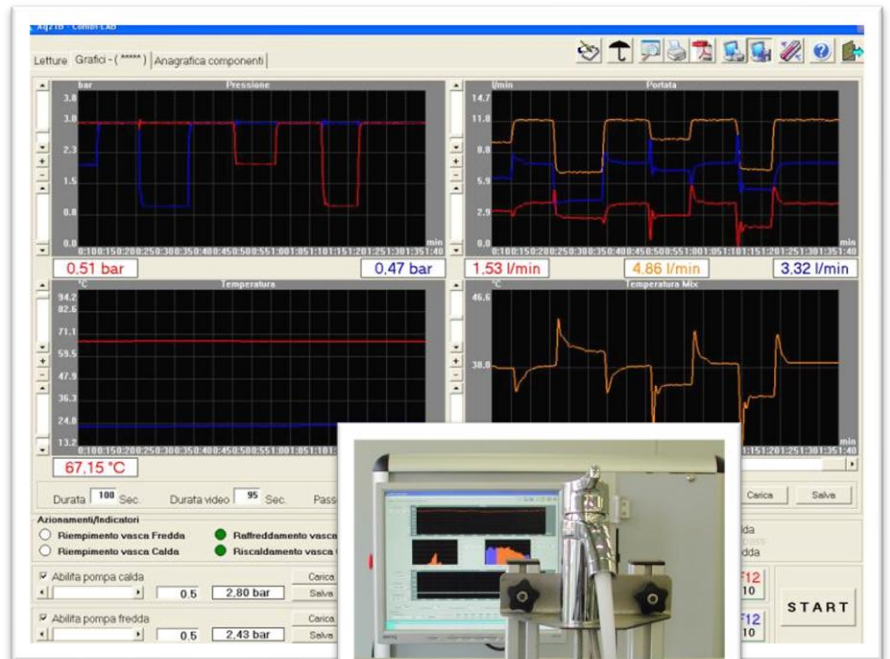


HYDRAULIC TEST BENCHES



Founded in 1947, Giussani started its business with the production of thermometers and electronic devices. Later, the need to test its products led the company to develop testing systems, producing over 600 test benches for temperature, pressure and electronic process signal testing.

Since 1982 Giussani has developed and produced a new line of hydraulic test benches initially for testing sanitary fittings and subsequently for testing performance and hydraulic components in general.

Our hydraulic test benches have been installed at leading companies in the industry in 33 countries around the world and at major official testing laboratories in: Italy, Germany, Saudi Arabia, Czechoslovakia, Denmark, Canada, Holland, and the United Kingdom. The current production of test benches, made in accordance with the most significant standards, covers a complete range of tests of sanitary fittings and accessories. In recent years, Giussani has set up test laboratories complete with hot and cold water supply units, storage tanks and water supply.



Hydro-sanitary taps test benches



BPR-SWG5010 BPR-SWG10010

- **SWG5010:** Flowrate 50+50 L/min, max. pressure 10 bar
- **SWG10010:** Flowrate 100+100 L/min, max. pressure 10 bar

LABORATORY TEST BENCH ON HYDROSANITARY TAPS

Option to test single taps, tanks units, single-lever mixer, thermostatic mixer, shower units, flexible hoses, automatic tapc, electronic taps...etc

AVAILABLE TESTS

- Flow rate, pressure and temperature measurement
- Safety features characterisation
- Mixing features characterisation
- Automatic control of thermostatic valves



BPR-SWG50 + opz-HP e opz-C SANITARY TAPS TEST BENCH

- Full version to perform all hydraulic test on hydro-sanitary taps
- Separate high-pressure test station: water hammer resistance and static pressure leakage tests
- Handling device for fidelity and sensitivity tests

BPR-2L-VM-SWG ENDURANCE TEST BENCH

Test bench with two separate stations suitable for carrying out endurance tests hydro-sanitary taps and thermostatic mixers

ON:

- Mechanical mixers
- Swivel spouts
- Ceramic and traditional single taps
- Diverters
- Shower mechanisms
- Thermostatic mixers



BP-NOISE ACOUSTIC TEST BENCH

- Performing noise tests in accordance with NF 31-014 annex-C, test rig in accordance with ISO 3822
- Mobile carriage housing test piping and detection devices + pressurisation pump
- Noise measurement with hydrophone + integrated work-station dedicated software
- Hydraulic resistor kit

Hydro-Sanitary taps test benches



BPR-FDT-ENCSA

Three stations test bench for mechanical endurance with flexing and durability tests on flexible hoses.

Reference standards:

EN 1113, EN 16146 and ASME A112.18.1-12/CSA B125.1.12.

AVAILABLE TESTS

Station 1 the test consists in assessing the resistance of a flexible hose when this exposed to cyclical bending forces in the proximity of the fitting

Station 3 the test consists in checking the durability of the hose when it is pulled out of the faucet and then pushed back

Station 2 the test consists in checking the resistance of the hose when it is subjected to a longitudinal tensile force



BPR-SWG-TP

CARTRIDGE AND MIXERS TEST BENCH

- Up to 3 separate test stations
- Possibility of automatic and rotation with independent rotary motor
- Productivity: approx. 40 pieces per hour for station
- Automatic pressure control, minimum and maximum temperature, mixed, cold and hot water shut-off and final evaluations

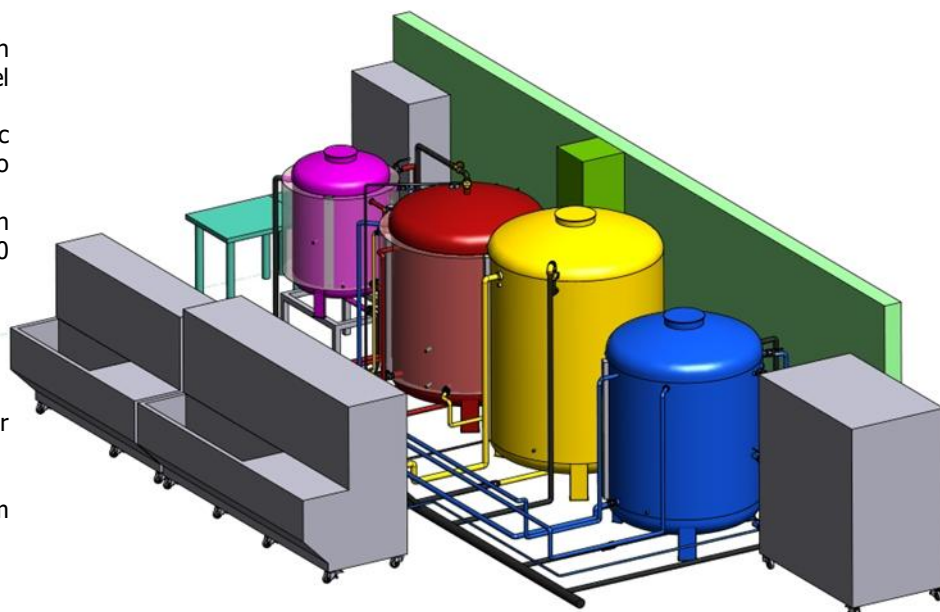
HIGH FLOW RATE TEST SYSTEM

Applications

The system allows all characterization tests of mixing valves and thermostatic valves with maximum mixed water flowrate of up to 500 L/minute in accordance with **EN15092, EN1111, NF079 DOC 8**

Main Features

- BPR high flow rate test bench up to 500 L/min
- Hot and cold water supply with accumulation unit with three stainless steel storage tanks
- A refrigeration unit and external electric resistors allow cool and heat the two storage tanks
- The system operates with accumulation with an autonomy of approximately 20 minutes at a mixed flow rate of 300 L/min
- Flow rate: cold/hot water 300+300 L/min
- Adjustable pressure range: 0.1÷7 bar
- Cold water temperature 10-25°C
- Hot water temperature 35-75°C
- 4000 liters/each for cold & hot water storage tanks
- 6000-liters mixed water recovery tank
- Control unit with PLC for system automation



Hydre-sanitary taps test benches

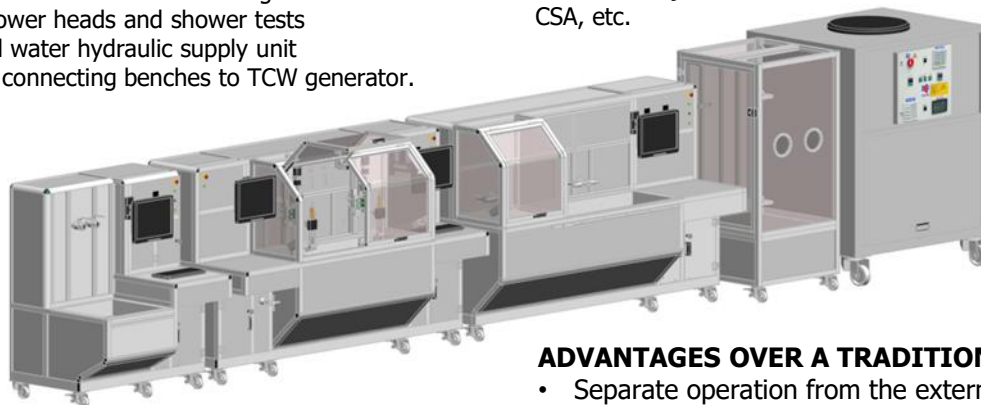


Complete line of sanitary faucet test benches consisting of:

- BPR-SWG-50 test bench + HP option for performance measurement
- BPR-2L-M-SWG test bench for endurance testing with two stations
- BP noise for acoustic characteristics measuring
- BPR-SHOWER for shower heads and shower tests
- TCW-B2 hot and cold water hydraulic supply unit
- Hydraulic system for connecting benches to TCW generator.

Applications

Measurement of hydraulic performance, durability tests, acoustic measurements of traditional and ceramic screw-down taps, mixers, thermostatic mixers, automatic taps, electronic taps, showers, shower heads, shower flexible hoses in accordance with the major international standards EN, NF, KIWA, ASME, CSA, etc.



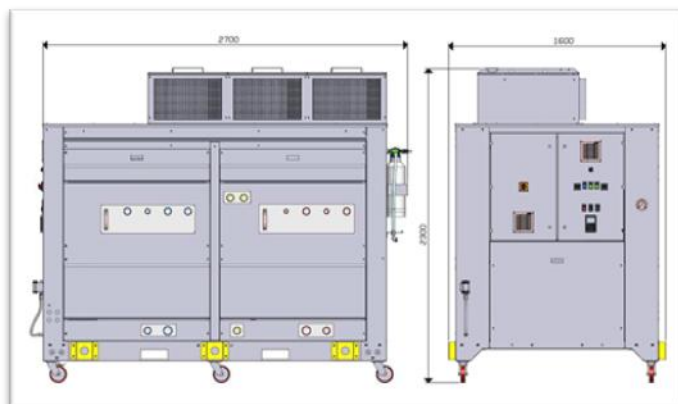
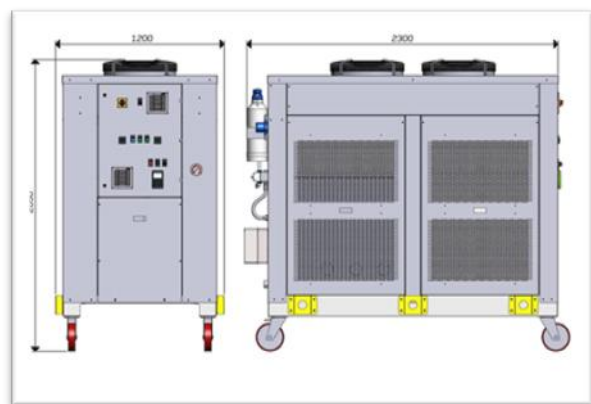
TCW/CCW SUPPLY UNITS

they allow the hydraulic test benches to be continuously supplied, they consist of two separate systems for the production and accumulation of cold and hot water and the recovery of mixed return water, which is filtered and sent back to the internal tanks to be subsequently heated and cooled to the required working temperatures.

ADVANTAGES OVER A TRADITIONAL SYSTEM

- Separate operation from the external mains
- High energy savings due water recovery system
- Constant feeding temperatures
- Reduced start-up transition
- Working temperatures: cold $10 \div 25^{\circ}\text{C}$, hot $40 \div 90^{\circ}\text{C}$
- Temperature stability, in continuous flow, $\pm 0.5^{\circ}\text{C}$
- PLC with graphical interface interconnected to the test bench

MODELS	TCWB2	CCWB2	TCWEO	CCWEO
Fans	Axial	Centrifugal	Axial	Centrifugal
Colling capacity	23 kW	23 kW	46 kW	46 kW
Heating capacity	24 kW	24 kW	48 kW	48 kW
Typical stability under dynamic conditions at 50% flow rate	$\pm 0,5^{\circ}\text{C}$	$\pm 0,5^{\circ}\text{C}$	$\pm 0,5^{\circ}\text{C}$	$\pm 0,5^{\circ}\text{C}$
Internal tanks capacity	300+300 Litres	300+300 Litres	400+400+100 litres	400+400+100 litres
Flow-rate in continuous operation with temp. 15 and 65°C and mixed temperature of 40°C	12+12 L/min	12+12 L/min	24+24 L/min	24+24 L/min
Overall dimensions	230 x 120 x (h) 210 cm	230 x 120 x (h) 230 cm	270 x 160 x (h) 210 cm	270 x 160 x (h) 240 cm
No-load weight	680 kg	720 kg	750 kg	850 kg
Power supply	400 V – 3 Ph – 50 Hz	400 V – 3 Ph – 50 Hz	400 V – 3 Ph – 50 Hz	400 V – 3 Ph – 50 Hz
Total power installed	36,0 kW	37,6 kW	70 kW	73 kW



CERTIFICATION:

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



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