HYDRAULIC TEST BENCHES

Hydraulic test benches are designed to measure the performance and durability characteristics of hydraulic components by simulating use in both real and extreme conditions to characterize components and define their performance and durability limits. Hydraulic benches generate static and impulsive pressure values with hot or cold water with controlled test chamber temperatures in order to conduct tests in accordance with major industry standards. Additional options are available to also perform flow rate, thermal cycle and tensile testes on pipes.

APPLICATIONS
HYDRAULIC TESTS OF:

- braided flexible hoses, plastic pipes, multilayer pipes, fittings pipe assemblies;
- metal and plastic fittings, hydraulic couplings, quick-release couplings;
- pressure reducers, heat exchangers, tanks and hydraulic components;
- durability tests with ball valve handling.

GIUSSANI

TESTING EXPERTISE

Test benches static/pulsing pressure, water hammer, aging

BPI

The BPI series test benches are our basic models for performing static and pulsating hydraulic pressure tests. They are used to test hydraulic components in general and hydro-sanitary fittings in accordance with industry standards.
Since they are not equipped with computers, all functions and commands are left to the operator.
The system can be pressurized at mains pressure with an external cold or hot water supply.
The unit is designed to operate in static test or with pulsating pressure and water hammer cycles.
The BPI-100 basic version features an operating range of up to 100 bar with 6 bar compressed air supply pressure. Versions with maximum pressure up to 250 bar, 400 bar and 600 bar are also available.

Models are available with horizontal test chamber with dimensions in length from 800 mm up to 1,600 mm (see above), or with vertical test chamber with heights up to 1,600 mm (see to the side).
The test chamber can be heated with a forced-air system with settable temperature up to 110°C.
Both versions can be equipped with an optional vacuum system to allow components with internal cavities or complex shapes to be properly filled with water.

BPF200-SIC-HT-HC
HOSE TEST BENCH

Test bench for detecting and measuring hydraulic characteristics under real operating conditions of flexible hoses and accessories, with water temperature (amb. up to 90°C) and test chamber temperature control (amb. up to 110°C), max. pressure 200 bar, impulsive pressure up to 100 bar.

EXECUTABLE TESTS

- Leak test with constant pressure and burst tests with hot or cold water
- Aging tests
- Pulsating pressure tests with hot or cold water
- Thermal cyclic tests with water flowing

BPF-AT-HCT-BP

Test bench for ageing tests of flexible hoses in accordance with 13618 standard.
The bench is equipped with thermostatic chamber up to 150°C.

- Adjustable pressure with pump up to 20 bar
- Maximum static pressure with booster up to 50 bar
- Tank with thermoregulated water with maximum temperature 90°C
- Double pull-out rack for connecting pipes being tested in mx 16+16 pieces

Test benches
static/pulsing pressure, thermal cycles, flow rate, valve endurance

The **BPF-T** series models are versatile multifunctional test benches designed to perform tests on multilayer pipes and pipe fitting assemblies for product validation with functional and durability tests.
The **BPV** series models have been specifically designed to perform thermal cycle tests on multilayer pipes or pipe assemblies in accordance with main industry standards. They are equipped with a test chamber dimensioned to comply with the test configuration to EN 12293, EN ISO 19893, DVGW-W534, ISO 1587-5, ISO 21003-5 standards.

BPF-T-3000
PIPES, FLEXIBLE HOSES AND FITTINGS TEST BENCH
The BPF-T series test benches are designed to carry out tests for detecting and measuring hydraulic characteristics under real operating conditions and endurance tests on flexible hoses, rigid pipes, multilayer pipes and fittings.

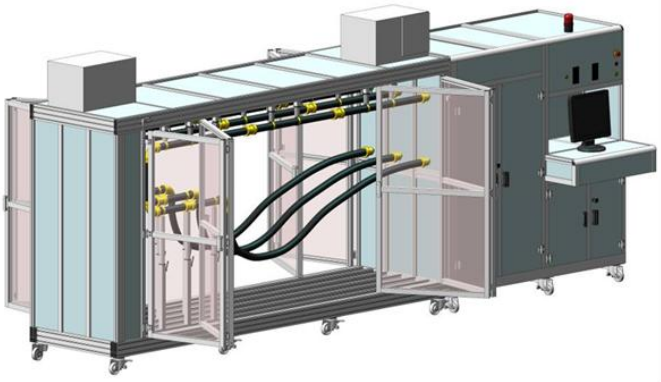
AVAILABLE TESTS
- Hydraulic burst test
- Leak test at costant pressure
- Water hammer test and pulsating pressure tests
- Thermal cycles
- Flow rate test
- Endurance tests on ball valves and taps

Optional application
- Conditioning units to prevent thermal dispersion due to increasing temperature of the test area
- Devices to place pipes in traction before starting the test and adjust their axial loadforce. They can be used to detect the pull-out force of the fittings when hot and cold water are circulating.

COLD AND HOT WATER SUPPLY UNITS
Thermal cycle test benches require external units to supply them with hot and cold water at the required flow rates, models available
TCW B2/CCWB2 power 37 kW for cold water production 10-25°C hot water 40-95°C
TCW E0/CCWE0 power 72 kW for cold water production 10-25°C hot water 40-95°C

BPV-3T
Three independent test stations
Overall rated flow rate: 65 L/min at 12 bar
Maximum overall flow rate: 100 L/min at 12 bar
Pressure range: 1 - 15 bar approx
Cold water temperature*: 10 - 25 °C
Hot water temperature*: 40 - 92 °C
Test stations: 3

Main features:
- Test pressure can be adjusted in the working range of 1÷15 bar with 2 pumps controlled by feedback inverter
- Independent flow rate adjustment valves on each test station
- Measurement of temperature and pressure difference in real time between the inlet and outlet for each station
- The system is designed to ensure a temperature change at the inlet of the test pipe in less than 1 minute



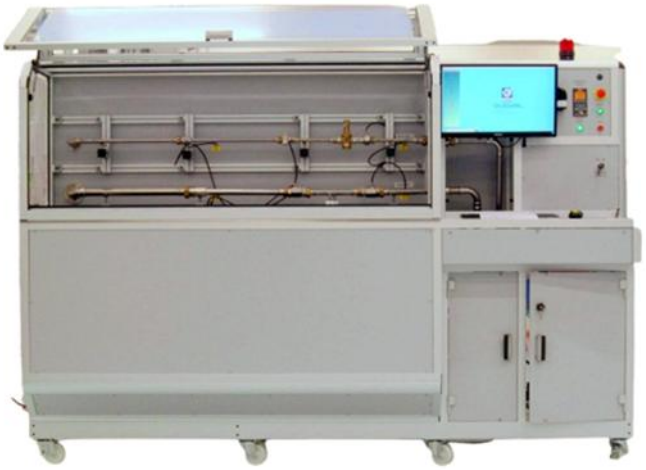
Flow rate test benches

The **BPF-Q** hydraulic benches allow flow rate tests to be performed on hydraulic components.
Dedicated software applications are available based on the type of component under test:

- flow rate with linear increase of upward and down
- ward pressure calculation of Kv and Cv coefficient
- measurement of the outlet pressure of pressure reducers as the flow rate changes
- measurement of flow rate as the pressure drop varies

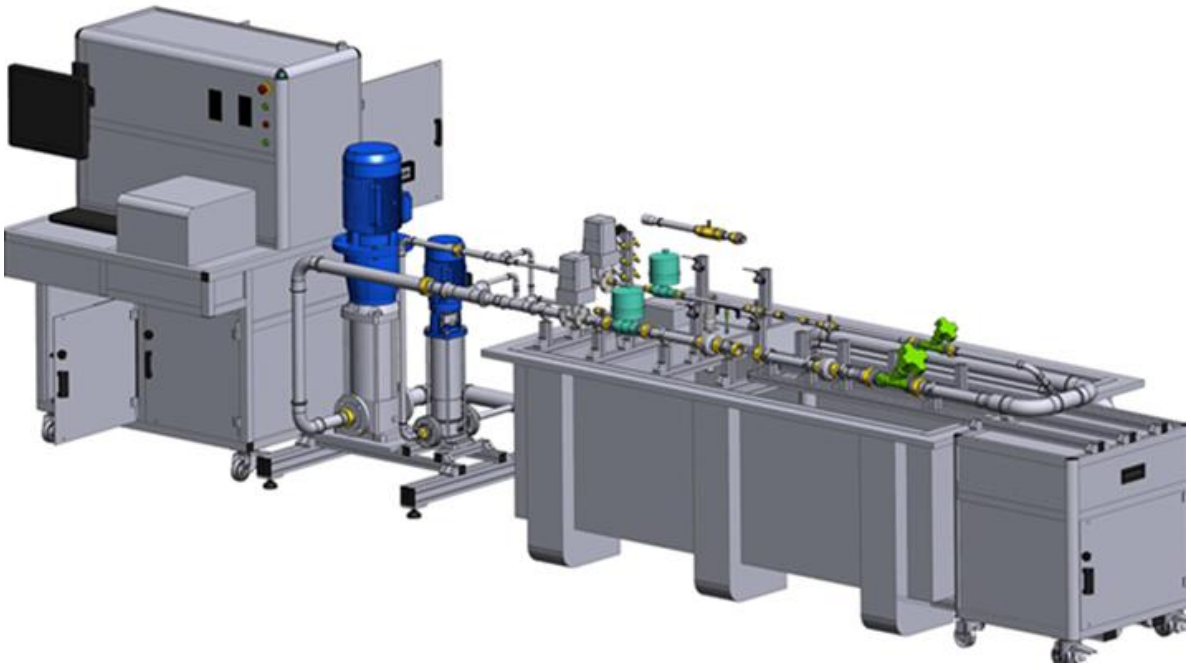
BPF-Q300-8
Flow rate test bench with two measuring lines, test compartment length 1600 mm:

- DN 10 mm flow rate range 2÷47 L/min
- DN 25 mm flow rate range 10÷295 L/min
- Adjustable pressure 0.2÷8 bar
- Water supply from mains with cold water
- Internal storage tank approx. 200 litres



BPF-Q300-12
Flow test bench with two measuring lines, test compartment length 1600 mm, features as model BPF-Q300-8:

- Adjustable delivery pressure 0.2÷12 bar



BPF-Q600-6
Flow rate test bench with power unit and the acquisition system in separate structure.
2000-liter cold water storage tank.
Version with two tandem supply pumps available up to three independent measuring lines.
Designed according the standards.

- DN 10 mm 2÷47 L/min flow rate
- DN 25 mm 10÷295 L/min flow rate
- DN 40 mm 25÷754 L/min flow rate
- Maximum flow rate with two pumps: 700 L/min
- Adjustable pressure: 0.2÷8 bar
- Maximum pressure at 300 L/min (with 1 pump): 6bar
- Maximum pressure at 600 L/min (with 2 pumps): 6bar
- Maximum pressure at 750 L/min (with 2 pumps): 4.5 bar
- Water supply from mains with cold water

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

TESTING EXPERTISE

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