



### General description

The bench, suitable for both R&D and production, is designed for the high-temperature execution of destructive burst and non-destructive leak tests on hoses/pipes and fittings for medium, high and very high pressure.

It consists of a thermo-regulated, heated chamber - in which the samples are stressed under pressure and temperature - and a unit containing the pressure generation hydraulic circuit and the automation system.

The bench is equipped with a local interface management system that allows the operator to easily control and set the test parameters.

The various test protocols - programmable and customizable for pressure and temperature values - allow for the production of specific ramps, according to the regulations applicable to the different components being tested.

To improve the safety of high pressure and high temperature tests, the bench is equipped with a nitrogen flushing circuit that forms part of the test chamber, and assists in creating an inert atmosphere.

The heated chamber is also equipped with a fire detection and extinguishing system, compliant with UNI EN 54, NFPA 12 and UNI EN ISO 13849 standards, whose function is completely autonomous.

# BTB-01H

## Leak and burst test bench

# BTB-01H

## Main performances and characteristics

- Test chamber maximum temperature: 150 ° C (Peak 170 ° C) [302 ° F (338 ° F)]
- Maximum Test Pressure: 1600 bar [23206 PSI]
- Pressure ramp adjustable up to ~ 1MPa per second [145 PSI per second]
- Ability to test up to 8 samples, individually or simultaneously
- Test chamber flushing with nitrogen, to inert atmosphere
- Recovery of the test fluid used during the burst test
- Fully inspectable structure for easy maintenance and testing

## Main Software functions

- Management of the chamber flushing with nitrogen for the hot test
- Filling of the test circuit
- Adjustment of the test chamber temperature
- Pressurization of the sample according to the pressure profile set by the protocol
- Burst pressure detection
- Recording and display of trends and test reports
- Archiving of test reports
- Circuit drain at the end of the test
- Management of test recipes
- Alarm management
- Remote control for diagnosis and assistance

## Environmental conditions and dimensions

- Min. Working temp. + 10 ° C - Max. + 40 ° C [+50 ° F / +104 ° F]
- Min. Storage temp. -10 ° C - Max. + 40 ° C [+14 ° F / +104 ° F]
- Relative humidity Max 60%
- Overall dimensions: LxWxH 3800x1900x2900mm [149.6x74.8x114.2 in]
- Main component weights:
  - o Weight of thermo-regulated chamber ~ 1530 Kg [3373 lb]
  - o Control console weight ~ 850 Kg [1874 lb]

## Industry 4.0

Our test benches, engineered according to the most up-to-date design criteria, are equipped with all the control and communication devices useful for fulfilling the requirements set out in the Italian National Industry 4.0 Plan for access to tax credit. Buyers will be able to operate in accordance with the 2020 Italian budget law (Law no. 160/2019).

## Customized Solutions

opus automazione specializes in the development of "Tailor-Made" solutions to satisfy specific customer needs. Our R&D department will assist you in your customization.



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UNI EN ISO 9001:2015

Environment  
Process Automation  
Test Bench  
Turbomachinery

Systems & Diagnostics Engineering