

LOCCIONI

Calibration and Flow Stand for H₂ Injectors

End-of-line testing solutions



The rig performs calibration and end-of-line (EOL) testing of H₂ injectors, measuring flow and pintle stroke at different operating points. The bench uses N₂ as test gas and actuates the injector under real operating conditions. Once the part is loaded, the test cycle runs automatically and all results are stored for traceability.

THE SYSTEM

The test bench is designed for both low-volume production and product development. Loading, unloading and electrical connection are manual, while the high-pressure (HP) connection is automatic.

A quick-change fixture system makes the bench flexible, so different product types can be tested on the same stand.

- > Manual loading/unloading
- > Fast changeover
- > Multi-purpose fixture



1. Fixture



2. Measuring system

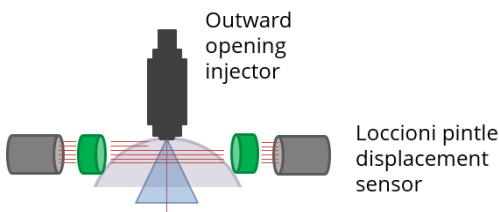
MAIN FEATURES

The system performs a range of tests on the injector:

- > Calibraton
- > Linearity curve
- > Dynamic flow check
- > Static flow check
- > Pintle lift
- > Opening and closing delays

TECHNICAL SPECIFICATIONS

- > Supply pressure: up to 100 bar
- > Test gas: N_2
- > Gas temperature: ambient
- > Back pressure: up to 10 bar
- > Flow measurement: up to 20 g/s
- > Pintle displacement: up to 1 mm

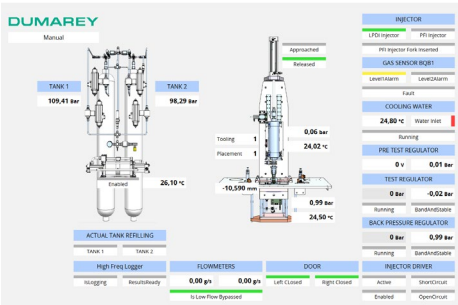


THE SOFTWARE

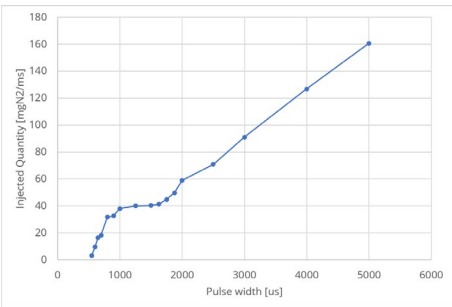
The software runs on Loccioni's Aulos platform, which comprises two applications: **Aulos Automation**, the desktop HMI that monitors and controls the hardware and runs the test routines, and **Aulos Supervisor**, which collects data and results from the systems and manages their test programs and configurations.

Main software functions:

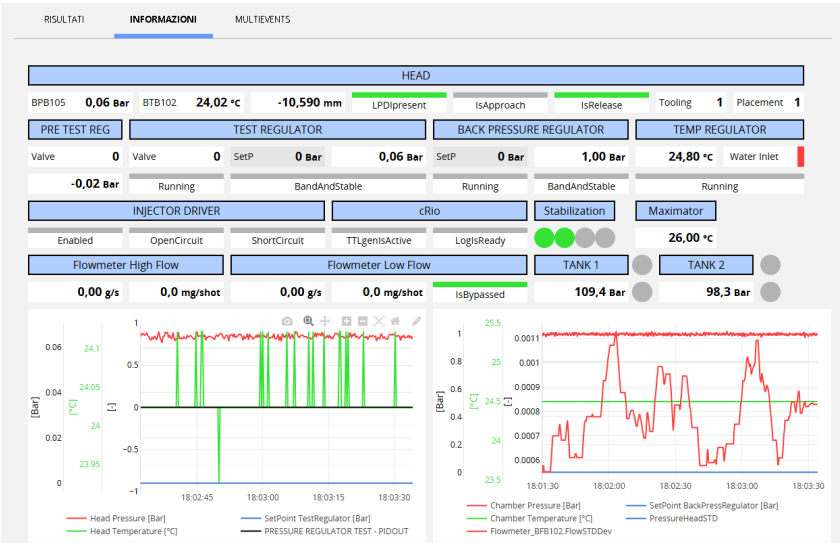
- > User access management
- > Hardware monitoring and calibration
- > Manual debugging
- > Dashboard
- > Program editor
- > Program execution
- > Automatic cycling
- > Result analysis
- > Health analysis
- > Data maintenance tool



3. Automatic panel



4. Linearity curve



5. Overview

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