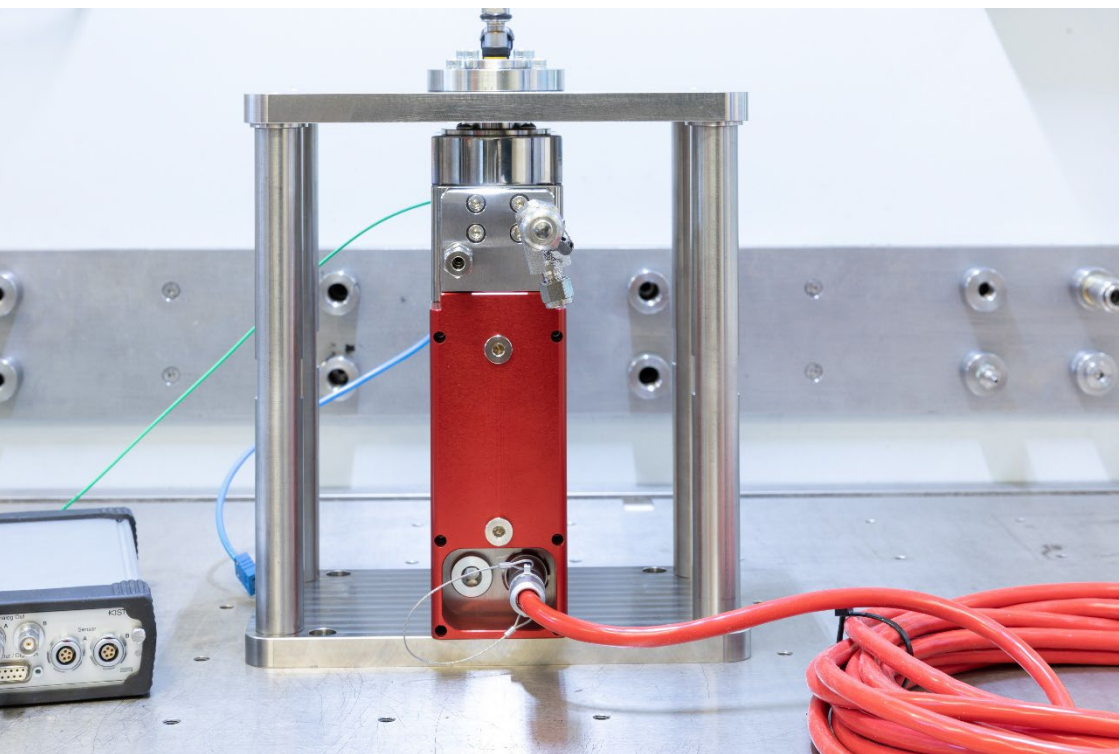


LOCCIONI

Air Mexus 4.0 shot-to-shot gas flowmeter test instrument

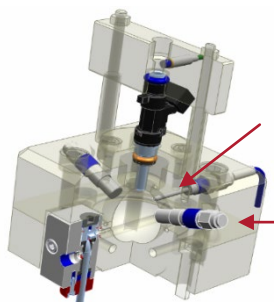


Loccioni Mexus is an integrated, multifunctional injection measurement instrument that measures both the injected fuel quantity and the injection rate of every single shot.

Air Mexus 4.0 is the version designed to characterize the injection of gaseous fuels such as hydrogen and CNG.

THE SYSTEM

The measurement principle is based on the constant volume method: the injector injects into a fixed volume, and the pressure rise in that volume is proportional to the quantity of fuel delivered.



1. Measurement concept

MAIN FEATURES

The system can fully characterize any type of gaseous fuel injector by measuring the following parameters:

- > the shot-to-shot gas mass flow of CNG or H2 injectors
- > the instantaneous injection rate
- > electrical functional test
- > the shot-to-shot mass flow of gas-fed GDI and MPI injectors
- > optional integrated pintle measurement

Main Description	
Measured parameters	• Injected quantity • Injection rate • Opening and closing delay • Pintle measurement
Statistical values	• Instantaneous values • Mean, max, min & standard deviation
Characteristics	
Measuring range	0.8 to 800 mg/shot (*)
Resolution	0.01 mg/shot
Injection frequency	5 – 50 Hz
Injections per cycle	1 – 10
Nozzle back pressure	2 – 150 bar(a)
Test gas	• Air, N2, any inert or non-explosive gas • H2, CNG (**)
Performance	
Number of cycles acquired	1 – 3000
Measurement window per cycle	Up to the complete cycle period
Acquisition frequency	1 MHz

* The range can be customized on request

** Tests with other gases are evaluated case by case

THE SOFTWARE

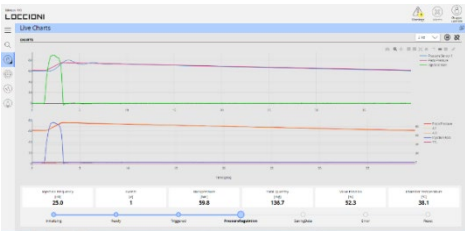
The software is based on Loccioni Aulos. The HMI is web-based, and communication uses the standard TCP/IP protocol.

The application includes:

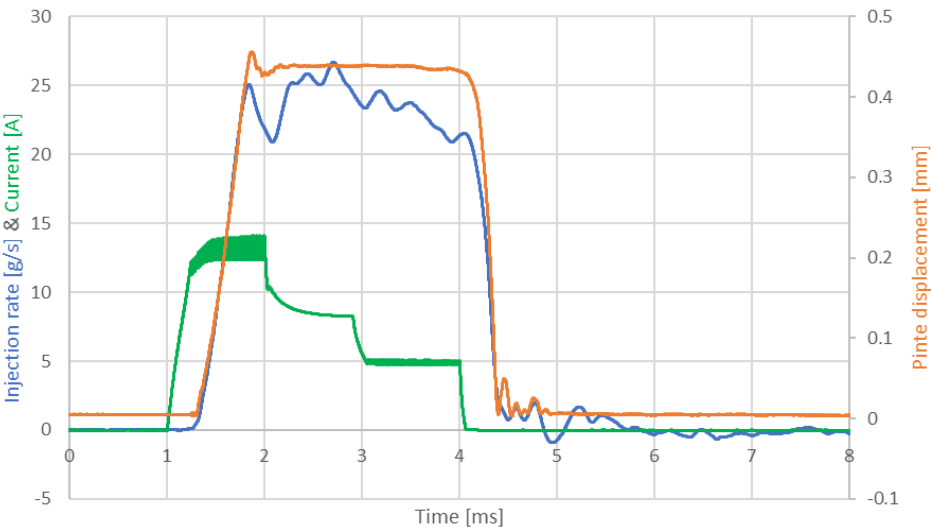
- > User Access Configuration
- > Hardware Monitoring and Calibration
- > Instrument Management
- > Program Editor
- > Program Execution
- > Automatic Cycling
- > Results Analysis



3. Mexus Mechanical Unit



4. Software interface



5. Example results

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