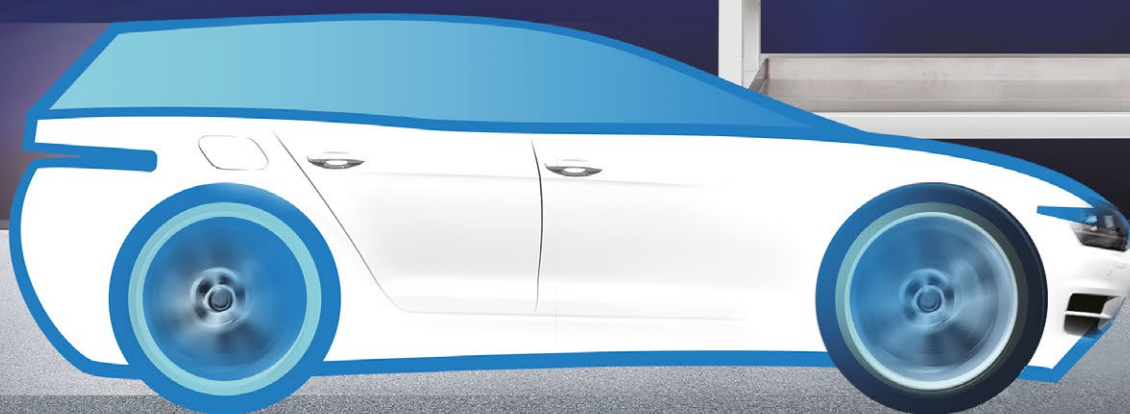


HORIBA
Automotive Test Systems

FUEL FLOW MEASUREMENT SYSTEM
FQ-3100 DP

DP



FQ-3100DP

Fuel Flow Measurement System

The FQ-3100DP fuel flow measurement system offers a highly precise method of measuring various fuel types for engines of up to 700 kW. The unit has a unique measuring range due to the DP sensor, which allows for a highly accurate measurement, even at very low consumption rates. In addition, the data transmission rate of 100 Hz enables highly dynamic measurements. These features make the fuel flow measurement system perfectly suited for demanding research and development applications, including testing of small engines (incl. single-cylinder research engines) and exploring lowest fuel consumption.



FEATURES

- » Measurement of various fuel types
- » Measuring range from 0.2 l/h to 400 l/h (300 kg/h)
- » Temperature control range from -30°C to 80°C
- » Data communication with up to 100 Hz
- » Continuous evaluation of statistical characteristics

KEY BENEFITS

Continuous Fuel Flow Measurement

The FQ-3100DP fuel flow measurement system differentiates itself from similar systems with its highly precise DP sensor which offers a measuring range of 1:1000. This, in combination with fuel conditioning mechanisms and the optional integrated plausibility check module, ensures highly precise, continuous and repeatable fuel measurement tests. Additionally, available options such as temperature modules and the remote-controlled pressure regulator, maximize your testing flexibility.



SIMPLE

- » Automated ventilation and purge function
- » Automated fuel exchange
- » Optional integrated plausibility check module



PRECISE

- » High precision, even at low consumption levels
- » High repeatability
- » Unique measuring range of DP sensor



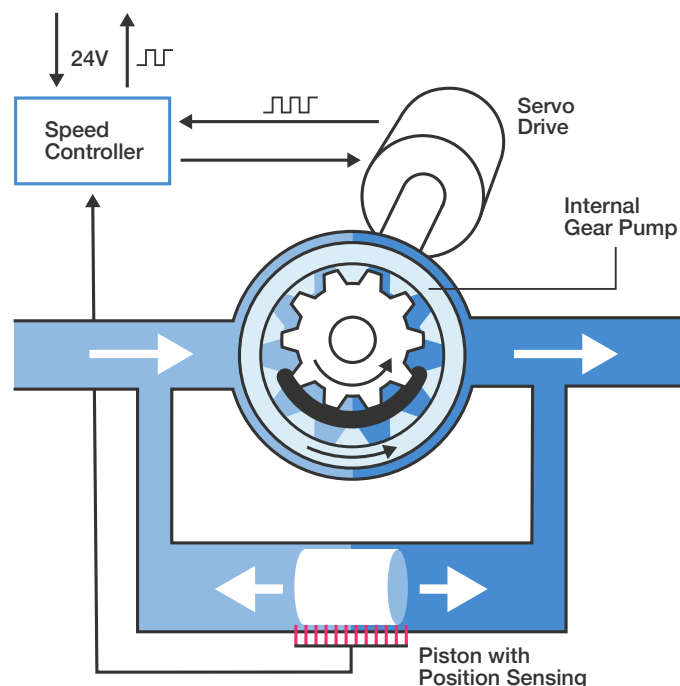
FLEXIBLE

- » Standard interfaces for easy automation integration
- » Wide range of optional modules

MEASUREMENT PRINCIPLE

Delta Pressure Principle with Active Driven Internal Gear Pump

Within the internal gear pump a piston in a bypass regulates the pressure difference between the fuel inlet and outlet of the gear pump. The volume flow causes the piston to start moving which breaks the light barrier. This activates the servomotor, which starts to regulate the internal gear pump until the pressure is equalized again. The volumetric flow is calculated based on the rotation frequency and the geometry of the gears.

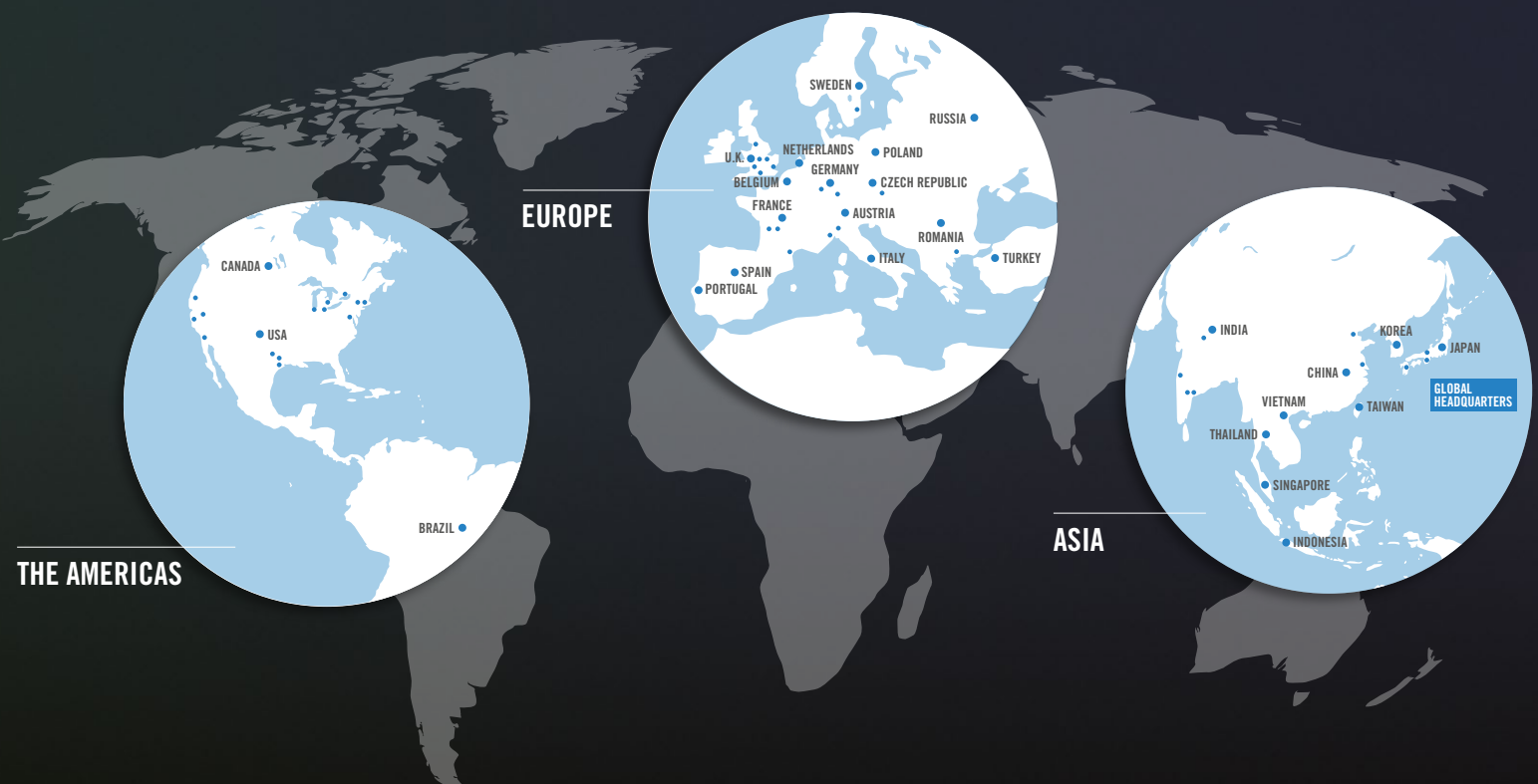


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