HORIBA
Automotive Test Systems

FUEL FLOW MEASUREMENT SYSTEM

FQ-1200CR

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Fuel Flow Measurement System

Measuring a vehicle's fuel flow requires a precise system which can run stationary and transient tests. It must also be able to offer high reproducibility and run cycle measurements under real operational conditions, including WLTP. The compact FQ-1200CR fuel flow measurement system precisely measures the fuel flow of diesel (specified by EN590) and gasoline (specified by EN228) in engines of up to 350 kW. An additional option also allows for the measurement of ethanol fuels. The FQ-1200CR enables the correlation of a vehicle's fuel flow with other factors, such as the vehicle's performance or emission output.

FEATURES

- Consumption up to 200 l / h (150 kg / h)
- High-temperature option for up to 60 °C
- Data communication with up to 10 Hz
- Continuous evaluation of statistical characteristics

KEY BENEFITS
Continuous Fuel Flow Measurement

The FQ-1200CR fuel flow measurement system is characterized by the Coriolis measurement principle, which allows for the continuous and precise measurement of the fuel flow by directly measuring the mass flow. The Coriolis principle, in combination with fuel conditioning mechanisms, enables precise and repeatable fuel measurement tests.

EFFICIENT

» Fast and automated verification of measurement results

» Safe and automated venting functionality

» Confirmed and automated procedures for approval and calibration

FLEXIBLE

» Wide range of optional modules for additional applications

» AK interface for the connection to automation systems

» Use of standard industrial components

SPECIFICATIONS

		FQ-1200CR
MEASURING RANGE	[kg / h]	0 – 150[1]
BASEMENT ACCURACY MASS FLOW SENSOR	[%]	≤ 0.1[2]
FUEL INLET PRESSURE	[bar]	0.5 – 1
FUEL INLET TEMPERATURE	°C	15 – 35
FUEL OUTLET TO ENGINE		
» Pressure	[bar]	0.5 – 6
» Temperature	[°C]	15[3] – 40[4] (60)[5]
» Stability temperature regulation	[°C]	± 0.1
» Circulation rate (not adjustable)	[l / h]	360
RETURN PRESSURE, ADJUSTABLE	[bar]	–0.5[6] – 2[7]
FUEL COMPATIBILITY		Diesel fuels specified by EN590, gasoline specified by EN228, (option ethanol up to 100 %)
POWER SUPPLY		230 V AC, 50 / 60 Hz
DIMENSIONS	[W/H/D in mm]	850 / 900 / 360

(1) typically achievable: 0.9–250 kg / h, (2) regarding specification sensor manufacturer, (3) depending on cooling water temperature and inlet temperature, (4) depending on heat backflow of the engine, (5) with option heating bath, (6) minimum adjustable pressure depends from adjustment of back pressure regulator and from fuel circulation rate, (7) typically achievable: –0.1 – 0.5 bar. Backflow pressure from engine depends on additional pressure lost caused by circulation rate and pipe dimensions. If the backpressure is adjusted to low air bubbles can appear in fuel.

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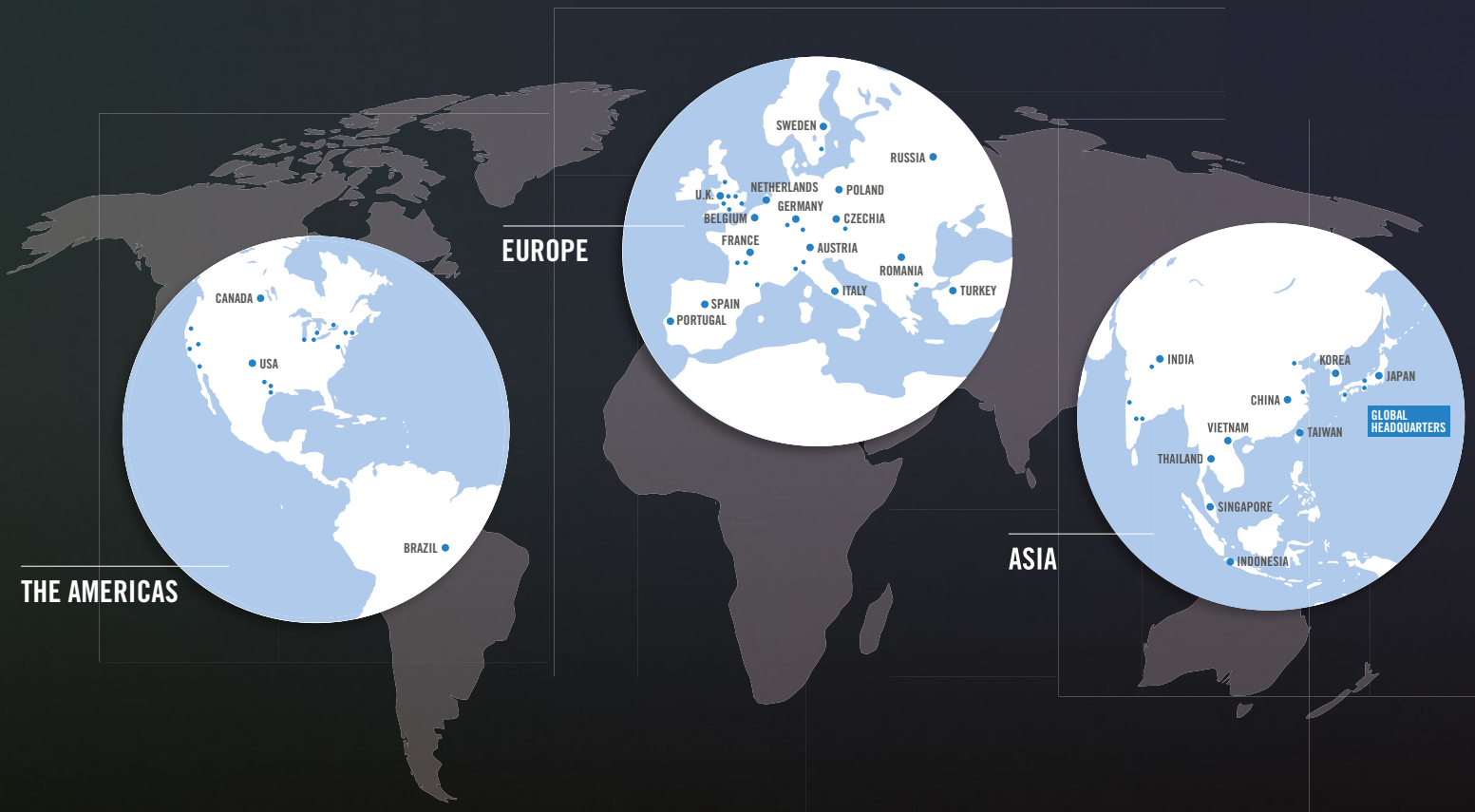

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