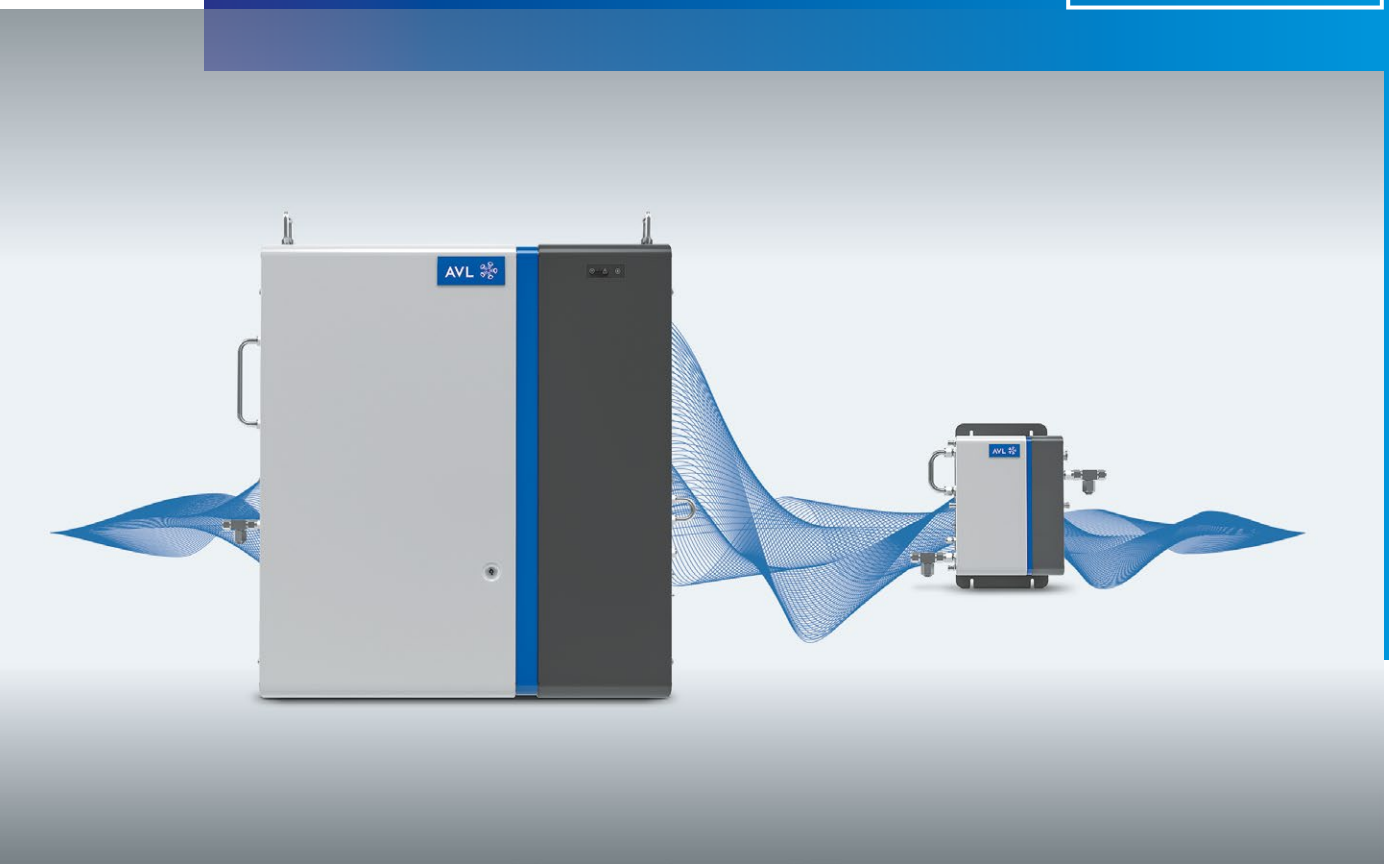


AVL HyTron™ & AVL GasTron™

Gas conditioning and consumption solutions

A PROVEN TEST ENVIRONMENT FOR NEW TECHNOLOGY

The use of hydrogen or CNG as an energy carrier plays a major role in decarbonizing our mobility and transportation on a global scale. With decades of experience and leadership in the consumption measurement of conventional liquid fuels, we have added a further industrialized solution for the testbed application in the AVL portfolio.

Ensuring operator safety was driving our development. As working with gaseous fuels yields certain risks, our product supports the safe operation with ease. The pressure integrity test, for example, allows you to ensure the leak-tight connection to the consumer and avoid the uncontrolled release of gas to the test cell.

KEY BENEFITS

- Reliable and robust consumption measurement
- Integrated safety routines and onboard diagnostics
- Pressure monitoring and limit warnings
- High-quality components and sensors
- Remote pressure control
- Wall or trolley mounting

THE SOLUTION

AVL HyTron™ and AVL GasTron™ respectively are the industrialized and integrated solutions for the safe supply and consumption measurement of gaseous fuels.



AVL HyTron™ and AVL GasTron™



Target applications (fuel cells and combustion engine)



Fuel Cell System testbed with AVL HyTron™

RELIABLE CONSUMPTION MEASUREMENT

Beside the sensor accuracy, a high-quality and robust flow measurement requires stable media conditions. Therefore, a dedicated setup is implemented, which eliminates pressure pulsations to ensure reproduceable fuel efficiency results also during transient testing. Also, the second sensor option allows you to realize a higher turndown ratio without manual switching.

TARGET APPLICATION

The product is designed to support testing of internal combustion engines and fuel cells operated with hydrogen or CNG. The compact solution is ideal to be fitted on existing testbeds or to be used on the chassis dyno for vehicle certification according to the requirements stated in ISO 23828, SAE J2572 and GB/T 35178.

TECHNICAL DATA

Fuel gas compatibility	
H_2	Gaseous hydrogen
CNG	Compressed natural gas
H_2/CNG	Mixtures (on request)
Additionally required media	Nitrogen and control air
Measurement uncertainty (acc. DIN 1319)	
Fuel gas mass flow	≤ 0.5 % of reading
Zero point stability	
Depending on sensor option	0.001 ... 0.02 kg/h
Ambient conditions	
Main Module	+ 5 ... 50 °C
UUT Module	– 40 ... 85 °C
Power supply	100 ... 240 VAC, 1 phase
Power consumption	~ 400 VA, typical 0.8 A
Dimensions (W × H × D) of LP & HP variant	
Main Module	1,100 × 1,120 × 230 mm
UUT Module	455 × 410 × 205 mm
Interfaces	
Device control and data	Ethernet (AK) and CAN Out

PRODUCT VARIANT			TARGET APPLICATION	FUEL GAS PRESSURE		HIGH ACCURACY	
				from facility	to consumer	H_2 mass flow	CNG mass flow
HyTron/GasTron	LP	LowPressure	Fuel Cell System	up to 25 bar	up to 20 bar	up to 23 kg/h	up to 130 kg/h
HyTron/GasTron	HP	HighPressure	ICE MPI/LPDI	up to 60 bar	up to 55 bar	up to 45 kg/h	up to 250 kg/h
HyTron/GasTron	HP+	HighPressure+	ICE HPDI	up to 400 bar	up to 350 bar	up to 50 kg/h	up to 280 kg/h

ICE ... Internal Combustion Engine
MPI ... Multi Port Injection
LPDI ... Low Pressure Direct Injection
HPDI ... High Pressure Direct Injection

Please consult your local sales contact to get informed about detailed specifications, alternative sensor configurations and options. The specified measurement uncertainty is achieved by ensuring the optimal operating conditions described in the product guide.

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FIND OUT MORE

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