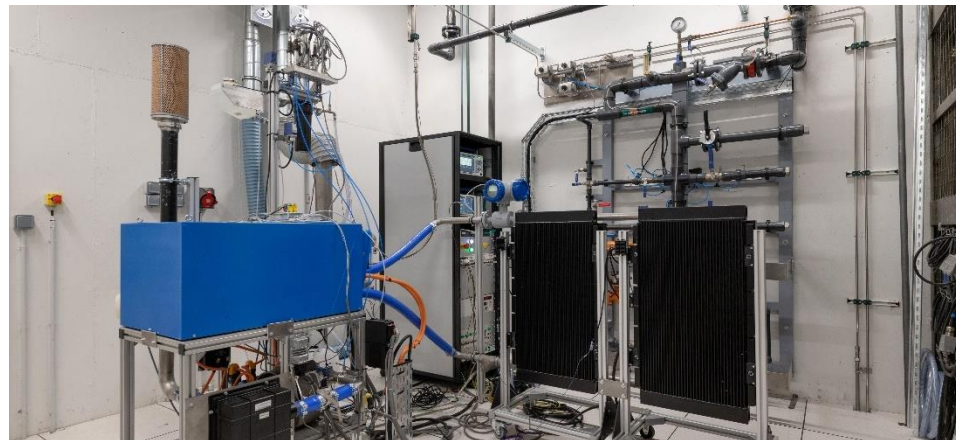




H₂ FUEL CELL TESTBENCH IFPEN



FUEL CELL TESTBENCH

- Testbench for hydrogen fuel cells, for passenger cars and heavy duty applications
- Location: IFPEN-Lyon
 - In Solaize
 - The testbench is supplied with hydrogen, used also for thermal engine testbenches
- Features of the testbench:
 - 210 kW max
 - 750 V max / 840 A max
- The testbench is characterized by:
 - Morphée® for the acquisition and control system
 - Hydrogen fuelling with a maximum pressure at the FC inlet of 20 bar
 - Cooling system
 - Maximum system size for the testbench access: L 1.28 m x H 2.02 m



Test cell with fuse walls



Electric power cabinet (210 kW)

FUEL CELL TESTBENCH INSTRUMENTATION

- **Wattmeter:**
 - 8 channels for the electric power, up to 1000 A per channel
- **Flowmeters:**
 - Hydrogen: 2 flowmeters, depending on the FC power: 1,2 kg/h and 15 kg/h max
 - Air: 2 flowmeters, depending on the FC power: 420 kg/h and 1200 kg/h max
 - For the cooling circuit
- **Gas analysis:**
 - H₂ (0-10%), O₂ (H₂ corrected taking into account O₂ et H₂O values)
 - Intake air hygrometry
- **Temperatures and pressures:**
 - 32 channels for T
 - 8 channels for P (up to 16 channels if needed)



Wattmeter



H2 flowmeter

Contact: Pierre Leduc, pierre.leduc@ifpen.fr, +33 147 526 479

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