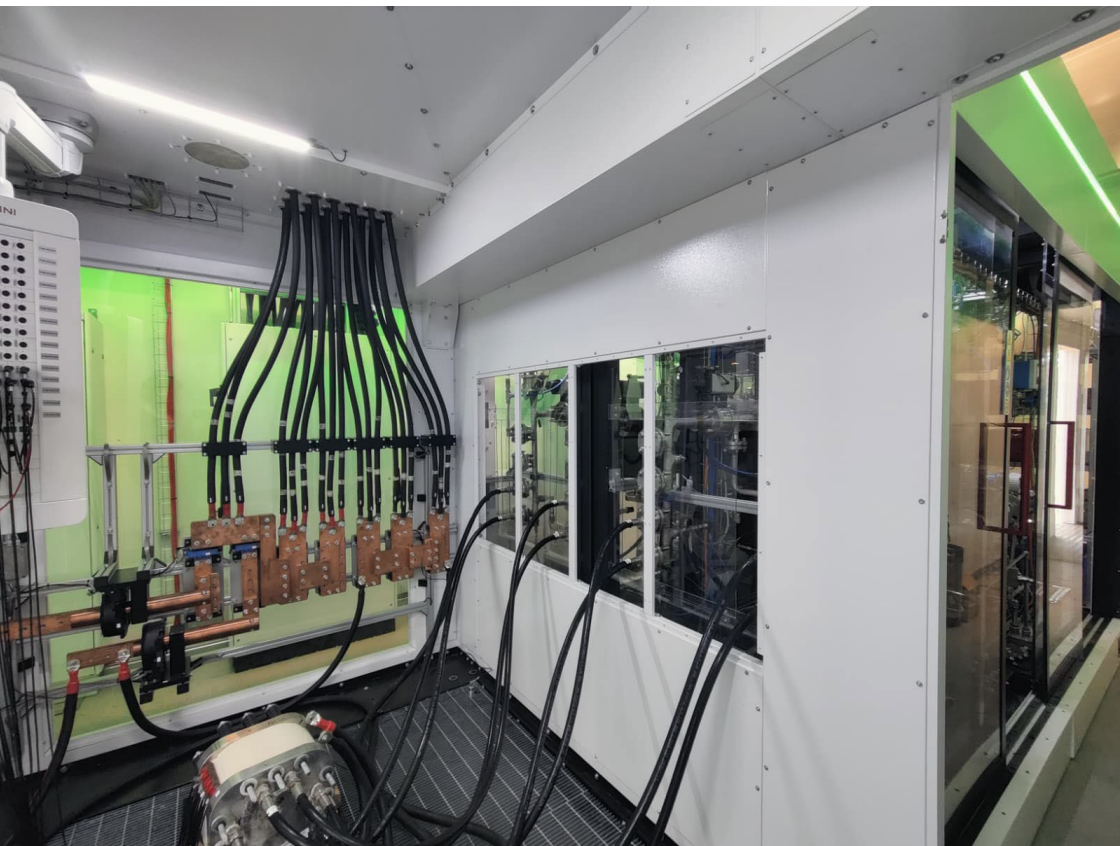


150 kW AEM Electrolyzer Test Bench

Testing solutions and services



This rig is designed for R&D functional testing of a complete AEM electrolyzer stack rated up to 150 kW. The unit can operate with KOH electrolyte at pressures of up to 30 bar, with circulation in the anode circuit only or in both circuits.

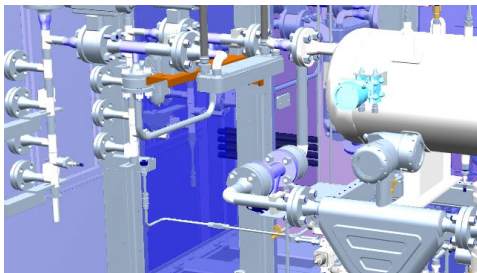
THE SYSTEM

The test bench is designed to test AEM electrolyzer stacks under different operating conditions.

The system is flexible: it can operate both symmetric and asymmetric stack configurations, high-voltage/low-current and low-voltage/high-current modes.

The system can operate at up to 4000 A.

- > 5 kW to 150 kW stacks
- > KOH-compatible materials
- > Integration into H2 production facilities



1. Skid design

MAIN FEATURES

The system can carry out a wide range of tests on the stack, both to analyze its performance in depth and to quickly identify any manufacturing defects.

- > Hydrogen leak test
- > Electrical functional test
- > Impedance spectroscopy (EIS)
- > Temperature analysis
- > Electrolyte carryover

TECHNICAL SPECIFICATIONS

- > Anode flow up to 100 l/min
- > Cathode flow up to 100 l/min
- > Anode pressure up to 30 barg
- > Cathode pressure up to 30 barg
- > Dew point measurement of produced gas
- > Gas temperature control up to 90 °C
- > Voltage up to 250 V
- > Current up to 4000 A
- > HTO/OTH measurement



2. Skid overview

THE SOFTWARE

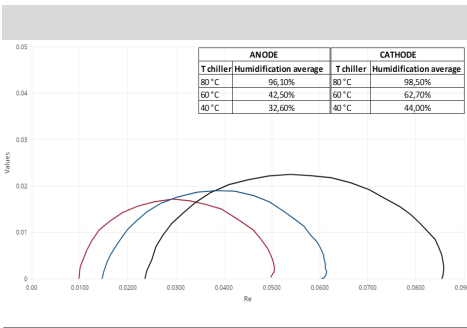
The software is based on Loccioni's Aulos platform, a suite of two main applications: **Aulos Automation**, a desktop monitoring application that includes the HMI for controlling the hardware and running routines, and **Aulos Supervisor**, which collects data and results from the systems and creates their programs and configurations.



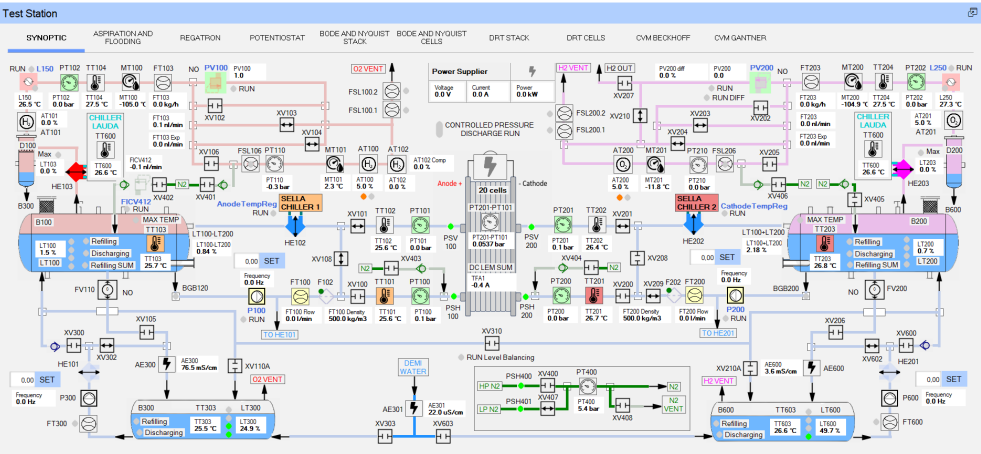
3. Automatic panel

Key application features:

- > User Access Configuration
- > Hardware Monitoring and Calibration
- > Manual Debug
- > Dashboard
- > Program Editor
- > Program Execution
- > Automatic Cycling
- > Results Analysis
- > Health Analysis
- > Data Maintenance Tool



4. EIS analysis



5. Synoptic view

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