



**A fully featured gas system can have different gas paths to match the chemical compatibility of the fluids used**

Every development of chemically-active new materials in fuel cells, catalyzers or sensors, must include a complete environmental test to assess the actual performance of the DUT.

Setting up an experiment means several weeks of multi-skill work, and an endless list of components to specify and procure.

The Gas Factory has been conceived by a team of experienced specialists, striving to make available a turn-key, self contained platform able to avoid any time losses, and letting R&D concentrate on their specific goals.

Stemming from joint activities with R&D labs at worldwide level, we are able to offer a reliable, performing and complete gas supply system.

Every aspect of the gas treatment is covered: mixing, humidifying, pre-heating and sampling for analysis, are all integrated within the platform.

A whole range of flexible programming tools, embedded in the control and reporting SW, let the user manage all relevant data with setup times of minutes.

Flawless integration with other instruments, like potentiostats, FRA's etc., makes The Gas Factory even more appealing when supporting automatic, or life-cycle tests.

Contact us, and talk to a specialist to find out more on our solutions.



## **GAS MANAGEMENT**

### **Mixing**

Up to 8 gases, mass flow controlled from a few ml/min to 50 L/min  
Any gas (CO and H<sub>2</sub>S included upon request)  
Filtering for mass flow protection  
Anti oil mist to 0,1 µm on AIR inputs  
Mass flow controlled  
CUT-OFF separate valve  
CHECK -valve output

### **Gas features**

### **Gas treatment**

Inert gas flush on output channels  
Bubbler system up to 20% Rh,  
or steam generator up to 99% Rh

### **Humidifier**

### **Gas pressure**

Up to 10 bar

### **Output gas treatment**

Dry filtered  
Spillage to GC or MS analysers  
Bubbler cutoff + check valve  
Mass flow metered  
Counterpressurized

### **Gas connections**

6 mm to 12 mm Swagelock-like  
dual ferrule connectors

### **Gas tightness**

Viton O-rings, viton sheets , BUNA on CO  
Teflon-based liquid sealed and tested to leak rate

### **Transfer lines**

Simple or heated to 150 °C transfers

## **ELECTRICAL FEATURES**

### **Controller**

Multi-channel MODBUS controller with internal managing of safety threshold

### **Measured quantities**

Valve status  
Mass flow set point and readout  
Moisture content or water mass flow  
Output mass flow meters  
Pressure/counterpressure  
Additional thermocouple and voltages inputs  
MODBUS multidrop for furnace control (GEFRAN or Eurotherm)  
Potentiostats / FRA from AMEL  
Additional equipment on request

### **Interfaceability**

### **Readout cycle**

Every second or slower

### **Logging file**

All quantities on a CSV Excel-readable file

## **DIMENSIONS & OTHERS**

### **Sytem-dependent**

Contact us for specific quotes and offers