



# BAGGI

communication and measurement



#### **About us**



Founded in 1947, BAGGI was born from the passion of its founder, Eugenio Baggi, for telecommunication, instrumentation and analysis.

In almost 50 years BAGGI team grew to find the best measurement solution for any production process in plants, industries, construction sites.

BAGGI is now a company leading innovative solutions in process measurement, analysis and control systems in most industrial fields, in Italy and abroad









#### **About us**

Our team provides many different kinds of services including:

- Consultancy
- Project and Design
- Production
- Installation and Start up
- Maintenance



With a particular focus on the most technologically challenging and innovative instruments and measurement solutions.





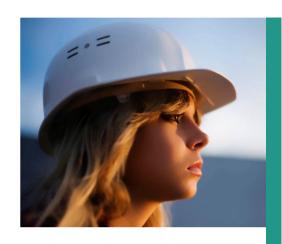


#### **Our service**

All solutions are available in standard configuration and also in customized design to meet specific requirement by the customer and by the process.

The final design could be customized to satisfy the specific requirements, saving costs during the on-site installation and maintenance.







The SensEvolution® division has been developed for providing industrial analysis in many application fields.

Its product lines are the result of combining the newest technologies with Baggi's over 60 years of industry experience.

According to the customers' requirements, new analysis methods may be added to the product line.

The evolution, of course, does not mean revolution, as the principles used are based on well-proven industrial practice.

Baggi has developed a specifc product line for different analyisis or measurement typologies:





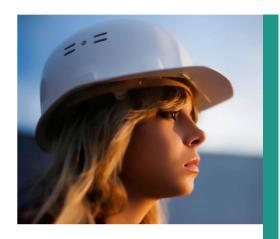












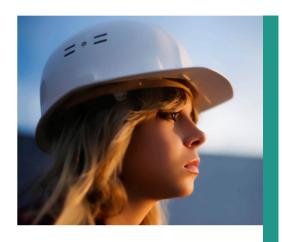






- Tank dewatering
- Desalters
- Two or three phase separators
- Dosing system plant





### SENS OLUTION Industrial measurement & analysis solutions

### **ONLINE VALIDATION SYSTEM** for process analyzer certification

**Measurement** and analysis

Practical, reliable and cost efficient solution for validation of measurement and analysis, in order to improve the process control reliability.



An integrated system of storage vessels, valves, actuators, and sample conditioners allows to feed into the analysers either the process fluid or the reference sample to a certified desired temperature and pressure











### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Overall Diesel System











### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Overall Gasoline System











### **ONLINE VALIDATION SYSTEM** for process analyzer certification

The package is composed of the following subsystems:

- Supporting skid
- Sample vessels
- Control instrumentation
- Cooling system
- PLC









### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### Supporting skid

Skid has been completely designed by BAGGI to be in compliance with the most strict quality test:

- Magnetic test for welding
- Painting for fire resistance
- Structural and weight calculation









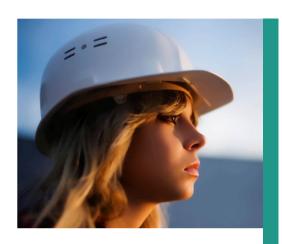


### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### **Sample Vessels**

The vessels for storing the certified validation fluid are manufactured by BAGGI<sup>®</sup>:

- AISI 316L made.
- Transmitters for level, temperature and pressure.
- Thermal insulation and cooling system to reduce the vapor pressure and chemical decomposition or degradation.
- Stirrer for sample mixing.
- U-Stamp certification.









### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### **Sample Vessels**















### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### **Control Instrumentation**

The system is provided with a series of instrumentation for process and control the sample:

- Cleaning circuitry and block&bleed (under the control of the PLC) for washing the lines and avoiding any crosscontamination between several validation and the process samples.
- Transmitter for level, temperature and pressure.
- Pneumatic valves (actuated by solenoid valves managed by PLC) for fluid control and distribution.
- Manual sample take-off.









### **ONLINE VALIDATION SYSTEM** for process analyzer certification

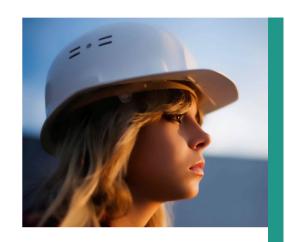
#### **Control Instrumentation**

















### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### **Cooling system**

A cooling system is provided to keep the sample inside the vessels at constant temperature (15°C) to reduce the vapor pressure and chemical decomposition or degradation.

The cooling system is composed by one or two chillers that use a refrigerant liquid to keep the sample under a fixed temperature.

It is provided with a pump that makes the refrigerant circulate into the vessel jackets.











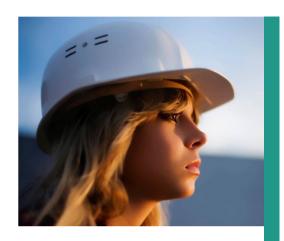
### **ONLINE VALIDATION SYSTEM** for process analyzer certification

#### **PLC**

The online validation system is controlled by a PLC that is the brain of the system.

- It provides an automatic control of the validation process controlling all the valves of the pneumatic system.
- Control of the sample cooling.
- Control of the block&bleed system.





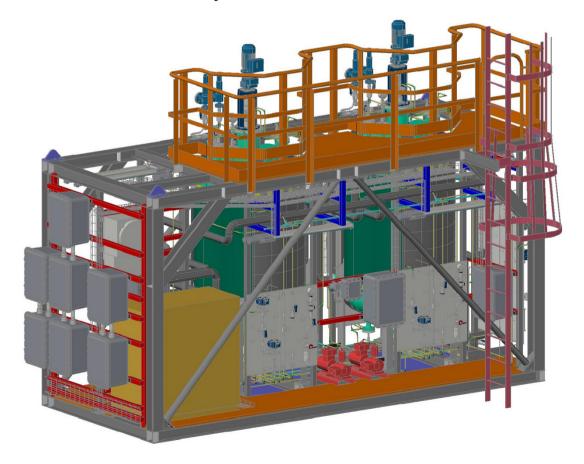


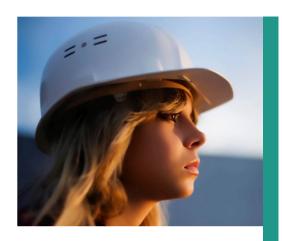




### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Validation system for Diesel 3D front view





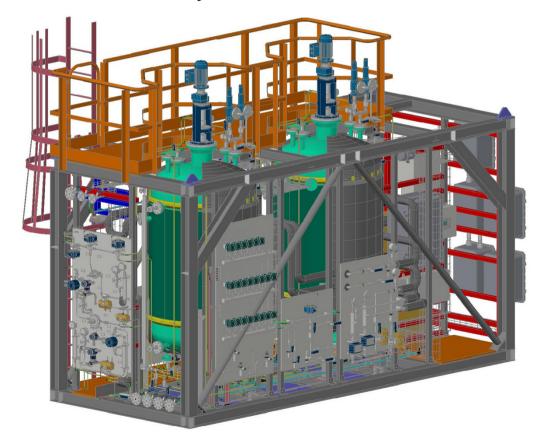


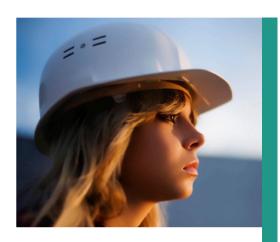




### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Validation system for Diesel 3D rear view





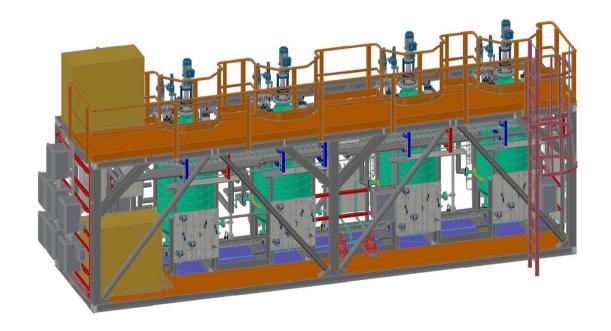






### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Validation system for Gasoline 3D front view





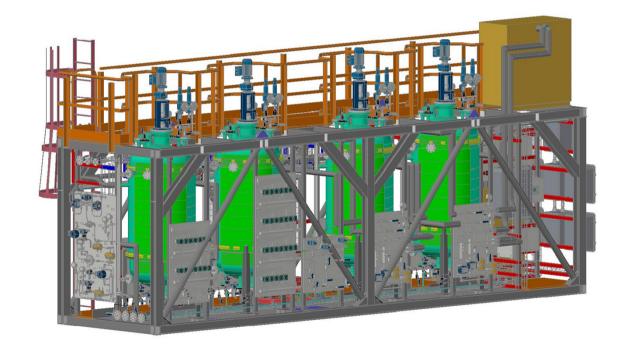






### **ONLINE VALIDATION SYSTEM** for process analyzer certification

Validation system for Gasoline 3D rear view





#### References



#### Some of our clients in oil field:



















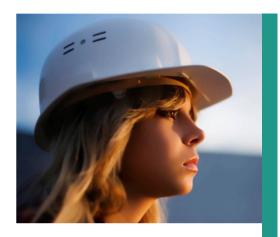














# Thank you for your attention

