



# Business Portfolio

<https://sairo.eu>





# Who are we?

SAIRO specializes in the design, manufacture, and installation of customized mechanical solutions for the biogas, biomethane, CO<sub>2</sub>, and water treatment sectors. The company produces stainless steel plants and components, process piping systems, heat exchangers, emergency flares, demisters, and biomass handling systems, managing every stage of the project: from technical analysis and design to manufacturing, installation, and after-sales support.

Biogas & biomethane plants

Process piping

Mechanical construction

District heating

Gas leak detection

Water treatment

Oxygen plants

30 +  
years of experience

18+  
Clients

2.9+ M  
Revenue in 2023/24/25



## Certifications and Technical Compliance

- ✓ Pressure equipment directive **(PED) 2014/68/UE**
- ✓ **ATEX** certification
- ✓ **Società Organismi di Attestazione (SOA)** certification (OS14-OS22-OS28)
- ✓ Welding procedures according to **EN ISO 9606**
- ✓ Design and construction of process piping according to **European and Italian Norms**
- ✓ Design of district heating networks in accordance with **EN 13941**
- ✓ Compliance with the ITA ministerial decree **(D.M.) 37/08**
- ✓ Compliance with environmental, social, and governance **(ESG) criteria**



## Projects:

# Agricultural Biogas/Biomethane Production Plant

Location: Italy

## SAIRO contributions

- Biomass feed lines
- Digester transport pipelines
- Plant for pre-treatment of biogas
- Upgraded biomethane distribution pipelines
- High-pressure pipelines to the national distribution grid
- CE PED certifications for the installed component lines
- Hot water circuit piping for thermal energy distribution
- Cold water circuit piping for process cooling and auxiliary services





## Projects:



### (VSPA) Oxygen Generation Plant

Location: Italy

#### About the project

A VPSA (Vacuum Pressure Swing Adsorption) system produces oxygen directly from ambient air by separating nitrogen through molecular sieves. The oxygen produced is used to support aerobic treatment processes of wastewater and digestate, where maintaining adequate levels of dissolved oxygen is essential to ensure the efficiency of biological processes. This project was done in collaboration with Avic International.

#### SAIRO contributions

- Steel tanks
- Process piping
- Mechanical assembly

#### Key Results

- Oxygen purity: >93%
- Production : 1.200 m<sup>3</sup>/h
- Vacuum tanks: 101,3 kPa







## Heat exchangers

SAIRO distributes heat exchangers for industrial, biogas, and biomass applications, ensuring efficient heat transfer even under harsh operating conditions. The range includes shell and tube biogas heat exchangers, pipe-in-pipe systems for biomass, and mobile exchangers for pasteurization, custom-engineered based on process requirements.



## Biogas and Biomethane Flares

SAIRO distributes high-efficiency biogas and biomethane flares, available in open or enclosed flame configurations. Designed to ensure safety, reliability, and regulatory compliance.



## Tanks

SAIRO designs, manufactures, and supplies industrial tanks for the storage of liquid or gaseous fluids..



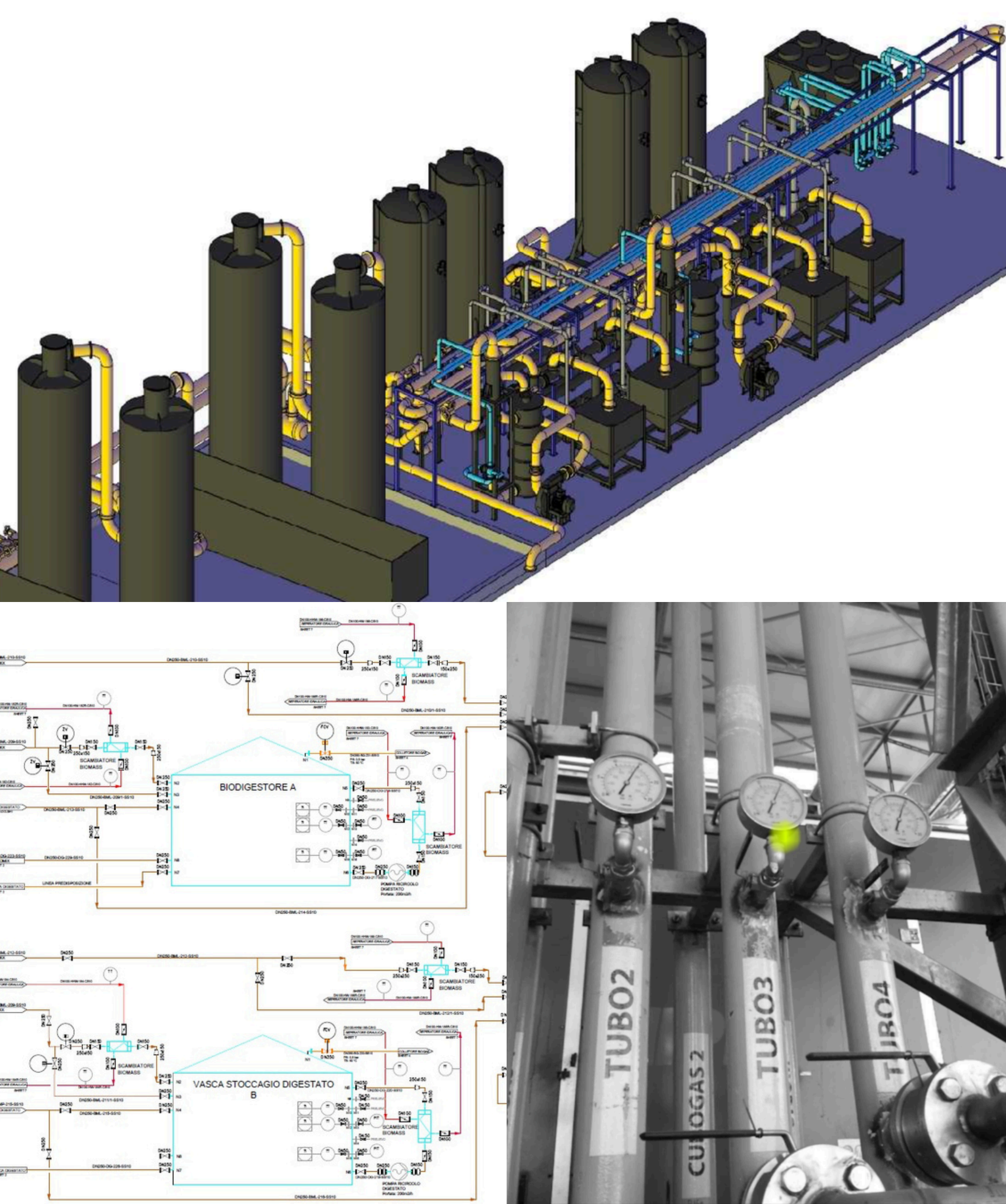
## Demister

SAIRO designs and manufactures high-efficiency gas-liquid separators, engineered to ensure effective phase separation with low pressure drops. Custom-built to client specifications, they are ideal for gas upgrading and industrial purification applications.



## Our services and engineering capabilities

- ✓ **Engineering**
  - Piping design in CAD 3D and P&ID software
  - Engineering tailored solutions
- ✓ **PED certification**
  - Consultation for PED certification
- ✓ **Gas leak detection**
  - Technical gas leak detection service for overhead industrial piping using an innovative system based on acoustic cameras.
- ✓ **Fire protection systems**
  - Design, supply and installation of complete fire protection systems
- ✓ **District Heating Network**
  - Design, supply and installation of district heating networks in accordance with EN 13941
- ✓ **Industrial maintenance**
  - Mechanical maintenance for industrial plants





# Contacts

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