

YOUR PARTNER IN **OIL&GAS**  
AND **POWER GENERATION**

Group  
Employees  
Worldwide

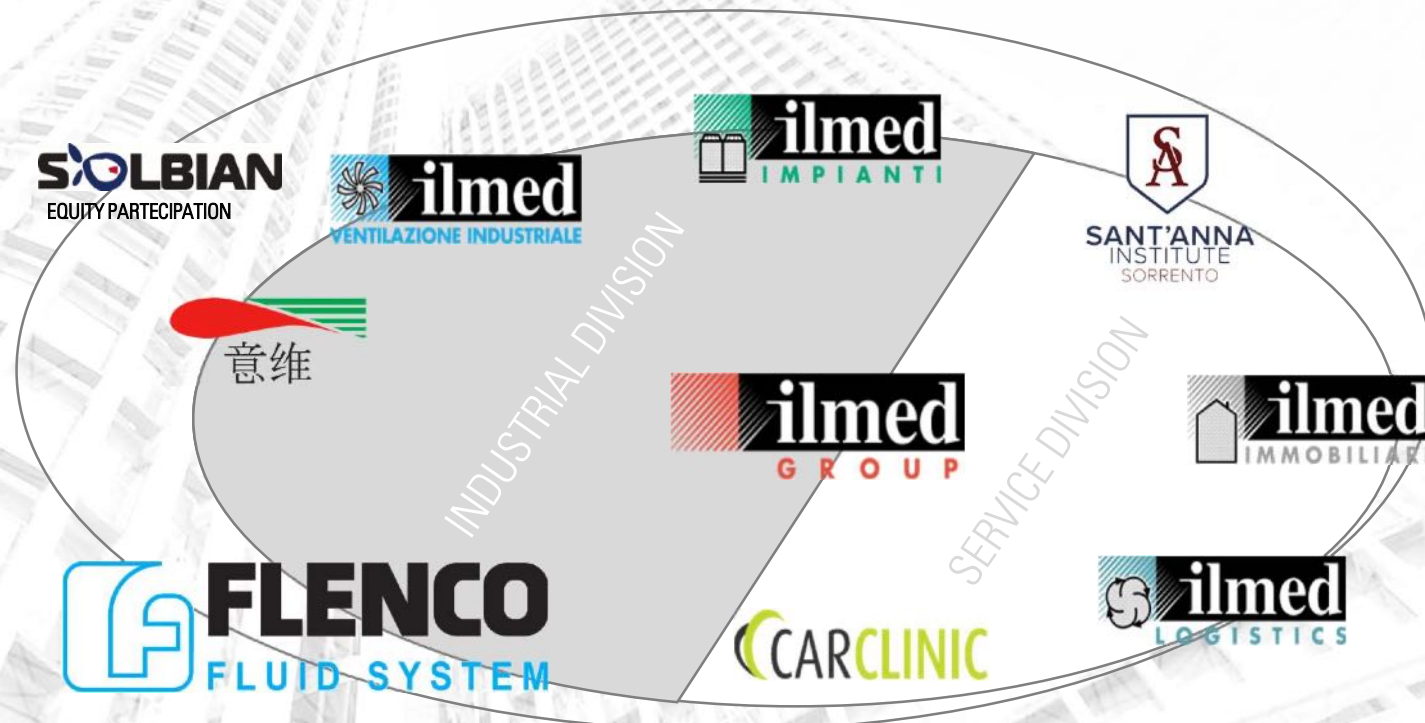
**1000+**

Group  
Turnover

**135M+**  
Euro

Group  
Sites

**250.000**  
sqm



Flenco  
Employees  
worldwide

**230+**

Flenco  
Turnover

**45M+**  
Euro

Flenco  
Sites

**40.000+**  
sqm

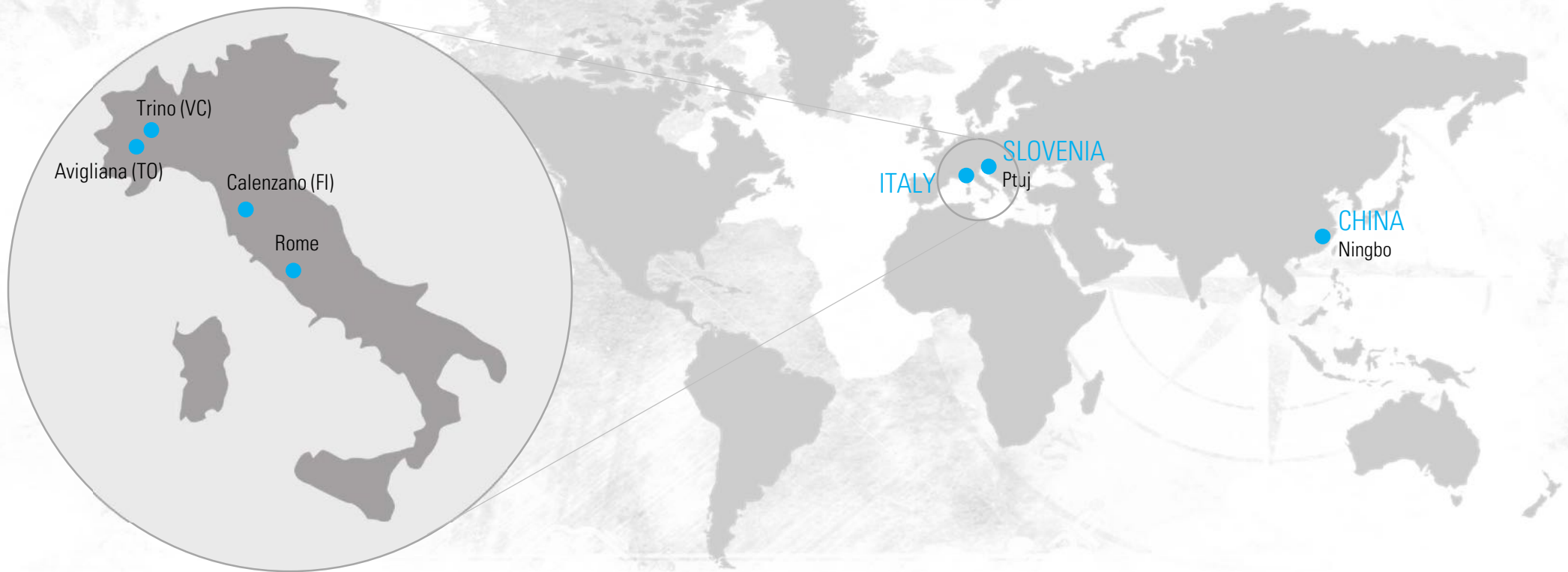


More than 5200 systems, experience and quality since 1988

Flenco Fluid System is a privately owned **Italian Company** which supplies a wide range of **Products & Services** to the **Energy, Oil & Gas, Power Generation** and **Petrochemical** markets worldwide.

The core business is represented by the **Engineering, Procurement, Production and Testing** of Auxiliary Systems for Gas and Steam Turbines, Compressors, Pumps, Generators and by the Process Packages for Balance of Plants (BOP).

- Headquarters in **Avigliana** (Turin), Italy
- Office in **Calenzano** (Florence) provides technical and commercial support
- Office in **Rome** primarily focuses on process engineering
- Premises in **Trino Vercellese**, Italy
- Premises in **Ptuj**, Slovenia
- Premises in **Ningbo**, China





Flenco's Industrial and Process Engineers are experts in several international standards and are involved in proprietary codes, specifications for major Clients in the Oil & Gas and Power Generation Business.

The Engineering team has over 50 people based in Italy. Industrial Engineering is carried out in Avigliana and Calenzano offices and Process Engineering is carried out in Rome.

## Flenco Process Engineering

- PFD – Process Flow Diagrams
- P&ID – Piping and Instrumentation Diagrams
- Heat & Material Balance
- Process Equipment Design
- Field instrumentation and Control Room design
- Datasheets

## Flenco Industrial Engineering

- Basic Engineering
- Mechanical Engineering
- Structural Analysis
- Mechanical Calculation
- Piping Stress Analysis
- 3D Modeling and Production Engineering
- Electrical, Instrumentation and Controls Engineering

## LUBE OIL SYSTEMS



Lube oil, seal oil, hydraulic oil, control oil systems for turbines, compressors, pumps, gears, generators designed according to API 614/ISO10438 or any other standard. They may include overhead tanks.

## INTEGRATED SYSTEMS

Integrated systems for lubrication, start up, gas and fuel treatment, including filtration, pumping, injection and controls.



## FULL PACKAGING



Assembly of the complete compressor train on the base frames, including mechanical (piping around & structures), electrical, instrumental and controls. Flenco offers a complete testing capability, while the modular design reduces field installation and transportation costs.

## COOLING WATER SYSTEMS

Cooling water systems or coolant skids, pump cooling water to the compressor cylinders, as the power input to the compressor is converted to heat in the compression process. Heat is removed by our cooling systems to prevent the gas and compressor parts from reaching excessively high temperatures.



## GAS SEAL PANELS



Gas seal panels, according to ISO 10438:2008 Part 4 and API 614 Fifth Edition Chapter 4, are designed to supply seal and buffer gas to the shaft seals. They include filters, controls, piping or tubing and the related instruments and cover a wide array of flows, pressures and material grades.

## HYDROGEN COOLING SYSTEMS

Gas cooling systems cool by filling the generator with hydrogen, maintain under pressure, check the gas purity and evacuate it. To prevent the formation of explosive gas mixtures, the air in the generator is expelled with CO<sub>2</sub> prior to being filled with hydrogen.



## WATER WASHING SYSTEMS



Turbine water wash systems can operate in both online (during turbine run) and offline (during turbine stop) mode. They deliver specified water and detergent flow to the nozzles, thus maintaining efficiency. They can be used onshore and offshore. Our standard systems are designed to be compact and mobile.

## WATER INJECTION SYSTEMS

For non-Dry Low Emissions (DLE) turbines without a NOx abatement system, a water injection system can be added to lower NOx emissions. This system injects demineralized water into the combustor through the fuel nozzles to regulate the combustor flame temperature and lower NOx emissions.



## AIR SYSTEMS



Flenco provides a wide range of air systems to produce and distribute compressed air to different utilities, control air for instrument and valves all-over the plant.

## ACCUMULATOR SKIDS

Accumulator skids are designed to prevent low system pressure trips during transient events and to provide additional temporary flow when required.



## GAS DRYERS



A hydrogen gas dryer is a system to dry and/or remove water from hydrogen gas for use in hydrogen-cooled generators, preventing deterioration of the hydrogen's cooling properties. Depending on customers' needs, we are able to provide both desiccant dryers and refrigerated dryers.

## STATOR WINDING COOLING SYSTEMS

Cooling system is designed to provide water free from oxygen to avoid corrosion in the system. The circuit is sealed from the atmosphere and under constant hydrogen overpressure. Water is circulated in a closed-circuit system through hollow conductors in the stator winding bars.





## GAS CONDITIONING SKIDS



Gas conditioning skids treat natural gas and other combustible gases before injection into a critical process. It performs two functions: removing both moisture and any solid contaminants from the gas and regulating the gas temperature to the injection requirements.

## CHEMICAL INJECTION & DOSING SYSTEMS

Chemical injection packages and dosing packages are specifically designed for dosing and injecting chemicals additives into a system at a required pressure, continuously or at intervals. Our dosing systems cover a wide range of possible applications in different areas of engineering.



## CONTAINERIZED TURN-KEY SOLUTIONS



Plug and play packages can be fitted into the ISO containers; the modular design allows for smart solutions, reduces transportation costs and facilitate use in remote areas. This design significantly simplifies field assembly since only minimal piping and electrical connections are required once the containers are at the work site.

## PIG LAUNCHERS AND RECEIVERS

Pig launchers and receivers perform maintenance operations (mainly cleaning and inspection) of the pipeline without stopping the flow of the product inside. Pigs or scrapers are pushed from the pig launcher along the pipe until it reaches the receiving trap. During this process, they remove deposits or separate fluids.



## SKID MOUNTED PUMPING SYSTEMS



Skid mounted pumping systems are designed to deliver the fluids into the storage tank or mobile tanker, or pump it from a tank to a burner or into a flowline. The fluid characteristics and the specific application for the pump determine which pump technology is most suitable.

## HOT WATER PACKAGES

The hot water package is designed and manufactured to heat the water contained in boilers through an electric heater. Water is then transferred to the utilities for different purposes. The package can be designed according to different international standards. In its application as hot water generator system, uses steam or boiler water as an energy source and can provide high recovery rates.



## FILTERING SKIDS



The skids treat natural gas and other combustible fluids before injection into a critical process, by removing any solid contaminants from the fluid.

## GAS METERING - REGULATING SKIDS



Gas metering and pressure regulating skids are designed to measure gas or liquid flowrate. The metering skids can be used to provide additional treatments including pressure-reduction and flow control.

## PERFORMANCE HEATER SKIDS



Heating skids are designed to heat oil, fuels or gases. The heating process is performed by steam, hot water or electricity.

## GAS SEPARATION PACKAGES



Gas separation package, with its vane pack or cyclone separators at high efficiency, making them suitable for installation upstream of the gas turbine or turbo-compressor.



## SERVICES

Flenco provides field installation assistance, commissioning, testing, calibration, training, technical advisory, troubleshooting and repair services. Our engineers team is on call 24/7.



## SPARE PARTS

Flenco provides technical definition and sourcing of: capital parts, commissioning spare parts (supplied with main system), repairable and consumable parts.

## REVAMPING AND RETROFIT

Upgrading of existing systems to improve performance, to save maintenance costs, to comply with new regulations and to keep the environmental impacts as low as possible.





## Headquarters



- Business & Administrative Head Offices
- Sales & Aftersales Department
- Engineering Department
- Purchasing & Logistics Department



## Premises



- Total area: 21.800 sqm
- Total covered area: 8.500 sqm
- Assembly / Test area: 2.800 sqm
- Pre-assembly area: 1.100 sqm
- Production / Welding area: 2600 sqm
- Painting / Sandblasting area: 400 sqm
- Warehouse: 1.200 sqm
- Offices: 400 sqm
- NDT area
- Cranes:
  - Assembly: 2x10 tons
  - Heavy Steel fabrication: 2x10 tons
  - Steel fabrication: 2x5 tons
  - Painting: 2x10 tons
  - Pipe Welding: 6x1,5 tons



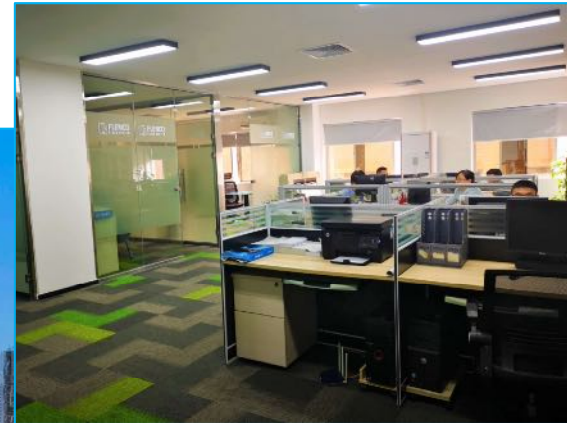
## Premises



- Total area: 22.000 sqm
- Total covered area: 8.800 sqm
- Offices (two floors): 2.300 sqm
- Loading / Unloading area: 200 sqm
- Assembly / Test area: 700 sqm
- Pre-assembly area: 1.000 sqm
- Production / Welding area: 2.000 sqm
- Painting / Sandblasting area: 270 sqm
- Warehouse: 850 sqm
- Machining area: 400 sqm
- NDT area
- Cranes:
  - Assembly: 2x25 tons + 1x15
  - Steel fabrication: 2x10 tons
  - Light Steel fabrication: 2x5 tons
  - Stainless Steel fabrication: 1x10 tons
  - Pre-assembly: 2x20 tons
  - Storehouse: 2x5 tons



## Premises



Flenco in Ningbo supports the Asian Pacific Region for procurement, project management, production and testing of fluid systems and skids.

- Total area: 3120 sqm
- Production / Welding area: 2300 sqm [18 m width, 10 m high]
- Warehouse: 400 sqm
- Production Offices: 300 sqm
- Offices: 120 sqm

# Main Customers





## Flenco Fluid System S.r.l.

### Avigliana Headquarters

Corso Torino, 4M - 10051 Avigliana (TO) - Italy  
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### Trino Workshop

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### Calenzano Office

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Tel. +39 055 3195 26



### Rome Office

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Tel. +39 011 93 39 611



## Flenco d.o.o.

### Ptuj Workshop

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## Flenco Ningbo Power Auxiliary Equipment & Systems Co.,LTD

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