



safe

Gas designed for you



safe s.r.l.
CNG Technology

One Brand for Multiple Business

Since 1975 SAFE has been actively engaged in various areas of natural gas treatment and compression thanks to internal specialized sectors.

Today SAFE designs, manufactures and assembles CNG, Oil & Gas and Biogas stations.

SAFE has a manufacturing and supply capability of more than 500 compressors per year.

SAFE is a quality certified company in accordance with the EN ISO 9001:2008.

SAFE's GROUP AT GLANCE:

- Complete turnkey station thanks to a complete product range
- More than 3.000 compressors supplied all around the world
- Over 80% installations outside Italy - Worldwide
- Worldwide service 24/24 h





Products - compressors

SAFE has unique capabilities of manufacturing tailor made compressors based on specific customer needs. SAFE manufactures a wide range of compressors, with power rating from 15 kW up to 1000 kW and flow rate from 80 to 14000 Sm³/h in configurations of both mechanical reciprocating compressors and hydraulic compressors which can be driven by either electrical motor or a gas engine.

Main Features:

- Turn key solutions
- Tailor made design
- Low operational cost
- Oil free configuration
- Metallic enclosures
- Designed for a wide range of suction pressures
- Delivery pressures up to 300 bar
- Perfectly balanced (no vibrations)
- Low noise level
- Low oil consumption
- Easy maintenance operations
- Remote monitoring and diagnostic
- Availability of training courses at company premises
- Service providers located worldwide



Partner
GE Oil & Gas - HSR



Compressors



«ST» SERIES

Medium/small size compressors suitable for operation with high suction pressures.

Available with booster configuration for daughter station with high capacity request.

Suction pressure: 8 - 70 bar g
Discharge pressure: 300 bar g
Flow rate: 130 - 1480 Sm³/h
Power: 22 - 90 kW

Suction pressure with booster configuration: 250 ÷ 10 bar g



«S» SERIES

Medium/small size compressors suitable for operation with low suction pressures.

Suction pressure: 0 - 8 bar g
Discharge pressure: 300 bar g
Flow rate: 80 - 530 Sm³/h
Power: 22 - 90 kW

Series



«SW» SERIES

Medium/large size compressors suitable for a high inlet pressure range.

These compressors are suitable for applications with high flow rates.

Suction pressure: 0 - 70 bar g
Discharge pressure: 300 bar g
Flow rate: 400 - 7300 Sm³/h
Power: 90 - 400 kW



«B» SERIES

High reliability hydraulic compressor particularly suitable for trailer (cylinder truck) unloading at daughter stations.

Suction pressure: 20 - 250 bar g
Discharge pressure: 300 bar g
Flow rate: 100 - 3200 Sm³/h
Power: 15 - 75 kW



Products - Dispensers

SAFE dispensers are the most advanced and reliable dispensers in the world.

As all Safe products, they are designed and built to operate continuously at peak capacity, while maintaining the highest levels of safety, reliability and accuracy.

SAFE's dispenser product range covers all types of vehicles' refueling

- Public station
- Mother station for trailers' refuellings
- Daughter station for cars' and buses' refuellings
- Private fleets or dedicated vehicles such as forklifts and similar

Main Features:

- Single, double and quad hose configuration
- Mass meter precision $\pm 0,5\%$
- Single, double and triple line versions
- Break away valves
- High flow versions up to 100kg/min
- Optional temperature compensation
- Optional interface for remote sales data collection
- Multiproduct technology available



Dispensers



«ESP» SERIES

Easy to install, the standard for all vehicles' refuelling.
Designed for harsh environments like very low temperature.

Single or double hose configuration with mass meter and electronic head to measure and display the dispensed gas.

Painted or stainless steel version.



«ESP44» SERIES

Refuel up to four vehicles simultaneously.

Stainless steel version.

Series



«ESV» SERIES

Ideal for sequential refueling or for private fleets where metering is not necessary.



FOR MOBILE STATION

Ideal for mobile refueling stations where there is a need to refuel two vehicles simultaneously and requires metered dispensing.



Other Products

SAFE designs and manufactures all accessories used in combination with its compressors, like dryers, metering systems, pressure reducing systems, storages systems, systems with chillers, gas treatment and filtering systems, priority panels, etc...

DRYER:

Twin column self-regenerating dryers or single column absorption type dryers are used as standards. In twin columns systems hot gas is used to dry the wet column adsorption bed while the other column remains in operation. Switching between the two columns may be manual or automatic. Dryers may also be equipped with gas analysis systems for a continuous monitoring of gas moisture content that may be used for automatic operation management.

METERING CABINET:

Metering and pressure reducing cabinets are custom designed and made to the customer specifications.

STORAGE:

SAFE storage cascading system is divided into three banks: high, medium, and low. Any number of cascades system can be manifolded together to increase storage capacity. Storages are usually supplied complete with priority and safety panel and may be enclosed in complete self supporting modular metal structures.





CNG STATIONS

PIPELINE STATIONS:

- High capacity stations - time-fill and fast-fill solutions
- Gas drying and treatment
- Extra chilling to increase filling capacity

DAUGHTERS STATIONS:

- Wide range of booster equipment with flow exceeding 3,200 m³/h
- Trailer emptying down to 10 bar
- Maximum performance and minimum energy consumption
- Storage systems for optimized operation of daughters stations

INDUSTRIAL:

- Pressure reducing and metering cabinets 500 to 20,000 m³/h
- Utilization pressure until 10 bar
- Fully automated and integrated systems plug and play
- Remote monitoring and control systems of facilities and equipment.





MOBILE STATIONS

Fully integrated mobile solutions for special applications:

CNG:

- Compression units for waste gas recovery
- Applications on Biogas plants
- Compact and investment efficient for temporary solution

NGV:

- Compression unit mounted on trailer for logistic flexibility
- Totally independent from external power sources
- Refueling of NGVs and Buses from CNG Trailers

DISTRIBUTION:

- Mobile compression systems for pipeline sections emptying during maintenance operations
- Mobile facilities for uninterrupted gas supply guarantee filling of ground storages for backup power generators, or other facilities.





OIL & GAS

Solutions for Oil & Gas industry:

UPSTREAM:

- High-speed compressors and high flow for wellhead operations (extraction and reinjection)
- Turbo expanders.
- Gas processing facilities (drying, CO2 membrane separation hydrocarbons)
- Compressors SAFE and GEMINI.

MIDSTREAM:

- Compressors for strategic storage system
- Compressors for transport systems (pipelines)

DISTRIBUTION:

- Compressors for petrochemical process
- Compressors for supplying fuel gas turbines





BIOGAS

Solutions for the production of biomethane:

PRODUCTION:

- Biodigesters to produce biogas from waste plant
- Generators for connection to mains
- Use forest residues
- Carbon Bonds
- Generators

BIOMETHAN UPGRADING:

- Equipment blowers
- Facilities for H₂S removal
- Screw Compressors
- Equipment for drying the biogas
- Membranes for separation of CO₂, with maximum reuse.
- Biomethane with 98% methane

UTILIZATION:

- Facilities for distribution as CNG compression
- Facilities compression for injection into pipeline
- Liquefaction





ENGINEERING AND SERVICES

SAFE offers engineering and maintenance services.

ENGINEERING:

- Technical and economic feasibility studies
- Development of key projects in line with the operational customer needs
- Development of building projects
- Obtaining permits and legalization in collaboration with local companies
- Development of custom applications
- Reengineering of existing plants and operation optimization
- Development of monitoring and control facilities for process automation
- Development of applications for gas balancing mother and daughter stations

MAINTENANCE:

- Global Service Network
- Preventive services through ongoing monitoring and parameter analysis
- Maintenance with qualified personnel
- Onsite training and update of service personnel





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