



TECNOCRYO



MULTIPLE GAS LINES

PNEUMATIC CAGE

AUTOMATIC FILLING MODULE

MODULAR STRUCTURES

FILLING STATION

PRODUCT DESCRIPTION

The cylinders filling stations are high pressure plant for filling cylinders and cylinder bundles through pumping and vaporizing the cryogenic liquid stored in the cryotanks. These stations supply gases or mixtures with different accuracy for industrial, food, medical or laboratory fields.

The cryotanks and the pumping and vaporizing packages represent the outdoor facilities and their management can be manual or fully automatic by a General Control System. Static Filling System and Cold Filling System are additional designed tools which provide a high performant filling process. The indoor filling modules complete the station facility, allowing the gases to be filled in the cylinders.

Monogas or Mixture gas panels are the core of the filling for a manual or automatic service and are precisely customized for every need. The TouchScreen interface allows the user to have a full control of the system by a user-friendly communication.

MAIN FEATURES

Performance data

Gases	Nitrogen, Oxygen, Argon, Carbon dioxide and other flammable and not flammable for mixtures.
Filling pressure	Cylinders 200 bar and 300 bar
Filling temperature	+10°C / +100°C
Cold Filling System	-40°C / 0°C
Flow range	up to 1000 Nmc/h
Filling capacity	Small: 500 cylinders/day Medium: 1500 cylinders/day Huge: >1500 cylinders/day

Configuration

- Modular system.
- Compatible to any gas mixture, previously analyzed by Tecnocryo's engineering department.
- Manually operated or fully automatic system by PCL and TouchScreen interface.
- Easy and safe service.
- Instant customer service by net communication direct to PLC.

Certification and testing

- Installation and piping system pneumatically tested on site.
- Cleaned and degreased for oxygen compatibility to EN12300.
- Assessment to E.U. directives:
 - 2014/68/EU PED
 - 2006/42/CE Machine
 - 2014/34/EU ATEX
- Design and manufacturing to EIGA and ASTM recommendations.



TECNOCRYO DESIGN

Features

Tanks and pump packages are located outdoor in the best configuration to allow easy and safe refilling from roadtanker. The pump and vaporizing units are well-designed for the specific station.

Modular structures allow the design of the best arrangement inside the workshop as much as filling cylinders and bundles for the best working flow and safe conditions for the operators.

Monogas and Mixture panels are specifically designed to meet the customer's needs and can include inert, dangerous or flammable gases for special mixtures.

The stations can fill cylinders either 200 bar or 300 bar by setting up the filling pressure in the control system. The terminal connections in the cylinders are designed accordingly to the Standards of every specific Country.

Supervision of the station by a TouchScreen.

The station can be set up and monitored in real time. Data can be stored in electronic archives and subsequently easily handled. A remote maintenance via net communication supports the user in any situation.

The control system is designed for "time-saving" service, allowing operations of venting and conditioning of cylinders whilst continuing to fill other cylinders on selection post procedure.

Options and accessories

The manual or semi-automatic system allows the user to manually set up the station during the filling, visually controlling the mixtures through the indication of pressure and temperature instruments.

The automatic system controls the station in every part leaving to the user only the desired set up. From pump to cylinders passing through the mixture composition, the automatic system takes autonomously care of the management by pressure and temperature information further the filling selection of the users.

Static Filling System is a specifically designed tool which allows a more accurate mixture by regulating the pressure in the end of the filling. This system has also a secondary effect to not stop the pump during the short time when no cylinders are being filled, thus increasing the lifetime of the pumps.

Cold Filling System is a designed tool which reduces and controls the temperature of the filling gas to compensate the cylinders warming during the compression. This feature provides an accurate maximum filling pressure.

TECNOCRYO QUALITY SYSTEM

TECNOCRYO relies on a High Quality System which completely merges with the Engineering and Manufacturing facilities, pursuing a strategy of continuous improvement within a moving market of high technology. Attention has been posed to the Standards and the relevant product certifications, specially for the European Directives.

**COLD FILLING
SYSTEM**



**SFS
STATIC
FILLING
SYSTEM**



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