TM NORWAY AS

Automatic High-Pressure Gas Cylinder Filling Carousel

Year 2019 | Project / Serial PRJ-2018-02-13-0001



Professional automated cylinder handling, preparation, filling and control system for high-pressure gases.

Machine identification

Specification	Details
Manufacturer	TM Norway AS, Norway
Description	Automatic gas filling carousel
Year	2019
Project / Serial No.	PRJ-2018-02-13-0001
Compliance	CE marked; nameplate refers to EU Machinery Directive 2006/42/EC, Annex II 1.A
System concept	Fully automatic high-pressure gas cylinder filling carousel

Main capabilities

- Automated cylinder positioning and handling through a carousel process.
- Automatic valve orientation, adapter positioning and filling connection depending on installed configuration.
- Residual-pressure measurement and controlled blow-down functions.
- Vacuum preparation of cylinders before filling where required by the selected recipe/process.
- Automatic filling of single gases and gas mixtures.
- Automatic final-pressure measurement, valve closing, leak checking and disconnection.
- Industrial PLC/HMI control with production and process information.
- Safety enclosure with guarded access, interlocks and emergency-stop equipment.

Cylinder and pressure range

Specification	Details
Cylinder volume	TM Norway platform specification: approximately 5-50 litres
Filling pressure	Platform designed for 200 bar and 300 bar applications

Process stations	8-station automatic carousel concept
Valve standards	May support DS, BS, DIN, AFNOR, CGA and VIPR/integrated valve types depending on installed adapters
Gas mode	Single gases and mixed gases

Possible gas applications

Depending on the installed gas supply, adapters, software, cleaning standard and certification, the system can be configured for professional cylinder filling applications such as:

- Oxygen (O2)
- Nitrogen (N2)
- Argon (Ar)
- Carbon dioxide (CO2)
- Helium (He)
- Welding and shielding gases
- Industrial and technical gases
- Gas mixtures / blended gases
- Specialty-gas applications
- Medical-gas applications where the complete configuration and certification are suitable

Important: The exact suitability of this specific machine for each gas, pressure, purity class, cylinder type and regulated application must be technically verified before recommissioning.

Machine overview



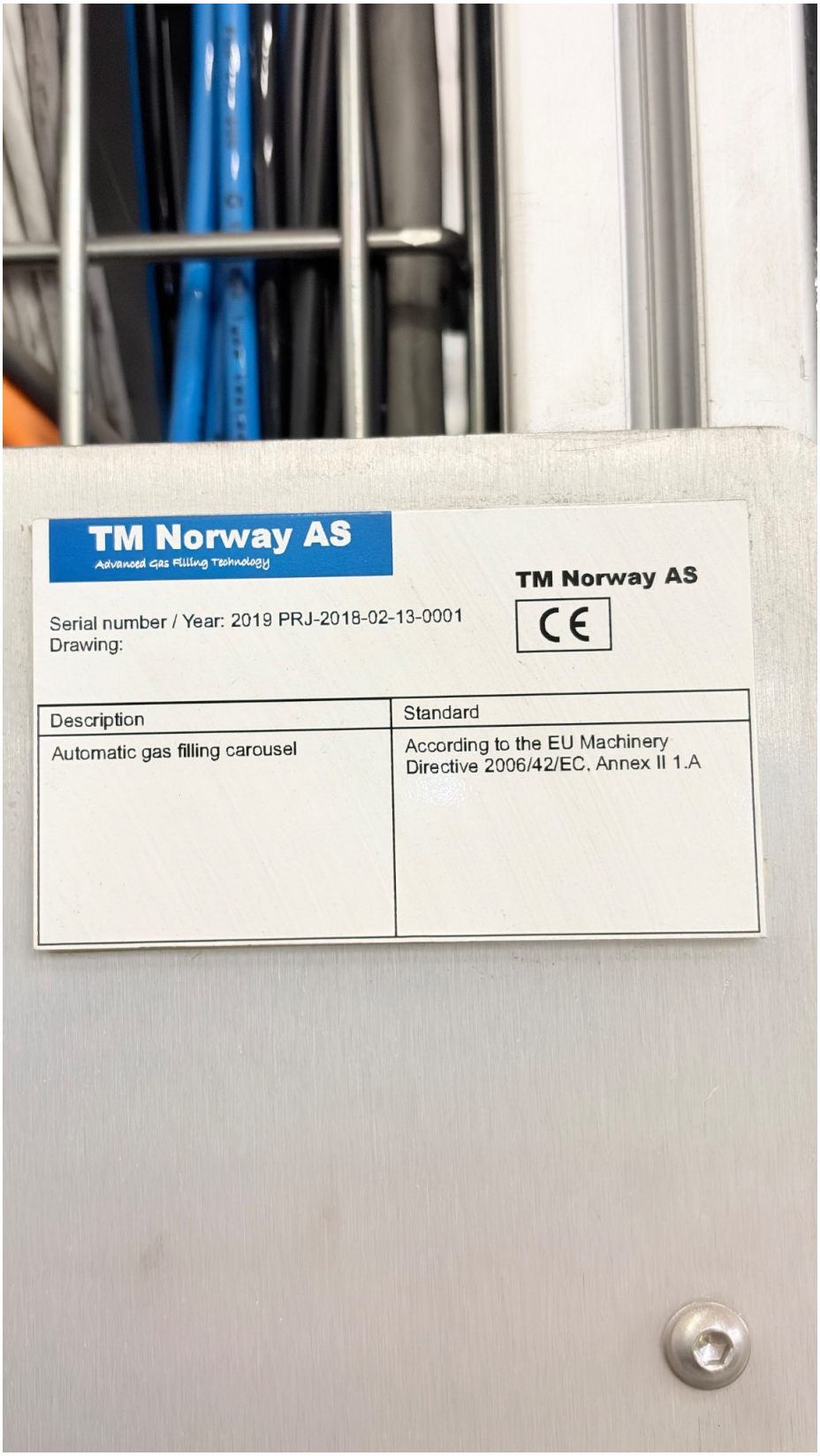
Automatic cylinder handling / carousel section



Main control area with Rexroth control equipment and industrial HMI



Siemens SIMATIC mobile operating panel



TM Norway AS machine nameplate

Automatic process - typical 8-station concept

Specification	Details
1. Cylinder receiving	Cylinder enters the automated filling carousel and is positioned for the process.
2. Valve positioning / connection	Valve outlet can be aligned and the appropriate filling adapter connected.
3. Residual pressure / blow-down	Residual pressure can be measured and the cylinder depressurised according to process requirements.
4. Vacuum preparation	Vacuum cycle can prepare the cylinder prior to filling when required.
5. Filling station 1	Main gas or single-gas filling.
6. Filling station 2	Additional gas, mixture component or recipe-dependent filling.
7. Final control	Final pressure check, valve closing, leak test and adapter disconnection.
8. Cylinder output	Finished cylinder leaves the carousel for downstream handling or storage.

Visible automation and safety equipment

- Rexroth industrial control system / modules visible in the electrical cabinet.
- Siemens SIMATIC mobile operator panel.
- Industrial HMI for machine operation, recipes, status and diagnostics.
- Pneumatic actuators, sensors, cylinder-handling axes and cable-chain systems.
- TROAX machine guarding with access doors and interlocking hardware.
- Emergency-stop devices and industrial electrical cabinets.

Potential buyer groups

- Industrial gas manufacturers and distributors
- Cylinder filling plants and regional filling centres
- Oxygen, nitrogen, argon, CO2 and helium suppliers
- Welding and shielding gas producers
- Medical gas companies subject to applicable configuration and certification
- Specialty-gas and gas-mixture producers

- Gas plant integrators and automation companies
- Companies upgrading from manual filling manifolds to automated cylinder filling

Information for recommissioning

Before installation at a new site, a professional buyer should verify the following items:

- Exact gas configuration and gas-contact materials
- Available cylinder sizes and valve adapters
- Maximum operating and filling pressure of the installed gas train
- PLC/HMI software, backups, recipes and access rights
- Electrical supply, pneumatic requirements and external gas supply connections
- Complete scope of supply, including all auxiliary equipment
- CE / conformity documentation, manuals, electrical and pneumatic drawings
- Dismantling, transport, installation and recommissioning requirements

Condition and inspection

Used industrial machine, manufactured in 2019. The installation can be inspected by appointment. The control system has been powered during inspection. Because this is a complex automated filling installation, final operational status, software configuration, adapters and complete scope of supply should be verified with the buyer before sale and recommissioning.

Why this system is commercially interesting

- Automation of several operations that are traditionally performed manually in cylinder filling.
- Flexible platform for different cylinders, valve standards and filling recipes.
- High-pressure 200/300 bar system concept.
- Capability for both single gases and gas mixtures.
- Automatic pressure measurement, vacuum, blow-down, filling and leak-control functions.
- Potential to reduce manual handling and improve repeatability and traceability.
- 2019 manufacture date makes it relatively modern compared with many used gas-filling installations on the market.

Search terms / international keywords

TM Norway gas filling carousel, automatic gas filling carousel, gas cylinder filling machine, automatic cylinder filling system, high pressure gas filling system, 200 bar gas filling, 300 bar gas filling, industrial gas filling machine, industrial gas filling plant, gas bottling plant, cylinder filling station, compressed gas filling equipment, oxygen cylinder filling machine, O2 filling plant, nitrogen cylinder filling machine, N2 filling plant, argon cylinder filling machine, CO2 cylinder filling machine, helium cylinder filling machine, welding gas filling machine, shielding gas filling plant, mixed gas filling system, gas mixture filling machine, specialty gas filling system, medical gas filling system, automatic cylinder

handling, cylinder filling automation, gas cylinder robot, automatic valve handling, cylinder valve connection system, VIPR filling system, DIN gas cylinder filling, CGA gas cylinder filling, AFNOR gas cylinder filling, BS gas cylinder filling, automatic cylinder blowdown, cylinder vacuum system, automatic leak test, gas cylinder pressure control, PLC gas filling system, HMI gas filling machine, used gas filling machine, used gas filling carousel, gas filling equipment for sale, cylinder filling plant for sale, automated industrial gas equipment, TM Norway filling system, TM Norway 2019, PRJ-2018-02-13-0001

Comparable-market search terms

Kosan Crisplant gas filling, Siraga filling carousel, Pamasol gas filling, Rotarex gas filling system, Linde gas filling equipment, AGA gas filling system, Messer gas filling plant, Air Liquide gas filling equipment, Air Products gas filling equipment, automatic cylinder filling carousel, high-pressure gas bottling equipment.

AVAILABLE FOR SALE - PRICE ON REQUEST

Worldwide inquiries welcome. Additional photos, videos and technical information available for serious buyers.