Filling station for CO_2 cylinders from cryogenic tank

A RELIABLE AND MODULAR SYSTEM
FOR FILLING CYLINDERS AND FIRE EXTINGUISHERS
WITH CO2 FROM CRYOGENIC TANK

Description

With FCD series stations, it is possible to perform filling of cylinders and fire extinguishers with liquid CO2 from cryogenic tank. The filling process can be carried out with manual or automatic control, depending on the type of station installed.
The use of a wide range of accessories makes it possible to rationalize filling operations in the best possible way, being able to adapt the stations to different needs and thus satisfy both small and large users.
FCD series stations allow a single operator to perform cylinder filling on one or two scales and, if necessary, package filling on another suitable scale.
Depending on the model installed, by setting the amount of product to be decanted, filling will automatically cease when the weight is reached.

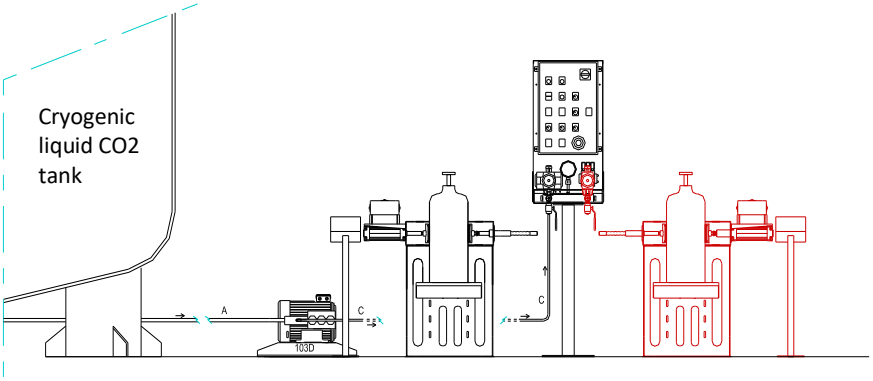
Components and devices

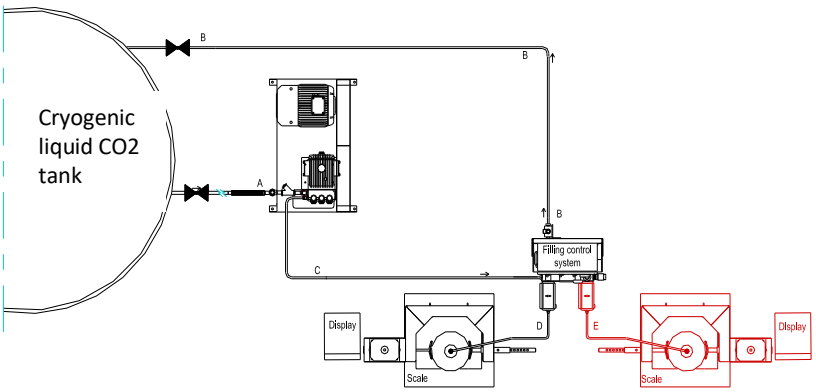
1. Piston pump, 103 series
2. Filling station, model FCD22 (manual control) or FCD222 (automatic control)
3. Electrical control panel, QE series, for management pump and filling station
4. Filling control scales, BE series with digital display
5. Pneumatic clamps, AIR4/BIL series, designed in specifically, to be installed on the scale and lock cylinders during filling
6. Installation platform, SSWS series, to avoid civil works

DAMOTEK
equipment for extinguishers & cylinders

CO_2 cylinders filling station from cryogenic tank

Front view of a complete installed station





Complete layout

CO2 filling pump 103/D

Recommended configuration

> Pump model 103DT: two different flow rates available for adjust filling to the capacity of the cylinder or fire extinguisher
> Automatic FCD222 station: allows filling to be managed on two scales with automatic stop when weight is reached
> No. 2 AIR4/BIL pneumatic clamps for installation on BE150 scales
> No. 2 installation platforms in walkable grating

PER MAGGIORI INFORMAZIONI:
FOR FURTHER INFORMATION CONTACT:
POUR INFORMATIONS CONTACTER:

DAMOTEK S.r.l.
Via Avv. Giovanni Agnelli, 10 12033 MORETTA (CN) ITALY
Tel: +39 0172 911235
Fax: +39 0172 911322

www.damotek.com
info@damotek.com

ISO 9001

Automated filling station for liquid CO_2

FCD222 series

Automatically controlled filling system assuring user-friendly and cost-effective operations

The FCD222 unit allows to fill CO_2 cylinders and fire-extinguishers by transferring liquid CO_2 from a cryogenic tank.
The pneumatically activated shut-off valves are controlled automatically on the basis of the information provided by the electronic scales.
Optionally, the CO_2 bundles can also be filled (using an appropriate control scale available on request).
An optional outlet for gaseous CO_2 can be provided in order to send CO_2 to the filling station for mixtures (Ar/ CO_2 etc.)
The CO_2 filling stations equipped with the FCD222 allow a single operator to fill cylinders, setting the quantity of the product to be introduced.
The filling process stops automatically when the required weight has been reached.
FCD222 must be connected to a transfer pump with single or double flow rate, see our model 103/D and 103/DT.

TECHNICAL SPECIFICATIONS

MODEL	FCD222B	FCD222A
CATALOGUE CODE	MCSE030	MCSE030-1
CYLINDERS / EXTINGUISHERS FILLING OUTLETS	2	1
MAXIMUM WORKING PRESSURE (bar)	100	100
VOLTAGE / FREQUENCY (VAC/Hz)	400/50	400/50
POWER (kW)	1,5	1,5

DAMOTEK
equipment for extinguishers & cylinders

Automated filling station for liquid CO_2

COMPONENTS AND DEVICES:

> Manifold in brass alloy
> Safety valves on the inlet and back to tank lines
> Pressure gauge for checking the filling pressure
> Pressure switch for max service pressure stop
> Pneumatically activated shut-off valves
> Control solenoid valves
> Electrical panel with low tension control lights and push buttons

STANDARD FITTINGS:

> Painted steel support predisposed to be fixed on the floor
> PTFE filling hoses, AISI 304 stainless steel braided, 1400 mm – length
> Stainless steel cylinder filling connections with handgrip
> Operating and maintenance manual

ACCESSORIES AVAILABLE ON REQUEST:

> Automatically controlled filling outlet for bundles
> Control scales for single cylinders or bundles filling, BE series.
> Arrangement of the electrical panel to be interfaced with the electrical heater model RE for preparing mixtures in the gas filling station
> Pt100 for checking the temperature for controlling pump cooling
> Electrical panel with built-in a pump power supply for single or dual flow or with a flow-rate variator series QE
> Steel structure for floor installation (avoiding civil works) to install the control scales at floor level, SSW-1 or SSW-2 series.

> PER MAGGIORI INFORMAZIONI:
FOR FURTHER INFORMATION CONTACT:
POUR INFORMATIONS CONTACTER:

DAMOTEK S.r.l.
Via Avv. Giovanni Agnelli, 10 12033 MORETTA (CN) ITALY
Tel: +39 0172 911235
Fax: +39 0172 911322

www.damotek.com
info@damotek.com

ISO 9001

CO_2 transfer unit

103D series

For liquid CO_2 transfer from cold converter tanks

Description

The 103/D series units are designed to transfer liquid CO_2 from cryogenic tanks to fire extinguishers, cylinders or other containers. The unit consists of a transfer pump installed on a steel support, an electric motor, belts and pulleys drive.
Different pump models are available, with standard or variable flow-rate.
The 103/D unit is available with a single flow-rate, between 300 and 800 Kg/h, according to customers' specifications.
The double-speed engine of 103/DT model provides a dual flow-rate, from a minimum of 300/600 Kg/h to a maximum of 400/800 Kg/h.
The variable frequency speed drive of 103/DTH model provides an adjustable flow-rate ranging from 300 Kg/h to 800 Kg/h.

TECHNICAL SPECIFICATIONS

MODEL	103D 3-PHASE	103DT 3-PHASE	103DTH 3-PHASE
CATALOGUE CODE	MCSE005	MCSE010	MCSE015
FLOW-RATE (kg/h)	300-800 fixed	300/600 ÷ 400/800	300-800 variable
MAXIMUM WORKING PRESSURE (bar)	100	100	100
VOLTAGE / FREQUENCY (VAC/Hz)	400/50	400/50	400/50
POWER (kW) (max)	4	3 / 4,5	4
DIMENSIONS (Lxlxh) (mm)	1300x630x520	1300x630x520	1300x630x520
WEIGHT (kg)	110 approx.	130 approx.	110 approx.

(Models for different voltages and frequencies are available on demand).

DAMOTEK
equipment for extinguishers & cylinders

CO_2 transfer unit

Perfectly integrated into DAMOTEK filling stations, the 103D model is a cost-effective solution allowing reduced operational costs. The unit allows a fast start-up up to a steady state. Ordinary maintenance can be achieved quickly with no need to employ skilled staff.

Components and devices

> Stainless steel platform
> Displacement pump with:
- brass head
- stainless steel suction and outlet valves
- ceramic pistons

> Belts and pulleys drive
> Pulley drive protection
> IP55 electric motor

Standard equipment:

> User manual
> Suction flexible hose, DN 16 AISI316, 300 mm long
> Outlet hose, PTFE braided made of stainless steel AISI304, DN10, 500 mm long

> PER MAGGIORI INFORMAZIONI:
FOR FURTHER INFORMATION CONTACT:
POUR INFORMATIONS CONTACTER:

DAMOTEK S.r.l.
Via Avv. Giovanni Agnelli, 10 12033 MORETTA (CN) ITALY
Tel: +39 0172 911235
Fax: +39 0172 911322

www.damotek.com
info@damotek.com

ISO 9001