



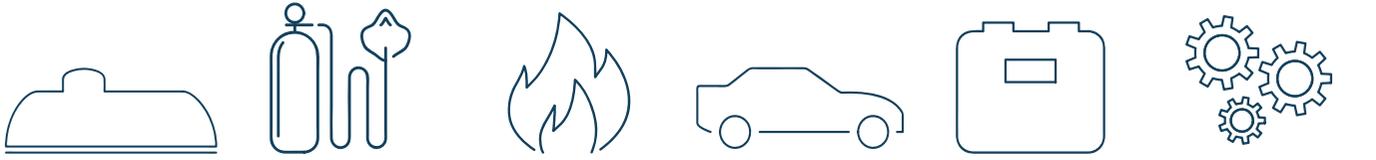
**CAVAGNA group**

Wherever gas is used, we are there

# **Technology serving the LPG industry**

2023 - 2024 EDITION

# Solutions



LPG SOLUTIONS

COMPRESSED GASES SOLUTIONS

NATURAL GAS SOLUTIONS

ALTERNATIVE FUEL SYSTEMS

GAS METERING SOLUTIONS

INDUSTRIAL PROCESS MANAGEMENT





The Cavagna Group began operation in 1949 in Northern Italy and continues to grow today. Since its origin, the Group has become a world leader in the forging and machining of brass, aluminum and stainless steel.

For over seventy years the Group has supplied safe products of superior quality and value. Technological advancement and sophisticated working procedures have allowed us to rapidly create new products and solutions for the gas control industry.

The Cavagna Group produces a wide range of products meeting international standards including:

- LPG Valves, Equipment and Regulators
- Engineering and Services dedicated to the LPG industry
- ASME, Fork Lift and Motor Fuel Tank Valves
- Natural Gas regulators for domestic, commercial and industrial use
- Gas meters
- Compressed Gases Cylinder Valves
- Specialty Gases Cylinder Valves
- Refrigerant Gases Cylinder Valves
- Regulation Equipment for Industrial Gases
- Regulation Equipment for Medical Gases
- Comprehensive Range of Welding, Cutting Equipment
- CNG - AUTOGAS cylinder valves and filling valves
- Hydrogen Valves and Components
- Cryogenic and LNG Valves and Components

The Group's design engineers and laboratory technicians closely cooperate with worldwide regulatory institutions, both in the writing of international performance standards and in the creation of new products.

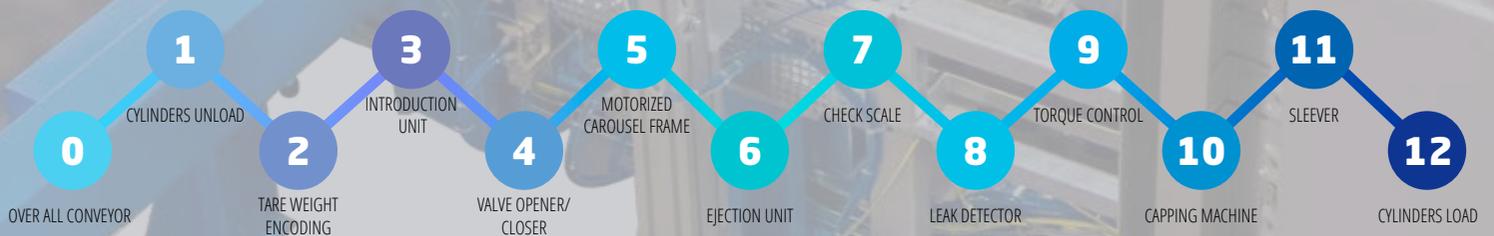
The Cavagna Group of companies has invested heavily in personnel, individual training, and robotic technology to meet the quality standards required by our customers and the 150 countries we serve.

Our philosophy is to provide all of our customers with quality products, continuous innovation and superior service in a competitive environment.



<b>LPG/Propane Equipment</b>	<b>pg.5</b>
Filling	pg.6
Safety and Checking of the Cylinder	pg.9
Cylinder Handling	pg.16
<b>Cylinder Filling Heads</b>	<b>pg.17</b>
Filling Heads	pg.18
<b>Maintenance and Refurbishment</b>	<b>pg.30</b>
Maintenance	pg.31
Refurbishment	pg.34
<b>Special Applications</b>	<b>pg.39</b>
Automatic Robots	pg.40
Screwing/Unscrewing machine	pg.40
Loading/Unloading	pg.40
Mobile Emergency Unit	pg.41
Welding Machine	pg.41
<b>Services</b>	<b>pg.42</b>
Installation & Commissioning	pg.43
Spare Parts	pg.43
After Sales	pg.43

# LPG/PROPANE EQUIPMENT





## FILLING Carousel



### LPG filling carousel with load cells

- All sizes of cylinders (from small to large capacity)
- All types of materials (steel, composit, ...)
- All types of valves
- Available in 8, 12, 18, 24 posts
- Capacity from 300 to 1,800 cylinders / hour
- Electronic scales

<b>Number of posts</b>	8*	12*	18*	24*
<b>Diameter (mm)</b>	3300	4000	5800	7200
<b>(inches)</b>	130	157	228	283

\* +1 empty post

#### Flexible

It is possible to add filling scales to the carousel frame according to required production needs without any modification

### Additional Equipment

#### LPG pressure regulation skid

Ensures LPG pressure regulation to one or more carousels or in-line filling skid.  
Regulation valve system or by pressure relief valve.

#### Pumping skid

Supplies LPG from tank to filling scales, provided ready for connection.

The products shown represent only some configurations and solutions of the wider range available.

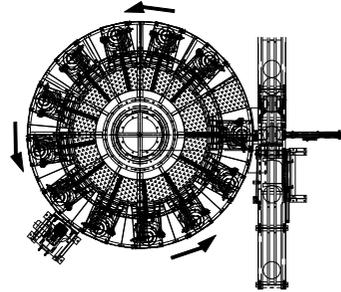
[www.cavagnagroup.com](http://www.cavagnagroup.com)



## FILLING Carousel inlet/outlet

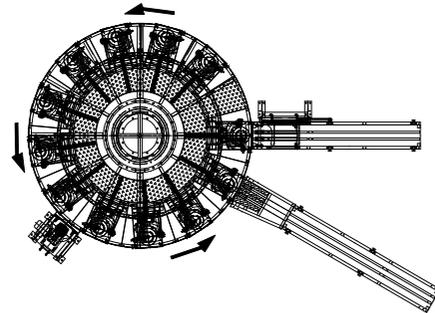
### Tangential system

This device ensures automatic introduction of empty cylinders on the carousel filling scales. It is pneumatically driven and installed.



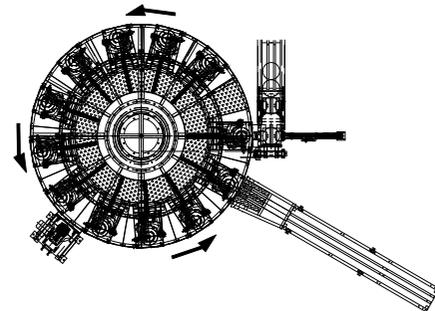
### Pneumatic Radial in-line admission

This device ensures automatic introduction of empty cylinders on the carousel filling scales. It is pneumatically powered and installed at the end of the chain conveyor.



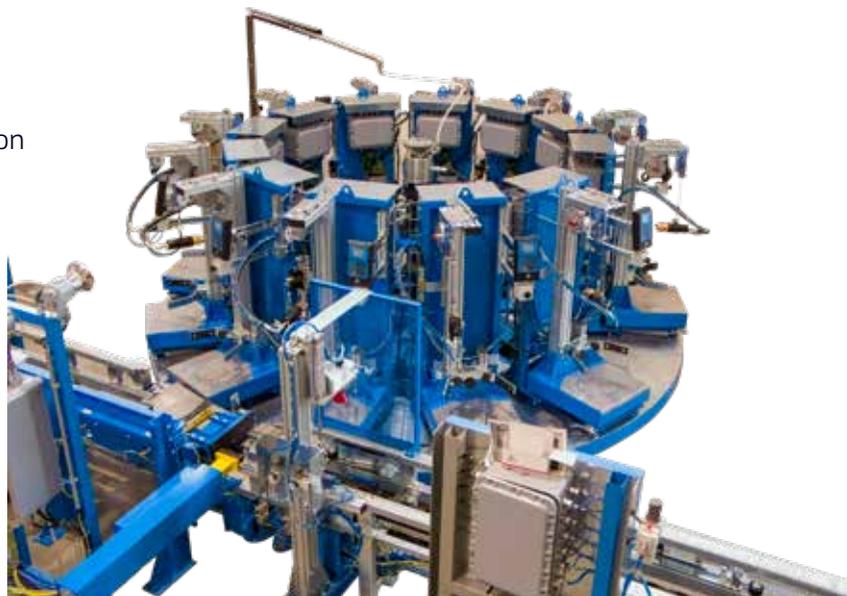
### Tangential admission and radial ejection

This device ensures automatic introduction of empty cylinders on the carousel filling scales. It is pneumatically powered and installed at the end of the chain conveyor.



### LPG supply from top

Many benefits:  
Limited civil works at the installation  
No LPG piping at low point  
Easy implementation  
Easy maintenance



The products shown represent only some configurations and solutions of the wider range available.



## FILLING Filling Scales

### Electronic filling scale for LPG cylinders

#### Description

Cable tensioner with automatic winding for filling head  
Automatic or Semi-automatic filling head (manual connection to valve, automatic disconnection)  
Painted steel support column with:  
Keypad with display unit and weighing processor  
N°02 Gas-stop valves with LPG gas hose  
Stainless steel plate platform with electronic weighing load-cell

#### Utilities requirement

Compressed air:  
Dew point: Min. 10°C lower than the lowest ambient temperature to which the compressed-air system is exposed at the plant.  
Water content: +max. 0.5 g/N<sup>3</sup>  
Oil content: max. 0.4 mg/N<sup>3</sup>  
Particle size: max. 50 µm  
Required pressure: 6-8 bar

Electricity:  
Voltage 1-phase: 12V to 240V  
Frequency: 50 or 60 Hertz (to be specified by the customer)

#### Filling Capacity

Filling accuracy: ± 50g (±20g on request)  
Filling capacity: 50 cylinders per hour for 13kg cylinders at differential pressure 10bar  
110 cylinders per hour for 6kg cylinders at differential pressure 12bar



The products shown represent only some configurations and solutions of the wider range available.



## SAFETY AND CHECKING Weight Checking

### Check scale

Electronic check scale to verify if the weight of the cylinder  
Production capacity up to 1.400 cyl/h  
Working range/accuracy 110 LBS / 0.11 LBS (50kg / 50g)  
Cylinder stopper  
Lifting plate  
NAWI metrological approval  
Automatic shunting device with roller conveyor  
Regulator filter

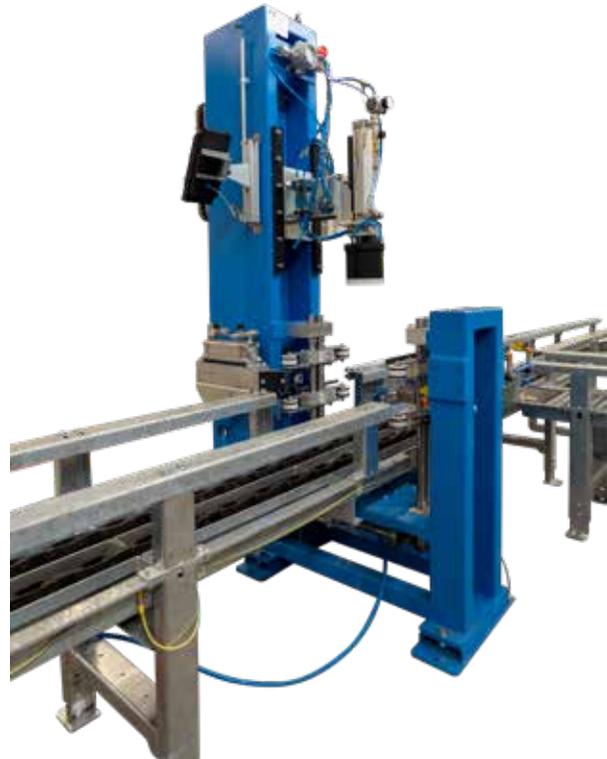


### Valve Leak Detector



**Manual leak detector**

Accuracy: adjustable from 2 to 5 g/h  
Capacity: up to 500 cylinders / hour



**Automatic leak detector**

Accuracy: adjustable from 2 to 5 g/h  
Capacity: up to 1,800 cylinders / hour (2 heads)  
with a minimum chain speed of 21 m/min

SERVICES  
SPECIAL APPLICATIONS  
MAINTENANCE REFURBISHMENT  
CYLINDER FILLING HEADS  
LPG/PROPANE EQUIPMENT

The products shown represent only some configurations and solutions of the wider range available.



# CYLINDER HANDLING Palletizing Unit

SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT



## Automatic Palletizing Unit

- Stacker / Unstacker
- Bar lifter
- Loading / Unloading modules



The products shown represent only some configurations and solutions of the wider range available.

[www.cavagnagroup.com](http://www.cavagnagroup.com)



# CYLINDER HANDLING Conveyors

## Chain conveyors

With lubricated or dry chain  
Chain speed from 6 to 35 meters / minute  
Fully galvanized frame



## Roller conveyor

Metallic frame  
Galvanized rollers  
Ball bearings

## Over-head conveyor

Automatic hooking and unhooking



The products shown represent only some configurations and solutions of the wider range available.

The image shows a complex industrial machine, likely a cylinder filling head, with a blue and yellow color scheme. The machine features multiple vertical columns, each equipped with a filling head and associated piping. The columns are numbered, with '19' and '20' visible. The machine is mounted on a base with a 'B/B' label. The overall scene is a factory or industrial setting.

# CYLINDER FILLING HEADS

B/B



## FILLING HEADS for LPG Valves 16, 19 and 35mm (Jumbo and Kosanova valves) Manually Operated

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Balanced jig for easy suspension between filling operations.
2. Easy to connect and disconnect. Filling is initiated by operating the manual handle.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

G3/8 or W21,8 x 1/14 LH

#### Outlet connection:

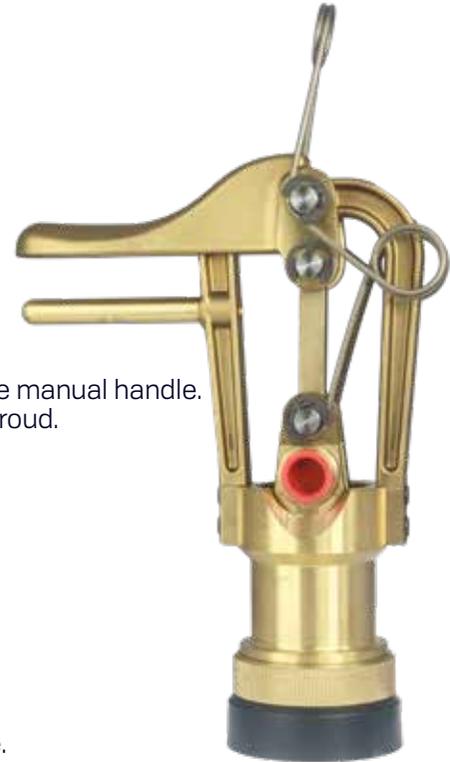
According to country standards.

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Liquid filling product: 1 - 15 bar  
Filling time approx. 5 sec./kg LPG at 7 bar differential pressure.

#### Function and Maintenance:

The Filling Head is easy to operate. The head outlet is attached to the valve inlet manually. While pressing the manual handle the filling heads makes a leak tight connection to the valve then opens the valve spindle and the gas starts to flow. When the cylinder is full the filling is stopped via the scale system. By moving the handle in its opposite direction the filling head disconnects from the valve.



Reference Image

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900001	G3/8	ø 35 mm
6882900002	G3/8 or W 21,8 x 1/14 LH	
6882900003		
6882900004	G3/8	ø 16 mm
6882900005		ø 19 mm
6882900006		ø 16 mm
6882900007		
6882900008	G3/8 or W 21,8 x 1/14 LH	

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for LPG Valves 16, 19 and 35mm (Jumbo and Kosanova valves) Semi-automatic

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Balanced jig for easy suspension between filling operations.
2. Easy to connect and disconnect. Filling is initiated by operating of the pneumatic air supply.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

- for LPG G3/8
- for Pneumatic air G1/4 according to country standards

#### Outlet connection:

According to country standards.

#### Supply pressures:

- Designed to operate within the normal supply pressures.
- Pneumatic supply: 4 - 6 bar.
- Liquid filling product: 1 - 15 bar
- Filling time approx. 5 sec./kg LPG at 7 bar differential pressure.

#### Function and Maintenance:

The Filling Head is easy to operate. The head outlet is attached to the valve inlet manually. Once the pneumatic pressure is applied to the head it forces the internal components of the head to move towards the valve top thereby establishing a leak tight connection and once this is established the further movement of the components forces the valve spindle to open and simultaneously the gas starts to flow. When the cylinder is full the filling is stopped by removing the pneumatic pressure. The internal springs of the head allows the valve to close and moves the components of the head backwards to stop the flow of gas and to disconnect the head from the valve. The head is removed manually.

\*inlet and outlet connection according to country standards



Reference Image

Part number	Inlet Connection*	Outlet Connection*
6882900020	LPG G3/8 PNEUMATIC AIR G1/4	ø 35 mm
6882900021		
6882900023		ø 19 mm
6882900024		
6882900027		ø 16 mm
6882900022		
6882900028		
6882900140		ø 35 mm

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for LPG Valves 16mm Manually Operated

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

### Features

1. Easy to connect and disconnect. Filling is initiated by applying the filling pressure.
2. Slim design makes it easy to handle and it fits easily inside any shroud.
3. Is operated without pneumatic air supply.

#### Inlet connection:

G1/4 or W21,8 x 1/14 according to country standards

#### Outlet connection:

Ø16 mm according to country standards

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Liquid filling product: 1 - 15 bar.  
Filling time approx. 5 sec./kg LPG at 7 bar differential pressure.

#### Function and Maintenance:

The Filling Head is easy to operate.  
The head outlet is attached firmly to the valve inlet manually. By applying the LPG filling pressure to the filling head, the head is locked leak tight to the valve and the filling is initiated. When the cylinder is full the filling is stopped by firmly removing the filling head from the valve.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900025	W 21,8 x 1/14 LH	ø 16 mm
6882900026	G1/4	ø 16 mm
6882900135	W 21,8 x 1/14 RH	ø 16 mm

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for LPG Valves 20, 21, 22, 25.6, 27, 35mm Compact Manually Operated

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Balanced jig for easy suspension between filling operations.
2. Easy to connect and disconnect. Filling is initiated by operating the manual handle.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

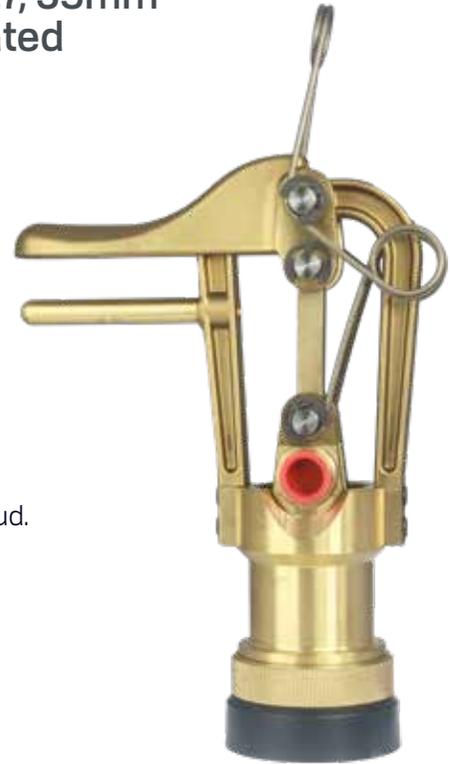
G3/8 or W21,8 x1/14 LH according to country standards

#### Outlet connection:

According to country standards.

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Liquid filling product: 1 - 15 bar  
Filling time approx. 2.5 sec./kg LPG at 7 bar differential pressure.



Reference Image

#### Function and Maintenance:

The Filling Head is easy to operate. The head outlet is attached to the valve inlet manually. While pressing the manual handle the filling heads makes a leak tight connection to the valve then opens the valve spindle and the gas starts to flow. When the cylinder is full the filling is stopped via the scale system. By moving the handle in its opposite direction the filling head disconnects from the valve.

#### Suitable for:

All compact valves outlets. Specify compact valve type when ordering.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
68.8.290.0009	ISO 228/1 - G3/8	ø 20 mm
68.8.290.0010	ISO 228/1 - G3/8 or W 21,8 x1/14 LH	
68.8.290.0011		
68.8.290.0012	ISO 228/1 - G3/8	ø 27 mm
68.8.290.0013		ø 22 mm
68.8.290.0014	ISO 228/1 - G3/8 or W 21,8 x1/14 LH	
68.8.290.0015	ISO 228/1 - G3/8	ø 21 mm
68.8.290.0016	W 21,8 x1/14 LH	
68.8.290.0017	DIN 259-1/2" NPT	
68.8.290.0018	ISO 228/1 - G3/8	ø 25.6 mm
68.8.290.0124		ø 20 mm
68.8.290.0139	ISO 228/1 - G3/8 or W 21,8 x1/14 LH	ø 35 mm

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Standard Handwheel Valves Male

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Balanced jig for easy suspension between filling operations.
2. Easy to connect and disconnect.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

### Inlet connection:

LPG: 3/8" GAS

### Outlet connection:

According to country standards

### Supply pressures:

The Filling Head is designed to operate within the normal supply pressures.  
Liquid filling product: 1-15 bar.  
Filling time as per the present valve specification.

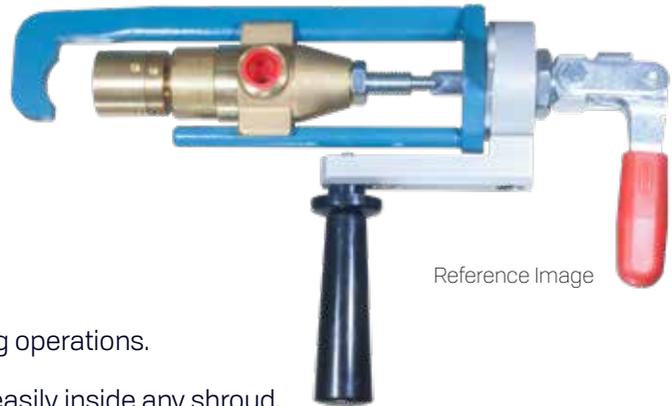
### Function and Maintenance:

The Filling Head is easy to operate.  
The clamping brace is placed around the neck of the standard Handwheel valve once the filling head outlet is aligned with the valve using the open/close handle.

After connecting, the flow of gas is initiated by switching the handle from the closed to the open position. When the filling operation should end the handle on the filling head top is switched back to the closed position and the filling head is disconnected from the valve.

### Suitable for:

A wide range of standard LPG Handwheel valve male thread with and without SRV.



Reference Image

SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900157	G3/8	Standard Handwheel Valve Male thread outlet with and without SRV
6882900161	G3/8	Standard Handwheel Valve Male thread outlet with and without SRV (special gasket connection)

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for LPG Valves 20, 21, 22, 24.8, 25.6, 27mm Compact Semi-automatically Operated

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Balanced jig for easy suspension between filling operations.
2. Easy to connect and disconnect.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

- for LPG G3/8
- for Pneumatic air G1/4

#### Outlet connection:

According to country standards

#### Supply pressures:

- Designed to operate within the normal supply pressures.
- Pneumatic supply: 4 - 6 bar.
- Liquid filling product: 1 - 15 bar
- Filling time approx. 2.5 sec./kg LPG at 7 bar differential pressure.

#### Function and Maintenance:

The Filling Head is easy to operate. The head outlet is attached to the valve inlet manually. Once the pneumatic pressure is applied to the head it forces the internal components of the head to move towards the valve top thereby establishing a leak tight connection and once this is established the further movement of the components forces the valve spindle to open and simultaneously the gas starts to flow. When the cylinder is full the filling is stopped by removing the pneumatic pressure. The internal springs of the head allows the valve to close and moves the components of the head backwards to stop the flow of gas and to disconnect the head from the valve. The head is removed manually.

#### Suitable for:

All compact  $\varnothing$  valve outlets.



Reference Image

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900029	LPG G3/8 - Pneumatic air G1/4	$\varnothing$ 27 mm
6882900030		$\varnothing$ 20 mm
6882900031		$\varnothing$ 22 mm
6882900032		$\varnothing$ 21 mm
6882900033		$\varnothing$ 21 mm
6882900034		$\varnothing$ 25.6 mm
6882900116		$\varnothing$ 24.8 mm
6882900137		$\varnothing$ 22 mm
6882900138		$\varnothing$ 21 mm

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Camping Valves Manually Operated

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.

### Features

1. Slim design makes it easy to handle and it fits easily inside any shroud.
2. Manual ON/OFF handle at the top is used for open/close of the gas flow and for attaching/ detaching the valve outlet thread.
3. The LPG inlet is placed at a sufficient distance from the valve connection allowing the inlet to be above most cylinder shrouds.

### Inlet connection:

LPG: G1/4

### Outlet connection:

Connects to camping ball valve with female threaded outlet M16 x 1,5 mm- or 3/8 BSP RH. Valves without and without PRV.

### Supply pressures:

Designed to operate within the normal supply pressures.  
Liquid filling product: 1 - 15 bar.  
Filling time as per the present valve specification.

### Function and Maintenance:

The Filling Head is easy to operate. The threaded filling gun outlet is connected to the valve outlet is connected to the valve outlet by rotating the filling head body clockwise using the open/close handle to apply the rotation. After connecting and lightening the thread the flow of gas is initiated by switching the handle 180° from the closed to the open position. The internal filling head spindle will then move towards the valve sphere and open the valve. When the filling operation should end the handle on the filling head top is switched 180° back to the closed position and the filling head is disconnected by rotating the body anti-clockwise until it releases itself from the valve thread.

### Suitable for:

Omeca valve 6405902028



Reference Image

SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900053	G1/4	M16 x 1,5
6882900113		
6882900118		3/8 19 BSP RH
6882900120		
6882900159		
6882900163	W21.7x1/14" RH	W21.8x1/14" LH

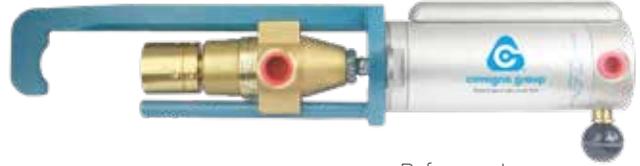
The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Handwheel Valves Semi-automatic

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

### Features

1. Insignificant loss of product (1 cm<sup>3</sup>) when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Balanced jig for easy suspension between filling operations.
3. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
4. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

#### Outlet connection:

Connects to standard outlet male thread valves without SRV. Specify valve type when ordering.

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar  
Filling time as per the present valve specification.

#### Function and Maintenance:

The Filling Head is easy to operate.  
The clamping brace is placed around the neck of the cylinder valve.  
Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

#### Suitable for:

A wide range of standard LPG Handwheel valves without SRV.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900042	LPG G3/8 PNEUMATIC AIR G1/4	Standard Handwheel male outlet without SRV Type 129A
6882900049	LPG G3/8 PNEUMATIC AIR G1/4	Standard Handwheel male outlet without SRV Type 129A
6882900136	LPG G3/8 PNEUMATIC AIR G1/4	Standard Handwheel male outlet without SRV Type 129A

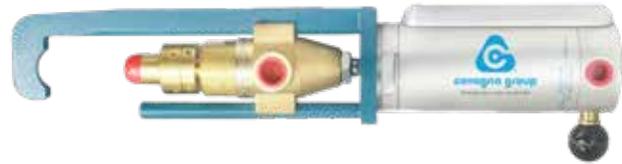
The products shown represent only some configurations and solutions of the wider range available.



# FILLING HEADS for Handwheel Valves with POL Outlet Semi-automatic

## MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

## Features

1. Insignificant loss of product (1 cm<sup>3</sup>) when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Balanced jig for easy suspension between filling operations.
3. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
4. Slim design makes it easy to handle and it fits easily inside any shroud.

### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

### Outlet connection:

Connects to POL type valves with or without Pressure Relief Valves. Specify when ordering.

### Supply pressures:

Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar  
Filling time as per the present valve specification.

### Function and Maintenance:

The Filling Head is easy to operate.  
The clamping brace is placed around the neck of the cylinder valve.  
Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

### Suitable for:

All different Handwheel POL type of valves. Specify valve type and outlet when ordering.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900044	LPG G3/8 PNEUMATIC AIR G1/4	Female POL thread valves with and without SRV Type i29A
6882900133 (left hand version)		
6882900054		
6882900048		

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Bayonet and Clip-on Valves Semi-automatic

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

### Features

1. Insignificant loss of product (1 cm<sup>3</sup>) when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Balanced jig for easy suspension between filling operations.
3. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
4. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

#### Outlet connection:

Connects to bayonet valves G61 acc. to EN 12864. Valves with and without PRV.

#### Supply pressures:

The Filling Head is designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar.  
Filling time as per present valve specification.

#### Function and Maintenance:

The Filling Head is easy to operate.  
The clamping brace is placed around the neck of the cylinder valve.  
Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

#### Suitable for:

Omeca valves 6602900136, 6602900145.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900046	LPG G3/8 PNEUMATIC AIR G1/4	Automatic bayonet valve with and without SRV Type 129A
6882900109		Clip-on cylinder valve

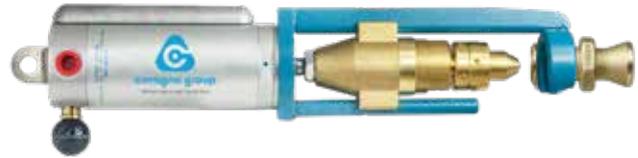
The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Coupling 6602901024 Semi-automatic

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

### Features

1. Insignificant loss of product (1 cm<sup>3</sup>) when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Balanced jig for easy suspension between filling operations.
3. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
4. Slim design makes it easy to handle and it fits easily inside any shroud.

### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

### Outlet connection:

Connects to Omeca Coupling 6602901024 (ACME Thread).

### Supply pressures:

Designed to operate within the normal supply pressures.

Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar.

Filling time as per present valve specification to which the coupling is connected.

### Packing:

The Filling Heads are individually packed in cardboard boxes with instructions.

### Function and Maintenance:

The Filling Head is easy to operate.

The connector at the end of the clamping brace is pushed into the undercut of the bayonet. Once the Filling Head outlet is aligned with the cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seals initiating the LPG flow.

After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. The connector is then removed from the valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

\*inlet and outlet connection according to country standards

### Suitable for:

Valve 6662901024.

Part number	Inlet Connection*	Outlet Connection*
6882900047	LPG G3/8 PNEUMATIC AIR G1/4	Omeca Coupling 6602901024 Type 129A

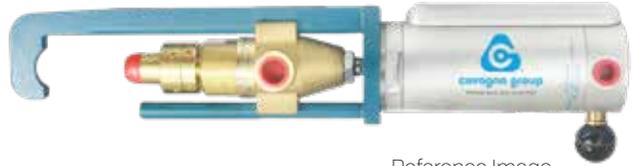
The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Handwheel Valves with OPD Semi-automatic

### MATERIALS AND STANDARDS

LPG outlets without access to pressurized air well as plants where pressurization or vacuum purging of cylinders is required.



Reference Image

### Features

Safe operation, easily connected and manually operated.

#### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

#### Outlet connection:

Connects to 1.312-5 ACME-2G, RH, EXT.

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar.  
Filling time as per present valve specification.

#### Function and Maintenance:

The Filling Head is easy to operate.

The clamping brace is placed around the neck of the cylinder valve.

Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

#### Suitable for:

OPD valves with POL female outlet. (reference model 6704900780)

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900045	LPG G3/8 PNEUMATIC AIR G1/4	OPD - female POL thread valve with check-lock with and without SRV Type 129A
6882900050		
6882900052		

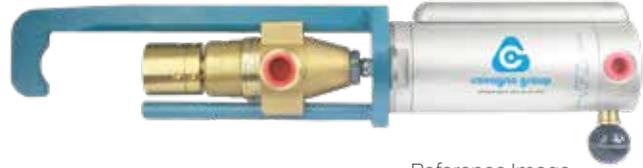
The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Handwheel Valves without SRV Semi-automatic

### MATERIALS AND STANDARDS

LPG outlets without access to pressurized air well as plants where pressurization or vacuum purging of cylinders is required.



Reference Image

### Features

Safe operation, easily connected and manually operated.

#### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

#### Outlet connection:

Connects to standard outlet male thread valves without SRV.

#### Supply pressures:

Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar.  
Filling time as per present valve specification.

#### Function and Maintenance:

The filling adapter is manually connected to a standard Handwheel valve having a small ACME male outlet. The front end of the filling adapter slides easy over the male acme thread and creates a firm connection. Next, the adapter handle, and thereby the internal spindle, is moved forward to seal the spindle leak tight to the valve outlet. Simultaneously, the internal spindle opens its spring loaded seat and then the LPG flows into the cylinder. After the filling, the operations are reversed and the internal spindle automatically closes the flow of LPG before it is disconnected from the valve.

#### Suitable for:

A wide range of standard LPG hand wheel (SAE FLARE) valves without SRV.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900051	LPG G3/8 PNEUMATIC AIR G1/4	Standard Handwheel (SAE FLARE) male outlet without SRV Type 129A

The products shown represent only some configurations and solutions of the wider range available.



# FILLING HEADS for Forklift Valves Semi-automatic

## MATERIALS AND STANDARDS

LPG outlets without access to pressurized air well as plants where pressurization or vacuum purging of cylinders is required.



Reference Image

## Features

Safe operation, easily connected and manually operated.

### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

### Outlet connection:

Connects to ACME - type Fork lift truck valves with SRV.

### Supply pressures:

Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1 - 15 bar.  
Filling time as per present valve specification.

### Function and Maintenance:

The Filling Head is easy to operate.  
The clamping brace is placed around the neck of the cylinder valve.  
Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

### Suitable for:

Fork lift truck valves with ACME female outlet.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900045	LPG G3/8 PNEUMATIC AIR G1/4	Fork lift truck - female thread valve with check-lock with SRV

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS for Forklift Valves Semi-automatic

### MATERIALS AND STANDARDS

The Filling Head is made of corrosion-resistant materials such as stainless steel, brass, aluminium and special polymers. The rubber materials used are developed and manufactured according to the requirements of EN 549.



Reference Image

### Features

1. Insignificant loss of product (1 cm<sup>3</sup>) when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Balanced jig for easy suspension between filling operations.
3. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
4. Slim design makes it easy to handle and it fits easily inside any shroud.

#### Inlet connection:

LPG G3/8 - Pneumatic air G1/4

#### Outlet connection:

Connects to standard outlet male thread valves without SRV.  
Specify exact valve type when ordering.

#### Supply pressures:

Designed to operate within the normal supply pressures.

#### Pneumatic supply:

6 - 10 bar. Liquid filling product: 1 - 15 bar Filling time as per the present valve specification.

#### Function and Maintenance:

The Filling Head is easy to operate.

The clamping brace is placed around the neck of the cylinder valve.

Once the Filling Head outlet is aligned with the Cylinder valve outlet, the ball knob is pushed to allow the compressed air to fill the pneumatic cylinder. This forces the Filling head outlet to attach the cylinder valve outlet thereby obtaining a leak tight connection and simultaneously opening the gas seal initiating the LPG flow. After completing the filling operation the handle on the side of the pneumatic cylinder is pushed and the air pressure is released thereby stopping the flow of gas and the outlet disconnects from the cylinder valve. All rubber seals inside the gas section as well as the complete pneumatic cylinder can be exchanged.

#### Suitable for:

A wide range of standard LPG handwheel valves with antifilling device.

\*inlet and outlet connection according to country standards

Part number	Inlet Connection*	Outlet Connection*
6882900168	LPG G3/8 PNEUMATIC AIR G1/4	Standard LPG valve with antifilling Type 129A

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS

Valve Model	Semi-Automatic Filling Heads	Manual Filling Heads
 Kosanova 16 mm 176A, 130K	<b>6882900022</b> <b>6882900027</b>	<b>6882900004</b> <b>6882900007</b> <b>6882900008</b>
 Kosanova 16 mm 176A, 179D	<b>6882900022</b> <b>6882900027</b> <b>6882900028</b>	<b>6882900025</b> <b>6882900026</b> <b>6882900135 (Dx)</b>
 Kosanova 19 mm 130L	<b>6882900023</b> <b>6882900024</b>	<b>6882900005</b> <b>6882900006</b>
 Jumbo, Kosan 35mm type 130B	<b>6882900020</b> <b>6882900021</b>	<b>6882900001</b> <b>6882900002</b> <b>6882900003</b>
 Compact 20 mm (Quick-on)	<b>6882900030</b>	<b>6882900010</b> <b>6882900011</b> <b>6882900124</b> <b>6882900009</b>
 Compact 21 mm (Quick-on)	<b>6882900032</b> <b>6882900033</b> <b>6882900138</b>	<b>6882900015</b> <b>6882900016</b> <b>6882900017</b>
 Compact 22 mm (Quick-on)	<b>6882900031</b> <b>6882900137</b>	<b>6882900013</b> <b>6882900014</b>
 Compact 24,8 mm (Quick-on)	<b>6882900116</b>	/
 Compact 25,6 mm (Quick-on)	<b>6882900034</b>	<b>6882900018</b>
 Compact 27 mm (Snap-Tight)	<b>6882900029</b>	<b>6882900012</b>
 Compact 35 mm (Snap-On) (66.0.290.1256)	<b>6882900140</b>	<b>6882900139</b>
 Camping valve (M16x1,5)	/	<b>6882900053</b> <b>6882900113</b> <b>6882900159</b>
 Camping valve (3/8" - 19BSP)	/	<b>6882900120</b> <b>6882900118</b>
 Standard Handwheel Valve Male Thread outlet	<b>6882900042</b> <b>6882900049</b>	/
 Standard Handwheel Valve POL outlet (example: 80.0.490.3135 80.0.490.5016 80.0.890.8198)	<b>6882900044</b> <b>6882900133</b> <b>6882900054</b> <b>6882900048</b>	<b>6882900129</b>

The products shown represent only some configurations and solutions of the wider range available.



## FILLING HEADS

Valve Model	Semi-Automatic Filling Heads	Manual Filling Heads
 Omega valve (example 67.0.490.0780)	<b>6882900045</b>	/
 Bajonet valves (examples 66.0.290.0136 66.0.290.0145)	<b>6882900046</b>	/
 Omega coupling (example 66.0.290.1024)	<b>6882900047</b>	/
 Fork lift truck G3/8 sin.	<b>6882900103</b>	/
 OPD valves Type 1 ACME American valves	<b>6882900050</b> <b>6882900052</b>	<b>6882900055</b>
 3/8" SAE Flare outlet (example 80.0.390.2062)	<b>6882900051</b>	/
 Filler Valve 1-3/4" x 6 ACME (examples 6602901122 6602901043)	/	<b>6882900057</b> <b>6882900234</b>
 Standard LPG valve with anti-filling (example 80.6.490.3003)	<b>6882900168</b>	/
 Standard Handwheel Valve Male thread outlet (example 8003902051)	<b>Not applicable</b>	<b>6882900157</b> <b>6882900161</b>
 Clip on cylinder valve (example 6602901235)	<b>6882900109</b>	<b>Not applicable</b>

SERVICES  
SPECIAL APPLICATIONS  
MAINTENANCE REFURBISHMENT  
CYLINDER FILLING HEADS  
LPG/PROPANE EQUIPMENT

The products shown represent only some configurations and solutions of the wider range available.

# MAINTENANCE AND REFURBISHMENT





## MAINTENANCE Emptying



### Cylinder emptying support

All types of cylinders with all types of valves 1, 2, 3, 6 or more testing posts stands for all kinds of cylinders and valves  
Visual flow control or/and time setting in the control panel for automatic stop of electrical pump.



### Evacuation Pump

One or more pneumatic or electrical pumps, according to the size of the stand, are provided to transfer the gas from cylinders to the storage tank.

SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT

The products shown represent only some configurations and solutions of the wider range available.



## MAINTENANCE Valve Testing Equipment

SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT

CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT

### Valve Screwing/Unscrewing Machine

- » Changeable heads for different valve types
- » Self-centering pneumatic clamping vice fits multiple cylinder sizes
- » Safety: Two-hand controls required to operate the machine
- » Supplied with a built-in roller plate for easy cylinder movement
- » Compact "all-in" design minimizes footprint
- » Easy connections to electric and compressed air
- » Typical installation type: off line, in NON Ex-Proof area



### Emptying Unit



### Emptying unit

LPG compressor with tanks receives gas extracted from cylinders and discharges to bulk storage  
Fully automatic

The products shown represent only some configurations and solutions of the wider range available.

[www.cavagnagroup.com](http://www.cavagnagroup.com)

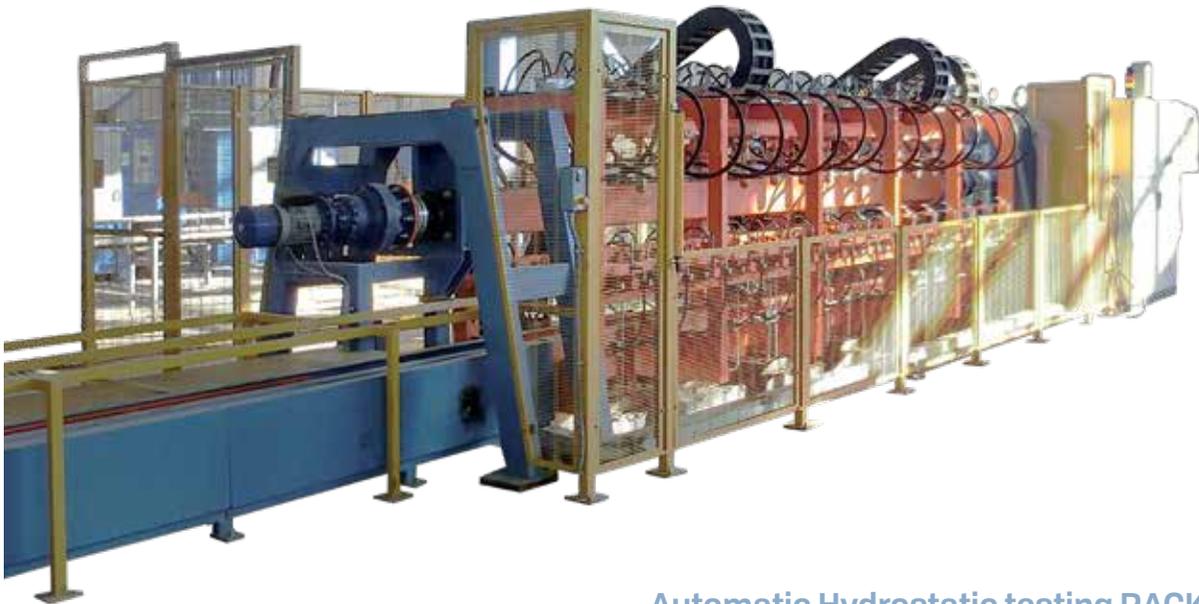


## MAINTENANCE Hydraulic Testing Ramp



### Manual Tilting testing rack

- 1, 2, 3, 6 or 10 testing posts
- All kinds of cylinders
- Manual or automatic rotation
- Possibility of automatic leak detection with electronic management



### Automatic Hydrostatic testing RACK

Inline process on chains conveyors

SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT

The products shown represent only some configurations and solutions of the wider range available.



## REFURBISHMENT Foot-Ring and Collar Replacement

SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT

CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT



### Semiautomatic foot-ring or collar cutting machine

Adjustable size  
By plasma cutting or other



### Grinding machine

Belt type

#### **Grinding Machine**

To remove cutting burrs and prepare surfaces  
before welding low consumption and easy to  
change grinding belt



### Semiautomatic machine welding

Adjustable size  
Manual, semi-automatic version

#### **Semiautomatic machine welding**

for welding new guard ring (collar)  
for welding new base ring (foot)



## REFURBISHMENT Foot-Ring and Shroud Straightening



### Foot-ring or shroud straightening unit

All types of cylinders  
Vertical or horizontal machine  
2 work sides on horizontal cylinders,  
2 types of foot-ring or collars on the same machine

**Double-welding machine**  
Semi-automatic welding machine capable  
of welding either guard ring (collar) or base ring  
(foot)



SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT

CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT

The products shown represent only some configurations and solutions of the wider range available.



# REFURBISHMENT Cylinder Treatment

SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT

CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT

## Normalization



### Normalization furnace

All types of cylinders

- Up to 930°C
- Automatic load & unload

The products shown represent only some configurations and solutions of the wider range available.



## REFURBISHMENT Cylinder Treatment

### Shot blasting



#### Shot blasting machine

All types of cylinders  
Horizontal or vertical on overhead conveyor  
Automatic load & unload

### Painting



#### Painting booth for filling plants, refurbishing plants or manufacturing plants

- Painting system up to 1800 cylinders per hour
- Water curtain or dry painting booth, installation on chain or overhead conveyor
- Protection system for the valve
- Traditional liquid or electrostatic paint
- Possibility to install an automatic painting booth on chain

The products shown represent only some configurations and solutions of the wider range available.

[www.cavagnagroup.com](http://www.cavagnagroup.com)

SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT

CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT



# REFURBISHMENT Cylinder Treatment

SERVICES

SPECIAL  
APPLICATIONS

MAINTENANCE  
REFURBISHMENT



## Washing machine

Example of customized in-line high pressure washing equipment for cylinders

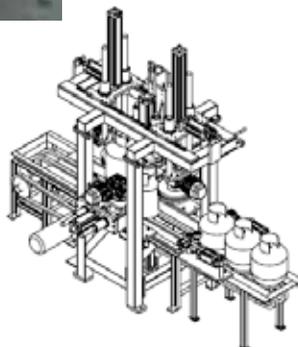
CYLINDER  
FILLING HEADS

LPG/PROPANE  
EQUIPMENT



## Semi-Automatic Brushing machine

This smart equipment is designed to clean the surface and the bottom/top parts of steel cylinders from dirt, old labels, etc. by mechanical brushing. The machine is built with a strong metal structure and perimeter of the equipment is fully enclosed by fixed or movable guards to grant a safe operation. Loading and unloading of the cylinders can be manually made by the operator or automatic upon request.



The products shown represent only some configurations and solutions of the wider range available.

A photograph of an industrial robotic arm in a factory setting, viewed through a safety grid. The arm is white and blue, with a blue laser line visible in the background. The text "SPECIAL APPLICATIONS" is overlaid in white, bold, sans-serif font.

# SPECIAL APPLICATIONS



## SPECIAL APPLICATIONS Automatic Robots



To add or remove valves to cylinders.

## Screwing/Unscrewing Machine

### Valve Screwing/Unscrewing Machine

- » Changeable heads for different valve types
- » Self-centering pneumatic clamping vice fits multiple cylinder sizes
- » Safety: Two-hand controls required to operate the machine
- » Supplied with a built-in roller plate for easy cylinder movement
- » Compact "all-in" design minimizers footprint
- » Easy connections to electric and compressed air
- » Typical installation type: off line, in NON Ex-Proof area



SERVICES

SPECIAL APPLICATIONS

MAINTENANCE REFURBISHMENT

CYLINDER FILLING HEADS

LPG/PROPANE EQUIPMENT



## SPECIAL APPLICATIONS Mobile Emergency Unit



### Mobile Emergency Unit

to transfer LPG contents from one LPG truck/tank to another in case of emergency.

- »A Half Lorry (Open Lorry)
- »LPG compressor unit (Blackmer, Corken o similar).
- »Pressure gauge on suction and discharge of the compressor.
- »Diesel engine.
- »Manual clutch with lever.
- »Transmission by pulleys.
- »Belt cover.
- »Liquid trap.
- »Strainer.
- »Four-way ball valve.
- »Piping connecting.
- »Safety relief valve.
- »Temperature gauge.
- »Reinforced steel frame with fixation holes (if needed).
- »Two flexible hoses for LPG vapor phase.
- »Two flexible hoses for LPG in liquid phase.
- »Portable flare system allowing secure burning of both liquid and vapor L.P.G. .
- »Set of grounding cables with spring driven reel.

# SERVICES

A photograph of two men in a construction or industrial setting. Both are wearing yellow hard hats. The man on the left is wearing a high-visibility yellow safety vest over a dark shirt and is looking down at a tablet computer he is holding. The man on the right is wearing a dark jacket and glasses, and is also looking at a tablet computer he is holding. The background is slightly blurred, showing what appears to be a construction site with some equipment and structural elements. The overall image has a semi-transparent dark overlay.



## SERVICES



### INSTALLATION & COMMISSIONING

Cavagna Group Engineering ensures the installation & commissioning of the equipment on your production sites.

Thanks to a team of local or multilingual technicians and experienced installers, Cavagna Group Engineering guarantees a smooth installation process and provides a high-quality service.



### SPARE PARTS

Cavagna Group Engineering markets a wide range of spare parts: with more than 50,000 spare parts available within the shortest possible time, at a competitive price.

Thanks to a highly experienced team, Cavagna Group Engineering provides technical support and a service that exceeds your expectations.

### AFTER SALES

With a dynamic team of qualified technicians, Cavagna Group Engineering provides the best response to your needs in all fields: technical information, troubleshooting, auditing or repair of equipment, whatever the time zone..



The products shown represent only some configurations and solutions of the wider range available.







## Our LPG Global Product Brands

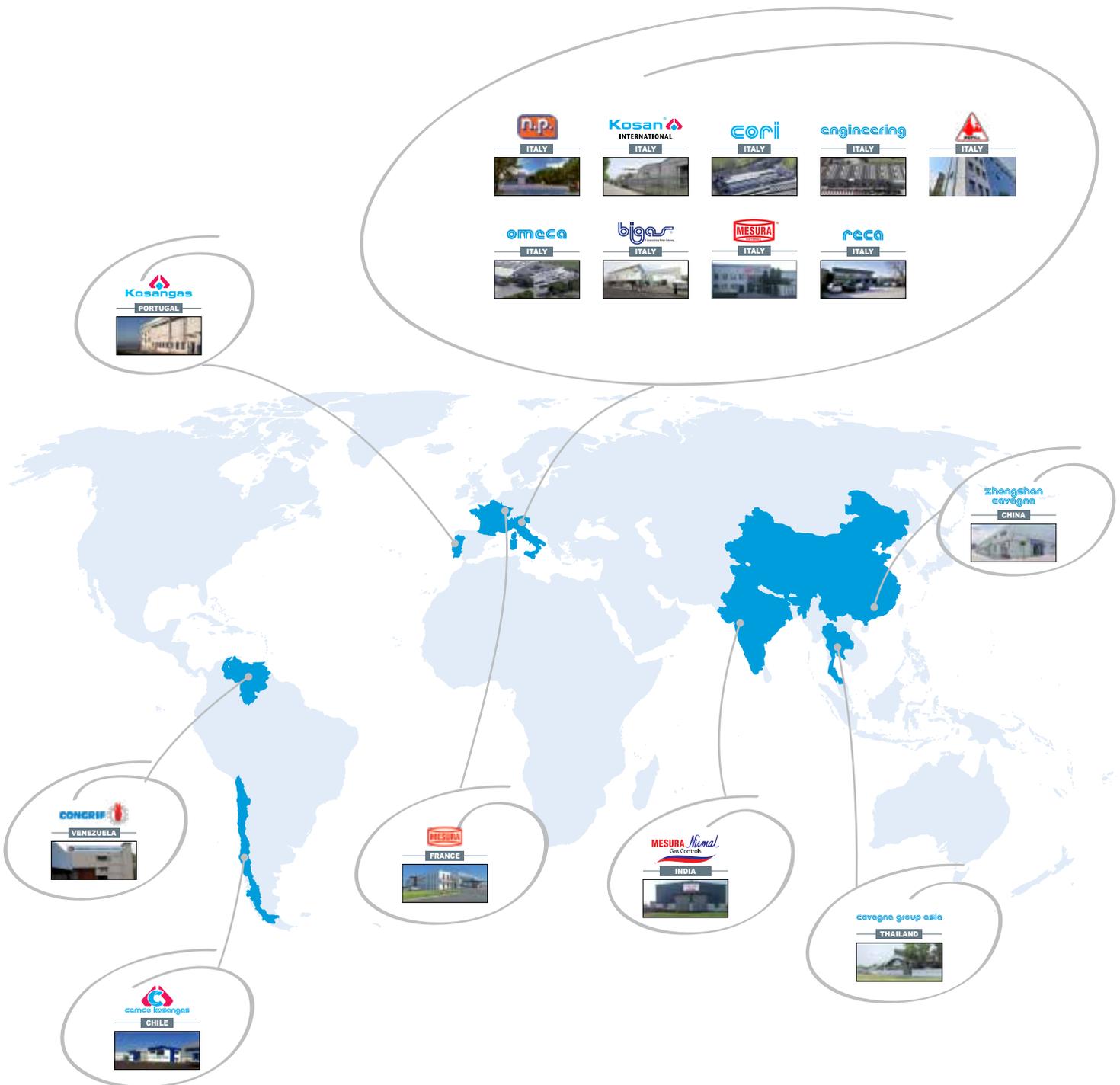


The Cavagna Group logo is a registered trademark of Cavagna Group SPA. All other brands are the property of their respective owners.  
RECA, KOSAN +, KOSANGAS, CEMCO KOSANGAS, OMECA, N.P. and GREENGEAR are brands of the Cavagna Group of Companies LPG Division.

The contents and pictures of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.



# Manufacturing Facilities





**cavagna group**

Wherever gas is used, we are there

**CAVAGNA GROUP SPA**

Via Statale 11/13 - Frazione Ponte San Marco

25011 Calcinato - Brescia (Italy)

Tel. 0039 030 9663111 - Fax 0039 030 9969014

**[info@cavagnagroup.com](mailto:info@cavagnagroup.com)**

**[www.cavagnagroup.com](http://www.cavagnagroup.com)**