



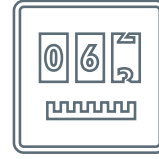
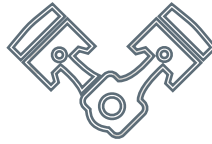
**cavagna group**

Wherever gas is used, we are there



# LPG Valves and Tank Equipment

# Solutions



## LPG SOLUTIONS

## COMPRESSED GASES SOLUTIONS

## NATURAL GAS SOLUTIONS

## ALTERNATIVE FUEL SYSTEMS

## GAS METERING SOLUTIONS

## OTHER





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 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 and Regulators
- Natural Gas regulators for domestic and industrial use
- ASME, Fork Lift, and Motor Fuel Tank Valves
- High Pressure Cylinder Valves
- Refrigeration Cylinder Valves
- Distribution and Regulation Equipment for Industrial Gases
- Distribution and Regulation Equipment for Medical Gases
- Comprehensive Range of Welding, Cutting Equipment and Special Gases
- CNG - AUTOGAS products

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 140 countries we serve.

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

## LPG Tank Equipment

<b>Pressure Relief Valves</b>	<b>PG. 6</b>
<b>Filler Valves</b>	<b>PG. 10</b>
<b>Liquid Withdrawal Valves</b>	<b>PG. 12</b>
<b>Multi-Service Valves</b>	<b>PG. 13</b>
<b>LPG Float Gauges</b>	<b>PG. 16</b>

## LPG Cylinder Valves

<b>Gas Phase Valves</b>	<b>PG. 20</b>
<b>Liquid Phase Valves</b>	<b>PG. 24</b>
<b>Level Indicator Valves</b>	<b>PG. 26</b>
<b>Dual Phase Valves</b>	<b>PG. 28</b>
<b>Camping Valves</b>	<b>PG. 29</b>

## Filling Heads

<b>LPG Filling Heads</b>	<b>PG. 32</b>
<b>Filling Heads for Refrigerant Gases</b>	<b>PG. 48</b>



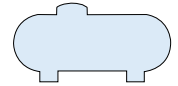
**CAVAGNA group**

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# LPG Tank Equipment

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<b>Filler Valves</b>	<b>PG. 10</b>
<b>Liquid Withdrawal Valves</b>	<b>PG. 12</b>
<b>Multi-Service Valves</b>	<b>PG. 13</b>
<b>LPG Float Gauges</b>	<b>PG. 16</b>





## External Pressure Relief Valves



**EU 19**  
70.0014

Pressure relief valve with conical thread between valve and lower check valve.

**ST 19**  
71.0005



**EU 29**  
70.0016

**ST 29**  
71.0015



**EU 24**  
70.0008

**ST 24**  
71.0010



**EU 30**  
70.0004

Safety relief valve with cylindric thread to be used in connection with the lower check valve. Tightness assured by bonded seal.

**ST 30 / ST 32**  
71.0004 / 71.0011



**EU 20**  
70.0026

**ST 20**  
71.0016

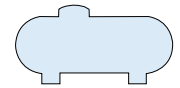


**EU 25**  
70.0205

**ST 25**  
71.0000

### Ordering Information

Part number	Bottom Male connection	Thread type		Configuration suitable for this capacity 10 PSI	PRV - Start to discharge setting (bar)	PRV Overpressure 10%	PRV Orifice (mm)
		Taper	Parallel			Capacity Nm <sup>3</sup> /min.	
70.0014 (EU 19) - PRV 71.0005 (ST 19) - CLD	3/4" - 14 NPT 1 1/4" NPT	x x		1000 lt	Basic Setting 256 PSI 17,65 bar	46	19
70.0026 (EU 20) - PRV 71.0016 (ST 20) - CLD	3/4" NPSM 1 1/4" NPT	x	x			43	19
70.0004 (EU 30) - PRV 71.0004 (ST 30) - CLD	1 1/4" NPSM 1 1/2" NPT	x	x	3000/5000 lt		118	29,5
70.0008 (EU 24) - PRV 71.0010 (ST 24) - CLD	1" NPT 1 1/4" NPT	x x				1750 lt	81
70.0205 (EU 25) - PRV 71.0000 (ST 25) - CLD	1" NPSM 1 1/4" NPT or 1" NPT	x	x	76			23,5
70.0004 (EU 30) - PRV 71.0011 (ST 32) - CLD	1 1/4" NPSM 2" NPT	x	x	3000/5000 lt		121	29,5



# External Pressure Relief Valves



**VS 60**  
**70.0080**

Safety relief valve with big capacity.

**VS 367** 17 bar  
**VS 368** 18 bar  
**70.0020**  
**70.0008**

Pressure relief valve with a lower check valve available with different inlet threads.



**VS 456** 16 bar  
**VS 457** 17 bar  
**70.0015**  
**70.0031**

Pressure relief valve with a lower check valve.

**ST 36**  
**71.0026**



**ST 45**  
**71.0030**

**66.1139**

Pressure relief valve for small containers and on-line pipe installations.

**66.1140**

Pressure relief valve for small containers and on-line pipe installations.



## Ordering Information

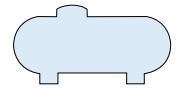
Part number	Bottom Male connection	Thread type		Configuration suitable for this capacity 10 PSI	PRV - Start to discharge setting (bar)	PRV Overpressure 10% Capacity Nm <sup>3</sup> /min.	PRV Orifice (mm)
		Taper	Parallel				
70.0016 (EU 29) - PRV	1 1/4" NPT	x		3000/5000 lt	basic 17,65**	118	29,50
71.0015 (ST 29) - CLD	2" NPT	x					
66.1280 - PRV	1/4-18 NPT	x		-	17,24	8,1 (at 120%0.)	7,4
70.0020/0008 (VS 367/368) - PRV	M 36 x 2		x	1000 lt	17 and 18**	79,8 and 84,7	24,50
71.0026 (ST 36) - CLD	1 1/4" NPSM	x					
70.0015/0031 (VS 456/457) - PRV	M 45 x 2		x	1750-3200 lt.	16 and 17**	100,6 and 110	29,50
71.0030 (ST 45) - CLD	2" NPT	x					

**OVERALL NOTE:** All our configurations PRV+CLD are suitable for a temperature range [C°] - 40 ÷ 65.

\* PRV = Pressure Relief Valve and CLD = Check-lock Device

\*\* please specify your requested setting pressure when ordering – various setting points available.

\*\*\* please enquiry our sales department for further local approvals – several national approvals available besides CE-approval.



# PV Series

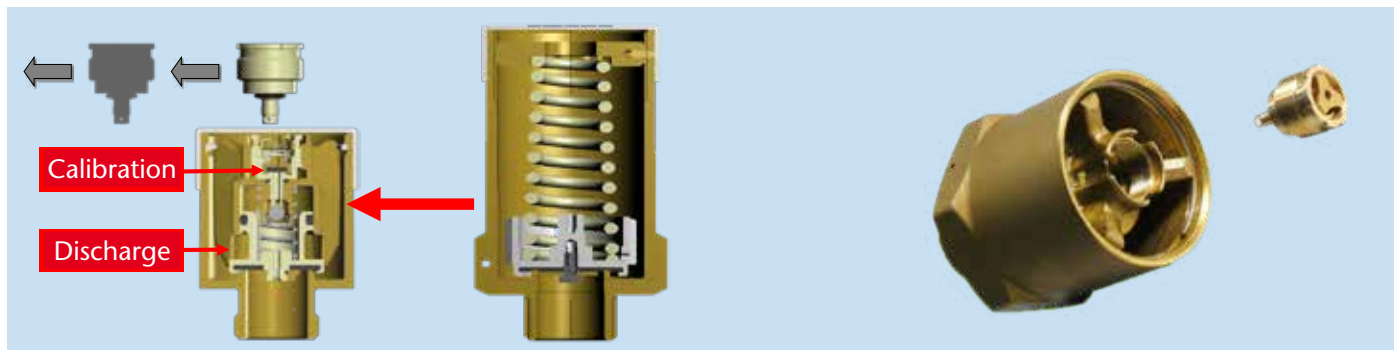
The safety valve PV has separate functions of discharge and calibration.  
 The calibration function is fulfilled by a replaceable cartridge.  
 The valve is installed directly in the tank and allows the following benefits:

- ECONOMICAL:** Simplifies operations related to the biennial operative validation foreseen by D.M. 329/04 and reduces drastically the cost.
- PRATICAL:** It is interchangeable with EU series valve and therefore can be mounted on the corresponding check-lock series valve.
- SAFE:** Increases in time the guaranteed stability of parameter settings.
- ECO COMPATIBLE:** More compact than standard products on the market.

Available for all dimensions of stationary tanks and different threads.  
 Approved to European standard EN 14129 , UL 132 and ASME v8.



Replacement Kit  
**68.0.390.0004**



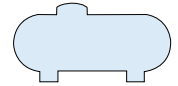
PV Safety valve with separate functions : calibration Traditional External Security Valve function and discharge

Extreme cost reduction of the safety valves re - inspection

## Ordering Information

Part number	Inlet Connection	PRV Orifice (mm)	PRV - Start to discharge setting (bar)	Flow Capacity (m <sup>3</sup> /min)	
				110% PN	120% PN
<b>PV 19</b> <b>PV 20</b>	1¼"-11,5 NPT	19	Default Configuration 256 PSI 17,65 bar	44,0	47,8
<b>PV 24</b> <b>PV 25</b>	1¼"-11,5 NPT NPSM	24,5		90,1	97,9
<b>PV 29</b>	1½"-11,5 NPT	29,5	Customizable upon request	132,0	143,5
<b>PV 31</b>	2"-11,5 NPT	29,5		132,0	143,5





# PV Series



## 70.0233 PV-60

70.0.090.0233

The new PV 60 safety valve is designed for large tanks. This valve introduces an important new feature, namely that of a replacement cartridge, which means that you no longer have to replace the entire safety valve. The PV 60 valve has both economic and operational advantages.



## 01.0.950.0228

Replaceable cartridge

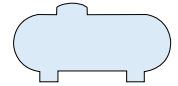


## 68.0.390.0075

Cartridge Replacement Kit

### Ordering Information

Part Number	Bottom Male Connection	Wrench grip hexagon	Thread type	PRV - Start to Discharge Setting (PSIG)	PRV-OVERPRESSURE 20%	Approval	PRV Orifice
					CAPACITY SCFM-AIR		
70.0.090.0233	2"-11.5 F.NPT	4"	Taper	250	11433 -12605	UL/ASME	1.7"
01.0.950.0228				250			
68.0.390.0075	Cartridge Replacement Kit						



## Filler Valves



**VRN 20**  
66.1043



**VRN 20 45°**  
66.1233



**VRN 20L**  
66.1063

**68.0211**  
68.0.290.0211



- Double Back Check Construction - All Omeca filler valves are of the double back check construction where there are: (1) a soft seated up back check, and (2) a metal-to-metal lower back check seat.
- Efficient Flow Characteristics - The efficient flow channel design of the valves gives low flow resistance, prolonging pump and hose life, and high filling capacity.
- Two Piece Body Design
- Smaller filling upper chamber to avoid waste of liquid lpg during every filling operation
- VRN 20L - 66.1063 is designed to make underground tank installations more accessible to fillers.
- VRN 20 45° is designed to make the filling process more user friendly.

### Ordering Information

Part number	Tank connection	Filler connection	Lpg liquid capacity at various differential pressure (GPM)			
			10 PSI	25PSI	50 PSI	75 PSI
66.o.290.1063 (VRN 20L)	1 1/4" - NPT	1 3/4" - 6 ACME	54	100	148	190
66.o.290.1043 (VRN 20)	1 1/4" - NPT	1 3/4" - 6 ACME	54	100	148	190
66.o.290.1233 (VRN 20 45°)	1 1/4" - 11.5 NPT	1 3/4" - 6 ACME 2G	54	100	148	190
68.o.290.0211	1 1/4" - 5 ACME 2G	1 3/4" - 6 ACME 2G				

## Filler Valves with Manual Ball Shut-off Features



**VRN 93**  
66.0221

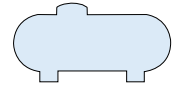


**VRN 88**  
67.0681

- Both these valves are double check filler valves where there are a soft seated upper back check and a (2) metal to metal lower back check seat
- Emergency ball shut-off valve incorporated
- These two versions can be used either for underground (VRN 88) or above ground LPG tanks (VRN 93) thanks to an oriented easy to connect design to the bobtail delivery truck
- All our filler valves have a filling capacity  $\geq 8 \text{ m}^3$  water  $\Delta p = 4 \text{ bar}$

### Ordering Information

Part Number	Tank connection	Filler connection
66.o.290.0221 (VRN 93)	1 1/4 - NPT	1 3/4 - 6 ACME
67.o.490.0681 (VRN 88)	1 1/4 - NPT	1 3/4 - 6 ACME



## Filler Valves with Overfilling Prevention Device



### 66.1101

Filler valve suitable for underground tank. The extended body allows an easier refilling operation.



### 66.1106

Filler valve with high flow capacity suitable for above ground containers. Specify tank size when ordering.



### 66.1145

Double Filling Valve with Automatic Stop and Manual Cut off Device.



### 66.1107 66.1136

Double Filling Valve with Automatic Stop and Manual Cut off Device.

### APPLICATION

These filler valves are designed for horizontal and vertical LPG containers.

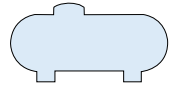
All the valves are equipped with an overfilling prevention device.

Always specify type of tank (horizontal or vertical) diameter of the tank and location of the filler valve in the flange of the tank.

All our filler valves have a filling capacity  $\geq 8 \text{ m}^3$  water  $\Delta p = 4 \text{ bar}$ .

### Ordering Information

Part number	Tank connection	Filler connection	Specify tank dimension when ordering
66.o.290.1101	1 1/4" NPT	1 3/4" ACME	*
66.o.290.1106	1 1/4" NPT	1 3/4" ACME	*
66.o.290.1145	1 1/4" - 11.5 NPT	1 3/4" -6 ACME - 2G	*
66.o.290.1136	1 1/4" - 11.5 NPT	1 3/4" -6 ACME - 2G	*
66.o.290.1107	1 1/4" - 11.5 NPT	1 3/4" -6 ACME - 2G	*



## Liquid Withdrawal Valves



**VL 13**  
**69.0008**

Liquid withdrawal valve

**RL 15**  
**72.0006**

Liquid Transfer Valve to be used with our VL 13 and VLT 18. It incorporates an excess flow limiter.



**VL 25**  
**69.0005**

Liquid withdrawal valve to be used with our RL 25 Liquid Withdrawal Valve.

**RL 25**  
**72.0025**

Liquid Transfer Valve to be used with our VL 25. It incorporates an excess flow device limiter.



**68.0231**  
**68.0.290.0231**

Liquid Reclaiming Connector

**RRL 16 A-P**  
**67.0797 / 0793**

Liquid withdrawal valve complete with protection cap.



**68.0232**  
**68.0.290.0232**

Liquid Reclaiming Connector

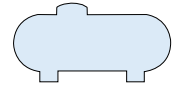
**68.0233**  
**68.0.290.0233**

Connector



### Ordering Information

Part number	Container connection	Outlet connection
69.0.290.0008 (VL 13)	3/4" – 14 NPT	3/4" – 14 NPT (plugged)
69.0.290.0005 (VL 25)	1 1/4" – 14 NPT	M 25 x 1.5 (plugged)
72.0.090.0006 (RL 15)	3/4" – 14 NPT	M 30 x 1.5
72.0.090.0025 (RL 25)	M 25 x 1.5	M 30 x 1.5
67.0.490.0793 (RRL 16)	3/4" – 14 NPT (with*/without* tube threading 3/4" 28UN-2B for dipping)	3/4" – 14 NPT (with plug cap)
67.0.490.0797 (RRL 16)	3/4" – 14 NPT	3/4" – 14 NPT (with plug cap)
68.0.290.0231	M 25 x 1.5-6	3/4" - 6 ACME
68.0.290.0232	3/4" - 14 NPT	3/4" - 6 ACME
68.0.290.0233	3/4" - 6 ACME	3/4" - 6 ACME



## Multi-Service Valves

### GSE 35

**Aboveground and Underground versions available**



Multi-Service Valve equipped with a pressure gauge in glycerine bath, 0÷25 bar scale, and a fixed level gauge to ensure 80% of tank filling. It allows optional installation of an outlet device with excess flow device.

### GS 41

**Aboveground and Underground versions available**



Multi-Service Valve with vertical outlet and fixed liquid level tube which ensures 80% max. filling of the tank.

It incorporates an excess flow device valve, which closes when the flow reaches a rate of 42÷54 Kg/h lpg (a first stage lpg regulator with 40 Kg/h capacity and 2 bar setting point can be attached).

### GS 50

**Aboveground and Underground versions available**



Multi-Service Valve equipped with a pressure gauge in glycerine bath, 0÷25 bar scale, and a fixed level gauge to ensure 80% of tank filling.

It incorporates an excess flow device valve, which closes when the flow reaches a rate of 42 ÷ 54 Kg/h lpg (a first stage lpg regulator with 40 Kg/h capacity and 2 bar setting point can be attached).

## Ordering Information

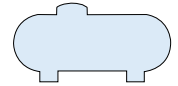
Part number	Container Connection	Outlet Connection	Excess flow device device	Closing Flow-CE (Lpg)	Fixed level gauges with dip tube	Master gauge insp. flange	Relief devices
<b>GSE 35 above gr. GSE 35 undergr.</b>	3/4" – 14 NPT	885" – 14 NGO LH-INT	Installed onto outlet connector	Between 42-54 kg/h lpg <sup>(1)</sup>	Available on all types with tubes in different lengths**	Yes	N/a
<b>GS 41 above gr.</b>	3/4" – 14 NPT	UNI ISO 228/1-G 3/4-B	Inlet Built-in			N/a	N/a
<b>GS 50 above gr. GS 50 undergr.</b>	3/4" – 14 NPT	W20x 1/14"LH	Inlet Built-in for both			Yes	N/a

\* item 16.0.950.0039/0052. Two models depending on the capacity required – please specify when ordering

\*\* please specify length of dip tube, tank capacity and diameter when ordering

<sup>(1)</sup> Data valid when upstream pressure 2 bar and first stage 40 kg/h regulator connected – excess flow device valve performance.

<sup>(2)</sup> Pressure relief device designed to discharge liquid in case of overpressure – The device starts to discharge liquid at 14 bar with a capacity of 1500 lt/h water.



## Multi-Service Valves



**GS 80**  
**80.0.890.8217 (Underground)**  
**80.0.890.8092 (Aboveground)**

Service valve equipped with a pressure gauge in glycerine bath, 0-25 bar scale, and fixed level gauge to ensure 80% of tank filling.



**GS 89**  
**67.0.490.0774**

Multi-Service Valve with vertical outlet and fixed liquid level tube which ensures 80% max. filling of the tank. It incorporates an excess flow device valve, which closes when the flow reaches a rate of 42÷54 Kg/h lpg (a first stage lpg regulator with 40 Kg/h capacity and 2 bar setting point can be attached).

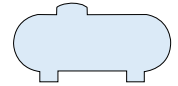


**GS 90 67.0.490.0809 (Underground)**  
**GS 90 L 67.0.490.0820 (Underground with fixed level gauge)**  
**GS 90 H 67.0.490.1013 (Aboveground with fixed level gauge)**

Multi-Service Valve. It incorporates an excess flow device valve, which closes when the flow reaches a rate of 42÷54 Kg/h lpg (a first stage lpg regulator with 40 Kg/h capacity and 2 bar setting point can be attached). It is a special underground and above ground fitting equipped with a pressure relief device that enables liquid discharge at 14 bar.

### Ordering Information

Part number	Container Connection	Outlet Connection
<b>80.8217 (GS 80 under gr.)</b> <b>80.8092 (GS 80 above gr.)</b>	3/4" - 14 NGT	0.885" - 14 NGO LH-INT
<b>67.0773 (GS 89 above gr.)</b> <b>67.0774</b>	1 1/4" - 11.5 NPT	UNI ISO 228/1-G 3/4-B
<b>67.0809 (GS 90 undergr.)</b>	1 1/4" - 11 1/2 NPT	UNI ISO 228/1-G 3/4-B
<b>67.1013 (GS 90 above gr.)</b>	3/4"-14 NPT	M20 x 1.5 -6g



## Underground Multi-Service Valve



**67.0807**  
**67.0.490.0807**

Multi-Service Valve

**67.1034**  
**67.0.490.1034**

Multi-Service Valve with  
Overfilling prevention device

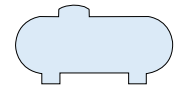


These filler valves are designed for horizontal and vertical LPG containers. All the valves are equipped with an overfilling prevention device. Always specify type of tank (horizontal or vertical) diameter of the tank and location of the filler valve in the flange of the tank.

- All our filler valves have a filling capacity  $\geq 8 \text{ m}^3$  water  $\Delta p = 4 \text{ bar}$ .

### Ordering Information

Part number	Tank connection	Filler connection	Specify tank dimension when ordering
<b>67.0.490.1034</b>	2 1/2" - 8 NPT	1 3/4" ACME	*
<b>67.0.490.1035</b>	2 1/2" - 8 NPT	1 3/4" ACME	*
<b>67.0.490.0807</b>	2 1/2" - 8 NPT	1 3/4" - 6 ACME	*



## LPG Float Gauges

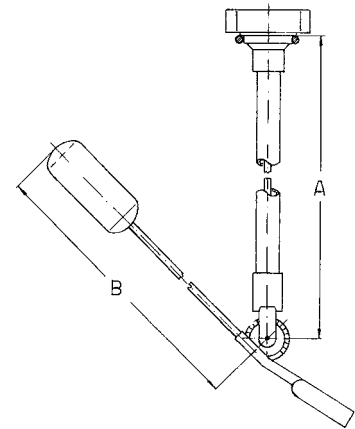
The product was redesigned to provide comprehensive up-dating as well as a 100% operating efficiency. Our LPG float gauge can also provide full performance even under the following critical conditions:

- when humidity for any reason is found within the LPG tank.
- when the transmission components are subjected to very low temperatures.

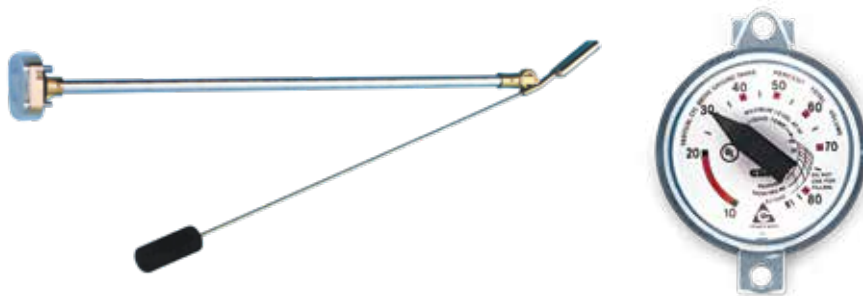
The indicator is complete with plastic cover, or gasket and stainless steel screws.  
All gauges can be manufactured in brass or in zamak.  
Available also with metal cover.  
Customized float gauges can be supplied on demand.

### LPG Float Gauges with 4 Screws

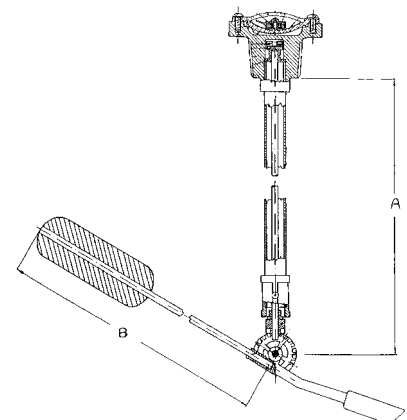
LPG TANK LEVEL GAUGES			
Cod.	Tank model	Ø	Lt.
2070/I A	horizontal	800	990/1000
2071/I A	horizontal	1000	1750/1800
2072/I A	horizontal	1200	3000/5000
2073/I A	horizontal	1250	-
2075/I A	vertical	800	500
2076/I A	spherical	-	990
2077/MTI-E TVA	vertical	1000	1000
2078/MTI-E TVA	vertical	1200	1500/1650
2078-2INT/I TVA	vertical	1200	2250/2300



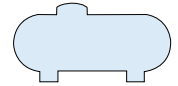
### LPG Float Gauges with Thread



LPG FLOAT GAUGES WITH THREAD 1"							
Cod.	Tank					Dimensions	
	Ø Inches	Ø mm.	Type	Gallons	Litres	A	B
2069.U.1"	24"	609,60	horizontal	120	454,25	338	285
2070.U.1"	30"	762,00	horizontal	250 / 320	946,35 / 1.211,328	412	360
2171.U.1"	37"	939,80	horizontal	500	1.892,70	510	438
2072.U.1"	41"	1.041,40	horizontal	1000	3.785,40	553	477
2073.U.1"	48"	1.219,20	horizontal			612	535
2075.U.1"	30"	762	vertical			640	430







## LPG Float Gauges

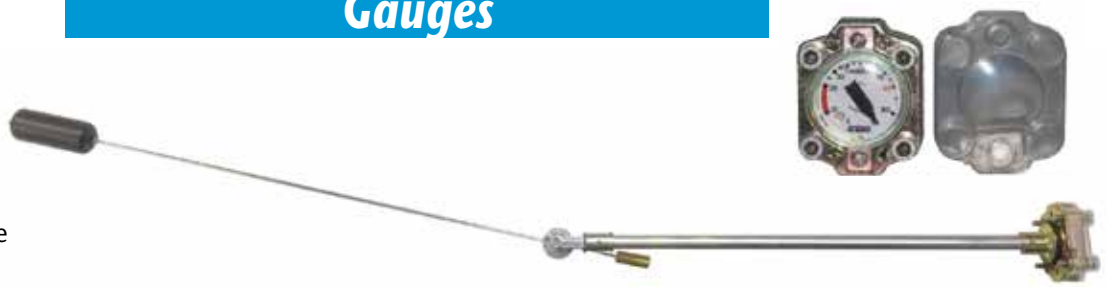


LPG FLOAT GAUGES WITH THREAD 1" 1/4							
Cod.	Tank					Dimensions	
	ø Inches	ø mm.	Type	Gallons	Litres	A	B
2069.U.1"1/4	24"	609,60	horizontal	120	454,25	338	285
2070.U.1"1/4	30"	762,00	horizontal	250/320	946,35 / 1.211,328	412	360
2171.U.1"1/4	37"	939,80	horizontal	500	1.892,70	510	438
2072.U.1"1/4	41"	1.041,40	horizontal	1000	3.785,40	553	477
2073.U.1"1/4	48"	1.219,20	horizontal			612	535
2075.U.1"1/4	30"	762	vertical			640	430

## Side Mounting LPG Float Gauges

**2080-00X(\*)**  
67.0.490.0807

Side Mounting Gauge



These filler valves are designed for horizontal and vertical LPG tanks.

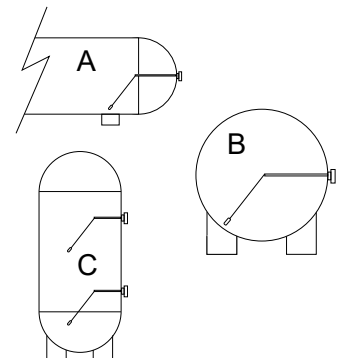
The valves are equipped with O-ring.

The valve is composed by stainless steel screws and plastic cover. Dial without glycerin.

\* The final code is defined before the order according to the tank dimensions and to the level gauge position of the tank.

### Ordering Information

Part number	Kind of Tank	Mounting of the Tank
2080-00X(*)	Horizontal	End (A)
		Shell (B)
2081-00X(*)	Vertical	Shell (C)





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# LPG Cylinder Valves

<b>Gas Phase Valves</b>	<b>PG. 20</b>
<b>Liquid Phase Valves</b>	<b>PG. 24</b>
<b>Level Indicator Valves</b>	<b>PG. 26</b>
<b>Dual Phase Valves</b>	<b>PG. 28</b>
<b>Camping Valves</b>	<b>PG. 29</b>





## LPG Handwheel Valves



**80.1109**  
**80.0.290.1109**

Open-close handwheel valve. Customizable upon request.

**80.3082**  
**80.0.490.3082**

LPG handwheel valve. Customizable upon request.



**80.1059**  
**80.6.290.1059**

Open-close handwheel valve. Customizable upon request.



**80.2051**  
**80.0.390.2051**

Open-close handwheel valve with excess flow limiter.

**80.1209**  
**80.6.290.1209**

Open-close handwheel valve. Customizable upon request.



**80.1146**  
**80.0.290.1146**

Open-close handwheel valve. Customizable upon request.

**80.1168**  
**80.6.290.1168**

Open-close handwheel valve. Customizable upon request.



### Ordering Information

Part number	Container connection	Outlet Connection
<b>80.0.290.1109</b>	W 19.8 x 1/14" LH DIN 477	W 21.8 x 1/14" LH DIN 477 N°2
<b>80.0.490.3082</b>	25E - EN 629-1 (W 28.8 x 1/14" DIN 477)	UNI ISO 228/1 G1/2-A LH
<b>80.6.290.1059</b>	25.5 x 2 CIGPL / NF88-765	W 20 x 1/14" LH EN 15202
<b>80.0.290.1209</b>	KG 19.3 x 1/14" Taper 6 to cone STAS 2667-89	W 21.8 x 1/14" LH DIN 477 N°1
<b>80.0.390.2051</b>	23.2 x 2 GPL Cone 10%	21.7 x 1.814
<b>80.0.290.1146</b>	17E - ISO 11363-1 (W 19.8 x 1/14" DIN 477)	W 21.8 x 1/14" LH
<b>80.6.290.1168</b>	24 x 2 GPL Cone 10%	W 21.8 x 1/14" LH DIN 477 N°1

## LPG Handwheel Valves with Pressure Relief Device



**80.6019**  
80.6.790.6019

Open-close handwheel valve with pressure relief device.

**80.6018**  
80.6.790.6018

Heavy duty valve with pressure relief device.

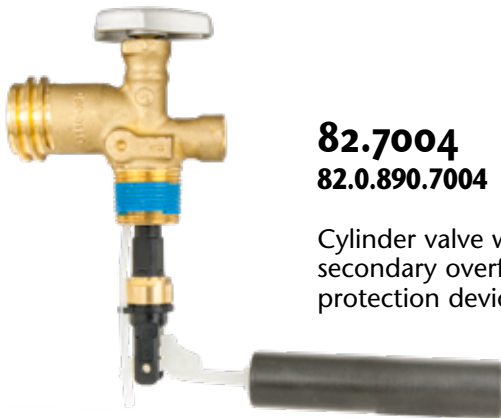


**80.5027**  
80.0.690.5027

Open-close handwheel valve with pressure relief device.

**80.6060**  
80.6.790.6060

Open-close valve with pressure relief valve and plastic diffuser for composite lpg cylinders. Parallel threads inlet connection.



**82.7004**  
82.0.890.7004

Cylinder valve with secondary overfill protection device.

**80.1145**  
80.0.290.1145

Open-close handwheel valve. Customizable upon request.



### Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
80.6.790.6019	ISO11363-1 17E DIN 477	W 21.8 x 1/14" LH DIN 477 N°2	35 bar
80.6.790.6018	25E EN 629-1 W28.8 x 1/14" DIN 477	W 21,8 x 1/14" LH DIN 477 N°1	35 bar
80.6.790.6060	M26 x 1.5-6g	W 21.8 x 1/14" LH DIN 477 N°2	35 bar
80.0.690.5027	25T	G 5/8 LH N° 105	26 bar
82.0.890.7004	M34 x 1.5-6g	1.312" -5 ACME 2G RH-EXT	26 bar
80.0.290.1145	25E - EN 629-1 (W 28.8 x 1/14" DIN 477)	.885"-14 NGO-LH-INT CGA 510	/



## LPG Click On Valves



**66.0011**  
**66.8.290.0011**

LPG Click On valve.  
Customizable upon request.

**66.0001**  
**66.8.290.0001**

LPG Click On valve.  
Customizable upon request.



**66.0005**  
**66.8.290.0005**

LPG Click On valve with pressure relief device. Customizable upon request.

**66.0249**  
**66.8.290.0249**

LPG Click On valve with internal sphere excess flow device. Customizable upon request.



**66.0263**  
**66.8.290.0263**

LPG Click On valve with internal sphere excess flow device. Customizable upon request.

**66.0220**  
**66.8.290.0220**

LPG Click On valve with Pressure Relief Device and fusible plug. Customizable upon request.



### Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
66.8.290.0011	3/4" - 14 NGT	ø 20	/
66.8.290.0001	3/4" - 14 NGT	ø 22	/
66.8.290.0005	3/4" - 14 NGT	ø 20	26 bar
66.8.290.0263	M26 x 1.5-6G	ø 20	26 bar
66.8.290.0249	ø 23.2 x 2 GPL Taper 10%	ø 20	26 bar
66.8.290.0220	25 E - EN 629-1 W28.8 x 1/14" DIN 477	ø 22	21 bar

# LPG Flat Top Valves



**66.0253**  
**66.8.290.0253**

LPG Flat top valve with pressure relief device. Customizable upon request. Weather sealed.

**66.0052**  
**66.8.290.0052**

LPG Click On valve. Customizable upon request. Weather sealed.



**66.0242**  
**66.8.290.0242**

LPG Flat top valve with pressure relief device. Customizable upon request. Weather sealed.

**66.0229**  
**66.8.290.0229**

LPG Flat top valve with pressure relief device. Customizable upon request. Weather sealed.



**66.0224**  
**66.8.290.0224**

LPG Flat top valve. Customizable upon request. Weather sealed.

## Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
66.8.290.0253	∅ 26.3 ± 0.075 x 2 Cone 10% CIGPL 88/765	3/4"-12 BSF (BS84)	26 bar
66.8.290.0052	25E - EN 629 - 1 (W28.8 x 1/14" DIN 477)	M22 x 2 -6g	/
66.8.290.0242	25E - EN 629 - 1 (W28.8x1/14" DIN 477)	∅ 21	/
66.8.290.0229	∅ 26.2 ± 0.1 x 2 Cone 10%	∅ 22	25 bar
66.8.290.0224	3/4" - 14 NGT	∅ 22	/



## LPG Forklift Handwheel Valves with Filtering System



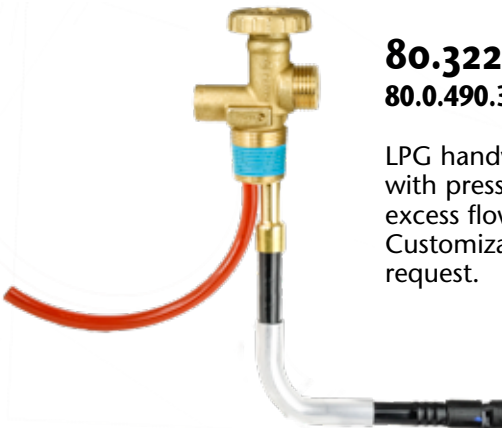
**80.3217**  
**80.6.490.3217**

LPG handwheel valve with filter. Customizable upon request.



**80.3001**  
**80.6.490.3001**

LPG handwheel valve with excess flow device. Customizable upon request.



**80.3221**  
**80.0.490.3221**

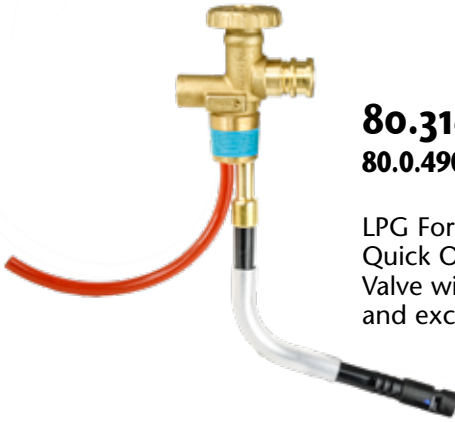
LPG handwheel valve with pressure relief and excess flow devices. Customizable upon request.

### Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
<b>80.6.490.3217</b>	17E ISO 11363/1 (W 19.8 X 1/14" DIN477)	W21.8 x 1.14" LH DIN 477 N° 1	/
<b>80.6.490.3001</b>	17E ISO 11363/1 (W 19.8 X 1/14" DIN477)	W21.8 x 1.814" LH UNI EN 15202 type G.12	/
<b>80.0.490.3221</b>	25E - EN 11363-1 (W 28.8 x 1/14" DIN 477)	W21.8 x 1.814" LH UNI EN 15202 type G.12	26 bar



# LPG Forklift Carburation Valves Horizontal Application



**80.3184**  
**80.0.490.3184**

LPG Forklift Carburation Quick Outlet Connection Valve with pressure relief and excess flow devices.



**66.1275**  
**66.0.290.1275**

LPG Forklift Carburation Quick Connection Valve with pressure relief device, sinterized filter and mechanical level indicator. Fusible plug version available.



**80.8175**  
**80.0.890.8175**

LPG Forklift Carburation Quick Connection Valve with excess flow devices.



**80.3192**  
**80.0.490.0312**

LPG Forklift Carburation handwheel Valve with excess flow device and quick connection.

## Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
66.0.290.1275	25E ISO 11363/1 (W28.8 x 1/14" DIN 477)	ø 22 connection G59	26 bar
80.0.890.8175	17E BS EN ISO 11116/1 (W19.8 x 1/14" DIN 477)	ø 22	/
80.0.490.3192	25E - EN 629-1 (W28.8 x 1/14" DIN 477)	ø 22	/
80.0.490.3184	25E ISO 11363/1 (W28.8 x 1/14" DIN 477)	ø 22	35 bar

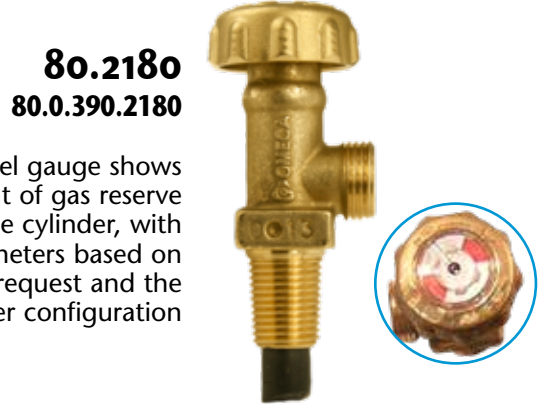


## LPG Valves with Pressure Level Indicator



**80.2164**  
**80.0.390.2164**

The level gauge shows the amount of gas reserve in the cylinder, with parameters based on customer's request and the cylinder configuration

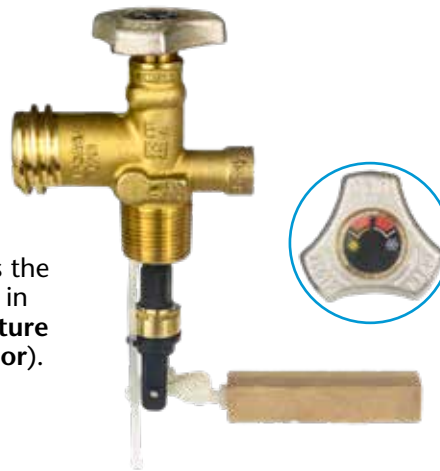


**80.2180**  
**80.0.390.2180**

The level gauge shows the amount of gas reserve in the cylinder, with parameters based on customer's request and the cylinder configuration

**80.8197**  
**80.0.890.8197**

The level gauge shows the amount of gas reserve in the cylinder (**temperature sensitive level indicator**).



**80.2181**  
**80.0.390.2181**

The level gauge shows the amount of gas reserve in the cylinder, with parameters based on customer's request and the cylinder configuration



**80.1223**  
**80.6.290.1223**

The level gauge shows the amount of gas reserve in the cylinder, with parameters based on customer's request and the cylinder configuration

### Ordering Information

Part number	Container connection	Outlet Connection
<b>80.0.390.2164</b>	ø 23.2 x 2 GPL Taper 10%	ø 21.7 x 1.814 NFE 29-650 GPL LH
<b>80.0.390.2180</b>	ø 23.2 x 2 GPL Taper 10%	ø 21.7 x 1.814 NFE 29-650 GPL LH
<b>80.0.390.2181</b>	ø 23.2 x 2 GPL Taper 10%	ø 21.7 x 1.814 NFE 29-650 GPL LH
<b>80.6.290.1223</b>	ø 23.2 x 2 GPL Cone 10%	W20 x 1/47" UNI 11144 LH
<b>80.0.890.8197</b>	3/4" - 14 NGT	1.312-5 ACME - 2G RH-EXT

## LPG Valves with Mechanical Level Indicator



**66.1275**  
**66.0.290.1275**

LPG Forklift Carburation Quick Connection Valve with pressure relief device, sinterized filter and mechanical level indicator. Fusible plug version available.



**66.0316**  
**66.0.290.0316**

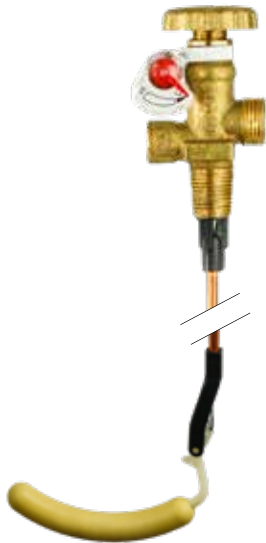
LPG 27 mm Quick Connection Valve with mechanical level indicator.

Wireless level transmitter



**80.8220**  
**80.0.890.8220**

LPG Handwheel Valve with mechanical level indicator.



LPG Quick Connection Valve with mechanical audible level indicator and wireless level transmitter.

**66.0235**  
**66.8.290.0235**

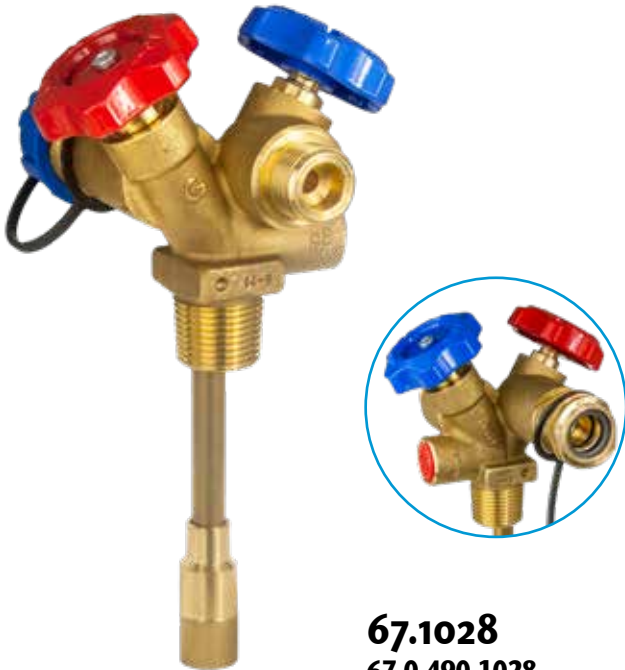
LPG Quick Connection Valve with mechanical audible level indicator.



### Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
66.0.290.0316	25E ISO 11363/1 (W28.8 x 1/14" DIN 477)	ø 27 Connection G59	26 bar
66.8.290.0235	ø 22.1 ± 0.075 x 2 Cone 10%	ø 20 ± 0.1	26 bar
80.0.890.8220	17E ISO 11363/1 (W19.8 x 1/14" DIN 477)	W21.8 x 1.14" LH DIN 477 N° 1	25 bar
66.0.290.1275	25E ISO 11363/1 (W28.8 x 1/14" DIN 477)	ø 22	26 bar

# LPG Multi-Valves



**67.1028**  
**67.0.490.1028**

LPG Dual Valve with excess flow device.  
M 14 x 1 - 6H  
dip tube connection.



**67.1036**  
**67.0.490.1036**

LPG Dual Valve with excess flow device.  
Fast connection for easy dip tube assembly.

## Ordering Information

Part number	Container Connection	Liquid Outlet Connection	Vapour Outlet Connection	Relief Setting Reconditioning
<b>67.0.490.1028</b>	3/4"-14 NGT	.903 -14 NGO LH EXT CGA 555	.885-14 NGO LH INT CGA 510	26 bar
<b>67.0.490.1036</b>	25.5 x 2 CIGPL / NF88 - 765	1 1/4" - 5 ACME - 2G	W21.8x1/14" LH DIN 477 n°1	26 bar

# LPG Camping Valves



### 64.B.290.0001

Camping handwheel valve with pressure relief device.

### 470 T

Camping handwheel valve with pressure relief device.



### 64.B.590.0001

Self-closing Camping valve type 6

### 64.B.590.0002

Self-closing Camping valve type 6



## Ordering Information

Part number	Container connection	Outlet Connection	Relief Setting Reconditioning
64.B.290.0001	17E EN ISO 11363/1 (19.8 x 1/14" DIN477)	3/8" - 19BSPF - LH - AS2473.2 No41	26 bar
470 T	0.715" - 14TPI - BS 341	3/8" - 19BSPF - LH - EXT	26 bar
64.B.590.0001	M22 x 1.25 - 6g	M16 x 1.5 - 6H	/
64.B.590.0002	M22 x 1.25 - 6g	M16 x 1.5 - 6H	/



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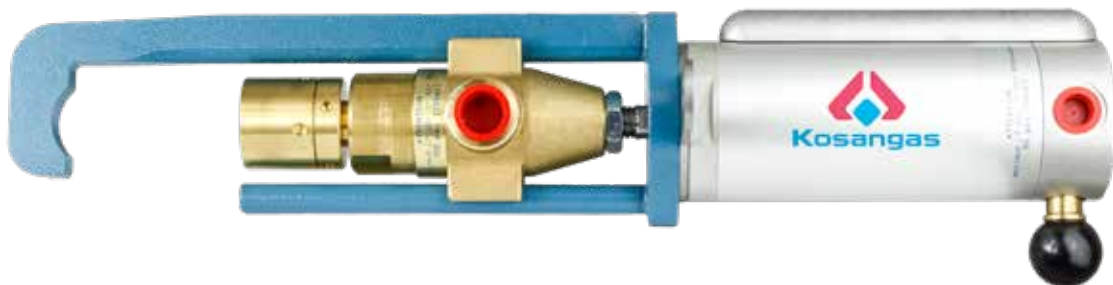


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# Filling Heads

<b>LPG Filling Heads</b>	<b>PG. 32</b>
<b>Filling Heads for Refrigerant Gases</b>	<b>PG. 48</b>





## LPG Filling Head

for LPG Valves 16, 19 and 35 mm  
(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: ISO 228/1-G3/8 or W21,8 x 1/14 LH

Outlet connection: Connects to Kosan LPG valves 16, 19 and 35 mm with and without SRV.

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

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0001	ISO 228/1 - G3/8	KOSAN LPG VALVES 35 mm type 119A - with and without SRV
68.8.290.0002	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	KOSAN LPG VALVES 35 mm type 119A - with and without SRV
68.8.290.0003	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	KOSAN LPG VALVES 35 mm type 119A - with and without SRV
68.8.290.0004	ISO 228/1 - G3/8	KOSANOVA LPG VALVES 16 mm type 139K - with or without SRV
68.8.290.0005	ISO 228/1 - G3/8	KOSANOVA LPG VALVES 19 mm type 139L - with or without SRV
68.8.290.0006	ISO 228/1 - G3/8	KOSANOVA LPG VALVES 19 mm type 139L - with and without SRV
68.8.290.0007	ISO 228/1 - G3/8	KOSANOVA LPG VALVES 16 mm type 179E - with or without SRV
68.8.290.0008	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	KOSANOVA LPG VALVES 16 mm type 179E - with or without SRV





## LPG Filling Head

for LPG Valves 16, 19 and 35 mm  
(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 opening of the pneumatic air supply.
3. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: LPG: ISO 228/1-G3/8  
Pneumatic air: ISO 228/1-G1/4

Outlet connection: Connects to Kosan LPG valves 16, 19 and 35 mm with and without SRV.

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.



Reference Image

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0020	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSAN LPG VALVES 35 mm type 119D - with or without SRV
68.8.290.0021	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSAN LPG VALVES 35 mm type 119D - with or without SRV
68.8.290.0023	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 19 mm type 139L - with or without SRV
68.8.290.0024	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 19 mm type 130L - with or without SRV
68.8.290.0027	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 16 mm type 179D and 130K, with or without SRV
68.8.290.0022	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 16 mm type 179 and 130K with or without SRV
68.8.290.0028	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 16 mm type 179D with or without SRV
68.8.290.0140	LPG: ISO 228/1 - G3/8 PNEUMATIC AIR: ISO 228/1 - G1/4	KOSANOVA LPG VALVES 35 mm



## LPG Filling Head

for LPG Valves 16 mm Kosanova  
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: W21,8 x 1/14 or ISO 228/1 - G 1/4

Outlet connection: Connects to Kosanova LPG valves type 179A, 16 mm with and without SRV.

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.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0025	W 21,8 x 1/14 LH	KOSANOVA LPG VALVES type 179A, 16 mm with and without SRV
68.8.290.0026	ISO 228/1 - G1/4	KOSANOVA LPG VALVES type 179A, 16 mm with and without SRV
68.8.290.0135	W 21,8 x 1/14 DX	KOSANOVA LPG VALVES type 179A, 16 mm with and without SRV



# LPG Filling Head

for LPG Valves 20, 21, 22, 25.6, 27, 35 mm  
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: ISO 228/1-G3/8 or W21,8 x 1/14 LH

Outlet connection: Connects to all Compact LPG valves 20 ,21, 22, 25.6, 27 and 35 mm with and without SRV.

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.

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.



Reference Image

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0009	ISO 228/1 - G3/8	COMPACT LPG VALVES 20 mm type 189B - with and without SRV
68.8.290.0010	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	COMPACT LPG VALVES 20 mm type 189B - with and without SRV
68.8.290.0011	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	COMPACT LPG VALVES 20 mm type 189B - with big SRV
68.8.290.0012	ISO 228/1 - G3/8	COMPACT LPG VALVES 27 mm type 189C (SHELL) - with and without SRV
68.8.290.0013	ISO 228/1 - G3/8	COMPACT LPG VALVES 22 mm type 189G - with and without SRV
68.8.290.0014	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	COMPACT LPG VALVES 22 mm type 189G - with and without SRV
68.8.290.0015	ISO 228/1 - G3/8	COMPACT LPG VALVES 21 mm type 189J - with and without SRV
68.8.290.0016	W 21,8 x 1/14 LH	COMPACT LPG VALVES 21 mm type 189J - with and without SRV
68.8.290.0017	DIN 259-1/2" NPT	COMPACT LPG VALVES 21 mm type 189J - with and without SRV
68.8.290.0018	ISO 228/1 - G3/8	COMPACT LPG VALVES 25.6 mm type 189N - with and without SRV
68.8.290.0124	ISO 228/1 - G3/8	COMPACT LPG VALVES 20 mm (Flat-top) with and without SRV
68.8.290.0139	ISO 228/1 - G3/8 or W 21,8 x 1/14 LH	COMPACT LPG VALVES 35 mm (Snap-on) with and without SRV



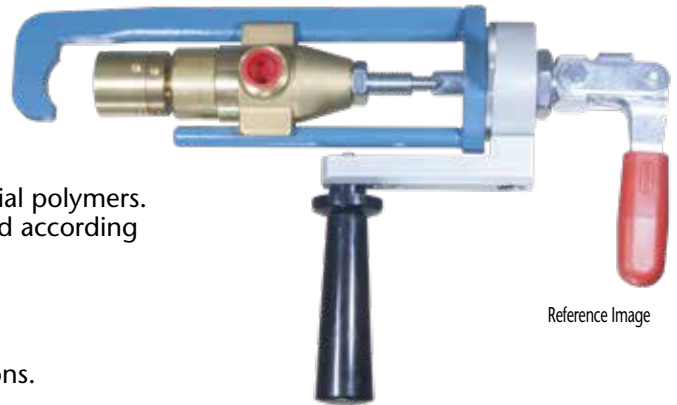
## LPG Filling Head for Standard Handwheel Valve Male

### 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.



Reference Image

Inlet connection: LPG: 3/8" GAS

Outlet connection: Connects to Standard Handwheel Valve Male thread outlet with and without SRV.

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 NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0157	3/8" GAS	Standard Handwheel Valve Male thread outlet with and without SRV
68.8.290.0161	3/8" GAS	Standard Handwheel Valve Male thread outlet with and without SRV (special gasket connection)



# LPG Filling Head

*for LPG Valves 20, 21, 22, 24.8, 25.6, 27 mm*  
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: ISO 228/1-G3/8  
Pneumatic air: ISO 228/1-G1/4

Outlet connection: Connects to Compact LPG valves 20, 21, 22, 24.8, 26.6 and 27 mm with and without SRV.

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

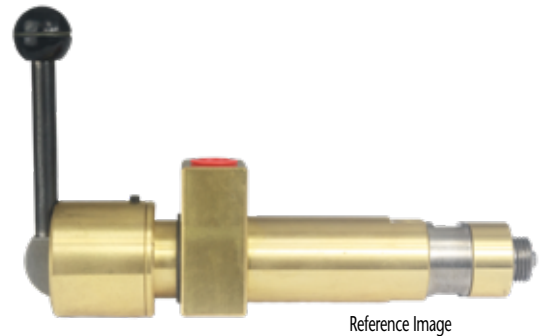
REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0029	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 27 mm - type 189C and to most SHELL type valves with and without SRV
68.8.290.0030	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 20 mm type 189D - with and without SRV
68.8.290.0031	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 22 mm type 189H - with and without SRV
68.8.290.0032	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 21 mm type 189J - with and without SRV
68.8.290.0033	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 21 mm type 189J - with and without SRV
68.8.290.0034	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 25.6 mm type 189N - with and without SRV
68.8.290.0116	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 24.8 mm with and without SRV
68.8.290.0137	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 22 mm type 189H - with and without SRV
68.8.290.0138	LPG: ISO 228/1 - G3/8 Pneumatic air: ISO 228/1 - G1/4	COMPACT LPG VALVES 21 mm type 189J - with and without SRV



## LPG Filling Head 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.



Reference Image

### 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: 1/4" GAS

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 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 64-0-590-2028

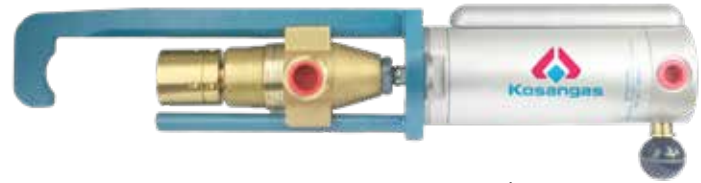
REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0053	1/4" GAS	M16 x 1,5 with and without SRV
68.8.290.0113	1/4" GAS	M16 x 1,5 with and without SRV
68.8.290.0118	1/4" GAS	3/8 19 BSP RH with and without SRV
68.8.290.0120	1/4" GAS	3/8 19 BSP RH with and without SRV
68.8.290.0159	1/4" GAS	3/8 19 BSP RH with and without SRV



# LPG Filling Head 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: 3/8" G - Pneumatic air : 1/4" G

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.

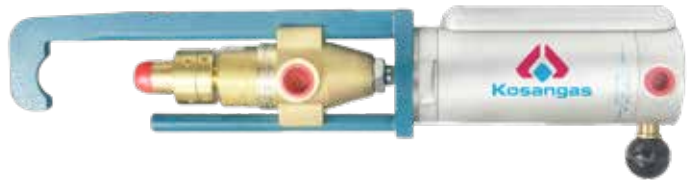
REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0042	PNEUMATIC AIR 1/4" LPG 3/8"	Standard Handwheel male outlet without SRV Type 129A
68.8.290.0049	PNEUMATIC AIR 1/4" LPG 3/8"	Standard Handwheel male outlet without SRV Type 129A
68.8.290.0136	PNEUMATIC AIR 1/4" LPG 3/8"	Standard Handwheel male outlet without SRV Type 129A



## LPG Filling Head 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: 3/8" G  
Pneumatic air: 1/4" G.

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.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0044	PNEUMATIC AIR 1/4" LPG 3/8"	Female POL thread valves with and without SRV Type 129A
68.8.290.0133 (left hand version)	PNEUMATIC AIR 1/4" LPG 3/8"	Female POL thread valves with and without SRV Type 129A
68.8.290.0054	PNEUMATIC AIR 1/4" LPG 3/8"	Female POL thread valves with and without SRV Type 129A
68.8.290.0048	PNEUMATIC AIR 1/4" LPG 3/8"	Female POL thread valves with and without SRV Type 129A





# LPG Filling Head

## 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: 3/8" G  
Pneumatic air : 1/4" G.

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 connector at the end of the clamping brace is pushed into the undercut of the bayonet. Once the Filing 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.

Suitable for: Omeca valves 66.0.290.0136, 66.0.290.0145.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0046	LPG 3/8" G PNEUMATIC AIR 1/4" G	Automatic bayonet valve with and without SRV Type 129A
68.8.290.0109	LPG 3/8" G PNEUMATIC AIR 1/4" G	Clip-on cylinder valve



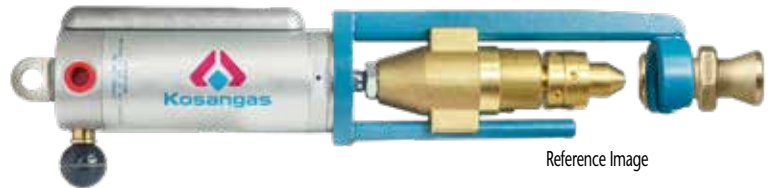
## LPG Filling Head

for Coupling 66-0-290-1024

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 off 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: 3/8" G  
Pneumatic air: 1/4" G.

Outlet connection: Connects to Omeca Coupling 66-0-290-1024 (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 Filing 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.

Suitable for: Omeca valve 66-0-290-1024.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0047	LPG 3/8" G PNEUMATIC AIR 1/4" G	Omeca coupling 66.0.290.1024 Type 129A



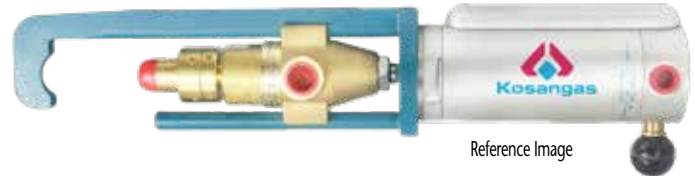
# LPG Filling Head

## 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: 3/8" GAS  
Pneumatic air: 1/4" GAS

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 67.0.490.0780)

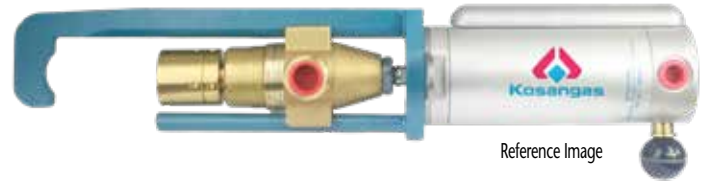
REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0045	LPG 3/8" G PNEUMATIC AIR 1/4" G	OPD - female POL thread valve with check-lock with and without SRV Type 129A
68.8.290.0050	LPG 3/8" G PNEUMATIC AIR 1/4" G	OPD - female POL thread valve with check-lock with and without SRV Type 129A
68.8.290.0052	LPG 3/8" G PNEUMATIC AIR 1/4" G	OPD - female POL thread valve with check-lock with and without SRV Type 129A



## LPG Filling Head 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: 3/8" G  
Pneumatic air: 1/4" G

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.

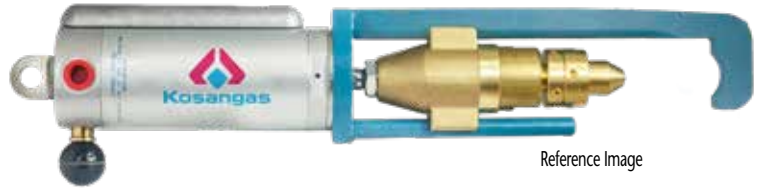
REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0051	LPG 3/8" G PNEUMATIC AIR 1/4" G	Standard Handwheel (SAE FLARE) male outlet without SRV Type 129A



# LPG Filling Head 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: 3/8" NPT  
Pneumatic air: 1/4" NPT

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.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0103	LPG 3/8" G PNEUMATIC AIR 1/4" G	Fork lift truck - female ACME thread valve with check-lock with SRV



## LPG Filling Head for Tank Filler 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.



Reference Image

### FEATURES

1. Easy and safe to connect and disconnect. Filling is initiated by operating the manual handle.
2. Slim design makes it easy to handle and it fits easily inside any shroud.
3. Safety lock for disconnection
4. The safe valve connection assures that the LPG can only flow when the filling head is leak tight connected to a filler valve.

Inlet connection: 3/4" G

Outlet connection: 1 3/4" x 6 ACME - 2g connects to Cavagna filler valves like 66.0.290.1043, 6602901122

Supply pressures: The Filling Head is designed to operate within the normal LPG supply pressures.  
Liquid filling product: 1 - 15 bar.

**Function and Maintenance:** The Filling Head is easy and safe to operate. The head outlet is attached leak tight to the valve inlet manually. While pressing down the manual handle the filling head spindle opens and the gas starts to flow. When the tank is full the filling is stopped and the filling head is removed by unscrewing the nut manually. By checking the safety lock and the manual handle reverses.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0057	3/4" G	1 3/4" x 6 ACME - 2g Filler valve example 6602901043

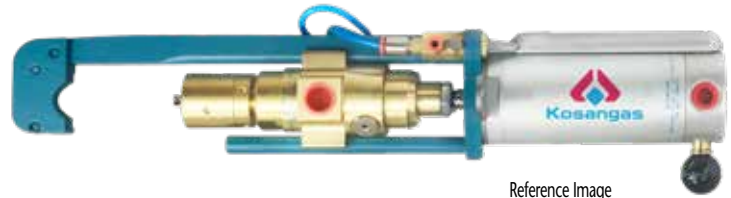


# LPG Filling Head

*for LPG Valves with Anti-filling device*  
*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: 3/8" G, Pneumatic air: 1/4" G

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.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0168	LPG 3/8" G. PNEUMATIC AIR 1/4" G.	Standard LPG valve with antifilling Type 129A



## Refrigerant Gases Filling Head

for Handwheel Valves

Manually Operated with Anti-filling opener

### 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. Limited loss of product when the gas flow is cut off and the filling head is removed from the cylinder valve.
2. Includes anti-filling device opener operating when the handle is switched to start the filing operation.
3. Connected and disconnected manually by rotating the threaded ring nut.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

The Filling Head is supplied with a chrome plated surface for long durability.

Inlet connection: Refrigerant gas: W21,7 x 1/14" RH male, 625-18 UNF-2A-RH-EXT (3/8" SAE FLARE)

Outlet connection: Connects to valve outlet threads W21,7 x 1/14" RH male or W21,8 x 1/14" RH male Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
 Liquid filling product: 1-20 bar.  
 Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

Function and      The Filling Head is easy to operate. The anti-filling opener spindle is connected to the end of the anti-filling spindle of the cylinder valve, then the ring nut threaded end is connected to the valve outlet to obtain a leak tight connection. After this the handle lever is operated and the gas will start filling the cylinder.  
 When the cylinder is full, the handle lever is again operated to stop the filling process, and the ring nut is removed from the valve outlet. This in turn allows the anti-filling opener spindle to be disconnected and the filling head is removed from the cylinder valve.  
 All rubber seals in contact with the gas as can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0108	REFRIGERANT GAS W21,7 x 1/14" RH.	W21,7 x 1/14" RH.
68.8.290.0115	625-18 UNF-2A-RH-EXT 3/8" SAE FLARE	W21,7 x 1/14" RH.
68.8.290.0103	REFRIGERANT GAS W21,7 x 1/14" RH.	W21,8 X 1/14" RH.

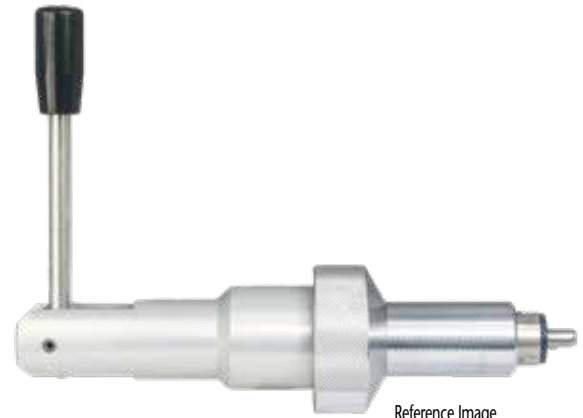




## **Refrigerant Gases Filling Head** *for Handwheel Valves* **Manually Operated with Anti-filling opener**

### 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. Limited loss of product when the gas flow is cut off and the filling head is removed from the cylinder valve.
2. Includes anti-filling device opener operating when the handle is switched to start the filling operation.
3. Connected and disconnected manually by rotating the threaded ring nut
4. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: Refrigerant gas: G 3/8".

Outlet connection: Connects to valve outlet threads 1,030 x 14 NGO RH, CGA660  
Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
Liquid filling product: 1-20 bar.  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

Function and Maintenance: The Filling Head is easy to operate. The anti-filling opener spindle is connected to the end of the anti-filling spindle of the cylinder valve, then the ring nut threaded end is connected to the valve outlet to obtain a leak tight connection. After this the handle lever is operated and the gas will start filling the cylinder.  
When the cylinder is full, the handle lever is again operated to stop the filling process, and the ring nut is removed from the valve outlet. This in turn allows the anti-filling opener spindle to be disconnected and the filling head is removed from the cylinder valve.  
All rubber seals in contact with the gas as can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0114	REFRIGERANT GAS G 3/8"	1,030 x 14 NGO RH, CGA660
68.8.290.0126 (Short version)	REFRIGERANT GAS G 3/8"	1,030 x 14 NGO RH, CGA660



## Refrigerant Gases Filling Head for Handwheel 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.



Reference Image

### FEATURES

1. Limited loss of product when the gas flow is cut off and the filling head is removed from the cylinder valve.
2. Connected and disconnected manually by rotating the threaded ring nut
3. Slim design makes it easy to handle and it fits easily inside any shroud.

The Filling Head is supplied with a chrome plated surface for long durability.

Inlet connection: Refrigerant gas: W21,7 x 1/14" RH.

Outlet connection: Connects to valve outlet threads W21,7 x 1/14" RH.  
Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
Liquid filling product: 1-20 bar  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

Function and Maintenance: The Filling Head is easy to operate. The ring nut threaded end is connected to the valve outlet to obtain a leak tight connection. After this the handle lever is operated and the gas will start filling the cylinder. When the cylinder is full, the handle lever is again operated to stop the filling process, and the ring nut is removed from the valve outlet. All rubber seals in contact with the gas as can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0121	REFRIGERANT GAS W21,7 x 1/14" RH.	W21,7 x 1/14" RH.



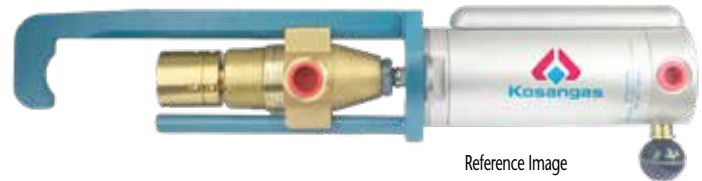
# Refrigerant Gases Filling Head

## 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 when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Includes anti-filling device opener.
3. Balanced jig for easy suspension between filling operations.
4. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: Refrigerant: 3/8" GAS  
Pneumatic air: 1/4" GAS.

Outlet connection: Connects to standard outlet male threads such as G1, G2, G4, G5, G6, G8, G11, G12 acc. to EN 12864.  
Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1-20 bar.  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

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 inlet, 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 FREON 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.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0043	REFRIGERANT GAS 3/8" AIR 1/4"	Standard Hand wheel male outlet with and without SRV Type 129A



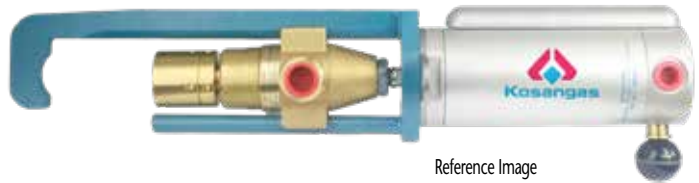
# Refrigerant Gases Filling Head

## 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 when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Includes anti-filling device opener operating automatically when the outlet engages the valve.
3. Balanced jig for easy suspension between filling operations.
4. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: Refrigerant gas: 3/8" G  
Pneumatic air: 1/4" G.

Outlet connection: Connects to standard outlet valve male threads such as G1, G2, G4, G5, G6, G8, G11, G12 acc. to EN12864.

Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1-20 bar  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

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. Then simultaneously the gas seal opens initiating the flow of refrigerant gas into the cylinder. 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 disconnecting the filling head outlet from the cylinder valve. All rubber seals in contact with the gas as well as the complete pneumatic cylinder can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0105	REFRIGERANT GAS 3/8" PNEUMATIC AIR 1/4"	1/4" SAE Flare valve outlet with and without SRV



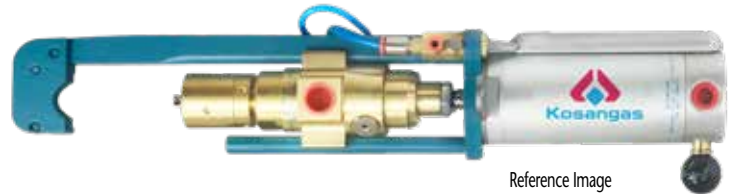
# Refrigerant Gases Filling Head

## for Handwheel Valves

### Semi-automatic with Antifilling opener

### 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 when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Includes anti-filling device opener.
3. Balanced jig for easy suspension between filling operations.
4. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

**Inlet connection:** Refrigerant: 3/8" GAS  
Pneumatic air: 1/4" GAS.

**Outlet connection:** Connects to standard outlet male threads such as G1, G2, G4, G5, G6, G8, G11, G12 acc. to EN 12864. Valves with and without SRV.

**Supply pressures:** Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1-20 bar.  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

**Function and Maintenance:** The Filling Head is easy to operate. The clamping brace is placed around the neck of the cylinder valve while the central Maintenance: anti-filling opener pin is connected to the end of the anti-filling device spindle. As the Filling Head outlet is aligned with the 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. Then the anti-filling device is opened and simultaneously the gas seal opens initiating the flow of refrigerant gas into the cylinder. 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, closing the anti-filling device disconnecting the filling head outlet from the cylinder valve. All rubber seals in contact with the gas as well as the complete pneumatic cylinder can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0065	REFRIGERANT GAS 3/8" PNEUMATIC AIR 1/4"	Standard Hand wheel male outlet with and without SRV
68.8.290.0127 (Stronger version)	REFRIGERANT GAS 3/8" PNEUMATIC AIR 1/4"	Standard Hand wheel male outlet with and without SRV
68.8.290.0134	REFRIGERANT GAS 3/8" PNEUMATIC AIR 1/4"	Standard Hand wheel male outlet with and without SRV



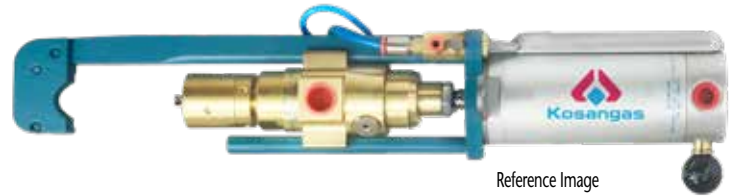
# Refrigerant Gases Filling Head

*for Handwheel Valves*

*Semi-automatic with Antifilling opener*

**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. Insignificant loss of product when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Includes anti-filling device opener operating automatically when the outlet engages the valve.
3. Balanced jig for easy suspension between filling operations.
4. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: Refrigerant gas: 3/8" G  
Pneumatic air: 1/4" G.

Outlet connection: Connects to outlet valve male thread 1,030"-14 NGO-RH-EXT, CGA660.  
Valves with and without SRV.

Supply pressures: Designed to operate within the normal supply pressures.  
Pneumatic supply: 6 - 10 bar. Liquid filling product: 1-20 bar  
Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

Function and Maintenance: The Filling Head is easy to operate. The clamping brace is placed around the neck of the cylinder valve while the central anti-filling opener pin is connected to the end of the anti-filling device spindle. 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. Then the anti-filling device is opened and simultaneously the gas seal opens initiating the flow of refrigerant gas into the cylinder. 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, closing the anti-filling device disconnecting the filling head outlet from the cylinder valve. All rubber seals in contact with the gas as well as the complete pneumatic cylinder can be exchanged.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0128	REFRIGERANT GAS 3/8" PNEUMATIC AIR 1/4"	1,030"-14 NGO-RH-EXT, CGA660 male outlet with and without SRV

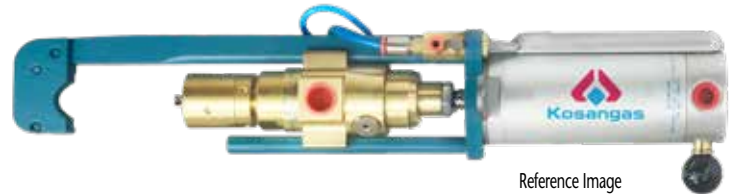


# Refrigerant Gases Filling Head

*for Handwheel Valves*  
*Semi-automatic with Antifilling opener*  
*for filling line evacuation*

## 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 when the gas flow is cut off and the filling head is released from the cylinder valve.
2. Includes anti-filling device opener operating automatically when the outlet engages the valve.
3. Balanced jig for easy suspension between filling operations.
4. Easy to manually connect and disconnect. Filling is initiated simultaneously with the connection to the valve.
5. Slim design makes it easy to handle and it fits easily inside any shroud.

Inlet connection: Refrigerant gas: 3/8" G  
 Pneumatic air: 1/4" G

Outlet connection: Connects to standard outlet valve male threads such as G1, G2, G4, G5, G6, G8, G11, G12 acc. to EN12864. Valves with and without SRV.
















Supply pressures: Designed to operate within the normal supply pressures.  
 Pneumatic supply: 6 - 10 bar. Liquid filling product: 1-20 bar  
 Filling time approx. 2 sec./Kg liquid at 7 bar differential pressure.

Function and Maintenance: The Filling Head is easy to operate. The clamping brace is placed around the neck of the cylinder valve while the central anti-filling opener pin is connected to the end of the anti-filling device spindle. As the Filling Head outlet is aligned with the 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. Then the anti-filling device is opened and simultaneously the gas seal opens initiating the flow of refrigerant gas into the cylinder. 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, closing the anti-filling device disconnecting the filling head outlet from the cylinder valve. All rubber seals in contact with the gas as well as the complete pneumatic cylinder can be exchanged. The Filling Head is equipped with a gas recovery system.

REFERENCE NUMBERS	INLET CONNECTION	OUTLET CONNECTION
68.8.290.0112	REFRIGERANT GAS 3/8" AIR 1/4"	Standard Handwheel male outlet with and without SRV













## LPG Filling Heads

Valve Model	Semi-Automatic Filling Heads	Manual Filling Heads
 Kosanova 16 mm 176A, 130K	68.8.290.0022 68.8.290.0027	68.8.290.0004 68.8.290.0007 68.8.290.0008
 Kosanova 16 mm 176A, 179D	68.8.290.0022 68.8.290.0027 68.8.290.0028	68.8.290.0025 68.8.290.0026 68.8.290.0135 (Dx)
 Kosanova 19 mm 130L	68.8.290.0023 68.8.290.0024	68.8.290.0005 68.8.290.0006
 Jumbo, Kosan 35mm type 130B	68.8.290.0020 68.8.290.0021	68.8.290.0001 68.8.290.0002 68.8.290.0003
 Compact 20 mm (Quick-on)	68.8.290.0030	68.8.290.0010 68.8.290.0011 68.8.290.0124 68.8.290.0009
 Compact 21 mm (Quick-on)	68.8.290.0032 68.8.290.0033 68.8.290.0138	68.8.290.0015 68.8.290.0016 68.8.290.0017
 Compact 22 mm (Quick-on)	68.8.290.0031 68.8.290.0137	68.8.290.0013 68.8.290.0014
 Compact 24,8 mm (Quick-on)	68.8.290.0116	/
 Compact 25,6 mm (Quick-on)	68.8.290.0034	68.8.290.0018
 Compact 27 mm (Snap-Tight)	68.8.290.0029	68.8.290.0012
 Compact 35 mm (Snap-On) (66.0.290.1256)	68.8.290.0140	68.8.290.0139
 Camping valve (M16x1,5)	/	68.8.290.0053 68.8.290.0113 68.8.290.0159
 Camping valve (3/8" - 19BSP)	/	68.8.290.0120 68.8.290.0118
 Standard Handwheel Valve Male Thread outlet	68.8.290.0042 68.8.290.0049	/
 Standard Handwheel Valve POL outlet (example: 80.0.490.3135 80.0.490.5016 80.0.890.8198)	68.8.290.0044 68.8.290.0133 68.8.290.0054 68.8.290.0048	68.8.290.0129














# LPG Filling Heads

Valve Model	Semi-Automatic Filling Heads	Manual Filling Heads
 Omega valve (example 67.0.490.0780)	<b>68.8.290.0045</b>	/
 Bajonet valves (examples 66.0.290.0136 66.0.290.0145)	<b>68.8.290.0046</b>	/
 Omega coupling (example 66.0.290.1024)	<b>68.8.290.0047</b>	/
 Fork lift truck G3/8 sin.	<b>68.8.290.0103</b>	/
 OPD valves Type 1 ACME American valves	<b>68.8.290.0050</b> <b>68.8.290.0052</b>	<b>68.8.290.0055</b>
 3/8" SAE Flare outlet (example 80.0.390.2062)	<b>68.8.290.0051</b>	/
 Filler Valve 1 3/4" x 6 ACME (examples 6602901122 6602901043)	/	<b>68.8.290.0057</b>
 Standard LPG valve with anti-filling (example 80.6.490.3003)	<b>68.8.290.0168</b>	/
 Standard Handwheel Valve Male thread outlet (example 8003902051)	<b>Not applicable</b>	<b>68.8.290.0157</b> <b>68.8.290.0161</b>
 Clip on cylinder valve (example 6602901235)	<b>68.8.290.0109</b>	<b>Not applicable</b>



## Filling Heads for Refrigerant Gases

Valve Model	Semi-Automatic Filling Heads	Manual Filling Heads
 "W21,7 x 1/14" RH +/- anti-filling	/	<b>68.8.290.0108</b> <b>68.8.290.0115</b>
 "W21,8 x 1/14" RH +/- anti-filling	/	<b>68.8.290.0163</b>
 W21,7 x 1/14" RH +/- anti-filling (7601900193) W21,8 x 1/14" RH +/- anti-filling	<b>68.8.290.0065</b>	<b>68.8.290.0121</b>
 W21,7 x 1/14" LH +/- anti-filling (7601900193) W21,8 x 1/14" LH +/- anti-filling (7601900420)	<b>68.8.290.0065</b>	/
 1,030 x 14 NGO RH, CGA660 +/- anti-filling	<b>68.8.290.0128</b>	<b>68.8.290.0114 (short version)</b> <b>68.8.290.0126 (short version)</b>
 Std. male outlets - anti-filling	<b>68.8.290.0043</b>	/
 Std. male outlets +/- anti-filling (7601900429)	<b>68.8.290.0065</b> <b>68.8.290.0112</b> <b>68.8.290.0127</b>	/
 1/4" SAE Flare -anti-filling	<b>68.8.290.0105</b>	/
 W21,8 x 1/14" RH +/- anti-filling (example 7601900333)	<b>68.8.290.0134</b>	/



**CAVAGNA group**

Wherever gas is used, we are there



# Quality Management System to ISO 9001 standard

## Quality: our prerogative!

Registration to ISO 9001 standards is for us not only a certificate. Our policy is to achieve the outmost customer satisfaction, through the effectiveness of our Quality Management Systems and through continuous improvement to suit the dynamic Customers' expectations. Cavagna Group's Environment Management System is certified in compliance with the international standard ISO 14001.

Personnel involvement, training and motivation are few of the elements that we rely on to achieve quality from each person and from each process.

## Quality: our "must"

## **WARRANTY AND LIABILITY CONDITIONS (Not Valid for USA and Canada)**

### **1 - Compliance of the brand new products**

The original seller of the brand new product (hereinafter referred to as Product) hereby warrants that the Product corresponds in quantity, quality, and type as specified in the sales contract (or, if missing, in the order's confirmation) for the Product and that the Product is without defects that could render it unfit for the use to which it is intended. The original seller of the Product is identified on the invoice for the Product and is referred to herein as the "Warrantor."

### **2 - Extent of the guarantee**

The warranty is limited only to defects in a) the design of the Product, b) the materials in the Product or c) the construction of the Product, which can be attributed to the Warrantor. The warranty does not apply in the case where the buyer is unable to prove correct storage and maintenance of the brand new products, or in the case the buyer has modified the Product without the prior written agreement of the Warrantor. Furthermore, the Warrantor is not liable for defects in the brand new product due to the normal wear and deterioration of those parts of the Product, which by their nature, are subject to rapid and continuous wear and tear (e.g.: lining, etc.).

In general, in no case shall the Warrantor be liable for defects in compliance that arise after the transfer of risk or possession of the Product to the buyer has taken place.

The warranty is valid only when the brand new products are installed, used and maintained in conformity with the warnings and instructions provided by the Warrantor in the instruction manual or other Product literature and in conformity with the applicable laws, standards or regulations existing in the location where the brand new products are used or, in the absence of any applicable laws, standards or regulations, in conformity with the best practices in the applicable industry or trade.

### **3 - Claims**

The buyer is required to check the compliance of the brand new Products and confirm the absence of flaws. The buyer should report any flaws or defects in brand new Products, in the following ways and time. Failure to properly and timely report a defect will void the warranty:

a) Claims for shortage or damages that could have been apparent from an examination of the exterior of the Product's packaging contents must be reported as soon as the brand new Products arrives at their place of destination or, in any event, no more than 5 days after that time.

b) Claims relevant to quantity, colour, quality flaws or defects or non-compliance that the buyer should have been able to identify as soon as it took possession of the Product, must be made shortly after the time when the brand new Product arrives at its place of destination or, in any event, no more than 15 days after that time;

c) Hidden flaws, defects or non-compliance (that is, those not identifiable according to the inspection imposed by law and by the preceding subparagraphs) must be reported within 30 days after the discovery or in any event, no more than 5 years from the delivery date.

Claims must be sent by registered letter, addressed to the head office of the Warrantor and must describe in detail the alleged defect, flaw or non-compliance.

In order to preserve this warranty, the buyer must not attempt any disassembly repairs or modifications on the brand new product without the Warrantor's prior written agreement.

The buyer forfeits and waives its rights under this warranty if the buyer does not consent to every reasonable request of the Warrantor, or if after the Warrantor has requested the return of the defective brand new products at buyer's own expenses, the buyer fails to return the Product within 5 working days from the request.

In the event that the warranty claim is ultimately determined, in the sole discretion of Warrantor, to be unfounded, the buyer will reimburse the Warrantor all expenses incurred by Warrantor in evaluating the warranty claim (travel, expert valuations, transport expenses etc.).

### **4 - Remedies**

Following a report by the buyer duly made in accordance with the previous point 3, the Warrantor, within a reasonable period depending on the type of claim, may, at Warrantor's sole reasonable discretion:

- a) Supply EXW to the buyer products of the same kind and quantity as those that have been proved to be defective or not in compliance with the contract; in such a case the Warrantor can require the return of the defective product, which becomes property of the Warrantor. In case of additional costs related to the replacement of a product proved to be defective or not in compliance, Warrantor and buyer shall jointly and previously agree how

to apportion the costs.

b) Communicate in writing the cancellation of the contract, and offering a refund of the amount paid for the replaced product

No other cost (such as disassembling and/or reassembling of the products, transportation from/to the premises of buyer's customers, etc.) shall be charged to or paid by the Warrantor, unless previously expressly agreed in writing by the Warrantor.

### **5 - Limit of seller's liability**

The Warranty provided herein supersedes all legal warranty for defects and compliance, and excludes any other possible liability of the Warrantor, however originating, from the brand new products supplied by Warrantor. In particular, the buyer cannot put forward another claim for compensation in respect of any further damages, request any reduction of the contract price or cancellation of the contract. Once the period of the Warranty has expired no claim can be made against the Warrantor.

In no event shall Warrantor be liable to buyer for any direct, incidental, indirect, consequential or exemplary damages, including without limitation any claim for damages based on lost revenues or profits, however caused.

No exceptions to or modification of this Warranty will be permitted unless expressly and specifically defined and accepted by the parties in writing.

### **6 - Technical regulations**

As far as the brand new product characteristics and specifications are concerned, the Warrantor complies with the legislation and the technical regulations prevailing in Italy and the European Directives, unless otherwise specified in the contractual documentation (i.e. contract, order's confirmation, or invoice); The buyer assumes the risk of any difference between the European Directives plus the Italian regulations and those of the country of destination, regarding the use or installation of the Products, and indemnifies the Warrantor for any such differences it. The Warrantor guarantees the performance of brand new products of manufactured by Warrantor only and exclusively in relation to uses, destinations, applications, tolerances, capacities, etc. that have been expressly indicated by Warrantor and that are incorporated in the contractual documentation (i.e. contract, order's confirmation, invoice).

The buyer is not authorised to dispose of the brand new Products supplied to him by the Warrantor in a way which does not conform to the indications described in the previous sub-paragraph and in the instructions given by Warrantor.

Where the buyer intends the said products to be resold, it shall be buyer's responsibility:

a) to inform the purchasers of the Product from buyer of the correct specifications and uses of the Product;

b) to grant any further periods or extended terms of any warranty provided by buyer only to buyer's purchasers that exceed the warranty granted to buyer by Warrantor according to paragraph 3.

c) the buyer shall not grant or extend any warranty on behalf of Warrantor to any third party.

### **7 - Personal injuries and property damages**

Warrantor shall indemnify buyer from and against any and all claims, demands, losses, liabilities alleged by third parties relating to personal injuries and property damages suffered as a result of a defective product. In such event, Warrantor will exclusively be responsible within the limits, terms and conditions of the product liability insurance policy held by it (a copy of the current policy is available upon request).

In case of potential damages to third parties that may arise from a defective brand new product, the buyer and Warrantor shall work together in good faith to determine the nature and extent of the appropriate measures to be taken, including recall operations. It is understood that the costs and expenses associated with the recall or other measures shall be paid by Warrantor within the limits, the terms and the conditions set forth in Warrantor's liability insurance policy, with the exclusion of the costs connected to the locating and retrieving the Products in the market, which will be paid by the Buyer.





**CAVAGNA group**

Wherever gas is used, we are there

# Our LPG Global Product Brands

**RECA**<sup>®</sup>

**Kosan**<sup>+</sup><sub>LINE</sub><sup>®</sup>

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