
GLPICCOLO

GLPICCOLO

Gas Engeneering technology

About Us

Glpiccolo is a company with three generations of expertise in the LPG, ammonia, and access control markets. Guided by customer focus, innovation, continuous improvement, and sustainability, we are committed to deliver excellence and long-term value.

Our mission is to provide safe and efficient solutions for cylinder filling, storage, distribution, vaporization, and transportation of LPG, ammonia, and other volatile products. Through continuous training, teamwork, and dedication, we ensure high quality, durable products and services that guarantee customer satisfaction.

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GLPICCOLO HAS HIGHLY QUALIFIED STAFF FOR

- Maintenance of products from our line and ball valves.
- Calibration of valves and hydrostatic tests.
- Verification/calibration of safety relief valves with presentation of the Technical Responsibility Report (A.R.T).
- Industrial assemblies.
- Training.

NOTE: In addition to our equipment and accessories, GLPICCOLO supplies all spare parts.

INDEX

MEASUREMENT EQUIPMENT

FILLING EQUIPMENT AND ACCESSORIES

OTHER PRODUCTS

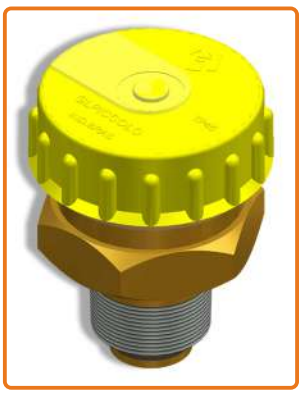
CYLINDER KIT — P 20

Set of equipment and accessories necessary and essential for the safe and efficient use of the P-20 gas cylinder, which is mainly used in forklifts.
It consists of the following items: magnetic gauge, filling valve, relief valve, safety relief valve, and service valve.

MAGNETIC GAUGE MM 20T19

Magnetic measurement of the liquid level contained in the P 20 cylinder.

FILLING VALVE V2B1945AC



Provides fast filling of the P 20 cylinder.

RELIEF VALVE VA L 06

Manual control of the filling level.

SERVICE VALVE VSV 19 M20

Vapor transfer from the P 20 cylinder to consumption with excess flow protection.

SAFETY RELIEF VALVE VSI L 19/25

Relief of excessive pressure of the P 20 cylinder.

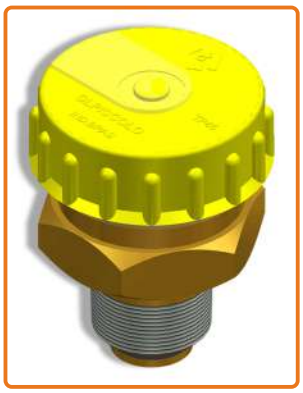
CYLINDER KIT — P 90

Set of equipment and accessories necessary and essential for the safe and efficient use of the P-90 gas cylinder.
It consists of the following items: magnetic gauge, filling valve, relief valve, and service valve.

MAGNETIC GAUGE MM-90-T25

Magnetic measurement of the liquid level contained in the P 90 cylinder.

FILLING VALVE V2B1945AC

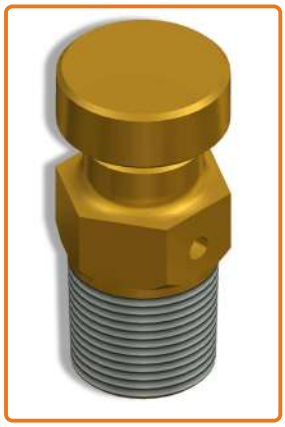


Provides fast filling of the P 90 cylinder.

SERVICE VALVE VSV-PS90

Vapor transfer from the P 90 cylinder to consumption with excess flow protection.

RELIEF VALVE VA-L-06



Manual control of the filling level.

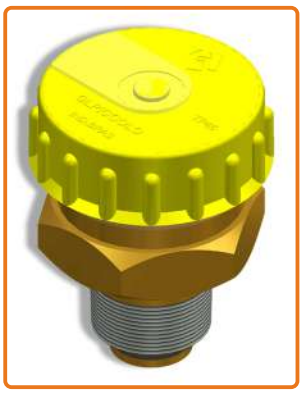
CYLINDER KIT — P-190

Set of equipment and accessories necessary and essential for the safe and efficient use of the P-190 gas cylinder.
It consists of the following items: magnetic gauge, filling valve, relief valve, safety relief valve, and service valve.

MAGNETIC GAUGE MM-190-T25

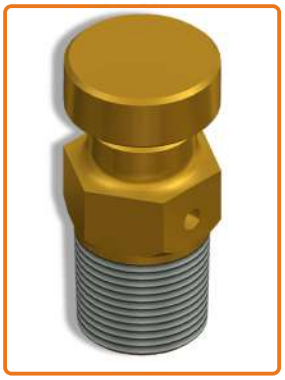
Magnetic measurement of the liquid level contained in the P-190 cylinder.

FILLING VALVE V2B1945AC



Provides fast filling of the P-190 cylinder.

RELIEF VALVE VA-L-06

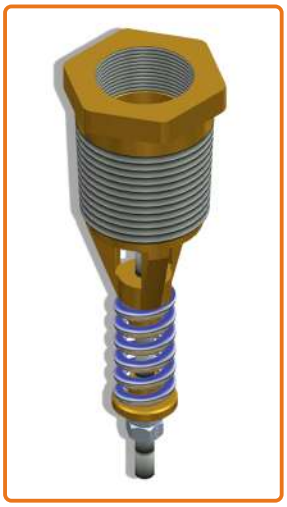


Manual control of the filling level.

SERVICE VALVE VSV-19-FP

Vapor transfer from the P-190 cylinder to consumption with excess flow protection.

SAFETY RELIEF VALVE VSV-19-FP

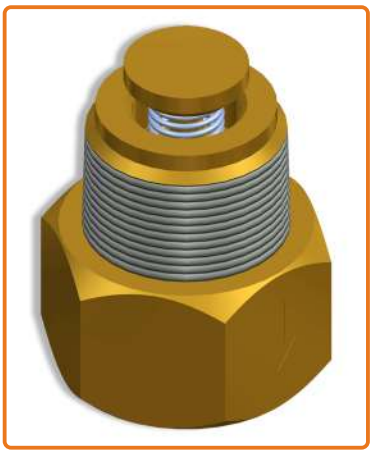


Relief of excessive pressure of the P-190 cylinder.

EXCESS FLOW VALVE

They are designed to contain excess flow in the event of pipeline rupture or abrupt opening of the ball valve. VF model valves are used in small tanks, small pipelines, and instrumentation protection. They operate both in vertical and horizontal positions.

MODEL: VF



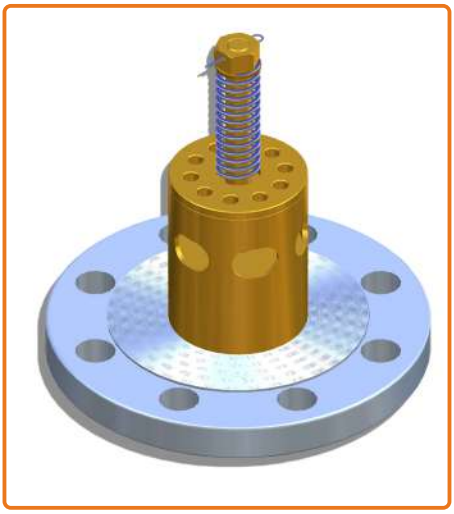
MODEL	Thread size NPT	Total Height (mm)
VF-06	1/4"	40
VF-09	3/8"	29
VF-12	1/2"	53
VF-19	3/4"	58
VF-25	1"	65
VF-31	3/4" x 1/2"	59,5
VF-32	1.1/4"	70
VF-38	1.1/2"	80
VF-50	2	102
VF-63	2.1/2"	115
VF-76	3"	120

MULTIFLOW EXCESS FLOW VALVE

The Multiflow Excess Flow Valve is designed for direct installation on the outlet flange of Liquefied Petroleum Gas (LPG), whether in liquid or vapor form.
In situations of pipeline rupture, the valve operates automatically, restricting the flow of LPG.
The closure happens immediately but not completely, allowing a small passage of LPG.
The installation of the valve must always be carried out in accordance with the LPG outlet pipeline diameter.

MODEL: VFM

MODEL: VFMF

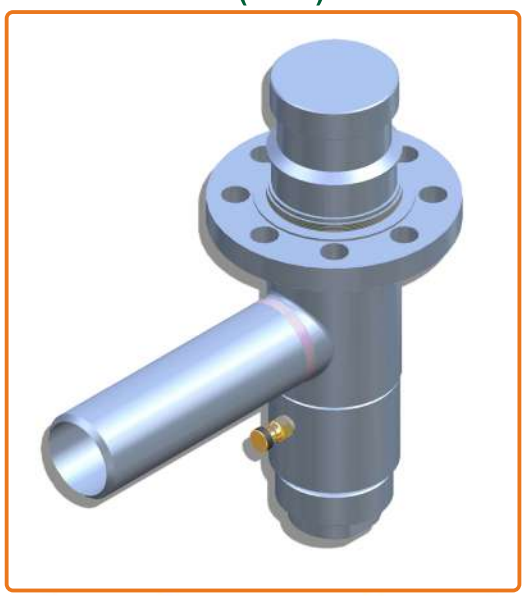


MODEL	Thread size NPT	Total Height (mm)
VFM-25	1"	180
VFM-32	1.1/4"	195
VFM-38	1.1/2"	195
VFM-50	2"	200
VFM-76	3"	285
VFMF-25	1"	155
VFMF-32	1.1/4"	163
VFMF-38	1.1/2"	168
VFMF-50	2"	172
VFMF-63	2.1/2"	189,5
VFMF-76	3"	228,5
VFMF-100	4"	286,5

HYDRAULIC VALVES

Hydraulic valves play a crucial role in the process of transferring liquids, being used mainly in storage tanks and transport systems for cargo vehicles. These valves are actuated by hydraulic circuits using hydraulic pumps to generate the required pressure.
They are designed to allow positive displacement of the flow when the product is inside the tank, ensuring safety and efficiency in the transfer of liquids. They are specially indicated for systems that operate with LPG (liquefied petroleum gas) or ammonia, among other products, and for applications that require resistance to chemical agents.

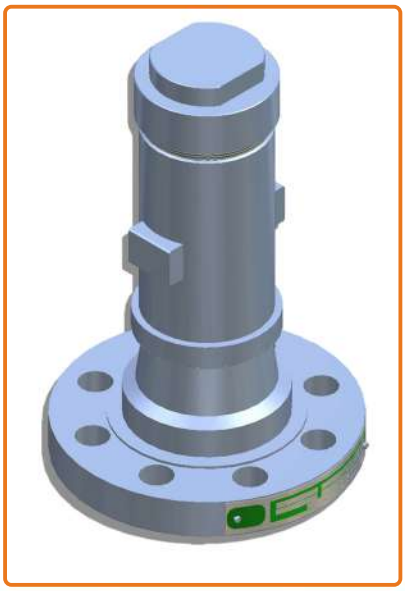
MODEL: ANGULAR HYDRAULIC VALVE (VHA)



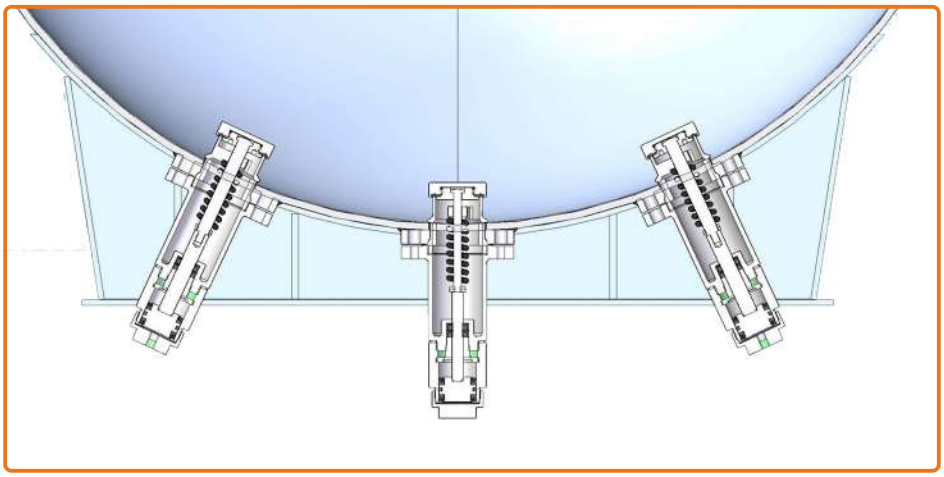
MODEL	Size	Total Height (approx.) mm
VHA-50	2"	360
VHA-76	3"	400
VHA-100	4"	450
VHA-F-126	BODY 2" AND FLANGE 3"	415
VHA-F-150	BODY 2" AND FLANGE 4"	450
VHA-F-176	BODY 3" AND FLANGE 4"	450

Models available in steel and stainless steel

MODEL: STRAIGHT HYDRAULIC VALVE (VHR)



MODEL	Size	Total Height (approx.) mm
VHR-50	2"	240
VHR-76	3"	255
VHR-100	4"	320
VHR-113	BODY 2" AND FLANGE 2.1/2"	215
VHR-126	BODY 2" AND FLANGE 3"	215
VHR-150	BODY 2" AND FLANGE 4"	215
VHR-176	BODY 3" AND FLANGE 4"	225
VHR-120	8"	358

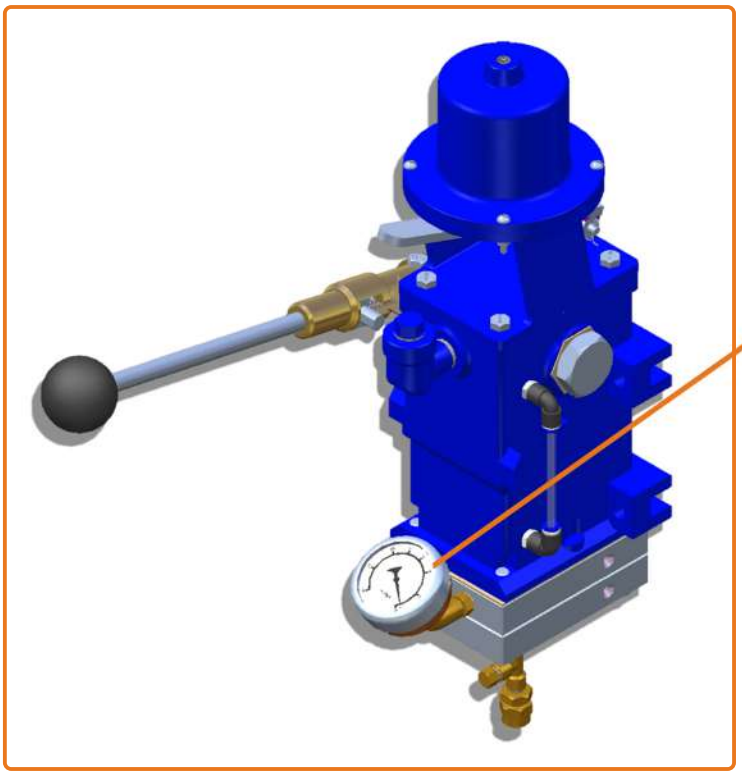


Installed at the bottom of the tank.

HYDRAULIC PUMP BH 80

The hydraulic pump operates with an actuating system fot the bottom hydraulic valve, which can be of the VHR or VHA models. Operation is performed manually by means of a lever, which can be activated in two ways: using compressed air to an aid lifting of the lever, or using a counterweight coupled to a lifting arm that balances the lever and ensures maintenance. The drive is clockwise.
The pump is equipped with an analog pressure gauge, indicating the pressure of the hydraulic system. As the lever is actuated, the gauge indicates the pressure applied to the system. This allows the operator to monitor the operating conditions and avoid overpressure in the system.

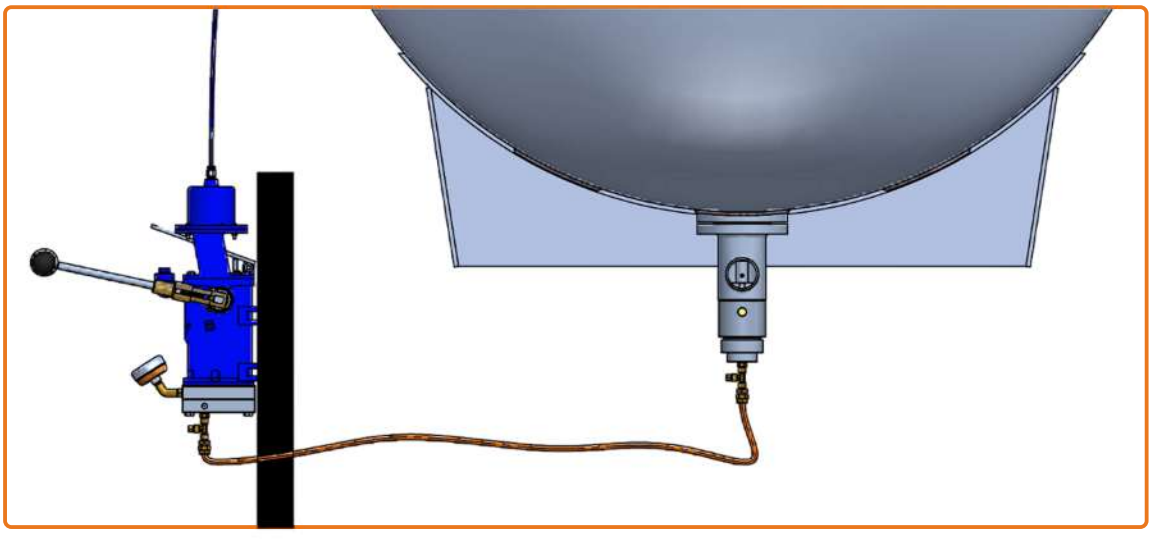
MODEL: HYDRAULIC PUMP BH-80



The pressure gauge has a measuring capacity of up to 1000 lbs/in² (approximately 70 Kgf/cm²).
However, during operational use, it is recommended that the working pressure does not exceed 400 lbs/in² (approximately 28 Kgf/cm²).
This ideal operating range is identified by the green color indicator on the gauge.

RECOMMENDED OIL FOR USE

Neutral mineral oil

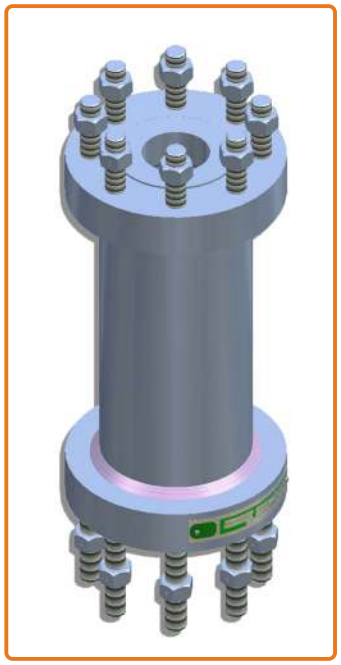


Assembly between the hydraulic pump and the bottom valve.

SPOOL FOR HYDRAULIC VALVE

The spools for hydraulic valves connect the straight hydraulic valve (model VHR) in stationary tanks, trucks, and pipelines.

MODEL: CP-50



MODEL	Flange size	Number of holes	Hole size	Total Length (mm)
CP-50	2"	8	5/8" UNC	310
CP-76	3"	8	3/4" UNC	340
CP-100	4"	8	3/4" UNC	405
CP-150	6"	12	3/4" UNC	430
CP-200	8"	12	3/4" UNC	480

SPRINKLER FOR STATIONARY TANK

The sprinkler works by spraying water, increasing the contact surface of the droplets and allowing greater heat absorption from the fire.
The mist blocks the transfer of radiant heat to the unburned fuel and promotes the cooling of the fire, all while using less water in the process compared to traditional spraying systems.

***ALL MODELS AVAILABLE IN BRASS AND STAINLESS STEEL**

MODEL: NP-L-19

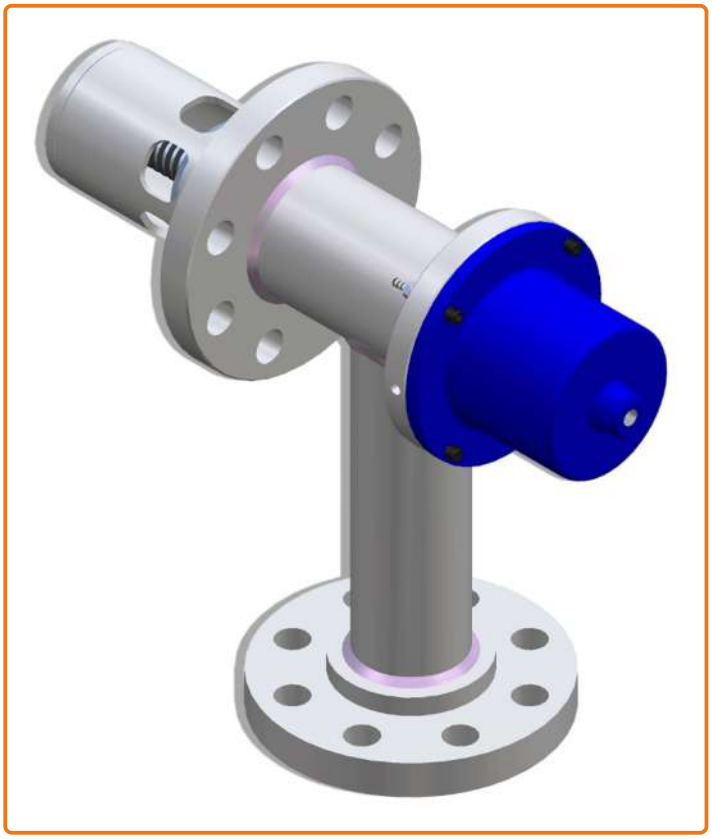
MODEL: NB-L-12

MODEL	Thread Size (NPT or BSP)	Flow Rate	Spray Angle	Opening Diameter
NB-12	1/2"	12,5 a 13 l/min	106°	2,5m
NB-19	3/4"	18 a 20 l/min		
NP-19				

PNEUMATIC INTERNAL ANGULAR VALVE – 2”

The pneumatic internal valve is designed for the transfer of liquids and for vapor equalization, being used in storage units and transport vehicles with pneumatic actuation. It is a functional, safe, and low cost equipment, with significant advantages over hydraulic valves, which have higher maintenance costs and additional safety devices such as hydraulic circuits.
The assembly of internal pneumatic valves is simple and practical, allowing their installation in almost all types of storage tanks. This device can be inserted into both vertical and horizontal tanks (with vertical flange) when there are no obstacles inside the tank, ensuring precise operation for vapor return with controlled flow, with a counterweighted closing system.

MODEL: VIPA-F-50

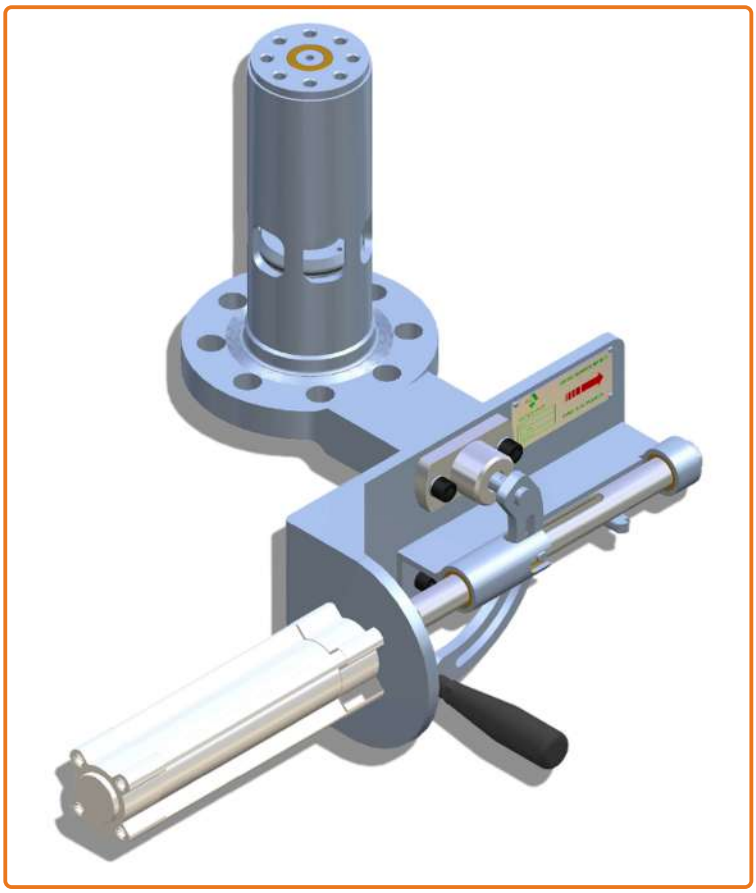


Example of VIPA F 50 assembly at the bottom of the tank.

STRAIGHT PNEUMATIC INTERNAL VALVE

The pneumatic straight valve is designed for filling or withdrawal of Liquefied Petroleum Gas (LPG) in transport containers, such as bobtail trucks, or in stationary tanks. Its coupling is by flange, facilitating installation. Actuation of the valve can be pneumatic or manual, with a lever system, or via a cable drive that allows remote actuation.
This valve was developed to enable significantly higher flow rates than bottom valves, preventing common problems such as cavitation and pressure drop. The presence of the manual lever facilitates manual actuation of the valve if there is any interference that prevents the pneumatic actuation system from operating.
After the VIPR valve is actuated, the return of gas to the tank occurs via the "drip" method (gravity), allowing pressure equalization in the lines and reducing the risk of liquid return. When applied to LPG transfer systems, the valve ensures safety in operation.

MODEL: VPR-50

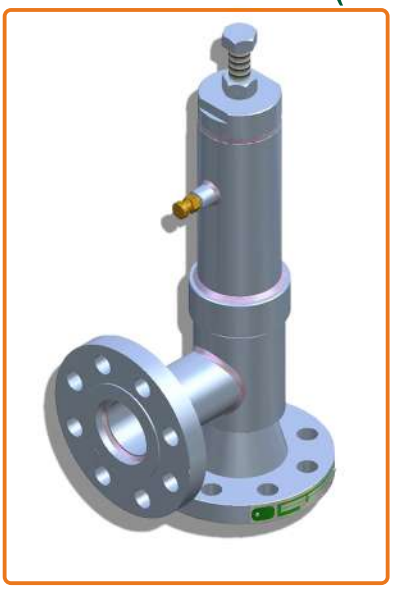


MODEL	Flange Size
VPR-50	2"
VPR-76	3"
VPR-100	4"

DIFFERENTIAL PRESSURE VALVES

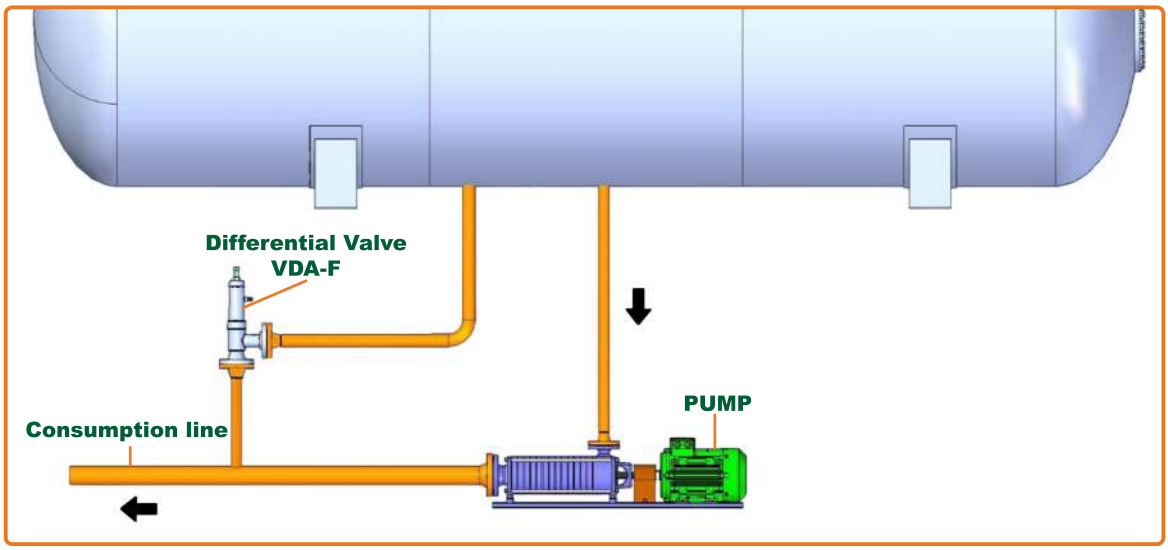
These valves operate smoothly and silently, allowing the passage of liquid gas when there is a differential pressure at the pump discharge.
Simultaneously, an internal valve performs vapor purging during the period when the pump remains stopped, facilitating the restart process.
The angular differential valves with threaded connection, model VDA-R, are designed for use in pump bypass systems that supply, individually, cylinders and small tanks. They can also be used in propellant systems for aerosols.
The angular differential valves with flange connection, model VDA-F, are suitable for pump bypass systems intended for liquid gas transfer in tank trucks, at multiple bottling terminals for cylinders, and in facilities that use bulk gas.
Both models do not require additional piping for vapor removal and can be installed in either vertical or horizontal positions.

MODEL: ANGULAR DIFFERENTIAL VALVE WITH FLANGE (VDA-F)



MODEL	Inlet and Outlet
VDA-R-19	3/4" NPT
VDA-R-25	1" NPT
VDA-R-32	1.1/4" NPT
VDA-R-38	1.1/2" NPT
VDA-R-50	2" NPT
VDA-F-25	FLANGE 1"
VDA-F-32	FLANGE 1.1/4"
VDA-F-38	FLANGE 1.1/2"
VDA-F-50	FLANGE 2"
VDA-F-76	FLANGE 3"
VDA-F-88	FLANGE 1.1/2" x 2"
VDA-F-100	FLANGE 4"
VDA-F-126	FLANGE 2" x 3"
VDA-F-150	FLANGE 6"

MODEL: ANGULAR DIFFERENTIAL VALVE WITH THREAD (VDA-R)



example of the installation of the differential pressure valve (VDA-F) in a system.

SAFETY RELIEF VALVES

Every tank used to store LPG or Ammonia must be protected by a safety relief valve.
This requirement is defined by standards and regulations aimed at ensuring operational safety.
Among these standards are ASME, NFPA, ANSI, and NR-13.
Safety relief valves protect tanks against the development of dangerous conditions by relieving pressure.
Such conditions can arise from any of the following situations:

- Excessive filling of the tank, which can result in excessive hydrostatic pressure capable of causing liquid expansion as temperature increases.
- Exposure of the tank to excessive external heating, causing a dangerous rise in pressure.
- Incorrect use of fuel, leading to a pressure increase.

The service life of safety relief valves is up to 10 years from the manufacturing date.
However, the actual safe lifespan may be shorter, requiring replacement depending on the environmental conditions to which they are exposed.
Inspection and maintenance of safety relief valves are extremely important.
Failures in this process can result in harm to people or damage to property.
If it is not possible to perform proper repair on safety relief valves installed on containers, a rule must be followed:
Any safety relief valve showing signs of leakage, poor operation, dirt buildup on the seat, or suspected malfunction must be immediately replaced with a proper valve.

Possible Causes of Safety Relief Valve Failure:

- Corrosion of metal parts (mainly springs);
- Deterioration of sealing rubber;
- Clogging or jamming of moving parts, restricting the valve's operation;
- Fragments on the valve seat after opening, preventing proper closure.

When a valve operates due to excessive pressure, it is recommended to remove it for repair or replacement.

SAFETY RELIEF VALVES WITH EXTERNAL SPRING

Safety valves with external spring (VSE) are designed with the spring and most of the valve's structure located internally to the container, providing superior protection against impacts and mechanical damage.
These valves are particularly suitable for the following types of gas containers:

- Stationary tanks:

Starting from 100 gallons (190 kg cylinders) and ASME-type tanks with capacities ranging from 124 to 1,950 gallons (250 to 4,000 kg), as well as other tanks with various capacities up to 10,000 kg.

- Mobile or transport tanks:

The VSE-TQ model is used in vehicles operating with LPG as fuel, including forklifts, tractors, trucks, buses, and construction equipment.
It is also applicable to trailers and bobtails used for gas transportation and delivery.
The VSE-AC model is especially recommended for trailers, as it maintains its integrity in case of accidents.
For installation and removal, a special wrench is required.

***ALL MODELS AVAILABLE IN STEEL, BRASS, AND STAINLESS STEEL**

MODEL: SAFETY RELIEF VALVE WITH EXTERNAL SPRING (VSE)

MODEL	Discharge start pressure psig (Kfg/cm²)	Tank Conecction NPT male	Total Height (approx. mm)	BSP Female Adapter	Flow Capacity (m³/min-air)	External Surface of LPG Tank (m²)	External Surface of NH³ Tank (m²)
VSE-19	250 (17,6)	3/4"	150	1"	56	7,50	22,20
VSE-25		1"	200	1.1/4	74	10,65	31,30
VSE-32		1.1/4"	320	1.1/2"	124	20,00	58,70
VSE-38		1.1/2"	340	2"	180	31,50	92,60
VSE-50		2"	360	2.1/2"	295	57,50	169,00
VSE-63		2.1/2"	380	3"	389	80,60	237,00

MODEL: SAFETY VALVE WITH EXTERNAL SPRING FOR TRAILER (VSE-AC)

MODEL	Discharge start pressure psig (Kfg/cm²)	Tank Conecction NPT male	Total Height (approx. mm)
VSE-AC-50	250 (17,6)	2"	330
VSE-AC-76		3"	460

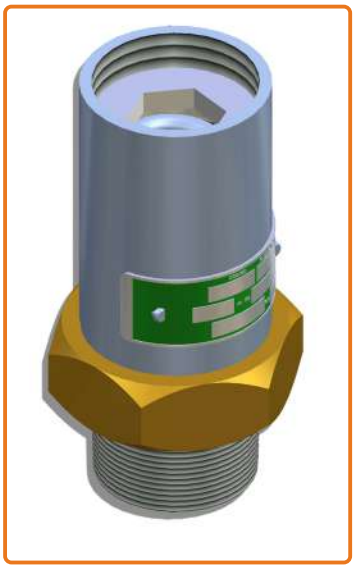
MODEL: SAFETY RELIEF VALVE WITH EXTERNAL SPRING FOR MOBILE TANKS (VSE-TQ)

MODEL	Tank Conecction NPT male	Exhaust tube Connection NPT	Exhaust tube Connection NPT
VSE-TQ-38-50	1.1/2"	-	310
VSE-TQ-50	2"	-	350
VSE-TQ-38-50	1.1/2"	2"	310
VSE-TQ-50-63	2"	2.1/2"	325
VSE-TQ-50-76	2"	3"	325
VSE-TQ-63-76	2.1/2"	3"	365

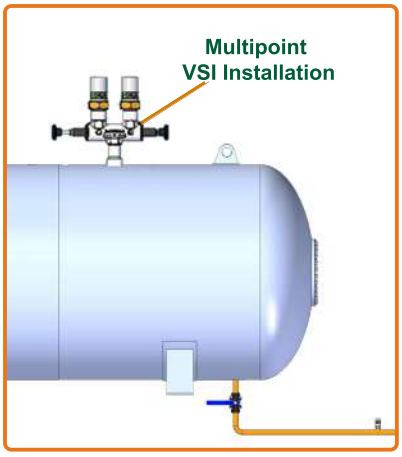
SAFETY RELIEF VALVE WITH INTERNAL SPRING

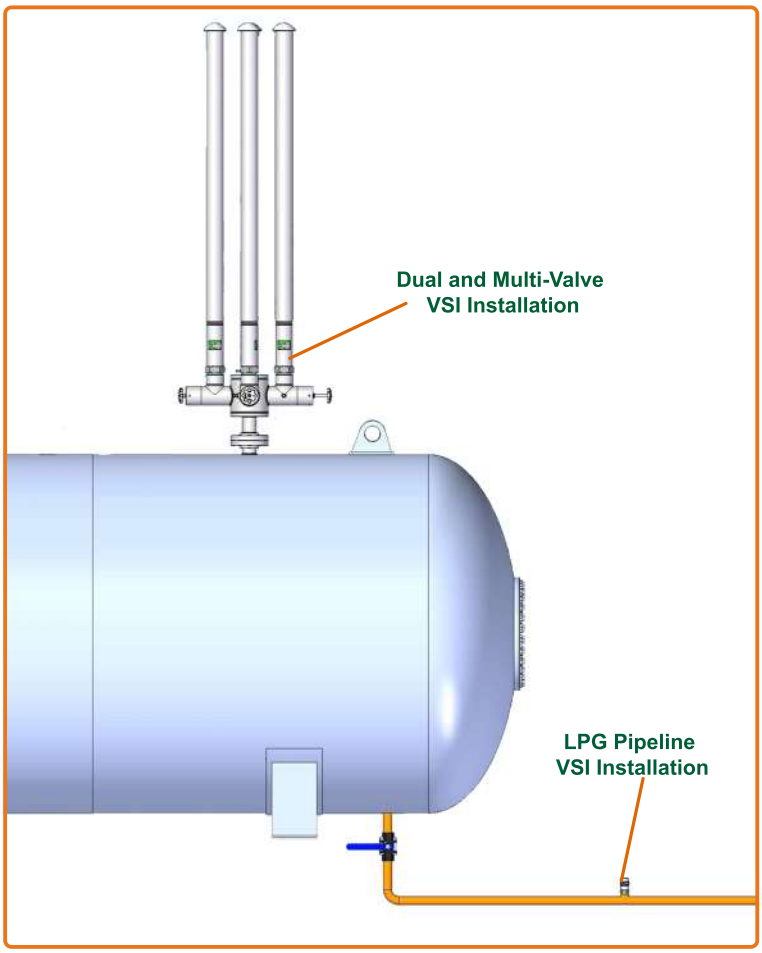
Safety relief valves with internal spring (VSI) are devices designed to operate outside the container, ensuring safety in pressurized systems.
These valves are especially suitable for stationary containers and tanks, both aboveground and underground, as well as piping systems that transport liquid gas, where they are positioned between the shut-off valves.
They can also be integrated into multipoint, dual valve, and multi-valve safety configurations.
It is important to note that VSI valves are not recommended for transport tanks.
In case of accidents, exposure of the valve body to the external environment may result in significant damage, compromising the system's functionality and safety.
***ALL MODELS AVAILABLE IN STEEL, BRASS, AND STAINLESS STEEL**

MODEL: SAFETY RELIEF VALVE WITH INTERNAL SPRING (VSI)



MODEL	Discharge start Pressure psig (Kgf/cm²)	Tank Connection NPT Male	Total Height (approx. mm)	BSP Female Adapter	Flow Capacity (m³/min-air)	External Surface of LPG Tank (m²)	External Surface of NH³ Tank (m²)
VSI-06	250 (17,6)	1/4"	69	1/2"	8	0,95	2,1
VSI-12		1/2"	80	3/4"	13	1,23	3,75
VSI-19		3/4"	85	1"	50	60,6	13,4
VSI-25		1"	117	1.1/4"	85	12,6	37
VSI-32		1.1/4"	117	1.1/2"	105	16,3	48
VSI-38		1.1/2"	149	2"	155	26,2	77,2
VSI-50		2"	216	2.1/2"	220	40,2	118,2
VSI-63		2.1/2"	273	3"	295	57,5	169





MULTIPOINT VALVE

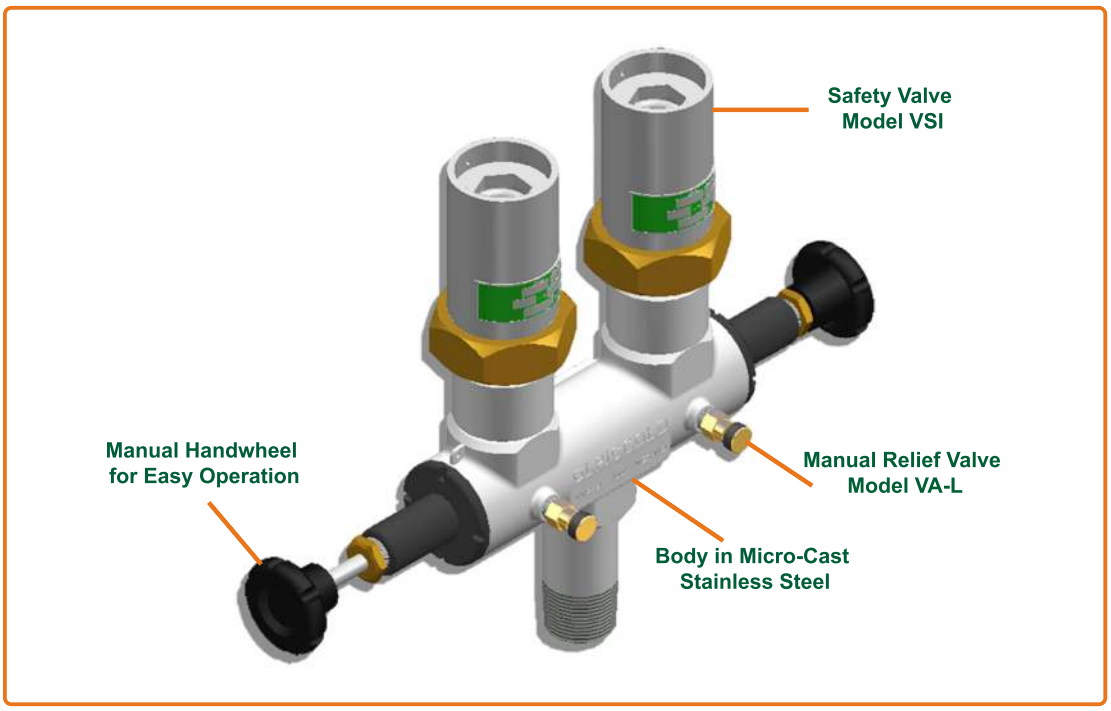
The MultiPoint valve is a device designed for pressure relief, composed of a manifold that allows the installation of up to two safety valves.
This equipment was developed specifically for small tanks, such as models P-500, P-1.000, P-2.000, and P-4.000.
The main feature of the MultiPoint valve is the ease of replacing the safety valve while in use, allowing replacement with a new one or removal for requalification without needing to empty the tank.
This ensures continuous and efficient operation, minimizing process interruptions.
Additionally, the valve is designed to handle pressure variations that may occur due to temperature increases and the expansion of stored fluids in the tank, ensuring operational safety.

MODEL: MULTIPOINT VALVE (VMP)

PATENTED

PATENT N° BR 20 2015 005531-0
PATENT N° BR 20 2015 005570-1

MODEL	Discharge Pressure psig (Kgf/cm²)	Tank Connection (NPT Thread)	Safety Valves	Flow Capacity (m³/min-air)	Quantity per Tank
VMP-19	250 (17,6)	3/4"	2 x (VSI-19)	50	1 x P-500
VMP-25		1"	2 x (VSI-25)	85	1x P-1000
VMP-32		1.1/4"	2 x (VSI-32)	105	1 x P-2000 2 x P-4000



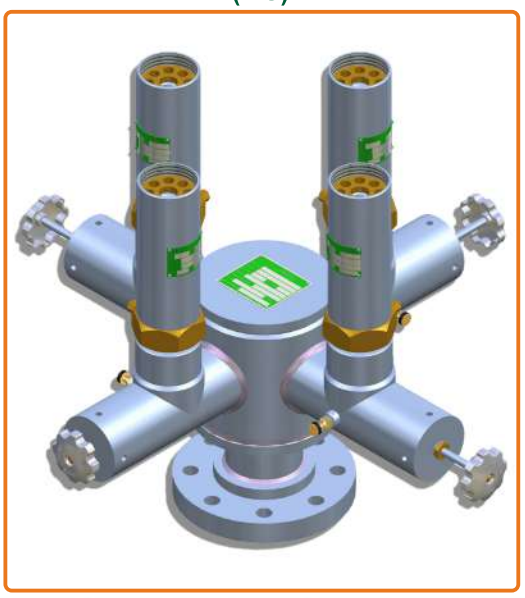
DOUBLE AND MULTI SAFETY RELIEF VALVES

The double safety relief valve (model DS) consists of two internal spring safety relief valves (VSI model) installed on a flanged manifold.
The multi safety relief valve consists of three (model MS-3) or four (model MS-4) safety relief valves of the same type, assembled similarly.
A control valve is used to interrupt the flow between the manifold and the valve, allowing its removal for maintenance or replacement.
An internal mechanism prevents the other control valve from closing, ensuring that the remaining safety valves remain operational.
These devices are equipped with vent pipes, which have a total height of 2.5 meters and are fitted with protective caps.
The Double Valve is designed for medium-sized stationary tanks for LPG and Ammonia.

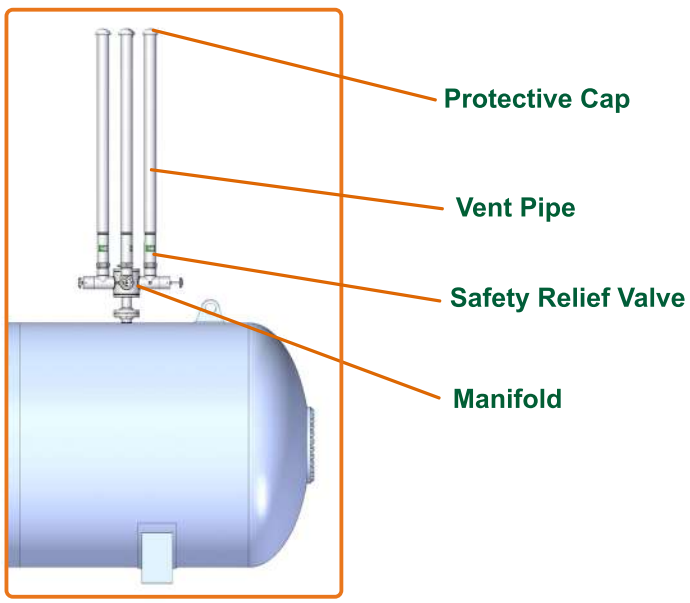
MODEL: DOUBLE SAFETY RELIEF VALVE (DS)

MODEL	Discharge Start Pressure psig (Kgf/cm²)	Tank Connection Flange or Thread	Safety Valves	Adapter and vent pipe	Flow Capacity (m³/min-air)	LPG Tank Water volume (L)	NH³ Tank Water Volume (L)
DS-32	250 (17,6)	2" / 3" / 4"	2 x VSI-32	2"	105	4.000	20.000
DS-38			2 x VSI-38	2"	155	8.000	40.000
DS-50			2 x VSI-50	2.1/2"	220	18.000	58.000
DS-63			2 x VSI-63	3"	295	28.000	85.000

MODEL: MULTI SAFETY VALVE (MS)



MODEL	Discharge Start Pressure psig (Kgf/cm²)	Tank Connection Flange or Thread	Safety Valves	Adapter and vent pipe	Flow Capacity (m³/min-air)	LPG Tank Water volume (L)	NH³ Tank Water Volume (L)
MS-3-32	250 (17,6)	2" / 3" / 4"	3 x VSI-32	2"	210	8.000	-
MS-3-38			3 x VSI-38	2"	310	18.800	-
MS-3-50			3 x VSI-50	2.1/2"	440	40.000	17.000
MS-3-63			3 x VSI-63	3"	590	58.000	-
MS-4-32			4 x VSI-32	2"	315	16.000	-
MS-4-38			4 x VSI-38	2"	465	24.000	-
MS-4-50			4 x VSI-50	2.1/2"	660	60.000	-
MS-4-63			4 x VSI-63	3"	885	117.000	-



VAPORIZERS

LPG vaporizers operate based on the principle of vaporizing LPG in its liquid state and are available in two distinct systems: FEED-OUT and FEED-BACK.

FEED-OUT System

The FEED-OUT system works by feeding liquid LPG, which undergoes a heating process for conversion into vapor.
After vaporization, the gas goes through regulation and filtration stages before being directed for consumption.
The energy sources for heating can be:

- Electric energy, using an electric resistance as the heating element (Model FLASHGAS).
- Heated water, through a water heater system (Model HYDROVAP).

FEED-BACK System

The FEED-BACK system is based on the utilization of natural heat, complemented by the vaporizer when necessary.
The heat required for vaporizing the liquid LPG is supplied by one of the following energy sources:

- Electric energy, using an electric resistance as the heating element (Model VAPELEC).
- Heated water, through a water heater system (Model VAPINDUS).

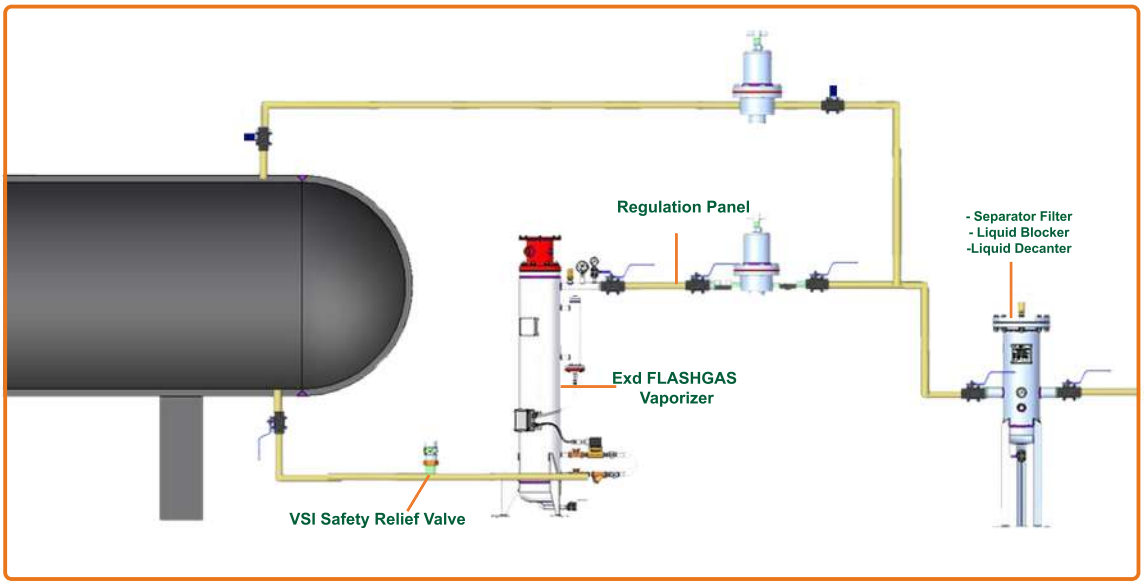
The operation of the FEED-BACK system consists of returning the vaporized LPG to the storage tank.
In this way, the withdrawal of gaseous LPG is carried out directly from the tank, optimizing the use of natural vaporization.
This process ensures greater energy efficiency and stability in the supply of LPG vapor for consumption.

The feed-out vaporization system, designed to operate in hazardous environments with explosion risk, works by allowing liquid LPG to enter the vaporizer body.
When in contact with the electric resistance, it is heated and converted into vapor before passing through a regulation and filtration process, after which it is directed for consumption.
With Ex d certification, this equipment is suitable for installation in areas with specific safety restrictions.
Available in various capacities, the system uses electric resistances as the energy source for vaporizing liquid LPG, making installation simpler.

MODEL: FEED-OUT VAPORIZER FLASHGAS Ex d

MODEL	Power (Kw)	Liquid inlet connection (NPT)	Gas Outlet connection (NPT)
FSV-15	1,8	1/2"	3/4" NPT
FSV-25	2,5	1/2"	3/4" NPT
FSV-50	10	1/2"	3/4" NPT
FSV-100	16	3/4"	1.1/2" NPT
FSV-160	22	3/4"	1.1/2" NPT
FSV-200	26	3/4"	1.1/2" NPT
FSV-240	32	3/4"	1.1/2" NPT
FSV-320	42,5	1"	1.1/2" NPT
FSV-500	65	1"	1.1/2" NPT
FSV-750	98	1"	FLANGE 3"
FSV-1000	130	1"	FLANGE 3"

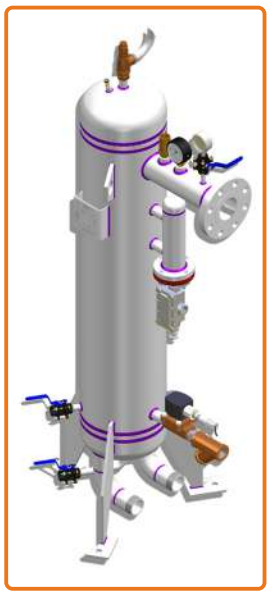
Provided with electrical control panel.
Available in 220 / 380 / 440V.



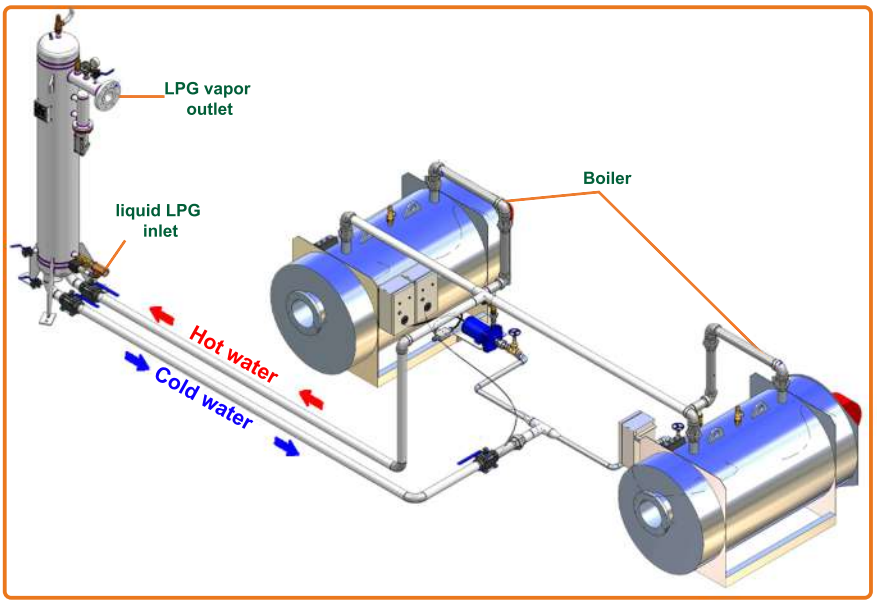
The second image shows an example of the installation of the FLASHGAS vertical electric feed-out vaporizer with

The Hydrovap vaporizer operates using an external heated water source, such as a boiler, which provides the thermal energy required for the vaporization of Liquefied Petroleum Gas (LPG).
During operation, the heated water is introduced into the heat exchanger at approximately 80°C.
The contact of liquid LPG with the exchanger tubes results in its vaporization.
After this process, the cooled water returns to the boiler after passing through the exchanger tube.
The generated LPG vapor flows through the heat exchanger and is expelled through the upper part of the Hydrovap, continuing toward consumption.

MODEL: HOT WATER FEED-OUT VAPORIZER (HYDROVAP)



This equipment is integrated into a Feed-out vaporization system called Hydrosys, which includes the following components:
A water heater (central heating system), the Hydrovap vaporizer, a water pump a support for the heater and pump (optional) an expansion water tank a panel and electrical components designed for system control.



Example of Hydrovap vaporizer assembly in the Hydrosys vaporization system.

SYSTEM MODEL	Peak Consumption (Kg/H)	Vaporizer Model	Liquid LPG Inlet (NPT)	LPG Vapor Outlet (flange)	Water inlet/outlet (NPT)	Pump	Heater Power (Kcal/h)	LPG Consuption (kg/h)	Central Heater / Generator
HYDROSYS-25	25	HYDROVAP-25	1/2"	1"	3/4"	P-500 C/VITON	30.000	2,15	220 TDBE/N - ORBIS
HYDROSYS-50	50	HYDROVAP-50	1/2"	1"	3/4"	P-500 C/VITON	30.000	2,15	220 TDBE/N - ORBIS
HYDROSYS-100	100	HYDROVAP-100	3/4"	1.1/2"	3/4"	P-500 C/VITON	30.000	2,15	220 TDBE/N - ORBIS
HYDROSYS-200	200	HYDROVAP-200	3/4"	1.1/2"	3/4"	P-500 C/VITON	30.000	3,19	230 TDBE/N - ORBIS
HYDROSYS-300	300	HYDROVAP-300	3/4"	1.1/2"	3/4"	C-750 C/VITON	2 x 30.000	4,3	2 x 220 TDBE/N - ORBIS
HYDROSYS-500	500	HYDROVAP-500	1"	1.1/2"	1"	C-750 C/VITON	100.000	6,9	AFR-100 ECAL
HYDROSYS-750	750	HYDROVAP-750	1"	3"	2"	C-750 C/VITON	100.000	9,2	AFR-100 ECAL
HYDROSYS-1000	1000	HYDROVAP-1000	1"	3"	2"	C-750 C/VITON	100.000	10,9	AFR-100 ECAL
HYDROSYS-1500	1500	HYDROVAP-1500	1.1/4"	4"	2"	C-750 C/VITON	150.000	16,3	AFR-150 ECAL

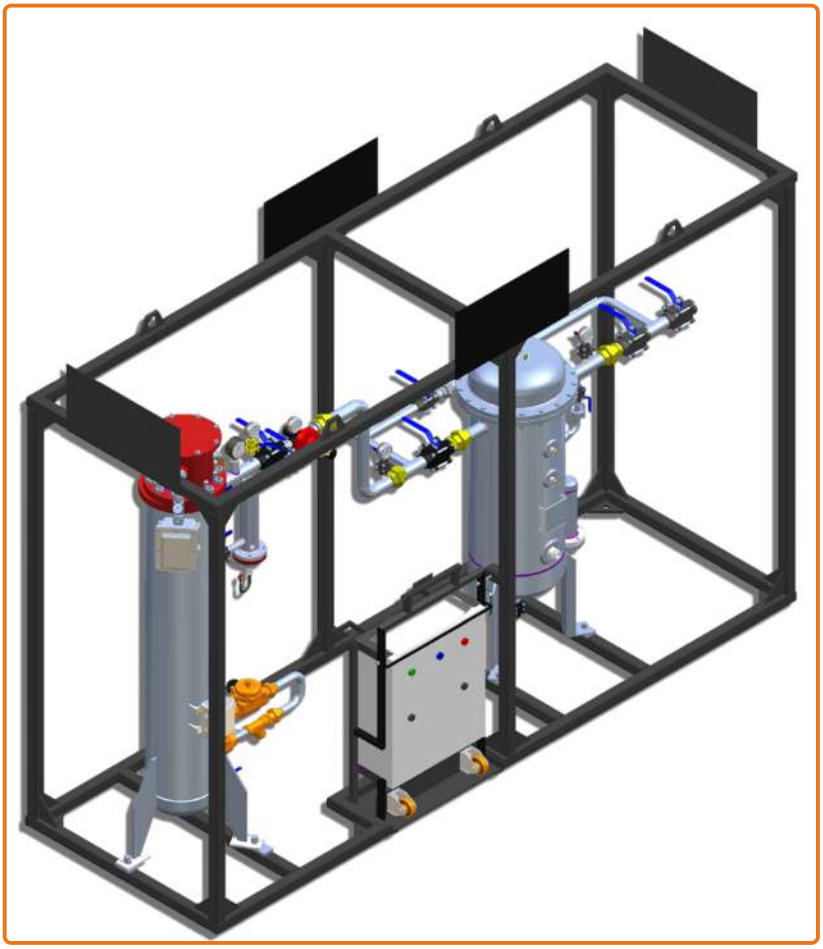
SKID VAP VAPORIZATION SYSTEM

The SKID VAP is a system designed for the vaporization of liquefied petroleum gas (LPG) in its liquid state, offering an efficient solution for the installation of vaporization centers.
This equipment can operate with one or two vaporizers, providing flexibility in system configuration.
The SKID VAP converts liquid LPG into vapor through a controlled heating process, essential for applications that require gas in its gaseous state.
The possibility of using one or two vaporizers provides adaptability according to specific user demand.
Its design allows for quick installation, reducing implementation time and optimizing the available space at the facility.
This system is ideal for various industrial and commercial applications that require LPG vapor, ensuring efficiency and safety in the vaporization process.

MODELS:
- SKID VAP 100 (Flow rate up to 100 Kg/h)
- SKID VAP 200 (Flow rate up to 200 Kg/h)
- SKID VAP 320 (Flow rate up to 320 Kg/h)
- SKID VAP 500 (Flow rate up to 500 Kg/h)
- SKID VAP 750 (Flow rate up to 750 Kg/h)
- SKID VAP 1000 (Flow rate up to 1000 Kg/h)
- SKID VAP 1500 (Flow rate up to 1500 Kg/h)

COMPONENTS:
- **Explosion-proof vaporizers compliant with Standard Ex d IIB T5 Gb IP65.**
- **Flow control valve for regulating output at the vaporizer outlet.**
- **Regulator for the output of LPG vapor from the tank.**
- **Electromechanical liquid blocker with filter or heavy particle separator filter.**
- **Control panel for managing the vaporizer and the liquid blocker**

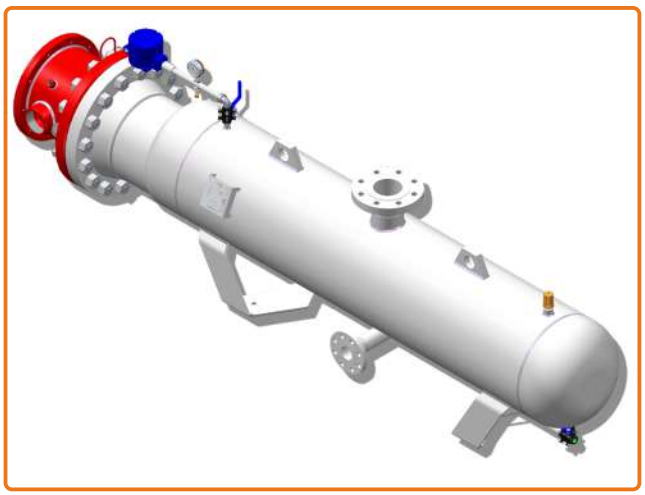
MODEL: SKID VAP VAPORIZATION SYSTEM - 100 Kg/h



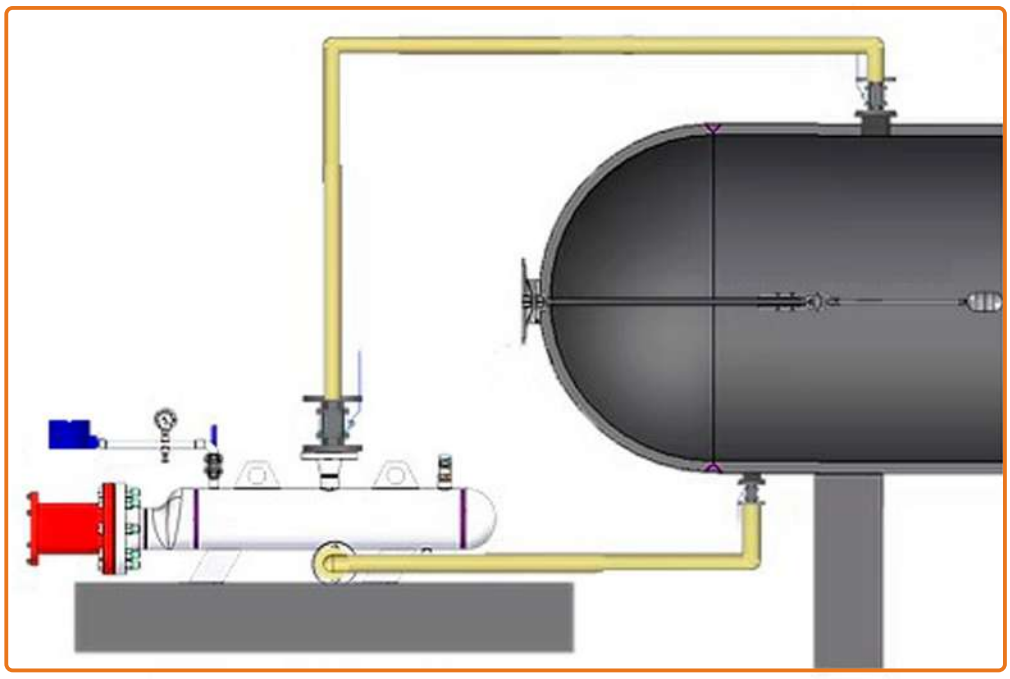
VAPELEC 2

The VAPELEC electric vaporizer, installed in the feed-back system connected to the Liquefied Petroleum Gas (LPG) storage tank, operates based on the principle of natural heating.
In this system, the heat naturally provided is supplemented by the vaporizer, resulting in an increase in vapor pressure inside the storage tank, ensuring sufficient vapor production to meet thermal demand.
To prevent the risk of excessive pressure increase inside the vaporizer chamber, a safety valve is integrated into the system.
The heat required for the vaporization of liquid LPG is generated by a specially designed electric resistance, specifically aimed at maximizing process efficiency and safety.
This resistance is controlled by a pressure switch, which monitors and regulates the pressure of the liquid stored in the vaporizer, ensuring proper and safe operation of the equipment.

MODEL: ELECTRIC VAPORIZER FEED-BACK SYSTEM(VAPELEC II)



MODEL	LPG Inlet Connection	LPG outlet Connection
3 Kw/h	Ø3/4"	Ø1"
6 Kw/h	Ø3/4"	Ø1"
9 Kw/h	Ø1"	Ø1.1/2"
15 Kw/h	Ø1"	Ø1.1/2"
18 Kw/h	Ø1"	Ø2"
26,4 Kw/h	Ø1"	Ø2.1/2"
45 Kw/h	Ø1.1/4"	Ø3"
52,8 Kw/h	Ø1.1/4"	Ø3"
75 Kw/h	Ø1.1/4"	Ø4"
90 Kw/h	Ø2"	Ø4"
105 Kw/h	Ø2"	Ø4"
120 Kw/h	Ø2"	Ø4"

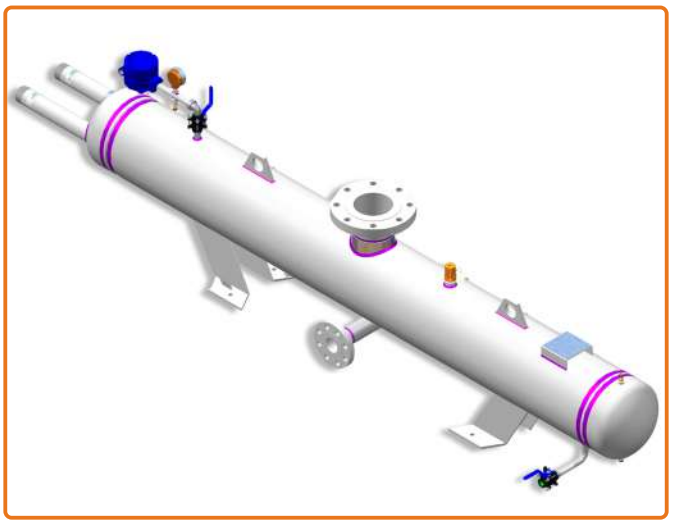


Example of installation of the VAPELEC II electric feed-back vaporizer connected to the LPG storage tank.

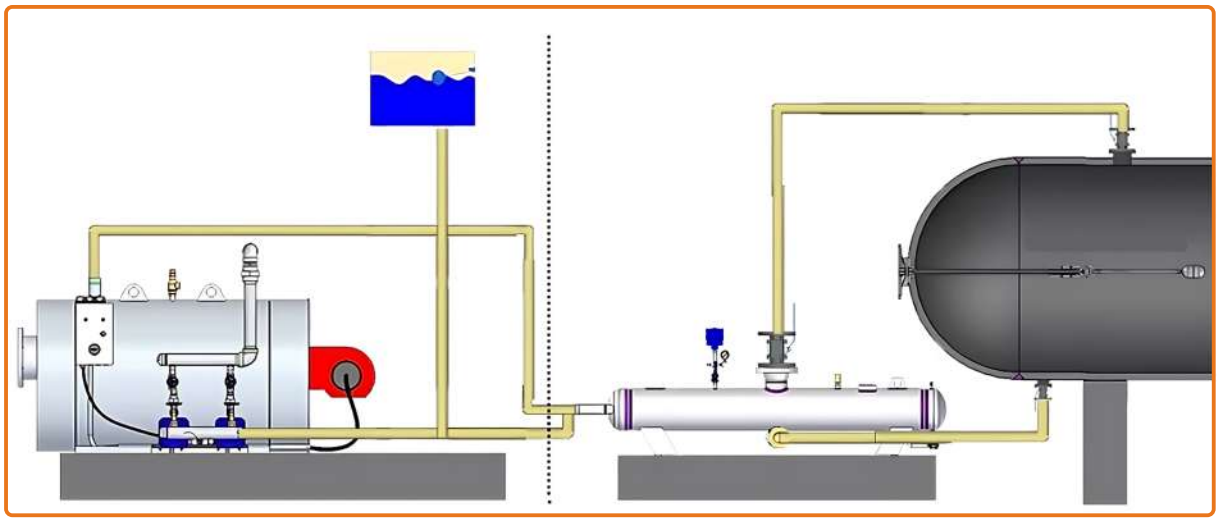
VAPINDUS

The Vapindus vaporizer model operates using an external hot water source, such as a boiler, which provides the thermal energy necessary for the vaporization of Liquefied Petroleum Gas (LPG).
During its operation, hot water at an approximate temperature of 85°C is introduced into the heat exchanger.
The contact between the liquid LPG inside the vaporizer body and the tubes of the exchanger causes the transformation of LPG into vapor.
After this interaction, the cooled water returns to the boiler after passing through the exchanger.
The generated LPG vapor then flows through the heat exchanger and is directed to the tank.

MODEL: VAPORIZER EXTERNAL HOT WATER SYSTEM (HYDROVAP)



MODEL	300	700	1000	1400	2000	2500	3000
Liquid Inlet Connection	Ø1"	Ø1.1/4"	Ø1.1/4"	Ø1.1/2"	Ø2"	Ø2"	Ø3"
Hot Water Inlet Conecction	Ø1"	Ø2"	Ø2"	Ø2"	Ø2"	Ø2"	Ø3"
Gas Outlet Connection	Ø2"	Ø3"	Ø4"	Ø4"	Ø5"	Ø5"	Ø6"
Hot Water Outlet Connection	Ø1"	Ø2"	Ø2"	Ø2"	Ø2"	Ø2"	Ø2"

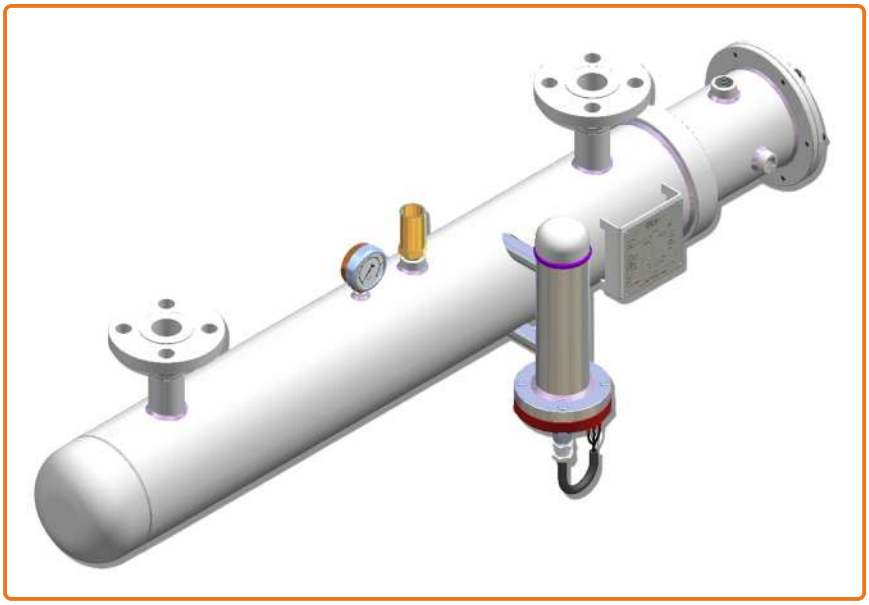


Example of installation of the Vapindus feed-back hot water vaporizer model VAPINDUS.

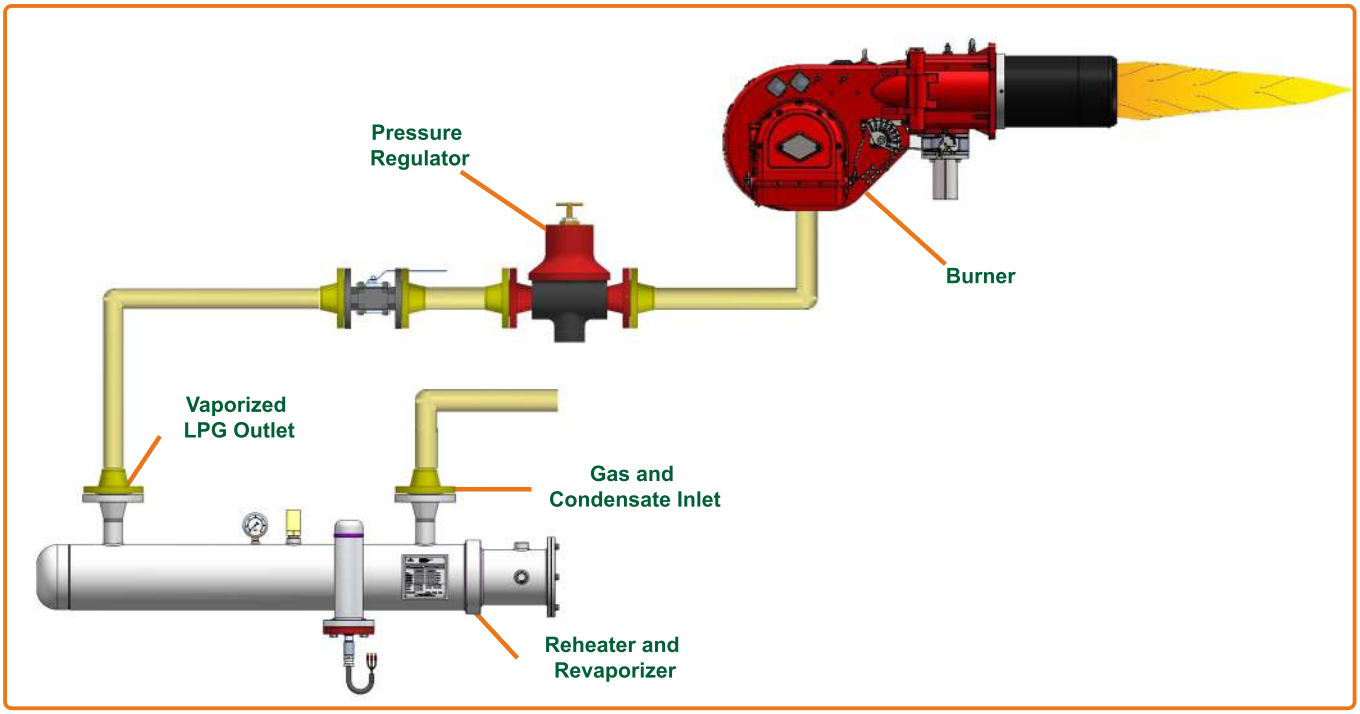
REHEATER AND REVAPORIZER MOD.RER

The purpose of the ReR (Reheater and Revaporizer) is to vaporize condensations of Liquefied Petroleum Gas (LPG), predominantly butane or a mixture of butane and propane, which can accumulate in extensive piping systems.
Installed in a lower position, the ReR collects condensations into its vaporization chamber and then into its heat exchanger.
Heat Exchanger Structure:
The heat exchanger consists of a heating element and a thermostat.
The thermostat monitors temperature variations caused by the presence or absence of condensations, activating or deactivating the heating element as necessary.
The system installation can be configured either in parallel or in-line configuration.

MODEL: REHEATER AND REVAPORIZER MOD.RER



Models Kw/h	1	2	3	5	10

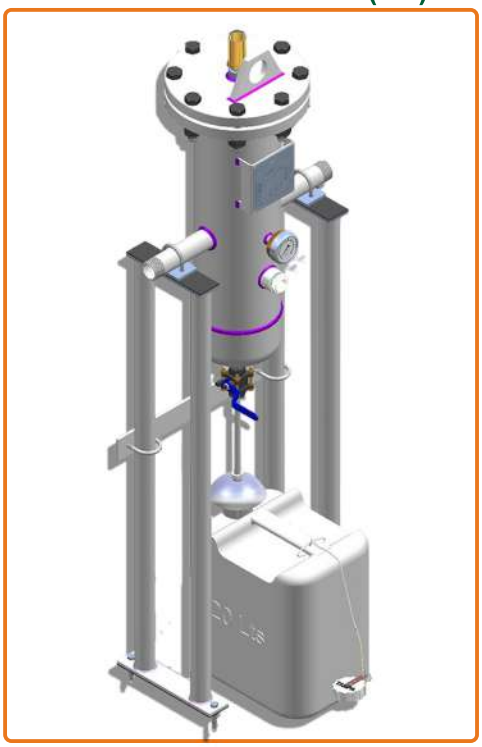


Example of ReR installation in an “in-line” configuration.

HEAVY PARTICLE SEPARATOR FILTER

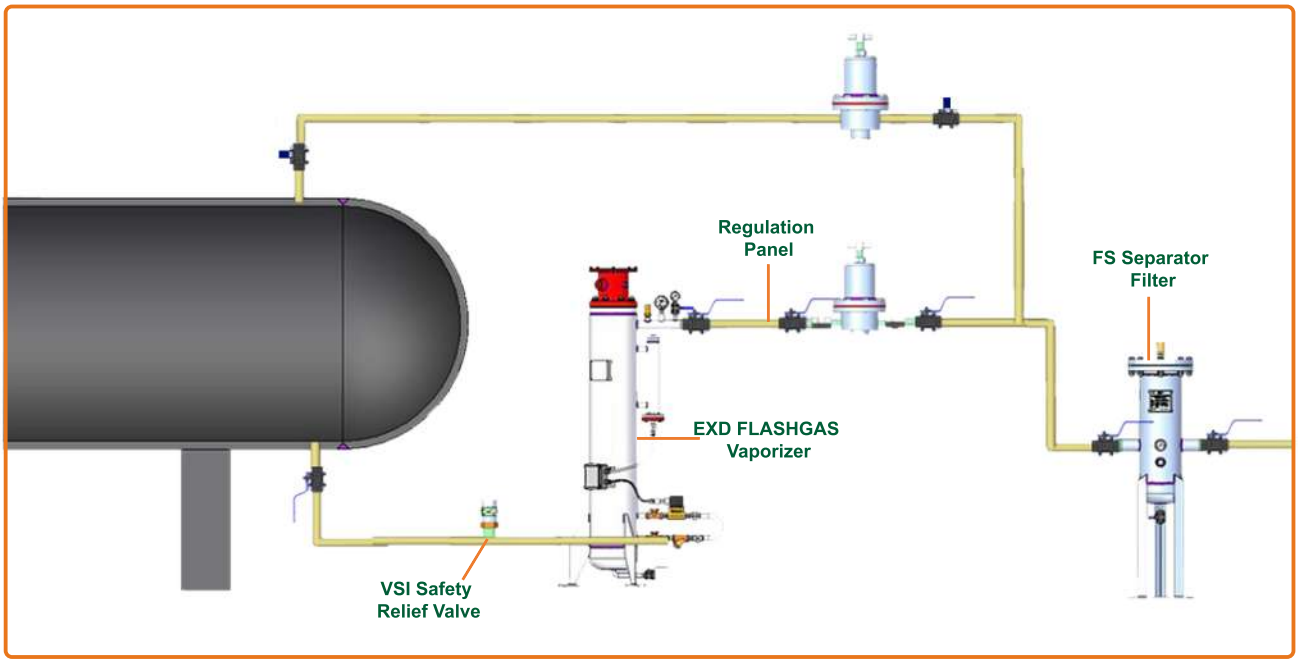
This filter is designed to retain heavy residues frequently found in LPG vapor, using a filtering element specifically developed for this purpose.
The heavy compounds include high boiling point residues and impurities, such as oils and greases.
The installation should occur after the regulation panel of the supply system.
It is recommended to include a by-pass system to allow continued operation during cleaning or replacement of the filtering element, if necessary.
The installation is feasible in both new and existing feed-out systems, requiring only minimal modifications.

MODEL: HEAVY PARTICLE SEPARATOR FILTER(FS)



MODEL	Flow Rate (kg/h)	Intel & Outlet	Body Diameter	Height (mm)
FS-25	10-25	3/4" NPT	4"	400
FS-80	40-80	1" NPT	6"	490
FS-135	115-135	1.1/4" NPT	6"	610
FS-270	180-270	2" NPT	8"	730
FS-550	350-550	FLANGE 3"	12"	780
FS-1000	750-1000	FLANGE 4"	12"	880
FS-1500	1000-1500	FLANGE 6"	14"	1260

Note: All filters come with support stands, preventing stress on the piping and including a drainage pump for collecting heavy residues.

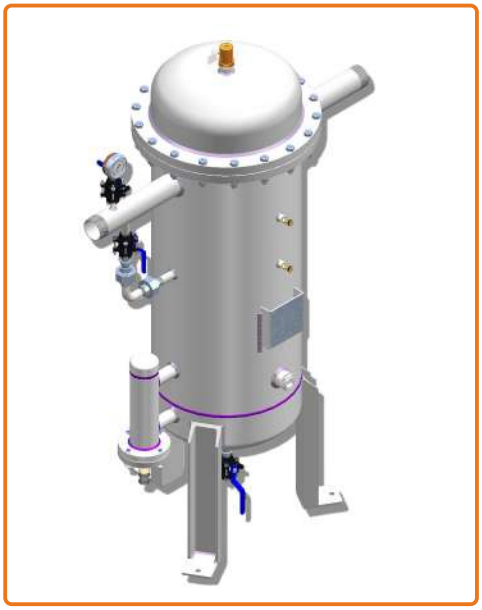


Example of installation of the Separator Filter FS.

ELECTROMECHANICAL LIQUID BLOCKER

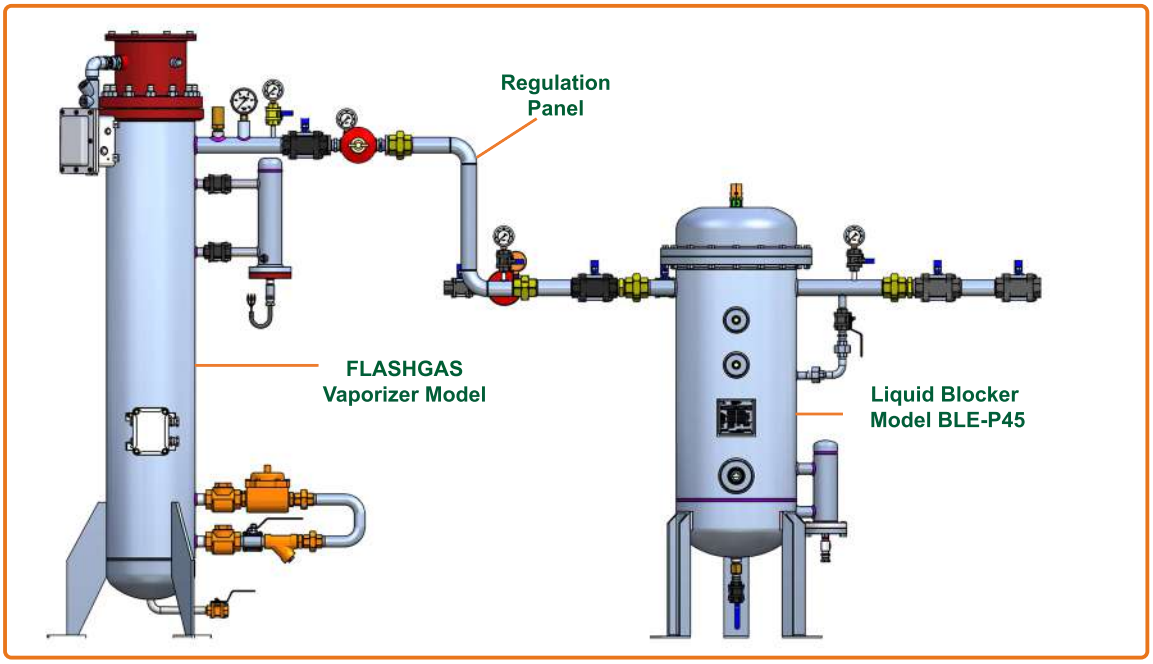
This device is designed to prevent the passage of Liquefied Petroleum Gas (LPG) liquid that, for any reason, may move through the regulation panel.
When LPG liquid enters the equipment, its internal level is monitored by a Level Controller.
When it reaches a certain level, a contact is triggered by the Reed-Switch, generating an audible and visual alert on the equipment panel.
If the liquid level continues to rise, a mechanical lock is activated by a float associated with a sealing system.
This mechanism completely stops the passage of LPG liquid until the pressure after the blocker is reduced to zero.
To restore the operation of the equipment:
Open the by-pass, allowing the liquid inside the blocker to be directed back to the piping.
This procedure decreases the float level, releasing the internal lock, and allowing the system to resume normal operation.
Models are available with internal filtering elements designed to retain heavy residues often found in LPG vapor.
These filtering elements are specifically developed to remove high-boiling-point compounds and impurities, such as oils and greases

MODEL: ELECTROMECHANICAL LIQUID BLOCKER P-45 (BLE-P45)



MODEL	P-45	P-90	P-125	P-190	P-1000
Flange	1" 1.1/2" 2" 3"	1" 1.1/2" 2" 3"	2" 3" 4"	2" 3" 4" 6"	6"
Threaded (NPT)	1" 1.1/2" 2"	1" 1.1/2" 2"	2"	2"	-

Note: All blockers come with an electrical control panel



STRAIGHT MECHANICAL AND ELECTROMECHANICAL LIQUID BLOCKER

The mechanical liquid blocker is equipment that operates under internal pressure, consisting of a shell/tube designed to mechanically block LPG liquid.
This liquid may be present in the blocker due to a system failure.
The mechanical blocking system operates through a float under pressure on a seat, with the purpose of completely stopping the passage of LPG liquid.
This ensures that all existing pressure, up to the point of consumption, is reduced to zero pressure after the block is activated.
A visual indicator on the body of the liquid blocker allows the presence of liquid to be checked.
In the electromechanical blocker, a float connected to a level controller emits an audible alert, located on the equipment's control panel, indicating the presence of LPG liquid inside the same internal areas as the mechanical blocker.
This control panel includes two additional terminals for connecting other equipment to assist in the process:

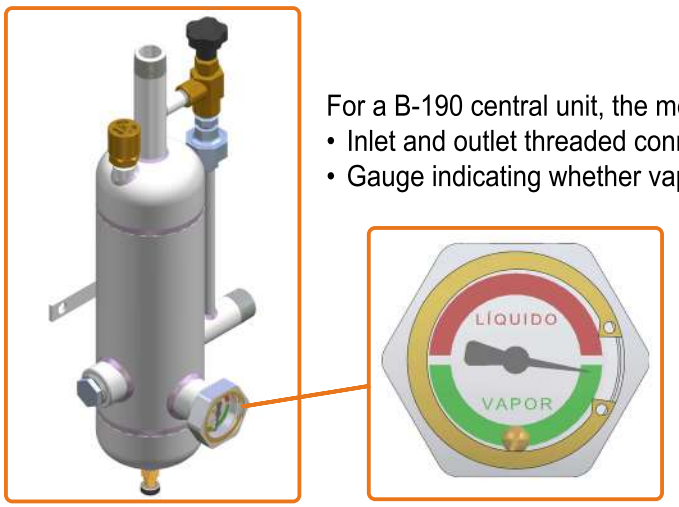
- Detecting the presence of liquid, or
- Activating a pump to return the liquid to the tank.

Available models: With threaded connections and With flanged connections.

MODEL: STRAIGHT MECHANICAL LIQUID BLOCKER

MODEL: STRAIGHT ELECTROMECHANICAL LIQUID BLOCKER

MODEL: MECHANICAL BLOCKER FOR B-190 CENTRAL UNIT



For a B-190 central unit, the mechanical blocker has a compact shell/tube, with:

- Inlet and outlet threaded connections (3/4" NPT)
- Gauge indicating whether vapor or liquid is present inside the equipment.

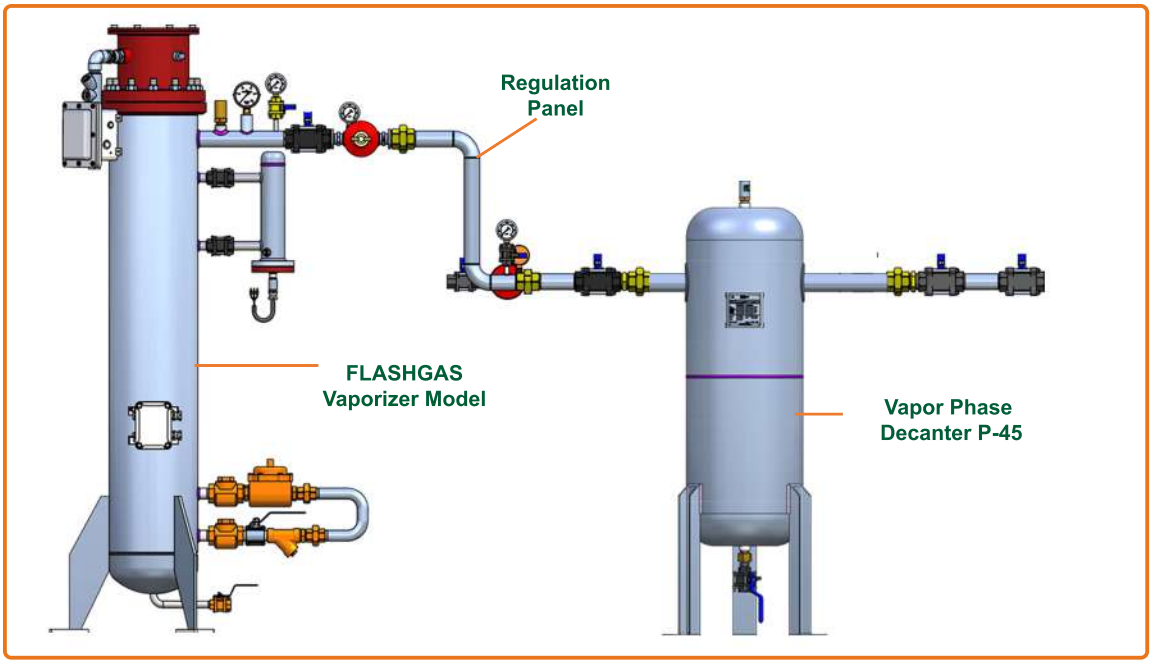
VAPOR PHASE DECANTER

The Decanter is a device designed for the separation and retention of heavy compounds with high boiling points present in vaporized gas, as well as impurities, oils, and greases.
When pressurized vapor gas flows through the filtration system, oils and impurities are deposited and directed to the drain.
Due to their higher density, these oils and impurities accumulate in the lower part of the decanter, requiring periodic drainage to maintain the system's efficiency.
Recommended Installation:
The Decanter is recommended for installation after the vaporizer and regulation panel (first stage) in feed-out systems, ensuring:

- Optimization of the separation process
- Improved quality of vaporized gas

MODEL: DECANTER P-45

Cylinder	P-45	P-90	P-125	P-190	P-1000
Flange	1" 1.1/2" 2" 3"	1" 1.1/2" 2" 3"	2" 3" 4"	2" 3" 4" 6"	6"
Threaded (NPT)	1" 1.1/2" 2"	1" 1.1/2" 2"	2"	2"	-



Example of installation of the Decanter for the vapor phase.

Magnetic Gauges

Magnetic gauges are devices designed to quantify the percentage level of LPG (liquefied petroleum gas) or liquid ammonia present in storage tanks.
Made with high-strength materials and subjected to rigorous quality control processes, these gauges offer durability as their main advantage.

Versatility and Applications

- The MM-60-T models are versatile, allowing installation in both horizontal and vertical tanks.

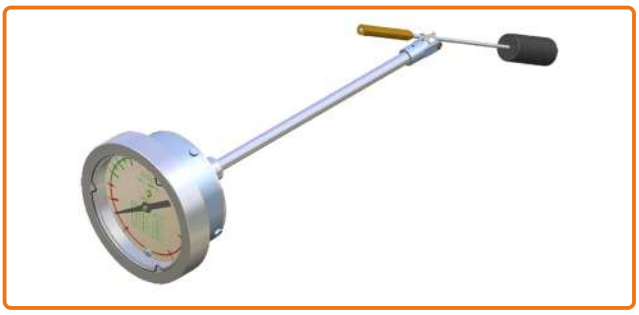
In some cases, customers request gauges for vertical tanks that require multiple measurement points. The level can be divided into up to 4 gauges per tank.

- The MM-120 model is suitable for tanks of various sizes, from small to large capacity.

Its flexible installation and robust materials ensure reliable performance under various operational conditions.

MODEL: MAGNETIC GAUGES MM-120

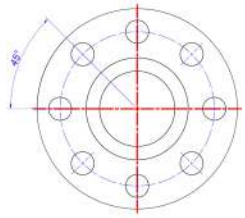
MODEL: MAGNETIC GAUGE VERTICAL TANK FLANGE MM-60-TQV

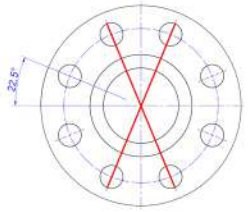


MODEL: MAGNETIC GAUGES MM-60-T

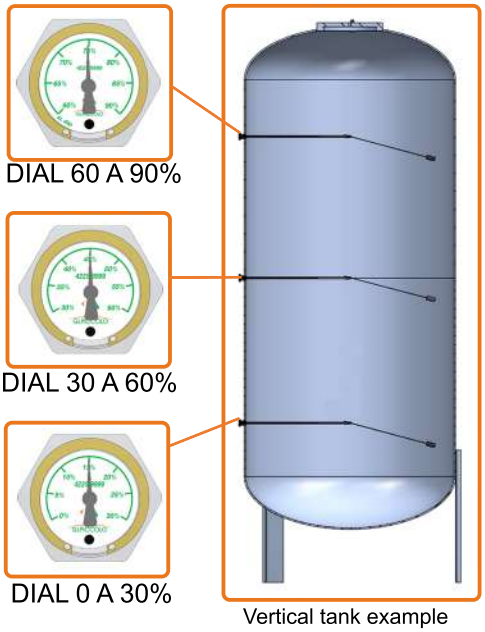
MODEL	Tank Connection	Material	Application (Product / Tank / Type)
MM-120	8 - hole flange	Stainless Steel	LPG / Large Tanks
MM-20-T19	3/4" NPT Thread	Aluminium / Stainless Steel	LPG / P-20 Cylinders
MM-90-T25	1" NPT Thread	Aluminium / Stainless Steel	LPG / P-90 Cylinders
MM-190-T25	1" NPT Thread	Aluminium / Stainless Steel	LPG / P-190 Cylinders
MM-60-T	3/4",1",1.1/4"NPT Thread	Aluminium / Stainless Steel	LPG / Tanks (P-500 / P-1000 / P-2000 / P-4000
MM-60-TF	4 - hole flange	Aluminium / Stainless Steel	LPG / Tanks (P-500 / P-1000 / P-2000 / P-4000
MM-60-T (SS)	3/4",1",1.1/4"NPT Thread	Stainless Steel	Ammonia / Small / Medium Tanks
MM-60-TF (SS)	4 - hole flange	Stainless Steel	Ammonia / Small / Medium Tanks
MM-60-TQV	4 - hole flange	Aluminium	LPG / Small / Medium Tanks
MM-60-TQV-R-25	1" NPT Thread	Aluminium	LPG / Small / Medium Tanks
MM-60-TQV-R-32	1.1/4" NPT Thread	Aluminium	LPG / Small / Medium Tanks

When installing gauges with a flange connection, pay attention to the orientation





X-shaped mounting



DIAL 60 A 90%

DIAL 30 A 60%

DIAL 0 A 30%

Vertical tank example with 3 gauges, each indicating different levels

ROAD VOLUMETRIC METER (MVR)

The MVR is a device used in tanker trucks for transporting hazardous substances, such as Liquefied Petroleum Gas (LPG) and liquid ammonia.
This equipment performs internal measurement of the tank volume, displaying the results as a volumetric percentage relative to the tank's total capacity.
They are equipped with a spring-controlled damper on the floating arm, which significantly reduces stress that quickly damages conventional meters.
The MVR replaces the Rotary-Gage system, which required releasing part of the internal gas to the atmosphere for reading.
Its construction is stainless steel, including the float, which provides continuous marking of the internal tank volume.
The operation of the MVR is based on a magnetic system using two magnets:

- One internal,
- One external,

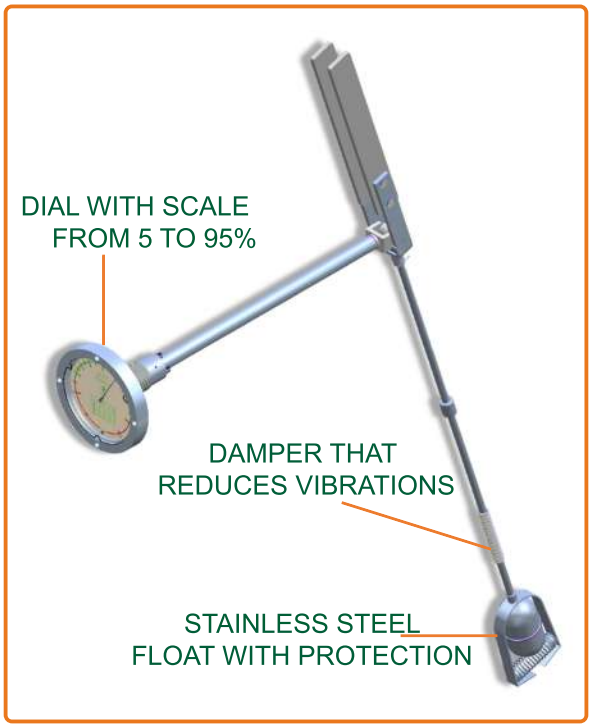
that rotate automatically in response to variations in the liquid level.
Advantages of the MVR over Rotary-Gage systems:

- Simpler installation.
- No environmental contamination.
- Compliant with CETESB's new regulations.
- Modern design resulting in lower maintenance costs.

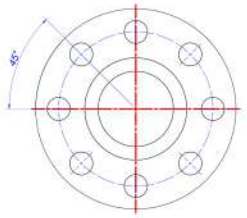
The MVR is manufactured to adapt to the internal diameter of the tank, ensuring a proper and efficient installation.

AVAILABLE MODELS:
NPT THREAD 1" OR 1.1/4" OR WITH FLANGE.

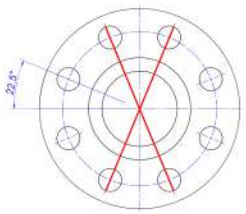
MODELO: ROAD VOLUMETRIC METER (MVR)



Attention to mounting the meters with flange relative to the tank



Cross mounting



X mounting

Side and rear installation of the MVR on the tank.

MEASURING ROD

They are used to determine the liquid level, such as LPG (liquefied petroleum gas) or ammonia, in stationary tanks, using millimeter scales.
Each tank is generally equipped with a pair of rods:

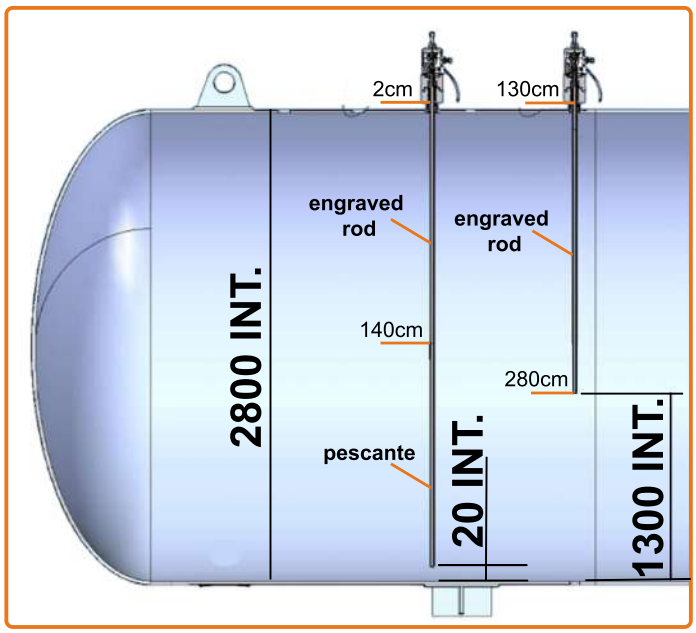
- One to measure the liquid level from the base to the middle of the tank.
- The other from the middle to the top.

For large tanks, sets of three rods can be used, segmenting the measurement into three distinct levels. In exceptional cases, sets with four rods can be used.
It is crucial that each rod has a length that allows safe and efficient reading by the operator.
Excessively long rods may make reading difficult and increase the risk of accidents, as they may lose balance and break.
Additionally, it is common for these rods to be equipped with valves for collecting samples of the liquid contained in the tank.
We offer a calibration service for the purchased rod scales, carried out by a laboratory accredited by the Brazilian Calibration Network (RBC).
The results of this process are submitted for analysis by our engineering team, ensuring compliance with Petrobras requirements for releasing the use of these rods.
The scales are calibrated before the final assembly of the rods.
The certificates and calibration seals are supplied along with the rods.

MODEL: MEASURING ROD (VM)

Sample Collection Valve (VCA): Equipped on the measuring rod to allow liquid collection for analysis.

MODEL	Thread Size (NPT)	Material	For use with
VM-L-19	3/4"	Brass	LPG
VM-L-25	1"		
VM-L-32	1.1/4"		
VM-I-19	3/4"	Stainless Steel	LPG Ammonia
VM-I-25	1"		
VM-I-32	1.1/4"		

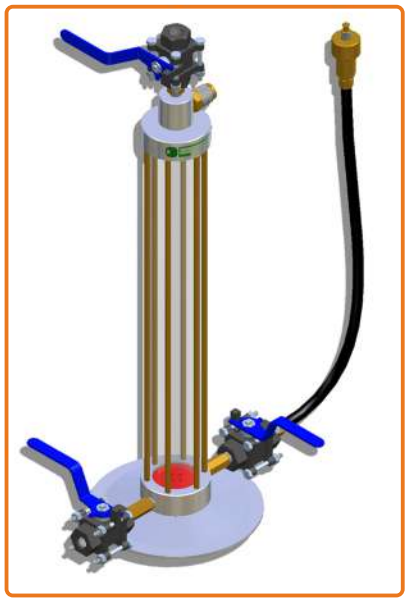


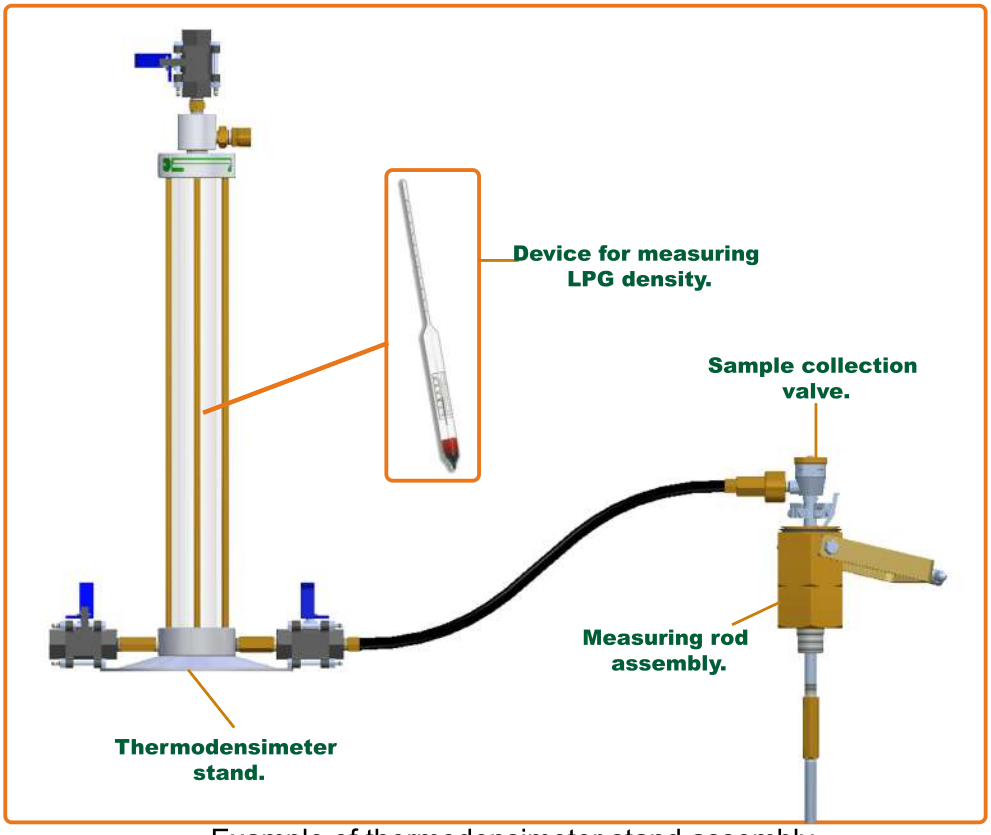
Example of Rod Installation shows positioning in the tank with marked heights for precise liquid measurement

THERMODENSIMETER STAND

A GLP (Liquefied Petroleum Gas) thermodensimeter stand is a device designed to facilitate the measurement of gas density.
The stand is used to hold the thermodensimeter, keeping it stable during the measurement of LPG density, which is crucial for ensuring accurate readings.
The stand is made of materials such as acrylic tubing, chosen for its transparency and strength, allowing the liquid to be seen and measurements to be monitored. It also includes ball valves at the inlet and outlet and a safety valve.
***Available models: single or double stand, with or without the thermodensimeter.**

MODEL: VSTD





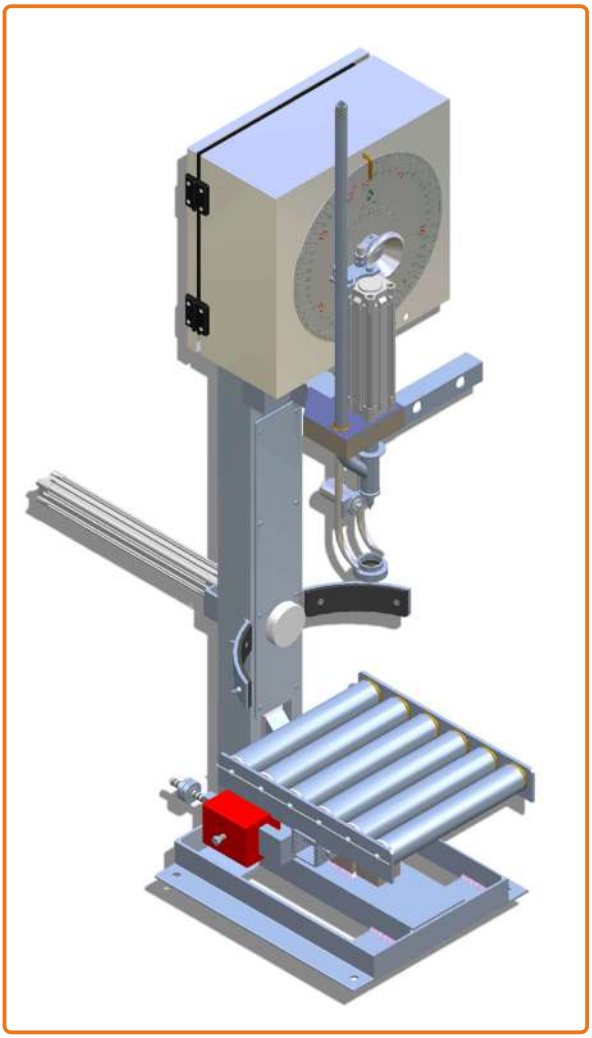
Example of thermodensimeter stand assembly.

FILLING EQUIPMENT

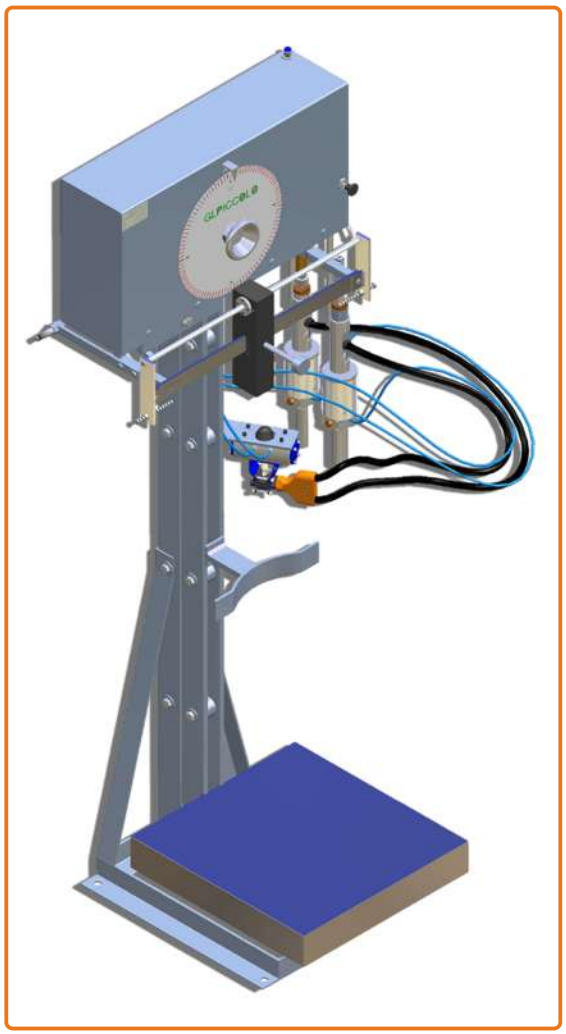
Model P-13: This equipment for filling P-13 cylinders is designed to be positioned in front of the operator, which facilitates and speeds up its operation.
The filling nozzle operates centrally on the roller, contributing to greater durability of the component.
The new box design provides more efficient regulation of both the pneumatic system and activation.
A shock absorber in the column minimizes the impact of the P-13 cylinder during operation.
For cylinder removal, an optional system is implemented: when the nozzle retracts, a sensor activates a cylinder that releases the cylinder, allowing its ejection from the carousel as it reaches the removal point to the conveyor belt.
***MODEL AVAILABLE WITH EJECTOR AND CENTRALIZER.**

Model P-20/45/90: The equipment for filling P-20/45/90 cylinders is equipped with two pneumatic clamps and an automatic shut-off valve or manual control.
When changing cylinders with different capacities, it is necessary to adjust the gauge.

MODEL: FILLING EQUIPMENT EP-13



MODEL: FILLING EQUIPMENT EP-20/45

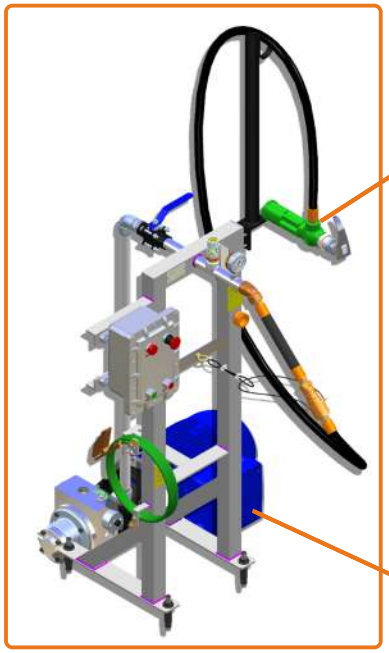


REFILLING STATION

The refilling stations are a refilling system for P-20 cylinders installed on forklifts, carried out in a central station installed within the company itself. This eliminates problems caused by a lack of replacement cylinders, as these can be refilled at any time.

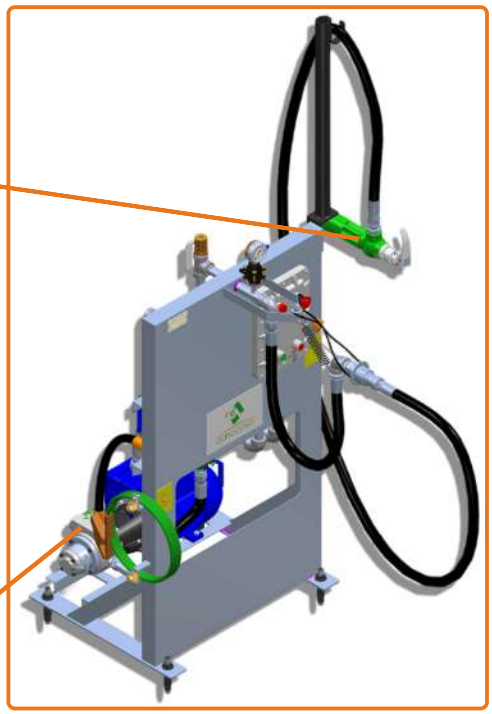
This system, in addition to eliminating the constant cylinder swaps, makes the process faster, more practical, and safer, optimizing the operator's time with these swaps, increasing productivity, and reducing accident risks.

MODEL: PIT STOP 25 (1")

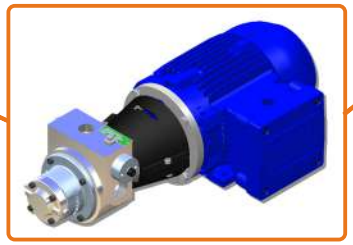


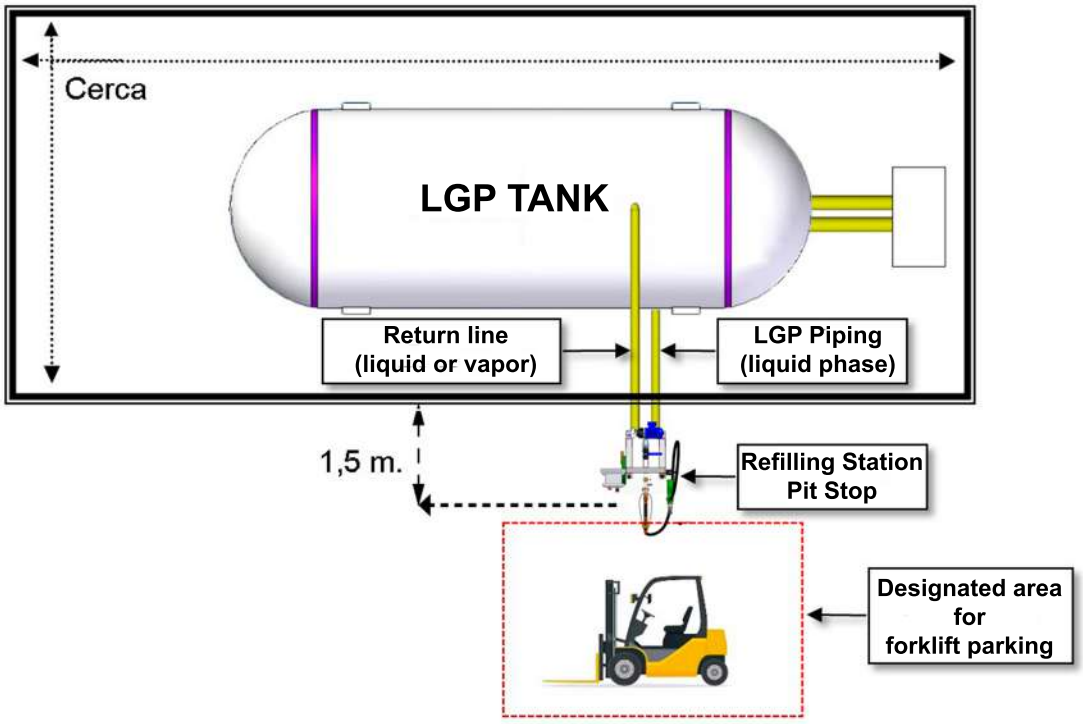
MODEL: FILLING VALVE VEBT-25/44

MODEL: GAS STATION 19 (3/4")



MODEL: GLP ELECTRIC PUMP MOD. JP0710





FILLING VALVE 1” NPT x 1.3/4” ACME

Filling Valve 1” NPT x 1.3/4” ACME

The VEBT-25/44 is a valve designed to minimize product release during disconnection of Bobtail-type trucks, distribution systems, and LPG storage tanks.

This valve provides immediate containment or flow release through lever movement. Closing occurs instantly, and the lever locks, offering extra protection to the system.

The VEBT-25/44 is a standalone unit that does not require additional adapters or connectors for installation and operation.

Key Features:

• The VEBT-25/44 reduces product loss through its venting system when disconnected, thanks to a seating design located at the bottom of the embedded ACME filling connector.

• Its seal design, equipped with a scraper-type pressure spring, ensures leak-free operation.

• Operation is made easier by an adjustment handle with a full 360° guide, allowing wide and easy connection, making the valve simple and practical to use.

The VEBT-25/44-SB model integrates a locking system that only allows LPG flow when the filling valve is fully coupled to the tank valve.

MODEL: FILLING VALVE
VEBT-25/44-SB

Example of VEBT-25/44 mounted on a Bobtail truck.

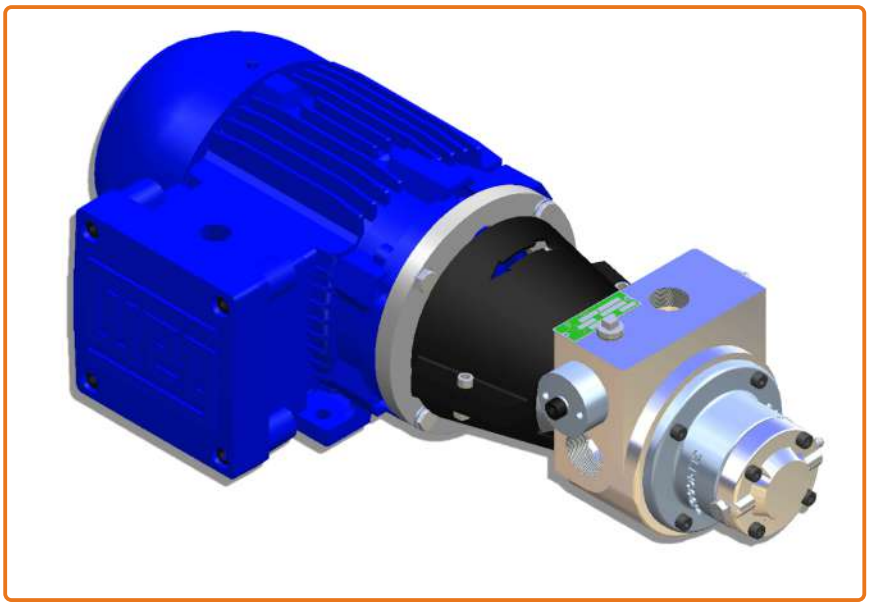
LPG ELECTRIC PUMP MODEL JP0710

The LPG electric pump, model JP0710, is designed for refueling forklifts that operate with Pit Stop or Gas Station systems.
This device is vane-driven and was developed to:

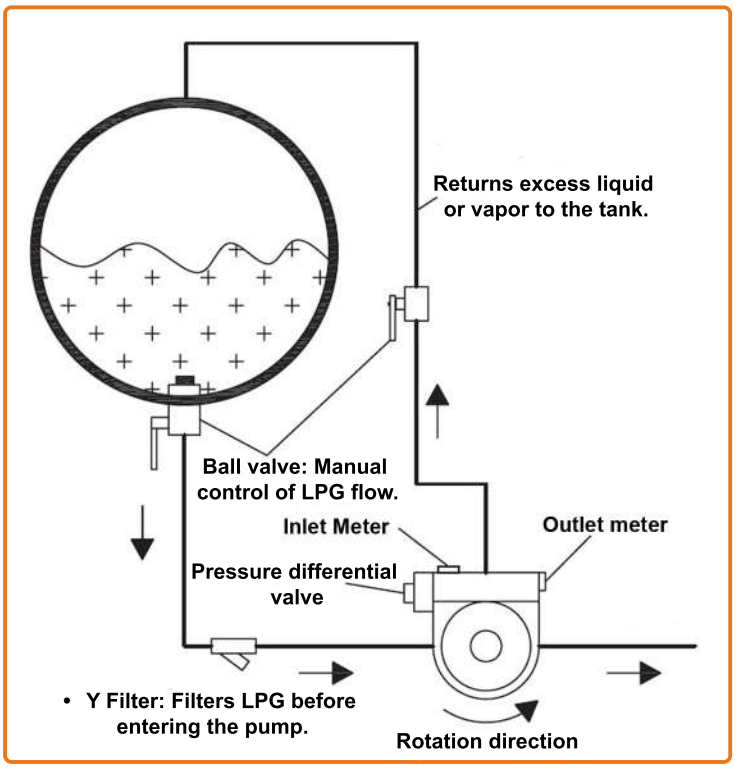
- Ensure stable performance,
- Provide fast and quiet operation.

The pump integrates a pressure differential system, internally coupled, with the objective of redirecting excess pressure back to the tank, ensuring efficiency and safety during the refueling process.

MODEL: LPG ELECTRIC PUMP MODEL JP0710



MODEL	Power	Rotation Speed	Voltage	Frequency	Inlet / Outlet size
Housing 90 in 4 poles	1CV	1740 rpm	220/380/440V	60Hz	1" npt



The JP0710 LPG Electric Pump ensures a safe and efficient process for forklift refueling, preventing overpressure and optimizing industrial LPG system operations.

ADAPTERS FOR FILLING VALVES

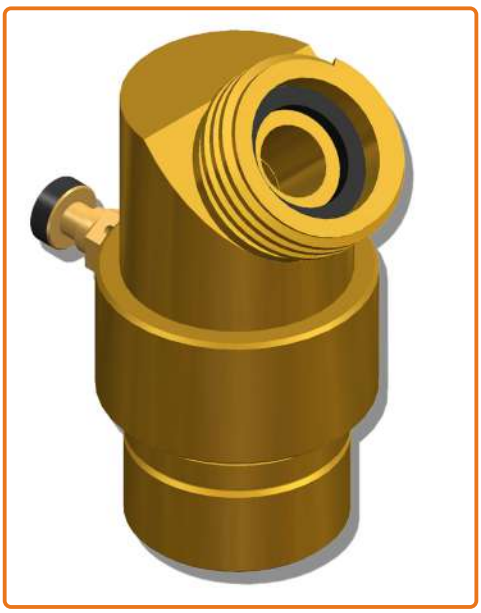
The filling valve adapter is an essential component for connecting the hose in systems that use LPG, with the main objective of facilitating the filling of tanks through a secure connection between the tank and the filling hose.

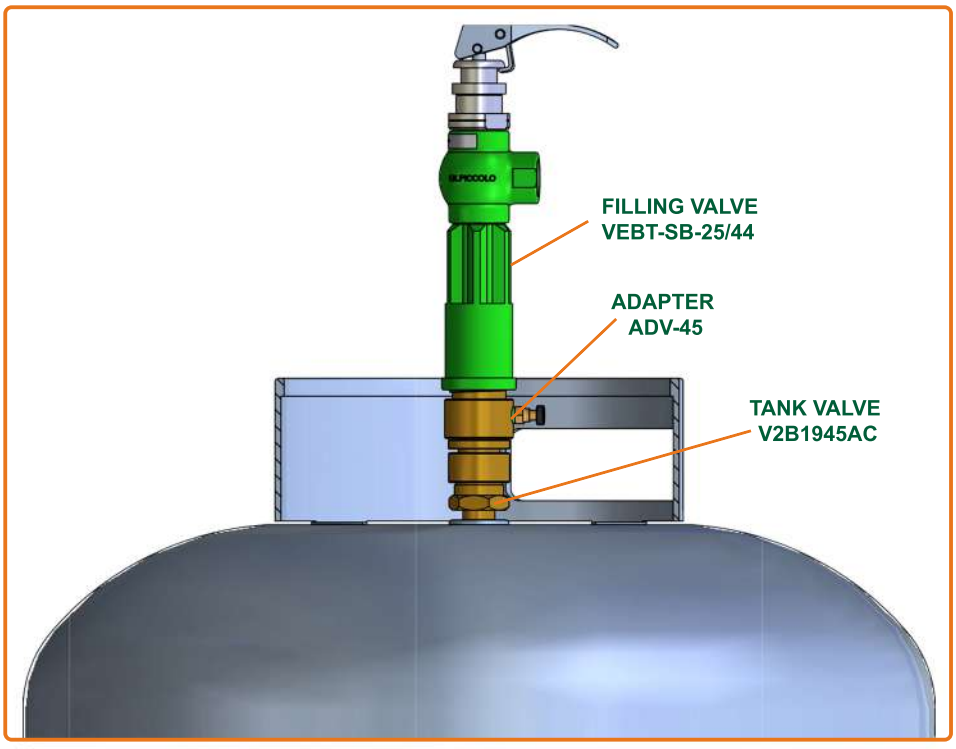
After the tank is filled, the total tightness of the tank valve must be checked by the relief valve on the adapter. If leakage persists, the filling valve must be removed while keeping the adapter connected to the tank to ensure tightness and enable repair of the filling valve.

The models are available in brass or aluminum, with or without locking systems, considering that the locking system allows the passage of LPG only when the filling valve is fully connected to the reservoir valve.

MODEL: ADV-45

MODEL: ADV-45-45°





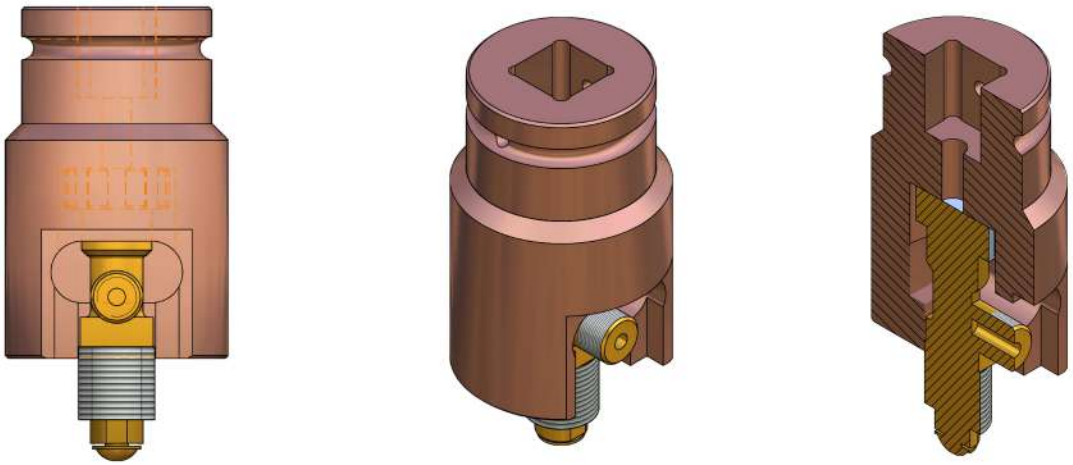
Example of installation on a P-190 cylinder.

SOCKETS

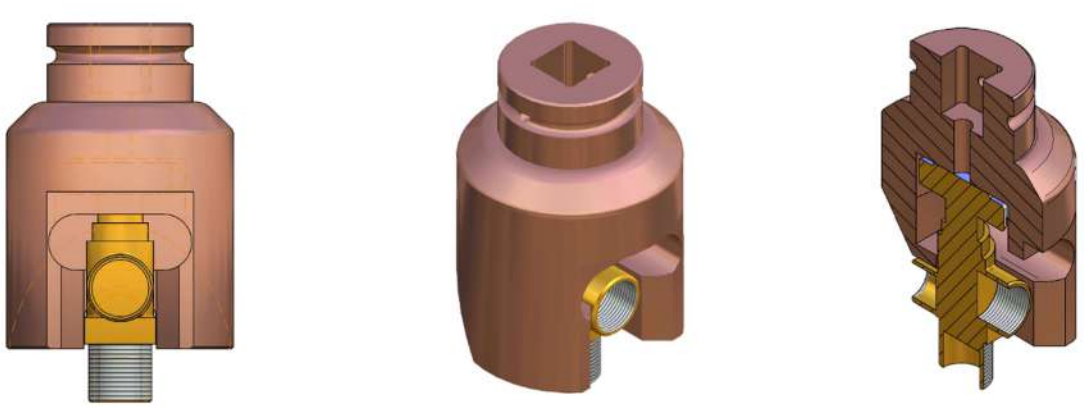
Sockets are used in the processes of installing or extracting valves in containers P-13, P-20, and P-45, ensuring a safer condition in this process. The material from which they are made is non-slip and has adequate mechanical strength to withstand tightening torques and, especially, extraction torques.
They are ideally sized to prevent the socket from touching the flange or the container's requalification plate. These devices can be used at all facilities where valve installation and extraction operations are performed on containers.
***P-20 and P-45 MODELS ARE AVAILABLE FOR FIXED SHAFT AND PNEUMATIC SCREWDRIVERS.**

MODEL: SOCKET FOR P-13 VALVES

MODEL: SOCKET FOR P-20 VALVES



MODEL: SOCKET FOR P-45 VALVES



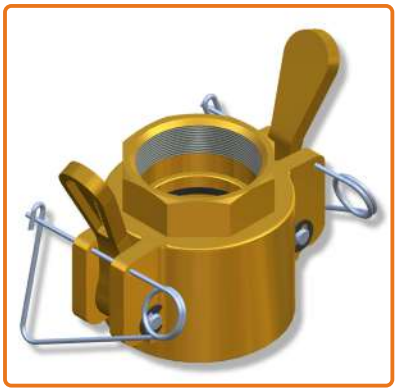
COUPLINGS

Couplings allow hose connections for use at LPG or Ammonia (NH3) transfer points in trucks and stationary tanks, providing a quick and secure connection to a piping system, making assembly and disassembly easier when necessary.

These couplings come in various dimensions and are manufactured from materials such as brass, stainless steel, carbon steel, and bronze.

Materials in class 300lb mean that the component can withstand higher pressures, making it suitable for systems operating under pressure.

MODEL: FEMALE COUPLING



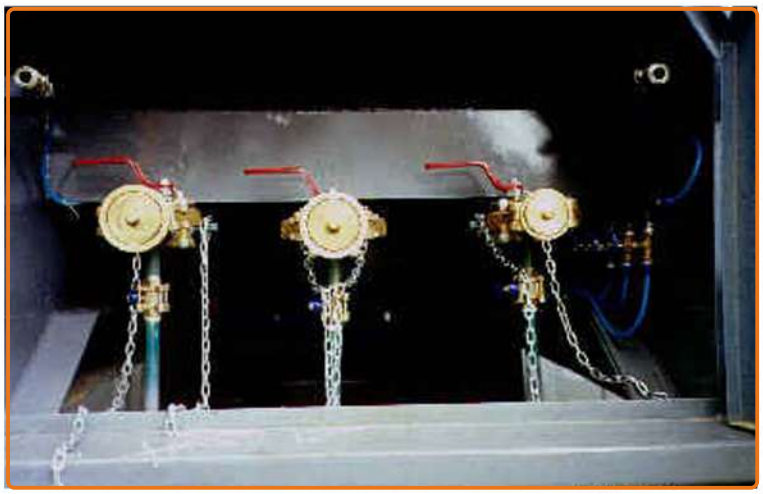
MODEL	CONNECTION
EF-32	1.1/4" NPT
EF-38	1.1/2" NPT
EF-50	2" NPT

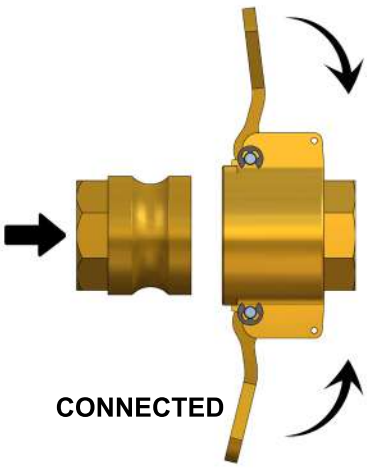
MODEL: MALE COUPLING

MODEL	CONNECTION
EM-32	1.1/4" NPT
EM-38	1.1/2" NPT
EM-50	2" NPT

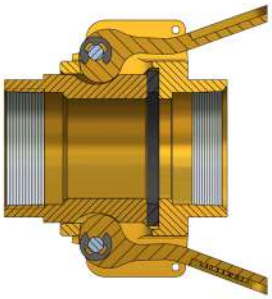
MODEL: CAP

MODEL	CONNECTION
TB-32	1.1/4"
TB-38	1.1/2"
TB-50	2"

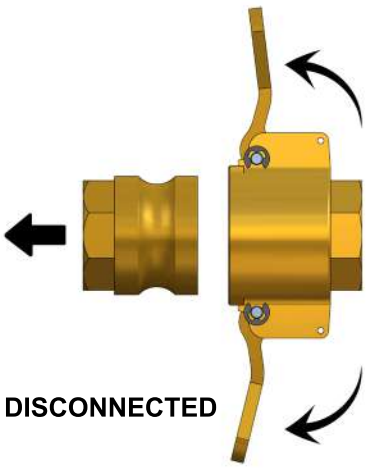




CONNECTED



LOCKED COUPLING



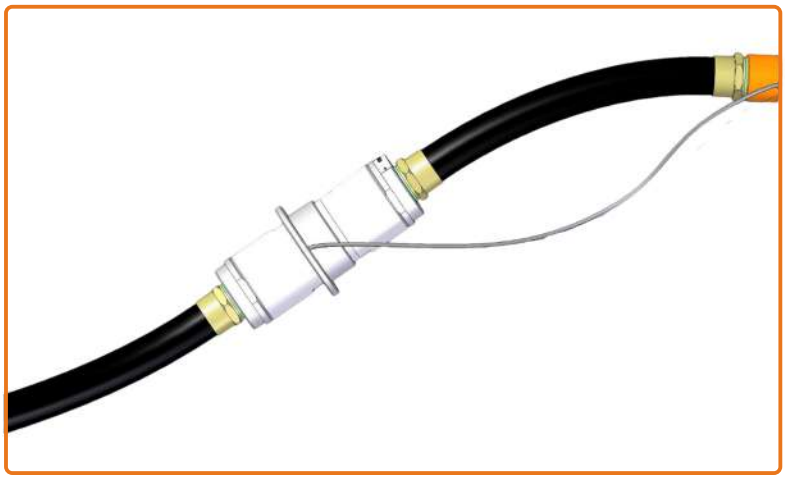
DISCONNECTED

Pull-Away Valves

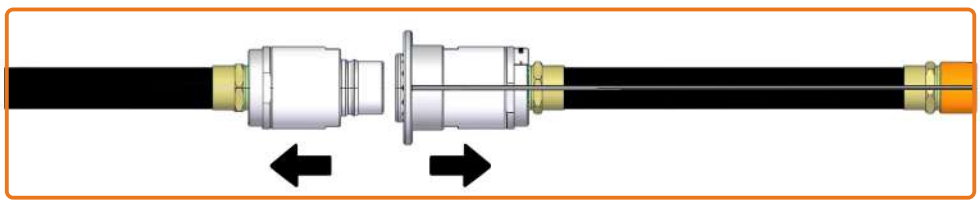
Pull-Away valves are specifically designed to ensure safety during Liquefied Petroleum Gas (LPG) and anhydrous ammonia transfer operations, covering activities such as transportation, loading, and unloading of trucks, filling fuel containers for engines, and various cylinder filling operations.
When correctly coupled to the discharge hose end, the valve acts to prevent gas escape in "pull-away" situations.
The valve separation occurs automatically in response to excessive tension, triggering the closure of two internal check valves that prevent reverse flow.
It is recommended that appropriate means be provided to depressurize each part of the coupling before reassembling the valve. For reassembly, the male half must be firmly inserted into the female half until the retaining balls fit into the appropriate groove.
After this process, it is crucial to check for leaks.
Note:
Pull-Away valves should be subjected to regular tests, preferably monthly, to ensure proper operation in "pull-away" situations.

MODEL: Pull-Away Valves

MODEL	Thread size (NPT)	Material
VEPW-A-10	3/8"	Steel
VEPW-A-12	1/2"	Steel
VEPW-A-19	3/4"	Steel
VEPW-A-25	1"	Steel
VEPW-AL-38	1.1/2"	Aluminium
VEPW-AL-50	2"	Aluminium



"Hose and Pull-Away valve at rest."



"Hose and Pull-Away valve under tension, causing valve separation and stopping the flow."

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