

ORIGINAL INSTRUCTIONS



TECHNICAL DATA SHEET

CODE 18450 001 00
CODE 18450 038 00



Rev. 03
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COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001

COMPANY WITH
ENVIRONMENTAL SYSTEM
CERTIFIED BY DNV
ISO 14001

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QUALITY SYSTEM
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ISO 3834-2

1. General warnings

This technical data sheet contains technical information concerning the mild steel and stainless steel leaf-spring primary shutoff and the main installation and maintenance instructions.

Complying with the instructions contained in this technical data sheet is crucial for the recognition of warranty against defective parts. Upon receiving the goods, ensure that they are intact and have not been accidentally damaged during transport. In the event parts of the accessory must be replaced, **use only genuine spare parts**.

2. Technical data

The leaf spring primary shutoff is designed to be welded to the tank, where the vacuum line starts. The primary shutoff is equipped with an "overflow" system with a stainless steel floating ball. This system prevents the suctioned material (liquids or similar) from entering the vacuum line when the maximum level inside the tank is reached. The primary shutoff acts as a safety valve in the event of excessive pressure, since it is equipped with leaf spring closure.

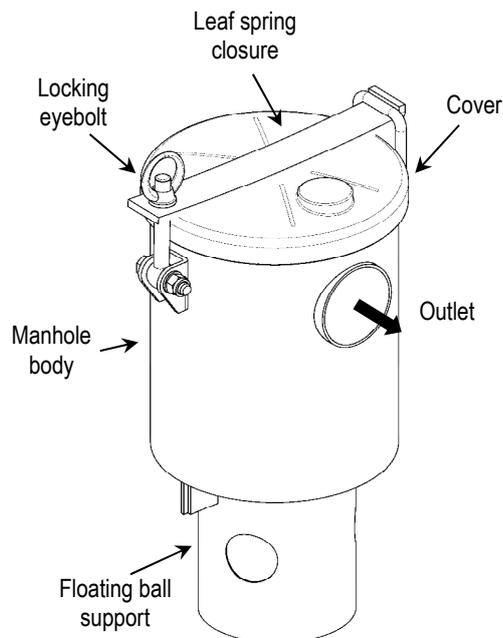
The following figure shows a schematic view of the leaf spring primary shutoff.

The leaf spring primary shutoff is available in two versions:

- **S355J2 carbon steel leaf spring primary shutoff** (code 18450 001 00) painted with G25 cast iron cover;
- **Stainless steel 304 L leaf spring primary shutoff** (code 18450 038 00) with G25 cast iron cover.

The internal floating ball is made of stainless steel 316 in both versions.

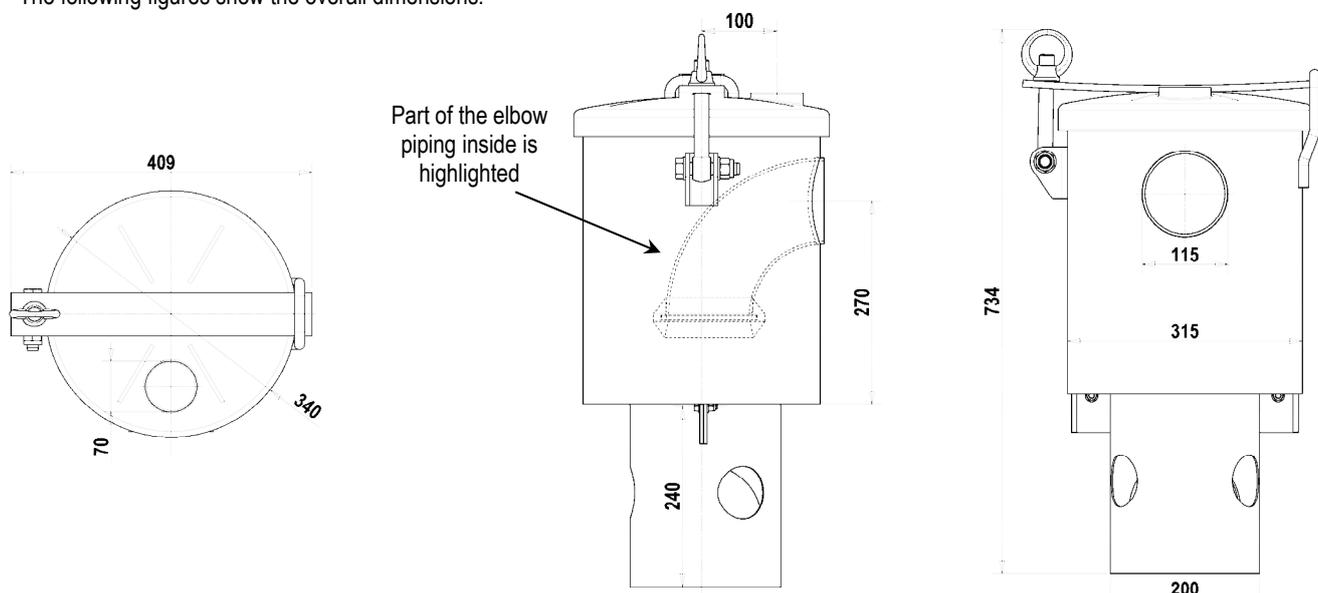
The following table shows the main operating parameters concerning maximum operating pressure (relative), calculation pressure (relative) and weight of the primary shutoff.



Operating parameters

Parameter	Primary shutoff
MAXIMUM OPERATING PRESSURE (RELATIVE)	-1 / +0.5 bar
CALCULATION PRESSURE (RELATIVE)	-1 / +2 bar
WEIGHT	33 Kg

The following figures show the overall dimensions.



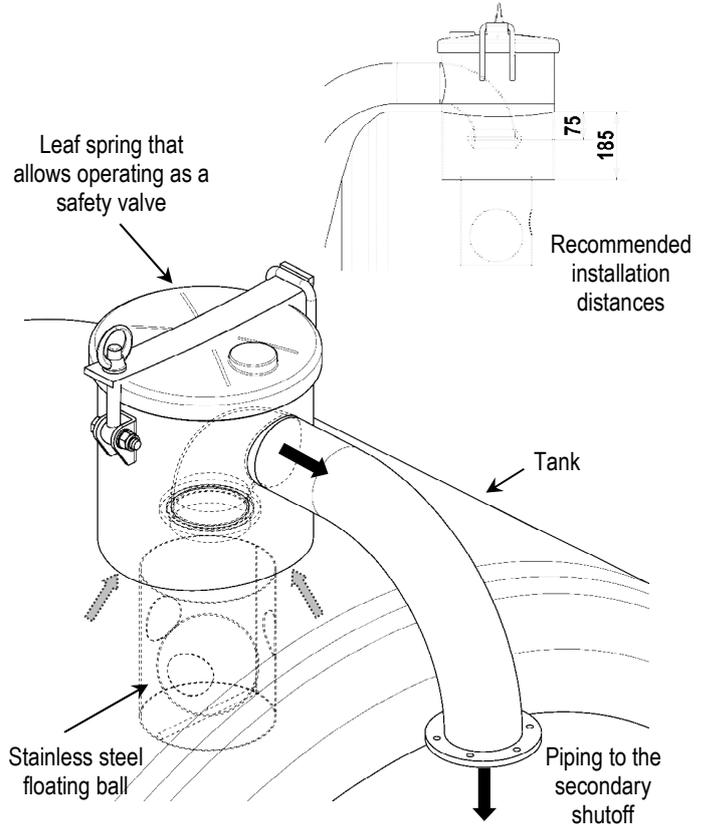
3. Installation and adjustment

The primary shutoff must be welded on top of the tank. The following figure shows the schematic view of a possible installation, highlighting the primary shutoff outlet (to create vacuum inside the tank) connected to the vacuum line. The recommended measurements (distance from the external top of the tank) for installation are also shown.

The primary shutoff can operate both in suction (as shown in the figure) and compression (e.g., to discharge the material inside the tank) mode.

The leaf spring closure allows the primary shutoff to act as a safety valve, venting the tank when the pressure is too high. Adjusting the eyebolt (pos. 8) allows adjusting the spring leaf and, therefore, the pressure beyond which the upper cover opens. Do not exceed the 0.5 bar calibration (relative).

In the event of installation at a greater distance from the top of the tank (with respect to the recommended ones) or in presence of material drawn along the vacuum line, we recommend drilling some holes on the side of the primary shutoff body (pos. 2) in order to improve the intake flow.



 **Attention: ensure that the primary shutoff is under atmospheric pressure before intervening on it.**

4. Maintenance and adjustment

To operate correctly, the primary shutoff must be cleaned regularly (according to the conditions of use and the type of substances that are suctioned). Under normal conditions of use, it is sufficient to clean with a jet of high pressure water from the rear of the tank (without intervening directly on the primary shutoff on top of the tank).

Should more thorough cleaning be required (e.g. in the event the natural movement of the metal floating ball is not allowed due to dirt), proceed as follows.

- Loosen the locking eyebolt (pos. 8).
- Remove the upper leaf spring (pos. 7).
- Remove the upper cover (pos. 4) and the seal (pos.6).
- Clean the inside of the primary shutoff using pressurised water.
- Reinstall the previously removed components taking care to place the seal correctly (pos. 6).

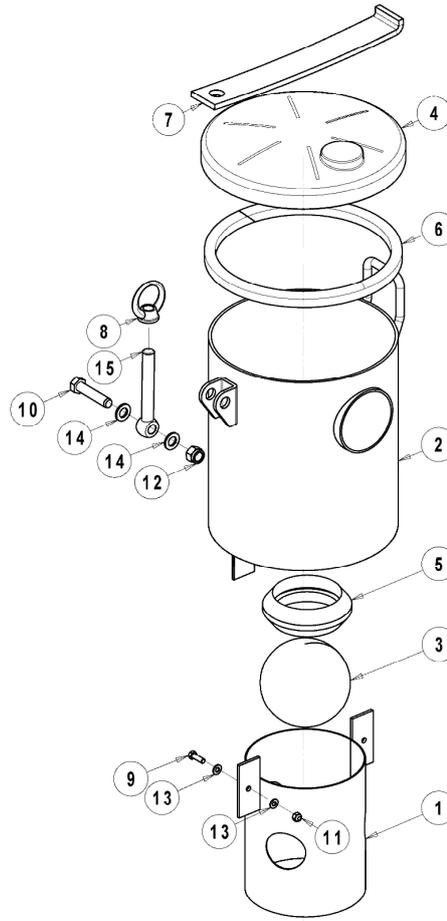
In presence of suctioned material (e.g. liquids) along the vacuum line, ensure the integrity and the correct position of the inner double taper seal (pos. 5) and floating ball (pos. 3). Replace if worn.

 **Attention: the leaf spring must be calibrated every time the cover is opened.**

In the event of excessive pressure, venting the primary shutoff can cause some of the material to leak from the tank. Clean up any leakage.

In the event of a pressure drop in correspondence of the primary shutoff, ensure the correct position of the cover seal (pos. 6). Replace if worn.

LEAF SPRING PRIMARY SHUTOFF



Carbon steel primary shutoff – code 18450 001 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513003100	GALV. FLOAT. SUPP. 200X250	1	9	4026102807	HEX SCREW 8.8 M8X25	2
2	1587000400	MANHOLE D.320 TH. 5	1	10	4026103217	HEX SCREW 8.8 M16X75	1
3	1592000200	STAINLESS STEEL 316 FLOAT. BALL D.150	1	11	4026305404	STAINLESS STEEL 304 SELF-LOCK. NUT M8	2
4	1640500100	CAST IRON MANHOLE COVER D.300	1	12	4026305408	STAINL. STEEL 304 SELF-LOCK. HEX NUT M16	1
5	1680601800	DOUBLE TAPER SEAL D.115	1	13	4026356105	FLAT WASHER M8	4
6	1680603000	MANHOLE COVER SEAL	1	14	4026357009	GALV. FLAT WASHER M16	2
7	1691001300	MANHOLE LEAF SPRING	1	15	4026415300	GALV. THREAD. PIN M20	1
8	4025500500	EYEBOLT M20	1				

Stainless steel primary shutoff – code 18450 038 00

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1513009700	STAINLESS STEEL 316 FLOAT. S. 200X250	1	9	4026103116	GALV. HEX SCREW 8.8 M14X70	1
2	1587009100	STAINLESS STEEL MANHOLE D.320 TH.5	1	10	4026150409	STAINLESS STEEL HEX SCREW M8X30	2
3	1592000200	STAINLESS STEEL 316 FLOAT. BALL D. 150	1	11	4026305404	STAINLESS STEEL 304 SELF-LOCK. NUT M16	2
4	1640500100	CAST IRON MANHOLE COVER D.300	1	12	4026305407	STAINLESS STEEL 304 SELF-LOCK. NUT M14	1
5	1680601800	DOUBLE TAPER SEAL D.115	1	13	4026357008	GALV. FLAT WASHER M14	2
6	1680603000	MANHOLE COVER SEAL	1	14	4026358005	STAINLESS STEEL 304 FLAT WASHER M8	4
7	1691001300	MANHOLE LEAF SPRING	1	15	4026415300	GALV. THREAD. PIN M20	1
8	4025500500	EYEBOLT M20	1				