



The Oventrop Quality Management System is certified to DIN-EN-ISO 9001

Diaphragm anti siphon valve "Oilstop F" with fixed safety height

Tender specification:

The Oventrop diaphragm anti siphon valve "Oilstop F" is used in heating oil installations according to DIN 4755 standard in which the maximum tank filling point is located at a higher level than the lowest point of the suction pipe. Should a leakage occur in the suction pipe between the anti siphon valve and the burner, the valve will prevent the oil in the tank being siphoned off. Installation is possible in the suction pipe of one pipe systems (with and without return flow feed) and two pipe systems.

Item no. 210 42 51 Safety height 1.8 m
 Item no. 210 42 52 Safety height 2.4 m
 Item no. 210 42 53 Safety height 3.0 m

Function:

When the burner is not in operation, a spring assisted piston shuts off the suction pipe between the tank and the succeeding system. Once the pump is switched on, the underlying pressure actuates the diaphragm, which via a tappet, will lift the piston and open the valve. During the operating time of the burner, the valve remains open.

If a leakage occurs in the suction pipe, the underlying pressure disappears. Then the diaphragm releases the piston and the valve is closed.

Advantages:

- low pressure loss
- leakage test of the system up to 6 bar with the valve being installed
- compact construction
- existing installations can be upgraded
- functions without auxiliary energy
- diaphragm and valve insert are fitted in such a way as to prevent tampering
- maintenance-free valve
- pressure compensation in case of increase of oil temperature between valve and burner

Installation and putting into operation:

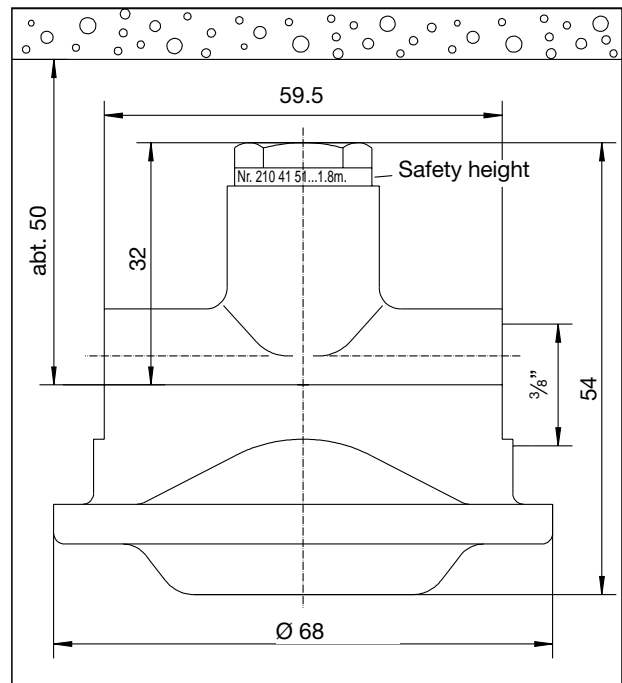
The difference in height Δh_v between the diaphragm anti siphon valve and the lowest point of the suction pipe may not exceed the set safety height (see marking on the plug)! The valve is installed in the flow direction (arrow) of the suction pipe and must be situated above the maximum tank oil level. The valve may be installed in any position, but it is preferable to install it horizontally with the diaphragm bonnet pointing downwards.

The valve should be installed free from tension in a dry and easily accessible location. Care must be taken that no impurities (e.g. metal shavings) enter the valve body. The bore hole in the bonnet may not be polluted or covered. During operation, the valve must be protected (e.g. by an insert or a strainer) against heavy pollution.

Non-return check valves (without pressure balance) may impair the operation of the solenoid valve. In case of a possible pressure built-up caused by a rise in temperature, especially in separate oil storage rooms, they should be removed and inactivated.

A leakage test of the system up to 6 bar is possible with the diaphragm anti siphon valve being installed. The bore hole in the bonnet should be easily accessible as it is used for the deaeration of the valve when putting it into operation. Once the burner is switched on, lift the valve seat by using a suitable pen until the oil reaches the burner. After that the valve works automatically.

Dimensions:



To check the chosen safety height, a leakage is simulated at the lowest point of the suction pipe (e.g. by loosening the flexible hoses of the burner or the filter cup). At the leakage point, no oil coming from the tank may escape. If it does, a valve with a higher safety height should be installed. Under no circumstances are the works settings to be changed!

In cases where an exact adjustment of the safety height between 1 m and 4 m is required, the diaphragm anti siphon valve with infinitely adjustable safety height, item no. 210 42 03, should be used.

Technical data:

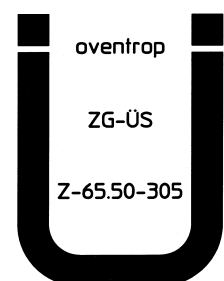
Flow capacity at pressure loss: max. 200 l/h at 40 mbar
 Safety height Δh_v : 1.8 m/2.4 m/3 m
 Connection: $\frac{3}{8}$ " female thread, suitable for compression fittings 6, 8, 10, 12 mm preferably horizontal
 Positioning:
 Max. test pressure: 6 bar
 Max. working pressure: 40 °C

Accessories:

Connection sets for copper pipes (compression fittings)	6 mm	Item 212 70 50
	8 mm	Item 212 70 51
	10 mm	Item 212 70 52
	12 mm	Item 212 70 53

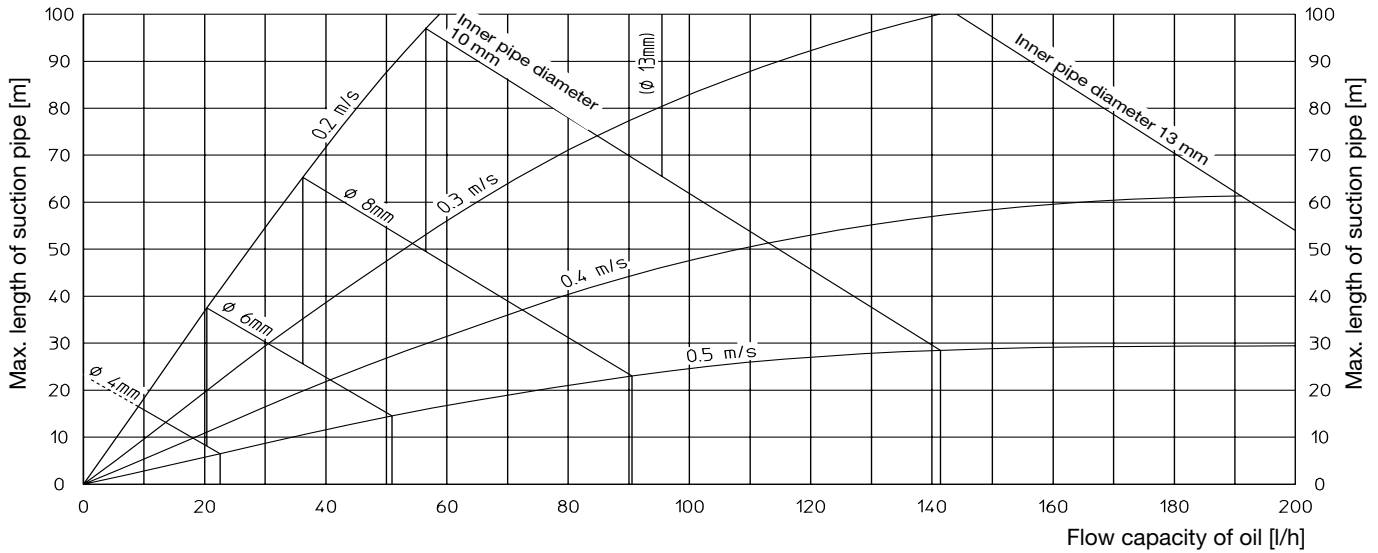
Tests:

TÜV tested (S 04/01) according to DIN EN 12514 part 2. General construction supervising admission by DIBt Z-65.50-305. Sign of conformity (Sign Ü)



The chart below is a guide to the normal lengths of the suction pipe depending on the flow capacity of the oil and the inner pipe diameter. It is assumed that the safety height preset at works (see marking on the plug) corresponds to the actual height difference Δh_V . If Δh_V is below the set value, the additional pressure loss for every meter is approximately 85 mbar.

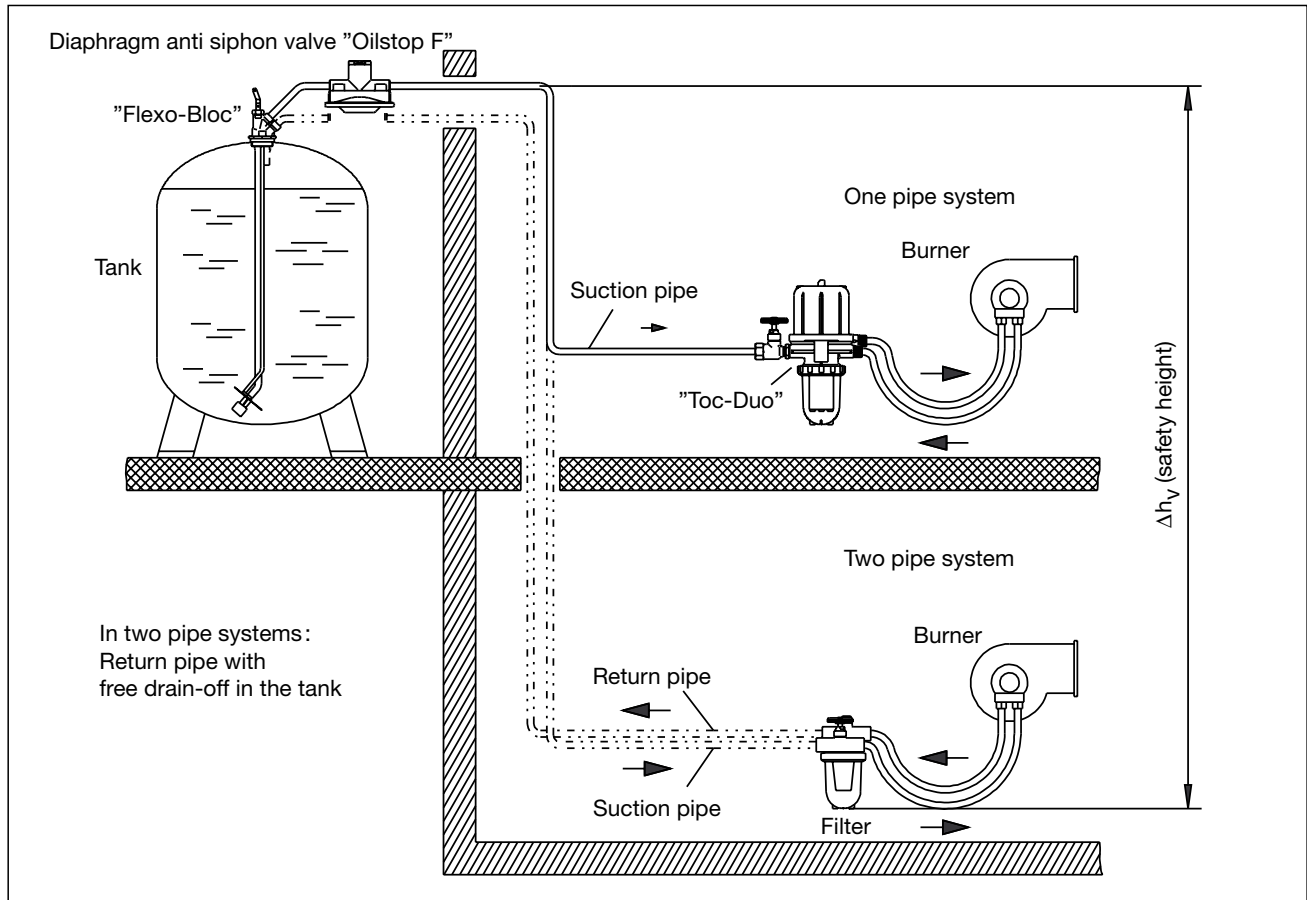
In practice this means if the safety height is exceeded by 0.5 m, the reduced length of the suction pipe is between 15-20% compared to the length of the suction pipe taken from the chart. With the flow capacity of the oil exceeding 100 l/s, another 5-10% are to be deducted.



The stated values are valid for a suction pipe without pipe bends/elbows, including the resistance values of the valves (diaphragm anti siphon valve and filter/"Toc-Duo") illustrated in the example of installation. When using the maximum possible length of the suction pipe, then the burner pump has to produce an underlying pressure of about -0.4 bar.

Pipe bends/elbows, isolation- and change-over valves or other installations in the suction pipe between the diaphragm anti siphon valve and the burner as well as oil of low temperature (underground tanks, unheated storage rooms, pipes installed outside, etc.) will mean additional pressure loss. Any such installations can reduce the maximum possible length of the suction pipe considerably, when compared with the values illustrated in the chart.

Example of installation:



Subject to technical modification without notice.

Product range 9
ti 102-1/10/10.2001/MW

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