



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

## Diaphragm anti siphon valve "Oilstop V" with infinitely adjustable safety height

### Tender specification:

The Oventrop diaphragm anti siphon valve "Oilstop V" 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 03

### 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.

When the valve is set to "**entlüften**" (deaerating), the piston is lifted off its seat and the safety function is deactivated. This facility enables a simple deaeration of the pipework when the system is put into operation for the first time or after maintenance/service works (e.g. filter change). Important: The required safety height for the system must be set after deaeration!

When the valve is set to "**absperren**" (isolation), the diaphragm is disabled. The valve may not be opened by system pressure. This facility enables maintenance/service works on parts of the pipe before or behind the valve. Attention: If the burner is switched on when the valve is isolated, the pump may be damaged!

### Advantages:

- infinite adjustment ensuring low pressure loss
- deaeration function allowing a trouble-free setting into operation
- isolation facility to carry out maintenance/service works and to isolate the system
- leakage test of the system up to 6 bar with the valve being installed
- valve can be lead sealed
- 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  $\Delta h_V$  between the diaphragm anti siphon valve and the lowest point of the suction pipe may not exceed 4 m (max. adjustable safety height)!

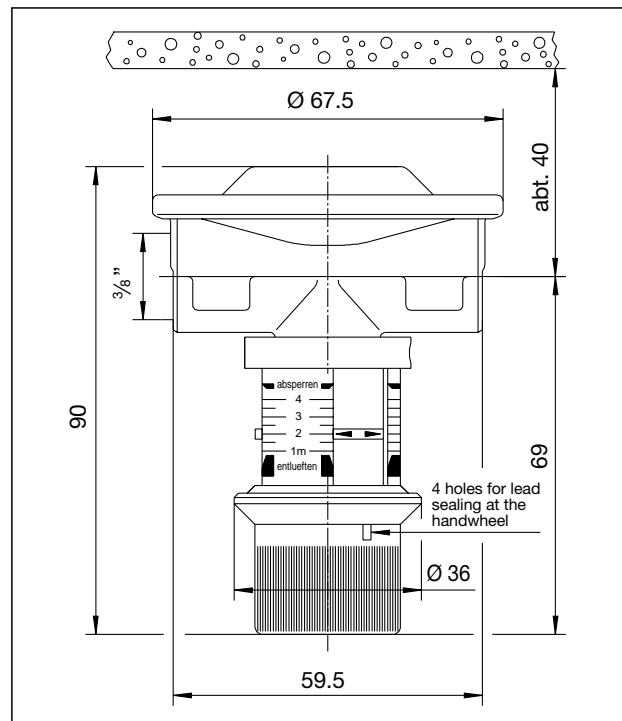
The valve is installed in the flow direction (arrow) of the suction pipe and must be situated above the maximum tank oil level. The valve may be installed in any position, but it is preferable to install it horizontally with the setting scale pointing downwards.

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.

Before putting the system into operation, the valve must be set to "entlüften" (deaerating) by turning the handwheel

### Dimensions:



anticlockwise until stop. As soon as the oil reaches the burner, the required safety height is set at the scale (equivalent to  $\Delta h_V$  in the illustrated example). Should a non-return check valve have been installed (without pressure balance), the setting of the safety height has to be carried out before installing the valve or when the burner is in operation. 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, the safety height should be increased until no more oil escapes. To prevent unauthorized tampering, the setting may be lead sealed at the handwheel. The valve now functions automatically.

A leakage test of the suction pipe up to 6 bar is possible with the valve being installed.

### Technical data:

Flow capacity at pressure loss: max. 200 l/h at 40 mbar  
Safety height  $\Delta h_V$ : adjustable between 1 m and 4 m

Connection:  $\frac{3}{8}$ " female thread, suitable for compression fittings 6, 8, 10, 12 mm preferably horizontal

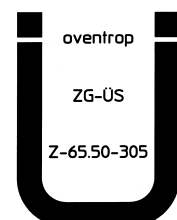
Positioning:  
Max. test pressure: 6 bar  
Max. working pressure: 40 °C

### 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
Sealing wire with lead	10 pcs.	Item 108 90 91

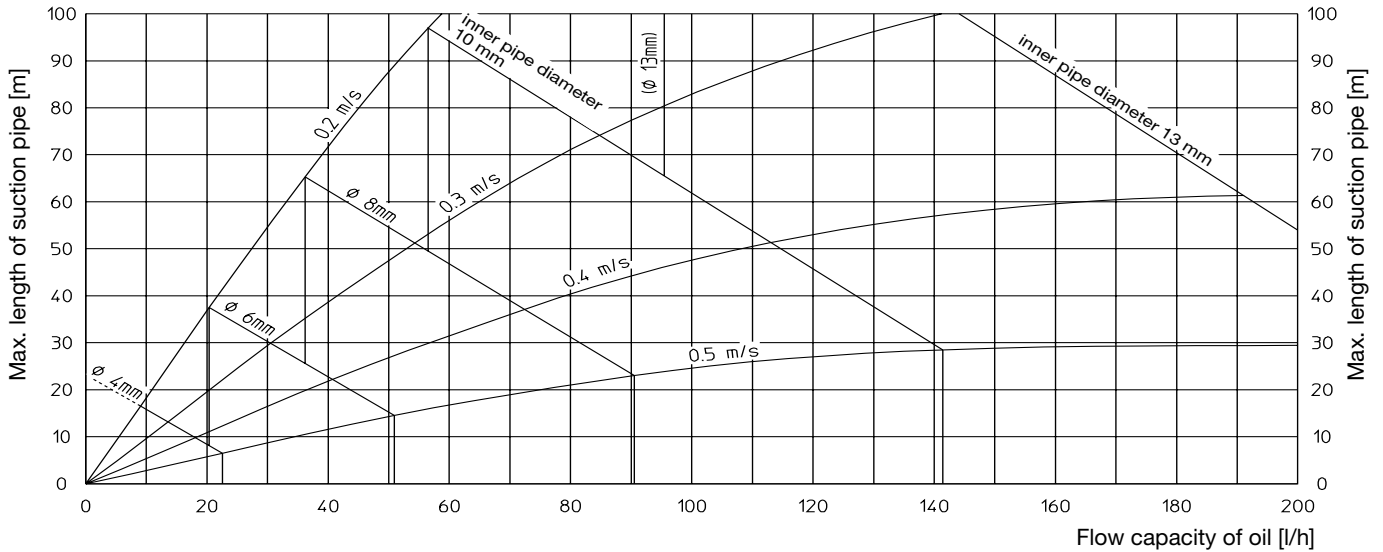
### Tests:

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 maximum length of the suction pipe depending on the flow capacity of the oil and the inner pipe diameter. It is assumed that the safety height

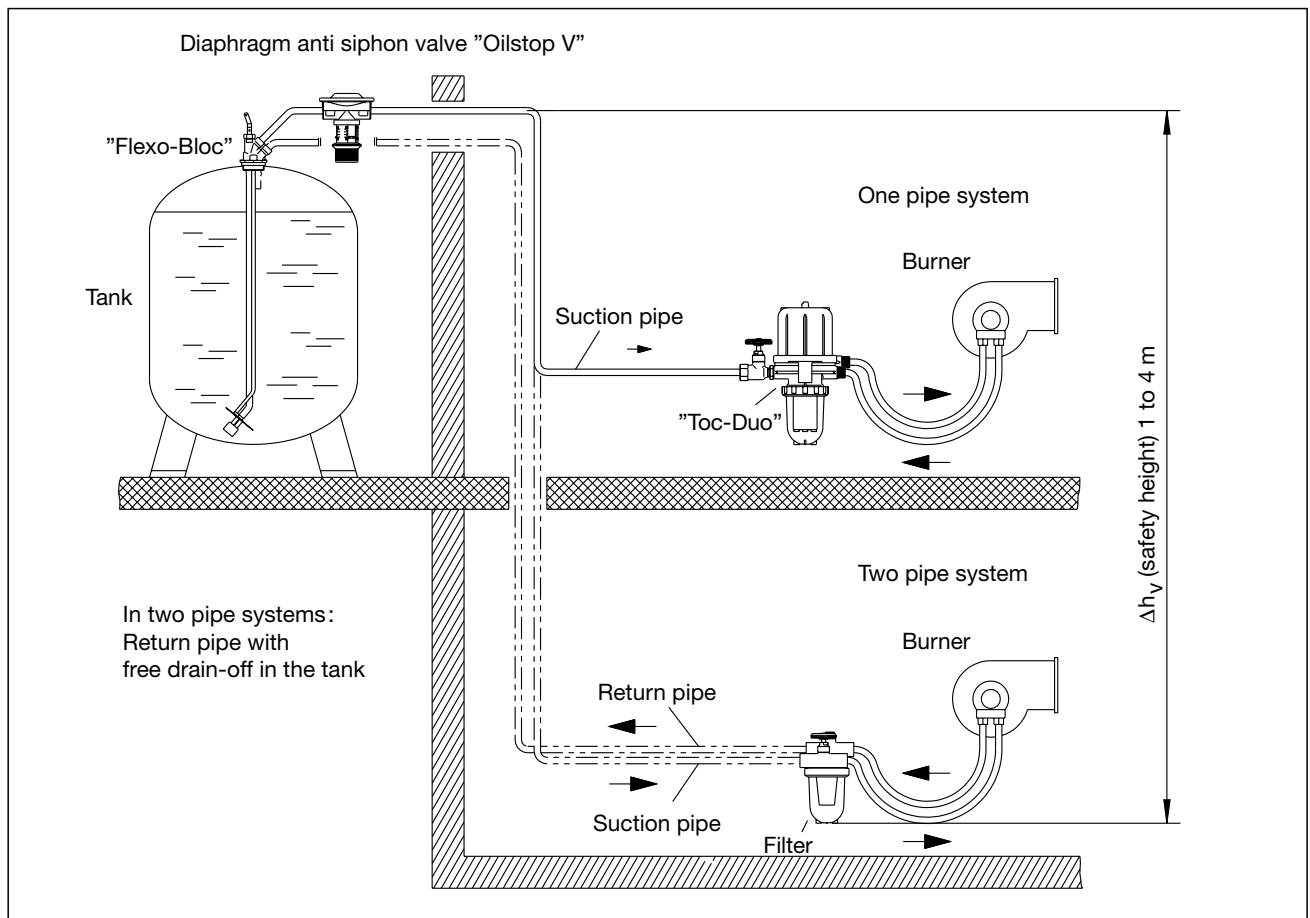
set at the handwheel corresponds to the actual height difference  $\Delta h_v$ .



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:**



In two pipe systems:  
Return pipe with  
free drain-off in the tank

OVENTROP UK LTD.  
Unit 1 - The Loddon Centre  
Wade Road  
Basingstoke, Hampshire RG24 8FL  
Telephone (0 1256) 330441  
Telefax (Sales) (0 1256) 330525  
Telefax (General) (0 1256) 470970  
E-Mail sales@oventrop.co.uk

F. W. OVENTROP GmbH & Co. KG  
Paul-Oventrop-Straße 1  
D-59939 Olsberg  
Telephone (0 2962) 82-0  
Telefax (0 2962) 82405  
Internet <http://www.oventrop.de>  
eMail mail@oventrop.de

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