

Application:

The Oventrop solenoid valve “Oilstop MV” is installed in the suction pipe of heating oil installations according to DIN 4755, where the maximum tank filling point is above the lowest point of the suction pipe.

Should a leakage occur in the suction pipe between the solenoid 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) or two pipe systems.

Note:

In two pipe systems, the return pipe must have free drainage into the tank.

Item no.: 2104553

Safety height:

The safety height of the solenoid valve is the vertical difference in height between the maximum tank filling point and the lowest point of the suction pipe.

Note:

The safety height of mechanical diaphragm anti-siphon valves is the vertical difference in height between the installation position of the valve (centre point) and the lowest point of the suction pipe.



General construction supervising admission: Z-65.50-456

Note:

The installation and operating instructions have to be kept by the user of the heating oil installation!

The valve has to be installed by a specialist company with due consideration of the valid standards and regulations.

Construction and function:

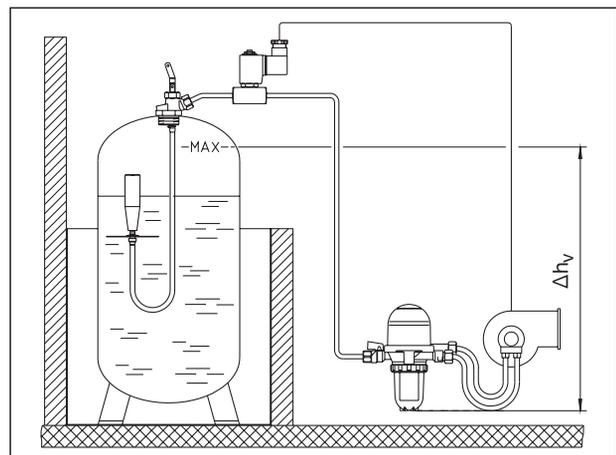
When the burner is not in operation, the solenoid valve shuts off the suction pipe between the tank and the succeeding system. Once the burner pump is switched on, the solenoid valve which is connected to the burner control will be opened.

If a leakage occurs in the suction pipe, the valve will prevent the oil in the tank being siphoned off when the burner is not in operation. The valve is pressure balanced, i.e. when pressure is built up in the suction pipe, the heating oil may flow towards the tank.

The valve cannot be opened by underlying pressure at the outlet port.



“Oilstop MV”



Safety height

Technical data:

Valve type:	Directly controlled 2/2-way solenoid valve
Operation mode:	NC (normally closed)
Size:	DN 5
Oil flow:	110 l/h with Δp 50 mbar ($K_v = 0.5 \text{ m}^3/\text{h} = 8.3 \text{ l/min}$)
Safety height:	$\Delta h_v = 3 \text{ m max.}$ according to DIBt, suitable up to approx. 10 m, see following notes
Connections:	G 3/8 female thread
Fluid:	EL type of heating oil according to DIN 51603-1 (see “Heating oils”)
Installation position:	any, coil preferably in vertical position
Ambient temperature:	-10 °C up to +60 °C*
Fluid temperature:	0 °C up to +40 °C
Nominal pressure:	PN 6
Operating pressure:	-0.9 up to +4 bar
Max. test pressure:	6 bar
Weight:	approx. 410 g

*according to DIN 4755 the heating oil temperature shall lie between 0 and +40 °.

Electrical data:

Design control voltage:	230 V / 50 Hz
Power consumption:	18 VA
Duty cycle:	100 % duty cycle
Electrical connection at the valve:	Socket according to DIN EN 175301-803, 4 x 90 ° turnable
Protection:	IP 65 with socket

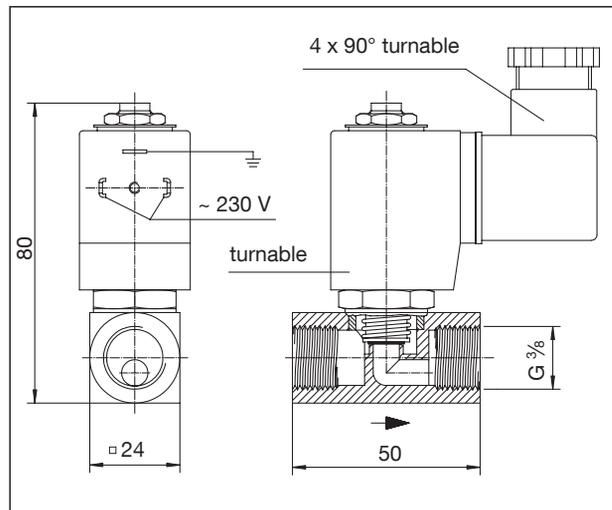
Notes:

The valve cannot be opened by underlying pressure at the outlet port; the closing body will be pressed firmly onto the valve seat by underlying pressure.

Liquids evaporate at a high vacuum level. Only the pipe content behind the solenoid valve may escape in case of a leakage.

In practice, the safety height is restricted to approx. 10 m with due consideration of the minimum operating pressure and the maximum density of the heating oil.

Safety heights exceeding 3 m need to be approved by an expert according to WHG.



Dimensions “Oilstop MV”

Pipe connection:

The valve is equipped with G 3/8 female threads.

Connection types:

- Flat sealing short couplings with short thread G 3/8 according to ISO 228, e.g. item no. 208307_ (see “Accessories”)
- Couplings with thread R 3/8 can also be sealed

Heating oils:

The solenoid valve “Oilstop MV” can also be used for heating oils containing vegetable oils or FAME, such as:

EL type of heating oil A Bio 10 according to DIN V 51603-6.

Note:

The admission as anti-siphon valve for these fluids is not part of the “General construction supervising admission” and therefore needs to be approved by an expert according to WHG.

Sizing of the suction pipe:

The DIN 4755 standard recommends a velocity of the suction pipe between 0.2 and 0.5 m/s.

Heating oil may contain air. In case of underlying pressure in the upper parts of the suction pipe, the air may be expelled with volatile oil particles. These air bubbles must be transported constantly to the burner. They may gather in pipes which are too large. If a big air bubble reaches the burner, it may cause a malfunction.

In one pipe systems, the heating oil flow corresponds to the quantity of burned oil (per 10 kW heat output approx. 1 litre/hour). In two pipe systems, the burner pump capacity has to be taken into consideration.

Formula for the velocity w in m/s:

$$w = 0.3537 \cdot V / D^2$$

with V – Heating oil flow in l/h

D – Inner diameter of the suction pipe in mm

Pipes with an inner diameter of less than 4 mm are not recommended.

The suction pressure should not exceed 0.4 bar.

Accessories:

Straight couplings “Ofix-Oil”, flat sealing; steel with brass cutting ring,

Size

G 3/8 x 6 mm	2083074
G 3/8 x 8 mm	2083075
G 3/8 x 10 mm	2083076

Subject to technical modifications without notice.

Product range 9
ti 116-EN/10/MW
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