Automatic air vents valves for solar energy systems Series MV-SOL

Main features

Automatic air vent for solar energy systems with special float in Polymer high resistance.

- Size available :
• 3/8” - 1/2” threaded.

WATTS® INDUSTRIES

Technology by nature

Description

MINIVENT valves **Series MV-SOL** are automatic air vent valves for solar systems. Valves are inspectionable, by unscrewing the cap from the valve tank (body). The seal between cap and valve tank is guaranteed from the presence of an O-ring, therefore it is possible to inspect and eventually clean the internal parts of the valve, in case of presence of foreign matters. Efficiency and functionality of the discharge mechanism during the time are guaranteed from the design characteristics of the valve.

Sealing system is suitable to support vibration.

MV-SOL

MINIVENT
Automatic air vent valve for solar energy systems with unscrewable cover for inspection. Body and cover of brass CW617N, 1265-99. Polyethylene float.
Seal between reservoir and cover with O-ring.
Connection ND 3/8” - 1/2” DIN - ISO 228/1.
Stainless steel (AISI 304) vacuum breaker (only for ND 3/8”).
Max. operating pressure : 12 bar. Max. operating temperature : 160 °C.

Type	Part No.	Size
MV-SOL	0249110	3/8”
MV-SOL	0249115	1/2”

Technical features	
Couplings	3/8” male DIN-ISO228/1, 1/2” available on demand (without vacuum breaker)
Maximum operating pressure	12 bar (175 psi)
Maximum operating temperature	160°C (320°F)

Design features	
Body and cover	EN12165-99 CW617N brass, hot pressed and sand blasted
Float	Polymer high resistance
Plug	Elastomer high resistance
Spring	AISI302 stainless steel
Cap	EN12164-01 CW614N brass, nickel plated
Vacuum breaker (only for 3/8”)	AISI304 stainless steel

Operation

Opening and closing of the valve is caused by the vertical movement (ascent and descent) of the float.

- With the occurrence of air inside the valve, the level of the water falls down, the float weigh acts on the lever, pulling down lever and shutter (which are united). In this configuration the horifice is open, the air may vent outside the installation.
- During the filling with water of the plant, the air which is contained in the hydraulic circuit is pushed outside through the **MINIVENT** valve. When all the air is discharged, the water that moves into the valve body pushes upward the float, as a result the lever pushes upward the shutter which closes the horifice and ensures the hermetic seal of the valve.

Installation

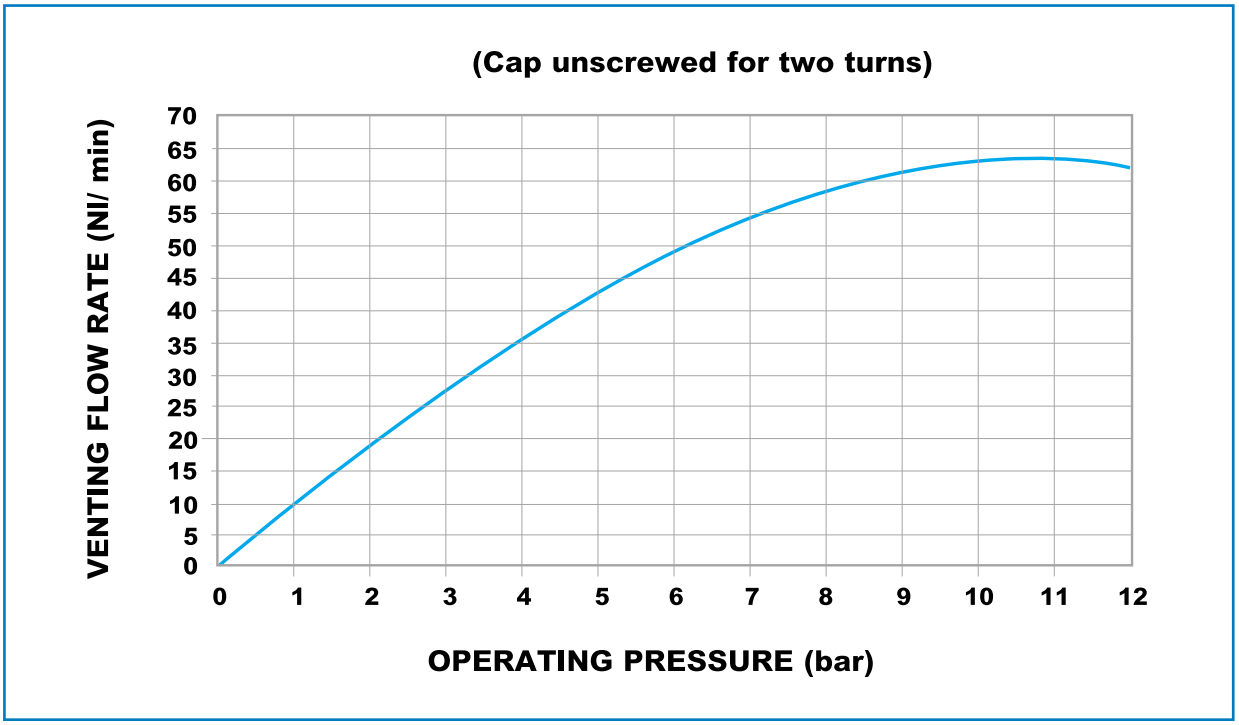
In order to ensure the maximum venting efficiency, the **MINIVENT** valve must be installed in the summit of the hydraulic circuit, in a place where the speed of the water is low.

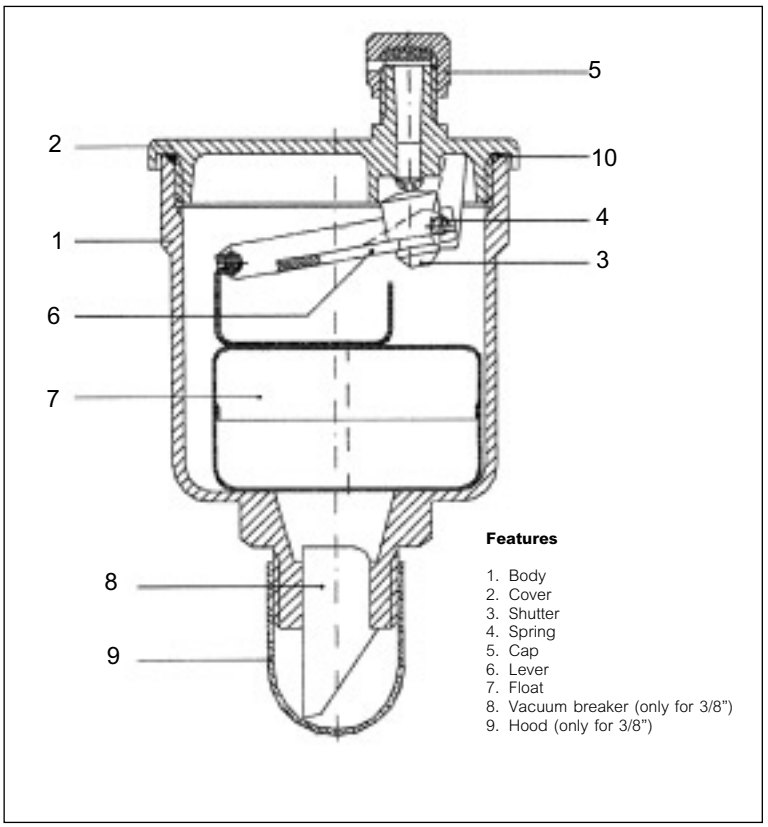
After the installation, in order to maximise the venting capacity, unscrew the protection cap for at least two turns (with this configuration the venting characteristics are shown in the above diagram).

Maintenance

MINIVENT air vent valve normally does not need maintenance. Anyhow, if the valve must be disassembled, the presence of the automatic shut-off valve **RIA** allows the operation without emptying the hydraulic circuit.

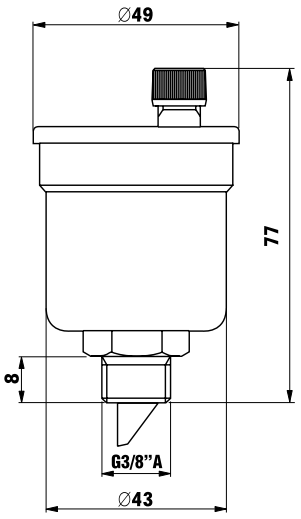
Venting Flow rate - Operating Pressure

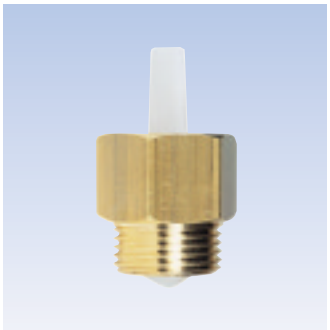




Overall Dimensions (mm)

MV-SOL





RIA/MV-SOL

Automatic shut-off valve.

Type	Part No.	Size
RIA/MV-SOL	0259410	3/8” x 3/8”

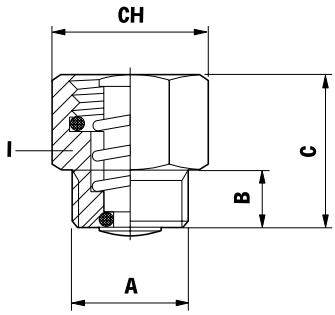
Operation

Automatic shut-off valve **RIA** allows the air vent valves (**MV-SOL**) to be removed without having to empty the system. The **RIA** shut-off valve is fitted with a device for quick total emptying of the water from the valve.

Design features	
Body	Brass EN12164-01 CW614N
Plug	Polymer high resistance
Spring	Stainless steel
Connections	MF 3/8” DIN - ISO 228/1
Sealing	Elastomer high resistance

Overall Dimensions (mm)

RIA



DN	B	C	CH
3/8”	8	11	19

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