

# SAFETY VALVE

## ZB-12 type

Code No: see table



### APPLICATION

The ZB-12 safety valves are designed for protection against to high water pressure in storage type electric water heaters of capacity up to 200 l and for nominal pressure 0,6 MPa.

### CONSTRUCTION

The main parts of the valve are the safety valve „A” and check valve „B”. Safety valve opens the flow to the outlet „1” when the pressure in heater, caused by expansion of heater water, increases over its permissible limit. Check valve protects against water back flow to the supply network.

The rubber diaphragm separates safety valve spring and opening device from flowing water.

The knob „3” is for periodical test (at least once a month) of safety valve proper operating by turning left (counter clockwise); the water should flow.

#### Materials:

valve body and inner metal parts: brass  
knob (two parts) - glass fibre reinforced PA  
diaphragm and gasket - rubber resistant to hot water up to 85 °C and ageing proof  
check valve spring - stainless steel  
safety valve spring - zinc coated steel

### MOUNTING

The safety valve should be mounted on cold water supply line of the heater.

It is not allowed to install filters or any devices between safety valve and heater.

The flow direction should be in accordance with the arrow marked on valve body. Maximum length of a pipe engagement into the valve is 9 mm.

The outlet hole „1” position should be between downward and horizontal, cannot be upward. Plastic elbow „2” should be screwed into outlet hole „1” with outlet downwards.

The overflow outlet can be connected with funnel using the pipe having the cross section at least equal to overflow outlet one.

The outlet pipe cannot be longer than 1,2 m, should be placed with slope and max. two bends. The outflow of water must be free and visible. The servicing personnel should be protected against injury.

The cross section of funnel pipe must be at least twice as the overflow outlet one.

The safety valve must be easy accessible after mounting. The valve and outflow pipe must be protected against freeze-up.

### MAINTENANCE

The proper operation of valve should be verified before every start-up and at least once a month turning the knob to position when water is flowing through the overflow outlet and following turning the knob to it down position with pressing to the valve body. If water still flow the valve should be swilled by repeated opening and closing. If water does not flow after opening the valve call the authorised service man.

**Note:** if water pressure in supply line is higher than 0,54 MPa water will still flow through overflow outlet.

**During the heating period water shall drip from the overflow outlet. The blocking of water overflow is forbidden**

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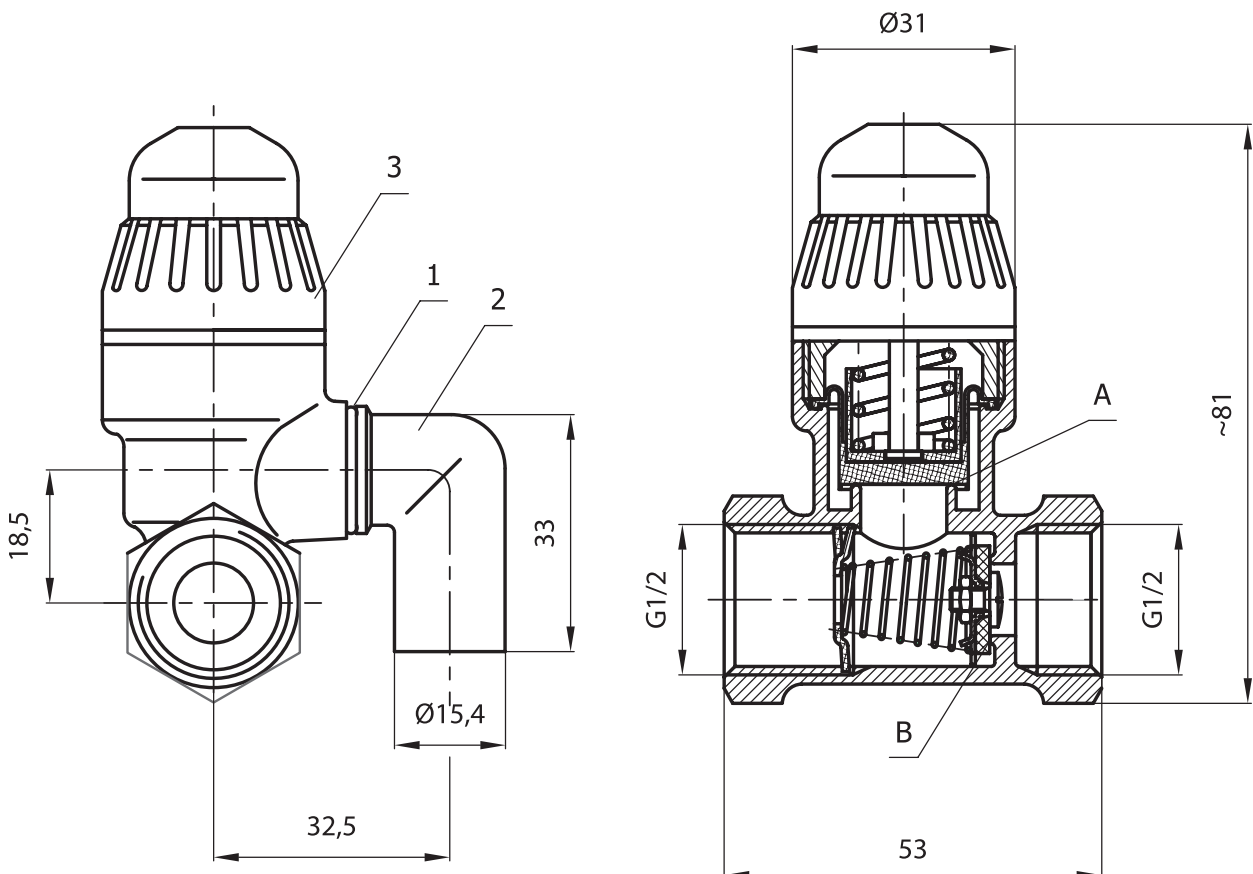
Code No: see table

### TECHNICAL DATA

Nominal pressure	0,6 MPa (6 bar)
Medium:	water
Medium temperature:	max 85 °C
Weight:	0,17 kg
Valve port diameter:	12 mm.

Code No	Surface of Valve Body	Nominal Water Pressure	Opening Pressure of Safety Valve „A”	Minimal Inside Diameter of Port „A”
		MPa	MPa	mm
0374 - 1001	blasted and nickel coated	0,6	0,67±0,03	12

Opening pressure differential between the inlet and outlet of the return valve "B" (drawing)  $\pm 0,01$  MPa



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