

Operating Manual

for thermostatic bi-metal steam trap

Type : RIFObi 2227 / 8227, PN 16 - 40
 Connections : Flange DN 15 / 20 / 25 / 40 / 50
 Threaded ports G $\frac{1}{4}$ " , G $\frac{3}{4}$ " , Socket weld, Housing C22.8

1.0 Safety instructions

1.1 Proper use



Any improper use, intervention in the design and deviation from the design data automatically lead to termination of the warranty. The float-controlled condensate trap type 2227 is designed for the discharge of condensate from steam, compressed air and pressure gas systems. The automatic type 8227 is designed for the discharge of air and gas at the high points of liquid-filled systems. Any other use is not permissible. The manufacturer is not liable for damage resulting from any other use. The user or operator bears the risk in this case. This also applies analogously to incorrect assembly, startup, use and maintenance.

1.2 Warnings and symbols



- There is a risk of personal injury due to escaping operating medium as well as because of pressure and temperature. Failure to comply with these warnings may lead to accidents.
- Follow the instructions in this operating manual.
- The operator must ensure that this operating manual and, if necessary, other relevant documents are available on site.
- Only properly qualified personnel may be assigned to handling this equipment.
- Any mode of operation that may impair safety must be avoided.

2.0 General description and use

2.1 Design of condensate trap and vent valve

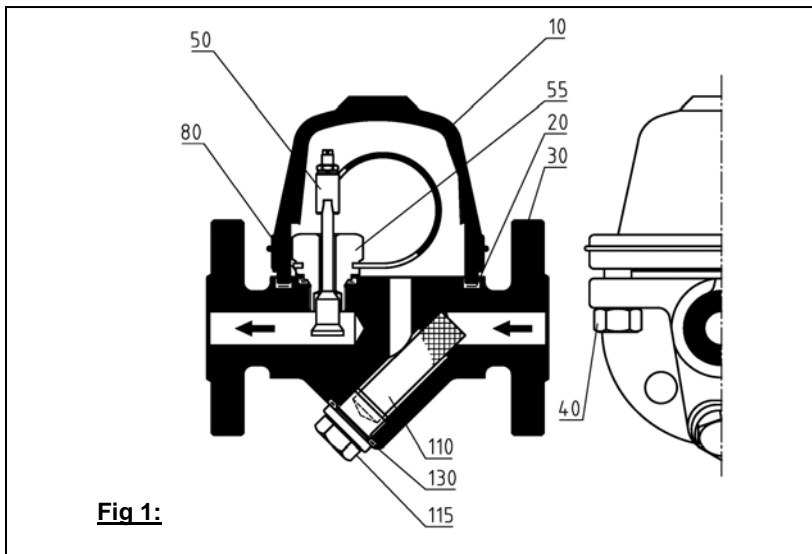


Fig 1:

Nr.	Designation	Material
10	Upper housing	C 22.8 forged
20	Housing seal	Graphite SGBC
30	Lower housing	C 22.8 forged
40	Set screws	M12x35, DIN933, A4-70
50	Bi-metal control complete	HC4 / SS
55	Valve seat complete	SS 1.4310
80	Seal for G $\frac{3}{8}$ " standard	Soft iron, 17 x 23 x 1
81	Seal for G $\frac{1}{2}$ " special	Soft iron, 21 x 28 x 1
110	Strainer	SS 1.4301, 15 x 55 lg.
115	Drain plug	G 1/2, 5.8
130	Seal for closure plug.	Soft iron, 21x28x1

- 2.2 Identification and operating limits:** acc. rating plate, see PS and TS
- 2.3 Functional limit of Bi-Metal control:** Standard-control unit PN40: max. 24 bar / 350 °C
Special-control unit PN16: max. 12 bar / 350 °C
- 2.4 Performance:** acc. to Works Standard-Sheet 2227

2.5 Function / Installation

The condensate trap is to be installed (don't use as vent valve) at the deepest point of the steam vessel. Due to its gravity, the condensate flows down to the deepest point, i.e. into the inlet housing.

A temperature drop opens while an increase of temperature closes the passage. As soon as any steam builds up, the valve closes.

3.0 Assembly

3.1 Installation

- Remove protective caps from condensate inlet and outlet
- The flow direction is as indicated by the arrow
- The fitting position is vertical or horizontal
- To avoid down times, it is recommended that a shut-off valve be installed in front of and, if necessary, behind the condensate trap.

4.0 Startup



The pressure build-up and heating-up of the housing should not take place abruptly. If leaks occur due to so-called settling after the first startup, the housing parts (item 40) can be retightened taking into account the indicated torque (30 Nm). Retightening may only be carried out when the housing is depressurized and at most warm to the touch.

5.0 Monitoring and checking

Malfunctions arise either as condensate backup (use as a condensate trap) or as steam entry.

Condensate backup can be determined through measurement of the surface temperature on the inlet housing.

Steam entry can be determined after the condensate outlet by means of an ultrasonic measuring device, e.g. SONAPHON.
Measure: Use a new bi-metal control.

6.0 Maintenance / inspection

6.1 Opening the trap and dismantling the bi-metal control

- The condensate trap must be depressurized. Shut off the system securely in front of and behind the condensate trap.
- The housing cool down until it is warm to the touch.
- Loosen housing parts (pos. 40).
- Remove the upper housing (10).
- Pull off the bi-metal control from the lower housing (30) with a wrench SW 27.



6.2 Installing the bi-metal control and assembly of the trap

In case of leakage of the valve seat by wear either the complete control (50) or the body with conical nipple (55) must be replaced.



- Coat the threat of G3/8 " and / or G1/2" with temperature-resistant lubricant (Rifox uses installing paste M1-Molypaul).
- Examine the seats part of (10) and (30).
- If necessary insert new housing seal (20) and/or seal (80/81).
- Screw and lock the bi-metal control unit (50), tightening torque 90 Nm.
- Put the bi-metal control in the lower housing (30) according to fig. 1.
- Set carefully the upper housing (10) on housing seal (20) in such a way that the bimetal lies in the housing.
- Put the strainer (3) in the inlet housing (1).
- Tighten the housing screws (40) evenly crosswise: **Tightening torque 30 Nm.**

6.3 Draining and cleaning the strainer



- The condensate trap must be depressurized. Shut off the system securely in front of and behind the condensate trap.
- The housing cool down until it is warm to the touch.
- Loosen and screw out the drain plug (115).
- Take out the strainer (110) and clean with compressed air.
- With the installing insert a new seal (130) and coat the threat of G1/2" with temperature-resistant lubricant.
- Screw in and counter the drain plug (115). **Tightening torque 140-160 Nm.**

6.4 Spare parts



Note! Only original spare parts may be used.

Pos.	Designation	Dimension / DIN	Material
20	Housing Gasket	88x 76x 1,5	Graphite SGBC
40	Bolts	M12x35, DIN931	A4-70
50	Bi-metal control complete	G3/8" standard, G1/2" special	SS / Hastelloy
80	Seal for G3/8" standard	23 x 17 x 1 mm	Soft iron
81	Seal for G1/2" special	28 x 21 x 1 mm	Soft iron
110	Strainer	15 x 55 mm	SS 1.4301
115	Drain Plug	G 1/2"	5.8
130	Seal for closure plug.	28 x 21 x 1 mm	Soft iron

7.0 Conformity assessment

With connections DN 15-25: according article 3, paragraph 3, **no CE-marking**

With connections DN 40-50: category 1, module H, **with CE-marking**


Management


Quality Assurance