

Job Name: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

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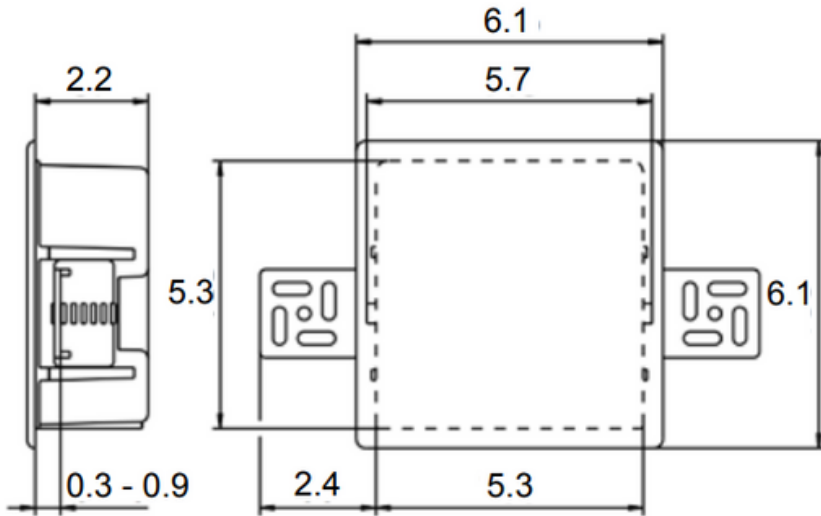
Spec Section: \_\_\_\_\_

Job Location: \_\_\_\_\_

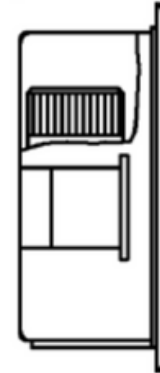
Engineer/Architect: \_\_\_\_\_

\_\_\_\_\_

Approval: \_\_\_\_\_ Date: \_\_\_\_\_



Dimensions in inches



**Product Description**

The "Unibox E RTL" for is a non-electric radiant floor return water temperature limiter. It is a wall box unit with an integrated temperature limiter, integrated deaeration, flushing valve and cover plate, and a valve connection for Oventrop "euroconus" compression fittings.

The "Unibox E RTL" requires no auxiliary energy. The "Unibox E RTL" is a control for temperature limitation of heating surfaces. In typical installations, the heat demand is controlled by radiators and thermostats. Installation is typically carried out in combination with a radiator heating system with a maximum design hot water temperature of 158 °F.

**Specifications**

- Item no.: 102 26 31
- White cover.
- Maximum working pressure: 150 psi.
- Maximum differential pressure: 14 psi.
- Control temperature range: 68-104 °F.
- Graduation on control cap 0 - 40. The figures indicate the maximum return temperatures in Celsius.
- Depth: 2.2 inches

**Return Hot Water Temperature Limiter Dial**

- 0 = Valve closed
- 10 = Frost protection
- 20 = About 68°F
- 25 = About 77°F
- 30 = About 86°F
- 35 = About 95°F
- 40 = About 104°F

**Recommended Application**

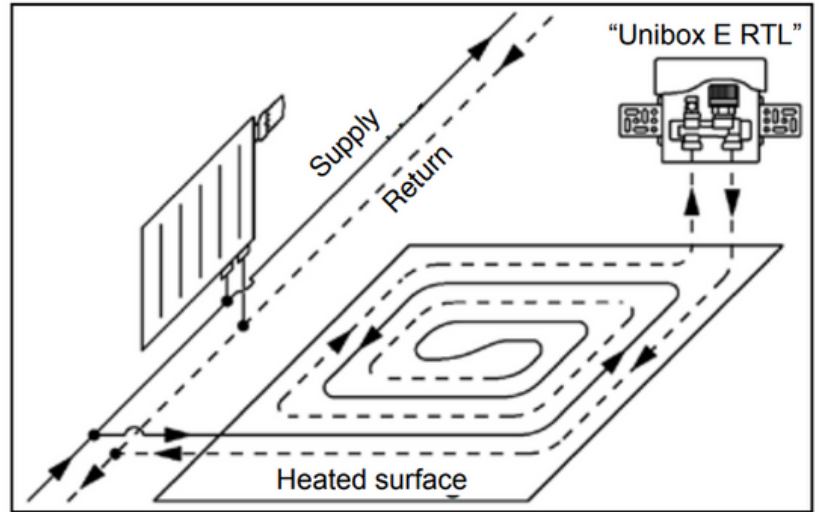
- Rooms and heating surfaces up to 250 ft<sup>2</sup>
- Loop circuit with a pipe length up to 300 ft. (Pipe size 1/2")
- The recommended temperature range of the return temperature limiter is between 77-104 °F.
- The maximum permissible concrete temperature near the heating pipes may not exceed 131 °F for concrete, 113 °F for mastic asphalt concrete, or according to the instructions of the underfloor manufacturer

**Function**

The "Unibox E RTL" serves to limit the return water temperature flowing through radiant floor tubing. The "Unibox E RTL" should be installed in such a position that the heating medium passes through the heating circuit first and then through the valve. The hot water medium cools down after the heated fluid is passed through the floor tubing. The flow through the "Unibox E RTL" is automatically controlled by a sensor element in contact with the heating fluid. The return temperature limit is set at the handwheel. Please observe guidelines regarding heating up and initial operation. The temperature of the surface heating can be adjusted by turning the handwheel. Normally, the "Unibox E RTL" is operated in a room with an additional radiator. The surface heating covers the first stage demand, whereas the radiator takes on the control of the second stage or the thermostat-controlled heating load.

**Correct Installation**

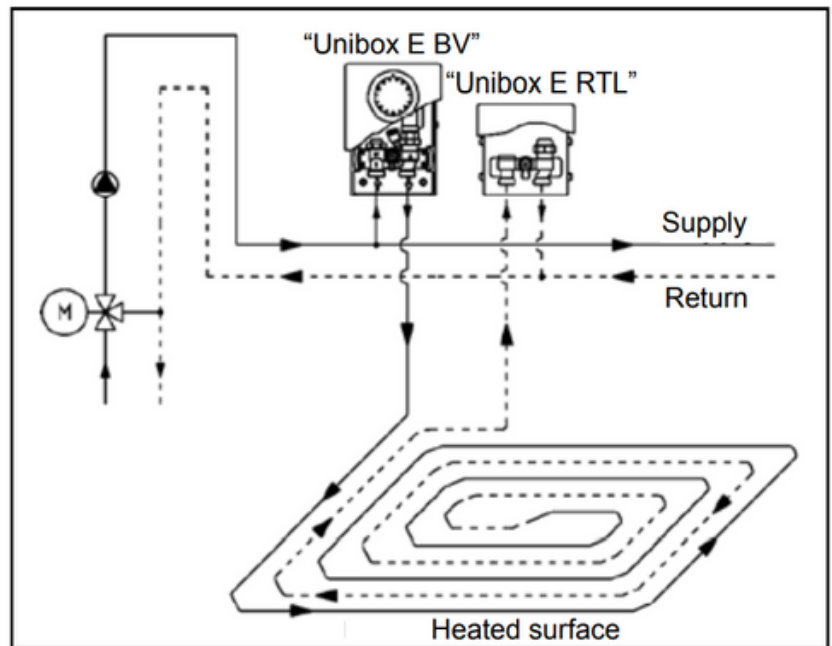
"Unibox E RTL" is a temperature limiter. For this reason, it is best installed with radiators controlled by thermostats that satisfy heat demand. Used for surface warming, the "Unibox E RTL" sets the limit of temperature that will flow through the heated surface during hot water pumping operation. In mild conditions, the "Unibox E RTL" will satisfy the thermostat for the radiator, and the surface warming will condition the space. For higher heat demand, the radiator thermostat opens while the heated surface continues to be warmed by the "Unibox E RTL".



Direct flow from supply pipe to the radiant tubing in the floor first, then return through "Unibox E RTL" before piping to the return.

**Return limiter "Unibox E RTL" with thermostat bypass "Unibox E BV"**

The return temperature limiter "Unibox E RTL" can be installed with the thermostat and bypass control "Unibox E BV". The combination controls room and surface temperatures with a non-electric thermostat, bypass capabilities and a return temperature limiting feature. If the "E BV" thermostat is satisfied, flow bypass can be temperature limiting by the "Unibox E RTL". The heat load is controlled by the thermostat and surface warming is insured with return temperature limited capabilities.



Direct flow from the supply pipe to the thermostatically controlled "Unibox E BV". The radiant tubing is then piped to the floor, then returns through the temperature limiter "Unibox E RTL" before directed to the return pipe.