

Additional equipment

Wood hydrometer

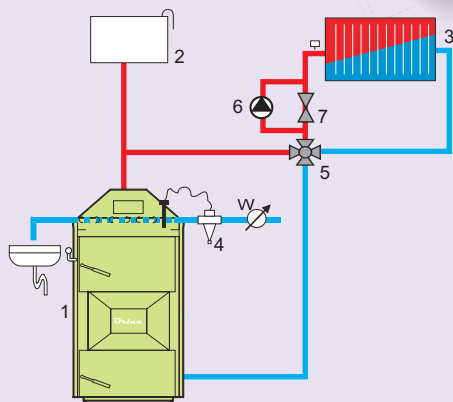
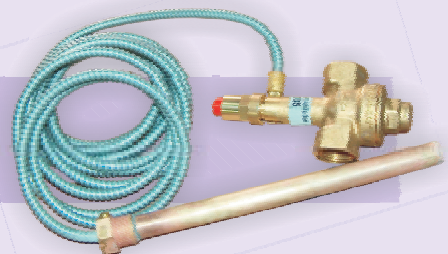
The hydrometer is needed for measuring of wood proper humidity during fuel purchasing but also for current control of stored wood.

Boiler fired with wood of proper humidity warrants complete and correct fuel utilization. Long term use of inappropriate wood causes the onset of tar on boiler internal walls, which causes difficulty in correct boiler operation.

Wood hydrometer



Draining valve



ORLAN additional equipment Thermal safety cooling device

To protect the boiler against overheating, any collector is needed to collect the heat surplus.

For this purpose, the best way is to use any device able to work on gravitation such as water heater or heat accumulation tank.

Boiler connecting scheme with thermostatic draining valve

There is also a new solution, accessible only in ORLAN, where a TS 130 thermostatic draining valve is connected (produced by Honeywell).

If the water excess temperature of 200°F the draining valve opens the cooling water flow (from water-pipe network) through the thermal cooling heat exchanger, built-in the boiler upper part.

If the thermostatic draining valve is used there is no need to connect any other heat collector on the central heating system. The solution with draining valve is recommended when there is no place for placing of water heater and also when the warm operational water is heated in other device (e.g. in flow water heater).

1. ORLAN SUPER
2. Opened compensating vessel
3. Radiator
4. Thermal safety device
5. Four-way mixing valve
6. Circulating pump
7. Difference valve

Additional equipment

LADDOMAT 21 thermoregulator

Laddomat 21 is a charging unit for a solid fuel boiler to a storage tank with hot water heater and mixing valve for the heating system.

Laddomat 21 works automatically on the condition that pump switches on / off automatically.

Laddomat 21 works efficiently during all stages of the boiler operation.

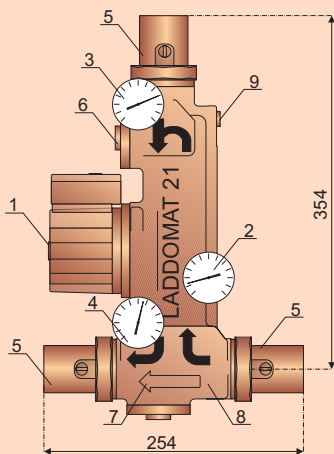
1. RS 25-6-3 circulating pump
2. Return temperature indicator
3. Heating water temperature indicator
4. Mixed water temperature indicator
5. 1 L " IG ball valve
6. Thermostatic valve
7. Automatic valve for regulation of gravitation circle
8. Deposit collector
9. Exit for filling out

Laddomat 21 enables the boiler to attain a proper boiler working temperature in a very short time.

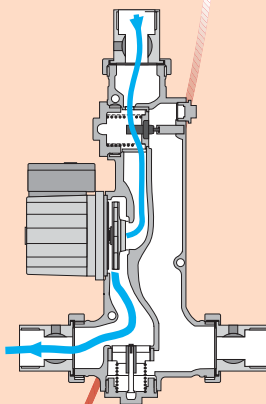
- Charging is continued by means of a slow flow of hot water.
- During the final part of the burnout, Laddomat 21 charges the storage tank fully due to the unique thermal valve, which closes the bypass opening completely.
- When the fire has gone out, Laddomat makes use of the remaining heat in the boiler and ember by the self-circulation of hot water from the top of the boiler into the storage tank. Energy is stored in the tank instead of being lost through the chimney.
- In the event of a power failure Laddomat 21 starts charging the container immediately by self-circulation.

The same happens if the pump breaks down. Reverse circulation is prevented during periods of non-firing, which means almost no loss of heat.

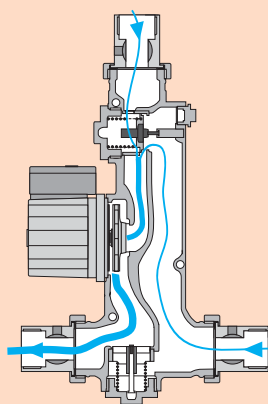
LADDOMAT 21 basing elements



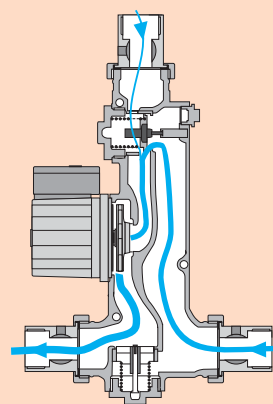
Heating medium flow by Laddomat



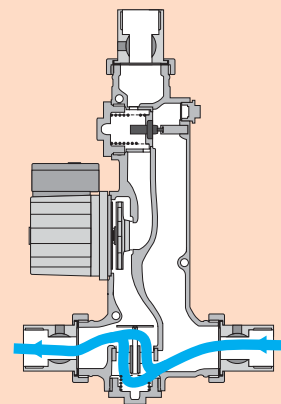
Stage 1
Boiler fire up, temperature in the heating system lower than 120°F



Stage 2
Heat accumulation charging begin, heating medium is mixed into thermo regulator



Stage 3
Full charging, heating medium from boiler feeding is mixed with secondary medium in small quantities



Stage 4
Discharging of energy from the boiler during power failure