

**A thin boundary layer\* in the storage tank is necessary for an effective, easy-to-operate solid fuel boiler system.**

**It is vitally important for the boundary layer that the installation of the the boiler and storage tanks is correct.**

**Laddomat 21 is a complete unit and is simple to install.**

**Laddomat 21 ensures perfect charging.**

*\* The Boundary Layer is a thin border between the hot water on top and the colder, denser water underneath.*

Laddomat 21 enables the boiler to attain the perfect working temperature in a very short space of time.

Laddomat 21 charges the storage tank by means of a slow flow of hot water. The vitally important boundary layer between hot and cold water is therefore optimal.

During the final part of the burn-out the Laddomat 21 charges the storage tank fully, thanks to the unique thermal valve, which closes the bypass opening completely.

When the fire has gone out, Laddomat 21 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.



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.

Dimensioning is simple. Laddomat 21 will suit any boiler up to 80 kW.

Laddomat 21 has a simple design with generous contact surfaces, thus simplifying installation.

The ball valves facilitate servicing as water can remain in the system.

The valves have extra large openings to cope with the maximum flow at the end of the charging period and during self-circulation.

Three thermometers offers full control over the charging cycle. They can be installed on either side of Laddomat 21.

Small general dimensions allow easy installation.

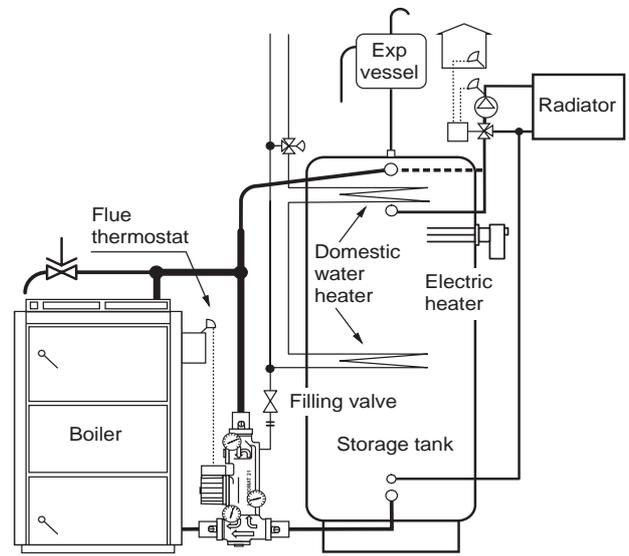
## Installing Laddomat 21

The presence of air in the system is the most common cause of circulation stoppage.

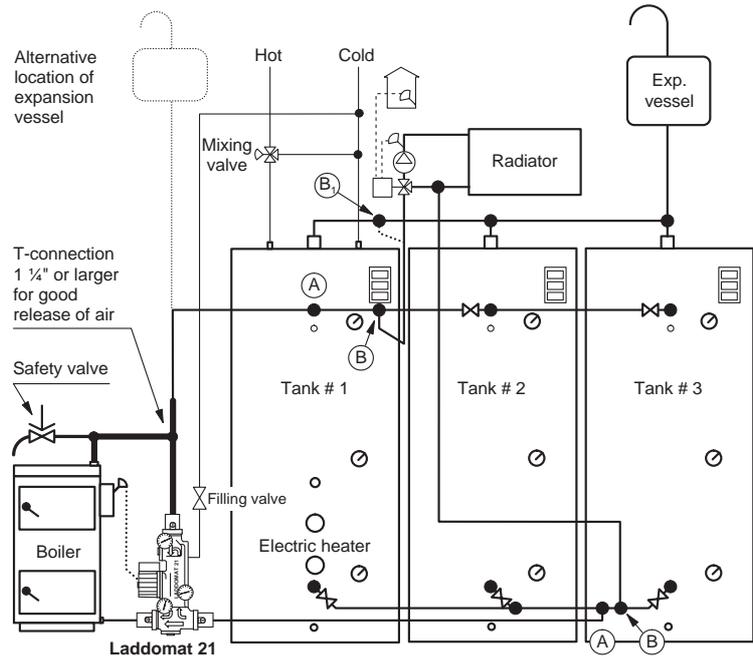
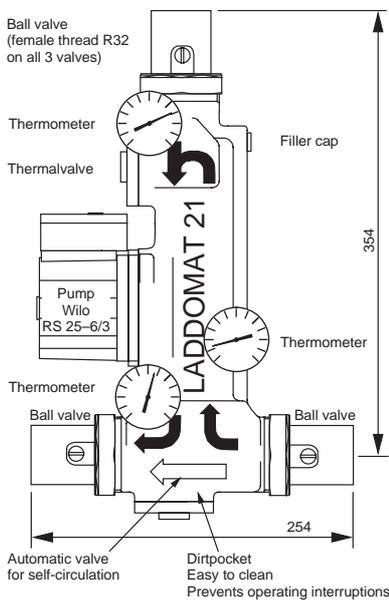
A simple layout of the connection pipes, like the one shown here, releases the air from the system automatically.

Generous pipe dimensions and short lengths guarantee operating reliability, even when the demand for heat is high, and effective self-circulation in the event of a power failure.

When installing up to three storage tanks the boiler and shunt valve should be connected “diagonally” (A-A, B-B) to obtain an even distribution of hot water to and from the tanks.



Laddomat 21



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## Starting and stopping the charging pump

It is important to start the pump as soon as the burning starts to ensure the boiler heats up rapidly.

Stopping the pump quickly when the fire has gone out will make the hot water self-circulate from the top of the boiler over to the storage tank.

An optional flue thermostat is responsible for this rapid stopping function. The thermostat is standard equipment on certain boilers.

## Technical data

Pump:	Wilo RS24-6-3
Connections:	R32 (3 pcs)
Opening temperature:	78° C (72° included, 83° and 88° optional extra)
Kv-value:	14
Boiler output:	max 80 kW

