

SERVICE INSTRUCTION — LADDOMAT® 21

Knocking noise in Laddomat 21

If a knocking noise is heard in Laddomat 21, it is nearly always the non-return valve, which opens and closes once every other, or every second.

In our experience, this is always caused by one or more air pockets in the system.

When the pump in Laddomat 21 starts or the thermal valve opens, a pressure change is caused and the air pocket acts as a spring so that the non-return valve opens and then closes.

The air is often in unvented sections of the boiler, tank or radiator circuit. Under-floor heating systems are particularly problematic because the pipes are often at uneven heights. There are lots of high spots that trap air.

Bleed the under-floor loops by running one at a time at the highest pump speed.

Installation with pressure expansion vessel

Another common cause is the operating pressure of installations with pressure expansion vessels is too low. The rubber membrane in the vessel springs against the air pocket in the vessel. This is rectified by filling the system with water so that the operating pressure is raised approx 0.2 bar = 2 mvp.

The operating pressure with a cold accumulator tank must be at least the height difference between the pressure gauge and the upper edge of the highest radiator + 2 mvp (see fig.).

If the operating pressure is raised, check that the vessel is large enough so that the safety valve is not deployed when the tank is fully charged.

NOTE! CHECK ONCE A YEAR that the set pre-pressure in the pressure expansion vessel is correct.

If bleeding does not help

In certain installations, it may prove impossible to solve the air problem for various reasons. Air pockets can occur in the boiler and tank in places that cannot be bled.

In order to prevent the knocking, one can increase the weight of the non-return valve cone. This is most easily achieved by installing an additional non-return valve washer, part no. 412006.

The disadvantage of this solution is that the self circulation may be slightly affected.

Install the SPIROVENT vent directly after the boiler. SPIROVENT is a powerful vent that, with its technology of removing microbubbles, evacuates all air in those parts of an installation that cannot usually be bled. It may take 1-3 weeks before SPIROVENT has removed all the air however.

The operating pressure must be at least 0.4 bar for SPIROVENT to function.

