

► Undesired heat consumption in one-pipe systems

Brunata's electronic heat cost allocators ensure that all heat consumption from radiators is registered. Even very low heat consumption is registered by the allocator, as is also the case with for instance low radiator temperatures. This means that sometimes real, but unintended, heat consumption is registered. This can happen if, for instance, the radiator valve is not tightly fit or in one-pipe systems where the radiator valve is placed on the supply pipe of the radiator.

Infrared photo illustration of undesired heat consumption in one-pipe system

Below it is shown how heat consumption can happen in a radiator in a one-pipe system even when the radiator valve is closed!

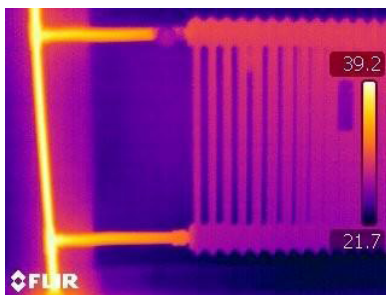


Illustration 1

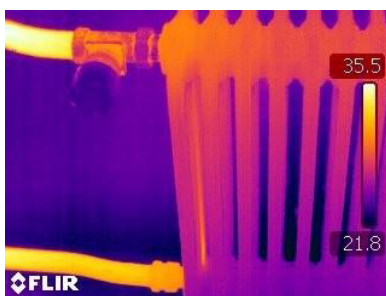


Illustration 2

Even though the unintended heat consumption may seem insignificant, the optimal solution is to stop it. This can be done by moving the radiator valve to the lower pipe (the return pipe). See illustration 6.

Here you can read more about the recording of heat consumption shown in illustrations 3-6 ►

Radiator in use, upper valve open

- Radiator valve mounted on upper pipe (the supply pipe)
- Recording takes place

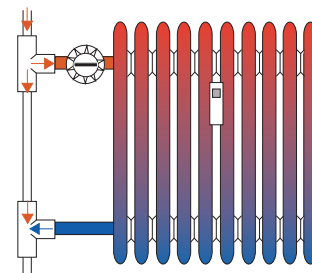


Illustration 3

Radiator in use (unintentional), upper valve closed

- Radiator valve on upper pipe (the supply pipe)
- Supply of hot water in the upper half of the lower pipe.
- Return of cold water in the lower part of the lower pipe. The reason being that hot water is lighter than cold water
- Result: The allocators record all real, but unintended, heat consumption

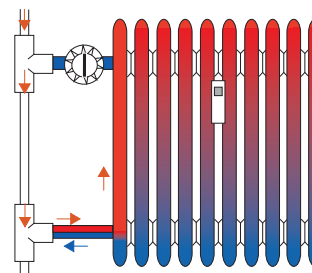


Illustration 4

The fact that the allocator records real, but not intended, heat consumption can be compared to that of a water meter installed in a water system with a leaky tap or toilet. The water meter will measure (the unintended) water consumption, which it, by the way, is supposed to. In the same way, a heat cost allocator will record all unintended heat consumption.

► Undesired heat consumption in one-pipe systems (continued)

Radiator with one-hole valve, valve is closed

The Problem with unintended consumption in one-pipe systems also occurs with so-called one-hole valves, i.e. valves where the supply and return water passes through the same pipe on the radiator.

Under normal conditions, these valves block only the return flow, but not the supply flow. As in illustration 3, circulation – i.e. supply and return flow – may occur through the supply part of the valve.

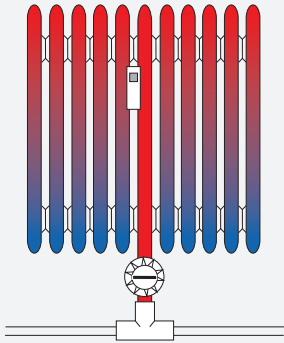


Illustration 5

Solution

- Radiator valve mounted on lower pipe (the return pipe)
- Reflux of hot water not possible
- No recording takes place

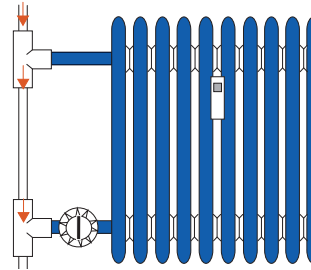


Illustration 6

Brunata is a Danish owned company. We have more than 90 years of experience within developing and producing meters, heat cost allocators, consumption accounts, meter services and latest substations. Today meters are often remotely read with access to the internet. We have a quality control system fulfilling DS/EN ISO 9001 and 14001.