

FILLING WATER FOR SYSTEMS

1

Below are important guidelines regarding the quality of water for filling the system to avoid non-compliance with the radiator itself once installed.

The warranty of Radiatori 2000 spa covers only products installed according to industry standards and by qualified professionals.

The quality of water used for filling a thermal system is crucial for ensuring its proper functioning and long-term durability.

Experience has confirmed that the pH value should be between 6.5 and 8, with an optimal condition around 7.3. It is essential to avoid using softened water, as it can cause significant damage to the entire system, compromising its efficiency and longevity.

It is important to note that to protect thermal systems from corrosion or scaling, which can affect radiators, pipes, and boilers, the UNI-CTI 8065 standard requires the treatment of filling water, regardless of the materials used (aluminum, steel, cast iron). Among the various treatments, according to the aforementioned standard, the use of film-forming aliphatic polyamines is recommended, such as the commercial product *Cillit-HS 23 Combi*.

A key consideration is that *Cillit-HS 23 Combi* does not form the protective film inside the system if the water circulation speed exceeds 2 m/s. To prevent the formation of corrosive gases within the system, it is highly recommended to use float valves for automatic venting of air from the radiators, thus preventing the accumulation of harmful gases.

One of the most common concerns among designers and installers of heating systems is the risk of corrosion caused by the presence of different materials, which could lead to the formation of galvanic micro-cells, damaging the system components.

However, despite what some theoretical sources may suggest, this issue has not been encountered in the daily practice of industry professionals. Field experience shows that the phenomenon of micro-cells is practically nonexistent, thanks to the dielectric properties of the seals and sealing materials placed between the radiators, valves, and pipes.

Analysis of numerous systems built with different material combinations has confirmed that under such conditions, no corrosion phenomena occur, providing reassurance to those who have already used these combinations and to those wishing to adopt the same system standards.

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