Remind for the radiator installation and usage

1. The installation of the radiator and the heating system has to be implemented according to the local normatives and general EU regulations (including the grounding of the building performed in accordance to the standard 60364-5-52:2011/A11:2017 – Low-voltage electrical installations and also following the installation manual provided by the manufacturer. The zones and allowed places for the installation of electric devices, such as electric radiators or central heating radiators equipped with electric heating elements are specified in general EU regulations on the safe use of electrical equipment for domestic use, in particular PN-EN-60335-2-30 and PN-EN-60335-2-43 and requirements for installations or locations, in particular PN-EN-60364-7-701.

2. It is imperative to ensure the quality of the heat transfer medium and that it meets the requirements set in the table below (electrochemical corrosion). The main water parameters and their recommended values:

Parameter	Unit	Ideal value	Notes
pH value (steel radiator)		>8.5...10.00	20°C
pH value (aluminium radiator)		6.5...7.5	20°C
Electrical conductivity	(µs/cm)	<500	20°C
Oxygen	(µg/l)	<100	20°C
Chlorine	(mg/l)	<50	
Sulphate	(mg/l)	<10	
Phosphate	(mg/l)	<30	
Iron	(mg/l)	<0.2	
Copper	(µg/l)	<10	
Degree of hardness	(mmol/l)	<2.5	
Calcium*	(mg/l)	-	
Magnesium*	(mg/l)	-	
DOC**	(mg/l)	<50	
Color		colorless	
Turbidity		almost clear	

Smell***		odorless	

*The degree of hardness is determined according to the amount of calcium and magnesium, therefore their ideal value is not noted.
** This is information on the amount of mud and other organic chemicals (inhibitors)
*** If the water has odour, it is worth investigating the reason. For example, a bacteria decreasing sulphate in the water can bring on the smell of hydrogen sulphide, caused by high acidity of water (pH value too low)

3. The radiator intended for the central heating system is not permitted to be connected to the domestic water system. The radiators for domestic water and open systems are made of specific material (stainless steel) in order to avoid corrosion from oxygen that is present in the system.

4. The lifespan of radiators is relatively long in normal circumstances, usually lasting for decades.

5. It is important to pay attention to the operating pressure and temperature of the heat transfer medium so that the readings are not higher than what has been allowed by the manufacturer. Running the heat transfer medium on higher operating pressure and temperature than permitted will shorten the lifespan of the radiator considerably. For more information on a specific type of radiator please consult the product information leaflet.

6. Zehnder radiators (Charleston, M2M) are designed for closed heating systems, where access of chemically free oxygen to the pipes is ruled out. The heating system has to be hermetic and all types of leakage is impermissible. Constantly increasing the heat transfer medium should be avoided as it contributes to the corrosion of internal steel surfaces.

7. Discharging and refilling the heating system has to be done only in case of replacement of plant components, but not periodically. The temperature of the heat transfer medium has to be between >0°C in minimum and 110°C in maximum.

8. The radiator with electric heating element is an electrical device and the requirements for electrical installation in a damp room have to be implemented during the installation. The electrical installation has to be carried out according to the local normatives and regulations in effect.

9. It is important to note that the towel dryer (merged ) is not intended to be a heating device for the room, as it burdens the heating element, which shortens its lifespan considerably. There are heating radiators (merged ) that are specifically for the purpose of heating the room.

10. Power failures should be avoided as they will considerably shorten the lifespan of the heating element. It is designed to function with a stable work rhythm and the electricity supply must be constant.
11. While using the control thermostat radiator and the floor heating together, the thermostat used has to measure the temperature inside the pipes, not the room temperature. The towel dryer and the floor heating will not work well together if the thermostat measures the room temperature instead.