Radiators for Low Temperature Heating Systems

With the current European regulations concerning insulation standards and a clear trend towards higher insulation values, the amount of heat required for new and renovated homes has dropped sharply in recent years. High efficiency (i.e. low energy) heating systems, such as heat pumps and high-performance boilers, for example, are an increasingly common option these days.

Unfortunately, radiators are still frequently associated with ‘old-fashioned’ high-temperature heating systems. However, a lesser known fact is that when combined with low-temperature heating systems, even with a low heating regime of 45/35/20, radiators are the ideal heating solution. Without any changes in operation or effectiveness, radiators can quickly heat a room, providing optimal comfort and increased efficiency at lower costs.

A few myths dispelled

“Radiators take up a lot of space”
Wrong. By placing a horizontal radiator under a window you increase the available (living) space and, at the same time, ensure additional comfort by providing more warmth near to the window. Vertical radiators also save space (products are available in sizes from just 300mm wide).

“Underfloor heating is the only solution for modern, well-insulated buildings”
Wrong. Ironically, underfloor heating works better in old houses and buildings, which have a higher heat requirement due to lower level of insulation.

Underfloor heating is sometimes less efficient in new buildings, as the heat requirement is lower and the response speed higher.

“Radiators burn dust particles and make the air dry”
Wrong. Radiators only burn dust particles with high system water temperatures set between 50°C and 70°C. While this hypothesis has not been scientifically proven, the level of atmospheric humidity in a room does not change as a result of a radiator heating up. In any event, the manner in which low temperature heating systems work makes this a thing of the past.

Benefits of Low Temperature Radiators:

Comfort
• Radiators offer high levels of quality and comfort.
• The direct heat radiation means rising hot air blocks the unpleasant, descending cold draught from the windows. The space in the room can be used right up to the window’s edge.
• Quiet, due to no moving parts and no humming.

Efficiency
• Fast response time to acute heat demand (opening of door or window).
• Rapid adaptation to external heat gain or rises – e.g. originating from people in the room, sunshine and/or electrical apparatus.
• Reduced heat loss via the walls or floor (with under floor heating).
• The total cost (purchase and installation) of radiators is relatively low and no subsequent maintenance is required.

Flexibility
• Room thermostats regulate the various heat requirements for different times of the day in different zones.
• Radiators can be replaced fairly easily with new ones during renovation.
• Radiators can be combined without any problem with low system water temperatures used in floor heating, for example.
• Durable, with a view to lower heat demand.
• Freedom to use any kind of floor covering.

Purmo provides a 10-year quality guarantee on all its products.

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