

## RADIATOR DIMENSIONS

Current regulations must be complied with when calculating the thermal power of radiators for installation. When determining the number of elements in a radiator, remember that the nominal thermal power refers to a  $\Delta T$  – the difference between the average water temperature and the room temperature – of 50K. Therefore, in order to save energy and improve environmental comfort, it is advisable to use for the system a design  $\Delta T$  of less than 50K, (e.g. 30K÷40K) and decrease the water delivery temperature. The thermal power of radiators for values other than  $\Delta T$  is obtained by multiplying the rated thermal power by a coefficient  $C$  calculated from the formula:

$$C = (\Delta t / 50 \text{ K})^n$$

where  $n$  is the exponent of the equation  $Q = B \Delta T^n$

which expresses the thermal power of the heating element and is shown in the table for the various models. This gives

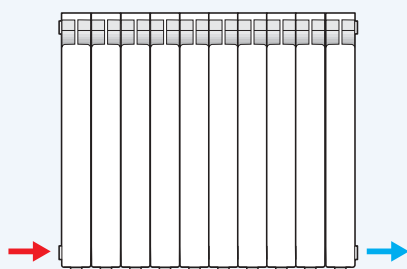
$$Q(\Delta t) = Q(50 \text{ K}) \times C$$

for automatic calculation go to [Calculate  \$\Delta T\$](#)

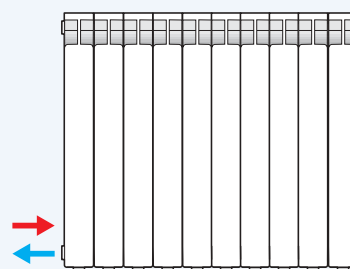
When determining the number of elements, remember that in installations in which the water enters and leaves from the bottom or with a single- or double-pipe valve, the thermal power may drop to 10-12% (**fig. A**) and 20% (**fig. B**), respectively, due to the particular water distribution inside the radiator. For radiators installed below shelves, in alcoves or – worse still – when using radiator covers – the thermal power may drop to 10-12% (**fig. C**).

for the first approximation go to [Heating requirements calculation](#)

(fig. A)



(fig. B)



(fig. C)

