GLOBAL
R A D I A T O R I

HEAT OUTPUT IN CONFORMITY WITH EN 442

The heat output of GLOBAL elements, shown in this catalogue, is certified complying with EN 442 rule to standardize the heat emissions in the EU.
In accordance with this regulation, the nominal heat emission is determined in a room test with Δt 50° C.
The advantage of this regulation can be summarized as follows:

◇ lower fuel demand for the reduction of passive losses of heat energy from boiler, pipes and heating appliances.
◇ higher levels of hygiene in warm environments, since the low temperature installations permit reduction of the convective air flows that circulate dust, bacterium, pollen etc.
◇ reduction of the heat loss in an environment heated with low temperature radiators produces improved comfort.

HEAT EMISSION WITH ΔT DIFFERENT FROM 50° C

The variation of heat emission of a radiator with Δt different from 50° C is determined in the following way:
assuming the datum point as the nominal power according to EN 442 rule Δt 50° C the result, with the characteristic equation, will be:
$P = Km \cdot \Delta t^{n}$

Example with Global MIX 600 a Δt = 60°C:
$P = 0{,}80314 \times 60^{1{,}32266} = 181$ Watt
where P   = heat output
Km = Km coefficient
n   = distinctive coefficient of the heating element
Δt   = the resultant of this equation

$\Delta t = tm - ta$ (ex. $\frac{85+75}{2} - 20 = 60°C$)

$tm = \frac{te+tu}{2}$

te = entry water temperature = 85°
tu = exit water temperature = 75°
ta = room temperature = 20°
tm = mean water temperature = 80°