

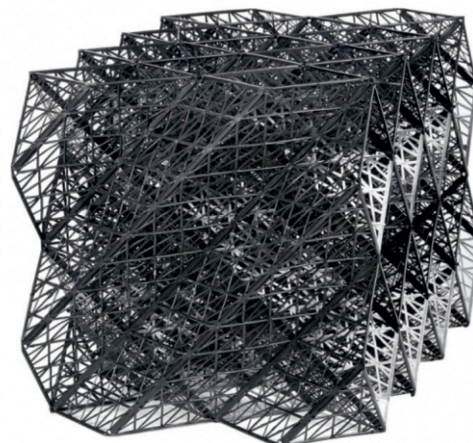


## Net structured hybrid filling R80

**Code: R80**

The R80 filling (manufactured after our own breveted design) is the next generation of filling, adapted to the technological requirements of any wet cooling tower, very efficient, practically invulnerable at impurity clogging, resistant to the influence of physical and chemical factors and fire.

The R80 filling is hybrid (mix) type, consists of individual elements with network appearance, from injected polypropylene (fireproof or non-fireproof), with optimized apertures and plies which generate both drops and films in its volume. The constitutive element of the R80 filling has oblique corrugated surface, the projection in plan being a rectangle (when the element is positioned vertically) or a square (when the element is positioned horizontally). By joining and assembling with cable ties the constitutive elements, there are formed packages with complex spatial structure that contain crossed inclined channels.



The alternation of the individual elements in the volume of R80 filling can be done in various ways, the most common being the one where the constitutive elements are placed one beside the other, without any distance between them, with the plies of adjacent elements alternatively crossed. In this case, the channels between the constitutive elements have a more complex form, but large enough in order to assure a big air flow through the installation (activation of drought).

The R80 filling improves the spacial volume occupied in the facility, by maximizing the heat and the substance transfer, while minimizing aerodynamic losses and material consumption.

The functional performances of the R80 filling are generally not affected by the impurity clogging phenomenon, due to the large air passing spaces, thus offering to the filling the invulnerability to the clogging for the whole life cycle.

Due to the increased intensity of the transfer processes, the R80 filling acts a lot better than similar fillings, "splash type" and as good as the performances of the exclusively "pellicle" type ones. Thereby there are accomplished lower water temperatures during the whole life cycle of the cooling tower.

Parameter name	Value
Cooling agent	Atmospheric air with or without industrial emissions
Water inlet temperature in the filling ( $^{\circ}\text{C}$ )	5 ... 80
Air outlet temperature from the filling ( $^{\circ}\text{C}$ )	-30 ... 80
Number of individual elements in assembled estate (piece/ $\text{m}^3$ )	61
Channels inclination	parallel or crossed
Average distance between individual elements, h (mm)	$80 \pm 1$
Package height, H (mm)	450
Package length, L (mm)	800 or multiples of 80 mm
Package width, I (mm)	450
Filling weight on 1 $\text{m}^3$ in assembled estate ( $\text{kg}/\text{m}^3$ )	10,5
Mechanical resistance at compacting without deformation of the package, with the individual elements in vertical position ( $\text{kN}/\text{m}^2$ )	4,6
Spraying density, economically applied ( $\text{m}^3/\text{m}^2\text{h}$ )	$3 \div 15$
Heat and substance transfer surface ( $\text{m}^2/\text{m}^3$ )	pellicle: 21 / drops: 13...17