

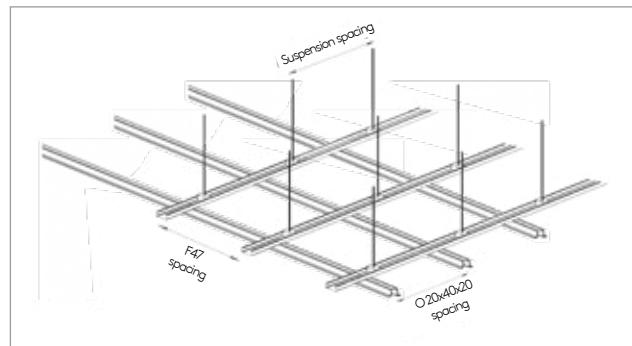


# FALSE CEILING F47/17R + OM 20X40X20

## GENERAL DESCRIPTION OF THE SYSTEM

- Kingspan's F47/17R + OM 20x40x20 system has been designed to support a false ceiling made of boards and an insulation layer (mineral wool or alike). It consists of a grid of galvanized steel profiles: the main runners are made up of F47/17R rails, while the cross profiles are made up of Omega OM 20x40x20.
- DX51 steel profiles, hot dipped galvanized Z140. Quality certified steel rolled by the leading European company.

## ASSEMBLY SKETCH AND ALLOWABLE SPANS



## JOINTS AND SUSPENSION

- The upper profiles - F47/17R rails- are suspended from the slab by means of TZ hangers, fixed by clipping on the rail flanges, and M6 threaded rod with nut and lock nut.
- The OM 20x40x20 profiles are fixed to the F47 /17R rails using self-drilling screws. Two M5.5 self-drilling screws must be placed in each joint between profiles, fixing the OM profile web to the F47 rail web. The screws will be arranged at least 2 cm apart.
- Finally, the boards are fitted onto the flanges of the Omega profiles. The insulating layer, if used, is placed over the boards.

## ALLOWABLE LOAD < 0.28 kN/m<sup>2</sup>

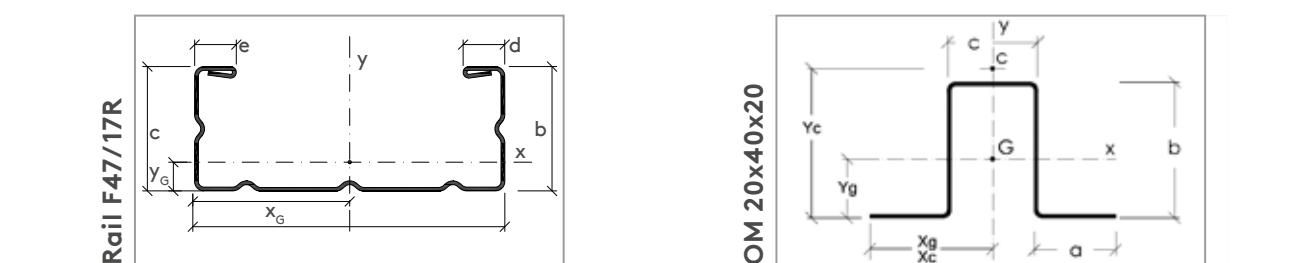
F47/17R Maximum spacing	OM 20x40x20 Maximum spacing	Suspension maximum spacing
0.40 m	1.20 m	0.60 m

## MAXIMUM LOADS

- Kingspan's F47 / 17R + Omega 20x40x20 false ceiling system has been designed to withstand a maximum load of 0,28 kN/m<sup>2</sup> ( $\approx 28 \text{ kg/m}^2$ ), considering the weight of the ceiling boards and a mineral wool (or alike) insulation layer. Any other load, such as equipments, must be suspended from the structural slab by other means, aside from Kingspan's false ceiling system.
- The design load will be obtained by adding the weights of the boards and the insulation layer. The final load will be factored by a safety factor of 1,35.

## TABLE OF GROSS MECHANICAL PROPERTIES OF THE PROFILES

PROFILE	Section dimensions					th.	self weight	Area	y <sub>0</sub>	x <sub>0</sub>	Axis y-y				Axis x-x					
	a	b	c	d	e						I <sub>y</sub>	I <sub>y</sub>	W <sub>y</sub>	I <sub>x</sub>	I <sub>x</sub>	W <sub>x</sub>	y <sub>c</sub>	x <sub>c</sub>	I <sub>t</sub>	I <sub>w</sub>
F47/17R	47	18	18	6	6	0.60	0.47	60.39	6.54	23.50	20,547.3	18,45	874.35	2,938.9	6.98	256.55	9.26	23.50	7.25	1,450.68
OM 20x40x20	20	40	20	-	-	0.80	0.84	107.34	17.08	29.20	18,865.3	13.26	646.07	24,229.6	15.02	1,057.1	43.03	29.20	22.90	4,096.63



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