



# 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 D steel profiles (according to EN 10346 standard), hot dipped galvanised Z140. Quality certified steel rolled by the leading European company.

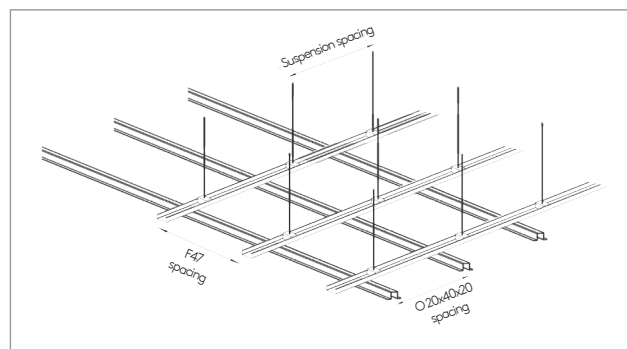
## JOINTS AND SUSPENSION

■ 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.

## ASSEMBLY SKETCH AND ALLOWABLE SPANS



### 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

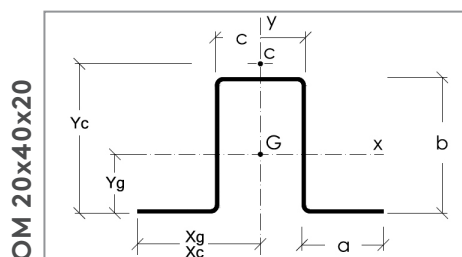
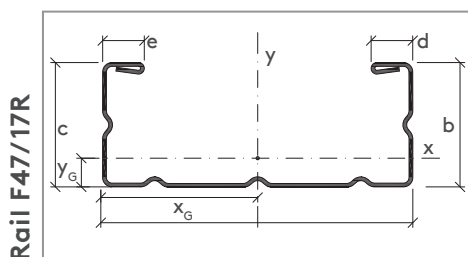
## MAXIMUM LOADS

■ 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> (≈ 28 kg/m<sup>2</sup>), 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>g</sub>	X <sub>g</sub>	Axis y-y			Axis x-x			Y <sub>c</sub>	X <sub>c</sub>	I <sub>t</sub>	I <sub>w</sub>
	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>				
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
	mm	mm	mm	mm	mm	mm	kg/ml	mm <sup>2</sup>	mm	mm	mm <sup>4</sup>	mm	mm <sup>3</sup>	mm <sup>4</sup>	mm	mm <sup>3</sup>	mm	mm	mm <sup>4</sup>	x10 <sup>3</sup> mm <sup>4</sup>



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