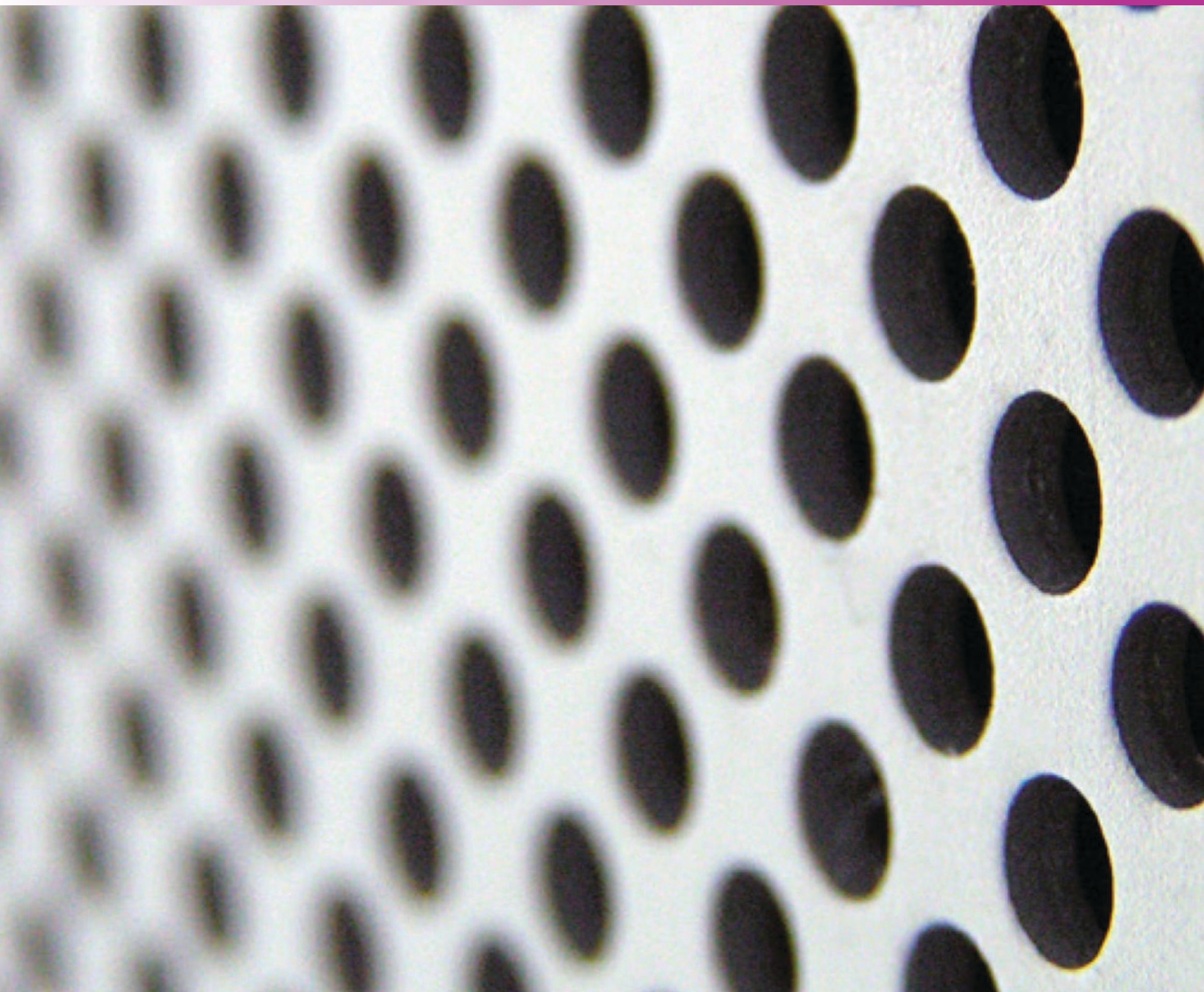


IAC Wallsound

A selection of medium performance acoustic panels for larger noise enclosures with focus on sound insulation and sound absorption





IAC Acoustics

Making the World a Quieter Place

Founded on an unrivalled history of engineering with some of the most pioneering discoveries in the industry, the IAC Acoustics brand is synonymous with technological innovation.

From controlling noise at a power station to tuning the sound in a TV or radio studio, IAC Acoustics has had a positive impact on society and helped to shape what can be achieved to make speech more intelligible, music more enjoyable, reduce the impact of industrial noise and protect people's sense of hearing.

The continual success of our products and services over the decades has brought the brand a reputation for quality and reliability among customers, whether they are multinational corporations or independent family businesses. This is supported by the expertise and passion of our workforce, the people behind the products, including designers, engineers and industry specialists.

To face the ever increasing noise reduction demands of the future, we will strive to further enhance our ability to reduce excessive noise. We aim to focus on developing tomorrow's solution today, innovating faster and delivering solutions that meet the requirements of the next generation. In doing so, we will stay true to our key values and founding philosophy to make the world a quieter place.

IAC Wallsound Acoustic Performance

IAC Wallsound is a sandwich panel with an insulation core of mineral wool and steel cover sheets, the internal sheet being perforated. IAC Wallsound panel is typically used for larger noise enclosures with focus on sound insulation and sound absorption.

IAC Wallsound - Insertion loss

Model	Frequency HZ											
	125		250		500		1000		2000		4000	
	Acoustic rating R_w dB											
	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.
IAC-WS-60 R_w 35 dB C,Ctr -2,-4dB	25.0 19.7 21.3	21.5	24.4 26.0 28.3	26.0	30.1 31.6 34.7	31.7	36.1 37.4 38.5	37.2	36.7 30.8 35.3	33.5	43.3 47.8 49.4	46.0
IAC-WS-80 R_w 32 dB	21.5 22.4 21.6	21.8	24.3 26.1 28.1	25.9	29.1 30.5 31.3	30.2	32.3 31.1 29.0	30.6	29.1 34.2 41.4	32.5	45.0 48.6 52.2	47.7
IAC-WS-100 R_w 36 dB C,Ctr -2,-5 dB	21.0 19.8 24.0	21.3	24.4 26.1 28.5	26.0	31.1 33.9 35.3	33.1	36.8 36.3 33.8	35.4	35.0 39.4 44.5	38.1	47.1 49.9 55.3	49.6
IAC-WS-120 R_w 36 dB C,Ctr -2,-4 dB	26.3 21.9 23.5	23.5	28.1 27.2 30.7	28.4	32.9 34.7 35.9	34.3	35.0 31.5 31.5	32.4	37.8 42.5 45.3	40.8	48.4 53.1 56.5	51.4

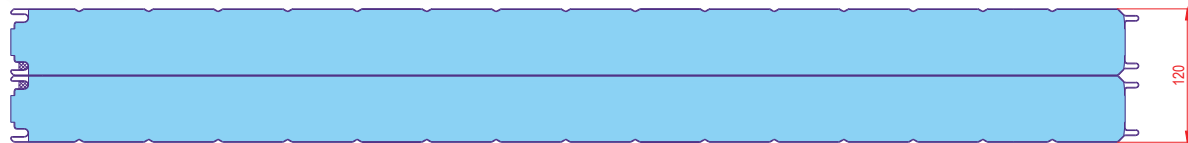
IAC Wallsound - Sound absorption

Model	Frequency HZ					
	125	250	500	1000	2000	4000
	Sound absorption α_s					
IAC-WS-80	0.47	0.82	0.98	1.02	0.93	0.78
IAC-WS-100	0.55	0.76	0.92	0.97	0.93	0.86
IAC-WS-120	0.61	0.83	0.93	0.96	0.97	0.98



Acoustic Performance Combinations

IAC Wallsound 60 (S/P*) + IAC Wallsound 60 (S/S*)



Combo	Frequency HZ															
	125		250		500		1000		2000		4000					
	Acoustic rating R _w dB															
	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.				
R _w 45 dB C,Ctr -2,-7 dB	27.0	22.6	33.3	34.2	39.2	42.9	41.9	48.2	49.1	48.0	51.1	54.1	53.7	66.2	68.1	67.8
	27.1	25.0	34.2	34.6	42.9	46.7	46.9	59.2	59.2	59.2	66.2	68.1	68.1	70.0	70.0	70.0

IAC Wallsound 60 (S/S*) + 50mm Glass wool + IAC Wallsound 60 (S/S*)



Combo	Frequency HZ															
	125		250		500		1000		2000		4000					
	Acoustic rating R _w dB															
	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.				
R _w 52 dB C,Ctr -3,-9 dB	28.4	26.1	37.8	41.3	50.7	53.4	52.9	58.0	59.4	59.2	62.4	60.9	62.6	73.5	73.8	73.5
	34.0	28.4	41.3	40.6	53.4	56.3	60.4	66.0	66.0	66.0	73.5	73.8	73.8	80.9	80.9	80.9



IAC Wallsound 60 (S/P*) + 155mm Airgap + IAC Wallsound 60 (S/S*)



Combo	Frequency HZ															
	125		250		500		1000		2000		4000					
	Acoustic rating R _w dB															
	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.	1/3 oct.	oct.				
R _w 55 dB C,Ctr -2,-6 dB	37.4	33.0	41.5	44.5	51.9	56.6	55.0	64.0	66.4	65.8	64.2	64.2	77.1	86.0	86.0	80.9
	39.3	35.7	44.5	48.3	56.6	60.7	67.7	73.5	73.5	73.5	80.9	80.9	85.9	85.9	85.9	85.9

IAC Wallsound surfaces

Standard external side (Solid)

0,60 mm Galvanised steel S320 GD + Z275

25 µm Polyester, Class RC3, RAL 9002, RAL 7035, RAL 1015, RAL 9010

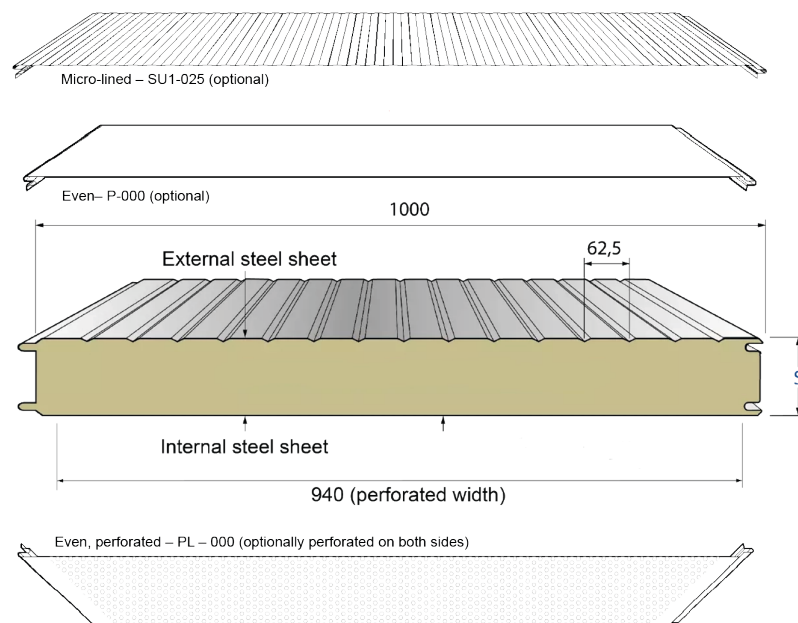
Standard internal side (Perforated)

0,60 mm Galvanised steel S320 GD + Z275

25 µm Polyester, Class RC3, RAL 9002

Optional features

- Can also be manufactured from aluminum or stainless steel
- Can be delivered with RC5 protection on the perforated side
- Perforation both sides
- Various patterns for the external side (see below)
- A range of standard colours
- Up to fire rating EI60 for IAC-WS-120



Reaction to Fire

Building material classified as A2-s1, d0 non-combustible according DIN EN 13501-1; mineral wool core A1, non-combustible, melting point > 1000°C

Thermal Conductivity

$\lambda=0,044$ W/m.K under the terms of DIN 4108 and DIN EN 13165.

The insulation values are regularly monitored by external bodies and may be applied without any further reduction.

Standard lengths

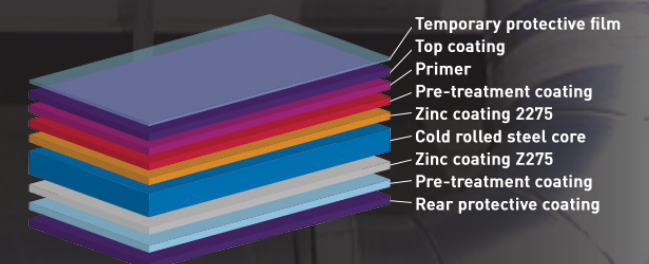
> 2,00 m up to 25,00 m, greater lengths on request.

Max span

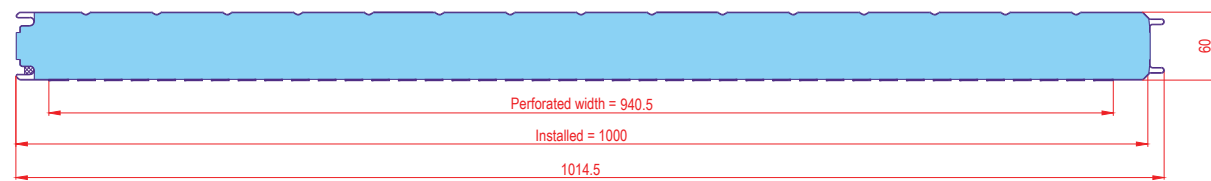
Detailed information about valid supporting widths [m] for wind pressure available on product pages.

Please contact IAC Acoustics for further information.

Typical coating system



IAC Wallsound 60

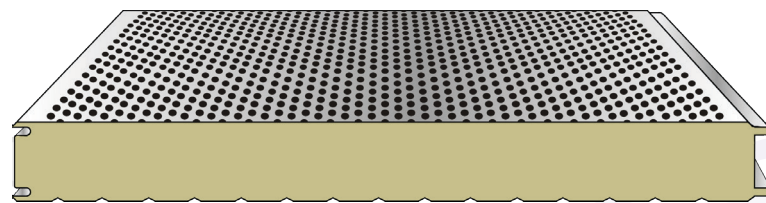


Core thickness	Weight	Thermal Resistance	Sound insulation
60mm	15,3 kg/m ²	1,34 m ² K / W	R _w ≈ 35 dB

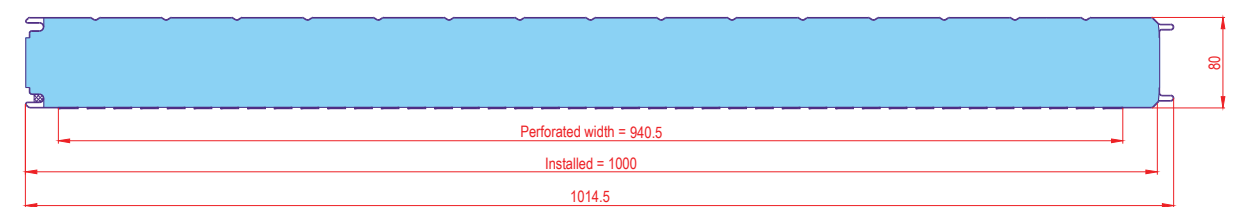
Valid supporting widths [m] for wind pressure

Stat. system	Wind pressure in kN / m ²										
	0,25	0,30	0,40	0,50	0,60	0,80	1,00	1,25	1,50	1,75	2,00
Single span	7,01 ⁴⁰	6,40 ⁴⁰	5,25 ⁴⁰	4,20 ⁴⁰	3,50 ⁴⁰	2,62 ⁴⁰	2,10 ⁴⁰	1,68 ⁴⁰	1,40 ⁴⁰	1,20 ⁴⁰	1,05 ⁴⁰
Dual span	1,62 ⁴⁰ 60	1,61 ⁴⁰ 60	1,59 ⁴⁰ 60	1,58 ⁴⁰ 60	1,56 ⁴⁰ 60	1,53 ⁴⁰ 60	1,50 ⁴⁰ 60	1,47 ⁴⁰ 60	1,40 ⁴⁰ 60	1,20 ⁴⁰ 60	1,05 ⁴⁰ 60
Multiple span	1,61 ⁴⁰ 60	1,59 ⁴⁰ 60	1,56 ⁴⁰ 60	1,53 ⁴⁰ 60	1,50 ⁴⁰ 60	1,46 ⁴⁰ 60	1,42 ⁴⁰ 60	1,38 ⁴⁰ 60	1,35 ⁴⁰ 60	1,20 ⁴⁰ 60	1,05 ⁴⁰ 60

- 40 → end support width necessary (mm)
- 1,62 → valid supporting width (m)
- 60 → intermediate support width necessary (mm)



IAC Wallsound 80

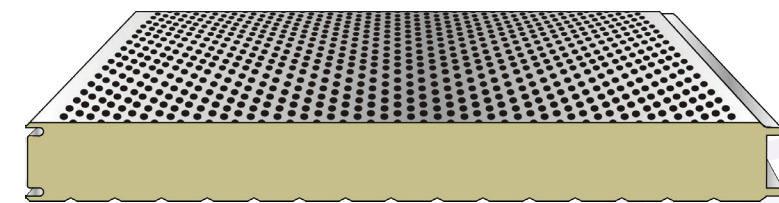


Core thickness	Weight	Thermal Resistance	Sound insulation
80mm	17,5 kg/m ²	1,79 m ² K / W	R _w ≈ 32 dB

Valid supporting widths [m] for wind pressure

Stat. system	Wind pressure in kN / m ²										
	0,25	0,30	0,40	0,50	0,60	0,80	1,00	1,25	1,50	1,75	2,00
Single span	8,11 ⁴⁰	7,40 ⁴⁰	6,41 ⁴⁰	5,62 ⁴⁰	4,69 ⁴⁰	3,51 ⁴⁰	2,81 ⁴⁰	2,25 ⁴⁰	1,87 ⁴⁰	1,60 ⁴⁰	1,04 ⁴⁰
Dual span	1,90 ⁴⁰ 60	1,89 ⁴⁰ 60	1,87 ⁴⁰ 60	1,85 ⁴⁰ 60	1,83 ⁴⁰ 60	1,79 ⁴⁰ 60	1,76 ⁴⁰ 60	1,72 ⁴⁰ 60	1,70 ⁴⁰ 60	1,60 ⁴⁰ 60	1,40 ⁴⁰ 60
Multiple span	1,89 ⁴⁰ 60	1,86 ⁴⁰ 60	1,83 ⁴⁰ 60	1,80 ⁴⁰ 60	1,76 ⁴⁰ 60	1,71 ⁴⁰ 60	1,66 ⁴⁰ 60	1,62 ⁴⁰ 60	1,58 ⁴⁰ 60	1,54 ⁴⁰ 60	1,40 ⁴⁰ 60

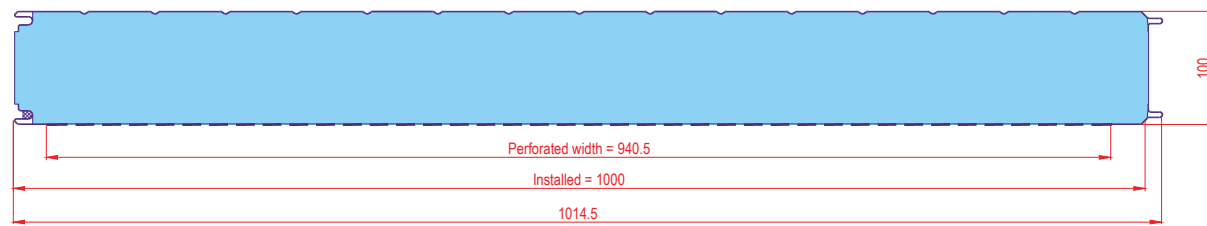
- 40 → end support width necessary (mm)
- 1,62 → valid supporting width (m)
- 60 → intermediate support width necessary (mm)



Errors and Omissions Excepted (E&OE).

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IAC Wallsound 100

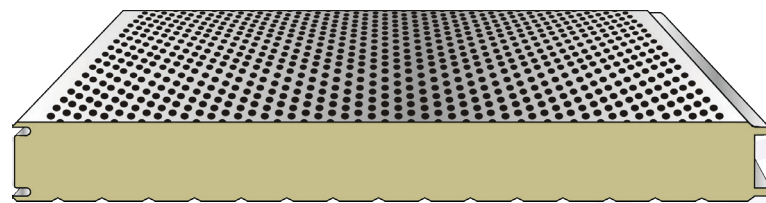


Core thickness	Weight	Thermal Resistance	Sound insulation
100mm	19.7 kg/m ²	2,25 m ² K / W	R _w ≈ 36 dB

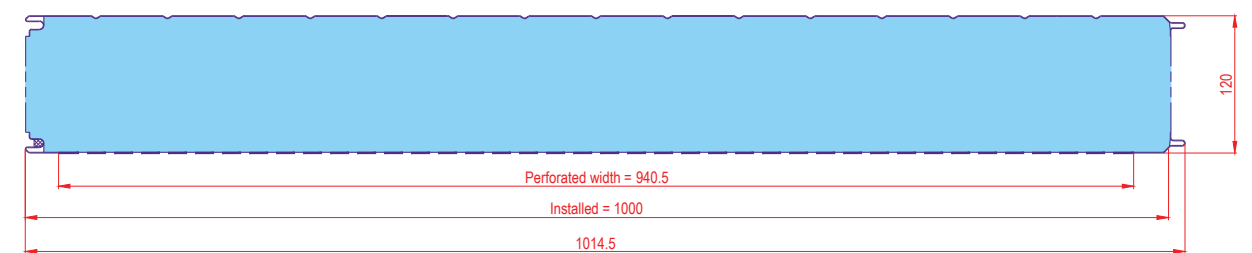
Valid supporting widths [m] for wind pressure

Stat. system	Wind pressure in kN / m ²										
	0,25	0,30	0,40	0,50	0,60	0,80	1,00	1,25	1,50	1,75	2,00
Single span	9,08 ⁴⁰	8,28 ⁴⁰	7,18 ⁴⁰	6,42 ⁴⁰	5,86 ⁴⁰	4,40 ⁴⁰	3,52 ⁴⁰	2,82 ⁴⁰	2,35 ⁴⁰	2,01 ⁴⁰	1,76 ⁴⁰
Dual span	2,16 ⁴⁰ 60	2,15 ⁴⁰ 60	2,12 ⁴⁰ 60	2,10 ⁴⁰ 60	2,08 ⁴⁰ 60	2,03 ⁴⁰ 60	2,00 ⁴⁰ 60	1,96 ⁴⁰ 60	1,92 ⁴⁰ 60	1,89 ⁴⁰ 60	1,76 ⁴⁰ 60
Multiple span	2,14 ⁴⁰ 60	2,12 ⁴⁰ 60	2,08 ⁴⁰ 60	2,04 ⁴⁰ 60	2,00 ⁴⁰ 60	1,94 ⁴⁰ 60	1,89 ⁴⁰ 60	1,83 ⁴⁰ 60	1,79 ⁴⁰ 60	1,75 ⁴⁰ 60	1,71 ⁴⁰ 60

40 → end support width necessary (mm)
 1,62 → valid supporting width (m)
 60 → intermediate support width necessary (mm)



IAC Wallsound 120



Core thickness	Weight	Thermal Resistance	Sound insulation	Resistance to fire
120mm	21.9 kg/m ²	2,70 m ² K / W	R _w ≈ 36 dB	⬮ EI60

Valid supporting widths [m] for wind pressure

Stat. system	Wind pressure in kN / m ²										
	0,25	0,30	0,40	0,50	0,60	0,80	1,00	1,25	1,50	1,75	2,00
Single span	9,95 ⁴⁰	9,08 ⁴⁰	7,86 ⁴⁰	7,04 ⁴⁰	6,42 ⁴⁰	5,29 ⁴⁰	4,23 ⁴⁰	3,38 ⁴⁰	2,82 ⁴⁰	2,42 ⁴⁰	2,12 ⁴⁰
Dual span	2,41 ⁴⁰ 60	2,39 ⁴⁰ 60	2,36 ⁴⁰ 60	2,34 ⁴⁰ 60	2,31 ⁴⁰ 60	2,26 ⁴⁰ 60	2,22 ⁴⁰ 60	2,18 ⁴⁰ 60	2,13 ⁴⁰ 60	2,10 ⁴⁰ 60	2,06 ⁴⁰ 60
Multiple span	2,39 ⁴⁰ 60	2,36 ⁴⁰ 60	2,31 ⁴⁰ 60	2,26 ⁴⁰ 60	2,22 ⁴⁰ 60	2,16 ⁴⁰ 60	2,10 ⁴⁰ 60	2,04 ⁴⁰ 60	1,98 ⁴⁰ 60	1,94 ⁴⁰ 60	1,90 ⁴⁰ 60

40 → end support width necessary (mm)
 1,62 → valid supporting width (m)
 60 → intermediate support width necessary (mm)

Supporting width for achieving fire testing

Single-span installation (Horizontal installation)

Core thickness		Fire rating		
		EI30	EI45	EI60
120	Partition	7,50 m*	6,00 m*	4,00 m*
120	Outer wall i → o	7,50 m*	-	4,00 m*

Maximum spans of exterior walls additionally influenced by wind load

* not for application in Germany

Errors and Omissions Excepted (E&OE).

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Contact



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