

Product reference: Soundmax and Soundmax XL

Product application: Our hinged acoustic doors provide a high performance solution to applications where acoustic separation requirements are critical. Select either a Soundmax steel, (right), or a Soundmax XL composite, (overleaf), depending on your application as outlined below.

Product Selection:

Soundmax: Traditional steel faced composite core hinged door in either single leaf or double leaf format. Most common acoustic door found in industrial, commercial, theatrical and broadcast applications.

Maximum dimension: 1250mm x 3000mm structural opening for single leaf door
2750mm x 3000mm structural opening for double leaf door

Maximum performance: R_w 58dB single leaf door
 R_w 54dB double leaf door
> R_w 65dB single or double leaf combined with similar in a tandem arrangement

Fire resistance: Up to 120 minutes EN 1634-1

Standard finish: Polyester powder coat from standard colour range

Hardware: Cam lift hinges in numbers to support the weight of the leaf fully when open
Lever latch, lock, pull handle, emergency push bar etc.

Fitting type: Infitted to structural and acoustic opening in either masonry or steel

Seals: Twin or triple PVC encased magnetic acoustic seals to the perimeter of the door leaf

Vision panel: Available as an option



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Soundmax XL: Composite core oversize hinged door in either single leaf or double leaf format. Typically found in Theatre or Exhibition Venue Rear Stage or Loading Bay applications but also found in many industrial noise reduction applications.

Maximum dimension: 3000mm x 6000mm structural opening for single leaf door
6000mm x 6000mm structural opening for double leaf door

Maximum performance: R_w 57dB single leaf door
 R_w 54dB double leaf door
> R_w 65dB single or double leaf combined with similar in a tandem arrangement

Hardware: Custom manufactured extra-heavy duty full bearing hinges, (radial and thrust), in numbers to support the weight of the leaf fully when open
Espagnolette fastener to each leaf

Fitting type: Face-fitted to structural and acoustic opening in either masonry or steel

Seals: Quadruple PVC coated cotton re-enforced fabric with an acoustic foam core. Arranged to provide an airlock section complete with acoustic absorption lining to enhance seal performance at high frequencies

Technical data:

Soundmax Steel

Panel thickness: 81mm to 121mm - R_w 48dB to R_w 58dB

U value: 0.53W/m²K to 1.50W/m²K

Panel options: Standard finish polyester powder coated over electro-deposited zinc coated steel sheet

Soundmax XL Composite

Panel thickness: 100mm to 150mm - R_w 40dB to R_w 57dB

U value: 0.39W/m²K to 0.60W/m²K

Panel options: Pre-finished PVC coated steel sheet or galvanised steel sheet for on-site finishing by others

Design flexibility:

Frame System: Due to the mass of our acoustic door leaves on our Soundmax XL composite doors, we have a selection of 'standard' frame designs to suit almost any weight/structure combination

Finish: Every door we build is custom designed to meet your requirements and as such we offer custom sizes, custom colours and custom finishes



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Tandem Arrangements:

Where very high levels of sound reduction are required we offer clients our tandem arrangement whereby two independent doors are fitted either side of the opening. In addition to the individual leaf performances we increase the unit performance by lining the reveal in sound absorbing mineral wool with a capping of perforated steel sheet, see photo. This ensures that we achieve the highest possible levels of sound attenuation possible.



Soundmax Acoustic Door Test Data:

Frequency f [Hz]	R 1/3 Octave [dB]	R 1/3 Octave [dB]	R 1/3 Octave [dB]	R 1/3 Octave [dB]	R 1/3 Octave [dB]
50	27.8	29.3	28.2	30.5	31.2
63	22.4	23.6	25.4	25.6	26.9
80	22.6	22.7	21.9	22.2	23.1
100	30.1	30.8	30.4	28.4	29.1
125	31.8	33.5	34.2	34.5	35.0
160	34.7	38.7	38.3	39.8	40.8
200	32.8	37.6	37.6	39.6	40.5
250	36.6	40.9	40.6	43.3	44.6
315	39.2	42.8	42.5	46.9	47.6
400	42.0	45.6	45.6	48.5	49.5
500	44.4	47.5	47.5	50.5	51.6
630	47.5	49.7	50.1	51.5	52.0
800	50.3	51.8	53.1	56.9	57.1
1000	51.8	53.1	55.3	59.6	59.8
1250	52.7	54.0	56.1	62.6	62.5
1600	52.0	53.7	55.1	65.0	65.5
2000	50.6	54.4	55.2	65.7	67.4
2500	49.1	52.9	54.0	67.3	68.7
3150	49.4	51.8	53.1	68.3	69.7
4000	50.7	55.1	55.9	70.1	70.8
5000	53.7	57.7	58.2	64.3	66.0
R_w	48	50	51	53	54
C	-2	-1	-2	-1	-2
C_{tr}	-6	-5	-6	-7	-8
Thickness mm	81	81	81	121	121
Door Type	Soundmax 48 Double	Soundmax 50 Double	Soundmax 51 Double	Soundmax 53 Double	Soundmax 54 Double



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