

Acoustic Door Specification

Noise-Lock® D-53 Steel Acoustic Door

IAC Acoustics

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Construction

- Door Structure** Each leaf shall be 89mm thick, fabricated from 2.0mm thick steel sheet filled with sound absorbing and damping elements. Leaf shall be internally reinforced to accept hardware.
- Frame** Architectural split frame shall be fabricated from 2.0mm thick steel sheets, channels and plates and to be filled with sound absorbing and damping elements. Additional structural elements incorporated into the builders' wall may be required to support the door assembly, please refer to IAC Acoustics for more information.
- Acoustic Seals** Side and head of door and frame shall each receive two sets of acoustic seals. An acoustic labyrinth shall be created when door is in closed position. Bottom of door leaf shall contain continuous gravity-activated seal which shall compress against steel threshold as door is closed.
- Pre-hung** Assembly and adjustment of door leaf, frame, acoustic seals and hinges shall take place at factory to ensure ease of installation, reliable operation and maintenance of acoustic performance. The entire doorset shall be shipped to job site ready to install and operate.
- Hinges** Shall be by IAC, CAM lift design, painted to match the door.
- Preparation** Door leaf and frame shall be predrilled and tapped in accordance with manufacturer's templates to accept specified hardware.

Vision Panel (if applicable)

Double glazed window unit comprising two panes of laminated safety glass (Thickness dependant on vision panel size) sealed within 2mm steel frames to suit leaf thickness of 89mm. Acoustic absorptive material fitted between the panes. Steel frames to be RAL polyester powder coated to match the door finish.

Colour / Finishes

Leaf and frame to be polyester powder coated to standard RAL colours.

Furniture

To be confirmed - factory fit and assembly.

Acoustic Rating

Rw (C; Ctr) 53 (-2; -6) dB to achieve minimum R'w48dB once installed (subject to flanking).

STC-54(dB) to achieve minimum NIC 49 once installed (subject to flanking).

Certified laboratory performance in single leaf arrangement as follows:

Frequency (Hz)	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k
1/3 Octave Sound Transmission Loss (dB)	24	21	28	28	40	48	52	51	52	52	54	55	55	54	51	51	51	54	59	63	65	64	62	60
Frequency (Hz)	63		125			250			500			1k			2k			4k			8k			
Full Octave Sound Transmission Loss (dB)	23		32			52			53			53			52			62			≥62			