Acoustic Fire Door Specification

Noise-Lock® ND-50, EI-60 Steel Door

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Construction

Door Structure
Each leaf shall be 75mm 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 & Intumescent Seals
Side and head of door and frame shall each receive two sets of acoustic and thermal 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. Intumescent seals along sides and head in place to expand under thermal load and fill gaps between leaf and frame.

Pre-hung
Assembly and adjustment of door leaf, frame, 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
Concealed hinges in the frame are used to hang the leaf of the door. Adjustment in various directions available with the hinge.

Preparation
Door leaf and frame shall be predrilled and tapped in accordance with manufacturer's templates to accept specified hardware.

Clear Opening
Structural opening width -258mm = Clear opening width
Structural opening height -145mm = Clear opening height

Vision Panel (if applicable)

Double glazed window unit comprising two panes of 15mm thick thermal resistant glass, sealed within steel frames to suit leaf thickness of 75mm. Acoustic foam reveals are fitted between glass. Steel window frames to be RAL polyester powder coated to match the door finish. Overall size of the vision panel to be confirmed by Client/Architect.

Colour / Finishes

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

Furniture

To be confirmed by Client/Architect.

Acoustic Rating

Rw (C; Ctr) 50 (-3; -9) dB to achieve minimum R'w46dB once installed (subject to flanking).

STC-51(dB) to achieve minimum NIC 46 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)	37	26	22	28	29	34	39	44	45	45	47	47	48	51	54	54	57	60	57	56	60	59	58	52

Frequency (Hz)	63	125	250	500	1k	2k	4k	8k
Full Octave Sound Transmission Loss (dB)	25	30	42	46	51	57	58	55