Soundproofing Performance

Below are the construction details of an acoustic door with composite core for STC applications.
These specifications must be followed as closely as possible to ensure maximum acoustic performance.

FORTE OPENING SOLUTIONS

STC Operable	Sound Rated Specialized Construction												Sound Rated Fireproof Construction					Sound Rated Standard Construction				
STC (dB)	44 dB	43 dB	39 dB	46 dB	45 dB	44 dB	43 dB	42 dB	41 dB	40 dB	39 dB	35 dB	45 dB	43 dB	42 dB	41 dB	30 dB	29 dB	31 dB	31 dB	30 dB	30 dB
Construction	SR44 (2) Paired	SR43 (2) Paired	SR39 (2) Paired	SR46	SR45	SR44	SR43	SR42	SR41	SR40	SR39	SR35	SR4545	SR4345	SR4245	SR4145	RMC45/60/90	AF45	7600	6000	8500	8600
Available Size	6' x 7' (max. 3' x 7'/door)			4' x 8'	4' x 8"	4' x 8"	4' x 8"	4' x 8"	4' x 8'	4' x 8"	4' x 8"	4' x 8"	3' x 7'	3' x 7'	3' x 7'	3' x 7'	4' x 10'	3' x 7'	3' x 7'	3' x 7'	3' x 7'	3' x 7'
Weight Factor (lb/sq. ft.)	10.6	8.8	7.4	10.6	10.6	10.6	8.8	8.8	8.8	7.4	7.4	6.5	10.4	10.1	10.1	10.1	3.7	4.9	4.9	5.4	4.5	4.8
Weight Based 3'x7' (lb)	218	174	143	218	218	218	174	174	174	155.4	155.4	137	218.4	212.1	212.1	212.1		104	114	120	108	110
Fire Rated Slab Door	N/A	20 min	20 min	20 min	20 min	20 min	20 min	20 min	20 min	20 min	20 min	20 min	45 min	45 min	45 min	45 min	45, 60, or 90 min	45 min	20 min	20 min	20 min	20 min
Approved Fire Rated Glazed Opening	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	N/A	N/A	N/A	N/A
Fire Rated Glazing Kit																						
Lite Kit	N/A	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSLH	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Anemostat Lopro	Anemostat Lopro	N/A	N/A	N/A	N/A
Glazing	N/A	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	3/16" Firelite NT	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	1/4" wire of Firelite NT 3/16"	1/4" wire of Firelite NT 3/16"	N/A	N/A	N/A	N/A
Maximum Vision (sq. in.)	N/A	216	216	100	216	484	216	484	864	864	864	484	216	216	484	864	1290	100	N/A	N/A	N/A	N/A
Non-Fire Rated Glazing Kit																						
Lite Kit	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	N/A	N/A	N/A	N/A	N/A	N/A	Slimline VSLH	Slimline VSLH	Slimline VSLH	Slimline VSLH
Glazing	11/16" Laminated	11/16" Laminated	5/8" Laminated	5/8" Laminated	5/8" Laminated	5/8" Laminated	1/2" Laminated	1/2" Laminated	5/8" Laminated	1/2" Laminated	1/2" Laminated	5/16" Laminated	N/A	N/A	N/A	N/A	N/A	N/A	1/4" Laminated	1/4" Laminated	1/4" Laminated	1/4" Laminated
Maximum Vision (sq. in.)	216	216	216	100	216	484	100	484	864	864	864	484	N/A	N/A	N/A	N/A	N/A	N/A	100	100	100	100

Configuration of Soundproofing Hardware

Kit #	13	13	13	10	10	10	10	10	10	10	10	12	10	10	10	10	15	3	2	2	2	2
Head & Jambs																						
Zero 119w																						
Pemko S-88												•										
Pemko S-88(double)																	•	•	•	•	•	•
Pemko S-44	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•						
DHSI 105																						
Zero 8145 SBK																						
Stop																						
Pemko S-88												•										
Pemko S-773	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•						
Bottom Rail																						
Pemko S-773	•	•	•																			
Drop-Down Threshold																						
DHSI CS DP . 375 (2)																						
STC411APK/ACP112	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•						
Pemko 434 ARL																		•				
Unique 50 MHD																			•	•	•	•
Zero 360												•										
Zero 369A																	•					
Other																						
Pemko AST 303AS (2)	•	•	•																			
Pemko S-773 (inactive)	•	•	•																			
ACP112 (custion 1-1/4" x 2")	•	•	•																			

Doors tested with specific configuration (Machined for cylindrical lock & mortised 4½" hinges in a 16Ga steel frame filled with concrete). Usage of different configuration may affect tested STC rating.

DOOR ASSEMBLY

SECTION 1.1 : DOOR CONSTRUCTION
- Core components pre-measured to standard sizes that vary depending door size and intended use.
- Standard sizes are suitable for the following door sizes: 3' x 7', 3'6" x 7', 3' x 8', 4' x 8', 4' x 10' and 3' x 7' (paired).
- Custom sizes available on request.
- The faces are glued to the core in accordance with industry standards for 1 3/4" 5-ply flush doors.
- Specification are based on a 3'0" x 7'0" and 4'0" x 8'0" test door (depending on construction).

SECTION 1.2 : HARDWARE
- All STC tests are carried out with specific hardware (No. 161 cylindrical lock and 4 1/2" full mortise hinges).
- Extra heavy duty hinges are recommended.
- Vision Lite have been tested on specific door construction and will affect STC performance if defference to test area.
- Contact us for any construction modification, including vision kits.
- Any hardware not installed using though bolts must be properly tightened.

ACOUSTIC

SECTION 2.1 : SEALING
- All levels of STC performance require specific gasket system and procedures.
- We can supply gasket products. Or, you can purchase products directly from a tested and approved manufacturer.
- Please refer to installation specifications for each gasket system.
- Acoustic hardware must be adjusted properly to door opening to meet manufacturing specification and 3rd party testing.