

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.

STC SOUND RATED SPECIALIZED CONSTRUCTION operable

	44dB	43dB	39dB	46dB	45dB	44dB	43dB	42dB	41dB	40dB	39dB	35dB
CONSTRUCTION	SR44 (2) PAIRED	SR43 (2) PAIRED	SR39 (2) PAIRED	SR46	SR45	SR44	SR43	SR42	SR41	SR40	SR39	SR35
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'
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
Weight based 3' x 7' (lb)	218	174	143	218	218	218	174	174	174	155.4	155.4	137
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
Approved fire rated glazed opening	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
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 VSL
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
Maximum vision (sq. in.)	N/A	216	216	100	216	484	216	484	864	864	864	484
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
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
Maximum vision (sq. in.)	216	216	216	100	216	484	100	484	864	864	864	484

SOUND RATED FIREPROOF CONSTRUCTION

	45dB	43dB	42dB	41dB	29dB
CONSTRUCTION	SR4545	SR4345	SR4245	SR4145	AF45
Available size	3' x 7'	3' x 7'	3' x 7'	3' x 7'	3' x 7'
Weight factor (lb/sq. ft.)	10.4	10.1	10.1	10.1	4.9
Weight based 3' x 7' (lb)	218.4	212.1	212.1	212.1	104
Fire rated slab door	45 min	45 min	45 min	45 min	45 min
Approved fire rated glazed opening	Available	Available	Available	Available	Available
Fire rated glazing kit					
Lite kit	Slimline VSIG	Slimline VSIG	Slimline VSIG	Slimline VSIG	Anemostat Lopro
Glazing	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	7/8" Pyrostop	1/4" wire or Firelite NT 3/16"
Maximum vision (sq. in.)	216	216	484	864	100
Non fire rated glazing kit					
Lite kit	N/A	N/A	N/A	N/A	N/A
Glazing	N/A	N/A	N/A	N/A	N/A
Maximum vision (sq. in.)	N/A	N/A	N/A	N/A	N/A

SOUND RATED STANDARD CONSTRUCTION

	38dB	31dB	31dB	30dB	30dB
CONSTRUCTION	8526	7600	6000	8500	8600
Available size	3' x 7'	3' x 7'	3' x 7'	3' x 7'	3' x 7'
Weight factor (lb/sq. ft.)	12.5	4.9	5.4	4.5	4.8
Weight based 3' x 7' (lb)	274	114	120	108	110
Fire rated slab door	N/A	20 min	20 min	20 min	20 min
Approved fire rated glazed opening	N/A	N/A	N/A	N/A	N/A
Fire rated glazing kit					
Lite kit	N/A	N/A	N/A	N/A	N/A
Glazing	N/A	N/A	N/A	N/A	N/A
Maximum vision (sq. in.)	N/A	N/A	N/A	N/A	N/A
Non fire rated glazing kit					
Lite kit	N/A	Slimline VSL	Slimline VSL	Slimline VSL	Slimline VSL
Glazing	N/A	1/4" laminated	1/4" laminated	1/4" laminated	1/4" laminated
Maximum vision (sq. in.)	N/A	100	100	100	100

CONFIGURATION OF SOUNDPROOFING HARDWARE

Kit #	13	13	13	10	10	10	10	10	10	10	10	12					3		2	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)																								
Pemko 411 AE/ACP112	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Pemko 434 ARL																								
Unique 50 MHD																								
Zero 360																								
Zero 369A																								
Other																								
Pemko AST 303AS (2)	●	●	●																					
Pemko S-773 (inactive)	●	●	●																					
ACP112 (cushion 1-1/4" x 2")	●	●	●																					

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 difference 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.