BRIDGEWALL ACOUSTICS OVERVIEW

Glass Acoustics

The STC (Sound Transmission Class) rating of a glass partition system is dependant on the type of glass specified. Refer to the chart below to understand how glass thickness and glass lamination impact acoustic ratings:

SINGLE GLAZED

Monolithic Glass

Thickness	Lamination	STC Value
3/8″	n/a	34
1/2″	n/a	36

Laminated Glass

Thickness	Lamination	STC Value
3/8″	0.030 P.V.B.	36
3/8″	0.060 P.V.B.	37
1/2″	0.030 P.V.B.	38
1/2″	0.060 P.V.B.	39

DOUBLE GLAZED

Monolithic Glass

Thickness	Lamination	STC Value
3/8″ + 3/8″	n/a	43
1/2″ + 3/8″	n/a	48
1/2″ + 1/2″	n/a	48

Laminated Glass

Thickness	Lamination	STC Value
3/8″ + 3/8″	0.030 P.V.B.	50
3/8″ + 3/8″	0.060 P.V.B.	51
1/2″ + 3/8″	0.030 P.V.B.	51
1/2″ + 3/8″	0.060 P.V.B.	52
1/2″ + 1/2″	0.030 P.V.B.	52
1/2″ + 1/2″	0.060 P.V.B.	53

Door Sound Control

Bridgewall systems are designed to minimize sound leakage, with doors being the primary acoustic weak point in partitions. To tackle this, we use specialized acoustic gaskets to seal our glass doors when closed. Additionally, our automatic drop seals, available for both sliding and swing doors, create a superior sound barrier compared to basic floor sweeps. For effective door acoustics, all four sides must be considered.

Flanking Transmission

When aiming for sound control, it's essential to consider all sound paths. Lab-tested acoustic ratings are ideal, but onsite conditions may create flanking paths above, below, or around partitions. Sound can travel through ductwork, drop ceilings, raised floors, or plumbing. Make sure the Ceiling Attenuation Class (CAC) of specified ceiling tiles matches your acoustic needs.

STC	What Can Be Heard
25	Normal speech can be heard
30	Loud speech can be understood
35	Loud speech audible but not intelligible
40	Loud speech audible as a murmur
45	Loud speech heard but not audible
50	Loud sounds faintly heard

Source: https://en.wikipedia.org/wiki/Sound_transmission_class

STC Rating Change	Change in Apparent Loudness
+/- 1	Almost imperceptible
+/- 3	Just perceptible
+/- 5	Clearly noticeable
+/- 10	Twice (or half) as loud

Source: https://www.stcratings.com/rules.html

Acoustic Testing

Acoustic testing for partitions is done in accordance with ASTM E90. ASTM E90 is the "Standard test method for laboratory measurement of airborne sound transmission loss of building partitions and elements." Bridgewall acoustic research and testing is done with accredited independant laboratories.

A Bridgewall acoustic laboratory test in accordance with ASTM E90 © 2019 Bridgewall