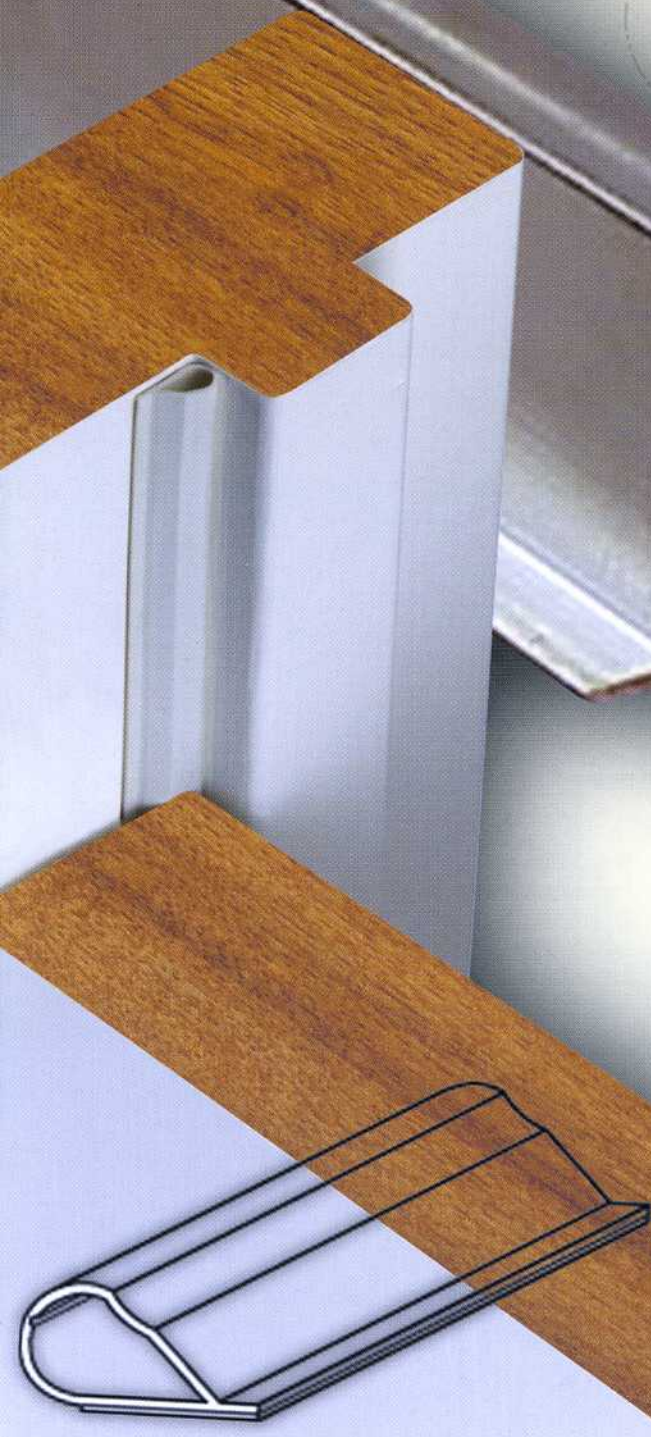
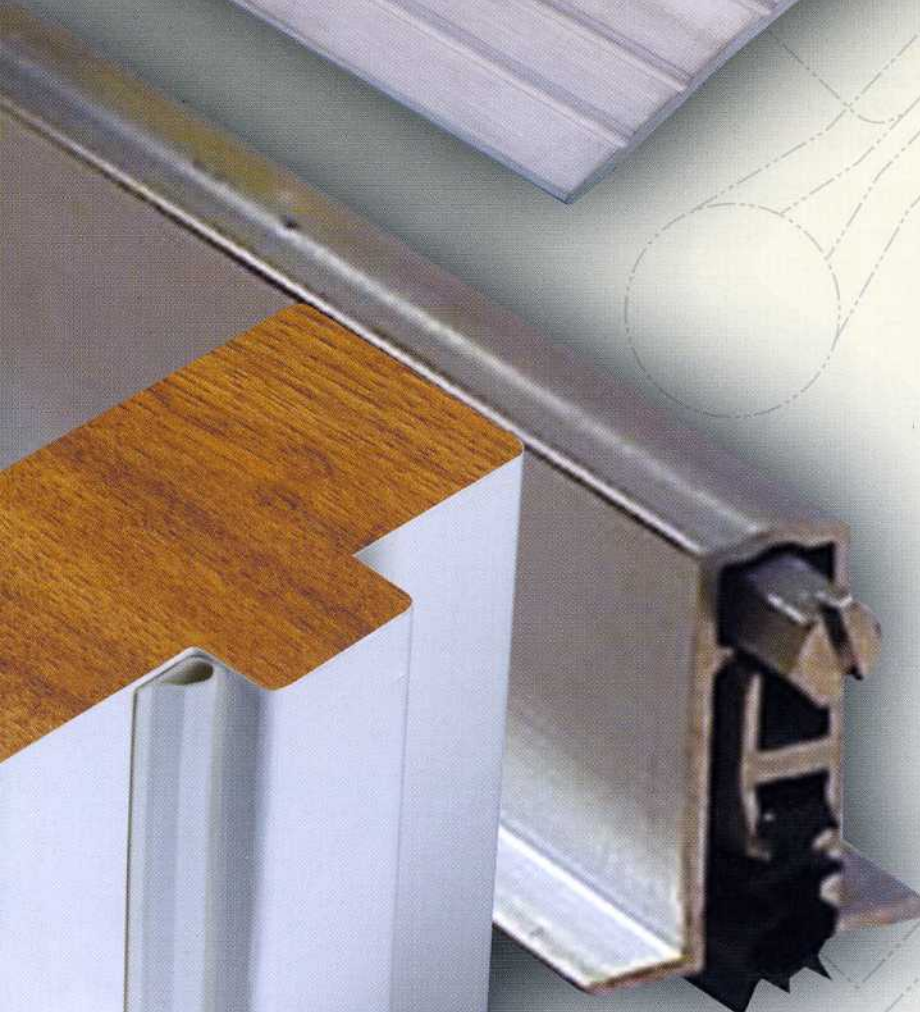


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ventura

Acoustic Sound Seal Systems
for Timber & Steel Doorsets

Effective suppression of noise and sound is a key factor in today's environment where locations such as factory workshops, toolrooms, lift switch gear winding rooms, hotels, banks, boardrooms, interview and doctors surgeries are all examples of situations benefiting from efficient acoustic control.

Correct selection of materials in the construction of floor, walls and ceiling are initially essential but it is invariably the doorway which offers the most noticeable weakness in permitting sound to 'intrude' or 'escape'.

For critical applications i.e. recording studios, the use of high quality purpose made door and frame sets are essential but for other everyday situations even a modest good quality solid core

timber door with acoustic seals may be suitable to prevent sound intrusion from one location to another.

The table below offers recommendations for component combinations which can be applied to suitable timber and steel door sets. The door set used must be at least equal to or better than the STC rating projected.

As the table illustrates, the entire perimeter of the door is effectively controlled by a combination of threshold, automatic door bottom seal and appropriate perimeter compression seal.

For further advice and guidance on Acoustic control contact Ventura's Technical staff.

Door location	Stop/jamb seal	Door Bottom	Threshold	Accessibility	Sound Transmission Class (STC)	
					Door Rating	System Rating
External	VS 88 (double)	V 434 ARL	V2005 AS	yes 	48	44
External	VS 88 (double)	V 434 ARL	V2001 AS	yes 	48	44
External	V350 CSR	V434 ARL	V2005 AS	yes 	44	41
External	VS 88	V 434 ARL	V177 AS	no	48	41
External	VS 88	V 434 ARL	V179 AS	no	48	41
External	V312 CR	V411 ARL	V2005 AS	yes 	44	40
External	VS 88	V411 ARL	V2005 AS	yes 	45	39
External	VS 88	V234 AV	V2005 AS	yes 	42	37
External	V312 CR	V234 AV	V2005 AS	yes 	41	37
Internal	V350 CSR	V434 ARL	V2364A	yes 	44	40
Internal	VS 88	V434 ARL	V2364A	yes 	43	39
Internal	V312 CR	V411 ARL	V236 A	yes 	44	39
Internal	VS 88	V411 ARL	V236A	yes 	45	38

Notes:

Stop / jamb seal VS88 may be applied as double row to improve rating by 3dB

Door shoe V210AV with rain deflector may be substituted for V234AV.

Thresholds V179AS*, V177AS*, V2001AS, may be substituted for V2005AS on exterior doors without loss of dB rating.

For Internal doorways, thresholds V270, V271, V236 or V2364 may be used in place of external thresholds with a 1dB loss of rating.

For thermal rated thresholds use V252x226AFG* or V254x226AFG*.

*not 'Accessibility threshold' due to increased height.

Note: "Accessibility Threshold" must not exceed 15mm rise height.

Information for comparison:

A standard solid core non-acoustic timber door can be anticipated to rate at STC 28 - 32.

Reinforced concrete 300mm thick will rate at approximately STC 54 - 56.

Plate glass (6.4mm thickness) will rate at approximately STC 25 - 26

STC rating	Level of Speech heard
STC 30	Loud speech understood
STC 35	Loud speech heard but not understood
STC 40	Loud speech audible as a murmur
STC 45	Loud speech barely audible
STC 50	Loud speech not audible

Note: The use of the American Sound Transmission Class (STC) Rating is used for its simpler description. Both the STC and British Airbourne Sound Insulation Indices are similar in Hertz Test Frequency.

Observations & Limitations:

It should be anticipated that a properly functioning acoustic door seal system will result in higher than normal closing & opening resistance. The use of lever handles and/or pull handles rather than knobsets is advisable to provide opening 'leverage'. Door closers and panic exit devices should be of appropriate duty and correctly set and adjusted for the door weight and size. Hinges should be freely operating – typically double ball race or journal support type. For improved acoustic levels Ventura Continuous hinges will provide improved attenuation over standard hinges. If at all possible, pairs of doors should be avoided in acoustic applications. If they are necessary, please consult Ventura's staff for meeting the stile design recommendations.

The majority of Ventura's components have, where appropriate, been air & smoke leakage tested and included in successful Fire Tests or assessments. Specific test data is available from Venturas' Technical Office.

