

Acoustical Systems



Experience and precision engineering are paramount in designing high-performance acoustical door assemblies, and nobody scores higher than Legacy on both counts. We extend that expertise to sound door manufacturers interested in collaborating to achieve industry-leading results.

Legacy's OEM program assists manufacturers in designing and building acoustical doors to achieve specific STC ratings. There are three distinct, integrated components to the services we provide:

- Advice on design and construction for your STC-rated doors,
- Consultation on integrating best-value sound-control gasketing to optimize costs and performance, and
- Collaborating on testing the assembly in the lab to achieve published STC ratings.

The first step is understanding your goals and the resources we can provide to help.

Call our engineering department to discuss.

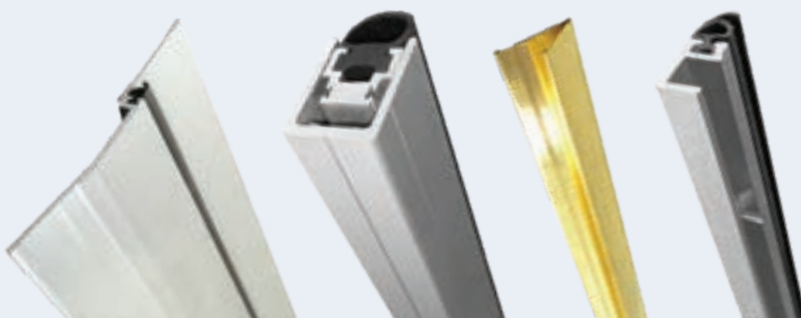
LEGACY ENGINEERING

Local: +1 (718) 292-5333

Toll Free: +1 (888) 383-3330

System	Head & Jamb	Door Bottom	Threshold	Door Rating	STC Rating
6049STC	5077, B182, 5881S	7763	3465	50	49
6148STC	5077, B182, 50517S	7763	3665	49	48
6048STC	5077, B182, 5881S, 52408S	7763	3465	50	48
6047STC	5077, B182	7763	3665	49	47
6046STC	5077, 50517S	7763	3665	49	46
6042STC	5077	7763	-	50	42
6142STC	5574	-	3465	50	42
6037STC	5584, 50519S	7553	3465	37	37
6136STC	5584, 5883S	7553, 793	3465	37	36
6236STC	50519S	7153	-	37	36

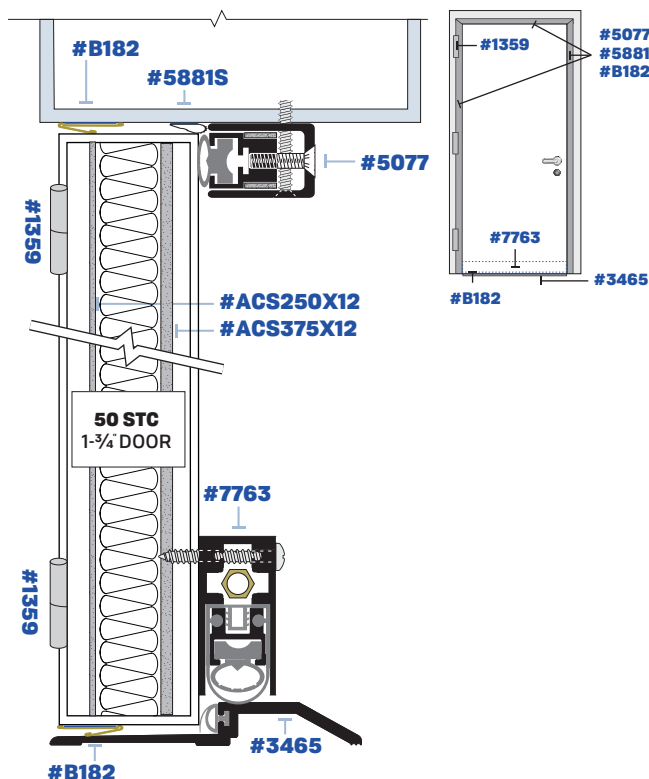
This representative list shows published STC results for acoustical door assemblies and configurations designed and tested through collaborations between Legacy and OEM partners.



#6049STC



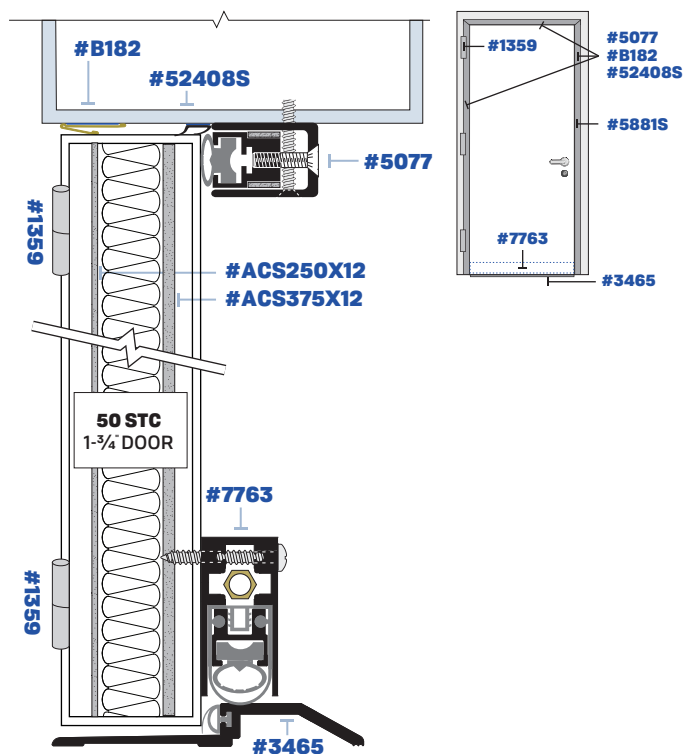
49 STC



#6048STC



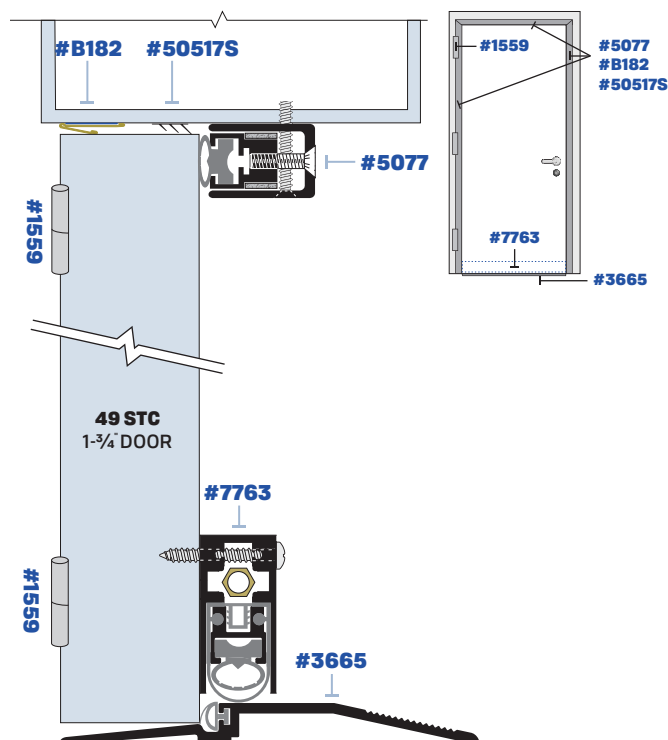
48 STC





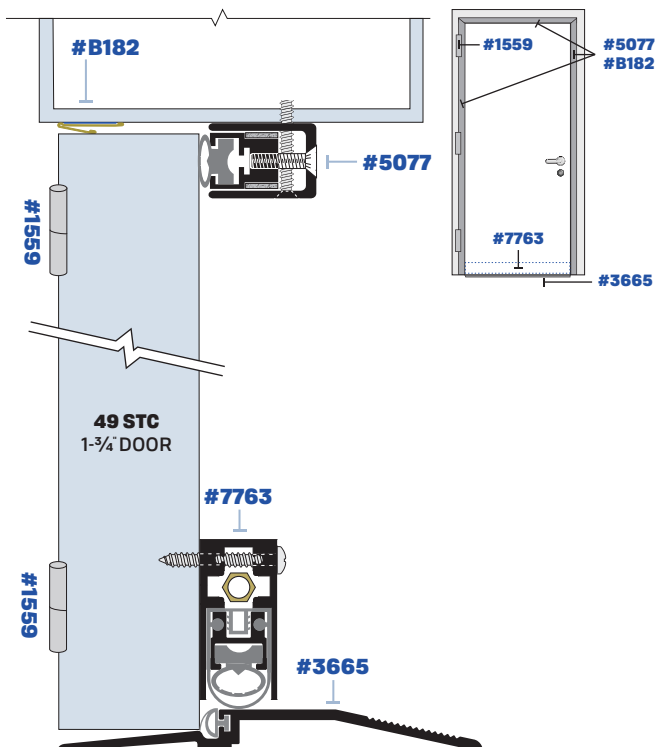
#6148STC

48 STC



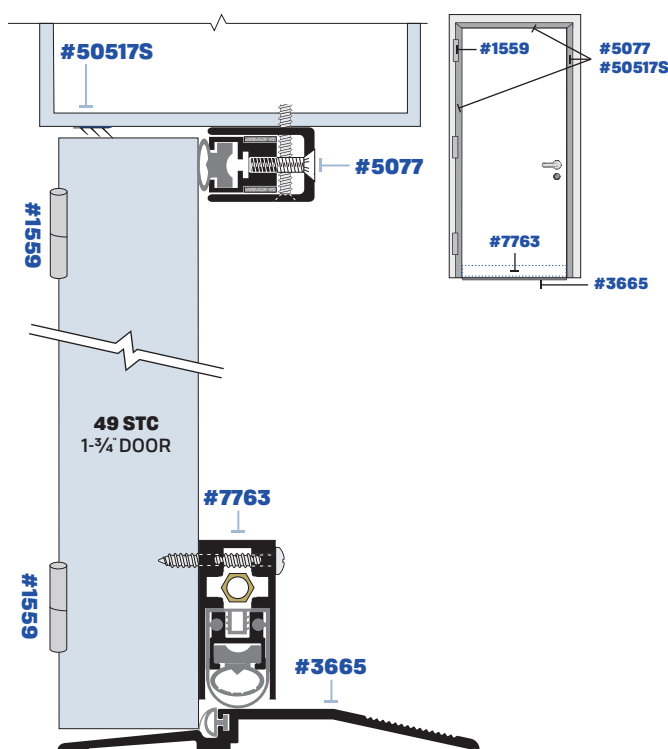
#6047STC

47 STC



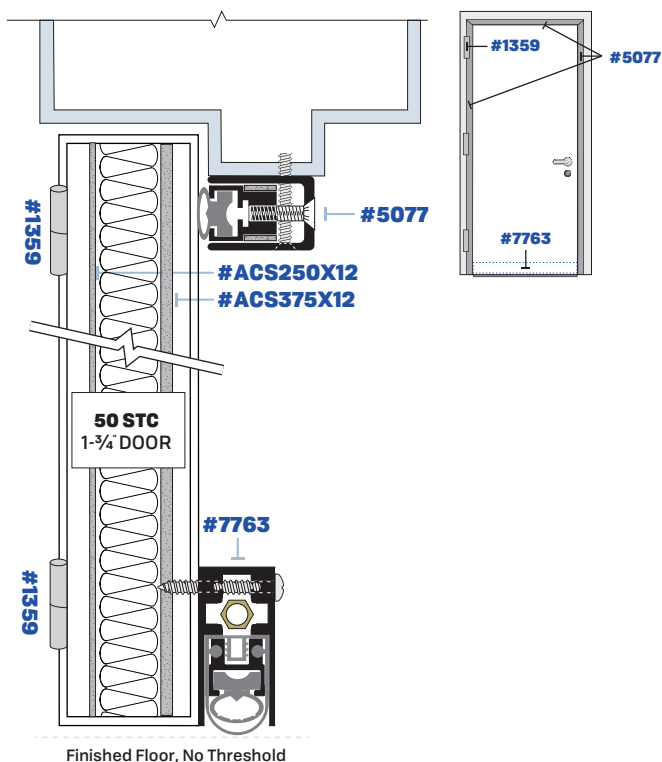
#6046STC

46 STC



#6042STC

42 STC

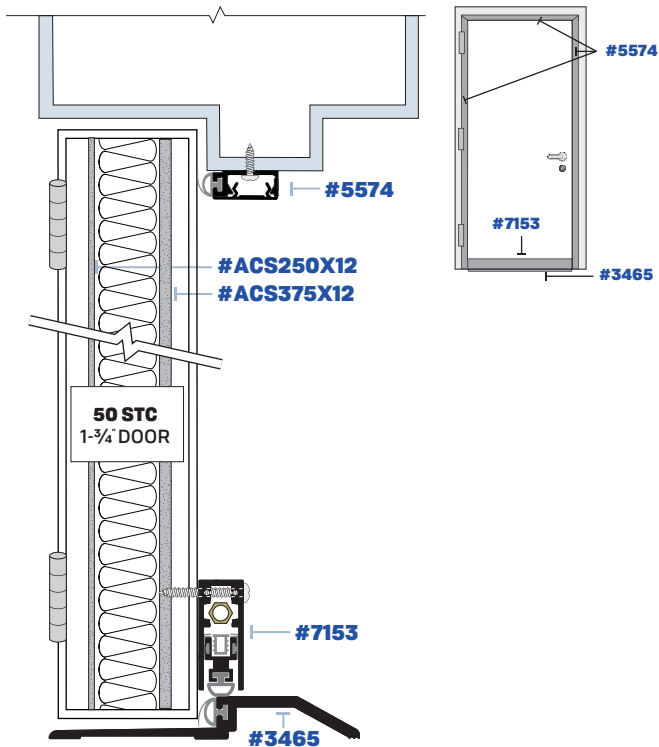


Finished Floor, No Threshold



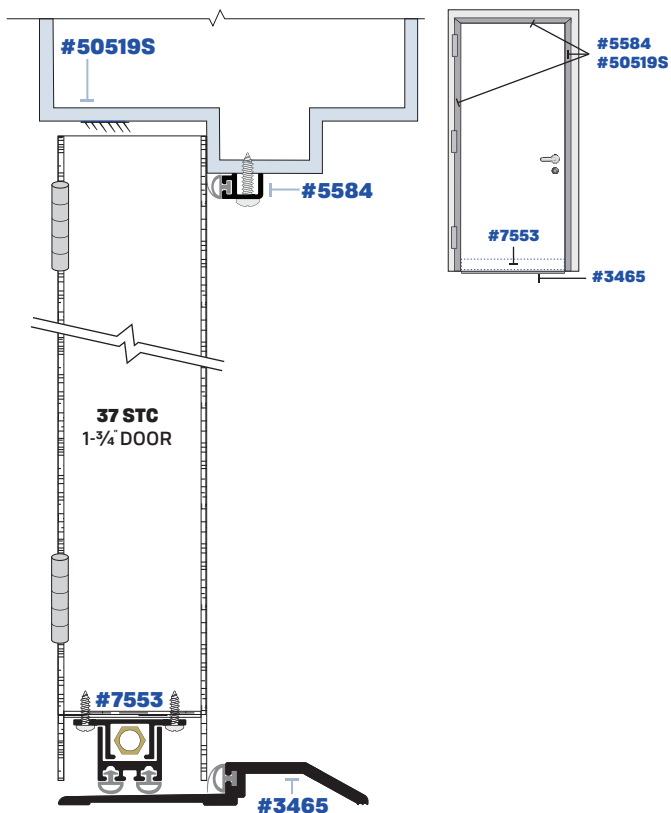
#6142STC

42 STC



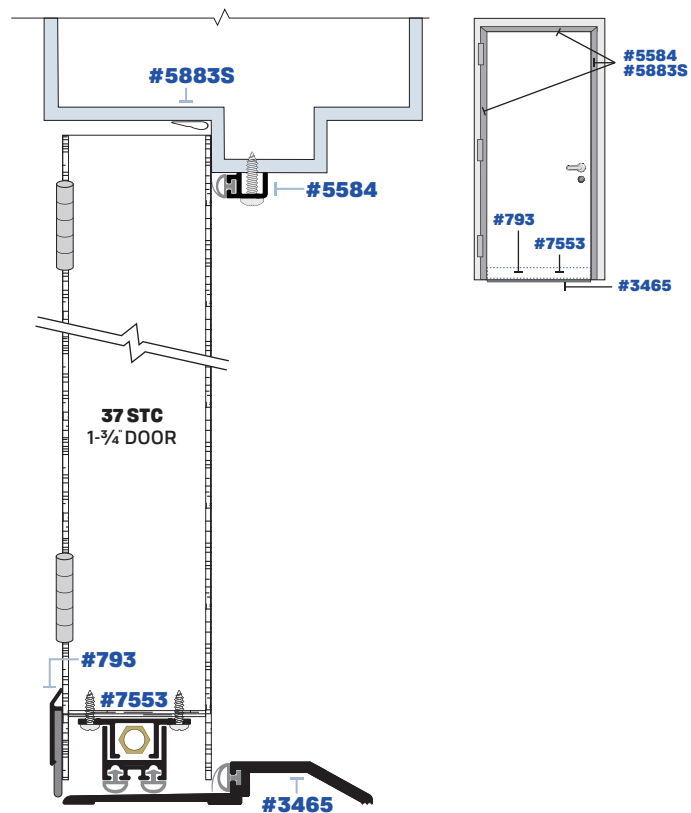
#6037STC

37 STC



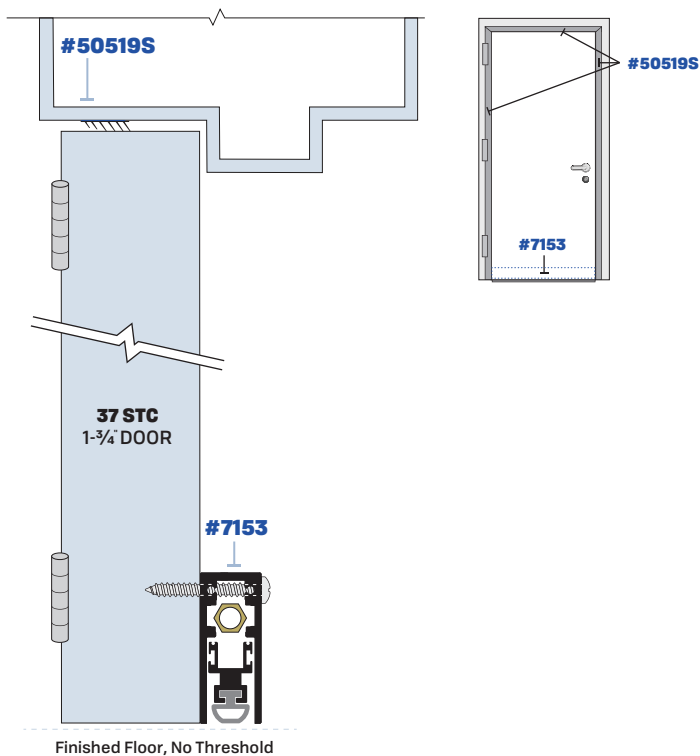
#6136STC

36 STC

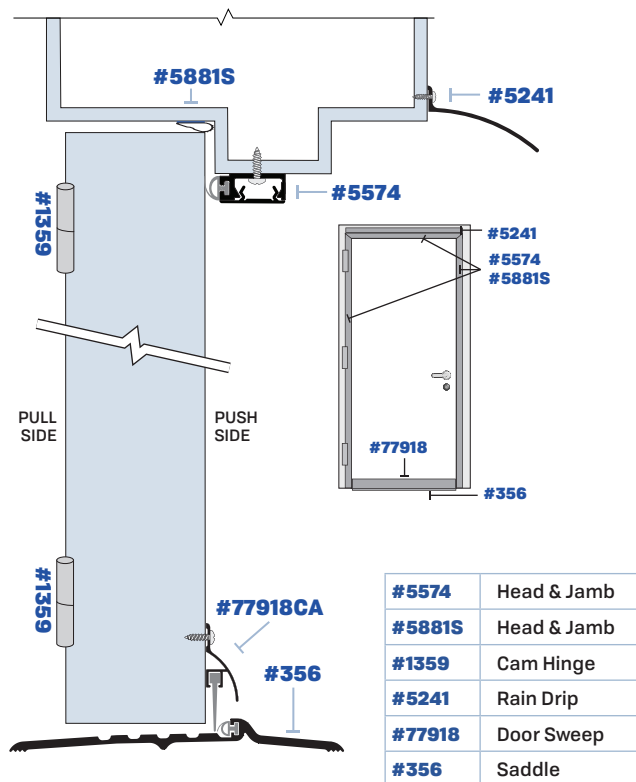


#6236STC

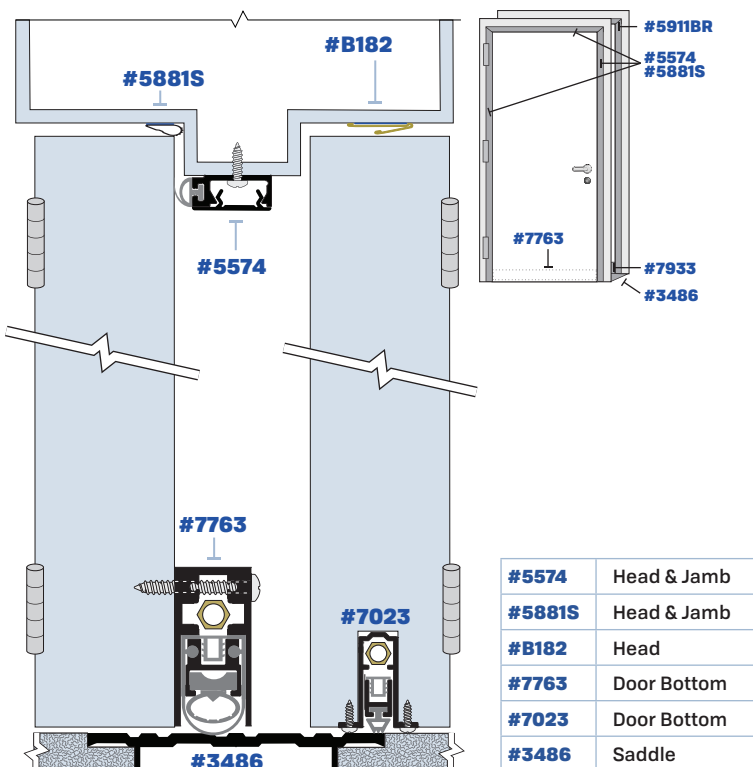
36 STC



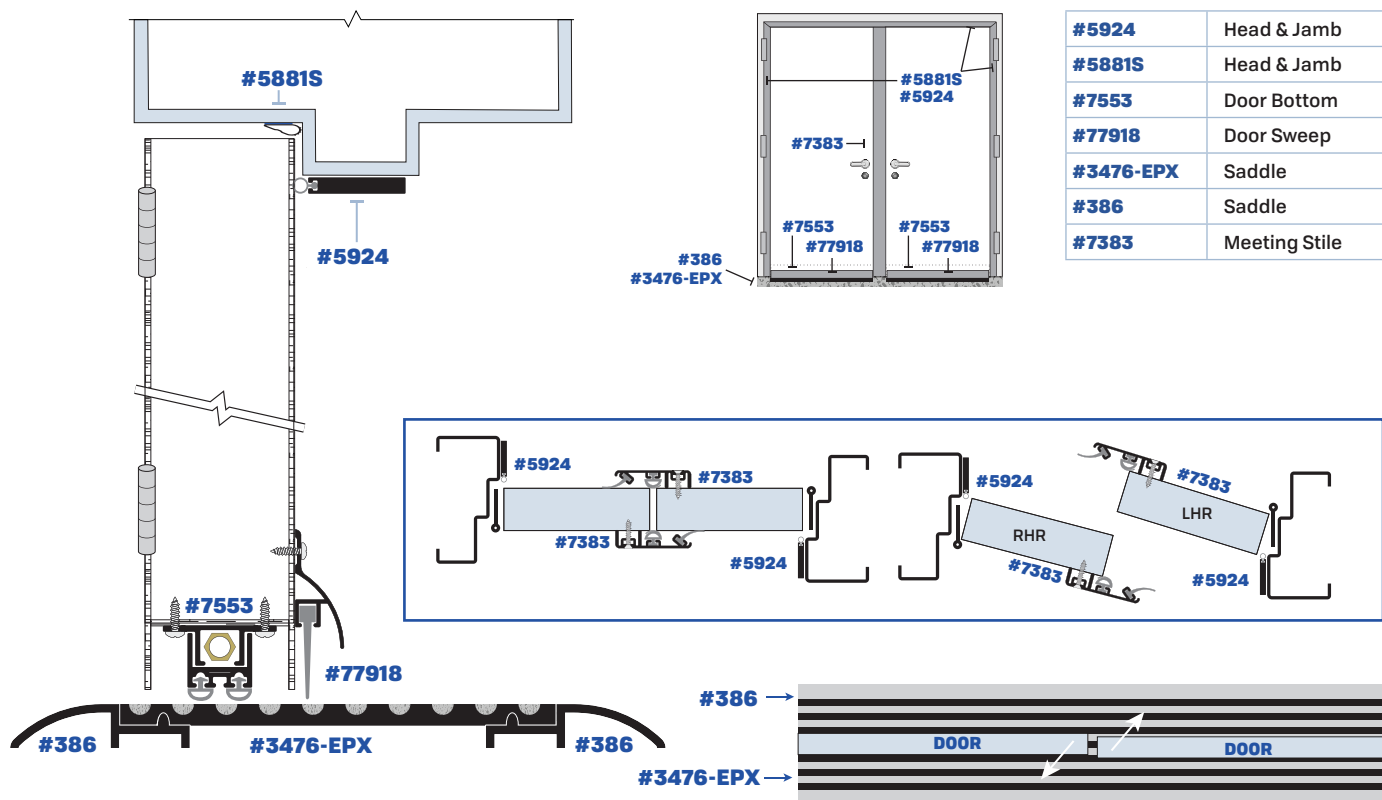
#6010 IN-SWINGING SYSTEM



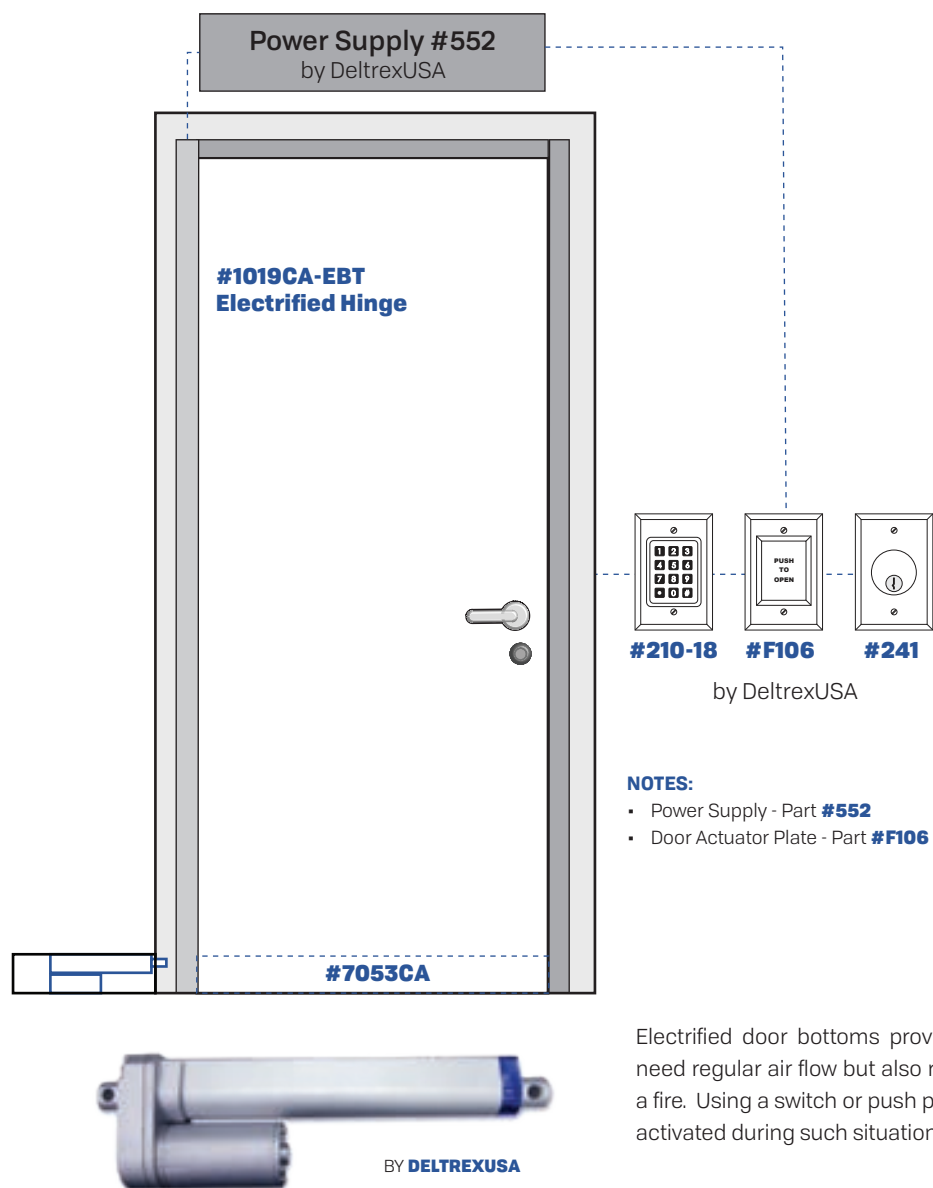
#6020 ACOUSTICAL COMMUNICATING SYSTEM



#6011 DOUBLE EGRESS PAIR OF DOORS SYSTEM (HOSPITAL & SCHOOLS)



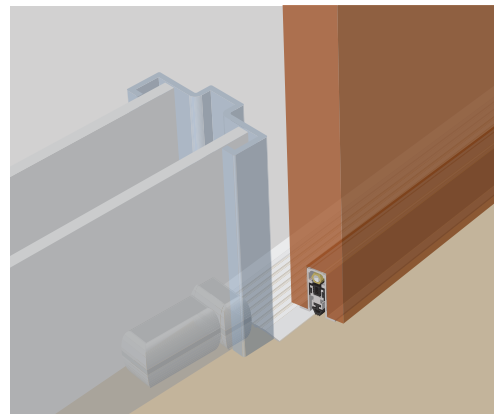
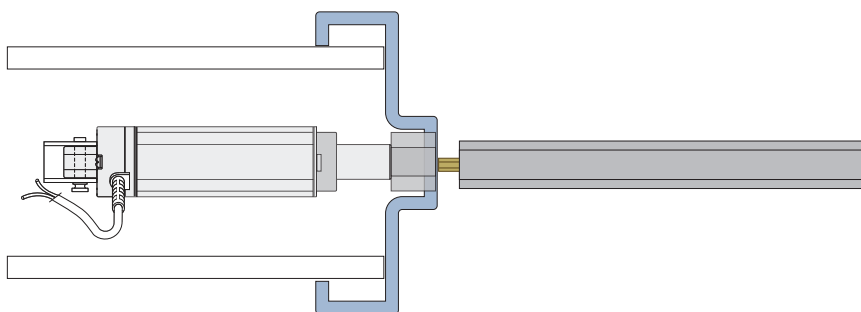
#64EA AUTOMATIC DOOR BOTTOM ON STAND-BY



Electrified door bottoms provide a practical solution for doorways to areas that need regular air flow but also require the door to seal during emergencies, such as a fire. Using a switch or push plate provided by Deltrex USA, the door bottom can be activated during such situations to provide a complete, airtight seal.

PIVOT DOOR APPLICATIONS

TOP DOWN VIEW



Nitrile for Clean Rooms

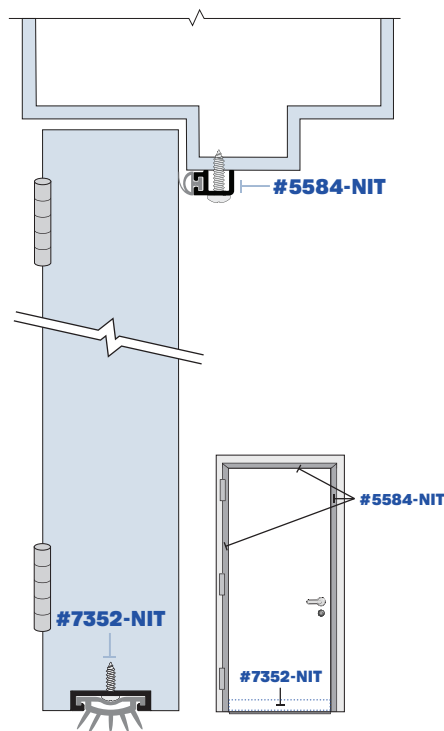
Nitrile rubber is a versatile addition to Legacy's arsenal of formulations for practical sealing solutions. Among its many benefits, nitrile rubber provides good compression set and tensile strength, and is resistant to heat, abrasion and moisture. Its resistance to gas permeability also makes it corrosion-resistant to a long list of chemicals.

Specifying nitrile rubber components can be useful for protecting sealing systems from extreme exposures to corrosive chemicals in medical and industrial applications.

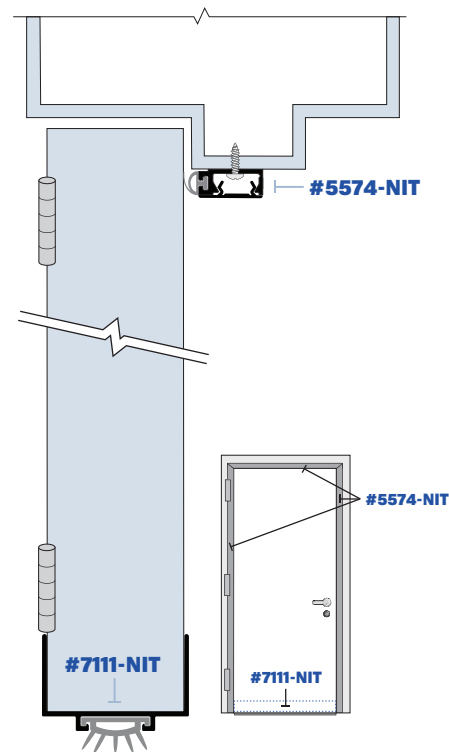
Specify NIT option to order nitrile rubber for these components.

#5574-NIT	Head & Jamb
#5584-NIT	Head & Jamb
#7352-NIT	Door Sweep
#7351-NIT	Door Sweep
#7111-NIT	Door Sweep

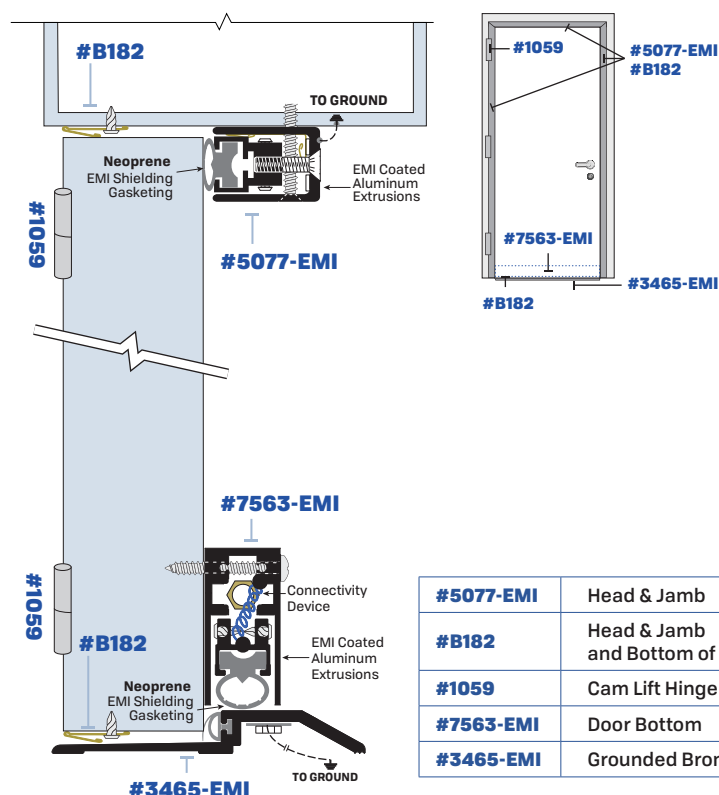
#6050NIT



#6051NIT



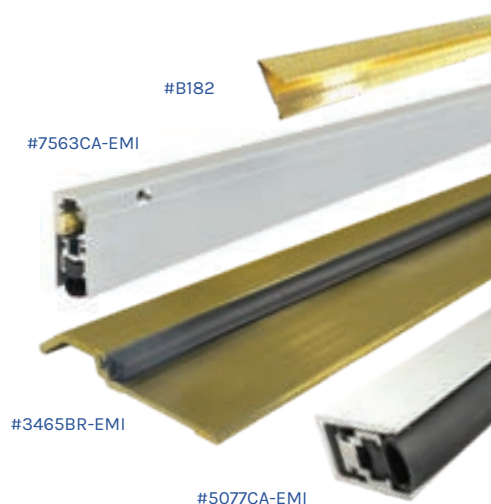
#6090EMI EMI/RFI SEALING SYSTEMS



#5077-EMI	Head & Jamb
#B182	Head & Jamb and Bottom of Door
#1059	Cam Lift Hinge
#7563-EMI	Door Bottom
#3465-EMI	Grounded Bronze Threshold

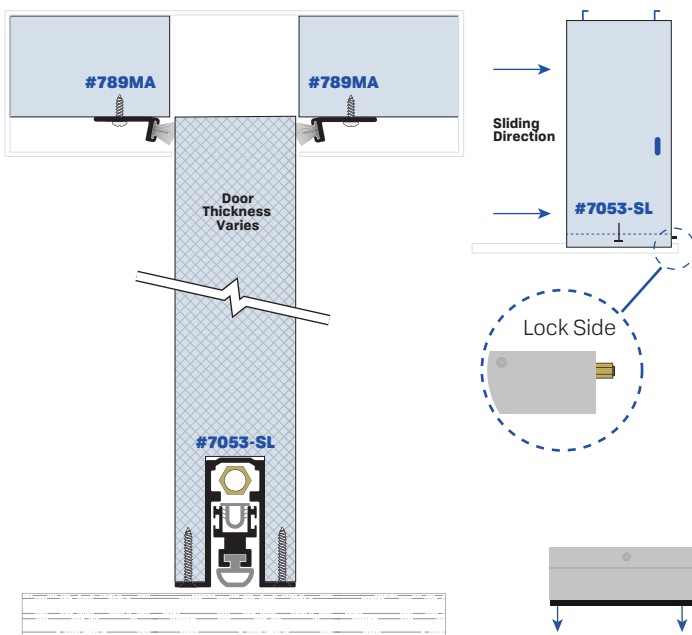
System #6090EMI is one solution available from Legacy for blocking electromagnetic and radio frequency interference in applications such as laboratories, hospitals, brokerage houses, embassies and other facilities using sensitive electronic equipment. We can provide specification assistance for configuring other systems for specific applications. Legacy also offers OEM consultation for developing similar systems.

The technology common to these systems provides uninterrupted electrical current to block EMI/RFI transmission. An iridate coating on the aluminum housings in Legacy EMI/RFI systems ensures maximum conductivity around the door gasketing, while solid carbon-filled neoprene rubber gaskets complete the electrical circuit. The #6090EMI system has adjustable features to help ensure a tight seal.



#6030 SLIDING DOOR SYSTEM

Legacy's patent pending automatic door bottom for the sliding door application has a unique low force activation mechanism which allows for more successful operations.

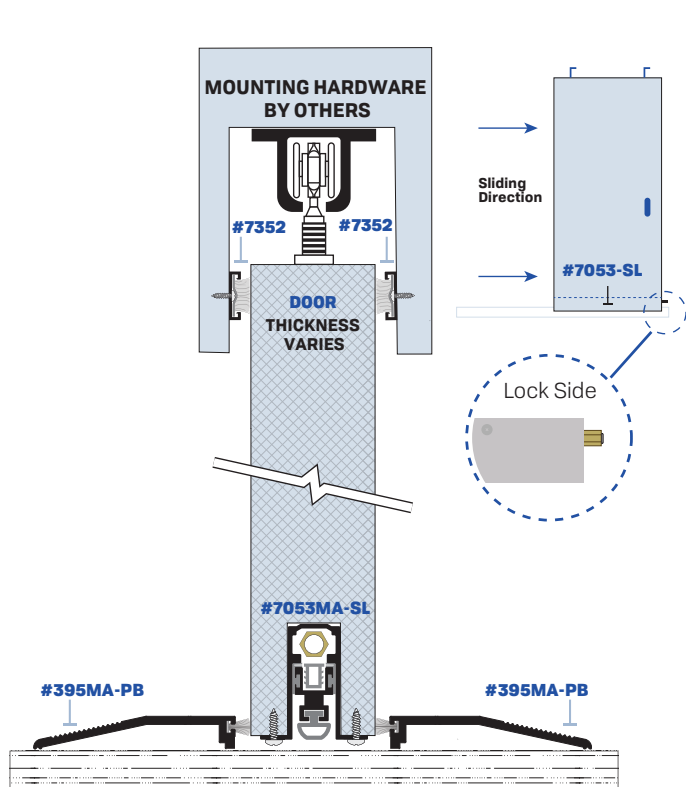


Even drop for sliding doors

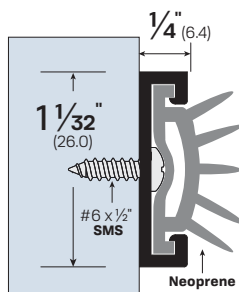


#6040 POCKET LATCH SYSTEM

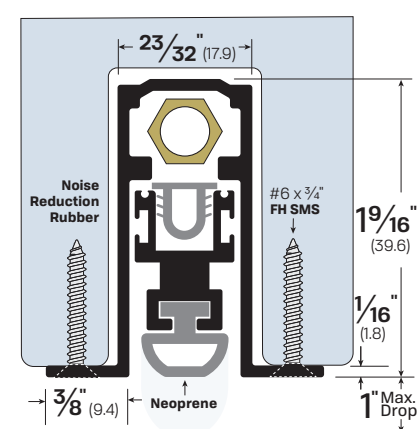
Legacy's patent pending automatic door bottom for the pocket latch application has a unique low force activation mechanism which allows for more successful operations.



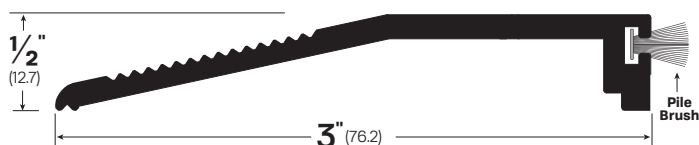
#7352



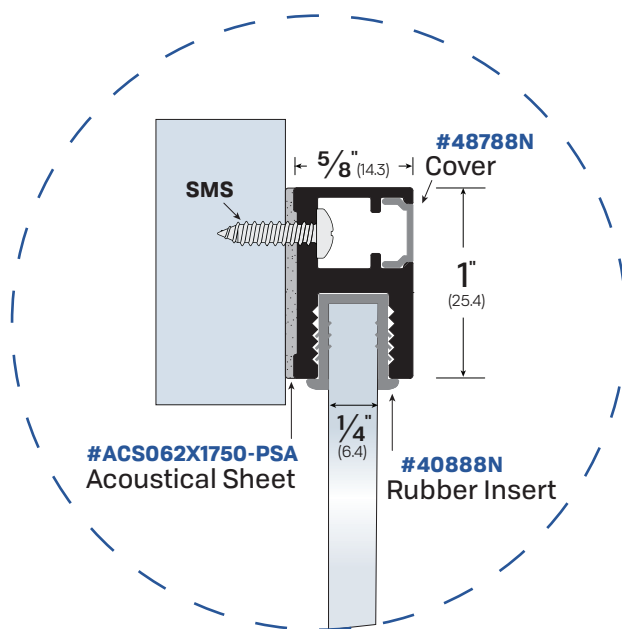
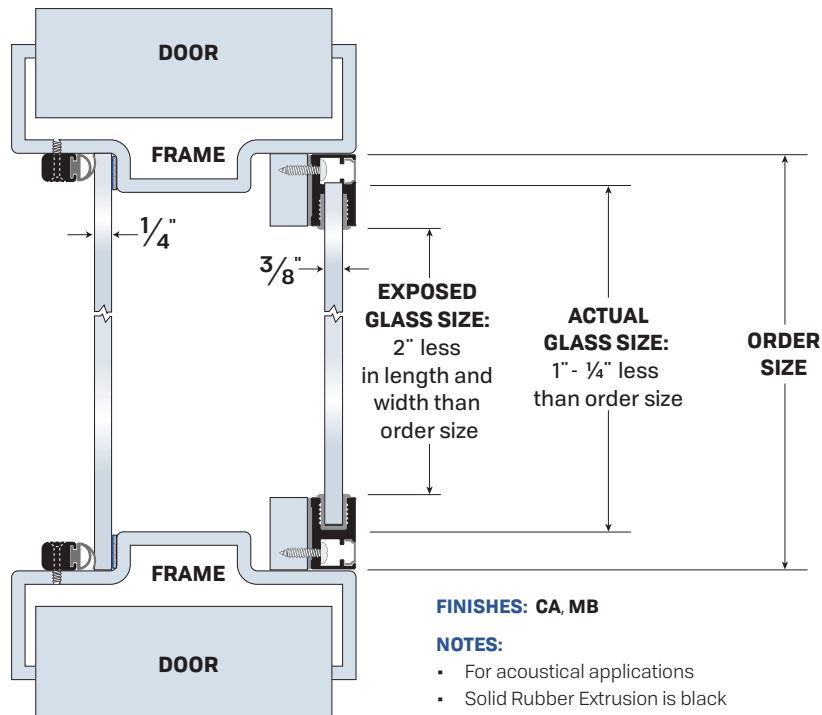
#7053-SL



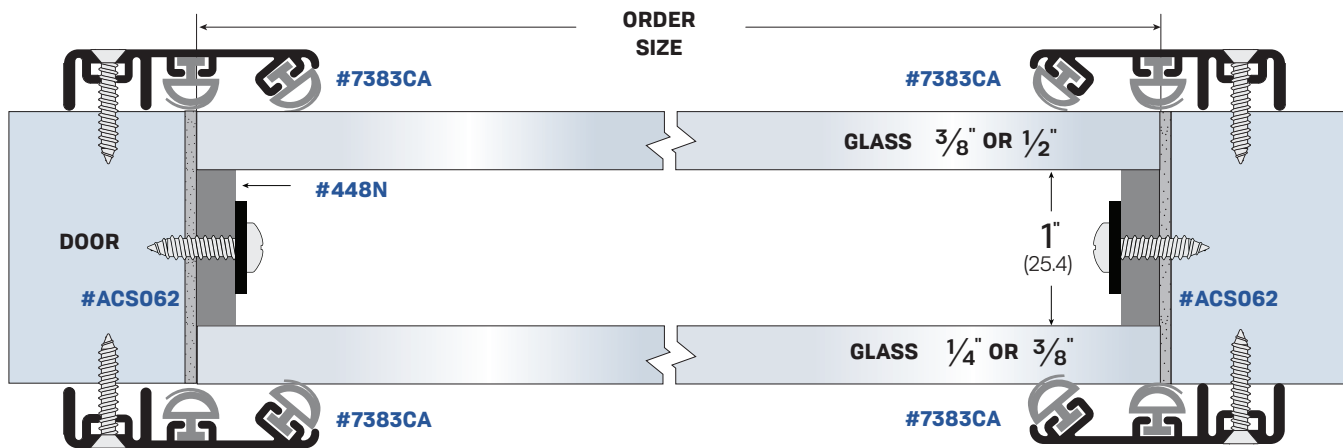
#395-PB



#50888 ACOUSTICAL VISION (1-3/4" DOORS)



#6384 ACOUSTICAL VISION (2-1/8" DOORS OR GREATER)



FINISHES: CA, MB

NOTES:

- Please specify thickness of the door when ordering.
- Acoustical Composite Sheet (ACS) by Legacy provides sound absorption between glass plates.
- Glass plates with two different thicknesses required to minimize sound transmission.
- Sound control performance on this opening may achieve up to 44STC.
- Glass to be supplied by other manufacturers.
- #7383 corners are standard mitered cut.

Acoustical Composite Sheet (ACS)

Acoustical Composite Sheet (ACS) is proprietary, special-purpose rubber material manufactured in sheet form – developed primarily for sound door OEM use as acoustical core to improve STC ratings. This lead-free, densely filled polyurethane rubber effectively blocks sound transmission while minimizing sound vibrations in the door itself for superior STC performance, without the weight and cost of conventional solid-lead acoustical linings.

Call our engineering department to discuss possible applications for your sound door program.

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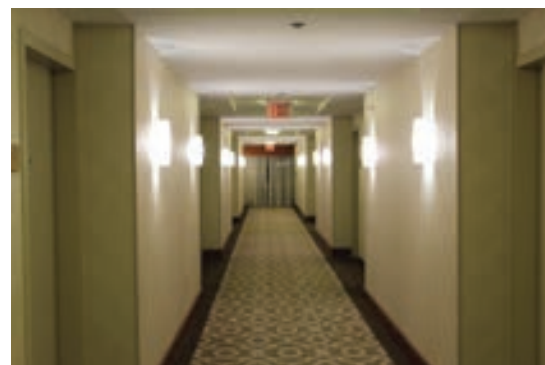
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Its non-toxic, inert properties also make ACS suitable for a range of additional OEM applications, which we are available to discuss for possible collaboration.

MATERIALS / SPECIFICATIONS:

- Densely filled, solid pigmented, polyurethane rubber noise barrier providing both sound-absorbing and sound-deadening properties.
- Uses 100% natural fiber found in volcanic rocks.
- Non-toxic, inert and non-carcinogenic – no toxic reactions with air or water.
- Non-combustible and non-explosive with a high melting point and low smoke index – safe for use in most fire-rated applications.
- Biodegradable with a low carbon footprint.
- Frequently used in CLMD (constrained layer mass damping) applications, such as sound walls.
- Mold-resistant and mildew-resistant, and washable when used in exposed areas, such as restaurants, public spaces, temporary applications, hanging baffles, etc.

	¼" Thick	½" Thick
	#ACS250X12	#ACS125X12
STC Rating	28	24
Deficiencies	23	32
OITC Rating	24	19



Sound Transmission Coefficients

Frequency	STC - ¼"	STC - ½"
125 Hz	18 db	14 db
250 Hz	20 db	15 db
500 Hz	25 db	20 db
1000 Hz	28 db	23 db
2000 Hz	32 db	37 db
4000 Hz	37 db	33 db
Sound Transmission Class:	28	24

Physical Properties		#ACS250X12	#ACS125X12
Tensile Strength:	(Per ASTM D412-64)	375 lb/sq. in.	105.32 lb./sq. in.
Elongation:	(Per ASTM D412-64)	113.2%	160%
Tear Strength:	(Per ASTM D1004-66)	6.09 lb./in.	6.09 lb./in.
Weight/ft. ²:		1.337 lb./sq. ft.	0.7106 lb./sq. ft.
Thickness:		Approximately 0.250"	Approximately 0.125"
Cold Crack:	(32°F)	No crack when bent over 1" mandrel	No crack when bent over 1" mandrel
Flammability:		Passes MVSS #302	Passes MVSS #302
		UL94-SE "O"	UL94-SE "O"
		Classified as SE (Self Extinguishing)	Classified as SE (Self Extinguishing)
		No burn rate	No burn rate
Recommended Service Temperature:		40°F - 140°F	40°F - 140°F
Notes:		May be doubled for improved isolation	May be doubled for improved isolation
		Resistant to oil, grease, & solvent	Resistant to oil, grease, & solvent

These results apply only to our test sample. Legacy will assist in developing samples and protocols for testing other materials on request.