

ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA

- Highly Flexible Single Panel System
- Single Panels Allow Multiple Room Setups, Changes in Pass Door and Work Surface Locations, and Remote Panel Storage
- Panel Moves Independently into Position
- Ideal for Applications Requiring Especially Tall Panels
- Suspension System Incorporates the Easy to Operate Smart Track™ Technology
- Smart Track Technology Makes Panel Storage Virtually Foolproof
- Right Angle Turn Layouts Available
- Used in Multipurpose Rooms, Exhibition Halls, and Commercial Buildings

Modernfold Model

Acousti-Seal 931

Flat Panels, Individual Operation

This specification along with product information and model details can be downloaded from www.modernfold.com

SPECIFICATION - SECTION 10 22 26 (10650) OPERABLE PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Manually operated, individual panel operable partitions.

B. Related Sections include the following:

1. Division 03 Sections for concrete tolerances required.
2. Division 05 Sections for primary structural support, including pre-punching of support members by structural steel supplier per operable partition supplier's template.
3. Division 06 Sections for wood framing and supports, and all blocking at head and jambs as required.
4. Division 09 Sections for wall and ceiling framing at head and jambs.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.

- B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure to attain no less than the STC rating specified. Provide a complete and unedited written test report upon request.
- C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 "Standard Guide for the Installation of Operable Partitions."

1.4 SUBMITTALS

- A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.
- B. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.
- C. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.
- D. Samples: Color samples demonstrating full range of finishes available by architect. Verification samples will be available in same thickness and material indicated for the work.

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1.5 DELIVERY, STORAGE, AND HANDLING

- A. Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.
- B. Protect panels during delivery, storage, and handling to comply with manufacturer's direction and as required to prevent damage.

1.6 WARRANTY

- A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.
- B. Warranty period: Two (2) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS, PRODUCTS, AND OPERATION

- A. Manufacturers: Subject to compliance with requirements, provide product by the following:
 - 1. Modernfold, Inc.
- B. Products: Subject to compliance with the requirements, provide the following product:
 - 1. Acousti-Seal #931 manually operated individual panel operable partition.

2.2 OPERATION

- A. Acousti-Seal #931: Series of individual flat panels, manually operated, top supported with operable floor seals.
- B. Final Closure:
 - 1. Horizontally expanding panel edge with removable crank.
 - 2. Hinged panel closure.
 - 3. Angle jamb.
 - 4. Pass door closure.

2.3 PANEL CONSTRUCTION

- A. Nominal 3-inch (76mm) thick panels in manufacturer's standard 48-inch (1220mm) widths. All panel horizontal and vertical framing members fabricated from minimum 18-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.

B. Panel Skin Options:

- 1. 1/2-inch (13mm) tackable fire core C gypsum board, class "A" rated single material or composite layers continuously bonded to panel frame. Acoustical ratings of panels with this construction (select one):
 - a. 41 STC
 - b. 47 STC
 - c. 50 STC
 - 2. 1/2-inch (13mm) tackable moisture resistant gypsum board, class "A" rated single material or composite layers continuously bonded to panel frame. Acoustical ratings of panels with this construction (select one):
 - a. 41 STC
 - b. 47 STC
 - c. 50 STC
 - 3. 1/2-inch (13mm) medium density fiberboard, single material or composite layers continuously bonded to panel frame. Acoustical ratings of panels with this construction (select one):
 - a. 41 STC
 - b. 47 STC
 - c. 50 STC
 - 4. Nominal 21-gage roll-formed steel wrapping around the panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Acoustical ratings of panels with this construction (select one):
 - a. 45 STC
 - b. 50 STC
 - c. 52 STC
- C. Hinges for Closure Panels, Pass Doors, and Pocket Doors shall be (select one):
- 1. Full leaf butt hinges, attached directly to panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Lifetime warranty on hinges. Hinges mounted into panel edge or vertical astragal are not acceptable.
 - 2. SOS® Invisible laminated hinge with antifriction segments mounted between each heat treated link. Hinge to be attached directly to panel frame. Welded internal hinge bracket shall support the hinge and allow for adjustment of hinge plates. Concealed hinges mounted into edge or vertical astragal are not acceptable (available on steel skin panel only).
- D. Panel Trim: No vertical trim required or allowed on edges of panels; minimal groove appearance at panel joints.

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E. Panel Weights:

Non-Steel Skin

1. 41 STC - 6.5 lbs./square foot
2. 47 STC - 7 lbs./square foot
3. 50 STC - 8 lbs./square foot

Steel Skin

1. 45 STC - 8 lbs./square foot
2. 50 STC - 8 lbs./square foot
3. 52 STC - 11 lbs./square foot

2.4 PANEL FINISHES

A. Panel Finish: Factory applied, Class “A” rated material. Finish shall be (select one):

1. Reinforced vinyl with woven backing weighing not less than 15 ounces per lineal yard.
2. Reinforced heavy duty vinyl with woven backing weighing not less than 27 ounces per lineal yard.
3. Acoustical, non-woven needle punch carpet, with fused fibers to prevent unraveling or fray of material.
4. Wall covering and upholstery fabric with surface treatment to resist stains.
5. Customer's own material (subject to factory approval).
6. Full height tackboard with vinyl or fabric covering.
 - a. 1/4-inch natural cork
 - b. 1/4-inch fiber board tackbase
7. Full height steel work surfaces (chalkboard or markerboard).
8. High pressure plastic laminate on MDF board.
9. Wood veneer on MDF board.
10. Reconstituted wood veneer (Uni-FormWood) on steel skin.
11. Uncovered for field finishing.
12. Primed for field finishing.

B. Panel trim: Exposed panel trim of one consistent color (Smoke Gray or Dark Bronze).

2.5 SOUND SEALS

- #### A. Vertical Interlocking Sound Seals between panels:
- Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic astragals or astragals in only one panel edge are not acceptable.
- #### B. Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.

C. Horizontal Bottom Seals (select one):

1. Modernfold IA2 bottom seal: Automatic operable seals providing nominal 2-inch (51 mm) operating clearance with an operating range of +1/2-inch (13mm) to -1-1/2 inch (38 mm) which automatically drop as panels are positioned, without the need for tools or cranks.
2. Modernfold IM2 bottom seal: Manually activated bottom seals with self contained handle providing nominal 2-inch (51mm) operating clearance with an operating range of +1/2-inch (13mm) to -1-1/2 inch (38mm). Seal shall be operable from panel edge or face.
3. Modernfold IC2 bottom seal: Manually activated operable bottom seals with removable handle providing nominal 2-inch (51mm) operating clearance with an operating range of +1/2-inch (13mm) to -1-1/2 inch (38mm). Seal shall be operable from panel edge or face.
4. Modernfold IC4 bottom seal: Manually activated operable bottom seals with removable handle providing nominal 4-inch (102mm) operating clearance with an operating range of +1/2-inch (13mm) to -3-1/2 inch (89mm). Seal shall be operable from panel edge or face.

2.6 SUSPENSION SYSTEM (select one)

A. #17 Suspension System

1. Suspension Tracks: Minimum 11-gage, 0.12-inch (3.04 mm) roll-formed steel track, suitable for either direct mounting to a wood header or supported by adjustable steel hanger brackets, supporting the load-bearing surface of the track, connected to structural support by pairs of 3/8-inch (9.5 mm) diameter threaded rods. Aluminum track is not acceptable.
 - a. Exposed track soffit: Steel, integral to track, and pre-painted off-white.
2. Carriers:
 - a. Right Angle Turn: Two carriers of low-friction polymer, reinforced with steel, that permit panels to traverse L, T, and X intersections without mechanical switching, on all panels except hinged closure panels.
 - b. “Smart Track™”: Two all-steel trolleys with steel tired ball bearing wheels. Non-steel tires are not acceptable. Suspension system shall provide automatic indexing of panels into stack area using preprogrammed switches and trolleys without electrical, pneumatic, or mechanical activation.

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- OR -

B. #14 Suspension System: "Smart Track"

1. Suspension Tracks: Minimum 7-gage, 0.18-inch (4.57 mm) roll formed steel. Static loading of track with brackets at 48-inch (1220 mm) centers shall show no failure of track or brackets at 5,000 pounds (2550 kg) point loading at mid-span. Track shall be supported by adjustable steel hanger brackets connected to structural support pairs of 1/2-inch (13 mm) diameter threaded rods. Brackets must support the load bearing surface of the track.
 - a. Exposed track soffit: Steel, removable for service and maintenance, attached to track bracket without exposed fasteners, and pre-painted off-white.
2. Carriers: Two all-steel trolleys with steel tired ball bearing wheels. Non-steel tires are not acceptable. Suspension system shall provide automatic indexing of panels into stack area using preprogrammed switches and trolleys without electrical, pneumatic, or mechanical activation.

- OR -

C. RT100 Suspension System: Multi-Directional

1. Suspension Tracks: Precision heat-treated extruded aluminum. Track to be supported by pairs of 3/8-inch (9.5 mm) diameter threaded rods.
 - a. Exposed track soffit: Aluminum, integral to track.
 - i. Standard: Clear anodized finish.
 - ii. Optional: Pre-painted off-white.
2. Carriers: Shall have horizontal counter-rotating wheels with heavy duty thrust steel bearings. Carriers permit panels to traverse L, T, or X intersections without mechanical switching.

- OR -

D. RT200 Suspension System: Multi-Directional

1. Suspension Tracks: Precision heat-treated extruded aluminum. Track to be supported by pairs of 3/8-inch (9.5 mm) diameter threaded rods.
 - a. Exposed track soffit: Aluminum, integral to track.
 - i. Standard: Clear anodized finish.
 - ii. Optional: Pre-painted off-white.

2. Carriers: Shall have horizontal counter-rotating wheels with oversized, steel reinforced, heavy duty thrust steel bearings. Carriers permit panels to traverse L,T, or X intersections without mechanical switching.

2.7 OPTIONS

A. Pass Doors:

1. Single Pass Doors (select one):
 - a. Standard hollow metal door hung in a steel frame. ADA compliant pass door to be equipped with friction latch and flush pulls for panic operation. No threshold will be permitted.
 - i. Pass door to be prime painted for field finishing.
 - ii. Pass door to be painted dark bronze or smoke gray.
 - b. Matching pass door same thickness and appearance as the panels. ADA compliant pass door equipped with friction latch and flush pulls for panic operation. No threshold will be permitted.
2. Double Pass Doors (select one):
 - a. Standard hollow metal doors hung in a steel frame. No center post is permitted. Active leaf to be equipped with friction latch and flush pulls for panic operation. No threshold will be permitted.
 - i. Pass door to be prime painted for field finishing.
 - ii. Pass door to be painted dark bronze or smoke gray.
 - b. Matching pass door same thickness and appearance as the panels. No center post is permitted. Active leaf to be trimless and equipped with friction latch and flush pulls for panic operation. No threshold will be permitted.
3. Hardware:
 - a. Automatic door closures.
 - b. Self-Illuminated exit signs.
 - c. Panic hardware.

B. Work Surfaces:

1. Tackboard: Minimum 1/4-inch (6.35mm) natural cork, covered with vinyl or fabric, with horizontal trim without exposed fasteners. Trim is not acceptable on vertical edges.
2. Markerboard: White enamel on steel, bonded to the face of the panel with horizontal trim without

exposed fasteners. Trim is not acceptable on vertical edges to provide uninterrupted work surface.

3. Chalkboard: Porcelain enamel on steel, bonded to the face of the panel with horizontal trim without exposed fasteners. Trim is not acceptable on vertical edges to provide uninterrupted work surface.

C. Available Accessories/Options:

1. Pocket Doors: Acusti-Seal Pocket Doors by Modernfold, Inc., with same finish and appearance as the adjacent panels.
2. Finished end caps at 90°/135°.
3. Intersecting partition interface.
4. Inset window options: glazed or unglazed.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Comply with ASTM E557, operable partition manufacturer’s written installation instructions, Drawings and approved Shop Drawings.
- B. Install operable partitions and accessories after other finishing operations, including painting have been completed.
- C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
- D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.

3.2 CLEANING AND PROTECTION

- A. Clean partition surfaces upon completing installation of operable partitions to remove dust, dirt, adhesives, and other foreign materials according to manufacturer’s written instructions.
- B. Provide final protection and maintain conditions in a manner acceptable to the manufacturer and installer that insure operable partitions are without damage or deterioration at time of Substantial Completion.

3.3 ADJUSTING

- A. Adjust operable partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.

3.4 EXAMINATION

- A. Examine fooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 DEMONSTRATION

- A. Demonstrate proper operation and maintenance procedures to Owner’s representative.
- B. Provide Operation and Maintenance Manual to Owner’s representative.

STC CONSTRUCTION AND TRACK SYSTEM HEIGHT LIMITATIONS

Acusti-Seal 931	Non-Steel Skin Max Height			Welded Steel Skin Max Height		
	41 STC	47 STC	50 STC	45 STC	50 STC	52 STC
#17 Direct Mounted Smart Track	14'-2"	14'-2"	12'-2"	12'-2"	12'-2"	10'-2"
#17 Bracket Mounted Smart Track	18'-2"	18'-2"	18'-2"	18'-2"	18'-2"	16'-2"
#14 Bracket Mounted Smart Track	24'-2"	24'-2"	24'-2"	28'-2"	28'-2"	28'-2"
#17 Direct Mounted Right Angle Track	14'-2"	14'-2"	12'-2"	12'-2"	12'-2"	10'-2"
#17 Bracket Mounted Right Angle Track	14'-2"	14'-2"	12'-2"	12'-2"	12'-2"	10'-2"
RT100 Multi-Directional	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"
RT200 Multi-Directional	24'-0"	24'-0"	24'-0"	24'-0"	24'-0"	24'-0"

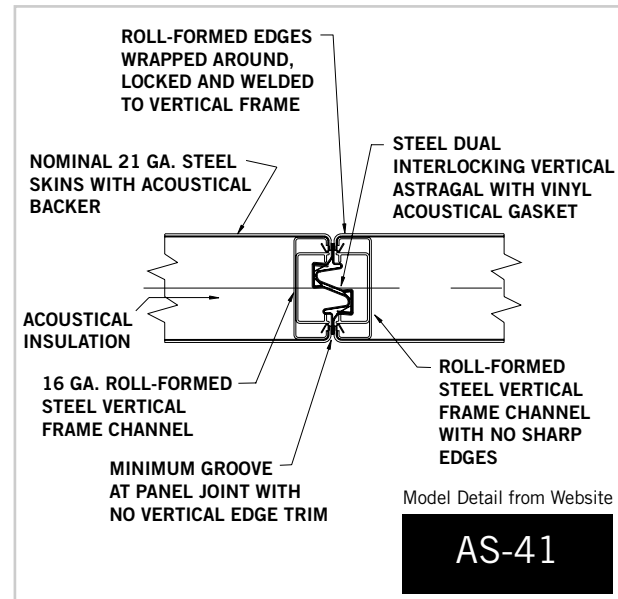
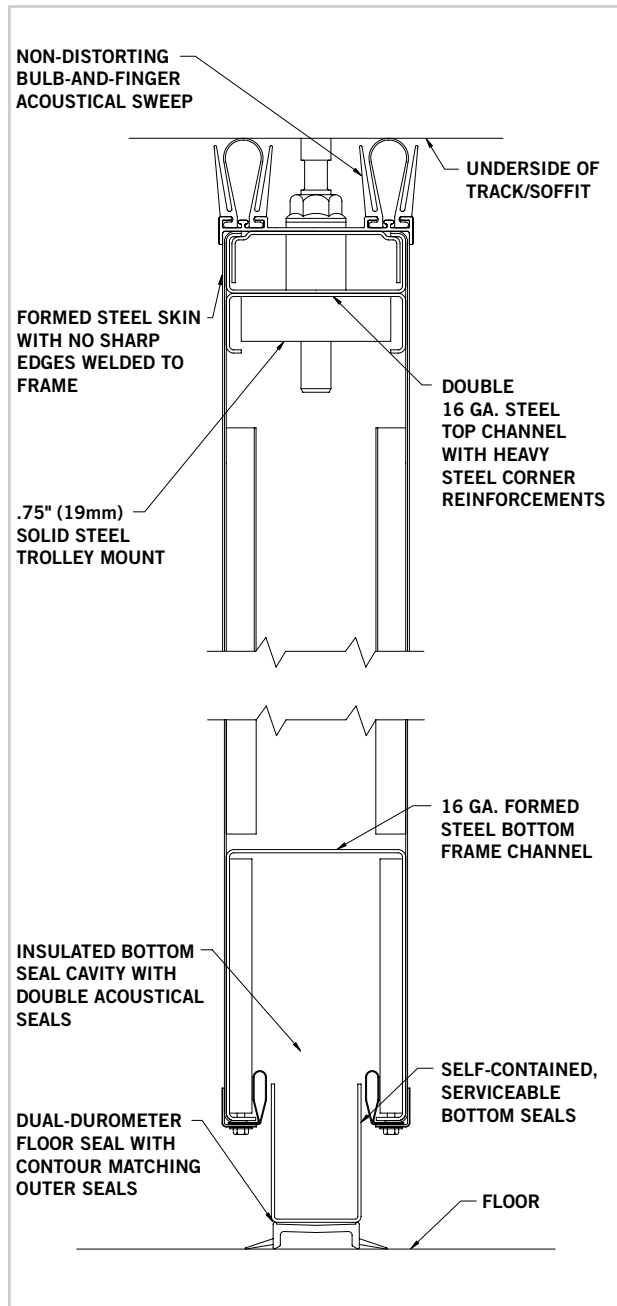
ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA STEEL SKIN PANEL CONSTRUCTION

Acousti-Seal 931
Panel Section Frame Details

Acousti-Seal 931
Standard Panel Joint

PANEL DETAILS ARE NOT TO SCALE

Roll-formed skin wraps completely around the edge of vertical 16-gage steel channel and is locked in place, eliminating any sharp edges and creating a unitized panel. The finish material is secured under the steel astragal to prevent peeling.



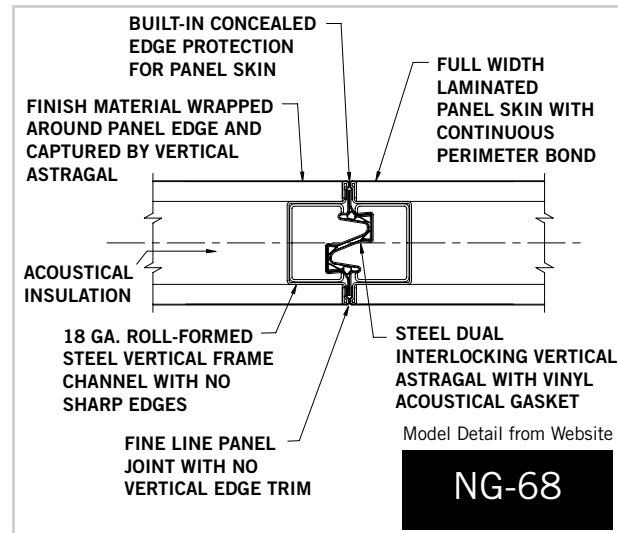
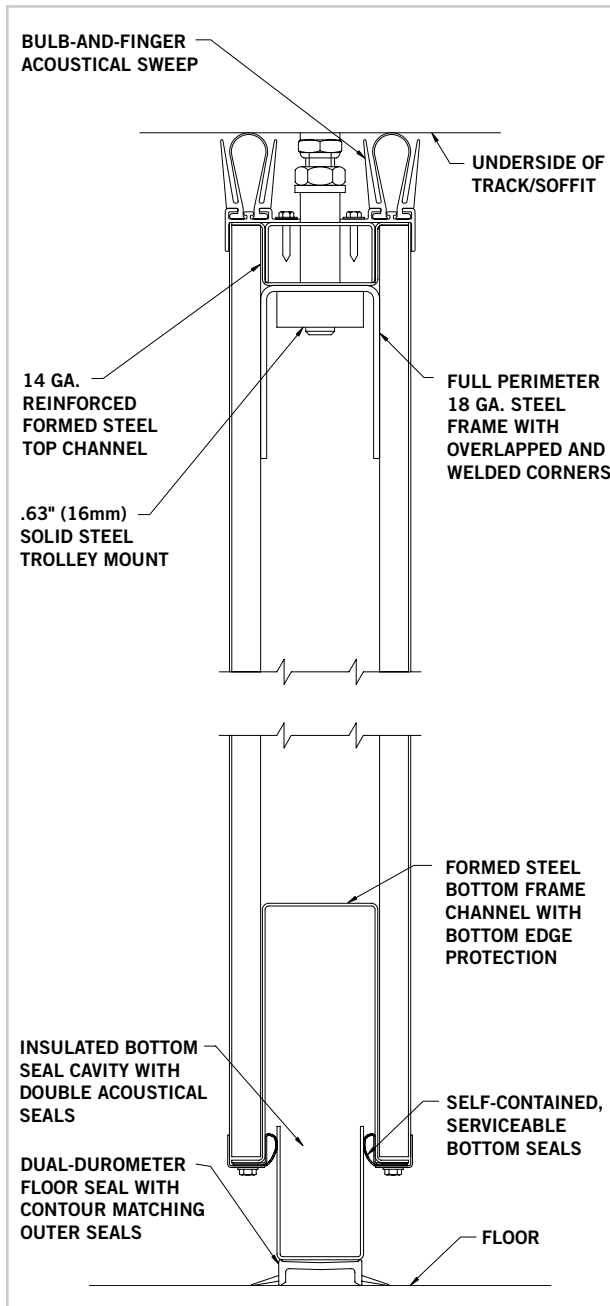
ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA NON-STEEL SKIN PANEL CONSTRUCTION

Acousti-Seal 931 Panel Section Frame Details

Acousti-Seal 931 Standard Panel Joint

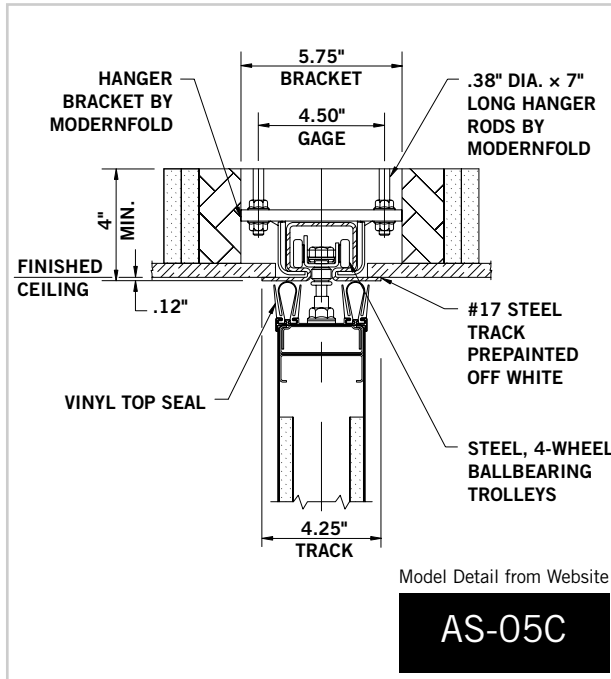
PANEL DETAILS ARE NOT TO SCALE

Roll-formed vertical frame channel provides added strength while eliminating any sharp edges. The outer covering is secured under the steel astragal to prevent peeling. The complete vertical edge of the panel is steel for maximum durability.

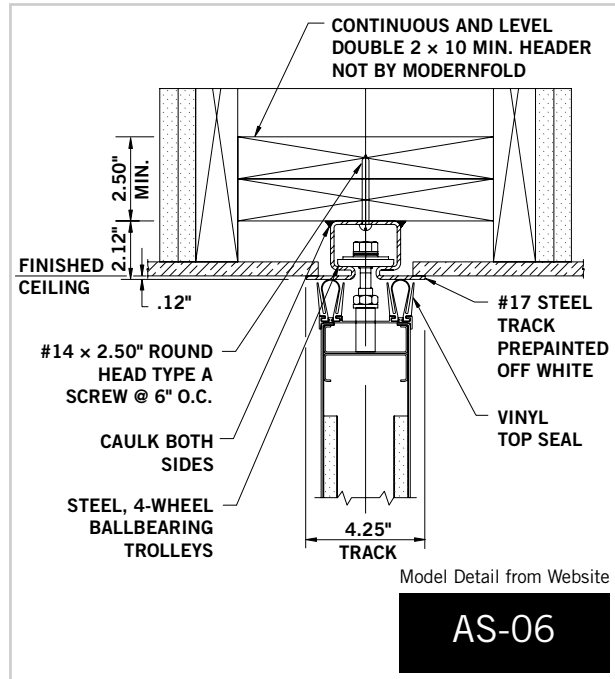


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA SUSPENSION SYSTEM OPTIONS

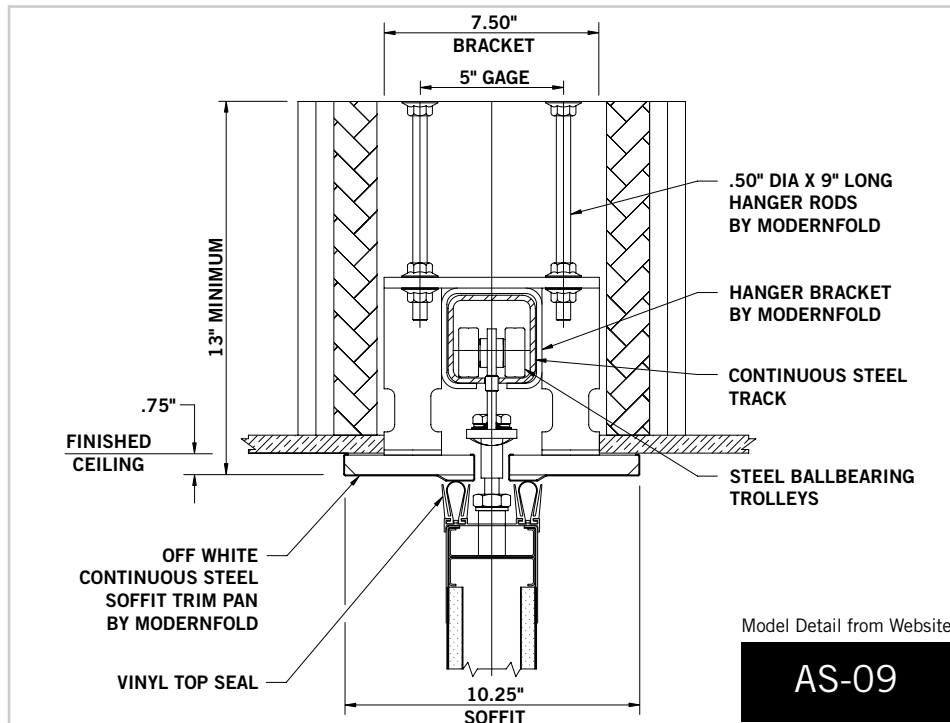
#17 Track System Bracket Mount
(Smart Track Shown)



#17 Track System Direct Mount
(Right Angle Shown)

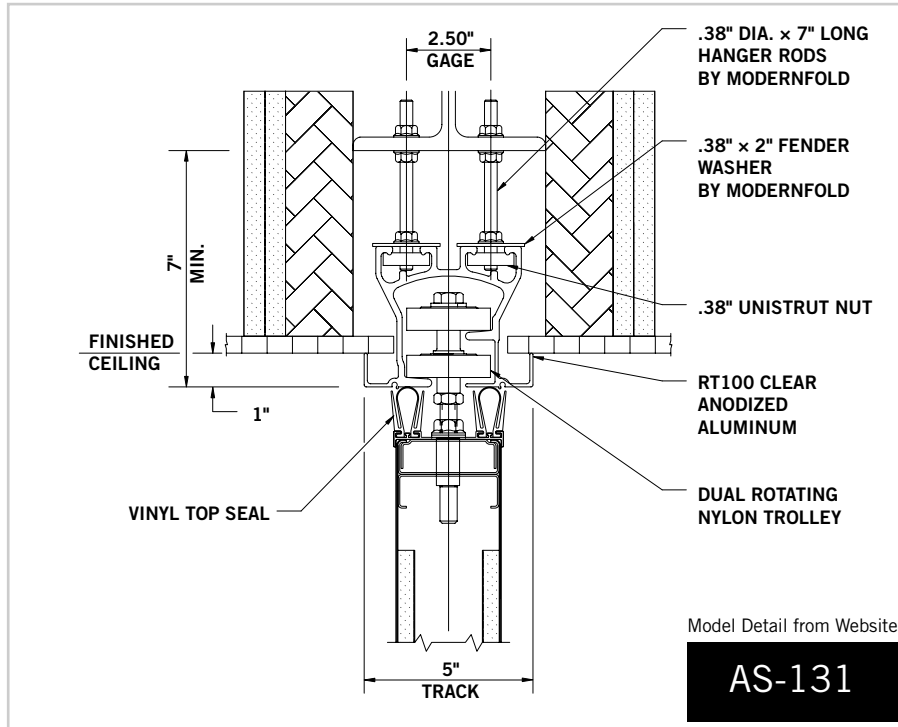


#14 Track System Bracket Mount (Smart Track Shown)

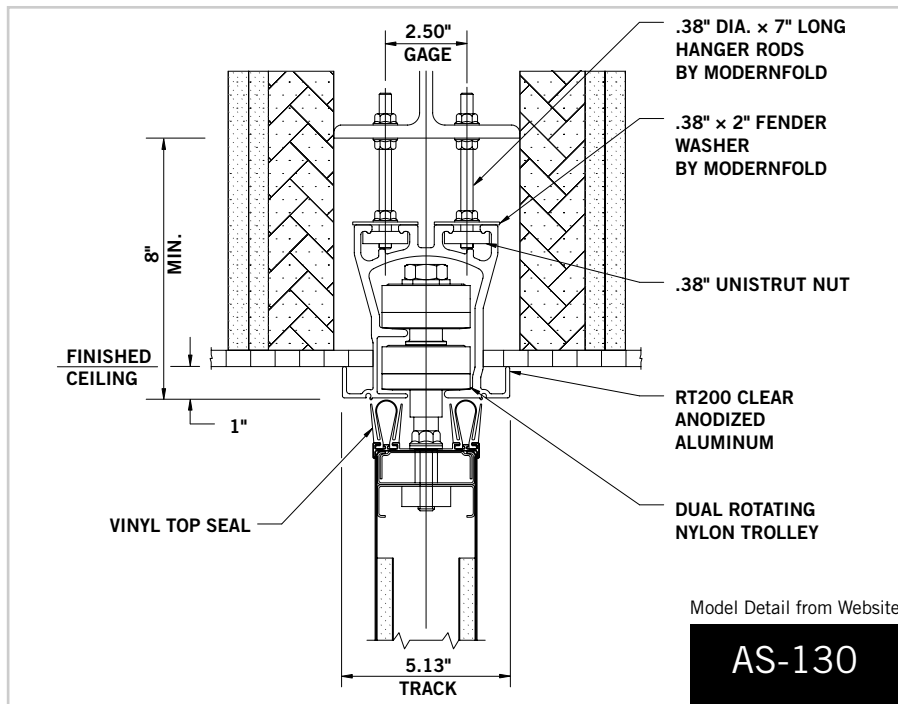


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA SUSPENSION SYSTEM OPTIONS

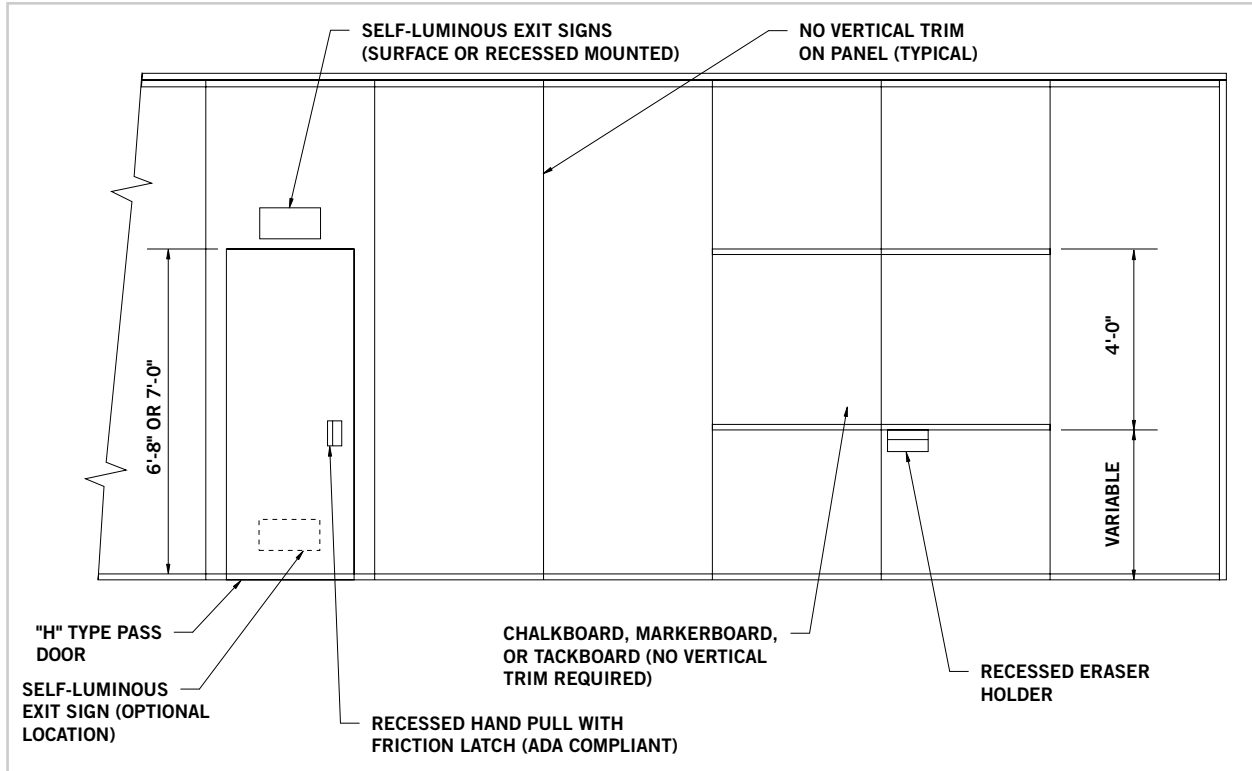
RT100 Multi-Directional Suspension System



RT200 Multi-Directional Suspension System

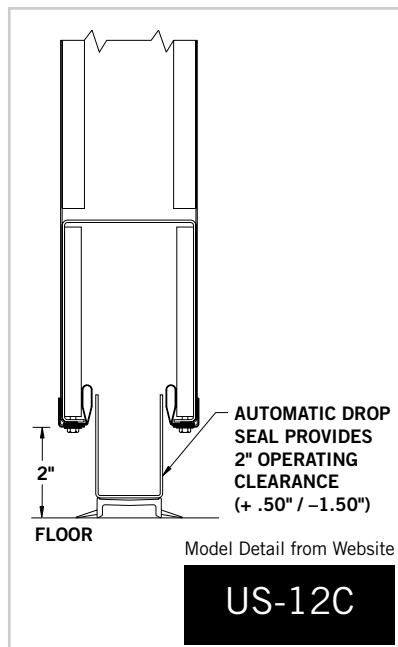


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA PANEL, WORK SURFACE, AND PASS DOOR OPTIONS

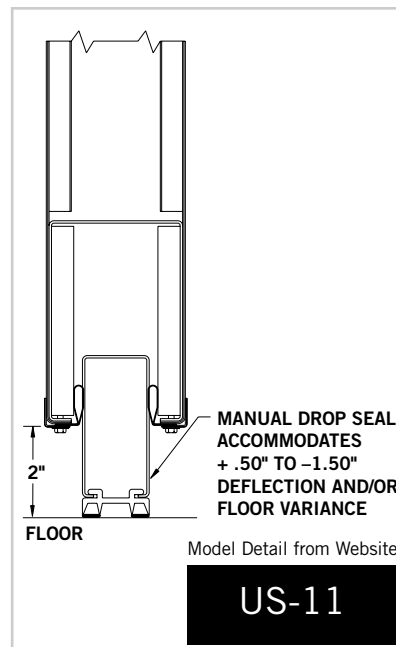


FLOOR SEAL OPTIONS

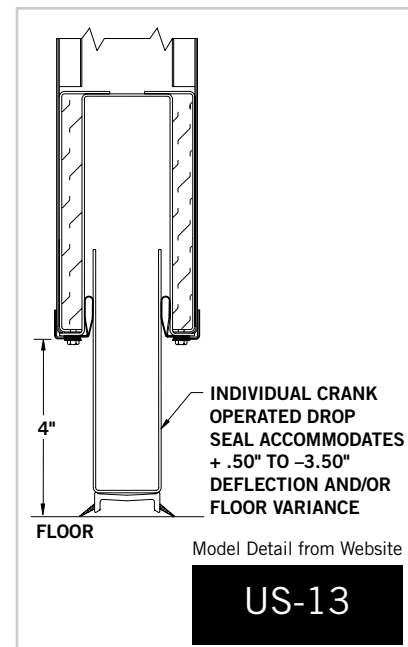
2" Automatic Seal



2" Manual Seal

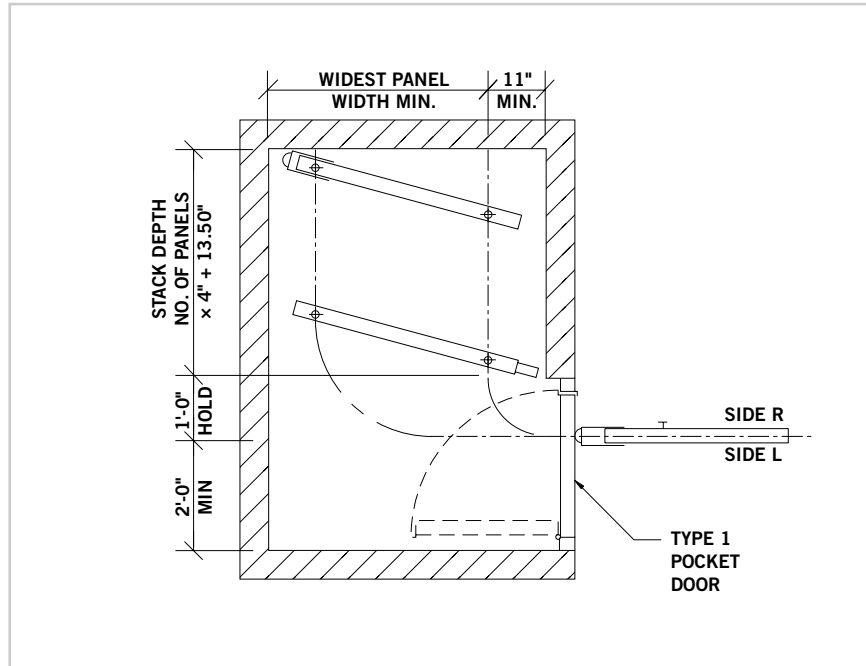


4" Manual Seal

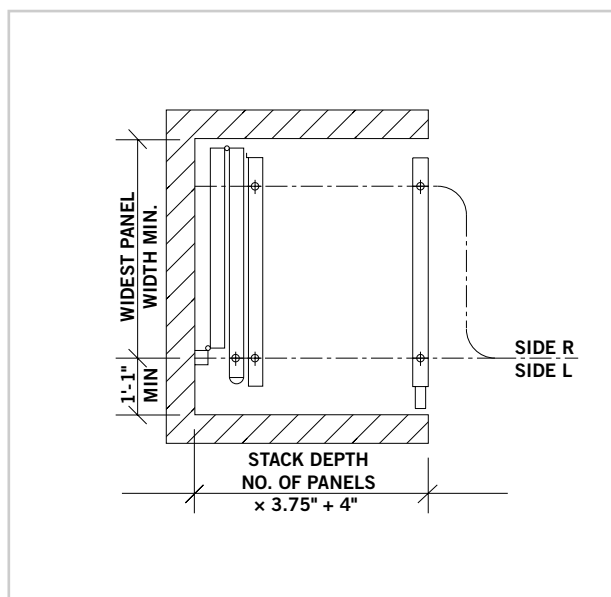


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA POCKET ENCLOSURE AND STACKING OPTIONS

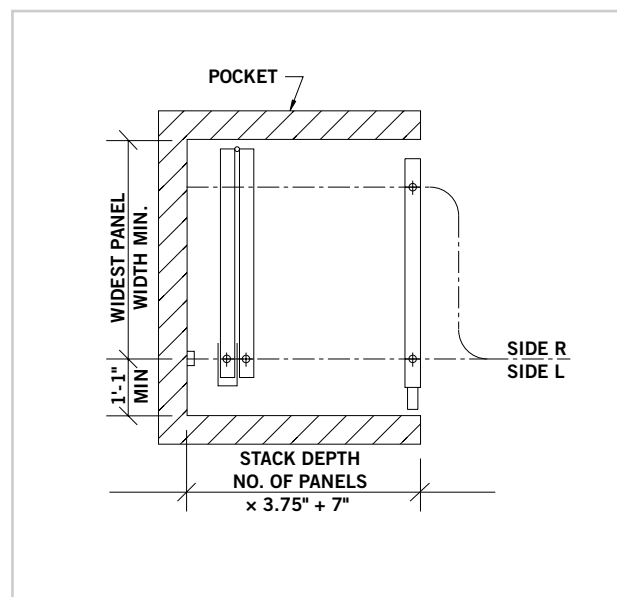
Remote Expandable Closure - Parallel Stack
 (Angle Stack) Smart Track



Bi-Fold Hinged Panel Closure -
 (Flat Stack) Smart Track

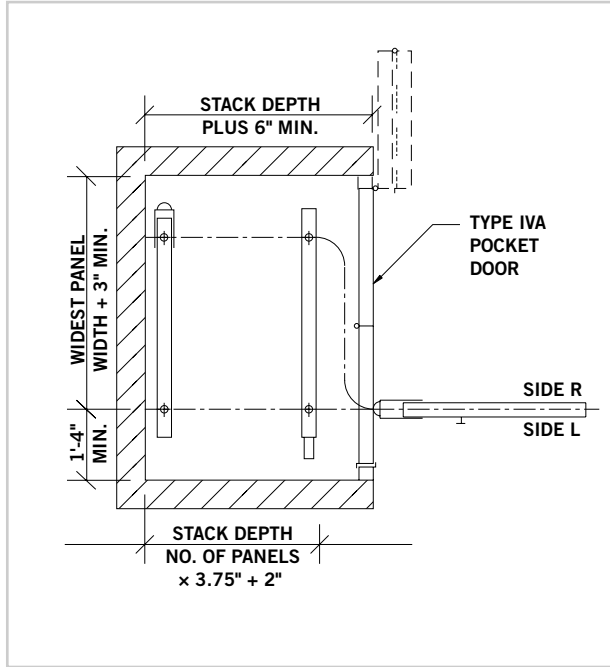


Bi-Fold Expandable Closure -
 (Flat Stack) Smart Track

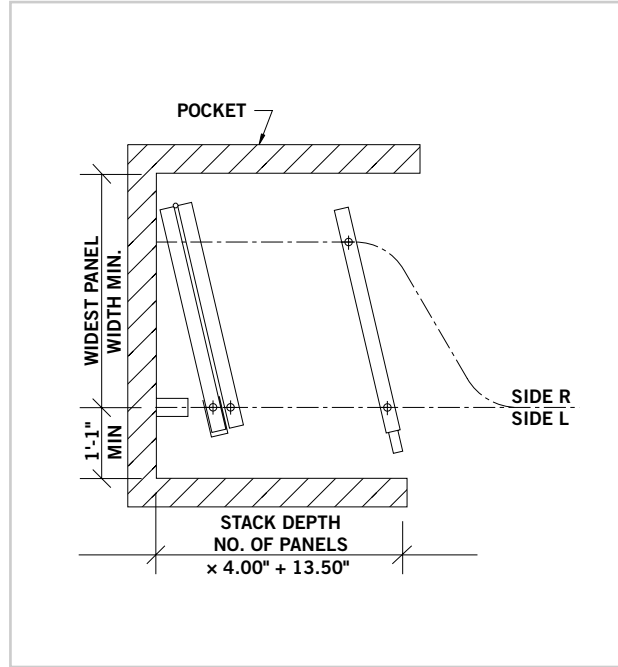


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA POCKET ENCLOSURE AND STACKING OPTIONS

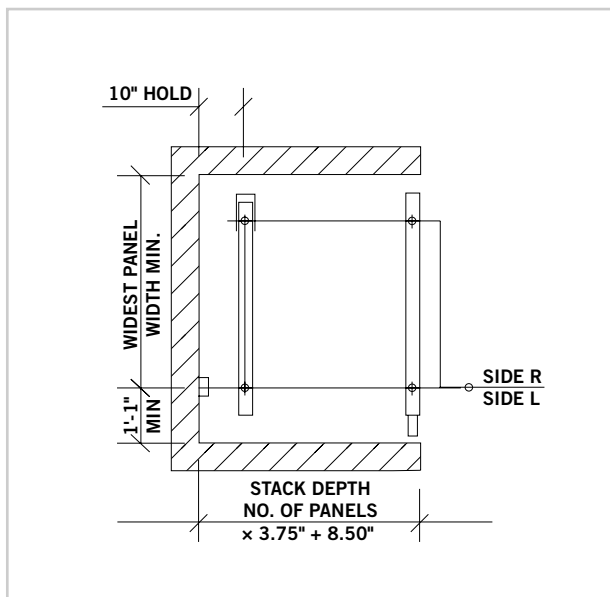
Remote Expandable Closure - 90° Side Stack (Flat Stack) Smart Track



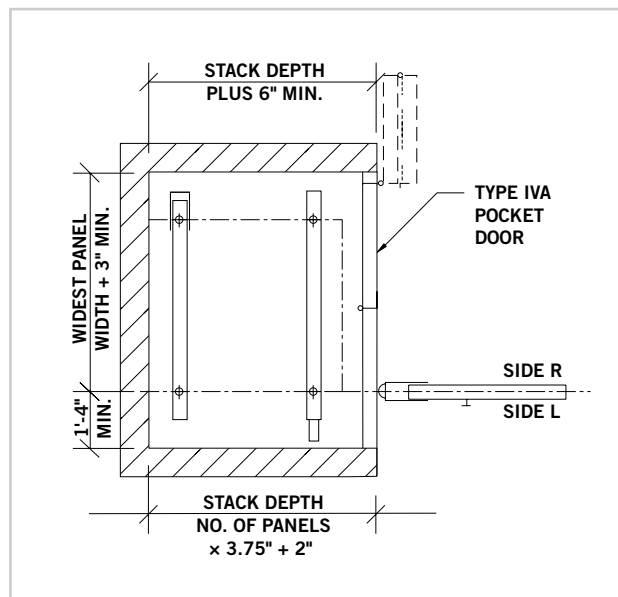
Bi-Fold Expandable Closure - (Angle Stack) Smart Track



Expandable Closure - 90° Side Stack Right Angle

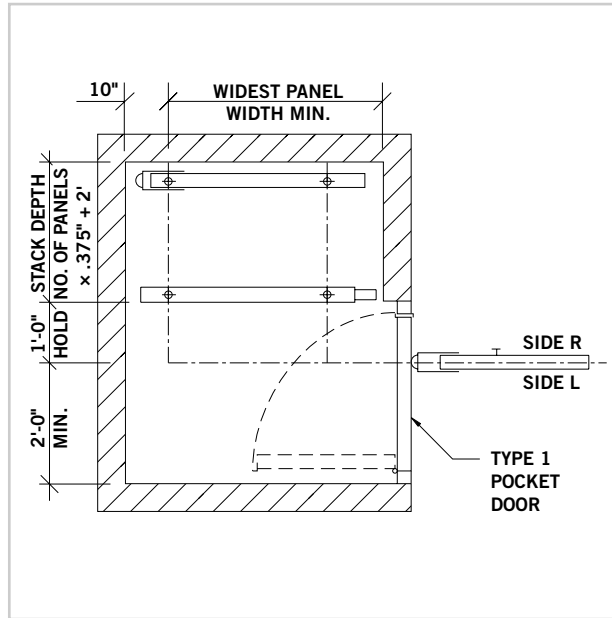


Remote Expandable Closure - 90° Side Stack Right Angle

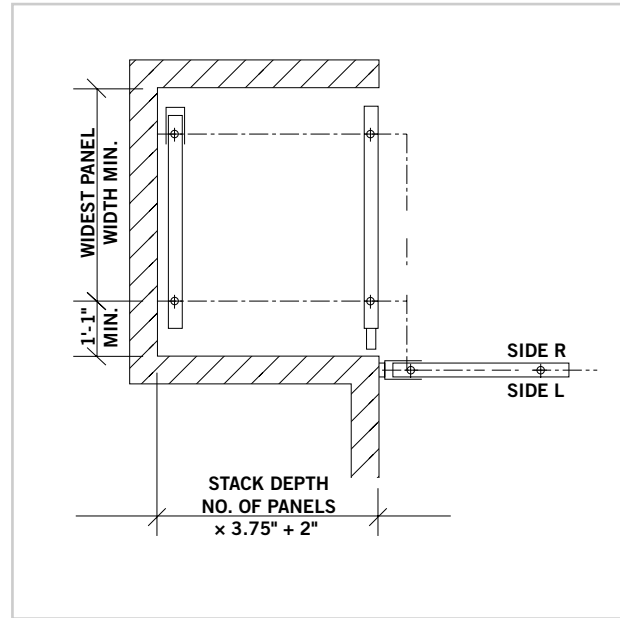


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA POCKET ENCLOSURE AND STACKING OPTIONS

Remote Expandable Closure -
Parallel Stack Right Angle

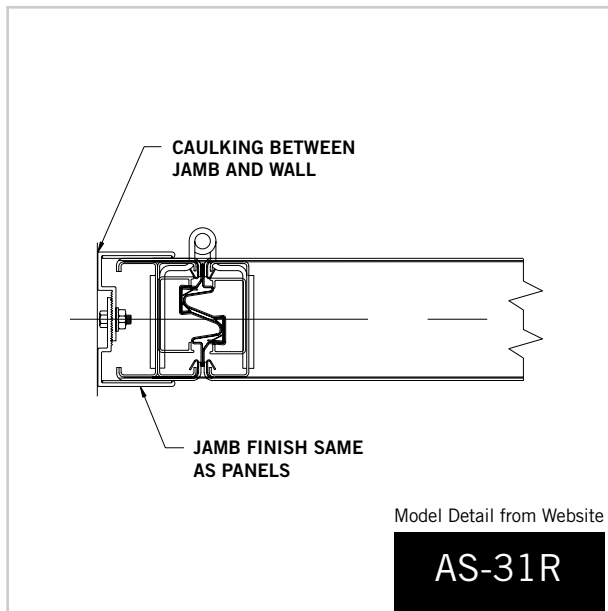


Remote Expandable Closure -
Offset Stack Right Angle

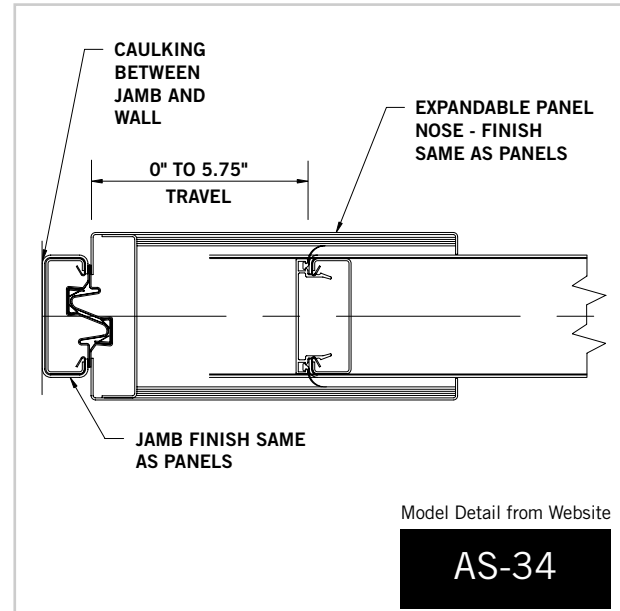


PANEL CROSS SECTIONS

Hinged Jamb

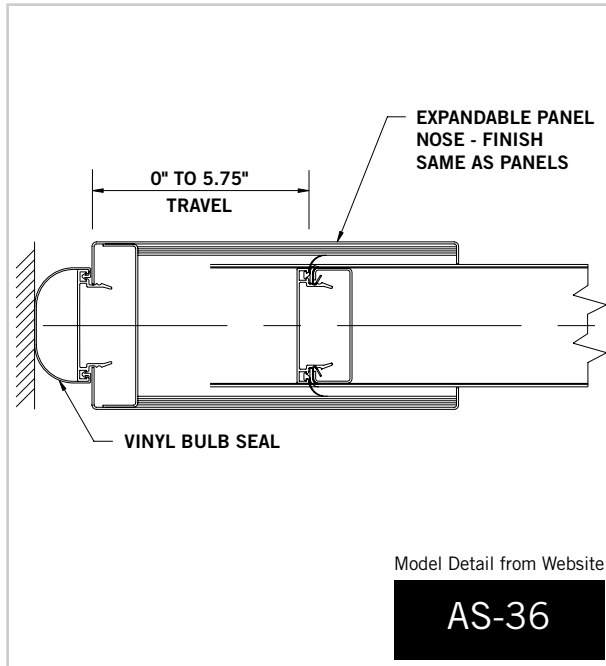


Expandable Panel w/Jamb

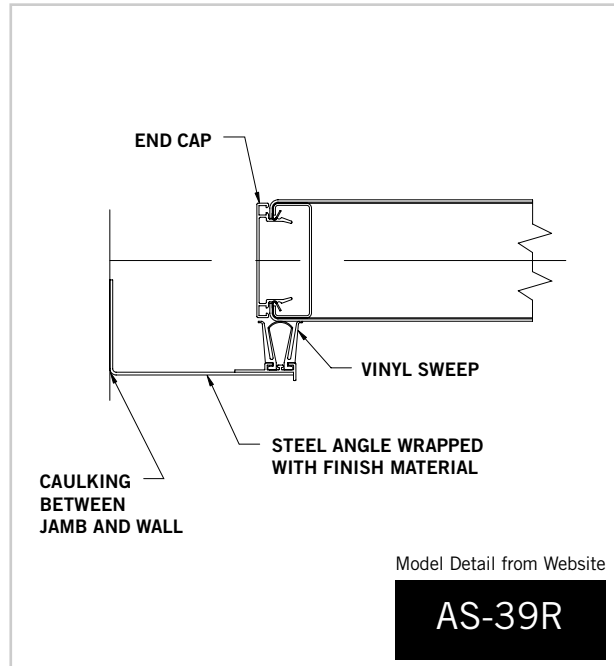


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA PANEL CROSS SECTIONS

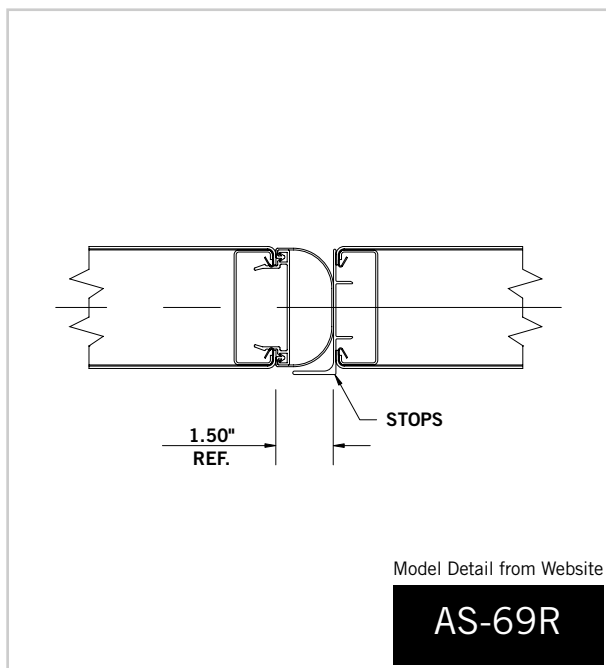
Expandable Panel w/Bulb Seal



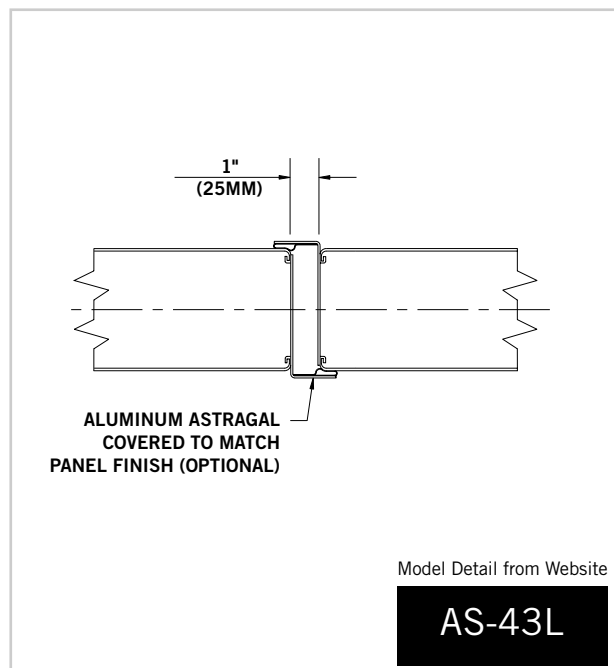
Angle Jamb



Hinged Panel Meeting w/Bulb Seal

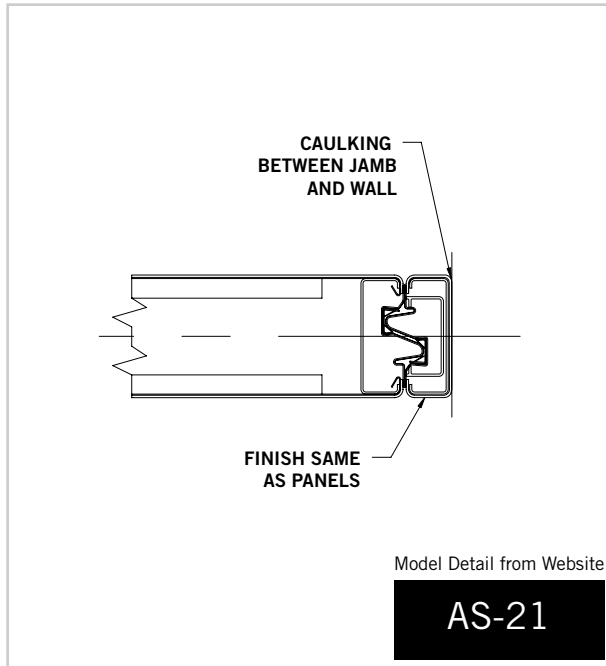


Hinged Panel Meeting w/Pass Door Astragal

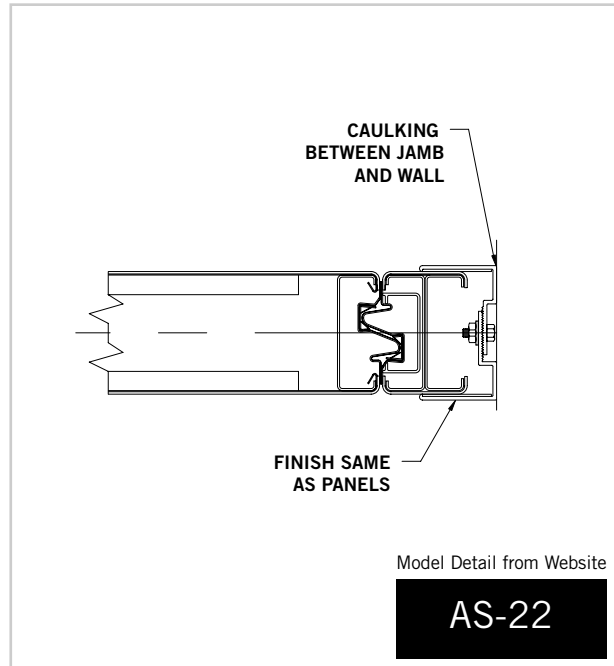


ACOUSTI-SEAL® 900 SERIES TECHNICAL DATA PANEL CROSS SECTIONS

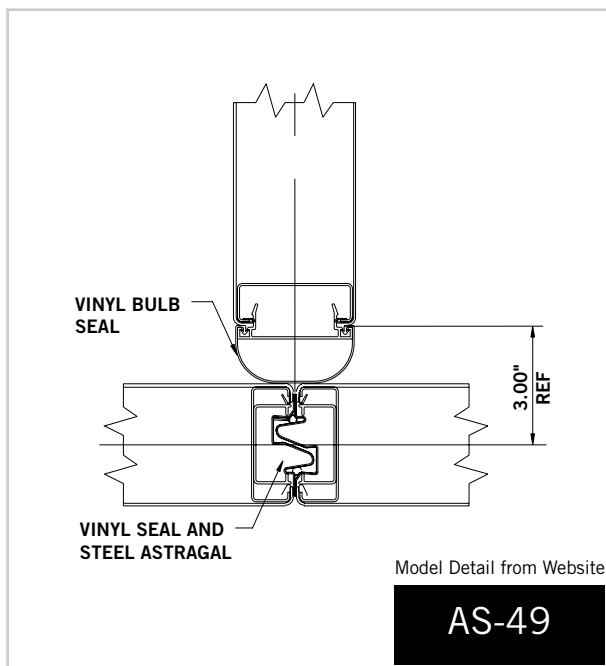
Nominal Fixed Jamb



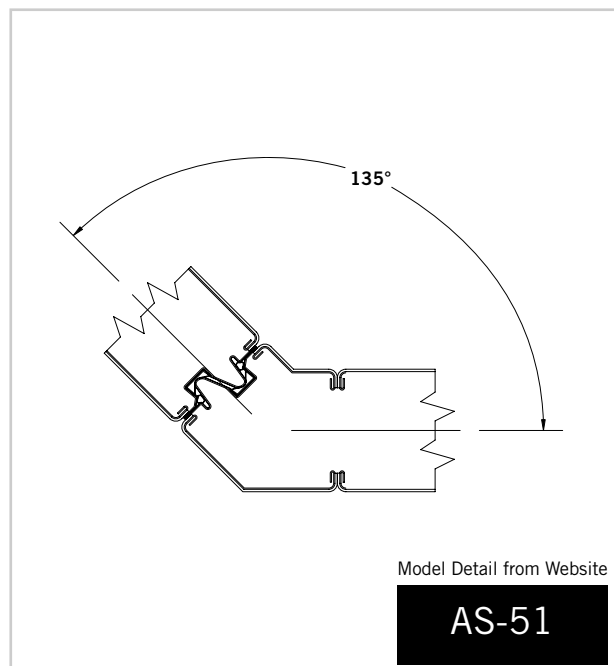
Variable Fixed Jamb



Bulb Seal and Intersection



135 Degree Angle Attachment



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