STELLA™ Acoustical Movable Glass Wall
Multi-Directional, Fully-Automatic Operation Specifications
SECTION 10 22 39 – Folding Panel Partitions - Glass

Part 1 - General

1.01 DESCRIPTION

A. General
   1. Furnish and install acoustically rated, movable glass partitions and suspension system with fully-automatic electrically operated seal systems. Provide all labor, materials, tools, equipment, and services for glass movable walls in accordance with provisions of contract documents.

1.02 RELATED WORK BY OTHERS

A. Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
B. All header, blocking, support structures, jambs, and track enclosures, as required in 1.04 Quality Assurance.
C. Pre-punching of support structure in accordance with approved shop drawings.
D. Paint or otherwise finishing all trim and other materials adjoining head and jamb of the partitions.

1.03 SUBMITTALS

A. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract. Show performance test results and details of construction materials, colors, profiles and opening dimensions. Appropriate LEED 2009 (v3) credit for the following:
   IEQ Credit 8.1: Daylight & Views – Daylight 75% of Spaces
   IEQ Credit 8.2: Daylight & Views – Daylight 90% of Spaces

1.04 QUALITY ASSURANCE

A. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
B. Glass shall be safety glass per ISO 28278-1:2011 or ASTM C1048-18 equivalent standard
C. Partition shall be tested to the ISO 10140-2 or ASTM E90 equivalent standard
D. Product to meet ANSI/ASA Standard S12.60, Acoustical Performance Criteria, Design Requirement and Guidelines for Schools.
E. Construction Products Directive (CPD), CE Mark verifying European harmonized standards for construction products, including electric components.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Proper storage of partitions before installation and continued protection during and after installation will be the responsibility of the General Contractor.

1.06 MANUFACTURER WARRANTY. Provide folding glass partitions system's standard limited warranty guaranteed against defects in material and workmanship for a period of five (5) years for panels and 10 years for tracks. Warranty does not cover glass damage after delivery, abuse or misuse, and must be installed by a factory trained, approved installer.

Part 2 - Products

2.01 ACCEPTABLE MANUFACTURERS

A. Upon compliance with all the criteria specified in this section, Manufacturers wishing to bid products similar to the product specified must submit to the architect 10 days prior to bidding complete data in support of compliance and a list of three past installations of products similar to those listed. The submitting manufacturer guarantees the proposed substituted product complies with the product specified and as detailed on the drawings.

2.02 MATERIALS

A. Product to be top supported, individual, multi-directional, acoustically rated glass panels, with Basis-of-Design the STELLA™ series by Kwik-Wall Company.

B. Panel Construction

1. Panels shall be nominally 4 1/2" – 4 11/16”[115-119mm] thick and up to 51" [1300] in width.
2. Frames shall be of architectural grade aluminum with powder coated or anodized finishes with vertical edges that form a male and female style interlocking connection. Standard panel heights up to 10’10” [3300mm] with full glass fronts.
    a. Optional heights up to 14’9” [4500] using horizontal mullions and dual stacked ¼” glass

[Specifiers Note: Panel heights can be achieved up to 14’9” but requires at least one mullion and multiple pieces of ¼” [6mm] glass. Panel widths cannot exceed 48” wide when panels heights exceed 10’10”. Also note that 50STC panel construction cannot exceed 10’10” [3300] due to overall weight limitations.]

3. Glazing sealants and gaskets suited and shaped for the glass configuration and thickness.
4. Fully-automatic *I-Core*, built-in battery operated carrier drive system must position the wall automatically by pre-programmed electronic wall mounted keypad. Each panel is driven electrically along the track and contains a wireless two-way control unit which the master control is able to identify & communicate. Panels to be pre-programmed for operating speed of closure and configuration.
5. Panels' operating batteries must charge both in extend and stacked positions. In the event of a long power interruption a battery back-up is supplied as standard.
4. Horizontal Seals
    a. Models with STC 44 and STC 50: Top and bottom horizontal low voltage electrically operated, automatically activated shall provide continuous contact with the track and floor with a total clearance of 3/4"” [20mm] when extended and provide a minimum 40lbs [18kg] of seal forces. Each top and bottom seal has an operating range of ¾” [20].
    b. Panels to make panel-to-panel electric contact allowing top and bottom panel seals to operate using built-in seal actuators.
    c. When using switchable glass, panel edges to have waist-high push button activator providing supplemental power assist.

[Specifiers Note: Some wall configurations require supplemental power converters to operate switchable glass and seal actuators. In these cases, an edge-activated push-button switch locations are determined by manufacture.]

d. Top and bottom PVC vinyl seal shoes to form tight acoustic connections with track and floors.

6. Vertical Seals: Vertical sound seals shall be of male/female configuration with full length bulb seals, ensure panel-to-panel alignment and prevent sound leaks between panels.
7. Glass: The glass shall be of factory installed nominal ¼" [6] clear tempered or laminated to both sides of the panels with a minimum 3 ½" airspace between the glass. Both laminated and tempered safety glass can be supplied to meet the acoustical requirement.
   a. Models with STC 44: Glass thickness to be nominally ¼" [6] and with final overall panel thickness of nominally 4 ½" [115].
   b. Models with STC 50: Glass thickness to be nominally 3/8" [9] and with final overall panel thickness of nominally 4 3/4" [119].
   c. Options:
      i. Glass can be fully back painted or custom to create opaque writing surfaces
      ii. Glass can be customized with decals and etching (requires factory pre-approval)
      iii. Switch glass films can be applied to the interior side of one glass surface.
8. Weight of Panels: 8.0 – 9.85 lbs./sq. ft. [39-48kg/m2]

C. Suspension system
1. Track shall be of clear anodized or White powder coated architectural grade extruded aluminum alloy 6063-T6. Track design shall provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of threaded steel hanger rods. L, T, or X intersections shall be factory assembled and field adjustable. Built-in ceiling trim shall be of anodized aluminum finish providing enclosure of plenum sound barrier on both sides of the track for maximum sound control. A section of track will be removable in order to make it possible for a panel to be removed from the track for later maintenance.
   a. Each panel shall be supported by two 2-wheeled dual horizontal counter-rotating carriers.
   b. Carriers are electronically driven by I-Core battery operated drive system embedded inside top of panel.
2. Optional Suspension System(s):
   a. The panels shall be supported by Kwik-Span pre-engineered truss and post system fabricated of steel and aluminum. Kwik-Span is laterally braced to the building structure. The load of the truss and partition is supported by end columns. The columns are connected to floor plates that distribute the load of the system at the floor.

[Specifiers Note: Custom engineered Kwik-Span™, field assembled overhead support is available for areas with insufficient overhead support and for select layouts (consult your Kwik-Wall Distributor).]

3. Plenum closure (by others): Design of plenum closure must permit lifting out of header panels to adjust track height. Plenum closure required for optimum sound control of partition.

D. Finishes
   1. Panel frames shall be powdered coated textured black and white powder coated paint.
      a. Optional (upcharge):
         i. Customer selected custom color (requires factory pre-approval and may extend lead time)
         ii. Clear anodized
   2. Fixed, continuous gasketing and sound seals gaskets shall be black
   3. Optional Solid Faced panels to be of same frame construction and seals and match the profiles of adjacent panels. These solid faced panels in lieu of glass shall be of (select one)
      i. Manufacturer's standard selection of Melamine laminate to Medium Density Fiberboard
      ii. High Pressure Laminate from manufacturer's standard selection laminated to Medium Density Fiberboard
      iii. Manufacturer's standard writable and magnetic high-pressure laminate with Medium Density Fiberboard.

E. Available Accessories/Options
   1. Pass Door. ADA compliant "U" shaped pass door allows the pass door to be located in any location in the opening. The pass door includes a self-closer. Options:
      a. Bi-Parting "L" passdoors
      b. The pass door hardware has turn handle on both sides
      c. Locks. Optional lock override is available.
   2. Face Options
      a. Panel(s) may have partial height glass and standard face options (example: bottom 4' [1219] section of high-pressure laminate, melamine or glass window at the top).
      b. Panels will contain horizontal mullions in specified locations that do not interfere with panel seal operation.

2.03 OPERATION

A. Panels shall move individually and fully-automatic from storage area positioned into the opening, and the seals set automatically by way of panel-to-panel 24v/2.6 amp electric connection.
   1. Activate the wall-mounted system LED controller.
   2. Hit start command to activate system that drives panels into place and drives seals tightly in place when positioned correct.
   3. Expandable telescoping closure, embedded within the permanent fixed wall automatically seals the final panel into place vertically.

C. Stack/Store Panels
   1. Activate the wall-mounted electric switch and power the low-voltage system.
   2. Retract seals and automatically move to storage area.
   3. Panels extend seals once stacked into storage area.
   4. Power down the wall-mounted controller.

2.04 ACOUSTICAL PERFORMANCE

A. Supply a copy of the acoustical test report certifying that the partition was tested by an independent laboratory. The partition tested must be fully functional and meet ISO or ASTM standards. The test results must be similar to or exceed the performance specified. Any sound test not showing panel construction details and weight or not disclosing all of the information will not be valid. Manufacturers must also guarantee that the products proposed have the same characteristics as the products specified and are in accordance with the drawings.
   Standard panel construction shall have obtained either a ISO dB or ASMT STC rating of (select those that apply): 44, 49dB/50STC

PART 3 - EXECUTION

A. Installation. The complete installation of the operable wall system shall be by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer’s standard printed specifications, instructions, and recommendations.
B. Cleaning
   1. All track and panel surfaces shall be wiped clean and free of handprints, grease, and soil.
   2. Cartoning and other installation debris shall be removed to on-site waste collection area, provided by others.
C. Training
   1. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
   2. Operating handle and owners manuals shall be provided to owner's representative.