



# Luminous™ – Movable Glass Walls by Kwik-Wall

## Technical Data

### AVA™ – Individual, Multi-Directional Panels

#### SECTION 10 22 39 – Folding Glass Partitions

#### SECTION 10 22 43 – Sliding Glass Partitions

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION

###### A. General

1. Furnish and install multi-directional, individual folding panel glass partitions and suspension system for interior use only that provides separation between rooms when extended. Provide all labor, materials, tools, equipment, and services for sliding folding glass partitions 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 wall panel construction and finish materials shall consist of Class A-rated materials in accordance with ASTM E 84.
- C. Glass shall meet ASTM C 1036-01: Standard Specification for Flat Glass.
- D. Glass shall be safety glass per ISO 28278-1:2011 or ASTM C1048-18 equivalent standard
- E. Trimmed acoustic configuration shall be tested to the ISO 10140-2 or ASTM E90 equivalent standard
- F. Trimmed acoustic configuration to meet ANSI/ASA Standard S12.60, Acoustical Performance Criteria, Design Requirement and Guidelines for Schools

[Specifier's Note: 1.04.C and 1.04.D not required for trimless, non-acoustic configuration.]

##### 1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. 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.

##### 1.06 MANUFACTURER WARRANTY

- A. 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, glass panels, with Basis-of-Design the AVA™ series by Kwik-Wall.
- B. Panel Construction
  1. Panels shall be nominally 1 7/16" [36] thick and up to 48" [1219] in width. Standard panel heights up to 10'-6" [3200].
  2. Horizontal top and bottom rails shall be continuous one-piece extrusion manufactured of structural grade aluminum with removable end caps. Rails shall utilize a cam lock feature to provide positive mechanical attachment to glass. (Passive friction type or adhesive applied rails shall not be allowed for safety reasons.
  3. Perimeter trim and seals
    - a. Trimless
      - i. Panels to have sanded/beveled vertical edges, resulting in a minimal groove appearance between adjacent glass panels.
      - ii. Top and bottom seals to be continuous contact black nylon brush seals.
      - iii. Optional vertical protective edge trim encapsulating the edge of the glass.



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- b. Trimmed acoustic
    - i. Panels to have extruded aluminum vertical edge trim and gaskets to form a tight panel-to-panel connection.
    - ii. Top and bottom seals to be continuous contact black vinyl seals.
  - 4. Bottom Rail Locking System: Each bottom rail glass retainer shall contain (select):
    - a. Standard operable floor lock consisting of a face-activated lever located on one (1) side of the panel connected to a floor lock that engages a recessed spring-loaded dust-proof strike to provide stability and security when the movable glass wall system is set up in the extended position. Intermediate panels shall have horizontal interconnecting foot-operated lock or centering pin for additional stability and security.
    - b. Optional keyed / thumb turn lock consisting of key-operated cylinders on both sides or key operation on one (1) side and thumb turn operation on opposite side.
    - c. Optional thumb turn consisting of an operable floor lock operated by a thumb turn that engages a recessed spring-loaded dust-proof strike to provide stability and security when the movable glass wall system is extended.
  - 5. Glass shall be manufactured in accordance with ASTM C 1036-01, ASTM C 1048-04, and ANSI Z97.1.
    - a. Trimless
      - i. Panels to have 1/2" [13] clear tempered glass.
    - b. Trimmed acoustic
      - i. Panels to have 1/2" [13] clear laminated glass.
    - c. Glass can be customized with decals and etching (requires factory pre-approval).
    - d. Specialty glass can be provided (requires factory pre-approval).
  - 6. Weight of Panels: 7.35 lbs./sq. ft. [35.9 kg/m<sup>2</sup>], maximum panel weight shall not exceed 330 lb. (150 kg)
- C. Suspension system
- 1. The track size shall be Type 425 multi-directional aluminum track certified to be capable of supporting up to 425 lbs. (193 kg) of total live load weight per panel.
  - 2. Track shall be architectural grade extruded structural aluminum alloy which prohibits deterioration caused by rust or corrosion. The aluminum track shall have a durable anodized clear satin finish, which resists color fading and flaking.
3. Track shall utilize grooves and interlocking steel pins for positive alignment of adjacent track sections. The track joints shall be reinforced overhead by a heavy-duty steel bracket made of hot-rolled, 3/8" [10] thick plate steel. Track shall include an integral nut slot to accept a hardened steel square nut to facilitate attachment of each all-thread rod and splice brackets to the overhead structural support.
4. 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 match 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. Optional direct mounting of track to level overhead structural (wood or steel) support by means of 3/8" [10] x 3" [76] lag screws.
  - b. Optional drop rod bracket mounting of track consisting of 3/8" [10] thick steel brackets mounted to top flange of track, supported with grade 2, 3/8" [10] diameter all-thread rods provided with 3/8" [10] serrated steel nuts.
5. Each individual panel shall be top supported by two carriers utilizing a 5/8" [16] diameter pendant bolt. Each carrier shall consist of dual horizontal, permanently-lubricated, precision ground steel bearings with high-strength polymer tires as required for smooth and quiet operation. Carriers shall be capable of negotiating 90 degree intersections as required for moving panels from storage location(s) to various installed positions. Carriers shall be capable of supporting 425 lbs. (193 kg) of total live load weight per panel.
6. 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 per ASTM E-557.
- D. Finishes
- 1. Panel frames shall be clear anodized.
    - a. Optional (upcharge):
      - i. Customer selected custom RAL color (requires factory pre-approval and may extend lead time)
    - 2. Fixed, seals shall be black.
  - 3. Hardware finish shall be clear anodized.



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4. Pull handle finish shall be stainless steel, satin effect.
  - a. Optional (possible upcharge):
    - i. Customer selected and/or supplied handle (requires factory pre-approval and may extend lead time)
- E. Available Accessories/Options
  1. Sliding swing panel consisting of a panel that is moved into position and utilizes a top pivot and bottom pivot that engages with a self-closing unit containing a hold-open feature that is recessed flush into the floor allowing the panel to swing 90 degree in both directions and be used to provide access through the movable glass wall system when it is set up in the extended position. Both sides of the panel shall contain a pull handle.
    - a. Lock available.
    - b. Only available in trimless configuration
  2. Sliding pivot panel consisting of a panel that is moved into position and utilizes a top and bottom pivot that allows the panel to pivot 90 degree in both directions and be used to provide access thru the movable glass wall system when it is set up in the extended position. Both sides of the panel can contain a pull handle.
    - a. Lock available.
    - b. Only available in trimless configuration
  3. Double door configuration available.
    - a. Only available in trimless configuration

#### 2.03 OPERATION

- A. Panels shall be manually moved from the storage area, positioned in the opening, and locked into place via built-in floor lock located inside the bottom panel rail.
- B. Final partition closure to be by (select one):
  1. Fixed swing panel consisting of a panel utilizing top pivot and bottom pivot that engages with a self-closing unit containing a hold-open feature that is recessed flush into the floor allowing the panel to swing and be used to affect the final closure and provides access through the movable glass wall system when it is set up in the extended position.
    - a. Trimless configuration allows for 90 degree swing in both directions.
    - b. Trimmed configuration allows for 90 degree swing in one direction.
  2. Fixed pivot panel consisting of a panel utilizing top and bottom pivots that allows the panel to pivot 90 degree and be used to affect final closure and provides access through the movable glass wall system when it is set up in the extended position.

- a. Trimless configuration allows for 90 degree pivot in both directions.
- b. Trimmed configuration allows for 90 degree pivot in one direction.

#### C. Stack/Store Panels

1. Retract floor locks and move to storage area.

#### 2.04 ACOUSTICAL PERFORMANCE – applies to trimmed configuration ONLY

- 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 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.
- B. Standard panel construction shall have obtained an ASTM STC rating of 35 STC.

### PART 3 – EXECUTION

#### 3.01 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 onsite waste collection area, provided by others.
- C. Training
  1. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
  2. Owner's manuals shall be provided to owner's representative.