

Model 2020 Individual Panels / Multi-Directional

Introduction:

The following three (3) part specification offers the Standard and *Optional* features for the Model 2020 Multi-Directional Operable Wall System. The **yellow** highlighted areas in the specification indicate an *Optional* selection that is available based on your project requirements.

In order to assist you with the design criteria KWIK-WALL has provided a Product Guide and Track & Carrier Selection Chart for the Model 2020.

The Product Guides indicate the acoustical ratings (STC) available, and also establishes the maximum partition height and width.

MODEL 2020 PRODUCT GUIDE Standard Acoustical Substrate Construction				
STC RATING	PANEL THICKNESS (nominal)	MAXIMUM PANEL WEIGHT lb. / ft. ²	MAXIMUM PANEL HEIGHT	MAXIMUM WALL WIDTH
42	3" [76]	6.5 (32 kg/m ²)	16'-2" (4.93 m)	Unlimited
45	3" [76]	8.5 (41 kg/m ²)	16'-2" (4.93 m)	Unlimited
49	3" [76]	9.8 (48 kg/m ²)	16'-2" (4.93 m)	Unlimited
50	3" [76]	11.0 (54 kg/m ²)	16'-2" (4.93 m)	Unlimited

Note: Optional Wood Veneer only available as Acoustical Substrate Construction.

MODEL 2020 PRODUCT GUIDE Optional Steel Skin Construction				
STC RATING	PANEL THICKNESS (nominal)	MAXIMUM PANEL WEIGHT lb. / ft. ²	MAXIMUM PANEL HEIGHT	MAXIMUM WALL WIDTH
49	3" [76]	10.9 (53 kg/m ²)	12'-2" (3.71 m)	Unlimited
51	3" [76]	12.0 (59 kg/m ²)	12'-2" (3.71 m)	Unlimited

The Track & Carrier Selection Chart determines the appropriate track and carrier system based on the STC Rating and Panel Fabrication Height.

MODEL 2020 - TRACK AND CARRIER SELECTION CHART											
PANEL SKIN TYPE	MAXIMUM PANEL WEIGHT lb. / ft. ²	STC RATING	PANEL FABRICATION HEIGHT*								
			Up to 8'-2" (2.49 m)	Up to 9'-2" (2.79 m)	Up to 10'-2" (3.10 m)	Up to 11'-2" (3.40 m)	Up to 12'-2" (3.71 m)	Up to 13'-2" (4.01 m)	Up to 14'-2" (4.32 m)	Up to 15'-2" (4.62 m)	Up to 16'-2" (4.93 m)
Acoustical Substrate	6.5 (32 kg/m ²)	42									
Acoustical Substrate	8.5 (41 kg/m ²)	45	425 Track & Carriers								
Acoustical Substrate	9.8 (48 kg/m ²)	49									
Acoustical Substrate	11.0 (54 kg/m ²)	50			850 Track & Carriers						
Steel Skin	10.9 (53 kg/m ²)	49									
Steel Skin	12.0 (59 kg/m ²)	51								Not Available	

*Based on 4'-0" (1.22 m) **Intermediate** panel widths. Depending on panel options selected KWIK-WALL may require 850 Track & Carriers.

Model 2020 Individual Panels / Multi-Directional Product Specification

PART 1 – GENERAL SPECIFICATIONS

1.01 WORK INCLUDED

- A. Operable wall system shall be furnished, installed and serviced by wall manufacturer's authorized distributor, in compliance with the architectural drawings and specifications contained herein.

1.02 RELATED WORK

- A. Structural Support: Structural support system required for suspending the operable wall shall be designed, installed and pre-punched by others, in accordance with ASTM E 557 and manufacturer's shop drawings.
- B. Insulation: Sound insulation and baffles for the plenum area above the track system, under the permanent floor, inside air ducts passing over or around the operable wall, and in permanent walls adjoining the operable wall system shall be by others, in accordance with ASTM E 557.
- C. Opening Preparation: Proper and complete preparation of the operable wall system opening shall be by others in accordance with ASTM E 557, and shall include floor leveling; plumbness of adjoining permanent walls; substrate and/or ceiling tile enclosures for the track system; and the painting and finishing of trim and other materials adjoining the head and jamb areas of the operable wall. Any permanent wall(s) receiving an adjustable or fixed wall jamb will require internal structural blocking in order to secure the jamb to the permanent wall. Refer to a copy of the shop drawings for additional details.

1.03 SYSTEM DESCRIPTION

- A. The operable wall system shall consist of Individual Panels that are top supported by two (2) multi-directional carriers that are capable of negotiating 90° "X", "L" and "T" intersections.
- B. The operable wall system shall consist of acoustically rated panels tested in accordance with ASTM E 90 and ASTM E 413 test procedures, and shall have achieved a STC rating as specified herein (see "Acoustical Performance" article listed under Part 2 – Products).

1.04 QUALITY ASSURANCE

- A. The operable wall shall have been tested in an independent acoustical testing laboratory in accordance with ASTM E 90 and ASTM E 413 test procedures.
- B. The operable wall panel construction and finish materials shall consist of Class A rated materials in accordance with ASTM E 84.
- C. The operable wall shall be installed by the manufacturer's authorized distributor in accordance with ASTM E 557.

1.05 REFERENCES

- A. ASTM E 90: Laboratory Measurement of Airborne-Sound Transmission Loss of Building Partitions.
- B. ASTM E 413: Determination of Sound Transmission Class (STC).
- C. ASTM E 557: Architectural Application and Installation of Operable Partitions.
- D. ASTM E 84: Surface Burning Characteristics of Building Materials.
- E. ASTM A 653: Specification for General Requirements for Steel Sheet, Alloy-Coated (Galvannealed) by the Hot Dip Process.
- F. ASTM C 423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- G. CCC-W-408A-D: Federal Specification which applies to Vinyl Coated Wall Coverings.
- H. CFFA-W-101-B: Chemical Fabrics and Film Association Quality Standard for Vinyl Coated Fabric Wall Coverings.

1.06 SUBMITTALS

- A. Manufacturer shall provide written technical information and related detail drawings, which demonstrate that the products comply with contract documents for each type of operable partition specified.
- B. Manufacturer shall provide detailed engineering drawings featuring track plan, panel elevation, horizontal and vertical details and beam punching template as required.
- C. Manufacturer shall provide written test report of the independent acoustical testing laboratory certifying the attainment of the specified STC rating, upon request.
- D. Manufacturer shall provide written instructions specifying the proper operation and maintenance of the operable wall system.
- E. Manufacturer shall provide a color selector demonstrating the manufacturer's selections of the specified finish material. Samples shall consist of actual swatches of the specified finish material.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Panels shall be individually wrapped in a protective plastic covering to keep panels clean during delivery, storage and handling.
- B. Panels shall be stored on edge and above the floor on cushioned blocking in a dry and ventilated area, protected from humidity and temperature extremes.

1.08 SEQUENCING / SCHEDULING

- A. Beam Punching: Manufacturer shall provide beam punching template drawing detailing the anchor locations for the suspended track system (as required for Drop Rod Mounting), as required for the fabrication and installation of structural overhead support by others.
- B. Track Installation: Scheduling of operable wall track installation shall occur after structural overhead support has been properly and completely fabricated and installed by others.
- C. Panel Installation: Operable wall panel installation shall occur after fixed wall substrate construction is properly and completely installed by others, as required to protect panels from ongoing adjacent construction.

1.09 WARRANTY

- A. Manufacturer shall warrant each partition and its component parts to be free from defects in material and workmanship for a period of five (5) years from the date of delivery to the original purchaser, when installed by an authorized KWIK-WALL distributor. (Contact your local KWIK-WALL Distributor or KWIK-WALL Company for complete warranty information.)

PART 2 – PRODUCT SPECIFICATIONS**2.01 ACCEPTABLE MANUFACTURER**

- A. Operable walls shall be Series 2000, Model 2020 Individual Panels / Multi-Directional as manufactured by KWIK-WALL Company.

2.02 PANEL CONSTRUCTION

- A. Panel Dimensions: Standard panel dimension shall be a nominal 3" [76] thick.
- B. Panel Frame: Steel reinforced frame shall be constructed of structural aluminum alloy with steel corner supports. Panel frame shall be Class A rated in accordance with ASTM E 84.
- C. Panel Skins: Panel skins shall be Class A rated in accordance with ASTM E 84. Panel skin material shall consist of (select):
 1. *Standard Acoustical Substrate*: consisting of structural acoustical substrate pressure laminated to both sides of the steel reinforced frame to form a rigid, unitized and structural panel.

2. *Optional Steel Skins*: consisting of minimum 22-gauge tension-levleed galvanneal steel, pressure laminated to a structural acoustical backer and to the steel reinforced frame to form a rigid, unitized and structural panel.

D. Panel Weight: Maximum panel weight shall be 6.5 – 12.0 lb./ft.² (32 – 59 kg/m²) depending on STC rating, size and options selected.

2.03 OPERATION

A. Operation shall be Individual Panels with a Multi-Directional track system that allows the panels to negotiate 90° “X”, “L” and “T” intersections as required for movement of panels from storage location(s) to various installed positions. Panels shall be top supported by two (2) carriers featuring dual horizontal precision bearings with high strength polymer tires riding on a structural aluminum track.

2.04 STACK ARRANGEMENTS

A. Stack Type: Panel storage configuration shall be (select):

1. *Standard Perpendicular Stack*: consisting of panels stacked perpendicular to the wall’s installed position.

2. *Optional Parallel Stack*: consisting of panels stacked parallel to the wall’s installed position.

3. *Optional Remote Stack*: consisting of panels located remotely from the wall’s installed position, as shown on submitted shop drawings.

B. Stack Quantity: Panels shall be stored in separate stack areas as required for panel storage.

2.05 FINISHES

A. Finish Material Type: Panel finish material shall be Class A (except wood veneer) rated in accordance with ASTM E 84, consisting of (select):

1. *Standard Vinyl*: consisting of Type I, reinforced vinyl weighing 15 oz./lin. yd. (465 g/lin. m). Standard Vinyl shall meet or exceed CCC-W-408A-D and CFFA-W-101-B quality standards.

2. *Optional Upgrade Vinyl*: consisting of Type II, reinforced vinyl weighing 20 oz./lin. yd. (620 g/lin. m). Upgrade Vinyl shall meet or exceed CCC-W-408A-D and CFFA-W-101-B quality standards.

3. *Optional Upgrade Fabric*: consisting of fade and tear resistant fabric that resists water-based stains weighing 13 oz./lin. yd. (403 g/lin. m).

4. *Optional Basics Carpet*: consisting of acoustically absorbent, non-woven needle punch fibers fused to prevent fraying and unraveling of material weighing 28.5 oz./lin. yd. (884 g/lin. m). Basics Carpet shall achieve a minimum NRC rating of .25 (applied over gypsum substrate) in accordance with ASTM C 423.

5. *Optional Upgrade Carpet*: consisting of acoustically absorbent, non-woven needle punch fibers fused to prevent fraying and unraveling of material weighing 23 oz./lin. yd. (713 g/lin. m). Upgrade Carpet shall achieve a minimum NRC rating of .20 (applied over gypsum substrate) in accordance with ASTM C 423.

6. *Optional Wood Veneer*: consisting of unfinished flat cut wood veneer laminated to 1/2" [12.7] thick particle board core. Veneer shall be book / running matched within a panel.

(Notes: Optional Class "A" rated particle board is available. Wood Veneer requires Cap-type astragal. Acoustical substrate STC ratings apply for Wood Veneer panel construction.)

7. *Optional Unfinished*: consisting of panels with exposed acoustical substrate or steel skins for field applied wallcovering or painting.

B. Finish Material Supplier: Finish material shall be (select):

1. *Standard Factory Supplied*: from manufacturer’s standard selection of finish materials, as specified.

2. *Optional Customer Supplied*: from customer’s selection of finish material, by others, and as approved by KWIK-WALL Company.

C. Finish Material Application: Finish material shall be (select):

1. *Standard Factory Applied*: by operable wall manufacturer. Customer supplied finish material samples must be submitted to manufacturer for testing and approval prior to acceptance and application.

2. Optional Field Applied: by others.

2.06 PERIMETER TRIM AND SEALS

- A. Vertical Trim and Seals: Panels shall have vertical astragals containing flexible vinyl seals and incorporate reversible tongue-and-groove-type configurations for positive interlocking with adjacent panels. Vertical astragal type shall be (select):
1. *Standard Trimless Astragal*: consisting of an aluminum extrusion with tongue-and-groove-type vertical astragals. Vertical trim shall not be permitted on the panel faces, resulting in a minimal groove appearance between adjacent panels.
(Note: Not available with optional Wood Veneer.)
 2. *Optional Cap-type Astragal*: consisting of an aluminum extrusion with tongue-and groove-type vertical astragals for protecting the finish material and substrate along the vertical edge of the panel.
- B. Horizontal Top Trim and Seals: Top seals shall consist of flexible vinyl sweep seals installed on both sides of the panel. The seals shall consist of a compressed bulb between two (2) fingers of vinyl. Top seal type shall be (select):
1. *Standard Fixed Top Seals*: consisting of continuous-contact flexible vinyl, sealing against the bottom flange of the overhead track.
 2. *Optional Operable Top Seals*: consisting of an edge-activated seal using a removable wrench as supplied by manufacturer. Top seals shall provide a maximum 1/2" [13] of travel. (Note: Only available with Standard Operable Bottom Seals.)
- C. Horizontal Bottom Trim and Seals: Bottom seals shall consist of multiple fingers of flexible vinyl for positive contact and sealing with various floor surfaces. Bottom seal type shall be (select):
1. *Standard Operable Bottom Seals*: consisting of an edge-activated seal using a removable wrench as supplied by manufacturer. Bottom seals shall provide 1 1/2" [38] of nominal travel.
 2. *Optional Adjustable Bottom Seals*: consisting of field-adjustable, continuous-contact vinyl sweep seals that allow for 3/4" [19] of nominal adjustment.
 3. *Optional Automatic Bottom Seals*: consisting of self-activated seals providing 1 1/2" [38] of nominal travel.
- D. Horizontal and Vertical Panel Trim: All exposed panel trim and hinges shall be of one (1) similar color (select):
1. Dark Bronze.
 2. Grey.

2.07 CLOSURE SYSTEMS

- A. Initial Closure System: The lead panel (the first panel exiting the stack) shall form seal vertically against a rigid wall surface, as accomplished by a (select):
1. *Standard Bulb Seal*: consisting of continuous-contact, flexible vinyl bulb seals installed along the vertical edge of the lead panel for positive compression against a rigid wall surface.
 2. *Optional Fixed Starter Jamb*: consisting of an aluminum extrusion, which is permanently mounted to a structural wall surface. The Fixed Starter Jamb shall incorporate a tongue-and-groove-type vertical astragal for positive interlocking with the lead panel.
 3. *Optional Adjustable Starter Jamb*: consisting of an aluminum extrusion which is permanently mounted to a structural wall surface and is field-adjustable to compensate for out-of-plumb conditions of the fixed wall. The Adjustable Starter Jamb shall incorporate a tongue-and-groove-type vertical astragal for positive interlocking with the lead panel.
- B. Final Closure System: The final closure panel (the last panel exiting the stack) shall form a seal vertically against a rigid wall surface. The type of final closure panel shall be (select):
1. *Standard Expander Panel Closure*: consisting of an expander mechanism with a nominal 5" [127] of travel, activated from the face of the panel using a removable wrench as supplied by manufacturer. The Expander Panel shall be equipped with an adjustable bottom seal (standard) or (optional) operable bottom seal, and a flush pull handle.

2. **Optional Hinged Panel(s) Closure:** consisting of a panel hinged permanently and directly to a structural wall surface. The Hinged Panel(s) shall be equipped with an adjustable bottom seal, a lap-type extrusion for sealing against its adjacent panel (standard) or (optional) expander mechanism with a nominal 5" [127] of travel, activated from the face of the panel using a removable wrench, and a flush pull handle on each side of the panel.

3. **Optional Pocket Door(s):** (see "Series 2000 Pocket Door" brochure for complete details and specifications).

Note: Optional Automatic Bottom Seal is *not* available in conjunction with Final Closure Panel(s).

2.08 ACOUSTICAL PERFORMANCE

- A. Certification: The operable wall shall have been tested in an independent acoustical testing laboratory in accordance with ASTM E 90 and ASTM E 413 test procedures.
- B. STC Rating: The operable wall acoustical performance rating shall be based on (select):
1. *Standard Acoustical Substrate:* with a standard rating of 49 STC, or optional ratings of 42 STC, 45 STC or 50 STC.

2. **Optional Steel Skins:** with optional ratings of 49 STC or 51 STC.

(Note: Not available with optional Wood Veneer.)

2.09 PANEL ACCESSORIES

- A. Accessories including Pass Doors; Single or Double, Keyed Cylinder Locks, Concealed Door Closures, Room Viewers, Exit Signs, Dry Marker Writing Surfaces, Recessed Eraser Trays, Vision Lites, Tack Surfaces and Pocket Doors shall be compatible with other accessories and options, furnished and installed by the operable wall manufacturer as noted on submitted shop drawings.

2.10 TRACK SYSTEMS

- A. Track Type: The operable wall track system shall be extruded from 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. The 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. Aluminum track shall include an integral nut slot to accept a hardened steel square nut to facilitate attachment of each steel all-rod and splice brackets to the overhead structural support.
- B. Track Size: The track size shall be (selected from *Track and Carrier Selection Chart - refer to Page 1*):
1. *Type 425 Multi-Directional Aluminum Track:* certified to be capable of supporting up to 425 lb. (193 kg) of total live load weight per panel.
 2. *Type 850 Multi-Directional Aluminum Track:* certified to be capable of supporting up to 850 lb. (386 kg) of total live load weight per panel.

2.11 CARRIER SYSTEMS

- A. Carrier Type: Each individual panel shall be top supported by two (2) 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. Multi-Directional carriers shall be capable of negotiating 90° "X", "L" and "T" intersections as required for moving panels from storage location(s) to various installed positions.
- B. Carrier Size: The carrier size shall be (select from *Track and Carrier Selection Chart - refer to Page 1*):
1. *Type 425 Multi-Directional Carrier:* certified to be capable of supporting up to 425 lb. (193 kg) of total live load weight per panel.
 2. *Type 850 Multi-Directional Carrier:* certified to be capable of supporting up to 850 lb. (386 kg) of total live load weight per panel.

2.12 SUSPENSION SYSTEMS

- A. Mounting Systems: The track shall be supported by (select):

1. *Standard Drop Rod Mount*: consisting of adjustable rods of grade 2, 3/8" [10] diameter threaded steel all-rod provided with 3/8" [10] serrated steel nuts.
2. *Optional Direct Mount*: consisting of 3/8" [10] x 3" [76] lag screws for attachment to an overhead structural (wood) support. (Direct mount track installations should not exceed 425 lb. (193 kg) of panel weight.)
3. *Optional Drop Rod Bracket Mount*: consisting of 3/8" [10] thick steel brackets mounted to top flange of track and supported with adjustable rods of grade 2, 3/8" [10] diameter threaded steel all-rod provided with 3/8" [10] serrated steel nuts.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Proper and complete preparation of the operable wall system opening shall be by others in accordance with the architectural drawings, manufacturers shop drawings and ASTM E 557. Any deviation of the actual opening from these specifications shall be called to the attention of the architect prior to the installation of the operable wall.
- B. Deficiencies in the operable wall opening shall be corrected by others prior to installation of the operable wall.

3.02 INSTALLATION

- A. The operable wall system shall be installed by manufacturer's authorized distributor.
- B. The operable wall shall be installed in accordance with manufacturer's written instructions, shop drawings and ASTM E 557 installation guidelines.

3.03 ADJUSTING AND CLEANING

- A. The operable wall panels and track system shall be adjusted and cleaned in accordance with manufacturers written instructions.

3.04 PROTECTION

- A. The operable wall panels shall be stored in the stacked (retracted) position prior to acceptance by the owner's representative.

3.05 DEMONSTRATION

- A. The operable wall manufacturer's authorized distributor shall demonstrate proper operation and explain proper and necessary maintenance requirements of the operable wall system to the owner's representative.

For additional information contact:

KWIK-WALL Company
1010 East Edwards Street
Springfield, Illinois 62703

Phone: 217-522-5553 or 800-280-5945 (United States and Canada only)

Fax: 217-522-1170 or 800-290-5945 (United States and Canada only)

Website: www.kwik-wall.com

Email: kwinfo@kwik-wall.com

Note:

Due to ongoing research and development, some variations may occur in product specifications.

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