

Model 2040 Continuously Hinged / Manual

Introduction:

The following three (3) part specification offers the Standard and *Optional* features for the Model 2040 Continuously Hinged / Manual 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 2040.

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

MODEL 2040 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)	12'-2" (3.71 m)	26'-0" (7.92 m)
45	3" [76]	8.5 (41 kg/m ²)	12'-2" (3.71 m)	20'-0" (6.10 m)
49	3" [76]	9.8 (48 kg/m ²)	12'-2" (3.71 m)	17'-0" (5.18 m)
50	3" [76]	11.0 (54 kg/m ²)	12'-2" (3.71 m)	15'-0" (4.57 m)

*Maximum number of panels should not exceed seven (7).
Note: Optional Wood Veneer only available as Acoustical Substrate Construction.

Note: "Maximum Wall Width" dimension is for partitions that stack at one (1) end, if partition stacks at both ends take maximum wall width x 2.

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

MODEL 2040 - TRACK AND CARRIER SELECTION CHART			
PANEL SKIN TYPE	MAXIMUM PANEL WEIGHT lb. / ft. ²	STC RATING	PANEL FABRICATION HEIGHT*
			Up to 12'-2" (3.71 m)
Acoustical Substrate	6.5 (32 kg/m ²)	42	
Acoustical Substrate	8.5 (41 kg/m ²)	45	850 Track & Carriers
Acoustical Substrate	9.8 (48 kg/m ²)	49	
Acoustical Substrate	11.0 (54 kg/m ²)	50	

*Based on 4'-0" (1.22 m) Intermediate panel widths.

Model 2040 Continuously Hinged / Manual 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 hinged 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 Continuously Hinged panels that are manually operated, featuring panels hinged together in a continuous panel train.
- 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 C 423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- F. CCC-W-408A-D: Federal Specification which applies to Vinyl Coated Wall Coverings.
- G. 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 2040 Continuously Hinged / Manual 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 structural acoustical substrate pressure laminated to both sides of the steel reinforced frame to form a rigid, unitized and structural panel.
- D. Panel Hinges: Panel hinges shall be architectural grade, full leaf butt hinges.

- E. Panel Weight: Maximum panel weight shall be 6.5 – 11.0 lb./ft.² (32 – 54 kg/m²) depending on STC rating, size and options selected.

2.03 OPERATION

- A. Operation shall be Continuously Hinged / Manual, consisting of panels hinged together forming a continuous panel train. Panels shall be top-supported by one (1) carrier in every pair.

2.04 STACK ARRANGEMENTS

- A. Stack Type: Panel storage configuration shall be Center Stack, consisting of panels stacked on center to the wall's installed position.
- B. Stack Quantity: Panels shall be stored at (select):
1. *Standard One End*: on one end of the wall run.

2. *Optional Both Ends*: on both ends of the wall run.

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 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 *Fixed* consisting of continuous-contact flexible vinyl, sealing against the bottom flange of the overhead track.
- 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 Automatic Bottom Seals*: consisting of self-activated seals providing 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 Floating Bottom Seals*: consisting of continuous-contact, vinyl sweep seals that ride on an aluminum chassis containing two (2) omni-wheel rollers that are under constant spring pressure towards the floor surface. Floating Bottom Seals shall provide up to 3" [76] of nominal travel to accommodate uneven floor conditions.
- 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. (Note: Not available for Floating Bottom Seals.)

2.07 CLOSURE SYSTEMS

- A. Initial Closure System: The lead panel (the first panel exiting the stack) shall form a seal vertically against a rigid wall surface. The initial closure shall be accomplished by a continuous-contact, flexible vinyl bulb seals installed along the vertical edge of the lead panel for positive compression against a rigid wall surface. Initial closure panel shall contain a flush pull handle on each side.
- 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 final closure shall be accomplished by a Half Panel, which is hinged permanently and directly to a structural wall. The Half Panel and its two (2) immediately adjacent panels shall incorporate adjustable bottom seals, and the first panel adjacent to the half panel shall contain a flush pull handle.

Note: Optional Automatic Bottom Seal is *not* available in conjunction with Final Closure panels.

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 Standard Acoustical Substrate with a standard rating of 49 STC, or optional ratings of 42 STC, 45 STC or 50 STC.

2.09 PANEL ACCESSORIES

- A. Accessories including Single Pass Doors, 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 & PANEL GUIDE SYSTEM

- A. Type 850 Continuously Hinged / Manual Aluminum Track: The operable wall track system shall be certified for up to 850 lb. (386 kg) of total live load weight per panel, and 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. Type 850 Aluminum Panel Guide: The panel guide shall be extruded from structural aluminum alloy, which prohibits deterioration caused by rust or corrosion. The aluminum panel guide shall have a durable anodized clear satin finish, which resists color fading and flaking. The panel guide shall utilize a groove and interlocking steel pins for positive alignment of adjacent panel guide sections. Panel guide shall be located on both sides of the exposed track surface to assist in straightening the continuously hinged train of panels. The exposed ends of the panel guide shall have a gathering nose to assist in straightening the operable wall panels and, to prevent damage to the panel faces.

2.11 CARRIER SYSTEM

- A. Type 850 Polymer Tire Carrier: Each pair of Continuously Hinged / Manual panels shall be top supported by one (1) carrier capable of supporting up to 850 lb. (386 kg) of total live load weight per panel, utilizing a 5/8" [16] diameter pendant bolt. Each carrier shall consist of eight (8) permanently-lubricated, precision ball bearing steel wheels with high strength polymer tires, as required for smooth and quiet operation.

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 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 manufacturer's 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:

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Note:

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

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