

**SECTION 08 32 20
HEAVY GLASS BOTTOM SLIDING DOOR SYSTEMS**

USE THIS SECTION WHEN SPECIFYING BOTTOM ROLLER GLASS PANEL PARTITIONS. SECTION INCLUDES TOP TRACK, MOUNTING HARDWARE, ROLLER ASSEMBLIES, ALUMINUM RAILS FOR GLASS PANELS, AND ACCESSORIES. GLASS IS FURNISHED BY GLAZING SUB-CONTRACTOR AND SPECIFIED IN SECTION 08 80 00.

THIS SPECIFICATION SECTION IS A MANUFACTURER SPECIFIC PRODUCT SPECIFICATION USING THE PROPRIETARY METHOD OF SPECIFYING APPLICABLE TO PROJECT SPECIFICATIONS AND MASTER GUIDE SPECIFICATIONS. THIS SPECIFICATION SECTION SHOULD BE EDITED TO MEET SPECIFIC PROJECT DESIGN CRITERIA BY A KNOWLEDGEABLE CONSTRUCTION SPECIFIER. OPTIONS ARE SHOWN IN BRACKETS []. CHOOSE OPTIONS THAT MEET DESIGN CRITERIA, AND REMOVE BRACKETS AND UNUSED OPTIONS BEFORE PRINTING.

PART 1 – GENERAL

1.01 Section Includes

- A. Bottom Roller Sliding Glass Panel Partitions.

1.02 Related Requirements

- A. Section 05 50 00 - Metal Fabrications
- B. Section 08 71 00 - Door Hardware.
- C. Section 08 80 00 - Glazing.

1.03 Reference Standards

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2005.
- B. ASTM A 36 - Standard Specification for Carbon Structural Steel; 2005.
- C. ASTM A 240 - Stainless Steel Sheet and Plate.
- D. ASTM A 276 - Standard Specification for Stainless Steel Bars and Shapes; 2008a.
- E. ASTM A 307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
- F. ASTM A 314 - Standard Specification for Stainless Steel Billets and Bars for Forging.
- G. ASTM A 480 - General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
- H. ASTM A 563 - Standard Specification for Carbons and Alloy Steel Nuts.
- I. ASTM A 574 - Standard Specification for Alloy Steel Socket-Head Cap Screws.
- J. ASTM A 582 - Standard Specification for Free-Machining Stainless Steel Bars.
- K. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2003.
- L. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
- M. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2006.
- N. ASTM B247 - Standard Specification for Aluminum and Aluminum-Alloy Die Forgings, Hand Forgings, and Rolled Ring Forgings; 2009.
- O. ASTM A 283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2003 (Reapproved 2007).
- P. ASTM B 455 - Standard Specification for Copper-Zinc-Lead Alloy (Leaded-Brass) Extruded Shapes; 2005.
- Q. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants; 2005.

- R. ASTM C 1036 - Standard Specification for Flat Glass; 2006.
- S. ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2004.
- T. ASTM F 593- Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
- U. ASTM F 594 - Standard Specification for Stainless Steel Nuts.
- V. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
- W. GANA (GM) - GANA Glazing Manual; 2004.

Specifier's Note: Article below includes submittal of relevant data to be furnished by Contractor before, during, and after construction. Coordinate this Article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 Submittals

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's descriptive literature for each component in all-glass entrance assembly.
- C. Shop Drawings: Drawings showing layout, dimensions, identification of components, and interface with adjacent construction. Coordinate shop drawings with shop drawings for glazing specified in Section 08 80 00.
 - 1. Include field measurements of openings.
 - 2. Include scaled (ie., 1 inch = 1 foot) floor plan and reflected ceiling plan of sliding panel partition layout. Provide dimensions, clearances, material call-outs, detail references, and schedule of part numbers, and quantities.
 - 3. Include elevations showing:
 - a. Appearance of all-glass entrance layouts.
 - b. Locations and identification of manufacturer-supplied door hardware and fittings.
 - c. Locations and sizes of cut-outs and drilled holes for other door hardware.
 - 4. Include details of:
 - a. Panel rails.
 - b. Track assembly.
 - c. Hardware.
 - 5. Schedule: Listing of each type component in glass panel partition assemblies, including type, size, and thickness of glass used, and, cross-referenced to shop drawing plans, elevations, and details.
 - 6. Templates for fabrication of each type of glass panel partition assemblies.
- D. Selection Samples: Two sets, representing manufacturer's full range of available metal materials and finishes.
- E. Certificates: Contractor's certification that installer of sliding glass panel partition assemblies meets specified qualifications.
- F. Calculations: Design calculations for anchorage of overhead track to supporting member. Calculations shall include Engineer's seal, and signature. Engineer shall be licensed to practice in [California] [State in which the Project is located] [_____].
- G. Operation and Maintenance Data: For manufacturer-supplied operating hardware.

Specifier's Note: Article below to include qualifications, prerequisites, standards, limitations, and criteria to establish the requirements for the level of quality for products and workmanship for the work of this section. Coordinate Article with Division 1 Quality Assurance Section.

1.05 Quality Assurance

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- A. Source Qualifications: CRL is ISO9001-2000 certified, with over 10 years of continuous manufacture of architectural glass panel sliding partition assemblies.
- B. Installer Qualifications: Minimum three years of experience installing entrance assemblies similar to those specified in this section.
- C. Single source responsibility: Obtain all glass sliding entrance systems from a single manufacturer, to ensure full compatibility and warranty of parts.

1.06 Delivery, Storage, and Handling

- A. Deliver all glass sliding entrances and related components in the manufacturer's original protective packaging. Do not deliver entrance units until the work is ready for their installation.
- B. Inspect components for damage upon delivery. Unless minor defects in metal components can be made to meet the Architect's specifications and satisfaction, damaged parts should be removed and replaced.

1.07 Warranty

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. See manufacturer for additional information on extended warranty periods for high performance coatings for track assemblies exposed to view.
 - 1. Powder coating - Spraylat Newlar - 15 year.

PART 2 – PRODUCTS

2.01 Manufacturers

- A. Rails, track assembly, rollers, and door hardware for SDR or SSR Bottom Roller Sliding Glass Panel Partitions:

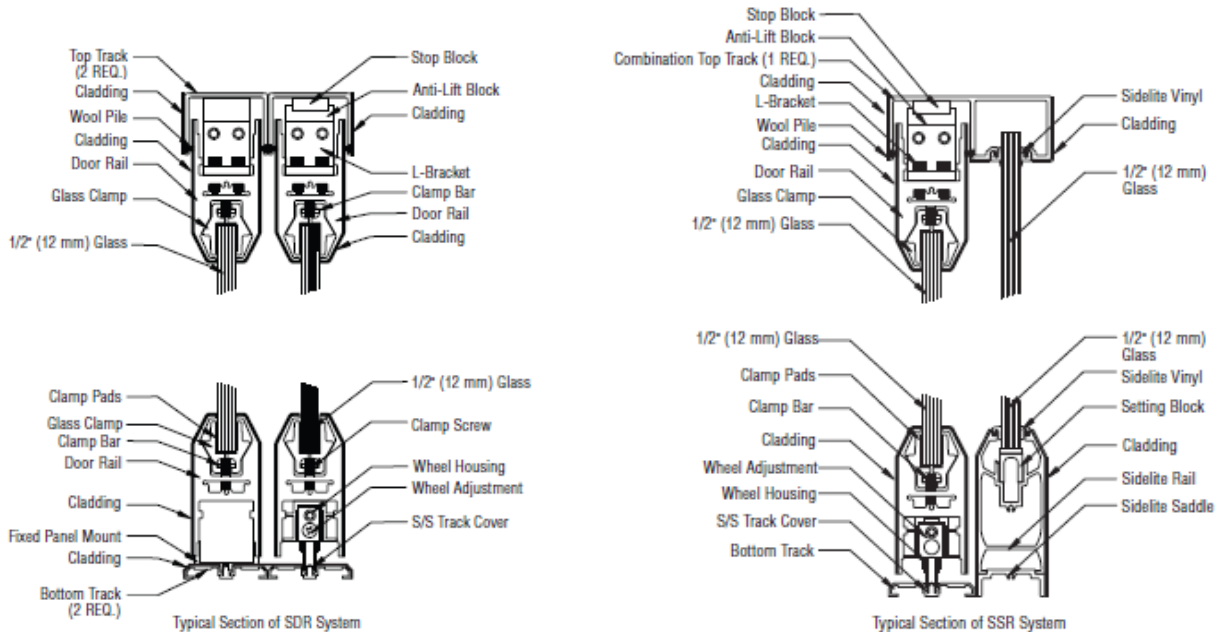
C.R. Laurence Co, Inc. (CRL)

Tel: (800) 421-6144 or (323) 588-1281 Ext. 7700

Fax: (800) 587-7501 or (323) 584-5289

Email: architectural@crlaurence.com

www.crl-arch.com



2.02 Assemblies

A. Factory fabricated assemblies consisting of frameless glass panels fastened with top and bottom rails in straight configuration as indicated on the drawings; CRL Heavy Glass Sliding Door System is basis for design. Interior installations only.

1. Prepared for all specified hardware whether specified in this section or not.
2. Finished metal surfaces protected with strippable film.
3. Factory assembled to greatest extent practicable; may be disassembled to accommodate shipping constraints.

2.03 Top Track

A. Top Track Assembly: Extruded aluminum pre-fabricated in straight configuration for guiding glass panels.

1. Track size: Per architect's drawings and specifications
2. Finish:
 - a. Satin Anodized
 - b. Black Bronze Anodized
 - c. Black Powder Coat
 - d. Brushed Stainless (Clad)
 - e. Polished Stainless (Clad)
 - f. Polished Brass (Clad)
 - g. Satin Brass (Clad)
 - c. Custom finish cladding is available to meet Architect's design requirements.

B. Heavy-Duty Roller Assembly: Rollers provide smooth movement of glass panels. Two (2) roller assemblies per panel. Each assembly is capable of supporting 125 lbs. (56.7 kg) each.

C. Track - standard: Extruded aluminum with stainless steel roller guide cover available up to 10 foot (3.05 m) long.

2.04 Glass Panel Rails

Specifiers Note: Select material and finish for top and bottom rails for glass panels; delete materials and finish paragraphs not used.

A. Glass panel rails: Sufficient to structurally support glazing and doors under specified loads.

1. Door rails: Extruded aluminum; ASTM B221, 6063 T6 alloy, with end caps, slide block, end brackets, stainless steel clamp bar, cork pad, with [without] keyed cylinder [thumb-turn] lock at bottom [top] rail. Door rails incorporate CRL patented Wedge-Lock™ Glass Securing System.

- a. Standard with 4 inch (102 mm) square rails.
- b. Standard with 4 inch (102 mm) tapered rails.
- c. Standard with 4 inch (102 mm) square top rails, and 6 inch (152 mm) square bottom rails.

B. Weatherstripping: A pile weatherstrip fills the gap between the Top Track and Door Rail.

2.05 Door Hardware

Specifiers Note: Select type of door pulls; delete door pulls not used.

A. Door pulls: Locking ladder pulls with concealed deadbolt lock [Center lock with extension rod through bottom rail into floor with dustproof keeper] [deadbolt handles].

B. Locking devices: Slide bolts; floor bolts, dustproof keepers.

C. Lock cylinders: Keyed cylinders; DRA10 [thumbturn; DRA22] [dummy cylinder; DRA30], finish

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to match finish of rail, unless noted otherwise.

D. Finish: Match finish of rails.

2.06 Materials

A. Glass: As specified in Section 08 80 00 Glazing; fully tempered. Note: Laminated glass should not be used with CRL Wedge-Lock rails.

1. Thickness: 3/8 inch (10 mm) or 1/2 inch (12 mm).

2. Size: [_____]. Maximum width: 48 inches (1219 mm). Maximum panel weight not to exceed 234 pounds (106 kg).

Specifier's Note: Use the following paragraph if glass panels are a part of this Section.

B. Glass: Tempered float glass meeting requirements of ASTM C 1036, Type I, Quality Q3, fully tempered in accordance with ASTM C 1048, Kind FT, and as follows:

1. Thickness: 3/8 inch (10 mm) or 1/2 inch (12 mm).

2. Color: Clear, Class 1.

3. Prepare glazing panels for indicated fittings and hardware before tempering.

4. Polish edges that will be exposed in finished work to bright flat polish.

5. Temper glass materials horizontally; visible tong marks or tong mark distortions are not permitted.

C. Extruded Aluminum Components: Conforming to ASTM B 221, Alloy 6063-T6.

D. Aluminum sheet: ASTM B209, Alloy 5052-H32 (used for non-structural cladding applied to top track when required by design).

E. Aluminum bars, and plate: ASTM B221, Alloy 6061-T6.

F. Steel plate: ASTM A36.

G. Stainless Steel Components: Conforming to ASTM A 666, Type 304 [316].

H. Brass Components: Conforming to ASTM B 455, UNS C38500, Architectural Bronze.

I. Sealant: One-part silicone sealant, conforming to ASTM C 920, Type S, Grade NS, Class 50, Use NT, G and A, clear [Color: _____, or as selected from manufacturer's standard color selection].

Specifier's Note: Use the following Cladding and Finishes Articles when non-structural sheet metal cladding is required at top track.

2.07 Cladding

A. Break-formed sheet metal to required shape, adhered to track or rails with double sided tape. Cladding is available in following metals:

1. Stainless Steel: 0.0375 inch (0.95 mm) thickness. Finish: Brushed; Polished.

2. Brass: 0.040 inch (1 mm) thickness. Finish: Polished; Satin.

3. Custom finish cladding is available to meet Architect's design requirements.

2.08 Finishes

A. Anodized [Architectural metal cladding] finish. [Six (6) Standard architectural finishes, powder coating and custom PVDF coatings are available upon request. Select from architectural finishes listed below, or specify custom finish desired.]

1. Satin Anodized.

2. Black Bronze Anodized.

3. Black Powder Coat.

4. Brushed Stainless (clad finish).

5. Polished Stainless (clad finish).

6. Polished Brass (clad finish).

PART 3 – EXECUTION

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3.01 Examination

- A. Verify floor flatness of 1/8 inch in 10 feet (3 mm / 3 m), non-cumulative.
- B. Verify wall plumbness of 1/8 inch in 10 feet (3 mm / 3 m), non-cumulative.
- C. Do not begin installation until substrates and openings have been properly prepared.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 Preparation

- A. Clean substrates thoroughly prior to installation.
- B. Prepare substrates using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 Installation

- A. Install track assembly, panels, rails, hardware, and mounting assemblies in accordance with manufacturer's written instructions, and approved shop drawings.
- B. Install glass and accessories in accordance with GANA Glazing Manual.
- C. Tolerances:
 - 1. Horizontal Components and Sight Lines: Not more than 1/8 inch in 10 feet (1:1000) variation from level, non-cumulative.
 - 2. Vertical Components and Sight Lines: Not more than 1/8 inch in 10 feet (1:1000) variation from plumb, non-cumulative.
 - 3. Variation from Plane or Indicated Location: Not more than 1/16 inch (1.5 mm).
- D. Installation of door hardware not supplied by glass panel sliding partition manufacturer is specified in Section 08 71 00.

3.04 Adjusting

- A. Adjust glass panels, to operate correctly, without binding.
- B. Adjust door hardware for smooth operation.

3.05 Cleaning

- A. Clean door and frame surfaces after installation, exercising care to avoid damage to the finish.
- B. Clean glass surfaces after installation, complying with requirements contained in the "Glass and Glazing" section for cleaning and maintenance. Remove excess glazing sealant compounds, dirt and or other substances

3.06 Protection

- A. Institute protective measures required throughout the remainder of the construction period to ensure that the all glass entrances do not incur any damage or deterioration, other than normal weathering, at the time of acceptance.

END OF SECTION