



STEELFORM™
OPTIMA

ACCEPTABLE MANUFACTURER

Sectional doors shall be SteelForm OPTIMA as manufactured by Raynor of Dixon, Illinois.

OPERATION

Operation shall be manual, motor and/or hand chain as specified and detailed on door schedule. (Note: delete from list any operations that do not apply).

SECTIONS

- A. Material: Sections shall be steel pan construction, roll-formed from 16 gauge (0.049" minimum steel thickness), commercial-quality, hot dipped galvanized (G90) steel per ASTM A-924 and A-653. Exterior of door to have flush outside face and roll-formed tongue and groove joints for weathertight closure. End stiles to be a minimum 13 gauge. Center stiles to be a minimum 16 gauge. End stiles and center stiles to be riveted to outside face with stainless steel rivets and resistance welded to interior rail.
- B. Mounting: Sections shall be mounted in the door opening using (select from list below):
1. Lap Jamb Angle Mounting: as normally-provided, sections shall overlap the door jambs by 1" (25mm) on each side of the door opening.
 2. Between-Jamb Bracket Mounting: as optionally-provided, sections shall be mounted between the door jambs, and seal against exterior perimeter seal installed along the vertical and top horizontal edges of the door
- C. Insulation and Back Covers: Sections may be furnished with insulation and back covers (select from below or delete section):
1. Polystyrene with Impact-resistant Covers: as normally-provided, insulation will be expanded polystyrene with an R-value of 7.70 and U-value of 0.130, with a white impact-resistant textured cover.
 2. Polystyrene with Hardboard Covers: as optionally-provided, insulation will be expanded polystyrene with an R-value of 7.87 and U-value of 0.127, with 1/8" (3.2mm) prime-painted hardboard covers (not recommended for use in high humidity or moisture areas).
 3. Polystyrene with 26 gauge Steel Covers: as optionally-provided, insulation will be expanded polystyrene with an R-value of 7.70 and U-value of 0.130, with 26 gauge, hot-dipped galvanized steel covers, stucco embossed and painted gray.
 4. Polystyrene with 24 gauge Steel Covers: as optionally-provided, insulation will be expanded polystyrene with an R-value of 7.70 and U-value of 0.130, with 24 gauge, hot-dipped galvanized steel covers, painted gray.
 5. Polystyrene with 20 gauge Steel Covers: as optionally-provided, insulation will be expanded polystyrene with an R-value of 7.70 and U-value of 0.130, with 20 gauge, hot-dipped galvanized steel covers, painted gray.
- D. Seals: Sections must be sealed at end stiles with 1/4" (6.4mm) thick polyethylene foam. Bottom of door to have flexible U-shaped vinyl seal in aluminum retainer.
- E. Trussing: Doors designed to withstand windloads of 20 lbs. per sq. ft. (97.6 kg/sq.m.). Deflection of door in horizontal position to be maximum of 1/120th of door width.
- F. Color: Exterior skin shall have two coats of paint, one primer coat and one finish coat in white.
- G. Windows: Sections may be furnished with either Oval-type or Full-view windows. Quantity and location(s) of windows shall be per door elevation drawing(s) (select from list below or delete section):
1. 24" x 8" (610 x 203mm) Oval Window: as normally-provided, encased in a one-piece vulcanized EPDM rubber frame.
 2. Color-matched Full-view Window: as optionally-provided, consisting of aluminum stile and rail construction and color matched to the color of the door with durable powdercoat paint.
- H. Glazing: Windows maybe provided with insulated or non-insulated glazing units.
- Oval-Type Windows:
1. 1/8" (3.2mm) thick DSB glass (insulated or non-insulated)
 2. 1/8" (3.2mm) thick acrylic Plexiglass® (insulated or non-insulated)
 3. 1/8" (3.2mm) thick Lexan® polycarbonate
 4. 3/16" (4.8mm) thick glass (insulated or non-insulated)
 5. 1/4" (6.4mm) thick wire-reinforced glass (insulated or non-insulated)
 6. 1/4" (6.4mm) thick acrylic Plexiglass®
- Full-View Type Windows:
1. 7/16" (11.1mm) thick DSB insulated glass
 2. 1/8" (3.2mm) thick DSB glass

TRACK

- A. Material: Track shall be hot-dipped galvanized steel per ASTM A-653, and fully adjustable for adequate sealing of door to jamb or weatherseal.
- B. Type: Track may be configured as Normal Headroom, Low Headroom, Vertical Lift, Lift-Clearance, Incline and/or Contour, as noted and detailed on door schedule. (Note: delete from list any configurations that do not apply).
- C. Size: Track size shall be (select from list below):
1. 2" (51mm) or 3" (76mm): as normally-provided determined by door size.
 2. 3" (76mm): as optionally-provided, regardless of door size, for promoting higher cycle life and durability.



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- D. Mounting: Tracks shall be either bracket-mounted or angle-mounted (select from list below):
1. Bracket-Mount: Using 2" adjustable track bracket as typically provided for use with wood jambs.
 2. "Floor-to-Header" Angle-Mount: Consisting of continuous angle extending from the floor up to the door header, for use with steel, wood or masonry jambs. Continuous angle size shall not be less than 2 5/16" x 5" x 3/32" (59 x 127 x 2.5mm).
 3. "Floor-to-Shaft" Angle-Mount: Consisting of continuous angle extending from the floor, past the header, and completely up to the door shaft for use with steel, wood or masonry jambs. Continuous angle size shall not be less than 2 5/16" x 5" x 3/32" (59 x 127 x 2.5mm) on 2" track.
- E. Finish: Track finish shall be (select from list below):
1. Galvanized: as normally-provided.
 2. White Powdercoat: as optionally-provided.

COUNTERBALANCE SYSTEM

- A. Type: The door counterbalance shall be provided with aircraft-type, galvanized steel lifting cables with minimum safety factor of 5 to 1. Counterbalance system shall be (select from list below):
1. Torsion Springs: as normally-provided, consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft.
 2. Weight Counterbalance: as optionally-provided for lift clearance and vertical lift only.
- B. Cycles: Torsion spring counterbalance shall achieve (select from list below):
1. 8,000 cycles
 2. 25,000 cycles
 3. 50,000 cycles
 4. 100,000 cycles

HARDWARE/ACCESSORIES

- A. Hinges and fixtures: All hinges and brackets shall be made from galvanized steel
- B. Rollers: Track rollers shall have a 2" (50.8mm) or 3" (76.2mm) diameter, consistent with track size. Rollers shall have hardened steel ball bearings.
- C. Accessory Perimeter Seal: Doors may be furnished with perimeter seal for jambs and header (delete section if not applicable).
- D. Accessory Air Infiltration Seal: Doors may be furnished with air infiltration seal for between door sections (delete section if not applicable).
- E. Accessory Lock: Door systems may be furnished with and exterior or interior locking device (select from list below or delete section):
1. Exterior Lock: shall have five-pin tumbler cylinder with night latch and steel bar engaging track.
 2. Interior Lock: shall have interior dead bolt provided with hole to receive padlock (padlock by others).