



**TriCore™**  
OPTIMA

#### ACCEPTABLE MANUFACTURER

Sectional doors shall be TriCore 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 sandwich construction 3" (76.2mm) thick, roll-formed from commercial-quality, hot-dipped galvanized steel per ASTM A-924 and A-653. Exterior skin to be constructed of 20 gauge (.030" minimum steel thickness) smooth (non-stucco) material, mechanically interlocked and pressure bonded to a 2 7/8" (73mm) thick, non-CFC expanded polystyrene core. Interior skin gauge shall be (select from list below):

1. 25 gauge (.017" minimum steel thickness) embossed stucco texture: as normally-provided.
2. 20 gauge (.030" minimum steel thickness) smooth texture: as optionally-provided.

Hinge reinforcement plates shall be of 14 gauge edge plates and 16 gauge center plates made of galvanized steel, located within the section interior at every hinge location. End stiles to be 16 gauge, separated from the exterior skin by a vinyl thermal break.

B. Mounting: Sections shall be mounted in the door opening using (select from list below):

1. Lap Jamb Angle Mounting: for 2" and 3" track sections shall overlap the door jambs by 1" (25mm) on each side of the door opening.
2. Between-Jamb Bracket Mounting: for 2" track, not 3", sections shall be mounted between the door jambs, and seal against exterior perimeter seal installed along the vertical and top horizontal edges of the jambs.

C. Insulation: Sections will have a R-value of 16.05 and U-value of 0.0623.

D. Seals: Interior and exterior skins to be separated by a continuous dual durometer vinyl seal held in place by a mechanical interlock to form an effective thermal break and a complete weatherseal along the section joint. Top of door to be provided with EPDM rubber sealing strip. Bottom of door to have flexible U-shaped vinyl seal in an extruded aluminum retainer.

E. Trussing: Doors shall be 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 1/120<sup>th</sup> of door width.

F. Color: Exterior and interior skins to have two coats of paint, one primer coat and one finish coat in white polyester paint.

G. Windows: Sections may be furnished with either Oval-type or Full-view (square edge-type) 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. 24" x 12" (610 x 305mm) Oval Window: as optionally-provided, encased in a one-piece vulcanized EPDM rubber frame.
3. 36" x 14" (914 x 356mm) Full-view (square-edge) Window: as optionally-provided, encased in an extruded PVC frame. (Note: Some restrictions may apply based on door height. Actual window width may vary slightly based on door width).
4. 42" x 14" (1067 x 356mm) Full-view (square-edge) Window: as optionally-provided, encased in an extruded PVC frame. (Note: Some restrictions may apply based on door height. Actual window width may vary slightly based on door width).

H. Glazing: Windows to be provided with 5/8" (16mm) insulated glass (select from list below or delete section):

1. 1/8" (3.2mm) DSB Glass: as normally-provided, consisting of two (2) panes of 1/8" (3.2 mm) DSB glass. (Available for Oval and Full-view square-edge-type windows).

I. Glass:

1. 3/16" (4.8mm) Glass: consisting of two (2) panes of 3/16" (4.8mm) glass. (Available for Oval-type windows only).
2. 1/8" (3.2mm) Acrylic: consisting of two (2) panes of 1/8" (3.2mm) acrylic Plexiglass®. (Available for Oval-type windows only).
3. 1/4" (6.4mm) Wire Glass: consisting of one pane of 1/4" (6.4mm) wire glass (exterior pane) and one pane of 1/8" (3.2mm) DSB glass (interior pane). (Available for Oval-type windows only).

#### 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 below):

1. 2" (51mm) or 3" (76mm): as normally-provided, as determined by door size.
2. 3" (76mm): as optionally-provided, regardless of door size, for promoting higher cycle life and durability.

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).



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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 cycle life shall be (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 fixtures shall be made from galvanized steel.
- B. Rollers: Rollers shall be 2" (50.8mm) or 3" (76.2mm) in diameter, consistent with track size. Rollers shall have hardened steel ball bearings.
- C. Perimeter Seal: Door shall be furnished with complete weather-stripping system to reduce air infiltration. Weather-stripping shall be replaceable without removal of track, mounting hardware, or door hardware.
  1. Bracket Mounted Doors: as optionally-provided with climate seal or vinyl seal with aluminum retainer (1399).
  2. Angle Mounted Doors: as normally-provided with angle clip on seal. Air leakage per foot of door perimeter (floor, jamb, and header) shall not exceed .81 CFM (22.9 L/Min) @ 25MPH (40.2km/hr). No air leakage shall be detected between section joints when tested in accordance with ASTM E-283.
- D. Accessory Lock: Door systems may be furnished with an 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).