



DesignForm™ Standard / Commercial Relante®

1.1 MANUFACTURERS

- A. Acceptable Manufacturer: Raynor, which is located at: 1101 East River Rd. P. O. Box 448 ; Dixon, IL 61021-0448; Toll Free Tel: 800-4-RAYNOR; Tel: 815-288-1431; Fax: 888-598-4790; Email: [request info \(thegarage@raynor.com\)](mailto:request info (thegarage@raynor.com)); Web: www.raynor.com

1.2 COMMERCIAL SECTIONAL RAISED PANEL DOOR

- A. DesignForm as manufactured by Raynor Garage Doors:
1. Doors:
 - a. Operation (select from list below):
 - 1) Provide doors designed for manual operation.
 - 2) Provide doors designed for hand chain operation.
 - 3) Provide doors designed for electric motor operation.
 - b. Jamb Construction (select from list below):
 - 1) Steel jambs with self-tapping fasteners.
 - 2) Wood jambs with lag screw fasteners.
 - 3) Masonry jambs with anchor bolt fasteners.
 - c. Structural Performance Requirements (insert required wind load psf):
 - 1) Wind Loads: Uniform pressure of: _____ psf.
 2. Sections:
 - a. DesignForm Standard:
 - 1) Sections shall be pressure bonded to injected polyurethane foam insulated core with interior and exterior skins separated by continuous thermal break. Hinge reinforcement plates shall be 19 gauge edge plates and 19 gauge center plates, located within section interior at every hinge location. End stiles to be 20 gauge galvanized steel. Sections shall feature a pinch-resistant, tongue-and-groove joint for weather-tight closure between sections.
 - 2) Material: Steel sandwich construction, 1-3/8 inches (35 mm) thick, roll formed from hot dipped galvanized steel complying with ASTM A 653. Exterior and interior skin to be constructed of 24 gauge embossed thickness steel. Exterior skin shall be woodgrain textured and interior skin shall be stucco textured. Exterior surface of sections shall feature embossed Colonial Raised Panels, Ranch Raised Panels or Flush Woodgrain Surface.
 - 3) Finish: Exterior skin to have two coats of paint, one primer coat and one finish coat (select from list below):
 - a) Color: White polyester paint.
 - b) Color: Almond polyester paint.
 - c) Color: ClayTone polyester paint.
 - d) Color: Dark Brown Kynar paint.
 - 4) Insulation: Injected polyurethane with R-value of 13.01.

- b. Seals: Bottom of door to have flexible U-shaped vinyl seal retained in aluminum rail. Optional blade seal on top section to prevent airflow above header
 - c. Trussing: Doors designed to withstand specified wind load. Deflection of door in horizontal position to be maximum of 1/120th of door width.
 - 3. Windows: Locations to comply with door elevation drawings. Select from list below:
 - a. Colonial style 17 inches by 12 inches (432 mm by 305 mm) minimum window encased in an extruded PVC frame.
 - b. Ranch style 40 inches by 12 inches (1016 mm by 305 mm) window minimum encased in an extruded PVC frame.
 - 4. Glazing: Windows to be provided with glazing units as follows (select from list below):
 - a. Single glass consisting of one pane of 1/8 inch (3.2 mm) thick DSB glass.
 - b. Insulated glass consisting of two panes of 1/8 inch (3.2 mm) thick glass.
 - 5. Mounting: Sections mounted in door opening using (select from list below):
 - a. Between-Jamb Bracket Mounting: sections mounted between door jambs, seal against exterior perimeter seal installed along vertical and top horizontal edges of jambs.
 - b. Lap Jamb Angle Mounting: section overlap door jambs by 1 inch (25 mm) on each side of door opening.
 - 6. Track:
 - a. Material: Hot-dipped galvanized steel (ASTM A 653), fully adjustable for adequate sealing of door to jamb or weatherseal.
 - b. Configuration Type (select from list below):
 - 1) Configuration Type: Normal Headroom.
 - 2) Configuration Type: Low Headroom.
 - 3) Configuration Type: Vertical Lift.
 - 4) Configuration Type: Lift-Clearance.
 - 5) Configuration Type: Incline.
 - 6) Configuration Type: Contour.
 - c. Track Size (select from list below):
 - 1) Size: 2 inches (51 mm).
 - 2) Size: 3 inches (76 mm).
 - d. Mounting (select from list below):
 - 1) Bracket-Mount using adjustable track brackets for use on 2-inch track 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 not less than 2-5/16 inches by 4 inches by 3/32 inch (59 by 102 by 2.5 mm) on 2-inch track and 3-1/2 inches by 5 inches by 1/8 inches (89 by 127 by 3.2 mm) on 3-inch track.
 - 3) Floor-to-Shaft Angle-Mount consisting of continuous angle extending from the floor, past header, completely up to door shaft for use with steel, wood, or masonry jambs. Continuous angle size not less than 2-5/16 inches by 4 inches by 3/32 inch (59 by 102 by 2.5 mm) on 2-inch track and 3-1/2 inches by 5 inches by 1/8 inches (89 by 127 by 3.2 mm) on 3-inch track.
 - e. Finish (select from list below):
 - 1) Galvanized.
 - 2) White Powdercoat.
 - 7. Counterbalance:
 - a. Counterbalance System: Provided with aircraft-type, galvanized steel

lifting cables with minimum safety factor of 5. Torsion Springs consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft. Specify cycle life below (up to 200,000)

- 1) Spring Cycle Requirements: Standard 10,000 cycles.
- 2) Spring Cycle Requirements: High cycle: _____ cycles.

8. Hardware (specify rollers below):
 - a. Hinges and Brackets: Fabricated from galvanized steel.
 - b. Track Rollers: 2 inches (50.8 mm) diameter consistent with track size, with hardened steel ball bearings.
 - c. Track Rollers: 3 inches (76.2 mm) diameter consistent with track size, with hardened steel ball bearings.
 - d. Perimeter Seal (optionally provided): Provide complete weather stripping system to reduce air infiltration. Weather stripping shall be replaceable.
 - 1) For bracket mounted doors provide climate seal or vinyl seal with aluminum retainer.
 - 2) For angle mounted doors provide angle clip-on seal.
 - e. Furnish door system with locks (optionally provided): Exterior lock with five-pin tumbler cylinder, night latch and steel bar engaging track.
 - f. Furnish door system with locks (optionally provided): Interior lock with dead bolt provided with hole to receive padlock provided by Owner.
9. DesignForm Limited Warranty: Raynor warrants the door sections against defects in material and workmanship, and deterioration due to rust-through for ten years from date of delivery to the original purchaser. Raynor also warrants the door sections against delamination of the insulation from the steel skins for ten years from date of delivery to the original purchaser. Window components are warranted against defects in material and workmanship for one year from date of delivery to the original purchaser. Raynor warrants all hardware and spring components against defects in material and workmanship for one year (or cycle life of the springs) from date of delivery to the original purchaser. Additional Limited Warranty requirements in accordance with manufacturer's full standard limited warranty documentation.