

SECTION 08360

POLYCARBONATE SECTIONAL OVERHEAD DOORS

PART 1 - GENERAL

1. SUMMARY

- A. Section includes Sectional Polycarbonate Overhead Doors.

2. RELATED SECTIONS

- A. 03 30 00 – Cast-In-Place Concrete.
- B. 04 20 00 – Unit Masonry Assemblies.
- C. 05 50 00 – Metal Fabrications.
- D. 06 10 00 – Rough Carpentry.
- E. 07 90 00 – Joint Seals.
- F. 08 70 00 – Door Hardware and Locks.
- G. 09 90 00 – Paints and Coatings.
- H. 11 15 00 – Parking Control Equipment: Remote door control.
- I. 16 05 00 – Electrical service and connections for powered operators.

3. REFERENCES

- A. ASTM International:
 - 1. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
 - 2. ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
 - 3. Door and Access Systems Manufacturers Association International:
 - a. DASMA 102 – Specification for Sectional Overhead Type Doors.
 - 4. ASTM D638-03 Standard Test Method for Tensile Properties of Plastics.
 - 5. ASTM D790-03 Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastic and Electrical Insulating Materials.

4. SUBMITTALS

- A. Submit under provisions of Section 01 30 00 – Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.

3. Installation methods.
 4. Operation and maintenance data.
 5. Nameplate data and rating for motors.
- C. Shop Drawings: Include opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- D. Selection Samples: Upon request furnish color samples or section sample.

5. SYSTEM DESCRIPTION

- A. Upward-acting Sectional Overhead Doors for vehicle passage which are factory-prefabricated and counter-balanced.
1. Panels: Extruded Hollow Multi-Wall Polycarbonate.

6. QUALITY ASSURANCE

- A. Provide doors, tracks, counter-balance mechanisms, hinges, rollers, and mounting hardware from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.
- B. Perform Work in accordance with DASMA 102, Application Type; Commercial.

7. QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years' experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years' experience in commercial overhead door installation and service.

8. WARRANTY

- A. Furnish five-year manufacturer's standard written warranty against material or manufacturing defect.
- B. Furnish one-year contractor's warranty.

PART 2 – PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Polycarbonate Sectional Doors:
1. American Garage Door Supply, Inc. – “Goliath Series – Gold Model”.
 2. Substitutions: Not permitted.

2.02 ARCHITECTURAL SERIES GLAZED ALUMINUM SECTIONAL OVERHEAD DOOR

- A. Sections:
1. 2-inch thick - 6063-T6 extruded aluminum framed sections.
 - a. Aluminum frame exterior surfaces to be beveled with tongue and groove meeting rail for optimum moisture drainage and weather tight seal.

- b. Bottom section rail to be 4" tall heavy duty to provide enhanced rigidity.
 2. Stiles to have minimum of .120" thick mounting surfaces for face hardware attachment.
 3. Sections constructed with a minimum 5-X wall, clear, sealed, 16 mm (5/8"), Polycarbonate panels with a minimum of 65% visibility.
 4. Sections assembled with fasteners constructed of stainless steel with flush head.
 5. Bottom section to include vinyl astragal secured with an aluminum-extruded retainer.
 6. Full Vision Panels: Provide (X) Full Vision Panels per door; constructed of 5/8" thick two-layer sealed acrylic panels, set with resilient glazing channel.
 7. All edges of the polycarbonate or acrylic panels wrapped in a neoprene tape to provide a weather tight seal.
 8. All exposed aluminum surfaces to receive an anodized finish that is in conformance with Aluminum Association Designation AA-M10C22A41. Color shall be "Clear". The anodized coating shall meet all standards set forth by AAMA 611.
- B. Tracks:
1. Tracks shall be three inch and a minimum of 12 Ga. galvanized steel construction and designed to utilize all available headroom.
 - a. Vertical tracks to have mounting angle.
 - b. Track bolts to be galvanized steel.
 - c. Horizontal tracks supplied with full length reinforcement angle, min. 14 Ga.
- C. Counterbalance Mechanism:
1. Cross-header shaft shall be two-piece solid keyed, 303 or 304 grade stainless steel.
 2. Helical-wound torsion springs to be galvanized steel with specialty coated aluminum die cast spring fittings with 1000 hour resistance in a salt spray test.
 - a. Standard Cycle Spring: 10,000 cycles.
 - b. High Cycle Spring: 25,000 cycles.
 - c. High Cycle Spring: 50,000 cycles.
 - d. High Cycle Spring: 100,000 cycles.
 - e. Maximum cycles in a single shaft line
 3. Counter-balance assemblies to include specialty coated: coupler and die-cast aluminum cable pick up drums able to withstand 1000 hour in a salt spray test.
 4. Pick-up cable constructed with 7 x 19 stainless steel and engineered with a 5 to 1 safety factor.
 5. All shaft bearing plates and head plates constructed of 12 Ga. stainless steel material with stainless steel greaseable bearings.

6. Headplates provided on high lift and vertical lift track configurations.

D. Hardware and Rollers:

1. Graduated end roller hinges, top and bottom fixtures and center hinges are a minimum of 12 Ga. stainless steel construction.
2. Roller shafts have stainless steel stems, wear-resistant UHMW polyethylene tires, and double-sealed precision ball bearings.
3. All hinge fasteners are 300 or 400 series plated stainless steel with stainless steel/rubber bonded washer.

E. Accessories:

1. Perimeter Weatherstripping: Extruded aluminum retainer; full height of the jamb, fitted with resilient flexible weatherstripping, placed in moderate contact with the door panels.
2. Head Weatherstripping: Dual-contact vinyl seal on full length of the top section.
3. Provide pusher springs (compression bumpers) on low headroom and standard lift track doors if equipped with jackshaft operators.

3. DOOR OPERATOR

1. "Fill in as required"

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

3.02 PREPARATION

- A. Contractor shall be responsible for ordering all parts, including track hanging materials, required to produce a complete operating system.
1. Contractor shall be responsible for corrosion resistance of all parts, mounting and fastening hardware, electric operator, and electrical enclosures and connections.
 2. Prepare opening to permit correct installation of the door unit(s).

3.03 INSTALLATION

- A. Anchor assembly to wall construction or building framing without distortion or stress.
- B. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- C. Fit and align door assembly including counter-balance hardware.
- D. Install perimeter weather stripping.

3.04 ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weather stripping.

3.05 CLEANING

- A. Remove temporary labels, coatings and visible markings.

3.06 PROTECTION OF INSTALLED CONSTRUCTION

- A. Do not permit construction traffic through overhead door openings during adjustment and cleaning.