This section includes aluminum glazed overhead sectional doors manufactured by Sunshine Doors Inc, with manual, chain or electric operation, with our without windows.

This section includes performance, proprietary, and descriptive type specifications; edit text to avoid conflicting requirements.

For more product information, contact Brian Kobialka (780) 722-8227 or e-mail Brian@SunshineDoor.CA , or visit www.sunshinedoor.com.

Part 1 General

1.1 SECTION INCLUDES

In this article, select the components or assemblies that are intended to be part of the content of this section and will not be included in other sections.

.1 Aluminum overhead sectional door.

.2 Glazing into aluminum sections.

.3 Operating hardware and tracks.

.4 [Manual] [Chain-Operated] [Electric] door operator.

1.2 RELATED SECTIONS

In this article, indicate those sections that inter-rely on this section. The listing below is only partial and should be edited to include those sections specific to the project that describe subjects or products that affect this section directly.

.1 Section 05 50 00 - Metal Fabrications: Steel [channel] opening frame.

.2 Section 06 10 13 - Wood Blocking and Curbing: Rough wood [blocking] [framing] for door opening.

.3 Section 07 92 00 - Joint Sealants: Perimeter sealant and backup materials.

.4 Section 08 71 00 - Door Hardware - General: Cylinder locks.

.5 Section 08 80 50 – Glass and Glazing: Glass for door lights.

.6 Division 26 - Electrical: Electrical service connection to door controller.

1.3 REFERENCES

Edit this article after editing the rest of this section. Only list reference standards below, that are included within the text of this section, when edited for a project specification delete other references that do not apply.

.1 AAMA 2603-13 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

.2 ANSI/DASMA 102 - 2011 – Specifications for Sectional Doors.

.3 ASTM B117-11 Standard Practice for Operating Salt Spray (Fog) Apparatus

.4 ASTM D523-14 - Standard Test Method for Specular Gloss

.5 ASTM D714-02(2009) Standard Test Method for Evaluating Degree of Blistering of Paints

.6 ASTM D1308-02(2013) Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes

.7 ASTM D3363-05(2011)e2 Standard Test Method for Film Hardness by Pencil Test

.8 ASTM D7091 - 13 - Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals

.9 ASTM E84-14 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 SYSTEM DESCRIPTION

Use this article carefully; restrict statements to describe the combined result of the components used to assemble the system. Do not repeat statements made in the Section Includes article.

.1 Panels: Aluminum frame panels with full-width polycarbonate glazing.

.2 Lift Type: [Vertical lift] [Standard lift] [High lift] [Low headroom] operating style with track and hardware.

.3 Operation: [Electric] [Pneumatic] [Chain hoist] [Manual pull], counter-balanced..

.4 Loads: Design and size components to withstand dead and live loads caused by pressure and suction of wind acting normal to plane of wall as measured in accordance with ANSI/DASMA 102.

1.5 SUBMITTALS FOR REVIEW

Do not request submittals if this specification section or drawings sufficiently describe the products of this section or if proprietary specifying is used. This requested review of submittals increases the possibility of unintended variations to the contract documents, thus increasing a consultant's liability. The following submittals are intended for review to determine eligibility for the project.

.1 Section 01 33 00: Submission procedures.

.2 Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, installation details and [_____].

.3 Product Data: Provide component construction, anchorage method, hardware, and [_____].

Include the following paragraph for submission of physical samples for selection of finish, colour, texture, etc.

.4 Samples: Submit [two (2)], aluminum and polycarbonate glazing panel samples, [<[_____] mm><<[_____] inch>>] in size, illustrating colour and finish.

1.6 SUBMITTALS FOR INFORMATION

The following submittals are for information only; do not request these submittals if the information submitted will be assessed for acceptability.

.1 Section 01 33 00: Submission procedures.

When manufacturer's written instructions for specific installation requirements are referenced in Part 3 Execution, include the following request for submittal of those instructions. Edit the Part 3 statements to avoid conflict with manufacturer's written instructions.

.2 Installation Data: Manufacturer's special installation requirements, special procedures, perimeter conditions requiring special attention, and [_____].

1.7 CLOSEOUT SUBMITTALS

The following submittals are for project closeout purposes; do not request these submittals if the information submitted will be assessed for acceptability.

.1 Section 01 78 10: Submission procedures.

.2 Operation and Maintenance Data:

.1 Include electrical control adjustments and [_____].

.2 Include data for [transmission] [motor] [shaft and gearing] , lubrication frequency, spare part sources.

Coordinate the following paragraph with the WARRANTY article.

.3 Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.8 QUALITY ASSURANCE

This article includes statements that require quality applicable to the whole section. If it is desirable or required for a manufacturer of a product to be certified, include such statement below.

.1 Products of This Section: Provide all Products and components specified in this section from one manufacturer.

.2 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum [ten (10)] years [documented] experience.

.3 Installer Qualifications: Company specializing in performing the work of this section with minimum [five (5)] years documented experience and approved by the manufacturer.

1.9 REGULATORY REQUIREMENTS

Only include this article when required by applicable code criteria.

.1 Conform to applicable code for motor and motor control requirements.

.2 Products Requiring Electrical Connection: Listed and classified by [testing firm acceptable to the authority having jurisdiction] [CSA] [UL] as suitable for the purpose specified.

1.10 DELIVERY, STORAGE AND HANDLING

.1 Door sections should be carried and handled in the upright position, on edge. Carrying flat may result in damage.

.2 Store in manufacture's unopened packaging until time of installation. Protect from moisture.

.3 Store in dry weather tight location.

1.11 WARRANTY

This article extends the warranty period beyond the one (1) year contract warranty period. Extended warranties add to construction cost and may present difficulties to the Owner by enforcing them. Specify with caution.

.1 Section 01 78 10: Warranties.

.2 Warranty: Manufacturer's five (5) year warranty against materials and workmanship of door sections.

.1 Include coverage of polycarbonate to manufacturers tolerances, including discolouration, loss of light transmission, and loss of strength due to weathering.

The following paragraph requests a manufacturer warranty; the request may not be effective as the manufacturer is outside the jurisdiction of the Owner/Contractor contract. Coordinate this paragraph with the Submittals at Project Closeout article.

.2 Provide [one (1)] year manufacturer warranty for electric operating equipment.

Part 2 Products

2.1 MANUFACTURERS

This article is for proprietary specifying with one or more manufacturers. Use the first and third paragraphs for specifying a single manufacturer. If specifying a product by reference to a standard only, delete this article.

.1 The Original Sunshine Door, manufactured by Sunshine Door Inc.
#105, 33 McKenzie Crescent
Red Deer County, Alberta T4S 2H4
Phone: 403.356.9472
www.sunshinedoor.com

Contact : Brian Kobialka
Email : Brian@SunshineDoor.CA
Tel : (780) 722-8227

.2 Supply Source:

Authorized Supply Only Dealers & Distributors
Authorized Supply & Install Dealers & Distributors
Contact Sunshine Door Inc for local dealer references.

.3 Substitutions: Not permitted .

2.2 MATERIALS

.1 Aluminum: Extruded, 6063-T5, 2 mm thick, 4 mm thick at hinge fastening locations.

Standard glass is clear, 16 mm (5/8 inch) thick polycarbonate. Acrylic is an alternate glazing. Refer to the manufacturer's literature for the wide variety of glazing and acrylic types and colours available.

.2 Glazing:

.1 Continuous full width Polycarbonate, Triple-wall construction, [<16 mm><<5/8 inch>>] thick, [clear] [white] [bronze] [blue] [silver grey] [blackberry] [Green] [Red] colour, with ultra-violet protection layer on the exterior surface.

Polycarbonate Thermal U-value 0.42 (R2.38)

Polycarbonate glazing must be complete as one unit the full width of the frame.

.2 Acrylic, dual-wall construction, [<19 mm><<3/4 inch>>] thick, wide port 2.5" rib spacing. Referenced as Clear View Wide Port Acrylic.

Thermal U-value 0.49 (R2.04)

Acrylic glazing must be complete as one unit the full width of the frame.

.3 Glazing gasket: Glazing wedge, compression fit rubber glazing wedge.

.4 Aluminum Finish: [Clear Anodized] [Black Anodized] [Painted white] [Thermosetting acrylic powder coating to AAMA 2603, PPG Duracron, colour [as selected]].

.5 Weatherstripping:

.1 Glazing: Thermoplastic vulcanizate, polyolefin based, recyclable. Santoprene 201-64.

.2 Between sections: Bulb weatherstripping, factory installed.

2.3 PANEL CONSTRUCTION

.1 Stiles and rails: Extruded aluminum frame stiles and rails, minimum 2 mm thick, and 4 mm thick at hardware fastening locations.

.1 Provide integral aluminum truss wall concealed within rail extrusion, from exterior to interior at the centre, on both interior and exterior frames. Truss wall to run whole width of door panel.

Select from the following panel configurations; delete inappropriate paragraphs.
Maximum sizes, for reference:
Maximum panel width (anodized or painted aluminum): 600 mm (24 inch).
Maximum panel length (mill finish): 9.1 m (30 ft) x 600 mm (24 inch) wide.
Section weight: 3 N/sq m (1.3 lb/sq ft).

.2 Panels:

.1 Glazing Panels: Polycarbonate, one-piece continuous triple-wall glazing, full width of panel, with extruded aluminum frame. Seal exterior glazing joints with gasket; do not use silicone.

.2 Glazing Panels: Acrylic, one-piece continuous dual-wall glazing, full width of panel, extruded aluminum frame.

.3 Infill Panels: Aluminum sheet both sides, with 13 mm (1/2 inch) insulation between, one-piece full width of panel, with extruded aluminum frame. Seal exterior glazing joints with gasket; do not use silicone.

.4 Infill Panels: Aluminum sheet one side (exterior) over 16 mm (5/8 inch) polycarbonate, one-piece full width section, extruded aluminum frame.

.5 Infill Panels: 24g steel sheet to one side (exterior) over 16 mm (5/8 inch) polycarbonate, one-piece full width section, extruded aluminum frame.

.6 Glazing of polycarbonate, acrylic, infill panels to be set and captured directly into the extruded aluminum framework. Add on glazing stops not permitted.

.7 Door Nominal Thickness: [<45 mm><<1-3/4 inches>>] thick.

2.4 HARDWARE COMPONENTS

Specify 2.0 mm (12 gauge) thick and 75 mm (3 inch) wide track where required to maintain performance requirements for doors larger than 9.3 sq m (100 sq ft). Refer to manufacturer's recommendations.

.1 Track: Rolled galvanized steel, [<1.3 mm><<16 gauge>>] [<2.0 mm><<12 gauge>>] thick; [<75 mm><<3 inch>>] [<50 mm><<2 inch>>] wide, continuous one piece per side; galvanized steel mounting brackets [<1.6 mm><<14 gauge>>] thick.

.2 Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of [stainless steel] [galvanized steel] ; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.

.3 Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables. Manual operation with maximum exertion of [<110 N><<25 lbs>>], force.

Coordinate this operator clause with other clauses. Delete electrical and control criteria if manual or chain operated.

.4 Operator: [Manual] [Chain] [Electric] [Pneumatic].

.5 Sill Weatherstripping: Fit to bottom of door panel, full length contact.

.6 Jamb Weatherstripping: Place full height of jamb, in moderate contact with door panels.

.7 Head Weatherstripping: One piece full length, fixed to top section.

.8 Panel Joint Weatherstripping: One piece full length, bulb weather stripping.

In the following paragraph, a locking door is usually associated with manually operated door assemblies; an electric disconnect is usually used with electric door assemblies.

.9 Lock: Inside [centre] [side] mounted, adjustable keeper, spring activated latch bar with feature to retain in locked or retracted position; [interior] [exterior] handle; lock [master keyed] [keyed differently] [keyed to Section 08 71 00] [keyed alike] .

2.5 ELECTRICAL CHARACTERISTICS AND COMPONENTS

Include and edit this article for electric operation. Select one or more of the following subparagraphs appropriate to the equipment requirements.

.1 Electrical Characteristics:

.1 [<250 W><<1/3 hp>>] [<375 W><<1/2 hp>>] , [[_____] rated load amperes] ; manually operable in case of power failure, transit speed of [<300 mm><<12 inches>>], per second.

.2 [_____] volts, [single] [three] phase, 60 Hz.

.3 [_____] amperes maximum [overcurrent protection] [circuit breaker size] [fuse size] . [[_____] minimum circuit capacity] .

.4 [_____] percent minimum power factor at rated load.

.5 Refer to Section 26 05 80 - Equipment Wiring: Electrical connections.

NEMA Type 1 is General Purpose, Type 4 is Totally Enclosed.

.2 Motor: [CAN/CSA C22.2 No. 100] [Refer to Section 23 05 13] [NEMA MG1, Type [_____]] .

.3 Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.

.4 Disconnect Switch: Factory mount disconnect switch [on equipment to Section 26 05 80] [in control panel].

.5 Electric Operator:

.1 [Side mounted on cross head shaft] [Centre mounted draw bar assembly] [Centre mounted on cross head shaft], adjustable safety friction clutch.

.2 Brake system actuated by independent voltage solenoid controlled by motor starter; enclosed gear driven limit switch; enclosed magnetic cross line reversing starter; mounting brackets and hardware.

Select and edit one of the following two paragraphs. Select type and quantity of control stations when specifying electric motors.

.6 Control Station:

.1 Standard [one (1)] [three (3)] button (open-close-stop) [momentary] [continuous pressure] type, control for each electric operator; [24] volt circuit, [recessed] [surface mounted] .

.2 Include key operated switch located [at exterior location indicated] [inside door jamb].

Expand the following paragraph with text description appropriate to project requirements when applicable.

.7 Interconnection to Security System: [_____].

Select and expand one or more of the following three paragraphs with text description appropriate to project requirements.

.8 Radio Control Antenna Detector: [_____].

.9 [Loop Detector] [Treadle]: [_____].

.10 Hand Held Transmitter: Digital control, resettable.

.11 Safety Edge: At bottom of door panel, full width; [electro-mechanical] sensitized type, wired to [stop] [reverse] door upon striking object; hollow [rubber] [neoprene] covered to provide weatherstrip seal.

2.6 FINISHES

Select and edit only the following paragraphs that apply. Sunshine Door produce standard powder coated door panels, and uncoated (galvanized) hardware and track.

.1 Door Panels:

.1 [Clear anodized] [Black anodized] [Painted white] [Precoat with thermosetting acrylic finish, colour [clear] [as selected]].

.2 Track: [Uncoated] [as selected].

.3 Hardware: [Uncoated] [as selected].

Part 3 Execution

3.1 EXAMINATION

.1 Section 01 70 00: Verify existing conditions before starting work.

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

.3 Verify that electric power is available and of the correct characteristics.

3.2 PREPARATION

.1 Prepare opening to permit correct installation of door unit to perimeter air and vapour barrier seal.

.2 Apply primer to wood frame.

3.3 STORAGE

.1 Store in a clean dry space with moderate temperature and low humidity.

.2 Store in a vertical position to prevent moisture, dust, or other contaminants from settling on the sections.

.3 Do not lay flat.

.4 Leave protective packaging in place until installation, with the exception of any adhesive packaging which must be removed within 30 days of manufacturing.

.5 Do not stack sharp, heavy, or abrasive items on nor against the Sunshine Door products.

3.4 INSTALLATION

Only include the following paragraph if a manufacturer actually publishes installation instructions many do not. If the manufacturer does NOT publish such a document, ensure all install criteria that is important to the project, is specified below.

.1 Install door unit assembly to manufacturer written instructions.

.2 Anchor assembly to wall construction and building framing without distortion or stress.

.3 Securely brace door tracks suspended from structure. Secure tracks to structural members only.

.4 Fit and align door assembly including hardware.

.5 Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components. Final connection of electrical service to be performed by qualified personnel.

.6 Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07 92 00.

.7 Install [perimeter trim] [closures].

3.5 ERECTION TOLERANCES

Do not assume that there are industry standards for tolerances. Specify tolerances below as appropriate to the nature or character of the project. Verify that such tolerances are realistic and realizable.

.1 Section 01 73 00: Tolerances.

.2 Maximum Variation from Plumb: [<1.5 mm><<1/16 inch>>].

.3 Maximum Variation from Level: [<1.5 mm><<1/16 inch>>].

.4 Longitudinal or Diagonal Warp: Plus or minus [<3 mm><<1/8 inch>>], from [<3 m><<10 ft>>] straight edge.

.5 Maintain dimensional tolerances and alignment with adjacent work.

3.6 MANUFACTURER'S FIELD SERVICES

This article is included to assist in field quality control of work being installed. The legal affect of this type of article is questionable and will not relieve the design professional of legal responsibility for the work described in this section. Specify with some measure of caution.

.1 Section 01 78 10: Prepare and start components.

.2 Ensure the operation and adjustments to door assembly for specified operation.

3.7 ADJUSTING

.1 Adjust door assembly to smooth operation and in full contact with weatherstripping.

3.8 CLEANING

This article is intended to supplement cleaning requirements specified in Division 01 sections. Edit this article to supplement Division 01 statements.

.1 Section 01 74 00: Cleaning installed work.

.2 Clean only if or as required [frames] [doors] [polycarbonate][acrylic].

.3 Clean with only a light horizontal motion using a soft nonabrasive cloth and mild dish soap with warm water for cleaning.

.4 Remove [temporary] labels and visible markings.

3.9 PROTECTION OF FINISHED WORK

.1 Section 01 78 40: Protecting installed work.

.2 Do not permit construction traffic through overhead door openings after adjustment and cleaning.

END OF SECTION