

Specifications for The Cygnus Panel System

Part 1-General

1.01 Description

Work Included: Work includes all labor, equipment and materials necessary for fabrication and erection of curtain wall panels consisting of the following:

Steel framing
Metal deck
Ceramic or stone cladding
Structural Silicone
Silicone sealant
Spacer/Bond Breaker

1.02 Quality Assurance

- A. Fabricator/erector shall be a Cygnus licensee.
- B. Source Quality Control: Provide Architect with full access to the fabrication plant during panel fabrication.
- C. Fabricator shall follow the guidelines established in the "Procedure Manual for the Design and Manufacture of the Cygnus Panel System," dated May, 1998.

1.03 Submittals

Shop Drawings: Submit shop drawings. Include 1/4" scale building elevations with panel types indicated, detail drawing of each panel type, connection and bracing detail.

- B. Engineering Calculations: Submit engineering calculations sufficient to establish conformance of structural framing design to the performance criteria.

1.041 Warranty

Warranty completed wall assembly against defects in materials and workmanship for a period of one year from date of substantial completion of the project.

Part 2-Products

2.01 Panel Framing Materials

Structural Steel Studs and Related Metal:

- 1. General: Type, size and spacing of all punched metal structural stud framing members, track and fasteners as shown on drawings.

Use standard quality steel with min. yield point of 40,000 psi, ASTM A36 A579 Grade E or A611-97 Grade C.

2. Finish: All framing components to be galvanized or receive coat of rust-resistant paint.

- B. Steel Tubes and Angles:
 - 1. Angles: Conform to ASTM F1554-99.
 - 2. Tubes: Conform to ASTM A500-99 or A501-99.

2.02 Steel Deck

- A. Material: Form decking from steel sheets conforming to ASTM A-611-97 Grade C or equal.

B. Finish: Hot-dipped galvanized conforming to ASTM A653 for zinc-coated deck G-60.

- C. Type: Type F or B or equal 22 gauge.

2.03 Cladding

As selected by the Architect shall be suitable for exterior use and comparable with the Cygnus Panel System.

2.04 Structural Silicone

Dow Corning 795, Tremco Spectrem 2, or approved equal.

2.05 Sealant Materials

- A. Sealant for joints within a panel: Dow Corning 795, Tremco Spectrem 2, or approved equal.
 - B. Sealant for panel to panel joints: Dow Corning 795 or approved equal.
 - C. Backer Rods, round, flexible, continuous length, extruded polyethylene foam sized for minimum 30% compression when inserted in the joint.
 - D. Spacer/Bond Breaker, Vinyl foam, or polyethylene tape of size indicated on drawings compatible with silicone sealant.
- 2.06 Mechanical Fastener/Leveling Device*
If a mechanical anchor is used, it will be the Cygnus Mechanical Fastener/Leveling Device or approved equal.

Part 3-Panel Fabrication

3.01 Framing

Prefabricate framing components into panels prior to erection. Cut framing components squarely or at an angle to

fit squarely against abutting members. Hold members firmly in position until properly fastened. Attachments of similar components shall be done by welding. Weld all joints. Seat studs squarely in the track with the stud web and flange abutting the track web, plumbed or aligned and securely attach to the flanges or web or both the upper and lower tracks. Splices in axial loaded studs will not be permitted. All welds shall be fillet, plug, butt or seam. Construct corners sections per details on drawings. Weld all intersections of tubes and weld to stud track as indicated. Grind all welds smooth at panel edges and both faces.

3.02 Steel Deck

Attach steel deck flutes to stud channels with corrosion resistant # 10 TEKs or a method approved by the design engineer.

3.03 Preparation for Cladding

Touch up all weld burns on steel studs, tube frames and supports with primer thatching original shop primer.

3.04 Spacer/Bond Breaker

Apply bond breaker tape at all panel edges and at joint when indicated on drawings.

3.05 Cladding Attachment

- A. Adhesive Application: Apply Structural Silicone sealant. Amount of silicone used is determined by design requirements. The positioning and alignment of the structural silicone, as well as the amount used, shall be as outlined in the "Procedure Manual for the Design and Manufacture of the Cygnus Panel System," dated May, 1988.
- B. Cladding Installation: Position cladding accurately over silicone, maintain width of joint indicated on drawings and press firmly into place. Clean adhesive immediately from face of cladding using methods recommended by manufacture. Cure as recommended by the Procedure Manual for the Design and Manufacture of the Cygnus Panel System," dated May, 1988 before moving panels.
- C. Fabrication Tolerances: Fabricate and furnish within the following tolerances.
Length: 20' and under. +/- 3/16".

Height: +/- 1/8".

Out of Square: 1/8" per 6' of length or 1/4" per panel, whichever is greater.

Tolerances not specified above: 1/6" per 10' or 1/8" per panel, whichever is greater.

Part 4-Erection

4.01 Inspection

Prior to start of erection, examine job conditions which affect execution, performance or quality of workmanship required. Do not proceed with erection until existing unsatisfactory conditions are corrected, adjusted or otherwise controlled.

4.02 Preparation

Field Measurements: Prior to fabrication of corner panels, filler panels or other dimensionally critical panels, make all field measurements necessary to insure correct fit.

4.03 Erection

- A. Alignment: Align and level panels as required by shop drawings and within allowable tolerances.
- B. Attachment Attach panels to structural frame with welded or bolted connections as indicated. protect cladding on panels from damage by field welding.
- C. Erection Tolerances: Erect panels with joints in position indicated within the following tolerances:
Face width of joints: Drawing dimension +/- 3/16".
Step in Face: +/- 3/16".