Fiberglass Columns

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Architectural Specification

1.0 General

1.1 Description:

A. Columns shall be Architectural Mall, Inc **FRP / FGP** fiberglass columns or column covers

B. Column Style (Select One): Round Tapered, Round Non Tapered, Square Tapered, Square Non Tapered, Round Non Tapered Twist, Barrel

C. Plain or Fluted (Select One)

D. If Columns selected are fluted, please specify fluting at bottom shaft to be _" above base (we will alter during manufacturing)

E. Square Columns are to be (Select One): Cast Spun or Fiberglass Cover (1/4" +/- wall thickness)

F. Select Cap Style (Depending on Shaft Not All Style Available, please call for more details) Tuscan, Round Tuscan, Doric, Roman Corinthian, Roman Ionic, Temple of the Winds, Scamozzi

G. Select Base Style (Depending on Shaft Not All Style Available, please call for more details) Tuscan, Round Tuscan, Doric, Attic, Round Attic

1.2 Submittals

A. Submit Architectural Mall, Inc literature and shop drawings

B. Submit sample of column shaft.

C. Field samples shall be capable of being incorporated into the actual construction.

1.3 Warranty

A. The columns shall be guaranteed in writing against defects of materials or workmanship for a period of limited lifetime from date of Substantial Completion of the project.

B. Columns must be installed following Architectural Mall, Inc guidelines.

1.4 Verification of Design

A. The components indicated on the drawings show dimensions established to accomplish the Architect's intended visual result and to conform to the building's configuration. The contractor shall verify that all components that will actually be provided for the work of this section will fit the building's structural elements and conform to the visual design criteria indicated on the drawings without materially altering profiles and alignments.

B. Any additional support or backing components shall be provided by the installing contractor as part of the work of this section.

2.0 Products

2.1 Acceptable Manufacturer

Architectural Mall, Inc
323 St Paul Blvd
Carol Stream, IL 60188
T. 877-279-9993
F. 844-817-0480
www.columnsandbalustrades.com
sales@architecturalmall.com

2.2 Fiberglass and Resin Materials

A. Glass cloth, matt and "chop" shall be equal to the products of PPG-Owens Corning.

B. Polyester resins shall be Class A. The resin will be flame retardant promoted thixotropic polyester resin designed for use in hand lay-up and spray-up processes. This resin is specifically formulated for use in applications that require an ASTM-84, Class 1 flame spread rating, without the use of fillers or antimony trioxide, with an ASTM-84 flame spread rating of 10 unfilled.

C. Final ratio of materials shall be 30% fiber 70% resin for the body of components.

D. Shaft thickness shall be 1/4" to 1" depending on size.

E. Allowable Tolerances

1. Wind Load Resistance:
   a. FRP Components when installed shall resist all wind loading.
   b. Minimum wind loading requirements as per Standard Building Code.
2. Dimensional Tolerances of Finished Units
   a. (1) Dimensions 10' or under: +/- 1/4".
      (2) Dimensions 10' to 20': +/- 3/8".
   b. Out of Square: 1/8" per 6.'

3.0 Material Properties

3.1 Physical Properties (1/8" Glass Mat Laminate)

Typical Properties	**Typical Range**
A. Flexural Strength, psi 77 degrees F	15,000 - 20,000
B. Flexural Modulus, psi 77 degrees F	550,000 - 700,000
C. Tensile Strength, psi 77 degrees F	10,000 - 18,000
D.Tensile Modulus, psi 77 degrees F	700,000 - 850,000
E. Barcol Hardness	45 - 55
F. Glass Content 0/0	24% - 29.5%
G. Compression Strength, psi	15,000 - 20,000
H. Water Absorption	.04% - .05%
I. Thermal Expansion (in./in./ft.)	.000011 - .000012

3.2 Flammability Properties (1/8" Glass Mat Laminate)

A. ASTM E-84 Tunnel Test = 10 (unfilled)

B. HLT-15 Rating = 100

C. ASTM D-635-74 = AEB<1.0 CM, ATB<5 sec.

D. ASTM D-2863-74 Oxygen Index = 36.5

4.0 Execution

4.1 Delivery

A. Deliver Materials in original packages, containers, or bundles bearing brand name & identification of manufacturer or supplier. General Customer to unload and store materials onsite under cover and in manner to keep them dry, protected from weather, direct sunlight, surface contamination, corrosion, and damage from construction traffic and other causes.

B. Handle materials and products to prevent damages to edges, ends, or surfaces

4.2 Installation

A. Follow manufacturers detailed installation guidelines. They are available online or by calling 877-279-9993.
B. Recommend Caulk for all joints is NP1 Sonolastic or equal
C. Fiberglass Columns are recommended to be sanded, primed, and painted.
D. Square Fiberglass Lite Columns have a marine grade gel coat.