

Weathering

All fiberglass pultruded parts will experience some degradation after prolonged exposure to outdoor weathering. Pultruded fiberglass components have excellent corrosion and temperature resistance but can be attacked by UV. Degradation first becomes apparent when the pultruded component surface loses its shiny appearance and gloss. Over longer periods and in severe cases, the fiberglass closest to the surface will become exposed; however, even in this advanced state, the physical properties of the pultruded part are not compromised by this surface degradation. The Champion Strut fiberglass channel framing system includes dark pigments, UV stabilizers and a surfacing veil to inhibit the effects of weathering and UV degradation. The surfacing veil provides a resin-rich surface which inhibits weathering and acts as a barrier from UV degradation between the surface and the top layer of the fiberglass-reinforced pultruded component. The addition of pigments used within the resin also slow the effects of weathering. The best overall method to protect pultruded components from the effects of outdoor weathering is to apply a protective coating. Champion recommends coating the pultruded components with an outdoor urethane or acrylate paint. This will protect the pultruded components from the future effects of weathering and prolong the fiberglass channel framing system life.

If your application will experience extreme exposure to ultraviolet, please contact Champion Fiberglass to discuss the extreme ultraviolet-resistant fiberglass channel framing system options that are available.

Handling and Storage

Transportation

Fiberglass channels are shipped in self-supporting crates designed to be unloaded by forklift. Crates should not be dropped from the truck trailer flatbeds. Fiberglass channels may also be shipped via enclosed vans in bundles. Smaller lengths of channel (under 5 ft) can be shipped via common courier delivery service.

Storage

- **Fiberglass channel** crates should be stored on a flat, level surface. The wooden frames should line up so the load will be transferred to the wood frames rather than the channel. The height of stacked channel should be limited to 12 ft.
- **Channel accessories**, when stored outdoors, should be under cover to protect items in cartons from the outdoor elements until ready for installation.

Champion Strut™ Specifications

1.0 Scope

- 1.1 This specification covers the requirements for the Champion Strut fiberglass channel framing system

2.0 Materials

- 2.1 Channels shall be pultruded from fire-resistant polyester and vinyl ester resins. Polyester and vinyl ester resins utilized will have a fire-retardant rating of 25 or less when tested in accordance with ASTM E-84 and exhibit low smoke generation. Polyester resin channels provided will be dark grey in color (CS-S Series channels) or light grey in color (CS-SST Series channels). Vinyl ester channels provided will be beige in color (CS-S Series channels and CS-SST Series channels). Special colors are available upon request.
- 2.2 Some channel accessories will be constructed from pultruded polyester and vinyl ester materials. Other channel accessories will be injection molded from long glass fiber-reinforced polyurethane resin.

3.0 Composition

- 3.1 Glass-reinforced channels will be constructed with 70% glass and 30% resin. Channels will utilize UV-stabilized resins (polyester or vinyl ester) and incorporate UV-resistant surfacing veil into the laminate. Surfacing veils will be applied to all exterior surfaces to improve weatherability and inhibit ultraviolet degradation.
- 3.2 Glass-reinforced channel accessories will be injection molded from 40% long glass fiber polyurethane resin. Channel accessories will incorporate dark grey pigments to improve weatherability and inhibit ultraviolet degradation.

4.0 Structural Design

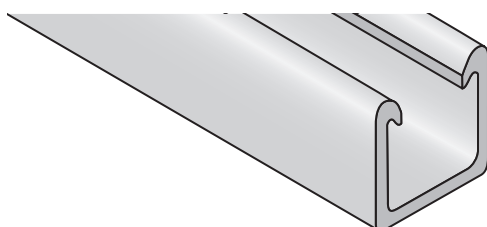
- 4.1 Champion Strut™ CS-S Series channel profile is designed to allow complete engagement and maximum pull-out strength of channel accessories. Flange design provides maximum strength compared to traditional fiberglass channel profile flange designs and permits greater torquing of accessories without failure.

The Champion Strut CS-SST Series channel profile is designed strictly to be used with traditional steel pipe clamps. Champion Strut CS-SST Series channel profile is not designed to be used with any polyurethane channel accessories pictured in this catalog. The CS-SST Series channel flange design will not interlock correctly with these accessories causing potential failures.

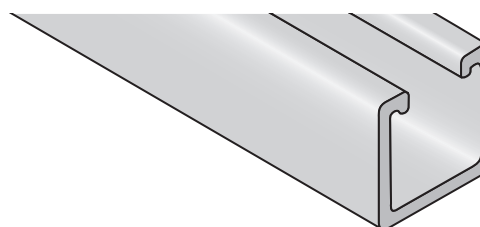
- 4.2 Champion Strut channel profiles will be offered in the following sizes:

CS-S SERIES	CS-SST SERIES
1-1/2" x 1-1/8" x 1/8"	1-5/8" x 1-1/8" x 3/16"
1-1/2" x 2-1/4" x 1/8"	1-5/8" x 2-1/4" x 3/16"
1-5/8" x 1-5/8" x 1/4"	1-5/8" x 1-5/8" x 3/16"
1-5/8" x 3-1/4" x 1/4"	1-5/8" x 3-1/4" x 3/16"

CS-S Series



CS-SST Series



- 4.3 Champion Strut CS-S Series channel profile will have a minimum flange pull-out strength of 1,000 lbs over 3/4"-long section of inside flange.

- 4.4 Champion Strut channel lengths shall be standardly supplied in 10-ft lengths with 20-ft lengths available upon special request.

5.0 Standards

- 5.1 Champion Strut channel shall conform to UL94VO self-extinguishing flammability standard.
- 5.2 Champion Strut shall have a flame spread rating of 25 or less when tested per ASTM E-84.
- 5.3 Champion Strut channel complies with the requirements of ASTM D-3917 and ASTM D-4385 which govern the dimensional tolerances and visual defects of pultruded shapes.

6.0 Quality Assurance

- 6.1 Manufacturer shall have a current Certificate, issued by an independent and accredited company, of compliance with an ISO 9001: 2015 Quality Management System.

7.0 General

- 7.1 Champion Strut shall be supplied as a system including all necessary non-metallic components (fasteners, hangers, pipe clamps, channel splice plates, brackets, beam clamps, etc.)
- 7.2 All Champion Strut components supplied shall be non-metallic except where 316 stainless steel hardware is used as part of the specific component.
- 7.3 Non-metallic fasteners shall be manufactured from long glass fiber-reinforced polyurethane. These fasteners combine high levels of stiffness, strength and toughness all together in a single material. No other method of reinforcing melt processable thermoplastic is able to match their performance properties.
- 7.4 Champion Strut is manufactured in the U.S.A. (Spring, TX) by Champion Fiberglass.

8.0 Environmental

Manufacturer shall have a current Certificate, issued by an independent and accredited company, of compliance with an ISO 14001: Environmental Management Systems and Performance.