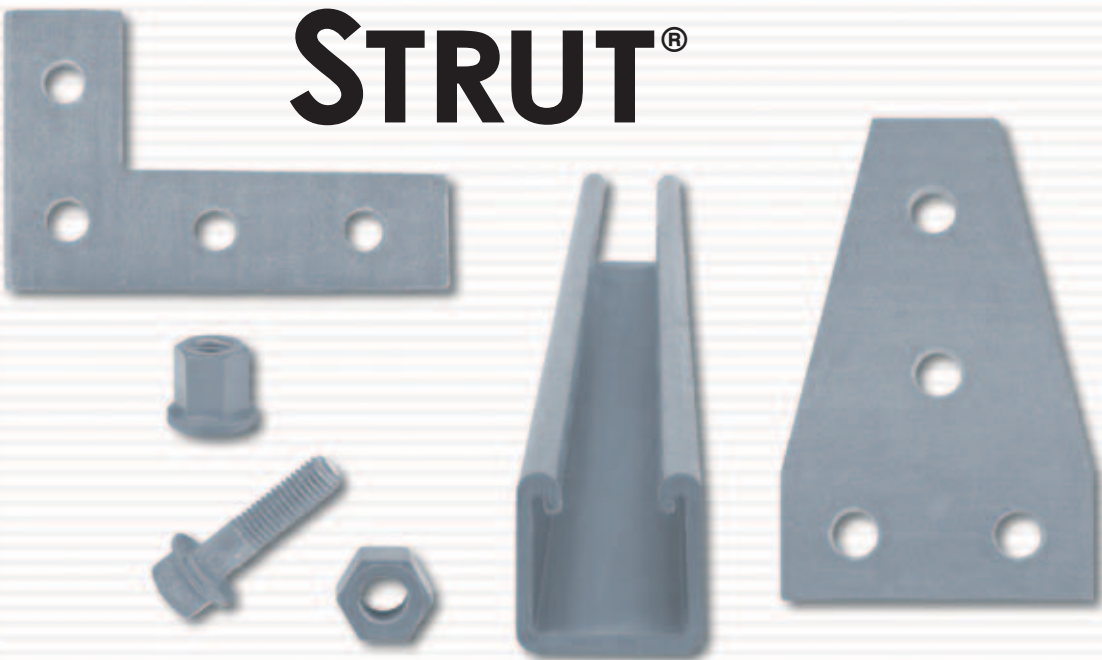


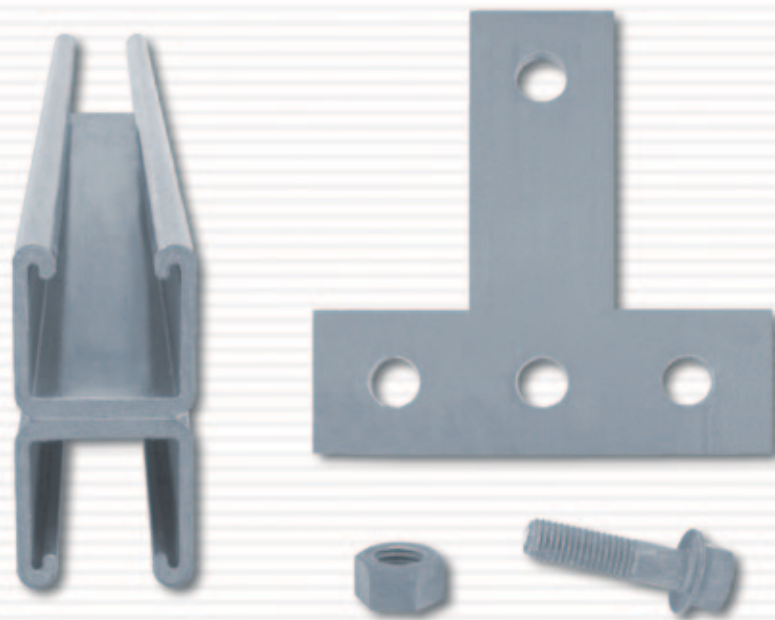
CHAMPION STRUT®



**CHAMPION
FIBERGLASS®**

ISO 9001:2008 Certified

*Quality Fiberglass Products
For the Electrical Industry*





Champion Fiberglass, Inc., is the leading manufacturer of fiberglass conduit, strut and bridge hanger for the electrical and mechanical markets. Our headquarters and manufacturing are located in Spring, Texas.

Champion Fiberglass, began production of epoxy fiberglass conduit and fittings in 1988. The company has the most advanced production facilities for manufacturing fiberglass conduit in North America. A well-trained and highly efficient work force utilizes proprietary high-speed winding equipment and high temperature curing ovens to ensure consistent production standards to produce the highest quality fiberglass conduit on the market.

In 1989, Champion Fiberglass developed the first conduit from epoxy resins that had flame resistance and low smoke characteristics, meeting the most stringent codes and specifications. Today this conduit system has been integrated into the **CHAMPION DUCT**® system and is **UL** and **CSA listed** for both below and above ground use.

Another milestone evolved in 2006 when Champion Fiberglass completed development of a Phenolic Conduit System, **FLAME SHIELD**®. It is now the number one choice conduit for subways, including tunnels and stations.

FLAME SHIELD conforms to the **NFPA 130** requirements, including the 2010 edition.

In 2008, **CHAMPION HAZ DUCT**® (XW Type fiberglass conduit) was allowed for use in **Class I Div 2** installations, per the **National Electrical Code** (NEC). This was accomplished by Champion Fiberglass after having worked with UL and NEC on this issue for many years.

Champion Fiberglass is a **ISO 9001:2008 Certified Company**. We offer our customers innovative solutions with the highest quality products and customer service available in our industry.



CHAMPION STRUT®

Features and Advantages 4

Engineering 5

Definition of Load Data 6 - 7

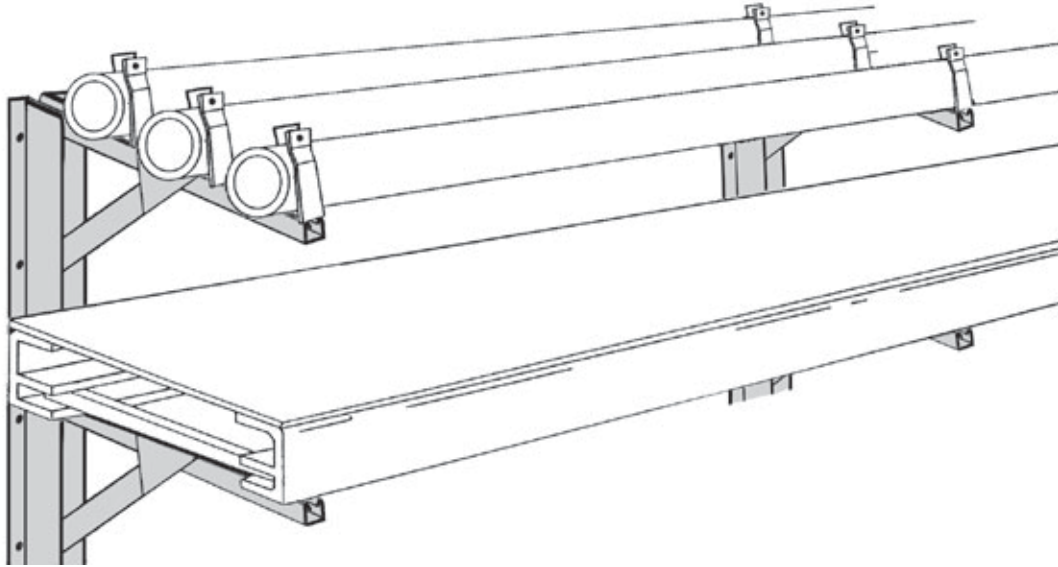
Connector Plates 8 - 9

Accessories 10 - 11

CHAMPION THREAD™ & Fasteners 12

Instrument Pipe Support 13

Corrosion Resistance Guide 14



CHAMPION STRUT®- the obvious solution for corrosive environments.

- > **Corrosion resistant.** (See the corrosion chart on page 14)
For assistance, contact our engineers for proper selection.
- > Complete system of fiberglass components.
- > Includes strut (channel) and a wide variety of fittings, threaded rods, nuts and accessories.
- > Available in both POLYESTER and VINYLESTER resins.
- > Supplied in standard 10 ft. lengths.
- > Offers the following advantages:
 - Competitively priced in comparison to stainless steel
 - Resistant to sunlight (UV resistant)
 - Easy to field drill and cut
 - Lightweight
 - Fire retardant

All of the strut and most of the fittings are manufactured by the PULTRUSION process. Continuous strands and mats of glass fiber are immersed in the resin and then pulled through a heated die. By this process, many different shapes can be manufactured. Special UV additives along with a polyester surface veil are added to give the components increased UV and corrosion resistance.

Temperature & Physical Properties

(See Pages 6-7 for Load Data and Deflection for each individual section)

Effects of Temperature

Temperature °F	Temperature (°C)	Approximate Percent of Strength	
		Polyester	Vinylester
75°	(24)	100%	100%
100°	(37)	90%	100%
125°	(51)	78%	100%
150°	(65)	68%	90%
175°	(78)	60%	85%
200°	(92)	52%	70%

Strength properties are reduced when continuously exposed to elevated temperatures. Working loads shall be reduced based on the above. If unusual temperature conditions exist, consult the factory.

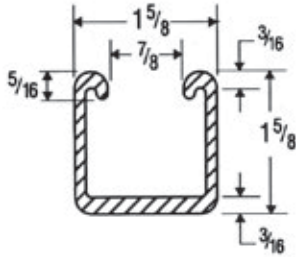
Typical Physical Properties

Tensile Strength	40,000 psi	(275 MPa)
Flexural Strength	45,000 psi	(310 MPa)
Flexural Modulus	2.5 x 10 ⁶ psi	(17.2 GPa)
Compressive Strength	25,000 psi	(172 MPa)
Specific Gravity	1.7	(1.7)
Coefficient of Thermal Expansion (Longitudinal)	5 x 10 ⁻⁶ in/in/°F	(2.8 m/m/°C)
Moisture Absorption	<1%, 24 hrs. at 70°F	(<1%, 24 hrs. at 21°C)
UL94 Flammability Classification	V-0	(V-0)
ASTM E84 - Flame Spread Index	<25	(<25)
- Flammability Rating	Class I	(Class I)
Surface Resistivity	<1.0 x 10 ⁴ Ω	(<1.0 x 10 ⁴ Ω)
Volume Resistivity	<1.0 x 10 ⁶ Ωcm	(<1.0 x 10 ⁶ Ωcm)

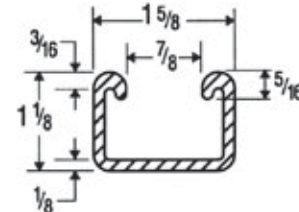
Definition of Load Data

All load data are given for the two most common cases:

- Concentrated load (often called point load)
- Uniform load, i.e. where the load is spread evenly across the span length

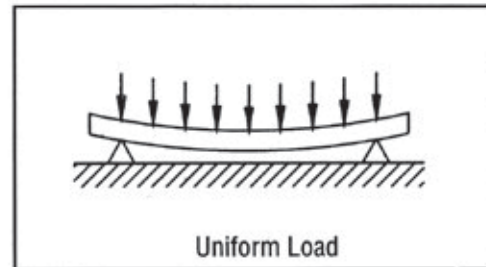
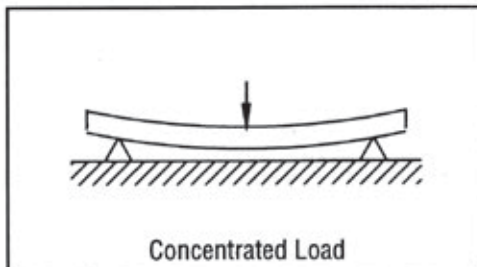
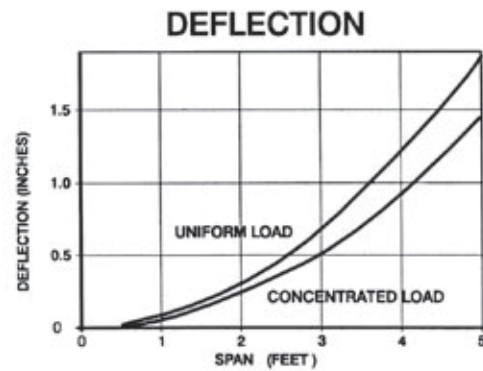
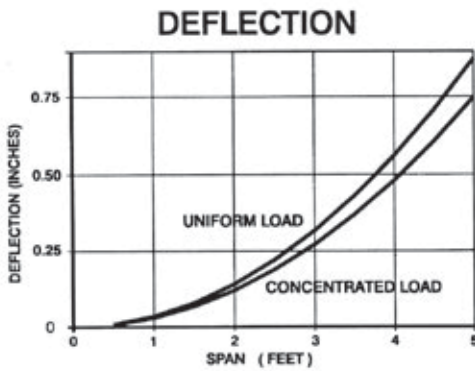
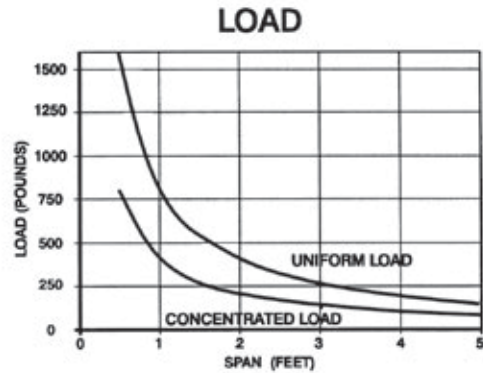
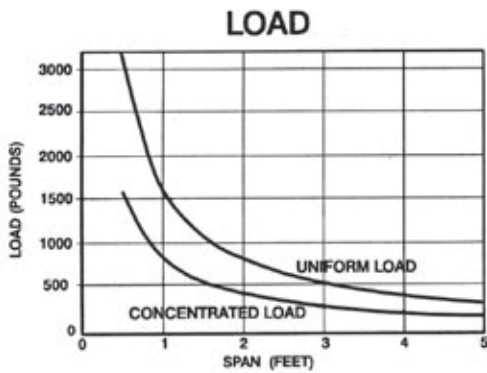


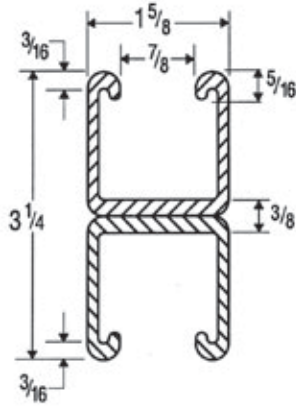
CS-S-15-10-P/V*



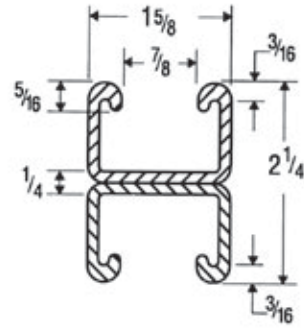
CS-S-11-10-P/V*

**Use P for Polyester resin and V for Vinylester resin.*



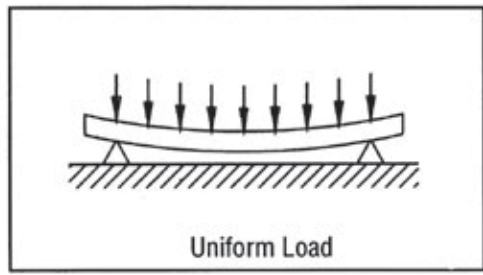
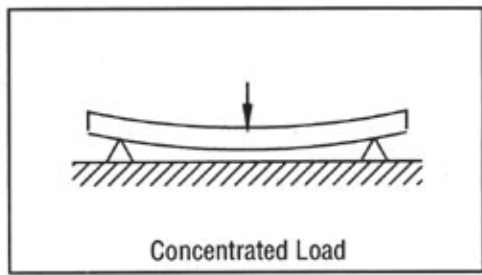
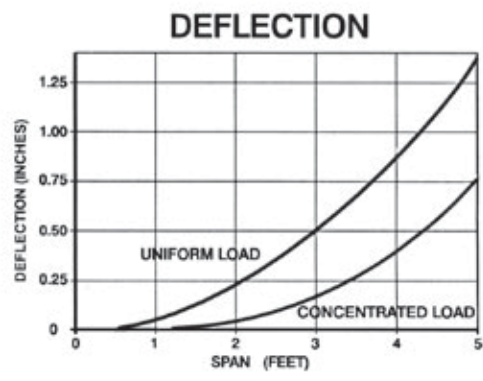
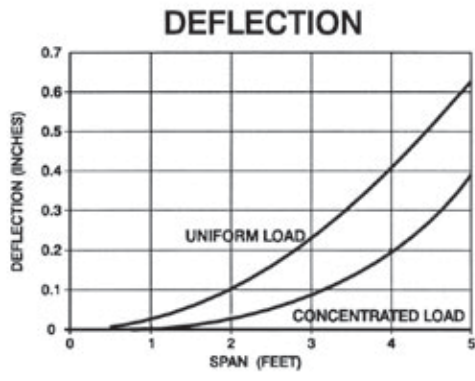
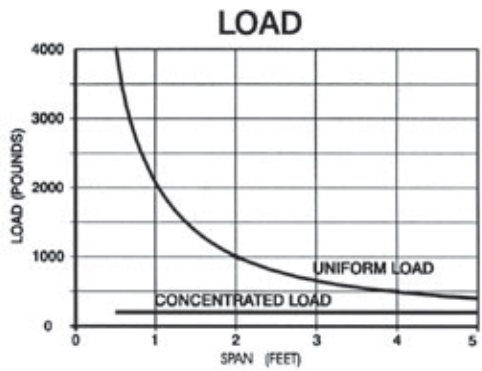
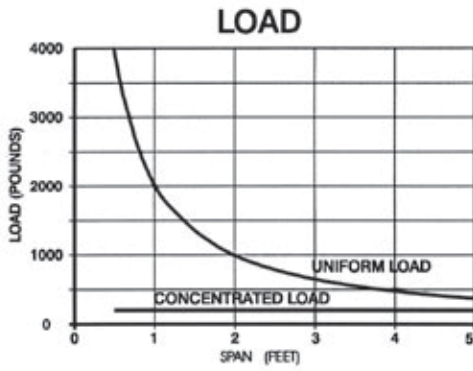


CS-S-15D-10-P/V*



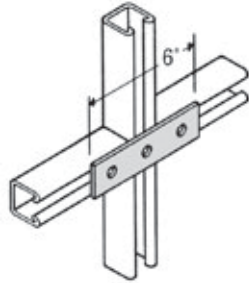
CS-S-11D-10-P/V*

**Use P for Polyester resin and V for Vinylester resin.*

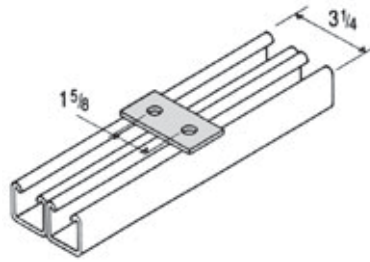


Connector Plates

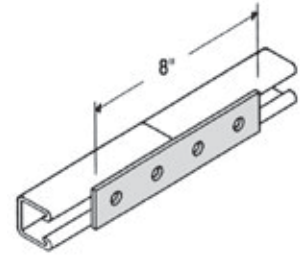
- Holes are drilled to accept 3/8" and 1/2" bolts



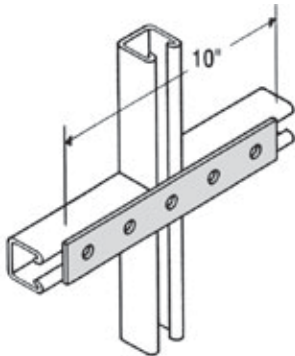
CS-101
3 Hole Flat



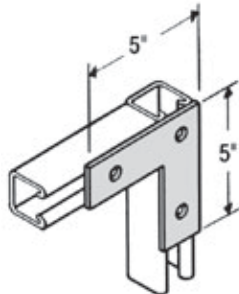
CS-102
2 Hole Flat



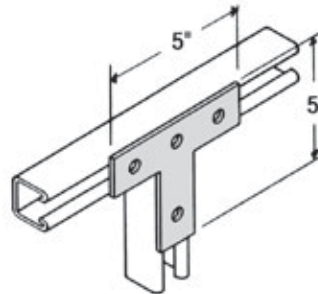
CS-104
4 Hole Straight



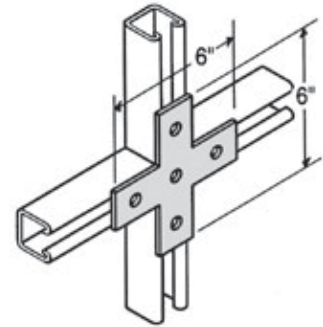
CS-105
5 Hole Straight



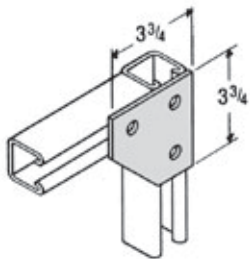
CS-109
Flat L



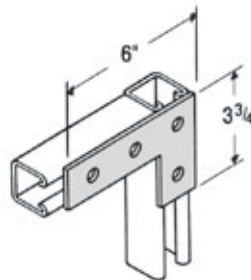
CS-110
Flat T



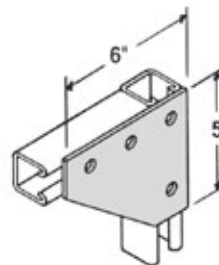
CS-111
Flat Cross



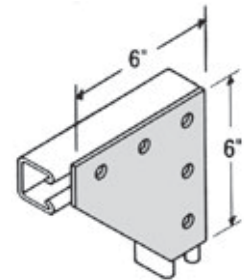
CS-112
3 Hole Heavy Duty L



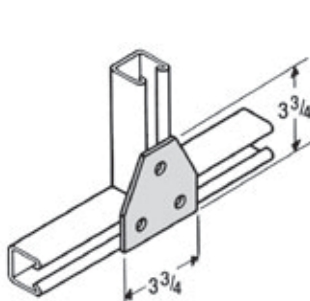
CS-113
4 Hole L



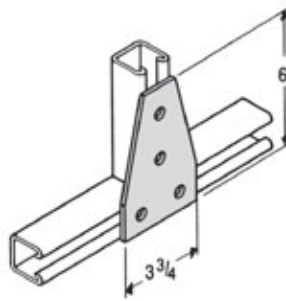
CS-114
4 Hole Heavy Duty L



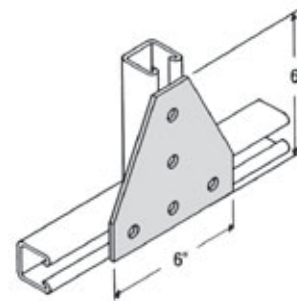
CS-115
5 Hole Heavy Duty L



CS-116
3 Hole Heavy Duty T



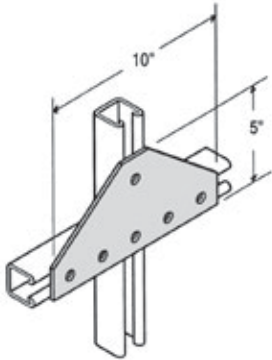
CS-117
4 Hole Heavy Duty T



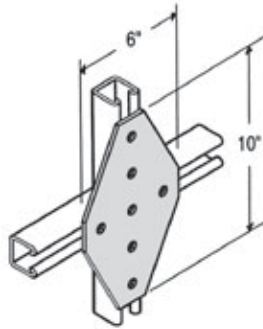
CS-118
5 Hole Heavy Duty T

Connector Plates & Accessories

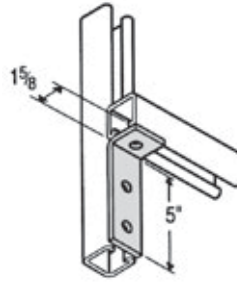
- Holes are drilled to accept 3/8" and 1/2" bolts



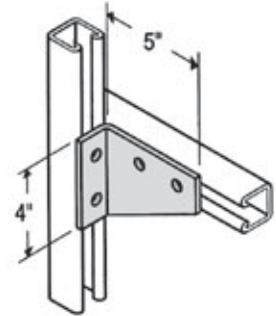
CS-119
6 Hole Heavy Duty T



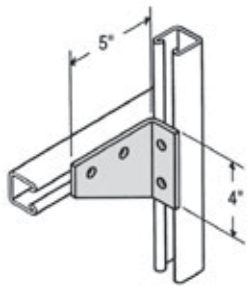
CS-120
7 Hole Heavy Duty X



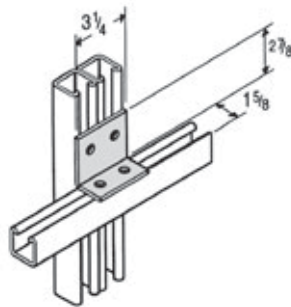
CS-205
3 Hole 90°



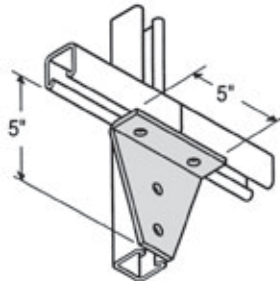
CS-209
4 Hole Heavy Duty 90° Right



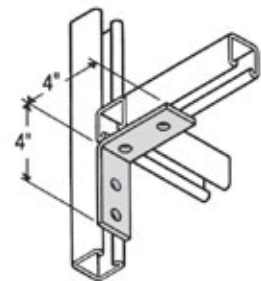
CS-210
4 Hole Heavy Duty 90° Left



CS-211
4 Hole 90° Stubby

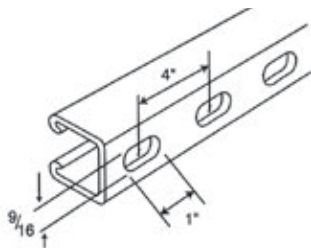


CS-226
4 Hole Heavy 90° T



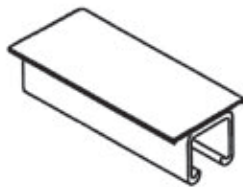
CS-405
4 Hole 90°

CS-S-15P-10-P/V*
Strut with Pre-Drilled Holes
**Use P for Polyester resin and V for Vinylester resin.*

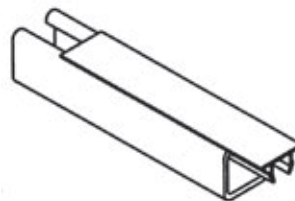


When using this strut, divide max load (pg. 4 & 5) by 3 to obtain allowable loads.

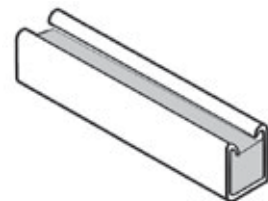
CSCI
Concrete Insert



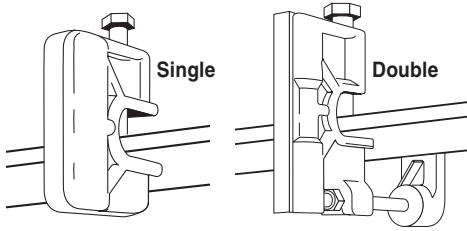
CSCS
Plastic Closure Strip



CSFI
Plastic Foam Insert for Temporary use during concrete pour



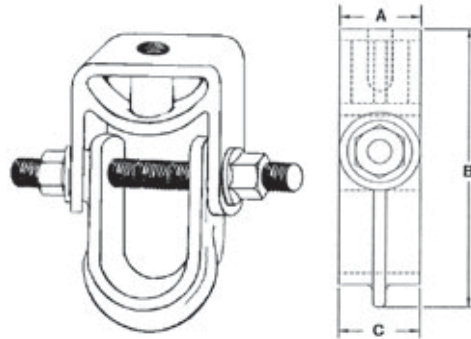
CD-0811



Beam Clamps

Allowable load = 300 lbs.
 Recommended safety factor of 3.
 Set screws included with clamps.

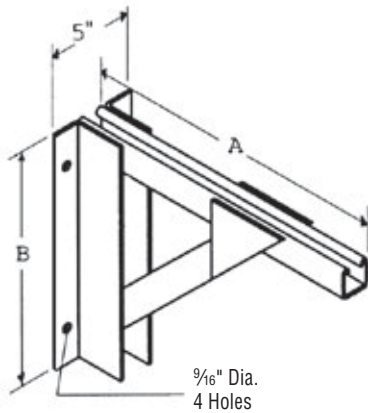
Vinylester Beam Clamps	Part No.
Single for 3/8" FRP Threaded Rod	CS-BC-3/8
Single for 1/2" FRP Threaded Rod	CS-BC-1/2
Double for 3/8" FRP Threaded Rod	CS-DC-3/8
Double for 1/2" FRP Threaded Rod	CS-DC-1/2



Fiberglass Clevis Hangers

Design loads have a 3:1 safety factor at 120°F. Insulation may be required at higher temperatures.

Part Number	Nominal Diameter in.	Max. Pipe OD in. (mm)	Hanger Rod in. (mm)	Maximum Load lbs. (kg)	A in. (mm)	B in. (mm)	C in. (mm)
CS-CH-3/4	3/4	1 (25)	1/2 (13)	200 (90)	2.53 (64)	4.52 (115)	1.25 (32)
CS-CH-1	1	1 1/2 (38)	1/2 (13)	200 (90)	2.53 (64)	4.52 (115)	1.25 (32)
CS-CH-1.25	1 1/4	1 3/4 (44)	1/2 (13)	200 (90)	3.06 (78)	5.14 (131)	1.25 (32)
CS-CH-1.5	1 1/2	2 (51)	1/2 (13)	200 (90)	3.06 (78)	5.14 (131)	1.25 (32)
CS-CH-2	2	2 5/8 (67)	1/2 (13)	300 (135)	3.68 (93)	6.52 (166)	1.25 (32)
CS-CH-2.5	2 1/2	3 1/4 (83)	1/2 (13)	400 (180)	3.68 (93)	6.52 (166)	1.25 (32)
CS-CH-3	3	3 7/8 (98)	1/2 (13)	600 (270)	7.04 (179)	10.00 (254)	1.50 (38)
CS-CH-4	4	5 1/8 (130)	1/2 (13)	600 (270)	7.04 (179)	10.00 (254)	1.50 (38)
CS-CH-6	6	7 1/8 (181)	1/2 (13)	600 (270)	9.36 (238)	12.33 (313)	2.04 (52)



Support Racks

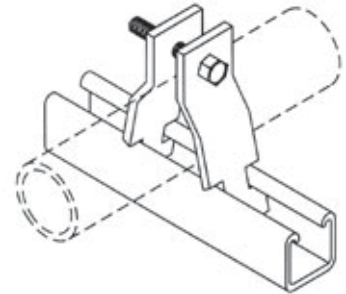
Part Number	Tray Width	Dimensions in. (mm)	
		A	B
CS-SR-06-P/V*	6 (152)	10 (254)	10 (254)
CS-SR-09-P/V*	9 (229)	13 (330)	12 (305)
CS-SR-12-P/V*	12 (305)	16 (406)	13 (330)
CS-SR-18-P/V*	18 (457)	22 (559)	16 (406)
CS-SR-24-P/V*	24 (610)	28 (711)	19 (483)
CS-SR-30-P/V*	30 (762)	34 (864)	22 (559)
CS-SR-36-P/V*	36 (914)	40 (1016)	25 (635)

Allowable load = 750 lbs.-based on total load, uniformly distributed over the width of the rack. Safety factor = 2

*Use P for Polyester resin and V for Vinylester resin.

"Non-Metallic" Universal Pipe Clamps

For rigid steel, PVC coated steel, PVC schedule 40 & 80 and filament wound epoxy fiberglass conduit (IPS only). Made from a special grade of glass reinforced vinylester resin. Standard fasteners are non-metallic bolts and hex nuts. See page 11-12 in this catalog.

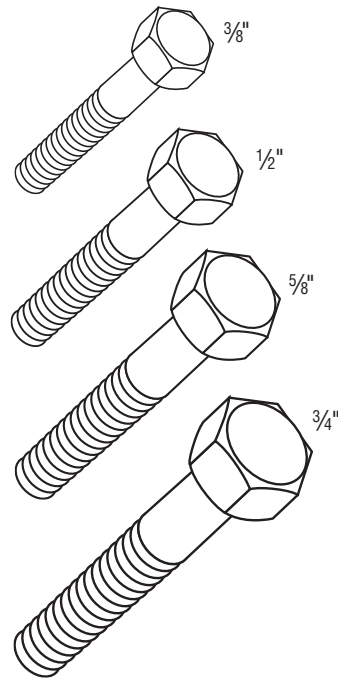


If stainless steel fasteners are preferred, add letter "S" to part nos. below.

Part Number	Pipe Size	Conduit Outside Dimensions in. (mm)			
		PVC Schedule 40 & 80	PVC Coated Steel	Rigid Steel	Epoxy Fiberglass IPS Type*
CS-PC-3/4-V	3/4	1.050 (27)	1.130 (29)	1.050 (27)	1.050 (27)
CS-PC-1-V	1	1.315 (33)	1.395 (35)	1.315 (33)	1.315 (33)
CS-PC-1.25-V	1 1/4	1.660 (42)	1.740 (44)	1.660 (42)	1.660 (42)
CS-PC-1.5-V	1 1/2	1.900 (48)	1.980 (50)	1.900 (48)	1.900 (48)
CS-PC-2-V	2	2.375 (60)	2.455 (62)	2.375 (60)	2.340 (59)
CS-PC-3-V	3	3.500 (89)	3.580 (91)	3.500 (89)	3.450 (88)
CS-PC-4-V	4	4.500 (114)	4.580 (116)	4.500 (114)	4.460 (113)

*Epoxy Fiberglass conduit, tubular dimensions (ID Type), does not fit into standard pipe clamps. Please consult factory.

Part No.	Description
CS-B- 3/8-1	3/8" x 1"
CS-B- 3/8-1 1/4	3/8" x 1 1/4"
CS-B- 3/8-1 1/2	3/8" x 1 1/2"
CS-B- 3/8-2	3/8" x 2"
CS-B- 3/8-2 1/2	3/8" x 2 1/2"
CS-B- 3/8-3	3/8" x 3"
CS-B- 1/2-1	1/2" x 1"
CS-B- 1/2-1 1/4	1/2" x 1 1/4"
CS-B- 1/2-1 1/2	1/2" x 1 1/2"
CS-B- 1/2-2	1/2" x 2"
CS-B- 1/2-2 1/2	1/2" x 2 1/2"
CS-B- 1/2-3	1/2" x 3"
CS-B- 1/2-3 1/2	1/2" x 3 1/2"
CS-B- 1/2-4	1/2" x 4"
CS-B- 1/2-5	1/2" x 5"
CS-B- 1/2-6	1/2" x 6"
CS-B- 5/8-1 1/4	5/8" x 1 1/4"
CS-B- 5/8-1 1/2	5/8" x 1 1/2"
CS-B- 5/8-2	5/8" x 2"
CS-B- 5/8-2 1/2	5/8" x 2 1/2"
CS-B- 5/8-3	5/8" x 3"
CS-B- 5/8-3 1/2	5/8" x 3 1/2"
CS-B- 5/8-4	5/8" x 4"
CS-B- 5/8-5	5/8" x 5"
CS-B- 5/8-6	5/8" x 6"
CS-B- 3/4-1 1/2	3/4" x 1 1/2"
CS-B- 3/4-2	3/4" x 2"
CS-B- 3/4-2 1/2	3/4" x 2 1/2"
CS-B- 3/4-3	3/4" x 3"
CS-B- 3/4-3 1/2	3/4" x 3 1/2"
CS-B- 3/4-4	3/4" x 4"
CS-B- 3/4-5	3/4" x 5"
CS-B- 3/4-6	3/4" x 6"



Champion Bolt

Sizes: 3/8", 1/2", 5/8", 3/4"
 Material: Long glass fiber reinforced polyurethane.



CS-SEAL-C

CHAMPION SEAL Field Cutting Sealant

- Seals exposed fibers after field cuts
- Champion Seal exceeds vinylester material in corrosion resistance
- Restores gloss and luster to weathered fiberglass
- Seals exposed FRP threads after installation of threaded rod and hex nuts

Available in 12 oz spray

Strut to Beam Clamp Assembly

CHAMPION STRUT® Beam Clamps allow easy attachment of Champion strut assemblies to a wide range of structural members. They are made from glass reinforced vinylester. To estimate the length of strut required, take the width of the I-beam and add 5". Maximum recommended loading: 200 lbs.

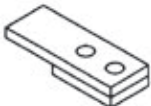
Each Assembly Includes:



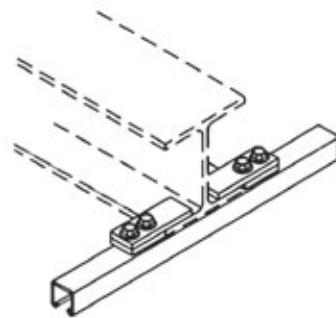
Four Channel Nuts



Four Fiberglass Bolts

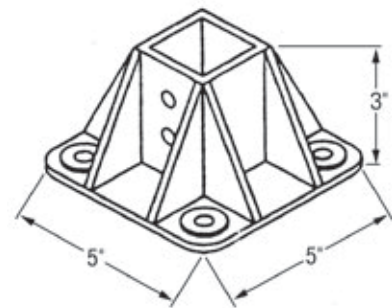


Two Clips



Double Bolt Assembly

Part No.	Assembly Description	Std. Qty.
CS-IC-3/8	Double bolt for 3/8"	1 assembly
CS-IC-1/2	Double bolt for 1/2"	1 assembly



Strut Post Base

Part No.	Size
CS-PB-S	Post Base for S-15 Strut
CS-PB-D	Post Base for S-15D Strut

CHAMPION THREAD™ Fasteners and Hanging Systems are specially developed to give optimum strength and chemical corrosion resistance. The systems are excellent for all structural, mechanical and electrical applications where components must be corrosion resistant. All nuts are hex type and standard tools can be used for easy assembly.

FRP Hex Nut



Part No.	Size
CS-HN- 3/8	3/8" - 16 UNC
CS-HN- 1/2	1/2" - 13 UNC
CS-HN- 5/8	5/8" - 11 UNC
CS-HN- 3/4	3/4" - 10 UNC
CS-HN-1	1" - 8 UNC



Supplied in 8 ft. (2.4m) lengths.

FRP Threaded Rod

Part No.	Size
CS-TR- 3/8	3/8" - 16 UNC
CS-TR- 1/2	1/2" - 13 UNC
CS-TR- 5/8	5/8" - 11 UNC
CS-TR- 3/4	3/4" - 10 UNC
CS-TR-1	1" - 8 UNC

FRP Channel Nut



Part No.	Size
CS-CN - 3/8 -V	3/8" - 16 UNC
CS-CN - 1/2 -V	1/2" - 13 UNC

FRP Flat Washer



Part No.	Size
CS-FW- 3/8	3/8" - 16 UNC
CS-FW- 1/2	1/2" - 13 UNC
CS-FW- 5/8	5/8" - 11 UNC
CS-FW- 3/4	3/4" - 10 UNC
CS-FW-1	1" - 8 UNC



FRP Rod Coupler

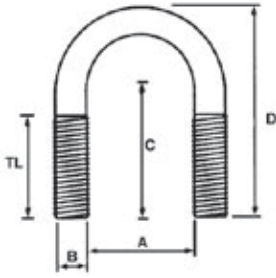
Part No.	Size
CS-RC- 3/8	3/8" - 16 UNC
CS-RC- 1/2	1/2" - 13 UNC
CS-RC- 5/8	5/8" - 11 UNC
CS-RC- 3/4	3/4" - 10 UNC
CS-RC-1	1" - 8 UNC

Typical Properties of Champion Threaded Rod

Properties	Thread Size				
	3/8-16 UNC	1/2-13 UNC	5/8-11 UNC	3/4-10 UNC	1-8 UNC
Thread shear strength using fiberglass nut in tensile (lbs.)	470	570	1,600	1,700	3,000
Transverse shear on threaded rod - double shear ASTM-B-565 (load lb.)	3,000	5,000	7,500	12,000	22,000
Transverse shear on threaded rod - single shear (load lb.)	1,600	2,600	3,800	6,200	15,000
Compressive strength - longitudinal ASTM-D-695 (psi)	54,000	54,000	54,000	54,000	65,000
Flexural strength ASTM-D-790 (psi)	55,000	55,000	55,000	55,000	60,000
Flexural modulus ASTM-D-790 (psi x 10 ⁶)	2.0	2.0	2.0	2.50	2.75
Torque strength using fiberglass nut lubricated with SAE 10W30 motor oil (ft./lbs.)	5	10	35	50	60
Dielectric strength ASTM-D-149 (kv/in.)	35	35	35	35	35
Water absorption 24 hour immersion - threaded ASTM-D-570 (%)	1	1	1	1	1
Coefficient of thermal expansion-longitudinal (in/in/°F)	5 x 10 ⁻⁶	5 x 10 ⁻⁶	5 x 10 ⁻⁶	5 x 10 ⁻⁶	5 x 10 ⁻⁶
Max recommended operation temp - based on 50% retention of ultimate thread shear strength (°F)	200	200	200	200	200
Stud weight lb/ft	0.07	0.12	0.18	0.28	0.50
Flammability	Self-Extinguishing on All				

Non-Metallic U-Bolt

U-Bolts are made from a fiberglass reinforced urethane material and are recommended for temperatures ranging from -40°F to +150°F.



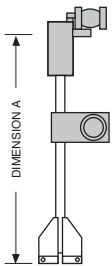
Part No.	Pipe Nominal Dia.	Dimensions					Load Ratings	
		A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	TL in. (mm)	Max. Rec. Load lbs. (kg)	Max. Rec. Torque in. lbs. (Nm)
CS-UB-1/2	1/2"	0.93 (24)	0.375 (10)	1.56 (40)	2.41 (61)	1.25 (32)	75 (34)	20 (2.3)
CS-UB-3/4	3/4"	1.12 (28)	0.375 (10)	1.66 (42)	2.60 (66)	1.25 (32)	75 (34)	20 (2.3)
CS-UB-1	1"	1.37 (35)	0.375 (10)	1.78 (45)	2.85 (72)	1.25 (32)	75 (34)	20 (2.3)
CS-UB-1.25	1 1/4"	1.68 (43)	0.375 (10)	1.94 (49)	3.16 (80)	1.25 (32)	75 (34)	20 (2.3)
CS-UB-1.50	1 1/2"	2.00 (51)	0.375 (10)	2.10 (53)	3.47 (88)	1.25 (32)	75 (34)	20 (2.3)
CS-UB-2	2"	2.43 (62)	0.500 (13)	2.46 (62)	4.18 (106)	1.50 (38)	150 (68)	40 (4.5)
CS-UB-2.5	2 1/2"	2.93 (74)	0.500 (13)	2.71 (69)	4.68 (119)	1.50 (38)	150 (68)	40 (4.5)
CS-UB-3	3"	3.56 (90)	0.500 (13)	3.03 (77)	5.31 (135)	1.50 (38)	150 (68)	40 (4.5)
CS-UB-3.5	3 1/2"	4.06 (103)	0.500 (13)	3.28 (83)	5.81 (148)	1.50 (38)	150 (68)	40 (4.5)
CS-UB-4	4"	4.56 (116)	0.500 (13)	3.53 (90)	6.31 (160)	1.50 (38)	150 (68)	40 (4.5)

Universal Instrument Pipe Support

The universal instrument pipe support system is manufactured from 2" filament wound epoxy resin conduit for increased stiffness and corrosion resistance. The outside diameter is 2 3/8" which is identical to 2" steel pipe (or PVC). The system is non-conductive and resistant to sunlight. The base is made from vinylester resin, with an 8" square base, specially designed with side bracing for extra bending support. The instrument pipe support is delivered fully assembled, or available in individual components if so desired. The 2" non-metallic u-bolt is an excellent device for attaching instruments, gauges etc. (Shaded components not included)

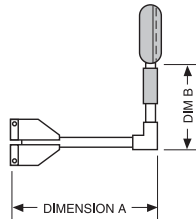
Single Floor Mount

Catalog No.:
CS-IS1- (dim) A
(Where A is defined per sketch below.)



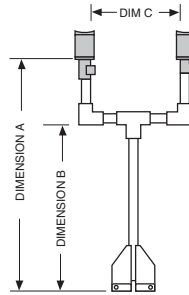
Wall or Floor Mount

Catalog No.:
CS-IS2- (dim) A - (dim) B



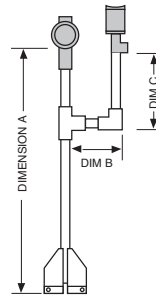
Double Floor Mount

Catalog No.:
CS-IS3- (dim) A - (dim) B - (dim) C



Multiple Instrument Floor Mount

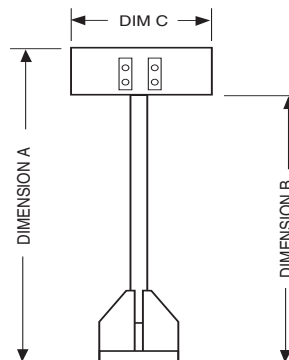
Catalog No.:
CS-IS4- (dim) A - (dim) B - (dim) C



Pushbutton Station

Similar to the instrument pipe support system, with 2" vinylester square tubing. The base is made from vinylester resin, with an 8" square base, specially designed with side bracing for extra bending support.

Catalog No.: CS-PB- (dim) A - (dim) B - (dim) C



Corrosion Resistance Guide

The corrosion guidelines tests were performed by immersing coupons for 30 days in the chemical at the temperature shown. This is a very severe test. It has been shown that CHAMPION STRUT® can often be used for chemicals listed as “Not Recommended” (NR). Real cases often are limited to fumes, vapors and occasional splashes at the temperatures indicated. Polyester is the standard resin used in the CHAMPION STRUT System, however a vinylester resin system is also available.

This information is provided solely as a guide since it is impossible to anticipate all individual site conditions. For specific applications which are not covered in this guide, and may require screening tests to evaluate resin system suitability, consultation with the factory is recommended.

Chemical	75° F (24° C)	150° F (66° C)	Chemical	75° F (24° C)	150° F (66° C)
Acetic Acid 15%	P	P	Lithium Chloride, Sat'd	P	P
Acetic Acid 50%	P	V	Magnesium Salts	P	P
Acetic Acid (Glacial)	NR	NR	Mercuric Chloride	P	P
Acetone	V*	NR	Mercurous Chloride	P	P
Aluminum Chloride	P	P	Mercury	P	P
Aluminum Hydroxide	P	V	Methyl Alcohol	P	NR
Aluminum Potassium Sulphate	P	P	Methyl Ethyl Ketone	NR	NR
Aluminum Sulphate	P	P	Mineral Oils	P	P
Ammonia, Dry Gas	P	P	Naphtha	P	P
Ammonia, Liquid	NR	NR	Nickel Salts	P	P
Ammonium Chloride, Sat'd	P	P	Nitric Acid, 0-10%	P	V
Ammonium Hydroxide 20%	P*	V	Nitric Acid >10%	NR	NR
Ammonium Nitrate, Sat'd	P	P	Oleic Acid	P	P
Ammonium Sulfate, Sat'd	P	P	Oxalic Acid	P	P
Amyl Alcohol	P*	V*	Perchloroethylene	P	P
Benzene	P	NR	Phenol, 0-2%	V	NR
Benzene Sulfonic Acid 30%	P	V	Phenol, >2%	NR	NR
Benzoic Acid, Sat'd	P	P	Phosphoric Acid	P	P
Butyl Alcohol, Normal	P	NR	Potassium Carbonate, 0-15%	P	V
Calcium Salts	P	P*	Potassium Carbonate, 15-Sat'd	NR	NR
Carbon Disulfide	NR	NR	Potassium Hydroxide	V	NR
Carbonic Acid, Sat'd	P	P	Potassium Permanganate	P	V
Carbon Tetrachloride	P*	P*	Potassium Persulfate	V	NR
Chlorine, Dry Gas	P	P	Potassium Salts	P	P
Chlorine, Wet Gas	V	V	Silver Nitrate	P	P
Chlorine Dioxide	P*	V*	Sodium Bicarbonate	P	P
Chlorine Water	P	P*	Sodium Bisulfate	P	P
Chlorobenzene	NR	NR	Sodium Carbonate	P	V
Chromic Acid 5%	P	V*	Sodium Chloride	P	P
Citric Acid, Sat'd	P	P	Sodium Dichromate	P	V
Copper Sulfate	P	P	Sodium Hydroxide	V	NR
Crude Oil, Sour	P	P	Sodium Hypochlorite, 0-5%	P	V
Diesel Fuel	P	P	Sodium Hypochlorite, 5-10%	V	V
Ethyl Alcohol	NR	NR	Sodium Hypochlorite, >10%	V	NR
Ethylene Glycol	P	P	Sodium Nitrate	P	P
Fatty Acids	P	P	Sodium Silicate <6%	V	V
Ferric Salts	P	P	Sodium Sulfate	P	P
Ferrous Sulfate	P	P	Sodium Sulfide	V	V
Fluoboric Acid, Sat'd	P	V	Sodium Thiosulfate	V	NR
Fluosilicic Acid 0-35%	V	V*	Styrene	NR	NR
Formic Acid, Vapor	P	P	Sulfure Dioxide, Dry or Wet Gas	P	P
Fuel Oil	P	P	Sulfuric Acid, Vapor	P	P
Gasoline	P	P*	Sulfurous Acid	V	NR
Glycerine	P	P	Tannic Acid	P	P
Hydrochloric Acid 0-10%	P	P	Tartaric Acid	P	P
Hydrochloric Acid 10-36%	P	V*	Toluene	NR	NR
Hydrofluoric Acid	NR	NR	Trisodium Phosphate	V	V
Hydrogen Chloride, Dry or Wet Gas	P	V	Water, City	P	P
Hydrogen Peroxide	NR	NR			
Hydrogen Sulfide, Dry or Wet Gas	P	V			
Kerosene	P	P			
Lactic Acid	P	P			
Lime Slurry, Sat'd	P	P			

P - Polyester resin system
 V - Vinylester resin system
 NR - not recommended
 * - some limitations apply - consult the factory

Information in this table is based on data supplied by raw material suppliers and collected from many years of similar industrial applications.

Temperatures represent standard test conditions and are not minimums or maximums. CHAMPION STRUT products may be acceptable at other temperatures for some chemicals, but should be tested to determine specific suitability.

The recommendations or suggestions contained in this table are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory or field trial prior to use.



CERTIFICATE OF REGISTRATION

This is to certify that

Champion Fiberglass Inc.
6400 Spring Stuebner Rd., Spring, Texas 77389 USA

operates a

Quality Management System

which complies with the requirements of

ISO 9001:2008

for the following scope of registration

The Registration covers the Quality Management System for the manufacture of fiberglass conduit and fittings.

Certificate No: CERT-0038433
File No: 1058413
Issue Date: November 6, 2009

Original Certification Date: November 6, 2009
Current Certification Date: November 6, 2009
Certificate Expiry Date: November 5, 2012

Chris Jouppi
President,
QMI-SAI Canada Limited

Alex Ezrakhovich
General Manager,
SAI Global Certification Services Pty Ltd

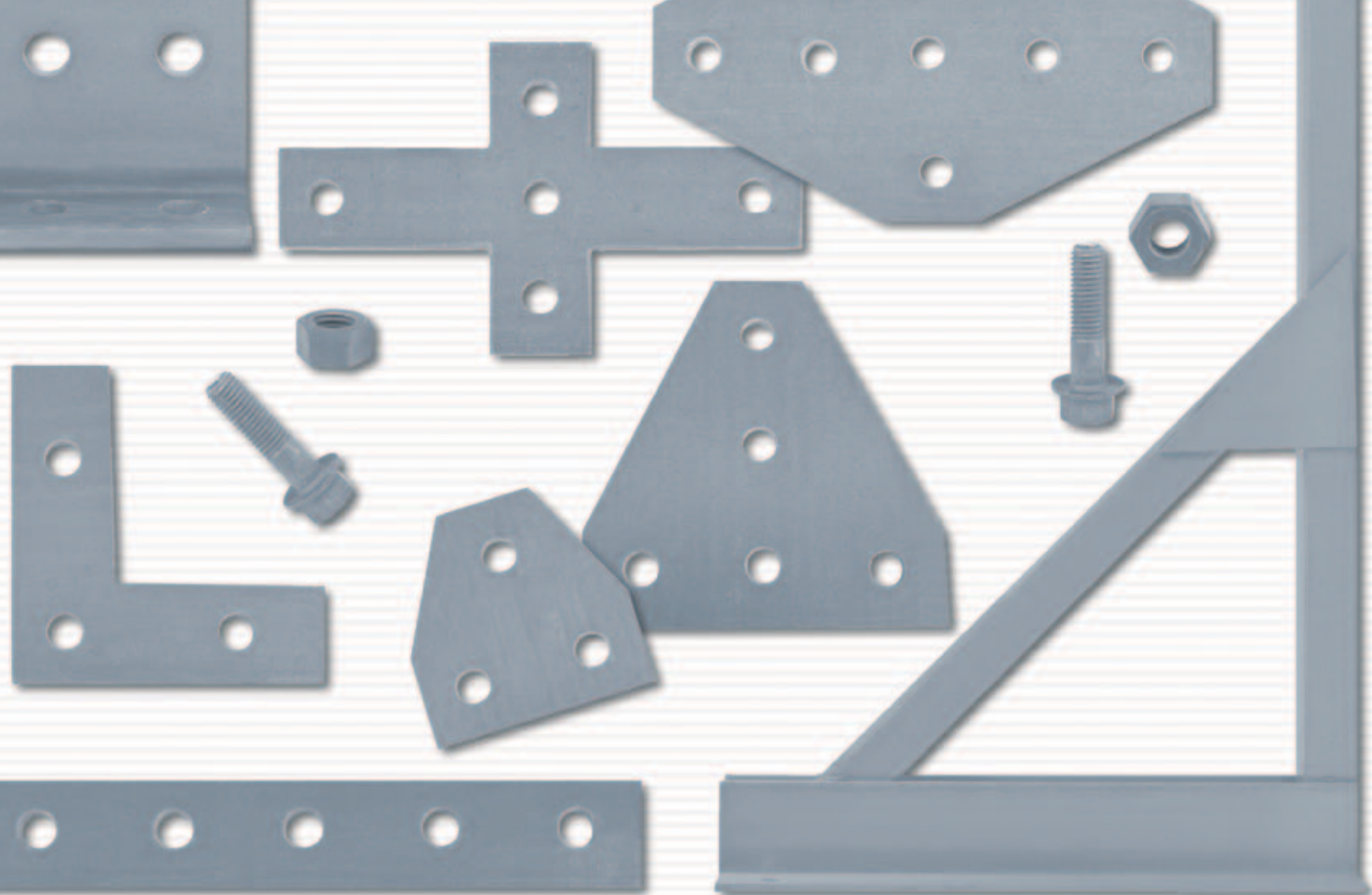


ISO 9001



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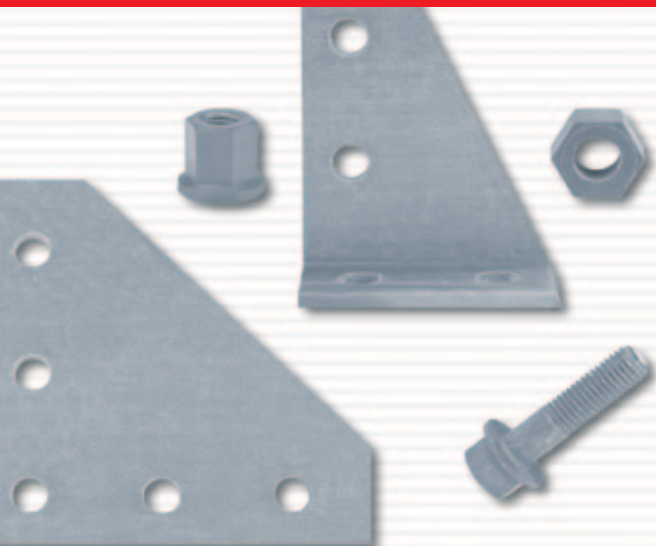
**CHAMPION
FIBERGLASS®**

ISO 9001:2008 Certified

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