

PLAIN (PL)

Plain finish designation means that the channel retains the oiled surface applied to the raw steel during the rolling process. The fittings have the original oiled surface of the coil or strip steel material.

Pregalvanized Zinc (PG) ASTM A653

Pregalvanized steel is zinc coated by a hot dip process. Steel strip from a coil is fed through a continuous zinc coater which cleans, fluxes and coats the steel with molten zinc. After cooling, the steel is recoiled.

The pregalvanized zinc coating conforms to a G-90 thickness designation per ASTM A653. The zinc thickness is .75 MIL or .45 oz./sq. ft. of surface area.

This coating is offered on Unistrut channel and tubing and is a well-proven, time-tested performer for indoor and outdoor applications. For severe corrosion applications, hot dip galvanizing, as described below, is a good alternative.

HOT DIP GALVANIZED (HG) ASTM A123 OR A153

In hot dip galvanizing, the finished part is immersed in a bath of molten zinc. This method results in complete zinc coverage and a thicker coating than pregalvanized or plated zinc.

The zinc coating is typically 2.6 MIL or 1.5 oz./sq. ft. of surface area.

This is the coating of choice for applications where severe corrosion is a design factor.

SPECIAL COATING

When specific applications require other than standard available finishes, special finishes can be supplied per customer requirements.

Electroplated Zinc (EG) ASTM B633, Type III SC1 or SC3

In the electroplating process, the part to be zinc coated is immersed in a solution of zinc ions. An electric current causes the zinc to be deposited on the part.

SC1 (Mild) has a Zinc coating of 0.2 and is recommended for dry indoor use. SC1 is the standard finish thickness.

SC3 (Severe) has a Zinc coating of 0.5 mill and is the standard finish thickness only on UL Listed raceway products.

Perma-Gold (ZD) ASTM B633, Type II SC3

Similar to the EG process except in a yellow color.

Unistrut Defender (DF)

Unistrut® Defender™ is a combination of two proprietary material coatings conforming to ASTM standards A1046 and A1059. Channel, Fittings and Pipe Clamps meet the physical requirements of ASTM A1011 SS GR 33, ASTM A1046 SS GR 33, or ASTM A1011 HSLAS GR 45 Class 2.

3X the corrosion resistance of HG!

Zinc Coating

Unistrut products are available in four types of zinc coatings:

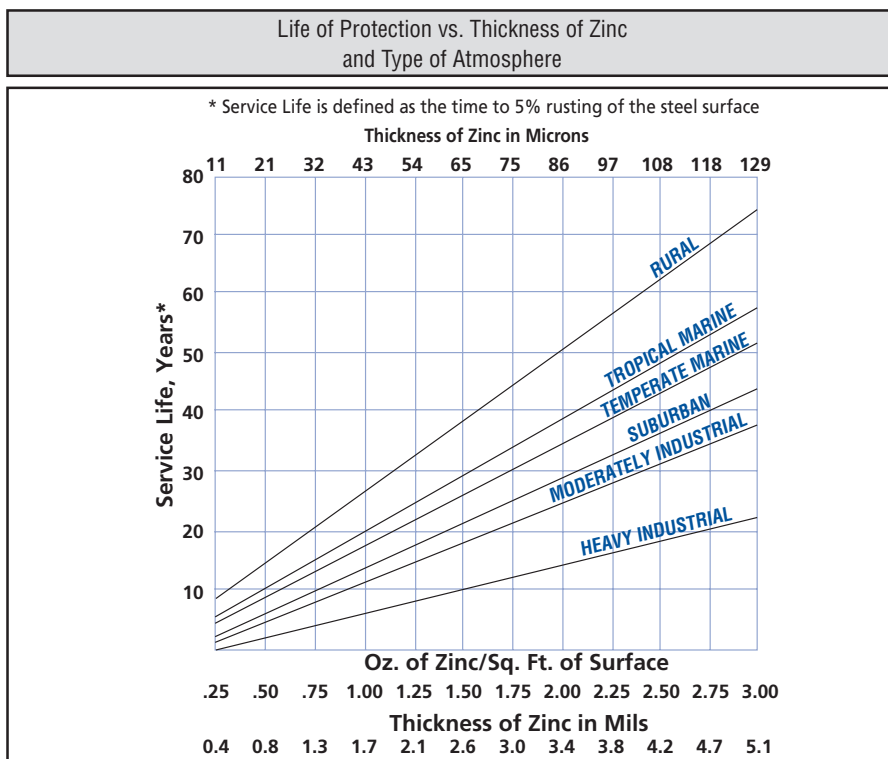
- Electroplated (EG)
- Perma-Gold (ZD)
- Pregalvanized (PG)
- Hot Dip Galvanized (HG).

Zinc offer two types of protection:

- **Barrier:** The zinc coating protects the steel substrate from direct contact with the environment.
- **Sacrificial:** The zinc coating will protect scratches, cut edges, etc. through an anodic sacrificial process.

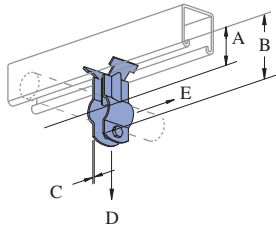
The service life of zinc coating is directly related to the zinc coating thickness as shown below.

Comparison of Zinc Finishes	
Finish	Zinc Thickness
Hot Dip Galvanized	2.6 MIL
Pre-galvanized	0.75 MIL
Electro-Galvanized (SC1)	0.2 MIL
Electro-Galvanized (SC3)	0.5 MIL
Perma-Gold (SC3)	0.5 MIL



P3409 THRU P3417

STAND-OFF PIPE CLAMPS



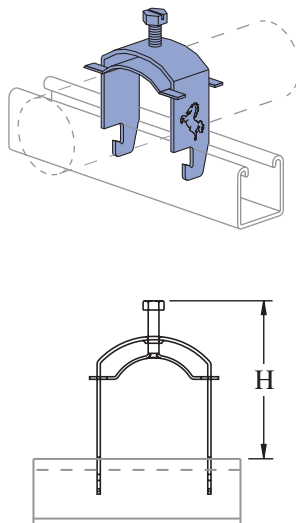
Hardware included.
Finish: Electro-galvanized.
Pipe Clamp 1½" Wide

Part No.	Pipe Size In (mm)	O.D. Size In (mm)	Load "D" Lbs (kN)	Load "E" Lbs (kN)	A In (mm)	B In (mm)	C Gauge (mm)	Wt/100 pcs Lbs (kg)
P3409	¾ 9.5	0.675 17.1	100 0.44	25 0.11	1⅞ 28.6	2⅞ 54.0	14 1.9	14 6.4
P3411	½ 12.7	0.840 21.3	150 0.67	35 0.16	1¼ 31.8	2⅞ 58.7	14 1.9	15 6.8
P3412	¾ 19.1	1.050 26.7	175 0.78	40 0.18	1⅞ 33.3	2⅞ 63.5	14 1.9	19 8.6
P3413	1 25.4	1.315 33.4	200 0.89	50 0.22	1½ 38.1	2¾ 69.9	14 1.9	22 10.0
P3414	1¼ 31.8	1.660 42.2	300 1.33	70 0.31	1⅞ 42.9	3¼ 82.6	12 2.7	34 15.4
P3415	1½ 38.1	1.900 48.3	400 1.78	80 0.36	1¾ 44.5	3½ 88.9	11 3.0	49 22.2
P3417	2 50.8	2.375 60.3	500 2.22	120 0.53	2 50.8	4 101.6	10 3.4	55 24.9

Safety factor of 5

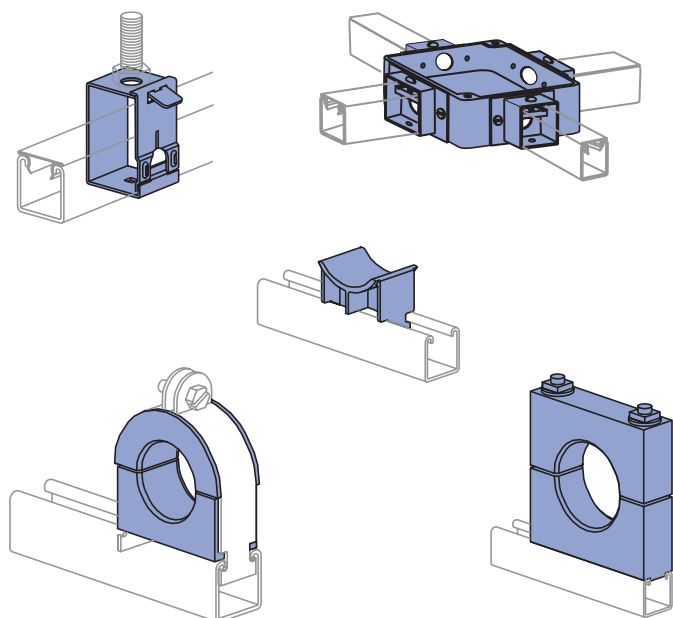
MU025 THRU MU400

MUSTANG UNIVERSAL ONE-PIECE PIPE, CONDUIT (GRC, EMT & IMC) AND TUBING CLAMPS



Finish: Electro-galvanized.
Clamps are 14 ga.

Part No.	Nominal Trade Size In (mm)	Trade Size O.D. Min In (mm)		Height Above Channel "H" Min In (mm)	
		Max In (mm)		Max. In (mm)	
MU025	¼ 6.4	0.375 9.5	0.5 13.7	1¼ 44.5	2 50.8
MU037	¾ 9.5	0.5 12.7	0.7 17.1	1⅞ 47.6	2⅞ 54.0
MU050	½ 12.7	0.63 15.9	0.84 21.3	2 50.8	2¼ 57.2
MU075	¾ 19.1	0.88 22.2	1.05 26.7	2¼ 57.2	2½ 63.5
MU100	1 25.4	1.13 28.6	1.32 33.4	2⅞ 60.3	2¾ 69.9
MU125	1¼ 31.8	1.38 34.9	1.66 42.2	2¾ 69.9	3⅞ 79.4
MU150	1½ 38.1	1.63 41.3	1.90 48.3	3 76.2	3⅞ 85.7
MU200	2 50.8	2.13 54.0	2.38 60.3	3⅞ 85.7	3⅞ 98.4
MU250	2½ 63.5	2.63 66.7	2.88 73.0	4¼ 108.0	4⅞ 117.5
MU300	3 76.2	3.13 79.4	3.50 88.9	4⅞ 123.8	5⅞ 136.5
MU350	3½ 88.9	3.63 92.1	4.00 101.6	5¼ 133.4	5⅞ 149.2
MU400	4 101.6	4.13 104.8	4.50 114.3	5¼ 146.1	6⅞ 161.9



MATERIAL

Unistrut fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip, bar or coil, and conform to one or more of the following specifications:

ASTM A575, A576, A635, A1011 SS GR 33, A1011 HSLAS GR 45 or A36. The fitting steel also meets or exceeds the physical requirements of ASTM A1011 SS GR 33.

Maple cable saddles, cable clamps and bus bar clamps are made from kiln-dry maple treated with paraffin to a depth of $\frac{1}{16}$ " (1.6mm). Special sizes of clamps can be fabricated upon request. Cable saddles are fiberglass-reinforced polyester.

CHANNEL RACEWAYS

The Unistrut Metal Framing System includes an exclusive combination of channel, fittings and hardware listed under new UL classification 5B. This classification covers strut-type channel raceways and fittings for use in accordance with Article 384 of the National Electrical Code, NFPA 70. Included are metal strut-type channel raceways at least .071 inch (1.81mm) thick and metal or non-metal closure strips at least .040 inch (1.02mm) thick.

The Unistrut system requires no welding, drilling or other complex fabrication techniques. This means faster, easier solutions for virtually any electrical support problem.

Unistrut channel offers structural and spanning capabilities not available with conventional surface raceway products and is available in continuous lengths of up to 20 feet. Just as important, it is part of an integrated system that can be used for raceways, trapeze hangers, cable-tray supports, lighting grids, fluorescent-fixture supports and countless other electrical applications.

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CHANNEL COMPATABILITY

All of the electrical components in this section are intended for use with any of the $1\frac{5}{8}$ " wide channel. They are not intended for use with $1\frac{1}{4}$ " or $1\frac{3}{16}$ " framing systems.

FINISHES

Components listed in this section are available in:

- Electro-galvanized (EG), conforming to ASTM B633 Type III SC1;
- Hot-dipped galvanized (HG), conforming to ASTM A123 or A153,
- Green Powder Coat (GR), conforming to commercial standards for Powder Coating
- Plain (PL)

Note: Many Unistrut Metal Framing components, when used with appropriate closures, are UL® listed, and CSA approved.

DESIGN LOAD

Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 2.5, unless otherwise noted.

DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

LISTINGS

UL File No. - E19459	Channel & Closure Strips
UL File No. - E25629	Fittings
CSA File No. - 013669	All Products