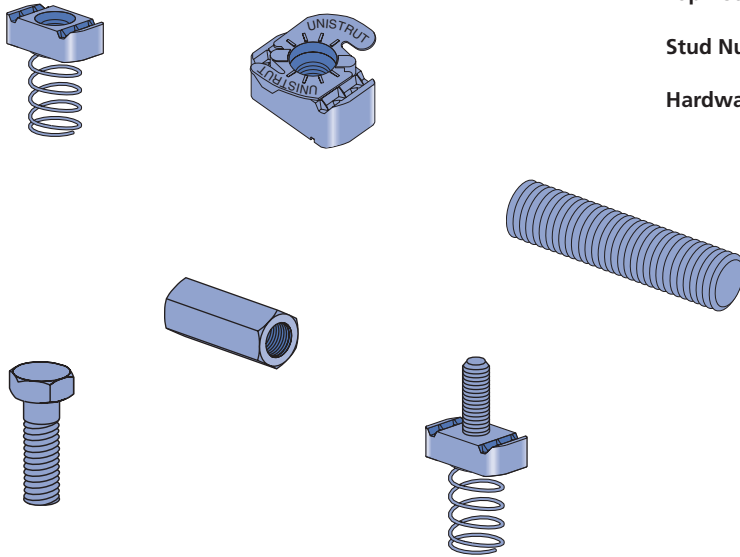




NUTS & HARDWARE

Channel Nuts With Springs	73
Channel Nuts Without Springs	73
Top Retainer Nuts	73
Stud Nuts	74
Hardware	74-76



MATERIAL

Unistrut channel nuts are manufactured from mild steel cold rolled coil, and after stamping and machining operations are completed, they are case hardened, assuring positive biting action into the inturned edge of the Unistrut channel.

Screws conform to SAE J429 GR 2 (exceeds ASTM A307). Proof Load 55KSI, Tensile Load 74 KSI

Bolt Size	Channel Nut ASTM
1/4" & 5/16"	A1011 SS GR33
3/8", 7/16" & 1/2"	A576 GR1015 Modified
5/8" & 3/4"	A36 or A675 GR60
7/8"	A36

FINISHES

All Channel nuts are available in:

- Electro-galvanized (EG), conforming to ASTM B633 type III SC1
- Hot-dipped galvanized (HG), conforming to ASTM A153
- Plain (PL)
- Unistrut Defender™ (DF), conforming to ASTM A1059

Hardware items such as Hex Nuts bolts and washers are Electro-Galvanized (EG), ASTM B633 Type III SC1 finish, unless otherwise noted.

Many hardware items are also available in stainless steel. Consult factory for ordering information.

THREADS

Unistrut nuts and bolts are manufactured to meet the Unified Screw Thread standard, ANSI B1.1, coarse series (UNC) class 2.

DESIGN BOLT TORQUE

BOLT SIZE	1/4"-20	5/16"-18	3/8"-16	1/2"-13	5/8"-11	3/4"-10
Rec.Torque Ft/Lbs (<i>N·m</i>)	6 (8)	11 (15)	19 (26)	50 (68)	100 (136)	125 (170)
Max Torque Ft/Lbs (<i>N·m</i>)	7 (9)	15 (20)	25 (34)	70 (95)	125 (170)	135 (183)

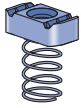
DIMENSIONS

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.

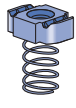
Many Unistrut nuts, bolts and hardware items are also available in standard metric dimensions. Consult factory for ordering information.



Channel Nuts With Spring



P1006 - P1010
Pg 73



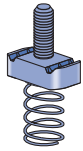
P1012S - P1024S
Pg 73



P4006 - P4010
Pg 73



P5506 - P5510
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P2378 - P2382
Pg 74

Channel Nuts Without Spring



P3016
Pg 73



P3006 - P3013
Pg 73



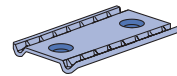
P1012 - P1024
Pg 73



P4012 - P4023
Pg 73



P1006T - P1010T, P4010T
Pg 73



P4908
Pg 73



P1016
Pg 73

Hardware



HHCS
Pg 74



HFMS
Pg 74



HRMS
Pg 74



HSHS
Pg 74



HCSS
Pg 74



HSQN
Pg 75



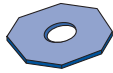
HHXN
Pg 75



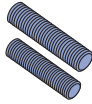
HFLW
Pg 75



HLKW
Pg 75



HOCW
Pg 76



HTHR
Pg 75



HRCN
Pg 75



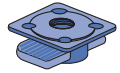
P2486
Pg 76



P2485
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P2485K
Pg 76



K1062 - K1064
Pg 76

MAXIMUM ALLOWABLE PULL-OUT AND SLIP LOADS

Channel	Channel Nut Size-Thread	Gauge	Allowable Pull-Out Strength Lbs (kN)	Resistance to Slip Lbs (kN)	Torque Ft-Lbs (N•m)
P1000 P3000 P4400 P4526 P5000 P5500	7/8" - 9	12	2,500	1,700	*125
			11.12	7.56	170
	3/4" - 10	12	2,500	1,700	*125
			11.12	7.56	170
	5/8" - 11	12	2,500	1,500	*100
			11.12	6.67	135
	1/2" - 13	12	2,000	1,500	50
			8.90	6.67	70
7/16" - 14	12	1,400	1,000	35	
		6.23	4.45	50	
3/8" - 16	12	1,000	800	19	
		4.45	3.56	25	
5/16" - 18	12	800	500	11	
		3.56	2.22	15	
1/4" - 20	12	600	300	6	
		2.67	1.33	8	
P3300	1/2" - 13	12	1,500	1,500	50
			6.67	6.67	70
	3/8" - 16	12	1,000	800	19
			4.45	3.56	25
5/16" - 18	12	800	500	11	
		3.56	2.22	15	
1/4" - 20	12	600	300	6	
		2.67	1.33	8	

Channel	Channel Nut Size-Thread	Gauge	Allowable Pull-Out Strength Lbs (kN)	Resistance to Slip Lbs (kN)	Torque Ft-Lbs (N•m)
P1100 & P4100	1/2" - 13	14	1,400	1,000	50
			6.23	4.45	70
	3/8" - 16	14	1,000	750	19
			4.45	3.34	25
5/16" - 18	14	800	400	11	
		3.56	1.78	15	
1/4" - 20	14	600	300	6	
		2.67	1.33	8	
P2000 & P4000	1/2" - 13	16	1,000	1,000	50
			4.45	4.54	70
	3/8" - 16	16	1,000	750	19
			4.45	3.34	25
5/16" - 18	16	800	400	11	
		3.56	1.78	15	
1/4" - 20	16	600	300	6	
		2.67	1.33	8	

* May require 3/8" or 1/2" thick fitting.

Nut design loads include a minimum safety factor of 3.

Note: Refer to the Channel Nut Selection Chart on the following two pages for the part number.

SQUARE NUTS



Part No.	Size	Wt/100 pcs Lbs (kg)
HSQN025EG	¼"	0.9 (0.4)
HSQN031EG	⅝"	1.6 (0.7)
HSQN037EG	⅜"	2.7 (1.2)
HSQN050EG	½"	5.8 (2.6)
HSQN062EG	⅝"	10.7 (4.9)
HSQN075EG	¾"	15.4 (6.9)
HSQN087EG	⅞"	24.9 (11.3)
HSQN100EG	1"	36.3 (16.5)

HEXAGON NUTS



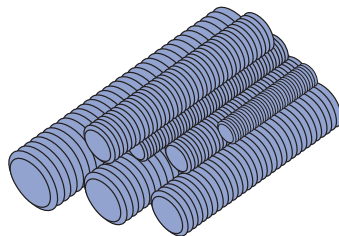
Part No.	Size	Wt/100 pcs Lbs(kg)
HHXN025EG	¼"	0.6 (0.3)
HHXN031EG	⅝"	1.2 (0.5)
HHXN037EG	⅜"	1.6 (0.7)
HHXN050EG	½"	4.8 (2.2)
HHXN062EG	⅝"	7.3 (3.3)
HHXN075EG	¾"	11.9 (5.4)
HHXN087EG	⅞"	19.0 (8.6)
HHXN100EG	1"	28.3 (12.8)

FLAT WASHERS



Part No.	Size	Wt/100 pcs Lbs(kg)
HFLW025EG	¼"	0.8 (0.4)
HFLW031EG	⅝"	1.0 (0.5)
HFLW037EG	⅜"	1.5 (0.7)
HFLW050EG	½"	3.5 (1.6)
HFLW062EG	⅝"	7.7 (3.5)
HFLW075EG	¾"	11.0 (5.0)
HFLW087EG	⅞"	15.3 (6.9)
HFLW100EG	1"	18.8 (8.5)

STEEL THREADED ROD



Standard Length 12' (3.7m)

Low Carbon Steel Grade 1006 - 1010
 F_y = 36,000 psi minimum
 F_t = 58,000 psi minimum

Part No.	Size	Wt/100 Ft. Lbs (kg)
HTHR025	¼" x 20	13 (5.9)
HTHR031	⅝" x 18	20 (9.1)
HTHR037	⅜" x 16	30 (13.6)
HTHR044	⅞" x 14	30 (13.6)
HTHR050	½" x 13	53 (24.0)
HTHR062	⅝" x 11	84 (38.1)
HTHR075	¾" x 10	124 (56.2)
HTHR087	⅞" x 9	170 (77.1)
HTHR100	1" x 8	223 (101.2)

LOCK WASHERS



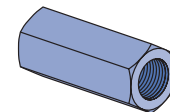
Part No.	Size	Wt/100 pcs Lbs (kg)
HLKW025EG	¼"	0.25 (0.1)
HLKW031EG	⅝"	0.41 (0.2)
HLKW037EG	⅜"	0.63 (0.3)
HLKW050EG	½"	1.32 (0.60)
HLKW062EG	⅝"	2.20 (1.0)
HLKW075EG	¾"	3.80 (1.7)
HLKW087EG	⅞"	6.00 (2.7)
HLKW100EG	1"	8.80 (4.0)

LOAD CARRYING CAPACITY OF THREADED HOT ROLLED STEEL
 CONFORMING TO ASTM A575 AND A576

Threaded Rod Loads for Piping Applications (based on MSS SP-58)		
Nominal Dia.	Root Area In ² (mm ²)	Max. Safe Load at 650°F (343°C) Lbs (kN)
⅜"	0.068 (43.9)	730 (3.25)
½"	0.126 (81.3)	1,350 (6.01)
⅝"	0.202 (130.3)	2,160 (9.61)
¾"	0.302 (194.8)	3,230 (14.37)
⅞"	0.419 (270.3)	4,480 (19.93)
1"	0.552 (356.1)	5,900 (26.24)

Threaded Rod Loads for Structural Applications (Based on AISC, Steel Construction Manual, ASD, 14th Edition. Per AISC, Allowed Tensile Stress = 0.33 * F _u)		
Nominal Dia.	Nominal Area In ² (mm ²)	Allowed Tension Load Lbs (kN)
¼"	0.049 (31.6)	930 (4.14)
⅜"	0.110 (71.0)	2,110 (9.39)
⅝"	0.150 (96.8)	2,870 (12.77)
¾"	0.196 (126.5)	3,750 (16.68)
⅞"	0.307 (198.2)	5,870 (26.11)
1"	0.442 (285.4)	8,450 (37.59)
1 ¼"	0.601 (388.0)	11,500 (51.15)
1 ½"	0.785 (506.8)	15,030 (66.86)

STEEL COUPLER NUTS

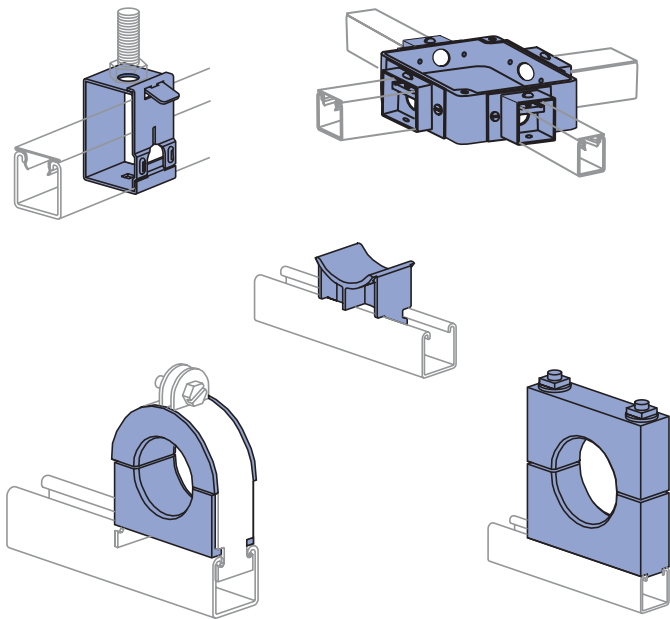


Part Number	Size	Length In (mm)	Wt/100 pcs Lbs (kg)
HRCN025	¼" - 20	⅞" (22.2)	1.9 (0.9)
HRCN031	⅝" - 18	1 ¼" (44.5)	7.5 (3.4)
HRCN037	⅜" - 16	1 ¼" (44.5)	9.0 (4.1)
HRCN044	⅞" - 14	1 ¼" (44.5)	10.4 (4.7)
HRCN050	½" - 13	1 ¼" (44.5)	10.0 (4.5)
HRCN062	⅝" - 11	2 ⅛" (54.0)	18.0 (8.2)
HRCN075	¾" - 10	2 ¼" (57.2)	28.0 (12.7)
HRCN087	⅞" - 9	2 ½" (63.5)	55.0 (24.9)
HRCN100	1" - 8	2 ¾" (69.9)	73.0 (33.1)

1 ⅝" Channel
 Telestrut
 Nuts & Hardware
 General Fittings
 Pipe/Conduit Supports
 Electrical Fittings
 Concrete Inserts
 Unipier®



ELECTRICAL FITTINGS



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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 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.

CHANNEL COMPATABILITY

All of the electrical components in this section are intended for use with any of the 1 5/8" wide channel. They are not intended for use with 1 1/4" or 1 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