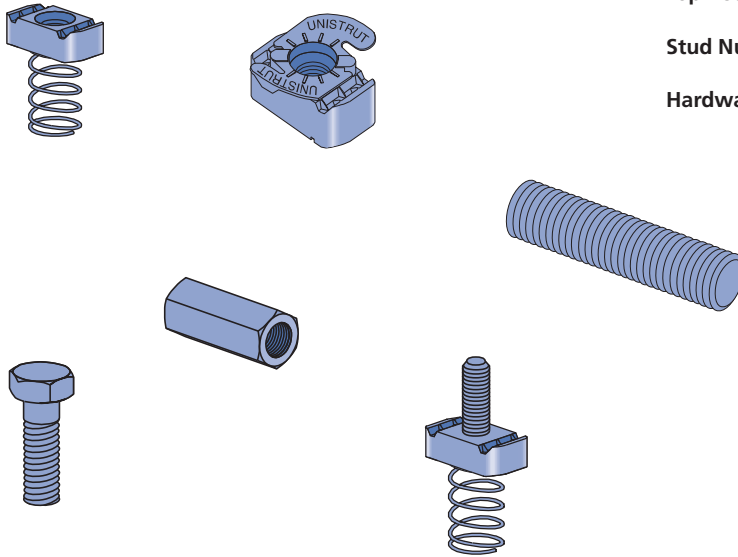




# NUTS & HARDWARE

Channel Nuts With Springs .....	67
Channel Nuts Without Springs .....	67
Top Retainer Nuts .....	67
Stud Nuts.....	68
Hardware.....	68-70



## MATERIAL

Unistrut channel nuts are manufactured from mild steel bars, and after 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 GR45
3/8", 7/16" & 1/2"	A576 GR1015 Modified
5/8" & 3/4"	A36 or A675 GR60
7/8"	A36

## FINISHES

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

All threads on the nuts and bolts are Unified and American coarse screw threads.

## 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 (N·m)	6 (8)	11 (15)	19 (26)	50 (68)	100 (136)	125 (170)
Max Torque Ft/Lbs (N·m)	7 (9)	15 (20)	25 (34)	70 (95)	125 (170)	135 (183)

## DIMENSIONS

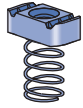
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted.

Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

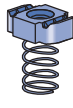
Many Unistrut nuts, bolts and hardware items are also available in standard metric dimensions. Consult factory for ordering information.



### Channel Nuts With Spring



P1006 - P1010  
Pg 67



P1012S - P1024S  
Pg 67



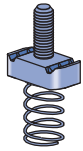
P4006 - P4010  
Pg 67



P4012S - P4023S  
Pg 67



P5506 - P5510  
Pg 67



P2378 - P2382  
Pg 68

### Channel Nuts Without Spring



P3016  
Pg 67



P3006 - P3013  
Pg 67



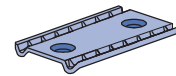
P1012 - P1024  
Pg 67



P4012 - P4023  
Pg 67



P1006T - P1010T, P4010T  
Pg 67



P4908  
Pg 67



P1016  
Pg 67

### Hardware



HHCS  
Pg 68



HFMS  
Pg 68



HRMS  
Pg 68



HSHS  
Pg 68



HCSS  
Pg 68



HSQN  
Pg 69



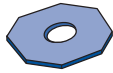
HHXN  
Pg 69



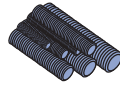
HFLW  
Pg 69



HLKW  
Pg 69



HOCW  
Pg 70



HTHR  
Pg 69



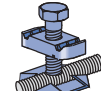
HRCN  
Pg 69



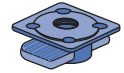
P2486  
Pg 70



P2485  
Pg 70



P2485K  
Pg 70



K1062 - K1064  
Pg 70

### 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 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	

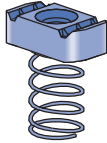
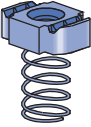
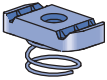
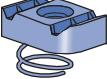
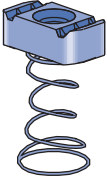
Channel	Channel Nut Size-Thread	Gauge	Allowable Pull-Out Strength Lbs (kN)	Resistance to Slip Lbs (kN)	Torque Ft-Lbs (N•m)
P1100 & P4100	1/2" - 13	14	1,400	1,000	50
			6.23	4.45	70
	3/8" - 16	14	1,000	750	19
			4.45	3.34	25
5/16" - 18	14	800	400	11	
		3.56	1.78	15	
1/4" - 20	14	600	300	6	
		2.67	1.33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

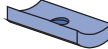
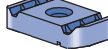



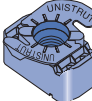
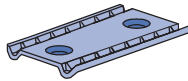

Nut design loads include a minimum safety factor of 3.

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

CHANNEL NUT WITH SPRING

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P1006-0832	#8 -32	7 (3.2)	P1000, P1100, P2000, P3000
P1006-1024	#10 -24	7 (3.2)		
P1006-1420	¼" -20	7 (3.2)		
P1007	⅝" -18	6 (2.7)		
P1008	⅜" -16	10 (4.5)		
P1009	⅞" -14	9 (4.1)		
P1010	½" -13	12 (5.4)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	
P1012S	⅝" -11	21 (9.5)	P1000, P1100, P2000, P3000	
P1023S	¾" -10	21 (9.5)		
P1024S	⅞" -9	21 (9.5)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P4006-0832	#8 -32	7 (3.2)	P3300, P4000, P4100	
P4006-1024	#10 -24	7 (3.2)		
P4006-1420	¼" -20	7 (3.2)		
P4007	⅝" -18	6 (2.7)		
P4008	⅜" -16	9 (4.1)		
P4009	⅞" -14	9 (4.1)		
P4010	½" -13	8 (3.6)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P4012S	⅝" -11	10 (4.5)	P3300, P4000, P4100	
P4023S	¾" -10	10 (4.5)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P5506-0832	#8 -32	7 (3.2)	P5500	
P5506-1024	#10 -24	7 (3.2)		
P5506-1420	¼" -20	7 (3.2)		
P5507	⅝" -18	6 (2.7)		
P5508	⅜" -16	10 (4.5)		
P5509	⅞" -14	10 (4.5)		
P5510	½" -13	12 (5.4)		

CHANNEL NUT WITHOUT SPRING

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P3016-0632	#6 -32	2 (0.9)	Any Channel
	P3016-0832	#8 -32	2 (0.9)	
	P3016-1024	#10 -24	4 (1.8)	
	P3016-1420	¼" -20	4 (1.8)	
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P3006-0832	#8 -32	6 (2.7)	Any Channel	
P3006-1024	#10 -24	6 (2.7)		
P3006-1420	¼" -20	6 (2.7)		
P3007	⅝" -18	6 (2.7)		
P3008	⅜" -16	9 (4.1)		
P3009	⅞" -14	9 (4.1)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P3010	½" -13	11 (5.0)	Any Channel Except P3300, P4000, P4100	
P3013	½" -13	8 (3.6)	P3300, P4000 P4100	
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P1012	⅝" -11	20 (9.1)	Any Channel Except P3300, P4000, P4100	
P1023	¾" -10	20 (9.1)		
P1024	⅞" -9	20 (9.1)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P4012	⅝" -11	11 (5.0)	P3300, P4000 P4100	
P4023	¾" -10	11 (5.0)		
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P1006T1420	¼" -20	7 (3.2)	Any Channel	
P1008T	⅜" -16	10 (4.5)		
P1010T	½" -13	12 (5.4)	Any Channel Except P3300, P4000, P4100	
P4010T	½" -13	8 (3.6)	P3300, P4000 P4100	
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P4908	⅝" -16	17.5 (7.9)	Any Channel	
Double Conveyor Adjusting Nut				
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
P1016	⅝" -16	17.5 (7.9)	Any Slotted Channel	
Missing Link Multi-Purpose Strut Fastener				



1 5/8" Channel

Telestrut

Nuts & Hardware

General Fittings

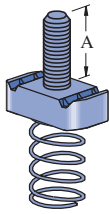
Pipe/Conduit Supports

Electrical Fittings

Concrete Inserts

Unipier®

### CHANNEL STUD NUT WITH SPRING



All Stud Nut grooves are serrated.

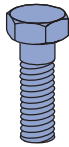
Part No.	Thread	"A" Stud In (mm)	Wt/100 pcs Lbs (kg)
P2378-1	1/4" - 20	1 (25.4)	8 (3.6)
P2378-2		1 1/4 (31.8)	9 (4.1)
P2378-3		1 1/2 (38.1)	9 (4.1)
P2379-1	5/16" - 18	1 (25.4)	12 (5.4)
P2379-2		1 1/4 (31.8)	12 (5.4)
P2379-3		1 1/2 (38.1)	13 (5.9)
P2380-1	3/8" - 16	1 (25.4)	13 (5.9)
P2380-2		1 1/4 (31.8)	13 (5.9)
P2380-3		1 1/2 (38.1)	13 (5.9)
P2380-4		1 3/4 (44.5)	15 (6.8)

Use With P1000, P1100, P2000, P3000

Part No.	Thread	"A" Stud In (mm)	Wt/100 pcs Lbs (kg)
P2380-5	3/8" - 16	2 (50.8)	16 (7.3)
P2380-6		2 1/4 (57.2)	16 (7.3)
P2381-2	1/2" - 13	1 (25.4)	14 (6.4)
P2381-3		1 1/4 (31.8)	15 (6.8)
P2381-4		1 1/2 (38.1)	17 (7.7)
P2381-5		1 3/4 (44.5)	18 (8.2)
P2381-6		2 (50.8)	19 (8.6)
P2381-7		2 1/4 (57.2)	20 (9.1)
P2382-2	5/8" - 11	1 1/4 (31.8)	18 (8.2)
P2382-3		1 1/2 (38.1)	20 (9.1)

Use With P1000, P1100, P2000, P3000

### HEX HEAD CAP SCREWS



Part No.	Size	Wt/100 pcs Lbs (kg)
HHCS025044EG	1/4" x 7/16"	1.0 (0.5)
HHCS025075EG	1/4" x 3/4"	1.3 (0.6)
HHCS025150EG	1/4" x 1 1/2"	2.6 (1.2)
HHCS031125EG	5/16" x 1 1/4"	3.6 (1.6)
HHCS037075EG	3/8" x 3/4"	4.0 (1.8)
HHCS037087EG	3/8" x 7/8"	4.4 (2.0)
HHCS037100EG	3/8" x 1"	4.5 (2.0)
HHCS037125EG	3/8" x 1 1/4"	5.3 (2.4)
HHCS037150EG	3/8" x 1 1/2"	6.0 (2.7)
HHCS037200EG	3/8" x 2"	7.6 (3.4)
HHCS037225EG	3/8" x 2 1/4"	8.4 (3.8)
HHCS037250EG	3/8" x 2 1/2"	9.2 (4.2)
HHCS050094EG	1/2" x 1 5/16"	9.1 (4.1)
HHCS050119EG	1/2" x 1 3/16"	10.2 (4.6)
HHCS050150EG	1/2" x 1 1/2"	11.6 (5.3)
HHCS050175EG	1/2" x 1 3/4"	13.1 (5.9)
HHCS050200EG	1/2" x 2"	14.6 (6.6)
HHCS050225EG	1/2" x 2 1/4"	16 (7.3)
HHCS050250EG	1/2" x 2 1/2"	17.5 (7.9)

### HEX SLOTTED MACHINE SCREWS



Part No.	Size	Wt/100 pcs Lbs (kg)
HSMS025050EG	1/4" x 1/2"	1.4 (0.6)
HSMS025062EG	1/4" x 5/8"	1.5 (0.7)
HSMS025075EG	1/4" x 3/4"	1.7 (0.8)
HSMS031100EG	5/16" x 1"	2.6 (1.2)
HSMS031125EG	5/16" x 1 1/4"	3.0 (1.4)
HSMS031150EG	5/16" x 1 1/2"	3.4 (1.5)
HSMS037125EG	3/8" x 1 1/4"	5.3 (2.4)

### FLAT HEAD MACHINE SCREWS



Part No.	Size	Wt/100 pcs Lbs (kg)
HFMS025062EG	1/4" x 5/8"	1.2 (0.5)
HFMS031100EG	5/16" x 1"	2.6 (1.2)
HFMS050100EG	1/2" x 1"	9.3 (4.2)

### CONE POINT SET SCREWS



Part No.	Size	Wt/100 pcs Lbs (kg)
HCSS025100EG	1/4" x 1"	2.8 (1.3)
HCSS031150EG	5/16" x 1 1/2"	3.9 (1.8)
HCSS037150EG	3/8" x 1 1/2"	4.5 (2.0)
HCSS037200EG	3/8" x 2"	6.1 (2.8)
HCSS050150EG	1/2" x 1 1/2"	8.5 (3.9)
HCSS050200EG	1/2" x 2"	11.4 (5.2)
HCSS062150EG	5/8" x 1 1/2"	14.5 (6.6)
HCSS062200EG	5/8" x 2"	23.0 (10.4)

### ROUND HEAD MACHINE SCREWS



Part No.	Size	Wt/100 pcs Lbs (kg)
HRMS025050EG	1/4" x 1/2"	1 (0.5)
HRMS025075EG	1/4" x 3/4"	1.2 (0.5)
HRMS025100EG	1/4" x 1"	1.5 (0.7)
HRMS031100EG	5/16" x 1"	2.6 (1.2)
HRMS031125EG	5/16" x 1 1/4"	3.0 (1.4)
HRMS037100EG	3/8" x 1"	4.1 (1.9)
HRMS037125EG	3/8" x 1 1/4"	4.7 (2.1)
HRMS037150EG	3/8" x 1 1/2"	5.3 (2.4)

SQUARE NUTS



Part No.	Size	Wt/100 pcs Lbs (kg)
HSQN025EG	1/4"	0.9 (0.4)
HSQN031EG	5/16"	1.6 (0.7)
HSQN037EG	3/8"	2.7 (1.2)
HSQN050EG	1/2"	5.8 (2.6)
HSQN062EG	5/8"	10.7 (4.9)
HSQN075EG	3/4"	15.4 (6.9)
HSQN087EG	7/8"	24.9 (11.3)
HSQN100EG	1"	36.3 (16.5)

HEXAGON NUTS



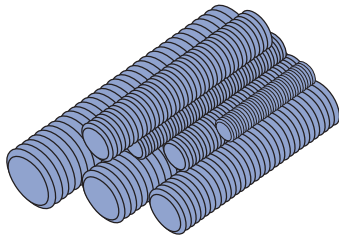
Part No.	Size	Wt/100 pcs Lbs(kg)
HHXN025EG	1/4"	0.6 (0.3)
HHXN031EG	5/16"	1.2 (0.5)
HHXN037EG	3/8"	1.6 (0.7)
HHXN050EG	1/2"	4.8 (2.2)
HHXN062EG	5/8"	7.3 (3.3)
HHXN075EG	3/4"	11.9 (5.4)
HHXN087EG	7/8"	19.0 (8.6)
HHXN100EG	1"	28.3 (12.8)

FLAT WASHERS



Part No.	Size	Wt/100 pcs Lbs(kg)
HFLW025EG	1/4"	0.8 (0.4)
HFLW031EG	5/16"	1.0 (0.5)
HFLW037EG	3/8"	1.5 (0.7)
HFLW050EG	1/2"	3.5 (1.6)
HFLW062EG	5/8"	7.7 (3.5)
HFLW075EG	3/4"	11.0 (5.0)
HFLW087EG	7/8"	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<sub>y</sub> = 36,000 psi minimum  
 F<sub>t</sub> = 58,000 psi minimum

Part No.	Size	Wt/100 Ft. Lbs (kg)
HTHR025	1/4" x 20	13 (5.9)
HTHR031	5/16" x 18	20 (9.1)
HTHR037	3/8" x 16	30 (13.6)
HTHR044	7/16" x 14	30 (13.6)
HTHR050	1/2" x 13	53 (24.0)
HTHR062	5/8" x 11	84 (38.1)
HTHR075	3/4" x 10	124 (56.2)
HTHR087	7/8" x 9	170 (77.1)
HTHR100	1" x 8	223 (101.2)

LOCK WASHERS



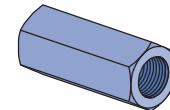
Part No.	Size	Wt/100 pcs Lbs (kg)
HLKW025EG	1/4"	0.25 (0.1)
HLKW031EG	5/16"	0.41 (0.2)
HLKW037EG	3/8"	0.63 (0.3)
HLKW050EG	1/2"	1.32 (0.60)
HLKW062EG	5/8"	2.20 (1.0)
HLKW075EG	3/4"	3.80 (1.7)
HLKW087EG	7/8"	6.00 (2.7)
HLKW100EG	1"	8.80 (4.0)

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 <sup>2</sup> (mm <sup>2</sup> )	Max. Safe Load at 650°F (343°C) Lbs (kN)
3/8"	0.068 (43.9)	730 (3.25)
1/2"	0.126 (81.3)	1,350 (6.01)
5/8"	0.202 (130.3)	2,160 (9.61)
3/4"	0.302 (194.8)	3,230 (14.37)
7/8"	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, 9th Edition. Per AISC, Allowed Tensile Stress = 0.33 * F <sub>u</sub> )		
Nominal Dia.	Nominal Area In <sup>2</sup> (mm <sup>2</sup> )	Allowed Tension Load Lbs (kN)
1/4"	0.049 (31.6)	930 (4.14)
3/8"	0.110 (71.0)	2,110 (9.39)
1/2"	0.150 (96.8)	2,870 (12.77)
3/4"	0.196 (126.5)	3,750 (16.68)
5/8"	0.307 (198.2)	5,870 (26.11)
3/4"	0.442 (285.4)	8,450 (37.59)
7/8"	0.601 (388.0)	11,500 (51.15)
1"	0.785 (506.8)	15,030 (66.86)

STEEL COUPLER NUTS



Part Number	Size	Length In (mm)	Wt/100 pcs Lbs (kg)
HRCN025	1/4" - 20	7/8" (22.2)	1.9 (0.9)
HRCN031	5/16" - 18	1 1/4" (44.5)	7.5 (3.4)
HRCN037	3/8" - 16	1 3/4" (44.5)	9.0 (4.1)
HRCN044	7/16" - 14	1 3/4" (44.5)	10.4 (4.7)
HRCN050	1/2" - 13	1 3/4" (44.5)	10.0 (4.5)
HRCN062	5/8" - 11	2 1/8" (54.0)	18.0 (8.2)
HRCN075	3/4" - 10	2 1/4" (57.2)	28.0 (12.7)
HRCN087	7/8" - 9	2 1/2" (63.5)	55.0 (24.9)
HRCN100	1" - 8	2 3/4" (69.9)	73.0 (33.1)



1 5/8" Channel

Telestrut

Nuts & Hardware

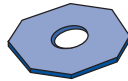
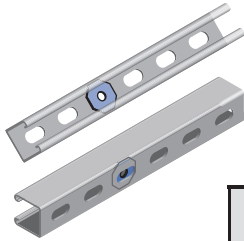
General Fittings

Pipe/Conduit Supports

Electrical Fittings

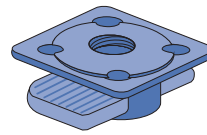
Concrete Inserts

### SLOT ADAPTER™

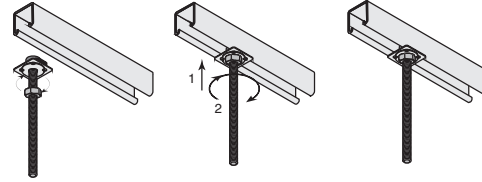


Part No.	Bolt Size	Wt/100 pcs Lbs (kg)
HOCW025	1/4" (6.4)	1 (0.5)
HOCW037	3/8" (9.5)	1.5 (0.7)

### KWIK WASHER™

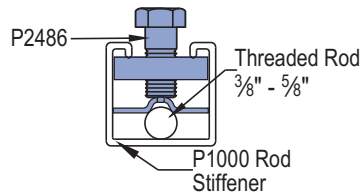
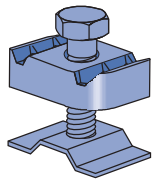


Overhead installation with one hand.  
Available in zinc plated and hot dip galvanized



### P2486

### SEISMIC ROD STIFFENER

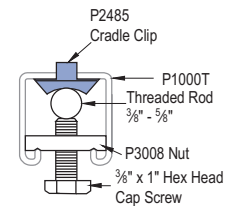
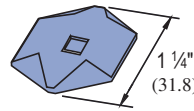


Wt/100 pcs: 16 Lbs (7.3 kg)

Part No.	Size In (mm)	Load Lbs (kN)	Wt/100 pcs Lbs (kg)
K1062	1/4" (6.4)	250 (1.11)	1.2 (0.5)
K1063	3/8" (9.5)	610 (2.71)	2.6 (1.2)
K1064	1/2" (12.7)	1,130 (5.03)	9.3 (4.2)

### P2485

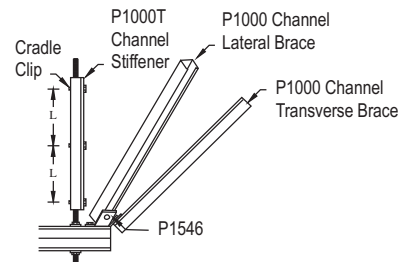
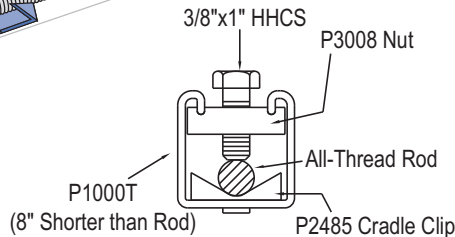
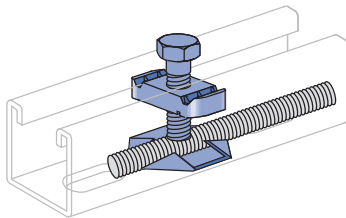
### CRADLE CLIP



Cradle clip only, order other items separately.

### P2485K

### SEISMIC CRADLE CLIP ASSEMBLY



Wt/100 pcs: 3.0 Lbs (1.4 kg)

### P2485 & P2486 – SPACING CHART

Rod Size In (mm)	Root Area In <sup>2</sup> (mm <sup>2</sup> )	Radius of Gyration In (mm)	Design Load Lbs (kN)	.....Rod Stiffener Clip Spacing (L).....			
				Rod Stress @100% 10,700 PSI In (mm)	Rod Stress @75% 8,025 PSI In (mm)	Rod Stress @50% 5,350 PSI In (mm)	Rod Stress @35% 3,745 PSI In (mm)
3/8"	0.068	0.074	730	9	11	13	15
9.5	49.5	1.99	3.25	228.6	279.4	330.2	381.0
1/2"	0.126	0.100	1,350	12	14	17	21
12.7	72.4	2.40	6.01	304.8	355.6	431.8	533.4
5/8"	0.202	0.127	2,160	15	18	22	26
15.9	138.3	3.32	9.61	381.0	457.2	558.8	660.4

#### Notes:

- Minimum Tensile Stress is 50,000 psi (345MPa)
- Working Stress is 10,700 psi (73.9 MPa) – Same as for Tension
- Compression Will Only Occur During a Seismic Event
- Compression Requires the Use of Rod Stiffeners
- KL/r = 200 When Rod Stress is at 35%

Refer to seismic bracing systems catalog for more detailed information.