

UNISTRUT[®]
SERVICE COMPANY

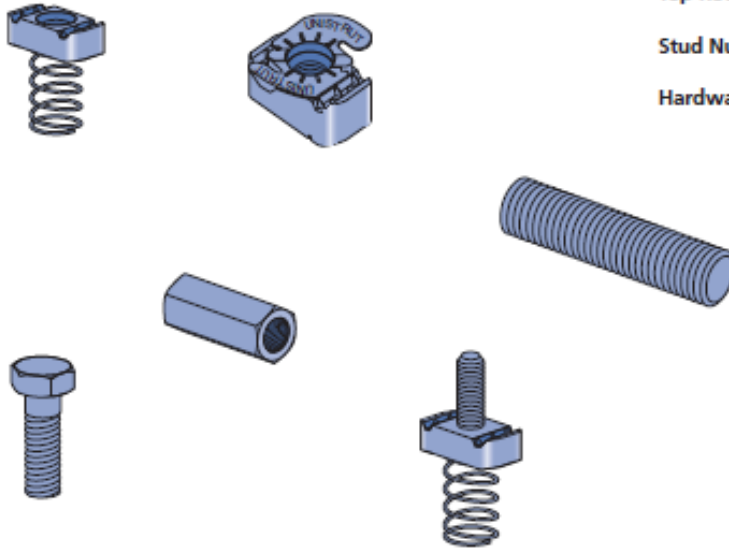
NUTS AND HARDWARE



UNISTRUT

NUTS & HARDWARE

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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" & 3/8"	A1011 SS GR45
3/8", 1/2" & 5/8"	A576 GR1015 Modified
3/4" & 1"	A36 or A675 GR60
1 1/4"	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	3/8"-18	1/2"-16	5/8"-13	3/4"-11	1"-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 73



P1012S - P1024S
Pg 73



P4006 - P4010
Pg 73



P5506 - P5510
Pg 73



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



HSON
Pg 75



HHXN
Pg 75



HFLW
Pg 75



HLKW
Pg 75



HCOW
Pg 75



HTHR
Pg 75



HRCN
Pg 75



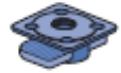
P2486
Pg 75



P2485
Pg 76



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 P5000 P5500	5/8" - 9	12	2,500 11.12	1,700 7.56	*125 170
	3/4" - 10	12	2,500 11.12	1,700 7.56	*125 170
	5/8" - 11	12	2,500 11.12	1,500 6.67	*100 135
	1/2" - 13	12	2,000 8.90	1,500 6.67	50 70
	7/16" - 14	12	1,400 6.23	1,000 4.45	35 50
	3/8" - 16	12	1,000 4.45	800 3.56	19 25
	5/16" - 18	12	800 3.56	500 2.22	11 15
	1/4" - 20	12	600 2.67	300 1.33	6 8
P3300	1/2" - 13	12	1,500 6.67	1,500 6.67	50 70
	3/8" - 16	12	1,000 4.45	800 3.56	19 25
	5/16" - 18	12	800 3.56	500 2.22	11 15
	1/4" - 20	12	600 2.67	300 1.33	6 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 6.23	1,000 4.45	50 70
	3/8" - 16	14	1,000 4.45	750 3.34	19 25
	5/16" - 18	14	800 3.56	400 1.78	11 15
	1/4" - 20	14	600 2.67	300 1.33	6 8
P2000 & P4000	1/2" - 13	16	1,000 4.45	1,000 4.54	50 70
	3/8" - 16	16	1,000 4.45	750 3.34	19 25
	5/16" - 18	16	800 3.56	400 1.78	11 15
	1/4" - 20	16	600 2.67	300 1.33	6 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 Nuts With and Without Spring




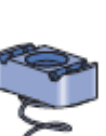
CHANNEL NUT WITH SPRING



	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	1/4" -20	7 (3.2)		
P1007	3/8" -18	6 (2.7)		
P1008	3/8" -16	10 (4.5)		
P1009	1/2" -14	9 (4.1)		
P1010	1/2" -13	12 (5.4)		


	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P1012S	3/8" -11	21 (9.5)	P1000, P1100, P2000, P3000
P1023S	3/4" -10	21 (9.5)		
P1024S	1/2" -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, P4400, P4520, P4100
P4006-1024	#10 -24	7 (3.2)		
P4006-1420	1/4" -20	7 (3.2)		
P4007	3/8" -18	6 (2.7)		
P4008	3/8" -16	9 (4.1)		
P4009	1/2" -14	9 (4.1)		
P4010	1/2" -13	8 (3.6)		

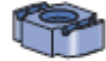
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P5506-0832	#8 -32	7 (3.2)	P5000, P5500
P5506-1024	#10 -24	7 (3.2)		
P5506-1420	1/4" -20	7 (3.2)		
P5507	3/8" -18	6 (2.7)		
P5508	3/8" -16	10 (4.5)		
P5509	1/2" -14	10 (4.5)		
P5510	1/2" -13	12 (5.4)		


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	1/4" -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	1/4" -20	6 (2.7)		
P3007	3/8" -18	6 (2.7)		
P3008	3/8" -16	9 (4.1)		
P3009	1/2" -14	9 (4.1)		

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P3010	1/2" -13	11 (5.0)	Any Channel Except P3300, P4000, P4400, P4520, P4100
P3013	1/2" -13	8 (3.6)	P3300, P4000, P4400, P4520, P4100	

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P1012	3/8" -11	20 (9.1)	Any Channel Except P3300, P4000, P4400, P4520, P4100
P1023	3/4" -10	20 (9.1)		
P1024	1/2" -9	20 (9.1)		

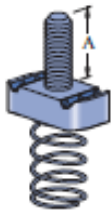
	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P4012	3/8" -11	11 (5.0)	P3300, P4000, P4400, P4520, P4100
P4023	3/4" -10	11 (5.0)		

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With
	P1006T1420	1/4" -20	7 (3.2)	Any Channel
P1008T	3/8" -16	10 (4.5)		
P1010T	1/2" -13	12 (5.4)	Any Channel Except P3300, P4000, P4400, P4520, P4100	
P4010T	1/2" -13	8 (3.6)	P3300, P4000, P4400, P4520, P4100	

	Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With								
	P4908	3/8" -16	17.5 (7.9)	Any Channel								
Double Conveyor Adjusting Nut												
<table border="1"> <thead> <tr> <th>Part Number</th> <th>Nut Size Thread</th> <th>Wt/100 pcs Lbs (kg)</th> <th>Use With</th> </tr> </thead> <tbody> <tr> <td>P1016</td> <td>3/8" -16</td> <td>17.5 (7.9)</td> <td>Any Slotted Channel</td> </tr> </tbody> </table>					Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With	P1016	3/8" -16	17.5 (7.9)	Any Slotted Channel
Part Number	Nut Size Thread	Wt/100 pcs Lbs (kg)	Use With									
P1016	3/8" -16	17.5 (7.9)	Any Slotted Channel									
Missing Link Multi-Purpose Strut Fastener												



CHANNEL STUD NUT WITH SPRING

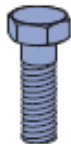


All Stud Nut grooves are serrated.

Part No.	Thread	"A" Stud In (mm)	Wt/100 pcs Lbs (kg)	Use With P1000, P1100, P2000, P3000
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	3/8" - 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)	

Part No.	Thread	"A" Stud In (mm)	Wt/100 pcs Lbs (kg)	Use With P1000, P1100, P2000, P3000
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	3/8" - 11	1 1/4 (31.8)	18 (8.2)	
P2382-3		1 1/2 (38.1)	20 (9.1)	

HEX HEAD CAP SCREWS



Part No.	Size	Wt/ 100 pcs Lbs (kg)
HHCS025044EG	1/4" x 3/8"	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	3/8" x 1 1/4"	3.6 (1.6)
HHCS037075EG	3/8" x 3/4"	4.0 (1.8)
HHCS037087EG	3/8" x 3/8"	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 5/8"	9.1 (4.1)
HHCS050119EG	1/2" x 1 3/4"	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	3/8" x 1"	2.6 (1.2)
HSMS031125EG	3/8" x 1 1/4"	3.0 (1.4)
HSMS031150EG	3/8" x 1 1/2"	3.4 (1.5)
HSMS037125EG	3/8" x 1 1/4"	5.3 (2.4)

CONE POINT SET SCREWS



Part No.	Size	Wt/ 100 pcs Lbs (kg)
HCSS025100EG	1/4" x 1"	2.8 (1.3)
HCSS031150EG	3/8" 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)

FLAT HEAD MACHINE SCREWS



Part No.	Size	Wt/ 100 pcs Lbs (kg)
HFMS025062EG	1/4" x 5/8"	1.2 (0.5)
HFMS031100EG	3/8" x 1"	2.6 (1.2)
HFMS050100EG	1/2" x 1"	9.3 (4.2)

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	3/8" x 1"	2.6 (1.2)
HRMS031125EG	3/8" 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	3/8"	1.6 (0.7)
HSQN037EG	1/2"	2.7 (1.2)
HSQN050EG	5/8"	5.8 (2.6)
HSQN062EG	3/4"	10.7 (4.9)
HSQN075EG	7/8"	15.4 (6.9)
HSQN087EG	1"	24.9 (11.3)
HSQN100EG	1 1/8"	36.3 (16.5)

HEXAGON NUTS



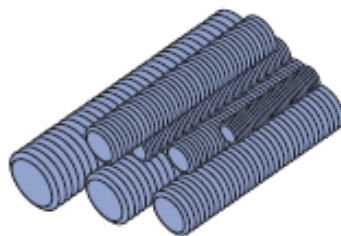
Part No.	Size	Wt/100 pcs Lbs(kg)
HHXN025EG	1/4"	0.6 (0.3)
HHXN031EG	3/8"	1.2 (0.5)
HHXN037EG	1/2"	1.6 (0.7)
HHXN050EG	5/8"	4.8 (2.2)
HHXN062EG	3/4"	7.3 (3.3)
HHXN075EG	7/8"	11.9 (5.4)
HHXN087EG	1"	19.0 (8.6)
HHXN100EG	1 1/8"	28.3 (12.8)

FLAT WASHERS



Part No.	Size	Wt/100 pcs Lbs(kg)
HFLW025EG	1/4"	0.8 (0.4)
HFLW031EG	3/8"	1.0 (0.5)
HFLW037EG	1/2"	1.5 (0.7)
HFLW050EG	5/8"	3.5 (1.6)
HFLW062EG	3/4"	7.7 (3.5)
HFLW075EG	7/8"	11.0 (5.0)
HFLW087EG	1"	15.3 (6.9)
HFLW100EG	1 1/8"	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	1/4" x 20	13 (5.9)
HTHR031	3/8" x 18	20 (9.1)
HTHR037	1/2" x 16	30 (13.6)
HTHR044	5/8" x 14	30 (13.6)
HTHR050	3/4" x 13	53 (24.0)
HTHR062	7/8" x 11	84 (38.1)
HTHR075	1" x 10	124 (56.2)
HTHR087	1 1/8" x 9	170 (77.1)
HTHR100	1 1/2" x 8	223 (101.2)

LOCK WASHERS



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

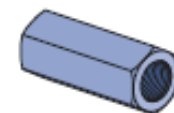
LOAD CARRYING CAPACITY OF THREADED HOT ROLLED STEEL

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)
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, 14th Edition. Per AISC, Allowed Tensile Stress = 0.33 * F _u)		
Nominal Dia.	Nominal Area In ² (mm ²)	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)
5/8"	0.196 (126.5)	3,750 (16.68)
3/4"	0.307 (198.2)	5,870 (26.11)
7/8"	0.442 (285.4)	8,450 (37.59)
1"	0.601 (388.0)	11,500 (51.15)
1 1/8"	0.785 (506.8)	15,030 (66.86)

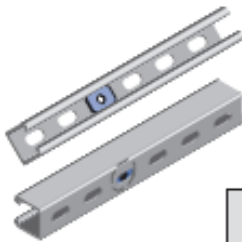
STEEL COUPLER NUTS



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

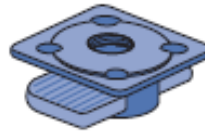


SLOT ADAPTER™

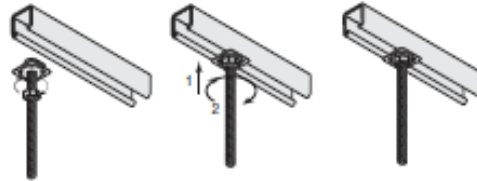


Part No.	Bolt Size	Wt/100 pcs Lbs (kg)
HOCW025	1/4" (6.4)	1 (0.5)
HOCW037	3/8" (9.5)	1.5 (0.7)

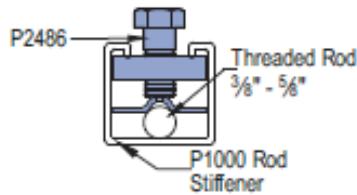
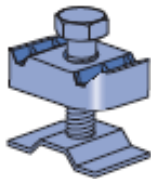
KWIK WASHER™



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



P2486 SEISMIC ROD STIFFENER



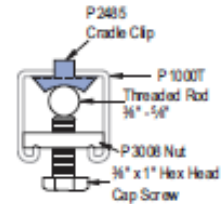
Wt/100 pcs: 16 Lbs (7.3 kg)

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

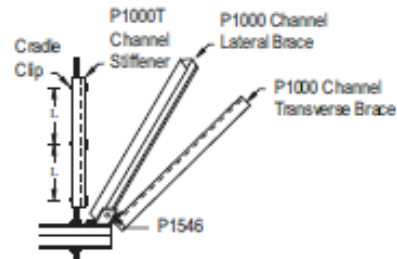
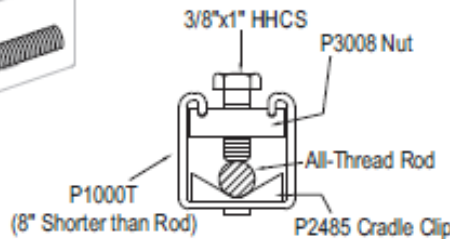
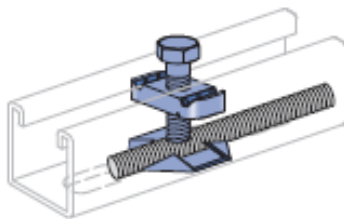


Cradle clip only, order other items separately.



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 ² (mm ²)	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
3/4	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:

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

Refer to seismic bracing systems catalog for more detailed information.

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