



STRUT NUTS

Strut Nut Load Data

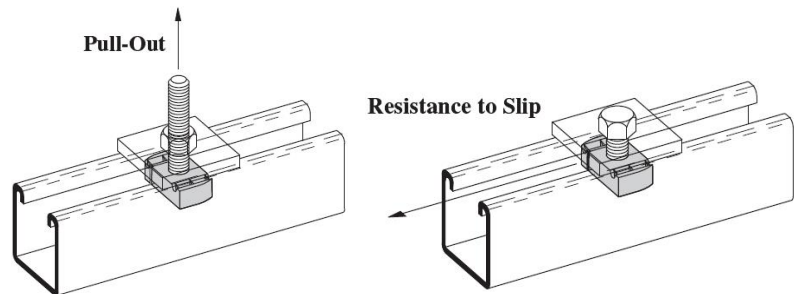
MAXIMUM ALLOWABLE PULL-OUT, SLIP LOAD AND DESIGNED TORQUE VALUES

Strut Nut		Channel Gauge	Channel Series	Allowable Pull-out		Resistance To Slip		Bolt Torque	
Thread Size	Figure Number			lbs.	kN	lbs.	kN	ft-lbs	N-m
1/4-20	3004, 3104, 3204, 3304, 3404	12	1000, 1200, 1500, 1600, 1700, 1960	450	(2.00)	300	(1.33)	6	(8)
		14	1100, 1300	450	(2.00)	300	(1.33)		
		16	1800	450	(2.00)	300	(1.33)		
5/16-18	3005, 3105, 3205, 3305	12	1000, 1200, 1500, 1600, 1700, 1960	750	(3.34)	450	(2.00)	11	(15)
		14	1100, 1300	750	(3.34)	400	(1.78)		
		16	1800	750	(3.34)	400	(1.78)		
3/8-16	3006, 3106, 3206, 3306, 3406	12	1000, 1200, 1500, 1600, 1700, 1960	1000	(4.45)	800	(3.56)	19	(26)
		14	1100, 1300	1000	(4.45)	600	(2.67)		
		16	1800	1000	(4.45)	600	(2.67)		
7/16-14	3007, 3107, 3207, 3307	12	1000, 1200, 1500, 1600, 1700, 1960	1400	(6.23)	1000	(4.45)	35	(47)
		14	1100, 1300	1200	(5.34)	800	(3.56)		
		16	1800	1000	(4.45)	800	(3.56)		
1/2-13	3408	12	1000, 1200, 1500, 1600, 1700, 1960	1000	(4.45)	800	(3.56)	50	(68)
	3208, 3351	12	1000, 1200, 1500, 1600, 1700, 1960	1500	(6.67)	1500	(6.67)		
	3008, 3108, 3308	12	1000, 1200, 1500, 1600, 1700, 1960	2000	(8.90)	1500	(6.67)		
	3008, 3108, 3208, 3308, 3351	14	1100, 1300	1400	(6.23)	1000	(4.45)		
		16	1800	1000	(4.45)	1000	(4.45)		
5/8-11	3209, 3352	12	1000, 1200, 1500, 1600, 1700, 1960	1500	(6.67)	1500	(6.67)	100	(136)
	3009, 3109, 3309	12	1000, 1200, 1500, 1600, 1700, 1960	2000	(8.90)	1500	(6.67)		
		14	1100, 1300	1400	(6.23)	1000	(4.45)		
	3209, 3309, 3352	16	1800	1000	(4.45)	1000	(4.45)		
3/4-10	3210, 3353	12	1000, 1200, 1500, 1600, 1700, 1960	1500	(6.67)	1500	(6.67)	125	(170)
	3010, 3110, 3310	12	1000, 1200, 1500, 1600, 1700, 1960	2000	(8.90)	1500	(6.67)		
		14	1100, 1300	1400	(6.23)	1000	(4.45)		
	3010, 3110, 3210, 3310, 3353	16	1800	1000	(4.45)	1000	(4.45)		
7/8-9	3011, 3111, 3311	12	1000, 1200, 1500, 1600, 1700, 1960	1500	(6.67)	1500	(6.67)	125	(170)
		14	1100, 1300	1400	(6.23)	1000	(4.45)		

Note: When used in conjunction with a Fig. 5000 series square washer.

Using stainless steel channel nuts in stainless steel channel, reduce slip loads by 50% due to hardness of material.

Using stainless steel channel nuts in aluminum channel, reduce slip loads and pull out loads by 70% due to hardness of material.



Unless otherwise specified, all dimensions on drawings and in charts are in inches and dimensions shown in parentheses are in millimeters.

Design Load Data

FOR TYPICAL CHANNEL STRUT CONNECTIONS

90° FITTINGS (WHEN USED IN POSITION SHOWN)

ORIENTATIONS	5112		5112		5130 & 5131		5130 & 5131		5120 & 5121	
	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn
12	1500	(6.67)	1000	(4.45)	2000	(8.90)	2000	(8.90)	1500	(6.67)
14	1000	(4.45)	650	(2.89)	2000	(8.90)	1650	(7.34)	1000	(4.45)
16	750	(3.34)	500	(2.22)	1500	(6.67)	1250	(5.56)	1000	(4.45)

90° FITTINGS (WHEN USED IN POSITION SHOWN)

ORIENTATIONS	5122		5165		5165		5110		5121	
	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn
12	2000	(8.90)	3000	(13.34)	2500	(11.12)	500	(2.22)	500	(2.22)
14	1500	(6.67)	2000	(8.90)	1650	(7.34)	500	(2.22)	500	(2.22)
16	900	(4.00)	1500	(6.67)	1250	(5.56)	500	(2.22)	500	(2.22)

90° FITTINGS (WHEN USED IN POSITION SHOWN)

FLAT PLATE FITTINGS

ORIENTATIONS	5120 & 5121		5122		5121		5010		5010	
	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn	Lbs.	Kn
12	1000	(4.45)	1200	(5.34)	1500	(6.67)	1000	(4.45)	1000	(4.45)
14	650	(2.89)	1200	(5.34)	1150	(5.12)	800	(3.56)	800	(3.56)
16	500	(2.22)	1000	(4.45)	650	(2.89)	600	(2.67)	600	(2.67)

Assumptions:

- Both ends of beams were assumed supported (used in pairs)
- Load data based on carbon steel Fig. 3008 strut nut and 1/2" bolt
- Safety factor = 2 1/2 based on ultimate strength of connection

Unless otherwise specified, all dimensions on drawings and in charts are in inches and dimensions shown in parentheses are in millimeters.