

Channel Nuts
Channel nuts are one of the main components of our strut system. It is designed to provide essential gripping power and ease during installation. Channel nuts are press formed, machined and hardened from steel which meets the requirements of ASTM A108 or ASTM A36 for our larger sizes.

Bolts, Screws, and Nuts
All bolts, screws and nuts meet the physical and chemical requirements of ASTM A307, SAE J429 or ASTM A563, and have unified inch screw threads (coarse, UNC). ISO metric threads are also available on special request.

Recommended Torque

Bolt Size	1/4"-20	5/16"-18	3/8"-16	1/2"-13
Foot/Lbs.	6	11	19	50
Nm	8	15	26	68

Bolt Size	M6x1	M8 x1.25	M10 x 1.5	M12x1.75
Nm	12	17	36	62
Foot/Lbs.	9	13	27	46

Materials & Finishes*

*Unless otherwise Noted. Refer to the product page for materials and finishes available by catalog number.

Note: Channel nuts are not available in HDG, Aluminum, or Stainless Steel Type 304

Finish Code	Finish	Specification
PLN	Plain	ASTM A108/A307 Gr. A, ASTM A563, SAE J429
ZN	Electro-Plated Zinc	ASTM B633 SC1 Type III
CZ	Chromium Zinc	ASTM F1136 Gr. 3
HDG	Hot-Dipped Galvanized	ASTM A153
SS6	Stainless Steel Type 316	MPIF 35/ASTM F593
AL	Aluminum	ASTM F468 S4

Metric
Metric dimensions are shown in parentheses. Unless Noted, all metric dimensions are in millimeters.

Note: Channel nuts and hardware are sold in full box quantities.

Standard Channel Nuts

Numbering Example: **N 7 25 - (*) WO**

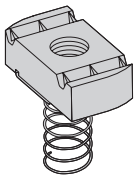
Nut Type	Channel Type	Thread Size	Stud Length	Suffix
N = Standard Nut	7 = Tall Channels	21 = #8-32	* = Specify Length of stud below for Stud Nut or Twirl Stud Nuts	WO = Without Spring
TN = Twirl-Nut™	B11	22 = #10-24		___ = Twirl-Nut or nuts with springs have blank suffix
SN = Stud Nut	B12	27 = #10-32		
STN = Stud Twirl-Nut	2 = Medium Channels	24 = 1/4"-20		
NW = Combo Nut Washer	B22	23 = 5/16"-18		
	B24	28 = 3/8"-16		
	B32	26 = 7/16"-14		
	5 = Short Channels	25 = 1/2"-13		
	B42	55 = 5/8"-11		
	B52	75 = 3/4"-10		
	B54	78 = 7/8"-9		

	3/4 = 3/4"-	
	1 = 1"	
	1 1/4 = 1 1/4"	
	1 1/2 = 1 1/2"	

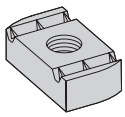
Metric Channel Nuts

Numbering Example: **BMS - 6 M**

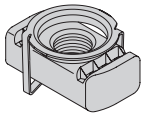
Nut Type	Metric Thread Size	Suffix
BMS = Spring Nut	3 = M3.5	S = Short Spring
BMS-D = Spring Nut (1/2" thick)	4 = M4	M = Medium Spring
BMT = Twirl-Nut	5 = M5	L = Long Spring
BMT-D = Twirl-Nut (1/2" thick)	6 = M6	___ = Twirl-Nut and nuts without springs have blank suffix
BMM = Spring Nut (Mini channel)	8 = M8	
	10 = M10	
	12 = M12	



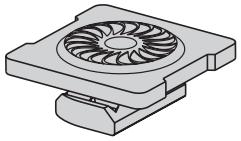
Spring Nut



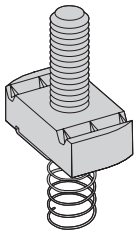
Nut without Spring



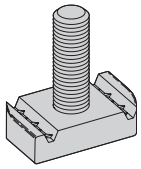
Twirl-Nut



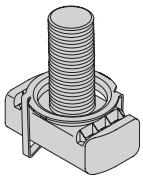
Combo Nut Washer



Stud Nut with Spring



Stud Nut without Spring

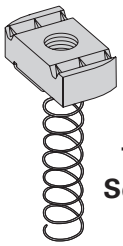


Twirl Stud Nut

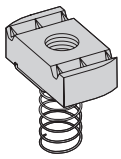
Reference page 78 for general fitting and standard finish specifications.

Note: See page 84 for resistance to slip & page 85 for pull-out strength.

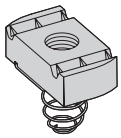
Channel nuts and hardware are sold in full box quantities.



700 Series



200 Series



500 Series

Spring Nut

Part No.	Thread Size	Fits Channel Sizes	Nut Thickness		Wt./C	
			In.	mm	Lbs.	kg
N721	#8-32	B11 & B12	1/4"	(6.3)	7.0	(3.17)
N221	#8-32	B22, B24, B32	1/4"	(6.3)	7.0	(3.17)
N521	#8-32	B42, B52, B54	1/4"	(6.3)	7.0	(3.17)
N727	#10-32	B11 & B12	1/4"	(6.3)	7.0	(3.17)
N227	#10-32	B22, B24, B32	1/4"	(6.3)	7.0	(3.17)
N527	#10-32	B42, B52, B54	1/4"	(6.3)	7.0	(3.17)
N722	#10-24	B11 & B12	1/4"	(6.3)	7.0	(3.17)
N222	#10-24	B22, B24, B32	1/4"	(6.3)	7.0	(3.17)
N522	#10-24	B42, B52, B54	1/4"	(6.3)	7.0	(3.17)
N724	1/4-20	B11 & B12	1/4"	(6.3)	6.7	(3.04)
N224	1/4-20	B22, B24, B32	1/4"	(6.3)	6.7	(3.04)
N524	1/4-20	B42, B52, B54	1/4"	(6.3)	6.7	(3.04)
N723	5/16-18	B11 & B12	1/4"	(6.3)	6.7	(3.04)
N223	5/16-18	B22, B24, B32	1/4"	(6.3)	6.7	(3.04)
N523	5/16-18	B42, B52, B54	1/4"	(6.3)	6.7	(3.04)
N728	3/8-16	B11 & B12	3/8"	(9.5)	9.3	(4.22)
N228	3/8-16	B22, B24, B32	3/8"	(9.5)	9.3	(4.22)
N528	3/8-16	B42, B52, B54	3/8"	(9.5)	9.3	(4.22)
N726	7/16-14	B11 & B12	3/8"	(9.5)	8.8	(3.99)
N226	7/16-14	B22, B24, B32	3/8"	(9.5)	8.8	(3.99)
N526	7/16-14	B42, B52, B54	3/8"	(9.5)	8.8	(3.99)
N725	1/2-13	B11 & B12	1/2"	(12.7)	11.6	(5.26)
N225	1/2-13	B22, B24, B32	1/2"	(12.7)	11.6	(5.26)
N525	1/2-13	B42, B52, B54	3/8"	(9.5)	8.8	(3.99)
N755	5/8-11	B11 & B12	1/2"	(12.7)	16.4	(7.44)
N255	5/8-11	B22, B24, B32	1/2"	(12.7)	16.4	(7.44)
N555	5/8-11	B42, B52, B54	3/8"	(9.5)	10.2	(4.62)
N775	3/4-10	B11 & B12	1/2"	(12.7)	14.5	(6.58)
N275	3/4-10	B22, B24, B32	1/2"	(12.7)	14.5	(6.58)
N575	3/4-10	B42, B52, B54	3/8"	(9.5)	8.8	(3.99)
N778	7/8-9	B11 & B12	1/2"	(12.7)	12.5	(5.67)
N278	7/8-9	B22, B24, B32	1/2"	(12.7)	12.5	(5.67)
Metric Threads						
BMS-6L	M6 x 1	B11 & B12	1/4"	(6.3)	6.9	(3.13)
BMS-6M	M6 x 1	B22, B24, B32	1/4"	(6.3)	6.9	(3.13)
BMS-6S	M6 x 1	B42, B52, B54	1/4"	(6.3)	6.9	(3.13)
BMS-8L	M8 x 1.25	B11 & B12	1/4"	(6.3)	6.7	(3.04)
BMS-8M	M8 x 1.25	B22, B24, B32	1/4"	(6.3)	6.7	(3.04)
BMS-8S	M8 x 1.25	B42, B52, B54	1/4"	(6.3)	6.7	(3.04)
BMS-10L	M10 x 1.5	B11 & B12	3/8"	(9.5)	9.6	(4.35)
BMS-10M	M10 x 1.5	B22, B24, B32	3/8"	(9.5)	9.6	(4.35)
BMS-10S	M10 x 1.5	B42, B52, B54	3/8"	(9.5)	9.6	(4.35)
BMS-12M	M12 x 1.75	B22, B24, B32	3/8"	(9.5)	9.2	(4.17)
BMS-12S	M12 x 1.75	B42, B52, B54	3/8"	(9.5)	9.2	(4.17)
BMS-D-12L	M12 x 1.75	B11 & B12	1/2"	(12.7)	12.2	(5.53)
BMS-D-12M	M12 x 1.75	B22, B24, B32	1/2"	(12.7)	12.2	(5.53)

Note: For mini channel nut information see page 245.

Reference page 78 for general fitting and standard finish specifications.

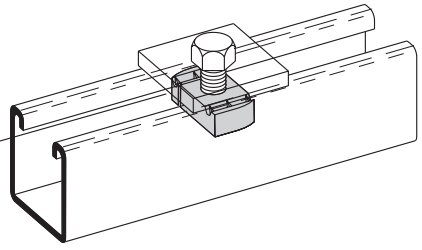
Resistance To Slip

• With Safety Factor of 3

	Thread Size	Nut Part Numbers	Resistance to Slip			
			12 ga. Channel		14 ga. Channel	
			Lbs.	N	Lbs.	N
	#8-32	**N221, N221WO,N521, N721, TN221**	50	220	50	220
	#10-24	**N222, N222WO, N522, N722, TN222**	100	440	100	440
	#10-32	**N227, N227WO, N527, N727, TN227**	100	440	100	440
	1/4"-20	**NW524*, N224, N224WO, N524, N724, TN224, STN224, SN224WO, SN224, SN524, SN724**	300	1330	300	1330
	5/16"-18	**N223, N223WO, N523, N723, TN223**	450	2000	450	2000
	3/8"-16	**NW528*, N228, N228WO, N528, N728 TN228, STN228, SN228WO, SN228, SN528, SN728**	800	3560	600	2670
	7/16"-14	**N226, N226WO, N526, N726, TN226**	1000	4450	800	3560
	1/2"-13	**N225, N225WO, N725, TN225, STN225, SN225WO, SN225, SN725**	1500	6670	1000	4450
		NW525*, N525, N525WO, TN525, STN525, SN525WO, SN525	1500	6670	1000	4450
	5/8"-11	**N255, N255WO, N755, TN255**	1500	6670	1000	4450
		N555, N555WO	1500	6670	1000	4450
	3/4"-10	**N275, N275WO, N775**	1500	6670	1000	4450
		N575, N575WO	1500	6670	1000	4450
	7/8"-9	**N278, N278WO, N778**	1500	6670	1000	4450
Metric Threads	M6 x 1	**BMS-6, BMS-6L, BMS-6M, BMS-6S, BMT-6**	300	1330	300	1330
	M8 x 1.25	**BMS-8, BMS-8L, BMS-8M, BMS-8S, BMT-8**	450	2000	450	2000
	M10 x 1.50	**BMS-10, BMS-10L, BMS-10M, BMS-10S, BMT-10**	800	3560	600	2760
	M12 x 1.75	**BMS-D-12, BMS-D-12L, BMS-D-12M, BMT-D-12**	1500	6670	1000	4450
		BMS-12, BMS-12M, BMS-12S, BMT-12	1500	6670	1000	4450

* Combo Nut Washer (see page 83)

Note:
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 by 70% due to hardness of material.



Note: For mini channel nut information see page 245.

Channel Nuts & Hardware

Reference page 78 for general fitting and standard finish specifications.

Pull-Out Strength

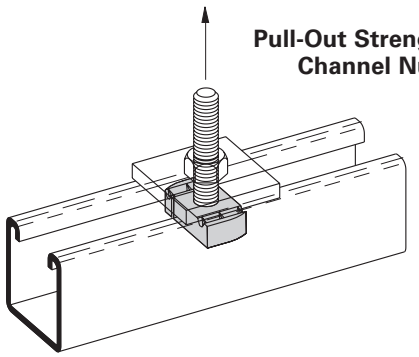
- With Safety Factor of 3
- Maximum pullout strength for B11 & B12 channels is limited to 1500 lbs. (6670 N).

Thread Size	Nut Part Numbers	Pull-Out Strength			
		12 ga. Channel		14 ga. Channel	
		Lbs.	N	Lbs.	N
#8-32	**N221, N221WO,N521, N721, TN221**	200	890	200	890
#10-24	**N222, N222WO, N522, N722, TN222**	250	1110	250	1110
#10-32	**N227, N227WO, N527, N727, TN227**	250	1110	250	1110
1/4"-20	**NW524*, N224,N224WO, N524, N724, TN224, STN224, SN224WO, SN224, SN524, SN724**	450	2000	450	2000
5/16"-18	**N223, N223WO, N523, N723, TN223**	750	3330	750	3330
3/8"-16	**NW528*, N228, N228WO, N528, N728 TN228, STN228, SN228WO, SN228, SN528, SN728**	1100	4890	1000	4450
7/16"-14	**N226, N226WO, N526, N726, TN226**	1500	6670	1200	5340
1/2"-13	**N225, N225WO, N725, TN225, STN225, SN225WO, SN225, SN725**	2000	8900	1400	6230
	NW525*, N525, N525WO, TN525, STN525, SN525WO, SN525	1500	6670	1400	6230
5/8"-11	**N255, N255WO, N755, TN255**	2000	8900	1400	6230
	N555, N555WO	1500	6670	1400	6230
3/4"-10	**N275, N275WO, N775**	2000	8900	1400	6230
	N575, N575WO	1500	6670	1400	6230
7/8"-9	**N278, N278WO, N778**	1500	6670	1400	6230
M6 x 1	**BMS-6, BMS-6L, BMS-6M, BMS-6S, BMT-6**	450	2000	450	2000
M8 x 1.25	**BMS-8, BMS-8L, BMS-8M, BMS-8S, BMT-8**	750	3330	750	3330
M10 x 1.50	**BMS-10, BMS-10L, BMS-10M, BMS-10S, BMT-10**	1100	4890	1000	4450
M12 x 1.75	**BMS-D-12, BMS-D-12L, BMS-D-12M, BMT-D-12**	2000	8900	1400	6230
	BMS-12, BMS-12M, BMS-12S, BMT-12	1500	6670	1400	6230

* Combo Nut Washer (see page 83)

Note:
Using stainless steel channel nuts in stainless steel channel, use pull-out loads as shown above.
Using stainless steel channel nuts in aluminum channel, reduce pull-out loads by 70% due to hardness of material.

Pull-Out Strength of Channel Nut



Note: For mini channel nut information see page 245.

Reference page 78 for general fitting and standard finish specifications.