Section 4: Combo Nut Washer & Spring Nuts

FUNCTIONS AND FEATURES

Combo Nut Washer is a pre-assembled nut and washer, which helps reduce the number of parts that require handling. The combination design allows for easy adjustment when installed in strut channel, and provides quick attachment for threaded rod, allowing a simple installation using just one hand, which helps reduce installation time and cost. Furthermore, the serrated flange negates the need for a flat washer.

To install, position Combo Nut Washer into strut channel and rotate clockwise as nut seats in the strut channel. Then slide Combo Nut Washer into the desired location in the strut channel and insert threaded rod into nut, the Combo Nut Washer locks at 90 degree angle. Then thread the rod up through the nut and lock into place with a hex nut, now the threaded rod is ready for products to be installed.

Spring Nuts are one of the main components of the suspension system, they are inserted anywhere along the continuous slot of the channel, allowing the attachment of fittings without drilling or welding. If changes are required, fittings are easily adjusted, removed, or reused.

Designed with specially formed teeth in the parallel channel recesses to grip the returned edge of the channel, and the shearing action of the teeth assures positive locking of the channel to the fittings.

Spring Nuts with regular spring have shrink wrap sleeves on them eliminating tangling during shipping and installation.

MATERIAL

Mild Steel (ASTM A108)

CASE HARDENING

After stamping and machining operations are competed, Spring Nuts are case hardened to a depth of 0.003" to 0.005" conforming to ASTM A576/A108 Grade 1015.

THREADS

Conforms to Unified Screw Thread(UNC) standard, ANSI B1.1, coarse series UNC Class 2

FINISHES

Zinc Electro-Galvanized (ASTM B633)

Hot-Dip Galvanized (ASTM A123/A153)

STAINLESS STEEL OPTIONS

All Spring Nuts are available in 304 Stainless Steel or 316 Stainless Steel (ASTM A240)

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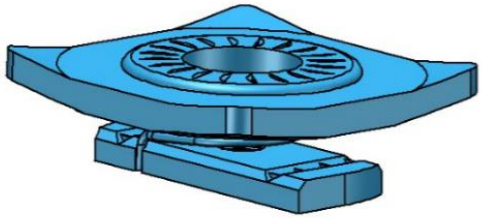
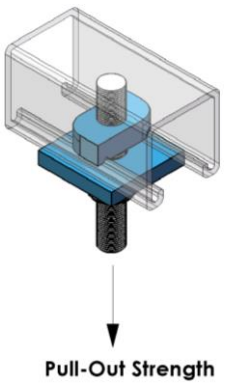


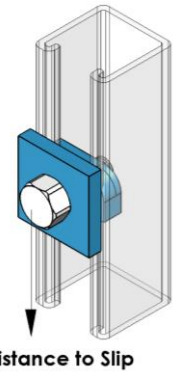
COMBO NUT WASHER

Part #	Thread Size (in.)	Dim. of Washer (in.)	Thread Count	Nut Thickness (in.)	Torque (ft.-lbs.)	Safety Factor	Approx. Wt. (lbs.)
A-NW524	1/4	1 5/8 x 1 5/8	20	1/4	6	3	0.16
A-NW528	3/8	1 5/8 x 1 5/8	16	3/8	19	3	0.18
A-NW525	1/2	1 5/8 x 1 5/8	13	3/8	50	3	0.17

Pull-Out and Resistance to Slip Loads

	12 Gauge Strut		14 Gauge Strut		16 Gauge Strut	
Thread Size	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)
1/4"-20	450	300	450	300	450	300
3/8”-16	1100	800	1000	600	1000	600
1/2"-13	1500	1500	1400	1000	1000	1000





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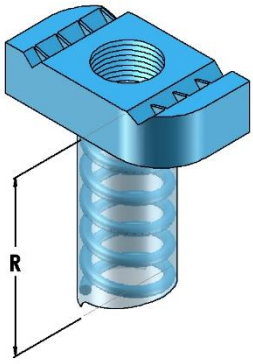
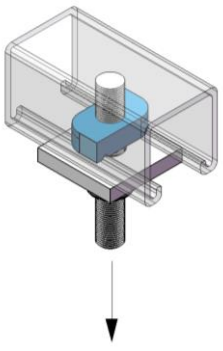


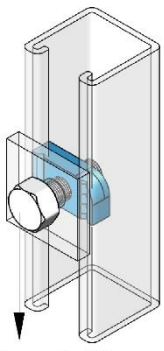
SPRING NUT REGULAR SPRING (WITH SHRINK WRAP)

Part #	Thread Size (in.)	Thread Count	R (in.)	Thickness (in.)	Torque (ft.-lbs.)	Safety Factor	Approx. Wt. (lbs.)
A-900RG 1/4	1/4	20	1 1/2	1/4	6	3	0.07
A-900RG 5/16	5/16	18	1 1/2	3/8	11	3	0.09
A-900RG 3/8	3/8	16	1 1/2	3/8	19	3	0.09
A-900RG 1/2	1/2	13	1 1/2	3/8	50	3	0.08
A-900RG 1/2 x 1/2	1/2	13	1 1/2	1/2	80	3	0.11
A-900RG 5/8	5/8	11	1 1/2	1/2	100	3	0.14
A-900RG 3/4	3/4	10	1 1/2	1/2	125	3	0.15
A-900RG 7/8	7/8	9	1 1/2	1/2	125	3	0.13

Pull-Out and Resistance to Slip Loads

	12 Gauge Strut		14 Gauge Strut		16 Gauge Strut	
Thread Size	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)
1/4"-20	600	300	600	300	600	300
5/16”-18	800	500	800	400	800	400
3/8”-16	1000	800	1000	750	1000	750
1/2"-13	2000	1500	1400	1000	1000	1000
1/2"x1/2”-13	2300	1500	1400	1000	1000	1000
5/8”-11	2500	1500	1400	1000	1000	1000
3/4”-10	2500	1700	1400	1000	1000	1000
7/8”-9	2500	1700	1400	1000	1000	1000


Pull-Out Strength


Resistance to Slip

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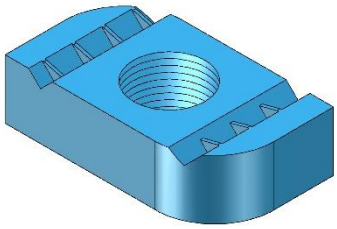
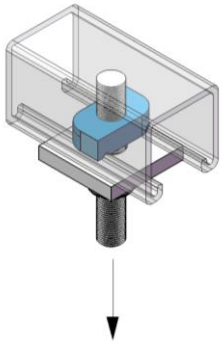


SPRING NUT NO SPRING

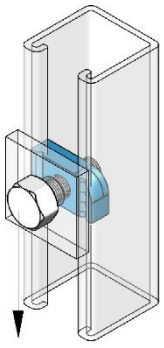
Part #	Thread Size (in.)	Thread Count	Thickness (in.)	Torque (ft.-lbs.)	Safety Factor	Approx. Wt. (lbs.)
A-900NS 1/4	1/4	20	1/4	6	3	0.06
A-900NS 5/16	5/16	18	3/8	11	3	0.09
A-900NS 3/8	3/8	16	3/8	19	3	0.08
A-900NS 1/2	1/2	13	3/8	50	3	0.07
A-900NS 1/2 x 1/2	1/2	13	1/2	80	3	0.10
A-900NS 5/8	5/8	11	1/2	100	3	0.13
A-900NS 3/4	3/4	10	1/2	125	3	0.13
A-900NS 7/8	7/8	9	1/2	125	3	0.12

Pull-Out and Resistance to Slip Loads

	12 Gauge Strut		14 Gauge Strut		16 Gauge Strut	
Thread Size	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)
1/4"-20	600	300	600	300	600	300
5/16”-18	800	500	800	400	800	400
3/8”-16	1000	800	1000	750	1000	750
1/2"-13	2000	1500	1400	1000	1000	1000
1/2"x1/2”-13	2300	1500	1400	1000	1000	1000
5/8”-11	2500	1500	1400	1000	1000	1000
3/4”-10	2500	1700	1400	1000	1000	1000
7/8”-9	2500	1700	1400	1000	1000	1000



Pull-Out Strength



Resistance to Slip

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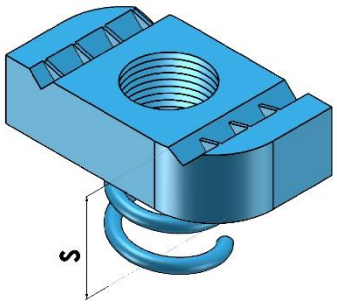
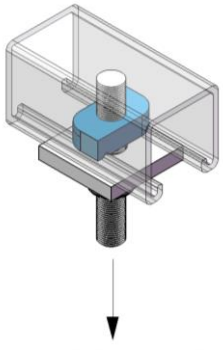


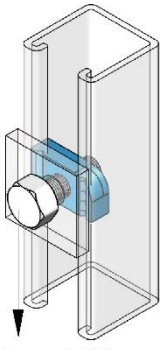
SPRING NUT SHORT SPRING

Part #	Thread Size (in.)	Thread Count	S (in.)	Thickness (in.)	Torque (ft.-lbs.)	Safety Factor	Approx. Wt. (lbs.)
A-900SH 1/4	1/4	20	11/16	1/4	6	3	0.06
A-900SH 5/16	5/16	18	11/16	3/8	11	3	0.09
A-900SH 3/8	3/8	16	11/16	3/8	19	3	0.08
A-900SH 1/2	1/2	13	11/16	3/8	50	3	0.07
A-900SH 1/2 x 1/2	1/2	13	11/16	1/2	80	3	0.10
A-900SH 5/8	5/8	11	11/16	1/2	100	3	0.14
A-900SH 3/4	3/4	10	11/16	1/2	125	3	0.13
A-900SH 7/8	7/8	9	11/16	1/2	125	3	0.12

Pull-Out and Resistance to Slip Loads

	12 Gauge Strut		14 Gauge Strut		16 Gauge Strut	
Thread Size	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)
1/4"-20	600	300	600	300	600	300
5/16”-18	800	500	800	400	800	400
3/8”-16	1000	800	1000	750	1000	750
1/2"-13	2000	1500	1400	1000	1000	1000
1/2"x1/2”-13	2300	1500	1400	1000	1000	1000
5/8”-11	2500	1500	1400	1000	1000	1000
3/4”-10	2500	1700	1400	1000	1000	1000
7/8”-9	2500	1700	1400	1000	1000	1000


Pull-Out Strength


Resistance to Slip

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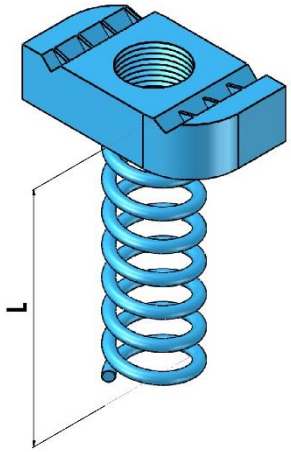
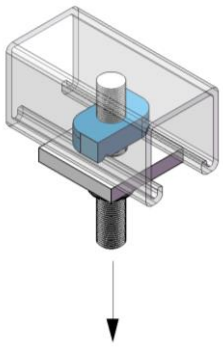


SPRING NUT LONG SPRING

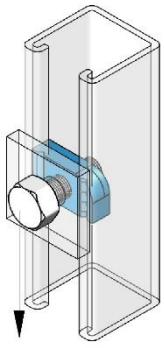
Part #	Thread Size (in.)	Thread Count	L (in.)	Thickness (in.)	Torque (ft.-lbs.)	Safety Factor	Approx. Wt. (lbs.)
A-900LS 1/4	1/4	20	2 1/2	1/4	6	3	0.07
A-900LS 5/16	5/16	18	2 1/2	3/8	11	3	0.09
A-900LS 3/8	3/8	16	2 1/2	3/8	19	3	0.09
A-900LS 1/2	1/2	13	2 1/2	3/8	50	3	0.08
A-900LS 1/2 x 1/2	1/2	13	2 1/2	1/2	80	3	0.10
A-900LS 5/8	5/8	11	2 1/2	1/2	100	3	0.15
A-900LS 3/4	3/4	10	2 1/2	1/2	125	3	0.14
A-900LS 7/8	7/8	9	2 1/2	1/2	125	3	0.13

Pull-Out and Resistance to Slip Loads

	12 Gauge Strut		14 Gauge Strut		16 Gauge Strut	
Thread Size	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)	Max. Allowable Pull-Out Strength (lbs.)	Resistance to Slip (lbs.)
1/4"-20	600	300	600	300	600	300
5/16”-18	800	500	800	400	800	400
3/8”-16	1000	800	1000	750	1000	750
1/2"-13	2000	1500	1400	1000	1000	1000
1/2"x1/2”-13	2300	1500	1400	1000	1000	1000
5/8”-11	2500	1500	1400	1000	1000	1000
3/4”-10	2500	1700	1400	1000	1000	1000
7/8”-9	2500	1700	1400	1000	1000	1000



Pull-Out Strength



Resistance to Slip

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