

# **Your One-Stop Source for Nut Products**

Nylon Insert Locknuts 
All-Metal Locknuts
Free-Spinning Nuts and Locknuts
Commercial Standards
Blue Print Specials

### All Metal Locknuts

Part Series	Description	Product	Sizes
Inch and Metric All	Metal Locknuts		
AUTOMATION	The Automation Locknut is precision manufactured on cold and hot forming equipment to ensure a uniform bearing area and chamfered top and to provide consistent prevailing torque results. <b>Applications:</b> High volume assembly locknut. The cone shape allows for orientation of locknut for automated assembly. Also referred to as Stover, Unitorque, Crownlock and Autolock.	000 88	<b>Grade A</b> : 1/4" – 1/2" <b>Grade B</b> : 1/4" – 1" <b>Grade C</b> : 1/4" – 1" <b>Metric:</b> Class 8, 9 and 10 M5-M36 Inch and Metric: Coarse and Fine Threads
COLLAR	Most effective when used in applications requiring large diameters, high strength and light weight. <b>Applications:</b> Large diameter requirements used in high strength heavy industry applications, Full Collar and Thin Collar designs.	00 00	5/8" – 3 UNC Coarse and UNF Fine Threads <b>Metric:</b> M16 – M50 Coarse and Fine Threads
FLANGE CENTER, TECH™ and TOP	A low-cost alternative to flange cone nuts. Flange Locknuts are available in Center, Tech <sup>™</sup> and Top Locknut designs with large bearing surface. Available in regular, large and super flange diameters. <b>Applications:</b> Industrial and commercial applications requiring an oversize bearing surface. Popular in lawn and garden equipment, material handling, and truck manufacturing.		<b>Grade F and G</b> : 1/4" – 1" UNC Coarse and UNF Fine Threads <b>Metric</b> : Class 8, 9 and 10-M5 – M20 Coarse and Fine Threads
FLANGE CONE	The cone-style Flange Locknut allows for fast and easy assembly until the locking element is encountered by the mating part. The full body flange and cone top of this locknut provide for additional strength and good appearance in the final product. One of the products of choice for the truck and automotive industries. <b>Applications:</b> Industrial and commercial applications requiring an oversize bearing surface.		<b>Grade F and G</b> : 1/4" – 5/8" UNC Coarse and UNF Fine Threads <b>Metric:</b> Class 8, 9 and 10-M3 – M30 Coarse and Fine Threads
FINISHED HEX: CENTER, TECH™ and TOP	Center Locknuts offer the most economical and efficient locking features. Nuts can be assembled from either side, reducing automated assembly cost. Tech™ or Top Lock designs are similar to the automation design, but at a reduced cost. Available in inch Grade 2, 5 and 8 or Metric Class 8, 9 or 10. <b>Applications:</b> Industrial and commercial appliances, automotive, truck, garden, and medical equipment. Also referred to as reversible, two-way, or bi-way.		#8 – 1" UNC Coarse and UNF Fine Threads <b>Metric:</b> M2.5 – M24 Coarse and Fine Threads
JAM HEX LOCKNUTS: CENTER, and TOP	Jam design offers a low profile locknut. Jam Center Locknuts have 3-point deflection and offer the most economical and efficient locking features. Nuts can be assembled from either side reducing automated assembly cost. Top Lock designs are also available. Available in inch Grade 2 and 5 or Metric Class 4. <b>Applications:</b> Industrial and commercial appliances, automotive, truck, garden, and medical equipment.	000	1/4" – 1" UNC Coarse and UNF Fine Threads <b>Metric:</b> M2.5 – M24 Coarse and Fine Threads
MACHINE SCREW: TOP LOCK	Aztech excels at small pattern locknut manufacturing, producing consistent installation torques for many electronic applications. This style satisfies low profile top locknut requirements. <b>Applications:</b> Computers, appliances, medical equipment, and garden.	00	#4 – 3/8" UNC Coarse and UNF Fine Threads
ACORN CENTER	For decorative or snag-free applications requiring a locking feature. The precision center lock deflection is located on opposite sides of the Acorn Nut body. Accurately located on the nut flats, the center lock fully engages the mating bolt before it protrudes past the hex flats. <b>Applications:</b> Low and High Crown designs for furniture, play ground equipment, and decorative applications.		#6 – 1/2" UNC Coarse and UNF Fine Threads
FLEX-TYPE	Full height light hex design provides excellent re-usability and uniform thread deflection for high temperature and severe vibration applications. <b>Applications:</b> Automotive engine and suspension, aerospace, agricultural, and industrial applications.	<b>(</b>	Full height #6 – 5/8" UNC Coarse and UNF Fine Threads

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## Nylon Insert Locknuts

Part Series	Description	Produc	ct Sizes		
Inch and Metric Ny	lon Insert Locknuts				
NM, NTM, NMRH	NM Series is a small diameter standard. NTM or Thin Pattern is used primarily for a shear load on the fastener assembly. NMRH Series is a reduced hex nut compared to common standards. <b>Applications:</b> Aerospace, appliances, avionics, computers, house and garden, medical equipment.		NM Series: 2-56 – 12-28 NTM Series: 2-56 – 12-28 NMRH Series: 6-32 – 1/4-28		
NE, NE8 (Grade 8 N1610 Series)	NE Series is the popular standard for most commercial applications. NE8 Series is produced using medium carbon steel and heat treated to Rockwell C26/32 for additional tensile and shear strength. <b>Applications:</b> Aerospace, appliances, agricultural equipment, house and garden, materials handling, trailers, truck and auto.		NE Series: 1/4-20 – 1 1/2-12		
NTE, NTE8 (Grade 8 N1610 Series)	NTE Series is a thin pattern used primarily for a shear load on the fastener assembly. NTE8 Series is a thin pattern produced using medium carbon steel and heat treated to Rockwell C26/32 for additional tensile and shear strength. <b>Applications:</b> Aerospace, appliances, avionics, computers, furniture, house and garden, lighting.	9	NTE Series: 1/4-20 – 1 1/2-12		
NU	NU Series is a heavy pattern locknut used in structural or heavy industrial applications. <b>Applications:</b> Bridges and buildings, farm equipment, heavy industry, oil field machinery, railroad.		NU Series: 1/4-20 – 3-4 NU Series: 1/2-20 – 3-12		
NTU	NTU Series is a thin, heavy pattern locknut. Used in structural or heavy industrial applications. <b>Applications</b> : Bearing retainers, pinion shafts, farm equipment, heavy industry, oil field machinery, railroad.	٩	NTU Series: 1/4-20 – 3-4 NTU Series: 5/8-18 – 3-12		
FLANGE, STAINLESS NM and NE	NFE Series is a light hex flange locknut. NM-SS & NE-SS Series are standards for commercial applications. <b>NFE Applications:</b> Appliances, computers, farm equipment, furniture, house and garden, material handling, trailer, truck and auto. <b>NM-SSE Applications:</b> Boating, trailer, food processing, pumps, furniture, buildings.		Flange Series: 1/4-20 – 3/4-10 NM-SS Series: #4-40 – 12-24 NE-SS Series: 1/4-20 – 3/4-10		
N1260, WC WING NKM, NKE	N1260 Series is a thick pattern locknut produced using medium carbon steel and heat treated to Rockwell C26/32. WC Series are designed for finger installation. NKM & NKE Series are locknuts with self-contained screw thread covers. <b>N1260 Applications:</b> Buildings and bridges, heavy equipment, field machinery, truck and auto.	<b>S</b>	N1260 Series High Hex Nylon: 3/8-24 – 1 1/2-12 WC Series: #8-32 – 3/8-24 NKM and NKE Series Nylon Cap Nuts: 4-40 – 3/8-24		
METRIC DIN982, DIN985	The most popular series of metric nylon insert locknuts, DIN982 is full height; the DIN985 is thin pattern. <b>Applications:</b> Industrial, commercial and automotive applications requiring a locknut of general use and maximum sustained temperature of 250°.		<b>DIN982</b> : M5 - M24 <b>DIN985</b> : M4 - M48		
Inch and Metric Ser	rated and K-Loc Locknuts				
SERRATED HEX FLANGE LOCKNUTS	Hex Nut with flanged serrated bearing surface to displace material forming a locking feature resistant to vibration and loosening. Available in standard and large flange diameters. <b>Applications:</b> Industrial and commercial applications requiring a large bearing surface and a mating surface that can withstand material displacement.	0	#10-32 – 5/8" UNC Coarse and UNF Fine Threads		
DOUBLE SERRATED HEX LOCKNUTS	Hex Nut with serrated bearing surface on both bearing surfaces to displace material forming a locking feature resistant to vibration and loosing. <b>Applications:</b> Industrial and commercial applications utilizing automated assembly and a mating surface that can withstand material displacement.		#10-32 – 3/8" UNC Coarse and UNF Fine Threads		
HEX K-LOC LOCKNUTS	Hex Nut with assembled free spinning External Tooth or Conical Lockwasher. The lockwasher creates the locking feature against the bearing surface of the nut and the mating surface. <b>Applications:</b> Popular low-cost locknut for commercial and industrial applications.		#4 – 5/8" UNC Coarse and UNF Fine Threads		
Inch and Metric He	x and Flange Nuts (No-lock)				
FINISHED HEX and JAM NUTS	Finished Hex Nuts for use with bolts of similar materials and finish. Hex Finished Jam Nuts are tightened against Full Hex Nuts to prevent loosening. Materials include grade 2, 5 and 8.	00	1/4" – 3" UNC Coarse and UNF Fine Threads		
HEX FLANGE NUTS	Hex Flange Nut with no serrations create an oversize bearing surface for applications requiring a more uniform bearing surface or alignment over oversize hole. Available in multiple grades and finishes for all application requirements.	9	#10 – 1" UNC Coarse and UNF Fine Threads		

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NUT SIZE AND THREADS PER INCH	GRADE A NUTS		GRADE B NUTS		GRADE C NUTS		PREVAILING-TORQUE			GRADE F NUTS		GRADE G NUTS	
	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib	FIRST INSTALL MAX Ib in	FIRST REMOVAL MIN Ib in	THIRD REMOVAL MIN Ib in	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib
4 - 40	540	250	720	380	910	550	4.0	1.0	0.2				
6 - 32	820	370	1,100	580	1,350	810	8.0	1.5	0.5				
8-32	1,250	580	1,700	900	2,100	1,250	12.0	2.0	0.5				
10 - 24	1,550	720	2,100	1,100	2,600	1,550	17	2.5	1.0				
12 - 24	2,200	1,000	2,900	1,550	3,650	2,200	27	3.5	1.0				
1/4 - 20	2,900	1,300	3,800	2,000	4,750	2,850	40	5.0	1.5	3,800	2,000	4,750	2,850
5/16 – 18	4,700	2,150	6,300	3,350	7,850	4,700	80	8.0	2.5	6,300	3,350	7,850	4,700
3/8 - 16	7,000	3,200	9,300	4,950	11,600	6,950	110	12.0	4.0	9,300	4,950	11,600	6,950
7/16 – 14	9,550	4,400	12,800	6,800	15,900	9,600	135	17	5.0	12,800	6,800	15,900	9,600
1/2 - 13	12,800	5,850	17,000	9,050	21,300	12,800	204	22	7.5	17,000	9,050	21,300	12,800
9/16 - 12	16,400	7,550	21,800	11,600	27,300	16,400	300	30	10.0	21,800	11,600	27,300	16,400
5/8 - 11	20,300	9,300	27,200	14,500	33,900	20,300	420	39	12.5	27,200	14,500	33,900	20,300
3/4 - 10	30,000	13,800	40,100	21,300	50,100	30,100	540	58	20	40,100	21,300	50,100	30,100
7/8 – 9	41,600	12,400	55,400	29,500	69,300	41,600	840	88	30				
1-8	54,500	15,000	72,700	38,700	90,900	54,600	1080	120	40				
1-1/8 – 7	68,700	18,900	80,100	42,100	115,000	69,000	1200	150	50				
1-1/4 - 7	87,200	24,000	101,700	53,500	145,000	87,000	1320	188	60				
1-3/8 – 6	104,000	28,700	121,300	63,800	173,000	104,000	1620	220	70				
1-1/2 - 6	126,000	34,800	147,500	77,600	211,000	127,000	1800	260	90				

### Proof Loads, Clamp Loads, and Prevailing-Torques for Coarse Thread Series Grades A, B, and C Hex Nuts and Grades F and G Hex Flange Nuts

#### Proof Loads, Clamp Loads, and Prevailing-Torques for Fine Thread Series Grades A, B, and C Hex Nuts and Grades F and G Hex Flange Nuts

NUT SIZE AND THREADS PER INCH	GRADE A NUTS		GRADE B NUTS		GRADE C NUTS		PREVAILING-TORQUE			GRADE F NUTS		GRADE G NUTS	
	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib	FIRST INSTALL MAX Ib in	FIRST REMOVAL MIN Ib in	THIRD REMOVAL MIN Ib in	PROOF LOAD Ib	CLAMP LOAD Ib	PROOF LOAD Ib	CLAMP LOAD Ib
4 – 48	600	270	790	420	990	600	4.0	1.0	0.2				
6 - 40	900	420	1,200	640	1,500	900	8.0	1.5	0.5				
8-36	1,350	610	1,750	930	2,200	1,300	12.0	2.0	0.5				
10 - 32	1,800	840	2,400	1,300	3,000	1,800	17	2.5	1.0				
12 - 28	2,300	1,050	3,100	1,650	3,900	2,350	27	3.5	1.0				
1/4 - 28	3,300	1,500	4,350	2,300	5,450	3,250	40	5.0	1.5	4,350	2,300	5,450	3,250
5/16 - 24	5,200	2,400	6,950	3,700	8,700	5,200	80	8.0	2.5	6,950	3,700	8,700	5,200
3/8 - 24	7,900	3,600	10,500	5,600	13,200	7,900	110	12.0	4.0	10,500	5,600	13,200	7,900
7/16 - 20	10,700	4,900	14,200	7,550	17,800	10,700	135	17	5.0	14,200	7,550	17,800	10,700
1/2 - 20	14,400	6,550	19,200	10,200	24,000	14,400	204	22	7.5	19,200	10,200	24,000	14,400
9/16 - 18	18,300	8,350	24,400	13,000	30,400	18,300	300	30	10.0	24,400	13,000	30,400	18,300
5/8 – 18	22,900	10,500	30,700	16,300	38,400	23,000	420	39	12.5	30,700	16,300	38,400	23,000
3/4 - 16	33,600	15,400	44,800	23,800	56,000	33,600	540	58	20	44,800	23,800	56,000	33,600
7/8 – 14	45,800	12,600	61,100	32,400	76,400	45,800	840	88	30				
1 – 14	61,100	16,800	81,500	43,300	101,900	61,100	1080	120	40				
1 – 12	59,700	16,400	79,600	42,300	99,500	59,700	1080	120	40				
1-1/8 - 12	76,900	21,200	89,900	47,500	128,000	76,800	1200	150	50				
1-1/4 - 12	96,600	26,600	113,000	59,700	161,000	96,600	1320	188	60				
1-3/8 – 12	118,000	32,500	138,000	72,900	197,000	118,000	1620	220	70				
1-1/2 - 12	142,000	39,100	166,000	87,700	237,000	142,000	1800	260	90				

SPECIFICATIONS FROM IFI 100/107 2002 REVISION • HEX NUT AND JAM NUT PERFORMANCE PER SAE J995



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