



**All Metal Hex
Flange Lock Nuts**
Crimped design for
powerful locking action.

All Metal Hex Flange Lock Nuts feature a built-in washer designed to distribute the clamping load across a wider area. Offering a crimped design that will grip the inserted fastener, All Metal Hex Flange Lock Nuts create powerful locking action in your assembly for excellent resistance to loosening due to vibration.

PRODUCT ATTRIBUTES

Crimped design increases resistance to loosening
Built-in washer distributes clamping load over wider area
Replaces traditional nut and lock washer applications
Sizes range from #8 to 1"; M6 to M16

MARKETS FOR ALL METAL HEX FLANGE LOCK NUTS

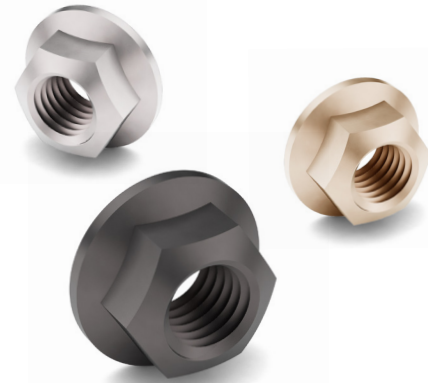
Heavy Truck
Construction Equipment
Agriculture Equipment
Automotive

THIS PRODUCT IS OFTEN CALLED...

Top Lock Flange Nut
Stover Flange Lock Nut
All Metal Top Lock Flange Nut
Prevailing Torque All Metal Flange Nut

AVAILABLE VALUE ADDED SERVICES

Bulk, full & broken case quantities
Secondary & rework services available
Custom packaging services
Custom plating

**ADDITIONAL HEX FLANGE PRODUCT WE SUPPLY**

Hex Flange Lag Screws
Hex Flange Screws
Metric & JIS Hex Flange Screws
Metric Stainless Steel Hex Flange Screws
Hex Serrated Flange Screws
Large Flange Hex Serrated Flange Screws
Stainless Steel Hex Serrated Flange Screws
Metric Hex Serrated Flange Screws
Hex Flange Nuts
Metric & JIS Hex Flange Nuts
Metric Stainless Steel Hex Flange Nuts
Hex Serrated Flange Lock Nuts
Large Flange Hex Serrated Flange Lock Nuts
Stainless Steel Hex Serrated Flange Lock Nuts
Metric & JIS Hex Serrated Flange Lock Nuts
Nylon Insert Hex Flange Lock Nuts
Metric Nylon Insert Hex Flange Lock Nuts

BACKED BY THE EARNEST
Service
GUARANTEE

**The right part.
The right quantity.
On-time.
Everytime.**

GRADE G (GRADE 8) & GRADE F (GRADE 5) ALL METAL HEX FLANGE LOCK NUTS

All Metal Hex Flange Lock Nuts are manufactured in accordance with the latest revision of the following industry standards:

- ASME B18.16.6** Dimensional Requirements
- SAE J995** Material and Physical Properties
- IFI 100/107** Prevailing Torque
- ASME B1.1** Thread Requirements
- ASTM F812** Surface Discontinuities
- ASTM B18.18** Inspection and Quality Assurance

THREADS

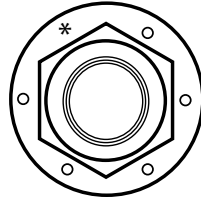
Threads made to requirements of ASME B1.1
Unified Threads (UNC) Class 2B
Thread acceptance per ASME B1.3, System 21

PLATING

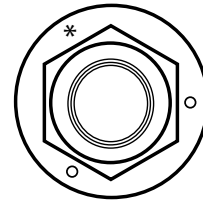
Phos and Oil
Zinc Clear
Zinc Yellow

MATERIAL AND PHYSICAL PROPERTIES

Grade G (Grade 8)



Grade F (Grade 5)



Chemical Composition:

GRADE	CARBON (C)	MANGANESE (Mn)	PHOSPHORUS (P)	SULFUR (S)
	Max	Min	Max	Max
G	0.55	0.30	0.04	0.05
F	0.55	0.30	0.05	0.15

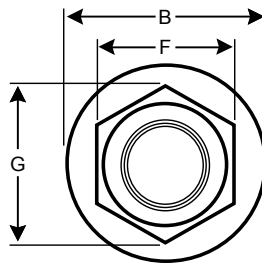
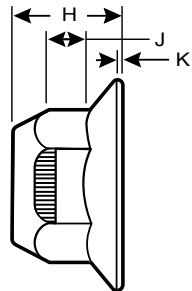
Hardness

SAE J995 GRADE G	SAE J995 GRADE F
HRC 24/36	HRC 32 max

Proof Load Strength

SAE J995 GRADE G	SAE J995 GRADE F
150,000 psi min	120,000 psi min

DIMENSIONS FOR GRADE G (GRADE 8) & GRADE F (GRADE 5) ALL METAL FLANGE LOCK NUTS



SIZE	GRADE	WIDTH ACROSS FLATS (F)		WIDTH ACROSS CORNERS (G)	FLANGE DIAMETER (B)		NUT THICKNESS (H)		WRENCH HEIGHT (J)	FLANGE THICKNESS (K)
		MAX	MIN	MIN	MAX	MAX	MIN	MIN	MIN	
#8	F	11/32	0.334	0.378	0.469	0.221	0.203	0.130	0.020	
#10	F	3/8	0.365	0.413	0.500	0.241	0.219	0.130	0.030	
1/4	G	7/16	0.428	0.488	0.560	0.300	0.265	0.140	0.040	
5/16	G	1/2	0.489	0.557	0.680	0.365	0.320	0.170	0.050	
3/8	G & F	9/16	0.551	0.628	0.810	0.425	0.404	0.200	0.060	
7/16	G	11/16	0.675	0.768	0.930	0.495	0.457	0.230	0.070	
1/2	G & F	3/4	0.736	0.840	1.070	0.555	0.528	0.260	0.080	
5/8	G	15/16	0.922	1.081	1.330	0.690	0.645	0.320	0.100	
3/4	G & F	1-1/16	1.088	1.240	1.585	0.825	0.742	0.380	0.110	
7/8	G & F	1-5/16	1.269	1.447	1.750	0.800	0.737	0.440	0.100	
1"	G & F	1-1/2	1.450	1.653	2.060	0.900	0.841	0.530	0.100	
1 1/4	G	1 7/8	1.812	2.066	2.280	1.530	1.470	0.950	0.200	

*The specifications shown on this sheet are not intended to be used in the production of parts. Earnest Machine is not responsible or liable in any manner for any production errors and we certify the information present on this specification sheet is correct to the best of our knowledge. ©2021 Earnest Machine Products

METRIC CLASS 10 ALL METAL HEX FLANGE LOCK NUTS

All Metal Hex Flange Lock Nuts are manufactured in accordance with the latest revision of the following industry standards:

DIN 6927	Dimensional Requirements
ISO 2320	Prevailing Torque
ISO 898-2	Material and Physical Properties
ISO 261	Thread Requirements
ISO 6157-2	Surface Discontinuities
ISO 3269	Inspection and Quality Assurance

THREADS

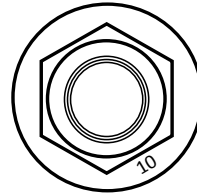
Threads are made to the requirements of ISO 261
ISO 965-2 Class 6H
Thread acceptance per ISO 1502

PLATING

Phos and Oil
Zinc Clear (RoHS compliant Cr3+)
Zinc Yellow

MATERIAL AND PHYSICAL PROPERTIES

Property Class 10



Chemical Composition:

CARBON (C)	MANGANESE (Mn)	PHOSPHORUS (P)	SULFUR (S)
Max	Min	Max	Max
0.58	0.30	0.048	0.058

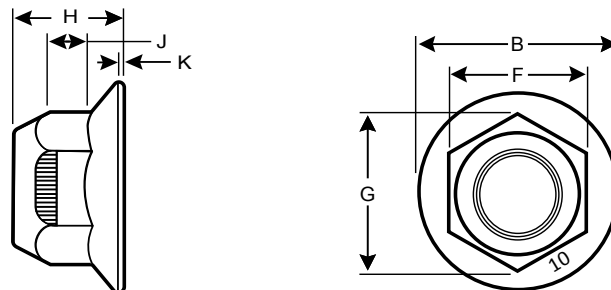
Hardness

ISO 898-2 CLASS 10
HRC 26/36

Tensile Strength

ISO 898-2 CLASS 10
1040 MPa min

DIMENSIONS FOR METRIC CLASS 10 ALL METAL HEX FLANGE LOCK NUTS



SIZE	WIDTH ACROSS FLATS (F)		WIDTH ACROSS CORNERS (G)	FLANGE DIAMETER (B)	NUT THICKNESS (H)	WRENCH HEIGHT (J)	FLANGE THICKNESS (K)
	MAX	MIN	MIN	MAX	MAX	MIN	MIN
M5	8	7.78	8.79	11.8	6.20	2.20	1.00
M6	10	9.78	11.05	14.20	7.30	3.10	1.10
M8	13	12.73	14.38	17.90	9.40	4.50	1.20
M10	15	14.73	16.64	21.80	11.40	5.50	1.50
M12	18	17.73	20.03	26.00	13.80	6.70	1.80
M14	21	20.67	23.35	29.90	15.90	7.80	2.10
M16	24	23.67	26.75	34.50	18.30	9.00	2.40

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All Metal Hex Flange Lock Nuts - Inch

Grade G

SIZE	GRADE	PITCH	FINISH	PART #
1/4-20	GR G	Coarse	Plain	1000006
1/4-20	GR G	Coarse	Phos & Oil	367018
1/4-20	GR G	Coarse	Zinc Clear	367016T
1/4-20	GR G	Coarse	Zinc Yellow	367017

5/16-18	GR G	Coarse	Phos & Oil	367038
5/16-18	GR G	Coarse	Zinc Clear	367040T
5/16-18	GR G	Coarse	Zinc Yellow	367039

3/8-16	GR G	Coarse	Phos & Oil	367058
3/8-16	GR G	Coarse	Zinc Clear	367050T
3/8-16	GR G	Coarse	Zinc Yellow	367059

3/8-24	GR G	Fine	Phos & Oil	367068
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7/16-14	GR G	Coarse	Phos & Oil	367078
7/16-14	GR G	Coarse	Zinc Yellow	367081

7/16-20	GR G	Fine	Phos & Oil	367088
7/16-20	GR G	Fine	Zinc Yellow	367089

1/2-13	GR G	Coarse	Phos & Oil	367108
1/2-13	GR G	Coarse	Zinc Clear	367110T
1/2-13	GR G	Coarse	Zinc Yellow	367109

1/2-20	GR G	Fine	Phos & Oil	367128
1/2-20	GR G	Fine	Zinc Yellow	367127

9/16-18	GR G	Fine	Zinc Yellow	367169
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5/8-11	GR G	Coarse	Plain Finish	367187
5/8-11	GR G	Coarse	Phos & Oil	367188
5/8-11	GR G	Coarse	Zinc Clear	368335T
5/8-11	GR G	Coarse	Zinc Yellow	367189

5/8-18	GR G	Fine	Phos & Oil	367208
5/8-18	GR G	Fine	Zinc Clear	367209T
5/8-18	GR G	Fine	Zinc Yellow	367207

3/4-10	GR G	Coarse	Phos & Oil	367228
3/4-10	GR G	Coarse	Zinc Yellow	367229
3/4-10	GR G	Coarse	Zinc Yellow	367226

Grade G

SIZE	GRADE	PITCH	FINISH	PART #
3/4-16	GR G	Fine	Phos & Oil	367258
3/4-16	GR G	Fine	Zinc Yellow	367257

7/8-9	GR G	Coarse	Phos & Oil	367268
7/8-14	GR G	Fine	Phos & Oil	367298

1-8	GR G	Coarse	Phos & Oil	367308
1-14	GR G	Extra Fine	Phos & Oil	367328

Grade F

SIZE	GRADE	PITCH	FINISH	PART #
#8-32	GR F	Coarse	Zinc Clear	1000002
#10-24	GR F	Coarse	Zinc Clear	1000005
3/8-24	GR F	Fine	Zinc Yellow	367060
1/2-13	GR F	Coarse	Zinc Clear	367102T
5/8-11	GR F	Coarse	Zinc Clear	1000001
3/4-10	GR F	Coarse	Zinc Clear	1000000
7/8-9	GR F	Coarse	Zinc Clear	1000003
1-8	GR F	Coarse	Zinc Clear	1000004

All Metal Hex Flange Lock Nuts - Metric

Metric Class 10

SIZE	GRADE	PITCH	FINISH	PART #
M6-1.0	ISO 10	Coarse	Plain Finish	484490
M6-1.0	ISO 10	Coarse	Phos & Oil	484891
M6-1.0	ISO 10	Coarse	Zinc Clear	484493T
M6-1.0	ISO 10	Coarse	Zinc Yellow	484492

M8-1.25	ISO 10	Coarse	Plain Finish	484495
M8-1.25	ISO 10	Coarse	Phos & Oil	484892

M10-1.5	ISO 10	Coarse	Phos & Oil	484893
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M12-1.75	ISO 10	Coarse	Plain Finish	484506
M12-1.75	ISO 10	Coarse	Phos & Oil	484894
M12-1.75	ISO 10	Coarse	Zinc Clear	484508T
M12-1.75	ISO 10	Coarse	Zinc Yellow	484507

M14-2.0	ISO 10	Coarse	Phos & Oil	484895
M14-2.0	ISO 10	Coarse	Zinc Yellow	484898

M16-2.0	ISO 10	Coarse	Phos & Oil	484896
M16-2.0	ISO 10	Coarse	Zinc Clear	484897T