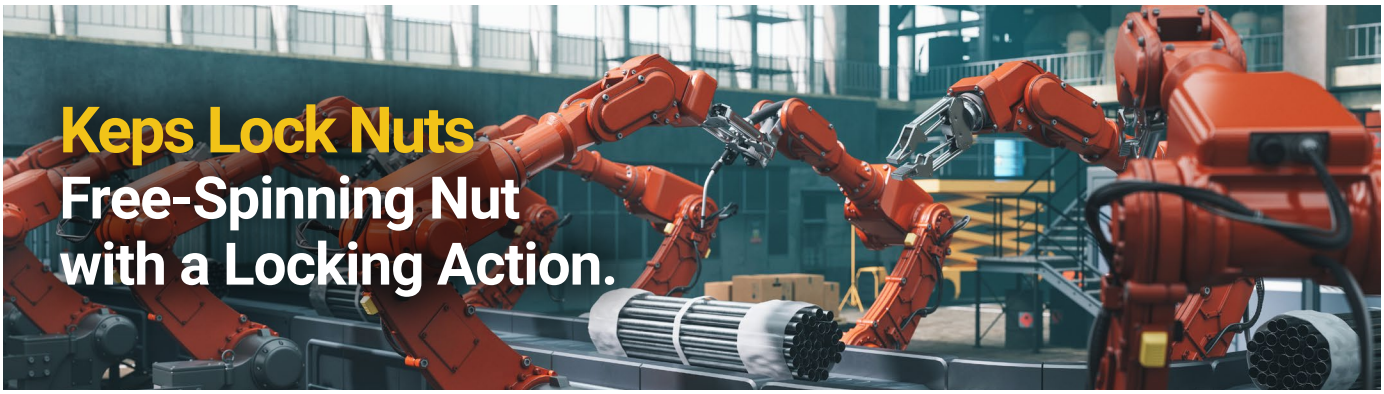
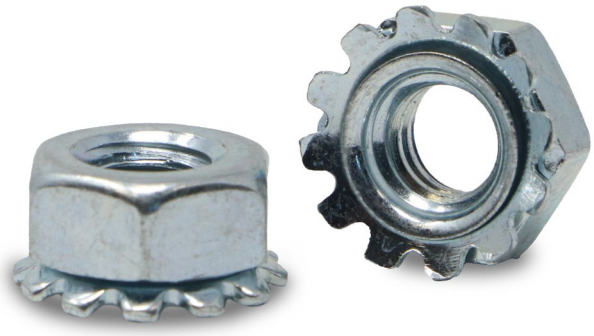
Earnest

PRODUCT SPECIFICATION SHEET



Keps Lock Nuts
Free-Spinning Nut with a Locking Action.

Keps Lock Nuts feature a free-spinning nut and an integrated external tooth washer designed to prevent loosening caused by vibration. When tightened onto a bolt, screw, or stud, the teeth of the free-spinning washer will grip the installation surface, creating resistance against rotation. The added friction helps maintain a secure bond, making this fastener suitable for applications where vibration and movement are concerns, such as in light-duty automotive and machinery assemblies.



PRODUCT ATTRIBUTES

Provides vibration resistance for light duty applications

2-Piece assembly with a preassembled free-spinning external tooth lock washer

Available in Carbon Steel and Stainless Steel for both inch and metric sizes

Carbon Steel available in RoHS compliant Zinc Clear Trivalent

MARKETS FOR KEPS LOCK NUTS

Robotics and Automotive Assemblies
Construction Equipment
Agriculture Equipment
Food Processing Equipment

THIS PRODUCT IS OFTEN CALLED

Hex Machine Screw Nut with Encapsulated External Tooth Lock Washer
Tooth Nut
Keps Nuts
K-Nuts

ADDITIONAL LOCK NUTS WE SUPPLY

All Metal Lock Nuts
2-Way Lock Nuts
Nylon Insert Lock Nuts
Hex Flange Lock Nuts
Hex Serrated Flange Lock Nuts
Twin Whiz Lock Nuts
Conical Keps Lock Nuts

AVAILABLE VALUE ADDED SERVICES

Bulk and full case quantities
Secondary and rework services available
Custom packaging services
Custom plating and coating

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Service
GUARANTEE

Inquire today at **+1 (800) 327-6378** or visit **EarnestMachine.com**

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PRODUCT SPECIFICATION SHEET

CARBON STEEL AND 18-8 STAINLESS STEEL KEPS LOCK NUTS

Keps Lock Nuts are manufactured in accordance with the latest revision of the following industry standards:

ASME B18.2.2	Nut Dimensional Requirements
ASME B18.21.1	Washer Dimensional Requirements
SAE J995	Material and Strength Level
ASTM A563	Material and Strength Level
ASME B1.1	Thread Requirements
ASTM F812	Surface Discontinuities
ASME B18.18	Inspection and Quality Assurance

THREADS

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

PLATING

GRADE	FINISH
Carbon Steel	Zinc Clear (RoHS compliant Cr3+)
Stainless Steel	Passivated

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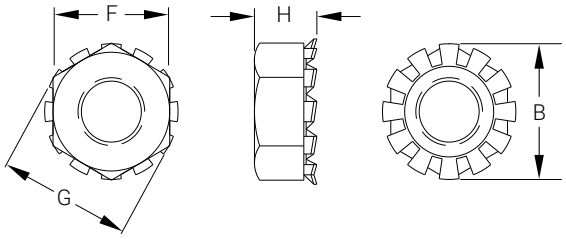
MATERIAL AND PHYSICAL PROPERTIES

Carbon Steel and 18-8 Stainless Steel



Carbon Steel: Chemical Composition

CARBON (C)	PHOSPHORUS (P)	SULFUR (S)
MAX	MAX	MAX
0.55	0.12	0.15

18-8 Stainless Steel: Chemical Composition

CARBON (C)	MANGANESE (Mn)	PHOSPHORUS (P)	SULFUR (S)	SILICON (Si)	CHROMIUM (Cr)		NICKEL (Ni)	
MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN
0.08	2.00	0.045	0.03	1.00	20.0	18.0	10.5	8.0

Grade Specifications

GRADE	HARDNESS	PROOF LOAD STRENGTH	
		COARSE THREAD	FINE THREAD
Carbon Steel	HRC 32 max	54,000 psi min	48,000 psi min
Stainless	HRB 80 min	75,000 psi min	75,000 psi min

SMALL PATTERN KEPS LOCK NUTS

SIZE	GRADE	WIDTH ACROSS FLATS (F)			WIDTH ACROSS CORNERS (G)		HEIGHT (H)		OUTSIDE DIAMETER (B)	
		NOM	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
#6 – 32	Carbon Steel	1/4	0.250	0.241	0.289	0.275	0.135	0.100	0.300	0.275

DIMENSIONS FOR CARBON STEEL AND 18-8 STAINLESS STEEL

SIZE	GRADE	WIDTH ACROSS FLATS (F)			WIDTH ACROSS CORNERS (G)		HEIGHT (H)		OUTSIDE DIAMETER (B)	
		NOM	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
#4 – 40	Carbon Steel	1/4	0.250	0.241	0.289	0.275	0.120	0.098	0.300	0.275
#6 – 32	Carbon Steel	5/16	0.312	0.302	0.361	0.344	0.145	0.131	0.375	0.344
#8 – 32	Carbon Steel	11/32	0.344	0.332	0.397	0.378	0.166	0.146	0.415	0.380
#10 – 24	Carbon Steel	3/8	0.375	0.362	0.433	0.413	0.166	0.146	0.450	0.415
#10 – 32	Carbon Steel	3/8	0.375	0.362	0.433	0.413	0.166	0.146	0.450	0.415
1/4 – 20	Carbon Steel	7/16	0.438	0.423	0.505	0.482	0.250	0.214	0.560	0.510
1/4 – 28	Carbon Steel	7/16	0.438	0.423	0.505	0.482	0.250	0.214	0.560	0.510
1/4 – 28	Stainess Steel	7/16	0.438	0.423	0.505	0.482	0.250	0.214	0.560	0.510
5/16 – 18	Carbon Steel	1/2	0.500	0.489	0.577	0.557	0.360	0.308	0.630	0.570
5/16 – 24	Carbon Steel	1/2	0.500	0.489	0.577	0.557	0.360	0.308	0.630	0.570
3/8 – 16	Carbon Steel	9/16	0.563	0.551	0.650	0.628	0.420	0.371	0.690	0.656
3/8 – 16	Stainless Steel	9/16	0.563	0.551	0.650	0.628	0.420	0.371	0.690	0.656
3/8 – 24	Carbon Steel	9/16	0.563	0.551	0.650	0.628	0.420	0.371	0.690	0.656
3/8 – 24	Stainless Steel	9/16	0.563	0.551	0.650	0.628	0.420	0.371	0.690	0.656
1/2 - 13	Carbon Steel	3/4	0.750	0.736	0.866	0.840	0.525	0.464	0.915	0.891

Earnest

PRODUCT SPECIFICATION SHEET

METRIC CARBON STEEL AND 18-8 (A2) STAINLESS STEEL KEPS LOCK NUTS

Metric Keps Lock Nuts are manufactured in accordance with the latest revision of the following industry standards:

DIN 934	Nut Dimensional Requirements
DIN 6798	Washer Dimensional Requirements
ISO 898-2	Material and Strength Level
ISO 261	Thread Requirements
ISO 6157	Surface Discontinuities
ISO 3269	Inspection and Quality Assurance

THREADS

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

PLATING

GRADE	FINISH
Carbon Steel	Zinc Clear (RoHS compliant Cr3+)
Stainless Steel	Passivated

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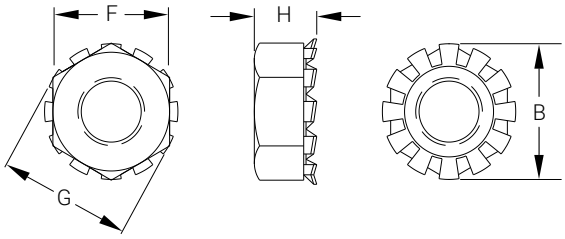
MATERIAL AND PHYSICAL PROPERTIES

Metric Carbon Steel and 18-8 (A2) Stainless Steel



Carbon Steel: Chemical Composition

CARBON (C)	PHOSPHORUS (P)	SULFUR (S)
MAX	MAX	MAX
0.55	0.12	0.15

18-8 Stainless Steel: Chemical Composition

CARBON (C)	MANGA-NESE (Mn)	PHOSPHORUS (P)	SULFUR (S)	SILICON (Si)	CHROMIUM (Cr)		NICKEL (Ni)	
MAX	MAX	MAX	MAX	MAX	MAX	MIN	MAX	MIN
0.08	2.00	0.045	0.03	1.00	20.0	18.0	10.5	8.0

Grade Specifications

GRADE	HARDNESS	PROOF LOAD STRENGTH
Carbon Steel	HRC 32 max	600 MPa min
Stainless	HRB 80 min	700 MPa min

DIMENSIONS FOR METRIC CARBON STEEL AND 18-8 (A2) STAINLESS STEEL

SIZE	GRADE	WIDTH ACROSS FLATS (F)			WIDTH ACROSS CORNERS (G)		HEIGHT (H)		OUTSIDE DIAMETER (B)	
		NOM	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
M3 – 0.5	Carbon Steel	5.5	5.5	5.32	6.27	6.01	3.0	2.5	7.3	6.9
M4 – 0.7	Carbon Steel	7	7.0	6.78	7.98	7.66	4.1	3.6	8.7	8.0
M4 – 0.7	Stainless Steel	7	7.0	6.78	7.98	7.66	4.1	3.6	8.7	8.0
M5 – 0.8	Carbon Steel	8	8.0	7.78	9.12	8.79	5.2	4.7	9.7	9.1
M5 – 0.8	Stainless Steel	8	8.0	7.78	9.12	8.79	5.2	4.7	9.7	9.1
M6 – 1.0	Carbon Steel	10	10.0	9.78	11.4	11.05	6.2	5.7	12.5	11.5
M6 – 1.0	Stainless Steel	10	10.0	9.78	11.4	11.05	6.2	5.7	12.5	11.5
M8 – 1.25	Carbon Steel	13	13.0	12.73	14.8	14.38	8.5	8.0	16.0	15.0