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# NUTS



**CHTO**

螺母类产品手册  
NUTS PRODUCT MANUAL

**CHTO**

**Chuangtuo Jinggong (Jiangsu) Co.,LTD**

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**创拓精工**



## COMPANY INTRODUCTION

Chuangtuo Jinggong (Jiangsu) Co., Ltd. is an integrated company engaged in the research and development, production, sales, and service of lock nuts. The company is located in Huai'an city, Jiangsu province, which is the hometown of the founding premier Zhou Enlai and the capital of gourmet food.

Chuangtuo started in 2012 and has transformed from a trading company (Huai'an Delong Hardware Co., Ltd.) to a production enterprise over the past 12 years.

Our company have a strong ability to integrate resources for fasteners and related products, and we can solve problems for customers, such as unconventional materials, small batch and multiple variety difficult parts, etc. Additionally, we have comprehensive self-inspection capabilities, with a complete set of testing equipment from raw materials to pre-shipment (Spectroscopic Equipment For Materials, Load-Bearing Tensile Testing Equipment, Metallographic Analyzer, X-Ray Film Thickness Instrument, Salt Spray Testing Equipment, Thread Accuracy Testing Equipment, etc.). Through years of accumulated experience in cooperation with foreign companies, we have a high-quality awareness and strong customer support capabilities, and our products can meet or even exceed customer requirements. At present, we mainly cooperate with foreign companies, and our main customers are excellent international well-known enterprises such as Würth, Bossard, Reyher, Fabory, Bufab, Optimas, Bollhoff, Keller& Kalmbach, and others. Most of the end-users are Fortune 500 companies, involving various fields.

Our main products include:

**All-Metal Hexagon Nuts**  
(ISO7719/ISO7042/ISO10513/ISO7044/DIN980/DIN6925/DIN6927/B18.16.6/IFI100/107/DIN6927/B18.16.6);

**Nylon Lock Nuts**  
(ISO10511/ISO10512/ISO7040/ISO7041/ISO7043/DIN982/DIN985/DIN6926/B18.16.6);

**Hexagon Thin Nuts**  
(ISO4035/ISO8675/DIN439/DIN936/B18.2.2);

**Flange Nuts**  
(ISO4161/DIN6923/B18.2.2/IFI145);

**German Standard Round Nut**  
(DIN981/DIN1804/DIN70852)

**Special-Shaped Non-Standard Nuts, Etc.**

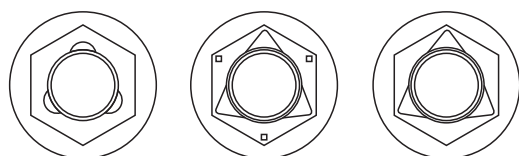
In order to meet the demands of different customers, we also provide corresponding high-grade hex nuts (Metric/American Standard), hot-dip galvanized nuts (standard thread/expansion hole), alloy steel nuts (35/42 CrMo), German standard/American standard/Italian standard and other series of products.

**We are immensely thankful to our customers for their unwavering support and trust throughout the years, and we are committed to providing them with exceptional service, top-notch product quality, and impeccable after-sales support.**



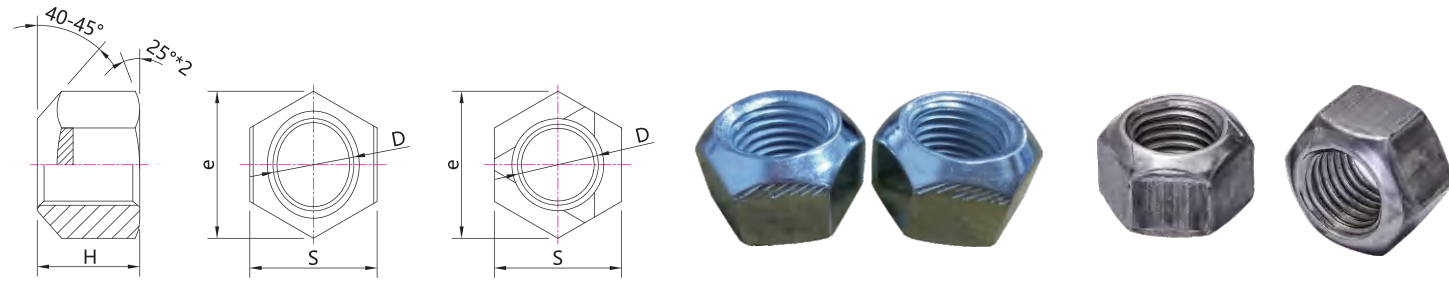
## Contents

All-Metal Distorted Hexagon Lock Nuts	03
All-Metal Distorted Hexagon Lock Nuts	04
All-Metal Distorted Flange Hexagon Lock Nuts	05
All-Metal Distorted Hexagon Lock Nuts	06
All-Metal Distorted Flange Hexagon Lock Nuts	07
Nylon Insert Hexagon lock Nuts	08
Nylon Insert Hexagon lock Nuts	09
Nylon Insert Hexagon lock Nuts	10
Nylon Insert Flange Hexagon Lock Nuts	11
Nylon Insert Hexagon Lock Nuts	12
Hexagon Thin Nuts	13
Hexagon Thin Nuts	14
Heavy Hexagon Thin Nuts	15
Flange Hexagon Nuts	16
Flange Hexagon Nuts	17
Hexagon Nuts	18
Heavy Hexagon Nuts	19
Slotted Hexagon Nuts	20
Slotted Hexagon Nuts	21
Slotted Hexagon Nuts	22
Slotted Hexagon Nuts	23
Slotted Hexagon Nuts	24
Slotted Hexagon Nuts	25
Slotted Hexagon Nuts	26
Lock Nuts (Round Nuts) For Rolling Bearings	27
Slotted Round Nuts	28
Slotted Round Nuts	29
Lock Washer	30
Lock Washer	31
Torsion of Lock Nuts	32
Common Specifications For Metric Internal Thread Size Table 6H (UNC)	33
Common Specifications For Metric Internal Thread Size Table 6H (UNF)	34
Common Specifications For Internal Thread (2B) Size (UNC)	35
Common Specifications For Internal Thread (2B) Size (UNF)	36
Thread pitch	37
Our Products	38
Our Products	39
Notes	40





## All-Metal Distorted Hexagon Lock Nuts



Specification	DIN980V				DIN6925				ISO7719/GB6184/Q334			
	Opposite Side S	Thickness H	Opposite Corner e Min	Wrenching Height Min	Opposite Side S	Thickness H	Opposite Corner e Min	Wrenching Height Min	Opposite Side S	Thickness H	Opposite Corner e Min	Wrenching Height Min
M3	5.32-5.5	3.4-3.7	6.01	1.65	5.32-5.5	3.4-3.7	6.01	1.65				
M4	6.78-7	3.9-4.2	7.66	2.2	6.78-7	3.9-4.2	7.66	2.2				
M5	7.78-8	4.8-5.1	8.79	2.75	7.78-8	4.8-5.1	8.79	2.75	7.78-8	4.8-5.3	8.79	3.52
M6	9.78-10	5.7-6	11.05	3.3	9.78-10	5.7-6	11.05	3.3	9.78-10	5.4-5.9	11.05	3.92
M7	10.73-11	6.5-7	12.12	3.85	10.73-11	6.5-7	12.12	3.85				
M8	12.73-13	7.5-8	14.38	4.4	12.73-13	7.5-8	14.38	4.4	12.73-13	6.44-7.1	14.38	5.15
M10	16.73-17	9-10	18.9	5.5	15.73-16	9-10	17.77	5.5	15.73-16	8.04-9	17.77	6.43
M12	18.67-19	11-12	21.1	6.6	17.73-18	11-12	20.03	6.6	17.73-18	10.37-11.6	20.03	8.3
M14	21.67-22	12-14	24.49	7.7	20.67-21	12-14	23.35	7.7	20.67-21	12.1-13.2	23.36	9.68
M16	23.67-24	14-16	26.75	8.8	23.67-24	14-16	26.75	8.8	23.67-24	14.1-15.2	26.75	11.28
M18	26.16-27	16-18	29.56	9.9					26.16-27	15.01-17	29.56	12.08
M20	29.16-30	18-20	32.95	11	29.16-30	18-20	32.95	11	29.16-30	16.9-19	32.95	13.52
M22	31-32	20-22	35.03	12.2					33-34	18.1-21	37.29	14.5
M24	35-36	22-24	39.55	13.2	35-36	22-24	39.55	13.2	35-36	20.2-23	39.55	16.16
M27	40-41	25-27	45.2	14.8								
M30	45-46	28-30	50.85	16.5	45-46	28-30	50.85	16.5	45-46	24.3-26.9	50.85	19.44
M33	49-50	31-33	55.37	18.2								
M36	53.8-55	34-36	60.79	19.8	53.8-55	34-36	60.79	19.8	53.8-55	29.4-32.5	60.79	23.52
M39	58.8-60	37-39	66.44	21.5								
M42	63.1-65	40-42	71.3									
M45	68.1-70	43-45	76.95									

Chamfer Slope Diameter  $\leq$  Smin  
GB6184/Q334/ISO7719 are Type 1 Nuts

Locking Method:  
Mouth Elliptic (①S Surface with twill ②S Surface flat) can be selected ;  
Pressure Point Variation Type (③ Slope surface three-point type  
④ Slope surface two-point type ⑤ Side three-point type square or round point)

Standard	Mechanical Performance	Specification
DIN980-87	ISO898-2/DIN267-4	Class 6H Tolerance DIN13-(12-15) D $\leq$ 16A; D > 16B
DIN6925-87	ISO898-2/DIN267-23	Class 6H Tolerance DIN13-(12-15) D $\leq$ 16A; D > 16B
ISO7719-2012	ISO898-2/ISO2320	Class 6H Tolerance ISO261 ISO724 ISO965-2 D $\leq$ 16A; D > 16B
GB6184-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D $\leq$ 16A; D > 16B

## All-Metal Distorted Hexagon Lock Nuts



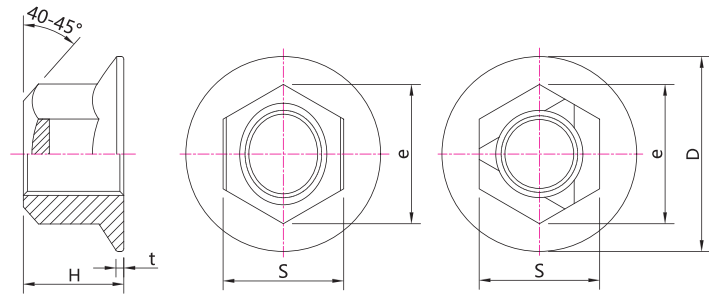
Specification	ISO7042/ISO10513/GB6185				ISO7720/GB6186				
	Opposite Side S	Thickness H		Opposite Corner e Min	Wrenching Height Min	Opposite Side S	Thickness H	Opposite Corner e Min	Wrenching Height Min
M5	7.78-8	4.8-5.1		8.79	3.52	7.78-8	4.8-5.3	8.79	3.84
M6	9.78-10	5.4-6		11.05	3.92	9.78-10	5.4-6.7	11.05	4.32
M8	12.73-13	7.14-8		14.38	5.15	12.73-13	7.14-8	14.38	5.71
M10	15.73-16	8.94-10	Gb6185	17.77	6.43	15.73-16	8.94-10.5	17.77	7.15
M12	17.73-18	11.57-13.3	11.57-12	20.03	8.3	17.73-18	11.57-13.3	20.03	9.26
M14	20.67-21	13.4-14.1		23.36	9.68	20.67-21	13.4-15.4	23.36	10.7
M16	23.67-24	15.7-16.4		26.75	11.28	23.67-24	15.7-17.9	26.75	12.6
M18									
M20	29.16-30	19-20.3		32.95	13.52	29.16-30	19-21.8	32.95	15.2
M22									
M24	35-36	22.6-23.9		39.55	16.16	35-36	22.6-26.4	39.55	18.1
M27									
M30	45-46	27.3-30		50.85	19.44	45-46	27.3-31.8	50.85	21.8
M33									
M36	53.8-55	33.1-36		60.79	23.52	53.8-55	33.1-38.5	60.79	26.5

Chamfer Slope Diameter  $\leq$  Smin  
ISO10513 refers specifically to fine teeth

Locking Method:  
Mouth Elliptic (①S Surface with twill ②S Surface flat) can be selected ;  
Pressure Point Variation Type (③ Slope surface three-point type ④ Slope surface two-point type ⑤ Side three-point type square or round point)

Standard	Mechanical Performance	Specification
ISO7042-2012	ISO898-2/ISO2320	Class 6H Tolerance ISO261 ISO724 ISO965-2 D $\leq$ 16A; D > 16B
ISO7720-2012	ISO898-2/ISO2320	Class 6H Tolerance ISO261 ISO724 ISO965-2 D $\leq$ 16A; D > 16B
ISO10513-2012	ISO898-2/ISO2320	Class 6H Tolerance ISO261 ISO724 ISO965-2 D $\leq$ 16A; D > 16B
GB6185-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D $\leq$ 16A; D > 16B
GB6186-86	GB/T3098.2	Class 6H Tolerance GB/T196、197 D $\leq$ 16A; D > 16B The torque shall be agreed upon by both parties

## All-Metal Distorted Flange Hexagon Lock Nuts



Specification	DIN6927/ISO7044					GB6187.1-2				
	Opposite Side S	Thickness H	Opposite Corner e Min	Flange Diameter D Max	Flange Thickness T Min	Opposite Side S	Thickness H	Opposite Corner e Min	Flange Diameter D Max	Flange Thickness T Min
M5	7.78-8	5.7-6.2	8.79	11.8	1	7.78-8	5.7-6.2	8.79	11.8	1
M6	9.78-10	6.8-7.3	11.05	14.2	1.1	9.78-10	6.8-7.3	11.05	14.2	1.1
M8	12.73-13	8.74-9.4	14.38	17.9	1.2	12.73-13	8.74-9.4	14.38	17.9	1.2
M10	14.73-15	10.34-11.4	16.64	21.8	1.5	14.73-15	10.34-11.4	16.64	21.8	1.5
M12	17.73-18	12.57-13.8	20.03	26	1.8	17.73-18	12.57-13.8	20.03	26	1.8
M14	20.67-21	14.8-15.9	23.36	29.9	2.1	20.67-21	14.8-15.9	23.36	29.9	2.1
M16	23.67-24	17.2-18.3	26.75	34.5	2.4	23.67-24	17.2-18.3	26.75	34.5	2.4
M20	29.16-30	20.3-22.4	32.95	42.8	3	29.16-30	20.3-22.4	32.95	42.8	3

Chamfer Slope Diameter  $\leq S_{min}$

GB6187.1-2000 grade 8  $\leq 16$  is type 1, > 16 is type 2, Grade 9 is type 2, grade 10 is type 1, grade 12 is type 2

GB6187.2-2000 Grade 6 is Type 1, grade 8  $\leq 16$  is type 2, > 16 is type 1, grade 10 is type 2

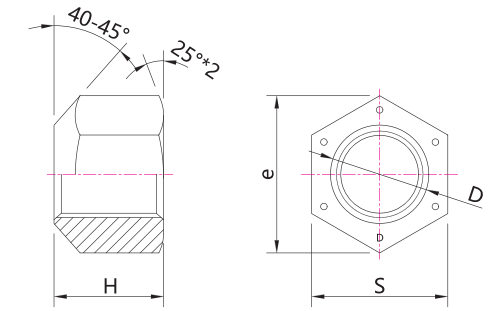
Locking Method:

Mouth Elliptic (①S Surface with twill ②S Surface flat) can be selected;

Pressure Point Variation Type (③ Slope surface three-point type ④ Slope surface two-point type ⑤ Side three-point type square or round point)

Standard	Mechanical Performance	Specification
DIN6927-83	ISO898-2/DIN267-23	Class 6H Tolerance DIN13-(12-15) D=A
ISO7044-1997	ISO2320	Class 6H Tolerance ISO261 ISO724 ISO965-2 D $\leq$ 16A; D>16B
GB6187.1-2000	GB3098.9	Class 6H Tolerance GB/T196、197 D $\leq$ 16A ; D > 16B
GB6187.2-2000	GB3098.9	Class 6H Tolerance GB/T196、197 D $\leq$ 16A ; D > 16B

## All-Metal Distorted Hexagon Lock Nuts



Specification	ASME B18.16.6-2017 Table10 (IFI 100/107-2002)							
	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric	Wrenching Height Min	Metric
4#	0.241-0.251	6.12-6.37	0.087-0.163	2.2-4.14	0.275-0.289	6.985-7.340	0.066	1.67
6#	0.302-0.313	7.67-7.95	0.102-0.171	2.59-4.34	0.344-0.361	8.737-9.169	0.075	1.90
8#	0.332-0.345	8.43-8.76	0.117-0.191	2.97-4.85 (3.3)	0.378-0.397	9.601-10.083	0.083	2.11
10#	0.362-0.376	9.19-9.55	0.117-0.241	2.97-6.12 (3.3)	0.413-0.433	10.490-10.998	0.083	2.11
12#	0.423-0.438	10.74-11.12	0.148-0.241	3.76-6.12 (4.1)	0.482-0.505	12.242-12.827	0.103	2.62
1/4	0.428-0.438	10.87-11.12	0.212-0.288	5.38-7.31(5.74)	0.488-0.505	12.395-12.827	0.145	3.68
5/16	0.489-0.502	12.42-12.75	0.258-0.336	6.55-8.53(6.93)	0.557-0.577	14.147-14.655	0.166	4.22
3/8	0.551-0.564	13.99-14.32	0.32-0.415	8.12-10.54(8.55)	0.628-0.65	15.951-16.510	0.198	5.03
7/16	0.675-0.689	17.14-17.50	0.365-0.463	9.27-11.76(9.77)	0.768-0.794	19.456-20.167	0.223	5.66
1/2	0.736-0.752	18.69-19.10	0.427-0.573	10.84-14.55(11.37)	0.84-0.866	21.336-21.996	0.262	6.65
9/16	0.861-0.877	21.86-22.27	0.473-0.621	12.01-15.77(12.59)	0.982-1.01	24.942-25.654	0.286	7.26
5/8	0.922-0.939	23.41-23.85	0.535-0.731	13.59-18.56(14.19)	1.051-1.083	26.695-27.508	0.329	8.36
3/4	1.088-1.127	27.63-28.62	0.617-0.827	15.67-21(16.86)	1.24-1.299	31.496-32.994	0.382	9.70
7/8	1.269-1.314	32.23-33.37	0.724-0.922	18.39-23.41(19.7)	1.447-1.516	36.753-38.506	0.45	11.43
1	1.45-1.502	36.83-38.15	0.831-1.018	21.10-25.85(22.52)	1.653-1.732	41.986-43.992	0.513	13.03
1 1/8	1.631-1.689	41.42-42.90	0.939-1.176	23.85-29.87(25.37)	1.859-1.949	47.218-49.504	0.576	14.63
1 1/4	1.812-1.877	46.02-47.67	1.03-1.272	26.16-32.3(27.78)	2.066-2.165	52.476-54.991	0.628	15.95
1 3/8	1.994-2.064	50.64-52.42	1.138-1.399	28.9-35.53(30.63)	2.273-2.382	57.734-60.502	0.681	17.30
1 1/2	2.175-2.252	55.24-57.20	1.245-1.526	31.62-38.76(33.45)	2.48-2.598	62.992-65.989	0.757	19.23

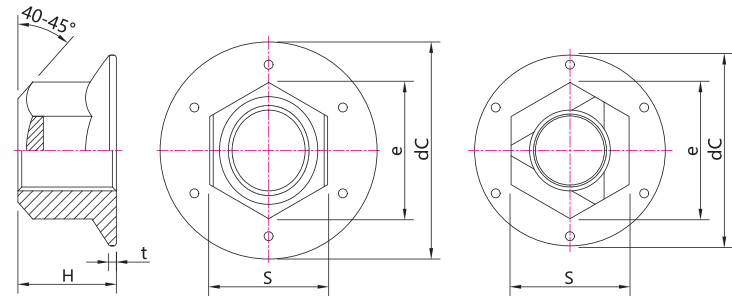
Locking Method:

Mouth Elliptic (①S Surface with twill ②S Surface flat) can be selected;

Pressure Point Variation Type (③ Slope surface three-point type ④ Slope surface two-point type ⑤ Side three-point type square or round point)

Standard	Mechanical Performance	Specification
ASME B18.16.6-2017	B18.16.6	Metal distorted nuts, Nylon lock nuts, Hexagon nuts and Flange nuts, All follow This Standard
		N2 N5 A B grade heat treatment up to 28HRC (N2 minimum hardness HRB68)
		N8 C G grade heat treatment is 24-32HRC (4#-5/8)
		N8 C G grade heat treatment is 26-34HRC (3/4-1)
		N8 C G grade heat treatment is 26-36HRC (1-1/8- 1-1/2)

## All-Metal Distorted Flange Hexagon Lock Nuts



ASME B18.16.6-2017 Table11 ( IFI 100/107-2002 )										
Specification	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric	Wrenching Height Min	Metric	Flange Diameter D	Metric
1/4	0.428-0.438	10.87-11.12	0.3	7.62	0.488	12.40	0.14	3.56	0.56	14.22
5/16	0.489-0.502	12.42-12.75	0.365	9.27	0.557	14.15	0.17	4.32	0.68	17.27
3/8	0.551-0.564	13.99-14.32	0.425	10.79	0.628	15.95	0.2	5.08	0.81	20.57
7/16	0.675-0.689	17.14-17.5	0.495	12.57	0.768	19.51	0.23	5.84	0.93	23.62
1/2	0.736-0.752	18.69-19.1	0.555	14.09	0.84	21.34	0.26	6.60	1.07	27.18
9/16	0.861-0.877	21.86-22.27	0.625	15.87	0.982	24.94	0.29	7.37	1.19	30.23
5/8	0.922-0.939	23.41-23.85	0.69	17.5	1.051	26.70	0.32	8.13	1.33	33.78
3/4	1.088-1.127	27.63-28.62	0.825	20.95	1.24	31.50	0.38	9.65	1.585	40.26

### Locking Method:

Mouth Elliptic (①S Surface with twill ②S Surface flat) can be selected;

Pressure Point Variation Type (③ Slope surface three-point type ④ Slope surface two-point type ⑤ Side three-point type square or round point)

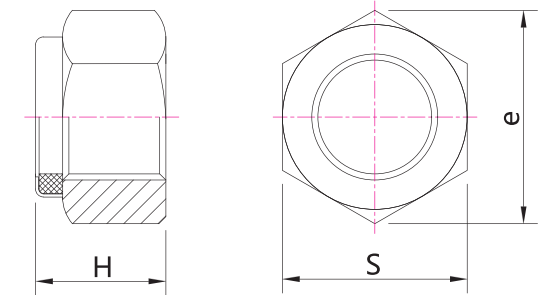
Standard	Mechanical Performance	Specification
ASME B18.16.6-2017	B18.16.6	Metal distorted nuts, Nylon lock nuts, Hexagon nuts and Flange nuts, all follow this standard

Class F heat treatment up to 28HRC (1/4-3/4)

Grade G heat treatment is 24-32HRC (1/4-5/8)

Grade G heat treatment is 26-34HRC (3/4)

## Nylon Insert Hexagon lock Nuts

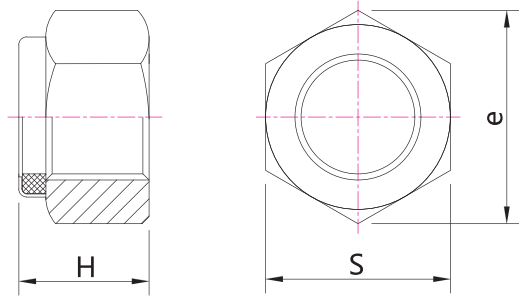


Specification	ISO7040/GB889.1/QC328			DIN6924			ISO7041-2012/GB6182-2000		
	Opposite Side S	Thickness H	Opposite Corner e Min	Opposite Side S	Thickness H	Opposite Corner e Min	Opposite Side S	Thickness H	Opposite Corner e Min
M3	5.32-5.5	4.02-4.5	6.01	5.32-5.5	4.2-4.5	6.01			
M4	6.78-7	5.52-6	7.66	6.78-7	5.7-6	7.66			
M5	7.78-8	6.22-6.8	8.79	7.78-8	6.44-6.8	8.79	7.78-8	6.62-7.2	8.79
M6	9.79-10	7.42-8	11.05	9.79-10	7.64-8	11.05	9.78-10	7.92-8.5	11.05
M8	12.73-13	8.92-9.5	14.38	12.73-13	9.14-9.5	14.38	12.73-13	9.5-10.2	14.38
M10	15.73-16	11.2-11.9	17.77	15.73-16	11.47-11.9	17.77	15.73-16	12.1-12.8	17.77
M12	17.73-18	14.2-14.9	20.03	17.73-18	14.47-14.9	20.03	17.73-18	15.4-16.1	20.03
M14	20.67-21	15.9-17	23.36	20.67-21	16.3-17	23.36	20.67-21	17-18.3	23.36
M16	23.67-24	17.8-19.1	26.75	23.67-24	18.26-19.1	26.75	23.67-24	19.4-20.7	26.75
M18				26.16-27	19.76-20.6	29.56			
M20	29.16-30	20.7-22.8	32.95	29.16-30	21.5-22.8	32.95	29.16-30	23-25.1	32.95
M22				33-34	23.2-24.5	37.29			
M24	35-36	25-27.1	39.55	35-36	25.8-27.1	39.55	35-36	27.4-29.5	39.55
M27				40-41	29.4-31	45.2			
M30	45-46	30.1-32.6	50.85	45-46	31-32.6	50.85	45-46	33.1-35.6	50.85
M33				49-50	33.9-35.5	55.37			
M36	53.8-55	36.4-38.9	60.79	53.8-55	37.3-38.9	60.79	53.8-55	40.1-42.6	60.79
M39				58.8-60	40.4-42	66.44			
M42				63.1-65	43.4-45	72.09			
M45				68.1-70	46.4-48	76.95			
M48				73.1-75	48.4-50	82.6			

Nylon ring is blue by default, white can be customized

Standard	Mechanical Performance	Specification
ISO7040-2012	ISO2302/ISO898-2	Class 6H Tolerance ISO261, ISO724, ISO965-2
DIN6924-1987	ISO898-2/DIN267-23	Class 6H Tolerance DIN13-(12-15)
ISO7041-2012	ISO2302/ISO898-2	Class 6H Tolerance ISO261, ISO724, ISO965-2
GB889.1-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D≤16A; D>16B
GB6182-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D≤16A; D>16B

## Nylon Insert Hexagon lock Nuts

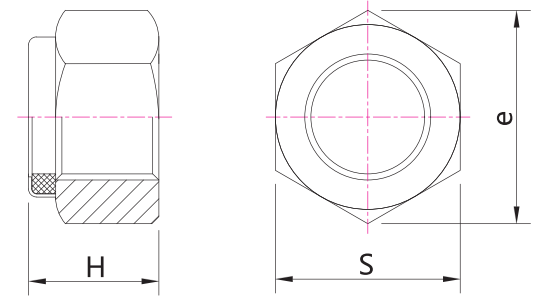


Specification	ISO10511/GB6172.2			ISO10512			QC326		
	Opposite Side S	Thickness H	Opposite Corner e Min	Opposite Side S	Thickness H	Opposite Corner e Min	Opposite Side S	Thickness H	Opposite Corner e Min
M3	5.32-5.5	3.42-3.9	6.01						
M4	6.78-7	4.52-5	7.66						
M5	7.78-8	4.52-5	8.79				7.78-8	6.62-7.2	8.79
M6	9.78-10	5.52-6	11.05				9.79-10	7.92-8.5	11.05
M8	12.73-13	6.18-6.78	14.38	12.73-13	8.92-9.5	14.38	12.73-13	9.5-10.2	14.38
M10	15.73-16	7.98-8.56	17.77	15.73-16	11.2-11.9	17.77	15.73-16	12.1-12.8	17.77
M12	17.73-18	9.53-10.23	20.03	17.73-18	14.2-14.9	20.03	17.73-18	15.4-16.1	20.03
M14	20.67-21	10.22-11.32	23.35	20.67-21	15.9-17	23.35	20.67-21	17-18.3	23.35
M16	23.67-24	11.32-12.42	26.75	23.67-24	17.8-19.1	26.75	23.67-24	19.4-20.7	26.75
M20	29.16-30	13.1-14.9	32.95	29.16-30	20.7-22.8	32.95	29.16-30	23-25.1	32.95
M24	35-36	16-17.8	39.55	35-36	25.0-27.1	39.55	35-36	27.4-29.5	39.55
M30	45-46	20.1-22.2	50.85	45-46	30.1-32.6	50.85	45-46	33.1-35.6	50.85
M36	53.8-55	23.4-25.5	60.79	53.8-55	36.4-38.9	60.79	53.8-55	40.1-42.3	60.79

Nylon ring is blue by default, white can be customized

Standard	Mechanical Performance	Specification
ISO10511-2012	ISO2320-2015	Class 6H Tolerance ISO261/ISO965-2 D≤16A; D>16B
GB6172.2-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D≤16A; D>16B
ISO10512-2012	ISO2320-2015	Class 6H Tolerance ISO261/ISO965-2 D≤16A; D>16B

## Nylon Insert Hexagon lock Nuts



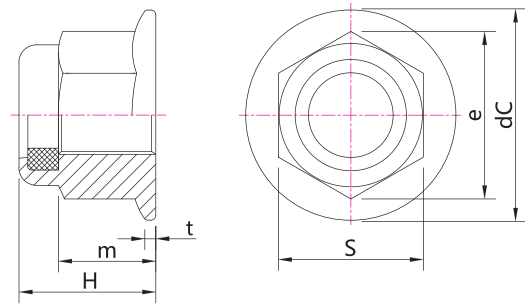
Specification	DIN985-1987					DIN982				
	Opposite Side S	Thickness H	Opposite Corner e Min	Hexagon Height	Wrenching Height	Opposite Side S	Thickness H	Opposite Corner e Min	Hexagon Height	Wrenching Height
M3	5.32-5.5	3.7-4	6.01	2.7	2.4					
M4	6.78-7	4.7-5	7.66	3.2	2.9					
M5	7.78-8	4.7-5	8.79	3.5	3.2	7.78-8	6-6.3	8.79	4.4	3.52
M6	9.78-10	5.7-6	11.05	4.5	4	9.78-10	7.7-8	11.05	4.9	3.92
M7	10.73-11	7.14-7.5	12.12	5.5	4.7	10.73-11	8.2-8.5	12.12	6.14	4.91
M8	12.73-13	7.64-8	14.38	6	5.5	12.73-13	9.14-9.5	14.38	6.44	5.15
M10	16.73-17	9.64-10	18.9	7	6.5	16.73-17	11.14-11.5	18.9	8.04	6.43
M12	18.67-19	11.57-12	21.1	9	8	18.67-19	13.64-14	21.1	10.37	8.3
M14	21.67-22	13.3-14	24.49	10	9.5	21.67-22	15.3-16	24.49	12.1	9.68
M16	23.67-24	15.3-16	26.75	11	10.5	23.67-24	17.3-18	26.75	14.1	11.28
M18	26.16-27	17.66-18.5	29.56	14	13	26.16-27	19.16-20	29.56	15.1	12.08
M20	29.16-30	18.7-20	32.95	15	14	29.16-30	20.7-22	32.95	16.9	13.52
M22	31-32	20.7-22	35.03	16	15	31-32	23.7-25	35.03	18.1	14.48
M24	35-36	22.7-24	39.55	16	15	35-36	26.7-28	39.55	20.2	16.16
M27	40-41	25.7-27	45.2	19	17					
M30	45-46	28.7-30	50.85	23	19					
M33	49-50	31.4-33	55.37	25	22					
M36	53.8-55	34.4-36	60.79	28	25					
M39	58.8-60	37.4-39	66.44	30	27					
M42	63.8-65	40.4-42	72.09	33	29					
M45	68.1-70	43.4-45	76.95	35	32					
M48	73.1-75	46.4-48	82.6	38	36					

Nylon ring is blue by default, white can be customized

Standard	Mechanical Performance	Specification
DIN985-87	DIN267-4	Class 6H Tolerance DIN13-(12-15) D≤16A; D>16B
DIN982-87	ISO898-2/DIN267-15	Class 6H Tolerance GB/T196、197 D≤16A; D>16B
GB6172.2-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D≤16A; D>16B

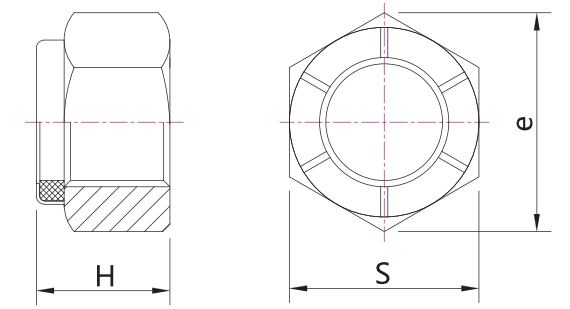


## Nylon Insert Flange Hexagon Lock Nuts



Specification	DIN6926					ISO7043/GB6183				
	Opposite Side S	Thickness H	Flange Diameter	Opposite Corner e Min	Flange Thickness t Min	Opposite Side S	Thickness H	Flange Diameter	Opposite Corner e Min	Flange Thickness t Min
M4	7	5.7	9.4	7.66						
M5	7.78-8	6.74-7.1	9.8-11.8	8.79	1	7.78-8	6.52-7.1	9.8-11.8	8.79	1
M6	9.78-10	8.74-9.1	12.2-14.2	11.05	1.1	9.78-10	8.52-9.1	12.2-14.2	11.05	1.1
M8	12.73-13	10.67-11.1	15.8-17.9	14.38	1.2	12.73-13	10.4-11.1	15.8-17.9	14.38	1.2
M10	14.73-15	13.07-13.5	19.6-21.8	16.64	1.5	14.73-15	12.8-13.5	19.6-21.8	16.64	1.5
M12	17.73-18	15.67-16.1	23.8-26	20.03	1.8	17.73-18	15.4-16.1	23.8-26	20.03	1.8
M14	20.67-21	17.68-18.2	27.6-29.9	23.36	2.1	20.67-21	16.9-18.2	27.6-29.9	23.36	2.1
M16	23.67-24	19.46-20.3	31.9-34.5	26.75	2.4	23.67-24	19-20.3	31.9-34.5	26.75	2.4
M18	26.16-27	22	38.6	30.14		26.16-27	22	38.6	30.14	
M20	29.16-30	23.96-24.8	39.9-42.8	32.95	3	29.16-30	22.7-24.8	39.9-42.8	32.95	3
M22										
M24										
M27										
M30										

## Nylon Insert Hexagon Lock Nuts



Specification	ASME B18.16.6-2017 Table3-NM-NE					ASME B18.16.6-2017 Table4-NTM-NTE				
	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric	Thickness H	Metric	Opposite Corner e Min	Metric
3#	0.243-0.251	6.17-6.38	0.133-0.153	3.38-3.89	0.268	6.81	0.094-0.124	2.38-3.15		
4#	0.243-0.251	6.17-6.38	0.133-0.153	3.38-3.89	0.268	6.81	0.094-0.124	2.38-3.15		
5#	0.243-0.251	6.17-6.38	0.133-0.153	3.38-3.89	0.268	6.81	0.094-0.124	2.38-3.15		
6#	0.305-0.313	7.75-7.95	0.168-0.188	4.27-4.78	0.339	8.61	0.11-0.14	2.79-3.56		
8#	0.336-0.345	8.53-8.76	0.219-0.239	5.56-6.07	0.374	9.50	0.157-0.187	3.98-4.75		
10#	0.367-0.376	9.32-9.55	0.229-0.249	5.82-6.32	0.41	10.41	0.157-0.187	3.98-4.75		
12#	0.43-0.439	10.92-11.15	0.298-0.328	7.57-8.33	0.482	12.24	0.188-0.218	4.77-5.54		
1/4	0.43-0.439	10.92-11.15	0.298-0.328	7.57-8.33	0.482	12.24	0.188-0.218	4.77-5.54		
5/16	0.489-0.502	12.42-12.75	0.329-0.359	8.36-9.12	0.552	14.02	0.235-0.265	5.96-6.73		
3/8	0.551-0.564	13.99-14.33	0.438-0.468	11.13-11.89	0.622	15.80	0.251-0.281	6.37-6.28		
7/16	0.616-0.627	15.65-15.93	0.438-0.468	11.13-11.89	0.698	17.73	0.298-0.328	7.56-8.33	0.694	17.63
1/2	0.736-0.752	18.69-19.1	0.579-0.609	14.71-15.47	0.837	21.26	0.298-0.328	7.56-8.33		
9/16	0.861-0.877	21.86-22.28	0.626-0.656	15.9-16.66	0.978	24.84	0.344-0.374	8.73-9.5		
5/8	0.922-0.94	23.41-23.88	0.735-0.765	18.67-19.43	1.051	26.70	0.376-0.406	9.55-10.31		
3/4	1.052-1.064	26.72-27.03	0.86-0.89	21.84-22.61	1.191	30.25	0.391-0.421	9.93-10.69		
7/8	1.239-1.252	31.47-31.8	0.969-0.999	24.61-25.37	1.403	35.64	0.454-0.484	11.53-12.29		
1	1.427-1.44	36.25-36.58	1.016-1.078	25.81-27.38	1.615	41.02	0.516-0.578	13.1-14.68		
1 1/8	1.614-1.627	41-41.33	1.141-1.203	28.98-30.56	1.826	46.38	0.61-0.672	15.49-17.07		
1 1/4	1.801-1.815	45.75-46.1	1.36-1.422	34.54-36.12	2.038	51.77	0.703-0.765	17.85-19.73		
1 3/8	1.973-2.008	50.11-51	1.547-1.609	39.29-40.87	2.232	56.69	0.759-0.821	18.27-20.85	2.249	57.12
1 1/2	2.159-2.197	54.84-55.8	1.578-1.64	40.08-41.66	2.444	62.08	0.766-0.828	19.45-21.03	2.416	61.36

Nylon ring is White color by default

Standard	Mechanical Performance	Specification
DIN6926-83	ISO898-2/DIN267-23	Class 6H Tolerance DIN13-(12-15)
GB6183-2000	GB/T3098.9	Class 6H Tolerance GB/T196、197 D≤16A; D>16B
ISO7043-2012	ISO2320-2015	Class 6H Tolerance ISO261/ISO965-2 D≤16A; D>16B

Standard	Mechanical Performance	Specification
ASME B18.16.6-2017	B18.16.6	Metal distorted nuts, Nylon lock nuts, Hexagon nuts and Flange nuts, all follow this standard

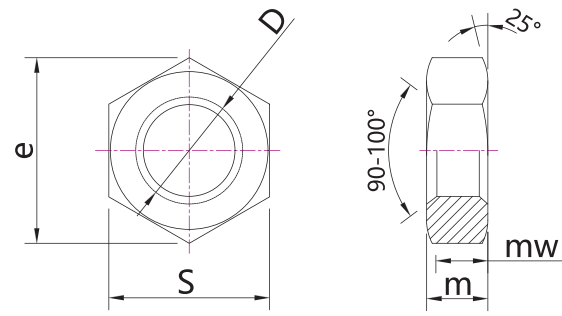
N2 N5 A B grade heat treatment up to 28HRC (N2 minimum hardness HRB68)

N8 C G grade heat treatment is 24-32HRC (4#-5/8)

N8 C G grade heat treatment is 26-34HRC (3/4-1)

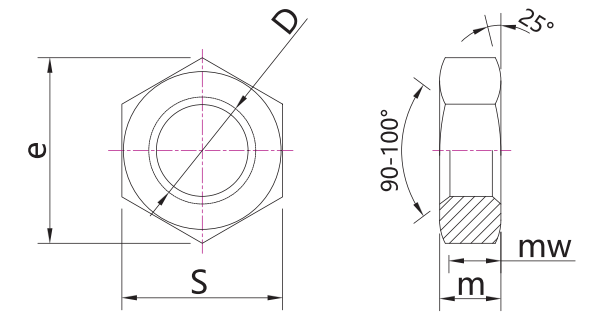
N8 C G grade heat treatment is 26-36HRC (1-1/8- 1-1/2)

## Hexagon Thin Nuts



Specification	ISO4035/ISO8675				DIN439			DIN936		
	Opposite Side S	Thickness H	Opposite Corner e Min	Wrenching Height	Opposite Side S	Thickness H	Opposite Corner e Min	Opposite Side S	Thickness H	Opposite Corner e Min
M1.6	3.02-3.2	0.75-1	3.41	0.6	3.08-3.2	0.75-1	3.48			
M2	3.82-4	0.95-1.2	4.32	0.8	3.82-4	0.95-1.2	4.32			
M2.5	4.82-5	1.35-1.6	5.45	1.1	4.82-5	1.35-1.6	5.45			
M3	5.32-5.5	1.55-1.8	6.01	1.2	5.32-5.5	1.55-1.8	6.01			
M3.5	5.82-6	1.75-2	6.58	1.4	5.82-6	1.75-2	6.58			
M4	6.78-7	1.95-2.2	7.66	1.6	6.78-7	1.95-2.2	7.66			
M5	7.78-8	2.45-2.7	8.79	2	7.78-8	2.45-2.7	8.79			
M6	9.78-10	2.9-3.2	11.05	2.3	9.78-10	2.9-3.2	11.05			
M8	12.73-13	3.7-4	14.38	3	12.73-13	3.7-4	14.38	12.73-13	4.7-5	14.38
M10	15.73-16	4.7-5	17.77	3.8	16.73-17	4.7-5	18.9	16.73-17	5.7-6	18.9
M12	17.73-18	5.7-6	20.03	4.6	18.73-19	5.7-6	21.1	18.67-19	6.64-7	21.1
M14	20.67-21	6.42-7	23.36	5.1	21.67-22	6.42-7	24.49	21.67-22	7.42-8	24.49
M16	23.67-24	7.42-8	26.75	5.9	23.67-24	7.42-8	26.75	23.67-24	7.42-8	26.75
M18	26.16-27	8.42-9	29.56	6.7	26.16-27	8.42-9	29.56	26.16-27	8.42-9	29.56
M20	29.16-30	9.1-10	32.95	7.3	29.16-30	9.1-10	32.95	29.16-30	8.42-9	32.95
M22	33-34	9.9-11	37.29	7.9	31-32	9.9-11	35.03	31-32	9.1-10	35.03
M24	35-36	10.9-12	39.55	8.7	35-36	10.9-12	39.55	35-36	9.1-10	39.55
M27	40-41	12.4-13.5	45.2	9.9	40-41	12.4-13.5	45.2	40-41	10.9-12	45.2
M30	45-46	13.9-15	50.85	11.1	45-46	13.9-15	50.85	45-46	10.9-12	50.85
M33	49-50	15.4-16.5	55.37	12.3	49-50	15.4-16.5	55.37	49-50	12.9-14	55.37
M36	53.8-55	16.9-18	60.79	13.5	53.8-55	16.9-18	60.79	53.8-55	12.9-14	60.79
M39	58.8-60	18.2-19.5	66.44	14.6	58.8-60	18.2-19.5	66.44	58.8-60	14.9-16	66.44
M42	63.1-65	19.7-21	71.3	15.8	63.1-65	19.7-21	71.3	63.1-65	14.9-16	71.3
M45	68.1-70	21.2-22.5	76.95	17	68.1-70	21.2-22.5	76.95	68.1-70	16.9-18	76.95
M48	73.1-75	22.7-24	82.6	18.2	73.1-75	22.7-24	82.6	73.1-75	16.9-18	82.6
M52	78.1-80	24.7-26	88.25	19.8	78.1-80	24.7-26	88.25	78.1-80	18.7-20	88.25
M56	82.8-85	26.7-28	93.56	21.4	82.8-85	26.7-28	93.56			
M60	87.8-90	28.7-30	99.21	23	87.8-90	28.7-30	99.21			
M64	92.8-95	30.4-32	104.86	24.3	92.8-95	30.4-32	104.86			
Standard	Mechanical Performance		Specification							
GB6172.1-2000	GB3098.2		Class 6H Tolerance GB/T196、197 D≤16A; D>16B							
ISO8675-2012	ISO898-2		Class 6H Tolerance ISO724 ISO965-1 D≤16A; D>16B							
ISO4035-2012	ISO898-2		Class 6H Tolerance ISO724 ISO965-1 D≤16A; D>16B							
DIN439-1987	DIN267-24		Class 6H Tolerance DIN13-(12-15) D≤16A; D>16B							
DIN936-1985	DIN267-24/ISO898-2		Class 6H Tolerance DIN13-(15) D≤16A; D>16B							

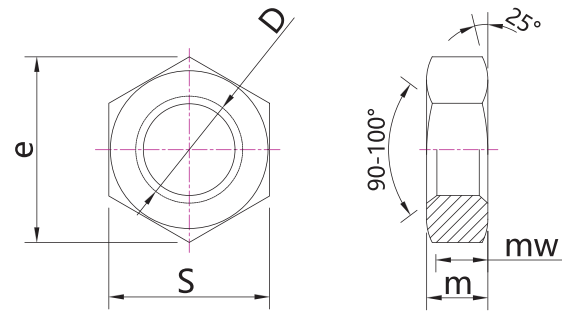
## Hexagon Thin Nut



Specification	Opposite Side S	ASME B18.2.2-2015-3 Thin Type				
		Metric	Thickness H	Metric	Opposite Corner e Min	
1/4	0.428-0.438	10.87-11.12	0.15-0.163	3.81-4.14	0.488-0.505	
5/16	0.489-0.5	12.42-12.7	0.18-0.195	4.57-4.95	0.557-0.577	
3/8	0.551-0.563	13.99-14.3	0.21-0.227	5.33-5.76	0.628-0.65	
7/16	0.675-0.688	17.14-17.47	0.24-0.26	6.09-6.6	0.768-0.794	
1/2	0.736-0.75	18.69-19.05	0.302-0.323	7.67-8.2	0.84-0.866	
9/16	0.861-0.875	21.86-22.22	0.301-0.324	7.64-8.22	0.982-1.01	
5/8	0.922-0.938	23.41-23.82	0.363-0.387	9.22-9.82	1.051-1.083	
3/4	1.088-1.125	27.63-28.57	0.398-0.446	10.1-11.32	1.24-1.299	
7/8	1.269-1.312	32.23-33.32	0.458-0.51	11.63-12.95	1.447-1.516	
1	1.45-1.5	36.83-38.1	0.519-0.575	13.18-14.6	1.653-1.732	
1 1/8	1.631-1.688	41.42-42.87	0.579-0.639	14.7-16.23	1.859-1.949	
1 1/4	1.812-1.875	46.02-47.62	0.687-0.751	17.44-19.07	2.066-2.165	
1 3/8	1.994-2.062	50.64-52.37	0.747-0.815	18.97-20.7	2.273-2.382	
1 1/2	2.175-2.25	55.24-57.15	0.808-0.88	20.52-22.35	2.48-2.598	
1 5/8	2.35-2.43	59.69-61.72	0.868-0.944	22.04-23.97	2.679-2.805	
1 3/4	2.538-2.625	64.46-66.67	0.929-1.009	23.59-25.62	2.893-3.031	
1 7/8	2.722-2.813	69.13-71.45	0.989-1.073	25.12-27.25	3.103-3.247	
2	2.9-3	73.66-76.2	1.05-1.138	26.67-28.9	3.306-3.464	
2 1/4	3.263-3.375	82.88-85.725	1.155-1.267	29.33-32.18	3.719-3.897	
2 1/2	3.625-3.75	92.07-95.25	1.401-1.427	35.58-36.24	4.133-4.33	
2 3/4	3.988-4.125	101.29-104.77	1.522-1.556	38.65-39.52	4.546-4.763	
3	4.35-4.5	110.49-114.3	1.643-1.685	41.73-42.799	4.959-5.196	
3 1/4	4.713-4.875	119.71-123.82	1.748-1.814	44.39-46.07	5.373-5.629	
3 1/2	5.075-5.25	128.9-133.35	1.87-1.943	47.49-49.35	5.786-6.062	
3 3/4	5.438-5.625	138.12-142.87	1.99-2.072	50.54-52.62	6.199-6.495	
4	5.8-6	147.32-152.4	2.11-2.201	53.59-55.90	6.612-6.928	
Standard	Mechanical Performance		Specification			
B18.2.2-2015	SAE J995-1999		Steel nut material and mechanical performance requirements			



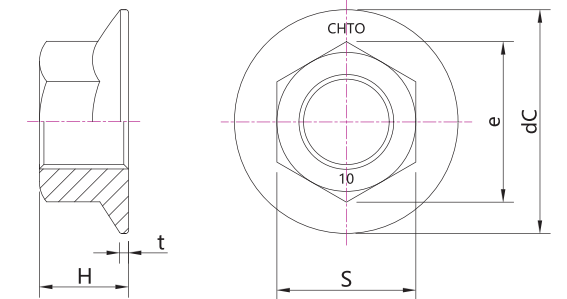
## Heavy Hexagon Thin Nuts



ASME B18.2.2-2015-10 JIC Heavy Nuts Thin Type						
Specification	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric
1/4	0.488-0.5	12.39-12.7	0.156-0.188	3.96-4.77	0.556-0.577	14.12-14.65
5/16	0.546-0.562	13.86-14.27	0.186-0.22	4.72-5.58	0.622-0.65	15.79-16.51
3/8	0.669-0.688	16.99-17.4	0.216-0.252	5.48-6.4	0.763-0.794	19.38-20.16
7/16	0.728-0.75	18.49-19.05	0.247-0.285	6.27-7.23	0.83-0.866	21.08-21.99
1/2	0.85-0.875	21.59-22.22	0.277-0.317	7.03-8.05	0.969-1.01	24.61-25.65
9/16	0.909-0.938	23.08-23.82	0.307-0.349	7.79-8.86	1.037-1.083	26.33-27.50
5/8	1.031-1.062	26.18-26.97	0.337-0.381	8.55-9.67	1.175-1.227	29.84-31.16
3/4	1.212-1.25	30.78-31.75	0.398-0.446	10.10-11.32	1.382-1.443	35.10-36.65
7/8	1.394-1.438	35.40-36.52	0.458-0.51	11.63-12.95	1.589-1.66	40.36-42.16
1	1.575-1.625	40-41.27	0.519-0.575	13.18-14.6	1.796-1.876	45.61-47.65
1 1/8	1.756-1.812	44.6-46.02	0.579-0.639	14.7-16.23	2.002-2.083	50.85-52.90
1 1/4	1.938-2	49.22-50.8	0.687-0.751	17.44-19.07	2.209-2.309	56.1-58.64
1 3/8	2.119-2.188	53.82-55.57	0.747-0.815	18.97-20.70	2.416-2.526	61.36-64.16
1 1/2	2.3-2.375	58.42-60.32	0.808-0.88	20.52-22.35	2.622-2.742	66.59-69.64
1 5/8	2.481-2.562	63.01-65.07	0.868-0.944	22.04-23.97	2.828-2.959	71.83-75.15
1 3/4	2.662-2.75	67.61-69.85	0.929-1.009	23.59-25.62	3.035-3.175	77.08-80.64
1 7/8	2.844-2.938	72.23-74.62	0.989-1.073	25.12-27.25	3.242-3.392	82.34-86.15
2	3.025-3.125	76.83-79.37	1.05-1.138	26.67-28.90	3.449-3.608	87.6-91.64
2 1/4	3.388-3.5	86.05-88.9	1.155-1.251	29.33-31.77	3.862-4.041	98.09-102.64
2 1/2	3.75-3.875	95.25-98.42	1.401-1.505	35.58-38.22	4.275-4.474	108.58-113.63
2 3/4	4.112-4.25	104.44-107.95	1.522-1.634	38.65-41.5	4.688-4.907	119.07-124.63
3	4.475-4.625	113.66-117.47	1.643-1.763	41.73-44.78	5.102-5.34	129.59-135.63
3 1/4	4.838-5	122.88-127	1.748-1.876	44.39-47.65	5.515-5.774	140.08-146.65
3 1/2	5.2-5.375	132.08-136.52	1.87-2.006	47.49-50.95	5.928-6.207	150.57-157.65
3 3/4	5.562-5.75	141.27-146.05	1.99-2.134	50.54-54.20	6.341-6.64	161.06-168.65
4	5.925-6.125	150.49-155.57	2.112-2.264	53.64-57.5	6.755-7.073	171.57-179.65

Standard	Mechanical Performance	Specification
B18.2.2-2015	SAE J995-1999	Steel nut material and mechanical performance requirements

## Flange Hexagon Nuts



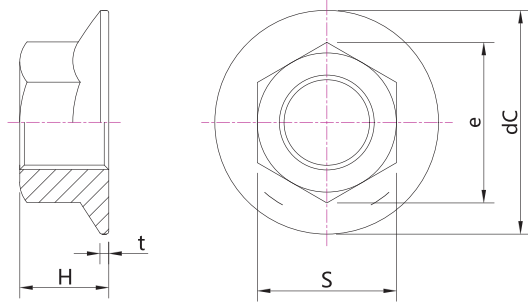
DIN6923						
Specification	Opposite Side S	Thickness H	Opposite Corner e Min	Flange Diameter dC	Flange Inner Diameter	Wrenching Height
M2.5	5.35-5.5	3.3-3.5	6.01	7.45-7.8		
M3	5.32-5.5	3.7-4	6.01	7.6-8		
M4	6.8-7	4.2-4.5	7.66	9.6-10		
M5	7.78-8	4.7-5	8.79	9.8-11.8	5-5.75	2.2
M6	9.78-10	5.7-6	11.05	12.2-14.2	6-6.75	3.1
M8	12.73-13	7.6-8	14.38	15.8-17.9	8-8.75	4.5
M10	14.73-15	9.6-10	16.64	19.6-21.8	10-10.8	5.5
M12	17.73-18	11.6-12	20.03	23.8-26	12-13	6.7
M14	20.67-21	13.3-14	23.36	27.6-29.9	14-15.1	7.8
M16	23.67-24	15.3-16	26.75	31.9-34.5	16-17.3	9
M20	29.67-30	18.9-20	32.95	39.9-42.8	20-21.6	11.1

ISO4161/GB6177.1						
Specification	Opposite Side S	Thickness H	Opposite Corner e Min	Flange Diameter dC	Flange Inner Diameter	Wrenching Height
M2.5	5.35-5.5	3.3-3.5	6.01	7.45-7.8		
M3	5.32-5.5	3.7-4	6.01	7.6-8		
M4	6.8-7	4.2-4.5	7.66	9.6-10		
M5	7.78-8	4.7-5	8.79	9.8-11.8	5-5.75	2.5
M6	9.78-10	5.7-6	11.05	12.2-14.2	6-6.75	3.1
M8	12.73-13	7.64-8	14.38	15.8-17.9	8-8.75	4.6
M10	14.73-15	9.64-10	16.64	19.6-21.8	10-10.8	5.6
M12	17.73-18	11.57-12	20.03	23.8-26	12-13	6.8
M14	20.67-21	13.3-14	23.36	27.6-29.9	14-15.1	7.7
M16	23.67-24	15.3-16	26.75	31.9-34.5	16-17.3	8.9
M20	29.16-30	18.7-20	32.95	39.9-42.8	20-21.6	10.7

Standard	Mechanical Performance	Specification
DIN6923-1983	ISO898-2/DIN267-23	Class 6H Tolerance DIN13-(12-15) D≤16A; D>16B
ISO4161-2012	ISO898-2	Class 6H Tolerance ISO261/ISO965-2 D≤16A; D>16B
GB6177.1-2016	GB3098.2	Class 6H Tolerance GB/T193、GB/T9145 D≤16A; D>16B

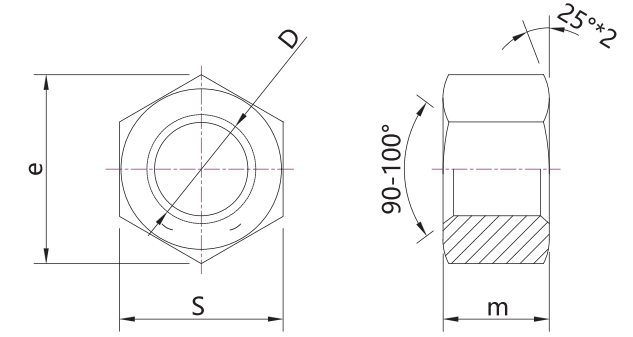
## Flange Hexagon Nuts



ASME B18.2.2/ IFI145-2002 Flange Hexagon Nuts								
Specification	Opposite Side S	Metric	Thickness H	Metric	Flange Diameter dC	Metric	Wrenching Height (min)	Metric
6#	0.302-0.312	7.67-7.92	0.156-0.171	3.96-4.34	0.406-0.422	10.31-10.71	0.10	2.54
8#	0.334-0.344	8.48-8.73	0.187-0.203	4.74-5.15	0.452-0.469	11.48-11.91	0.13	3.30
10#	0.365-0.375	9.27-9.52	0.203-0.219	5.15-5.56	0.48-0.5	12.19-12.7	0.13	3.30
12#	0.428-0.438	10.87-11.12	0.222-0.236	5.63-5.99	0.574-0.594	14.57-15.08	0.14	3.56
1/4	0.428-0.438	10.87-11.12	0.222-0.236	5.63-5.99	0.574-0.594	14.57-15.08	0.14	3.56
5/16	0.489-0.5	12.42-12.7	0.268-0.283	6.8-7.18	0.66-0.68	16.76-17.27	0.17	4.32
3/8	0.551-0.562	13.99-14.27	0.33-0.347	8.38-8.81	0.728-0.75	18.49-19.05	0.23	5.84
7/16	0.675-0.688	17.14-17.47	0.375-0.395	9.52-10.03	0.91-0.937	23.11-23.79	0.26	6.60
1/2	0.736-0.75	18.69-19.05	0.437-0.458	11.09-11.63	1-1.031	25.4-26.18	0.31	7.87
9/16	0.861-0.875	21.86-22.22	0.483-0.506	12.26-12.85	1.155-1.188	29.33-30.17	0.35	8.89
5/8	0.922-0.938	23.41-23.82	0.545-0.569	13.84-14.45	1.248-1.281	31.69-32.53	0.40	10.16
3/4	1.088-1.125	27.63-28.57	0.627-0.675	15.92-17.14	1.46-1.5	37.08-38.1	0.46	11.68

Standard	Mechanical Performance	Specification
B18.2.2-2015	SAE J995-1999	Steel nut material and mechanical performance requirements
IFI145-2002	SAE J995-1999	Steel nut material and mechanical performance requirements

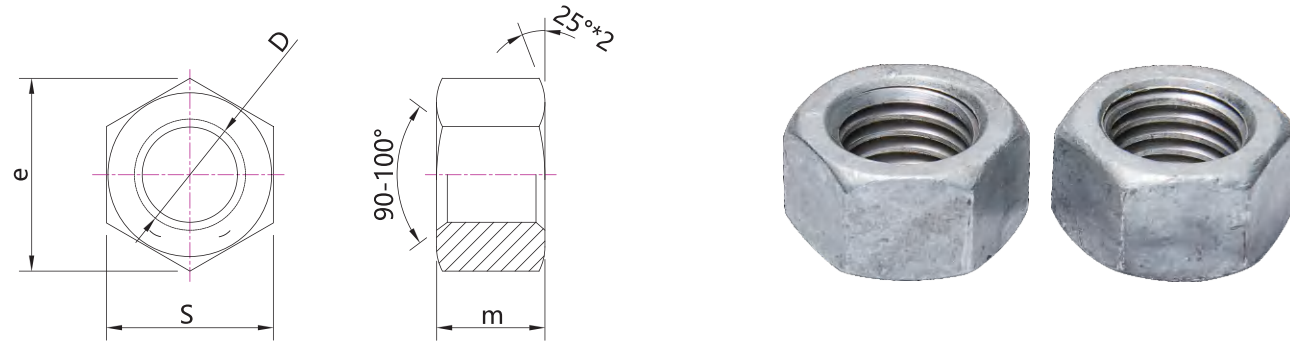
## Hexagon Nuts



ASME B18.2.2-2015-3 Hexagon Nuts						
Specification	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric
1/4	0.428-0.438	10.87-11.12	0.212-0.226	5.38-5.74	0.488-0.505	12.39-12.82
5/16	0.489-0.5	12.42-12.7	0.258-0.273	6.55-6.93	0.557-0.577	14.14-14.65
3/8	0.551-0.563	13.99-14.3	0.32-0.337	8.12-8.55	0.628-0.65	15.95-16.51
7/16	0.675-0.688	17.14-17.47	0.365-0.385	9.27-9.77	0.768-0.794	19.5-20.16
1/2	0.736-0.75	18.69-19.05	0.427-0.448	10.84-11.37	0.84-0.866	21.33-21.99
9/16	0.861-0.875	21.86-22.22	0.473-0.496	12.01-12.59	0.982-1.01	24.94-25.65
5/8	0.922-0.938	23.41-23.82	0.535-0.559	13.58-14.19	1.051-1.083	26.69-27.50
3/4	1.088-1.125	27.63-28.57	0.617-0.665	15.67-16.89	1.24-1.299	31.49-32.99
7/8	1.269-1.312	32.23-33.32	0.724-0.776	18.38-19.71	1.447-1.516	36.75-38.50
1	1.45-1.5	36.83-38.1	0.831-0.887	21.1-22.52	1.653-1.732	41.98-43.99
1 1/8	1.631-1.688	41.42-42.87	0.939-0.999	23.85-25.37	1.859-1.949	47.21-49.50
1 1/4	1.812-1.875	46.02-47.62	1.03-1.094	26.16-27.78	2.066-2.165	52.47-54.99
1 3/8	1.994-2.062	50.64-52.37	1.138-1.206	28.9-30.63	2.273-2.382	57.73-60.50
1 1/2	2.175-2.25	55.24-57.15	1.245-1.317	31.62-33.45	2.48-2.598	62.99-65.98
1 5/8	2.35-2.43	59.69-61.72	1.364-1.416	34.64-35.96	2.679-2.805	68.04-71.24
1 3/4	2.538-2.625	64.46-66.67	1.46-1.54	37.08-39.11	2.893-3.031	73.48-76.98
1 7/8	2.722-2.813	69.13-71.45	1.567-1.651	39.8-41.93	3.103-3.247	78.81-82.47
2	2.9-3	73.66-76.2	1.675-1.763	42.54-44.78	3.306-3.464	83.97-87.98
2 1/4	3.263-3.375	82.88-85.725	1.89-1.986	48-50.44	3.719-3.897	94.46-98.98
2 1/2	3.625-3.75	92.07-95.25	2.105-2.209	53.46-56.10	4.133-4.33	104.97-109.98
2 3/4	3.988-4.125	101.29-104.77	2.319-2.431	58.9-61.74	4.546-4.763	115.46-120.98
3	4.35-4.5	110.49-114.3	2.534-2.654	64.36-67.41	4.959-5.196	125.95-131.97
3 1/4	4.713-4.875	119.71-123.82	2.749-2.877	69.82-73.07	5.373-5.629	136.47-142.97
3 1/2	5.075-5.25	128.9-133.35	2.964-3.1	75.28-78.74	5.786-6.062	146.96-153.97
3 3/4	5.438-5.625	138.12-142.87	3.178-3.322	80.72-84.37	6.199-6.495	157.45-164.97
4	5.8-6	147.32-152.4	3.393-3.545	86.18-90.04	6.612-6.928	167.94-175.97

Standard	Mechanical Performance	Specification
B18.2.2-2015	SAE J995-1999	Steel nut material and mechanical performance requirements

## Heavy Hexagon Nuts

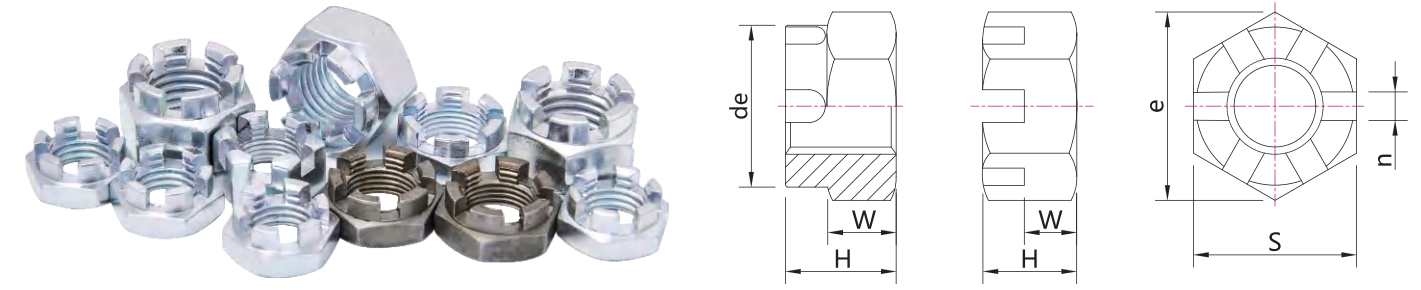


ASME B18.2.2-2015-10 Heavy Hexagon Nuts

Specification	Opposite Side S	Metric	Thickness H	Metric	Opposite Corner e Min	Metric
1/4	0.488-0.5	12.39-12.7	0.218-0.25	5.53-6.35	0.556-0.577	14.12-14.65
5/16	0.546-0.562	13.86-14.27	0.28-0.314	7.11-7.97	0.622-0.65	15.79-16.51
3/8	0.669-0.688	16.99-17.4	0.341-0.377	8.66-9.57	0.763-0.794	19.38-20.16
7/16	0.728-0.75	18.49-19.05	0.403-0.441	10.23-11.2	0.83-0.866	21.08-21.99
1/2	0.85-0.875	21.59-22.22	0.464-0.514	11.78-13.05	0.969-1.01	24.61-25.65
9/16	0.909-0.938	23.08-23.82	0.526-0.568	13.36-14.42	1.037-1.083	26.33-27.50
5/8	1.031-1.062	26.18-26.97	0.587-0.631	14.90-16.02	1.175-1.227	29.84-31.16
3/4	1.212-1.25	30.78-31.75	0.71-0.758	18.03-19.25	1.382-1.443	35.10-36.65
7/8	1.394-1.438	35.40-36.52	0.833-0.885	21.15-22.47	1.589-1.66	40.36-42.16
1	1.575-1.625	40-41.27	0.956-1.012	24.28-25.7	1.796-1.876	45.61-47.65
1 1/8	1.756-1.812	44.6-46.02	1.079-1.139	27.4-28.93	2.002-2.083	50.85-52.90
1 1/4	1.938-2	49.22-50.8	1.187-1.251	30.14-31.77	2.209-2.309	56.1-58.64
1 3/8	2.119-2.188	53.82-55.57	1.31-1.378	33.27-35.0	2.416-2.526	61.36-64.16
1 1/2	2.3-2.375	58.42-60.32	1.433-1.505	36.39-38.22	2.622-2.742	66.59-69.64
1 5/8	2.481-2.562	63.01-65.07	1.556-1.632	39.52-41.45	2.828-2.959	71.83-75.15
1 3/4	2.662-2.75	67.61-69.85	1.679-1.759	42.64-44.67	3.035-3.175	77.08-80.64
1 7/8	2.844-2.938	72.23-74.62	1.802-1.886	45.77-47.9	3.242-3.392	82.34-86.15
2	3.025-3.125	76.83-79.37	1.925-2.013	48.89-51.13	3.449-3.608	87.6-91.64
2 1/4	3.388-3.5	86.05-88.9	2.155-2.251	54.73-57.17	3.862-4.041	98.09-102.64
2 1/2	3.75-3.875	95.25-98.42	2.401-2.505	60.98-63.62	4.275-4.474	108.58-113.63
2 3/4	4.112-4.25	104.44-107.95	2.647-2.759	67.23-70.07	4.688-4.907	119.07-124.63
3	4.475-4.625	113.66-117.47	2.893-3.013	73.48-76.53	5.102-5.34	129.59-135.63
3 1/4	4.838-5	122.88-127	3.124-3.252	79.34-82.6	5.515-5.774	140.08-146.65
3 1/2	5.2-5.375	132.08-136.52	3.37-3.506	85.59-89.05	5.928-6.207	150.57-157.65
3 3/4	5.562-5.75	141.27-146.05	3.616-3.76	91.84-95.5	6.341-6.64	161.06-168.65
4	5.925-6.125	150.49-155.57	3.862-4.014	98.09-101.95	6.755-7.073	171.57-179.65

Standard	Mechanical Performance	Specification
B18.2.2-2015	SAE J995-1999	Steel nut material and mechanical performance requirements

## Slotted Hexagon Nuts



DIN935-2013

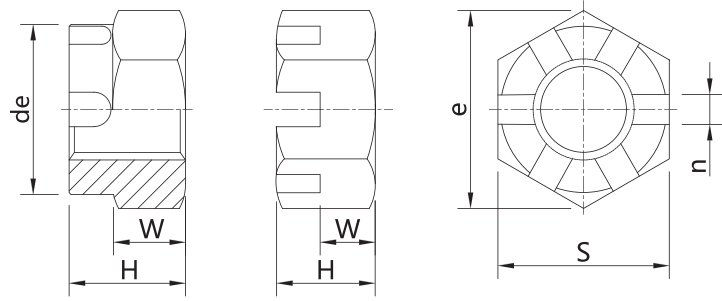
Specification	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M4	6.78-7	4.7-5	7.66	1.2-1.45	2.9-3.2	/
M5	7.78-8	5.7-6	8.79	1.4-1.65	3.7-4	/
M6	9.78-10	7.14-7.5	11.05	2-2.25	4.7-5	/
M7	10.73-11	7.64-8	12.12	2-2.25	5.2-5.5	/
M8	12.73-13	9.14-9.5	14.38	2.5-2.75	6.14-6.5	/
M10	15.73-16	11.57-12	17.77	2.8-3.05	7.64-8	/
M12	17.73-18	14.57-15	20.03	3.5-3.8	9.64-10	15.57-16
M14	20.67-21	15.57-16	23.35	3.5-3.8	10.57-11	17.57-18
M16	23.67-24	18.48-19	26.75	4.5-4.8	12.57-13	21.48-22
M18	26.16-27	20.16-21	29.56	4.5-4.8	14.57-15	24.3-25
M20	29.16-30	21.16-22	32.95	4.5-4.8	15.57-16	27.3-28
M22	33-34	25.16-26	37.29	5.5-5.8	17.57-18	31-32
M24	35-36	26.16-27	39.55	5.5-5.8	18.48-19	33-34
M27	40-41	29.16-30	45.2	5.5-5.8	21.48-22	37-38
M30	45-46	32-33	50.85	7-7.36	23.48-24	41-42
M33	49-50	34-35	55.37	7-7.36	25.48-26	45-46
M36	53.8-55	37-38	60.79	7-7.36	28.48-29	49-50
M39	58.8-60	39-40	66.44	7-7.36	30.28-31	53.8-55
M42	63.1-65	45-46	71.3	9-9.36	33.38-34	56.8-58
M45	68.1-70	47-48	76.95	9-9.36	35.38-36	60.8-62
M48	73.1-75	49-50	82.6	9-9.36	37.38-38	63.8-65
M52	78.1-80	52.8-54	88.25	9-9.36	41.38-42	68.8-70
M56	82.8-85	55.8-57	93.56	9-9.36	44.38-45	73.8-75
M60	87.8-90	61.8-63	99.21	11-11.43	47.38-48	78.8-80
M64	92.8-95	64.8-66	104.86	11-11.43	50.26-51	83.6-85
M68	97.8-100	67.8-69	110.51	11-11.43	53.26-54	88.6-90
M72	102.8-105	71.8-73	116.16	11-11.43	57.26-58	93.6-95
M76	107.8-110	74.8-76	121.81	11-11.43	60.26-61	98.6-100
M80	112.8-115	77.8-79	127.46	11-11.43	63.26-64	103.6-105
M85	117.8-120	86.6-88	133.11	14-14.43	67.26-68	108.6-110
M90	127.5-130	90.6-92	144.08	14-14.43	71.26-72	118.6-120
M100	142.5-145	98.6-100	161.02	14-14.43	79.26-80	128.4-130

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
DIN935-2013	ISO898-2/ISO3506-2	Class 6H Tolerance ISO261 ISO965-2 D≤16A; D>16B



## Slotted Hexagon Nuts

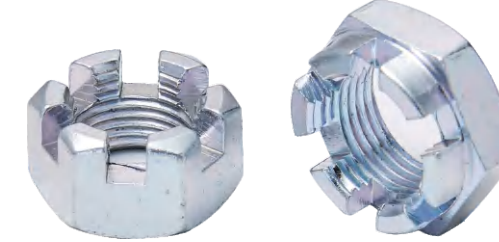
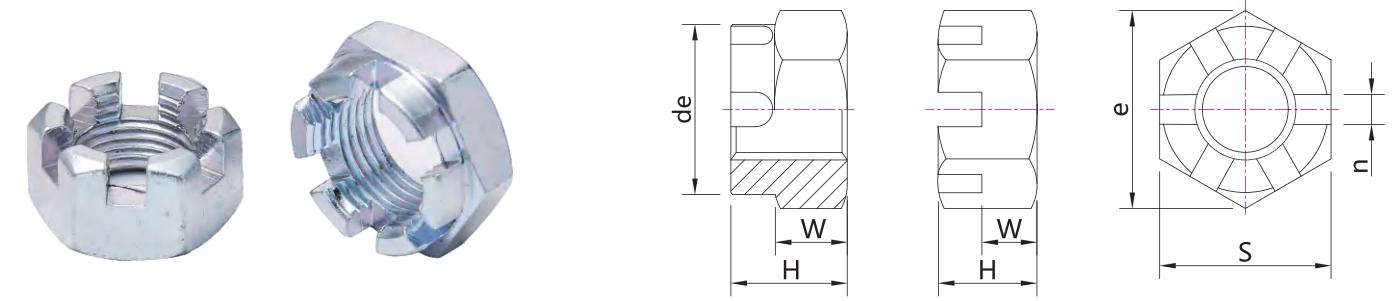


DIN937-1983						
Specification	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M6	9.78-10	5.7-6	11.05	2-2.25	3.2-3.5	/
M7	10.73-11	6.64-7	12.12	2-2.25	3.7-4	/
M8	12.73-13	7.64-8	14.38	2.5-2.75	4.2-4.5	/
M10	16.73-17	8.64-9	18.9	2.8-3.05	4.7-5	/
M12	18.67-19	9.64-10	20.1	3.5-3.8	5.7-6	16.57-17
M14	21.67-22	10.57-11	24.49	3.5-3.8	6.64-7	18.48-19
M16	23.67-24	11.57-12	26.75	4.5-4.8	6.64-7	21.48-22
M18	26.16-27	12.3-13	29.56	4.5-4.8	7.64-8	24.3-25
M20	29.16-30	12.3-13	32.95	4.5-4.8	7.64-8	27.3-28
M22	31-32	14.3-15	35.03	5.5-5.8	8.64-9	29.3-30
M24	35-36	14.3-15	39.55	5.5-5.8	8.64-9	33-34
M27	40-41	16.3-17	45.2	5.5-5.8	10.57-11	37-38
M30	45-46	17.3-18	50.85	7-7.36	10.57-11	41-42
M33	49-50	19.16-20	55.37	7-7.36	12.57-13	45-46
M36	53.8-55	19.16-20	60.79	7-7.36	12.57-13	49-50
M39	58.8-60	21.16-22	66.44	7-7.36	12.57-13	53.8-55
M42	63.8-65	22.16-23	72.02	9-9.36	13.57-14	56.8-58
M45	68.1-70	24.16-25	76.95	9-9.36	15.57-16	60.8-62
M48	73.1-75	24.16-25	82.6	9-9.36	15.57-16	63.8-65
M52	78.1-80	26.16-27	88.25	9-9.36	17.57-18	68.8-70

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
DIN937-1983	DIN267-24/DIN267-11	Class 6H Tolerance ISO261 ISO965-2 D≤16A; D>16B

## Slotted Hexagon Nuts

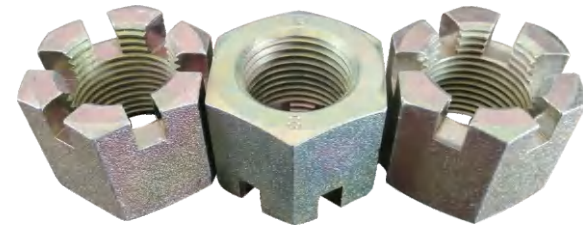
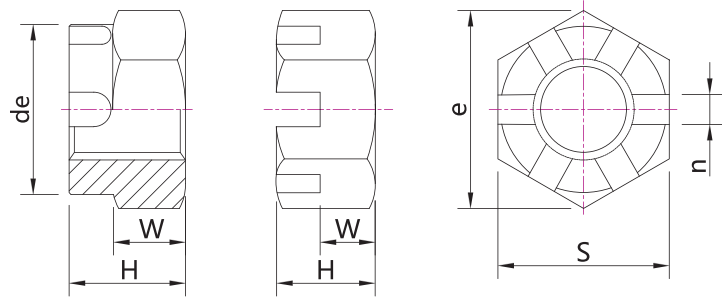


DIN979-2013						
Specification	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M6	9.78-10	4.7-5	11.05	2-2.25	2.25-2.5	/
M7	10.73-11	5.2-5.5	12.12	2-2.25	2.75-3	/
M8	12.73-13	6.14-6.5	14.38	2.5-2.75	3.2-3.5	/
M10	15.73-16	7.64-8	17.77	2.8-3.05	3.7-4	/
M12	17.73-18	9.64-10	20.03	3.5-3.8	4.7-5	15.57-16
M14	20.67-21	10.57-11	23.35	3.5-3.8	5.7-6	17.57-18
M16	23.67-24	12.57-13	26.75	4.5-4.8	6.64-7	21.48-22
M18	26.16-27	14.3-15	29.56	4.5-4.8	8.64-9	24.3-25
M20	29.16-30	15.3-16	32.95	4.5-4.8	9.64-10	27.3-28
M22	33-34	17.3-18	37.29	5.5-5.8	9.64-10	31-32
M24	35-36	18.16-19	39.55	5.5-5.8	10.57-11	33-34
M27	40-41	21.16-22	45.2	5.5-5.8	13.57-14	37-38
M30	45-46	23.16-24	50.85	7-7.36	14.57-15	41-42
M33	49-50	25.16-26	55.37	7-7.36	16.57-17	45-46
M36	53.8-55	28.16-29	60.79	7-7.36	19.48-20	49-50
M39	58.8-60	30-31	66.44	7-7.36	21.48-22	53.8-55
M42	63.1-65	32-33	71.3	9-9.36	21.48-22	56.8-58
M45	68.1-70	33.5-34.5	76.95	9-9.36	22.02-22.5	60.8-62
M48	73.1-75	35-36	82.6	9-9.36	23.48-24	63.8-65
M52	78.1-80	37-38	88.25	9-9.36	25.48-26	68.8-70

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
DIN979-2013	ISO898-2/ISO3506-2	Class 6H Tolerance ISO261 ISO965-2 D≤16A; D>16B

## Slotted Hexagon Nuts



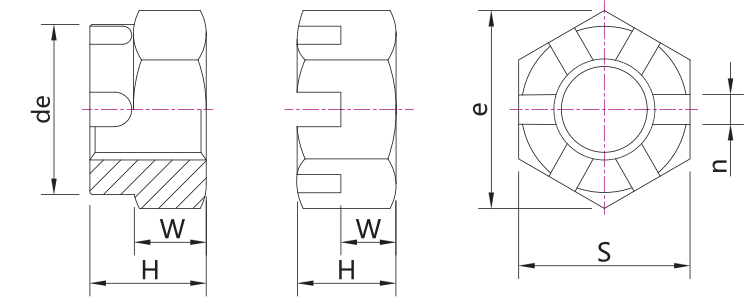
Specification	GB6178					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M4	6.78-7	4.7-5	7.66	1.2-1.8	2.9-3.2	/
M5	7.78-8	6.4-6.7	8.79	1.4-2	4.4-4.7	/
M6	9.78-10	7.34-7.7	11.05	2-2.6	4.9-5.2	/
M8	12.73-13	9.44-9.8	14.38	2.5-3.1	6.44-6.8	/
M10	15.73-16	11.97-12.4	17.77	2.8-3.4	8.04-8.4	/
M12	17.73-18	15.37-15.8	20.03	3.5-4.25	10.37-10.8	/
M14	20.67-21	17.37-17.8	23.35	3.5-4.25	12.37-12.8	/
M16	23.67-24	20.28-20.8	26.75	4.5-5.7	14.37-14.8	/
M20	29.16-30	23.16-24	32.95	4.5-5.7	17.37-18	27.16-28
M24	35-36	28.66-29.5	39.55	5.5-6.7	20.88-21.5	33-34
M30	45-46	33.6-34.6	50.85	7-8.5	24.98-25.6	41-42
M36	53.8-55	39-40	60.79	7-8.5	30.38-31	49-50

Specification	GB6179					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M5	7.64-8	5.2-6.7	8.63	1.4-2	4.22-4.7	/
M6	9.64-10	6.2-7.7	10.89	2-2.6	4.72-5.2	/
M8	12.57-13	8.3-9.8	14.2	2.5-3.1	6.22-6.8	/
M10	15.57-16	10.6-12.4	17.59	2.8-3.4	7.82-8.4	/
M12	17.57-18	14-15.8	19.85	3.5-4.25	10.1-10.8	/
M14	20.16-21	16-17.8	22.78	3.5-4.25	12.1-12.8	/
M16	23.16-24	18.7-20.8	26.17	4.5-5.7	14.1-14.8	/
M20	29.16-30	21.9-24	32.95	4.5-5.7	17.3-18	/
M24	35-36	27.4-29.5	39.55	5.5-6.7	20.66-21.5	/
M30	45-46	32.1-34.6	50.85	7-8.5	24.76-25.6	/
M36	53.8-55	37.5-40	60.79	7-8.5	30-31	/

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
GB6178-1986	GB3098.2	Class 6H Tolerance GB196、197 D≤16A; D>16B
GB6179-1986	GB3098.2	Class 7H Tolerance Gb196、197

## Slotted Hexagon Nuts



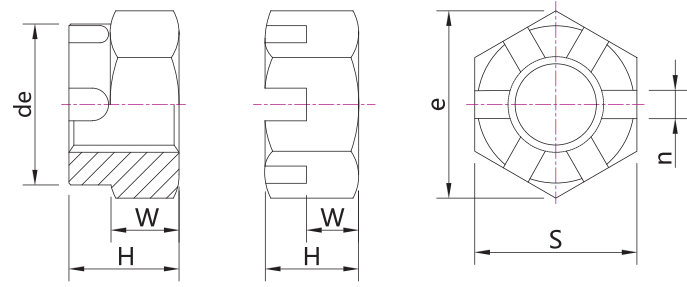
Specification	GB6180					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M5	7.85-8	6.6-6.9	8.79	1.4-2	4.8-5.1	/
M6	9.78-10	7.94-8.3	11.05	2-2.6	5.4-5.7	/
M8	12.73-13	9.64-10	14.38	2.5-3.1	7.14-7.5	/
M10	15.73-16	11.87-12.3/12.87-13.3	17.77	2.8-3.4	8.94-9.3	/
M12	17.73-18	15.57-16	20.03	3.5-4.25	11.57-12	/
M14	20.67-21	18.58-19.1	23.35	3.5-4.25	13.4-14.1	/
M16	23.67-24	20.58-21.1	26.75	4.5-5.7	15.7-16.4	/
M20	29.16-30	25.46-26.3	32.95	4.5-5.7	19-20.3	27.16-28
M24	35-36	31.06-31.9	39.55	5.5-6.7	22.6-23.9	33-34
M30	45-46	36.7-37.6	50.85	7-8.5	27.3-28.6	41-42
M36	53.8-55	42.7-43.7	60.79	7-8.5	33.1-34.7	49-50

Specification	GB6181					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M5	7.78-8	4.8-5.1	8.79	1.4-2	2.8-3.1	Castle-Like Appearance Only
M6	9.78-10	5.4-5.7	11.05	2-2.6	3.2-3.5	
M8	12.73-13	7.14-7.5	14.38	2.5-3.1	4.2-4.5	
M10	15.73-16	8.94-9.3	17.77	2.8-3.4	5-5.3	
M12	17.73-18	11.57-12	20.03	3.5-4.25	6.64-7	
M14	20.67-21	13.4-14.1	23.35	3.5-4.25	8.74-9.1	
M16	23.67-24	15.7-16.4	26.75	4.5-5.7	9.97-10.4	
M20	29.16-30	19-20.3	32.95	4.5-5.7	13.87-14.3	
M24	35-36	22.6-23.9	39.55	5.5-6.7	15.41-15.9	
M30	45-46	27.3-28.6	50.85	7-8.5	19.08-19.6	
M36	53.8-55	33.1-34.7	60.79	7-8.5	23.18-23.7	

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
GB6180-1986	GB3098.2	Class 6H Tolerance GB196、197 D≤16A; D>16B
GB6181-1986	GB3098.2/GB3098.6	Class 6H Tolerance Gb196、197 D≤16A; D>16B

## Slotted Hexagon Nuts



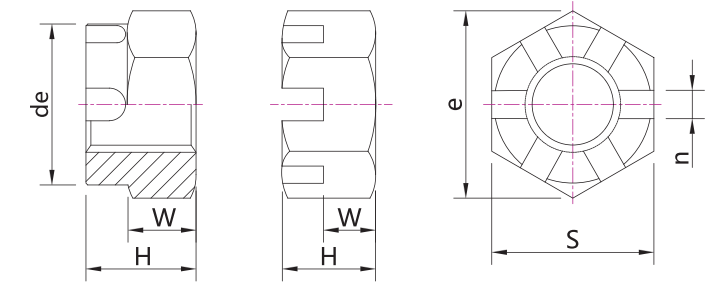
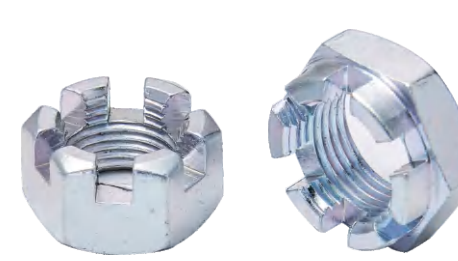
Specification	Gb9457 UNF/Q381B UNF/Q381C UNF					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M8	12.73-13	9.04-9.8	14.38	2.5-3.1	6.44-6.8	/
M10	15.73-16	11.97-12.4	17.77	2.8-3.4	8.04-8.4	/
M12	17.73-18	15.37-15.8	20.03	3.5-4.25	10.37-10.8	/
M14	20.67-21	17.37-17.8	23.36	3.5-4.25	12.37-12.8	/
M16	23.67-24	20.28-20.8	26.75	4.5-5.7	14.37-14.8	/
M18	26.16-27	20.96-21.8	29.56	4.5-5.7	15.1-15.8	24.16-25
M20	29.16-30	23.16-24	32.95	4.5-5.7	17.3-18	27.16-28
M22	33-34	26.56-27.4	37.29	5.5-6.7	18.56-19.4	29.16-30
M24	35-36	28.66-29.5	39.55	5.5-6.7	20.66-21.5	33-34
M27	40-41	30.8-31.8	45.2	5.5-6.7	22.96-23.8	37-38
M30	45-46	33.6-34.6	50.85	7-8.5	24.76-25.6	41-42
M33	49-50	36.7-37.7	55.37	7-8.5	27.86-28.7	45-46
M36	53.8-55	39-40	60.79	7-8.5	30-31	49-50

Specification	Gb9458 UNF/Q381B UNF/Q381C UNF					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M8	12.73-13	10.07-10.5	14.38	2.5-3.1	7.14-7.5	
M10	15.73-16	12.87-13.3	17.77	2.8-3.4	8.94-9.3	
M12	17.73-18	16.57-17	20.03	3.5-4.25	11.57-12	
M14	20.67-21	18.58-19.1	23.36	3.5-4.25	13.67-14.1	
M16	23.67-24	21.88-22.4	26.75	4.5-5.7	15.97-16.4	
M18	26.16-27	22.76-23.6	29.56	4.5-5.7	16.9-17.6	24.16-25
M20	29.16-30	25.46-26.3	32.95	4.5-5.7	19.46-20.3	27.16-28
M22	33-34	28.96-29.8	37.29	5.5-6.7	20.5-21.8	29.16-30
M24	35-36	30.9-31.9	39.55	5.5-6.7	23.06-23.9	33-34
M27	40-41	33.7-34.7	45.2	5.5-6.7	25.4-26.7	37-38
M30	45-46	36.6-37.6	50.85	7-8.5	27.76-28.6	41-42
M33	49-50	40.5-41.5	55.37	7-8.5	30.9-32.5	45-46
M36	53.8-55	42.7-43.7	60.79	7-8.5	33.7-34.7	49-50

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
GB9457-1988	GB3098.2	Class 6H Tolerance GB196、197 D≤16A; D>16B
GB9458-1988	GB3098.2/GB3098.6	Class 6H Tolerance Gb196、197 D≤16A; D>16B

## Slotted Hexagon Nuts



Specification	UNI5593					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M4	7	5	7.66	1.2	3.2	/
M5	8	5	8.79	1.4	4	/
M6	10	7.5	11.05	2	5	/
M7	11	8	12.12	2	5.5	/
M8	13	9.5	14.38	2.5	6.5	/
M10	17	12	17.77	2.8	8	/
M12	19	15	20.03	3.5	10	17
M14	22	16	24.49	3.5	11	19
M16	24	19	26.75	4.5	13	22
M18	27	21	29.56	4.5	15	25
M20	30	22	32.95	4.5	16	28
M22	32	26	35.03	5.5	18	30
M24	36	27	39.55	5.5	19	34
M27	41	30	45.20	5.5	22	38
M30	46	33	50.85	7	24	42
M33	50	35	55.37	7	26	46
M36	55	38	60.79	7	29	50
M39	60	40	66.44	7	31	55

Specification	UNI5595					
	Opposite Side S	Thickness H	Opposite Corner e Min	Slot Width (n)	Slot To End Face (W)	Diameter (de)
M5	8	5	8.79	1.4	4	/
M6	10	7.5	11.05	2	5	/
M8	13	9.5	14.38	2.5	6.5	/
M10	17	12	17.77	2.8	8	/
M12	19	15	20.03	3.5	10	17
M14	22	16	24.49	3.5	11	19
M16	24	19	26.75	4.5	13	22
M18	27	21	29.56	4.5	15	25
M20	30	22	32.95	4.5	16	28
M22	32	26	35.03	5.5	18	30
M24	36	27	39.55	5.5	19	34
M27	41	30	45.20	5.5	22	38
M30	46	33	50.85	7	24	42
M33	50	35	55.37	7	26	46
M36	55	38	60.79	7	29	50
M39	60	40	66.44	7	31	55

The slot type defaults to a flat-bottomed slot (U-shaped bottom can be customized)

Standard	Mechanical Performance	Specification
UNI5593	ISO898-2/ISO3506-2	Class 6H Tolerance ISO261 ISO965-2 D≤16A; D>16B
UNI5595	ISO898-2/ISO3506-2	Class 6H Tolerance ISO261 ISO965-2 D≤16A; D>16B



### DIN 981 Lock Nuts (Round Nuts) For Rolling Bearings

Item	G Thread Spec.(6H)		d2 Outer Dia (h13)		d1 Slope Diameter(h13)		B Total Thickness(h13)		b Slot Width (J14)		h Slot Depth (H17)		Aa Slot Bottom to Slot Bottom(h11)	S1 Perpendicularity Of Thread To End Face	lock washer DIN5406
	6H Go-No Go	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size			
Km0	M10*0.75	18	-0.27	13.5	-0.27	4		3	±0.125			14			MB0
KM1	M12*1	22		17		4		3				18			MB1
KM2	M15*1	25	-0.33	21	-0.33	5	-0.18	4			2	21			MB2
KM3	M17*1	28		24		5		4				24			MB3
KM4	M20*1	32		26		6		4				28			MB4
KM5	M25*1.5	38	-0.39	32	-0.39	7	-0.22	5	±0.15		+0.5	34	0.04		MB5
KM6	M30*1.5	45		38		7		5				41			MB6
KM7	M35*1.5	52		44		8	-0.22	5				48			MB7
KM8	M40*1.5	58		50		9		6				53			MB8
KM9	M45*1.5	65	-0.46	56	-0.46	10		6			2.5	60			MB9
KM10	M50*1.5	70		61		11		6				65			MB10
KM11	M55*2	75		67	-0.46	11		7			3	69			MB11
KM12	M60*2	80		73		12	-0.27	7				74			MB12
KM13	M65*2	85		79		12		7				79			MB13
KM14	M70*2	92		85		13	-0.27	8	±0.18			85			MB14
KM15	M75*2	98	-0.54	90	-0.54	15	-0.27	8			3.5	91			MB15
KM16	M80*2	105		95		15		8				98			MB16
KM17	M85*2	110		102	-0.54	16		8				103	0.05		MB17
KM18	M90*2	120		108		17		10			4	112			MB18
KM19	M95*2	125		113		17		10				117			MB19
KM20	M100*2	130		120		18		10				122			MB20
KM21	M105*2	140		126		18		10							MB21
KM22	M110*2	145		133		19		12			+1.2				MB22
KM23	M115*2	150	-0.63	137	-0.63	20		12			5				MB23
KM24	M120*2	155		138		20		12							MB24
KM25	M125*2	160		148	-0.63	21		12							MB25
KM26	M130*2	165		149		21		12							MB26
KM27	M135*2	175		160		22		12							MB27
KM28	M140*2	180		160		22		14	±0.215		6				MB28
KM29	M145*2	190		171		24		14							MB29
KM30	M150*2	195		171		24		14							MB30
KM31	M155*3	200		182		25		16							MB31
KM32	M160*3	210		182		25		16			7				MB32
KM33	M165*3	210	-0.72	193	-0.72	26	-0.33	16							MB33
KM34	M170*3	220		193		26		16							MB34
KM36	M180*3	230		203		27		18							MB36
KM38	M190*3	240		214		28		18			8				MB38
KM40	M200*3	250		226		29		18							MB40
KML24	M120*2	145		135		20		12			+1.5				MBL24
KML26	M130*2	155	-0.63	145	-0.63	21		12							MBL26
KML28	M140*2	165		155		22		12							MBL28
KML30	M150*2	180		170		24		14			5				MBL30
KML32	M160*3	190		180		25		14	±0.215						MBL32
KML34	M170*3	200		190		26		16							MBL34
KML36	M180*3	210	-0.72	200	-0.72	27		16							MBL36
KML38	M190*3	220		210		28		18							MBL38
KML40	M200*3	240		220		29		18			8				MBL40

### DIN 70852 Slotted Round Nuts

Thread Spec.	d2 Outer Dia(h12)		d3 Slope Diameter(±0.3)		a Total Thickness(h11)		b Slot Width(C11)		c Slot Depth (+0.1/-0)		Slots Number	S1 Perpendicularity Of Thread To End Face	lock washer DIN70952
	6H Go-No Go	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size			
M10*1	20		16		5	-0.075							10
M12*1.5	22		18				4.5	+0.07/+0.145	1.8				12
M14*1.5	24	-0.21	20		6								14
M16*1.5	28		23										16
M18*1.5	30		25				5.5		2.3				18
M20*1.5	32		27										20
M22*1.5	36		30		7	-0.09					4		22
M24*1.5	38		32										24
M26*1.5	40	-0.25	34				6.5		2.8			0.04	26
M28*1.5	42		36										28
M30*1.5	44		38										30
M32*1.5	48		41										32
M35*1.5	50		43										35
M38*1.5	54		47				7	+0.08/+0.17	3.3				38
M40*1.5	56		49										40
M42*1.5	60		52										42
M45*1.5	62	-0.3	54		8								45
M48*1.5	65		57										48
M50*1.5	68		60				8		3.8				50
M52*1.5	70		62										52
M55*1.5	75		67										55
M60*1.5	80		71										60
M65*1.5	85		76		9								65
M70*1.5	90		81										70
M75*1.5	95	-0.35	86	±0.3									75
M80*1.5	100		91				11		4.3	+0.1/-0			80
M85*1.5	108		99								6	0.05	85
M90*1.5	112		103		10								90
M95*1.5	118		109										95
M100*1.5	125		116										100
M105*1.5	130		121										105
M110*1.5	138		126										110
M115*1.5	145		133										115
M120*1.5	150	-0.4	138										120
M125*1.5	155		143										125
M130*1.5	160		148										130
M135*1.5	165		153		12								135
M140*1.5	170		158										140
M145*1.5	175		163										145
M150*1.5	180		168										150
M155*1.5	185		173										155
M160*1.5	190		178										160
M165*1.5	198		186										165
M170*1.5	202		190										170
M175*1.5	208	-0.46	196								8		175
M180*1.5	215		203										180
M185*1.5	222		206										185
M190*1.5	230		214		14								190
M195*1.5	235		219										195
M200*1.5	240		224										200

## DIN 1804 Slotted Round Nuts

Thread Spec.	d2 Outer Dia(h11)		d3 Step Dia(±0.3)		z Step Height	h Total Thickness(h14)		b Slot Width (JS 14)		t Slot Depth(H17)		Slots Number
	6H Go-No Go	Size	Tolerance	Size		Tolerance	Size	Tolerance	Size	Tolerance	Size	
M6*0.75	16	-0.11	12			5		4		1.5		4
M8*1	20		16				-0.3					
M10*1	25	-0.13	20			6						
M12*1.5	28		23					5	±0.15	2		
M14*1.5	30		25			7						
M16*1.5	32		27					6		2.5	+0.6/-0	
M18*1.5	34		28			8						
M20*1.5	36	-0.16	30				-0.36					
M22*1.5	40		34			9						
M24*1.5	42		36					7		3		
M26*1.5	45		38									
M28*1.5	50		43			10						
M30*1.5	50		43					8		3.5		
M32*1.5	52		45									
M35*1.5	55		48		0.5	11						
M38*1.5	58		50									
M40*1.5	62		54					8				
M42*1.5	62	-0.19	54			12						
M45*1.5	68		60									
M48*1.5	75		67									
M50*1.5	75		67									
M52*1.5	80		70			13			±0.18			
M55*1.5	80		70									
M58*1.5	90		80									
M60*1.5	90		80	±0.3								
M62*1.5	95		85									
M65*1.5	95		85									
M68*1.5	100	-0.22	90			14	-0.43	10		4		
M70*1.5	100		90									
M72*1.5	110		100									
M75*1.5	110		100								+1.2/-0	
M80*2	115		105									
M85*2	120		110									
M90*2	130		120									
M95*2	135		120			16						
M100*2	145		130									
M105*2	155		140									
M110*2	155	-0.25	140									
M115*2	165		150									
M120*2	165		150		1			12		5		
M125*2	180		165									
M130*3	180		165			18			±0.215			
M140*3	195		180									
M150*3	205		190									
M160*3	220	-0.29	205									
M170*3	230		210									
M180*3	245		225			20	-0.52	16		7	+1.5/-0	
M190*3	260		240									
M200*3	270	-0.32	250			22						

W: No heat treatment H: heat treatment hardness HRC 60±2

## DIN5406 Lock Washer

Lock Washer	Fit round nut spec	d2 Teeth Outer Dia(js17)		d1 Inner Dia(C11)		d3 Inner Dia(h13)		M(11)		b1 Teeth Width(a15)		b2 Teeth Width(a15)		s Thickness (±0.1)		N Teeth Number
		Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	Size	Tolerance	
DIN5406																
MB0	M10*0.75	21		10	+0.08/+0.17	13.5	-0.27	8.5	+0.08/+0.17	3	-0.4	3	-0.4			9
MB1	M12*1	25	±1.05	12	+0.095/	17		10.5	+0.095/					1		11
MB2	M15*1	28		15	+0.205	21	-0.33	13.5	+0.205	4		4				
MB3	M17*1	32		17		24		15.5								
MB4	M20*1	36	±1.25	20	+0.11/	26		18.5	+0.11/+							
MB5	M25*1.5	42		25	+0.24	32		23	0.24	5	-0.48	5	-0.48			
MB6	M30*1.5	49		30		38	-0.39	27.5						1.25	13	
MB7	M35*1.5	57		35	+0.12/	44		32.5	+0.12/+							
MB8	M40*1.5	62	±1.5	40	+0.28	50		37.5	0.28	6		6				
MB9	M45*1.5	69		45	+0.13/	56		42.5	+0.13/+							
MB10	M50*1.5	74		50	+0.29	61		47.5	0.29							
MB11	M55*2	81		55	+0.14/	67	-0.46	52.5	+0.14/+	7				1.5	17	
MB12	M60*2	86		60	+0.33	73		57.5	0.33							
MB13	M65*2	92	±1.75	65		79		62.5				8				
MB14	M70*2	98		70	+0.15/	85		66.5	+0.15/+	8	-0.58		-0.58			
MB15	M75*2	104		75	+0.34	90		71.5	0.34							
MB16	M80*2	112		80		95		76.5								
MB17	M85*2	119		85	+0.17/	102	-0.54	81.5				10				
MB18	M90*2	126		90	+0.39	108		86.5	+0.17/+					1.75		
MB19	M95*2	133		95		113		91.5	0.39	10						
MB20	M100*2	142		100		120		96.5								
MB21	M105*2	145		105		126		100.5	+0.18/+							
MB22	M110*2	154	±2	110	+0.18/	133		105.5	0.4			12				
MB23	M115*2	159		115	+0.4	137		110.5		12				±0.1		
MB24	M120*2	164		120		138		115								
MB25	M125*2	170		125		148		120								
MB26	M130*2	175		130	+0.2/	149	-0.63	125	+0.2/+			14		2		
MB27	M135*2	185		135	+0.45	160		130	0.45							
MB28	M140*2	192		140		160		135		14	-0.7		-0.7			
MB29	M145*2	202		145		171		140								
MB30	M150*2	205		150	+0.21/	171		145	+0.21/+			16				
MB31	M155*3	212	±2.3	155	+0.46	182		147.5	0.46							
MB32	M160*3	217		160		182		154		16						
MB33	M165*3	222		165	+0.23/	193		157.5				18		2.5		
MB34	M170*3	232		170	+0.48	193	-0.72	164	+0.23/+							
MB36	M180*3	242		180		203		174	0.48							
MB38	M190*3	252	±2.6	190	+0.24/	214		184	+0.24/+	18		20				
MB40	M200*3	262		200	+0.53	226		194	0.53							
MBL24	M120*2	151		120	+0.18/+0.4	135		115	+0.18/+0.4							
MBL26	M130*2	161	±2	130	+0.2/	145		125	+0.2/+	12		14		2		
MBL28	M140*2	171		140	+0.45	155	-0.63	135	0.45			16				
MBL30	M150*2	188		150	+0.21/	170		145	+0.21/+							
MBL32	M160*3	199		160	+0.46	180		154	0.46	14	-0.7	18	-0.7			
MBL34	M170*3	211	±2.3	170	+0.23/	190		164	+0.23/+							
MBL36	M180*3	221		180	+0.48	200		174	0.48	16				2.5		
MBL38	M190*3	231		190	+0.24/	210	-0.72	184	+0.24/+			20				
MBL40	M200*3	248		200	+0.53	222		194	0.53	18						

## DIN70952 Lock Washer

Lock Washer DIN70952 d1	A Type		B Type			d1 Inner Dia (C11) Size Tolerance	c Single Tooth Height Size	b1 Outer Teeth Width(h11) Size Tolerance	b2 Inner Teeth Width(h11) Size Tolerance	s Thickness (±0.1) Size Tolerance			
	d2 Teeth bottom Dia(s17) Size	e Teeth Radius Size	t Multiple Teeth Height Size	d3 Teeth Outer Dia Size	d4 Multiple Teeth Inner Dia Size					Size	Tolerance		
10	16	11	5	19	21	10	+0.5/+0.4	3	4	4	-0.075	0.75	±0.1
12	18	12	6	21	23	12							
14	20	13		23	25	14							
16	23	14.5		26	29	16							
18	25	16.5		28	31	18							
20	27	17.5		30	33	20							
22	30	19		34	37	22							
24	32	20	36	39	24								
26	34	22	38	41	26								
28	36	23	40	43	28								
30	38	24	42	45	30								
32	41	25.5	45	49	32	+0.5/+0.35	6	7	7	-0.09	1.2	±0.1	
35	43	26.5	47	51	35								
38	47	28.5	51	55	38								
40	49	29.5	53	57	40								
42	52	31	57	61	42								
45	54	32	59	63	45								
48	57	33.5	62	66	48								
50	60	35	65	69	50								
52	62	37	67	71	52								
55	67	39.5	72	76	55								
60	71	41.5	76	81	60	+1/+0.8	6	10	-0.09	10	-0.11	1.5	±0.1
65	76	44	81	86	65								
70	81	46.5	86	91	70								
75	81	50	91	96	75								
80	170	52.5	96	101	80								
85	175	56.5	104	109	85								
90	185	58.5	108	113	90								
95	192	62.5	114	119	95								
100	202	66	121	126	100								
105	205	68.5	126	131	105								
110	212	71	133	139	110	+1/+0.75	8	11	12	-0.11	1.5	±0.1	
115	217	74.5	140	146	115								
120	222	77	145	151	120								
125	232	79.5	150	156	125								
130	242	84	155	161	130								
135	252	86.5	160	166	135								
140	262	89	165	171	140								
145	151	91.5	170	176	145								
150	161	94	175	181	150								
155	171	96.5	180	186	155								
160	188	99	185	191	160								
165	199	103	193	199	165								
170	211	105	197	203	170								
175	221	108	203	209	175								
180	231	111.5	210	216	180								
185	248	115	215	223	185								
190	248	119	223	231	190	+1/+0.7	12	12	12	-0.11	1.5	±0.1	
195	248	121.5	228	236	195								
200	248	124	233	241	200								

## Torsion of Lock Nuts

Specification	All Metal Locking Torque Test - Metric					
	Grade 5-8			Grade 10-12		
	First Screw In	First Screw Out	Fifth Screw Out	First Screw In	First Screw Out	Fifth Screw Out
M3	0.43	0.12	0.08	0.6	0.15	0.1
M4	0.9	0.18	0.12	1.2	0.22	0.15
M5	1.6	0.29	0.2	2.1	0.35	0.24
M6	3	0.45	0.3	4	0.55	0.4
M8	6	0.85	0.6	8	1.15	0.8
M10	10.5	1.5	1	14	2	1.4
M12	15.5	2.3	1.6	21	3.1	2.1
M14	24	3.3	2.3	31	4.4	3
M16	32	4.5	3	42	6	4.2
M18	42	6	4.2	56	8	5.5
M20	54	7.5	5.3	72	10.5	7
M22	68	9.5	6.5	90	13	9
M24	80	11.5	8	106	15	10.5
M27	94	13.5	10	123	17	12
M30	108	16	12	140	19	14
M33	122	18	14	160	21.5	16.5
M36	136	21	16	180	24	17.5
M39	150	23	18	200	26.5	19.5

Unit: In Nm

Specification	All Metal Locking Torque Test		
	Grade 2-5-8		
	First Screw In	First Screw Out	Third Screw Out
10#	1.91	0.28	0.11
12#	3.04	0.39	0.11
1/4	4.51	0.56	0.169
5/16	9.03	0.9	0.28
3/8	12.4	1.35	0.45
7/16	15.2	1.91	0.56
1/2	23	2.48	0.84
9/16	33	3.38	1.12
5/8	47.4	4.4	1.41
3/4	60.9	6.54	2.25
7/8	94.8	9.93	3.38
1	121.9	13.54	4.51
1 1/8	135.4	16.9	5.64
1 1/4	149	21.2	6.77
1 3/8	182.9	24.8	7.9
1 1/2	203.19	29.3	10.15

Unit: In Nm



### Common Specifications For Metric Internal Thread Size Table 6H (UNC)

Internal Thread Spec		Major Diameter (min)	Pitch Diameter		Minor Diameter		Diameter Before Tapping
Nominal Diameter	Teeth Distance		Max	Min	Max	Min	
M1.4	0.3	1.4	1.28	1.205	1.142	1.075	1.1
M1.6	0.35	1.6	1.458	1.373	1.32	1.22	1.25
M2.0	0.4	2	1.83	1.74	1.679	1.567	1.6
M2.2	0.45	2.2	2.003	1.908	1.838	1.713	1.8
M2.5	0.45	2.5	2.303	2.303	2.138	2.013	2.1
M3.0	0.5	3	2.775	2.675	2.599	2.459	2.5
M3.5	0.6	3.5	3.222	3.11	3.01	2.85	2.9
M4.0	0.7	4	3.663	3.545	3.422	3.242	3.3
M5.0	0.8	5	4.605	4.48	4.334	4.134	4.2
M6.0	1	6	5.5	5.35	5.153	4.917	5
M7.0	1	7	6.5	6.35	6.153	5.917	6
M8.0	1.25	8	7.348	7.188	6.912	6.647	6.8
M9.0	1.25	9	8.348	8.188	7.912	7.647	7.8
M10	1.5	10	9.206	9.026	8.676	8.376	8.5
M11	1.5	11	10.206	10.026	9.676	9.376	9.5
M12	1.75	12	11.063	10.863	10.441	10.106	10.2
M14	2	14	12.913	12.701	12.21	11.835	12
M16	2	16	14.913	14.701	14.21	13.835	14
M18	2.5	18	16.913	16.701	15.744	15.294	15.5
M20	2.5	20	18.6	18.376	17.744	17.294	17.5
M22	2.5	22	20.6	20.376	19.744	19.294	19.5
M24	3	24	22.316	22.051	21.252	20.752	21
M27	3	27	25.316	25.051	24.252	23.752	24
M30	3.5	30	28.007	27.727	26.771	26.211	26.5
M33	3.5	33	31.007	30.727	29.771	29.221	29.5
M36	4	36	33.702	33.402	32.27	31.67	32
M39	4	39	36.702	36.402	35.27	34.67	35
M42	4.5	42	39.392	39.077	37.799	37.129	37.5
M45	4.5	45	42.392	42.077	40.799	40.129	40.5
M48	5	48	45.087	44.752	43.279	42.587	43

### Common Specifications For Metric Internal Thread Size Table 6H (UNF)

Internal Thread Spec		Major Diameter (min)	Pitch Diameter		Minor Diameter		Diameter Before Tapping
Nominal Diameter	Teeth Distance		Max	Min	Max	Min	
M3	0.35	3	2.863	2.773	2.721	2.621	2.65
M4	0.5	4	3.775	3.675	3.559	3.459	3.5
M5	0.5	5	4.775	4.675	4.599	4.459	4.5
M6	0.75	6	5.645	5.513	5.378	5.188	5.2
M8	1	8	7.500	7.350	7.153	6.917	7
M10	1	10	9.500	9.350	9.153	8.917	9
M10	1.25	10	9.348	9.188	8.912	8.647	8.8
M12	1.25	12	11.368	11.188	10.912	10.647	10.8
M12	1.5	12	11.216	11.026	10.676	10.376	10.5
M14	1.5	14	13.216	13.026	12.676	12.376	12.5
M16	1.5	16	15.216	15.026	14.676	14.376	14.5
M18	1.5	18	17.216	17.026	16.676	16.376	16.5
M18	2	18	16.913	16.701	16.210	15.835	16
M20	1.5	20	19.216	19.026	18.676	18.376	18.5
M20	2	20	18.913	18.701	18.210	17.835	18
M22	1.5	22	21.216	21.026	20.767	20.376	20.5
M22	2	22	20.913	20.701	20.210	19.835	20
M24	1.5	24	23.226	23.026	22.676	22.376	22.5
M24	2	24	22.925	22.701	22.210	21.835	22
M27	1.5	27	26.426	26.026	25.676	25.376	25.5
M27	2	27	25.925	25.701	25.210	24.835	25
M30	1.5	30	29.226	29.026	28.676	28.376	28.5
M30	2	30	28.925	28.701	28.210	27.835	28
M33	2	33	31.925	31.701	31.21	30.835	31
M33	3	33	31.316	31.051	30.252	29.752	30
M36	1.5	36	35.226	35.026	34.676	34.376	34.5
M36	2	36	34.925	34.701	34.21	33.835	34
M36	3	36	34.316	34.051	33.252	32.752	33
M39	2	39	37.925	37.701	37.21	36.835	37
M39	3	39	37.316	37.051	36.252	35.752	36
M42	2	42	40.925	40.701	40.21	39.835	40
M42	3	42	40.316	40.051	39.252	38.75	39
M45	3	45	43.316	43.051	42.252	41.752	42
M48	3	48	46.331	46.051	45.252	44.752	45

Nuts

Nuts

### Common Specifications For Internal Thread (2B) Size (UNC)

Nominal Dimensions And Teeth Per Inch	Minor Diameter		Pitch Diameter		Major Diameter (min)	Bottom Hole Diameter	
	Min	Max	Min	Max		Min	Max
8-32	0.13	0.139	0.1437	0.1475	0.164	3.4	3.5
(0.164-32)	3.302	3.5306	3.65	3.7465	4.1656		
10-24	0.145	0.156	0.1629	0.1672	0.19	3.75	3.9
(0.190-24)	3.683	3.9624	4.1377	4.2469	4.826		
12-24	0.171	0.181	0.1889	0.1933	0.216	4.4	4.55
(0.216-24)	4.3434	4.5974	4.7981	4.9098	5.4864		
1/4-20	0.196	0.207	0.2175	0.2224	0.25	5.05	5.2
(0.250-20)	4.9784	5.2578	5.5245	5.649	6.35		
5/16-18	0.252	0.265	0.2764	0.2817	0.3125	6.45	6.6
(0.3175-18)	6.4008	6.731	7.0206	7.1552	7.9375		
3/8-16	0.307	0.321	0.3344	0.3401	0.375	7.85	8
(0.375-16)	7.7978	8.1534	8.4938	8.6385	9.525		
7/16-14	0.36	0.376	0.3911	0.3972	0.4375	9.2	9.4
(0.4375-14)	9.144	9.5504	9.9339	10.0889	11.1125		
1/2-13	0.417	0.434	0.45	0.4565	0.5	10.65	10.9
(0.50-13)	10.5918	11.0236	11.43	11.5951	12.7		
9/16-12	0.472	0.49	0.5084	0.5152	0.5625	12.05	12.3
(0.5625-12)	11.9888	12.446	12.9134	13.0861	14.2875		
5/8-11	0.527	0.546	0.566	0.5732	0.625	13.45	13.7
(0.625-11)	13.3858	13.8684	14.3764	14.5593	15.875		
3/4-10	0.642	0.663	0.685	0.6927	0.75	16.4	16.7
(0.750-10)	16.3068	16.8402	17.399	17.5946	19.05		
7/8-9	0.755	0.778	0.8028	0.811	0.875	19.3	19.6
(0.875-9)	19.177	19.7612	20.3911	20.5994	22.225		
1"-8	0.865	0.89	0.9188	0.9276	1	22.1	22.4
(1.000-8)	21.971	22.606	23.3375	23.561	25.4		

1. The diameter of the bottom hole refers to the diameter before tapping. Soft materials such as cast iron and brass should take a small value, while hard materials such as steel and bronze should take a large value.

2. Marking example: 10-24UNC-2B (or 0.190-24UNC-2B), 3/8-16UNC-2B (or 0.375-16UNC-2B)

### Common Specifications For Internal Thread (2B) Size (UNF)

Nominal Dimensions And Teeth Per Inch	Minor Diameter		Pitch Diameter		Major Diameter (min)	Bottom Hole Diameter	
	Min	Max	Min	Max		Min	Max
8-36	0.134	0.142	0.146	0.1496	0.164	3.45	3.67
(0.164-36)	3.4036	3.6068	3.7084	3.7998	4.1656		
10-32	0.156	0.164	0.1697	0.1736	0.19	4	4.27
(0.190-32)	3.9624	4.1656	4.3104	4.4094	4.826		
12-28	0.177	0.186	0.1928	0.197	0.216	4.55	4.85
(0.216-28)	4.4958	4.7244	4.8971	5.0038	5.4864		
1/4-28	0.211	0.22	0.2268	0.2311	0.25	5.4	5.71
(0.250-28)	5.3594	5.588	5.7607	5.8699	6.35		
5/16-24	0.267	0.277	0.2854	0.2902	0.3125	6.85	7.2
(0.3175-24)	6.7818	7.0358	7.2492	7.3711	7.9375		
3/8-24	0.33	0.34	0.3479	0.3528	0.375	8.45	8.78
(0.375-24)	8.382	8.636	8.8367	8.9611	9.525		
7/16-20	0.383	0.395	0.405	0.4104	0.4375	9.85	10.23
(0.4375-20)	9.7282	10.033	10.287	10.4242	11.1125		
1/2-20	0.446	0.457	0.4675	0.4731	0.5	11.4	11.82
(0.50-20)	11.3284	11.6078	11.8745	12.0167	12.7		
9/16-18	0.502	0.515	0.5264	0.5323	0.5625	12.85	13.31
(0.5625-18)	12.7508	13.081	13.3706	13.5204	14.2875		
5/8-18	0.565	0.578	0.5889	0.5949	0.625	14.45	14.89
(0.625-18)	14.351	14.6812	14.9581	15.1105	15.875		
3/4-16	0.682	0.696	0.7094	0.7159	0.75	17.4	17.95
(0.750-16)	17.3228	17.6784	18.0188	18.1839	19.05		
7/8-14	0.798	0.814	0.8286	0.8356	0.875	20.35	20.97
(0.875-14)	20.2692	20.6756	21.0464	21.2242	22.225		
1"-12	0.91	0.928	0.9459	0.9535	1	23.9	23.95
(1.000-12)	23.114	23.5712	24.0259	24.2189	25.4		

1. The diameter of the bottom hole refers to the diameter before tapping. Soft materials such as cast iron and brass should take a small value, while hard materials such as steel and bronze should take a large value.

2. Marking example: 10-32UNF-2B (Or 0.190-32UNF-2B), 3/8-24UNF-2B (Or 0.375-24UNF-2B)

## Thread Pitch

Item	Metric			
	Spec.	Standard Teeth	Fine Teeth	Extremely Fine Teeth
1	M1.6	0.35		
2	M2	0.4		
3	M2.5	0.45		
4	M3	0.5	0.35	
5	M3.5	0.6		
6	M4	0.7	0.5	
7	M5	0.8	0.5	
8	M6	1	0.75	
9	M7	1	0.75	
10	M8	1.25	1	0.75
11	M9	1.25	1	0.75
12	M10	1.5	1.25	1
13	M11	1.5	1.25	1
14	M12	1.75	1.5	1/1.25
15	M14	2	1.5	1
16	M16	2	1.5	1
17	M18	2.5	2	1.5
18	M20	2.5	2	1.5
19	M22	2.5	2	1.5
20	M24	3	2	1.5
21	M27	3	2	1.5
22	M30	3.5	3	2/1.5
23	M33	3.5	2	
24	M36	4	3	2/1.5
25	M39	4	2	
26	M42	4.5	3	
27	M45	4.5	3	
28	M48	5	3	
29	M52	5	3	
30	M56	5.5	4	
31	M60	5.5	4	
32	M64	6	4	

Item	US Standard				
	Spec.	Standard Teeth	Fine Teeth	Extremely Fine Teeth	Whitworth Thread
1	1#	1.854	64	72	
2	2#	2.184	56	64	
3	3#	2.515	48	56	
4	4#	2.845	40	48	
5	5#	3.175	40	44	
6	6#	3.505	32	40	
7	8#	4.166	32	36	
8	3/16	4.76	24	32	
9	10#	4.826	24	32	
10	12#	5.5	24	28	
11	1/4	6.35	20	28	20
12	5/16	7.94	18	24	18
13	3/8	9.53	16	24	16
14	7/16	11.11	14	20	14
15	1/2	12.7	13	20	12
16	9/16	14.29	12	18	12
17	5/8	15.86	11	18	11
18	3/4	19.05	10	16	10
19	7/8	22.23	9	14	9
20	1	25.4	8	12	8
21	1 1/8	28.57	7	12	
22	1 1/4	31.75	7	12	
23	1 3/8	34.92	6	12	
24	1 1/2	38.1	6	12	
25	1 3/4	44.45	5		
26	2	50.8	4.5		

## OUR PRODUCTS

Our main products include:

All-Metal Hexagon Nuts : (ISO7719/ISO7042/ISO10513/ISO7044/DIN980/DIN6925/DIN6927/B18.16.6/IFI100/107);  
 Nylon Lock Nuts : (ISO10511/ISO10512/ISO7040/ISO7041/ISO7043/DIN982/DIN985/DIN6926/B18.16.6);  
 Hexagon Thin Nuts : (ISO4035/ISO8675/DIN439/DIN936/B18.2.2);  
 Flange Nuts : (ISO4161/DIN6923/B18.2.2/IFI145);  
 German Standard Round Nut : (DIN981/DIN1804/DIN70852);  
 Special-Shaped Non-Standard Nuts. Etc.



Nuts

Nuts



# OUR PRODUCTS

## 我们的产品



Dedicated to catching up with and striving to surpass Europe and the United States in locking nuts and locking techniques.

**CHTO**  
FIRST-CLASS SERVICE  
EXCELLENT QUALITY  
COMPREHENSIVE AFTER  
-SALES SUPPORT  
一流的服务，  
过硬的质量，  
完善的售后

