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# INTERNATIONAL STANDARD



# 2359

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Prevailing torque-type steel hexagon locknuts — Dimensions — Inch series

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## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2359 was drawn up by Technical Committee ISO/TC 2, *Bolts, nuts and accessories*.

It was approved in August 1971 by the Member Bodies of the following countries :

Belgium	Ireland	Portugal
Canada	Italy	South Africa, Rep. of
Czechoslovakia	Netherlands	Sweden
Finland	New Zealand	Thailand
Hungary	Norway	Turkey
India	Poland	United Kingdom

The Member Body of the following country expressed disapproval of the document on technical grounds :

France

# Prevailing torque-type steel hexagon locknuts – Dimensions – Inch series

## 1 SCOPE AND FIELD OF APPLICATION

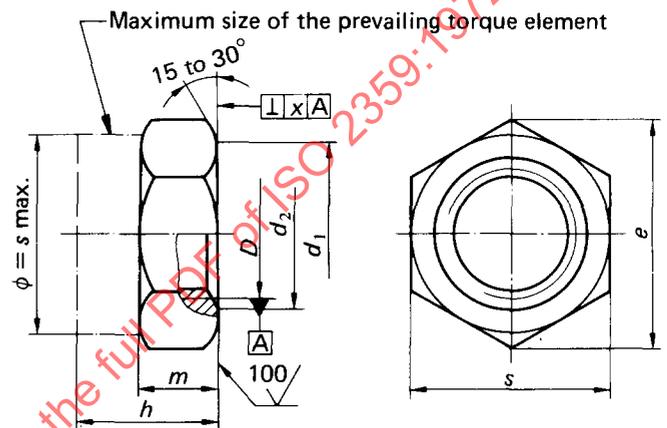
This International Standard specifies the dimensions of prevailing torque-type steel hexagon locknuts, inch series.

It also specifies two Types (A and B) with different total heights.

For the threads, refer to ISO/R 263, *ISO inch screw threads – General plan and selection for screws, bolts and nuts (diameter range 0.06 to 6 in)*. Unless otherwise specified, class 2B tolerances are applicable.

For the mechanical properties and performance requirements refer to ISO 2320, *Prevailing torque-type steel hexagon locknuts – Mechanical and performance properties*.

## 2 DIMENSIONS



Effective length (engaged) of thread  $\geq 0.6 D$

Dimensions in inches

Nominal diameter <i>D</i>	Width across flats <i>s</i>			Width across corners <i>e</i>		Height of locknut <i>h</i>			Hexagon height <i>m</i>	Diameter of bearing surface <i>d<sub>1</sub></i>		Perpendicularity tolerance of the bearing surface, <i>x</i>	Counter-sink diameter <i>d<sub>2</sub></i>
	nominal	max.	min.	max.	min.	max.		min.		max.	min.		
						A	B						
No. 8 0.164 0	<sup>11</sup> / <sub>32</sub>	0.345 0	0.332	0.397	0.378	0.201	0.246	0.117	0.083	0.345	0.328	0.009	0.194
No. 10 0.190 0	<sup>3</sup> / <sub>8</sub>	0.376 0	0.362	0.433	0.413	0.241	0.285	0.117	0.083	0.376	0.357	0.009	0.220
No. 12 0.216 0	<sup>7</sup> / <sub>16</sub>	0.438 0	0.423	0.505	0.482	0.241	0.328	0.148	0.103	0.438	0.416	0.010	0.246
<sup>1</sup> / <sub>4</sub> 0.250 0	<sup>7</sup> / <sub>16</sub>	0.438 5	0.428	0.505	0.488	0.295	0.328	0.212	0.145	0.438	0.416	0.010	0.280
<sup>5</sup> / <sub>16</sub> 0.312 5	<sup>1</sup> / <sub>2</sub>	0.502 0	0.489	0.577	0.557	0.345	0.406	0.258	0.166	0.502	0.475	0.011	0.342
<sup>3</sup> / <sub>8</sub> 0.375 0	<sup>9</sup> / <sub>16</sub>	0.564 5	0.551	0.650	0.628	0.415	0.481	0.320	0.198	0.564	0.534	0.012	0.405
<sup>7</sup> / <sub>16</sub> 0.437 5	<sup>11</sup> / <sub>16</sub>	0.689 5	0.675	0.794	0.768	0.482	0.568	0.365	0.223	0.689	0.653	0.013	0.472
<sup>1</sup> / <sub>2</sub> 0.500 0	<sup>3</sup> / <sub>4</sub>	0.752 0	0.736	0.866	0.840	0.513	0.650	0.427	0.262	0.752	0.712	0.014	0.540
<sup>9</sup> / <sub>16</sub> 0.562 5	<sup>7</sup> / <sub>8</sub>	0.877 0	0.861	1.010	0.982	0.621	0.731	0.473	0.286	0.877	0.830	0.015	0.607
<sup>5</sup> / <sub>8</sub> 0.625 0	<sup>15</sup> / <sub>16</sub>	0.939 5	0.922	1.083	1.051	0.731	0.812	0.535	0.329	0.939	0.890	0.016	0.675
<sup>3</sup> / <sub>4</sub> 0.750 0	1 <sup>1</sup> / <sub>8</sub>	1.127 0	1.088	1.299	1.240	0.827	0.975	0.617	0.382	1.127	1.069	0.018	0.810
<sup>7</sup> / <sub>8</sub> 0.875 0	1 <sup>5</sup> / <sub>16</sub>	1.314 5	1.269	1.516	1.447	0.975	1.135	0.724	0.450	1.314	1.246	0.020	0.945
1 1.000 0	1 <sup>1</sup> / <sub>2</sub>	1.502 0	1.450	1.732	1.653	1.100	1.300	0.831	0.513	1.502	1.425	0.022	1.080
1 <sup>1</sup> / <sub>8</sub> 1.125 0	1 <sup>11</sup> / <sub>16</sub>	1.689 5	1.631	1.949	1.859	1.242	1.460	0.939	0.576	1.689	1.603	0.025	1.215
1 <sup>1</sup> / <sub>4</sub> 1.250 0	1 <sup>7</sup> / <sub>8</sub>	1.877 0	1.812	2.165	2.066	1.382	1.650	1.030	0.628	1.877	1.781	0.028	1.350
1 <sup>3</sup> / <sub>8</sub> 1.375 0	2 <sup>1</sup> / <sub>16</sub>	2.064 5	1.994	2.382	2.273	1.520	1.790	1.138	0.681	2.064	1.959	0.031	1.485
1 <sup>1</sup> / <sub>2</sub> 1.500 0	2 <sup>1</sup> / <sub>4</sub>	2.252 0	2.175	2.598	2.480	1.650	1.950	1.245	0.757	2.252	2.138	0.034	1.620

### NOTES

- The part of the locknut containing the prevailing torque element may have any contour within the maximum permitted size. The value *s* min. is not applicable to this size.
- Locknuts up to <sup>3</sup>/<sub>8</sub> in shall assemble by hand on a basic GO thread plug gauge by a minimum of one half turn, and locknuts of <sup>7</sup>/<sub>16</sub> in and larger by a minimum of one full turn. The plug gauge shall be without a chip groove, and shall have a point with dimensions conforming to those for the point on hexagon screws as specified in ISO . . .
- The thread axis shall be concentric with the axis of the locknut body, within 1.5 % (3 % total indicator reading) of the value *s* max.