

International Standard



7719

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

Prevailing torque type all-metal hexagon nuts, style 1 — Property classes 5, 8 and 10

Écrous hexagonaux à freinage interne, à couple préalable (tout métal), style 1 — Classes de qualité 5, 8 et 10

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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 7719 was developed by Technical Committee ISO/TC 2, *Fasteners*, and was circulated to the member bodies in December 1981.

It has been approved by the member bodies of the following countries:

Australia	Hungary	New Zealand
Canada	India	Norway
China	Ireland	Poland
Czechoslovakia	Italy	Romania
Denmark	Japan	South Africa, Rep. of
Egypt, Arab Rep. of	Korea, Dem. P. Rep. of	Spain
Finland	Korea, Rep. of	Sri Lanka
France	Mexico	Switzerland
Germany, F.R.	Netherlands	USA

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Belgium
United Kingdom
USSR

Prevailing torque type all-metal hexagon nuts, style 1 — Property classes 5, 8 and 10

1 Scope and field of application

This International Standard specifies the characteristics of prevailing torque type all-metal hexagon nuts with thread sizes from M 5 to M 36 inclusive, in property classes 5, 8 and 10, and product grades A ($d < M 16$) and B ($d > M 16$).

If other specifications are required, it is recommended that they should be selected from existing International Standards, for example ISO 261, ISO 898, ISO 965, ISO 2320, ISO 4759/1.

For property class 9 nuts, see ISO 7720.

2 References

ISO 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions.*

ISO 261, *ISO general purpose metric screw threads — General plan.*

ISO 898, *Mechanical properties of fasteners.*

ISO 965, *ISO general purpose metric screw threads — Tolerances.*

ISO 2320, *Prevailing torque type steel hexagon nuts — Mechanical and performance properties.*

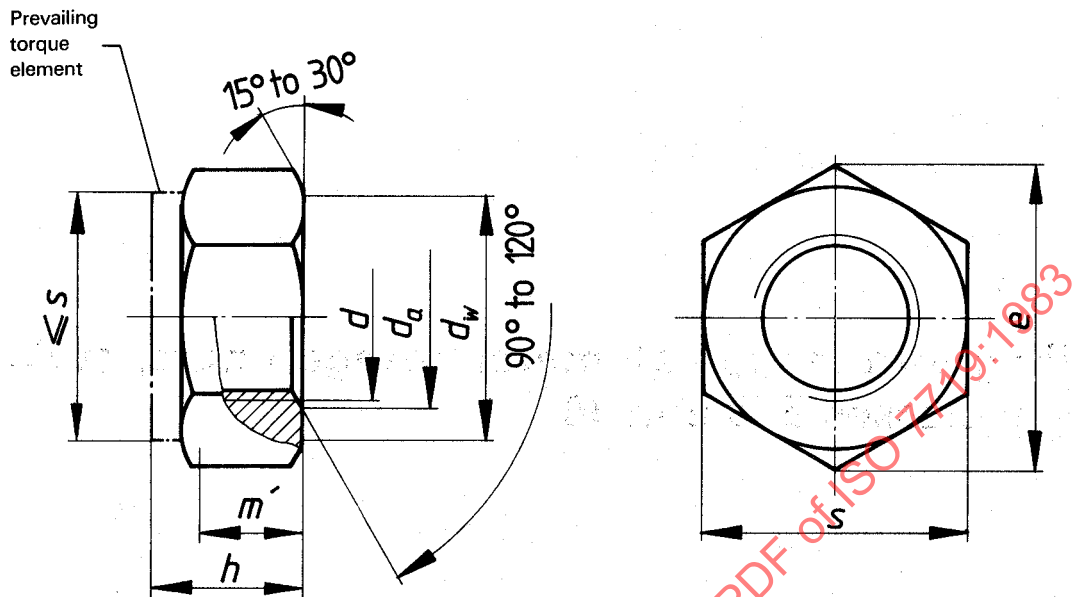
ISO 3269, *Fasteners — Acceptance inspection.*¹⁾

ISO 4042, *Threaded components — Electroplated coatings components.*¹⁾

ISO 4759/1, *Tolerances for fasteners — Part 1: Bolts, screws and nuts with thread diameters $> 1,6$ and < 150 mm and product grades A, B and C.*

1) At present at the stage of draft.

3 Dimensions



Dimensions in millimetres

Thread size <i>d</i>		M 5	M 6	M 8	M 10	M 12	(M 14) ¹⁾	M 16	M 20	M 24	M 30	M 36
<i>p</i> ²⁾		0,8	1	1,25	1,5	1,75	2	2	2,5	3	3,5	4
<i>d_a</i>	min.	5	6	8	10	12	14	16	20	24	30	36
	max.	5,75	6,75	8,75	10,8	13	15,1	17,3	21,6	25,9	32,4	38,9
<i>d_w</i>	min.	6,9	8,9	11,6	14,6	16,6	19,6	22,5	27,7	33,2	42,7	51,1
<i>e</i>	min.	8,79	11,05	14,38	17,77	20,03	23,35	26,75	32,95	39,55	50,85	60,79
	max.	5,3	5,9	7,1	9	11,6	13,2	15,2	19	23	26,9	32,5
<i>h</i>	min.	4,8	5,4	6,44	8,04	10,37	12,1	14,1	16,9	20,2	24,3	29,4
	min.	2,7	3	3,7	4,8	6,7	7,8	9,1	10,9	13	15,7	19
<i>m'</i> ³⁾	min.	2,7	3	3,7	4,8	6,7	7,8	9,1	10,9	13	15,7	19
<i>s</i>	max.	8	10	13	16	18	21	24	30	36	46	55
	min.	7,78	9,78	12,73	15,73	17,73	20,67	23,67	29,16	35	45	53,8

1) The size in brackets should be avoided if possible.
2) *P* = pitch of the thread.
3) Minimum wrenching height.

4 Specifications and reference International Standards

Nut	Types	NF (normal friction) and LF (low friction)
	International Standard	ISO 2320
Material		Steel, in accordance with ISO 898/2 and ISO 2320
Thread	Tolerance	6H
	International Standards	ISO 261, ISO 965
Mechanical properties	Property class	5, 8, 10
	International Standards	ISO 898/2, ISO 2320
Torque and other requirements ¹⁾	International Standard	ISO 2320
Tolerances	Product grade	For $d < M16$: A For $d > M16$: B
	International Standard	ISO 4759/1
Finish		As processed Requirements for electroplated coatings are covered in ISO 4042. If different electroplating requirements are desired or if requirements are needed for other finishes, they should be negotiated between customer and supplier.
Acceptability		For acceptance procedure, see ISO 3269.

1) Lubrication is permitted to meet the requirements in ISO 2320.

5 Designation

Example for the designation of a prevailing torque type hexagon nut, with thread size $d = M12$ and property class 8, normal friction (NF) type:

Prevailing torque type hexagon nut ISO 7719 - M12 - 8 - NF

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