
**Hexagon regular nuts (style 1) with metric
fine pitch thread — Product grades A and B**

*Écrous hexagonaux normaux (style 1) à filetage métrique à pas fin —
Grades A et B*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 8673:2012](https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012)

[https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-
9d15-b0b0512ee964/iso-8673-2012](https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012)



iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 8673:2012

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Dimensions	2
4	Requirements and reference International Standards	4
5	Designation	4
Bibliography		5

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 8673:2012](https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012)

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8673 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 12, *Fasteners with metric internal thread*.

This third edition cancels and replaces the second edition (ISO 8673:1999), of which it constitutes a minor revision.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 8673:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>

Introduction

This International Standard belongs to a complete group of product standards developed by ISO on external hexagon drive fasteners. It comprises the following:

- a) hexagon head bolts (ISO 4014, ISO 4015, ISO 4016 and ISO 8765);
- b) hexagon head screws (ISO 4017, ISO 4018 and ISO 8676);
- c) hexagon nuts (ISO 4032, ISO 4033, ISO 4034, ISO 4035, ISO 4036, ISO 7040, ISO 7041, ISO 7042, ISO 7719, ISO 7720, ISO 8673, ISO 8674, ISO 8675, ISO 10511, ISO 10512 and ISO 10513);
- d) hexagon bolts with flange (ISO 4162, ISO 15071 and ISO 15072);
- e) hexagon nuts with flange (ISO 4161, ISO 7043, ISO 7044, ISO 10663, ISO 12125, ISO 12126 and ISO 21670).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 8673:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 8673:2012

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>

Hexagon regular nuts (style 1) with metric fine pitch thread — Product grades A and B

1 Scope

This International Standard specifies the geometry of hexagon nuts with nominal thread diameter from 8 mm up to and including 64 mm and the mechanical properties of hexagon regular nuts (style 1) with metric fine pitch thread in product grade A for nominal thread diameters 8 mm $\leq D \leq 16$ mm and in product grade B for nominal diameters 16 mm $< D \leq 39$ mm.

If, in special cases, specifications other than those listed in this International Standard are required, they can be selected from existing International Standards, for example ISO 724, ISO 898-2, ISO 965-1, ISO 3506-2 and ISO 4759-1.

NOTE As there is an insufficient nut height due to the fine pitch thread, there is a higher probability of nut thread stripping. Hence, high nuts (style 2) according to ISO 8674 are preferably used.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable to its application. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 724, *ISO general-purpose metric screw threads — Basic dimensions*

ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread*

ISO 965-1, *ISO general-purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 3269, *Fasteners — Acceptance inspection*

ISO 3506-2, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 2: Nuts*

ISO 4042, *Fasteners — Electroplated coatings*

ISO 4759-1, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*

ISO 6157-2, *Fasteners — Surface discontinuities — Part 2: Nuts*

ISO 8839, *Mechanical properties of fasteners — Bolts, screws, studs and nuts made of non-ferrous metals*

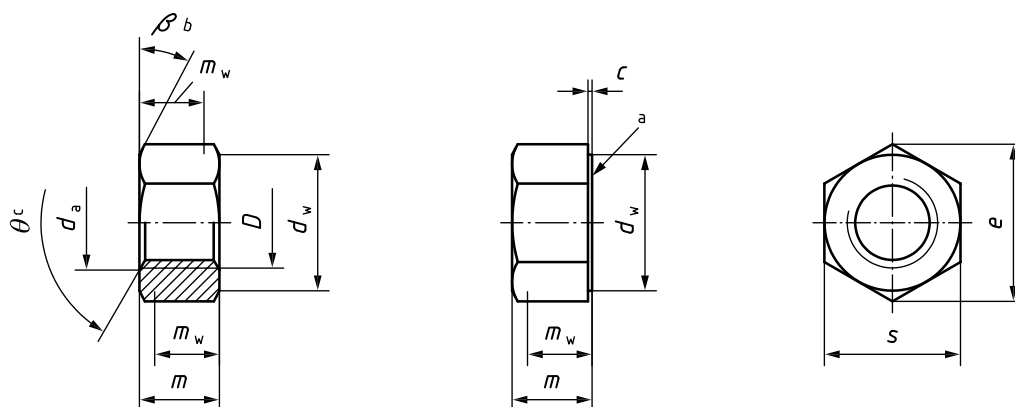
ISO 8992, *Fasteners — General requirements for bolts, screws, studs and nuts*

ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coatings*

3 Dimensions

See Figure 1 and Table 1 and Table 2.

Symbols and descriptions of dimensions are specified in ISO 225.



a Unless otherwise specified at the time of order, the nuts are delivered without washer-face.

b $\beta = 15^\circ$ to 30° .

c $\theta = 90^\circ$ to 120° .

Figure 1
iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 8673:2012

<https://standards.iteh.ai/catalog/standards/sist/7322519e-64dd-4737-9d15-b0b0512ee964/iso-8673-2012>

Table 1 — Preferred threads

Dimensions in millimetres

Thread ($D \times P$)	M8×1	M10×1	M12× 1,5	M16× 1,5	M20× 1,5	M24×2	M30×2	M36×3	M42×3	M48×3	M56×4	M64×4
c	max.	0,60	0,60	0,60	0,80	0,80	0,80	0,80	1,00	1,00	1,00	1,00
	min.	0,15	0,15	0,15	0,20	0,20	0,20	0,20	0,30	0,30	0,30	0,30
d_a	max.	8,75	10,80	13,00	17,30	21,60	25,90	32,40	38,90	45,40	51,80	60,50
	min.	8,00	10,00	12,00	16,00	20,00	24,00	30,00	36,00	42,00	48,00	56,00
d_w	min.	11,63	14,63	16,63	22,49	27,70	33,25	42,75	51,11	59,95	69,45	88,16
e	min.	14,38	17,77	20,03	26,75	32,95	39,55	50,85	60,79	71,30	82,60	104,86
m	max.	6,80	8,40	10,80	14,80	18,00	21,50	25,60	31,00	34,00	38,00	45,00
	min.	6,44	8,04	10,37	14,10	16,90	20,20	24,30	29,40	32,40	36,40	43,40
m_w	min.	5,15	6,43	8,30	11,28	13,52	16,16	19,44	23,52	25,92	29,12	34,72
s	nom. = max.	13,00	16,00	18,00	24,00	30,00	36,00	46,00	55,00	65,00	75,00	95,00
	min.	12,73	15,73	17,73	23,67	29,16	35,00	45,00	53,80	63,10	73,10	92,80

Table 2 — Non-preferred threads

Dimensions in millimetres

Thread ($D \times P$)	M10× 1,25	M12× 1,25	M14× 1,5	M18× 1,5	M20×2	M22× 1,5	M27×2	M33×2	M39×3	M45×3	M52×4	M60×4
c	max.	0,60	0,60	0,60	0,80	0,80	0,80	0,80	1,00	1,00	1,00	1,00
	min.	0,15	0,15	0,15	0,20	0,20	0,20	0,20	0,30	0,30	0,30	0,30
d_a	max.	10,80	13,00	15,10	19,50	21,60	23,70	29,10	35,60	42,10	48,60	56,20
	min.	10,00	12,00	14,00	18,00	20,00	22,00	27,00	33,00	39,00	45,00	52,00
d_w	min.	14,63	16,63	19,64	24,85	27,70	31,35	38,00	46,55	55,86	64,70	83,41
e	min.	17,77	20,03	23,36	29,56	32,95	37,29	45,20	55,37	66,44	76,95	99,21
m	max.	8,40	10,80	12,80	15,80	18,00	19,40	23,80	28,70	33,40	36,00	42,00
	min.	8,04	10,37	12,10	15,10	16,90	18,10	22,50	27,40	31,80	34,40	40,40
m_w	min.	6,43	8,30	9,68	12,08	13,52	14,48	18,00	21,92	25,44	27,52	32,32
s	nom. = max.	16,00	18,00	21,00	27,00	30,00	34,00	41,00	50,00	60,00	70,00	90,00
	min.	15,73	17,73	20,67	26,16	29,16	33,00	40,00	49,00	58,80	68,10	87,80