BRITISH STANDARD

BS EN
28675 : 1992
ISO 8675 : 1988

Hexagon thin nuts with metric fine pitch thread — Product grades A and B

The European Standard EN 28675 : 1991 has the status of a British Standard

Ecrous bas hexagonaux à filetage métrique à pas fin — Grades A et B

Niedrige Sechskantmuttern mit metrischem Feingewinde — Produktklassen A und B

BSI
STANDARDS

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United Kingdom	British Standards Institution

This British Standard, having been prepared under the direction of the General Mechanical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 1 April 1992

The following BSI references relate to the work on this standard:
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Contents

National foreword

This British Standard has been prepared under the direction of the General Mechanical Engineering Standards Policy Committee and is the English language version of EN 28675 : 1991 'Hexagon thin nuts with metric fine pitch thread — Product grades A and B', published by the European Committee for Standardization (CEN). It is identical with ISO 8675 : 1988, published by the International Organization for Standardization (ISO). EN 28675 : 1991 was produced as a result of international discussion in which the UK took an active part.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 28675

October 1991

UDC 621.882.31

Descriptors: Fasteners, nuts: fasteners, double hexagonal nuts, screw threads, specifications, dimensions, designation

English version

Hexagon thin nuts with metric fine pitch thread — Product grades A and B

(ISO 8675 : 1988)

Ecrous bas hexagonaux à filetage métrique à pas fin — Grades A et B
(ISO 8675 : 1988)

Niedrige Sechskantmuttern mit metrischem Feingewinde — Produktklassen A und B
(ISO 8675 : 1988)

This European Standard was approved by CEN on 1991-10-10. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

In 1990, ISO 8675 : 1988 was submitted to the CEN P.Q.-procedure.

Following the positive result of the P.Q., CEN/BT agreed to submit ISO 8675 : 1988 with the following modifications to Formal Vote.

In the French version, replace:

- 'boulon' by 'vis partiellement filetée',
- 'vis' by 'vis entièrement filetée'.

In accordance with the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Hexagon thin nuts with metric fine pitch thread — Product grades A and B

0 Introduction

This International Standard is part of the complete ISO product standard series on hexagon drive fasteners. The series comprises:

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 8673, ISO 8674 and ISO 8675);

d) hexagon flanged bolts (ISO 4162 and ISO 8102);

e) hexagon flanged screws;[1)]

f) hexagon flanged nuts (ISO 4161, ISO 7043 and ISO 7044);

g) structural bolting (ISO 4775 and ISO 7411 to ISO 7417).

1 Scope and field of application

This International Standard gives specifications for hexagon thin nuts, with metric fine pitch thread, with nominal thread diameters d from 8 mm up to and including 64 mm, with product grade A for sizes d up to and including 16 mm and product grade B for sizes d over 16 mm.

If, in special cases, specifications other than those listed in this International Standard are required, they should be selected from existing International Standards, for example ISO 261, ISO 898-6, ISO 965-2, ISO 3506, ISO 4759-1.

Coarse thread hexagon nuts according to ISO 4035 should be the first choice.

2 References

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

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

ISO 898-6, *Mechanical properties of fasteners — Part 6: Nuts with specified proof load values — Fine pitch thread.*

ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2 : Limits of sizes for general purpose bolt and nut threads — Medium quality.*

ISO 3269, *Fasteners — Acceptance inspection.*

ISO 3506, *Corrosion-resistant stainless steel fasteners — Specifications.*

ISO 4035, *Hexagon thin nuts (chamfered) — Product grades A and B.*

ISO 4042, *Threaded components — Electroplated coatings.*[2)]

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

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

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

1) These will form the subjects of future International Standards.

2) At present at the stage of draft.

3 Dimensions

NOTE — Symbols and designations of dimensions are specified in ISO 225.

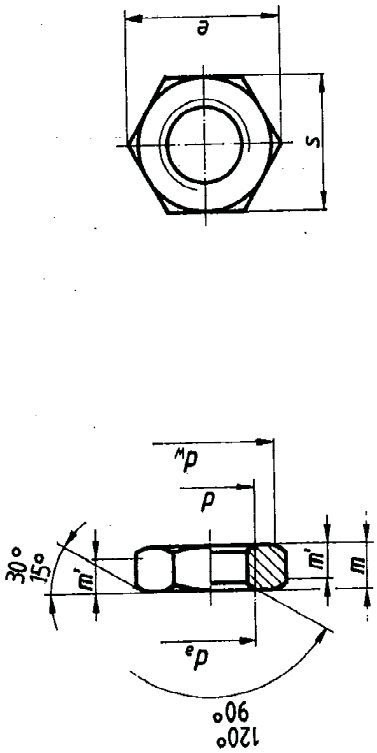

Table 1 — Preferred threads

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
d_a	min.	8	10	12	16	20	24	30	36	42	48	56	64
	max.	8,75	10,8	13	17,3	21,6	25,9	32,4	38,9	45,4	51,8	60,5	69,1
d_w	min.	11,63	14,63	16,63	22,49	27,7	33,25	42,75	51,11	59,95	69,45	78,66	88,16
e	min.	14,38	17,77	20,03	26,75	32,95	39,55	50,85	60,79	71,3	82,6	93,56	104,86
m	max.	4	5	6	8	10	12	15	18	21	24	28	32
	min.	3,7	4,7	5,7	7,42	9,1	10,9	13,9	16,9	19,7	22,7	26,7	30,4
m'	min.	2,96	3,76	4,56	5,94	7,28	8,72	11,12	13,52	15,76	18,16	21,36	24,32
s	nom. = max.	13	16	18	24	30	36	46	55	65	75	85	95
	min.	12,73	15,73	17,73	23,67	29,16	35	45	53,8	63,1	73,1	82,8	92,8

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
d_a	min.	10	12	14	18	20	22	27	33	39	45	52	60
	max.	10,8	13	15,1	19,5	21,6	23,7	29,1	35,6	42,1	48,6	56,2	64,8
d_w	min.	14,63	16,63	19,64	24,85	27,7	31,35	38	46,55	55,86	64,7	74,2	83,41
e	min.	17,77	20,03	23,36	29,56	32,95	37,29	45,2	55,37	66,44	76,95	88,25	99,21
m	max.	5	6	7	9	10	11	13,5	16,5	19,5	22,5	26	30
	min.	4,7	5,7	6,42	8,42	9,1	9,9	12,4	15,4	18,2	21,2	24,7	28,7
m'	min.	3,76	4,56	5,14	6,74	7,28	7,92	9,92	12,32	14,56	16,96	19,76	22,96
s	nom. = max.	16	18	21	27	30	34	41	50	60	70	80	90
	min.	15,73	17,73	20,67	26,16	29,16	33	40	49	58,8	68,1	78,1	87,8

4 Specifications and reference standards

Table 3 — Specifications and reference standards

Material		Steel	Stainless steel	Non-ferrous metal
General requirements	International Standard	ISO 8992		
Thread	Tolerance	6H		
	International Standards	ISO 261, ISO 965-2		
Mechanical properties	Class	$d \leq 39$ mm: 04, 05 $d > 39$ mm: as agreed	$d \leq 20$ mm: A2-70 20 mm $< d \leq 39$ mm: A2-50 $d > 39$ mm: as agreed	.....
	International Standards	$d \leq 39$ mm: ISO 898-6 $d > 39$ mm: as agreed	$d \leq 39$ mm: ISO 3506 $d > 39$ mm: as agreed	ISO 8839
Tolerances	Product grade	$d \leq 16$ mm : A $d > 16$ mm : B		
	International Standard	ISO 4759-1		
Finish		as processed	plain	plain
		Requirements for electroplating 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.		

5 Designation

Example for the designation of a hexagon thin nut with thread M16 × 1,5 and property class 05:

Hexagon nut ISO 8675 - M16 × 1,5 - 05

National annex NA (informative)

Committees responsible

The United Kingdom participation in the preparation of this European Standard was entrusted by the General Mechanical Engineering Standards Policy Committee (GME/-) to Technical Committee GME/9 upon which the following bodies were represented:

BEAMA Ltd.
British Constructional Steelwork Association Ltd.
British Industrial Fasteners Federation
British Railways Board
British Steel Industry
British Steel Industry (Wire Section)
Gauge and Tool Makers' Association
Ministry of Defence
Society of Motor Manufacturers and Traders Ltd.
Washer Manufacturers' Association of Great Britain

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

Defence Manufacturers' Association
General Municipal Boilermaker and Allied Trades Union
Screw Thread Tool Manufacturers' Association
Society of British Aerospace Companies Ltd.

National annex NB (informative)

Cross-references

Publication referred to	Corresponding British Standard
ISO 225 : 1983	BS EN 20225 : 1992 Fasteners — Bolts, screws, studs and nuts — Symbols and designation of dimensions
ISO 261 : 1973	BS 3643 ISO metric screw threads Part 1 : 1981 Principles and basic data
ISO 3506 : 1979	BS 6105 : 1981 Specification for corrosion-resistant stainless steel fasteners
ISO 4035 : 1986	BS EN 24035 : 1992 Hexagon thin nuts (chamfered) — Product grades A and B
ISO 4759-1 : 1978	BS 6322 Tolerances for fasteners Part 1 : 1982 Specification for tolerances of bolts, screws and nuts with thread diameters $\geq$ 1.6 mm and $\leq$ 150 mm and product grades A, B and C
ISO 8839 : 1986	BS EN 28839 : 1992 Mechanical properties of fasteners — Bolts, screws, studs and nuts made of non-ferrous metals

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28675 : 1992
ISO 8675 : 1988

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