भारतीय मानक

Indian Standard

IS 3468 : 2024

पाइप नट — विशिष्टि

(तीसरा पुनरीक्षण)

Pipe Nuts — Specification

(Third Revision)

ICS 21.060.20

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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Price Group 5

General Engineering and Fasteners Standards Sectional Committee, PGD 37

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the General Engineering and Fasteners Standards Sectional Committee had been approved by the Production and General Engineering Division Council.

This standard was first published in 1966 and subsequently revised in 1975 and 1991. This revision has been taken up to keep pace with the latest technological developments and international practices. In this revision following major changes have been made:

a) The various requirements of pipe nuts have been updated based on the latest international practices (*see* Table 2);
b) The designation of pipe nuts has been specified with better explanation;
c) Changes have been made in the table on dimensions of pipe nuts; and
d) References have been updated.

In the preparation of this standard, considerable assistance has been derived from DIN 431 : 2013.

The composition of the Committee, responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

PIPE NUTS — SPECIFICATION

(Third Revision)

1 SCOPE

This standard specifies the requirements for pipe nuts in the size range G 1/8 to G 6 (hexagon and octagon) with threads as specified in IS 2643 and of product grades B and C.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standardare encouraged to investigate the possibility of applying the most recent edition of these standards.

3 TYPES

Pipe nuts shall be of the following 2 types:

a) Type 1 : Unchamfered pipe nuts

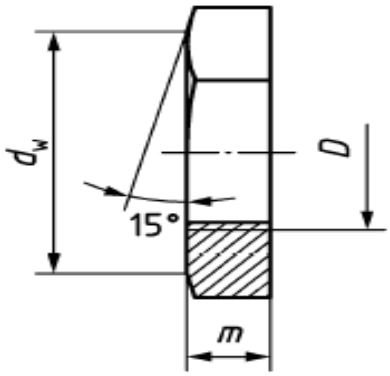
b) Type 2 : Chamfered pipe nuts

4 DIMENSIONS

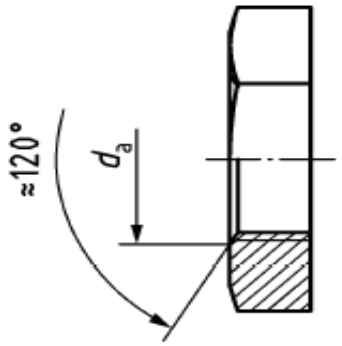
The dimensions and the shapes of the nuts shall be as given in Fig.1 and Table 1.

5 REQUIREMENTS

The various requirements of the pipe nuts shall be as specified in Table 2.

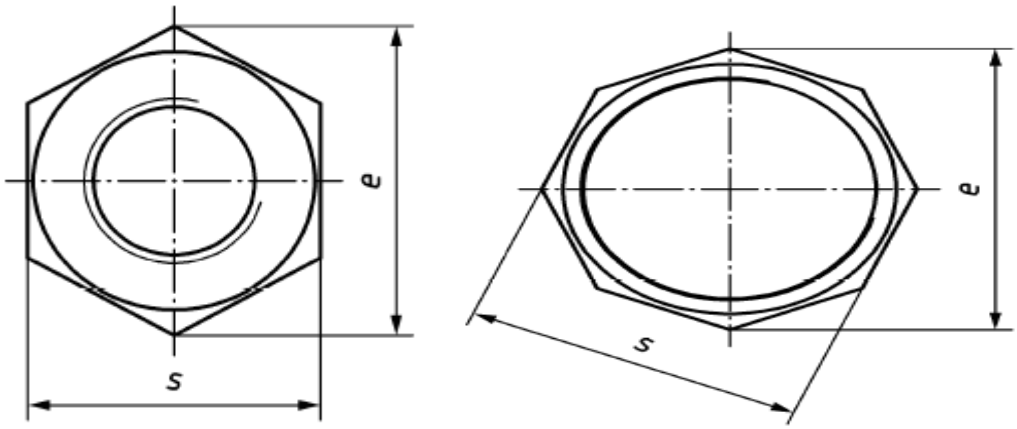


Type 1 (Unchamfered)



Type 2 (Chamfered)

(Other dimensions are same as Type 1)



For sizes G 1/8 to G 4 (Hexagon) For sizes G 5 to G 6 (Octagon)

FIG. 1 NUT DIMENSIONS (TYPE 1 AND TYPE 2)

Table 1 Dimensions for Pipe Nuts
(*Clause* 4)
All dimensions are in millimetres

Sl No.	Thread Size *d*	d_a *Max*	d_w *Min*	*e* *Min*	*m*		*S*	
					Max[1)]	*Min*	*Max*	*Min*
(1)	(2)	(3)	(4)	(5)	(6)		(7)	
i)	G 1/8	10.5	16.5	19.85	6.48	6	18	17.57
ii)	G 1/4	14.2	19.1	22.78	6.48	6	21	20.16
iii)	G 3/8	18	24.8	29.56	7.58	7	27	26.16
iv)	G 1/2	22.6	31.3	37.29	8.58	8	34	33
v)	(G 5/8)	24.7	31.3	37.29	8.58	8	34	33
vi)	G 3/4	28.6	32.3	39.55	9.58	9	36	34
vii)	G 7/8	32.6	38	45.20	9.58	9	41	40
viii)	G 1	35.9	42.8	50.85	10.58	10	46	45
ix)	(G 1 1/8)	40.9	46.5	55.37	10.58	10	50	49
x)	G 1 1/4	45.3	51.1	60.79	11.70	11	55	53.8
xi)	G 1 1/2	51.6	55.9	66.44	12.70	12	60	58.8
xii)	(G 1 3/4)	58	64.7	76.93	13.70	13	70	68.1
xiii)	G 2	64.4	69.4	82.60	13.70	13	75	73.1
xiv)	(G 2 1/4)	71	78.7	93.56	16.70	16	85	82.8
xv)	G 2 1/2	81.2	88.2	104.86	16.70	16	95	92.8
xvi)	G 3	94.9	97.7	116.16	19.84	19	105	102.8
xvii)	G 4	122	125.9	149.72	22.84	22	135	132.5
xviii)	G 5	149.5	154.4	183.06	22.84	22	165	162.5
xix)	G 6	177	176.1	209.5	25.84	25	190	185.4

[1)] The maximum size applies for type 2 nuts. In the case of type 1 nuts, *m* is to be larger by a machining allowance.
NOTE — Sizes shown within brackets are of second preference.

Table 2 Requirements of Pipe Nuts
(*Clause* 5)

Sl No.	Material		Steel	Stainless Steel	Non-ferrous Metal
(1)	(2)	(3)		(4)	
i)	General requirements	As specified in	IS 1367 (Part 1)		
ii)	Thread	As specified in	IS 2643		
iii)	Mechanical properties	Grade	14H	A2	Brass having minimum tensile strength 300 MPa
		As specified in	IS 1367 (Part 7)	IS 1367 (Part 14/Sec 2)	
iv)	Limit deviations and geometrical tolerances	Product grade	C for type 1 and B for type 2		
		As specified in	IS 1367 (Part 2)		
v)	Surface finish	As specified in	As processed (no coating) Electroplated coatings as specified in IS 1367 (Part 11) Non-electrolytically applied zinc flake coatings as specified in IS 10683 Hot dip galvanized coatings as specified in IS 1367 (Part 13) Additional requirements or other surface finishes or coatings shall be agreed between the supplier and the customer	Clean and bright and/or passivated	As processed (no coating) Electroplated coatings as specified in IS 1367 (Part 11)
vi)	Surface condition		Surface discontinuities as specified in IS 1367 (Part 10)		
	Acceptance inspection	As specified in	IS 1367 (Part 17)		

6 DESIGNATION

6.1 The pipe nuts shall be designated by type, thread size, property grade of material and IS No. of this standard.

Example:

A pipe nut of thread size G 6, type 1, and made up of steel of grade 14H shall be designated as:

Pipe Nut — 1 — G 6 — 14H IS 3468

6.2 When the pipe nuts are manufactured from brass, the word 'Brass' shall be added at the end of the designation.

Example:

A pipe nut of thread size G 3/8, type 1 and made from brass shall be designated as

Pipe Nut — 1 — G 3/8 — Brass IS 3468

7 MARKING

7.1 Marking of the pipe nuts shall be in accordance with IS 1367 (Part 18).

7.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as perthe conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.

ANNEX A

(*Clause 2*)

LIST OF REFERRED STANDARDS

IS No./Others Standard	*Title*
IS 1367	Technical supply conditions for threaded steel fasteners:
(Part 1) : 2014/ ISO 8992 : 2005	General requirements for bolts, screws, studs and nuts (*fourth revision*)
(Part 2) : 2002/ ISO 4759-1 : 2000	Tolerances for fasteners — Bolts, screws, studs and nuts — Product grades a, b and c (*third revision*)
(Part 7) : 1980	Mechanical properties and test methods for nuts without specified proof loads (*second revision*)
(Part 10) : 2002/ ISO 6157-2 : 1995	Surface discontinuities — Nuts (*third revision*)
(Part 11) : 2020/ ISO 4042 : 2018	Electroplated coating systems (*fourth revision*)
(Part 14/Sec 2) : 2018/ ISO 3506-2 : 2009	Mechanical properties of corrosion-resistant stainless-steel fasteners, Section 2 Nuts with specified grades and property classes (*fifth revision*)
(Part 17) : 2005/ ISO 3269 : 2000	Inspections sampling and acceptance procedure (*fourth revision*)
IS 1367 (Part 18) : 1996	Industrial fasteners — Threaded steel fasteners — Technical supply conditions: Part 18 Packaging (*third revision*)
IS 2643 : 2005/ ISO 228-1 : 2000	Pipe threads where pressure-tight joints are not made on the threads — Dimensions tolerances and designation (*third revision*)
IS 9519 : 2005/ ISO 272 : 1982	Fasteners — Hexagon products — Width across flats (*first revision*)
IS/ISO 10683 : 2018	Fasteners — Non-electrolytically applied zinc flake coating systems

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

General Engineering and Fasteners Standards Sectional Committee, PGD 37

Organization	*Representatives(s)*
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Amendments Issued Since Publication

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