

इंटरनेट

मानक

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“Step Out From the Old to the New”

IS 15705 (2006): Gauging of hexagon sockets [PGD 31: Bolts, Nuts and Fasteners Accessories]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
षट्कोणीय सॉकेट का मापन

Indian Standard
GAUGING OF HEXAGON SOCKETS

ICS 21.060.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

NATIONAL FOREWORD

This Indian Standard which is identical with ISO 23429 : 2004 'Gauging of hexagon socket' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Bolts, Nuts and Fasteners Accessories Sectional Committee and approval of the Production and General Engineering Division Council.

This standard shall be used in conjunction with IS 2269 : 2006 'Hexagon socket head cap screws (fifth revision)'.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard reference appears to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is listed below along with its degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 4759-1 : 2000 Tolerances for fasteners — Part 1 : Bolts, screws, studs and nuts — Product grades A, B and C	IS 1367 (Part 2) : 2002 Technical supply conditions for threaded steel fasteners: Part 2 Tolerances for fasteners — Bolts, screws, studs and nuts — Product grades A, B and C (<i>third revision</i>)	Identical

As decided by the Committee additional requirements of Packaging and BIS Certification Marking are given in National Annex A. These additional requirements are part of this standard.

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 or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. 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
GAUGING OF HEXAGON SOCKETS

1 Scope

This International Standard specifies gauges for hexagon sockets with tolerances as specified in ISO 4759-1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

3 Dimensions

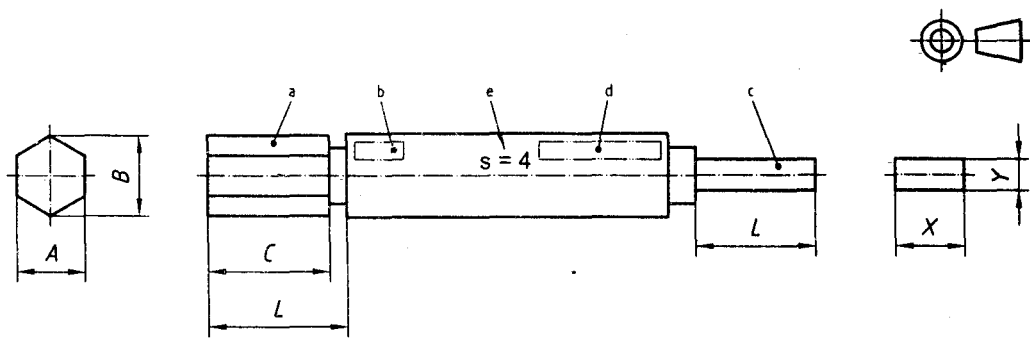
For gauge dimensions see Figure 1 and Table 2.

For design rules for gauge dimensions see Table 1.

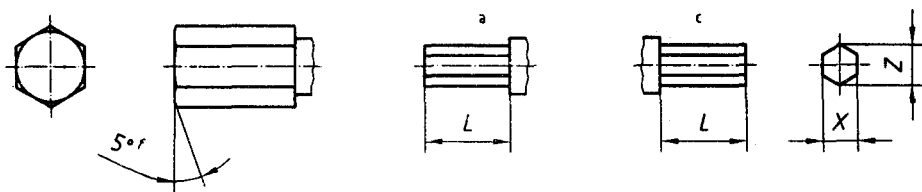
4 Designation

EXAMPLE A gauge for a hexagon socket with a width across flats of 10 mm is designated as follows:

Gauge ISO 23429 - 10



a) Regular construction



b) Optional constructions of GO members and NOT GO members for small sizes

- a GO member.
- b Panel for marking GO.
- c NOT GO member.
- d Panel for marking NOT GO.
- e Socket size (width across flats).
- f 5° chamfer optional.

Figure 1 — Gauge dimensions

Table 1 — Design rules for gauge dimensions

Dimensions in millimetres	
Gauge type	Dimensions
GO gauge for dimension s^a	$A_{\max} = s_{\min} - 0,001$ $A_{\min} = A_{\max} - 0,003 (s \leq 2)$ $A_{\min} = A_{\max} - 0,005 (s > 2)$
GO gauge for dimension e^b	$B_{\max} = e_{\min} - 0,005$ $B_{\min} = B_{\max} - 0,005$
NOT GO gauge for dimension s	$X_{\min} = s_{\max} + 0,001$ $X_{\max} = X_{\min} + 0,002 (s \leq 2)$ $X_{\max} = X_{\min} + 0,005 (s > 2)$
^a Width across flats of socket.	
^b Width across corners of socket.	

Table 2 — Gauge dimensions

Dimensions in millimetres

Nominal socket size, <i>s</i>		0,7	0,9	1,3	1,5	2	2,5	3	4	5	6	8	
GO gauge: Width across flat	<i>A</i>	max.	0,709	0,886	1,274	1,519	2,019	2,519	3,019	4,019	5,019	6,019	8,024
		min.	0,706	0,883	1,271	1,516	2,016	2,514	3,014	4,014	5,014	6,014	8,019
GO gauge: Width across corners	<i>B</i>	max.	0,804	1,006	1,449	1,728	2,298	2,868	3,438	4,578	5,718	6,858	9,144
		min.	0,799	1,001	1,444	1,723	2,293	2,863	3,433	4,573	5,713	6,853	9,139
GO gauge: Length	<i>C</i>	min.	1,5	2,4	4,7	5	5	7	7	7	8	8	
Usable gauge length	<i>L</i>	min.	1,5	2,4	4,7	5	5	7	7	7	12	16	
NOT GO gauge: Width across flats	<i>X</i>	max.	0,727	0,916	1,303	1,583	2,083	2,586	3,086	4,101	5,146	6,146	8,181
		min.	0,725	0,914	1,301	1,581	2,081	2,581	3,081	4,096	5,141	6,141	8,176
NOT GO gauge: Thickness	<i>Y</i>	max.	—	—	—	—	—	—	1,80	2,30	2,80	3,80	
		min.	—	—	—	—	—	—	1,75	2,25	2,75	3,75	
NOT GO gauge: Width across corners	<i>Z</i>	max.	0,782	0,980	1,397	1,68	2,23	2,79	3,35	—	—	—	
		min.	0,770	0,968	1,384	1,66	2,21	2,77	3,33	—	—	—	

Nominal socket size, <i>s</i>			10	12	14	17	19	22	27	32	36	41	46
GO Gauge: Width across flat	<i>A</i>	max.	10,024	12,031	14,031	17,049	19,064	22,064	27,064	32,079	36,079	41,079	46,079
		min.	10,019	12,026	14,026	17,044	19,059	22,059	27,059	32,074	36,074	41,074	46,074
GO Gauge: Width across corners	<i>B</i>	max.	11,424	13,711	15,991	19,432	21,729	25,149	30,849	36,566	41,126	46,826	52,526
		min.	11,419	13,706	15,986	19,427	21,724	25,144	30,844	36,561	41,121	46,821	52,521
GO gauge: Length	<i>C</i>	min.	12	12	12	19	19	22	22	32	32	41	41
Usable gauge length	<i>L</i>	min.	20	24	28	34	38	44	54	64	72	82	82
NOT GO gauge: Width across flats	<i>X</i>	max.	10,181	12,218	14,218	17,236	19,281	22,281	27,281	32,336	36,336	41,336	46,336
		min.	10,176	12,213	14,213	17,231	19,276	22,276	27,276	32,331	36,331	41,331	46,331
NOT GO gauge: Thickness	<i>Y</i>	max.	4,80	5,75	6,75	8,10	9,10	10,50	12,90	15,30	17,20	19,60	22,00
		min.	4,75	5,70	6,70	8,05	9,05	10,45	12,85	15,25	17,15	19,55	21,95
NOT GO gauge: Width across corners	<i>Z</i>	max.	—	—	—	—	—	—	—	—	—	—	—
		min.	—	—	—	—	—	—	—	—	—	—	—

NATIONAL ANNEX A
(National Foreword)

A-1 PACKAGING

The packaging of hexagon socket set screws shall be in accordance with IS 1367 (Part 18) : 1996 'Industrial fasteners — Threaded steel fasteners — Technical supply conditions: Part 18 Packaging (*third revision*)'.

A-2 BIS CERTIFICATION MARKING

Details available with the Bureau of Indian Standards.

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Amendments Issued Since Publication

[illegible]

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