
Gauging of hexagon sockets

Calibrage des six pans creux



Reference number
ISO 23429:2004(E)

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Foreword

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ISO 23429 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

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.

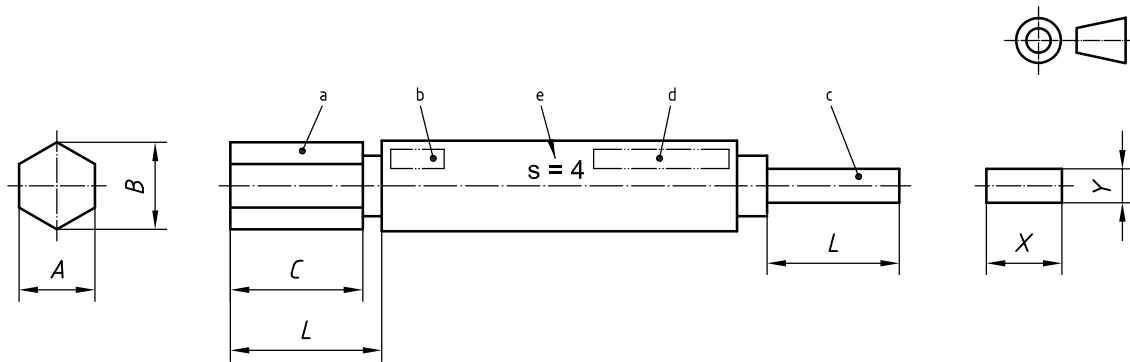
For design rules for gauge dimensions see Table 1.

4 Designation

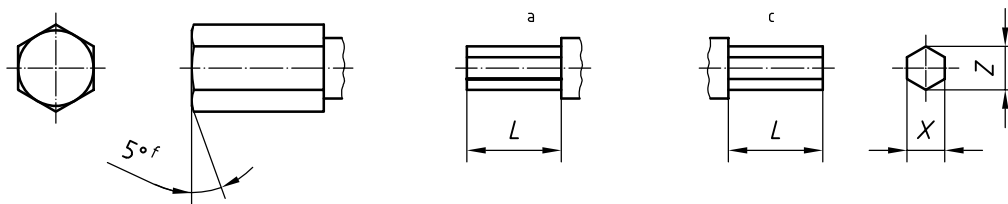
EXAMPLE A gauge for a hexagon socket with a width across flats of 10 mm is designated as follows:

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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.	—	—	—	—	—	—	—	—	—	—	—

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