

Aerospace series — Clearance for wrenches and sockets

ICS 49.030.99

National foreword

This British Standard is the UK implementation of EN 3819:2008.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Série aérospatiale - Dégagements pour clés et douilles

Luft- und Raumfahrt - Platzbedarf für Schraubwerkzeuge

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Foreword

This document (EN 3819:2008) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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1 Scope

This standard defines the minimum clearance area required around nuts and bolt heads when using either double hexagon box or socket wrenches defined in AECMA standard.

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.

EN 3710, *Aerospace series — Sockets, bi-hexagonal — Technical Specification*¹⁾

EN 3711, *Aerospace series — Wrench-double ended, bi-hexagonal — Straight, cranked, offset*¹⁾

3 Clearance for box wrench according to EN 3711

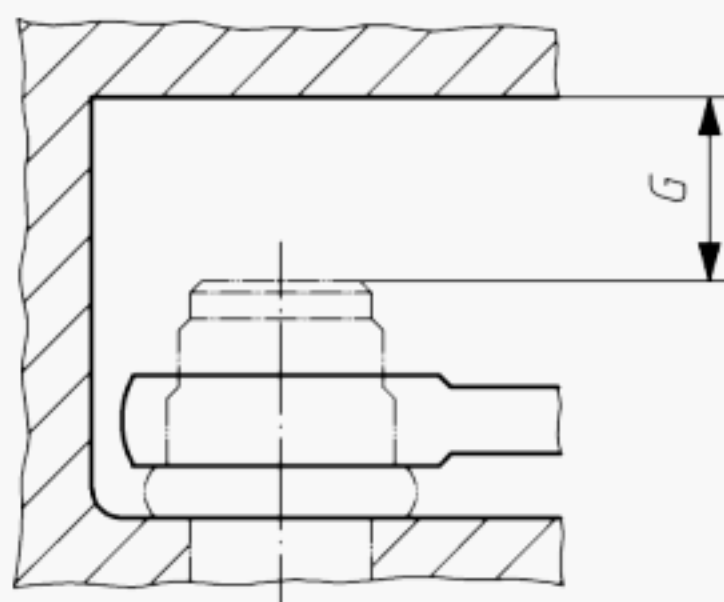


Figure 1

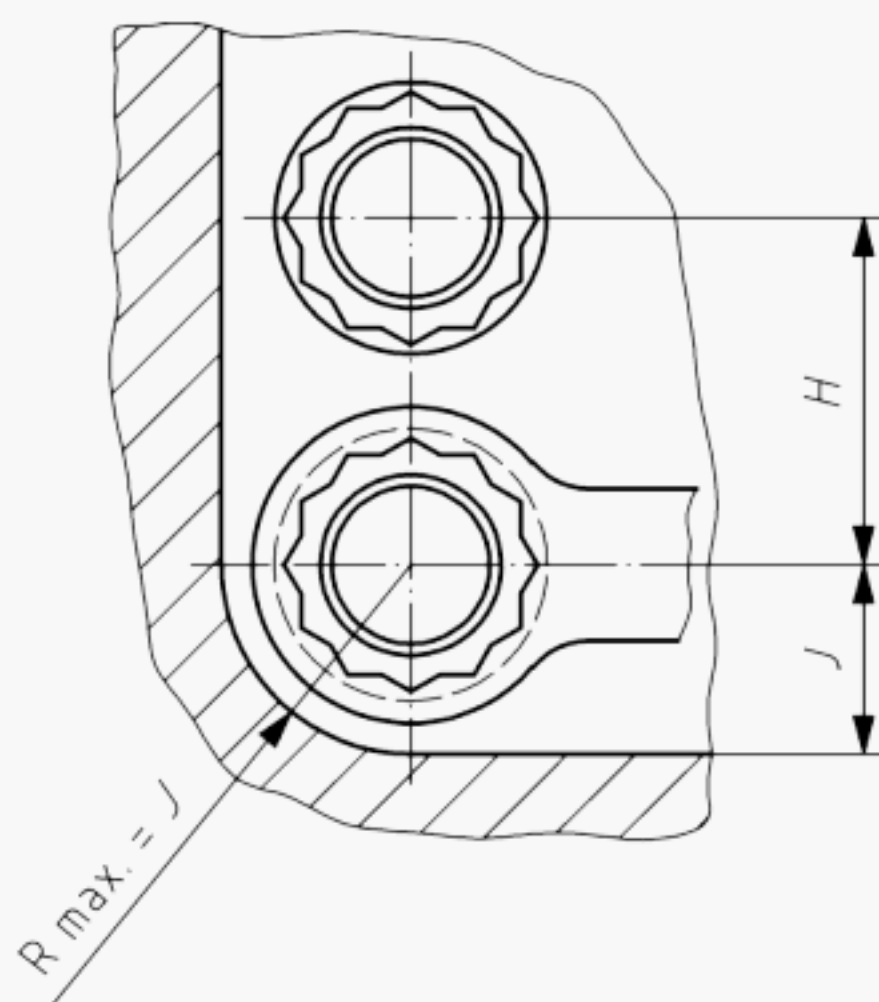


Figure 2

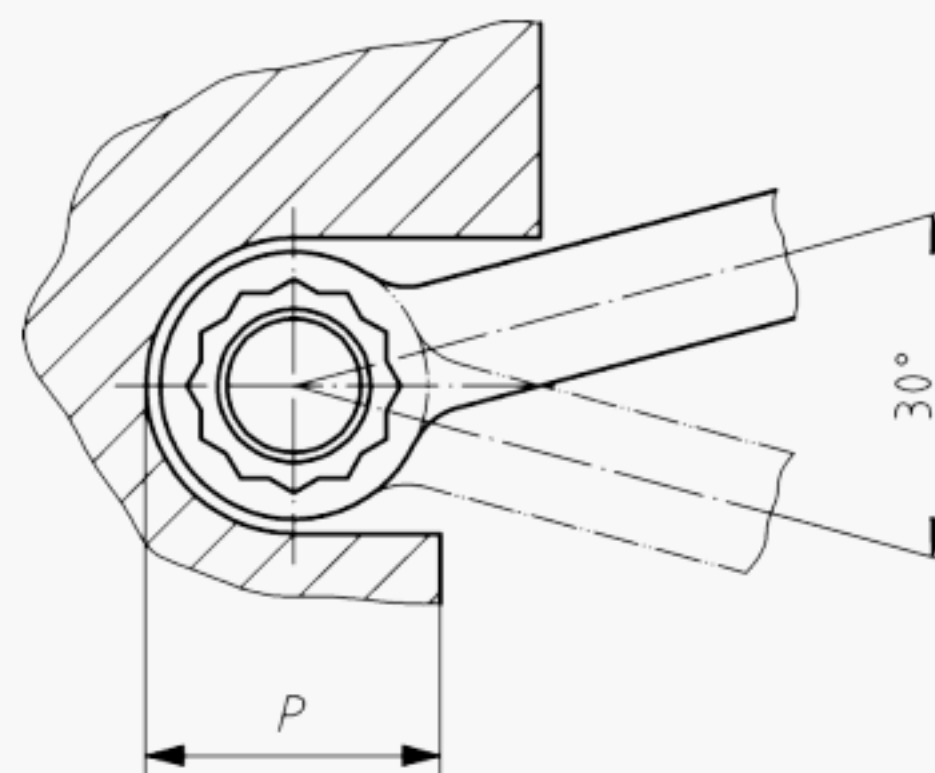


Figure 3

¹⁾ Published as AECMA prestandard at the date of publication of this standard.

Table 1

Across flats	<i>G</i> mm min.	<i>H</i> mm min.	<i>J</i> mm min.	<i>P</i> mm max.
6	7	11	6	9
7	7,5	12	6,5	11
8	8	13,5	7,5	12,5
9	9	15	8	15,5
10	10	16,5	9	14
11	10,5	18	9,5	16,5
12	11	19,5	10,5	20
14	11,5	21,5	11,5	21,5
17	13	26	13,5	30,5
19	14	28,5	15	31
22	15	32,5	17	39

4 Clearance for socket wrench according to EN 3710

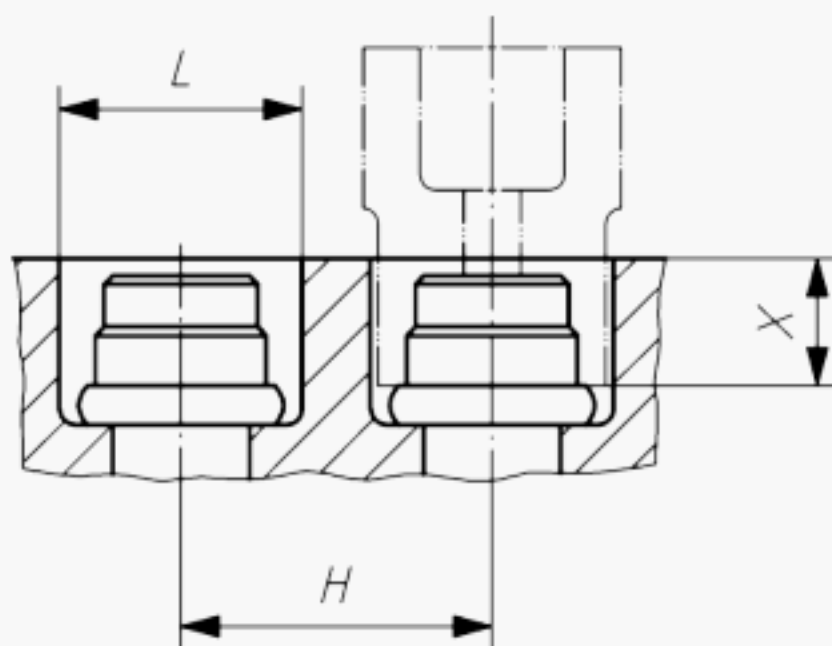


Figure 4

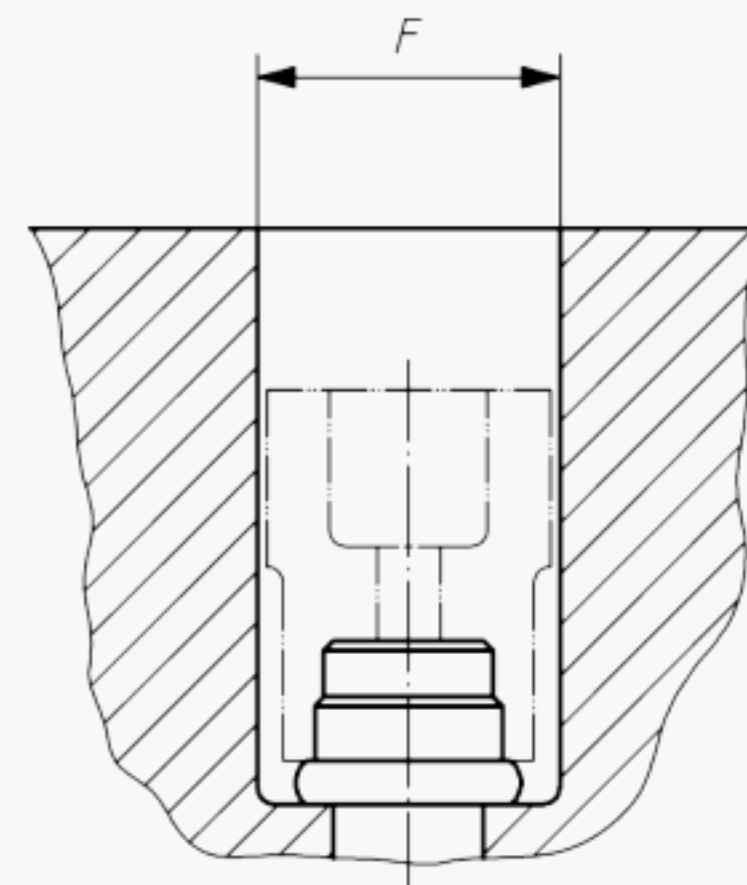


Figure 5

Table 2

Square drive		Across flats	<i>L</i>	<i>H</i>	<i>X</i> _S ^a	<i>X</i> _l ^b	<i>F</i>
mm	inch		mm min.	mm min.			mm min.
6,35	1/4	5	Ø 9	10	8	28	Ø 12,5
		6	Ø 10,5	11,5			Ø 13
		7	Ø 12	13			
		8	Ø 13,5	14,5			
		9	Ø 14,5	15,5			Ø 15
10	3/8	7	Ø 12	13	9	22	Ø 18,5
		8	Ø 13,5	14,5			
		9	Ø 14,5	15,5			
		10	Ø 16	17			
		11	Ø 17	18			
		12	Ø 18,5	19,5			
		13	Ø 19,5	20,5			Ø 23,5
12,7	1/2	10	Ø 16	17	16	46	Ø 25
		11	Ø 17	18			
		12	Ø 18,5	19,5			
		13	Ø 19,5	20,5			
		14	Ø 21,5	22,5			
		15	Ø 23	24			
		16	Ø 24	25			Ø 26
		17	Ø 25,5	26,5			
		18	Ø 26,5	27,5			Ø 28
		19	Ø 28	29			
		20	Ø 29	30			Ø 29
		21	Ø 30,5	31,5			Ø 30,5
		22	Ø 31,5	32,5			Ø 31,5
^a Standard serial.							
^b Length serial.							

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