
**Assembly tools for screws and nuts —
Double-headed open-ended wrenches,
double-headed box wrenches and
combination wrenches — Maximum
widths of heads**

*Outils de manœuvre pour vis et écrous — Clés à fourche doubles, clés
polygonales doubles et clés mixtes — Largeurs maximales
d'encombrement des têtes*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3318 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 10, *Assembly tools for screws and nuts, pliers and nippers*.

This fourth edition cancels and replaces the third edition (ISO 3318:1990), which has been technically revised as follows:

- a) revision of Table 1 in accordance with ISO 272;
 b) addition of Clause 4.
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Assembly tools for screws and nuts — Double-headed open-ended wrenches, double-headed box wrenches and combination wrenches — Maximum widths of heads

1 Scope

This International Standard specifies the maximum outside head dimensions for double-headed open-ended wrenches, double-headed ring wrenches and combination wrenches, identified in ISO 1703 under reference Nos. 1 1 01 02 0, 1 1 01 05 0, 1 1 01 06 0, 1 1 02 03 0, 1 1 02 04 0, 1 1 02 05 0, 1 1 02 06 0.

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 272, *Fasteners — Hexagon products — Widths across flats*

ISO 691, *Assembly tools for screws and nuts — Wrench and socket openings — Tolerances for general use*

ISO 1711-1, *Assembly tools for screws and nuts — Technical specifications — Part 1: Hand-operated wrenches and sockets*

3 Maximum outside head dimensions

See Figures 1 and 2 and Table 1 for the dimensions.

The drawings are schematic and are not intended to specify a given design; only the dimensions given shall be complied with.

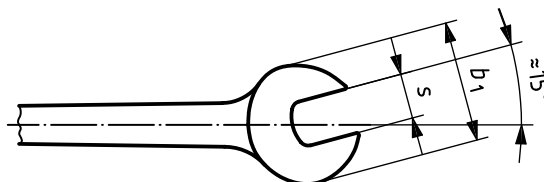


Figure 1 — Open-ended wrench

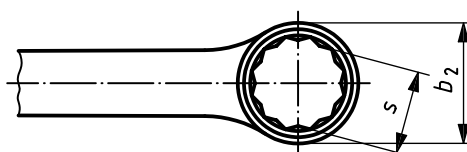


Figure 2 — Box wrench

Table 1 — Maximum outside head dimensions

Dimensions in millimetres

Nominal width across flats s^a	b_1^b max.	b_2^c max.
3,2	14	7
4	15	8
5	18	10
5,5	19	10,5
7	22	12,5
8	24	14
10	28	17
11	30	18,5
13	34	21,5
15	39	24,5
16	41	26
18	45	29
21	51	33,5
24	57	38
27	64	42,5
30	70	47
34	78	53
36	83	56
41	93	63,5
46	104	71
50	112	77
55	123	84,5
60	133	92

^a Width across flats in accordance with ISO 272; tolerances in accordance with ISO 691.

^b $b_{1max.} \approx 2,1s + 7$.

^c $b_{2max.} \approx 1,5s + 2$.

4 Technical specifications

The technical specifications shall be in accordance with ISO 1711-1.

Bibliography

- [1] ISO 1703, *Assembly tools for screws and nuts — Designation and nomenclature*

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