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# International Standard



# 6787

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Assembly tools for screws and nuts — Adjustable wrenches — Width across flats up to 50 mm

*Outils de manœuvre pour vis et écrous — Clés à molette — Ouverture jusqu'à 50 mm*

First edition — 1982-12-15

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UDC 621.883.42

Ref. No. ISO 6787-1982 (E)

**Descriptors :** tools, assembly tools, wrenches, dimensions, tests, torsion tests.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6787 was developed by Technical Committee ISO/TC 29, *Small tools*, and was circulated to the member bodies in January 1981.

It has been approved by the member bodies of the following countries :

Austria	Israel	Spain
Belgium	Italy	Sweden
Brazil	Korea, Dem. P. Rep. of	Switzerland
China	Korea, Rep. of	United Kingdom
France	Poland	USA
Germany, F.R.	Romania	USSR
Hungary	South Africa, Rep. of	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Australia  
India  
Japan

# Assembly tools for screws and nuts – Adjustable wrenches – Width across flats up to 50 mm

## 1 Scope and field of application

This International Standard specifies the overall length of adjustable wrenches for nut assembly of width across flats up to 50 mm and the admissible clearance of the adjustable jaw. It also specifies test conditions to test the suitability of tool performance.

## 2 References

- ISO/R 80, *Rockwell hardness test (B and C scales) for steel*.
- ISO 272, *Fasteners – Hexagon products – Widths across flats*.
- ISO 1703, *Assembly tools for screws and nuts – Nomenclature*.
- ISO 1711, *Hand operated wrenches and sockets – Technical specifications*.

## 3 Dimensions

The dimensions, in millimetres, are given in the table (see also the figure).

## 4 Clearance of adjustable jaw

The clearance  $j$  between the adjustable jaw and the fixed jaw shall be measured after the adjustable jaw has been exposed to

a slight side pressure in accordance with the figure. The clearance shall not exceed the value  $j$  for the size of wrench specified in the table irrespective of which side is to be checked.

The adjustable jaw shall be machined to permit free travel throughout the range of opening without binding or wedging.

## 5 Hardness

The hardness of heat-treated wrenches shall be at least 40 HRC. The hardness values shall be tested over the whole of the head.

## 6 Torque test

The values of the applicable test torque are equal to those of series C of ISO 1711 multiplied by a factor of 0,8.

These values are given in the table.

The test procedure shall be as specified in ISO 1711.

Testing shall be carried out on a hexagon test mandrel treated to a minimum hardness of 55 HRC.

After testing, the wrench shall present no permanent deformation nor any other defect that may influence its correct use.