

INTERNATIONAL STANDARD



1502

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

ISO general purpose metric screw threads — Gauging

Filetages métriques ISO pour usages généraux — Vérification par calibres à limites

First edition — 1978-07-15

UDC 621.882.082

Ref. No. ISO 1502-1978 (E)

Descriptors : screw threads, ISO screw threads, gauges, thread gauges, plug gauges, inspection, dimensions, dimensional tolerances, computation, formulae (mathematics).

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (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 set up 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 1502 was developed by Technical Committee ISO/TC 1, *Screw threads*. It was submitted directly to the ISO Council, in accordance with clause 6.13.1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 1502-1970, which had been approved by the member bodies of the following countries :

Austria	India	Portugal
Belgium	Israel	Romania
Chile	Italy	South Africa, Rep. of
Czechoslovakia	Japan	Spain
Denmark	Korea, Rep. of	Sweden
Egypt, Arab Rep. of	Netherlands	Thailand
France	Norway	Turkey
Germany	Peru	United Kingdom
Hungary	Poland	

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

Australia*	Switzerland*
Canada	U.S.A.
New Zealand*	U.S.S.R.*

* Subsequently these member bodies indicated their approval of International Standard ISO 1502.

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ISO general purpose metric screw threads — Gauging

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives the necessary instructions for the manufacture and use of gauges for checking ISO general purpose metric screw threads complying with ISO 68 and ISO 261.

It is recognized that other methods of checking may be used, for example measurement with indicating instruments. Checking with gauges in accordance with this International Standard is always decisive.

The aim of this International Standard is to provide means of distinguishing between workpiece threads that comply with the limits of size and those that do not.

In order to ensure the interchangeability of workpiece threads and to avoid disputes between manufacturer and purchaser, the following principles should be applied :

- a) the manufacturer shall not deliver any workpiece thread the actual thread size (for example the pitch diameter and the virtual pitch diameter) of which lies outside the specified limits;
- b) the purchaser shall not reject any workpiece thread the actual thread size (for example the pitch diameter and the virtual pitch diameter) of which lies inside the specified limits.

In order to satisfy these two principles, this International Standard establishes the requisite types and sizes of gauges for the checking of screw threads, the conditions under which these gauges are to be used and rules for the inspection of the workpiece threads.

2 REFERENCES

ISO 1, *Standard reference temperature for industrial length measurements.*

ISO 68, *ISO general purpose screw threads — Basic profile.*

ISO 261, *ISO general purpose screw threads — General plan.*

ISO 965/1, *ISO general purpose metric screw threads — Tolerances — Principles and basic data.*

ISO/R 1938, *ISO system of limits and fits — Part II : Inspection of plain workpieces.*

3 TYPES OF GAUGES

This International Standard specifies the essential features of the types of gauges¹⁾ listed in 3.1 and 3.2 which are recommended for the checking of workpiece external and internal screw threads and for the setting and checking of certain of the screw gauges.

3.1 Gauges for workpiece external threads and their check plugs and setting plugs

- Solid GO screw ring gauge
- Adjustable GO screw ring gauge
- Check plugs (GO and NOT GO) for new solid GO screw ring gauge
- Setting plug for adjustable GO screw ring gauge
- Wear check plug for solid or adjustable GO screw ring gauge
- GO screw calliper gauge
- Setting plug for GO screw calliper gauge
- NOT GO screw calliper gauge
- Setting plug for NOT GO screw calliper gauge
- Solid NOT GO screw ring gauge
- Adjustable NOT GO screw ring gauge
- Check plugs (GO and NOT GO) for new solid NOT GO screw ring gauge
- Setting plug for adjustable NOT GO screw ring gauge
- Wear check plug for solid or adjustable NOT GO screw ring gauge
- Plain gauges for major diameter (ring or calliper gauges)

3.2 Gauges for workpiece internal threads

- GO screw plug gauge
- NOT GO screw plug gauge
- Plain gauges for minor diameter (plug gauges)

1) The GO and NOT GO gauges may be combined.