
**Gas cylinders — 17E and 25E taper
threads for connection of valves to gas
cylinders —**

**Part 2:
Inspection gauges**

iTeh STANDARD PREVIEW
*Bouteilles à gaz — Filetages coniques 17E et 25E pour le raccordement
des robinets sur les bouteilles à gaz —
Partie 2: Calibres de contrôle*
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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 11363-2 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, *Cylinder fittings*.

This first edition of ISO 11363-2 cancels and replaces ISO 11116-2:1999 and ISO 11191:1997.

ISO 11363 consists of the following parts, under the general title *Gas cylinders — 17E and 25E taper threads for connection of valves to gas cylinders*:

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- ISO 11363-2:2010
- *Part 1: Specifications* <https://standards.iteh.ai/catalog/standards/sist/e4888ad6-ee4f-4640-83cf-283e209c2218/iso-11363-2-2010>
- *Part 2: Inspection gauges*

Introduction

Gas cylinders intended to contain compressed, liquefied or dissolved gas under pressure are fitted with accessories to allow release and refilling of gas. Hereinafter, the term “valve” will apply to such accessories.

The connection between cylinder and valve is obtained by assembly of two taper-threads (an external one on the valve stem and an internal one in the cylinder neck), both having the same nominal taper, thread pitch and thread profile.

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Gas cylinders — 17E and 25E taper threads for connection of valves to gas cylinders —

Part 2: Inspection gauges

1 Scope

This part of ISO 11363 specifies types, dimensions and principles of use of gauges, to be used in conjunction with the taper threads specified in ISO 11363-1 (i.e. 17E and 25E threads).

It provides examples of calculations for thread gauge dimensions on the large end diameter (Annex A) and draws attention to the limitations of the gauging system specified (Annex B).

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 11363-1, *Gas cylinders — 17E and 25E taper threads for connection of valves to gas cylinders — Part 1: Specifications*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11363-1 and the following apply.

3.1

check gauge

gauge for checking dimensional conformity of inspection gauges

NOTE This gauge is not used for gauging cylinder neck threads or valve stem threads.

3.2

inspection gauge

gauge used for the routine gauging of cylinder neck and valve stem threads

NOTE This gauge is not used for checking other gauges.

3.3

single-part gauge

gauge of sufficient length to contact the length of full form taper threads

NOTE These gauges are either plugs or rings, plain or threaded.

3.4 two-part gauge
gauge consisting of two separate inspection gauges, used in combination, where one is used to contact the large end of the taper cone and the other the small end

NOTE These sets of gauges are either plugs or rings, plain or threaded.

4 Requirements

4.1 Materials

All gauges shall be manufactured from material of suitable strength, stability and hardness.

4.2 Thread profile

The thread profile of threaded inspection and check gauges shall be as shown in Figure 1.

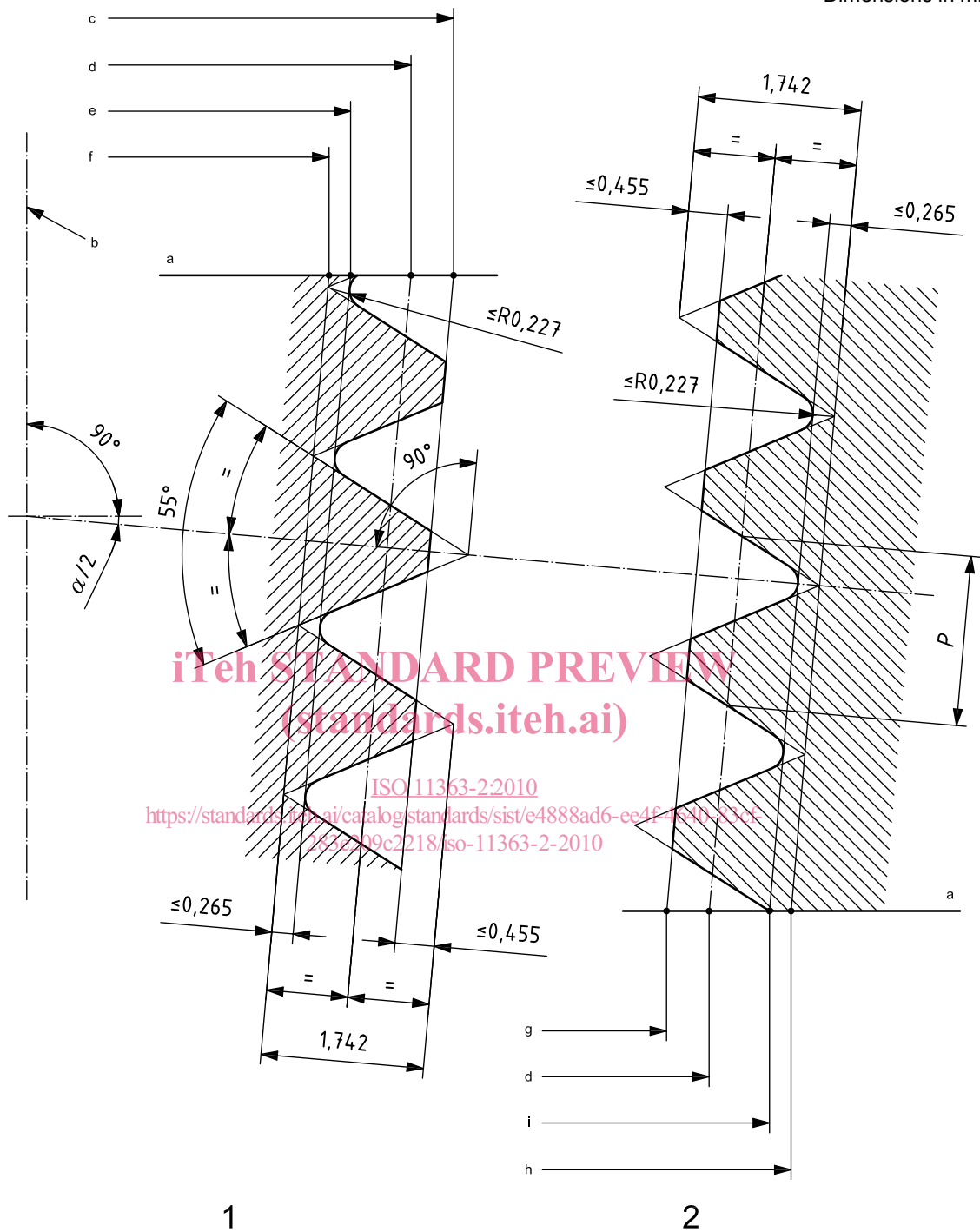
The thread profile is a British Standard Whitworth (BSW)¹⁾ form with a 55° angle (see Figure 1).

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1) A coarse thread devised and standardized in 1841 by British engineer Sir Joseph Whitworth (1803-87). It has an angle of thread of 55° and ranges in size from 1/16 in to 2 1/2 in. It is used in many types of engineering throughout the world, although in the UK its use is now being superseded by the ISO metric system (ISO 68-1).

Dimensions in millimetres



Key

- P pitch
- 1 plug gauge thread profile
- 2 ring gauge thread profile

- | | | |
|-------------------|---------------------------|---------------------------|
| a Gauge plane. | d Pitch diameter. | g Minor diameter. |
| b Thread axis. | e Maximum minor diameter. | h Maximum major diameter. |
| c Major diameter. | f Minimum minor diameter. | i Minimum major diameter. |

Figure 1 — Thread profiles

4.3 Thread handedness

The thread shall be a right-hand thread, such that it moves away from an observer when rotated clockwise.

4.4 Taper

The nominal values for the taper are the following.

- Taper ratio: 3/25.
- Taper angle: 6° 52'.
- Taper slope: 12 %.

4.5 Pitch, P

The nominal pitch is 1,814 mm (derived from $\frac{25,4}{14}$ mm) (see Figure 1).

5 Gauge dimensions

The following dimensional requirements apply to gauges shown in Figure 2 to Figure 15, inclusive.

All dimensions are given in millimetres.

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Tolerances for specified dimensions on all gauges are:

- all lengths, $\pm 0,01$ mm; [ISO 11363-2:2010](https://standards.iteh.ai/catalog/standards/sist/e4888ad6-ee4f-4640-83cf-283e209c2218/iso-11363-2-2010)
- diameters of inspection gauges, $\pm 0,01$ mm;
- diameters of check gauges, $\begin{matrix} -0,01\text{ mm} \\ -0,02\text{ mm} \end{matrix}$.

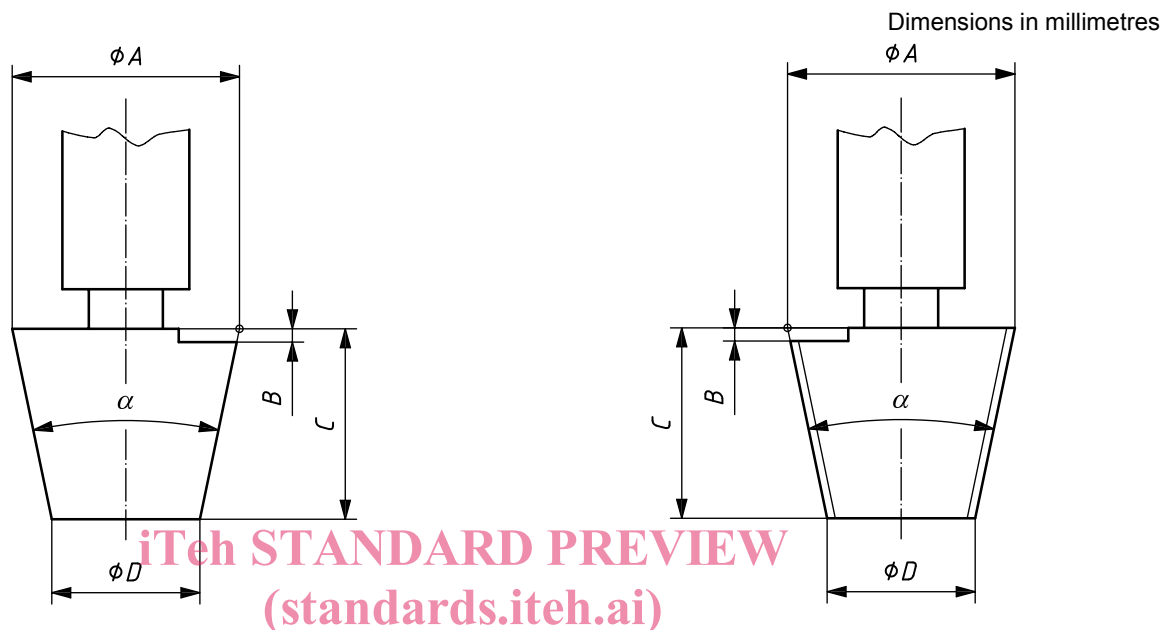
For threaded gauges, only pitch diameters are specified. For minor and major diameters see Figure 1.

Unspecified dimensions shall be chosen by the manufacturer of the gauges.

6 Inspection gauges

6.1 Gauges for cylinder neck thread

6.1.1 Single-part plug gauges



Key

Thread	17E	25E
A	16,876	25,476
B	1	1
C	17	22
D	14,836	22,836

Thread	17E	25E
A	18,038	26,638
B	1	1
C	17	22
D	15,998	23,998

Figure 2 — Plain plug gauge for minor diameters “I-1”

Figure 3 — Threaded plug gauge for pitch diameters “I-2”