BRITISH STANDARD

BS EN ISO
15245-2:2001
Incorporating
Corrigendum No. 1

Gas cylinders — Parallel threads for connection of valves to gas cylinders —

Part 2: Gauge inspection

The European Standard EN ISO 15245-2:2001 has the status of a British Standard

ICS 21.040.30; 23.020.30

National foreword

This British Standard is the official English language version of EN ISO 15245-2:2001. It is identical with ISO 15245-2:2001.

The UK participation in its preparation was entrusted by Technical Committee PVE/3, Gas containers, to Subcommittee PVE/3/1, Valve fittings for gas cylinders, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 12 November 2001

Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, EN ISO foreword page, ISO title page, pages ii to iv, pages 1 to 7, the Annex ZA page, an inside back cover and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15245-2

October 2001

ICS 23.020.30

English version

Gas cylinders - Parallel threads for connection of valves to gas cylinders - Part 2: Gauge inspection (ISO 15245-2:2001)

Bouteilles à gaz - Filetages parallèles pour le raccordement des robinets sur les bouteilles à gaz - Partie 2: Contrôle par calibre (ISO 15245-2:2001)

Ortsbewegliche Gasflaschen - Zylindrische Gewinde zum Anschluss von Ventilen an Gasflaschen - Teil 2: Prüflehren (ISO 15245-2:2001)

This European Standard was approved by CEN on 10 October 2001.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 15245-2:2001 E

CORRECTED 2002-01-02

Foreword

The text of the International Standard from Technical Committee ISO/TC 58 "Gas cylinders" has been taken over as a European Standard by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 15245-2:2001 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

EN ISO 15245–2:2001

INTERNATIONAL STANDARD

ISO 15245-2

First edition
2001-10-15

Gas cylinders — Parallel threads for connection of valves to gas cylinders —

Part 2: Gauge inspection

Bouteilles à gaz — Filetages parallèles pour le raccordement des robinets sur les bouteilles à gaz —

Partie 2: Contrôle par calibre

Reference number
ISO 15245-2:2001(E)

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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 3.

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 part of ISO 15245 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15245-2 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, *Cylinder fittings*.

ISO 15245 consists of the following parts, under the general title *Gas cylinders — Parallel threads for connection of valves to gas cylinders*:

— *Part 1: Specification*

— *Part 2: Gauge inspection*

Gas cylinders — Parallel threads for connection of valves to gas cylinders —

Part 2:
Gauge inspection

1 Scope

This part of ISO 15245 specifies types, dimensions and principles of use of gauges to be used in conjunction with the sealing systems of the parallel threads specified in ISO 15245-1.

The threads themselves are gauged using GO and NOT GO gauges as described in ISO Recommendation 1502.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15245. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15245 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 724, *ISO general-purpose metric screw threads — Basic dimensions*

ISO 15245-1, *Gas cylinders — Parallel threads for connection of valves to gas cylinders — Part 1: Specification*

3 Terms and definitions

General definitions for parallel thread gauging are given in ISO 1502.

For the purposes of this part of ISO 15245, the following terms and definitions apply.

3.1
GO and NOT GO plain plug gauges

3.1.1
GO gauge
gauge designed to advance into or over a component in order to witness that the component is within its correct dimension and tolerance band

NOTE Failure to advance into or over the component is reason for rejection.

3.1.2
NOT GO gauge
gauge designed not to advance into or over a component if the component is outside its correct dimension and tolerance band

NOTE 1 If the gauge does advance into or over the component this is reason for rejection.

NOTE 2 Both GO and NOT GO gauges are used to assess the conformity of the component.

3.2
recess depth plug gauge
GO and NOT GO plain plug gauge used for checking the depth of the sealing recess

See Figure 1.

3.3
recess diameter plug gauge
plain plug gauge used for checking the diameter of the sealing recess

See Figure 2.

3.4
thread relief plug gauge
GO and NOT GO plain plug gauge used for checking the dimensions of the thread relief

See Figure 3.

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 shall be in accordance with the basic profile of metric screw threads (see ISO 68-1) with a 60° angle. The form and thread height measurements are perpendicular to the axis of the thread.

4.3 Thread rotation

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

4.4 Pitch

The pitches of the threads are as follows:

— M18: 1,5 mm (see ISO 724);

— M25: 2 mm (see ISO 724);

— M30: 2 mm (see ISO 724).

5 Gauge dimensions

The dimensional requirements shown in Tables 1 to 3 apply to the gauges shown in Figures 1 to 3 respectively.

All dimensions are given in millimetres.

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

6 Inspection gauges

Three typical plain plug gauges are shown in Figures 1 to 3 and their dimensions and tolerances in Tables 1 to 3.

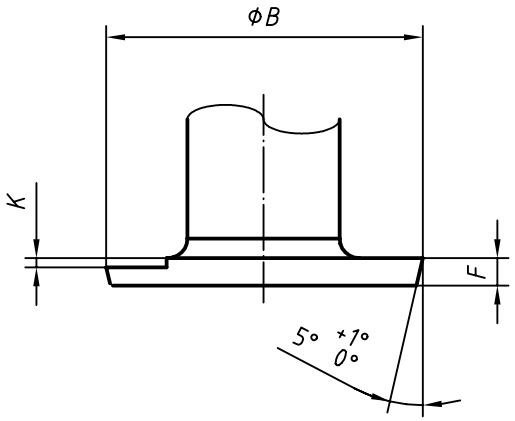


Figure 1 — Recess depth plug gauge (gauge No. 1)

Table 1 — Dimensions of recess depth plug gauge

Thread size	Dimensions		
	B $^{0}_{-0,05}$	F $^{0}_{-0,014}$	K $\pm$ 0,01
M18 × 1,5	23,5	2,3	0,4
M25 × 2	32,1	3,2	0,5
M30 × 2	37,1	3,2	0,5

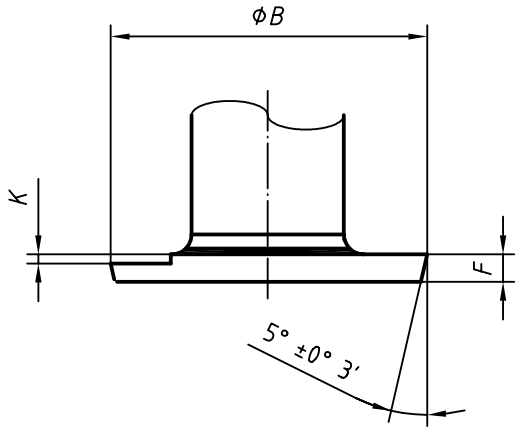
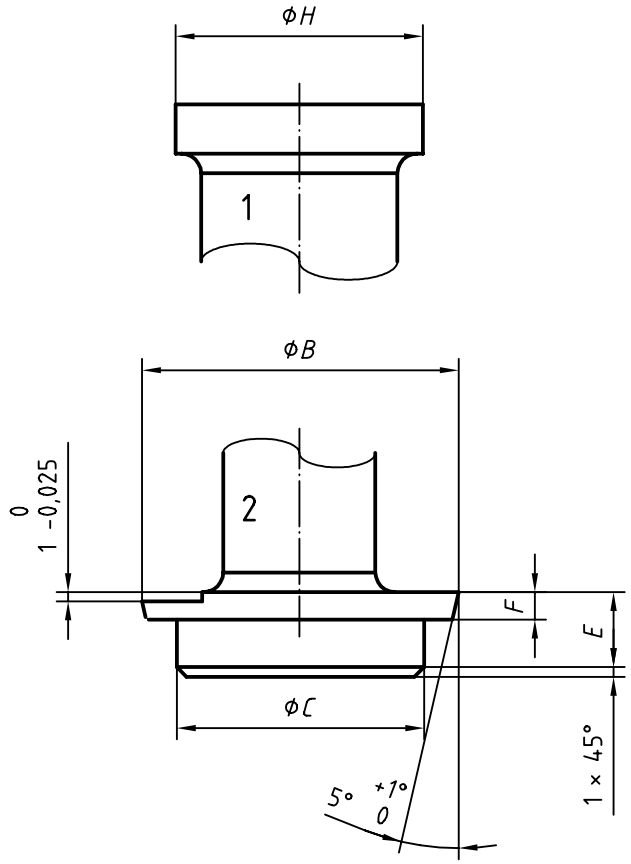


Figure 2 — Recess diameter plug gauge (gauge No. 2)

Table 2 — Dimensions of recess diameter plug gauge

Thread size	Dimensions		
	B $^{+0,013}_{+0,007}$	F ± 0,03	K ± 0,01
M18 × 1,5	23,83	1,8	0,97
M25 × 2	32,53	2,5	1,43
M30 × 2	37,53	2,5	1,43



Key

1 NOT GO
2 GO

Figure 3 — Thread relief plug gauge (gauge No. 3)

Table 3 — Dimensions of thread relief plug gauges

Thread size	Dimensions				
	B $^{0}_{-0,05}$	C $^{+0,021}_{+0,012}$	H $^{0}_{-0,009}$	E $^{0}_{-0,025}$	F $\pm 0,03$
M18 × 1,5	23,5	18,33	18,63	6	1,5
M25 × 2,0	32,1	25,33	25,63	7	2,16
M30 × 2,0	37,1	30,33	30,63	8,5	2,16

7 Use of inspection gauges

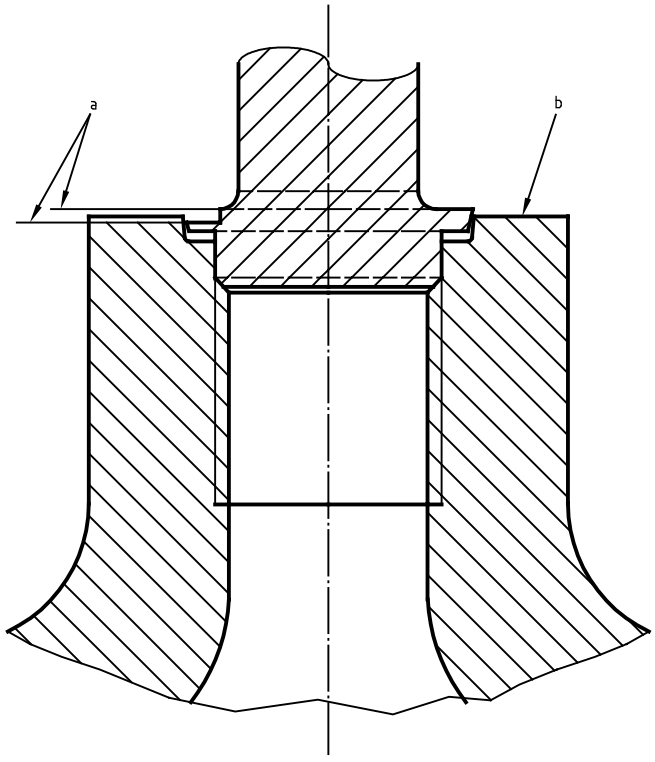
7.1 Plain gauges

Plain gauges shall be installed in position within the areas to be gauged. Undue force shall not be used.

7.2 Accept or reject criteria using plug gauges

The acceptability to gauge is determined by the position of the plane at the mouth of the cylinder neck relative to the test surfaces of the gauge.

The dimension shall be considered acceptable to the gauge if this plane is flush with or falls between the test surfaces of the gauge when the gauge is fitted to the recess (see Figure 4).



a Test surfaces

b Reference plane of the cylinder

Figure 4 — Use of plug gauge

8 Verification of inspection gauges

8.1 General

During use, inspection gauges will wear and can be damaged. The user shall ensure that the gauges are examined regularly in order to verify that they remain within the specified dimensions. Frequency of checks required will depend upon usage and shall be the responsibility of the user.

8.2 Plug gauges

Verification of inspection plug gauges shall be carried out directly, using optical or other suitable equipment.

9 Identification

Inspection gauges shall be identified by the following information:

— “ISO 15245”;

— “18P”, “25P”, “30P” as appropriate;

— “I-” (followed by the appropriate number of the gauge for example “I-1”.

Bibliography

[1] ISO 1502, *ISO general-purpose metric screw threads — Gauges and gauging*

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normativereferences are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
ISO 15245-1	2001	Gas cylinders - Parallel threads for connection of valves to gas cylinders - Part 1: Specification	EN ISO 15245-1	2001

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