SLOVENSKI STANDARD
oSIST prEN ISO 15245-1:2020

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Plinske jeklenke - Cilindrični navoji za priključitev ventilov na plinske jeklenke - 1. del: Specifikacija (ISO/DIS 15245-1:2020)

Gas cylinders - Parallel threads for connection of valves to gas cylinders - Part 1: Specification (ISO/DIS 15245-1:2020)

Ortsbewegliche Gasflaschen - Zylindrische Gewinde für den Anschluss von Ventilen an Gasflaschen - Teil 1: Spezifikation (ISO/DIS 15245-1:2020)

Bouteilles à gaz - Filetages parallèles pour le raccordement des robinets sur les bouteilles à gaz - Partie 1: Spécifications (ISO/DIS 15245-1:2020)

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23.020.35	Plinske jeklenke	Gas cylinders

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

Part 1:
Specification

Bouteilles à gaz — Filetages parallèles pour le raccordement des robinets sur les bouteilles à gaz — Partie 1: Spécifications

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 15245-1:2001), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Integration of the amendment published in 2013;

— Modification of Figure 2 Cylinder neck;

— Addition of 4.5 O-ring.

A list of all parts in the ISO 15245 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Cylinders intended to contain compressed, liquefied or dissolved gas under pressure are fitted with accessories (valves, straight or angle fittings) to allow release of and refilling with gas. Hereinafter, the term “valve” applies to such accessories.

The connection between cylinder and valve is obtained by the assembly of two parallel threads with the same nominal pitch and thread profile – an external one on the valve stem and an internal one in the cylinder neck – and an “O” ring seal.

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

Part 1: Specification

1 Scope

This part of ISO 15245 specifies definitions, dimensions and tolerances of parallel screw threads of nominal diameter 30 mm (designated 30P), 25 mm (designated 25P) and 18 mm (designated 18P), for the connection of valves to medical and industrial gas cylinders.

This part of ISO 15245 does not cover the connection requirements for:

— mechanical strength;

— gas tightness;

— capability of repeated assembly and dismounting operations[1)].

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

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

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

ISO 965-1, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

ISO 5408, *Screw threads — Vocabulary*

ISO 11114-2, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5408 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

1) This aspect is covered in ISO 13341.

3.1
valve stem
parallel sided end of valve body, with a thread formed on the external surface with a plain machined section close to the flange on the valve body for "O" ring seating

See Figure 1, thread *X*.

3.2
cylinder neck thread
A
parallel sided axial hole in the cylinder neck

See Figure 2.

Note 1 to entry: This includes a thread formed on the internal surface including a sealing recess for the "O" ring and thread relief.

3.3
sealing recess diameter
B
diameter of tapered recess machined in the top face of the cylinder neck, concentric with the cylinder neck thread, to provide a surface on which the "O" ring can seal

See Figure 2.

3.4
sealing recess depth
F
depth of tapered recess machined in the top face of the cylinder neck, concentric with the cylinder neck thread, to provide a surface on which the "O" ring can seal

See Figure 2.

3.5
thread relief
C
diameter of plain machined parallel sided section, concentric with the cylinder neck thread, between the cylinder neck thread and the sealing recess

See Figure 2.

3.6
distance to start of thread
E
distance from the top face of the cylinder neck to the start of the thread, including recess depth and thread relief

See Figure 2.

3.7
thread relief
V
minimum length of plain machined parallel sided section on the valve stem, between the valve stem thread and the flange on the valve body, on to which the "O" ring can seal

See Figure 1.