

Gas welding equipment - Acetylene manifold systems for welding, cutting and allied processes - Safety requirements in high-pressure devices (ISO 15615:2022)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 15615:2022 sisaldab Euroopa standardi EN ISO 15615:2022 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15615:2022 consists of the English text of the European standard EN ISO 15615:2022.
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ICS 25.160.30

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EUROPEAN STANDARD

EN ISO 15615

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2022

ICS 25.160.30

Supersedes EN ISO 15615:2013

English Version

Gas welding equipment - Acetylene manifold systems for  
welding, cutting and allied processes - Safety requirements  
in high-pressure devices (ISO 15615:2022)

Matériel de soudage aux gaz - Centrales de détente pour la distribution d'acétylène pour le soudage, le coupage et les techniques connexes - Exigences de sécurité pour les dispositifs haute pression (ISO 15615:2022)

Gasschweißgeräte - Acetylenflaschen-Batterieanlagen für Schweißen, Schneiden und verwandte Prozesse - Sicherheitsanforderungen für Hochdruckeinrichtungen (ISO 15615.2:2022)

This European Standard was approved by CEN on 20 October 2022.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## European foreword

This document (EN ISO 15615:2022) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding and allied processes" the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 15615:2013.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Endorsement notice

The text of ISO 15615:2022 has been approved by CEN as EN ISO 15615:2022 without any modification.

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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](http://www.iso.org/directives)).

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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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 8, *Equipment for gas welding, cutting and allied processes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 15615:2013), which has been technically revised.

The main changes are as follows:

- the manual quick-acting shut-off valve has been removed because it is no longer state of the art;
- the remotely actuated shut-off valve has been removed because it is no longer state of the art;
- in [3.8](#) the definition of change-over unit has been added;
- in [5.2.6](#) a requirement has been added;
- in [5.3.4](#) the additional requirements for three-way valves have been clarified;
- in [5.3.6](#) specific requirements for pressure gauges have been added;
- new [subclause 6.4](#) on external gas leakage test has been added;
- in [6.7.2](#) tolerances have been added;
- in [6.7.3](#) a minimum value for vacuum has been added;
- in [6.7.4.4](#) the test conditions for three-way valves have been clarified;
- in [6.8.2](#) other comparable test methods for leakage have been permitted;
- in [6.8.3](#) a minimum settling time of pressure has been added;

— in [Clause 8](#) the kind of device has been added to the marking.

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](http://www.iso.org/members.html). Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.

# Gas welding equipment — Acetylene manifold systems for welding, cutting and allied processes — Safety requirements in high-pressure devices

## 1 Scope

This document establishes the general specifications, requirements and tests for devices located on the high-pressure side of acetylene manifold systems up to 2,5 MPa (25 bar)<sup>1)</sup> as defined in ISO 14114. It does not apply to high-pressure piping, high-pressure flexible hoses or pressure regulators.

## 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 5171, *Gas welding equipment — Pressure gauges used in welding, cutting and allied processes*

ISO 9090, *Gas tightness of equipment for gas welding and allied processes*

ISO 9539, *Gas welding equipment — Materials for equipment used in gas welding, cutting and allied processes*

ISO 10297, *Gas cylinders — Cylinder valves — Specification and type testing*

ISO 15296:2017, *Gas welding equipment — Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15296 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **non-return valve**

device that prevents passage of gas in the direction opposite to the intended flow

[SOURCE: ISO 15296:2017, 3.4.2]

### 3.2

#### **automatic quick-acting shut-off device**

self-acting device that closes quickly, for example when triggered by an acetylene decomposition in the high-pressure manifold pipework

[SOURCE: ISO 15296:2017, 3.4.10, modified — Definition revised.]

1) 1 bar = 0,1 MPa = 10<sup>5</sup> Pa; 1 MPa = 1 N/mm<sup>2</sup>.