

Third edition 2022-10

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

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



Reference number ISO 15615:2022(E)

## ISO 15615:2022(E)

This is a preview of "ISO 15615:2022". Click here to purchase the full version from the ANSI store.



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Page			
Fore	word		iv
1	Scop	e	1
2	Norn	native references	1
3	Tern	ns and definitions	1
4		gn	
_	•		
5	<b>Requirements</b> 5.1 General		
	5.2	General requirements	
	0.2	5.2.1 Materials	
		5.2.2 External gas leakage	
		5.2.3 Internal gas leakage	
		5.2.4 Internal gas leakage after decomposition test	
		5.2.5 Pressure resistance	3
		5.2.6 Acetylene decomposition	
	5.3	Additional requirements to be met by specific types of devices	
		5.3.1 Non-return valve	3
		5.3.2 Automatic quick-acting shut-off device	3
		5.3.3 Automatic pressure-actuated shut-off valve	3
		5.3.4 Three-way valve	4
		5.3.5 Stop valve	4
		5.3.6 Pressure gauge	4
6	Type testing		
•	6.1	General	
	6.2	Reference values and accuracy of instruments	
	6.3	Test gases	
	6.4	External gas leakage	
	6.5	Internal gas leakage test	
	6.6	Pressure resistance test	
	6.7	Acetylene decomposition test	
		6.7.1 General	
		6.7.2 Test conditions	5
		6.7.3 Test procedure and test precautions	
		6.7.4 Additional test conditions for certain devices	6
	6.8	Non-return valve test	8
		6.8.1 General	
		6.8.2 Reverse flow test for non-return valves	
		6.8.3 Fatigue test for non-return valves	9
	6.9	Endurance test for three-way valves, automatic pressure-actuated shut-off valves	
		and stop valves	9
	6.10	Trip pressure test for automatic pressure-actuated shut-off valves	
		6.10.1 General	
		6.10.2 Equipment	
		6.10.3 Test procedure	10
7	Man	lanufacturer's instructions	
8	Marl	xing	11
Anne	ex A (no	rmative) <b>Summary of tests</b>	13
Bibliography			16

## 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 <a href="www.iso.org/directives">www.iso.org/directives</a>).

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 <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

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 <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

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 <u>5.2.6</u> a requirement has been added;
- in 5.3.4 the additional requirements for three-way valves have been clarified;
- in <u>5.3.6</u> specific requirements for pressure gauges have been added;
- new <u>subclause 6.4</u> on external gas leakage test has been added;
- in <u>6.7.2</u> tolerances have been added;
- in 6.7.3 a minimum value for vacuum has been added;
- in <u>6.7.4.4</u> the test conditions for three-way valves have been clarified;
- in <u>6.8.2</u> other comparable test methods for leakage have been permitted;
- in <u>6.8.3</u> a minimum settling time of pressure has been added;

— in <u>Clause 8</u> 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 <a href="www.iso.org/members.html">www.iso.org/members.html</a>. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: <a href="https://committee.iso.org/sites/tc44/home/interpretation.html">https://committee.iso.org/sites/tc44/home/interpretation.html</a>.