
**Pretočni merilniki za priključitev na končne dele napeljav za medicinske pline
(ISO/DIS 15002:2005)**

Flow-metering devices for connection to terminal units of medical gas pipeline systems (ISO/DIS 15002:2005)

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST EN ISO 15002:2008](https://standards.itih.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008)

<https://standards.itih.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008>

July 2005

ICS 11.040.10

Will supersede EN 13220:1998

English Version

Flow-metering devices for connection to terminal units of medical gas pipeline systems (ISO/DIS 15002:2005)

Dispositifs de mesure de débit pour raccordement aux
prises murales des systèmes de distribution de gaz
médicaux (ISO/DIS 15002:2005)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 215.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

prEN ISO 15002:2005 (E)

Foreword

This document (prEN ISO 15002:2005) has been prepared by Technical Committee ISO/TC 121 "Anaesthetic and respiratory equipment" in collaboration with Technical Committee CEN/TC 215 "Respiratory and anaesthetic equipment", the secretariat of which is held by BSI.

This document is currently submitted to the parallel Enquiry.

This document will supersede EN 13220:1998.

Endorsement notice

The text of ISO/DIS 15002:2005 has been approved by CEN as prEN ISO 15002:2005 without any modifications.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN ISO 15002:2008](https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008)

<https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008>



DRAFT INTERNATIONAL STANDARD ISO/DIS 15002

ISO/TC 121/SC 6

Secretariat: ANSI

Voting begins on:
2005-07-28

Voting terminates on:
2005-12-28

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Flow-metering devices for connection to terminal units of medical gas pipeline systems

Dispositifs de mesure de débit pour raccordement aux prises murales des systèmes de distribution de gaz médicaux

[Revision of first edition (ISO 15002:2000)]

ICS 11.040.10

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/CEN PARALLEL ENQUIRY

The CEN Secretary-General has advised the ISO Secretary-General that this ISO/DIS covers a subject of interest to European standardization. **In accordance with the ISO-lead mode of collaboration as defined in the Vienna Agreement, consultation on this ISO/DIS has the same effect for CEN members as would a CEN enquiry on a draft European Standard.** Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN ISO 15002:2008](https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008)

<https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008>

Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

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

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	
3 Terms and definitions	
4 Arrangement of flow-metering systems and devices	
5 General requirements	
5.1 Safety	
5.2* Alternative construction	
5.3 Materials	
5.4 Design requirements	
5.4.1 Inlet connector	
5.4.2 Outlet connector	
5.4.3* Filtration	
5.4.4 Scales and indicators	
5.4.5 Mechanical strength	
5.4.6 Accuracy of flowrate	
5.4.7 Flow control valve	
5.4.8 Leakage	
5.4.9* Resistance to ignition	
5.4.10 Connection to rail systems	
5.5 Constructional requirements	
5.5.1* Cleaning	
5.5.2* Lubricants	
5.5.3 Loosening torque	
5.5.4 Flow-setting torque	
5.5.5* Inadvertent disassembly	
6 Test methods	
6.1 General	
6.1.1 Ambient conditions	
6.1.2 Test gases	
6.1.3 Reference conditions	
6.2 Test method for mechanical strength	
6.3 Test method for accuracy of flowrate	
6.4 Test method for leakage	
6.4.1 Internal leakage	
6.4.2 External leakage	
6.5 Test method for loosening and operating torques	
6.6 Test method for durability of markings and colour coding	
7 Marking, colour coding and packaging	
7.1 Marking	
7.2 Colour coding	
7.3 Packaging	
8 Information to be supplied by the manufacturer	
Annex A (Informative) Rationale	

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 15002 was prepared by Technical Committee ISO/TC 121, *Anaesthetic and respiratory equipment*, Subcommittee SC 6, *Medical gas systems*.

This second edition cancels and replaces the first edition, which has been technically revised.

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

SIST EN ISO 15002:2008

<https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008>

Introduction

This International Standard pays particular attention to:

- . safety (mechanical strength, safe relief of excess pressure, resistance to ignition);
- . gas specificity;
- . cleanliness of materials;
- . suitability of materials;
- . accuracy;
- . testing;
- . identification;
- . information supplied.

Annex A contains rationale statements for some of the requirements of this part of ISO 10524. The clauses and subclauses marked with an asterix (*) after their number have corresponding rationale contained in annex A, included to provide additional insight into the reasoning that led to the requirements and recommendations that have been incorporated in this standard. It is considered that knowledge of the reasons for the requirements will not only facilitate the proper application of this International Standard, but will expedite any subsequent revisions.

[SIST EN ISO 15002:2008](https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008)

<https://standards.iteh.ai/catalog/standards/sist/9b417fe5-e0cc-4ba9-a7b5-0b5561eeb77c/sist-en-iso-15002-2008>

Flow-metering devices for connection to terminal units of medical gas pipeline systems

1 Scope

1.1 This International Standard is applicable to:

. flow-metering devices which are connected, either directly or by means of flexible connecting assemblies, and disconnected by the operator at terminal units of a medical gas pipeline system for measurement and delivery of medical gases;

. flow-metering devices which are connected and disconnected by the operator at gas-specific connection points of devices such as pressure regulators.

1.2 It applies only to flow-metering devices for the following medical gases:

- oxygen,
- oxygen-enriched air
- nitrous oxide,
- medical air,
- synthetic air
- carbon dioxide,
- helium,
- xenon,
- specified mixtures of the gases listed above,
- oxygen/nitrous oxide mixture 50/50 (% volume fraction).

1.3 This International Standard is not applicable to electrical or electronic flow-metering devices.