

STN	Gumové hadice a hadice s koncovkami Drôtom alebo textilom vystužené jednotlivé tlakové typy na hydraulické aplikácie Špecifikácia (ISO 18752: 2022)	STN EN ISO 18752 63 5425
------------	--	--

Rubber hoses and hose assemblies - Wire- or textile-reinforced single-pressure types for hydraulic applications - Specification (ISO 18752:2022)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/22

Obsahuje: EN ISO 18752:2022, ISO 18752:2022

Oznámením tejto normy sa ruší
STN EN ISO 18752 (63 5425) z januára 2017

135156

EUROPEAN STANDARD

EN ISO 18752

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2022

ICS 23.040.70

Supersedes EN ISO 18752:2016

English Version

Rubber hoses and hose assemblies - Wire- or textile-reinforced single-pressure types for hydraulic applications - Specification (ISO 18752:2022)

Tuyaux et flexibles en caoutchouc - Types hydrauliques à pression unique, avec armature de fils métalliques ou textiles tressés - Spécifications (ISO 18752:2022)

Gummischläuche und -schlauchleitungen - Draht- oder textilverstärkte Einzeldrucktypen für hydraulische Anwendungen - Spezifikation (ISO 18752:2022)

This European Standard was approved by CEN on 27 March 2022.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.



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

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

EN ISO 18752:2022 (E)

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 18752:2022) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 "Rubber and plastics hoses and hose assemblies" 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 October 2022, and conflicting national standards shall be withdrawn at the latest by October 2022.

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 18752:2016.

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, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 18752:2022 has been approved by CEN as EN ISO 18752:2022 without any modification.

INTERNATIONAL STANDARD

ISO 18752

Fourth edition
2022-03

Rubber hoses and hose assemblies — Wire- or textile-reinforced single- pressure types for hydraulic applications — Specification

*Tuyaux et flexibles en caoutchouc — Types hydrauliques à pression
unique, avec armature de fils métalliques ou textiles tressés —
Spécifications*



Reference number
ISO 18752:2022(E)

© ISO 2022

ISO 18752:2022(E)**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

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification	2
4.1 Classes.....	2
4.2 Grades and types.....	2
5 Materials and construction	3
5.1 Hoses.....	3
5.2 Hose assemblies.....	3
6 Dimensions and tolerances	4
6.1 Diameters.....	4
6.2 Cover thickness.....	6
6.3 Concentricity.....	6
6.4 Length.....	6
7 Physical properties	7
7.1 Fluid resistance of rubber compounds.....	7
7.1.1 Test pieces.....	7
7.1.2 Oil resistance.....	7
7.1.3 Water-based fluid resistance.....	7
7.1.4 Water resistance.....	7
7.2 Performance requirements.....	7
7.2.1 Hydrostatic requirements.....	7
7.2.2 Change in length.....	8
7.2.3 Minimum bend radius.....	8
7.2.4 Resistance to impulse.....	10
7.2.5 Leakage of hose assemblies.....	10
7.2.6 Cold flexibility.....	10
7.2.7 Adhesion between components.....	10
7.2.8 Vacuum resistance.....	10
7.2.9 Ozone resistance.....	11
7.2.10 Abrasion resistance.....	11
8 Frequency of testing	11
9 Marking	11
9.1 Hoses.....	11
9.2 Hose assemblies.....	11
10 Recommendations for packaging and storage	11
11 Information by hose manufacturer	12
12 Test report	12
Annex A (normative) Type tests and routine tests	13
Annex B (informative) Production tests	14
Annex C (informative) Information to be provided by hose manufacturer	15
Bibliography	16

ISO 18752:2022(E)

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 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 218, *Rubber and plastics hoses and hose assemblies*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 18752:2014), which has been technically revised.

The main changes are as follows:

- the scope has been extended to water-based fluid, in order to align the document with ISO 1436, ISO 3862 and ISO 4079;
- in [7.1.2](#):
 - “For all grades” was replaced with “For types AS, AC, BS and BC”;
 - a new temperature condition of 120 °C was added;
- a new subclause [7.1.3](#) was added;
- in [Annex B, Table B.1](#), change in length test per batch, was replaced “X” with “N/A”.

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.

Rubber hoses and hose assemblies — Wire- or textile-reinforced single-pressure types for hydraulic applications — Specification

1 Scope

This document specifies requirements for ten classes, four grades and seven types of wire- or textile-reinforced hydraulic hoses and hose assemblies of nominal sizes ranging from 5 to 102. Each class has a single maximum working pressure for all sizes.

They are suitable for use with:

- oil-based hydraulic fluids HH, HL, HM, HR and HV as defined in ISO 6743-4 at temperatures ranging from -40 °C to $+100\text{ °C}$ for types AS, AC, BS and BC hoses and from -40 °C to $+120\text{ °C}$ for types CS, CC and DC hoses.
- water-based fluids HFC, HFAE, HFAS and HFB as defined in ISO 6743-4 at temperatures ranging from -40 °C to $+70\text{ °C}$.
- water at temperatures ranging from 0 °C to $+70\text{ °C}$.

This document does not include requirements for the connection ends. It is limited to the performance of hoses and hose assemblies. The hose assembly maximum working pressure is governed by the lowest maximum working pressure of the components.

NOTE It is the responsibility of the user, in consultation with the hose manufacturer, to establish the compatibility of the hose with the fluid to be used.

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 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

ISO 6605, *Hydraulic fluid power — Test methods for hoses and hose assemblies*

ISO 6743-4, *Lubricants, industrial oils and related products (class L) — Classification — Part 4: Family H (Hydraulic systems)*

ISO 6803, *Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing*

ISO 7233, *Rubber and plastics hoses and hose assemblies — Determination of resistance to vacuum*

ISO 7326:2016, *Rubber and plastics hoses — Assessment of ozone resistance under static conditions*

ISO 8033, *Rubber and plastics hoses — Determination of adhesion between components*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 18752:2022(E)

ISO 10619-1:2017, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

ISO 10619-2:2021, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 2: Bending tests at sub-ambient temperatures*

ISO 17165-1, *Hydraulic fluid power — Hose assemblies — Part 1: Dimensions and requirements*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN