SLOVENSKI STANDARD
SIST EN 14424:2013

01-september-2013

Nadomešča:
SIST EN 14424:2005

Cevni fitingi z vijačnimi pušami

Hose fittings with screwed ferrules

Schlaucharmaturen mit Schraubhülsen

Raccords pour flexibles avec bague vissée

Ta slovenski standard je istoveten z: EN 14424:2013

ICS:

23.040.70 Gumene cevi in armature Hoses and hose assemblies

SIST EN 14424:2013 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14424

June 2013

ICS 23.040.70

Supersedes EN 14424:2004

English Version

Hose fittings with screwed ferrules

Raccords pour flexibles avec bague vissée

Schlaucharmaturen mit Schraubhülsen

This European Standard was approved by CEN on 8 May 2013.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword

This document (EN 14424:2013) has been prepared by 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of an identical text or by endorsement, at the latest by December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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

This document supersedes EN 14424:2004.

In comparison to EN 14424:2004, the following changes have been made:

— In the Scope and in 4.3, the maximum working pressure and the working temperature ranges have been changed.

— In Clause 2, the normative references have been updated.

— Clause 3 "Terms and definitions" has been amended.

— In 4.2, a remark for the usage of plastic coatings was added.

— In 6.2, the list of materials for hose fittings and union nuts has been revised.

— A new subclause 6.3 "Surface treatment" was added.

— In 6.4, the requirements for materials of thread gaskets have been revised.

— In Clause 7, the requirements for marking have been revised.

— Clause 8 regarding type testing and quality control has been restructured and amended.

— The Bibliography has been reviewed.

— The standard has been revised editorially.

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

1 Scope

This European Standard specifies the design, materials and dimensions of hose fittings with screwed ferrules for rubber and thermoplastics hoses for use with flammable and non-flammable liquids or gases, e.g. fuel dispensing hoses, liquid natural gas (LPG) hoses, tank truck hoses and hoses for liquid and gaseous chemicals. The nominal sizes covered are DN 13 to DN 40.

Up to DN 25, the maximum working pressure is 25 bar[1)], and for DN 32 and DN 40 the maximum working pressure is 16 bar.

The working temperature range is –20 °C to +65 °C, for LPG-usage it is –30 °C to +70 °C up to DN 25, and for LT-(low temperature) usage it is –50 °C to +70 °C.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10025-2, *Hot rolled products of structural steels — Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10087, *Free-cutting steels — Technical delivery conditions for semi-finished products, hot-rolled bars and rods*

EN 10088-1, *Stainless steels — Part 1: List of stainless steels*

EN 10216-1, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 1: Non-alloy steel tubes with specified room temperature properties*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads — Dimensions, tolerances and designation*

EN 12164, *Copper and copper alloys — Rod for free machining purposes*

EN 12168, *Copper and copper alloys — Hollow rod for free machining purposes*

EN 12420, *Copper and copper alloys — Forgings*

EN 14420-5, *Hose fittings with clamp units — Part 5: Threaded connections*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1)*

EN ISO 4042, *Fasteners — Electroplated coatings (ISO 4042)*

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

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

1) 1 bar = 0,1 MPa.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 8330 and the following apply.

3.1
DN (nominal size)
alphanumeric designation of size for components of a pipework system, which is used for reference purposes and which comprises the letters DN followed by a dimensionless whole number which is indirectly related to the physical size, in millimetres, of the bore or outside diameter of the end connections

Note 1 to entry: The number following the letters DN does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.

Note 2 to entry: In those standards which use the DN designation system, any relationship between DN and component dimensions should be given, e.g. DN/OD or DN/ID.

[SOURCE: EN ISO 6708:1995, 2.1]

3.2
thread gasket
flat faced gasket for threads according to EN ISO 228-1

4 General requirements

4.1 General

Hose fittings shall withstand the mechanical, thermal and chemical loads and shall be impermeable and resistant to flammable and non-flammable fluids and vapours.

Hose fittings shall be designed such that they establish a frictional and positive-locking tight connection on the hose.

Hose fittings shall be designed such that when fitted to hoses the hose is destroyed first before being torn out from the fitting, if overstress occurs.

Hose side fitting components shall not cause any dangerous notch or shear stresses on the hose.

4.2 Resistance of the fitting materials to the fluid

When selecting the type of connection, consideration shall be given to the potential hazard caused by the medium and the operating conditions.

In individual cases, other concentrations and additions to the medium as well as increase of temperature can reduce the resistance of the metallic materials. In these cases details should be agreed between purchaser and manufacturer. If data are not available, individual tests are necessary.

The fitting components may be surface protected, e.g. nickel-plated, zinc-plated, chrome-plated or polymer coating.

Details should be agreed between purchaser and manufacturer.

If plastic coatings are provided it shall be ensured that the required electric conductivity of the hose assembly is maintained.

The pairing of fittings from different material groups shall be avoided, if the presence of electrolytes is expected (contact corrosion).

4.3 Maximum working pressures and temperatures

Up to nominal size DN 25, the maximum working pressure shall be 25 bar, and for nominal sizes DN 32 and DN 40 the maximum working pressure shall be 16 bar.

The range of the working temperature shall be –20 °C to + 65 °C, for LPG-usage it shall be –30 °C to +70 °C up to DN 25, and for LT-(Low temperature) usage it shall be –50 °C to +70 °C.

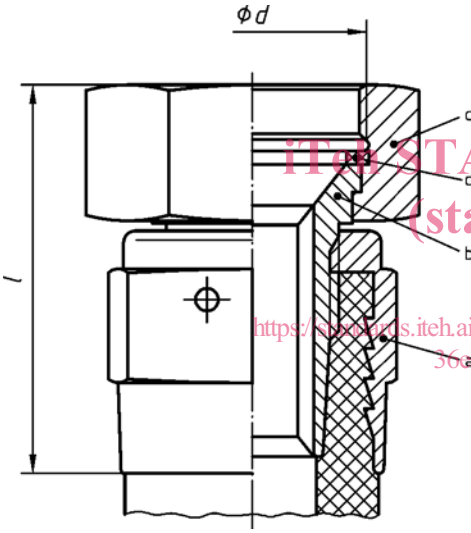
NOTE Permissible pressures and temperatures of hose assemblies are limited by the hoses and gaskets used.

5 Dimensions and designation

5.1 Dimensions

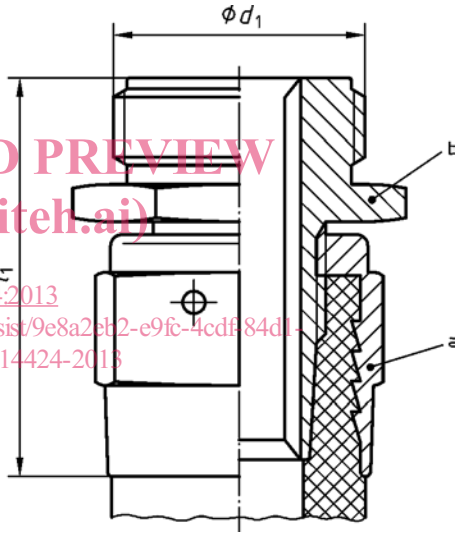
Figures 1 to 8 are examples only. The dimensions of hose fittings with screwed ferrules shall be in accordance with Tables 1 to 7.

NOTE Details not specified in the order are at the manufacturer's discretion.



Key
a ferrule
b female connecting part
c union nut
d thread gasket

Figure 1 — Ferrule fitting Type G (internal thread)

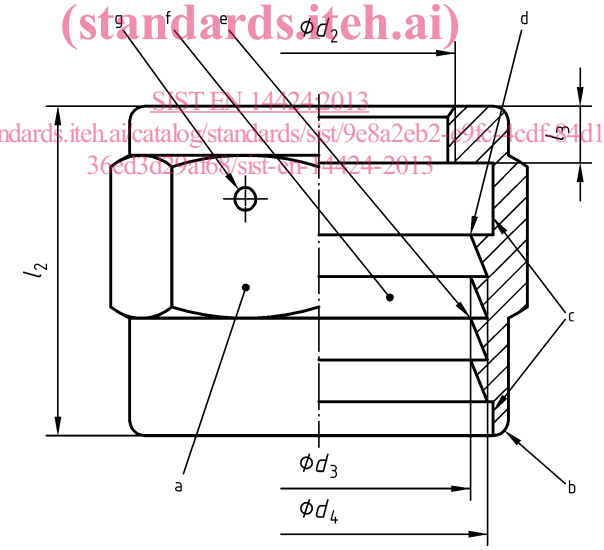


Key
a ferrule
b male connecting part

Figure 2 — Ferrule fitting Type GA (outside thread)

Table 1 — Dimensions for ferrule fittings Type G and GA

Nominal size DN	**Hose internal diameter**	d connecting thread	d_1 connecting thread	l min. mm	l_1 min. mm
13	13	G ½	G ½ A EN ISO 228-1	49	51
		G ¾	R ½ EN 10226-1/NPT		55
		G 1			
15	16	G ¾	G ¾ A EN ISO 228-1		53
		G 1	R ¾ EN 10226-1/NPT		54
		—	G 1 A EN ISO 228-1	—	54
19	19	G ¾	R ¾ EN 10226-1/NPT	50	54
		G 1	G 1 A EN ISO 228-1	52	55
21	21	G ¾	—	51	—
		G 1	—	52	—
25	25	G 1	G 1 A EN ISO 228-1	55	59
		G 1 ¼	R 1 EN 10226-1/NPT	58	65
32	32	G 1 ¼	G 1 ¼ A EN ISO 228-1	64	65
40	38	G 1 ½	G 1 ½ A EN ISO 228-1	67	71



Key

a s = width across flats, hexagonal or octagonal
b rounded
c dimension $\geq d_4$
d dimension $\geq d_3$
e profile corners chamfered
f inner profile at the discretion of the manufacturer
g inspection orifice location at the discretion of the manufacturer

Figure 3 — Ferrule