



# SLOVENSKI STANDARD

## SIST EN 15069:2008

01-september-2008

J U f b c g f b ] d ` ] b g \_ ] j Y b h ` ] n U \_ c j ] b g \_ Y W j b Y d f ] \_ ` f \_ Y n U d f ] \_ ` f ] h j [ c g d c X ] b ` g \_ ] d ` ] b g \_ ] ` U d U f U r c j

Safety gas connection valves for metal hose assemblies used for the connection of domestic appliances using gaseous fuel

Sicherheitsgasanschlussarmaturen für den Anschluss von Gasgeräten mit Gasschlauchleitungen in der Hausinstallation für brennbare Gase

Dispositifs de raccordement de sécurité pour appareils à usage domestique utilisant les combustibles gazeux et alimentés par tuyau métallique onduleux

**Ta slovenski standard je istoveten z: EN 15069:2008**

### ICS:

23.060.01	Ventili na splošno	Valves in general
91.140.40	Sistemi za oskrbo s plinom	Gas supply systems

**SIST EN 15069:2008**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01eaddc-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

<https://standards.iteh.ai/catalog/standards/sist/a01eaddc-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

EUROPEAN STANDARD

EN 15069

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2008

ICS 23.060.40; 91.140.40

English Version

## Safety gas connection valves for metal hose assemblies used for the connection of domestic appliances using gaseous fuel

Dispositifs de raccordement de sécurité pour appareils à usage domestique utilisant les combustibles gazeux et alimentés par tuyau métallique onduleux

Sicherheitsgasanschlussarmaturen für den Anschluss von Gasgeräten mit Gasschlauchleitungen in der Hausinstallation für brennbare Gase

This European Standard was approved by CEN on 2 February 2008.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01eade-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

<https://standards.iteh.ai/catalog/standards/sist/a01eade-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>



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

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

## Contents

Page

Foreword.....	5
Introduction .....	6
<b>1 Scope .....</b>	<b>6</b>
<b>2 Normative references .....</b>	<b>6</b>
<b>3 Terms and definitions .....</b>	<b>7</b>
<b>4 General requirements.....</b>	<b>9</b>
4.1 SC valve types.....	9
4.2 Classification.....	10
4.2.1 Temperature classes .....	10
4.2.2 Pressure classes.....	10
4.3 Construction requirements.....	10
4.3.1 General.....	10
4.3.2 Materials .....	11
4.3.3 Nominal sizes .....	11
4.4 Construction.....	11
4.5 Connection .....	12
4.5.1 General.....	12
4.5.2 Connection and disconnection .....	12
4.5.3 Disconnection .....	12
4.5.4 Rotation .....	12
4.6 Operation .....	12
4.6.1 General.....	12
4.6.2 Manual operated control (if fitted) .....	12
4.7 Dangerous substances .....	12
<b>5 Performance requirements and tests .....</b>	<b>13</b>
5.1 General.....	13
5.2 Test end fittings .....	13
5.3 Test sequence schedule .....	13
5.4 Leak-tightness.....	15
5.4.1 Angular seal .....	15
5.4.2 External leak-tightness .....	15
5.4.3 Internal leak-tightness.....	16
5.5 Internal Pressure.....	16
5.5.1 Requirements .....	16
5.5.2 Test.....	17
5.6 Rated flow rate .....	17
5.6.1 Requirements .....	17
5.6.2 Test.....	17
5.7 Tensile strength resistance .....	19
5.7.1 Requirements .....	19
5.7.2 Tests.....	19
5.8 Bending resistance.....	20
5.8.1 Requirements .....	20
5.8.2 Tests.....	20
5.9 Resistance to torsion .....	20
5.9.1 Requirements .....	20
5.9.2 Tests.....	20
5.10 Resistance to impact.....	21
5.10.1 Requirements .....	21

5.10.2	Tests .....	21
5.11	Durability .....	22
5.11.1	Durability of the manually operated control SC valve .....	22
5.11.2	Durability of connection and disconnection .....	23
5.11.3	Rotation durability of the SC valve outlet .....	23
5.11.4	Temperature durability - Thermal ageing .....	23
5.12	High and low temperature resistance .....	24
5.12.1	Low temperature resistance .....	24
5.12.2	High temperature resistance (only for SC valve without TSD) .....	26
5.12.3	Leak-tightness during thermal load (only for SC valve with TSD) .....	26
5.13	Resistance to lubricants .....	26
5.13.1	General .....	26
5.13.2	Requirement .....	26
5.13.3	Test .....	26
5.14	Reaction to fire .....	27
5.14.1	Requirement .....	27
5.14.2	Testing and assessment methods .....	27
5.15	Resistance to gas .....	27
5.15.1	General .....	27
5.15.2	Requirement .....	27
5.15.3	Test .....	27
5.16	Corrosion resistance .....	28
5.16.1	Requirement .....	28
5.16.2	Test .....	28
5.17	Operating torque for a manually operated control SC valve .....	28
5.17.1	Requirement .....	28
5.17.2	Test .....	28
5.18	Operating strength for a safety quick connection SC valve .....	29
5.18.1	Requirement .....	29
5.18.2	Test .....	29
5.19	Stop resistance .....	29
5.19.1	Requirement .....	29
5.19.2	Test .....	30
5.20	SC valves type 2 and 4 .....	30
5.20.1	Leak-tightness of the OSD .....	30
5.20.2	Overflow safety rate .....	30
5.20.3	Overflow safety durability .....	31
5.20.4	Normal flow durability .....	31
5.21	Electrical continuity .....	32
5.21.1	Requirement .....	32
5.21.2	Test .....	32
5.22	Leak-tightness of the system with non-metal components .....	32
5.22.1	Requirement .....	32
5.22.2	Test .....	32
5.23	SC valves type 3 and 4 .....	33
5.23.1	Reaction to temperature .....	33
6	Evaluation of conformity .....	33
6.1	General .....	33
6.2	Type testing .....	33
6.2.1	Initial type testing (ITT) .....	33
6.2.2	Subsequent type testing .....	34
6.3	Factory production control (FPC) .....	34
6.3.1	General .....	34
6.3.2	FPC requirements for all manufacturers .....	34
6.3.3	Manufacturer-specific FPC system requirements .....	36
6.4	Installation instructions .....	37
6.5	Packaging .....	38

## EN 15069:2008 (E)

<b>Annex A</b> (informative) <b>SC valve and hose fitting design requirements for connection to the gas supply pipework or to the pressure reduction device of portable gas bottles</b> .....	<b>39</b>
<b>Annex B</b> (informative) <b>Test end fitting</b> .....	<b>58</b>
<b>Annex ZA</b> (informative) <b>Clauses of this European Standard addressing the provision of the EU Construction Products Directive</b> .....	<b>59</b>
<b>ZA.1</b> <b>Scope and relevant characteristics</b> .....	<b>59</b>
<b>ZA.2</b> <b>Procedure for attestation of conformity of SC valves</b> .....	<b>60</b>
<b>ZA.2.1</b> <b>System of attestation of conformity</b> .....	<b>60</b>
<b>ZA.2.2</b> <b>EC Certificate and Declaration of conformity</b> .....	<b>63</b>
<b>ZA.3</b> <b>CE marking and labeling</b> .....	<b>64</b>
<b>Bibliography</b> .....	<b>66</b>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01e4dde-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

<https://standards.iteh.ai/catalog/standards/sist/a01e4dde-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

## Foreword

This document (EN 15069:2008) has been prepared by Technical Committee CEN/TC 236 "Non industrial manually operated shut-off valves for gas and particular combinations valves-other products", the secretariat of which is held by UNI.

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 September 2008, and conflicting national standards shall be withdrawn at the latest by December 2009.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 89/106/EEC.

For relationship with EU Directive 89/106/EEC, see informative Annex ZA, which is an integral part of this document.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01eadd-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

<https://standards.iteh.ai/catalog/standards/sist/a01eadd-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

## Introduction

This European Standard contains product characteristics relating to the safety of persons, animal and property and the protection of their environment.

The objective of this European Standard is to achieve safe operation of connection valves by specifying the requirements of performance, materials and test methods.

Safety gas connection valves are used internally to connect gas appliances including movable gas appliances and externally to connect appliances such as grills, gas radiation heating, lights etc.

Valves manufactured to this European Standard are designed to be used with compatible hose assemblies conforming to EN 14800 and prEN 15070:2007.

Attention is drawn to the need for careful quality control as given in EN ISO 9001:2000.

This European Standard is based on a balance of requirements given by the major national European Gas Authorities for valves and metal hose assemblies for the connection of domestic gas appliances.

It reflects the recognised practise and technology of products approved today as well as the present culture of usage by the consumer.

The introduction of new technologies supported by National Gas Authorities may require the adoption of this European Standard regarding individual requirements and tests.

iTeh STANDARD PREVIEW

(standards.iteh.ai)

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01eade-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

<https://standards.iteh.ai/catalog/standards/sist/a01eade-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

## 1 Scope

These valves are suitable for connection of the fixed gas supply system to domestic appliances inside or outside a dwelling using 2<sup>nd</sup> or 3<sup>rd</sup> Family gases and at a pressure of up to and including 0,5 bar.

These valves are designed for the use with either movable appliances or for the connection of fixed appliances.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

EN 377, *Lubricants for applications in appliances and associated controls using combustible gases except those designed for use in industrial processes*

EN 437:2003, *Test gases — Test pressures — Appliance categories*

EN 549, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 1503-1, *Valves — Materials for bodies, bonnets and covers — Part 1: Steels specified in European Standards*

EN 1503-3, *Valves — Materials for bodies, bonnets and covers — Part 3: Cast irons specified in European Standards*



EN 1503-4, *Valves — Materials for bodies, bonnets and covers — Part 4: Copper alloys specified in European Standards*

EN 1775:2007, *Gas supply — Gas pipework for buildings — Maximum operating pressure less than or equal to 5 bar — Functional recommendations*

EN 10222 (all parts), *Steel forgings for pressure purposes*

EN 10277-3, *Bright steel products — Technical delivery conditions — Part 3: Free-cutting steels*

EN 13501-1:2007, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 60335-1:2002, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2001, modified)*

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2006)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2:2002)*

ISO 1817:2005, *Rubber, vulcanized — Determination of the effect of liquids*

## iTeh STANDARD PREVIEW

### 3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the following terms and definitions apply.

[SIST EN 15069:2008](https://standards.iteh.ai/catalog/standards/sist/a01eaddc-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008)

#### 3.1 Connections <https://standards.iteh.ai/catalog/standards/sist/a01eaddc-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

##### 3.1.1

##### **safety connection valve**

component which permits or interrupts the flow of gas by the movement of a closure device which is operated by the connection or disconnection of a metal hose assembly where the valve inlet is connected to the gas installation pipework and whose outlet connects mechanically to the metal hose assembly and prevents any gas flow if the hose assembly is disconnected.

In addition it can incorporate an overflow safety device or a thermal safety device.

It also can be combined with a manually operated valve

##### 3.1.2

##### **safety quick connection**

end fitting consisting of two parts that is designed to permit quick connection and disconnection without tools, the device is leak-tight such that it prevents the release of gas from the upstream pipe work when disconnected and is designed to prevent accidental disconnection and incorrect operation

##### 3.1.3

##### **threaded connection**

connection which is gas tight achieved either by metal to metal contact in the thread or by assistance of a gasket. This connection can only be assembled and disassembled with an appropriate tool

##### 3.2

##### **SC valve**

abbreviation used in this European Standard to denote a safety connection valve as defined in 3.1

**EN 15069:2008 (E)**

- 3.3 domestic appliance**  
appliance intended for use by individual householders inside or outside a dwelling
- 3.4 standard reference conditions**  
conditions to which all measured values are corrected (temperature: 15 °C, absolute pressure 101,325 Pa, dry air)
- 3.5 SC valve inlet**  
part of the SC valve which is connected to the gas installation pipe
- 3.6 SC valve outlet**  
part of the SC valve which is connected to the assembly
- 3.7 Leak-tightness**
- 3.7.1 external leak-tightness**  
leak-tightness of a gas carrying component with respect to atmosphere. Distinction shall be made between:
- external leak-tightness with the SC valve connected;
  - external leak-tightness with the SC valve disconnected
- 3.7.2 internal leak-tightness**  
leak-tightness between the inlet and outlet of the manually operated device of the SC valve (if it exists), with the closure device moved to the closed position
- 3.8 Pressures**
- 3.8.1 inlet pressure**  
pressure at the inlet of the SC valve
- 3.8.2 outlet pressure**  
pressure at the outlet of the SC valve
- 3.8.3 maximum operating pressure (MOP)**  
maximum pressure at which a SC valve can be operated continuously, under normal operating conditions
- 3.8.4 test pressure**  
pressure to be applied during the test
- 3.8.5 pressure drop**  
difference between the inlet and the outlet pressures

ITeC STANDARD PREVIEW  
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/a01e4dde-7060-48d9-bac6-89e980d71bf7/sist-en-15069-2008>

### 3.9 Flow

#### 3.9.1

##### **rated flow rate**

flow rate of air under standard reference conditions, at a given pressure drop

#### 3.9.2

##### **overflow safety device (OSD)**

safety device which automatically interrupts the flow of gas if it exceeds a preset value

#### 3.9.3

##### **overflow safety level**

flow rate of air at which the overflow safety device interrupts the flow of gas

### 3.10 Temperatures

#### 3.10.1

##### **maximum operating temperature (MOT)**

maximum temperature at which a SC valve can be operated continuously, under normal operating conditions

#### 3.10.2

##### **minimum operating temperature (mOT)**

lowest temperature at which a SC valve can be operated continuously, under normal operating conditions

#### 3.10.3

##### **thermal safety device (TSD)**

device that automatically shuts off the flow of gas when the temperature exceeds a preset value

#### 3.11

##### **closure device**

movable part of the SC valve which shuts off the gas flow

#### 3.12

##### **manually operated control**

mechanical independent device that shuts off the flow of gas under a voluntary action

#### 3.13

##### **screw-in connector**

end fitting consisting of two parts that is designed to permit screw in connection and disconnection without tools, the device is leak-tight such that it prevents the release of gas from the upstream pipe work when disconnected and is designed to prevent accidental disconnection and incorrect operation

#### 3.14

##### **gas**

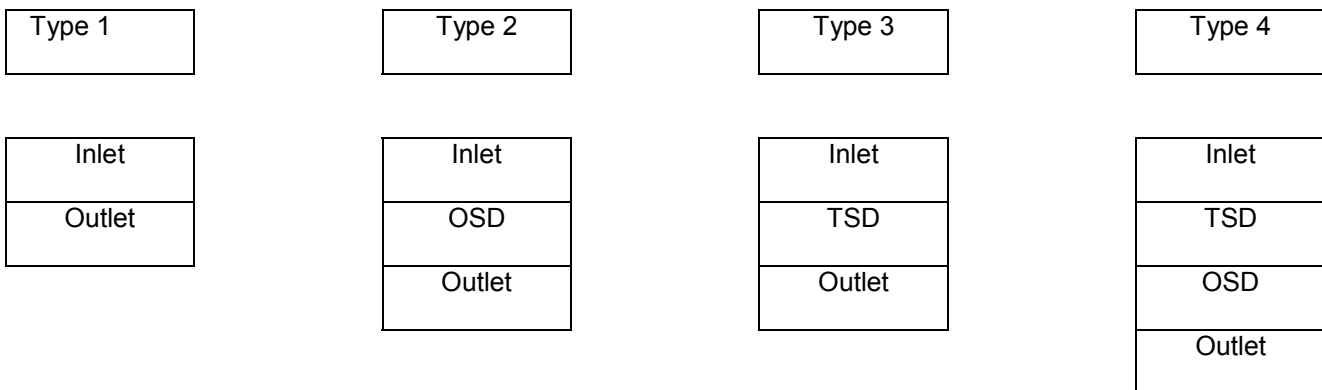
term gas relates to a second or third family gas as referred to in EN 437:2003, Table 1. These gases are commonly referred to as natural gases or liquefied petroleum gases (LPG)

## 4 General requirements

### 4.1 SC valve types

The SC valve is designed to have a combination of elements as shown in Figure 1.

## EN 15069:2008 (E)



**Figure 1 — SC valve – Combination of elements and their sequence**

No other combinations and sequence of elements as shown in Figure 1 shall be in conformity to this European Standard.

## 4.2 Classification

### 4.2.1 Temperature classes

SC valves shall be divided into two temperature classes as follows:

**Table 1 — SC valve temperature classes**

Class	Temperature range (°C)
T1	-20 to 60
T2	-40 to 60

### 4.2.2 Pressure classes

SC valves shall be divided into three pressure classes as follows:

**Table 2 — SC valve pressure classes**

Class	MOP (Pa)	MOP (bar)
P1	5 000	0,05
P2	$0,2 \times 10^5$	0,2
P3	$0,5 \times 10^5$	0,5

## 4.3 Construction requirements

### 4.3.1 General

The SC valve shall be constructed and assembled in such a way that its operating characteristics can not be altered under the normal operating conditions of installation and use.

If it is possible after disconnection of the hose for foreign bodies to enter the SC valve and to alter its operation the SC valve shall be provided with a protection device.

NOTE The SC valve can be protruding, embedded or semi-embedded in its support.

An overflow safety device, if fitted, shall comply with the requirements of 5.20.

#### 4.3.2 Materials

The parts of the SC valve in contact with gas or the surrounding atmosphere, shall be manufactured from corrosion resistant materials, or shall be suitably protected to withstand the corrosion resistance tests in 5.16. The manufacturer shall provide a warning that if the SC valve is to be built into a wall it shall be protected from its surroundings by appropriate means.

The parts of the housing which separate a gas-carrying compartment from the atmosphere shall be manufactured from one of the following metals:

- copper alloy excluding aluminium-bronze; according to EN 1503-4;
- ductile cast iron excluding laminar cast iron; according to EN 1503-3;
- forged steel and cast steel; according to EN 10222, EN 1503-1 or EN 10277-3;
- austenitic stainless steel.

End fittings and non-permanently attached parts, whether surface finished or not, shall be manufactured from stainless steel, or from copper alloys containing at least 57 % copper and up to a maximum permitted 3,5 % lead.

Where there can be risk of stress corrosion cracking, any threaded parts manufactured from the above copper alloys shall be stress relieved.

Springs and other moving parts shall be manufactured from corrosion resistant material or shall be coated to protect against corrosion and shall be capable of retaining their protective coating despite any movement resulting from the operation of the SC valve.

All markings shall be durable and resistant to atmospheric conditions. Labels and their markings shall neither deteriorate nor lift or become unreadable by humidity and temperature for a reasonably economic working life.

Non-metal components and aluminium may be used in an overflow safety device directly in contact with gas provided that in the event of a fracture of this part not more than 30 dm<sup>3</sup>/h of air can escape at the MOP.

Rubber seals shall conform to EN 549.

Lubricants shall conform to EN 377.

#### 4.3.3 Nominal sizes

The nominal size of SC valve shall be designated DN 8 and DN 12 and shall be determined by the flow rate requirements given in 5.6. For the purpose of this standard DN 10 and DN 15 fittings shown in Annex A shall be considered as DN 8 and DN 12 respectively.

### 4.4 Construction

All SC valve components, when under visual examination shall be clean and free from burrs and shall have no sharp edges and corners which could cause damage, injury or incorrect operation.

SC valves shall be leak-tight and maintenance free. Seals for moving parts, which separate gas ways from the atmosphere, shall maintain their original leak-tightness according to 5.4 without any manual adjustment.

**EN 15069:2008 (E)**

It shall not be possible to interfere with the sealing device inside a SC valve and the OSD, if fitted. This requirement can be evidenced by visual examination and shall apply both when the SC valve is connected and when the SC valve is disconnected.

If a compression spring is used, the two end-faces of the spring shall be parallel and perpendicular to the axis of the spring. The end coils of a spring shall not damage their mating faces.

The wall thickness from any gas way to atmosphere or to holes connected to the atmosphere, shall not be less than 1 mm. Holes for screw, pins etc., which are used for the assembly of parts and for mounting, shall not provide any leak path between gas ways and the atmosphere. This requirement shall be verified by dimensional metrology.

**4.5 Connection****4.5.1 General**

The manufacturer shall declare the type of connection used and provide the necessary connection details as part of the installation instructions in 6.4.

NOTE Annex A provides information on local and/or national regulations for connection types.

**4.5.2 Connection and disconnection**

The SC valve shall be designed such that when the hose is connected or disconnected, there shall be no intermediate position in which leaks may occur.

**4.5.3 Disconnection**

After disconnection the SC valve shall automatically shut-off the gas flow as required in 5.4.2.

**4.5.4 Rotation**

In cases where rotation of the hose is possible, the hose shall be capable of rotating 360° in both directions without disconnection.

**4.6 Operation****4.6.1 General**

The method used to connect and disconnect the hose to the SC valve shall be such that it prevents disconnection without manual manipulation and subsequent incorrect operation.

**4.6.2 Manual operated control (if fitted)**

The manually operated control shall be such that the open and closed positions shall be without ambiguity.

In the case of a rotating manual actuator, rotation shall cover an angle of 90° in a clockwise direction for closure.

In the open and closed position there shall be a system of stops satisfying the test described in 5.19.

**4.7 Dangerous substances**

Materials used in SC valve shall not release any dangerous substances in excess of the maximum permitted levels specified in a relevant European Standard for the material or permitted in the national regulations of the member state of destination.

## 5 Performance requirements and tests

### 5.1 General

Unless otherwise stated:

- all pressures shall be in their static conditions and shall be relative to atmospheric pressure;
- the ambient temperature for the tests shall be within the temperature limits given in 5.3;
- the SC valves to be tested shall be stored in the laboratory for at least 30 min before the start of the tests, so that their temperature has stabilized;
- the tests shall be carried out using dry air and the flow measurements shall be adjusted to standard reference conditions by the equation given in 5.6.2.

### 5.2 Test end fittings

Tests requiring the use of end fittings identical to those on the hose shall be carried out with dummy fittings as described in Annex B. Such fittings shall have dimensions giving the largest tolerance field.

### 5.3 Test sequence schedule

If any sample fails one of the tests within the test sequence schedule given in Table 3 then all samples shall be deemed to have failed to meet the type test requirements of this European Standard. The tests shall be performed under ambient conditions. The following tolerances shall apply:

atmospheric pressure:	(± 0,1) mbar	air pressure:	(± 5) %
flow rate:	(± 5) %	ambient temperature:	(± 1) °C
temperature above 125 °C:	(± 10) °C	time:	(± 0,1) %
dimensions:	(± 0,1) mm		

For each DN the tests shown in Tables 3 and 4 shall be performed in the sequence given.