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STANDARDS
INSTITUTE

SVENSK STANDARD SS-EN ISO 12209-1

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Gas cylinders – Outlet connections for gas cylinder valves for compressed breathable air – Part 1: Yoke type connections (ISO 12209-1:2000)

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Swedish Standards corresponding to documents referred to in this Standard are listed in "Catalogue of Swedish Standards", issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

Gasflaskor – Anslutning för utloppsventil till gasflaskor för komprimerad andningsluft – Del 1: Anslutning med bygel (ISO 12209-1:2000)

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English version

Gas cylinders - Outlet connections for gas cylinder valves for
compressed breathable air - Part 1: Yoke type connections (ISO
12209-1:2000)

Bouteilles à gaz - Raccords de sortie pour robinets de
bouteilles à gaz pour air comprimé respirable - Partie 1:
Raccords du type à étrier (ISO 12909-1:2000)

Ortsbewegliche Gasflaschen - Ventilseitenstutzen für
Gasflaschenventile für verdichtete Atemluft - Teil 1:
Bügelanschluß (ISO 12209-1:2000)

This European Standard was approved by CEN on 15 November 2000.

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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 Management Centre has the same status as the official versions.

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Foreword

The text of the International Standard ISO 12209-1:2000 has been prepared by Technical Committee ISO/TC 58 "Gas cylinders" in collaboration with Technical Committee CEN/TC 23 "Transportable gas cylinders", 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of an identical text or by endorsement, at the latest by May 2001, and conflicting national standards shall be withdrawn at the latest by May 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 12209-1:2000 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

Gas cylinders — Outlet connections for gas cylinder valves for compressed breathable air —

Part 1: Yoke type connections

1 Scope

This part of ISO 12209 specifies the characteristics of the yoke type outlet connections for gas cylinder valves for compressed breathable air cylinders, up to a maximum cylinder working pressure of 230 bar. It states the fundamental requirements for both the connection and its components and includes basic dimensions.

Annex A gives the outlet connection prototype qualification test procedures.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 12209. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 12209 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 10297, *Gas cylinders — Cylinder valves — Specification and type testing*.

ISO 11114-1, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 1: Metallic materials*.

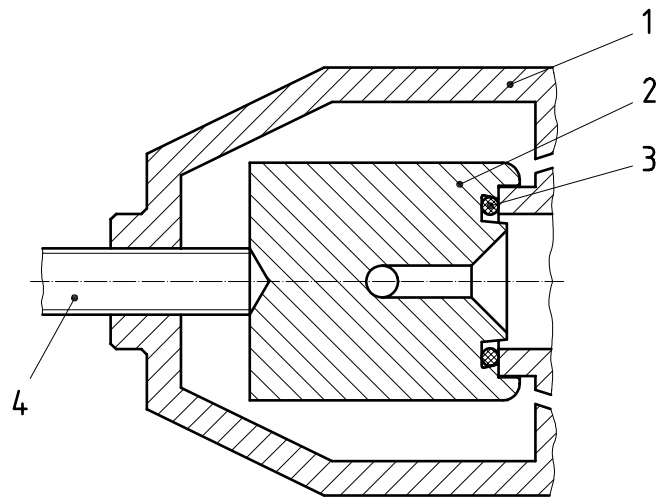
3 General requirements

Figure 1 shows the yoke type connection in the assembled state.

The valve outlet and O-ring dimensions are shown in Figure 2 and given in Table 1, and the yoke dimensions are shown in Figure 3 and given in Table 2.

No outer dimensions are given for the yoke. However, they shall be chosen such that the yoke can resist a torque applied via the screw of 20 N·m without visible permanent deformation of the thread and/or the yoke. In addition, the tests described in annex A shall be carried out. The volume within the dotted lines shown in the yoke drawing on Figure 3 shall not be obstructed by other parts, in such a way that the yoke would not fit over the valve.

The requirements for material specifications, gas/material compatibility, valve prototype testing are covered in the relevant standards, for example ISO 10297 and ISO 11114-1.



Key

- 1 Yoke
- 2 Valve outlet
- 3 O-ring
- 4 Screw

Figure 1 — Yoke type connection — Assembly drawing

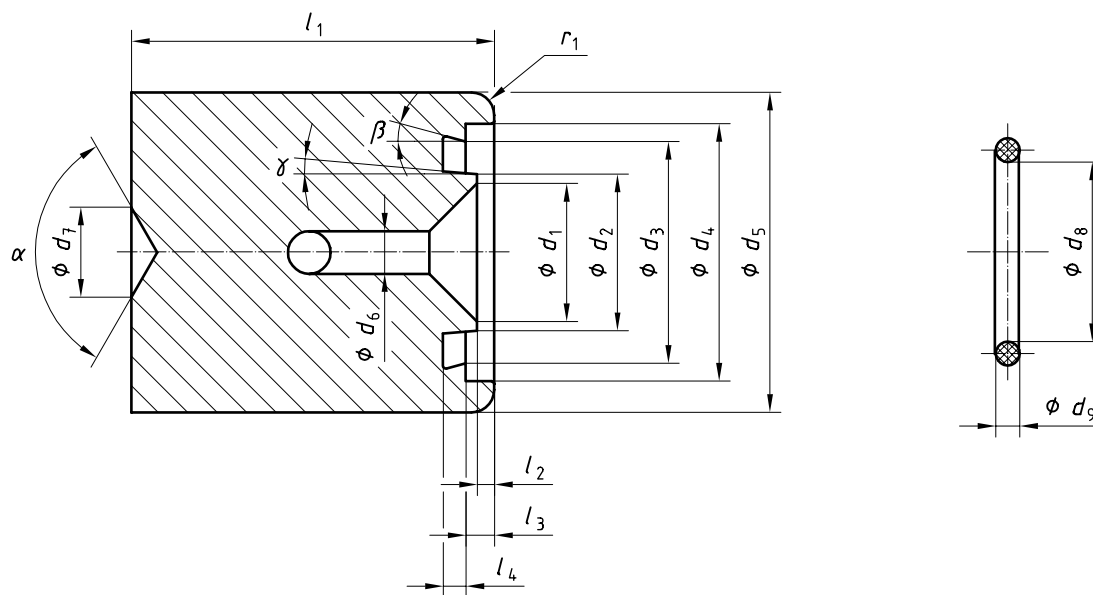


Figure 2 — Valve outlet dimensions

Table 1 — Valve outlet and O-ring dimensions

Dimensions in millimetres

Symbol	Dimension	Tolerance	Symbol	Dimension	Tolerance
l_1	25,5	$-\frac{0}{3}$	d_1	9,7	$\pm 0,15$
l_2	1,2	$+\frac{0,2}{0}$	d_2	11	$-\frac{0}{0,25}$
l_3	2	$-\frac{0}{0,3}$	d_3	15,6	$+\frac{0,1}{0}$
l_4	1,6	$-\frac{0}{0,1}$	d_4	18,1	$+\frac{0,2}{0}$
r_1 max.	1,6	—	d_5	22,5	$-\frac{0}{1,5}$
α	120°	$\pm 5^\circ$	d_6 min.	3	—
β	15°	$\pm 1^\circ$	d_7	6,3	$+\frac{0,8}{0}$
γ	5°	$-\frac{0}{5^\circ}$	d_8 nom.	12,5	—
—	—	—	d_9 nom.	1,8	—

NOTE 1 Concentricity shall be 0,1 for d_1 to d_4 , 0,2 for d_6 and 0,3 for d_5 and d_7 .

NOTE 2 The dimensions of the O-rings are in accordance with ISO 3601-1^[1].

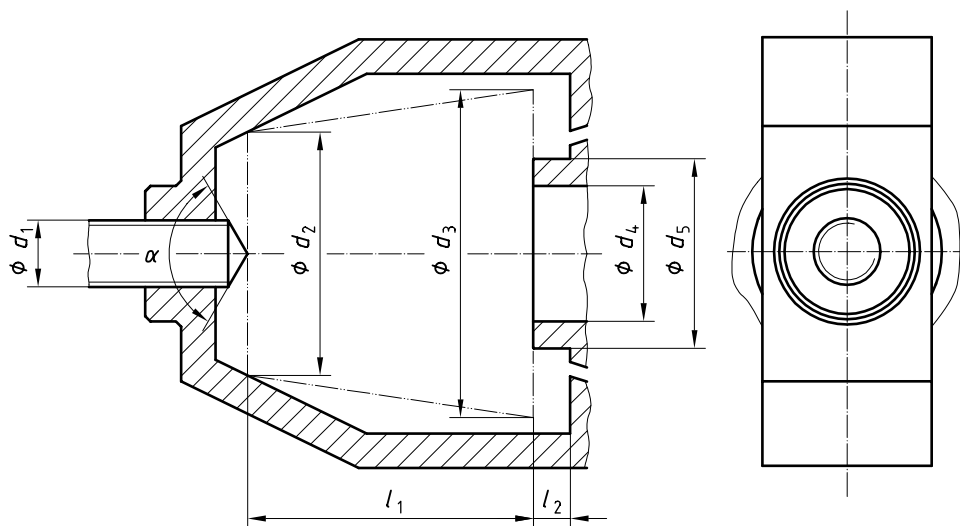


Figure 3 — Yoke

Table 2 — Yoke dimensions

Dimensions in millimetres

Symbol	Dimension	Tolerance	Symbol	Dimension	Tolerance
l_1 min.	26	—	d_1	16 6	—
l_2 min.	2,8	—	d_2 min.	23	—
chamfer	$0,1 \times 45^\circ$	—	d_3 min.	31	—
α	110°	$\pm 5^\circ$	d_4	12,8	+ 0,20 - 0,05
—	—	—	d_5	17,9	$\pm 0,05$

4 Marking

The valve outlet and nipple or screw shall have the following marking as indicated below:

- number of this part of ISO 12209;
- manufacturer's designation;
- year and month of manufacture;
- working pressure (230 bar).

If the yoke is available as a separate item, it shall be permanently marked with the letters "ISO", the name, the symbol or the logo of the manufacturer.