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Tyre valves — Dimensions and designation

Valves pour pneumatiques — Dimensions et désignation

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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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).

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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 31, *Tyres, rims and valves*, Subcommittee SC 9, *Valves for tube and tubeless tyres*.

This third edition cancels and replaces the second edition (ISO 9413:2012), which has been technically revised. It also incorporates the Amendment ISO 9413:2012/Amd.1:2012. The main change compared to the previous edition is as follows:

— Inclusion of new types of valves used for TPMS application.

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.

Tyre valves — Dimensions and designation

1 Scope

This document defines the essential dimensions and the designation of tube valves and tubeless valves.

Annex B gives the correspondence between ISO designations and the designations established by:

— TRA (Tire and Rim Association Inc.);

— ETRTO (European Tyre and Rim Technical Organisation);

— JATMA (The Japan Automotive Tyre Manufacturer's Association, Inc.).

In the remainder of this document, all the dimensions are given at their nominal value except in cases where the tolerances are indicated.

The threaded length of valve stems for which no thread length is specified is the maximum possible length.

NOTE The drawings for valves are not all at the same scale.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Valves and valve componente for tyres — Identification system

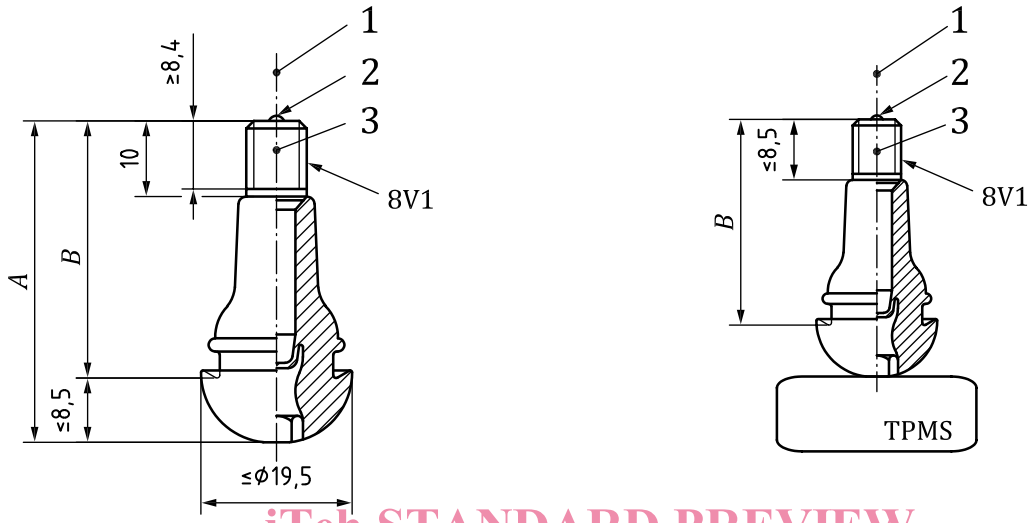
The designations of tyre valves and tyre valve components shall follow the identification system in accordance with Annex A.

5 Tubeless valves only

5.1 Snap-in valves

5.1.1 Valve hole $11{,}3^{+0{,}4}_{0}$

Dimensions in millimetres



a) Standard shape **b) TPMS valve**

Key

1 cap [I 01 / I 02 / I 03]
2 core [H 01]
3 core chambers No. 1 and No. 3

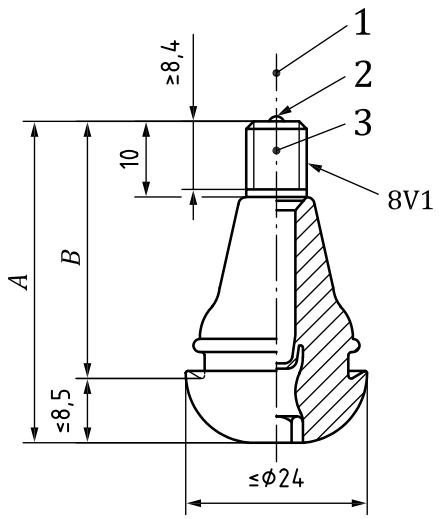
Designation	*A* mm	*B* mm
CQ 01[a]	33	25
CQ 02	43	35
CQ 03	49	41
CQ 04	56,5	48,5
CQ 05	62	54
CQ 06	75	67
CQ 09[b]	—	35
CQ 10[b]	—	41

[a] For short core only.
[b] TPMS valve/ short core preferred.

Figure 1 — Valve hole $11{,}3^{+0{,}4}_{0}$

5.1.2 Valve hole $15{,}7\ ^{+0{,}4}_{0}$

Dimensions in millimetres



Key

1 cap [I 01 / I 02 / I 03]

2 core [H 01]

3 core chambers No. 1 and No. 3

Designation	*A* mm	*B* mm
CR 01	43	35
CR 02	62	54

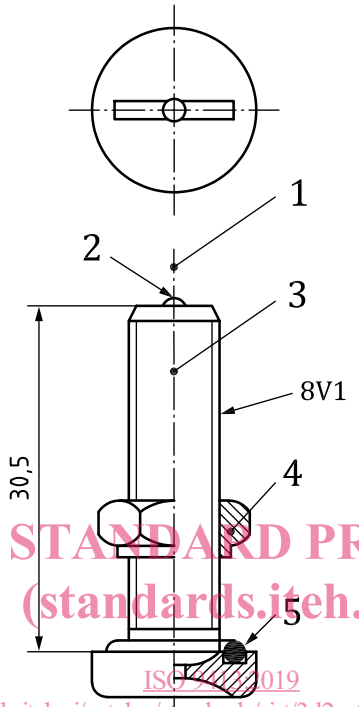
Figure 2 — Valve hole $15{,}7\ ^{+0{,}4}_{0}$

5.2 Clamp-in valves

5.2.1 Clamp-in valves with O-ring

5.2.1.1 Valve hole $8{,}3\ ^{+0{,}3}_{0}$

Dimensions in millimetres



Key

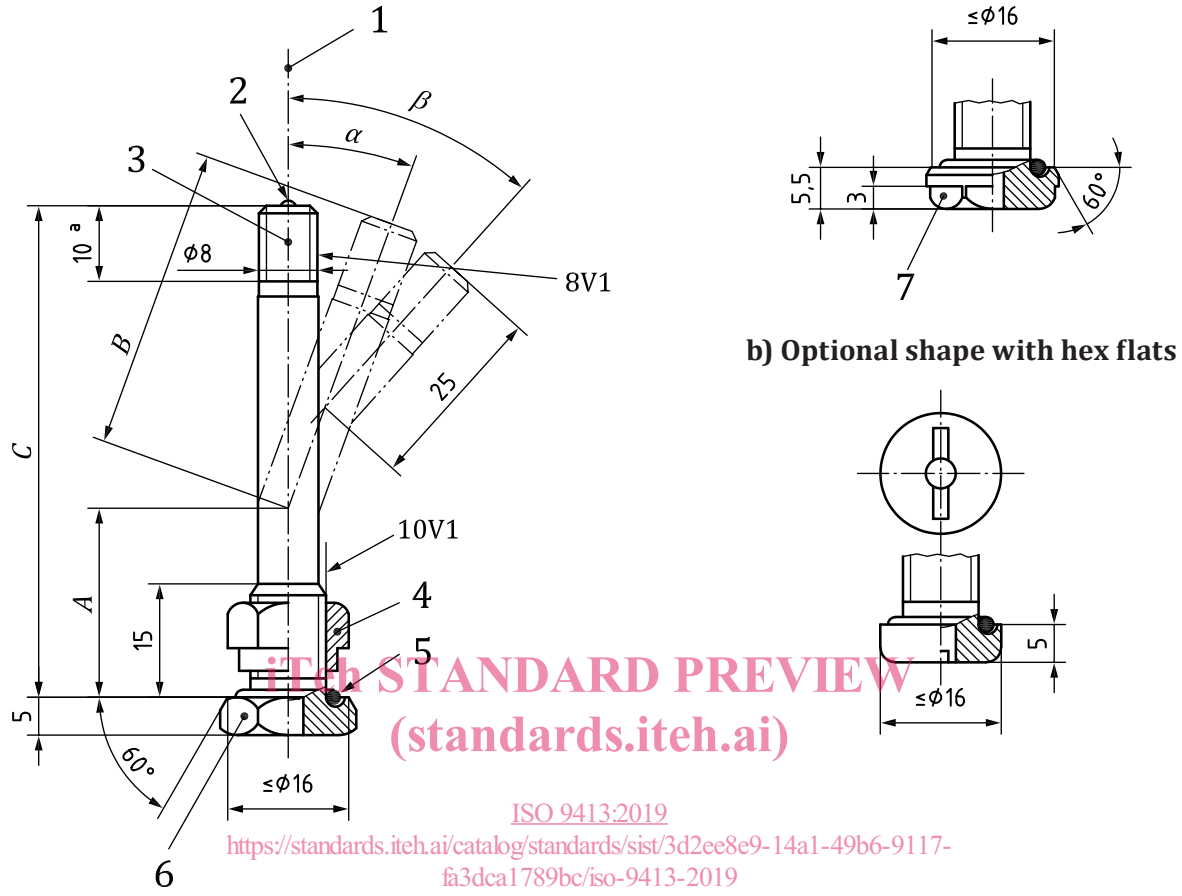
1 cap [I 01 / I 02 / I 03]
2 core [H 01]
3 core chamber No. 1
4 nut [E 02]
5 rubber O-ring [C 05]

Designation
CM 01

Figure 3 — Valve hole $8{,}3\ ^{+0{,}3}_{0}$

5.2.1.2 Valve hole $9{,}7\ ^{+0,3}_{0}$

Dimensions in millimetres



b) Optional shape with hex flats

a) Fully threaded

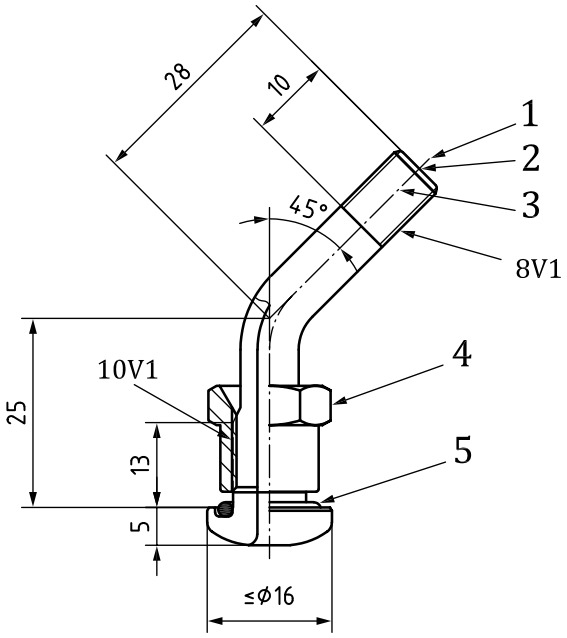
c) Optional shape with slot

Key

1 cap [I 01 / I 02 / I 03]
2 core [H 01]
3 core chamber No. 1
4 hex nut [E 03]
5 rubber O-ring [C 03]
6 before chamfer
7 16 on flats hex
[a] Fully threaded.

Designation	*A* mm	*B* mm	*C* mm	*α* °	*β* °
CP 01	—	—	36	—	—
DP 01	25	60	85	27	—
DP 02	25	40	65	27	—
DP 03	25	85	110	27	—
DP 04	25	50	75	27	—
DP 05[a]	50	25	75	27	—
EP 01[a]	25	—	95	27	42
[a] Short core only.					

Figure 4 — Valve hole $9{,}7\ ^{+0,3}_{0}$



Key

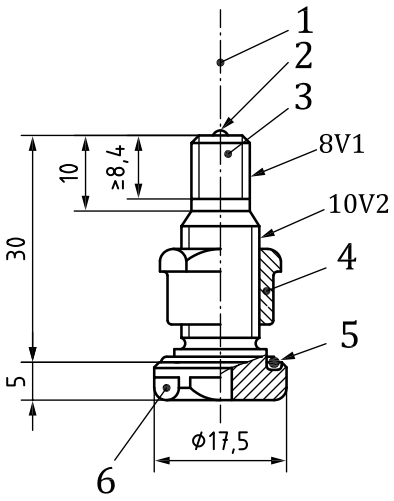
1 cap [I 01 / I 02 / I 03]
2 short core only [H 01]
3 core chamber No. 1
4 hex nut [E 03]
5 rubber O-ring [C 03]

Designation
DP 06

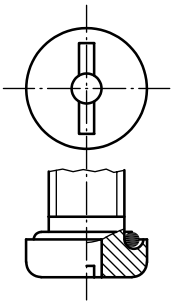
Figure 5 — Valve hole $9{,}7\ ^{+0,3}_{0}$

5.2.1.3 Valve hole $11{,}3\ ^{+0{,}4}_{0}$

Dimensions in millimetres



a) Standard shape



b) Optional shape with slot

Key

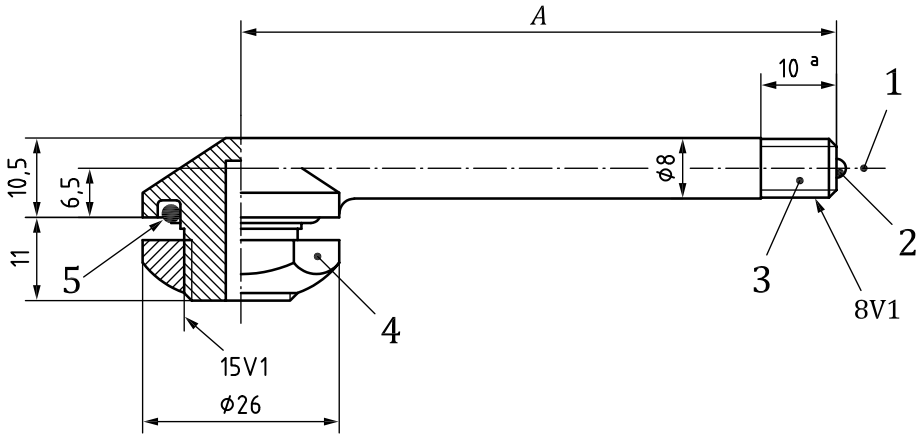
1 cap [I 01 / I 02 / I 03]
2 short core only [H 01]
3 core chamber No. 1
4 hex nut [E 07]
5 rubber O-ring [C 04]
6 16 on flats

Designation
CQ 07

Figure 6 — Valve hole $11{,}3\ ^{+0{,}4}_{0}$

5.2.1.4 Valve hole $15{,}7\ ^{+0{,}4}_{0}$

Dimensions in millimetres



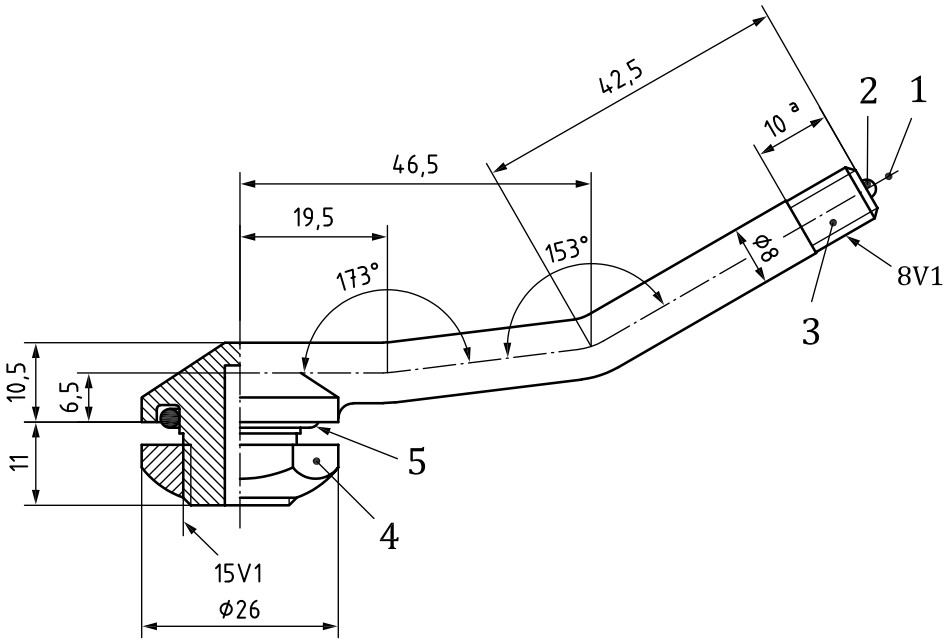
Key

1 cap [I 01 / I 02 / I 03]
2 core [H 01]
3 core chamber No. 1
4 hex nut [E 09]
5 rubber O-ring [C 02]
a Fully threaded.

Designation	A mm
DR 01	40
DR 02	95

Figure 7 — Valve hole $15{,}7\ ^{+0{,}4}_{0}$

Dimensions in millimetres



Key

1 cap [I 01 / I 02 / I 03]
2 core [H 01]
3 core chamber No. 1
4 hex nut [E 09]
5 rubber O-ring [C 02]
a Fully threaded.

Designation
FR 01

Figure 8 — Valve hole $15{,}7\ ^{+0,4}_{0}$