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Tyre valves — ISO core chambers No. 1, No. 2, No. 3 and No. 4

Valves pour pneumatiques — Logements de mécanismes ISO no 1, no 2, no 3 et no 4

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web 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).

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 9, *Valves for tube and tubeless tyres*.

This second edition of ISO 20562 cancels and replaces the first edition (ISO 20562:2004), which has been technically revised.

This corrected version of ISO 20562:2014 incorporates the following corrections.

The sentence in the Foreword regarding revisions has been modified as follows:

This second edition of ISO 20562 cancels and replaces the first edition (ISO 20562:2004), which has been technically revised.

Tyre valves — ISO core chambers No. 1, No. 2, No. 3 and No. 4

1 Scope

This International Standard specifies the interchangeability dimensions of ISO core chambers Nos. 1, 2, 3 and 4 for tyre valves. For the applicability of the core chambers, see ISO 9413.[1]

2 Normative references

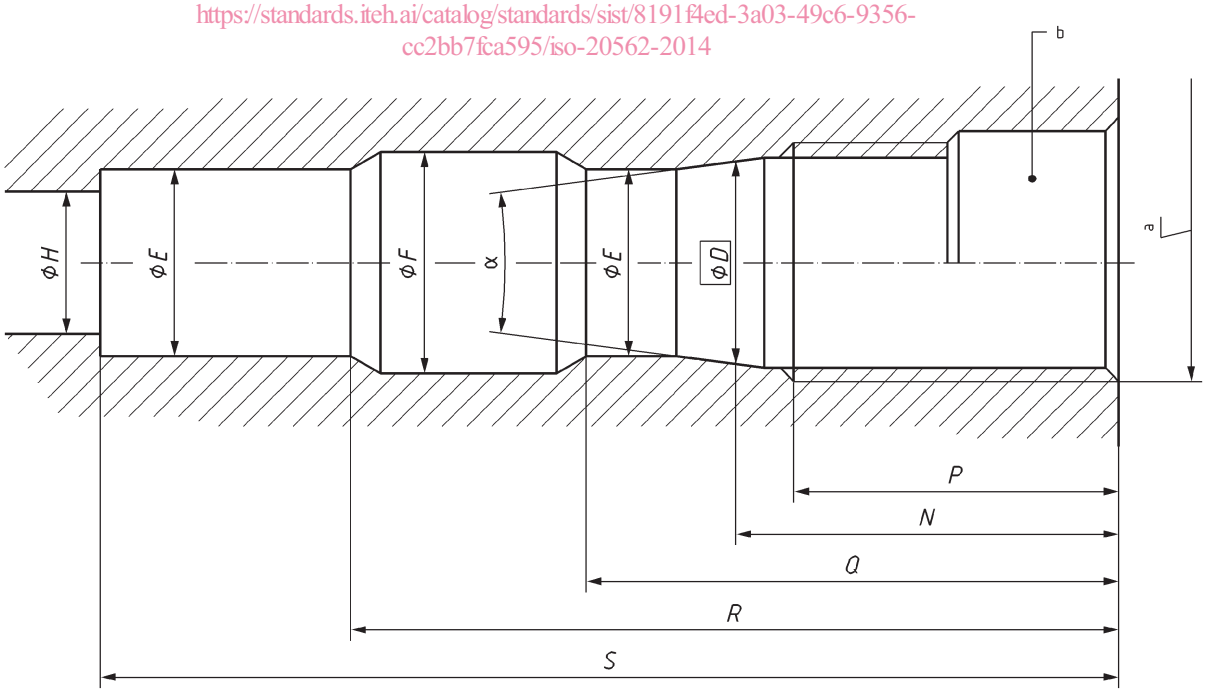
The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1502:1996, *ISO general-purpose metric screw threads — Gauges and gauging*

ISO 4570, *Tyre valve threads*

3 ISO core chamber No. 1 — Dimensions and tolerances

ISO core chamber No. 1 (see Figure 1) can be used on all valves, provided the valve mouth is long enough to accept long cores. The core chamber dimensions shall be in accordance with Table 1 and the tolerances of the core head pin position in accordance with Figure 2.



Key

a Thread 5V1 (see ISO 4570).

b The counterbore of the valve mouth is optional (for its dimensions, see Annex A).

Figure 1 — Core chamber No. 1

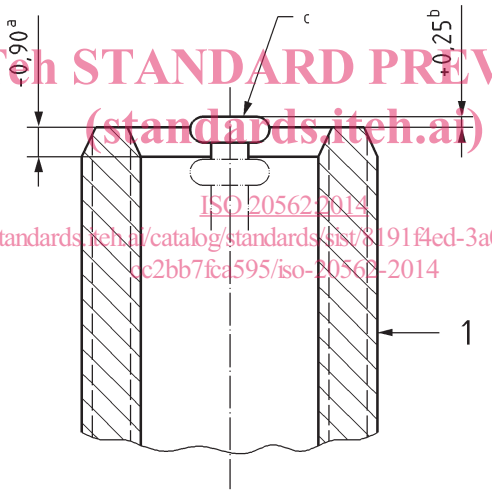
Table 1 — Core chamber No. 1 dimensions and angle α

Dimensions in millimetres

Dimension/angle	Min.	Max.
D	4,3	
E	3,82	3,94
F	4,27	4,70
H	—	3,2
N	10,0	10,4
P[a]	7,8	8,6
Q	13,5	14,5
R	22,7	25,0
S	30,5	31,0
α	16°	18°

[a] The length of the thread is determined by using a GO thread plug gauge (see ISO 1502:1996, 11.3 and Figure 12). The dimension shall be measured from the end of the gauge and shall include a chamfer length of 0,5 × pitch.

Dimensions in millimetres



Key

1 valve stem

[a] Low limit.

[b] High limit.

[c] The pin head shall not be more than 0,25 mm above or 0,90 mm below the valve mouth after insertion of the core at a torque of

— 0,17 N·m to 0,34 N·m for a core with an elastomeric barrel gasket, or

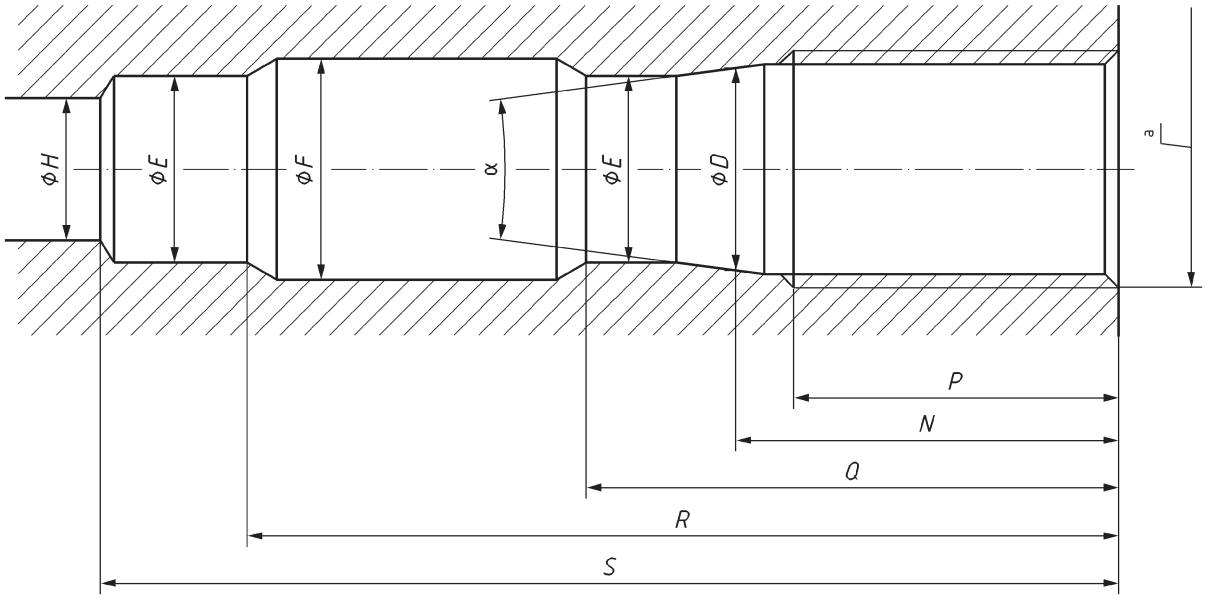
— 0,34 N·m to 0,54 N·m for a core with a metallic sealing gasket.

Figure 2 — Core pin head position — Tolerances

4 ISO core chamber No. 2 (large bore) — Dimensions and tolerances

ISO core chamber No. 2 (large bore) is designed principally for valves used on tyres of agricultural machines, earth-moving machines, and civil aircraft.

The dimensions of the core chamber (see Figure 3) shall be in accordance with Table 2 and the tolerances of the core pin head position in accordance with Figure 4.



Key

a Thread 8V1 (see ISO 4570).

Figure 3 — Core chamber No. 2

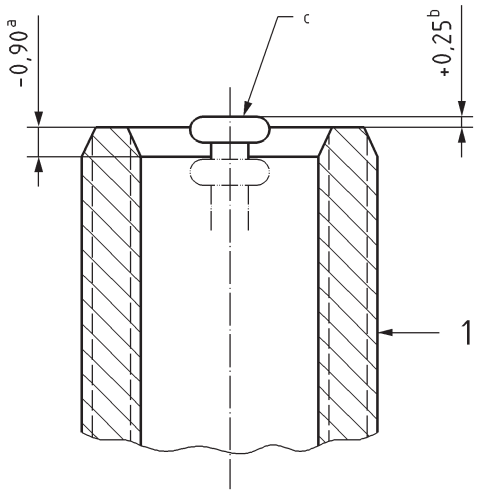
Table 2 — Core chamber No. 2 dimensions and angle α

Dimensions in millimetres

Dimension/angle	Min.	Max.
D	6,7	
E	6,3	6,4
F	7,3	7,7
H	4,6	4,9
N	13,82	14,22
P[a]	11,5	12,3
Q	17,8	18,5
R	30,5	31,5
S	34,3	35,1
α	16°	18°

a The length of the thread is determined by using a GO thread plug gauge (see ISO 1502:1996, 11.3 and Figure 12). The dimension shall be measured from the end of the gauge and shall include a chamfer length of 0,5 × pitch.

Dimensions in millimetres



Key

1 valve stem

a Low limit.

b High limit.

c The pin head shall not be more than 0,25 mm above or 0,90 mm below the valve mouth after insertion of the core at a torque of

— 0,34 N·m to 0,56 N·m for a core with an elastomeric barrel gasket, or

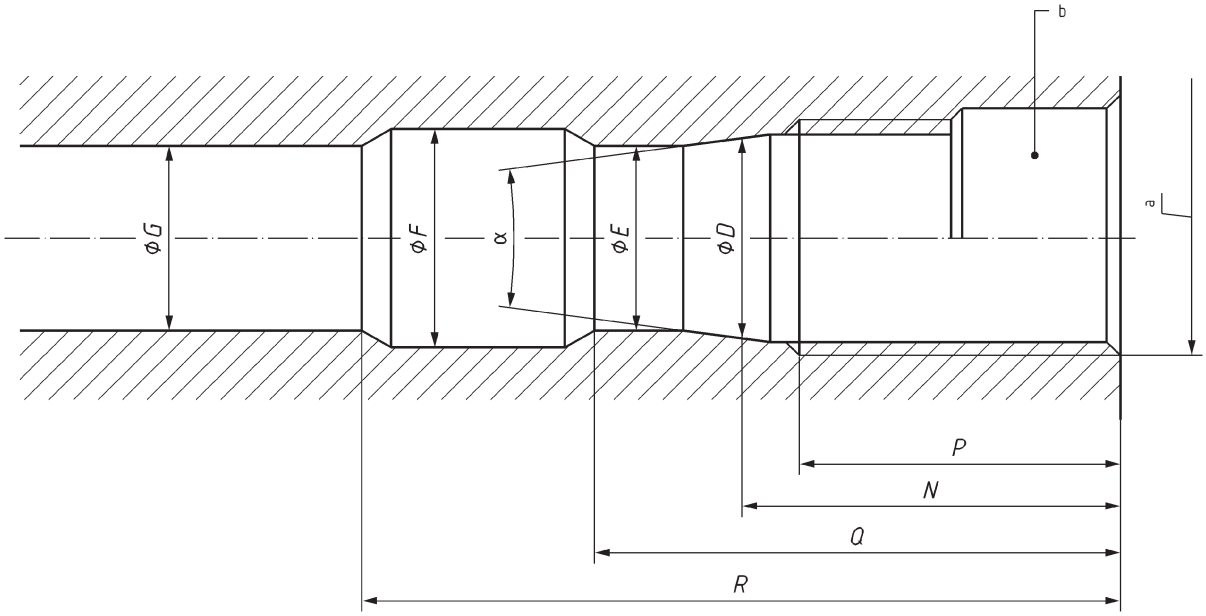
— 0,60 N·m to 0,80 N·m for a core with a metallic sealing barrel gasket.

Figure 4 — Core pin head position — Tolerances

5 ISO core chamber No. 3 — Dimensions and tolerances

ISO core chamber No. 3 (see Figure 5) is designed mainly for bent valves for which the valve mouth is too short to receive a long core.

The dimensions of the core chamber shall be in accordance with Table 3 and the tolerances of the core pin head in accordance with Figure 2.



Key

a Thread 5V1 (see ISO 4570).

b The valve counterbore is optional.

Figure 5 — Core chamber No. 3

Table 3 — Core chamber No. 3 dimensions and angle α

Dimensions in millimetres

Dimension/angle	Min.	Max.
D	4,3	
E	3,82	3,94
F	4,27	4,70
G	3,82	4,70
N	10,0	10,4
P[a]	7,8	8,6
Q	13,5	14,5
R	22,7	—
α	16°	18°

a The length of the thread is determined by using a GO thread plug gauge (see ISO 1502:1996, 11.3 and Figure 12). The dimension shall be measured from the end of the gauge and shall include a chamfer length of 0,5 × pitch.

6 ISO core chamber No. 4 — Dimensions and tolerances

ISO core chamber No. 4 (see Figure 6) is designed mainly for bent valves for which the valve mouth is too short to receive a long core; it is for used only with ES01, ES02, ES03, FR02, FR03, FS01, FS02, GS01, and DF01 (see ISO 9413).

The dimensions of the core chamber shall be in accordance with Table 4 and the tolerances of the core pin head in accordance with Figure 2.