INTERNATIONAL STANDARD

ISO 11116-2

First edition
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Gas cylinders — 17E taper thread for connection of valves to gas cylinders —

Part 2:
Inspection gauges

Bouteilles à gaz — Filetages coniques 17E pour le raccordement des robinets sur les bouteilles à gaz —

Partie 2: Calibres de vérification

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11116-2 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC2, *Cylinder fittings*.

ISO 11116 consists of the following parts, under the general title *Gas cylinders — 17E taper thread for connection of valves to gas cylinders*:

— *Part 1: Specification*

— *Part 2: Inspection gauges*

Annexes A and B of this part of ISO 11116 are for information only.

Introduction

This part of ISO 11116 belongs to a series of standards specifying thread dimensions and gauge requirements.

Gas cylinders — 17E taper thread for connection of valves to gas cylinders —

Part 2:
Inspection gauges

1 Scope

This part of ISO 11116 specifies types, dimensions and principles of the use of gauges, to be used in conjunction with the taper thread specified in ISO 11116-2.

Annex A provides examples of calculations for thread gauge dimensions on the large end diameter.

Annex B draws attention to the limitations of the gauging system specified.

2 Terms and definitions

For the purposes of this part of ISO 11116 the following terms and definitions apply.

2.1
inspection gauge
gauge used for the routine gauging of cylinder neck and valve stem threads, but not used for checking other gauges

2.2
check gauge
gauge for checking dimensional conformity of inspection ring gauges, but not for gauging cylinder neck threads

2.3
single part gauge
gauge, plug or ring, plain or threaded of sufficient length to contact the full length of taper thread

2.4
two-part gauges
two separate inspection gauges, plug or ring, plain or threaded used in combination, where one is used to contact the large end of the taper cone and the other the small end

3 Requirements

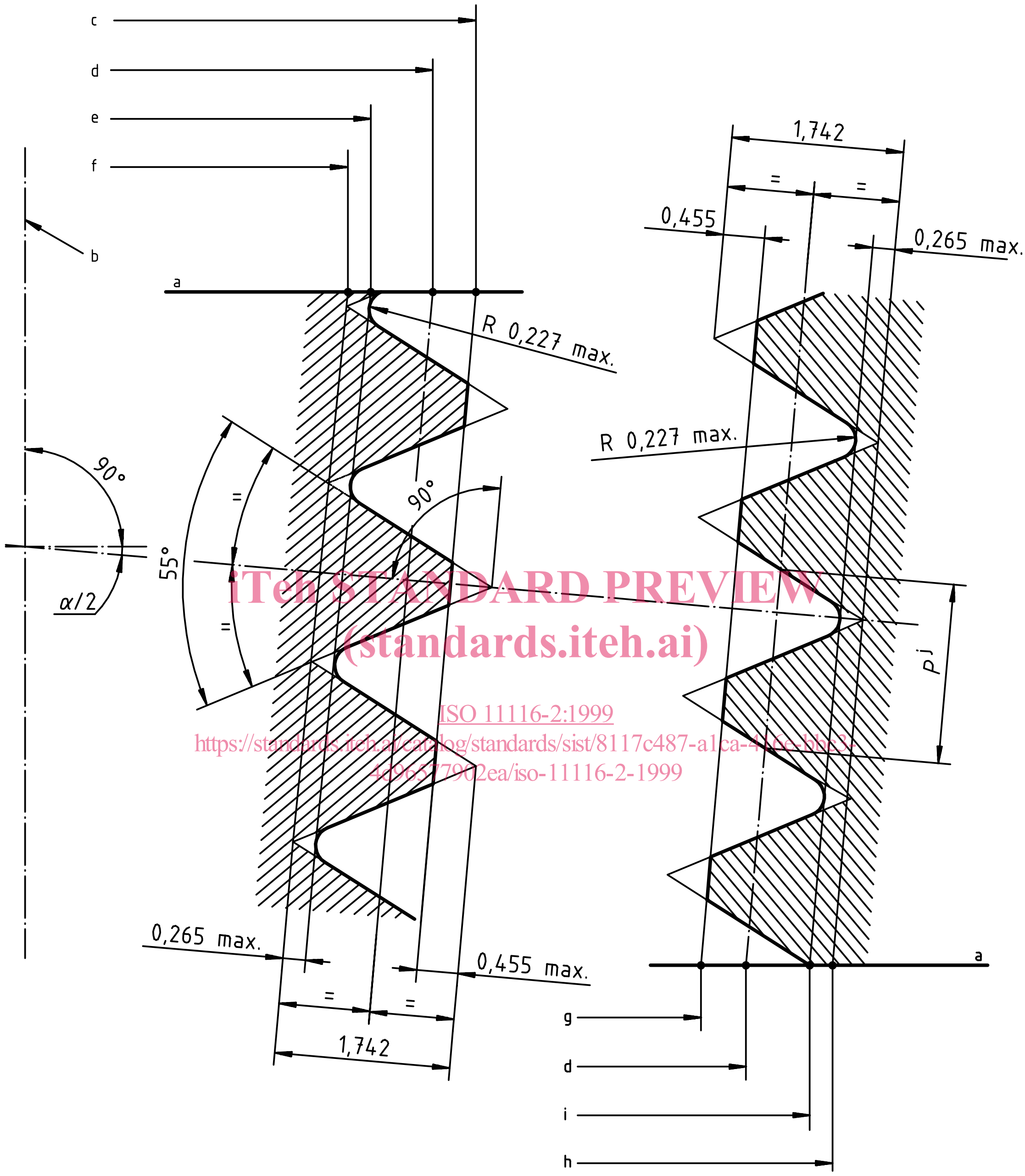
3.1 Materials

All gauges shall be manufactured from material of suitable strength, stability and hardness.

3.2 Thread profile

The thread profile of threaded inspection and check gauges shall be as shown in Figure 1.

Dimensions in millimetres



Plug gauge thread profile Ring gauge thread profile

a Gauge plane
b Thread axis
c Major diameter
d Pitch diameter
e Maximum minor diameter
f Minimum minor diameter
g Minor diameter
h Minimum major diameter
i Maximum major diameter
j Pitch

Figure 1 — Thread profiles

3.3 Thread rotation

The thread shall be a right hand thread, such that it moves away from an observer, when rotated clockwise.

3.4 Taper

— Taper: 3/25;

— Taper angle: 6° 52';

— Taper slope: 12 %.

3.5 Thread profile

The thread profile has a 55° angle. The form and thread height measurements are perpendicular to the cone surface (see Figure 1).

3.6 Pitch, *P*

The pitch is 1,814 mm (derived from $\frac{25,4}{14}$ mm) (see Figure 1).

4 Gauge dimensions

The following dimensional requirements apply to gauges shown in Figure 2 to Figure 15.

All dimensions are given in millimetres.

4.1 Tolerances for specified dimensions on all gauges are:

— ± 0,01 mm on all lengths;

— ± 0,01 mm on diameters of inspection gauges;

— $^{-0,01}_{-0,02}$ mm on diameters of check gauges.

4.2 For threaded gauges, pitch diameters only are specified. For minor and major diameters see Figure 1.

4.3 Unspecified dimensions shall be chosen by the manufacturer of the gauges.

5 Inspection gauges

5.1 Cylinder neck thread

5.1.1 Single part plug gauges

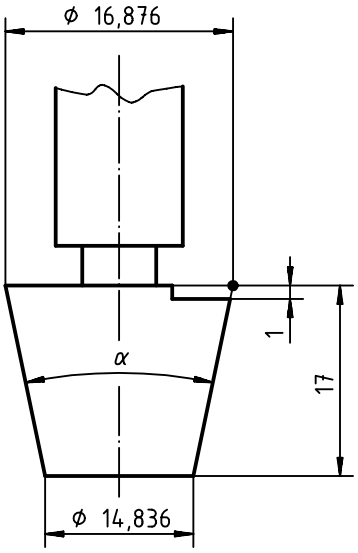
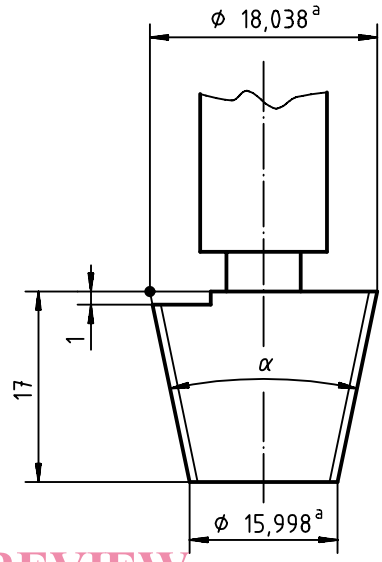


Figure 2 — Plain plug gauge for minor diameters "I-1"



a Pitch diameter

Figure 3 — Threaded plug gauge for pitch diameters "I-2"

5.1.2 Two-part plug gauges – small end diameter

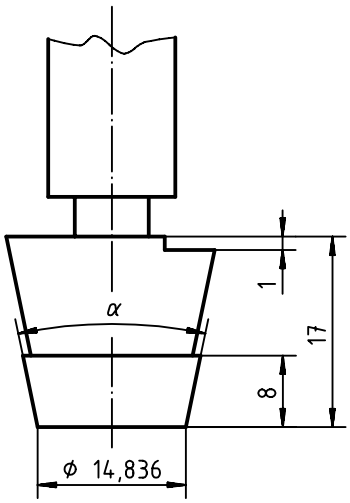
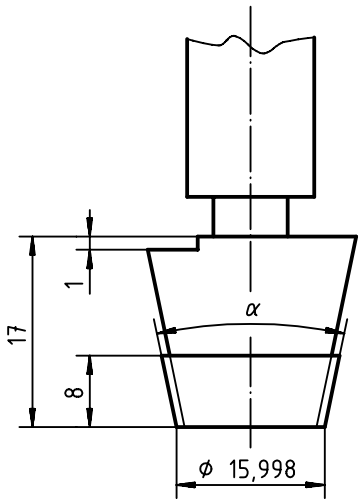


Figure 4 — Plain plug gauge for minor diameters "I-3"



a Pitch diameter

Figure 5 — Threaded gauge for pitch diameters "I-4"

5.1.3 Two-part plug gauges – large end diameter

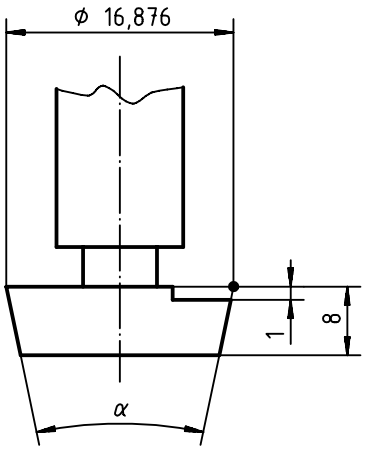
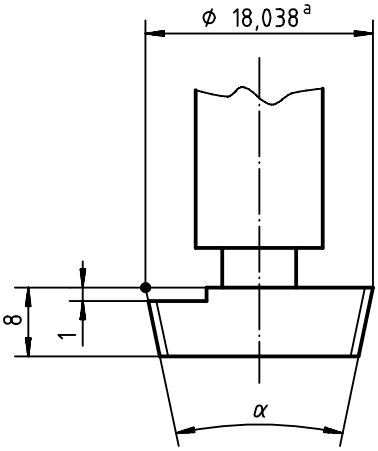


Figure 6 — Plain plug gauge for minor diameters "I-5"



a Pitch diameter

Figure 7 — Threaded gauge for pitch "I-6"

5.2 Valve stem thread

5.2.1 Single-part ring gauges

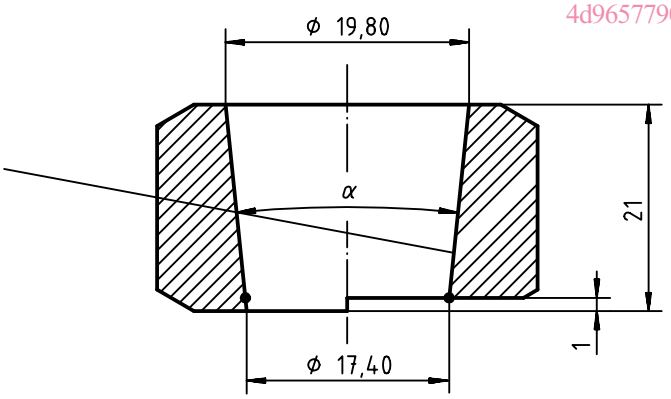
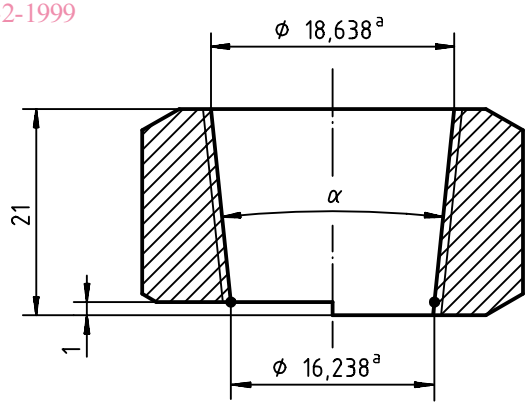


Figure 8 — Plain ring gauge for major diameter "I-7"



a Pitch diameter

Figure 9 — Threaded ring gauge for pitch diameter "I-8"