Manomeetrid. Osa 1: Bourdoni toruga manomeetrid. Mõõtmed, metroloogia, nõuded ja katsetamine

Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 837-1:1999 sisaldab Euroopa standardi EN 837-1:1996 + AC:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 837-1:1999 consists of the English text of the European standard EN 837-1:1996 + AC:1998. This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: See Euroopa standard määrab kindlaks nõuded Bourdoni toruga manomeetrite kohta (tähistatud B-ga, vt p 12). Need on näidikuga manomeetrid, vaakummeetrid ja kombineeritud manovaakummeetrid (kombineeritud rõhumõõturid), mille torud on rõngakujulised, spiraalikujulised või siugtorud, nimimõõde on 40 kuni 250 ning manomeetrilise rõhu mõõtepiirkond on kuni 1600 baari.	**Scope:**

ICS 17.100

Võtmesõnad: manomeetrid, metroloogia, metroloogiline kontroll, mõõteriistad, mõõtmed, märgistus, näidikuga mõõteriist, ohutus, tehnilised andmed, tähistus, täpsus, vaakummeetrid

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 837-1

December 1996

ICS 17.100

Descriptors: Pressure gauges, Bourdon tubes, requirements, testing.

English version

Pressure gauges

Part 1: Bourdon tube pressure gauges
Dimensions, metrology, requirements and testing

Manomètres – Partie 1: Manomètres à tubes de Bourdon – Dimensions, métrologie, prescriptions et essais

Druckmeßgeräte – Teil 1: Druckmeßgeräte mit Rohrfedern – Maße, Meßtechnik, Anforderungen und Prüfung

This European Standard was approved by CEN on 1996-10-30.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Ref. No. EN 837-1:1996 E

Contents

Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 141 "Pressure gauges - Thermometers - Means of measuring and/or recording temperature during the distribution of refrigerated frozen and quick-frozen products", the secretariat of which is held by AFNOR.

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 June 1997, and conflicting national standards shall be withdrawn at the latest by June 1997.

This European Standard is a part of the series of the following standards :

- EN 837-1 : Pressure gauges - Part 1 : Bourdon tube pressure gauges-Dimensions, metrology, requirements and testing ;

- EN 837-2 : Pressure gauges - Part 2 : Selection and installation recommendations for pressure gauges ;

- EN 837-3 : Pressure gauges - Part 3 : Diaphragm and capsule pressure gauges-Dimensions, metrology, requirements and testing.

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

1 Scope

This European Standard specifies requirements for Bourdon tube (designated by B, see clause 12) indicating pressure gauges, vacuum gauges and combined vacuum and pressure gauges (compound gauges), with circular, spiral or coiled forms, from 40 to 250 nominal size with ranges up to 1600 bar for the measurement of gauge pressure.

A reading of zero bar is atmospheric pressure. 1 bar = 10^5 Pa.

Gauges specified have circular dials with concentric scales for industrial and test use.

The standard includes methods of test for performance to be applied at type approval and production piece tests.

The standard applies to gauges suitable for industrial use with common industrial fluids. It applies also to liquid-filled gauges, gauges for high pressure gases and gauges for use with oxygen or acetylene. It does not apply to pressure gauges with electrical contacts.

Pressure gauges for welding, cutting and associated processes are not included in this standard, but are specified in EN 562.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ANSI/ASME B1.20.1		Pipe threads, general purpose (inch).
EN 472	1994	Pressure gauges - Vocabulary.
EN 562	1994	Gas welding equipment - Pressure gauges used for welding, cutting and allied processes.
EN 29539	1992	Materials used for equipment used in gas welding, cutting and allied processes (ISO 9539:1988).
EN 60529	1991	Degrees of protection provided by enclosures.
EN 60068-2-6	1995	Electrical engineering - basic environmental testing procedures - Part 2 : Tests - Test Fc and guidance : Vibration (sinusoidal).
EN 60068-2-27	1993	Electrical engineering - basic environmental testing procedures - Part 2 : Tests - Test Ea and guidance : Shock.
ISO 228-1	1994	Pipe threads where pressure-tight joints are not made on the threads - Part 1: Designation, dimensions and tolerances.

ISO 1302	1992	Technical drawings - Methods of indicating surface texture on drawings.
EN 22768-1	1993	General tolerances - Part 1 : Tolerances for linear and angular dimensions without individual tolerance indications.
ISO 2859-1	1989	Sampling procedures for inspection by attributes - Part 1 : Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.
ISO 7000	1989	Motor vehicles - Graphic symbols - Principles, synopsis.
ISO 10102	1990	Assembly tools for screws and nuts - Double-headed open-ended engineers' wrenches.

3 Definitions

For the purpose of this European Standard, the definitions given in EN 472 apply.

4 Nominal sizes

Nominal sizes of gauges are as follows : 40, 50, 63, 80, 100, 150, 160 and 250.

See table 2 for dimensions.