

Regulaatorid, mille võimsus on kuni 100kg/h (kaasa arvatud) ja maksimaalne nominaalne väljundrõhk kuni 4 bar (kaasa arvatud), v.a. standardis EN 12864 kajastatud, ja nendega seotud ohutusseadmed butaanile, propaanile ja nende segudele KONSOLIDEERITUD TEKST

Regulators with a capacity of up to and including 100 kg/h, having a maximum nominal outlet pressure of up to and including 4 bar, other than those covered by EN 12864 and their associated safety devices for butane, propane or their mixtures CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13785:2005+A1:2008 sisaldab Euroopa standardi EN 13785:2005+A1:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 15.12.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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This Estonian standard EVS-EN 13785:2005+A1:2008 consists of the English text of the European standard EN 13785:2005+A1:2008.

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English Version

**Regulators with a capacity of up to and including 100 kg/h,
having a maximum nominal outlet pressure of up to and
including 4 bar, other than those covered by EN 12864 and their
associated safety devices for butane, propane or their mixtures**

Détendeurs de débit inférieur ou égal à 100 kg/h, à
pression de détente nominale maximale inférieure ou égale
à 4 bar, autres que les détendeurs relevant de l'EN 12864,
et leurs dispositifs de sécurité associés pour butane,
propane ou leurs mélanges

Druckregelgeräte mit einem höchsten Ausgangsdruck von <
4 bar und einem Durchfluss < 100 kg/h, die nicht in EN
12864 geregelt sind, für Butan, Propan oder deren
Gemische sowie die dazugehörigen
Sicherheitseinrichtungen

This European Standard was approved by CEN on 1 July 2004 and includes Corrigendum 1 issued by CEN on 14 February 2007 and Amendment 1 approved by CEN on 27 September 2008.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13785:2005+A1:2008) has been prepared by Technical Committee CEN/TC 181 "Dedicated liquefied petroleum gas appliances", 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of an identical text or by endorsement, at the latest by May 2009, and conflicting national standards shall be withdrawn at the latest by May 2009.

This document includes Amendment 1, approved by CEN on 2008-09-27 and Corrigendum 1 issued by CEN on 2007-02-14.

This document supersedes EN 13785:2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags **AC** **AC 1**.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This document includes a Bibliography.

This standard covers only type testing.

Items relating to quality assurance systems, production testing and particularly certificates of conformity are not covered in this standard.

This standard is the second part of a series of standards covering different applications of LPG Regulators. The two complementary standards are:

- EN 12864: Low pressure, non adjustable regulators having a maximum regulated pressure of less than or equal to 200 mbar, with a capacity of less than or equal to 4 kg/h, and their associated safety devices for butane, propane or their mixtures;
- EN 13786: Automatic change-over valves having a maximum outlet pressure of up to and including 4 bar with a capacity of up to and including 100 kg/h, and their associated safety devices for butane, propane or their mixtures

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

¹⁾ Only applicable to the German version.

1 Scope

This document defines the constructional and operational characteristics, the safety requirements, test methods and the marking of regulators having a capacity of less than or equal to 100 kg/h, other than the regulators covered by EN 12864, for butane, propane or their mixtures, in the gaseous phase.

Regulators for caravans up to 1,5 kg/h are covered by EN 12864.

NOTE 1 bar = 10^5 Pa.

This document also applies to the safety devices which are included within regulators covered by this document. The characteristics of these devices are given in annexes A and B.

The requirements apply generally to regulators used in locations where the temperature likely to be reached during use is between -20 °C and +50 °C. When the regulators are used at temperatures below -20 °C it is essential that they comply with special requirements which are defined in annex C.

This document does not include the installation rules for regulators. Reference should be made to national regulations in force in the member countries.

This document only covers type testing.

WARNING NOTICE: The figures in annexes G and H show the types of connections used according to the country of use of the regulators.

The top part of these figures (above the horizontal line) applies to the regulator and is normative.

The bottom part of these figures (below the horizontal line) applies to the part to be connected to the regulator. This is given as a guide for the tests and is not normative.

2 Normative references

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

EN 437:2003, *Test gases - Test pressures - Appliances categories.*

EN 549, *Rubber materials for seals and diaphragms for gas appliances and gas equipment.*

EN 12164, *Copper and copper alloys - Rod for free machining purposes.*

EN 12165, *Copper and copper alloys - Wrought and unwrought forging stock.*

EN 60695-11-10, *Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods (IEC 60695-11-10:1999).*

EN ISO 75, *Plastics - Determination of temperature of deflection under load.*

EN ISO 178, *Plastics - Determination of flexural properties (ISO 178:2001).*

EN ISO 180, *Plastics - Determination of Izod impact strength (ISO 180:2000).*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: dimensions, tolerances and designation (ISO 228-1:2000)*

EN ISO 527, *Plastics - Determination of tensile properties.*

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions - Part 1: Country codes (ISO 3166-1:1997).*

EN ISO 4892-3, *Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:1994).*

EN ISO 8434-1; *Metallic tube connections for fluid power and general use - Part 1: 24° compression fittings (ISO 8434-1:1994).*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation.*

ISO 301, *Zinc alloy ingots intended for casting.*

ISO 565, *Test sieves - Metal wire cloth, perforated metal plate and electroformed sheet - Nominal sizes of openings.*

ISO 7005-2, *Metallic flanges - Part 2: Cast iron flanges.*

ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests.*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 General terms and definitions

3.1.1

regulator

device which maintains a regulated pressure within preset limits, whatever the upstream pressure, rate and temperature. The regulator can have fixed, variable or adjustable regulated pressure.

The terminology given is that shown in Figure 1. The diagram is given as information; no other method is excluded