EESTI STANDARD EVS-EN 257:1999

Gaasiseadmete mehaanilised termostaadid

Mechanical thermostats for gas-burning appliances

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 257:1999 sisaldab Euroopa standardi EN 257:1992+A1:1996 ingliskeelset teksti. Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 257:1999 consists of the English text of the European standard EN 257:1992+A1:1996. This document is endorsed on 23.11.1999 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 standard määrab kindlaks konstruktsiooni- ja töönõuded gaasiseadmete mehaanilistele termostaatidele. Standard kehtestab ühtlasi määratlused, katsetingimused ja märgistused. Standard kehtib mehaaniliste termostaatide kohta, mis kontrollivad gaasivoolu otseselt või kaudselt läbi integraalgaasiventiili ning mis ei vaja toimimiseks välist elektrienergiat. Selle standardi nõuded kehtivad kõigi gaasiseadmete termostaatidele nii soojendusel kui jahutusel, mis ...	**Scope:**

ICS 27.060.20

Võtmesõnad: gaasiseadmed, gaasivool, katsed, märgistus, seadmete tehnilised andmed, termostaadid, tööomaduste hindamine

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 257
February 1992
+ A1
June 1996

ICS 17.200.20; 27.060.20

Descriptors: Gas appliances, thermostats, safety requirements, testing.

English version

Mechanical thermostats for gas burning appliances
(includes Amendment A1:1996)

Thermostats mécaniques équipant les appareils d'utilisation des combustibles gazeux (amendement A1:1996 inclus)

Mechanische Temperaturregler für Gasgeräte (enthält Änderung A1:1996)

This European Standard was approved by CEN on 1996-02-06 and amendment A1 on 1995-11-30.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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.

This European Standard exists 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, 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

Contents

Page

Tables

Page

Figures

Foreword to EN 257:1992

This European Standard has been prepared by CEN/TC 58 'Safety and control devices for gas burners and gas burning appliances', the Secretariat of which is held by BSI.

This European Standard has been prepared under a mandate given to CEN by the Commission of European Communities and the European Free Trade Association and supports essential requirements of the relevant EC Directive.

This standard covers type testing only.

In accordance with the CEN/CENELEC Internal Regulations, 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.

Foreword to EN 257:1992/A1:1996

This amendment has been prepared by Technical Committee CEN/TC 58 'Safety and control devices for gas burners and gas burning appliances', the Secretariat of which is held by BSI.

It has been issued to align the standard with the essential requirements stipulated in EC Directive 90/396/EEC ('Gas Appliance Directive') and to correct errors in the first edition of the standard.

This amendment has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive 90/396/EEC.

This amendment shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards be withdrawn, by December 1996 at the latest.

In accordance with CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this amendment: 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 safety, constructional and performance requirements for mechanical thermostats for gas applications. It also establishes concepts, test conditions and marking.

It applies to mechanical thermostats that control the gas flow directly or indirectly through an integral gas valve, and that do not require external electrical energy for their operation.

The requirements specified here apply to thermostats for all gas appliances, for heating or cooling, which are suitable for one or more of the fuel gases of the 1st, 2nd and 3rd families and for the associated gas pressures.

This standard only covers thermostats used with gas appliances which are not installed outdoors.

Mechanical thermostats dealt with in this standard are intended for control functions.

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.

ISO 7-1:1981
Pipe threads where pressure tight joints are made on the threads; designation, dimensions and tolerances

ISO 65:1981
Carbon steel tubes suitable for screwing in accordance with ISO 7-1

ISO 228-1:1982
Pipe threads where pressure-tight joints are not made on the threads; designation, dimensions and tolerances

ISO 262:1973
ISO general purpose metric screw threads; selected sizes for screws, bolts and nuts

ISO 274:1975
Copper tubes of circular section; dimensions

ISO 301:1981
Zinc alloy ingots intended for casting

ISO 1817:1985
Rubber, vulcanized; determination of the effect of liquids

ISO 7005:1988
Metallic flanges

IEC 335-1:1983
Safety of household and similar electrical appliances; general requirements

IEC 529:1989
Classification of degrees of protection provided by enclosures

IEC 685-2-1:1980
Connection devices (junction and/or tapping) for household and similar fixed electrical installations; particular requirements; screwless terminals for connecting copper conductors without special preparation

IEC 998-2-1:1990
Connecting devices for low voltage circuits for household and similar purposes; particular requirements for connecting devices as separate entities with screw-type clamping units

IEC 730-1:1986
Automatic electrical controls for household and similar use; General requirements

CEE Recommendation No. 6 (1974)
Snap-on connectors

3 Definitions

For the purposes of this standard, the following definitions apply.

3.1 mechanical thermostat ('thermostat', for short): Thermostat which controls the temperature by adjusting the flow rate in accordance with the sensor temperature without any external energy, so that the temperature remains within given limits.

3.2 Types of mechanical thermostat

3.2.1 adjustable thermostat: Thermostat in which the temperature set point can be adjusted by the user between minimum and maximum values.

3.2.2 fixed setting thermostat: Thermostat that has a pre-set fixed operating temperature which cannot be adjusted by the user.

3.2.3 snap-acting thermostat: Thermostat with only two positions for the flow rate, i.e. 'Full on – Off', 'Full on – Reduced rate' or 'Reduced rate – Off'.

3.2.4 modulating thermostat: Thermostat which controls the flow rate in accordance with a predetermined and continuous function of the temperature of the temperature sensor.

3.2.5 modulating thermostat with additional on-off action: Thermostat which acts as a snap-acting thermostat between the closed and reduced positions and as a modulating thermostat between the reduced and full-on positions.

3.3 closure member: Moving part of the thermostat which opens and closes the gas circuit and/or varies the gas rate.

3.4 breather hole: Orifice that allows atmospheric pressure to be maintained in a compartment of variable volume.

3.5 pre-setting device: Device for setting the thermostat ready for operation (to be effected by an authorized person). It may be fixed or variable (e.g. when it is the gas flow that is adjustable, either an orifice or an adjusting screw may be used).

3.6 fixed by-pass: Non-adjustable pre-setting device for fixing the minimum gas flow through a thermostat.

3.7 by-pass adjusting device: Setting screw or an exchangeable orifice that fixes the minimum gas flow rate through the thermostat, and which is accessible only by the use of tools.

3.8 temperature sensor: Device which senses the temperature of the medium to be controlled or to be supervised.

3.9 Leak tightness

3.9.1 external leak tightness (soundness): Leak tightness of a gas-carrying compartment with respect to atmosphere.

3.9.2 internal leak tightness (thermostat with complete shut-off): Leak tightness of the closure member when in a closed position sealing a gas-carrying compartment with respect to another compartment or to the outlet of the thermostat.

The internal leak tightness is the total leakage of those closure members in the closed position.

3.10 Pressures

3.10.1 General: All pressures are relative to the atmospheric pressure and are measured at right angles to the direction of gas flow.