



NSAI
Standards

Irish Standard
I.S. EN 16905-2:2020

Gas-fired endothermic engine driven heat pumps - Part 2: Safety

I.S. EN 16905-2:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 16905-2:2020 is the adopted Irish version of the European Document EN 16905-2:2020, Gas-fired endothermic engine driven heat pumps - Part 2: Safety

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EUROPEAN STANDARD

EN 16905-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2020

ICS 27.080

English Version

Gas-fired endothermic engine driven heat pumps - Part 2: Safety

Pompes à chaleur à moteur endothermique alimenté
au gaz - Partie 2: Sécurité

Gasbefeuerte endothermische Motor-Wärmepumpen -
Teil 2: Sicherheit

This European Standard was approved by CEN on 4 November 2019.

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 CEN-CENELEC Management Centre or to any CEN member.

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EN 16905-2:2020 (E)

European foreword

This document (EN 16905-2:2020) has been prepared by Technical Committee CEN/TC 299 “Gas-fired sorption appliances, indirect fired sorption appliances, gas-fired endothermic engine heat pumps and domestic gas-fired washing and drying appliances”, the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by July 2020 and conflicting national standards shall be withdrawn at the latest by July 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This standard comprises the following parts under the general title, *Gas-fired endothermic engine driven heat pumps*:

- *Part 1: Terms and definitions;*
- *Part 2: Safety;*
- *Part 3: Tests conditions;*
- *Part 4: Tests methods;*
- *Part 5: Calculation of seasonal performances in heating and cooling mode.*

These documents will be reviewed whenever new mandates could apply.

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

1 Scope

1.1 Scope of EN 16905

This European Standard specifies the requirements, test methods and test conditions for the rating and performance calculation of air conditioners and heat pumps using either air, water or brine as heat transfer media, with gas-fired endothermic engine driven compressors when used for space heating, cooling and refrigeration, hereafter referred to as "GEHP appliance".

This European Standard only applies to GEHP appliances with a maximum heat input (based on net calorific value) not exceeding 70 kW at standard rating conditions.

This standard only applies to GEHP appliances under categories I_{2H}, I_{2E}, I_{2Er}, I_{2R}, I_{2E(S)B}, I_{2L}, I_{2LL}, I_{2ELL}, I_{2E(R)B}, I_{2ESi}, I_{2E(R)}, I_{3P}, I_{3B}, I_{3B/P}, II_{2H3+}, II_{2Er3+}, II_{2H3B/P}, II_{2L3B/P}, II_{2E3B/P}, II_{2ELL3B/P}, II_{2L3P}, II_{2H3P}, II_{2E3P} and II_{2Er3P} according to EN 437:2018.

This standard only applies to GEHP appliances having:

- a) gas fired endothermic engines under the control of fully automatic control systems;
- b) closed system refrigerant circuits in which the refrigerant does not come into direct contact with the fluid to be cooled or heated;
- c) where the temperature of the heat transfer fluid of the heating system (heating water circuit) does not exceed 105 °C during normal operation;
- d) where the maximum operating pressure in the
 - 1) heating water circuit (if installed) does not exceed 6 bar
 - 2) domestic hot water circuit (if installed) does not exceed 10 bar.

This European Standard applies to GEHP appliances only when used for space heating or space cooling or for refrigeration, with or without heat recovery.

The GEHP appliances having their condenser cooled by air and by the evaporation of external additional water are not covered by this European Standard.

Packaged units, single split and multisplit systems are covered by this European Standard. Single duct and double duct units are covered by this European Standard.

The above GEHP appliances can have one or more primary or secondary functions.

This European Standard is applicable to GEHP appliances that are intended to be type tested. Requirements for GEHP appliances that are not type tested would need to be subject to further consideration.

In the case of packaged units (consisting of several parts), the standard applies only to those designed and supplied as a complete package.

NOTE All the symbols given in this text are used regardless of the language used.

1.2 Scope of EN 16905-2

This part of EN 16905 specifies the safety requirements, the safety test conditions and the safety test methods of gas-fired endothermic engine driven heat pumps for heating and/or cooling mode including the engine heat recovery.

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