

**Külmakompressorid. Nominaal tingimused, tolerantsid
ja tootja võimsusandmete esitus**

**Refrigerant compressors - Rating conditions, tolerances
and presentation of manufacturer's performance data**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12900:2013 sisaldab Euroopa standardi EN 12900:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 12900:2013 consists of the English text of the European standard EN 12900:2013.
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English Version

Refrigerant compressors - Rating conditions, tolerances and presentation of manufacturer's performance data

Compresseurs pour fluides frigorigènes - Conditions de détermination des caractéristiques, tolérances et présentation des performances par le fabricant

Kältemittel-Verdichter - Nennbedingungen, Toleranzen und Darstellung von Leistungsdaten des Herstellers

This European Standard was approved by CEN on 8 June 2013.

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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 12900:2013) has been prepared by Technical Committee CEN/TC 113 “Heat pumps and air conditioning units”, the secretariat of which is held by AENOR.

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of an identical text or by endorsement, at the latest by January 2014 and conflicting national standards shall be withdrawn at the latest by January 2014.

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

This document supersedes EN 12900:2005.

The main changes with respect to the previous edition are listed below:

- a) Clause 3 “Terms and definitions” is modified;
- b) the revised standard takes into account the application of CO₂;
- c) the requirements on part load conditions according to Mandate M/488 are considered.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the rating conditions, tolerances and the method of presenting manufacturer's data for positive displacement refrigerant compressors. These include single stage compressors and single and two stage compressors using a means of fluid subcooling. This is required so that a comparison of different refrigerant compressors can be made. The data relate to the refrigerating capacity and power absorbed and include requirements for part-load operation where applicable.

2 Normative references

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

EN 378-1:2008+A2:2012, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 1: Basic requirements, definitions, classification and selection criteria*

EN 13771-1, *Compressors and condensing units for refrigeration — Performance testing and test methods — Part 1: Refrigerant compressors*

ISO 817, *Refrigerants — Designation system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 378-1:2008+A2:2012 and the following apply.

3.1

positive displacement compressor

compressor in which compression is obtained by changing the internal volume of the compression chamber

[SOURCE: EN 378-1:2008+A2:2012, 3.4.6]

3.2

refrigerating capacity

product of the low pressure mass flow of refrigerant through the compressor and the difference between the specific enthalpy of the refrigerant at the low pressure of the compressor inlet and the specific enthalpy of fluid entering the evaporator expansion device

Note 1 to entry: This latter enthalpy is related to the stated fluid temperature under following pressure conditions:

- for single-stage expansion cycles the compressor discharge pressure;
- for multiple-stage expansion cycles the pressure (dew point temperature) at the corresponding compressor intermediate port.

The refrigerant at the low compressor inlet is superheated above the suction dew point temperature to the stated value.

Note 2 to entry: Condensing temperature is defined as saturated dew point temperature.