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Multiple split-system air-conditioners and air-to-air heat pumps — Testing and rating for performance

Climatiseurs et pompes à chaleur air/air multi-split — Essais et détermination des caractéristiques de performance

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 15042 was prepared by Technical Committee ISO/TC 86, *Refrigeration and air-conditioning*, Subcommittee SC 6, *Testing and rating of air-conditioners and heat pumps*.

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Multiple split-system air-conditioners and air-to-air heat pumps — Testing and rating for performance

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1 Scope

This International Standard establishes performance testing and rating criteria for factory-made residential, commercial and industrial, electrically driven, mechanical-compression, air-cooled air-conditioners and air-to-air heat pumps, described as basic multi-split systems, modular multi-split systems and modular heat recovery multi-split systems. These multi-split systems include air-to-air systems with non-ducted and/or ducted indoor units with integral fans and indoor units supplied without fans.

This International Standard is limited to single- and multiple-circuit split-systems which utilize one or more compressors with no more than two steps of control of the outdoor unit. It is also limited to split-systems with a single refrigeration circuit which utilize one or more variable-speed compressors or alternative compressor combinations for varying the capacity of the system by three or more steps. These split-systems are designed to operate with a combination of one or more outdoor units and two or more indoor units designed for individual operation, and such modular systems that are capable of transferring recovered heat from one or more indoor units to other units in the same system.

The requirements of testing and rating contained in this International Standard are based on the use of matched assemblies.

This International Standard is not applicable to the testing and rating of:

a) water-cooled or water source equipment;

b) mobile (single-duct) units having a condenser exhaust duct;

c) individual assemblies not constituting a complete refrigeration system;

d) equipment using the absorption refrigeration cycle.

This International Standard does not cover the determination of either seasonal efficiencies or seasonal part-load performances which can be required in some countries because they provide a better indication of efficiency under actual operating conditions.

NOTE Throughout this International Standard, the terms “equipment” and “systems” mean “multi-split air-conditioners” and/or “multi-split heat pumps”.

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.

ISO 817, *Refrigerants — Designation and safety classification*[1)]

1) To be published. (Revision of ISO 817:2005.)

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