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Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct — Testing and rating for performance

AMENDMENT 1

Climatiseurs refroidis par air et pompes à chaleur portables non raccordés à simple conduit — Essais et détermination des caractéristiques des performances

AMENDEMENT 1

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Foreword

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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AMENDMENT 1

Clause 9

Add a new subclause 9.3 after subclause 9.2.

9.3 Literature requirements

Each air conditioner and heat pump system shall have information as required by Annex G in installation/use manuals as provided with the unit from the factory.

Annex G

Add the following annex after Annex F, before the Bibliography.

Annex G
(normative)
Information on installation and use

G.1 General

Non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct can be selected for their easiness and rapidity of use, handling and installation, in particular when the use of other categories of air conditioners is not convenient or it is forbidden, for examples in rented or holiday houses or in historical buildings where an external unit cannot be placed outdoor. In addition, these appliances have higher flexibility in use as they do not need to be permanently installed, they can also be used in different rooms, depending on the length of the exhaust hose or on the installation conditions available (e.g. suitable air evacuation outlets).

Operational mode and features are quite different from those of the well-known non-ducted air conditioners and heat pumps largely diffused worldwide and covered by ISO 5151.

For non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust duct, net cooling capacity is decreased when outdoor temperature is higher than room temperature. Net cooling capacity is increased when outdoor temperature is lower than room temperature. Similar capacity change occurs also in heating operation.

G.2 Information for correct installation and use

The following information on their correct installation and on use of non-ducted portable air-cooled air conditioners and air-to-air heat pumps having a single exhaust ducts, shall be included in the instructions for installation and use and provided to the user together with the appliance.

G.3 Installation

Single duct portable air conditioners are suitable for installation in small rooms (e.g. single rooms, studio apartments, small offices).

Install the air conditioner on a firm foundation to minimize noise and vibration and place the unit on a smooth, level floor.

Never place any obstacles around the air inlet or outlet of the air conditioner

For efficient air-conditioning keep at least 30 cm distance between the wall and surface of the appliance. Air outlet shall be kept at least 100 cm from any wall.

For the detailed installation procedure follow strictly the manufacturer instructions.

It is important that air exhaust hose and all its accessories are tightly connected in order to minimize air leakage into indoor environment.

G.4 Straighten the exhaust hose

This is extremely important for the proper operation and maintenance of a portable air conditioner. The exhaust hose that is used to vent the hot air out, whether through a window, or a sliding door, or drop ceiling, should minimize bends or twists and avoid kinks.

Do not try to extend the exhaust hose, it should remain as short as possible to ensure maximum efficiency. Most exhaust hoses are 70 cm to 130 cm long which should provide you with sufficient space to reach a proper venting area.

For a better performance it is suggested to place insulation material around the duct.

G.5 Cleaning

Regularly cleaning your portable air conditioning unit is one of the most important things you can do to keep it in proper working condition. Like most essential household appliances, the importance of proper maintenance simply cannot be stressed enough. When it comes to portable air conditioners, there are a few areas that need to be routinely checked-out and cleaned, if needed.

Filters in the A/C unit need to be cleaned or changed on a regular basis according to manufacturer instructions. The frequency in which change or clean the filter depends on the use of air conditioner and on the indoor / outdoor environment.

It is suggested to clean up any dust or debris that has accumulated within the exhaust hoses and grilles. Any particles that are stuck in the exhaust hoses and grilles may impede the overall air flow of your unit, which will not only lead to a degradation of its overall efficiency, but also overwork the unit which may then lead to a shortened lifespan of the appliance. To avoid this, and ensure you get the most from your portable A/C unit, it is strongly recommended to clean the exhaust hoses and grilles out during high-usage months.

G.6 General recommendations for optimal operation

To ensure optimal performances from your air conditioner, follow these recommendations.

— It is recommended to use as spot cooling with high outside air temperatures (higher than 30 °C).

— It is recommended to use for room cooling with mild outside air temperatures (lower than 29 °C).

— Close windows and doors in the room to be air conditioned (see Figure G.1).

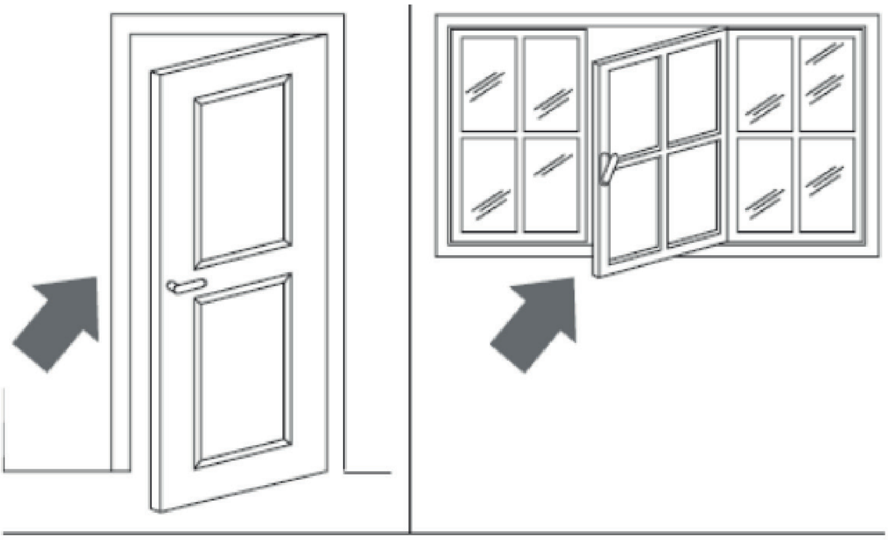

Figure G.1 — Close doors and windows

— Follow strictly the manufacturer instructions.

— Protect the room from direct exposure to the sun by partially closing curtains and/or blinds to increase performances and to make the appliance much more economical to run (see Figure G.2).

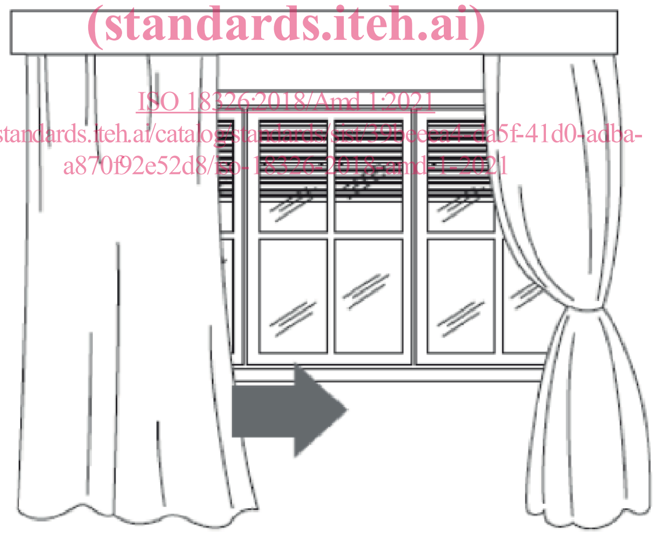

Figure G.2 — Close blinds or curtains

— Never use the appliance outdoor.

— Make sure there are no operating heating appliances in the room where the air conditioner is installed.

— Make sure the air conditioner is standing on a level surface.

— Avoid dripping or splashing of water or other liquids on the appliance.

— Condensate collection tank shall be emptied when water level sensor stops operation.

— Do not place or store the air conditioner where it can fall or be pulled into water or any other liquid. Unplug immediately if any contact with water occurs.

— Never rest objects of any kind on the air conditioner.

— Never obstruct the air intake or outlet grilles (see Figure G.3).

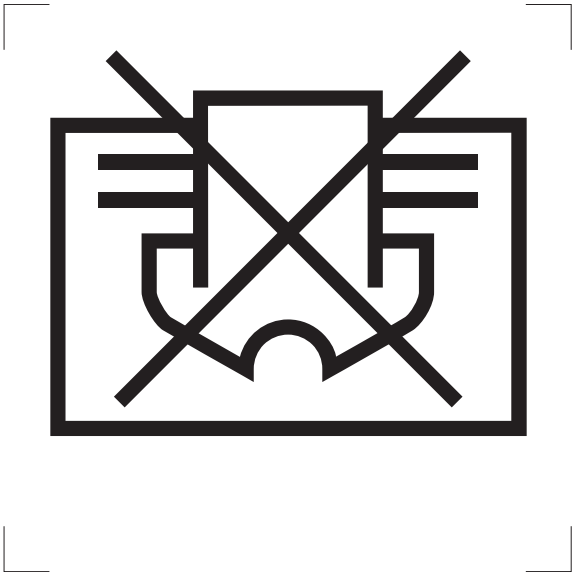

Figure G.3 — Not suitable for covering

ICS 23.120; 27.080

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