

DMMS ISO 15042:2017 Multiple split-system air conditioners and air-to-air heat pumps — Testing and rating for performance

Scope

This document specifies the performance testing, the standard conditions and the test methods for determining the capacity and efficiency ratings of air-cooled air conditioners and air-to-air heat pumps.

This document is applicable to the following equipment:

- — 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 document is limited to:

- — residential, commercial and industrial split-system air conditioners and heat pumps;
- — factory-made, electrically driven and use mechanical compression;
- — single- and multiple-circuit split-systems which utilize one or more compressors with no more than two steps of control of the outdoor unit;

or

- — 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 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 document are based on the use of matched assemblies.

This document is not applicable to the rating and testing of the following:

- 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.
- e) ducted air conditioners and/or ducted heat pumps, rated at less than 8 kW and intended to operate at external static pressures of less than 25 Pa, controlled by a single thermostat/controller (refer to ISO 5151);
- f) multiple split-system utilizing one or more refrigeration systems, one outdoor unit and one or more indoor units, controlled by a single thermostat/controller (refer to ISO 5151 or ISO 13253).

This document does not cover the determination of 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 document, the terms “equipment” and “systems” mean “multi-split air conditioners” and/or “multi-split heat pumps”.