SASO 2663/2017

الهيئة السعودية للمواصفات والمقاييس والجودة Saudi Standards, Metrology and Quality Org (SASO)



SASO 2663:2017 (Draft)

AIR CONDITIONERS

MINIMUM ENERGY PERFORMANCE, LABELLING AND TESTING REQUIREMENTS FOR LOW CAPACITY WINDOW TYPE AND SINGLE-SPLIT

SASO 2663/2017

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Draft Saudi Standard No. 2663/2017

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Introduction and Objective

This document has been prepared by the Saudi Standards, Metrology and Quality Organization (SASO) and will supersede the previous standard: SASO 2663:2014 "Energy Labelling and Minimum Energy Performance Requirements for Air-Conditioners". The standard was updated in order to:

- 1- Improve the minimum energy efficiency requirements (MEPS)
- 2- Clarify the definitions for rated values, tested values and acceptance criteria.
- 3- Update the label design

The objective of this document is to provide detailed performance and energy labelling requirements that air-conditioning appliances need to meet in order to enter the Saudi market.

1. SCOPE

This standard specifies the Minimum Energy Performance Standard (MEPS) and the energy labelling requirements for single-package of window type, single split-system non-ducted air conditioners using air-cooled condensers, single split-system ducted air-conditioners using air-cooled condensers, and heat pumps using air-cooled condensers or using electric resistance for residential, commercial and industrial sector as applicable in accordance with SASO standards.

The standard applies to units designed to operate with the following voltages:

- AC single phase circuits of 220 V or 230 V,
- DC single phase up to 400V,
- Designed for dual voltage (including DC) up to 400V,
- Voltage range including above values, and three phase circuits of 380 V or 400 V
- At frequency of 60 Hz.

The standard covers units with capacities up to and including 65,000 Btu/h (19 kW).

Note: For any additional requirements such as safety, please refer to SASO related standards.

The following units are excluded from the scope of this standard:

a) Units covered by SASO 2874 : 2016 "Air Conditioners – Minimum Energy Performance Requirements and Testing Requirements" standard

b) Evaporative coolers

c) Mobile (windowless) and portable units with exhaust air duct

d) Individual assemblies not constituting a complete refrigeration system such as condensing units for separate use

e) Models that have been granted exemption by SASO due to specific design for applications such as air-conditioners that are not intended for human comfort

2. NORMATIVE REFERENCES

The following normative reference standards apply. However, this standard supersedes the below reference standards in case of conflicting requirements. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- SASO GSO ISO 5151 (2010): Non-ducted air conditioners and heat pumps Testing and rating for performance
- SASO GSO ISO 13253 (2011): Ducted air-conditioners and air to air heat pumps Testing and rating for performance

3. TERMS AND DEFINITIONS

3.1 Annual Energy Consumption (AEC)

AEC is estimated by calculating energy consumed in (kWh), based on the rated power input at T1 conditions multiplied by 2700 hours. AEC = Rated Power (kW) x 2700 (h) [kWh]

3.2 Check test (Compliance test)

A full or partial test in accordance to SASO GSO ISO 5151 or SASO GSO ISO 13253 as applicable, to verify the performance and energy consumption of an individual model.

3.3 Cooling Capacity category

The cooling capacity category for ACs is a category by which the appropriate MEPS value is selected.

3.4 Ducted air conditioners

An air conditioner model configuration where the indoor side is situated remote to the space to be conditioned. The conditioned air is supplied or extracted via a duct.

3.5 Energy Efficiency rating

Is part of the the energy efficiency label displayed by colored bars. The rating indicates the claimed energy efficiency of a model at rated conditions and derived from the rated EER at T1.

3.6 Maximum Operating Conditions

The maximum allowable working conditions that a system, a part of a system or equipment is designed to and/or can withstand.

3.7 Minimum Energy Performance Standard (MEPS)

Mininum value of the EER to be reached by the air conditioner for the rating conditions at T1 and T3.

3.8 Non-ducted air conditioner

An air conditioner model configuration where the indoor side is situated partly or wholly within the space to be conditioned. The conditioned air is supplied and extracted directly to and from the conditioned space.

3.9 Rated capacity

The nominal capacity claimed by the manufacturer of an air-conditioner model determined as follows, as applicable:

Rated cooling capacity: as claimed by the manufacturer for temperature T1 and T3 (unit: kW - Btu/h).

Rated heating capacity: as claimed by the manufacture for temperature condition H1 (units: kW).

The rated capacity appears on the energy label as 'Capacity' heating and/or cooling, as applicable (unit: kW - Btu/h).

3.10 Rated Coefficient of Performance (COP) for heating

Ratio of the rated heating capacity to the rated power input value (Unit: W/W) at any given set of rating conditions at H1.

3.11 Rated Energy Efficiency Ratio (EER)

Ratio of the rated cooling capacity to the rated power input value (Unit: Btu/(h.W)) at any given set of rating conditions at T1 and T3.

3.12 Rated power

Effective power input of the air conditioner model as claimed by the manufacturer during the determination of rated cooling capacity and rated heating capacity, as applicable. (Units: W or kW).

3.13 Reference testing conditions for cooling and Heating (Temperatures T1, T3 and H1) For the values of Reference testing conditions for cooling and Heating , please refer to Table (1).

3.14 Single split system

An air conditioner with separate indoor and outdoor components that are connected with refrigerant piping. The indoor unit is usually fixed within the conditioned space.

3.15 Single Package Windows air conditioners

A non ducted air conditioners in which a single unit contains all the components of the air conditioning unit (compressors, motors, connecting pipes and heat exchangers, and the entire air conditioning unit rests on a single base) and designed for mounting in a window or through a wall.

3.16 Tested (measured) Energy Efficiency Ratio (EER)

Ratio of the tested cooling capacity to the tested power input value (Unit: Btu/(h.W)) at any given set of rating conditions at T1 and T3.

3.17 Tested (measured) capacity

The tested value of the thermal capacity of the model: Tested cooling capacity: as measured for temperatures T1 and T3. (Unit: Btu/h) Tested heating capacity: as measured for temperature H1 (Unit: kW).

3.18 Tested (measured) power

The tested value of the air conditioner power input as measured according to the testing standard applicable (Unit: W or kW).

4. MINIMUM ENERGY PERFORMANCE STANDARD (MEPS)

4.1 General

The value of the Energy Eficiency Ratio (EER) for the rated values, shall be greater than or equal to the minimum energy performance standard (MEPS) value for the air conditioners in the scope of this standard. MEPS are based on the rated cooling capacity for the rated EER at rating conditions (T1) and (T3), according to Table 1 and Table 2.

Table 1 – REFERENCE TESTING CONDITIONS FOR COOLING AND HEATING				
	Indoor s	section	Outdoor section	
Testing conditions	Dry-Bulb °C	Wet-Bulb °C	Dry-Bulb °C	Wet-Bulb °C
Temperature T ₁	27.0	19.0	35.0	24.0
Temperature T_3	29.0	19.0	46.0	24.0
Temperature H ₁	20.0	15.0	7.0	6.0

Table	Table 2 – MINIMUM REQUIRED EER (MEPS) APPLICABLE				
Air conditioner	Rated Cooling Capacity (CC) categories at	EER Values (Btu/h)/W			
appliance type	test condition (11) in Blu/n (or W)	T1	Т3		
Single package of Window type – category A	CC ≤ 24,000 (7,050W)	9.80	7.00		
Single package of Window type – category B	24,000 (7,050W) < CC ≤ 65,000 (19,050 W)	9.00	6.20		
Split type ducted and non-ducted using air- cooled condensers, heat pumps using air cooled condensers	CC ≤ 65,000 (19,050 W)	11.80	8.30		

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4.2 Declaration of the rated cooling capacity and heating capacity

The declaration of the rated cooling capacity CC_{rated} shall be expressed in terms of Btu/h and kW as presented in Table 3.

The declaration of the rated heating capacity CH_{rated} shall be expressed (when relevant) in terms of W at a multiple of 50 W.

Table 3 – RULES TO EXPRESS THE RATED COOLING CAPACITY			
Rated cooling capacity (Btu/h) Multiples (Btu/h)			
CC _{rated} ≤ 24,000 (7,050 W)	100 (30 W)		
24,000 < CC _{rated} ≤ 65,000 (19,050 W)	200 (50 W)		

4.3 Declaration of the rated EER (EER_{rated}) and rated COP (COP_{rated})

Standard values of energy efficiency, whenever published, shall be expressed in multiples of the nearest 0.05 Btu/(W.h) for the rated EER or 0.05 (W/W) for the rated COP.

4.4 Functional requirements related to cooling performances

Air conditioners within the scope of this standard shall satisfy the following requirements:

- Maximum cooling performance at temperature 52 C
- Minimum cooling, freeze-up air blockage and freeze-up drip when relevant
- Condensate control and enclosure sweat performance

As expressed in SASO GSO ISO 5151 Clause 5.2 to 5.5 or SASO GSO ISO 13253 Clause 6.2 to 6.4.

4.5 Heating performances for AC with heating and cooling function

4.5.1 General

These performances shall be stated only if the heating mode is available.

4.5.2 Heating capacity

Rated values for heating capacity, electric power and COP are established at H1 temperature conditions according to table 1. As expressed in SASO GSO ISO 5151 Clauses 6.2 to 6.4 or SASO GSO ISO 13253 Clauses 7.2 and 7.3.

For air conditioners powered with an electric resistance for the heating mode, cooling and heating modes shall not operate simultaneously, and the maximum power shall be declared by the manufacturer.

Note: refer to clause 9 to express the heating information in the energy label.

4.5.3 Functional performance of the heating function

Air conditioners with integrated heating within the scope of this standard shall satisfy the following requirements:

- Operability at maximum heating conditions;
- Operability at minimum heating conditions;
- Verification of the automatic defrost performance, when relevant.

5. CRITERIA FOR ACCEPTABILITY OF PRODUCTS AT REGISTRATION

5.1 General

Registration of products is necessary to enter into the Saudi market and applies to imported and locally manufactured products.

The information about registration requirement for energy labelling and MEPS is available in information center of Saudi Standards, Metrology and Quality Organization (SASO).

5.2 Information about registration of the air-conditioner

For registration of an air-conditioner for energy labelling and MEPS, a test report in accordance with standard referenced in Clause 2, as applicable shall be attached.

An application shall be provided for each model, in accordance with Appendix A, and submitted to the registration body (see Clause 10).

5.3 Product using test report to justify the performance

5.3.1 General

A test report from an accredited laboratory or a laboratory approved by SASO shall be presented for registration. This test report shall include results for EER at T1 and T3, and COP at H1 when relevant.

The test procedure shall correspond to the type of product and relevant testing standard (see Clause 2).

5.3.2. Conditions for the test report

- Test report shall corresponds to the model tested
- Test for one model is sufficient

Information about main components (compressor, heat exchanger, motors, blowers,) to clearly identify the model tested and submitted for the application shall be presented.

5.3.3. Criteria for acceptability

The values presented in the test report shall be accepted as valid when meets the following criteria as applicable:

- a) Tested power≤ 1.05 x rated power
- b) Tested cooling capacity 20.95 x rated cooling capacity
- c) Tested EER MEPS and \geq 0.95 x rated EER
- d) The standard for tests is defined according to the type of AC in Clause 4
- a) Tested COP≥ 0.95 x rated COP
- e) Tested voltage(refer to the standard mentioned in Clause 2)
- f) Test Frequency60 Hz ±2%
- g) Testing conditions (T1)(refer to the standard mentioned in Clause 2)
- h) Testing conditions (T3)(refer to the standard mentioned in Clause 2)

6. CRITERIA FOR MARKET SURVEILLANCE

The energy label shall be accepted as valid when a single sample of an appliance or unit model subjected to an initial screening test meets the following criteria as applicable:

- i) Tested power≤ 1.05 x rated power
- j) Tested cooling capacity ≥ 0.95 x rated cooling capacity
- k) Tested EER≥ MEPS and ≥ 0.95 x rated EER
- I) The standard for tests is defined according to the type of AC in Clause 4
- m) Tested COP≥ 0.95 x rated COP
- n) Tested Voltage(refer to the standard mentioned in Clause 2)
- o) Test Frequency......60 Hz ±2%
- p) Testing conditions (T1)..... (refers to the standard mentioned in Clause 2)
- q) Testing conditions (T3)..... (refers to the standard mentioned in Clause 2)

7. NAME PLATE AND INSTRUCTION SHEET OR MANUAL

7.1 General

In addition to any information needed to be displayed on the air-conditioner unit, the following information shall be marked on the nameplate of the air conditioner, in Arabic or English or both. The marking shall not be on a detachable part of the unit and shall be indelible, durable and easily legible.

Any information related energy performance added showed in any part of the airconditioner unit or packaging shall not have any ambiguity or lead to misunderstanding of the perform ance of the unit.

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7.2 Information on the nameplate

The information on the name plate in Arabic or English or both shall include at

least:

- Manufacturer's name and trademark (if different).
- Country of origin.
- Manufacturer's model or type reference and serial number of the unit.
- Rated voltage or rated voltage range (Volts).
- Rated frequency (Hz).
- For each of cooling test conditions T1 and T3 according to the standard stated in clause 2, as applicable:
 - Rated current in A.
 - Rated power input in W or kW.
 - Rated cooling capacity in Btu/h and kW.
 - Rated Energy Efficiency Ratio (EER) in (Btu/hr)/Watt.
- For heating test conditions according to the standard referenced in clause 2, if applicable:
 - Rated current in A.
 - Rated Input power rating in W or kW.
 - Rated Heating capacity in W or kW.
 - Rated Coefficient of Performance (COP) (W/W).
 - Refrigerant used and mass of refrigerant charge in kg.

7.3 Instruction sheet

An instruction sheet or manual in both Arabic and English shall be delivered with each airconditioner, including the following information:

The information specified in clause 7.2.

- Dimensions of the unit and its method of mounting
- Minimum clearances between the various parts of the unit and the surrounding framework.
- Instructions necessary for the correct operation of the unit and any
 - Special precautions to be observed to ensure its safe use and
 - Maintenance.
- Instruction for packing and unpacking the unit.
- Weight of the unit (Gross and Net).
- Any other additional information.

8. ENERGY RATING CLASSIFICATION

8.1 General

The Energy Efficiency Class Rating is used for the comparative label for products within the scope of this standard.

8.2 Determination of the energy efficiency class

The energy efficiency class is then determined in accordance with the following table, where the EER (energy efficiency ratio) is the rated value at condition T1.

Table 4– Energy Efficiency Classification					
Bar color	Energ	y class	EER limits (rated value) (Btu/h)/W at T1		
Dark green	í	A	EER ≥ 16.5		
Green	ب	В	16.5> EER ≥ 14.5		
Light green	د	С	14.5> EER ≥ 13.0		
Yellow	د	D	13.0> EER ≥ 11.8		
Orange	ھ	E	11.8> EER ≥ 10.8		
Red	و	F	10.8> EER ≥ 9.80		
Dark Red	j	G	9.8> EER ≥ 9.0		

9. ENERGY LABELLING REQUIREMENTS

9.1 Information and Values Contained in the Energy Labels

- **Field (a):** This field displays the logo of the Saudi Standards, Metrology and Quality Organization (SASO).
- Field (b): This field displays the product energy efficiency class.
- Field (c): This field identifies the cooling information and shall include the following:
 - Cooling capacity at T1 conditions (Btu/h and kW).
 - EER at T1 in (Btu/h.W)
 - Annual energy consumption (kWh)
- Field (d): This field identifies the Heating information and shall include the following:
 - Heating capacity in (kW).
 - COP in (W/W)
- Field (e): This field identifies the type of air conditioner (Window or Split).
- Field (f): This field identifies the product information including (Brand Name, Country of Manufacturing, and Model Number).
- Field (g): This field shall have a QR code representing the main characteristics of the air conditioner, this may include the following items based on the data provided in the registration form:
 - o Manufacturer name
 - o Model number
 - Country of origin

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- Rated voltage (V)
- o Rated power (W) at T1
- Rated Cooling Capacity at T1 (Btu/h and kW)
- Rated Energy performance at T1 conditions (EER)
- o Rated power (W) at T3
- Rated Cooling Capacity at T3 (Btu/h and kW)
- Rated Energy performance at T3 conditions (EER)
- Heating method (i.e. Heat pump or Electric Resistance)
- Energy efficiency classification (alphabetical letter)
- Field (h): This field identifies the registration number, the label serial number, and the standard reference number.
- Field (i): This field identifies the legal statement.

9.2 Design and placement of the label

The label shall be printed as illustrated in Figure 1. It shall be fixed and non-removable on the most prominent part the product and packaging.

In case of Split type Air Conditioners, a label shall be fixed and non-removable on both the indoor and outdoor units and their packaging.

The label must be 100 mm wide and 170 mm high; if the label shall be printed in a larger format its contents must remain proportionate.

Market Market State	طاقة ENERG	اقة كفاءة الد Y EFFICIENCY LA	بط BEL
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			ب
			5
			هـ
			9
			ز
التدفئة HEATING	÷Ģ:-	لتبريد cooline	*
CARACITY NW	السمة كيفروند	CARWOTTY KW (Bhutto	السعية عيدومة (دوجامي)
COP (WIW)	مواطر (الرادم (ومديرمد)	SER BTV/JN ID	لىسىمائىلىمائىلى 1 م چىنانىيەرىما
		AMAGAL BRENCY CONSUMPTION	الاستهلات السنوي قطاقة كمر وطبيحا السنو
TVPE: منتخفان SPLIT	اللوع . woo		
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WODEL NUMBE	سم الطبران ER	· · · · · · · · · · · · · · · · · · ·	288.83
Sorial Rumber STANDARD REFERENCE NO	1	RECISTIVATION NO	1.25.75
ك للملاحقة النظامية	بل البيع يعرضا	ة أو العبث بهذه البطاقة ق	إزالة أوتغطيا
The removal, covering o	r damaging of th	nis label before sale is puni	shable by law

Figure 1 - Energy efficiency label sample



Figure 2 – Position of information on the label

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10. REGISTRATION REQUIREMENTS

Product registration is mandatory, whereby information about registration requirements will be available in the Saudi Standards, Metrology, and Quality Organization (SASO) website, and reference shall be made to the separate SASO registration forms and requirements.

Applications shall be submitted through the registration system electronically via SASO website. The applicant shall fulfill all updated requirements of the electronic registration system and any new requirements, procedures, and regulations required by SASO. A draft of the registration form is provided in Annex (the final version is the one presented on the SASO website).

APPENDIX A APPLICATION FOR REGISTRATION OF AIR-CONDITIONERS FOR ENERGY LABELLING AND MEPS (informative)

This Appendix presents out the format for submitting an application for registration.

Application for registration of an air-conditioner for energy efficiency.

I hereby apply for registration of an electrical appliance/s for the purpose of energy labelling

In the Country of (specify the country in which this application is made)

PART 1 APPLICANT INFORMATION (manfucaturer or importer)

Applicant Name	:					
Company Name	:					
Company Addre	SS :					
P.O.Box	:	Post Code:				
Contact Person : (Name and Adress and workplace in each sales country)						
JobTitle :						

Phone : Fax : Electronic Mail :

No.	Supplier or Vendor Name	Contact Address (Mail Address, Phone, Fax, Electronic Mail)	License Number or Commercial Licenses (related to import and sale of goods in the kingdom
1			
2			
3			

PART 2 – IDENTIFICATION OF THE APPLIANCE				
Model Name (if applicable):				
Model Number for single package of window type				
Model Number (on indoor unit for split system):				
Model Number (on outdoor unit for split systems only):				
Other model number to be included under this registration:				
Country of manufacturing	Saudi Arabia Other (please s	oecify)		
Year in which model first available in Saudi Arabia				
Model Number to appear on the Energy Label				
Date of manufacture traceability (of package or indoor unit for split systems) Is the date of manufacture permanently marked on the rating plate in a non-encrypted format If 'Yes' provide an example of the date format If 'No' provide details on how to determine (from the serial number or other permanent markings for this model)	e Yes No Date format Provide details ed hat		tails	
Date of manufacture traceability (of outdoor unit for split systems only) Is the date of manufacture permanently marked on the rating plate in a non-encrypted format If 'Yes' provide an example of the date format If 'No' provide details on how to determine (from the serial number or other permanent markings for this model)	Yes No Date format Provide details ed lat		tails	
Does this model or family replace or supplement another model or family with identical energy consumption and energy efficiency rating	Yes No			
If yes give relevant details	Model Name Model number Reg nur		Registration number	
Information about the components used in the manufacturing (non-mandatory)	 e 1- Compressor Country of origin Name of manufacturer or trading mark Compressor model number Compressor type 2- Fan Country of origin Name of manufacturer or trading mark Fan model number 		ark	

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PART 3 – TESTING AND TEST REPORT				
Test laboratory Type	Own 'in house' laboratory Independent laboratory			
Test Laboratory Name:				
Test Laboratory Address:				
Test Laboratory Location :	Saudi Arabia Other (specify)			
Test Laboratory Accreditation	Saudi Accreditati Other (Accredited	on Committee (SAC) d from a body membe	er or ILAC)	
Test Standard used	ISO 5151 as per Clause 2 ISO 13253 as per Clause 2 Other - please specify			
Does this air-conditioner have separate indoor and outdoor units?	Yes No			
Serial number of tested unit and date of test	SERIAL NUMBER Package unit or indoor unit if split system	SERIAL NUMBER Outdoor unit for split system	TEST DATE	
	Unit	Package unit or indoor unit if split	Outdoor unit if split	
Rated voltage and rated frequency of the tested unit	Rated voltage or rated voltage range (V)		System	
	(Hz)			

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PART 4 – SPECIFIC DETAILS OF THE APPLIANCE				
Dimensions of the air-conditioner (not mandatory): For split systems note only dimensions of the indoor unit	Width (mm)	Height (mm)	Length (mm)	
Air-conditioner type	Cooling only Heat pump Cooling + Elec Other (please	ctric Resistance specify)		
Power supply	Single phase Three phase DC			
Rated Voltage (s) or rated Voltage ranges (V)				
Rated frequency (Hz)				
Refrigerant type (Number)	Please specify: Note: Refrigerant shall comply with the mandatory requirements of the Presidency of Metrology and Environment			
A/C configuration 1 – Air distribution	Ducted Non-ducted			
A/C configuration 1 – Type	Please specify			
Does this air-conditioner use a variable speed drive (inverter) or multi-speed compressor?	Yes No			

PART 5 – PERFORMANCES				
ENERGY PERFORMANCE – COOLING – CONDITION T1				
COOLING POWER at T1	Rated Effective Power Input (kW)			
	Tested Effective Power Input (kW)			
COOLING CAPACITY at T1	Rated Cooling Capacity (Btu/h and kW)			
	Tested Cooling Capacity (Btu/h and kW)			
EER at T1	Rated EER (Btu/(h.W))			
	Tested EER (Btu/(h.W))			
Class rating according to Clause 8	class (please specify)			
ENERGY PERFORMANCE - COOLING - COM	NDITION T3			
COOLING POWER at T3	Rated Effective Power Input (kW)			
	Tested Cooling Power Input (kW)			
COOLING CAPACITY at T3	Rated Cooling Capacity (Btu/h and kW)			
	Tested Cooling Capacity (Btu/h and kW)			
EER at T3	Rated EER (Btu/(h.W))			
	Tested EER (Btu/(h.W))			
FUNCTIONAL PERFORMANCE – COOLING				
Operability at Maximum cooling conditions at T3 conditions	Tested Declared	Result: Pass or Fail		
Minimum cooling at T3 conditions	Tested Declared	Result: Pass or Fail		
Freeze-up drip at T3 conditions (non-ducted AC)	Tested Declared	Result: Pass or Fail		
Condensate control and enclosure sweat performance	Tested Declared	Result: Pass or Fail		
ENERGY PERFORMANCE – HEATING – CONDITION H1 – when relevant				
HEATING POWER at H1	Rated Effective Power Input (kW)			
	Tested Effective Power Input (kW)			
HEATING CAPACITY at H1	Rated Heating Capacity (kW)			
	Tested Heating Capacity (kW)			
COP at H1	Rated COP (W/W)			

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	Tested COP (W/W)			
If Heating function is provided by an Electric Resistance, then the following shall apply:				
 COP is equal to one (if no testing value provided). Heating Capacity is based on the resistance of the heating element. 				
FUNCTIONAL PERFORMANCE – HEATING				
Operability at Maximum heating conditions	Tested	Result: Pass or Fail		
	Declared			
Operability at Minimum heating conditions	Tested	Result: Pass or Fail		
	Declared			
Test of the automatic defrost (when relevant)	Tested	Result: Pass or Fail		
	Declared			

PART 6 – PERFORMANCE AT PART LOAD ^(a)			
Note: values in table 6 shall be filled as informative. Priority is given to identify which test method is used and value of the integrated part load performance. If available results at part load can be added.			
STANDARD FOR REFERENCE (e.g. ISO 16358, AHRI 210/240,)		(b)	
Acronym used for the combined part load performance	e.g. (SEER, IPLVP,)	(C)	
Performance at part load 25%	External temperature(Dry- Bulb) [°C]	(c) (d)	
	(Electric) Power [kW]	(c) (d)	
	EER 25%	(c) (d)	
Performance at part load 50%	External temperature (Dry-Bulb) [°C]	(c) (d)	
	(Electric) Power [kW]	(c) (d)	
	EER 50%	(c) (d)	
Performance at part load 75%	External temperature (Dry-Bulb) [°C]	(c) (d)	
	(Electric) Power [kW]	(c) (d)	
	EER 75%	(c) (d)	
Performance at 100%	External temperature (Dry-Bulb) [°C]	(c) (d)	
	(Electric) Power [kW]	(c) (d)	
	EER 100%	(c) (d)	

^(a) This data are not mandatory but will be use

^(b) Testing methodology used for assessment of the seasonal performance or integrated part load performance

^(c) Value with 2 decimal points

^(d) If available (all percentage are subject to change depending on the standards used to establish the part load performance)