

# TEST REPORT COMMISSION REGULATION (EU) No 206/2012

of 6 March 2012

implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for air conditioners and comfort fans COMMISSION REGULATION (EU) No 626/2011

of 4 May 2011

supplementing Regulation(EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of air conditioners

Report Reference No...... AHEE250200087751

Testing Laboratory..... SGS-CSTC standards Technical Services Co., Ltd. Anhui Branch

Fanhua Road, Economic & Technological Development Area,

Hefei, 230601 Anhui, China

Applicant's name..... BAUF HOME GmbH

Address ...... Frankfurter Straße 16, 74072 Heilbronn, Germany

Test specification:

626/2011, COMMISSION DELEGATED REGULATION(EU)

2023/2048

Test procedure ....... STR: Regulation (EU) 2017/1369 and Directive 2009/125/EC

Non-standard test method...... None

Test Report Form No..... EEC\_206/2012/626/2011 B

Test Report Form(s) Originator .....: SGS-CSTC

Master TRF ...... 2023-09-01

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Page 2 of 28 Report No.: AHEE250200087751

Test item description.....: Split Type Air Conditioner

Trade Mark...... BAUF

Manufacturer....: Same as applicant

Model/Type reference ...... BRAC-SP-IM1-24-R3-I/BRAC-SP-IM1-24-R3-O

Ratings.....: See marking plates

Factory .....: AUX AIR CONDITIONER CO., LTD.

1166 North Mingguang Road, Jiangshan, Yinzhou, Ningbo, 315191

Zhejiang, China



#### Summary of testing:

#### Tests performed (name of test and test clause):

COMMISSION REGULATION (EU) No 206/2012, COMMISSION REGULATION (EU) No 626/2011, COMMISSION DELEGATED REGULATION(EU) 2023/2048

The length of refrigerant lines between indoor unit and outdoor unit was 5m. The tests were performed on model BRAC-SP-IM1-24-R3-I/BRAC-SP-IM1-24-R3-O.

The test result which covering all models was classed as A++ of cooling, A+ for heating(average), A+++ for heating(warmer).

Copy of marking plate: (the marking plates maybe only drafts)

#### **Testing location:**

Refer to p.1

## BAUF

## Split Type Air Conditioner (Indoor Unit)

**(€** 🕱

Model BRAC-SP-IM1-24-R3-I

Electric Shock Prevention Class 1

Climates Type

Power Supply 220-240V-/50Hz Cooling Capacity 7.30(1.80-7.40) kW

**Heating Capacity** 7.30(1.80-7.40) kW

Cooling Power Input 2.20(0.23-2.70) kW

16 A

R32

**Heating Power Input** 2,20(0.23-2.53) kW

Max. Discharged Pressure 4.3 MPa

Max. Input Curent

Max. Suction Pressure 2.5 MPa

Refrigerant Refrigerant Quantity 1,3 kg

Indoor Unit Net Weight 13 kg

Nº

xxxxxxxxxxx

2024.12



Contains fluorinated greenhouse gases

Made in PRC

**BAUF HOME GmbH,** Frankfurter Straße 16, 74072 Heilbronn, Germany

## BAUF

## Split Type Air Conditioner (Outdoor Unit)





Model BRAC-SP-IM1-24-R3-O

Power Supply 220-240V-/50Hz **Cooling Power Input** 2.20(0.23-2.70) kW

**Heating Power Input** 2.20(0.23-2.53) kW

Max. Input Curent 16 A

Refrigerant R32

Refrigerant Quantity 1.3 kg/0.88tCO2eq.

Water-proof Class IPX4 Outdoor Unit Net Weight 39 kg

**GWP** 675

xxxxxxxxxxx

2024.12



Contains fluorinated greenhouse gases

Made in PRC

**BAUF HOME GmbH**, Frankfurter Straße 16 74072 Heilbronn, Germany

Due to differences in the optional part, there may be a weight deviation of about 1kg.





Test item particulars ... : Split Type Air Conditioner

Classification of installation and use ... : Fixed appliance

Supply Connection ... : Flexible supply cord connected to fixed wiring

Possible test case verdicts:

- test case does not apply to the test object ... : N/A

- test object does meet the requirement ... : P (Pass)

- test object does not meet the requirement ... : F (Fail)

Testing ... ... :

Date of receipt of test item ... : 2023-09-20

Date (s) of performance of tests ... : 2023-09-22 to 2023-10-15

#### General remarks:

The test results presented in this report relate only to the object tested.

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"(see Enclosure #)" refers to additional information appended to the report.

Throughout this report a comma is used as the decimal separator.

### General product information:

Split-type air-conditioners for household use, the refrigerant was R32.

The appliances have cooling and heating functions.

<sup>&</sup>quot;(see appended table)" refers to a table appended to the report.



**COMMISSION REGULATION (EU) No 206/2012** CI. Result-Remark Verdict Requirement-Test ANNEX I Ecodesign requirements **DEFINITIONS APPLICABLE FOR THE** 1 Ρ PURPOSES OF THE ANNEXES REQUIREMENTS FOR MINIMUM ENERGY 2 Ρ EFFICIENCY, MAXIMUM POWER CONSUMPTION IN OFF-MODE AND STANDBY MODE AND FOR MAXIMUM SOUND POWER **LEVEL** (a) From 1 January 2013, single duct and double N/A duct air conditioners shall correspond to requirements as indicated in Tables 1, 2 and 3 below, calculated in accordance with Annex II. Single duct and double duct air conditioners and comfort fans shall fulfil the requirements on standby and off mode as indicated in Table 2 below. The requirements on minimum energy efficiency and maximum sound power shall relate to the standard rating conditions specified in Annex II, Table 2. Table 1 Requirements for minimum energy efficiency Double duct air conditioners Single duct air conditioners EER<sub>rated</sub> EER<sub>rated</sub> COP<sub>rated</sub> COP<sub>rated</sub> If GWP of refrigerant > 150 2.40 2.36 2.40 1,80 If GWP of refrigerant ≤ 150 216 2,12 2,16 1,62 Table 2 Requirements for maximum power consumption in off-mode and standby mode for single duct and double duct air conditioners and comfort fans Off mode Power consumption of equipment in any off-mode condition shall not exceed Standby mode The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 1,00 W. The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display, shall not exceed 2,00 W. Equipment shall, except where this is inappropriate for the intended use, Availability of standby and/or off provide off mode and/or standby mode, and/or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. Table 3 Requirements for maximum sound power level Indoor sound power level in dB(A) 65



**COMMISSION REGULATION (EU) No 206/2012** CI. Requirement-Test Result-Remark Verdict From 1 January 2013, air conditioners, except GWP of refrigerant > 150 Ρ (b) single and double duct air conditioners, shall correspond to minimum energy efficiency and maximum sound power level requirements as indicated in Tables 4 and 5 below, calculated in accordance with Annex II. The requirements on energy efficiency shall take into account the reference design conditions specified in Annex II, Table 3 using the 'Average' heating season where applicable. The requirements on sound power shall relate to Р 6 kW < Rated capacity ≤12 the standard rating conditions specified in Annex II, kW Table 2 Table 4 Requirements for minimum energy efficiency SCOP SEER (Average heating season) If GWP of refrigerant > 150 3,40 3,60 3,06 If GWP of refrigerant ≤ 150 3.24 Table 5 Requirements for maximum sound power level Rated capacity ≤ 6 kW 6 < Rated capacity ≤12 kW Indoor sound power level in Outdoor sound power level in Indoor sound power level in Outdoor sound power level in dB(A) 60 65 65 70 From 1 January 2014, air conditioners shall (c) Ρ correspond to requirements as indicated in the table below, calculated in accordance with Annex II. The requirements on energy efficiency for air conditioners, excluding single and double duct air conditioners, shall relate to the reference design conditions specified in Annex II, Table 3 using the 'Average' heating season where applicable. The requirements on energy efficiency for single and double duct air conditioners shall relate to the standard rating conditions specified in Annex II, Table 2.



**COMMISSION REGULATION (EU) No 206/2012** CI. Result-Remark Verdict Requirement-Test Table 6 Requirements for minimum energy efficiency Air conditioners, except double Double duct air conditioners Single duct air conditioners and single duct air conditioners SCOP (heating SEER EER<sub>rated</sub> COP<sub>rated</sub> EER<sub>rated</sub> COPrated season Average) If GWP of refrigerant 4,60 3,80 2,60 2,60 2,60 2,04 > 150 for < 6 kW If GWP of refrigerant 3,42 2,34 2,34 2,34 1.84 4.14 ≤ 150 for < 6 kW If GWP of refrigerant 4,30 3.80 2,60 2.04 2.60 2.60 > 150 for 6-12 kW If GWP of refrigerant 3,87 3,42 2.34 2,34 2,34 1,84 ≤ 150 for 6-12 kW From 1 January 2014, single duct and double duct (d) N/A air conditioners and comfort fans shall correspond to requirements as indicated in Table 7 below, calculated in accordance with Annex II. Table 7 Requirements for maximum power consumption in off-mode and standby mode Off mode Power consumption of equipment in any off-mode condition shall not exceed 0,50 W Standby mode The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 0,50 W. The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display shall not exceed 1,00 W. Availability of standby and/or off Equipment shall, except where this is inappropriate for the intended use, provide off mode and/or standby mode, and/or another condition which mode does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. Power management When equipment is not providing the main function, or when other energyusing product(s) are not dependent on its functions, equipment shall, unless inappropriate for the intended use, offer a power management function, or a similar function, that switches equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into: standby mode, or off mode, or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. The power management function shall be activated before delivery.



**COMMISSION REGULATION (EU) No 206/2012** CI. Result-Remark Verdict Requirement-Test PRODUCT INFORMATION REQUIREMENTS 3. Ρ (a) From 1 January 2013, as regards air Р conditioners and comfort fans, the information set out in points below and calculated in accordance with Annex II shall be provided on: (i) the technical documentation of the product; Р (ii) free access websites of manufacturers of air Ρ conditioners and comfort fans; (b) The manufacturer of air conditioners and Ρ comfort fans shall provide laboratories performing market surveillance checks, upon request, the necessary information on the setting of the unit as applied for the establishment of declared capacities, SEER/EER, SCOP/COP values and service values and provide contact information for obtaining such information. (c) Information requirements for air conditioners. See attached table 1 Ρ except double duct and single duct air conditioners. (d) Information requirements for single duct and N/A double duct air conditioners. Single duct air conditioners shall be named 'local air conditioners' in packaging, product documentation and in any advertisement material, whether electronic or in paper. Manufacturer shall provide information as detailed in the table 2. (e) Information requirements for comfort fans. N/A Manufacturer shall provide information as detailed in the table 3 ANNEX II Measurements and calculations For the purposes of compliance and verification of EN 14825: 2022: 1 Ρ compliance with the requirements of this EN14511-2: 2022; Regulation, measurements and calculations shall EN14511-3: 2022: be made using harmonised standards the reference EN 12102-1: 2022 used numbers of which have been published in the Official Journal of European Union, or other reliable, accurate and reproducible method, which takes into account the generally recognised state of the art methods, and whose results are deemed to be of low uncertainty. They shall fulfil all of the following technical parameters. The determination of the seasonal energy 2 Ρ consumption and efficiency for seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) shall take into account: (a) European cooling and heating season(s), as Ρ defined in Table 1 below; (b) reference design conditions, as defined in Table Р 3 below: (c) electric energy consumption for all relevant Ρ modes of operation, using time periods as defined in Table 4 below:



**COMMISSION REGULATION (EU) No 206/2012** CI. Requirement-Test Result-Remark Verdict (d) effects of the degradation of the energy Ρ efficiency caused by on/off cycling (if applicable) depending on the type of control of the cooling and/or heating capacity; (e) corrections on the seasonal coefficients of Ρ performance in conditions where the heating load can not be met by the heating capacity; (f) the contribution of a back-up heater (if Р applicable) in the calculation of the seasonal efficiency of a unit in heating mode. Where the information relating to a specific model, 3 Ρ being a combination of indoor and outdoor unit(s), has been obtained by calculation on the basis of design, and/or extrapolation from other combinations, the documentation should include details of such calculations and/or extrapolations, and of tests undertaken to verify the accuracy of the calculations undertaken (including details of the mathematical model for calculating performance of such combinations, and of measurements taken to verify this model). The rated energy efficiency ratio (EER rated) and, N/A when applicable, rated coefficient of performance (COP rated ) for single and double duct air conditioners shall be established at the standard rating conditions as defined in Table 2 below. The calculation of seasonal electricity consumption Р for cooling (and/or heating) shall take into account electric energy consumption of all relevant modes of operation, as defined in Table 3 below, using operational hours, as defined in Table 4 below. The comfort fan efficiency shall be determined on 6 N/A the basis of the nominal air flow rate of the unit divided by the nominal electric power input of the





**COMMISSION REGULATION (EU) No 206/2012** CI. Result-Remark Verdict Requirement-Test Table 2 Standard rating conditions, temperatures in 'dry bulb' air temperature ('wet bulb' indicated in brackets) Indoor air temperature Outdoor air temperature Appliance Function cooling 27 (19) 35 (24) air conditioners, excluding single duct air conditioners heating 20 (max. 15) 7(6) cooling 35 (24) 35 (24) (\*) single duct air conditioner heating 20 (12) 20 (12) (\*) (\*) In case of single duct air conditioners the condenser (evaporator) when cooling (heating) is not supplied with outdoor air, but indoor Reference design conditions, temperatures in 'dry bulb' air temperature ('wet bulb' indicated in brackets) Indoor air temperature Outdoor air temperature Bivalent temperature Operating limit temperature Function/season Tin Tdesignc/Tdesignh Tol Tbiv cooling 27 (19) Tdesignc = 35 (24) Tdesignh = - 10 (- 11) max. - 7 heating/Average max. 2 heating/Warmer Tdesignh = 2 (1)max. 7 max. 2 20 (15) heating/Colder Tdesignh = - 22 (- 23) max. - 7 max. - 15 Table 4 Operational hours per type of appliance per functional mode to be used for calculation of electricity consumption Type of appliance/functionality (if applicable) Heating Thermostat-Standby Unit Off mode On mode season off mode mode heater mode cooling: H<sub>CE</sub> heating: H<sub>HE</sub>  $H_{TO}$  $H_{\text{SB}}$  $H_{\mathsf{OFF}}$  $H_{\mathsf{CK}}$ Air conditioners, except single and double duct air conditioner Cooling mode, if appliance 350 221 2 142 5 088 7 760 h/annum offers cooling only Cooling h/annum 350 221 2 142 0 2 672 mode Cooling and heating modes, if 179 0 179 Average 1 400 0 appliance offers both Heating h/annum 755 0 0 755 Warmer 1 400 modes mode Colder 2 100 131 0 0 131



**COMMISSION REGULATION (EU) No 206/2012** CI. Result-Remark Verdict Requirement-Test Type of appliance/functionality Heating Thermostat-Standby Crankcase On mode Off mode (if applicable) season off mode mode heater mode cooling: H<sub>CE</sub> Нто  $H_{zz}$ H<sub>OFF</sub> Нск heating: H<sub>H</sub> Average 1 400 179 0 3 672 3 8 5 1 Heating mode, if appliance h/annum Warmer 1 400 755 0 4 3 4 5 4 476 offers heating only Colder 2 100 131 0 2 189 2 9 4 4 Double duct air conditioner Cooling mode, if appliance offers cooling only h/60 min 1 n/a n/a n/a n/a Cooling and Cooling h/60 min 1 n/a n/a n/a n/a heating modes, if appliance Heating offers both h/60 min n/a n/a n/a n/a mode modes Heating mode, if appliance h/60 min 1 n/a n/a n/a n/a offers heating only Single duct air conditioner h/60 min Cooling mode 1 n/a n/a n/a n/a Heating mode h/60 min 1 n/a n/a n/a n/a ANNEX III Verification procedure for market surveillance purposes When performing the market surveillance checks referred to in Article 3(2) of Directive 2009/125/EC, the authorities of the Member States shall apply the following verification procedure for the requirements set out in Annex I. 1 The authorities of the Member State shall test one N/A single unit. 2. The air conditioner model, except single and 2 N/A double duct air conditioners, shall be considered to comply with the requirements set out in Annex I, as applicable, to this Regulation, if its seasonal energy efficiency ratio (SEER), or seasonal coefficient for performance (SCOP), if applicable, is not less than the declared value minus 8 % at the declared capacity of the unit. The SEER and SCOP values shall be established in accordance with Annex II. The model of a single and double duct air N/A conditioner shall be considered to comply with the requirements set out in Annex I, as applicable, to this Regulation, if the results for off-mode and standbymode conditions do not exceed the limit values by more than 10 %, and if the energy efficiency ratio (EER rated), or coefficient for performance (COP rated), if applicable, is not less than the declared value minus 10 %. The EER and COP values shall be established in accordance with Annex II.



**COMMISSION REGULATION (EU) No 206/2012** CI. Requirement-Test Result-Remark Verdict The air conditioner model shall be considered to N/A comply with the requirements set out in this Regulation, as applicable, if the maximum sound power level does not exceed more than 2 dB(A) of the declared value. If the result referred to in point 2 is not achieved, the 3 N/A market surveillance authority shall randomly select three additional units of the same model for testing. 4 The air conditioner model, except single and double N/A duct air conditioners, shall be considered to comply with the requirements set out in Annex I, as applicable, to this Regulation, if the average of the three units for the seasonal energy efficiency ratio (SEER), or seasonal coefficient of performance (SCOP), if applicable, is not less than the declared value minus 8 % at the declared capacity of the unit. The SEER and SCOP values shall be established in accordance with Annex II. The model of a single and double duct air N/A conditioner shall be considered to comply with the requirements set out in Annex I, as applicable, to this Regulation, if the average of the results of the three units for off-mode and standby- mode conditions do not exceed the limit values by more than 10 %, and if the average of the energy efficiency ratio (EER rated), or coefficient of performance (COP rated), if applicable, is not less than the declared value minus 10 %. The EER and COP values shall be established in accordance with Annex II. The air conditioner model shall be considered to N/A comply with the requirements set out in this Regulation, as applicable, if the average of the maximum sound power level does not exceed more than 2 dB(A) of the declared value. If the results referred to in point 4 are not achieved. 5 N/A the model shall be considered not to comply with this Regulation. For the purposes of checking conformity with the N/A requirements of this Regulation, Member States shall apply the procedures referred to in Annex II, and harmonised standards the reference numbers of which have been published in the Official Journal of the European Union, or other reliable, accurate and reproducible calculation and measurement methods. which take into account the generally recognised state-of-the-art.





Table 1: Р Information requirements for air conditioners, except double duct and single duct air conditioners. (the number of decimals in the box indicates the precision of reporting) Information to identify the model(s) to which the information relates to: Function (indicate if present) If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. Cooling Υ Average (mandatory) Υ Υ Warmer (if designated) Υ Heating Ν Colder (if designated) symbol value unit unit Item item symbol value **Design load** Seasonal efficiency Cooling Pdesignc 6,7 kW Cooling **SEER** 6,9 kW SCOP/A 4,2 Heating/Average Pdesignh 5,3 Heating/Average Heating/Warmer Pdesignh 7.2 kW Heating/Warmer SCOP/W 5.4 Heating/Colder Pdesignh kW Heating/Colder SCOP/C Declared capacity (\*) for cooling, at indoor Declared energy efficiency ratio (\*), at indoor temperature 27(19) °C and outdoor temperature Ti temperature 27(19) °C and outdoor temperature Ti Function (indicate if present) If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'. Cooling Υ Υ Average (mandatory) Υ Υ Warmer (if designated) Heating Colder (if designated) Ν Item value unit item value unit symbol symbol kW 3,04  $T_i = 35 \, ^{\circ}C$ Pdc 6,63  $T_i = 35 \,^{\circ}C$ **EERdc** Ti = 30 °C Pdc 4,54 kW Ti = 30 °C **EERdc** 4,87 Tj = 25 °C Pdc 3,02 kW Tj = 25 °C 8,37 **EERdc** Pdc Ti = 20 °C 1,58 kW Ti = 20 °C **EERdc** 14,12 Declared capacity (\*) for heating/Average season, Declared coefficient of performance (\*)/Average at indoor temperature 20 °C and outdoor season, at indoor temperature 20 °C and outdoor temperature Ti temperature Ti Item symbol value unit item symbol value unit Tj = -7 °CPdh 4,75 kW Tj = -7 °CCOPdc 2,57 Tj = 2 °C Pdh Tj = 2 °C 2,95 kW COPdc 4.17 Ti = 7 °CPdh 2,00 kW Tj = 7 °C COPdc 5,59 Ti = 12 °C Pdh 1,88 kW  $T_i = 12 °C$ COPdc 6,83 Ti = operating Pdh kW Ti = operating limit COPdc limit 5,02 2,15 Pdh 4,75 kW COPdc 2,57 Tj = bivalentTj = bivalent



	_						
temperature				temperature			
Declared capacity at indoor temperat temperature Tj			eason,	Declared coefficient of performance (*)/Warmer season, at indoor temperature 20 °C and outdoor temperature Tj			
Item	symbol	value	unit	item	symbol	value	unit
Tj = 2 °C	Pdh	6,89	kW	Tj = 2 °C	COPdc	2,61	_
Tj = 7 °C	Pdh	4,29	kW	Tj = 7 °C	COPdc	4,67	_
Tj = 12 °C	Pdh	1,93	kW	Tj = 12 °C	COPdc	6,98	_
Tj = bivalent temperature	Pdh	6,89	kW	Tj = bivalent temperature	COPdc	2,61	_
Tj = operating limit	Pdh	6,89	kW	Tj = operating limit	COPdc	2,61	
Declared capacity (*) for heating/Colder season, at indoor temperature 20 °C and outdoor temperature Tj		Declared coefficient or at indoor temperature Tj					
Item	symbol	value	unit	item	symbol	value	unit
Tj = - 7 °C	Pdh	_	kW	Tj = - 7 °C	COPdc	_	
Tj = 2 °C	Pdh	_	kW	Tj = 2 °C	COPdc	_	_
Tj = 7 °C	Pdh	_	kW	Tj = 7 °C	COPdc	_	_
Tj = 12 °C	Pdh	_	kW	Tj = 12 °C	COPdc	_	_
Tj = bivalent temperature	Pdh	_	kW	Tj = bivalent temperature	COPdc	_	_
Tj = operating limit	Pdh	_	kW	Tj = operating limit	COPdc	_	_
Tj = -15 °C	Pdh	_	kW	Tj = -15 °C	COPdc	_	_
Bivalent temperatu	ıre			Operating limit temperature			
heating/Average	Tbiv	-7	°C	heating/Average	Tol	-10	°C
heating/Warmer	Tbiv	2	°C	heating/Warmer	Tol	2	°C
heating/Colder	Tbiv	_	°C	heating/Colder	Tol	_	°C
Cycling interval ca	pacity			Cycling interval efficiency			
for cooling	Pcycc	_	kW	for cooling	EERcyc	_	_
for heating	Pcych	_	kW	for heating	COPcyc	_	_
Degradation coefficient cooling (**)	Cdc	0,25	_	Degradation co- efficient heating (**)	Cdh	0,25	_
Electric power inputative mode	Electric power input in power modes other than		Annual electricity cons	sumption			
off mode	Poff	_	kW	for cooling	QCE	340	kWh/ a
standby mode (cooling / heating)	PsB	0,66	W	Heating/Average	QHE	1766	kWh/ a
thermostat-off mode	Рто	52,9/ 13,0	W	Heating/Warmer	QHE	1866	kWh/ a





(cooling / heating)							
crankcase heater mode	Рск	_	kW	Heating/Colder	QHE	_	kWh/ a
Capacity control (indicate one of three options)			Other items				
Function (indicate if present)			If function includes heating: Indicate the heating season the information relates to. Indicated values should relate to one heating season at a time. Include at least the heating season 'Average'.				
Cooling	Υ		Average (mandatory)		Υ		
Heating	Y		Warmer (if designated)		Y		
		Colder (if designated)		N			
Item	symbol	value	unit	item	symbol	value	unit
Fixed	N		Sound power level (indoor/outdoor)	level (indoor/ outdoor) LWA	62/64	dB(A)	
staged	N		Global warming potential	GWP	675	kgC O2 eq.	
variable	Y		Rated air flow (indoor/outdoor)	_	1300	m <sub>3</sub> /h	
	AUX AIR CONDITIONER CO., 1166 North Mingguang Road,					•	•

<sup>(\*)</sup> For staged capacity units, two values divided by a slash ('/') will be declared in each box in the section 'Declared capacity of the unit' and 'declared EER/COP' of the unit.

In as much as is relevant in view of the functionality, the manufacturer shall supply the information as requested in the above Table 1 in the technical documentation of the product. For units with capacity control marked 'staged', two values for the highest and lowest, noted 'hi/lo' divided by a slash ('/') will be declared in each box under 'Declared capacity'.

<sup>(\*\*)</sup> If default Cd = 0,25 is chosen then (results from) cycling tests are not required. Otherwise either the heating or cooling cycling test value is required.





Table 2: Information requirements for single duct and double duct air N/A conditioners Information to identify the model(s) to which the information relates to [fill in as necessary]: Description Symbol Value Unit Prated for cooling Rated capacity for cooling kW Prated for heating Rated capacity for heating kW Rated power input for cooling PEER kW **P**COP Rated power input for heating kW **EERd** Rated Energy efficiency ratio Rated Coefficient of COPd performance Information to identify the model(s) to which the information relates to [fill in as necessary]: Description Symbol Value Unit Power consumption in Рто W thermostat-off mode PsB Power consumption in standby W mode DD: QDD Electricity consumption of DD: kWh/a single/double duct appliances SD: QSD SD: kWh/h (indicate for cooling and heating separately) Lwa Sound power level dB(A) **GWP** Global warming potential kgCO 2 eq. Contact details for obtaining more information





Test data according to EN 14825:2022

## **Test condition (Cooling function):**

Voltage: 230 V / Frequency: 50 Hz / Harmonic distortion: 1,0 %,

Table 2 — Part load conditions for reference SEER and reference SEER<sub>on</sub> calculation of air-to-air units

	Part load ratio	Part Ioad ratio	Outdoor air dry bulb temperature	Indoor air dry bulb (wet bulb) temperatures
		%	°C	°C
Α	(35-16)/(Tdesignc -16)	100	35	27(19)
В	(30-16)/(Tdesignc -16)	74	30	27(19)
С	(25-16)/(Tdesignc -16)	47	25	27(19)
D	(20-16)/(Tdesignc -16)	21	20	27(19)

Test condition	Cooling capacity(W)	Cooling power input(W)	EER	Remark ( For variable capacity units, the frequency settings for the same part load conditions.)
Α	6628,3	2179,1	3,04	82 Hz
В	4542,1	932,2	4,87	47 Hz
С	3018,6	360,6	8,37	26 Hz
D	1588	112,5	14,12	12 Hz

## Test condition (Heating function(Average)):

Voltage: 230 V / Frequency: 50 Hz / Harmonic distortion: 1,0 %;

Tj (bivalent temperature): <u>-7℃</u>; operating limit (TOL): <u>-10℃</u>,

Table 6 — Part load conditions for reference SCOP, reference SCOP<sub>on</sub> and reference SCOP<sub>net</sub> calculation of air-to-air units for the reference heating season "A" = average

	A	Outdoor air dry bulb	Indoor air dry bulb	
	Part load ratio	Part load ratio	(wet bulb) temperatures	temperature
		%	°C	°C
Α	(-7-16)/(Tdesignh -16)	88	-7(-8)	20
В	(+2-16)/(Tdesignh -16)	54	2(1)	20
С	(+7-16)/(Tdesignh -16)	35	7(6)	20
D	(+12-16)/(Tdesignh -16) 15		12(11)	20
Е	(TOL-16)/(Tdesignh -16)		TOL	20
F	(Tbivalent-16)/(Tdesign	nh -16)	Tbivalent	20

Test condition	Heating capacity(W)	heating power input(W)	СОР	Remark (For variable capacity units, the frequency settings for the same part load conditions,)
Α	4753,2	1849,3	2,57	90 Hz
В	2948,5	707,8	4,17	40 Hz
С	2001,8	357,9	5,59	28 Hz
D	1875,7	274,5	6,83	20 Hz
E	5016,8	2337,6	2,15	116 Hz
F	4753,2	1849,3	2,57	90 Hz





Test condition (Heating function(Warmer)):

Voltage: 230 V / Frequency: 50 Hz / Harmonic distortion: 1,0 %;

Tj (bivalent temperature):  $2^{\circ}$ ; operating limit (TOL):  $2^{\circ}$ ,

Table 7 — Part load conditions for reference SCOP, reference SCOPon and reference SCOPnet calculation of air-to-air units for the reference heating season "W" = warmer

		•		
	W	W		
	Part load ratio	Part load ratio Part load ratio		Indoor air dry bulb temperature
		%	°C	°C
Α	(not applicable)			
В	(+2-16)/(Tdesignh -16)	100	2(1)	20
С	(+7-16)/(Tdesignh -16)	64	7(6)	20
D	(+12-16)/(Tdesignh -16)	(+12-16)/(Tdesignh -16) 29		20
Е	(TOL-16)/(Tdesignh -16)		TOL	20
F	(Tbivalent-16)/(Tdesignh	(Tbivalent-16)/(Tdesignh -16)		

Test condition	Heating capacity(W)	heating power input(W)	СОР	Remark( For variable capacity units, the frequency settings for the same part load conditions,)
В	6889,3	2638,2	2,61	111 Hz
С	4287,8	918	4,67	49 Hz
D	1928,3	276,4	6,98	20 Hz
E	6889,3	2638,2	2,61	111 Hz
F	6889,3	2638,2	2,61	111 Hz

The SEER, SCOP and Sound power level:				
SEER on	SCOP on (Average)	SCOP on (Warmer)	Sound power level (dB(A))	
7,18	4,21	5,43	61,2 / 62,0 (IU / OU)	
SEER	SCOP (Average)	SCOP (Warmer)	1	
6,90	4,20	5,40	/	
Q <sub>CE</sub>	Q <sub>HE</sub> (Average)	Q <sub>HE</sub> (Warmer)	/	
340	1766	1866	/	



Information of efficiency for Declared value and Measured value Item Declared value Measured value SEER 6,9 6,90  $\mathsf{Q}_\mathsf{CE}$ 340 340 Average (mandatory) SCOP 4,2 4,20  $Q_{\mathsf{HE}}$ 1767 1766 Warmer SCOP 5,4 5,40  $Q_{\text{HE}}$ 1867 1866





Requirements for minimum energy efficiency and maximum sound power level

Р

Report No.: AHEE250200087751

From 1 January 2013, air conditioners, except single and double duct air conditioners, shall correspond to minimum energy efficiency and maximum sound power level requirements as indicated in Tables 4 and 5 below, calculated in accordance with Annex II, The requirements on energy efficiency shall take into account the reference design conditions specified in Annex II, Table 3 using the 'Average' heating season where applicable, The requirements on sound power shall relate to the standard rating conditions specified in Annex II, Table 2:

3,60 3,40 65 / 70 (IU	/ OU)

#### Requirements for minimum energy efficiency and maximum sound power level

Ρ

From 1 January 2014, air conditioners shall correspond to requirements as indicated in the table below, calculated in accordance with Annex II, The requirements on energy efficiency for air conditioners, excluding single and double duct air conditioners, shall relate to the reference design conditions specified in Annex II, Table 3 using the 'Average' heating season where applicable,

SEER	SCOP	Sound power level (dB(A))
4,30	3,80	65 / 70 (IU / OU)

Verification table N/A

- 1, The air conditioner model, except single and double duct air conditioners, shall be considered to comply with the requirements set out in Annex I, as applicable, to this Regulation, if its seasonal energy efficiency ratio (SEER), or seasonal coefficient for performance (SCOP), if applicable, is not less than the declared value minus 8 % at the declared capacity of the unit, The SEER and SCOP values shall be established in accordance with Annex II,
- 2, The air conditioner model shall be considered to comply with the requirements set out in this Regulation, as applicable, if the maximum sound power level does not exceed more than 2 dB(A) of the declared value,

	•	` ,
Tested SEER	Declared SEER	Verification
_	_	Tested SEER > Declared SEER x 92%
Tested SCOP	Declared SCOP	Verification
_	_	Tested SCOP > Declared SCOP x 92%
Tested sound power level (dB(A))	Declared Sound power level (dB(A))	Verification
_	_	Tested sound power level < Declared Sound power level + 2 dB(A)



**COMMISSION REGULATION (EU) No 626/2011** CI, Requirement-Test Result-Remark Verdict ANNEX II Energy efficiency classes The energy efficiency of air conditioners shall be Ρ determined on the basis of measurements and calculations set out Annex VII, Both the SEER and SCOP shall take into account Р the reference design conditions and the operational hours per relevant mode of operation, and the SCOP shall relate to the heating season 'average'. as laid down in Annex VII, The rated energy efficiency ratio (EER rated) and the rated coefficient of performance (COP rated) shall relate to standard rating conditions, as laid down in Annex VII, 2 Ρ Energy efficiency classes for air conditioners, except double ducts and single ducts Energy Efficiency Class SEER SCOP A+++ SEER ≥ 8,50 SCOP ≥ 5,10 A++  $6,10 \le SEER < 8,50$  $4,60 \le SCOP < 5,10$ A+  $5.60 \le SEER \le 6.10$  $4.00 \le SCOP \le 4.60$ Α  $5,10 \le SEER < 5,60$  $3,40 \le SCOP < 4,00$ В  $4,60 \le SEER < 5,10$  $3.10 \le SCOP < 3.40$ C  $4,10 \le SEER < 4,60$  $2,80 \le SCOP < 3,10$ D  $3,60 \le SEER < 4,10$  $2,50 \le SCOP < 2,80$ Е  $3,10 \le SEER < 3,60$  $2,20 \le SCOP < 2,50$ F  $2,60 \le SEER < 3,10$  $1,90 \le SCOP < 2,20$ G SEER < 2,60 SCOP < 1,90 N/A Table 2 Energy efficiency classes for double ducts and single ducts Energy Efficiency Double ducts Single ducts EER<sub>rated</sub> COPrated EER<sub>rated</sub> COPrated A+++  $\geq 4,10$  $\geq 4,60$  $\geq 4,10$  $\ge 3,60$ A++  $3,60 \le EER < 4,10$  $4,10 \le COP < 4,60$  $3,60 \le EER < 4,10$  $3,10 \le COP < 3,60$ A+  $3,10 \le EER < 3,60$  $3,60 \le COP < 4,10$  $3,10 \le EER < 3,60$  $2,60 \le COP < 3,10$ Α  $2,60 \le EER < 3,10$  $3,10 \le COP < 3,60$  $2,60 \le EER < 3,10$  $2,30 \le COP < 2,60$ В  $2,40 \le EER < 2,60$  $2,60 \le COP < 3,10$  $2,40 \le EER < 2,60$  $2,00 \le COP < 2,30$ C  $2.10 \le EER < 2.40$  $2,40 \le COP < 2,60$  $2,10 \le EER < 2,40$  $1,80 \le COP < 2,00$ D 1.80 < EER < 2.10  $2,00 \le COP < 2,40$ 1.80 < FER < 2.10  $1,60 \le COP < 1,80$ Е  $1,60 \le EER < 1,80$  $1,80 \le COP < 2,00$  $1,60 \le EER < 1,80$  $1,40 \le COP < 1,60$ F  $1,40 \le EER < 1,60$  $1,60 \le COP < 1,80$  $1,40 \le EER < 1,60$  $1,20 \le COP < 1,40$ G < 1,40 < 1,60 < 1,40 < 1,20



**COMMISSION REGULATION (EU) No 626/2011** CI, Requirement-Test Result-Remark Verdict ANNEX IV Product fiche 1. The information in the product fiche shall be given Р in the order specified below: (a) supplier's name or trade mark; Р (b) model identifier of the indoor air conditioner or of Р the indoor and outdoor elements of the air conditioner: (c) without prejudice to any requirements under the N/A Union eco-label scheme, where a model has been granted a 'European Union eco-label' under Regulation (EC) No 66/2010, a copy of the eco-label may be added; (d) inside and outside sound power levels at Ρ standard rating conditions, on cooling and/or heating (e) the name and GWP of the refrigerant used and a Ρ standard text as follows: 'Refrigerant leakage contributes to climate change, Ρ Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere, This appliance contains a refrigerant fluid with a GWP equal to [xxx], This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [xxx] times higher than 1 kg of CO<sup>2</sup>, over a period of 100 years, Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional," Additionally, the following information shall be 2 Р included in the product fiche on air conditioners on the cooling mode, when efficiency is declared on the basis of the seasonal energy efficiency ratio (SEER): (a) the SEER and the energy efficiency class of the Р model (model of a unit or of a combination of units) determined in accordance with definitions and test procedures in Annex I and VII for the cooling mode as well as with the class limits defined in Annex II; (b) the indicative annual electricity consumption Q Ρ CE in kWh/a during the cooling season, determined in accordance with definitions and test procedures in Annex I and VII, respectively, It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results, Actual energy consumption will depend on how the appliance is used and where it is located'; (c) the design load Pdesignc in kW of the appliance Ρ in cooling mode determined in accordance with definitions and test procedures in Annex I and VII, respectively; Additionally, the following notes define the 3 Р information to be included in the fiche on the heating mode, when efficiency is declared on the basis of seasonal coefficient of performance (SCOP):



**COMMISSION REGULATION (EU) No 626/2011** CI, Requirement-Test Result-Remark Verdict (a) the SCOP and the energy efficiency class of the Ρ model, or combination, in heating mode determined in accordance with definitions and test procedures in Annex I and VII, respectively, as well as with the class limits defined in Annex II; (b) the indicative annual electricity consumption for Ρ an average heating season Q HE in kWh/a. determined in accordance with definitions and test procedures in Annex I and VII, respectively, It shall be described as: 'Energy consumption "XYZ" kWh per year, based on standard test results, Actual energy consumption will depend on how the appliance is used and where it is located'; (c) other designated heating seasons for which the Ρ unit is declared fit for purpose, with options of warmer (optional) or colder (optional) seasons, as defined in Annex I; (d) the design load Pdesignh in kW of the appliance Ρ in heating mode determined in accordance with definitions and test procedures in Annex I and VII; (e) the declared capacity and an indication of the Ρ back up heating capacity assumed for the calculation of SCOP at reference design conditions, Additionally, the following notes define the 4 N/A information to be included in the fiche of air conditioners, when efficiency is declared on the basis of energy efficiency ratio (EER rated) or coefficient of performance (COP rated): (a) the energy efficiency class of the model, N/A determined in accordance with definitions and test procedures in Annex I and VII, as well as the class limits defined in Annex II; (b) for double ducts, the indicative hourly electricity N/A consumption Q DD in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII, It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results, Actual energy consumption will depend on how the appliance is used and where it is located'; (c) for single ducts, the indicative hourly electricity N/A consumption Q SD in kWh/60 minutes determined in accordance with definitions and test procedures in Annex I and VII, It shall be described as: 'Energy consumption "X,Y" kWh per 60 minutes, based on standard test results, Actual energy consumption will depend on how the appliance is used and where it is located'; (d) the cooling capacity P rated in kW of the N/A appliance determined in accordance with definitions and test procedures in Annex I and VII; (e) the heating capacity P rated in kW of the N/A appliance determined in accordance with definitions and test procedures in Annex I and VII, One fiche may cover a number of appliance models 5 N/A supplied by the same supplier,



**COMMISSION REGULATION (EU) No 626/2011** CI, Requirement-Test Result-Remark Verdict The information contained in the fiche may be given N/A in the form of a copy of the label, either in colour or in black and white, Where this is the case, the information listed in points 1-4 not already displayed on the label shall also be provided, ANNEX V Technical documentation The technical documentation referred to in Article 3 Р (1)(c) shall include at least the following items: (a) the name and address of the supplier: Ρ (b) a general description of the appliance model, sufficient for it to be unequivocally and easily identified, Single ducts shall be referred to as 'local air conditioners'; (c) where appropriate, the references for the Р harmonised standards applied; (d) where appropriate, the other calculation methods, N/A measurement standards and specifications used; (e) identification and signature of the person Ρ empowered to bind the supplier; (f) where appropriate the technical parameters for Ρ measurements, established in accordance with Annex VII: (i) overall dimensions; Ρ (ii) specification of the type of the air conditioner; Ρ (iii) specification whether the appliance is designed Ρ for cooling or heating only or for both; (iv) the energy efficiency class of the model as Ρ defined in Annex II; (v) The energy efficiency ratio (EER rated) and Ρ coefficient of performance (COP rated) for single and double duct air conditioners or seasonal energy efficiency ratio (SEER) and seasonal coefficient of performance (SCOP) for other air conditioners; (vi) The heating season for which the appliance is Ρ declared fit for purpose; (vii) Sound power levels expressed in dB(A) re1 pW. Ρ rounded to the nearest integer; (viii) the name and GWP of refrigerant used, Р (g) the results of calculations performed in Ρ accordance with Annex VII, Suppliers may include additional information at the end of the above list, Where the information included in the technical Ρ documentation file for a particular air conditioner model has been obtained by calculation on the basis of design, or extrapolation from other equivalent appliances, or both, the documentation shall include details of such calculations or extrapolations, or both, and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken, The information shall also include a list of all other equivalent appliance models where the information was obtained on the same basis,

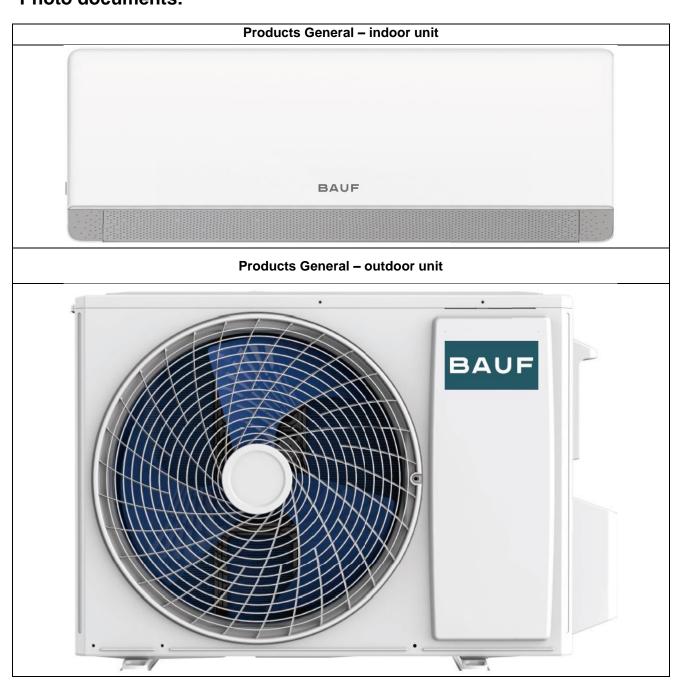


**COMMISSION REGULATION (EU) No 626/2011** CI, Requirement-Test Result-Remark Verdict ANNEX VI Information to be provided in the cases where end-users cannot be expected to see the product displayed 1, The information referred to in Article 4(b) shall be Ρ provided in the following order: (a) The energy efficiency class of the model as Ρ defined in Annex II; (b) for air conditioners other than single ducts and Ρ double ducts: (i) the seasonal energy efficiency ratio (SEER) Ρ and/or seasonal coefficient of performance (SCOP); (ii) the design load (in kW); Р (iii) the annual electricity consumption; Ρ (iv) the cooling and/or each heating ('Average, Р Colder, Warmer') season the appliance is declared fit for purpose; (c) for single duct and double duct air conditioners: N/A (i) the energy efficiency ratio (EER) and/or coefficient N/A of performance (COP): (ii) the rated capacity (kW); N/A (iii) for double ducts, the hourly electricity N/A consumption for cooling and/or heating; (iv) for single ducts, the hourly electricity N/A consumption for cooling and/or heating; (d) Sound power levels expressed in dB(A) re1 pW, Ρ rounded to the nearest integer; (e) Name and GWP of refrigerant used, Ρ Where other information contained in the product 2 Ρ information fiche is also provided, it shall be in the form and order specified in Annex IV, 3 The size and font in which all the information Ρ referred in this Annex is printed or shown shall be legible,





**Photo documents:** 









--- End of Report ---