

Air Conditioner ERP Test Report

Report Number.....: 4390415.53

Tested by (name + signature).: Elvis Chen

Elvis Chen

Approved by (name + signature).....: Jacky Zhang

Jacky Zhang

Date of issue.....: 2022-09-07

Total number of pages.....: 21 pages

Testing Laboratory: DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch

Address.....: Block 5, No.3, Qiyun Road, Huangpu District, Guangzhou, Guangdong, China

Applicant's name: TCL Air conditioner (Zhong Shan) Co.,Ltd.

Address.....: No.59.Nantou Road West, Nantou Town Zhongshan City, Guangdong P.R. China

Test specification:

Standard: EN 14511-1:2018, EN 14511-2:2018, EN 14511-3:2018, EN 14511-4:2018, EN 14825:2018, EN 12102-1:2017+CRGD:2018

Test procedure.....: (EU) No 206/2012, (EU) No 626/2011, EU 2017/254, EU 2016/2282

Non-standard test method.....: N/A

Test Report Form No......: EN 14825-2018 V1.1

Test Report Form(s).....: DEKRA Guangzhou

Originator:

Test item description.....: Air conditioner

Trade Mark.....: TCL

Manufacturer.....: TCL Air Conditioner (Zhong Shan) Co., Ltd.

Factory: TCL Air Conditioner (Zhong Shan) Co., Ltd.

Model/Type reference.....: TAC-24CHSD/*I3A (* = TP11, TP21, TP31, TPG11, TPG21, TPG31, TP41, TP51, TP61, TP71, TP72, TP81, TP91, TPA1)

Ratings.....: 220-240 V~, 50 Hz, see rating label

Summary of testing:**Tests performed (Test items):**

Cooling capacity

Heating capacity

Standby/off, thermostat off mode power consumption

Testing location:



TCL Air conditioner (Zhong Shan) Co.,Ltd.

No.59.Nantou Road West, Nantou Town Zhongshan City, Guangdong P.R. China

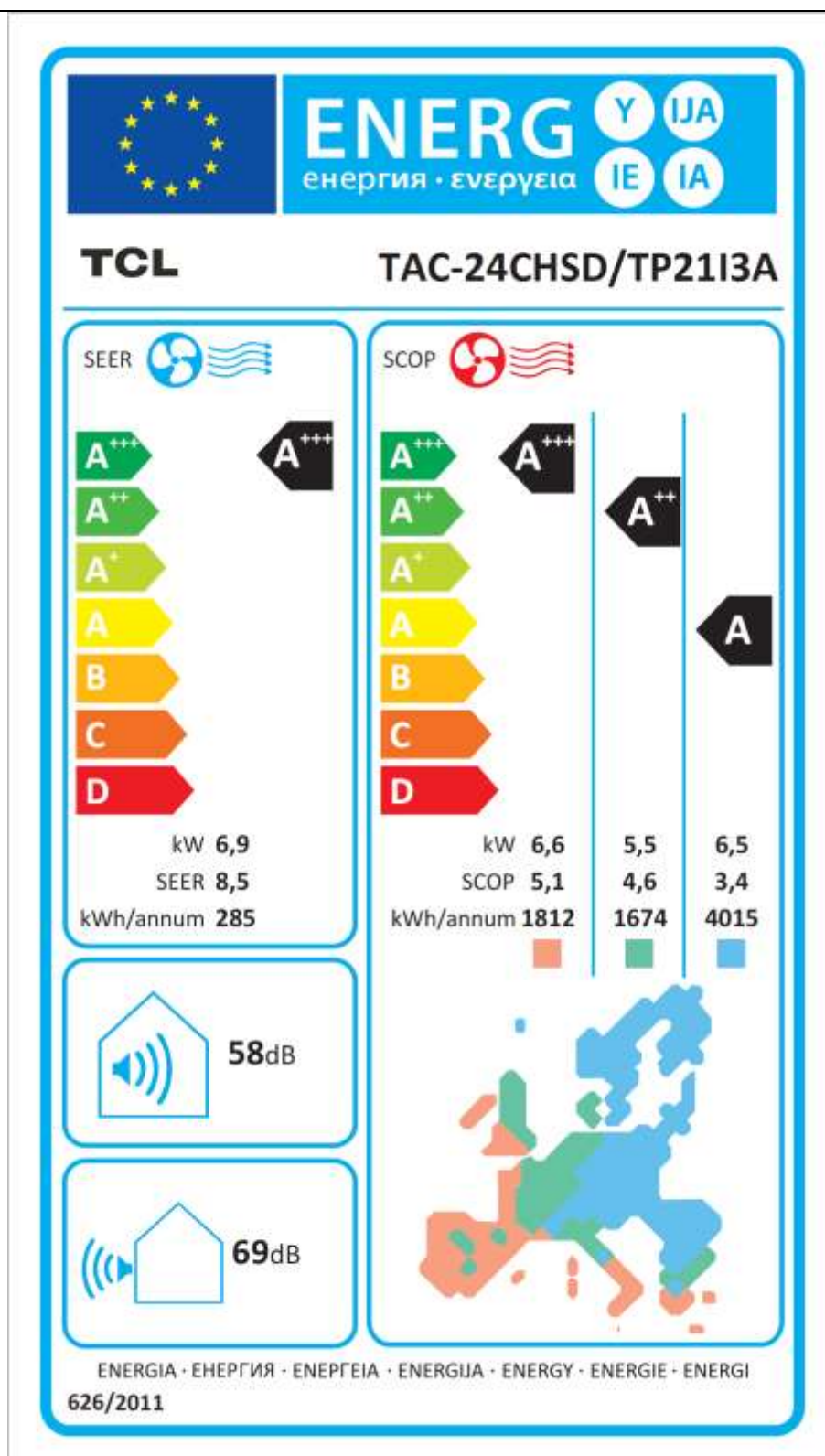
Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBS that own these marks.

Representative model

| | | | |
|---|----------------------|----------------------|---|
| TCL SPLIT TYPE AIR CONDITIONER | | |   |
| Model | TAC-24CHSD/TP2113A | | |
| | Indoor | TAC-24CHSD/TP2113A | |
| | Outdoor | TAC-24CHSD/TP2113A | |
| | Cooling | Heating | |
| Capacity | 6910W (1830~7820) | 7100W (1850~7960) | |
| Current | 8.7A (2.3~15.5) | 8.0A (2.3~16.0) | |
| Rated Current (IEC/EN60335) | 15.5A | 16.0A | |
| Power Input | 1940W (410~2830) | 1810W (420~3010) | |
| Rated Power Input (IEC/EN60335) | 2830W | 3010W | |
| Indoor Air Volume | 1100m³/h | 1100m³/h | |
| Maximum Allowable Pressure | | 3.7MPa | |
| Max. Pressure | Discharge | 3.7MPa | |
| | Suction | 1.2MPa | |
| Sound Power | Indoor | 58dB(A) | |
| | Outdoor | 69dB(A) | |
| Weight | Indoor | 14kg | |
| | Outdoor | 47kg | |
| Rated Voltage | | 220-240V~ | |
| Rated Frequency | | 50Hz | |
| Refrigerant/Charge/GWP | | R32/1.270kg/675 | |
| CO ₂ equivalent | | 0.858 tonnes | |
| Contains fluorinated greenhouse gases | | | |
| Outdoor Unit Water Proof Protection | | IPX4 | |
| TCL Air conditioner (Zhong Shan) Co., Ltd No. 59, Nantou Road West, Nantou, Zhongshan, Guangdong, China | | | |

Rating label (draft version only for indicating the ratings)



Energy label (draft version only for indicating the ratings)

| | |
|--|--|
| Test item particulars : | |
| Classification of installation and use | Fixed appliance |
| Supply Connection..... : | Non-detachable power supply cord with plug |

| |
|--|
| 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..... : 2022-05-26 |
| Date (s) of performance of tests..... : 2022-05-26 to 2022-09-02 |

| |
|--|
| General remarks: |
| <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>"(see Enclosure #)" refers to additional information appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report, a dot is used as the decimal separator.</p> <p>The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to calculate the uncertainty associated with the measurement result.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>The information provided by the customer in this report may affect the validity of the results, the test lab is not responsible for it.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>This report is not used for social proof function in China market.</p> |

| General product information: | |
|---|---|
| Model number of Unit Under Test | TAC-24CHSD/TP21I3A Indoor: TAC-24CHSD/TP21I3A Outdoor: TAC-24CHSD/TP21I3A |
| Type of System | Split type air conditioner |
| Air-conditioner Type | Cooling and heating |
| Power Supply | Single Phase |
| Refrigerant | R32 |
| Unit Mounting (applicable to non ducted indoor units only) | Wall mounted |
| Heat Source (Heating Mode) | Air |
| Heat Sink (Cooling Mode) | Air-cooled |
| Does this air conditioner have a variable output compressor? | Yes |
| Type of compressor | inverter |
| Maximum continuous frequency for cooling (applicable to inverter driven compressor only) (Hz) | 66 |
| Maximum continuous frequency for heating (applicable to inverter driven compressor only) (Hz) | 106 |
| <p>This appliance is a split type air conditioner. Model TAC-24CHSD/*I3A * can be TP11, TP21, TP31, TPG11, TPG21, TPG31, TP41, TP51, TP61, TP71, TP72, TP81, TP91, TPA1, means different appearance and/or colour.</p> <p>After review, model TAC-24CHSD/TP21I3A was subjected to test.</p> | |

| Test and verification results | | | |
|-------------------------------|---|-----------------|---------|
| Clause | Ecodesign requirements - GENERIC ECODESIGN REQUIREMENTS | Result - Remark | Verdict |
| 2a) | From 1 January 2013: Single duct and double duct air conditioners shall correspond to requirements as indicated in Tables 1, 2 and 3 | | N/A |
| Table 1 | Requirements for minimum energy efficiency | | N/A |
| Table 2 | Off mode: Power consumption of equipment in any off-mode condition shall not exceed 1,00 W | | N/A |
| | 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. | | N/A |
| | Standby mode: 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. | | N/A |
| | Availability of standby and/or off mode Equipment shall, except where this is inappropriate for the intended use, 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. | | N/A |
| Table 3 | Indoor sound power level no more than 65 dB(A) | | N/A |
| 2b) | 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 | | N/A |
| Table 4 | Requirements for minimum energy efficiency | | P |
| Table 5 | Requirements for maximum sound power level | | P |
| 2c) | From 1 January 2014, air conditioners shall correspond to requirements as indicated in the table 6 | | P |
| 2d) | From 1 January 2014, single duct and double duct air conditioners and comfort fans shall correspond to requirements as indicated in Table 7 | | N/A |
| Table 7 | Off mode: Power consumption of equipment in any off-mode condition shall not exceed 0,50 W. | | N/A |

| Clause | Ecodesign requirements - GENERIC ECODESIGN REQUIREMENTS | Result - Remark | Verdict |
|--------|--|-----------------|---------|
| | 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. | | N/A |
| | Standby mode: 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. | | N/A |
| | Availability of standby and/or off modeEquipment shall, except where this is inappropriate for the intended use, 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. | | N/A |
| | Power management When equipment is not providing the main function, or when other energy- using 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. | | N/A |

| Information requirements for air conditioners, except double duct and single duct air conditioners | | | | | | | |
|---|----------------------|-------|------|--|------------------|--------|------|
| 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 | Y | | | Average (mandatory) | Y | | |
| heating | Y | | | Warmer (if designated) | Y | | |
| | | | | Colder (if designated) | Y | | |
| Item | symbol | value | unit | Item | symbol | value | unit |
| Design load | | | | Seasonal efficiency | | | |
| cooling | P _{designc} | 6.9 | kW | cooling | SEER | 8.5 | — |
| heating/Average | P _{designh} | 5.5 | kW | heating/Average | SCOP/A | 4.6 | — |
| heating/Warmer | P _{designh} | 6.6 | kW | heating/Warmer | SCOP/W | 5.1 | — |
| heating/Colder | P _{designh} | 6.5 | kW | heating/Colder | SCOP/C | 3.4 | — |
| Declared capacity (*) for cooling, at indoor temperature 27(19) °C and outdoor temperature T _j | | | | Declared energy efficiency ratio (*), at indoor temperature 27(19) °C and outdoor temperature T _j | | | |
| T _j = 35 °C | P _{dc} | 6.901 | kW | T _j = 35 °C | EER _d | 3.800 | — |
| T _j = 30 °C | P _{dc} | 4.956 | kW | T _j = 30 °C | EER _d | 5.756 | — |
| T _j = 25 °C | P _{dc} | 3.201 | kW | T _j = 25 °C | EER _d | 10.003 | — |
| T _j = 20 °C | P _{dc} | 1.757 | kW | T _j = 20 °C | EER _d | 19.098 | — |
| Declared capacity (*) for heating/Average season, at indoor temperature 20°C and outdoor temperature T _j | | | | Declared coefficient of performance (*)/Average season, at indoor temperature 20°C and outdoor temperature T _j | | | |
| T _j = − 7 °C | P _{dh} | 4.867 | kW | T _j = − 7 °C | COP _d | 2.792 | — |
| T _j = 2 °C | P _{dh} | 3.012 | kW | T _j = 2 °C | COP _d | 4.641 | — |
| T _j = 7 °C | P _{dh} | 2.017 | kW | T _j = 7 °C | COP _d | 5.915 | — |
| T _j = 12 °C | P _{dh} | 1.295 | kW | T _j = 12 °C | COP _d | 7.573 | — |
| T _j = bivalent temperature | P _{dh} | 4.867 | kW | T _j = bivalent temperature | COP _d | 2.792 | — |
| T _j = operating limit | P _{dh} | 5.927 | kW | T _j = operating limit | COP _d | 2.327 | — |
| Declared capacity (*) for heating/Warmer season, at indoor temperature 20°C and outdoor temperature T _j | | | | Declared coefficient of performance (*)/Warmer season, at indoor temperature 20°C and outdoor temperature T _j | | | |
| T _j = 2 °C | P _{dh} | 6.602 | kW | T _j = 2 °C | COP _d | 2.675 | — |
| T _j = 7 °C | P _{dh} | 4.196 | kW | T _j = 7 °C | COP _d | 5.019 | — |
| T _j = 12 °C | P _{dh} | 1.937 | kW | T _j = 12 °C | COP _d | 6.749 | — |
| T _j = bivalent temperature | P _{dh} | 6.602 | kW | T _j = bivalent temperature | COP _d | 2.675 | — |
| T _j = operating limit | P _{dh} | 6.602 | kW | T _j = operating limit | COP _d | 2.675 | — |

| Declared capacity (*) for heating/Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance (*) /Colder season, at indoor temperature 20°C and outdoor temperature Tj | | | |
|--|-------|-------|----|---|--------|-----------|-----------|
| Tj = - 7 °C | Pdh | 3.886 | kW | Tj = - 7 °C | COPd | 3.172 | — |
| Tj = 2 °C | Pdh | 2.325 | kW | Tj = 2 °C | COPd | 4.454 | — |
| Tj = 7 °C | Pdh | 1.586 | kW | Tj = 7 °C | COPd | 5.322 | — |
| Tj = 12 °C | Pdh | 1.257 | kW | Tj = 12 °C | COPd | 6.513 | — |
| Tj = bivalent temperature | Pdh | 5.304 | kW | Tj = bivalent temperature | COPd | 2.215 | — |
| Tj = operating limit | Pdh | 4.197 | kW | Tj = operating limit | COPd | 1.903 | — |
| Tj = - 15 °C | Pdh | 5.304 | kW | Tj = - 15 °C | COPd | 2.215 | — |
| Bivalent temperature | | | | Operating limit temperature | | | |
| heating/Average | Tbiv | -7 | °C | heating/Average | Tol | -15 | °C |
| heating/Warmer | Tbiv | 2 | °C | heating/Warmer | Tol | 2 | °C |
| heating/Colder | Tbiv | -15 | °C | heating/Colder | Tol | -25 | °C |
| Cycling interval capacity | | | | Cycling interval efficiency | | | |
| for cooling | Pcycc | N/A | kW | for cooling | EERcyc | N/A | — |
| for heating | Pcych | N/A | kW | for heating | COPcyc | N/A | — |
| Degradation co-efficient cooling (**) | Cdc | 0.25 | — | Degradation co-efficient heating (**) | Cdh | 0.25 | — |
| Electric power input in power modes other than 'active mode' | | | | Annual electricity consumption | | | |
| off mode | POFF | — | kW | cooling | QCE | 285 | kWh/a |
| standby mode | PSB | 0.002 | kW | heating/Average | QHE | 1674 | kWh/a |
| thermostat-off mode | PTO | 0.016 | kW | heating/Warmer | QHE | 1812 | kWh/a |
| crankcase heater mode | PCK | — | kW | heating/Colder | QHE | 4015 | kWh/a |
| Capacity control (indicate one of three options) | | | | Other items | | | |
| fixed | N | | | Sound power level (indoor/outdoor) | LWA | 58 / 69 | dB(A) |
| staged | N | | | Global warming potential | GWP | 675 (R32) | kgCO2 eq. |
| variable | Y | | | Rated air flow (indoor/outdoor) | — | 1100/4000 | m3/h |

| Information requirements for single duct and double duct air conditioners. | | | |
|--|-------------------------|-------|-----------------------|
| Information to identify the model(s) to which the information relates to [fill in as necessary] | | | |
| Description | Symbol | Value | Unit |
| Rated output power for cooling | P_{rated} for cooling | N/A | kW |
| Rated output power for heating | P_{rated} for heating | N/A | kW |
| Rated power input for cooling | P_{EER} | N/A | kW |
| Rated power input for heating | P_{COP} | N/A | kW |
| Rated Energy efficiency ratio | EER_{rated} | N/A | — |
| Rated Coefficient of performance | COP_{rated} | N/A | — |
| Thermostat-off mode power consumption | P_{TO} | N/A | W |
| Standby mode power consumption | P_{SB} | N/A | W |
| Off mode power consumption | P_{OFF} | N/A | W |
| Seasonal electricity consumption for double ducts (DD): hourly electricity consumption for single ducts (SD): hourly electricity consumption | Q | N/A | kWh/60min. |
| Sound power level (indoor only) | L_{WA} | N/A | dB(A) |
| Global warming potential of refrigerant | GWP | N/A | kgCO ₂ eq. |
| Contact details for obtaining more information | N/A | | |

Table for cooling test data

| General test conditions/part load | unit | A35/A27(100%) | A30/A27(74%) | A25/A27(47%) | A20/A27(21%) |
|-----------------------------------|------|---------------|--------------|--------------|--------------|
| - | - | A | B | C | D |
| Barometric | KPa | 100.92 | 101.19 | 108.88 | 101.33 |
| Voltage | V | 229.65 | 229.73 | 229.96 | 230.11 |
| Current input | A | 8.06 | 5.84 | 2.40 | 0.89 |
| Power input | kW | 1.816 | 0.861 | 0.320 | 0.092 |
| Test conditions indoor unit | | | | | |
| Air inlet temperature, DB/WB | °C | 27.06/18.98 | 27.00/18.99 | 26.94/18.97 | 26.98/19.03 |
| Air outlet temperature, DB/WB | °C | N/A | N/A | N/A | N/A |
| Test conditions outdoor unit | | | | | |
| Air inlet temperature, DB/WB | °C | 35.04/24.03 | 30.03/25.03 | 25.03/15.04 | 19.99/14.05 |
| | | | | | |
| Total cooling capacity | kW | 6.901 | 4.956 | 3.201 | 1.757 |
| Power input | kW | 1.816 | 0.861 | 0.320 | 0.092 |
| Energy efficiency ratio | - | 3.80 | 5.76 | 10.00 | 19.10 |
| Compressor frequency | Hz | 66 | 40 | 21 | 10 |

Table for heating test data (Average)

| General test conditions/part load | unit | A-10/A20 (100%) | A-7/A20 (88%) | A-7/A20 (88%) | A2/A20 (54%) | A7/A20 (35%) | A12/A20 (15%) |
|-----------------------------------|------|-----------------|---------------|---------------|--------------|--------------|---------------|
| - | - | E | F | A | B | C | D |
| Barometric | KPa | 101.35 | 101.41 | 101.41 | 101.34 | 101.32 | 101.29 |
| Voltage | V | 230.34 | 230.24 | 230.24 | 230.08 | 230.30 | 230.76 |
| Current input | A | 11.18 | 7.78 | 7.78 | 4.45 | 2.46 | 1.37 |
| Power input | kW | 2.547 | 1.743 | 1.743 | 0.649 | 0.341 | 0.171 |
| Test conditions indoor unit | | | | | | | |
| Air inlet temperature, DB/WB | °C | 20.01/15.00 | 20.00/15.01 | 20.00/15.01 | 20.02/14.99 | 19.99/14.97 | 20.00/15.00 |
| Air outlet temperature, DB/WB | °C | 33.28/18.32 | 30.84/18.77 | 30.84/18.77 | 26.85/17.43 | N/A | N/A |
| Test conditions outdoor unit | | | | | | | |
| Air inlet temperature, DB/WB | °C | -10.00/-11.00 | -7.01/-7.99 | -7.01/-7.99 | 2.00/1.00 | 7.01/6.00 | 12.02/10.98 |
| Summary of the test results | | | | | | | |
| Total heating capacity | kW | 5.927 | 4.867 | 4.867 | 3.012 | 2.017 | 1.295 |
| Power input | kW | 2.547 | 1.743 | 1.743 | 0.649 | 0.341 | 0.171 |
| Co-efficiency of performance | - | 2.33 | 2.79 | 2.79 | 4.64 | 5.91 | 7.57 |
| Compressor frequency | Hz | 106 | 74 | 74 | 33 | 18 | 10 |

Table for heating test data (Warmer)

| General test conditions/part load | unit | A2/A20 (100%) | A2/A20 (100%) | -- | A2/A20 (100%) | A7/A20 (64%) | A12/A20 (29%) |
|-----------------------------------|------|---------------|---------------|----|---------------|--------------|---------------|
| - | - | E | F | A | B | C | D |
| Barometric | KPa | 101.52 | 101.52 | -- | 101.52 | 101.47 | 100.91 |
| Voltage | V | 230.31 | 230.31 | -- | 230.31 | 229.73 | 229.66 |
| Current input | A | 10.84 | 10.84 | -- | 10.84 | 5.70 | 2.20 |
| Power input | kW | 2.468 | 2.468 | -- | 2.468 | 0.836 | 0.287 |
| Test conditions indoor unit | | | | | | | |
| Air inlet temperature, DB/WB | °C | 20.01/15.00 | 20.01/15.00 | -- | 20.01/15.00 | 20.06/14.99 | 20.03/14.97 |
| Air outlet temperature, DB/WB | °C | 33.13/18.09 | 33.13/18.09 | -- | 33.13/18.09 | N/A | N/A |
| Test conditions outdoor unit | | | | | | | |
| Air inlet temperature, DB/WB | °C | 2.00/1.00 | 2.00/1.00 | -- | 2.00/1.00 | 7.01/6.02 | 12.00/11.02 |
| | | | | | | | |
| Summary of the test results | - | A2/A20 (100%) | A2/A20 (100%) | -- | A2/A20 (100%) | A7/A20 (64%) | A12/A20 (29%) |
| Total heating capacity | kW | 6.602 | 6.602 | -- | 6.602 | 4.196 | 1.937 |
| Power input | kW | 2.468 | 2.468 | -- | 2.468 | 0.836 | 0.287 |
| Co-efficiency of performance | - | 2.68 | 2.68 | -- | 2.68 | 5.02 | 6.75 |
| Compressor frequency | Hz | 92 | 92 | -- | 92 | 37 | 16 |

Table for heating test data (Colder)

| General test conditions/part load | unit | A-22/A20 (100%) | A-15/A20 (82%) | A-15/A20 (82%) | A-7/A20 (61%) | A2/A20 (37%) | A7/A20 (24%) | A12/A20 (11%) |
|-----------------------------------|------|-----------------|----------------|----------------|---------------|--------------|--------------|---------------|
| - | - | E | F | G | A | B | C | D |
| Barometric | KPa | 100.88 | 101.04 | 101.04 | 100.85 | 101.16 | 101.29 | 101.33 |
| Voltage | V | 230.33 | 230.13 | 230.13 | 230.24 | 230.25 | 230.24 | 230.62 |
| Current input | A | 9.70 | 10.52 | 10.52 | 8.02 | 3.64 | 2.20 | 1.50 |
| Power input | kW | 2.206 | 2.395 | 2.395 | 1.225 | 0.522 | 0.298 | 0.193 |
| Test conditions indoor unit | | | | | | | | |
| Air inlet temperature, DB/WB | °C | 20.01/15.00 | 20.00/15.00 | 20.00/15.00 | 20.00/15.00 | 19.99/15.00 | 19.99/15.02 | 20.04/15.03 |
| Air outlet temperature, DB/WB | °C | 29.47/18.43 | 32.01/19.24 | 32.01/19.24 | 29.15/18.31 | 25.44/16.94 | N/A | N/A |
| Test conditions outdoor unit | | | | | | | | |
| Air inlet temperature, DB/WB | °C | -22.02/-22.88 | -15.00/-15.10 | -15.00/-15.10 | -7.01/-8.00 | 2.00/1.00 | 7.00/6.02 | 12.03/11.04 |
| | | | | | | | | |
| Summary of the test results | - | A-22/A20 (100%) | A-15/A20 (82%) | A-15/A20 (82%) | A-7/A20 (61%) | A2/A20 (37%) | A7/A20 (24%) | A12/A20 (11%) |
| Total heating capacity | kW | 4.197 | 5.304 | 5.304 | 3.886 | 2.325 | 1.586 | 1.257 |
| Power input | kW | 2.206 | 2.395 | 2.395 | 1.225 | 0.522 | 0.298 | 0.193 |
| Co-efficiency of performance | - | 1.90 | 2.21 | 2.21 | 3.17 | 4.45 | 5.32 | 6.51 |
| Compressor frequency | Hz | 106 | 106 | 106 | 53 | 24 | 14 | 10 |

SEER calculation:

| | Outdoor air | measured Cooling Capacity | Input Power | EER _{DC/meas} | Cd | EER _{PL} |
|---|----------------|------------------------------|----------------|------------------------|------|-------------------|
| | °C | kW | kW | | | |
| A | 35 | 6.901 | 1.816 | 3.80 | 0.25 | 3.80 |
| B | 30 | 4.956 | 0.861 | 5.76 | 0.25 | 5.76 |
| C | 25 | 3.201 | 0.32 | 10.00 | 0.25 | 10.00 |
| D | 20 | 1.757 | 0.092 | 19.10 | 0.25 | 19.10 |

| | Part load ratio | Cooling demand Pc(Tj) | Bin hours hj | Measured Cooling capacity | Capacity ratio | Measured EER | Corrected EER _{PL} | EER(Tj) Cd=0,25 | hj x Pc(Tj) | hj x Pc(Tj) / EERbin(Tj) |
|---|--------------------|-----------------------------|--------------------|---------------------------------|-------------------|-----------------|--------------------------------|--------------------|----------------|--------------------------------|
| | Tj | | | | | | | | | |
| | 17 | 5.3% | 0.363 | 205 | | | | 18.27 | 74 | 4 |
| | 18 | 10.5% | 0.726 | 227 | | | | 18.27 | 165 | 9 |
| | 19 | 15.8% | 1.090 | 225 | | | | 18.27 | 245 | 13 |
| D | 20 | 21.1% | 1.453 | 225 | 1.757 | 0.827 | 19.10 | 18.27 | 327 | 18 |
| | 21 | 26.3% | 1.816 | 216 | | | | 16.62 | 392 | 24 |
| | 22 | 31.6% | 2.179 | 215 | | | | 14.96 | 469 | 31 |
| | 23 | 36.8% | 2.542 | 218 | | | | 13.31 | 554 | 42 |
| | 24 | 42.1% | 2.906 | 197 | | | | 11.66 | 572 | 49 |
| C | 25 | 47.4% | 3.269 | 178 | 3.201 | 1.021 | 10.00 | 10.00 | 582 | 58 |
| | 26 | 52.6% | 3.632 | 158 | | | | 9.15 | 574 | 63 |
| | 27 | 57.9% | 3.995 | 137 | | | | 8.30 | 547 | 66 |
| | 28 | 63.2% | 4.359 | 109 | | | | 7.45 | 475 | 64 |
| | 29 | 68.4% | 4.722 | 88 | | | | 6.61 | 416 | 63 |
| B | 30 | 73.7% | 5.085 | 63 | 4.956 | 1.026 | 5.76 | 5.76 | 320 | 56 |
| | 31 | 78.9% | 5.448 | 39 | | | | 5.36 | 212 | 40 |
| | 32 | 84.2% | 5.811 | 31 | | | | 4.97 | 180 | 36 |
| | 33 | 89.5% | 6.175 | 24 | | | | 4.58 | 148 | 32 |
| | 34 | 94.7% | 6.538 | 17 | | | | 4.19 | 111 | 27 |
| A | 35 | 100.0% | 6.901 | 13 | 6.901 | 1.000 | 3.80 | 3.80 | 90 | 24 |
| | 36 | 105.3% | 7.264 | 9 | | | | 3.80 | 65 | 17 |
| | 37 | 110.5% | 7.627 | 4 | | | | 3.80 | 31 | 8 |
| | 38 | 115.8% | 7.991 | 3 | | | | 3.80 | 24 | 6 |
| | 39 | 121.1% | 8.354 | 1 | | | | 3.80 | 8 | 2 |
| | 40 | 126.3% | 8.717 | 0 | | | | 3.80 | 0 | 0 |
| | | | | | | | | | 6583 | 751 |
| | | | | | | | | | SEERon | 8.76 |
| | | | | | | | | | SEER | 8.52 |

| | | | | | | | | |
|----------------------|---------|-----|------------------|-------|----|-----------------|------------------------------------|-----------|
| Equiv. Hce | 350 | h | | | | | Q _c /SEER _{on} | 275.61362 |
| H _{TO} | 221 | h | P _{TO} | 0.016 | kW | HTO*PTO | 3.536 | kwh |
| H _{SB} | 2142 | h | P _{SB} | 0.002 | kW | HSB*PSB | 4.284 | kwh |
| H _{CK} | 2672 | h | P _{CK} | 0 | kW | HCK*PCK | 0 | kwh |
| H _{OFF} | 0 | h | P _{OFF} | 0 | kW | HOFF*POFF | 0 | kwh |
| | | | | | | Q _{ce} | 283.43362 | |
| P _{designc} | 6.901 | kW | | | | | | |
| Q _c | 2415.35 | kWh | | | | | | |

SCOP calculation (Average):

| | Outdoor air °C | measured Heating Capacity kW | Input Power kW | COP _{DC/meas} | Cd | COP _{PL} (COP bin (T _j)) |
|---|--------------------------|--|--------------------------|------------------------|------|---|
| A | -7 | 4.867 | 1.743 | 2.79 | 0.25 | 2.79 |
| B | 2 | 3.012 | 0.649 | 4.64 | 0.25 | 4.64 |
| C | 7 | 2.017 | 0.341 | 5.91 | 0.25 | 5.91 |
| D | 12 | 1.295 | 0.171 | 7.57 | 0.25 | 7.57 |
| E | -10 | 5.927 | 2.547 | 2.33 | 0.25 | 2.33 |
| F | -7 | 4.867 | 1.743 | 2.79 | 0.25 | 2.79 |

| | T _j | Part load ratio | Heating demand Ph(T _j) | Bin hours | Heat load covered by the heat pump | elbu(T _j) | Capacity ratio | COP _{PL} | COP _{bin} (T _j) | hj | | COP (including backup heater) | hj*[Ph(T _j)- elbu(T _j)] | |
|---|----------------|--------------------|--|--------------|---|-----------------------|-------------------|-------------------|--------------------------------------|--------------------------|---|--|--|---|
| | | | | | | | | | | hj x Ph(T _j) | *[Ph(T _j)- elbu(T _j)]/ +elbu(T _j) | | hj*[Ph(T _j)- elbu(T _j)] | h _j *[Ph(T _j)- elbu(T _j)] |
| A | -10 | 100.0% | 5.502 | 1 | 5.927 | 0.000 | 0.93 | 2.29 | 2.29 | 6 | 2 | 2.29 | 6 | 2.41 |
| | -9 | 96.2% | 5.290 | 25 | 5.574 | 0.000 | 0.95 | | 2.45 | 132 | 54 | 2.45 | 132 | 53.89 |
| | -8 | 92.3% | 5.079 | 23 | 5.220 | 0.000 | 0.97 | | 2.62 | 117 | 45 | 2.62 | 117 | 44.53 |
| | -7 | 88.5% | 4.867 | 24 | 4.867 | 0.000 | 1.00 | 2.79 | 2.79 | 117 | 42 | 2.79 | 117 | 41.83 |
| | -6 | 84.6% | 4.655 | 27 | 4.655 | 0.000 | 1.00 | | 3.00 | 126 | 42 | 3.00 | 126 | 41.93 |
| | -5 | 80.8% | 4.444 | 68 | 4.444 | 0.000 | 1.00 | | 3.20 | 302 | 94 | 3.20 | 302 | 94.34 |
| | -4 | 76.9% | 4.232 | 91 | 4.232 | 0.000 | 1.00 | | 3.41 | 385 | 113 | 3.41 | 385 | 112.99 |
| | -3 | 73.1% | 4.021 | 89 | 4.021 | 0.000 | 1.00 | | 3.61 | 358 | 99 | 3.61 | 358 | 99.01 |
| | -2 | 69.2% | 3.809 | 165 | 3.809 | 0.000 | 1.00 | | 3.82 | 628 | 165 | 3.82 | 628 | 164.55 |
| | -1 | 65.4% | 3.597 | 173 | 3.597 | 0.000 | 1.00 | | 4.02 | 622 | 155 | 4.02 | 622 | 154.63 |
| B | 0 | 61.5% | 3.386 | 240 | 3.386 | 0.000 | 1.00 | | 4.23 | 813 | 192 | 4.23 | 813 | 192.09 |
| | 1 | 57.7% | 3.174 | 280 | 3.174 | 0.000 | 1.00 | | 4.44 | 889 | 200 | 4.44 | 889 | 200.37 |
| | 2 | 53.8% | 2.963 | 320 | 2.963 | 0.000 | 1.00 | 4.64 | 4.64 | 948 | 204 | 4.64 | 948 | 204.27 |
| | 3 | 50.0% | 2.751 | 357 | 2.751 | 0.000 | 1.00 | | 4.90 | 982 | 201 | 4.90 | 982 | 200.60 |
| | 4 | 46.2% | 2.539 | 356 | 2.539 | 0.000 | 1.00 | | 5.15 | 904 | 176 | 5.15 | 904 | 175.51 |
| | 5 | 42.3% | 2.328 | 303 | 2.328 | 0.000 | 1.00 | | 5.41 | 705 | 130 | 5.41 | 705 | 130.48 |
| | 6 | 38.5% | 2.116 | 330 | 2.116 | 0.000 | 1.00 | | 5.66 | 698 | 123 | 5.66 | 698 | 123.37 |
| | 7 | 34.6% | 1.904 | 326 | 1.904 | 0.000 | 1.00 | 5.91 | 5.91 | 621 | 105 | 5.91 | 621 | 104.96 |
| | 8 | 30.8% | 1.693 | 348 | 1.693 | 0.000 | 1.00 | | 6.12 | 589 | 96 | 6.12 | 589 | 96.33 |
| | 9 | 26.9% | 1.481 | 335 | 1.481 | 0.000 | 1.00 | | 6.32 | 496 | 79 | 6.32 | 496 | 78.57 |
| C | 10 | 23.1% | 1.270 | 315 | 1.270 | 0.000 | 1.00 | | 6.52 | 400 | 61 | 6.52 | 400 | 61.37 |
| | 11 | 19.2% | 1.058 | 215 | 1.058 | 0.000 | 1.00 | | 6.72 | 227 | 34 | 6.72 | 227 | 33.87 |
| | 12 | 15.4% | 0.846 | 169 | 0.846 | 0.000 | 1.00 | 6.92 | 6.92 | 143 | 21 | 6.92 | 143 | 20.68 |
| | 13 | 11.5% | 0.635 | 151 | 0.635 | 0.000 | 1.00 | | 7.1178 | 96 | 13 | 7.12 | 96 | 13.47 |
| | 14 | 7.7% | 0.423 | 105 | 0.423 | 0.000 | 1.00 | | 7.3182 | 44 | 6 | 7.32 | 44 | 6.07 |
| | 15 | 3.8% | 0.212 | 74 | 0.212 | 0.000 | 1.00 | | 7.5187 | 16 | 2 | 7.52 | 16 | 2.08 |
| | 16 | 0.0% | | 4910 | | 0.000 | | | | summation | 11365 | 2454 | 11365 | 2454 |
| | | | | | | | | | | SCOP _{on} | 4.63 | | SCOP _{net} | 4.63 |
| | | | | | | | | | | SCOP | 4.62 | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

| | | | | | | | | | |
|----------------------|-----------|-----|------------------|-------|----|-----------------|------------------------------------|-----------|--|
| H _{he} | 1400 | h | | | | | Q _h /SCOP _{on} | 1663.3711 | |
| H _{TO} | 179 | h | P _{TO} | 0.016 | kW | HTO*PTO | 2.864 | kWh | |
| H _{SB} | 0 | h | P _{SB} | 0.002 | kW | HSB*PSB | 0 | kWh | |
| H _{CK} | 179 | h | P _{CK} | 0 | kW | HCK*PCK | 0 | kWh | |
| H _{OFF} | 0 | h | P _{OFF} | 0 | kW | HOFF*POFF | 0 | kWh | |
| | | | | | | Q _{he} | 1666.2351 | | |
| P _{designh} | 5.502 | kW | | | | | | | |
| Q _H | 7702.5565 | kWh | | | | | | | |

SCOP calculation (Warmer):

| | Outdoor air °C | measure d Heating Capacity kW | Input Power kW | COP _{DC/meas} | Cd | COP _{PL} (COP bin (T _j)) |
|---|--------------------------|--|--------------------------|------------------------|------|---|
| B | 2 | 6.602 | 2.468 | 2.68 | 0.25 | 2.68 |
| C | 7 | 4.196 | 0.836 | 5.02 | 0.25 | 5.02 |
| D | 12 | 1.937 | 0.287 | 6.75 | 0.25 | 6.75 |
| E | 2 | 6.602 | 2.468 | 2.68 | 0.25 | 2.68 |
| F | 2 | 6.602 | 2.468 | 2.68 | 0.25 | 2.68 |

| | | | | | | | | | | h _j | | COP | | h _j {Ph(T _j)- | |
|---|----------------|-----------|----------------|-----------|-------------------------------|---------------------|----------|------------------|--------------------------------------|--|------|---------------------------|--------|--|------------------------|
| | | Part load | Heating demand | Bin hours | Heat load covered by the heat | | Capacity | COP _d | COP _{bin} (T _j) | *{[(Ph(T _j)-elbu(T _j))/COP _{bin} (T _j)]/+elbu(T _j)} | | (including backup heater) | | h _j {Ph(T _j)-elbu(T _j)/COP _{bin} (T _j)/C | |
| B | T _j | | | | ratio | Ph(T _j) | | | | h _j | pump | elbu(T _j) | ratio | h _j x Ph(T _j) | +elbu(T _j) |
| B | 2 | 100.0% | 6.602 | 3 | 6.602 | 0.000 | 1.00 | 2.68 | 2.68 | 20 | 7 | 2.68 | 19.8 | 7.4 | |
| | 3 | 92.9% | 6.130 | 22 | 6.121 | 0.010 | 1.00 | | 3.14 | 135 | 43 | 3.13 | 134.7 | 42.8 | |
| | 4 | 85.7% | 5.659 | 63 | 5.640 | 0.019 | 1.00 | | 3.61 | 357 | 100 | 3.58 | 355.3 | 98.3 | |
| | 5 | 78.6% | 5.187 | 63 | 5.158 | 0.029 | 1.01 | | 4.08 | 327 | 81 | 4.01 | 325.0 | 79.6 | |
| | 6 | 71.4% | 4.716 | 175 | 4.677 | 0.039 | 1.01 | | 4.55 | 825 | 187 | 4.42 | 818.5 | 179.9 | |
| C | 7 | 64.3% | 4.244 | 162 | 4.196 | 0.048 | 1.01 | 5.02 | 5.02 | 688 | 143 | 4.80 | 679.8 | 135.4 | |
| | 8 | 57.1% | 3.773 | 259 | 3.744 | 0.028 | 1.01 | | 5.37 | 977 | 188 | 5.19 | 969.7 | 180.7 | |
| | 9 | 50.0% | 3.301 | 360 | 3.292 | 0.009 | 1.00 | | 5.71 | 1188 | 211 | 5.64 | 1185.3 | 207.5 | |
| | 10 | 42.9% | 2.829 | 428 | 2.841 | 0.000 | 1.00 | | 6.06 | 1211 | 200 | 6.06 | 1211.0 | 199.9 | |
| | 11 | 35.7% | 2.358 | 430 | 2.389 | 0.000 | 0.99 | | 6.40 | 1014 | 158 | 6.40 | 1013.9 | 158.3 | |
| D | 12 | 28.6% | 1.886 | 503 | 1.937 | 0.000 | 0.97 | 6.75 | 6.75 | 949 | 141 | 6.75 | 948.8 | 140.6 | |
| | 13 | 21.4% | 1.415 | 444 | 1.485 | 0.000 | 0.95 | | 7.10 | 628 | 89 | 7.10 | 628.1 | 88.5 | |
| | 14 | 14.3% | 0.943 | 384 | 1.033 | 0.000 | 0.91 | | 7.44 | 362 | 49 | 7.44 | 362.2 | 48.7 | |
| | 15 | 7.1% | 0.472 | 294 | 0.582 | 0.000 | 0.81 | | 7.79 | 139 | 18 | 7.79 | 138.6 | 17.8 | |
| | 16 | 0.0% | 0.000 | 0 | 0.130 | 0.000 | 0.00 | | 8.13 | 0 | 0 | | | | |
| | | | | | | | | | | SCOP _{on} | 5.46 | SCOP _{net} | | 5.54 | |
| | | | | | | | | | | SCOP | 5.43 | | | | |

| | | | | | | | | | |
|----------------------|--------|-----|------------------|-------|----|------------------------------------|-----------------|-----------|--|
| Equiv. H | 1400 | h | | | | Q _h /SCOP _{on} | 1691.4701 | | |
| H _{TO} | 755 | h | P _{TO} | 0.016 | kW | HTO*PTO | 12.08 | kWh | |
| H _{SB} | 0 | h | P _{SB} | 0.002 | kW | HSB*PSB | 0 | kWh | |
| H _{CK} | 755 | h | P _{CK} | 0 | kW | HCK*PCK | 0 | kWh | |
| H _{OFF} | 0 | h | P _{OFF} | 0 | kW | HOFF*POFF | 0 | kWh | |
| | | | | | | | Q _{he} | 1703.5501 | |
| P _{designh} | 6.602 | kW | | | | | | | |
| Q _H | 9242.8 | kWh | | | | | | | |

SCOP calculation (Colder):

| | Outdoor air °C | measured Heating Capacity kW | Input Power kW | COP _{DC/meas} | Cd | COP _{PL} (COP bin (T _j)) |
|---|--------------------------|--|--------------------------|------------------------|------|---|
| A | -7 | 3.886 | 1.225 | 3.17 | 0.25 | 3.17 |
| B | 2 | 2.325 | 0.522 | 4.45 | 0.25 | 4.45 |
| C | 7 | 1.586 | 0.298 | 5.32 | 0.25 | 5.32 |
| D | 12 | 1.257 | 0.193 | 6.51 | 0.25 | 6.51 |
| E | -22 | 4.197 | 2.206 | 1.90 | 0.25 | 1.90 |
| F | -15 | 5.304 | 2.395 | 2.21 | 0.25 | 2.21 |
| G | -15 | 5.304 | 2.395 | 2.21 | 0.25 | 2.21 |

| | | | | | | | | | | h _j | | COP | | h _j *{Ph(T _j)- | | | | | | | | | |
|----------------------|--------|---------------------|----------------|------------------|-------------------------------|-------|-------------------|--------------------------------------|------|--------------------------------------|---|----------------|---|---|--|--|--|--|--|--|--|--|--|
| | | Part load | Heating demand | Bin hours | Heat load covered by the heat | | Capacity | declared | | h _j x Ph(T _j) | *{[(Ph(T _j)-elbu(T _j))/COPbin(T _j)+elbu(T _j)] | backup heater) | h _j *{Ph(T _j)-elbu(T _j)} | h _j *{Ph(T _j)-OPbin(T _j)/C | | | | | | | | | |
| T _j | ratio | Ph(T _j) | h _j | pump | elbu(T _j) | ratio | COP _{PL} | COP _{bin} (T _j) | | | | | | | | | | | | | | | |
| -22 | 100.0% | 6.502 | 1 | 4.197 | 2.305 | | 1.9025385 | 1.90 | | 7 | 5 | 1.44 | 4 | 2.21 | | | | | | | | | |
| -21 | 97.4% | 6.331 | 6 | 4.355 | 1.975 | | | 1.95 | | 38 | 25 | 1.50 | 26 | 13.42 | | | | | | | | | |
| -20 | 94.7% | 6.159 | 13 | 4.513 | 1.646 | | | 1.99 | | 80 | 51 | 1.57 | 59 | 29.46 | | | | | | | | | |
| -19 | 92.1% | 5.988 | 17 | 4.671 | 1.317 | | | 2.04 | | 102 | 61 | 1.66 | 79 | 39.00 | | | | | | | | | |
| -18 | 89.5% | 5.817 | 19 | 4.830 | 0.988 | | | 2.08 | | 111 | 63 | 1.76 | 92 | 44.10 | | | | | | | | | |
| -17 | 86.8% | 5.646 | 26 | 4.988 | 0.658 | | | 2.13 | | 147 | 78 | 1.88 | 130 | 61.01 | | | | | | | | | |
| -16 | 84.2% | 5.475 | 39 | 5.146 | 0.329 | | | 2.17 | | 214 | 105 | 2.03 | 201 | 92.48 | | | | | | | | | |
| G | -15 | 81.6% | 5.304 | 41 | 5.304 | 0.000 | 2.2146138 | 2.21 | | 217 | 98 | 2.21 | 217 | 98.20 | | | | | | | | | |
| -14 | 78.9% | 5.133 | 35 | 5.127 | 0.000 | | | 2.33 | | 180 | 77 | 2.33 | 180 | 76.96 | | | | | | | | | |
| -13 | 76.3% | 4.962 | 52 | 4.950 | 0.000 | | | 2.45 | | 258 | 105 | 2.45 | 258 | 105.14 | | | | | | | | | |
| -12 | 73.7% | 4.791 | 37 | 4.772 | 0.000 | | | 2.57 | | 177 | 69 | 2.57 | 177 | 68.87 | | | | | | | | | |
| -11 | 71.1% | 4.620 | 41 | 4.595 | 0.000 | | | 2.69 | | 189 | 70 | 2.69 | 189 | 70.32 | | | | | | | | | |
| -10 | 68.4% | 4.449 | 43 | 4.418 | 0.000 | 1.01 | | 2.81 | | 191 | 68 | 2.81 | 191 | 68.00 | | | | | | | | | |
| -9 | 65.8% | 4.277 | 54 | 4.241 | 0.000 | 1.01 | | 2.93 | | 231 | 79 | 2.93 | 231 | 78.76 | | | | | | | | | |
| -8 | 63.2% | 4.106 | 90 | 4.063 | 0.000 | 1.01 | | 3.05 | | 370 | 121 | 3.05 | 370 | 121.07 | | | | | | | | | |
| A | -7 | 60.5% | 3.935 | 125 | 3.886 | 0.000 | 1.01 | 3.17 | 3.17 | 492 | 155 | 3.17 | 492 | 155.06 | | | | | | | | | |
| -6 | 57.9% | 3.764 | 169 | 3.713 | 0.000 | 1.01 | | 3.31 | | 636 | 192 | 3.31 | 636 | 191.92 | | | | | | | | | |
| -5 | 55.3% | 3.593 | 195 | 3.539 | 0.000 | 1.02 | | 3.46 | | 701 | 203 | 3.46 | 701 | 202.67 | | | | | | | | | |
| -4 | 52.6% | 3.422 | 278 | 3.366 | 0.000 | 1.02 | | 3.60 | | 951 | 264 | 3.60 | 951 | 264.29 | | | | | | | | | |
| -3 | 50.0% | 3.251 | 306 | 3.192 | 0.000 | 1.02 | | 3.74 | | 995 | 266 | 3.74 | 995 | 265.84 | | | | | | | | | |
| -2 | 47.4% | 3.080 | 454 | 3.019 | 0.000 | 1.02 | | 3.88 | | 1398 | 360 | 3.88 | 1398 | 359.96 | | | | | | | | | |
| -1 | 44.7% | 2.909 | 385 | 2.845 | 0.000 | 1.02 | | 4.03 | | 1120 | 278 | 4.03 | 1120 | 278.10 | | | | | | | | | |
| 0 | 42.1% | 2.738 | 490 | 2.672 | 0.000 | 1.02 | | 4.17 | | 1341 | 322 | 4.17 | 1341 | 321.74 | | | | | | | | | |
| B | 1 | 39.5% | 2.566 | 533 | 2.498 | 0.000 | 1.03 | 4.31 | 4.31 | 1368 | 317 | 4.31 | 1368 | 317.26 | | | | | | | | | |
| 2 | 36.8% | 2.395 | 380 | 2.325 | 0.000 | 1.03 | 4.45 | 4.45 | 4.45 | 910 | 204 | 4.45 | 910 | 204.36 | | | | | | | | | |
| 3 | 34.2% | 2.224 | 228 | 2.177 | 0.000 | 1.02 | | 4.63 | | 507 | 110 | 4.63 | 507 | 109.59 | | | | | | | | | |
| 4 | 31.6% | 2.053 | 261 | 2.029 | 0.000 | 1.01 | | 4.80 | | 536 | 112 | 4.80 | 536 | 111.61 | | | | | | | | | |
| 5 | 28.9% | 1.882 | 279 | 1.882 | 0.000 | 1.00 | | 4.97 | | 525 | 106 | 4.97 | 525 | 105.55 | | | | | | | | | |
| 6 | 26.3% | 1.711 | 229 | 1.734 | 0.000 | 0.99 | | 5.15 | | 392 | 76 | 5.15 | 392 | 76.10 | | | | | | | | | |
| C | 7 | 23.7% | 1.540 | 269 | 1.586 | 0.000 | 0.97 | 5.32 | 5.32 | 414 | 78 | 5.32 | 414 | 77.83 | | | | | | | | | |
| 8 | 21.1% | 1.369 | 233 | 1.520 | 0.000 | 0.90 | | 5.41 | | 319 | 59 | 5.41 | 319 | 58.93 | | | | | | | | | |
| 9 | 18.4% | 1.198 | 230 | 1.454 | 0.000 | 0.82 | | 5.50 | | 275 | 50 | 5.50 | 275 | 50.07 | | | | | | | | | |
| 10 | 15.8% | 1.027 | 243 | 1.389 | 0.000 | 0.74 | | 5.59 | | 249 | 45 | 5.59 | 249 | 44.61 | | | | | | | | | |
| 11 | 13.2% | 0.855 | 191 | 1.323 | 0.000 | 0.65 | | 5.68 | | 163 | 29 | 5.68 | 163 | 28.76 | | | | | | | | | |
| D | 12 | 10.5% | 0.684 | 146 | 1.257 | 0.000 | 0.54 | 5.77 | 5.77 | 100 | 17 | 5.77 | 100 | 17.31 | | | | | | | | | |
| 13 | 7.9% | 0.513 | 150 | 1.191 | 0.000 | 0.43 | | 5.86 | | 77 | 13 | 5.86 | 77 | 13.14 | | | | | | | | | |
| 14 | 5.3% | 0.342 | 97 | 1.125 | 0.000 | 0.30 | | 5.95 | | 33 | 6 | 5.95 | 33 | 5.58 | | | | | | | | | |
| 15 | 2.6% | 0.171 | 61 | 1.060 | 0.000 | 0.16 | | 6.04 | | 10 | 2 | 6.04 | 10 | 1.73 | | | | | | | | | |
| 16 | 0.0% | 0.000 | 0 | 0.994 | 0.000 | 0.00 | | | | 0 | | | | | | | | | | | | | |
| | | | | | | | | | | 16025 | 4338 | | 15918 | 4231 | | | | | | | | | |
| | | | | | | | | | | SCOP _{on} | 3.69 | | SCOP _{net} | 3.76 | | | | | | | | | |
| Equiv. H | | 2100 | h | | | | | Q _h /SCOP _{on} | | 2528.6583 | | | | | | | | | | | | | |
| H _{TO} | | 131 | h | P _{TO} | 0.01 | kW | | HTO*PTO | | 1.31 | | kWh | | | | | | | | | | | |
| H _{SB} | | 0 | h | P _{SB} | 0.001 | kW | | HSB*PSB | | 0 | | kWh | | | | | | | | | | | |
| H _{CK} | | 131 | h | P _{CK} | 0 | kW | | HCK*PCK | | 0 | | kWh | | | | | | | | | | | |
| H _{OFF} | | 0 | h | P _{OFF} | 0.001 | kW | | HOFF*POFF | | 0 | | kWh | | | | | | | | | | | |
| | | | | | | | | Q _{he} | | 2529.9683 | | | | | | | | | | | | | |
| P _{designh} | | 4.449 | kW | | | | | | | | | | | | | | | | | | | | |
| Q _H | | 9341.883871 | kWh | | | | | | | | | | | | | | | | | | | | |

| Item | Measured value | Rated value | Deviation | Verdict |
|--|----------------|-------------|-----------|---------|
| SEER | 8.52 | 8.5 | 0.2% | P |
| SCOP(average) | 4.62 | 4.6 | 0.4% | P |
| SCOP (warmer) | 5.43 | 5.1 | 6.5% | P |
| SCOP (colder) | 3.69 | 3.4 | 8.5% | P |
| Power consumption in thermostat off mode | 16.0 W | 16.0 W | 0% | P |
| Power consumption in standby mode | 2.0 W | 2.0 W | 0% | P |
| Remark: For the original qualification test, the rating values should be equal to or more unfavorable than the tested values. | | | | |

Table I

Energy efficiency classes for air conditioners, except double ducts and single ducts

| Energy Efficiency Class | SEER | SCOP |
|-------------------------|--------------------------------|--------------------------------|
| A+++ | $\text{SEER} \geq 8,50$ | $\text{SCOP} \geq 5,10$ |
| A++ | $6,10 \leq \text{SEER} < 8,50$ | $4,60 \leq \text{SCOP} < 5,10$ |
| A+ | $5,60 \leq \text{SEER} < 6,10$ | $4,00 \leq \text{SCOP} < 4,60$ |
| A | $5,10 \leq \text{SEER} < 5,60$ | $3,40 \leq \text{SCOP} < 4,00$ |
| B | $4,60 \leq \text{SEER} < 5,10$ | $3,10 \leq \text{SCOP} < 3,40$ |
| C | $4,10 \leq \text{SEER} < 4,60$ | $2,80 \leq \text{SCOP} < 3,10$ |
| D | $3,60 \leq \text{SEER} < 4,10$ | $2,50 \leq \text{SCOP} < 2,80$ |
| E | $3,10 \leq \text{SEER} < 3,60$ | $2,20 \leq \text{SCOP} < 2,50$ |
| F | $2,60 \leq \text{SEER} < 3,10$ | $1,90 \leq \text{SCOP} < 2,20$ |
| G | $\text{SEER} < 2,60$ | $\text{SCOP} < 1,90$ |

Table for sound power

| | | | | | | | | | | |
|---|----------------------|------|------|------|------|------|------|------|------|------|
| indoor | | | | | | | | | | |
| Test voltage / frequency | 230 V / 50 Hz | | | | | | | | | |
| Air inlet temperature, DB/WB | 27.0 °C / 19.0 °C | | | | | | | | | |
| Measured surface | 14.14 m ² | | | | | | | | | |
| Background Noise Level [dB] | 18,0 | | | | | | | | | |
| Microphone Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| L _{pi} [dB] | 44.3 | 46.2 | 46.7 | 47.0 | 45.9 | 46.3 | 47.5 | 47.0 | 46.1 | 46.5 |
| L _{pmc} / Averaged Sound Pressure Level [dB (A)] | 46.42 | | | | | | | | | |
| LW / Sound Power Level [dB (A)] | 57.93 | | | | | | | | | |
| Rated sound Power Level [dB (A)] | 58 | | | | | | | | | |
| Verdict | P | | | | | | | | | |

| | | | | | |
|---|----------------------|------|------|------|------|
| outdoor | | | | | |
| Test voltage / frequency | 230 V / 50 Hz | | | | |
| Air inlet temperature, DB/WB | 35.0 °C / 24.0 °C | | | | |
| Measured surface | 30.41 m ² | | | | |
| Background Noise Level [dB] | 18,0 | | | | |
| Microphone Position | 1 | 2 | 3 | 4 | 5 |
| L _{pi} [dB] | 53.3 | 53.1 | 54.6 | 54.1 | 52.2 |
| L _{pmc} / Averaged Sound Pressure Level [dB (A)] | 53.54 | | | | |
| LW / Sound Power Level [dB (A)] | 68.37 | | | | |
| Rated sound Power Level [dB (A)] | 69 | | | | |
| Verdict | P | | | | |

Photos:



Indoor



Outdoor unit



Compressor

End of report