

# REGULATION (EU) N. 813/2013

## Ecodesign requirements for space heaters

Air to water reversible heat pumps optimized for heating

### **i-KIR-MTD 0075t - 0151t**

Heating Capacity Range 19,8 - 39,4 [kW] - (EN14511 VALUE)

Nominal Heating Capacity at Tdesignh Range 16,0 - 33,0 [kW]



IT

EN

DE

ES

FR

|                                             |   |
|---------------------------------------------|---|
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## 1. REGULATION (EU) N. 813/2013

### 1.1 Scope of the document

This document is compliant with the Commission Regulation (EU) N. 813/2013 regarding "REQUIREMENTS FOR PRODUCT INFORMATION" (Annex II, Point 5) and it is made by the required information set out of the Table 2, Annex II of the Regulation called "Information requirements for heat pump space heaters and heat pump combination heaters".

### 1.2 REGULATION (EU) N. 813/2013 description

The COMMISSION REGULATION (EU) N. 813/2013 of 2 August 2013, implementing Directive 2009/125/EC of the European Parliament and of the Council, establishes ecodesign requirements for the placing on the market and/or putting into service of space heaters and combination heaters with a rated heat output  $\leq 400$  kW, including those integrated in packages of space heater, temperature control and solar device or packages of combination heater, temperature control and solar device as defined in Article 2 of Commission Delegated Regulation (EU) N. 811/2013.

### 1.3 Climaveneta's declared data description

- Heat pump combination heater: heat pump space heater that is designed to also provide heat to deliver hot drinking.
- Low-temperature application: application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 35 °C.
- Medium-temperature application: application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C.
- T<sub>designH</sub>: temperature at reference design conditions.
- P<sub>designH</sub>, Design load for heating: the rated heat output of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW.
- Seasonal space heating energy efficiency ( $\eta_s$ ): ratio between the space heating demand for a designated heating season, supplied by a heater and the annual energy consumption required to meet this demand, expressed in %.
- Seasonal space heating energy efficiency class: efficiency class determined on the basis of its seasonal space heating energy efficiency with a difference distribution between heaters and low temperature heat pumps.
- Low-temperature heat pump: heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of  $-7$  °C ( $-8$  °C) in the reference design conditions for average climate.
- Bivalent temperature: the outdoor temperature declared by the manufacturer for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating.
- Operation limit temperature: the outdoor temperature declared by the manufacturer for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero.
- Degradation coefficient: measure of efficiency loss due to cycling of heat pump space heaters or heat pump combination heaters.
- Off mode: a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function.
- Thermostat-off mode: condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational.
- Standby mode: condition where the heater is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display.
- Crankcase heater mode: condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started.
- Seasonal coefficient of performance (SCOP): the overall coefficient of performance of a heat pump heater representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption.
- Supplementary capacity for heating: rated heat output of a supplementary heater that supplements the declared capacity for heating to meet the part load for heating, if the declared capacity for heating is less than the part load

for heating.

- Capacity control: ability of a heat pump space heater or heat pump combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle.
- Annual energy consumption: means the energy consumption required to meet the reference annual heating demand for a designated heating season.
- Sound power level LWA: the A-weighted sound power level, indoors and/or outdoors, expressed in dB.

## 2. CLIMAVENETA CONTENTS UNIT

### 2.1 Table index

Air to water reversible heat pumps optimized for heating

#### i-KIR-MTD 0075t - 0151t

Heating Capacity Range 19,8 - 39,4 [kW]

Nominal Heating Capacity at Tdesignh Range 16,0 - 33,0 [kW]

| Units     | Version | Size  |       |       |       |       | Pag. |
|-----------|---------|-------|-------|-------|-------|-------|------|
| i-KIR-MTD | B       | 0075t | 0091t | 0095t | 0101t | 0121t | 5    |
|           |         | 0135t | 0151t |       |       |       |      |

| i-KIR-MTD /0075t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>16</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>141</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A+</b>  |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 14,1       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 8,59       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 7,13       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 8,11       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 14,1       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 13,3       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,28       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 3,73       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 4,60       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 5,60       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,28       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,14       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,108      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 2,64       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 72         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 9129       |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 7992       |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| i-KIR-MTD /0091t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>23</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>163</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 20,4       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 12,4       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 9,15       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 10,4       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 20,4       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 19,3       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,67       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,16       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 5,35       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 6,60       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,67       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,50       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,119      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 3,76       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 73         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 11519      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 11016      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| i-KIR-MTD /0095t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>25</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>160</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 22,4       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 13,6       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 10,9       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 12,5       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 22,4       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 21,4       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,53       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,12       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 5,38       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 6,71       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,53       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,39       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,158      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 3,92       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 75         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 12805      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 11016      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| i-KIR-MTD /0101t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>27</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>157</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 24,3       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 14,8       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 15,9       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 18,1       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 24,3       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 23,2       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,44       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,08       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 5,57       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 6,75       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,44       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,30       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,190      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 4,27       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 76         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 14178      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 11016      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.



| i-KIR-MTD /0121t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>26</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>164</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 22,9       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 14,0       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 10,1       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 11,6       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 22,9       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 21,1       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,63       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,34       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 5,16       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 6,35       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,63       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,42       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,121      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 4,79       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 77         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 12843      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 15984      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| i-KIR-MTD /0135t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>29</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>163</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 25,2       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 15,4       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 12,2       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 14,0       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 25,2       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 23,4       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,58       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,28       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 5,38       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 6,69       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,58       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,39       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,149      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 5,09       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 78         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 14175      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 15984      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| i-KIR-MTD /0151t                                                                                                                        |                           |             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------|------------|
| Air-to-water heat pump:                                                                                                                 | yes / no                  |             | yes        |
| Water-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Brine-to-water heat pump:                                                                                                               | yes / no                  |             | no         |
| Low-temperature heat pump:                                                                                                              | yes / no                  |             | yes        |
| With supplementary heater:                                                                                                              | yes / no                  |             | no         |
| Mixed unit with heat pump:                                                                                                              | yes / no                  |             | no         |
| Temperature application (1)                                                                                                             | (low 35°C/ medium 55°C)   |             | low 35°C   |
| Water flow rate                                                                                                                         | fixed / variable          |             | fixed      |
| Outlet temperature                                                                                                                      | fixed / variable          |             | variable   |
| Parameters are declared for average/warmer/colder climate conditions (1)                                                                | average / warmer / colder |             | average    |
| <b>Rated heat output at Tdesignh</b>                                                                                                    | <b>Prated = Pdesignh</b>  | <b>[kW]</b> | <b>33</b>  |
| <b>Seasonal space heating energy efficiency</b>                                                                                         | <b>ηs</b>                 | <b>[%]</b>  | <b>171</b> |
| <b>Seasonal space heating energy efficiency class</b>                                                                                   | -                         | -           | <b>A++</b> |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               |                           |             |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Pdh                       | [kW]        | 28,8       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Pdh                       | [kW]        | 17,5       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Pdh                       | [kW]        | 19,3       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Pdh                       | [kW]        | 22,1       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Pdh                       | [kW]        | 28,8       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Pdh                       | [kW]        | 26,8       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Pdh                       | [kW]        | -          |
| Bivalent temperature                                                                                                                    | Tbiv                      | [°C]        | -7         |
| Degradation coefficient                                                                                                                 | Cdh                       | -           | 0,90       |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> |                           |             |            |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | COPd                      | -           | 2,65       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | COPd                      | -           | 4,49       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | COPd                      | -           | 6,02       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | COPd                      | -           | 7,38       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature                                                  | COPd                      | -           | 2,65       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature                                           | COPd                      | -           | 2,42       |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | COPd                      | -           | -          |
| For air-to-water HP : Operation limit temperature                                                                                       | TOL                       | [°C]        | -20        |
| Heating water operating limit temperature at TOL                                                                                        | WTOL                      | [°C]        | 45         |
| <b>Power consumption in modes other than active mode</b>                                                                                |                           |             |            |
| Off mode                                                                                                                                | POFF                      | [kW]        | 0,000      |
| Thermostat-off mode                                                                                                                     | PTO                       | [kW]        | 0,181      |
| Standby mode                                                                                                                            | PSB                       | [kW]        | 0,060      |
| Crankcase heater mode                                                                                                                   | PCK                       | [kW]        | 0,060      |
| <b>Supplementary heater</b>                                                                                                             |                           |             |            |
| Nominal heating capacity                                                                                                                | Psup                      | [kW]        | 5,75       |
| <b>Other items</b>                                                                                                                      |                           |             |            |
| Capacity control                                                                                                                        | fixed / variable          |             | variable   |
| Sound power level, indoors                                                                                                              | LWA                       | [dB(A)]     | -          |
| Sound power level, outdoors                                                                                                             | LWA                       | [dB(A)]     | 78         |
| Annual electricity consumption for heating                                                                                              | QHE                       | [kW/h]      | 15433      |
| <b>Outdoor heat exchanger</b>                                                                                                           |                           |             |            |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                      | Qairsource                | [m³/h]      | 15984      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                            | Qwater/brine source       | [m³/h]      | -          |

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

Unit in standard configuration/execution, without optional accessories.

| ENGLISH                                                                                                                                 | ITALIANO                                                                                                                                                      | FRANCAISE                                                                                                                                                                          | DEUTSCH                                                                                                            | ESPAÑOL                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air-to-water heat pump:                                                                                                                 | Pompa di calore aria/ acqua:                                                                                                                                  | Pompes à chaleur air-eau:                                                                                                                                                          | Luft-Wasser-Wärmepumpe:                                                                                            | Bomba de calor aire-agua:                                                                                                                                         |
| Water-to-water heat pump:                                                                                                               | Pompa di calore acqua/ acqua:                                                                                                                                 | Pompes à chaleur eau-eau:                                                                                                                                                          | Wasser-Wasser-Wärmepumpe:                                                                                          | Bomba de calor agua-agua:                                                                                                                                         |
| Brine-to-water heat pump:                                                                                                               | Pompa di calore salamoia/ acqua:                                                                                                                              | Pompe à chaleur eau glycolée-eau:                                                                                                                                                  | Sole-Wasser-Wärmepumpe:                                                                                            | Bomba de calor salmuera-agua:                                                                                                                                     |
| Low-temperature heat pump:                                                                                                              | Pompa di calore a bassa temperatura:                                                                                                                          | Pompes à chaleur basse température:                                                                                                                                                | Niedertemperatur-Wärmepumpe:                                                                                       | Bomba de calor de baja temperatura:                                                                                                                               |
| With supplementary heater:                                                                                                              | Con riscaldatore supplementare:                                                                                                                               | Équipée d'un dispositif de chauffage d'appoint:                                                                                                                                    | Mit Zusatzheizgerät:                                                                                               | Equipado con un calefactor complementario:                                                                                                                        |
| Mixed unit with heat pump:                                                                                                              | Apparecchio misto a pompa di calore:                                                                                                                          | Dispositif de chauffage mixte par pompe à chaleur:                                                                                                                                 | Kombiheizgerät mit Wärmepumpe:                                                                                     | Calefactor combinado con bomba de calor:                                                                                                                          |
| Temperature application                                                                                                                 | Temperatura applicazione                                                                                                                                      | Application à température                                                                                                                                                          | Temperatur Anwendung                                                                                               | Aplicación de temperatura                                                                                                                                         |
| Water flow rate                                                                                                                         | Portata d'acqua                                                                                                                                               | Débit fluide                                                                                                                                                                       | Volumenstrom Wasser                                                                                                | Caudal agua                                                                                                                                                       |
| Outlet temperature                                                                                                                      | Temperatura di uscita                                                                                                                                         | Température de sortie                                                                                                                                                              | Austrittstemperatur                                                                                                | Temperatura de salida                                                                                                                                             |
| Parameters are declared for average/warmer/colder climate conditions                                                                    | I parametri sono dichiarati per condizioni climatiche medie/ alte/ basse                                                                                      | Les paramètres sont déclarés pour les conditions climatiques moyennes/chaud/basse                                                                                                  | Die Parameter sind für eine Mitteltemperaturanwendung anzugeben                                                    | Los parámetros se indicarán para condiciones climáticas medias/ alta/ baja                                                                                        |
| Rated heat output at Tdesignh                                                                                                           | Potenza termica nominale a Tdesign                                                                                                                            | Puissance thermique nominale Tdesignh                                                                                                                                              | Wärmenennleistung Tdesignh                                                                                         | Potencia calorífica nominal Tdesignh                                                                                                                              |
| Seasonal space heating energy efficiency                                                                                                | Efficienza energetica stagionale del riscaldamento d'ambiente                                                                                                 | Efficacité énergétique saisonnière pour le chauffage des locaux                                                                                                                    | Jahreszeitbedingte Raumheizungs-Energieeffizienz                                                                   | Eficiencia energética estacional de calefacción                                                                                                                   |
| Seasonal space heating energy efficiency class                                                                                          | Classe di efficienza energetica stagionale del riscaldamento d'ambiente                                                                                       | Efficacité énergétique saisonnière pour le chauffage des locaux                                                                                                                    | Jahreszeitbedingte Raumheizungs-Energieeffizienz                                                                   | Eficiencia energética estacional de calefacción                                                                                                                   |
| <b>Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj</b>                               | <b>Capacità di riscaldamento dichiarata a carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj</b>                                  | <b>Puissance calorifique déclarée à charge partielle pour une température intérieure de 20 °C et une température extérieure Tj</b>                                                 | <b>Angegebene Leistung für Teillast bei Raumlufttemperatur 20 °C und Außenlufttemperatur Tj</b>                    | <b>Capacidad de calefacción declarada para una carga parcial a una temperatura interior de 20 °C y una temperatura exterior Tj</b>                                |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                                                                      | Capacità di riscaldamento con temperatura esterna Tj = - 7 °C                                                                                                 | Puissance calorifique déclarée avec la température extérieure Tj = - 7 °C                                                                                                          | Erklärt, Raumheizung mit Außenlufttemperatur Tj = - 7 °C                                                           | Capacidad de calefacción para una temperatura exterior Tj = - 7 °C                                                                                                |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                                                       | Capacità di riscaldamento con temperatura esterna Tj = + 2 °C                                                                                                 | Puissance calorifique déclarée avec la température extérieure Tj = +2 °C                                                                                                           | Erklärt, Raumheizung mit Außenlufttemperatur Tj = +2 °C                                                            | Capacidad de calefacción para una temperatura exterior Tj = +2 °C                                                                                                 |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                                                       | Capacità di riscaldamento con temperatura esterna Tj = + 7 °C                                                                                                 | Puissance calorifique déclarée avec la température extérieure Tj = +7 °C                                                                                                           | Erklärt, Raumheizung mit Außenlufttemperatur Tj = +7 °C                                                            | Capacidad de calefacción para una temperatura exterior Tj = +7 °C                                                                                                 |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                                                      | Capacità di riscaldamento con temperatura esterna Tj = + 12 °C                                                                                                | Puissance calorifique déclarée avec la température extérieure Tj = +12 °C                                                                                                          | Erklärt, Raumheizung mit Außenlufttemperatur Tj = +12 °C                                                           | Capacidad de calefacción para una temperatura exterior Tj = +12 °C                                                                                                |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                                                        | Capacità di riscaldamento con temperatura esterna Tj = temperatura bivalente                                                                                  | Puissance calorifique déclarée avec la température extérieure Tj = Température bivalente                                                                                           | Erklärt, Raumheizung mit Außenlufttemperatur Tj = Bivalenztemperatur                                               | Capacidad de calefacción para una temperatura exterior Tj = Temperatura bivalente                                                                                 |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature                                                 | Capacità di riscaldamento con temperatura esterna Tj = temperatura limite di esercizio                                                                        | Puissance calorifique déclarée avec la température extérieure Tj = Température maximale de service                                                                                 | Erklärt, Raumheizung mit Außenlufttemperatur Tj = Betriebsgrenzwert-Temperatur                                     | Capacidad de calefacción para una temperatura exterior Tj = Temperatura limite de funcionamiento                                                                  |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                                                            | Per le pompe di calore aria/ acqua: Tj = - 15 °C (se TOL < - 20 °C)                                                                                           | Pour les pompes à chaleur air-eau: Tj = - 15 °C (si TOL < - 20 °C)                                                                                                                 | Für Luft-Wasser-Wärmepumpen: Tj = - 15 °C (wenn TOL < - 20 °C)                                                     | Para bombas de calor aire-agua: Tj = - 15 °C (si TOL < - 20 °C)                                                                                                   |
| Bivalent temperature                                                                                                                    | Temperatura bivalente                                                                                                                                         | Température bivalente                                                                                                                                                              | Bivalenztemperatur                                                                                                 | Temperatura bivalente                                                                                                                                             |
| Degradation coefficient                                                                                                                 | Coefficiente di degradazione                                                                                                                                  | Coefficient de dégradation                                                                                                                                                         | Minderungsfaktor                                                                                                   | Coeficiente de degradación                                                                                                                                        |
| <b>Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj</b> | <b>Coefficiente di prestazione dichiarato o indice di energia primaria per carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj</b> | <b>Coefficient de performance déclaré ou coefficient sur énergie primaire déclaré à charge partielle pour une température intérieure de 20 °C et une température extérieure Tj</b> | <b>Angegebene Leistungszahl oder Heizzahl für Teillast bei Raumlufttemperatur 20 °C und Außenlufttemperatur Tj</b> | <b>Coeficiente de rendimiento declarado o factor energético primario para una carga parcial a una temperatura interior de 20 °C y una temperatura exterior Tj</b> |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                                                                | Coefficiente di prestazione con temperatura esterna Tj = - 7 °C                                                                                               | Coefficient de performance déclaré avec la température extérieure Tj = - 7 °C                                                                                                      | Erklärten Leistungszahl bei Außenlufttemperatur Tj = - 7 °C                                                        | Capacidad de calefacción para una temperatura exterior Tj = - 7 °C                                                                                                |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                                                                 | Coefficiente di prestazione con temperatura esterna Tj = + 2 °C                                                                                               | Coefficient de performance déclaré avec la température extérieure Tj = +2 °C                                                                                                       | Erklärten Leistungszahl bei Außenlufttemperatur Tj = +2 °C                                                         | Capacidad de calefacción para una temperatura exterior Tj = +2 °C                                                                                                 |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                                                                 | Coefficiente di prestazione con temperatura esterna Tj = + 7 °C                                                                                               | Coefficient de performance déclaré avec la température extérieure Tj = +7 °C                                                                                                       | Erklärten Leistungszahl bei Außenlufttemperatur Tj = +7 °C                                                         | Capacidad de calefacción para una temperatura exterior Tj = +7 °C                                                                                                 |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                                                                | Coefficiente di prestazione con temperatura esterna Tj = + 12 °C                                                                                              | Coefficient de performance déclaré avec la température extérieure Tj = +12 °C                                                                                                      | Erklärten Leistungszahl bei Außenlufttemperatur Tj = +12 °C                                                        | Capacidad de calefacción para una temperatura exterior Tj = +12 °C                                                                                                |

| ENGLISH                                                                                                                                                                                                              | ITALIANO                                                                                                                                                                                                                               | FRANCAISE                                                                                                                                                                                                                                     | DEUTSCH                                                                                                                                                                                                    | ESPAÑOL                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Declared coefficient of                                                                                                                                                                                              | Coefficiente di prestazione con                                                                                                                                                                                                        | Coefficient de performance                                                                                                                                                                                                                    | Erklärten Leistungszahl bei                                                                                                                                                                                | Capacidad de calefacción para                                                                                                                                                                                                                               |
| Declared coefficient of performance with outdoor temperature $T_j$ = Operation limit temperature                                                                                                                     | Coefficiente di prestazione con temperatura esterna $T_j$ = temperatura limite di esercizio                                                                                                                                            | Coefficient de performance déclaré avec la température extérieure $T_j$ = Température maximale de service                                                                                                                                     | Erklärten Leistungszahl bei Außenlufttemperatur $T_j$ = Betriebsgrenzwert-Temperatur                                                                                                                       | Capacidad de calefacción para una temperatura exterior $T_j$ = Temperatura límite de funcionamiento                                                                                                                                                         |
| For air-to-water heat pumps: $T_j$ = - 15 °C (if TOL < - 20 °C)                                                                                                                                                      | Per le pompe di calore aria/acqua: $T_j$ = - 15 °C (se TOL < - 20 °C)                                                                                                                                                                  | Pour les pompes à chaleur air-eau: $T_j$ = - 15 °C (si TOL < - 20 °C)                                                                                                                                                                         | Für Luft-Wasser-Wärmepumpen: $T_j$ = - 15 °C (wenn TOL < - 20 °C)                                                                                                                                          | Para bombas de calor aire-agua: $T_j$ = - 15 °C (si TOL < - 20 °C)                                                                                                                                                                                          |
| For air-to-water HP : Operation limit temperature                                                                                                                                                                    | Per le pompe di calore aria/acqua: temperatura limite di esercizio                                                                                                                                                                     | Pour les pompes à chaleur air-eau: Température limite de fonctionnement                                                                                                                                                                       | Für Luft-Wasser-Wärmepumpen: Betriebsgrenzwert-Temperatur                                                                                                                                                  | Para bombas de calor aire-agua: Temperatura límite de funcionamiento                                                                                                                                                                                        |
| Heating water operating limit temperature                                                                                                                                                                            | Temperatura limite di esercizio di riscaldamento dell'acqua                                                                                                                                                                            | Température maximale de service de l'eau de chauffage                                                                                                                                                                                         | Grenzwert der Betriebstemperatur des Heizwassers                                                                                                                                                           | Temperatura límite de calentamiento de agua                                                                                                                                                                                                                 |
| <b>Power consumption in modes other than active mode</b>                                                                                                                                                             | <b>Consumo energetico in modi diversi dal modo attivo</b>                                                                                                                                                                              | <b>Consommation d'électricité dans les modes autres que le mode actif</b>                                                                                                                                                                     | <b>Stromverbrauch in anderen Betriebsarten als dem Betriebszustand</b>                                                                                                                                     | <b>Consumo de electricidad en modos distintos del activo</b>                                                                                                                                                                                                |
| Off mode                                                                                                                                                                                                             | Modo spento                                                                                                                                                                                                                            | Mode arrêt                                                                                                                                                                                                                                    | Aus-Zustand                                                                                                                                                                                                | Modo desactivado                                                                                                                                                                                                                                            |
| Thermostat-off mode                                                                                                                                                                                                  | Modo termostato spento                                                                                                                                                                                                                 | Mode arrêt par thermostat                                                                                                                                                                                                                     | Thermostat-aus-Zustand                                                                                                                                                                                     | Modo desactivado por termostato                                                                                                                                                                                                                             |
| Standby mode                                                                                                                                                                                                         | Modo stand-by                                                                                                                                                                                                                          | Mode veille                                                                                                                                                                                                                                   | Bereitschaftszustand                                                                                                                                                                                       | Modo de espera                                                                                                                                                                                                                                              |
| Crankcase heater mode                                                                                                                                                                                                | Modo riscaldamento del carter                                                                                                                                                                                                          | Mode résistance de carter active                                                                                                                                                                                                              | Betriebszustand mit Kurbelgehäuseheizung                                                                                                                                                                   | Modo riscaldamento del carter                                                                                                                                                                                                                               |
| <b>Supplementary heater</b>                                                                                                                                                                                          | <b>Riscaldatore supplementare</b>                                                                                                                                                                                                      | <b>Dispositif de chauffage d'appoint</b>                                                                                                                                                                                                      | <b>Zusatzheizgerät</b>                                                                                                                                                                                     | <b>Calefactor complementario</b>                                                                                                                                                                                                                            |
| Nominal heating capacity                                                                                                                                                                                             | Potenza termica nominale                                                                                                                                                                                                               | Puissance thermique nominale                                                                                                                                                                                                                  | Heizleistung nominal                                                                                                                                                                                       | Potencia térmica nominal                                                                                                                                                                                                                                    |
| <b>Other items</b>                                                                                                                                                                                                   | <b>Altri elementi</b>                                                                                                                                                                                                                  | <b>Autres caractéristiques</b>                                                                                                                                                                                                                | <b>Sonstige Elemente</b>                                                                                                                                                                                   | <b>Otros elementos</b>                                                                                                                                                                                                                                      |
| Capacity control                                                                                                                                                                                                     | Controllo della capacità                                                                                                                                                                                                               | Régulation de la puissance                                                                                                                                                                                                                    | Leistungssteuerung                                                                                                                                                                                         | Control de capacidad                                                                                                                                                                                                                                        |
| Sound power level, indoors                                                                                                                                                                                           | Livello della potenza sonora, all'interno                                                                                                                                                                                              | Niveau de puissance acoustique, à l'intérieur                                                                                                                                                                                                 | Schallleistungspegel, innen                                                                                                                                                                                | Nivel de potencia acústica (interior)                                                                                                                                                                                                                       |
| Sound power level, outdoors                                                                                                                                                                                          | Livello della potenza sonora, all'esterno                                                                                                                                                                                              | Niveau de puissance acoustique, à l'extérieur                                                                                                                                                                                                 | Schallleistungspegel, außen                                                                                                                                                                                | Nivel de potencia acústica (exterior)                                                                                                                                                                                                                       |
| Annual electricity consumption for heating                                                                                                                                                                           | Consumo di elettricità annuale per il riscaldamento                                                                                                                                                                                    | Consommation annuelle d'électricité pour le chauffage                                                                                                                                                                                         | Jahresstromverbrauch für die Heizung                                                                                                                                                                       | Consumo anual de electricidad para la calefacción                                                                                                                                                                                                           |
| <b>Outdoor heat exchanger</b>                                                                                                                                                                                        | <b>Scambiatore di calore esterno</b>                                                                                                                                                                                                   | <b>Echangeur de chaleur externe</b>                                                                                                                                                                                                           | <b>Wärmetauscher äußere</b>                                                                                                                                                                                | <b>Intercambiador de calor (exterior)</b>                                                                                                                                                                                                                   |
| For air-to-water HP: Rated air flow rate, outdoors                                                                                                                                                                   | Per le pompe di calore aria/acqua: portata d'aria, all'esterno                                                                                                                                                                         | Pour les pompes à chaleur air-eau: débit d'air nominal, à l'extérieur                                                                                                                                                                         | Für Luft-Wasser-Wärmepumpen: Nenn-Luftdurchsatz, außen                                                                                                                                                     | Para bombas de calor aire-agua: Caudal de aire nominal (exterior)                                                                                                                                                                                           |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                                                                                                         | Per le pompe di calore acqua/acqua e salamoia/acqua: flusso di salamoia o acqua nominale, scambiatore di calore all'esterno                                                                                                            | Pour les pompes à chaleur eau-eau ou eau glycolée-eau: débit nominal d'eau glycolée ou d'eau, échangeur thermique extérieur                                                                                                                   | Für Wasser/Sole-Wasser-Wärmepumpen: Wasser- oder Sole-Nenndurchsatz                                                                                                                                        | Para bombas de calor agua/salmuera a agua: Caudal de salmuera o de agua nominal, intercambiador de calor de exterior                                                                                                                                        |
| Notes:                                                                                                                                                                                                               | Note:                                                                                                                                                                                                                                  | Remarques:                                                                                                                                                                                                                                    | Hinweise:                                                                                                                                                                                                  | Notas:                                                                                                                                                                                                                                                      |
| The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature. | I parametri sono dichiarati per l'applicazione a temperatura media, tranne per le pompe di calore a bassa temperatura. Per le pompe di calore a bassa temperatura, i parametri sono dichiarati per l'applicazione a bassa temperatura. | Les paramètres sont déclarés pour l'application à moyenne température, excepté pour les pompes à chaleur basse température. Pour les pompes à chaleur basse température, les paramètres sont déclarés pour l'application à basse température. | Die Parameter sind für eine Mitteltemperaturanwendung anzugeben, außer für Niedertemperatur-Wärmepumpen. Für Niedertemperatur-Wärmepumpen sind die Parameter für eine Niedertemperaturanwendung anzugeben. | Los parámetros se declararán para aplicaciones de media temperatura, excepto si se trata de bombas de calor de baja temperatura. En el caso de las bombas de calor de baja temperatura, los parámetros se declararán para aplicaciones de baja temperatura. |
| Unit in standard configuration/execution, without optional accessories.                                                                                                                                              | Unità in configurazione ed esecuzione standard, priva di accessori opzionali.                                                                                                                                                          | Unité en configuration et exécution standard, sans accessoires optionnels.                                                                                                                                                                    | Gerät mit Standard-Konfiguration und -Ausführung, ohne wunschesweises Zubehör.                                                                                                                             | Unidad en configuración y ejecución estándar, sin accesorios opcionales.                                                                                                                                                                                    |

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