## MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

Climaveneta **Technical Documentation** ERACS2-Q-G05\_1062\_3222\_201812\_EN

# **REGULATION (EU) N. 813/2013**

### **Ecodesign requirements for space heaters**

MULTIFUNCTION UNITS AIR SOURCE

ERACS2-Q-G05 1062 - 3222

Heating Capacity Range 213 - 617 [kW] - (EN14511 VALUE) Nominal Heating Capacity at TdesignH Range 153 - 400 [kW]







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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)  $\rm N.$ 813/2013 reguarding "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 ≤ 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 Description of the data declared by Mitsubishi Electric Hydronics & IT Cooling Systems

- 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
- TdesignH: temperature at reference design conditions.
- PdesignH, 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 (ηs ): 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,
- 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 part meet the to

- 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
- Annual energy consumption: means the energy consumption required to meet the reference annual heating demand for a designated heating
- 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

MULTIFUNCTION UNITS AIR SOURCE

#### ERACS2-Q-G05 1062 - 3222

Heating Capacity Range 213 - 617 [kW]

Nominal Heating Capacity at TdesignH Range 153 - 400 [kW]

| Units        | Version |                       |      | Size |      |      | Pag. |
|--------------|---------|-----------------------|------|------|------|------|------|
| ERACS2-Q-G05 | CA      | 1062                  | 1162 | 1362 | 1562 | 1762 | 5    |
|              |         | 1962                  | 2022 | 2222 | 2422 | 2622 |      |
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|              |         | 1962                  | 2022 | 2222 | 2422 | 2622 |      |
| ERACS2-Q-G05 | XL-CA   | 2022                  | 2222 |      |      |      | 35   |
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|              |         | 2022                  | 2222 |      |      |      |      |

| 062                             |   |   |
|---------------------------------|---|---|
| yes / no                        |   | yes   |
| yes / no                        |   | no  |
| yes / no                        |   | no  |
| yes / no                        |   | yes   |
| yes / no                        |   | no  |
| *                               |   | no  |
| (low 35°C/ medium 55°C)         |   | low 35°C  |
| fixed / variable                |   | fixed   |
| fixed / variable                |   | variable  |
| average / warmer / colder       |   | average   |
| Prated = Pdesignh               | [kW]  | 157   |
| <u> </u>                        | [%]   | 131   |
| -                               |   |   |
| ure Tj                          |   |   |
| Pdh                             | [kW]  | 139   |
| Pdh                             | [kW]  | 84,5  |
| Pdh                             | [kW]  | 65,0  |
| Pdh                             | [kW]  | 74,6  |
| Pdh                             | [kW]  | 139   |
| Pdh                             | [kW]  | 132   |
| Pdh                             | [kW]  | -   |
| Tbiv                            | l,cj  | -7  |
| Cdh                             |   | 0.90  |
| re 20 °C and outdoor temperatur | e Ti  |   |
| COPd                            | - 1   | 2,61  |
| COPd                            |   | 3,26  |
| COPd                            | -   | 4,16  |
| COPd                            | -   | 4,81  |
| COPd                            | -   | 2,61  |
| COPd                            |   | 2,44  |
| COPd                            | -   | -   |
| TOL                             | [°C]  | -10   |
| WTOL                            | [°C]  | 50  |
|                                 |   |   |
| POFF                            | [kW]  | 0,000   |
| PTO                             | [kW]  | 0,732   |
| PSB                             | [kW]  | 0,590   |
| PCK                             | [kW]  | 0,590   |
|                                 |   | <u> </u>  |
| Psup                            | [kW]  | 25,3  |
|                                 |   |   |
| fixed / variable                |   | variable  |
| LWA                             | [dB(A)]   | -   |
| LWA                             | [dB(A)]   | 97  |
| QHE                             | [kWh]   | 96562   |
| _                               |   |   |
|                                 |   |   |
| Qairsource                      | [m³/h]  | 22,84   |
|                                 | yes / no (low 35°C/ medium 55°C) fixed / variable fixed / variable average / warmer / colder Prated = Pdesignh ηs - ITE Tj Pdh | yes / no   yes / no |

<sup>(1)</sup> 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.



| ERACS2-Q-G05 /CA  | 1162                      |                   |          |
|---|---------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]              | 213      |
| Seasonal space heating energy efficiency  | ηs                        | [%]               | 125      |
| Seasonal space heating energy efficiency class  |                           |                   |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Ti                  |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                       | [kW]              | 164      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                       | [kW]              | 114      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                       | [kW]              | 81,4     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                       | [kW]              | 93.5     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                       | [kW]              | 172      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                       | [kW]              | 154      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                       | [kW]              | -        |
| Bivalent temperature  | Thiv                      | [°C]              | -5       |
| Degradation coefficient   | Cdh                       | -                 | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                           | re Ti             |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                      | -                 | 2.66     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                      | -                 | 2.97     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                      | -                 | 3.96     |
| Declared coefficient of performance with outdoor temperature Ti = +12 °C                        | COPd                      | _                 | 4.75     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                      | -                 | 2,80     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      | -                 | 2.47     |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                    | COPd                      | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                       | l <sub>o</sub> Cl | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l <sub>c</sub> Cl | 50       |
| Power consumption in modes other than active mode   |                           | [ 0]              |          |
| Off mode  | POFF                      | [kW]              | 0.000    |
| Thermostat-off mode   | PTO                       | [kW]              | 1,061    |
| Standby mode  | PSB                       | [kW]              | 0.590    |
| Crankcase heater mode   | PCK                       | [kW]              | 0.590    |
| Supplementary heater  | 1. 2                      | []                |          |
| Nominal heating capacity  | Psup                      | [kW]              | 58,8     |
| Other items   |                           | . ,               | ,-       |
| Capacity control  | fixed / variable          |                   | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                       | [dB(A)]           | 97       |
| Annual electricity consumption for heating  | QHE                       | [kWh]             | 137073   |
| Outdoor heat exchanger  | 1                         | [seeing]          | .0.0.0   |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]            | 24,95    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source       | [m³/h]            | -        |
|   | Q                         | [,]               |          |

<sup>(1)</sup> 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.



| ERACS2-Q-G05 /CA  | 1362                              |          |          |
|---|-----------------------------------|----------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]     | 221      |
| Seasonal space heating energy efficiency  | ης                                | [%]      | 133      |
| Seasonal space heating energy efficiency class  |                                   |          |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |          |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                               | [kW]     | 196      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]     | 119      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]     | 93,9     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]     | 108      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]     | 196      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]     | 184      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ture 20 °C and outdoor temperatur | re Tj    | ,        |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                              | <u> </u> | 2,71     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -        | 3,23     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -        | 4,27     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -        | 5,01     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              | -        | 2,71     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | -        | 2,51     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                              | -        | -        |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]     | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]     | 50       |
| Power consumption in modes other than active mode   |                                   |          |          |
| Off mode  | POFF                              | [kW]     | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]     | 1,070    |
| Standby mode  | PSB                               | [kW]     | 0,590    |
| Crankcase heater mode   | PCK                               | [kW]     | 0,590    |
| Supplementary heater  |                                   |          |          |
| Nominal heating capacity  | Psup                              | [kW]     | 36,9     |
| Other items   |                                   |          |          |
| Capacity control  | fixed / variable                  |          | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]  | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]  | 97       |
| Annual electricity consumption for heating  | QHE                               | [kWh]    | 134450   |
| Outdoor heat exchanger  | <u>'</u>                          |          |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]   | 27,23    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]   | -        |

<sup>(1)</sup> 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.



| ERACS2-Q-G05 /CA  | 1562                      |                   |          |
|---|---------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]              | 244      |
| Seasonal space heating energy efficiency  | ηs                        | [%]               | 136      |
| Seasonal space heating energy efficiency class  | -                         | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Ti                  |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                       | [kW]              | 216      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                       | [kW]              | 131      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                       | [kW]              | 100      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                       | [kW]              | 116      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                       | [kW]              | 216      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                       | [kW]              | 205      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate |                           |                   |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                      | -                 | 2.70     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                      | -                 | 3,37     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                      | -                 | 4,31     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                      | -                 | 4.95     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                      | -                 | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | -                 | 2.51     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                      | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l <sub>C</sub> CJ | 50       |
| Power consumption in modes other than active mode   |                           | [ -]              |          |
| Off mode  | POFF                      | [kW]              | 0.000    |
| Thermostat-off mode   | PTO                       | [kW]              | 1,340    |
| Standby mode  | PSB                       | [kW]              | 0.649    |
| Crankcase heater mode   | PCK                       | [kW]              | 0.649    |
| Supplementary heater  | 1. 2                      | []                |          |
| Nominal heating capacity  | Psup                      | [kW]              | 39,0     |
| Other items   |                           |                   | ,-       |
| Capacity control  | fixed / variable          | T                 | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                       | [dB(A)]           | 98       |
| Annual electricity consumption for heating  | QHE                       | [kWh]             | 145087   |
| Outdoor heat exchanger  |                           | ferred            |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]            | 33,26    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]            | -        |
| . o. mate. , z.m.e to mate more parties. Nation of Mater flow rate, outdoor float exchanger   |                           | [,]               |          |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /CA  | 1762                             |          |          |
|---|----------------------------------|----------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]     | 285      |
| Seasonal space heating energy efficiency  | ης                               | [%]      | 131      |
| Seasonal space heating energy efficiency class  | -                                |          |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                         |          |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                              | [kW]     | 252      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                              | [kW]     | 153      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                              | [kW]     | 122      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                              | [kW]     | 140      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                              | [kW]     | 252      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                              | [kW]     | 237      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat    | ure 20 °C and outdoor temperatur | re Tj    | ,        |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                             | <u> </u> | 2,68     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                             | -        | 3,19     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                             | -        | 4,20     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                             | -        | 4,92     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                             | -        | 2,68     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                             | -        | 2,48     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                             | -        | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]     | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]     | 50       |
| Power consumption in modes other than active mode   |                                  |          |          |
| Off mode  | POFF                             | [kW]     | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]     | 1,490    |
| Standby mode  | PSB                              | [kW]     | 0,649    |
| Crankcase heater mode   | PCK                              | [kW]     | 0,649    |
| Supplementary heater  |                                  |          |          |
| Nominal heating capacity  | Psup                             | [kW]     | 47,5     |
| Other items   |                                  |          |          |
| Capacity control  | fixed / variable                 |          | variable |
| Sound power level, indoors  | LWA                              | [dB(A)]  | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)]  | 99       |
| Annual electricity consumption for heating  | QHE                              | [kWh]    | 175662   |
| Outdoor heat exchanger  | <u> </u>                         |          |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]   | 35,61    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source              | [m³/h]   | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05/CA   | 1962                              |                   |          |
|---|-----------------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 314      |
| Seasonal space heating energy efficiency  | ης                                | [%]               | 137      |
| Seasonal space heating energy efficiency class  | -                                 | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera   | ature Tj                          |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                               | [kW]              | 278      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]              | 169      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]              | 130      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]              | 150      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]              | 278      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]              | 264      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]              | -        |
| Bivalent temperature  | Tbiv                              | l <sub>o</sub> Cl | -7       |
| Degradation coefficient   | Cdh                               |                   | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | ure 20 °C and outdoor temperature | re Ti             | -,       |
| Declared coefficient of performance with outdoor temperature Ti = -7 °C                       | COPd                              | - 1               | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -                 | 3,38     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -                 | 4,35     |
| Declared coefficient of performance with outdoor temperature Ti = +12 °C                      | COPd                              | -                 | 5,02     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              | -                 | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                              | -                 | 2,53     |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                  | COPd                              | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l <sub>o</sub> CJ | 50       |
| Power consumption in modes other than active mode   |                                   |                   |          |
| Off mode  | POFF                              | [kW]              | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]              | 1,138    |
| Standby mode  | PSB                               | [kW]              | 0,649    |
| Crankcase heater mode   | PCK                               | [kW]              | 0,649    |
| Supplementary heater  |                                   |                   | <u> </u> |
| Nominal heating capacity  | Psup                              | [kW]              | 50,2     |
| Other items   |                                   |                   |          |
| Capacity control  | fixed / variable                  |                   | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]           | 99       |
| Annual electricity consumption for heating  | QHE                               | [kWh]             | 186138   |
| Outdoor heat exchanger  | <u> </u>                          | 1 - 1             |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 41,58    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]            | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /CA  | 2022                      |                   |          |
|---|---------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]              | 362      |
| Seasonal space heating energy efficiency  | ηs                        | [%]               | 134      |
| Seasonal space heating energy efficiency class  | -                         | -                 | -        |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Ti                  |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C   | Pdh                       | [kW]              | 320      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C   | Pdh                       | [kW]              | 195      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C   | Pdh                       | [kW]              | 147      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C  | Pdh                       | [kW]              | 169      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature  | Pdh                       | [kW]              | 320      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature   | Pdh                       | [kW]              | 308      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | Pdh                       | [kW]              | -        |
| Bivalent temperature  | Tbiy                      | [°C]              | -7       |
| Degradation coefficient   | Cdh                       | -                 | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                           |                   |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C   | COPd                      | -                 | 2.77     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C   | COPd                      | -                 | 3.24     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C   | COPd                      | -                 | 4,28     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C  | COPd                      | _                 | 5.01     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature  | COPd                      | -                 | 2,77     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      | -                 | 2.61     |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)  | COPd                      | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l <sub>c</sub> Cl | 50       |
| Power consumption in modes other than active mode   | -                         | ,                 |          |
| Off mode  | POFF                      | [kW]              | 0.000    |
| Thermostat-off mode   | PTO                       | [kW]              | 1,188    |
| Standby mode  | PSB                       | [kW]              | 0.753    |
| Crankcase heater mode   | PCK                       | [kW]              | 0.753    |
| Supplementary heater  |                           | , , ,             | -,       |
| Nominal heating capacity  | Psup                      | [kW]              | 54,1     |
| Other items   | ·                         |                   | <u> </u> |
| Capacity control  | fixed / variable          |                   | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                       | [dB(A)]           | 99       |
| Annual electricity consumption for heating  | QHE                       | [kWh]             | 218601   |
| Outdoor heat exchanger  |                           | , , ,             |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]            | 38,06    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]            | -        |
|   |                           | F11.4.1.1         |          |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /CA  | 2222                      |                   |          |
|---|---------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]              | 391      |
| Seasonal space heating energy efficiency  | ηs                        | [%]               | 139      |
| Seasonal space heating energy efficiency class  | -                         |                   |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper  | ature Tj                  |                   |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C  | Pdh                       | [kW]              | 346      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C   | Pdh                       | [kW]              | 211      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C   | Pdh                       | [kW]              | 156      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C  | Pdh                       | [kW]              | 178      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature  | Pdh                       | [kW]              | 346      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature   | Pdh                       | [kW]              | 329      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | Pdh                       | [kW]              | -        |
| Bivalent temperature  | Thiv                      | [°C]              | -7       |
| Degradation coefficient   | Cdh                       | -                 | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | *                         |                   | 0,00     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C   | COPd                      |                   | 2,80     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C   | COPd                      |                   | 3,39     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C   | COPd                      | _                 | 4,42     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C  | COPd                      | _                 | 5,13     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature  | COPd                      | -                 | 2,80     |
| Declared coefficient of performance with outdoor temperature Tj = Divalent temperature  Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | -                 | 2.60     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)  | COPd                      | -                 | 2,00     |
| For air-to-water HP : Operation limit temperature   | TOL                       | l <sub>c</sub> CJ | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | [°C]              | 50       |
| Power consumption in modes other than active mode   | WIOL                      | [ 0]              | 30       |
| Off mode  | POFF                      | [kW]              | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]              | 1,409    |
| Standby mode  | PSB                       |                   | 0,762    |
| ,   | PCK                       | [kW]              | 0,762    |
| Crankcase heater mode   | PCK                       | [kW]              | 0,762    |
| Supplementary heater  Nominal heating capacity  | Dour                      | FI-AA/I           | 61,9     |
|   | Psup                      | [kW]              | 01,9     |
| Other items   | fixed / veriable          |                   | variable |
| Capacity control  | fixed / variable LWA      | [dD/A)]           | variable |
| Sound power level, indoors  |                           | [dB(A)]           | - 101    |
| Sound power level, outdoors   | LWA                       | [dB(A)]           | 101      |
| Annual electricity consumption for heating  | QHE                       | [kWh]             | 228241   |
| Outdoor heat exchanger  | I a                       |                   | 50.00    |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]            | 50,60    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]            | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /CA  | 2422                               |         |          |
|---|------------------------------------|---------|----------|
| Air-to-water heat pump:   | yes / no                           |         | yes      |
| Nater-to-water heat pump:   | yes / no                           |         | no       |
| Brine-to-water heat pump:   | yes / no                           |         | no       |
| .ow-temperature heat pump:  | yes / no                           |         | yes      |
| Vith 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 |
| Nater flow rate   | fixed / variable                   |         | fixed    |
| Outlet temperature  | fixed / variable                   |         | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder          |         | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                  | [kW]    | 357      |
| Seasonal space heating energy efficiency  | ηs                                 | [%]     | 139      |
| Seasonal space heating energy efficiency class  | 1-                                 |         |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                           |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                                | [kW]    | 316      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                                | [kW]    | 192      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                                | [kW]    | 158      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                                | [kW]    | 181      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                                | [kW]    | 357      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                                | [kW]    | 357      |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                  | Pdh                                | [kW]    | -        |
| Bivalent temperature  | Tbiv                               | [°C]    | -10      |
| Degradation coefficient   | Cdh                                | -       | 0,90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperature | e Tj    |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                               | -       | 2,78     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                               | -       | 3,41     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                               | -       | 4,45     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                               | -       | 5,15     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                               | -       | 2,66     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                               | -       | 2,66     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                               | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                                | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                               | [°C]    | 50       |
| Power consumption in modes other than active mode   | _                                  |         |          |
| Off mode  | POFF                               | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                                | [kW]    | 1,597    |
| Standby mode  | PSB                                | [kW]    | 0,762    |
| Crankcase heater mode   | PCK                                | [kW]    | 0,762    |
| Supplementary heater  |                                    |         |          |
| Nominal heating capacity  | Psup                               | [kW]    | 0,00     |
| Other items   |                                    |         |          |
| Capacity control  | fixed / variable                   |         | variable |
| Sound power level, indoors  | LWA                                | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                                | [dB(A)] | 0        |
| Annual electricity consumption for heating  | QHE                                | [kWh]   | 207419   |
| Outdoor heat exchanger  | · ·                                |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                         | [m³/h]  | 46,03    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source                | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /CA  | 2622                              |              |            |
|---|-----------------------------------|--------------|------------|
| 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    |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]         | 400        |
| Seasonal space heating energy efficiency  | ηs                                | [%]          | 139        |
| Seasonal space heating energy efficiency class  | -                                 |              |            |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper      | ature Tj                          |              |            |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                              | Pdh                               | [kW]         | 354        |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]         | 215        |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]         | 194        |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]         | 225        |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]         | 400        |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]         | 400        |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                               | [kW]         | -          |
| Bivalent temperature  | Tbiv                              | l.cj         | -10        |
| Degradation coefficient   | Cdh                               |              | 0.90       |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ture 20 °C and outdoor temperatur | e Ti         |            |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                              | -            | 2,84       |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -            | 3,39       |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -            | 4,49       |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -            | 5,20       |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              |              | 2,74       |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | <del>-</del> | 2.74       |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | COPd                              | -            | -,-        |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1         | -10        |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]         | 50         |
| Power consumption in modes other than active mode   | W102                              | [ 0]         |            |
| Off mode  | POFF                              | [kW]         | 0,000      |
| Thermostat-off mode   | PTO                               | [kW]         | 1,206      |
| Standby mode  | PSB                               | [kW]         | 0,770      |
| Crankcase heater mode   | PCK                               | [kW]         | 0.770      |
| Supplementary heater  | 1 Oil                             | [KAA]        | 0,110      |
| Nominal heating capacity  | Psup                              | [kW]         | 0,00       |
| Other items   | 1 Sup                             | [KAA]        | 0,00       |
| Capacity control  | fixed / variable                  |              | variable   |
| Sound power level, indoors  | LWA                               | [dB(A)]      | - variable |
| Sound power level, indoors  | LWA                               | [dB(A)]      | 0          |
| Annual electricity consumption for heating  | QHE                               | [kWh]        | 232506     |
| Outdoor heat exchanger  | QIIL                              | [KVVII]      | 232300     |
| For air-to-water HP: Rated air flow rate. outdoors  | Qairsource                        | [m³/h]       | 46,03      |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Quirsource  Qwater/brine source   | [m³/h]       | 40,03      |
| -or water-/printe-to-water fleat pumps. Rated printe or water flow rate, outdoor neat exchanger | Qwater/brine source               | [1117/11]    |            |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1062                           |         |          |
|---|----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]    | 157      |
| Seasonal space heating energy efficiency  | ης                               | [%]     | 131      |
| Seasonal space heating energy efficiency class  | -                                | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera   | ature Tj                         |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                              | [kW]    | 139      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                              | [kW]    | 84,5     |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                              | [kW]    | 65,0     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                              | [kW]    | 74,6     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                              | [kW]    | 139      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                              | [kW]    | 132      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | ure 20 °C and outdoor temperatur | re Tj   |          |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                      | COPd                             | -       | 2,61     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                             | -       | 3,26     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                             | -       | 4,16     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                             | -       | 4,81     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                             | -       | 2,61     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                             | -       | 2,44     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                             | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                  |         |          |
| Off mode  | POFF                             | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]    | 0,732    |
| Standby mode  | PSB                              | [kW]    | 0,590    |
| Crankcase heater mode   | PCK                              | [kW]    | 0,590    |
| Supplementary heater  |                                  |         |          |
| Nominal heating capacity  | Psup                             | [kW]    | 25,3     |
| Other items   |                                  |         |          |
| Capacity control  | fixed / variable                 |         | variable |
| Sound power level, indoors  | LWA                              | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)] | 91       |
| Annual electricity consumption for heating  | QHE                              | [kWh]   | 96562    |
| Outdoor heat exchanger  |                                  | · '     |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]  | 22,84    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source              | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1162                    |                   |          |
|---|---------------------------|-------------------|----------|
| 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                  |                   | ves      |
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]              | 213      |
| Seasonal space heating energy efficiency  | ης                        | [%]               | 125      |
| Seasonal space heating energy efficiency class  | -                         | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Ti                  |                   |          |
| Declared capacity for heating with outdoor temperature $T_j = -7$ °C                            | Pdh                       | [kW]              | 164      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                       | [kW]              | 114      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                       | [kW]              | 81,4     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                       | [kW]              | 93.5     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                       | [kW]              | 172      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                       | [kW]              | 154      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                       | [kW]              | -        |
| Bivalent temperature  | Thiv                      | [°C]              | -5       |
| Degradation coefficient   | Cdh                       | -                 | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                           |                   | 0,00     |
| Declared coefficient of performance with outdoor temperature $T_i = -7$ °C                      | COPd                      | -                 | 2.66     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                      | -                 | 2.97     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                      | -                 | 3.96     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                      |                   | 4.75     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                      | _                 | 2,80     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      |                   | 2.47     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                      | -                 | -,       |
| For air-to-water HP : Operation limit temperature   | TOL                       | l <sub>o</sub> CJ | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | [°C]              | 50       |
| Power consumption in modes other than active mode   | 1.1.02                    | [ 0]              |          |
| Off mode  | POFF                      | [kW]              | 0.000    |
| Thermostat-off mode   | PTO                       | [kW]              | 1,061    |
| Standby mode  | PSB                       | [kW]              | 0.590    |
| Crankcase heater mode   | PCK                       | [kW]              | 0.590    |
| Supplementary heater  | 1. 5.1                    | []                | 0,000    |
| Nominal heating capacity  | Psup                      | [kW]              | 58,8     |
| Other items   |                           | []                |          |
| Capacity control  | fixed / variable          |                   | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                       | [dB(A)]           | 92       |
| Annual electricity consumption for heating  | QHE                       | [kWh]             | 137073   |
| Outdoor heat exchanger  |                           | [ssvii]           |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]            | 24,95    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source       | [m³/h]            | -        |
| To water is made the mater meat pumps. I take shine of water new rate, outdoor heat exchanger   | Grator/brillo Source      | [/]               | _        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1362                    |          |          |
|---|---------------------------|----------|----------|
| Air-to-water heat pump:   | yes / no                  |          | yes      |
| Water-to-water heat pump:   | yes / no                  |          | no       |
| Brine-to-water heat pump:   | yes / no                  |          | no       |
| _ow-temperature heat pump:  | yes / no                  |          | yes      |
| Nith 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 |
| Nater flow rate   | fixed / variable          |          | fixed    |
| Outlet temperature  | fixed / variable          |          | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder |          | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]     | 221      |
| Seasonal space heating energy efficiency  | ηs                        | [%]      | 133      |
| Seasonal space heating energy efficiency class  | 1-                        |          |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                  |          |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                       | [kW]     | 196      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                       | [kW]     | 119      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                       | [kW]     | 93,9     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                       | [kW]     | 108      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                       | [kW]     | 196      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                       | [kW]     | 184      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                       | [kW]     | -        |
| Bivalent temperature  | Thiv                      | [°C]     | -7       |
| Degradation coefficient   | Cdh                       |          | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ··                        | re Ti    | 0,00     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                      |          | 2,71     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                      | -        | 3,23     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                      | -        | 4,27     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                      | _        | 5,01     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                      | _        | 2,71     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | _        | 2,51     |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                  | COPd                      | _        |          |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1     | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l°C]     | 50       |
| Power consumption in modes other than active mode   | WIGE                      | [ 0]     |          |
| Off mode  | POFF                      | [kW]     | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]     | 1,070    |
| Standby mode  | PSB                       | [kW]     | 0,590    |
| Crankcase heater mode   | PCK                       | [kW]     | 0,590    |
| Supplementary heater  | 1 Oil                     | [KAA]    | 0,590    |
| Nominal heating capacity  | Psup                      | [kW]     | 36,9     |
| Other items   | 1 Sup                     | [KAA]    | 30,9     |
| Capacity control  | fixed / variable          |          | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]  | variable |
| Sound power level, indoors  | LWA                       | [dB(A)]  | 92       |
| Sound power level, outdoors  Annual electricity consumption for heating                       | QHE                       | - 17-    | 134450   |
| Annual electricity consumption for neating  Outdoor heat exchanger                            | QПE                       | [kWh]    | 134450   |
| <u> </u>  | Opiropures                | [ma3/la1 | 27.22    |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]   | 27,23    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]   | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1562                           |         |          |
|---|----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]    | 244      |
| Seasonal space heating energy efficiency  | ης                               | [%]     | 136      |
| Seasonal space heating energy efficiency class  | -                                | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera   | ature Tj                         |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                              | [kW]    | 216      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                              | [kW]    | 131      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                              | [kW]    | 100      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                              | [kW]    | 116      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                              | [kW]    | 216      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                              | [kW]    | 205      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | ure 20 °C and outdoor temperatur | re Tj   |          |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                      | COPd                             | -       | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                             | -       | 3,37     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                             | -       | 4,31     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                             | -       | 4,95     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                             | -       | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                             | -       | 2,51     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                             | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                  |         |          |
| Off mode  | POFF                             | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]    | 1,340    |
| Standby mode  | PSB                              | [kW]    | 0,649    |
| Crankcase heater mode   | PCK                              | [kW]    | 0,649    |
| Supplementary heater  |                                  |         |          |
| Nominal heating capacity  | Psup                             | [kW]    | 39,0     |
| Other items   |                                  |         |          |
| Capacity control  | fixed / variable                 |         | variable |
| Sound power level, indoors  | LWA                              | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)] | 93       |
| Annual electricity consumption for heating  | QHE                              | [kWh]   | 145087   |
| Outdoor heat exchanger  |                                  |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]  | 33,26    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source              | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1762                            |                   |           |
|---|-----------------------------------|-------------------|-----------|
| Air-to-water heat pump:   | yes / no                          |                   | yes       |
| Water-to-water heat pump:   | yes / no                          |                   | no        |
| Brine-to-water heat pump:   | yes / no                          |                   | no        |
| _ow-temperature heat pump:  | yes / no                          |                   | yes       |
| Nith 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  |
| Nater flow rate   | fixed / variable                  |                   | fixed     |
| Outlet temperature  | fixed / variable                  |                   | variable  |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder         |                   | average   |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 285       |
| Seasonal space heating energy efficiency  | ηs                                | [%]               | 131       |
| Seasonal space heating energy efficiency class  | -                                 | -                 |           |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |                   |           |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                               | [kW]              | 252       |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]              | 153       |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]              | 122       |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]              | 140       |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]              | 252       |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]              | 237       |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]              | -         |
| Bivalent temperature  | Tbiv                              | l <sub>c</sub> Cj | -7        |
| Degradation coefficient   | Cdh                               |                   | 0.90      |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti             | -,        |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              |                   | 2,68      |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -                 | 3,19      |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -                 | 4,20      |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              |                   | 4,92      |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              |                   | 2,68      |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                              |                   | 2,48      |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                  | COPd                              |                   | -,        |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1              | -10       |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]              | 50        |
| Power consumption in modes other than active mode   | W102                              | [ 0]              |           |
| Off mode  | POFF                              | [kW]              | 0,000     |
| Thermostat-off mode   | PTO                               | [kW]              | 1,490     |
| Standby mode  | PSB                               | [kW]              | 0,649     |
| Crankcase heater mode   | PCK                               | [kW]              | 0.649     |
| Supplementary heater  | 1 OK                              | [KAA]             | 0,040     |
| Nominal heating capacity  | Psup                              | [kW]              | 47,5      |
| Other items   | 1 306                             | [KAA]             | 47,0      |
| Capacity control  | fixed / variable                  |                   | variable  |
| Sound power level, indoors  | LWA                               | [dB(A)]           | vai labic |
| Sound power level, indoors Sound power level, outdoors  | LWA                               | [dB(A)]           | 93        |
| Annual electricity consumption for heating  | QHE                               | - 17-             | 175662    |
| Annual electricity consumption for neating  Outdoor heat exchanger                            | QПE                               | [kWh]             | 170002    |
| <u> </u>  | Opiropures                        | [ma3/ha]          | 25.64     |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 35,61     |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]            | -         |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 1962                    |         |          |
|---|---------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]    | 314      |
| Seasonal space heating energy efficiency  | ης                        | [%]     | 137      |
| Seasonal space heating energy efficiency class  | -                         | -       | -        |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper  | ature Ti                  |         |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C   | Pdh                       | [kW]    | 278      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C   | Pdh                       | [kW]    | 169      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C   | Pdh                       | [kW]    | 130      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C  | Pdh                       | [kW]    | 150      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature  | Pdh                       | [kW]    | 278      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature   | Pdh                       | [kW]    | 264      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | Pdh                       | [kW]    | -        |
| Bivalent temperature  | Tbiy                      | [°C]    | -7       |
| Degradation coefficient   | Cdh                       | -       | 0.90     |
| Degradation coefficient of performance or primary energy ratio for part load at indoor temperat   | *                         |         | 0,90     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C   | COPd                      | -       | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C  Declared coefficient of performance with outdoor temperature Tj = +2 °C                                      | COPd                      |         | 3,38     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C   | COPd                      | -       | 4,35     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C  | COPd                      | -       | 5,02     |
| Declared coefficient of performance with outdoor temperature Tj = +12 C   | COPd                      | -       | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = Divalent temperature  Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | -       | 2,70     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | COPd                      | -       | 2,00     |
| , , , , ,   | TOL                       |         | -10      |
| For air-to-water HP : Operation limit temperature   |                           | [°C]    |          |
| Heating water operating limit temperature at TOL  | WTOL                      | [°C]    | 50       |
| Power consumption in modes other than active mode   | DOFF                      | FLAA/I  | 0.000    |
| Off mode  | POFF                      | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]    | 1,138    |
| Standby mode  | PSB                       | [kW]    | 0,649    |
| Crankcase heater mode   | PCK                       | [kW]    | 0,649    |
| Supplementary heater  | 1-                        |         |          |
| Nominal heating capacity  | Psup                      | [kW]    | 50,2     |
| Other items   |                           |         |          |
| Capacity control  | fixed / variable          |         | variable |
| Sound power level, indoors  | LWA                       | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                       | [dB(A)] | 93       |
| Annual electricity consumption for heating  | QHE                       | [kWh]   | 186138   |
| Outdoor heat exchanger  |                           |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]  | 41,58    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 2022                           |         |          |
|---|----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]    | 362      |
| Seasonal space heating energy efficiency  | ης                               | [%]     | 134      |
| Seasonal space heating energy efficiency class  | -                                |         |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                         |         |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                              | [kW]    | 320      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                              | [kW]    | 195      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                              | [kW]    | 147      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                              | [kW]    | 169      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                              | [kW]    | 320      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                              | [kW]    | 308      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat    | ure 20 °C and outdoor temperatur | re Ti   |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                             | -       | 2,77     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                             | -       | 3,24     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                             | -       | 4,28     |
| Declared coefficient of performance with outdoor temperature Ti = +12 °C                        | COPd                             | -       | 5,01     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                             | -       | 2,77     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                             | -       | 2,61     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                             | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                  |         |          |
| Off mode  | POFF                             | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]    | 1,188    |
| Standby mode  | PSB                              | [kW]    | 0,882    |
| Crankcase heater mode   | PCK                              | [kW]    | 0,882    |
| Supplementary heater  |                                  |         | ·        |
| Nominal heating capacity  | Psup                             | [kW]    | 54,1     |
| Other items   |                                  |         |          |
| Capacity control  | fixed / variable                 |         | variable |
| Sound power level, indoors  | LWA                              | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)] | 94       |
| Annual electricity consumption for heating  | QHE                              | [kWh]   | 218624   |
| Outdoor heat exchanger  | <u> </u>                         |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]  | 38,06    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source              | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 2222                    |                  |               |
|---|---------------------------|------------------|---------------|
| 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       |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]             | 391           |
| Seasonal space heating energy efficiency  | ηs                        | [%]              | 139           |
| Seasonal space heating energy efficiency class  | -                         | -                |               |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Ti                  |                  |               |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                       | [kW]             | 346           |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                       | [kW]             | 211           |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                       | [kW]             | 156           |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                       | [kW]             | 178           |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                       | [kW]             | 346           |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                       | [kW]             | 329           |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                       | [kW]             | -             |
| Bivalent temperature  | Thiv                      | [°C]             | -7            |
| Degradation coefficient   | Cdh                       | -                | 0.90          |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                           |                  | 0,30          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                      | -                | 2.80          |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                      |                  | 3,39          |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                      | _                | 4.42          |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                      | _                | 5.13          |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                      |                  | 2,80          |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      | -                | 2.60          |
| For air-to-water heat pumps: $Tj = -15 ^{\circ}C$ (if $TOL < -20 ^{\circ}C$ )                   | COPd                      | -                | -             |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1             | -10           |
| Heating water operating limit temperature at TOL  | WTOL                      | [°C]             | 50            |
| Power consumption in modes other than active mode   | WIGE                      | [ 0]             | 30            |
| Off mode  | POFF                      | [kW]             | 0.000         |
| Thermostat-off mode   | PTO                       | [kW]             | 1,409         |
| Standby mode  | PSB                       | [kW]             | 0.937         |
| Crankcase heater mode   | PCK                       | [kW]             | 0.937         |
| Supplementary heater  | 1 Oil                     | [KVV]            | 0,957         |
| Nominal heating capacity  | Psup                      | [kW]             | 61,9          |
| Other items   | 1 306                     | [KAA]            | 01,0          |
| Capacity control  | fixed / variable          |                  | variable      |
| Sound power level, indoors  | LWA                       | [dB(A)]          | variable<br>- |
| Sound power level, outdoors   | LWA                       | [dB(A)]          | 96            |
| Annual electricity consumption for heating  | QHE                       | [kWh]            | 228272        |
| Outdoor heat exchanger  | QIIL.                     | [VAA11]          | 220212        |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]           | 50,60         |
| · · · · · · · · · · · · · · · · · · ·   |                           | [m³/h]<br>[m³/h] | 50,60         |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source       | [m-/n]           | <del>-</del>  |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C  | A 2422                          |         |          |
|---|---------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh               | [kW]    | 357      |
| Seasonal space heating energy efficiency  | ης                              | [%]     | 139      |
| Seasonal space heating energy efficiency class  | -                               | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera   | nture Tj                        |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                             | [kW]    | 316      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                             | [kW]    | 192      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                             | [kW]    | 158      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                             | [kW]    | 181      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                             | [kW]    | 357      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                             | [kW]    | 357      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                             | [kW]    | -        |
| Bivalent temperature  | Tbiv                            | [°C]    | -10      |
| Degradation coefficient   | Cdh                             | -       | 0,90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | ure 20 °C and outdoor temperatu | re Tj   |          |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                      | COPd                            | -       | 2,78     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                            | -       | 3,41     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                            | -       | 4,45     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                            | -       | 5,15     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                            | -       | 2,66     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                            | -       | 2,66     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                            | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                             | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                            | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                 |         |          |
| Off mode  | POFF                            | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                             | [kW]    | 1,597    |
| Standby mode  | PSB                             | [kW]    | 0,937    |
| Crankcase heater mode   | PCK                             | [kW]    | 0,937    |
| Supplementary heater  |                                 |         |          |
| Nominal heating capacity  | Psup                            | [kW]    | 0,00     |
| Other items   |                                 |         |          |
| Capacity control  | fixed / variable                |         | variable |
| Sound power level, indoors  | LWA                             | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                             | [dB(A)] | 0        |
| Annual electricity consumption for heating  | QHE                             | [kWh]   | 207450   |
| Outdoor heat exchanger  |                                 |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                      | [m³/h]  | 46,03    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source             | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /LN-C   | A 2622                    |                   |          |
|--|---------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh  | Prated = Pdesignh         | [kW]              | 400      |
| Seasonal space heating energy efficiency   | ης                        | [%]               | 139      |
| Seasonal space heating energy efficiency class   | -                         | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature      | ature Ti                  |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                                    | Pdh                       | [kW]              | 354      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                                    | Pdh                       | [kW]              | 215      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                                    | Pdh                       | [kW]              | 194      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                                   | Pdh                       | [kW]              | 225      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                     | Pdh                       | [kW]              | 400      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature              | Pdh                       | [kW]              | 400      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)   | Pdh                       | [kW]              | -        |
| Bivalent temperature   | Thiv                      | [°C]              | -10      |
| Degradation coefficient  | Cdh                       | -                 | 0,90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat         |                           |                   | 0,30     |
| Declared coefficient of performance with outdoor temperature $T_1 = -7$ °C                           | COPd                      | -                 | 2.84     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                              | COPd                      |                   | 3,39     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                              | COPd                      | _                 | 4,49     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                             | COPd                      | <del>-</del> -    | 5.20     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature               | COPd                      |                   | 2,74     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature        | COPd                      |                   | 2.74     |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)   | COPd                      | _                 | -,       |
| For air-to-water HP: Operation limit temperature   | TOL                       | l <sub>o</sub> CJ | -10      |
| Heating water operating limit temperature at TOL   | WTOL                      | [°C]              | 50       |
| Power consumption in modes other than active mode  | 152                       | [ 0]              |          |
| Off mode   | POFF                      | [kW]              | 0.000    |
| Thermostat-off mode  | PTO                       | [kW]              | 1,206    |
| Standby mode   | PSB                       | [kW]              | 0.944    |
| Crankcase heater mode  | PCK                       | [kW]              | 0.944    |
| Supplementary heater   |                           | []                | 0,0      |
| Nominal heating capacity   | Psup                      | [kW]              | 0,00     |
| Other items  | ·                         | []                |          |
| Capacity control   | fixed / variable          |                   | variable |
| Sound power level, indoors   | LWA                       | [dB(A)]           | -        |
| Sound power level, outdoors  | LWA                       | [dB(A)]           | 0        |
| Annual electricity consumption for heating   | QHE                       | [kWh]             | 232537   |
| Outdoor heat exchanger   |                           | [ssvii]           |          |
| For air-to-water HP: Rated air flow rate, outdoors   | Qairsource                | [m³/h]            | 46,03    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger         | Qwater/brine source       | [m³/h]            |          |
| 1 of water 75 mile to water fleat paritys. Nation 5 mile of water flow rate, outdoor fleat exchanger | Grater/Brille Source      | [/]               |          |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 1062                         |                     |              |
|---|--------------------------------|---------------------|--------------|
| 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      |
| Rated heat output at Tdesignh   | Prated = Pdesignh              | [kW]                | 153          |
| Seasonal space heating energy efficiency  | ης                             | [%]                 | 131          |
| Seasonal space heating energy efficiency class  | -                              | -                   | -            |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Ti                       |                     |              |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                            | [kW]                | 136          |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                            | [kW]                | 82,7         |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                            | [kW]                | 65,0         |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                            | [kW]                | 74,6         |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                            | [kW]                | 136          |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                            | [kW]                | 129          |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                    | Pdh                            | [kW]                | -            |
| Bivalent temperature  | Thiv                           | [°C]                | -7           |
| Degradation coefficient   | Cdh                            | -                   | 0.90         |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                                |                     |              |
| Declared coefficient of performance with outdoor temperature $T_i = -7$ °C                      | COPd                           | -                   | 2.65         |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                           | -                   | 3,25         |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                           | -                   | 4,17         |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                           |                     | 4.82         |
| 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                           |                     | 2.48         |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                           | -                   | -            |
| For air-to-water HP : Operation limit temperature   | TOL                            | l <sub>o</sub> CJ   | -10          |
| Heating water operating limit temperature at TOL  | WTOL                           | [°C]                | 50           |
| Power consumption in modes other than active mode   | W102                           | [ 0]                |              |
| Off mode  | POFF                           | [kW]                | 0.000        |
| Thermostat-off mode   | PTO                            | [kW]                | 0,683        |
| Standby mode  | PSB                            | [kW]                | 0.590        |
| Crankcase heater mode   | PCK                            | [kW]                | 0.590        |
| Supplementary heater  | T Six                          | [KVV]               | 0,000        |
| Nominal heating capacity  | Psup                           | [kW]                | 24,0         |
| Other items   | 1 cup                          | [KVV]               | 21,0         |
| Capacity control  | fixed / variable               |                     | variable     |
| Sound power level, indoors  | LWA                            | [dB(A)]             | - variable   |
| Sound power level, nitdoors   | LWA                            | [dB(A)]             | 87           |
| Annual electricity consumption for heating  | QHE                            | [kWh]               | 94429        |
| Outdoor heat exchanger  | WI IL                          | [KAA11]             | 37723        |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                     | [m³/h]              | 18,30        |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Quarsource Qwater/brine source | [III /II]<br>[m³/h] | -            |
| i or water-rumme-to-water meat pumps. Ivated unine or water now rate, outdoor neat exchanger    | Zwatenbillie 200106            | [iii /ii]           | <del>-</del> |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 1162                            |         |          |
|---|-----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]    | 207      |
| Seasonal space heating energy efficiency  | ης                                | [%]     | 125      |
| Seasonal space heating energy efficiency class  | -                                 | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                              | Pdh                               | [kW]    | 160      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]    | 111      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]    | 81,3     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]    | 93,4     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]    | 167      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]    | 150      |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                    | Pdh                               | [kW]    | -        |
| Bivalent temperature  | Tbiv                              | [°C]    | -5       |
| Degradation coefficient   | Cdh                               | -       | 0,90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ure 20 °C and outdoor temperature | re Tj   |          |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                        | COPd                              | -       | 2,68     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -       | 2,97     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -       | 3,97     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -       | 4,77     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              | -       | 2,82     |
| 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]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                   |         |          |
| Off mode  | POFF                              | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]    | 0,981    |
| Standby mode  | PSB                               | [kW]    | 0,590    |
| Crankcase heater mode   | PCK                               | [kW]    | 0,590    |
| Supplementary heater  |                                   |         |          |
| Nominal heating capacity  | Psup                              | [kW]    | 56,5     |
| Other items   |                                   |         |          |
| Capacity control  | fixed / variable                  |         | variable |
| Sound power level, indoors  | LWA                               | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)] | 88       |
| Annual electricity consumption for heating  | QHE                               | [kWh]   | 133131   |
| Outdoor heat exchanger  |                                   |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]  | 20,20    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05/SL-C   | A 1362                    |  |               |
|---|---------------------------|--|---------------|
| 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       |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]   | 217           |
| Seasonal space heating energy efficiency  | ηs                        | [%]  | 133           |
| Seasonal space heating energy efficiency class  | -                         | <del>                                     </del> |               |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                  |  |               |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                       | [kW]   | 192           |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                       | [kW]   | 117           |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                       | [kW]   | 93,8          |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                       | [kW]   | 108           |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                       | [kW]   | 192           |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                       | [kW]   | 181           |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                       | [kW]   | -             |
| Bivalent temperature  | Thiv                      | [°C]   | -7            |
| Degradation coefficient   | Cdh                       |  | 0.90          |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | · · ·                     | e Ti   | 0,00          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                      | <u> </u>   | 2,72          |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                      | -  | 3,24          |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                      | -  | 4,28          |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                      |  | 5,02          |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                      |  | 2,72          |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      | <del>-</del> -                                   | 2,53          |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | COPd                      | _  | -             |
| For air-to-water HP : Operation limit temperature   | TOL                       | [°C]   | -10           |
| Heating water operating limit temperature at TOL  | WTOL                      | l°C]   | 50            |
| Power consumption in modes other than active mode   | WIGE                      | [ 0]   |               |
| Off mode  | POFF                      | [kW]   | 0,000         |
| Thermostat-off mode   | PTO                       | [kW]   | 1,001         |
| Standby mode  | PSB                       | [kW]   | 0,590         |
| Crankcase heater mode   | PCK                       | [kW]   | 0,590         |
| Supplementary heater  | T OIC                     | [KAA]  | 0,000         |
| Nominal heating capacity  | Psup                      | [kW]   | 35,7          |
| Other items   | 1 Sup                     | [KAA]  | 00,1          |
| Capacity control  | fixed / variable          |  | variable      |
| Sound power level, indoors  | LWA                       | [dB(A)]  | variable<br>- |
| Sound power level, outdoors   | LWA                       | [dB(A)]  | 88            |
| Annual electricity consumption for heating  | QHE                       | [kWh]  | 131733        |
| Outdoor heat exchanger  | QUE                       | [KVVII]  | 131733        |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m3/h1   | 22.11         |
| ,   |                           | [m³/h]   | ,             |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source       | [m³/h]   | -             |

<sup>(1)</sup> 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.

| ERACS2-Q-G05/SL-C   | A 1562                    |         |          |
|---|---------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]    | 238      |
| Seasonal space heating energy efficiency  | ηs                        | [%]     | 136      |
| Seasonal space heating energy efficiency class  | 1-                        | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor | ature Tj                  |         |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C   | Pdh                       | [kW]    | 211      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C   | Pdh                       | [kW]    | 128      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C   | Pdh                       | [kW]    | 100      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C  | Pdh                       | [kW]    | 115      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature  | Pdh                       | [kW]    | 211      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature   | Pdh                       | [kW]    | 201      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | Pdh                       | [kW]    | -        |
| Bivalent temperature  | Thiv                      | [°C]    | -7       |
| Degradation coefficient   | Cdh                       | - []    | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   |                           | re Ti   | 0,00     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C   | COPd                      |         | 2,73     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C   | COPd                      | -       | 3,37     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C   | COPd                      | -       | 4,32     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C  | COPd                      | _       | 4,97     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature  | COPd                      | _       | 2,73     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                      | _       | 2,54     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)  | COPd                      | _       |          |
| For air-to-water HP : Operation limit temperature   | TOL                       | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | [°C]    | 50       |
| Power consumption in modes other than active mode   | WIGE                      | [ 0]    |          |
| Off mode  | POFF                      | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]    | 1,243    |
| Standby mode  | PSB                       | [kW]    | 0,649    |
| Crankcase heater mode   | PCK                       | [kW]    | 0.649    |
| Supplementary heater  | 1 OK                      | [IXAA]  | 0,040    |
| Nominal heating capacity  | Psup                      | [kW]    | 37,7     |
| Other items   | 1 cup                     | [KVV]   | 07,7     |
| Capacity control  | fixed / variable          |         | variable |
| Sound power level, indoors  | LWA                       | [dB(A)] | -        |
| Sound power level, indoors  Sound power level, outdoors   | LWA                       | [dB(A)] | 89       |
| Annual electricity consumption for heating  | QHE                       | [kWh]   | 141510   |
| Outdoor heat exchanger  | QIIL .                    | [KVVII] | 141010   |
| Outdoor neat exchanger For air-to-water HP: Rated air flow rate. outdoors   | Qairsource                | [m3/h1  | 26,94    |
| ,   |                           | [m³/h]  | 20,94    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 1762                            |                   |          |
|---|-----------------------------------|-------------------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 279      |
| Seasonal space heating energy efficiency  | ηs                                | [%]               | 131      |
| Seasonal space heating energy efficiency class  | -                                 | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |                   |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                              | Pdh                               | [kW]              | 246      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]              | 150      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]              | 122      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]              | 140      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]              | 246      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]              | 233      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                               | [kW]              | -        |
| Bivalent temperature  | Tbiv                              | l,cj              | -7       |
| Degradation coefficient   | Cdh                               | -                 | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat    | ture 20 °C and outdoor temperatur | re Ti             |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                              | - I               | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -                 | 3,19     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -                 | 4,21     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -                 | 4,94     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              | -                 | 2,70     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | -                 | 2.51     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | COPd                              | -                 | -,       |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l <sub>c</sub> Cl | 50       |
| Power consumption in modes other than active mode   | 1.1.02                            | [ 0]              |          |
| Off mode  | POFF                              | [kW]              | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]              | 1,385    |
| Standby mode  | PSB                               | [kW]              | 0,649    |
| Crankcase heater mode   | PCK                               | [kW]              | 0.649    |
| Supplementary heater  | T Six                             | [KVV]             | 0,010    |
| Nominal heating capacity  | Psup                              | [kW]              | 45,7     |
| Other items   | · sap                             | []                | .0,.     |
| Capacity control  | fixed / variable                  |                   | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]           | 89       |
| Annual electricity consumption for heating  | QHE                               | [kWh]             | 171641   |
| Outdoor heat exchanger  | GIIL.                             | [IZAA11]          | 17 10-11 |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 28,63    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]            | 20,03    |
| or water-runne-to-water near pumps. Indied brine or water now rate, outdoor near exchanger      | water/brille source               | [ [[[] /[]]       | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 1962                    |         |          |
|---|---------------------------|---------|----------|
| Air-to-water heat pump:   | yes / no                  |         | yes      |
| Water-to-water heat pump:   | yes / no                  |         | no       |
| Brine-to-water heat pump:   | yes / no                  |         | no       |
| ow-temperature heat pump:   | yes / no                  |         | yes      |
| Nith 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 |
| Nater flow rate   | fixed / variable          |         | fixed    |
| Dutlet temperature  | fixed / variable          |         | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder |         | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]    | 307      |
| Seasonal space heating energy efficiency  | ηs                        | [%]     | 137      |
| Seasonal space heating energy efficiency class  | -                         |         |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                  |         |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                       | [kW]    | 272      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                       | [kW]    | 166      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                       | [kW]    | 130      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                       | [kW]    | 150      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                       | [kW]    | 272      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                       | [kW]    | 259      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | · · ·                     | re Ti   | 0,00     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                      | -       | 2,73     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                      | _       | 3,37     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                      | _       | 4,36     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                      |         | 5,03     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                      | _       | 2,73     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | _       | 2,55     |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                  | COPd                      | _       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l°C]    | 50       |
| Power consumption in modes other than active mode   | WICE                      | [ 0]    | 30       |
| Off mode  | POFF                      | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]    | 1,054    |
| Standby mode  | PSB                       | [kW]    | 0,649    |
| Crankcase heater mode   | PCK                       | [kW]    | 0,649    |
| Supplementary heater  | FCK                       | [KVV]   | 0,049    |
| Nominal heating capacity  | Psup                      | [kW]    | 48,6     |
| Other items   | Fsup                      | [KVV]   | 40,0     |
| Capacity control  | fixed / variable          |         | variable |
| Sound power level, indoors  | LWA                       | [dB(A)] | variable |
| Sound power level, indoors Sound power level, outdoors  | LWA                       | - \ /3  | 89       |
| 1 /   |                           | [dB(A)] |          |
| Annual electricity consumption for heating  | QHE                       | [kWh]   | 181887   |
| Outdoor heat exchanger  | 0-:                       | F20 7   | 20.07    |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]  | 33,67    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 2022                            |                   |          |
|---|-----------------------------------|-------------------|----------|
| Air-to-water heat pump:   | yes / no                          |                   | yes      |
| Nater-to-water heat pump:   | yes / no                          |                   | no       |
| Brine-to-water heat pump:   | yes / no                          |                   | no       |
| ow-temperature heat pump:   | yes / no                          |                   | yes      |
| Vith supplementary heater:  | yes / no                          |                   | no       |
| Mixed unit with heat pump:  | yes / no                          |                   | no       |
| Femperature application (1)   | (low 35°C/ medium 55°C)           |                   | low 35°C |
| Nater flow rate   | fixed / variable                  |                   | fixed    |
| Outlet temperature  | fixed / variable                  |                   | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder         |                   | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 363      |
| Seasonal space heating energy efficiency  | ηs                                | [%]               | 135      |
| Seasonal space heating energy efficiency class  | -                                 |                   |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |                   |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                               | [kW]              | 321      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]              | 195      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]              | 146      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]              | 169      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]              | 321      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]              | 311      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]              | -        |
| Bivalent temperature  | Tbiv                              | l <sub>o</sub> Cj | -7       |
| Degradation coefficient   | Cdh                               |                   | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti             | ,        |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              | Í - I             | 2,80     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -                 | 3,25     |
| Declared coefficient of performance with outdoor temperature Ti = +7 °C                       | COPd                              | -                 | 4,28     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              | -                 | 5,02     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              | -                 | 2,80     |
| Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature | COPd                              | -                 | 2,65     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                              | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l°C]              | 50       |
| Power consumption in modes other than active mode   |                                   |                   |          |
| Off mode  | POFF                              | [kW]              | 0.000    |
| Thermostat-off mode   | PTO                               | [kW]              | 1,149    |
| Standby mode  | PSB                               | [kW]              | 0,882    |
| Crankcase heater mode   | PCK                               | [kW]              | 0,882    |
| Supplementary heater  |                                   | 1 1 1             | -,       |
| Nominal heating capacity  | Psup                              | [kW]              | 52,1     |
| Other items   |                                   | 1 5 11            | ,-       |
| Capacity control  | fixed / variable                  |                   | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]           | 90       |
| Annual electricity consumption for heating  | QHE                               | [kWh]             | 217998   |
| Outdoor heat exchanger  | W. I.L.                           | [izaati]          | 217000   |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 35,07    |
| ,   |                                   |                   |          |
| or water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger   | Qwater/brine source               | [m³/h]            | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 2222                    |         |          |
|---|---------------------------|---------|----------|
| Air-to-water heat pump:   | yes / no                  |         | yes      |
| Water-to-water heat pump:   | yes / no                  |         | no       |
| Brine-to-water heat pump:   | yes / no                  |         | no       |
| ow-temperature heat pump:   | yes / no                  |         | yes      |
| Nith 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 |
| Nater flow rate   | fixed / variable          |         | fixed    |
| Outlet temperature  | fixed / variable          |         | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder |         | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh         | [kW]    | 390      |
| Seasonal space heating energy efficiency  | ης                        | [%]     | 139      |
| Seasonal space heating energy efficiency class  | -                         |         |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                  |         |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                       | [kW]    | 345      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                       | [kW]    | 210      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                       | [kW]    | 156      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                       | [kW]    | 178      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                       | [kW]    | 345      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                       | [kW]    | 330      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                       | [kW]    | -        |
| Bivalent temperature  | Thiv                      | [°C]    | -7       |
| Degradation coefficient   | Cdh                       | - [ 0]  | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | · · ·                     | re Ti   | 0,00     |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                      |         | 2,82     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                      | _       | 3,39     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                      | _       | 4,42     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                      |         | 5,13     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                      | _       | 2,82     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                      | _       | 2,63     |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                  | COPd                      | _       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                       | l°C1    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                      | l°C]    | 50       |
| Power consumption in modes other than active mode   | WICE                      | [ 0]    | 30       |
| Off mode  | POFF                      | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                       | [kW]    | 1,370    |
| Standby mode  | PSB                       | [kW]    | 0,937    |
| Crankcase heater mode   | PCK                       | [kW]    | 0,937    |
| Supplementary heater  | PCK                       | [KVV]   | 0,937    |
| Nominal heating capacity  | Psup                      | [kW]    | 60,3     |
| Other items   | Fsup                      | [KVV]   | 00,3     |
|   | fixed / veriable          |         | variable |
| Capacity control  | fixed / variable          | [dP/A)] | variable |
| Sound power level, indoors  | LWA                       | [dB(A)] | - 02     |
| Sound power level, outdoors   | LWA                       | [dB(A)] | 92       |
| Annual electricity consumption for heating  | QHE                       | [kWh]   | 227262   |
| Outdoor heat exchanger  |                           | F 20.3  | 40.00    |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                | [m³/h]  | 46,62    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source       | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 2422                            |                   |          |
|---|-----------------------------------|-------------------|----------|
| Air-to-water heat pump:   | yes / no                          |                   | yes      |
| Nater-to-water heat pump:   | yes / no                          |                   | no       |
| Brine-to-water heat pump:   | yes / no                          |                   | no       |
| ow-temperature heat pump:   | yes / no                          |                   | yes      |
| Nith supplementary heater:  | yes / no                          |                   | no       |
| Mixed unit with heat pump:  | yes / no                          |                   | no       |
| Femperature application (1)   | (low 35°C/ medium 55°C)           |                   | low 35°C |
| Nater flow rate   | fixed / variable                  |                   | fixed    |
| Outlet temperature  | fixed / variable                  |                   | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder         |                   | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 359      |
| Seasonal space heating energy efficiency  | ηs                                | [%]               | 140      |
| Seasonal space heating energy efficiency class  | -                                 | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |                   |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                             | Pdh                               | [kW]              | 318      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]              | 193      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]              | 158      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]              | 181      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]              | 359      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]              | 359      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]              | -        |
| Bivalent temperature  | Tbiv                              | l <sub>c</sub> Cj | -10      |
| Degradation coefficient   | Cdh                               |                   | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti             | -,       |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              | <u> </u>          | 2,81     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -                 | 3,42     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -                 | 4,45     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              | -                 | 5,15     |
| Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature        | COPd                              | -                 | 2,70     |
| Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature | COPd                              | -                 | 2.70     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                              | -                 | -        |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l°C1              | 50       |
| Power consumption in modes other than active mode   | -                                 |                   |          |
| Off mode  | POFF                              | [kW]              | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]              | 1,546    |
| Standby mode  | PSB                               | [kW]              | 0,937    |
| Crankcase heater mode   | PCK                               | [kW]              | 0,937    |
| Supplementary heater  |                                   | 1 1 1             | -,       |
| Nominal heating capacity  | Psup                              | [kW]              | 0,00     |
| Other items   |                                   |                   | -,       |
| Capacity control  | fixed / variable                  | T                 | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]           | 0        |
| Annual electricity consumption for heating  | QHE                               | [kWh]             | 208054   |
| Outdoor heat exchanger  |                                   | lixxxiil          | 200001   |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 42.44    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]            |          |
| or water-pointo-to-water heat pumps. Italed office of water flow rate, outdoor heat exchanger | water/brille source               | [iii /ii]         |          |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /SL-C  | A 2622                            |         |          |
|---|-----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]    | 400      |
| Seasonal space heating energy efficiency  | ηs                                | [%]     | 139      |
| Seasonal space heating energy efficiency class  | -                                 |         |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                               | [kW]    | 354      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]    | 215      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]    | 194      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]    | 225      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]    | 400      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]    | 400      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]    | -        |
| Bivalent temperature  | Tbiv                              | loci l  | -10      |
| Degradation coefficient   | Cdh                               | -       | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti   | -,       |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              | -       | 2,86     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -       | 3,39     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -       | 4,50     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              | _       | 5,21     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              | _       | 2,76     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                              |         | 2.76     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                              | _       |          |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l°C]    | 50       |
| Power consumption in modes other than active mode   | W102                              | [ 0]    |          |
| Off mode  | POFF                              | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]    | 1,144    |
| Standby mode  | PSB                               | [kW]    | 0,944    |
| Crankcase heater mode   | PCK                               | [kW]    | 0,944    |
| Supplementary heater  | 11 510                            | [L/AA]  | 0,344    |
| Nominal heating capacity  | Psup                              | [kW]    | 0,00     |
| Other items   | · oup                             | [IVAA]  | 3,00     |
| Capacity control  | fixed / variable                  |         | variable |
| Sound power level, indoors  | LWA                               | [dB(A)] | variabic |
| Sound power level, indoors  | LWA                               | [dB(A)] | 0        |
| Annual electricity consumption for heating  | QHE                               | - 172   | 232066   |
| Outdoor heat exchanger  | QПE                               | [kWh]   | 232000   |
| •   | Opiropurop                        | [ma3/b1 | 42.44    |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]  | 42,44    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]  | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-C  | A 2022                            |          |          |
|---|-----------------------------------|----------|----------|
| Air-to-water heat pump:   | yes / no                          |          | yes      |
| Water-to-water heat pump:   | yes / no                          |          | no       |
| Brine-to-water heat pump:   | yes / no                          |          | no       |
| ow-temperature heat pump:   | yes / no                          |          | yes      |
| Nith 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 |
| Nater flow rate   | fixed / variable                  |          | fixed    |
| Outlet temperature  | fixed / variable                  |          | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder         |          | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]     | 363      |
| Seasonal space heating energy efficiency  | ηs                                | [%]      | 144      |
| Seasonal space heating energy efficiency class  | -                                 | -        |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |          |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                               | [kW]     | 321      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]     | 195      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]     | 146      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]     | 169      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]     | 321      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]     | 311      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]     | -        |
| Bivalent temperature  | Tbiv                              | loci     | -7       |
| Degradation coefficient   | Cdh                               |          | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti    |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              |          | 2,92     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -        | 3,48     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -        | 4,59     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              | -        | 5,38     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              | _        | 2,92     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                              | _        | 2.76     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                              | -        | -,       |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1     | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]     | 50       |
| Power consumption in modes other than active mode   | 11102                             | [ 0]     |          |
| Off mode  | POFF                              | [kW]     | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]     | 1,149    |
| Standby mode  | PSB                               | [kW]     | 0,753    |
| Crankcase heater mode   | PCK                               | [kW]     | 0.753    |
| Supplementary heater  | T OIL                             | [KVV]    | 0,700    |
| Nominal heating capacity  | Psup                              | [kW]     | 52,1     |
| Other items   | 1. 000                            | [1444]   | 02,1     |
| Capacity control  | fixed / variable                  |          | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]  | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]  | 86       |
| Annual electricity consumption for heating  | QHE                               | [kWh]    | 204567   |
| Outdoor heat exchanger  | SIIL                              | [L/AA11] | 204307   |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]   | 35.07    |
| ,   |                                   |          | 33,07    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]   | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-C  | A 2222                            |                   |          |
|---|-----------------------------------|-------------------|----------|
| Air-to-water heat pump:   | yes / no                          |                   | yes      |
| Water-to-water heat pump:   | yes / no                          |                   | no       |
| Brine-to-water heat pump:   | yes / no                          |                   | no       |
| ow-temperature heat pump:   | yes / no                          |                   | yes      |
| Nith supplementary heater:  | yes / no                          |                   | no       |
| Mixed unit with heat pump:  | yes / no                          |                   | no       |
| Femperature application (1)   | (low 35°C/ medium 55°C)           |                   | low 35°C |
| Nater flow rate   | fixed / variable                  |                   | fixed    |
| Outlet temperature  | fixed / variable                  |                   | variable |
| Parameters are declared for average/warmer/colder climate conditions (1)                      | average / warmer / colder         |                   | average  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]              | 390      |
| Seasonal space heating energy efficiency  | ης                                | [%]               | 150      |
| Seasonal space heating energy efficiency class  | -                                 | -                 |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper    | ature Tj                          |                   |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                               | [kW]              | 345      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                               | [kW]              | 210      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                               | [kW]              | 156      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                               | [kW]              | 178      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                               | [kW]              | 345      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                               | [kW]              | 330      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | Pdh                               | [kW]              | -        |
| Bivalent temperature  | Tbiv                              | l <sub>c</sub> Cj | -7       |
| Degradation coefficient   | Cdh                               |                   | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor tempera   | ture 20 °C and outdoor temperatur | re Ti             |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                       | COPd                              |                   | 2,95     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                              | -                 | 3,67     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                              | -                 | 4,82     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                              | -                 | 5,58     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                              |                   | 2,95     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                              |                   | 2.75     |
| For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)                                  | COPd                              |                   |          |
| For air-to-water HP : Operation limit temperature   | TOL                               | l°C1              | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]              | 50       |
| Power consumption in modes other than active mode   | W102                              | [ 0]              |          |
| Off mode  | POFF                              | [kW]              | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]              | 1.370    |
| Standby mode  | PSB                               | [kW]              | 0,762    |
| Crankcase heater mode   | PCK                               | [kW]              | 0.762    |
| Supplementary heater  | 1. 0.0                            | fizaal            | 0,102    |
| Nominal heating capacity  | Psup                              | [kW]              | 60,3     |
| Other items   | 1 cup                             | [KVV]             |          |
| Capacity control  | fixed / variable                  |                   | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]           | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]           | 88       |
| Annual electricity consumption for heating  | QHE                               | [kWh]             | 210908   |
| Outdoor heat exchanger  | WI IL                             | [L/AA11]          | 210300   |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]            | 46.62    |
| ,   |                                   |                   | 40,02    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source               | [m³/h]            | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA   | -E 1062                          |          |          |
|---|----------------------------------|----------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]     | 156      |
| Seasonal space heating energy efficiency  | ης                               | [%]      | 146      |
| Seasonal space heating energy efficiency class  | -                                |          |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                         |          |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                              | [kW]     | 138      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                              | [kW]     | 84,0     |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                              | [kW]     | 66,7     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                              | [kW]     | 76,6     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                              | [kW]     | 138      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                              | [kW]     | 130      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat    | ure 20 °C and outdoor temperatur | re Tj    | ,        |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                             | <u> </u> | 2,84     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                             | -        | 3,65     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                             | -        | 4,69     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                             | -        | 5,38     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                             | -        | 2,84     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                             | -        | 2,63     |
| For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)                                      | COPd                             | -        | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]     | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]     | 50       |
| Power consumption in modes other than active mode   |                                  |          |          |
| Off mode  | POFF                             | [kW]     | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]     | 0,737    |
| Standby mode  | PSB                              | [kW]     | 0,508    |
| Crankcase heater mode   | PCK                              | [kW]     | 0,508    |
| Supplementary heater  |                                  |          |          |
| Nominal heating capacity  | Psup                             | [kW]     | 26,0     |
| Other items   |                                  |          |          |
| Capacity control  | fixed / variable                 |          | variable |
| Sound power level, indoors  | LWA                              | [dB(A)]  | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)]  | 86       |
| Annual electricity consumption for heating  | QHE                              | [kWh]    | 86290    |
| Outdoor heat exchanger  | <u> </u>                         |          |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]   | 20,20    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source              | [m³/h]   | -        |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA   | -E 1162                          |         |          |
|---|----------------------------------|---------|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]    | 188      |
| Seasonal space heating energy efficiency  | ης                               | [%]     | 134      |
| Seasonal space heating energy efficiency class  | -                                | -       |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                         |         |          |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                              | Pdh                              | [kW]    | 166      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                              | [kW]    | 101      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                              | [kW]    | 85,7     |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                              | [kW]    | 98,6     |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                              | [kW]    | 166      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                              | [kW]    | 154      |
| 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     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ure 20 °C and outdoor temperatur | re Tj   |          |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                             | -       | 2,84     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                             | -       | 3,21     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                             | -       | 4,35     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                             | -       | 5,20     |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                             | -       | 2,84     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                             | -       | 2,61     |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                    | COPd                             | -       | -        |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]    | -10      |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]    | 50       |
| Power consumption in modes other than active mode   |                                  |         |          |
| Off mode  | POFF                             | [kW]    | 0,000    |
| Thermostat-off mode   | PTO                              | [kW]    | 1,172    |
| Standby mode  | PSB                              | [kW]    | 0,514    |
| Crankcase heater mode   | PCK                              | [kW]    | 0,514    |
| Supplementary heater  |                                  |         |          |
| Nominal heating capacity  | Psup                             | [kW]    | 33,9     |
| Other items   |                                  |         |          |
| Capacity control  | fixed / variable                 |         | variable |
| Sound power level, indoors  | LWA                              | [dB(A)] | -        |
| Sound power level, outdoors   | LWA                              | [dB(A)] | 87       |
| Annual electricity consumption for heating  | QHE                              | [kWh]   | 113207   |
| Outdoor heat exchanger  |                                  |         |          |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]  | 26,94    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source              | [m³/h]  | -        |

<sup>(1)</sup> 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.

| -E 1362                   |  |   |
|---------------------------|--|---|
| yes / no                  |  | yes   |
| yes / no                  |  | no  |
| •                         |  | no  |
| yes / no                  |  | yes   |
| yes / no                  |  | no  |
|                           |  | no  |
| (low 35°C/ medium 55°C)   |  | low 35°C  |
| fixed / variable          |  | fixed   |
| fixed / variable          |  | variable  |
| average / warmer / colder |  | average   |
| Prated = Pdesignh         | [kW]   | 221   |
|                           |  | 141   |
| ·                         |  |   |
| ture Tj                   |  |   |
| Pdh                       | [kW]   | 195   |
| Pdh                       | [kW]   | 119   |
| Pdh                       | [kW]   | 95,8  |
| Pdh                       |  | 110   |
| Pdh                       |  | 195   |
| Pdh                       |  | 184   |
| Pdh                       |  | -   |
| Tbiv                      |  | -7  |
| Cdh                       |  | 0.90  |
|                           |  |   |
| COPd                      | -  | 2.85  |
| COPd                      | -  | 3.44  |
| COPd                      | -  | 4,57  |
| COPd                      | -  | 5.34  |
| COPd                      | -  | 2,85  |
| COPd                      | -  | 2.63  |
| COPd                      | -  | -   |
| TOL                       | l°C1   | -10   |
| WTOL                      | r - 1  | 50  |
|                           | ,  |   |
| POFF                      | [kW]   | 0.000   |
| PTO                       |  | 1,066   |
| PSB                       | [kW]   | 0,514   |
|                           |  | 0.514   |
|                           |  | -,-   |
| Psup                      | [kW]   | 36,7  |
| <u> </u>                  |  | <u> </u>  |
| fixed / variable          |  | variable  |
| LWA                       | [dB(A)]  | -   |
| LWA                       | [dB(A)]  | 87  |
| QHE                       | [kWh]  | 126654  |
|                           | , , ,  |   |
|                           |  |   |
| Qairsource                | [m³/h]   | 26,94   |
|                           | yes / no (low 35°C/ medium 55°C) fixed / variable fixed / variable average / warmer / colder Prated = Pdesignh ηs ture Tj Pdh | yes / no   yes / no |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA   | л-Е 1562                          |  |          |
|---|-----------------------------------|--|----------|
| 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  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]   | 242      |
| Seasonal space heating energy efficiency  | ηs                                | [%]  | 149      |
| Seasonal space heating energy efficiency class  | 1-                                | <del>                                     </del> |          |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |  |          |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                               | [kW]   | 214      |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]   | 130      |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]   | 103      |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]   | 118      |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]   | 214      |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]   | 201      |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                               | [kW]   | -        |
| Bivalent temperature  | Tbiv                              | loci l   | -7       |
| Degradation coefficient   | Cdh                               | - 1  | 0.90     |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ture 20 °C and outdoor temperatur | re Ti  |          |
| Declared coefficient of performance with outdoor temperature $T_1 = -7$ °C                      | COPd                              | -  | 2,90     |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -  | 3,73     |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -  | 4,78     |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -  | 5,50     |
| Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature          | COPd                              | -  | 2,90     |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | -  | 2.68     |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | COPd                              | -  | -,       |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]   | -10      |
| Heating water operating limit temperature at TOL  | WTOL                              | l°Cl   | 50       |
| Power consumption in modes other than active mode   |                                   | [ 0]   |          |
| Off mode  | POFF                              | [kW]   | 0,000    |
| Thermostat-off mode   | PTO                               | [kW]   | 1,355    |
| Standby mode  | PSB                               | [kW]   | 0,514    |
| Crankcase heater mode   | PCK                               | [kW]   | 0.514    |
| Supplementary heater  | T Six                             | [155.4.]   | 0,011    |
| Nominal heating capacity  | Psup                              | [kW]   | 40,3     |
| Other items   | · sap                             | []   | ,.       |
| Capacity control  | fixed / variable                  |  | variable |
| Sound power level, indoors  | LWA                               | [dB(A)]  | -        |
| Sound power level, outdoors   | LWA                               | [dB(A)]  | 88       |
| Annual electricity consumption for heating  | QHE                               | [kWh]  | 131113   |
| Outdoor heat exchanger  | GIIL.                             | [IZAA11]   | 101110   |
| For air-to-water HP: Rated air flow rate. outdoors  | Qairsource                        | [m³/h]   | 28,63    |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]   | 20,03    |
| To water now rate, outdoor heat exchange  | Water/brille Source               | [111/11]   |          |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA-E 1762  |                                  |         |          |  |
|---|----------------------------------|---------|----------|--|
| 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  |  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                | [kW]    | 283      |  |
| Seasonal space heating energy efficiency  | ης                               | [%]     | 139      |  |
| Seasonal space heating energy efficiency class  | -                                | -       |          |  |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera   | ature Tj                         |         |          |  |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                            | Pdh                              | [kW]    | 250      |  |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                             | Pdh                              | [kW]    | 152      |  |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                             | Pdh                              | [kW]    | 124      |  |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                            | Pdh                              | [kW]    | 143      |  |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature              | Pdh                              | [kW]    | 250      |  |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature       | Pdh                              | [kW]    | 236      |  |
| 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     |  |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperat  | ure 20 °C and outdoor temperatur | re Tj   |          |  |
| Declared coefficient of performance with outdoor temperature Tj = - 7 °C                      | COPd                             | -       | 2,82     |  |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                       | COPd                             | -       | 3,41     |  |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                       | COPd                             | -       | 4,51     |  |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                      | COPd                             | -       | 5,27     |  |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature        | COPd                             | -       | 2,82     |  |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature | COPd                             | -       | 2,61     |  |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                  | COPd                             | -       | -        |  |
| For air-to-water HP : Operation limit temperature   | TOL                              | [°C]    | -10      |  |
| Heating water operating limit temperature at TOL  | WTOL                             | [°C]    | 50       |  |
| Power consumption in modes other than active mode   |                                  |         |          |  |
| Off mode  | POFF                             | [kW]    | 0,000    |  |
| Thermostat-off mode   | PTO                              | [kW]    | 1,462    |  |
| Standby mode  | PSB                              | [kW]    | 0,520    |  |
| Crankcase heater mode   | PCK                              | [kW]    | 0,520    |  |
| Supplementary heater  |                                  |         |          |  |
| Nominal heating capacity  | Psup                             | [kW]    | 46,9     |  |
| Other items   |                                  |         |          |  |
| Capacity control  | fixed / variable                 |         | variable |  |
| Sound power level, indoors  | LWA                              | [dB(A)] | -        |  |
| Sound power level, outdoors   | LWA                              | [dB(A)] | 88       |  |
| Annual electricity consumption for heating  | QHE                              | [kWh]   | 164000   |  |
| Outdoor heat exchanger  |                                  | -       |          |  |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                       | [m³/h]  | 33,67    |  |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  | Qwater/brine source              | [m³/h]  | -        |  |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA-E 2022  |                                   |          |          |  |
|---|-----------------------------------|----------|----------|--|
| 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  |  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]     | 367      |  |
| Seasonal space heating energy efficiency  | ης                                | [%]      | 147      |  |
| Seasonal space heating energy efficiency class  |                                   |          |          |  |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |          |          |  |
| Declared capacity for heating with outdoor temperature Tj = -7 °C                               | Pdh                               | [kW]     | 324      |  |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]     | 197      |  |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]     | 154      |  |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]     | 177      |  |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]     | 324      |  |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]     | 306      |  |
| For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)                                    | Pdh                               | [kW]     | -        |  |
| Bivalent temperature  | Tbiv                              | l,cj     | -7       |  |
| Degradation coefficient   | Cdh                               |          | 0.90     |  |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ture 20 °C and outdoor temperatur | e Ti     | -,       |  |
| Declared coefficient of performance with outdoor temperature Ti = -7 °C                         | COPd                              | - 1      | 2,91     |  |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -        | 3,59     |  |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -        | 4,74     |  |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -        | 5,55     |  |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              |          | 2,91     |  |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | -        | 2,70     |  |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                    | COPd                              | -        | -        |  |
| For air-to-water HP : Operation limit temperature   | TOL                               | l,cJ     | -10      |  |
| Heating water operating limit temperature at TOL  | WTOL                              | l,cj     | 50       |  |
| Power consumption in modes other than active mode   |                                   |          |          |  |
| Off mode  | POFF                              | [kW]     | 0,000    |  |
| Thermostat-off mode   | PTO                               | [kW]     | 1,333    |  |
| Standby mode  | PSB                               | [kW]     | 0.759    |  |
| Crankcase heater mode   | PCK                               | [kW]     | 0.759    |  |
| Supplementary heater  |                                   | , , ,    | -,       |  |
| Nominal heating capacity  | Psup                              | [kW]     | 60,5     |  |
| Other items   |                                   | . ,      | <u> </u> |  |
| Capacity control  | fixed / variable                  |          | variable |  |
| Sound power level, indoors  | LWA                               | [dB(A)]  | -        |  |
| Sound power level, outdoors   | LWA                               | [dB(A)]  | 87       |  |
| Annual electricity consumption for heating  | QHE                               | [kWh]    | 201921   |  |
| Outdoor heat exchanger  |                                   | , , ,    |          |  |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]   | 48,02    |  |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]   | -        |  |
|   |                                   | F11.41.1 |          |  |

<sup>(1)</sup> 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.

| ERACS2-Q-G05 /XL-CA-E 2222  |                                   |         |          |  |
|---|-----------------------------------|---------|----------|--|
| 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  |  |
| Rated heat output at Tdesignh   | Prated = Pdesignh                 | [kW]    | 374      |  |
| Seasonal space heating energy efficiency  | ης                                | [%]     | 148      |  |
| Seasonal space heating energy efficiency class  | -                                 | -       |          |  |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature | ature Tj                          |         |          |  |
| Declared capacity for heating with outdoor temperature Tj = - 7 °C                              | Pdh                               | [kW]    | 331      |  |
| Declared capacity for heating with outdoor temperature Tj = +2 °C                               | Pdh                               | [kW]    | 202      |  |
| Declared capacity for heating with outdoor temperature Tj = +7 °C                               | Pdh                               | [kW]    | 160      |  |
| Declared capacity for heating with outdoor temperature Tj = +12 °C                              | Pdh                               | [kW]    | 189      |  |
| Declared capacity for heating with outdoor temperature Tj = Bivalent temperature                | Pdh                               | [kW]    | 331      |  |
| Declared capacity for heating with outdoor temperature Tj = Operation limit temperature         | Pdh                               | [kW]    | 306      |  |
| 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     |  |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperate   | ure 20 °C and outdoor temperature | re Tj   | <u> </u> |  |
| Declared coefficient of performance with outdoor temperature Tj = -7 °C                         | COPd                              | -       | 2,81     |  |
| Declared coefficient of performance with outdoor temperature Tj = +2 °C                         | COPd                              | -       | 3,66     |  |
| Declared coefficient of performance with outdoor temperature Tj = +7 °C                         | COPd                              | -       | 4,85     |  |
| Declared coefficient of performance with outdoor temperature Tj = +12 °C                        | COPd                              | -       | 5,81     |  |
| Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature          | COPd                              | -       | 2,81     |  |
| Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature   | COPd                              | -       | 2,55     |  |
| For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)                                    | COPd                              | -       | -        |  |
| For air-to-water HP : Operation limit temperature   | TOL                               | [°C]    | -10      |  |
| Heating water operating limit temperature at TOL  | WTOL                              | [°C]    | 50       |  |
| Power consumption in modes other than active mode   |                                   |         |          |  |
| Off mode  | POFF                              | [kW]    | 0,000    |  |
| Thermostat-off mode   | PTO                               | [kW]    | 1,492    |  |
| Standby mode  | PSB                               | [kW]    | 0,768    |  |
| Crankcase heater mode   | PCK                               | [kW]    | 0,768    |  |
| Supplementary heater  |                                   |         |          |  |
| Nominal heating capacity  | Psup                              | [kW]    | 68,0     |  |
| Other items   |                                   |         |          |  |
| Capacity control  | fixed / variable                  |         | variable |  |
| Sound power level, indoors  | LWA                               | [dB(A)] | -        |  |
| Sound power level, outdoors   | LWA                               | [dB(A)] | 89       |  |
| Annual electricity consumption for heating  | QHE                               | [kWh]   | 204501   |  |
| Outdoor heat exchanger  | <u> </u>                          | -       |          |  |
| For air-to-water HP: Rated air flow rate, outdoors  | Qairsource                        | [m³/h]  | 60,10    |  |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger    | Qwater/brine source               | [m³/h]  | -        |  |

<sup>(1)</sup> 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.





Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

# MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

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