

## Subtype Ecodan Power Inverter 10/12-300D AA

|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| Certificate Holder  | Mitsubishi Electric Air Conditioning Systems Europe LTD                           |
| Address             | Nettlehill Road, Houston Industrial Estate                                        |
| ZIP                 | EH54 5EQ                                                                          |
| City                | Livingston                                                                        |
| Country             | GB                                                                                |
| Certification Body  | SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise) |
| Subtype title       | Ecodan Power Inverter 10/12-300D AA                                               |
| Registration number | 037-0025-20                                                                       |
| Heat Pump Type      | Outdoor Air/Water                                                                 |
| Refrigerant         | R32                                                                               |
| Mass of Refrigerant | 1.6 kg                                                                            |
| Certification Date  | 06.10.2020                                                                        |
| Testing basis       | HP Keymark scheme rules rev. no. 6                                                |

## Model PUD-SWM100VAA(-BS) + E\*ST30D-M\*D

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Model name                          | PUD-SWM100VAA(-BS) + E*ST30D-M*D |
| Application                         | Heating + DHW + low temp         |
| Units                               | Indoor, Outdoor                  |
| Climate zone (for heating)          | n/a                              |
| Cooling mode application (optional) | n/a                              |
| Any additional heat sources         | n/a                              |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 8 kW            | 8 kW               |
| El input    | 1.6 kW          | 3.08 kW            |
| COP         | 5               | 2.6                |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 178 %           | 131 %              |
| Prated                                              | 10 kW           | 10 kW              |
| SCOP                                                | 4.53            | 3.35               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = -7°C                                       | 3.1             | 2                  |
| Cdh Tj = -7 °C                                      | 1               | 1                  |
| Pdh Tj = +2°C                                       | 5.7 kW          | 5.7 kW             |
| COP Tj = +2°C                                       | 4.46            | 3.16               |
| Cdh Tj = +2 °C                                      | 0.99            | 0.99               |
| Pdh Tj = +7°C                                       | 5.4 kW          | 5.2 kW             |
| COP Tj = +7°C                                       | 5.68            | 4.77               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.99               |
| Pdh Tj = 12°C                                       | 4.5 kW          | 3.6 kW             |
| COP Tj = 12°C                                       | 7.76            | 6.92               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = Tbiv                                       | 3.1             | 2                  |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW         | 8.57 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.85            | 1.93               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 15 W            | 15 W               |
| PTO                                                 | 15 W            | 15 W               |
| PSB                                                 | 15 W            | 15 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.43 kW         | 1.43 kW            |
| Annual energy consumption Qhe                       | 4564 kWh        | 6173 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 221 %       | 131 %       |
| Prated                                              | 10 kW       | 10 kW       |
| SCOP                                                | 5.59        | 3.88        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 10 kW       | 10.1 kW     |
| COP Tj = +2°C                                       | 3.3         | 1.93        |
| Cdh Tj = +2 °C                                      | 1           | 1           |
| Pdh Tj = +7°C                                       | 6.4 kW      | 6.4 kW      |
| COP Tj = +7°C                                       | 5.16        | 3.32        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 4.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.19        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.98        |
| Pdh Tj = Tbiv                                       | 10 kW       | 10.1 kW     |
| COP Tj = Tbiv                                       | 3.3         | 1.93        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.9 kW      | 6.9 kW      |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.6         | 1.6         |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 15 W        | 15 W        |
| PTO                                                 | 15 W        | 15 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2334 kWh    | 3390 kWh    |

## Model PUD-SWM100VAA(-BS) + E\*ST30D-\*M\*D

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Model name                          | PUD-SWM100VAA(-BS) + E*ST30D-*M*D |
| Application                         | Heating + DHW + low temp          |
| Units                               | Indoor, Outdoor                   |
| Climate zone (for heating)          | n/a                               |
| Cooling mode application (optional) | n/a                               |
| Any additional heat sources         | n/a                               |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 8 kW            | 8 kW               |
| El input    | 1.6 kW          | 3.08 kW            |
| COP         | 5               | 2.6                |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 178 %           | 131 %              |
| Prated                                              | 10 kW           | 10 kW              |
| SCOP                                                | 4.53            | 3.35               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = -7°C                                       | 3.1             | 2                  |
| Cdh Tj = -7 °C                                      | 1               | 1                  |
| Pdh Tj = +2°C                                       | 5.7 kW          | 5.7 kW             |
| COP Tj = +2°C                                       | 4.46            | 3.16               |
| Cdh Tj = +2 °C                                      | 0.99            | 0.99               |
| Pdh Tj = +7°C                                       | 5.4 kW          | 5.2 kW             |
| COP Tj = +7°C                                       | 5.68            | 4.77               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.99               |
| Pdh Tj = 12°C                                       | 4.5 kW          | 3.6 kW             |
| COP Tj = 12°C                                       | 7.76            | 6.92               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = Tbiv                                       | 3.1             | 2                  |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW         | 8.57 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.85            | 1.93               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 15 W            | 15 W               |
| PTO                                                 | 15 W            | 15 W               |
| PSB                                                 | 15 W            | 15 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.43 kW         | 1.43 kW            |
| Annual energy consumption Qhe                       | 4564 kWh        | 6173 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 221 %       | 131 %       |
| Prated                                              | 10 kW       | 10 kW       |
| SCOP                                                | 5.59        | 3.88        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 10 kW       | 10.1 kW     |
| COP Tj = +2°C                                       | 3.3         | 1.93        |
| Cdh Tj = +2 °C                                      | 1           | 1           |
| Pdh Tj = +7°C                                       | 6.4 kW      | 6.4 kW      |
| COP Tj = +7°C                                       | 5.16        | 3.32        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 4.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.19        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.98        |
| Pdh Tj = Tbiv                                       | 10 kW       | 10.1 kW     |
| COP Tj = Tbiv                                       | 3.3         | 1.93        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.9 kW      | 6.9 kW      |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.6         | 1.6         |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 15 W        | 15 W        |
| PTO                                                 | 15 W        | 15 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2334 kWh    | 3390 kWh    |

## Model PUD-SWM100YAA(-BS) + E\*ST30D-M\*D

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Model name                          | PUD-SWM100YAA(-BS) + E*ST30D-M*D |
| Application                         | Heating + DHW + low temp         |
| Units                               | Indoor, Outdoor                  |
| Climate zone (for heating)          | n/a                              |
| Cooling mode application (optional) | n/a                              |
| Any additional heat sources         | n/a                              |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 8 kW            | 8 kW               |
| El input    | 1.6 kW          | 3.08 kW            |
| COP         | 5               | 2.6                |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 177 %           | 130 %              |
| Prated                                              | 10 kW           | 10 kW              |
| SCOP                                                | 4.49            | 3.33               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = -7°C                                       | 3.1             | 2                  |
| Cdh Tj = -7 °C                                      | 0.99            | 1                  |
| Pdh Tj = +2°C                                       | 5.7 kW          | 5.7 kW             |
| COP Tj = +2°C                                       | 4.46            | 3.16               |
| Cdh Tj = +2 °C                                      | 0.98            | 0.99               |
| Pdh Tj = +7°C                                       | 5.4 kW          | 5.2 kW             |
| COP Tj = +7°C                                       | 5.68            | 4.77               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.98               |
| Pdh Tj = 12°C                                       | 4.5 kW          | 3.6 kW             |
| COP Tj = 12°C                                       | 7.76            | 6.92               |
| Cdh Tj = +12 °C                                     | 0.96            | 0.96               |
| Pdh Tj = Tbiv                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = Tbiv                                       | 3.1             | 2                  |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW         | 8.57 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.85            | 1.93               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 22 W            | 22 W               |
| PTO                                                 | 22 W            | 22 W               |
| PSB                                                 | 22 W            | 22 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.43 kW         | 1.43 kW            |
| Annual energy consumption Qhe                       | 4602 kWh        | 6210 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 218 %       | 130 %       |
| Prated                                              | 10 kW       | 10 kW       |
| SCOP                                                | 5.53        | 3.85        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 10 kW       | 10.1 kW     |
| COP Tj = +2°C                                       | 3.3         | 1.93        |
| Cdh Tj = +2 °C                                      | 0.99        | 1           |
| Pdh Tj = +7°C                                       | 6.4 kW      | 6.4 kW      |
| COP Tj = +7°C                                       | 5.16        | 3.32        |
| Cdh Tj = +7 °C                                      | 0.98        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 4.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.19        |
| Cdh Tj = +12 °C                                     | 0.97        | 0.97        |
| Pdh Tj = Tbiv                                       | 10 kW       | 10.1 kW     |
| COP Tj = Tbiv                                       | 3.3         | 1.93        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.9 kW      | 6.9 kW      |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.6         | 1.6         |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 22 W        | 22 W        |
| PTO                                                 | 22 W        | 22 W        |
| PSB                                                 | 22 W        | 22 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2334 kWh    | 3390 kWh    |

## Model PUD-SWM100YAA(-BS) + E\*ST30D-\*M\*D

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Model name                          | PUD-SWM100YAA(-BS) + E*ST30D-*M*D |
| Application                         | Heating + DHW + low temp          |
| Units                               | Indoor, Outdoor                   |
| Climate zone (for heating)          | n/a                               |
| Cooling mode application (optional) | n/a                               |
| Any additional heat sources         | n/a                               |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 8 kW            | 8 kW               |
| El input    | 1.6 kW          | 3.08 kW            |
| COP         | 5               | 2.6                |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 59 dB(A)        | 59 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 177 %           | 130 %              |
| Prated                                              | 10 kW           | 10 kW              |
| SCOP                                                | 4.49            | 3.33               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = -7°C                                       | 3.1             | 2                  |
| Cdh Tj = -7 °C                                      | 0.99            | 1                  |
| Pdh Tj = +2°C                                       | 5.7 kW          | 5.7 kW             |
| COP Tj = +2°C                                       | 4.46            | 3.16               |
| Cdh Tj = +2 °C                                      | 0.98            | 0.99               |
| Pdh Tj = +7°C                                       | 5.4 kW          | 5.2 kW             |
| COP Tj = +7°C                                       | 5.68            | 4.77               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.98               |
| Pdh Tj = 12°C                                       | 4.5 kW          | 3.6 kW             |
| COP Tj = 12°C                                       | 7.76            | 6.92               |
| Cdh Tj = +12 °C                                     | 0.96            | 0.96               |
| Pdh Tj = Tbiv                                       | 8.8 kW          | 8.8 kW             |
| COP Tj = Tbiv                                       | 3.1             | 2                  |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.57 kW         | 8.57 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.85            | 1.93               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 22 W            | 22 W               |
| PTO                                                 | 22 W            | 22 W               |
| PSB                                                 | 22 W            | 22 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.43 kW         | 1.43 kW            |
| Annual energy consumption Qhe                       | 4602 kWh        | 6210 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
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#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 218 %       | 130 %       |
| Prated                                              | 10 kW       | 10 kW       |
| SCOP                                                | 5.53        | 3.85        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 10 kW       | 10.1 kW     |
| COP Tj = +2°C                                       | 3.3         | 1.93        |
| Cdh Tj = +2 °C                                      | 0.99        | 1           |
| Pdh Tj = +7°C                                       | 6.4 kW      | 6.4 kW      |
| COP Tj = +7°C                                       | 5.16        | 3.32        |
| Cdh Tj = +7 °C                                      | 0.98        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 4.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.19        |
| Cdh Tj = +12 °C                                     | 0.97        | 0.97        |
| Pdh Tj = Tbiv                                       | 10 kW       | 10.1 kW     |
| COP Tj = Tbiv                                       | 3.3         | 1.93        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.9 kW      | 6.9 kW      |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.6         | 1.6         |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 22 W        | 22 W        |
| PTO                                                 | 22 W        | 22 W        |
| PSB                                                 | 22 W        | 22 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2334 kWh    | 3390 kWh    |

## Model PUD-SWM120VAA(-BS) + E\*ST30D-M\*D

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Model name                          | PUD-SWM120VAA(-BS) + E*ST30D-M*D |
| Application                         | Heating + DHW + low temp         |
| Units                               | Indoor, Outdoor                  |
| Climate zone (for heating)          | n/a                              |
| Cooling mode application (optional) | n/a                              |
| Any additional heat sources         | n/a                              |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 10 kW           | 10 kW              |
| El input    | 2.13 kW         | 3.77 kW            |
| COP         | 4.7             | 2.65               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 177 %           | 129 %              |
| Prated                                              | 12 kW           | 12 kW              |
| SCOP                                                | 4.5             | 3.3                |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = -7°C                                       | 2.85            | 1.94               |
| Cdh Tj = -7 °C                                      | 1               | 1                  |
| Pdh Tj = +2°C                                       | 6.5 kW          | 6.5 kW             |
| COP Tj = +2°C                                       | 4.45            | 3.1                |
| Cdh Tj = +2 °C                                      | 0.99            | 0.99               |
| Pdh Tj = +7°C                                       | 5.6 kW          | 5.3 kW             |
| COP Tj = +7°C                                       | 5.83            | 4.73               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.99               |
| Pdh Tj = 12°C                                       | 4.4 kW          | 4.3 kW             |
| COP Tj = 12°C                                       | 7.86            | 6.94               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.98               |
| Pdh Tj = Tbiv                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = Tbiv                                       | 2.85            | 1.94               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.2 kW         | 10.2 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.64            | 1.88               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 15 W            | 15 W               |
| PTO                                                 | 15 W            | 15 W               |
| PSB                                                 | 15 W            | 15 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.8 kW          | 1.8 kW             |
| Annual energy consumption Qhe                       | 5512 kWh        | 7519 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 217 %       | 129 %       |
| Prated                                              | 12 kW       | 12 kW       |
| SCOP                                                | 5.49        | 3.83        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 12 kW       | 12 kW       |
| COP Tj = +2°C                                       | 3.24        | 1.85        |
| Cdh Tj = +2 °C                                      | 1           | 1           |
| Pdh Tj = +7°C                                       | 7.7 kW      | 7.7 kW      |
| COP Tj = +7°C                                       | 4.9         | 3.17        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 5.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.31        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.98        |
| Pdh Tj = Tbiv                                       | 12 kW       | 12 kW       |
| COP Tj = Tbiv                                       | 3.24        | 1.85        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW        | 8 kW        |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.57        | 1.57        |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 15 W        | 15 W        |
| PTO                                                 | 15 W        | 15 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2864 kWh    | 4128 kWh    |

## Model PUD-SWM120VAA(-BS) + E\*ST30D-\*M\*D

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Model name                          | PUD-SWM120VAA(-BS) + E*ST30D-*M*D |
| Application                         | Heating + DHW + low temp          |
| Units                               | Indoor, Outdoor                   |
| Climate zone (for heating)          | n/a                               |
| Cooling mode application (optional) | n/a                               |
| Any additional heat sources         | n/a                               |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 10 kW           | 10 kW              |
| El input    | 2.13 kW         | 3.77 kW            |
| COP         | 4.7             | 2.65               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 177 %           | 129 %              |
| Prated                                              | 12 kW           | 12 kW              |
| SCOP                                                | 4.5             | 3.3                |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = -7°C                                       | 2.85            | 1.94               |
| Cdh Tj = -7 °C                                      | 1               | 1                  |
| Pdh Tj = +2°C                                       | 6.5 kW          | 6.5 kW             |
| COP Tj = +2°C                                       | 4.45            | 3.1                |
| Cdh Tj = +2 °C                                      | 0.99            | 0.99               |
| Pdh Tj = +7°C                                       | 5.6 kW          | 5.3 kW             |
| COP Tj = +7°C                                       | 5.83            | 4.73               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.99               |
| Pdh Tj = 12°C                                       | 4.4 kW          | 4.3 kW             |
| COP Tj = 12°C                                       | 7.86            | 6.94               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.98               |
| Pdh Tj = Tbiv                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = Tbiv                                       | 2.85            | 1.94               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.2 kW         | 10.2 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.64            | 1.88               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 15 W            | 15 W               |
| PTO                                                 | 15 W            | 15 W               |
| PSB                                                 | 15 W            | 15 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.8 kW          | 1.8 kW             |
| Annual energy consumption Qhe                       | 5512 kWh        | 7519 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 217 %       | 129 %       |
| Prated                                              | 12 kW       | 12 kW       |
| SCOP                                                | 5.49        | 3.83        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 12 kW       | 12 kW       |
| COP Tj = +2°C                                       | 3.24        | 1.85        |
| Cdh Tj = +2 °C                                      | 1           | 1           |
| Pdh Tj = +7°C                                       | 7.7 kW      | 7.7 kW      |
| COP Tj = +7°C                                       | 4.9         | 3.17        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 5.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.31        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.98        |
| Pdh Tj = Tbiv                                       | 12 kW       | 12 kW       |
| COP Tj = Tbiv                                       | 3.24        | 1.85        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW        | 8 kW        |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.57        | 1.57        |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 15 W        | 15 W        |
| PTO                                                 | 15 W        | 15 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2864 kWh    | 4128 kWh    |

## Model PUD-SWM120YAA(-BS) + E\*ST30D-M\*D

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Model name                          | PUD-SWM120YAA(-BS) + E*ST30D-M*D |
| Application                         | Heating + DHW + low temp         |
| Units                               | Indoor, Outdoor                  |
| Climate zone (for heating)          | n/a                              |
| Cooling mode application (optional) | n/a                              |
| Any additional heat sources         | n/a                              |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 10 kW           | 10 kW              |
| El input    | 2.13 kW         | 3.77 kW            |
| COP         | 4.7             | 2.65               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 176 %           | 128 %              |
| Prated                                              | 12 kW           | 12 kW              |
| SCOP                                                | 4.47            | 3.28               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = -7°C                                       | 2.85            | 1.94               |
| Cdh Tj = -7 °C                                      | 0.99            | 1                  |
| Pdh Tj = +2°C                                       | 6.5 kW          | 6.5 kW             |
| COP Tj = +2°C                                       | 4.45            | 3.1                |
| Cdh Tj = +2 °C                                      | 0.98            | 0.99               |
| Pdh Tj = +7°C                                       | 5.6 kW          | 5.3 kW             |
| COP Tj = +7°C                                       | 5.83            | 4.73               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.98               |
| Pdh Tj = 12°C                                       | 4.4 kW          | 4.3 kW             |
| COP Tj = 12°C                                       | 7.86            | 6.94               |
| Cdh Tj = +12 °C                                     | 0.96            | 0.96               |
| Pdh Tj = Tbiv                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = Tbiv                                       | 2.85            | 1.94               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.2 kW         | 10.2 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.64            | 1.88               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 22 W            | 22 W               |
| PTO                                                 | 22 W            | 22 W               |
| PSB                                                 | 22 W            | 22 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.8 kW          | 1.8 kW             |
| Annual energy consumption Qhe                       | 5548 kWh        | 7555 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 215 %       | 128 %       |
| Prated                                              | 12 kW       | 12 kW       |
| SCOP                                                | 5.44        | 3.81        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 12 kW       | 12 kW       |
| COP Tj = +2°C                                       | 3.24        | 1.85        |
| Cdh Tj = +2 °C                                      | 0.99        | 1           |
| Pdh Tj = +7°C                                       | 7.7 kW      | 7.7 kW      |
| COP Tj = +7°C                                       | 4.9         | 3.17        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 5.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.31        |
| Cdh Tj = +12 °C                                     | 0.97        | 0.98        |
| Pdh Tj = Tbiv                                       | 12 kW       | 12 kW       |
| COP Tj = Tbiv                                       | 3.24        | 1.85        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW        | 8 kW        |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.57        | 1.57        |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 22 W        | 22 W        |
| PTO                                                 | 22 W        | 22 W        |
| PSB                                                 | 22 W        | 22 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2864 kWh    | 4128 kWh    |

## Model PUD-SWM120YAA(-BS) + E\*ST30D-\*M\*D

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Model name                          | PUD-SWM120YAA(-BS) + E*ST30D-*M*D |
| Application                         | Heating + DHW + low temp          |
| Units                               | Indoor, Outdoor                   |
| Climate zone (for heating)          | n/a                               |
| Cooling mode application (optional) | n/a                               |
| Any additional heat sources         | n/a                               |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 121 %       |
| COP                             | 2.93        |
| Heating up time                 | 02:25 h:min |
| Standby power input             | 39 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 16147 | Warmer Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 145 %       |
| COP                             | 3.49        |
| Heating up time                 | 02:38 h:min |
| Standby power input             | 38 W        |
| Reference hot water temperature | 52.5 °C     |
| Mixed water at 40°C             | 417 l       |

## EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 10 kW           | 10 kW              |
| El input    | 2.13 kW         | 3.77 kW            |
| COP         | 4.7             | 2.65               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 176 %           | 128 %              |
| Prated                                              | 12 kW           | 12 kW              |
| SCOP                                                | 4.47            | 3.28               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = -7°C                                       | 2.85            | 1.94               |
| Cdh Tj = -7 °C                                      | 0.99            | 1                  |
| Pdh Tj = +2°C                                       | 6.5 kW          | 6.5 kW             |
| COP Tj = +2°C                                       | 4.45            | 3.1                |
| Cdh Tj = +2 °C                                      | 0.98            | 0.99               |
| Pdh Tj = +7°C                                       | 5.6 kW          | 5.3 kW             |
| COP Tj = +7°C                                       | 5.83            | 4.73               |
| Cdh Tj = +7 °C                                      | 0.98            | 0.98               |
| Pdh Tj = 12°C                                       | 4.4 kW          | 4.3 kW             |
| COP Tj = 12°C                                       | 7.86            | 6.94               |
| Cdh Tj = +12 °C                                     | 0.96            | 0.96               |
| Pdh Tj = Tbiv                                       | 10.6 kW         | 10.6 kW            |
| COP Tj = Tbiv                                       | 2.85            | 1.94               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 10.2 kW         | 10.2 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.64            | 1.88               |
| WTOL                                                | 60 °C           | 60 °C              |
| Poff                                                | 22 W            | 22 W               |
| PTO                                                 | 22 W            | 22 W               |
| PSB                                                 | 22 W            | 22 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 1.8 kW          | 1.8 kW             |
| Annual energy consumption Qhe                       | 5548 kWh        | 7555 kWh           |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| $\eta_s$                                            | 215 %       | 128 %       |
| Prated                                              | 12 kW       | 12 kW       |
| SCOP                                                | 5.44        | 3.81        |
| Tbiv                                                | 2 °C        | 2 °C        |
| TOL                                                 | -25 °C      | -25 °C      |
| Pdh Tj = +2°C                                       | 12 kW       | 12 kW       |
| COP Tj = +2°C                                       | 3.24        | 1.85        |
| Cdh Tj = +2 °C                                      | 0.99        | 1           |
| Pdh Tj = +7°C                                       | 7.7 kW      | 7.7 kW      |
| COP Tj = +7°C                                       | 4.9         | 3.17        |
| Cdh Tj = +7 °C                                      | 0.99        | 0.99        |
| Pdh Tj = 12°C                                       | 4.4 kW      | 5.2 kW      |
| COP Tj = 12°C                                       | 6.88        | 5.31        |
| Cdh Tj = +12 °C                                     | 0.97        | 0.98        |
| Pdh Tj = Tbiv                                       | 12 kW       | 12 kW       |
| COP Tj = Tbiv                                       | 3.24        | 1.85        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW        | 8 kW        |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.57        | 1.57        |
| WTOL                                                | 60 °C       | 60 °C       |
| Poff                                                | 22 W        | 22 W        |
| PTO                                                 | 22 W        | 22 W        |
| PSB                                                 | 22 W        | 22 W        |
| PCK                                                 | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0 kW        | 0 kW        |
| Annual energy consumption Qhe                       | 2864 kWh    | 4128 kWh    |