

## Subtype F1345-60

|                     |             |
|---------------------|-------------|
| Certificate Holder  | Nibe AB     |
| Address             | Box 14      |
| ZIP                 | S-28521     |
| City                | Markaryd    |
| Country             | SE          |
| Certification Body  | RISE CERT   |
| Subtype title       | F1345-60    |
| Registration number | 012-053     |
| Heat Pump Type      | Brine/Water |
| Refrigerant         | R407c       |
| Mass of Refrigerant | 3.4 kg      |

## Model F1345-60

|                                     |                       |
|-------------------------------------|-----------------------|
| Model name                          | F1345-60              |
| Application                         | Heating (medium temp) |
| Units                               | Indoor                |
| Climate zone (for heating)          | Colder Climate        |
| Cooling mode application (optional) | n/a                   |
| Any additional heat sources         | n/a                   |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | No          |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 59.22 kW        | 54.20 kW           |
| El input    | 13.72 kW        | 17.90 kW           |
| COP         | 4.32            | 3.02               |

### EN 12102-1 | Average Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 47 dB(A)        | 47 dB(A)           |

### EN 14825 | Average Climate

|               | Low temperature | Medium temperature |
|---------------|-----------------|--------------------|
| $\eta_s$      | 176 %           | 138 %              |
| Prated        | 67.00 kW        | 67.00 kW           |
| SCOP          | 4.60            | 3.65               |
| Tbiv          | -7 °C           | -5 °C              |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 59.50 kW        | 54.80 kW           |
| COP Tj = -7°C | 4.42            | 3.17               |
| Pdh Tj = +2°C | 60.10 kW        | 56.60 kW           |
| COP Tj = +2°C | 4.59            | 3.62               |
| Pdh Tj = +7°C | 30.50 kW        | 29.20 kW           |
| COP Tj = +7°C | 4.87            | 4.06               |
| Pdh Tj = 12°C | 30.80 kW        | 29.80 kW           |
| COP Tj = 12°C | 4.91            | 4.31               |
| Pdh Tj = Tbiv | 59.50 kW        | 55.20 kW           |
| COP Tj = Tbiv | 4.42            | 3.26               |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 59.20 kW    | 24.10 kW    |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.31        | 3.03        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99        | 0.99        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 120 W       | 120 W       |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 80 W        | 80 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 7.80 kW     | 12.90 kW    |
| Annual energy consumption Qhe                       | 30169 kWh   | 38048 kWh   |

#### EN 12102-1 | Colder Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 47 dB(A)        | 47 dB(A)           |

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| ηs                                                  | 181 %           | 142 %              |
| Prated                                              | 67.00 kW        | 67.00 kW           |
| SCOP                                                | 4.73            | 3.75               |
| Tbiv                                                | -18 °C          | -15 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7°C                                       | 60.30 kW        | 56.20 kW           |
| COP Tj = -7°C                                       | 4.62            | 3.53               |
| Pdh Tj = +2°C                                       | 30.60 kW        | 29.10 kW           |
| COP Tj = +2°C                                       | 4.90            | 4.01               |
| Pdh Tj = +7°C                                       | 30.80 kW        | 29.70 kW           |
| COP Tj = +7°C                                       | 5.00            | 4.29               |
| Pdh Tj = 12°C                                       | 30.80 kW        | 30.10 kW           |
| COP Tj = 12°C                                       | 4.80            | 4.46               |
| Pdh Tj = Tbiv                                       | 59.60 kW        | 55.30 kW           |
| COP Tj = Tbiv                                       | 4.45            | 3.28               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 59.20 kW        | 54.10 kW           |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.31            | 3.03               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.99            | 0.99               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 2 W             | 2 W                |
| PTO                                                 | 100 W           | 100 W              |
| PSB                                                 | 7 W             | 7 W                |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| PCK                                        | 80 W        | 80 W        |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 7.80 kW     | 12.90 kW    |
| Annual energy consumption Q <sub>he</sub>  | 34918 kWh   | 43924 kWh   |