

Subtype BI-BLOC R290 HWP-40-80x

|                     |   |
|---------------------|---|
| Certificate Holder  | Viessmann Climate Solutions GmbH & Co. KG             |
| Address             | Viessmannstr. 1                                       |
| ZIP                 | 35107   |
| City                | Allendorf/Eder  |
| Country             | DE  |
| Certification Body  | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title       | BI-BLOC R290 HWP-40-80x                               |
| Registration number | 011-1W1015  |
| Heat Pump Type      | Outdoor Air/Water                                     |
| Refrigerant         | R290  |
| Mass of Refrigerant | 1.2 kg  |
| Certification Date  | 30.04.2025  |
| Testing basis       | HP KEYMARK certification scheme rules rev. 14         |

**Model BI-BLOC R290 HWP-40-XWHT8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-40-XWHT8-H    |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****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 | 4.00 kW         | 3.56 kW            |
| El input    | 0.80 kW         | 1.20 kW            |
| COP         | 5.00            | 2.97               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 4.08 kW         | 3.77 kW            |
| $\eta_s$       | 176 %           | 127 %              |
| Prated         | 4.08 kW         | 3.77 kW            |
| SCOP           | 4.48            | 3.25               |
| Tbiv           | -8 °C           | -8 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 3.45 kW         | 3.22 kW            |
| COP Tj = -7°C  | 3.12            | 2.15               |
| Cdh Tj = -7 °C | 0.993           | 0.995              |
| Pdh Tj = +2°C  | 2.52 kW         | 2.04 kW            |

|   |             |             |
|---|-------------|-------------|
| COP Tj = +2°C                                       | 4.33        | 3.11        |
| Cdh Tj = +2 °C                                      | 0.987       | 0.988       |
| Pdh Tj = +7°C                                       | 2.56 kW     | 2.57 kW     |
| COP Tj = +7°C                                       | 5.62        | 4.13        |
| Cdh Tj = +7 °C                                      | 0.984       | 0.988       |
| Pdh Tj = 12°C                                       | 2.36 kW     | 2.20 kW     |
| COP Tj = 12°C                                       | 7.16        | 6.03        |
| Cdh Tj = +12 °C                                     | 0.978       | 0.980       |
| Pdh Tj = Tbiv                                       | 3.65 kW     | 3.38 kW     |
| COP Tj = Tbiv                                       | 3.00        | 2.09        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.42 kW     | 3.09 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.79        | 1.90        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994       | 0.995       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.68 kW     | 0.67 kW     |
| Annual energy consumption Qhe                       | 1883 kWh    | 2395 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 5.62 kW         | 5.36 kW            |
| ηs             | 148 %           | 122 %              |
| Prated         | 5.62 kW         | 5.36 kW            |
| SCOP           | 3.78            | 3.13               |
| Tbiv           | -9 °C           | -9 °C              |
| TOL            | -20 °C          | -20 °C             |
| Pdh Tj = -7°C  | 3.40 kW         | 3.30 kW            |
| COP Tj = -7°C  | 3.40            | 2.80               |
| Cdh Tj = -7 °C | 1.000           | 1.000              |
| Pdh Tj = +2°C  | 2.10 kW         | 2.00 kW            |
| COP Tj = +2°C  | 5.00            | 4.00               |
| Cdh Tj = +2 °C | 1.000           | 1.000              |
| Pdh Tj = +7°C  | 2.60 kW         | 2.60 kW            |
| COP Tj = +7°C  | 6.30            | 5.10               |

|   |             |             |
|---|-------------|-------------|
| Cdh Tj = +7 °C                                      | 1.000       | 1.000       |
| Pdh Tj = 12°C                                       | 2.30 kW     | 2.50 kW     |
| COP Tj = 12°C                                       | 7.60        | 6.80        |
| Cdh Tj = +12 °C                                     | 1.000       | 1.000       |
| Pdh Tj = Tbiv                                       | 3.70 kW     | 3.50 kW     |
| COP Tj = Tbiv                                       | 3.20        | 2.60        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.60 kW     | 2.30 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.30        | 1.70        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 5.62 kW     | 5.36 kW     |
| Annual energy consumption Qhe                       | 3662 kWh    | 4217 kWh    |

**EN 12102-1 | Warmer Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Warmer Climate**

|                 | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| Pdesignh        | 2.35 kW         | 1.90 kW            |
| ηs              | 216 %           | 146 %              |
| Prated          | 2.35 kW         | 1.90 kW            |
| SCOP            | 5.47            | 3.73               |
| Tbiv            | 2 °C            | 2 °C               |
| TOL             | 2 °C            | 2 °C               |
| Pdh Tj = +2°C   | 2.30 kW         | 1.90 kW            |
| COP Tj = +2°C   | 4.20            | 2.50               |
| Cdh Tj = +2 °C  | 1.000           | 1.000              |
| Pdh Tj = +7°C   | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C   | 5.40            | 3.50               |
| Cdh Tj = +7 °C  | 1.000           | 1.000              |
| Pdh Tj = 12°C   | 2.50 kW         | 2.40 kW            |
| COP Tj = 12°C   | 7.70            | 5.50               |
| Cdh Tj = +12 °C | 1.000           | 1.000              |
| Pdh Tj = Tbiv   | 2.30 kW         | 1.90 kW            |
| COP Tj = Tbiv   | 4.20            | 2.50               |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.30 kW     | 1.90 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.20        | 2.50        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 573 kWh     | 680 kWh     |

**Model BI-BLOC R290 HWP-60-XWHT8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-60-XWHT8-H    |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****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 | 4.80 kW         | 4.39 kW            |
| El input    | 0.98 kW         | 1.46 kW            |
| COP         | 4.90            | 3.01               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 5.46 kW         | 5.14 kW            |
| $\eta_s$       | 180 %           | 141 %              |
| Prated         | 5.46 kW         | 5.14 kW            |
| SCOP           | 4.58            | 3.61               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 4.80 kW         | 4.60 kW            |
| COP Tj = -7°C  | 3.00            | 2.30               |
| Cdh Tj = -7 °C | 1.000           | 1.000              |
| Pdh Tj = +2°C  | 2.90 kW         | 2.80 kW            |

|   |             |             |
|---|-------------|-------------|
| COP Tj = +2°C                                       | 4.60        | 3.60        |
| Cdh Tj = +2 °C                                      | 1.000       | 1.000       |
| Pdh Tj = +7°C                                       | 2.30 kW     | 2.50 kW     |
| COP Tj = +7°C                                       | 5.50        | 4.70        |
| Cdh Tj = +7 °C                                      | 1.000       | 1.000       |
| Pdh Tj = 12°C                                       | 2.30 kW     | 2.40 kW     |
| COP Tj = 12°C                                       | 7.60        | 5.60        |
| Cdh Tj = +12 °C                                     | 1.000       | 1.000       |
| Pdh Tj = Tbiv                                       | 4.80 kW     | 4.60 kW     |
| COP Tj = Tbiv                                       | 3.00        | 2.30        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.40 kW     | 4.10 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.70        | 2.10        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.05 kW     | 1.04 kW     |
| Annual energy consumption Qhe                       | 2461 kWh    | 2947 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 6.51 kW         | 6.71 kW            |
| ηs             | 149 %           | 119 %              |
| Prated         | 6.51 kW         | 6.71 kW            |
| SCOP           | 3.80            | 3.04               |
| Tbiv           | -10 °C          | -9 °C              |
| TOL            | -20 °C          | -20 °C             |
| Pdh Tj = -7°C  | 4.10 kW         | 4.00 kW            |
| COP Tj = -7°C  | 3.30            | 2.70               |
| Cdh Tj = -7 °C | 1.000           | 1.000              |
| Pdh Tj = +2°C  | 2.50 kW         | 2.40 kW            |
| COP Tj = +2°C  | 5.00            | 4.00               |
| Cdh Tj = +2 °C | 1.000           | 1.000              |
| Pdh Tj = +7°C  | 2.60 kW         | 2.60 kW            |
| COP Tj = +7°C  | 6.30            | 5.20               |

|   |             |             |
|---|-------------|-------------|
| Cdh Tj = +7 °C                                      | 1.000       | 1.000       |
| Pdh Tj = 12°C                                       | 2.30 kW     | 2.50 kW     |
| COP Tj = 12°C                                       | 7.60        | 6.90        |
| Cdh Tj = +12 °C                                     | 1.000       | 1.000       |
| Pdh Tj = Tbiv                                       | 4.50 kW     | 4.40 kW     |
| COP Tj = Tbiv                                       | 2.90        | 2.50        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.30 kW     | 2.90 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.20        | 1.70        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 6.51 kW     | 6.71 kW     |
| Annual energy consumption Qhe                       | 4229 kWh    | 5435 kWh    |

**EN 12102-1 | Warmer Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Warmer Climate**

|                 | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| Pdesignh        | 2.77 kW         | 2.38 kW            |
| ηs              | 220 %           | 153 %              |
| Prated          | 2.77 kW         | 2.38 kW            |
| SCOP            | 5.58            | 3.89               |
| Tbiv            | 2 °C            | 2 °C               |
| TOL             | 2 °C            | 2 °C               |
| Pdh Tj = +2°C   | 2.80 kW         | 2.40 kW            |
| COP Tj = +2°C   | 4.10            | 2.60               |
| Cdh Tj = +2 °C  | 1.000           | 1.000              |
| Pdh Tj = +7°C   | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C   | 5.30            | 3.50               |
| Cdh Tj = +7 °C  | 1.000           | 1.000              |
| Pdh Tj = 12°C   | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C   | 7.70            | 5.60               |
| Cdh Tj = +12 °C | 1.000           | 1.000              |
| Pdh Tj = Tbiv   | 2.80 kW         | 2.40 kW            |
| COP Tj = Tbiv   | 4.10            | 2.60               |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.80 kW     | 2.40 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.10        | 2.60        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 663 kWh     | 817 kWh     |

**Model BI-BLOC R290 HWP-80-XWHT8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-80-XWHT8-H    |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****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 | 5.60 kW         | 5.36 kW            |
| El input    | 1.19 kW         | 1.71 kW            |
| COP         | 4.70            | 3.14               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 6.47 kW         | 6.20 kW            |
| $\eta_s$       | 175 %           | 137 %              |
| Prated         | 6.47 kW         | 6.20 kW            |
| SCOP           | 4.44            | 3.51               |
| Tbiv           | -6 °C           | -6 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 5.10 kW            |
| COP Tj = -7°C  | 3.00            | 2.30               |
| Cdh Tj = -7 °C | 0.900           | 1.000              |
| Pdh Tj = +2°C  | 3.50 kW         | 3.50 kW            |

|   |             |             |
|---|-------------|-------------|
| COP Tj = +2°C                                       | 4.20        | 3.40        |
| Cdh Tj = +2 °C                                      | 0.900       | 1.000       |
| Pdh Tj = +7°C                                       | 2.60 kW     | 2.50 kW     |
| COP Tj = +7°C                                       | 6.20        | 4.50        |
| Cdh Tj = +7 °C                                      | 0.900       | 1.000       |
| Pdh Tj = 12°C                                       | 2.20 kW     | 2.40 kW     |
| COP Tj = 12°C                                       | 7.60        | 6.60        |
| Cdh Tj = +12 °C                                     | 0.900       | 1.000       |
| Pdh Tj = Tbiv                                       | 5.50 kW     | 5.20 kW     |
| COP Tj = Tbiv                                       | 3.10        | 2.40        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.90 kW     | 4.50 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.70        | 2.00        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.62 kW     | 1.70 kW     |
| Annual energy consumption Qhe                       | 3012 kWh    | 3648 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| Pdesignh       | 7.68 kW         | 7.45 kW            |
| ηs             | 143 %           | 121 %              |
| Prated         | 7.68 kW         | 7.45 kW            |
| SCOP           | 3.66            | 3.11               |
| Tbiv           | -9 °C           | -9 °C              |
| TOL            | -20 °C          | -20 °C             |
| Pdh Tj = -7°C  | 4.70 kW         | 4.50 kW            |
| COP Tj = -7°C  | 3.20            | 2.60               |
| Cdh Tj = -7 °C | 0.900           | 1.000              |
| Pdh Tj = +2°C  | 2.90 kW         | 2.90 kW            |
| COP Tj = +2°C  | 4.70            | 4.00               |
| Cdh Tj = +2 °C | 0.900           | 1.000              |
| Pdh Tj = +7°C  | 3.10 kW         | 2.60 kW            |
| COP Tj = +7°C  | 6.40            | 5.20               |

|   |             |             |
|---|-------------|-------------|
| Cdh Tj = +7 °C                                      | 0.900       | 1.000       |
| Pdh Tj = 12°C                                       | 2.90 kW     | 2.50 kW     |
| COP Tj = 12°C                                       | 7.80        | 7.10        |
| Cdh Tj = +12 °C                                     | 0.900       | 1.000       |
| Pdh Tj = Tbiv                                       | 5.10 kW     | 4.90 kW     |
| COP Tj = Tbiv                                       | 3.00        | 2.40        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.60 kW     | 3.30 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.20        | 1.70        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 7.68 kW     | 7.45 kW     |
| Annual energy consumption Qhe                       | 5174 kWh    | 5903 kWh    |

**EN 12102-1 | Warmer Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Warmer Climate**

|                 | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| Pdesignh        | 3.83 kW         | 3.66 kW            |
| ηs              | 238 %           | 166 %              |
| Prated          | 3.83 kW         | 3.66 kW            |
| SCOP            | 6.02            | 4.22               |
| Tbiv            | 2 °C            | 2 °C               |
| TOL             | 2 °C            | 2 °C               |
| Pdh Tj = +2°C   | 3.80 kW         | 3.70 kW            |
| COP Tj = +2°C   | 3.80            | 2.70               |
| Cdh Tj = +2 °C  | 0.900           | 1.000              |
| Pdh Tj = +7°C   | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C   | 5.60            | 3.60               |
| Cdh Tj = +7 °C  | 0.900           | 1.000              |
| Pdh Tj = 12°C   | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C   | 7.90            | 5.80               |
| Cdh Tj = +12 °C | 0.900           | 1.000              |
| Pdh Tj = Tbiv   | 3.80 kW         | 3.70 kW            |
| COP Tj = Tbiv   | 3.80            | 2.70               |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.80 kW     | 3.70 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.80        | 2.70        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 1.000       |
| WTOL  | 70 °C       | 70 °C       |
| Poff  | 0 W         | 0 W         |
| PTO   | 14 W        | 14 W        |
| PSB   | 16 W        | 16 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 849 kWh     | 1159 kWh    |

**Model BI-BLOC R290 HWP-40-FST8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-40-FST8-H     |
| Application                         | Heating + DHW + low temp       |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****EN 16147 | Average Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 110 %       |
| COP                             | 2.66        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 46.9 W      |
| Reference hot water temperature | 53.7 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Colder Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 99 %        |
| COP                             | 2.35        |
| Heating up time                 | 02:42 h:min |
| Standby power input             | 73.8 W      |
| Reference hot water temperature | 53.7 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Warmer Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 138 %       |
| COP                             | 3.25        |
| Heating up time                 | 02:16 h:min |
| Standby power input             | 61.2 W      |
| Reference hot water temperature | 55.6 °C     |
| Mixed water at 40°C             | 260 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 | 4.00 kW         | 3.56 kW            |
| El input    | 0.80 kW         | 1.20 kW            |
| COP         | 5.00            | 2.97               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 4.08 kW         | 3.77 kW            |
| $\eta_s$  | 176 %           | 127 %              |
| Prated  | 4.08 kW         | 3.77 kW            |
| SCOP  | 4.48            | 3.25               |
| Tbiv  | -8 °C           | -8 °C              |
| TOL   | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 3.45 kW         | 3.22 kW            |
| COP Tj = -7°C                                       | 3.12            | 2.15               |
| Cdh Tj = -7 °C                                      | 0.993           | 0.995              |
| Pdh Tj = +2°C                                       | 2.52 kW         | 2.04 kW            |
| COP Tj = +2°C                                       | 4.33            | 3.11               |
| Cdh Tj = +2 °C                                      | 0.987           | 0.988              |
| Pdh Tj = +7°C                                       | 2.56 kW         | 2.57 kW            |
| COP Tj = +7°C                                       | 5.62            | 4.13               |
| Cdh Tj = +7 °C                                      | 0.984           | 0.988              |
| Pdh Tj = 12°C                                       | 2.36 kW         | 2.20 kW            |
| COP Tj = 12°C                                       | 7.16            | 6.03               |
| Cdh Tj = +12 °C                                     | 0.978           | 0.980              |
| Pdh Tj = Tbiv                                       | 3.65 kW         | 3.38 kW            |
| COP Tj = Tbiv                                       | 3.00            | 2.09               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.42 kW         | 3.09 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.79            | 1.90               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994           | 0.995              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |

|  |             |             |
|--|-------------|-------------|
| PSB  | 16 W        | 16 W        |
| PCK  | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.68 kW     | 0.67 kW     |
| Annual energy consumption Qhe              | 1883 kWh    | 2395 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 5.62 kW         | 5.36 kW            |
| $\eta_s$  | 148 %           | 122 %              |
| Prated  | 5.62 kW         | 5.36 kW            |
| SCOP  | 3.78            | 3.13               |
| Tbiv  | -9 °C           | -9 °C              |
| TOL   | -20 °C          | -20 °C             |
| Pdh Tj = -7°C                                       | 3.40 kW         | 3.30 kW            |
| COP Tj = -7°C                                       | 3.40            | 2.80               |
| Cdh Tj = -7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +2°C                                       | 2.10 kW         | 2.00 kW            |
| COP Tj = +2°C                                       | 5.00            | 4.00               |
| Cdh Tj = +2 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.60 kW            |
| COP Tj = +7°C                                       | 6.30            | 5.10               |
| Cdh Tj = +7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = 12°C                                       | 2.30 kW         | 2.50 kW            |
| COP Tj = 12°C                                       | 7.60            | 6.80               |
| Cdh Tj = +12 °C                                     | 1.000           | 1.000              |
| Pdh Tj = Tbiv                                       | 3.70 kW         | 3.50 kW            |
| COP Tj = Tbiv                                       | 3.20            | 2.60               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.60 kW         | 2.30 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.30            | 1.70               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|   |                 |                    |
|---|-----------------|--------------------|
| Supplementary Heater: PSUP                          | 5.62 kW         | 5.36 kW            |
| Annual energy consumption Qhe                       | 3662 kWh        | 4217 kWh           |
| <b>EN 12102-1   Warmer Climate</b>                  |                 |                    |
|   | Low temperature | Medium temperature |
| Sound power level indoor                            | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor                           | 51 dB(A)        | 51 dB(A)           |
| <b>EN 14825   Warmer Climate</b>                    |                 |                    |
|   | Low temperature | Medium temperature |
| Pdesignh  | 2.35 kW         | 1.90 kW            |
| $\eta_s$  | 216 %           | 146 %              |
| Prated  | 2.35 kW         | 1.90 kW            |
| SCOP  | 5.47            | 3.73               |
| Tbiv  | 2 °C            | 2 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 2.30 kW         | 1.90 kW            |
| COP Tj = +2°C                                       | 4.20            | 2.50               |
| Cdh Tj = +2 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C                                       | 5.40            | 3.50               |
| Cdh Tj = +7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = 12°C                                       | 2.50 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 7.70            | 5.50               |
| Cdh Tj = +12 °C                                     | 1.000           | 1.000              |
| Pdh Tj = Tbiv                                       | 2.30 kW         | 1.90 kW            |
| COP Tj = Tbiv                                       | 4.20            | 2.50               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.30 kW         | 1.90 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.20            | 2.50               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.00 kW         | 0.00 kW            |
| Annual energy consumption Qhe                       | 573 kWh         | 680 kWh            |

**Model BI-BLOC R290 HWP-60-FST8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-60-FST8-H     |
| Application                         | Heating + DHW + low temp       |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****EN 16147 | Average Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 110 %       |
| COP                             | 2.67        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 45.4 W      |
| Reference hot water temperature | 53.5 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Colder Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 99 %        |
| COP                             | 2.35        |
| Heating up time                 | 02:26 h:min |
| Standby power input             | 74.5 W      |
| Reference hot water temperature | 53.8 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Warmer Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 144 %       |
| COP                             | 3.41        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 53.2 W      |
| Reference hot water temperature | 53.8 °C     |
| Mixed water at 40°C             | 260 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 | 4.80 kW         | 4.39 kW            |
| El input    | 0.98 kW         | 1.46 kW            |
| COP         | 4.90            | 3.01               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 5.46 kW         | 5.14 kW            |
| $\eta_s$  | 180 %           | 141 %              |
| Prated  | 5.46 kW         | 5.14 kW            |
| SCOP  | 4.58            | 3.61               |
| Tbiv  | -7 °C           | -7 °C              |
| TOL   | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 4.80 kW         | 4.60 kW            |
| COP Tj = -7°C                                       | 3.00            | 2.30               |
| Cdh Tj = -7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +2°C                                       | 2.90 kW         | 2.80 kW            |
| COP Tj = +2°C                                       | 4.60            | 3.60               |
| Cdh Tj = +2 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +7°C                                       | 2.30 kW         | 2.50 kW            |
| COP Tj = +7°C                                       | 5.50            | 4.70               |
| Cdh Tj = +7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = 12°C                                       | 2.30 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 7.60            | 5.60               |
| Cdh Tj = +12 °C                                     | 1.000           | 1.000              |
| Pdh Tj = Tbiv                                       | 4.80 kW         | 4.60 kW            |
| COP Tj = Tbiv                                       | 3.00            | 2.30               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.40 kW         | 4.10 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.70            | 2.10               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |

|  |             |             |
|--|-------------|-------------|
| PSB  | 16 W        | 16 W        |
| PCK  | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 1.05 kW     | 1.04 kW     |
| Annual energy consumption Qhe              | 2461 kWh    | 2947 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 6.51 kW         | 6.71 kW            |
| $\eta_s$  | 149 %           | 119 %              |
| Prated  | 6.51 kW         | 6.71 kW            |
| SCOP  | 3.80            | 3.04               |
| Tbiv  | -10 °C          | -9 °C              |
| TOL   | -20 °C          | -20 °C             |
| Pdh Tj = -7°C                                       | 4.10 kW         | 4.00 kW            |
| COP Tj = -7°C                                       | 3.30            | 2.70               |
| Cdh Tj = -7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +2°C                                       | 2.50 kW         | 2.40 kW            |
| COP Tj = +2°C                                       | 5.00            | 4.00               |
| Cdh Tj = +2 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.60 kW            |
| COP Tj = +7°C                                       | 6.30            | 5.20               |
| Cdh Tj = +7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = 12°C                                       | 2.30 kW         | 2.50 kW            |
| COP Tj = 12°C                                       | 7.60            | 6.90               |
| Cdh Tj = +12 °C                                     | 1.000           | 1.000              |
| Pdh Tj = Tbiv                                       | 4.50 kW         | 4.40 kW            |
| COP Tj = Tbiv                                       | 2.90            | 2.50               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.30 kW         | 2.90 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.20            | 1.70               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|   |                 |                    |
|---|-----------------|--------------------|
| Supplementary Heater: PSUP                          | 6.51 kW         | 6.71 kW            |
| Annual energy consumption Qhe                       | 4229 kWh        | 5435 kWh           |
| <b>EN 12102-1   Warmer Climate</b>                  |                 |                    |
|   | Low temperature | Medium temperature |
| Sound power level indoor                            | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor                           | 51 dB(A)        | 51 dB(A)           |
| <b>EN 14825   Warmer Climate</b>                    |                 |                    |
|   | Low temperature | Medium temperature |
| Pdesignh  | 2.77 kW         | 2.38 kW            |
| $\eta_s$  | 220 %           | 153 %              |
| Prated  | 2.77 kW         | 2.38 kW            |
| SCOP  | 5.58            | 3.89               |
| Tbiv  | 2 °C            | 2 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 2.80 kW         | 2.40 kW            |
| COP Tj = +2°C                                       | 4.10            | 2.60               |
| Cdh Tj = +2 °C                                      | 1.000           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C                                       | 5.30            | 3.50               |
| Cdh Tj = +7 °C                                      | 1.000           | 1.000              |
| Pdh Tj = 12°C                                       | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 7.70            | 5.60               |
| Cdh Tj = +12 °C                                     | 1.000           | 1.000              |
| Pdh Tj = Tbiv                                       | 2.80 kW         | 2.40 kW            |
| COP Tj = Tbiv                                       | 4.10            | 2.60               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 2.80 kW         | 2.40 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.10            | 2.60               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.000           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.00 kW         | 0.00 kW            |
| Annual energy consumption Qhe                       | 663 kWh         | 817 kWh            |

**Model BI-BLOC R290 HWP-80-FST8-H**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | BI-BLOC R290 HWP-80-FST8-H     |
| Application                         | Heating + DHW + low temp       |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Heat Source                         | Outdoor Air                    |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | Yes         |

**Outdoor Air/Water****EN 16147 | Average Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 110 %       |
| COP                             | 2.67        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 45.4 W      |
| Reference hot water temperature | 53.5 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Colder Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 99 %        |
| COP                             | 2.35        |
| Heating up time                 | 02:26 h:min |
| Standby power input             | 74.5 W      |
| Reference hot water temperature | 53.8 °C     |
| Mixed water at 40°C             | 260 l       |

**EN 16147 | Warmer Climate**

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 144 %       |
| COP                             | 3.41        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 53.2 W      |
| Reference hot water temperature | 53.8 °C     |
| Mixed water at 40°C             | 260 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 | 5.60 kW         | 5.36 kW            |
| El input    | 1.19 kW         | 1.71 kW            |
| COP         | 4.70            | 3.14               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Average Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 6.47 kW         | 6.20 kW            |
| $\eta_s$  | 175 %           | 137 %              |
| Prated  | 6.47 kW         | 6.20 kW            |
| SCOP  | 4.44            | 3.51               |
| Tbiv  | -6 °C           | -6 °C              |
| TOL   | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 5.30 kW         | 5.10 kW            |
| COP Tj = -7°C                                       | 3.00            | 2.30               |
| Cdh Tj = -7 °C                                      | 0.900           | 1.000              |
| Pdh Tj = +2°C                                       | 3.50 kW         | 3.50 kW            |
| COP Tj = +2°C                                       | 4.20            | 3.40               |
| Cdh Tj = +2 °C                                      | 0.900           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.50 kW            |
| COP Tj = +7°C                                       | 6.20            | 4.50               |
| Cdh Tj = +7 °C                                      | 0.900           | 1.000              |
| Pdh Tj = 12°C                                       | 2.20 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 7.60            | 6.60               |
| Cdh Tj = +12 °C                                     | 0.900           | 1.000              |
| Pdh Tj = Tbiv                                       | 5.50 kW         | 5.20 kW            |
| COP Tj = Tbiv                                       | 3.10            | 2.40               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.90 kW         | 4.50 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.70            | 2.00               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |

|  |             |             |
|--|-------------|-------------|
| PSB  | 16 W        | 16 W        |
| PCK  | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 1.62 kW     | 1.70 kW     |
| Annual energy consumption Qhe              | 3012 kWh    | 3648 kWh    |

**EN 12102-1 | Colder Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 51 dB(A)        | 51 dB(A)           |

**EN 14825 | Colder Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| Pdesignh  | 7.68 kW         | 7.45 kW            |
| $\eta_s$  | 143 %           | 121 %              |
| Prated  | 7.68 kW         | 7.45 kW            |
| SCOP  | 3.66            | 3.11               |
| Tbiv  | -9 °C           | -9 °C              |
| TOL   | -20 °C          | -20 °C             |
| Pdh Tj = -7°C                                       | 4.70 kW         | 4.50 kW            |
| COP Tj = -7°C                                       | 3.20            | 2.60               |
| Cdh Tj = -7 °C                                      | 0.900           | 1.000              |
| Pdh Tj = +2°C                                       | 2.90 kW         | 2.90 kW            |
| COP Tj = +2°C                                       | 4.70            | 4.00               |
| Cdh Tj = +2 °C                                      | 0.900           | 1.000              |
| Pdh Tj = +7°C                                       | 3.10 kW         | 2.60 kW            |
| COP Tj = +7°C                                       | 6.40            | 5.20               |
| Cdh Tj = +7 °C                                      | 0.900           | 1.000              |
| Pdh Tj = 12°C                                       | 2.90 kW         | 2.50 kW            |
| COP Tj = 12°C                                       | 7.80            | 7.10               |
| Cdh Tj = +12 °C                                     | 0.900           | 1.000              |
| Pdh Tj = Tbiv                                       | 5.10 kW         | 4.90 kW            |
| COP Tj = Tbiv                                       | 3.00            | 2.40               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.60 kW         | 3.30 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.20            | 1.70               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|   |                 |                    |
|---|-----------------|--------------------|
| Supplementary Heater: PSUP                          | 7.68 kW         | 7.45 kW            |
| Annual energy consumption Qhe                       | 5174 kWh        | 5903 kWh           |
| <b>EN 12102-1   Warmer Climate</b>                  |                 |                    |
|   | Low temperature | Medium temperature |
| Sound power level indoor                            | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor                           | 51 dB(A)        | 51 dB(A)           |
| <b>EN 14825   Warmer Climate</b>                    |                 |                    |
|   | Low temperature | Medium temperature |
| Pdesignh  | 3.83 kW         | 3.66 kW            |
| $\eta_s$  | 238 %           | 166 %              |
| Prated  | 3.83 kW         | 3.66 kW            |
| SCOP  | 6.02            | 4.22               |
| Tbiv  | 2 °C            | 2 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 3.80 kW         | 3.70 kW            |
| COP Tj = +2°C                                       | 3.80            | 2.70               |
| Cdh Tj = +2 °C                                      | 0.900           | 1.000              |
| Pdh Tj = +7°C                                       | 2.60 kW         | 2.30 kW            |
| COP Tj = +7°C                                       | 5.60            | 3.60               |
| Cdh Tj = +7 °C                                      | 0.900           | 1.000              |
| Pdh Tj = 12°C                                       | 2.40 kW         | 2.40 kW            |
| COP Tj = 12°C                                       | 7.90            | 5.80               |
| Cdh Tj = +12 °C                                     | 0.900           | 1.000              |
| Pdh Tj = Tbiv                                       | 3.80 kW         | 3.70 kW            |
| COP Tj = Tbiv                                       | 3.80            | 2.70               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.80 kW         | 3.70 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.80            | 2.70               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900           | 1.000              |
| WTOL  | 70 °C           | 70 °C              |
| Poff  | 0 W             | 0 W                |
| PTO   | 14 W            | 14 W               |
| PSB   | 16 W            | 16 W               |
| PCK   | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.00 kW         | 0.00 kW            |
| Annual energy consumption Qhe                       | 849 kWh         | 1159 kWh           |