

Subtype Tensio 8 10 C MR

|                     |  |
|---------------------|--|
| Certificate Holder  | Remeha ND  |
| Address             | Marchantstraat 55  |
| ZIP                 | 7332   |
| City                | AZ Apeldoorn   |
| Country             | NL   |
| Certification Body  | BRE Global Limited   |
| Subtype title       | Tensio 8 10 C MR   |
| Registration number | 041-K025-02  |
| Heat Pump Type      | Outdoor Air/Water  |
| Refrigerant         | R32  |
| Mass of Refrigerant | 1.65 kg  |
| Certification Date  | 19.05.2022   |
| Testing basis       | Heat Pump Keymark Scheme Rules Rev 09                            |
| Testing laboratory  | TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN |

**Model Mono 2 AWHP 8MR**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | Mono 2 AWHP 8MR                |
| Application                         | Heating (medium temp)          |
| Units                               | Outdoor                        |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Reversibility                       | Yes                            |
| 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 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 | 8.40 kW         | 7.50 kW            |
| El input    | 1.63 kW         | 2.36 kW            |
| COP         | 5.15            | 3.18               |

**EN 12102-1 | Average Climate**

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

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 132 %              |
| Prated         | 8.12 kW         | 6.60 kW            |
| SCOP           | 5.21            | 3.36               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 7.19 kW         | 5.84 kW            |
| COP Tj = -7°C  | 3.35            | 2.16               |
| Cdh Tj = -7 °C | 0.90            | 0.90               |
| Pdh Tj = +2°C  | 4.65 kW         | 3.76 kW            |
| COP Tj = +2°C  | 5.09            | 3.30               |
| Cdh Tj = +2 °C | 0.90            | 0.90               |
| Pdh Tj = +7°C  | 2.90 kW         | 2.43 kW            |

|   |             |             |
|---|-------------|-------------|
| COP Tj = +7°C                                       | 6.82        | 4.34        |
| Cdh Tj = +7 °C                                      | 0.90        | 0.90        |
| Pdh Tj = 12°C                                       | 1.63 kW     | 1.40 kW     |
| COP Tj = 12°C                                       | 8.35        | 5.33        |
| Cdh Tj = +12 °C                                     | 0.90        | 0.90        |
| Pdh Tj = Tbiv                                       | 7.19 kW     | 5.84 kW     |
| COP Tj = Tbiv                                       | 3.35        | 2.16        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.45 kW     | 4.91 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.04        | 1.84        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 14 W        | 14 W        |
| PTO   | 24 W        | 24 W        |
| PSB   | 14 W        | 14 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.68 kW     | 1.69 kW     |
| Annual energy consumption Qhe                       | 3223 kWh    | 4056 kWh    |

**EN 12102-1 | Colder Climate**

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

**EN 14825 | Colder Climate**

|                 | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| ηs              | 170 %           | 112 %              |
| Prated          | 6.98 kW         | 5.78 kW            |
| SCOP            | 4.32            | 2.88               |
| Tbiv            | -15 °C          | -15 °C             |
| TOL             | -22 °C          | -22 °C             |
| Pdh Tj = -7°C   | 4.46 kW         | 3.86 kW            |
| COP Tj = -7°C   | 3.66            | 2.48               |
| Cdh Tj = -7 °C  | 0.90            | 0.90               |
| Pdh Tj = +2°C   | 2.70 kW         | 2.21 kW            |
| COP Tj = +2°C   | 5.20            | 3.35               |
| Cdh Tj = +2 °C  | 0.90            | 0.90               |
| Pdh Tj = +7°C   | 1.66 kW         | 1.44 kW            |
| COP Tj = +7°C   | 6.53            | 4.11               |
| Cdh Tj = +7 °C  | 0.90            | 0.90               |
| Pdh Tj = 12°C   | 1.66 kW         | 1.47 kW            |
| COP Tj = 12°C   | 7.96            | 5.92               |
| Cdh Tj = +12 °C | 0.90            | 0.90               |
| Pdh Tj = Tbiv   | 5.69 kW         | 4.71 kW            |
| COP Tj = Tbiv   | 2.83            | 1.90               |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.06 kW     | 2.80 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.95        | 1.22        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 14 W        | 14 W        |
| PTO   | 24 W        | 24 W        |
| PSB   | 14 W        | 14 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 2.91 kW     | 2.99 kW     |
| Annual energy consumption Qhe                       | 3978 kWh    | 4950 kWh    |
| Pdh Tj = -15°C (if TOL)                             | 5.69        | 4.71        |
| COP Tj = -15°C (if TOL)                             | 2.83        | 1.90        |
| Cdh Tj = -15 °C                                     | 0.90        | 0.90        |

**EN 12102-1 | Warmer Climate**

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

**EN 14825 | Warmer Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs  | 273 %           | 177 %              |
| Prated  | 8.12 kW         | 8.37 kW            |
| SCOP  | 6.99            | 4.50               |
| Tbiv  | 7 °C            | 7 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 7.57 kW         | 7.55 kW            |
| COP Tj = +2°C                                       | 3.98            | 2.59               |
| Cdh Tj = +2 °C                                      | 0.900           | 0.900              |
| Pdh Tj = +7°C                                       | 5.22 kW         | 5.38 kW            |
| COP Tj = +7°C                                       | 6.26            | 4.01               |
| Cdh Tj = +7 °C                                      | 0.900           | 0.900              |
| Pdh Tj = 12°C                                       | 2.45 kW         | 2.32 kW            |
| COP Tj = 12°C                                       | 9.02            | 5.55               |
| Cdh Tj = +12 °C                                     | 0.900           | 0.900              |
| Pdh Tj = Tbiv                                       | 5.22 kW         | 5.38 kW            |
| COP Tj = Tbiv                                       | 6.26            | 4.01               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.57 kW         | 7.55 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.98            | 2.59               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |                 |                    |
| WTOL  | 65 °C           | 65 °C              |
| Poff  | 14 W            | 14 W               |

|  |             |             |
|--|-------------|-------------|
| PTO  | 24 W        | 24 W        |
| PSB  | 14 W        | 14 W        |
| PCK  | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.55 kW     | 0.82 kW     |
| Annual energy consumption Qhe              | 1569 kWh    | 2485 kWh    |

**Model Mono 2 AWHP 10MR**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | Mono 2 AWHP 10MR               |
| Application                         | Heating (medium temp)          |
| Units                               | Outdoor                        |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Reversibility                       | Yes                            |
| 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 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 | 10.00 kW        | 9.50 kW            |
| El input    | 2.02 kW         | 3.06 kW            |
| COP         | 4.95            | 3.10               |

**EN 12102-1 | Average Climate**

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

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 137 %              |
| Prated         | 9.17 kW         | 7.67 kW            |
| SCOP           | 5.19            | 3.49               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 8.11 kW         | 6.78 kW            |
| COP Tj = -7°C  | 3.23            | 2.24               |
| Cdh Tj = -7 °C | 0.90            | 0.90               |
| Pdh Tj = +2°C  | 5.18 kW         | 4.29 kW            |
| COP Tj = +2°C  | 5.01            | 3.42               |
| Cdh Tj = +2 °C | 0.90            | 0.90               |
| Pdh Tj = +7°C  | 3.32 kW         | 2.77 kW            |

|   |             |             |
|---|-------------|-------------|
| COP Tj = +7°C                                       | 7.08        | 4.52        |
| Cdh Tj = +7 °C                                      | 0.90        | 0.90        |
| Pdh Tj = 12°C                                       | 1.65 kW     | 1.58 kW     |
| COP Tj = 12°C                                       | 8.58        | 5.68        |
| Cdh Tj = +12 °C                                     | 0.90        | 0.90        |
| Pdh Tj = Tbiv                                       | 8.11 kW     | 6.78 kW     |
| COP Tj = Tbiv                                       | 3.23        | 2.24        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.40 kW     | 5.39 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.96        | 1.83        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 14 W        | 14 W        |
| PTO   | 24 W        | 24 W        |
| PSB   | 14 W        | 14 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.76 kW     | 2.28 kW     |
| Annual energy consumption Qhe                       | 3647 kWh    | 4539 kWh    |

**EN 12102-1 | Colder Climate**

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

**EN 14825 | Colder Climate**

|                 | Low temperature | Medium temperature |
|-----------------|-----------------|--------------------|
| ηs              | 170 %           | 116 %              |
| Prated          | 7.75 kW         | 6.71 kW            |
| SCOP            | 4.32            | 2.99               |
| Tbiv            | -15 °C          | -15 °C             |
| TOL             | -22 °C          | -22 °C             |
| Pdh Tj = -7°C   | 4.83 kW         | 4.27 kW            |
| COP Tj = -7°C   | 3.60            | 2.54               |
| Cdh Tj = -7 °C  | 0.90            | 0.90               |
| Pdh Tj = +2°C   | 2.94 kW         | 2.57 kW            |
| COP Tj = +2°C   | 5.26            | 3.51               |
| Cdh Tj = +2 °C  | 0.90            | 0.90               |
| Pdh Tj = +7°C   | 1.92 kW         | 1.66 kW            |
| COP Tj = +7°C   | 7.08            | 4.37               |
| Cdh Tj = +7 °C  | 0.90            | 0.90               |
| Pdh Tj = 12°C   | 1.66 kW         | 1.48 kW            |
| COP Tj = 12°C   | 7.96            | 5.96               |
| Cdh Tj = +12 °C | 0.90            | 0.90               |
| Pdh Tj = Tbiv   | 6.32 kW         | 5.48 kW            |
| COP Tj = Tbiv   | 2.64            | 2.00               |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 4.63 kW     | 2.80 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 1.97        | 1.22        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 14 W        | 14 W        |
| PTO   | 24 W        | 24 W        |
| PSB   | 14 W        | 14 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 3.13 kW     | 3.91 kW     |
| Annual energy consumption Qhe                       | 4424 kWh    | 5540 kWh    |
| Pdh Tj = -15°C (if TOL)                             | 6.32        | 5.48        |
| COP Tj = -15°C (if TOL)                             | 2.64        | 2.00        |
| Cdh Tj = -15 °C                                     | 0.90        | 0.90        |

**EN 12102-1 | Warmer Climate**

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

**EN 14825 | Warmer Climate**

|   | Low temperature | Medium temperature |
|---|-----------------|--------------------|
| ηs  | 279 %           | 180 %              |
| Prated  | 8.58 kW         | 8.63 kW            |
| SCOP  | 7.12            | 4.58               |
| Tbiv  | 7 °C            | 7 °C               |
| TOL   | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 8.44 kW         | 8.06 kW            |
| COP Tj = +2°C                                       | 3.84            | 2.59               |
| Cdh Tj = +2 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +7°C                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = +7°C                                       | 6.18            | 4.10               |
| Cdh Tj = +7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = 12°C                                       | 2.62 kW         | 2.53 kW            |
| COP Tj = 12°C                                       | 9.04            | 5.82               |
| Cdh Tj = +12 °C                                     | 0.90            | 0.90               |
| Pdh Tj = Tbiv                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = Tbiv                                       | 6.18            | 4.10               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.44 kW         | 8.16 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.84            | 2.61               |
| WTOL  | 65 °C           | 65 °C              |
| Poff  | 14 W            | 14 W               |
| PTO   | 24 W            | 24 W               |
| PSB   | 14 W            | 14 W               |

|  |             |             |
|--|-------------|-------------|
| PCK  | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.14 kW     | 0.48 kW     |
| Annual energy consumption Qhe              | 1628 kWh    | 2516 kWh    |