

### 3. Specifications

#### 3.1 WH-ADC0316M9E83 WH-WXG09ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 9.00                                          | 9.00                             |                                  |
|                              | BTU/h                                           |           | 30700                                         | 30700                            |                                  |
| Heating COP                  | W/W                                             |           | 5.23                                          | 3.81                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 9.0                                           | 9.0                              | 9.0                              |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.33 / 250                                    | 5.00 / 197                       | 4.45 / 175                       |
|                              | Annual Consumption                              | kWh       | 1901                                          | 3721                             | 4990                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A+++                             |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 9.0                                           | 9.0                              | 9.0                              |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.40 / 173                                    | 3.50 / 137                       | 3.20 / 125                       |
|                              | Annual Consumption                              | kWh       | 2735                                          | 5318                             | 6939                             |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.35 / 136                                    | 3.10 / 125                       | 2.35 / 95                        |
|                              | AEC                                             | kWh       | 1236                                          | 1339                             | 1765                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 58***<br>Heating: 52*** | Heating: 58***<br>Heating: 52*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 83.0 (2931)  |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.78 (62.8) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 163 (359)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 25                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 400                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazed Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 36                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 76.2 × 524 × 117                            |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 25.8 (1.5)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 1.72 | Heating: 2.36 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 8.51                                        |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 12.8 / 8.51k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 3.8                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 2.6  | Heating: 3.6  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 12.8                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 96   | Heating: 95   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 22.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                         | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|------------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                              | EN 14511                           |                |                |
|                                                    |                        |                              | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition<br>(Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                       | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB               | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                    | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                    | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                    | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                     | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                    | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                    | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                    | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                          | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                            | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                            | 12                                 |                |                |
|                                                    | MWP                    | bar                          | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                      | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                            | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                           | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>               | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                          | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                          | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                          | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                          | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.

### 3.2 WH-ADC0316M9E83 WH-WXG12ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 12.00                                         | 12.00                            |                                  |
|                              | BTU/h                                           |           | 40900                                         | 40900                            |                                  |
| Heating COP                  | W/W                                             |           | 5.06                                          | 3.54                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 12.0                                          | 12.0                             | 12.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.20 / 245                                    | 4.73 / 186                       | 4.38 / 172                       |
|                              | Annual Consumption                              | kWh       | 2586                                          | 5244                             | 6758                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A++                              |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 12.0                                          | 12.0                             | 12.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.40 / 173                                    | 3.65 / 143                       | 3.25 / 127                       |
|                              | Annual Consumption                              | kWh       | 3647                                          | 6792                             | 9111                             |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.35 / 136                                    | 3.10 / 125                       | 2.35 / 95                        |
|                              | AEC                                             | kWh       | 1236                                          | 1339                             | 1765                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 59***<br>Heating: 53*** | Heating: 59***<br>Heating: 53*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 92.0 (3249)  |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.78 (62.8) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 163 (359)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 32                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 420                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazed Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 36                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 76.2 × 524 × 117                            |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 34.4 (2.1)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 2.37 | Heating: 3.39 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 9.84                                        |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 14.8 / 9.84k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 3.8                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 3.6  | Heating: 5.2  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 14.8                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 96   | Heating: 95   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 39.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                         | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|------------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                              | EN 14511                           |                |                |
|                                                    |                        |                              | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition<br>(Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                       | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB               | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                    | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                    | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                    | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                     | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                    | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                    | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                    | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                          | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                            | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                            | 12                                 |                |                |
|                                                    | MWP                    | bar                          | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                      | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                            | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                           | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>               | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                          | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                          | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                          | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                          | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.



### 3.3 WH-ADC0316M9E83 WH-WXG16ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 16.00                                         | 16.00                            |                                  |
|                              | BTU/h                                           |           | 54600                                         | 54600                            |                                  |
| Heating COP                  | W/W                                             |           | 4.89                                          | 3.30                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 16.0                                          | 16.0                             | 16.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.08 / 240                                    | 4.75 / 187                       | 4.33 / 170                       |
|                              | Annual Consumption                              | kWh       | 3517                                          | 6966                             | 9101                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A++                              |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 16.0                                          | 16.0                             | 16.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.45 / 175                                    | 3.70 / 145                       | 3.40 / 133                       |
|                              | Annual Consumption                              | kWh       | 4801                                          | 8935                             | 11613                            |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.20 / 129                                    | 2.85 / 115                       | 2.10 / 85                        |
|                              | AEC                                             | kWh       | 1294                                          | 1456                             | 1979                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 62***<br>Heating: 57*** | Heating: 62***<br>Heating: 57*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 108.0 (3814) |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.77 (62.4) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 165 (364)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 32                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 480                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazed Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 44                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 72.0 × 535 × 120.5                          |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 45.9 (2.8)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 3.27 | Heating: 4.85 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 12.80                                       |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 19.0 / 12.8k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 4.9                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 4.9  | Heating: 7.3  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 19.0                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 97   | Heating: 96   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 63.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                      | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|---------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                           | EN 14511                           |                |                |
|                                                    |                        |                           | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition (Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                    | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB            | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                 | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                 | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                 | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                  | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                 | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                 | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                 | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                       | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                         | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                         | 12                                 |                |                |
|                                                    | MWP                    | bar                       | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                   | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                         | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                        | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>            | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                       | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                       | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                       | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                       | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.

### 3.4 WH-ADC0316M9E8AN3 WH-WXG09ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 9.00                                          | 9.00                             |                                  |
|                              | BTU/h                                           |           | 30700                                         | 30700                            |                                  |
| Heating COP                  | W/W                                             |           | 5.23                                          | 3.81                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 9.0                                           | 9.0                              | 9.0                              |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.33 / 250                                    | 5.00 / 197                       | 4.45 / 175                       |
|                              | Annual Consumption                              | kWh       | 1901                                          | 3721                             | 4990                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A+++                             |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 9.0                                           | 9.0                              | 9.0                              |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.40 / 173                                    | 3.50 / 137                       | 3.20 / 125                       |
|                              | Annual Consumption                              | kWh       | 2735                                          | 5318                             | 6939                             |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.35 / 136                                    | 3.10 / 125                       | 2.35 / 95                        |
|                              | AEC                                             | kWh       | 1236                                          | 1339                             | 1765                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 58***<br>Heating: 52*** | Heating: 58***<br>Heating: 52*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 83.0 (2931)  |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.78 (62.8) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 163 (359)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 25                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 400                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazen Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 36                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 76.2 × 524 × 117                            |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 25.8 (1.5)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 1.72 | Heating: 2.36 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 8.51                                        |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 12.8 / 8.51k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 3.8                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 2.6  | Heating: 3.6  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 12.8                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 96   | Heating: 95   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 22.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                      | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|---------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                           | EN 14511                           |                |                |
|                                                    |                        |                           | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition (Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                    | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB            | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                 | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                 | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                 | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                  | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                 | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                 | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                 | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                       | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                         | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                         | 12                                 |                |                |
|                                                    | MWP                    | bar                       | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                   | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                         | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                        | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>            | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                       | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                       | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                       | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                       | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.



### 3.5 WH-ADC0316M9E8AN3 WH-WXG12ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 12.00                                         | 12.00                            |                                  |
|                              | BTU/h                                           |           | 40900                                         | 40900                            |                                  |
| Heating COP                  | W/W                                             |           | 5.06                                          | 3.54                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 12.0                                          | 12.0                             | 12.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.20 / 245                                    | 4.73 / 186                       | 4.38 / 172                       |
|                              | Annual Consumption                              | kWh       | 2586                                          | 5244                             | 6758                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A++                              |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 12.0                                          | 12.0                             | 12.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.40 / 173                                    | 3.65 / 143                       | 3.25 / 127                       |
|                              | Annual Consumption                              | kWh       | 3647                                          | 6792                             | 9111                             |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.35 / 136                                    | 3.10 / 125                       | 2.35 / 95                        |
|                              | AEC                                             | kWh       | 1236                                          | 1339                             | 1765                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 59***<br>Heating: 53*** | Heating: 59***<br>Heating: 53*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 92.0 (3249)  |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.78 (62.8) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 163 (359)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 32                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 420                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazed Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 36                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 76.2 × 524 × 117                            |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 34.4 (2.1)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 2.37 | Heating: 3.39 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 9.84                                        |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 14.8 / 9.84k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 3.8                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 3.6  | Heating: 5.2  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 14.8                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 96   | Heating: 95   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 39.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                         | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|------------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                              | EN 14511                           |                |                |
|                                                    |                        |                              | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition<br>(Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                       | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB               | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                    | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                    | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                    | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                     | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                    | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                    | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                    | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                          | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                            | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                            | 12                                 |                |                |
|                                                    | MWP                    | bar                          | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                      | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                            | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                           | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>               | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                          | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                          | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                          | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                          | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                          | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.

### 3.6 WH-ADC0316M9E8AN3 WH-WXG16ME8

| Item                         |                                                 | Unit      | Outdoor Unit                                  |                                  |                                  |
|------------------------------|-------------------------------------------------|-----------|-----------------------------------------------|----------------------------------|----------------------------------|
| Performance Test Condition   |                                                 |           | EN 14511                                      |                                  |                                  |
|                              |                                                 |           | EN 14825                                      |                                  |                                  |
| Cooling Capacity             | Condition (Ambient/Water)                       |           | A35W7                                         |                                  |                                  |
|                              | kW                                              |           | 9.00                                          |                                  |                                  |
|                              | BTU/h                                           |           | 30700                                         |                                  |                                  |
| Cooling EER                  | W/W                                             |           | 3.61                                          |                                  |                                  |
| Heating Capacity             | Condition (Ambient/Water)                       |           | A7W35                                         | A2W35                            |                                  |
|                              | kW                                              |           | 16.00                                         | 16.00                            |                                  |
|                              | BTU/h                                           |           | 54600                                         | 54600                            |                                  |
| Heating COP                  | W/W                                             |           | 4.89                                          | 3.30                             |                                  |
| Heating Erp                  | Low Temperature Application (W35)               |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 16.0                                          | 16.0                             | 16.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 6.08 / 240                                    | 4.75 / 187                       | 4.33 / 170                       |
|                              | Annual Consumption                              | kWh       | 3517                                          | 6966                             | 9101                             |
|                              | Class                                           |           | A+++                                          | A+++                             | A++                              |
|                              | Medium Temperature Application (W55)            |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | Predesign                                       | kW        | 16.0                                          | 16.0                             | 16.0                             |
|                              | Tbiv/TOL                                        | °C        | 2 / 2                                         | -10 / -10                        | -22 / -22                        |
|                              | SCOP/ηs                                         | (W/W) / % | 4.45 / 175                                    | 3.70 / 145                       | 3.40 / 133                       |
|                              | Annual Consumption                              | kWh       | 4801                                          | 8935                             | 11613                            |
|                              | Class                                           |           | A+++                                          | A++                              | A++                              |
|                              | DHW                                             |           | Warmer                                        | Average                          | Colder                           |
|                              | Application                                     | Climate   |                                               |                                  |                                  |
|                              | COP / nwh                                       | (W/W) / % | 3.20 / 129                                    | 2.85 / 115                       | 2.10 / 85                        |
|                              | AEC                                             | kWh       | 1294                                          | 1456                             | 1979                             |
| Noise Level                  | Condition (Ambient/Water)                       |           | A35W7                                         | A7W35                            | A2W35                            |
|                              | dB (A)                                          |           | Cooling: -                                    | Heating: -                       | Heating: -                       |
|                              | Power Level dB                                  |           | Cooling: 60***                                | Heating: 62***<br>Heating: 57*** | Heating: 62***<br>Heating: 57*** |
| Air Flow                     | m³/min (ft³/min)                                |           | Cooling: 97.0 (3426)<br>Heating: 108.0 (3814) |                                  |                                  |
| Refrigeration Control Device |                                                 |           | Expansion Valve                               |                                  |                                  |
| Refrigeration Oil            | cm³                                             |           | PZ68S (1600)                                  |                                  |                                  |
| Refrigerant                  | kg (oz)                                         |           | R290, 1.77 (62.4) (Pre-charged) (-) (Maximum) |                                  |                                  |
| F-GAS                        | GWP                                             |           | 3                                             |                                  |                                  |
|                              | CO <sub>2</sub> eq (ton) (Precharged / Maximum) |           | 0.006 / -                                     |                                  |                                  |
| Dimension                    | Height                                          | mm (inch) | 1520 (59-27/32)                               |                                  |                                  |
|                              | Width                                           | mm (inch) | 1200 (47-1/4)                                 |                                  |                                  |
|                              | Depth                                           | mm (inch) | 430 (16-59/64)                                |                                  |                                  |

| Item                                                                                 |                   | Unit                      | Outdoor Unit                                |               |               |
|--------------------------------------------------------------------------------------|-------------------|---------------------------|---------------------------------------------|---------------|---------------|
| Net Weight                                                                           |                   | kg (lbs)                  | 165 (364)                                   |               |               |
| Pipe Diameter (Inner)                                                                |                   | mm                        | 32                                          |               |               |
| Standard Length                                                                      |                   | m (ft)                    | 5.0 (16.4)                                  |               |               |
| Maximum Pipe Length                                                                  |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| I/D & O/D Height Difference                                                          |                   | m (ft)                    | 30.0 (98.4)                                 |               |               |
| Water Pipe Connector                                                                 | Indoor            | inch                      | 1-1/4                                       |               |               |
|                                                                                      | Outdoor           |                           | 1-1/4                                       |               |               |
| Compressor                                                                           | Type              |                           | Hermetic Motor Compressor (Involute Scroll) |               |               |
|                                                                                      | Motor Type        |                           | Synchronous Electric Motor (6-poles)        |               |               |
|                                                                                      | Rated Output      | kW                        | 3.10                                        |               |               |
| Fan                                                                                  | Type              |                           | Propeller Fan                               |               |               |
|                                                                                      | Material          |                           | PP                                          |               |               |
|                                                                                      | Motor Type        |                           | DC (8-poles)                                |               |               |
|                                                                                      | Input Power       | kW                        | -                                           |               |               |
|                                                                                      | Output Power      | W                         | 120 × 2                                     |               |               |
|                                                                                      | Fan Speed         | rpm                       | Cooling: 510<br>Heating: 480                |               |               |
| Heat Exchanger                                                                       | Fin material      |                           | Aluminium (Blue Coat)                       |               |               |
|                                                                                      | Fin Type          |                           | Corrugated Fin                              |               |               |
|                                                                                      | Row × Stage × FPI |                           | 2 × 58 × 19                                 |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 44 × 1473.2 × 868.2:902.7                   |               |               |
| Hot Water Coil                                                                       | Type              |                           | Brazen Plate                                |               |               |
|                                                                                      | No. of Plates     |                           | 44                                          |               |               |
|                                                                                      | Size (W × H × L)  | mm                        | 72.0 × 535 × 120.5                          |               |               |
|                                                                                      | Water Flow Rate   | l/min (m³/h)              | Cooling: 25.8 (1.5)<br>Heating: 45.9 (2.8)  |               |               |
| Power Source (Phase, Voltage, Cycle)                                                 |                   | Ø                         | Three                                       |               |               |
|                                                                                      |                   | V                         | 400                                         |               |               |
|                                                                                      |                   | Hz                        | 50                                          |               |               |
| Input Power                                                                          |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | kW                        | Cooling: 2.49                               | Heating: 3.27 | Heating: 4.85 |
| Maximum Input Power For Heatpump System                                              |                   | kW                        | 12.80                                       |               |               |
| Outdoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)           |                   |                           | 3Ø / 19.0 / 12.8k                           |               |               |
| Indoor Power Supply : Phase (Ø) / Max. Current (A) / Max. Input Power (W)            |                   |                           | 3Ø / 13.1 / 9.00k                           |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -                                   |               |               |
| Starting Current                                                                     |                   | A                         | 4.9                                         |               |               |
| Running Current                                                                      |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | A                         | Cooling: 3.8                                | Heating: 4.9  | Heating: 7.3  |
| Maximum Current For Heatpump System                                                  |                   | A                         | 19.0                                        |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | Condition (Ambient/Water) | A35W7                                       | A7W35         | A2W35         |
|                                                                                      |                   | %                         | Cooling: 95                                 | Heating: 97   | Heating: 96   |
| Power Cord                                                                           | Number of core    |                           | -                                           |               |               |
|                                                                                      | Length            | m (ft)                    | -                                           |               |               |
| Thermostat                                                                           |                   |                           | Electronic Control                          |               |               |
| Protection Device                                                                    |                   |                           | Electronic Control                          |               |               |
| Pressure Relief Valve Water Circuit                                                  |                   | kPa                       | Open: 400, Close: 280 and below             |               |               |

| Item                           |                 | Unit             | Outdoor Unit                                                                                                                                                                                      |
|--------------------------------|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation Range                | Outdoor Ambient | °C (min. / max.) | Cooling: 10 / 43<br>Heating (Tank): -28 / 43<br>Heating (Circuit): -28 / 35                                                                                                                       |
|                                | Water Outlet    | °C (min. / max.) | Cooling: 5 / 20<br>Heating (Tank): - / 65* <sup>3</sup> ,<br>Heating (Circuit): 20 / 55 (Below Ambient -25 °C) * <sup>4</sup><br>Heating (Circuit): 20 / 75 (Above Ambient -15 °C) * <sup>4</sup> |
| Internal Pressure Differential |                 | kPa              | Cooling: 22.0<br>Heating: 63.0                                                                                                                                                                    |
| Pump                           | Motor Type      |                  | Brushless DC Motor (Sensorless vector control system)                                                                                                                                             |
|                                | No. of Speed    |                  | Variable speed                                                                                                                                                                                    |
|                                | Input Power     | W                | 175                                                                                                                                                                                               |
| Flow Sensor                    | Type            |                  | Vortex (Piezoelectric sensor)                                                                                                                                                                     |
|                                | Measuring range | l/min            | 5 ~ 60                                                                                                                                                                                            |

| Item                                               |                        | Unit                      | Indoor Unit                        |                |                |
|----------------------------------------------------|------------------------|---------------------------|------------------------------------|----------------|----------------|
| Performance Test Condition                         |                        |                           | EN 14511                           |                |                |
|                                                    |                        |                           | EN 14825                           |                |                |
| Noise Level                                        |                        | Condition (Ambient/Water) | A35W7                              | A7W35          | A2W35          |
|                                                    |                        | dB (A)                    | Cooling: 22***                     | Heating: 22*** | Heating: 22*** |
|                                                    |                        | Power Level dB            | Cooling: 35***                     | Heating: 35*** | Heating: 35*** |
| Dimension                                          | Depth                  | mm (inch)                 | 602 (23-45/64)                     |                |                |
|                                                    | Width                  | mm (inch)                 | 599 (23-37/64)                     |                |                |
|                                                    | Height                 | mm (inch)                 | 2036 (80-5/32)                     |                |                |
| Net Weight                                         |                        | kg (lbs)                  | 105 (231)                          |                |                |
| Water Pipe Diameter                                | Room                   | mm (inch)                 | 31 (1-1/4)                         |                |                |
|                                                    | Shower                 | mm (inch)                 | 19 (3/4)                           |                |                |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                 | 12.00 (17/36)                      |                |                |
| Pressure Release Valve                             |                        | kPa                       | Open: 800, Close: 640 and below    |                |                |
| Protection Device                                  |                        | A                         | Earth Leakage Circuit Breaker (40) |                |                |
| Expansion Vessel                                   | Volume                 | l                         | 12                                 |                |                |
|                                                    | MWP                    | bar                       | 4                                  |                |                |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                   | 9.00 / 85                          |                |                |
| Tank Volume (Spec / Nett)                          |                        | L                         | 270 / 260                          |                |                |
| Max. Tank Water Set Temperature                    |                        | °C                        | 65                                 |                |                |
| Tank Coil Surface                                  |                        | m <sup>2</sup>            | 2.4                                |                |                |
| Maximum Working Pressure                           | Heat / Cool            | Bar                       | 4.0                                |                |                |
|                                                    | Tank Circuit           | Bar                       | 10.0                               |                |                |
| Operating Pressure                                 | Tank Unit              | Bar                       | 3.5                                |                |                |
|                                                    | Expansion Relief Valve | Bar                       | 8.0                                |                |                |
| Expansion Vessel Pre-charge Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |
| Pressure Reducing Valve Set Pressure (DHW Circuit) |                        | Bar                       | 3.5                                |                |                |

| Item            |                                                       | Unit           | Indoor Unit    |
|-----------------|-------------------------------------------------------|----------------|----------------|
| Pressure Vessel | Material                                              |                | EN14511        |
|                 | Volume                                                | L              | 260            |
|                 | Design Pressure                                       | Bar            | 10             |
| Heat Exchanger  | Material                                              |                | EN-1.4521      |
|                 | Diameter                                              | mm             | 22             |
|                 | Thickness                                             | mm             | 0.8            |
|                 | Surface Area                                          | m <sup>2</sup> | 2.4            |
|                 | Total Length                                          | m              | 34.5           |
| DHW Tank        | Total Corrosion ion<br>(Chloride + Sulphate + Nitric) | mg/L           | < 150          |
|                 | Conductivity @ Water Tank<br>Water Temperature < 60°C | µS/cm          | < 1250         |
|                 | Conductivity @ Water Tank<br>Water Temperature < 65°C | µS/cm          | < 1200         |
|                 | Saturation Index (LSI)<br>@ 20°C                      |                | > -4.0 / < 0.4 |
|                 | PH                                                    |                | 6.5 - 8.5      |

**Note:**

- In case it is necessary to indicate the air flow volume in (l/s), the value in (m<sup>3</sup>/min.) shall be multiplied by 16.7 and rounded down the decimal point.
- If the EUROVENT Certified models can be operated under the “extra-low” temperature condition, -7°C DB and -8°C WB temperature with rated voltage 230V shall be used.
- Capacity is measured at outdoor temperature 7°C DB and 6°C WB with controlled water inlet 30°C and water outlet 35°C (EN 14511-2)
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.
- \*\*\* The sound pressure and sound power level is measured with distance 1.0m from the unit and height at 1.5m. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*\*\*\* The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- \*\*\* The sound power level is measured with accordance to EN12102 under full load conditions. (Test carry out for cooling at ambient 35°C DB and Water Out 7°C, heating at ambient 7°C DB / 6°C WB and water out 55°C)
- \*3 When outdoor ambient is under -15°C, only the backup heater operate above 55°C. (Outdoor unit don't have backup heater.)
- \*4 Between outdoor ambient -15°C and -25°C, the water outlet temperature gradually decreases from 75°C to 55°C.