

## 2.2 WH-ADC0916H9E8 WH-UQ12HE8

| Item                       |                                    | Unit                      | Outdoor Unit                                 |             |             |       |
|----------------------------|------------------------------------|---------------------------|--|-------------|-------------|-------|
| Performance Test Condition |                                    |                           | EN 14511                                     |             |             |       |
| Cooling Capacity           | Condition (Ambient/Water)          |                           | A35W7  |             |             |       |
|                            | kW                                 |                           | 10.00  |             |             |       |
|                            | BTU/h                              |                           | 34100  |             |             |       |
|                            | kcal/h                             |                           | 8600   |             |             |       |
| Cooling EER                | W/W                                |                           | 2.81   |             |             |       |
|                            | kcal/h                             |                           | 2.42   |             |             |       |
| Heating Capacity           | Condition (Ambient/Water)          |                           | A7W35  | A2W35       |             |       |
|                            | kW                                 |                           | 12.00  | 12.00       |             |       |
|                            | BTU/h                              |                           | 41000  | 41000       |             |       |
|                            | kcal/h                             |                           | 10320  | 10320       |             |       |
| Heating COP                | W/W                                |                           | 4.74   | 3.44        |             |       |
|                            | kcal/h                             |                           | 4.08   | 2.96        |             |       |
| Heating ErP                | Low temperature Application (W35)  |                           |  |             |             |       |
|                            | Application                        | Climate                   | Warmer                                       | Average     | Colder      |       |
|                            | Pdesign                            | kW                        | 12.00  | 12.00       | 14.00       |       |
|                            | Tbivalent / TOL                    | °C                        | 2/2  | -10/-10     | -15/-22     |       |
|                            | SCOP / ns                          | (W/W) / %                 | 5.86 / 231                                   | 4.32 / 170  | 4.08 / 160  |       |
|                            | Annual Consumption                 | kWh                       | 2738   | 5745        | 8480        |       |
|                            | Class                              |                           | A++  | A++         | A++         |       |
|                            | Low temperature Application (W55)  |                           |  |             |             |       |
|                            | Application                        | Climate                   | Warmer                                       | Average     | Colder      |       |
|                            | Pdesign                            | kW                        | 12.00  | 12.00       | 13.00       |       |
|                            | Tbivalent / TOL                    | °C                        | 2 / 2  | -10 / -10   | -15 / -22   |       |
|                            | SCOP / ns                          | (W/W) / %                 | 4.02 / 158                                   | 3.32 / 130  | 3.20 / 125  |       |
|                            | Annual Consumption                 | kWh                       | 3990   | 7466        | 10012       |       |
|                            | Class                              |                           | A++  | A++         | A++         |       |
|                            | Noise Level                        | Condition (Ambient/Water) |  | A35W7       | A7W35       | A2W35 |
|                            |                                    | dB(A)                     |  | Cooling: 49 | Heating: 48 | -     |
| Power level dB             |                                    |                           | Cooling: 64                                  | Heating: 62 | -           |       |
| Air Flow                   | m³/min (ft³/min)                   |                           | Cooling: 93.3 (3290)<br>Heating: 80.0 (2830) |             |             |       |
| Refrigerant Control Device |                                    |                           | Expansion Valve                              |             |             |       |
| Refrigerant Oil            | cm³                                |                           | FV50S (1200)                                 |             |             |       |
| Refrigerant (R410A)        | kg (oz)                            |                           | 2.85k (100.6)                                |             |             |       |
| F-GAS                      | GWP                                |                           | 2088   |             |             |       |
|                            | CO2eq (ton) (Precharged / Maximum) |                           | 6.243 / 8.331                                |             |             |       |
| Dimension                  | Height                             | mm (inch)                 | 1410 (55-1/2)                                |             |             |       |
|                            | Width                              | mm (inch)                 | 1283 (50-1/2)                                |             |             |       |
|                            | Depth                              | mm (inch)                 | 320 (12-19/32)                               |             |             |       |

| Item   |                   | Unit                      | Outdoor Unit   |               |               |
|--|-------------------|---------------------------|--|---------------|---------------|
| Net Weight   |                   | kg (lbs)                  | 151 (333)  |               |               |
| Pipe Diameter  | Liquid            | mm (inch)                 | 9.52 (3/8)   |               |               |
|  | Gas               | mm (inch)                 | 15.88 (5/8)  |               |               |
| Standard Length  |                   | m (ft)                    | 5 (16.4)   |               |               |
| Pipe Length Range  |                   | m (ft)                    | 3 (9.8) ~ 30 (98.4)  |               |               |
| I/D & O/D Height Different   |                   | m (ft)                    | 20 (65.6)  |               |               |
| Additional Gas Amount  |                   | g/m (oz/ft)               | 50 (0.5)   |               |               |
| Refrigerant Chargeless   |                   | m (ft)                    | 10 (32.8)  |               |               |
| Compressor   | Type              |                           | Hermetic Motor   |               |               |
|  | Motor Type        |                           | Brushless (4-poles)  |               |               |
|  | Rated Output      | kW                        | 4.30   |               |               |
| Fan  | Type              |                           | Propeller Fan  |               |               |
|  | Material          |                           | PP   |               |               |
|  | Motor Type        |                           | DC (8-poles)   |               |               |
|  | Input Power       | W                         | -  |               |               |
|  | Output Power      | W                         | 60   |               |               |
|  | Fan Speed         | rpm                       | Cooling: 600 (Top), 640 (Bottom)<br>Heating: 520 (Top), 560 (Bottom) |               |               |
| Heat Exchanger   | Fin Material      |                           | Aluminium (Pre Coat)   |               |               |
|  | Fin Type          |                           | Corrugated Fin   |               |               |
|  | Row x Stage x FPI |                           | 2 x 51 x 18  |               |               |
|  | Size (W x H X L)  | mm                        | 903.7 x 1295.4 x 38.1  |               |               |
| Power Source (Phase, Voltage, Cycle)   |                   | Ø                         | Three  |               |               |
|  |                   | V                         | 400  |               |               |
|  |                   | Hz                        | 50   |               |               |
| Input Power  |                   | Condition (Ambient/Water) | A35W7  | A7W35         | A2W35         |
|  |                   | kW                        | Cooling: 3.56  | Heating: 2.53 | Heating: 3.49 |
| Maximum Input Power for Heatpump System  |                   | kW                        | 7.91   |               |               |
| Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | 3Ø / 11.9 / 7.91k  |               |               |
| Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | 3Ø / 13.0 / 9.00k  |               |               |
| Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)                 |                   |                           | - / - / -  |               |               |
| Starting current   |                   | A                         | 5.4  |               |               |
| Running Current  |                   | Condition (Ambient/Water) | A35W7  | A7W35         | A2W35         |
|  |                   | A                         | Cooling: 5.4   | Heating: 3.9  | Heating: 5.3  |
| Maximum Current for Heatpump System  |                   | A                         | 11.9   |               |               |
| Power Factor<br>Power factor means total figure of compressor and outdoor fan motor. |                   | %                         | Cooling: 97  | Heating: 96   | Heating: 5.3  |
| Power Cord   | Number of core    |                           | -  |               |               |
|  | Length            | m (ft)                    | -  |               |               |
| Thermostat   |                   |                           | Electronic Control   |               |               |
| Protection Device  |                   |                           | Electronic Control   |               |               |

| Item   |                        | Unit                      | Indoor Unit   |             |       |
|--|------------------------|---------------------------|---|-------------|-------|
| Performance Test Condition                         |                        |                           | EN 14511  |             |       |
| Operation Range                                    | Outdoor Ambient        | °C (min. / max.)          | Cooling: 16/43<br>Heating: -28 / 35   |             |       |
|  | Water Outlet           | °C (min. / max.)          | Cooling: 5 / 20<br>Heating (Tank): - / 65*,<br>Heating (Circuit): 20 / 55 (Below ambient -15°C),<br>20 / 60 (Below ambient -10°C) |             |       |
| Internal Pressure Differential                     |                        | kPa                       | Cooling: 28.0<br>Heating: 39.0  |             |       |
| Noise Level  |                        | Condition (Ambient/Water) | A35W7   | A7W35       | A2W35 |
|  |                        | dB(A)                     | Cooling: 33   | Heating: 33 | -     |
|  |                        | Power level dB            | Cooling: 46   | Heating: 46 | -     |
| Dimension  | Height                 | mm (inch)                 | 717 (28-7/32)   |             |       |
|  | Width                  | mm (inch)                 | 598 (23-17/32)  |             |       |
|  | Depth                  | mm (inch)                 | 1800 (70-27/32)   |             |       |
| Net Weight   |                        | kg (lbs)                  | 126 (278)   |             |       |
| Refrigerant Pipe Diameter                          | Liquid                 | mm (inch)                 | 9.52 (3/8)  |             |       |
|  | Gas                    | mm (inch)                 | 15.88 (5/8)   |             |       |
| Water Pipe Diameter                                | Room                   | mm (inch)                 | 31 (1-1/4)  |             |       |
|  | Shower                 | mm (inch)                 | 19 (3/4)  |             |       |
| Water Drain Hose Inner Diameter                    |                        | mm (inch)                 | 12.10 (17/36)   |             |       |
| Pump   | Motor Type             |                           | DC Motor  |             |       |
|  | Input Power            | W                         | 82  |             |       |
| Hot Water Coil                                     | Type                   |                           | Brazed Plate  |             |       |
|  | No. of Plates          |                           | 52  |             |       |
|  | Size (H x W x L)       | mm                        | 93 x 119 x 376  |             |       |
|  | Water Flow Rate        | l/min (m³/h)              | Cooling: 28.7 (1.7)<br>Heating: 34.4 (2.1)  |             |       |
| Pressure Relief Valve Water Circuit                |                        | kPa                       | Open: 300, Close: 266 and below   |             |       |
| Flow Switch  | Type                   |                           | Electronic sensor   |             |       |
| Protection Device                                  |                        | A                         | Residual Current Circuit Breaker (25)   |             |       |
| Expansion Vessel                                   | Volume                 | l                         | 10  |             |       |
|  | MWP                    | bar                       | 3   |             |       |
| Capacity of Integrated Electric Heater / OLP TEMP  |                        | kW / °C                   | 9.00 / 80   |             |       |
| Tank Volume (Spec / Nett)                          |                        | L                         | 200 / 185   |             |       |
| Max. Tank Water Set Temperature                    |                        | °C                        | 65  |             |       |
| Tank Coil Surface                                  |                        | m²                        | 1.8   |             |       |
| Maximum Working Pressure                           | Heat / Cool            | bar                       | 3.0   |             |       |
|  | 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  |                | EN-1.4521             |
|                 | Volume  | L              | 185                   |
|                 | Design Pressure                                       | bar            | 10                    |
| Heat Exchanger  | Material  |                | EN-1.4162 / EN-1.4521 |
|                 | Diameter  | mm             | 22                    |
|                 | Thickness   | mm             | 0.8                   |
|                 | Surface Area  | m <sup>2</sup> | 1.8                   |
|                 | Total Length  | m              | 25                    |
| 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:**

- Cooling capacities are based on outdoor air temperature of 35°C Dry Bulb with controlled indoor water inlet temperature of 12°C and water outlet temperature of 7°C.
- Heating capacities are based on outdoor air temperature of 7°C Dry Bulb (44.6°F Dry Bulb), 6°C Wet Bulb (42.8°F Wet Bulb) with controlled indoor water inlet temperature of 30°C and water outlet temperature of 35°C.
- Specifications are subjected to change without prior notice for further improvement.
- \* Above 55°C, only possible with backup heater operation.
- It is recommended to follow DHW tank water quality limit for Panasonic Air to Water All in One according to Drinking Water Directive 98/83 EC.