

### 3. Specifications

#### 3.1 WH-ADC0912K9E83 WH-UXZ09KE8

Item		Unit	Outdoor Unit		
Performance Test Condition		EN14511 / EN14825			
Cooling Capacity	Condition (Ambient/Water)	A35W7			
	kW	8.80			
	BTU/h	30000			
Cooling EER	W/W	3.11			
Heating Capacity	Condition (Ambient/Water)	A7W35	A2W35		
	kW	9.00	9.00		
	BTU/h	30700	30700		
Heating COP	W/W	5.03	3.69		
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	9.0	9.0	11.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	6.47 / 256	4.96 / 195	4.31 / 169
	Annual Consumption	kWh	1859	3747	6289
	Class		A+++	A+++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	9.0	9.0	11.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.34 / 171	3.57 / 140	3.26 / 127
	Annual Consumption	kWh	2772	5208	8327
	Class		A+++	A++	A++
	DHW		Warmer	Average	Colder
	Application	Climate			
	COP / nwh	(W/W) / %	3.35 / 134	3.08 / 123	2.35 / 94
	AEC	kWh	1231	1338	1750
	Noise Level	Condition (Ambient/Water)	A35W7	A7W35	A2W35
dB (A)		Cooling: 49	Heating: 51	Heating: 51	
Power Level dB (A)		Cooling: 67	Heating: 68 Heating: 65	Heating: 68 Heating: 65	
Air Flow	m <sup>3</sup> /min (ft <sup>3</sup> /min)	Cooling: 85.3 (3010) Heating: 64.9 (2290)			
Refrigeration Control Device	Expansion Valve				
Refrigeration Oil	cm <sup>3</sup>	FW50S (1300)			
Refrigerant (R32) Precharged / Maximum	kg (oz)	1.60 (56.5) / 2.20 (77.7)			
F-GAS	GWP	675			
	CO <sub>2</sub> eq (ton) (Precharged / Maximum)	1.080 / 1.485			
Dimension	Height	mm (inch)	1340 (52-3/4)		
	Width	mm (inch)	900 (35-7/16)		
	Depth	mm (inch)	320 (12-19/32)		
Net Weight	kg (lbs)	90 (198)			
Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	12.7 (1/2)		

Item		Unit	Outdoor Unit		
Standard Length		m (ft)	7 (23.0)		
Pipe Length Range		m (ft)	3 (9.8) ~ 30 (98.4)		
I/D & O/D Height Difference		m (ft)	20 (65.6)		
Additional Gas Amount		g/m (oz/ft)	30 (0.3)		
Refrigeration Charge Less		m (ft)	10 (32.8)		
Compressor	Type		Hermetic Motor		
	Motor Type		Synchronous Electric Motor (6-poles)		
	Rated Output	kW	3.00		
Fan	Type		Propeller Fan		
	Material		PP		
	Motor Type		DC (8-poles)		
	Input Power	W	-		
	Output Power	W	60		
	Fan Speed	rpm	Cooling: 630 (Top), 670 (Bottom) Heating: 440 (Top), 480 (Bottom)		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 62 × 19		
	Size (W × H × L)	mm	903.7 × 1302.0 × 36.38		
Power Source (Phase, Voltage, Cycle)		∅	Three		
		V	400		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 2.83	Heating: 1.79	Heating: 2.44
Maximum Input Power For Heatpump System		kW	6.60		
Power Supply 1 : Phase (∅) / Max. Current (A) / Max. Input Power (W)			3∅ / 10.4 / 6.60k		
Power Supply 2 : Phase (∅) / Max. Current (A) / Max. Input Power (W)			3∅ / 13.0 / 9.00k		
Power Supply 3 : Phase (∅) / Max. Current (A) / Max. Input Power (W)			- / - / -		
Starting Current		A	2.8		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 4.5	Heating: 2.8	Heating: 3.9
Maximum Current For Heatpump System		A	10.4		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 92 Heating: 92 Heating: 92		
Power Cord		Number of core	-		
		Length	m (ft)	-	
Thermostat			Electronic Control		
Protection Device			Electronic Control		

Item		Unit	Indoor Unit		
Performance Test Condition			EN14511 / EN14825		
Operation Range	Outdoor Ambient	°C (min. / max.)	Cooling (Circuit): 10 / 43 Heating (Tank/Circuit): -28 / 35		
	Water Outlet	°C (min. / max.)	Cooling: 5 / 20 Heating (Tank): - / 65* <sup>3</sup> , Heating Circuit: 20 / 55 (Below Ambient -15°C)** <sup>4</sup> Heating Circuit: 20 / 60 (Above Ambient -10°C)** <sup>4</sup>		
Internal Pressure Differential		kPa	Cooling: 30.0 Heating: 32.0		
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 33	Heating: 33	Heating: 33
	Power Level dB (A)		Cooling: 46	Heating: 46	Heating: 46
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)	119 (262)		
Refrigerant Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	12.7 (1/2)		
Water Pipe Diameter	Room	mm (inch)	31.75 (1-1/4)		
	Shower	mm (inch)	19.05 (3/4)		
Water Drain Hose Inner Diameter		mm (inch)	12.00 (17/36)		
Pump	Motor Type		Brushless DC Motor		
	No. of Speed		7 (Software Selection)		
	Input Power	W	145		
Hot Water Coil	Type		Braze Plate		
	No. of Plates		36		
	Size (W × H × L)	mm	68 × 333 × 121 or 68 × 376 × 119		
	Water Flow Rate	l/min (m <sup>3</sup> /h)	Cooling: 25.2 (1.5) Heating: 25.8 (1.5)		
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 210 and below		
Flow Sensor	Type		Piezoelectric sensor		
	Range	l/min	5 ~ 60		
Pressure Release Valve		kPa	Open: 800, Close: 640 and below		
Protection Device		A	Earth Leakage Circuit Breaker (25 ~ 40)		
Expansion Vessel	Volume	l	10		
	MWP	bar	3.0		
Capacity of Integrated Electric Heater / OLP TEMP		kW / °C	9.00 / 80		
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	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	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 (Chloride + Sulphate + Nitric)	mg/L	< 150
	Conductivity @ Water Tank Water Temperature < 60°C	µS/cm	< 1250
	Conductivity @ Water Tank Water Temperature < 65°C	µS/cm	< 1200
	Saturation Index (LSI) @ 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.
- \*<sup>3</sup> Above 55°C, only possible with backup heater operation.
- \*<sup>4</sup> Between outdoor ambient -10°C and -15°C, the water outlet temperature gradually decreases from 60°C to 55°C.
- 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
- 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.
- Flowrate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and ΔT=5°C.
- The sound pressure 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 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)
- The sound power level is measured with accordance to EN12102 under conditions of the EN14825.
- EER and COP classification is at 230V only in accordance with EU directive 2003/32/EC.