

2. Specifications

2.1 WH-SDC03H3E5 WH-UD03HE5

Item			Unit	Outdoor Unit	
Performance Test Condition				EN 14511	
Cooling Capacity			Condition (Ambient/Water)	A35W7	
			kW	3.20	
			BTU/h	10900	
			kcal/h	2750	
Cooling EER			W/W	3.08	
			kcal/hW	2.64	
Heating Capacity			Condition (Ambient/Water)	A7W35	A2W35
			kW	3.20	3.20
			BTU/h	10900	10900
			kcal/h	2750	2750
Heating COP			W/W	5.00	3.56
			kcal/hW	4.30	3.06
Noise Level			Condition (Ambient/Water)	A35W7	
			dB (A)	Cooling: 47	
			Power Level dB	Cooling: 65	
Heating	ErP	Application	Climate	Average – Low Temp (W35)	Average – Medium Temp (W55)
		Pdesign	kW	4.0	3.0
		Tbivalent	°C	-10	-10
		SCOP	(W/W) / %	4.88 / 195	3.25 / 130
		Annual Consumption	kWh	1693	1908
		Class		A++	A++
Air Flow			m³/min (ft³/min)	Cooling: 33.9 (1200) Heating: 28.9 (1020)	
Refrigeration Control Device				Expansion Valve	
Refrigeration Oil			cm³	FV50S (450)	
Refrigerant (R410A)			kg (oz)	1.20 (42.4)	
Dimension	Height		mm (inch)	622 (24-1/2)	
	Width		mm (inch)	824 (32-15/32)	
	Depth		mm (inch)	298 (11-24/32)	
Net Weight			kg (lbs)	39 (86)	
Pipe Diameter	Liquid		mm (inch)	6.35 (1/4)	
	Gas		mm (inch)	12.70 (1/2)	
Standard Length			m (ft)	7 (23.0)	
Pipe Length Range			m (ft)	3 (9.8) ~ 15 (49.2)	
I/D & O/D Height Difference			m (ft)	5 (16.4)	
Additional Gas Amount			g/m (oz/ft)	20 (0.2)	
Refrigeration Charge Less			m (ft)	10 (32.8)	
Compressor	Type			Hermetic Motor (Rotary)	
	Motor Type			Brushless (4-poles)	
	Rated Output		kW	0.90	

Item		Unit	Outdoor Unit		
Fan	Type		Propeller Fan		
	Material		PP		
	Motor Type		DC (8-poles)		
	Input Power	W	—		
	Output Power	W	40		
	Fan Speed	rpm	Cooling: 950 Heating: 800		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 28 × 17		
	Size (W × H × L)	mm	36.4 × 588 × 827.7 : 856.3		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 1.04	Heating: 0.64	Heating: 0.90
Maximum Input Power For Heatpump System		kW	2.35		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 11.0 / 2.35k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 13.0 / 3.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	3.0		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 4.8	Heating: 3.0	Heating: 4.2
Maximum Current For Heatpump System		A	11.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 94 Heating: 93		
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	Cooling: 16 ~ 43 Heating: -20 ~ 35	
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55	
Internal Pressure Differential		kPa	Cooling: 5.0 Heating: 5.0	
Noise Level	Condition (Ambient/Water)		A35W7	
	dB (A)		Cooling: 28	
	Power Level dB		Cooling: 41	
Dimension	Height	mm (inch)	892 (35-1/8)	
	Width	mm (inch)	500 (19-11/16)	
	Depth	mm (inch)	340 (13-13/32)	
Net Weight		kg (lbs)	44 (97)	
Refrigerant Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)	
	Gas	mm (inch)	12.70 (1/2)	
Water Pipe Diameter	Inlet	mm (inch)	28 (1-3/32)	
	Outlet	mm (inch)	28 (1-3/32)	
Water Drain Hose Inner Diameter		mm (inch)	12 (15/32)	
Pump	Motor Type		DC Motor	
	Input Power	W	30	

Item		Unit	Indoor Unit
Hot Water Coil	Type		Brazed Plate
	No. of Plates		48
	Size (H × W × L)	mm	82 × 93 × 325
	Water Flow Rate	l/min (m ³ /h)	Cooling: 9.2 (0.6) Heating: 9.2 (0.6)
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below
Flow Switch			Electronic Sensor
Protection Device		A	Residual Current Circuit Breaker (30 ~ 40)
Expansion Vessel	Volume	l	10
	MWP	bar	3
Capacity of Integrated Electric Heater		kW	3.00

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.
- Specification are subjected to change without prior notice for further improvement.

2.2 WH-SDC05H3E5 WH-UD05HE5

Item			Unit	Outdoor Unit		
Performance Test Condition				EN 14511		
Cooling Capacity			Condition (Ambient/Water)	A35W7		
			kW	4.50		
			BTU/h	15300		
			kcal/h	3870		
Cooling EER			W/W	2.69		
			kcal/hW	2.32		
Heating Capacity			Condition (Ambient/Water)	A7W35	A2W35	
			kW	5.00	4.20	
			BTU/h	17100	14300	
			kcal/h	4300	3610	
Heating COP			W/W	4.63	3.11	
			kcal/hW	3.98	2.67	
Noise Level			Condition (Ambient/Water)	A35W7		
			dB (A)	Cooling: 48		
			Power Level dB	Cooling: 66		
Heating	ErP	Application	Climate	Average – Low Temp (W35)		Average – Medium Temp (W55)
		Pdesign	kW	5.0		4.0
		Tbivalent	°C	-10		-10
		SCOP	(W/W) / %	4.88 / 195		3.25 / 130
		Annual Consumption	kWh	2116		2541
		Class		A++		A++
Air Flow			m³/min (ft³/min)	Cooling: 39.6 (1400) Heating: 31.8 (1120)		
Refrigeration Control Device				Expansion Valve		
Refrigeration Oil			cm³	FV50S (450)		
Refrigerant (R410A)			kg (oz)	1.20 (42.4)		
Dimension	Height		mm (inch)	622 (24-1/2)		
	Width		mm (inch)	824 (32-15/32)		
	Depth		mm (inch)	298 (11-24/32)		
Net Weight			kg (lbs)	39 (86)		
Pipe Diameter	Liquid		mm (inch)	6.35 (1/4)		
	Gas		mm (inch)	12.70 (1/2)		
Standard Length			m (ft)	7 (23.0)		
Pipe Length Range			m (ft)	3 (9.8) ~ 15 (49.2)		
I/D & O/D Height Difference			m (ft)	5 (16.4)		
Additional Gas Amount			g/m (oz/ft)	20 (0.2)		
Refrigeration Charge Less			m (ft)	10 (32.8)		
Compressor	Type			Hermetic Motor (Rotary)		
	Motor Type			Brushless (4-poles)		
	Rated Output		kW	0.90		
Fan	Type			Propeller Fan		
	Material			PP		
	Motor Type			DC (8-poles)		
	Input Power		W	—		
	Output Power		W	40		
	Fan Speed		rpm	Cooling: 980 Heating: 860		

Item		Unit	Outdoor Unit		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 28 × 17		
	Size (W × H × L)	mm	36.4 × 588 × 827.7 : 856.3		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 1.67	Heating: 1.08	Heating: 1.35
Maximum Input Power For Heatpump System		kW	2.59		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 12.0 / 2.59k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 13.0 / 3.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	5.0		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 7.6	Heating: 5.0	Heating: 6.2
Maximum Current For Heatpump System		A	12.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	A35W7 Cooling: 96	A7W35 Heating: 94	A2W35 Heating: 95
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	Cooling: 16 ~ 43 Heating: -20 ~ 35	
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55	
Internal Pressure Differential		kPa	Cooling: 9.5 Heating: 12.3	
Noise Level		Condition (Ambient/Water)	A35W7	
		dB (A)	Cooling: 28	
		Power Level dB	Cooling: 41	
Dimension	Height	mm (inch)	892 (35-1/8)	
	Width	mm (inch)	500 (19-11/16)	
	Depth	mm (inch)	340 (13-13/32)	
Net Weight		kg (lbs)	44 (97)	
Refrigerant Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)	
	Gas	mm (inch)	12.70 (1/2)	
Water Pipe Diameter	Inlet	mm (inch)	28 (1-3/32)	
	Outlet	mm (inch)	28 (1-3/32)	
Water Drain Hose Inner Diameter		mm (inch)	12 (15/32)	
Pump	Motor Type		DC Motor	
	Input Power	W	34	
Hot Water Coil	Type		Brazen Plate	
	No. of Plates		48	
	Size (H × W × L)	mm	82 × 93 × 325	
	Water Flow Rate	l/min (m³/h)	Cooling: 12.9 (0.8) Heating: 14.3 (0.9)	
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below	
Flow Switch			Electronic Sensor	

Item		Unit	Indoor Unit
Protection Device		A	Residual Current Circuit Breaker (30 ~ 40)
Expansion Vessel	Volume	l	10
	MWP	bar	3
Capacity of Integrated Electric Heater		kW	3.00

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.
- Specification are subjected to change without prior notice for further improvement.

2. Specifications

2.1 WH-SDC07H3E5 WH-UD07HE5

Item		Unit	Outdoor Unit		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		6.00		
	BTU/h		20500		
	kcal/h		5160		
Cooling EER	W/W		2.63		
	kcal/hW		2.26		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		7.00	6.55	
	BTU/h		23900	22300	
	kcal/h		6020	5630	
Heating COP	W/W		4.46	3.34	
	kcal/hW		3.84	2.87	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	7.0	5.0	6.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	5.69 / 225	4.83 / 190	4.08 / 160
	Annual Consumption	kWh	1643	2140	3624
	Class		A++	A++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	6.0	7.0	6.0
	Tbivalent / TOL	°C	2 / 2	-6 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.07 / 160	3.32 / 130	2.95 / 115
	Annual Consumption	kWh	1971	4354	5022
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 48	Heating: 50	—
	Power Level dB		Cooling: 66	Heating: 68	—
Air Flow		m³/min (ft³/min)	Cooling: 56.3 (1987) Heating: 46.0 (1624)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil		cm³	FV50S (900)		
Refrigerant (R410A)		kg (oz)	1.45 (51.2)		
Dimension	Height	mm (inch)	795 (31-5/16)		
	Width	mm (inch)	900 (35-7/16)		
	Depth	mm (inch)	320 (12-19/32)		
Net Weight		kg (lbs)	66 (146)		
Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	15.88 (5/8)		
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)		

Item		Unit	Outdoor Unit		
Compressor	Type		Hermetic Motor		
	Motor Type		Brushless (4-poles)		
	Rated Output	kW	1.70		
Fan	Type		Propeller Fan		
	Material		PP		
	Motor Type		DC (8-poles)		
	Input Power	W	—		
	Output Power	W	60		
	Fan Speed	rpm	Cooling: 670 Heating: 570		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 30 × 17		
	Size (W × H × L)	mm	38.1 × 762.0 × 873.8:903.8		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 2.28	Heating: 1.57	Heating: 1.96
Maximum Input Power For Heatpump System		kW	4.59		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 21.0 / 4.59k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 13.0 / 3.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	7.2		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 10.3	Heating: 7.2	Heating: 9.0
Maximum Current For Heatpump System		A	21.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 96 Heating: 95		
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	Cooling: 16 ~ 43 Heating: -20 ~ 35		
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55		
Internal Pressure Differential		kPa	Cooling: 18.0 Heating: 24.0		
Noise Level		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		dB (A)	Cooling: 30	Cooling: 30	—
		Power Level dB	Cooling: 43	Cooling: 43	—
Dimension	Height	mm (inch)	892 (35-1/8)		
	Width	mm (inch)	500 (19-11/16)		
	Depth	mm (inch)	340 (13-13/32)		
Net Weight		kg (lbs)	44 (97)		
Refrigerant Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	15.88 (5/8)		
Water Pipe Diameter	Inlet	mm (inch)	28 (1-3/32)		
	Outlet	mm (inch)	28 (1-3/32)		
Water Drain Hose Inner Diameter		mm (inch)	12 (15/32)		

Item		Unit	Indoor Unit
Pump	Motor Type		DC Motor
	No. of Speed		7 (Software Selection)
	Input Power	W	48
Hot Water Coil	Type		Brazed Plate
	No. of Plates		48
	Size (H × W × L)	mm	82 × 93 × 325
	Water Flow Rate	l/min (m ³ /h)	Cooling: 17.6 (1.1) Heating: 20.1 (1.2)
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below
Flow Switch			Electronic Sensor
Protection Device		A	Residual Current Circuit Breaker (30 ~ 40)
Expansion Vessel	Volume	l	10
	MWP	bar	3
Capacity of Integrated Electric Heater		kW	3.00

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.
- Specification are subjected to change without prior notice for further improvement.
- Flow rate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and $\Delta T = 5^\circ\text{C}$.

2.2 WH-SDC09H3E5 WH-UD09HE5

Item		Unit	Outdoor Unit		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		7.00		
	BTU/h		23900		
	kcal/h		6020		
Cooling EER	W/W		2.43		
	kcal/hW		2.09		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		9.00	6.70	
	BTU/h		30700	22800	
	kcal/h		7740	5760	
Heating COP	W/W		4.13	3.13	
	kcal/hW		3.55	2.69	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	7.0	6.0	7.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	5.69 / 225	4.83 / 190	4.08 / 160
	Annual Consumption	kWh	1643	2566	4233
	Class		A++	A++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	6.0	7.0	6.0
	Tbivalent / TOL	°C	2 / 2	-6 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.07 / 160	3.32 / 130	2.95 / 115
	Annual Consumption	kWh	1971	4354	5022
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 50	Heating: 51	—
	Power Level dB		Cooling: 68	Heating: 69	—
Air Flow		m ³ /min (ft ³ /min)	Cooling: 56.3 (1987) Heating: 51.0 (1800)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil		cm ³	FV50S (900)		
Refrigerant (R410A)		kg (oz)	1.45 (51.2)		
Dimension	Height	mm (inch)	795 (31-5/16)		
	Width	mm (inch)	900 (35-7/16)		
	Depth	mm (inch)	320 (12-19/32)		
Net Weight		kg (lbs)	66 (146)		
Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	15.88 (5/8)		
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		Brushless (4-poles)		
	Rated Output	kW	1.70		

Item		Unit	Outdoor Unit		
Fan	Type		Propeller Fan		
	Material		PP		
	Motor Type		DC (8-poles)		
	Input Power	W	—		
	Output Power	W	60		
	Fan Speed	rpm	Cooling: 700 Heating: 640		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 30 × 17		
	Size (W × H × L)	mm	38.1 × 762.0 × 873.8:903.8		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 2.88	Heating: 2.18	Heating: 2.14
Maximum Input Power For Heatpump System		kW	5.01		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 22.9 / 5.01k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 13.0 / 3.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	10.0		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 13.0	Heating: 10.0	Heating: 9.8
Maximum Current For Heatpump System		A	22.9		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 96 Heating: 95		
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	Cooling: 16 ~ 43 Heating: -20 ~ 35		
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55		
Internal Pressure Differential		kPa	Cooling: 24.0 Heating: 39.5		
Noise Level		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		dB (A)	Cooling: 30	Cooling: 30	—
		Power Level dB	Cooling: 43	Cooling: 43	—
Dimension	Height	mm (inch)	892 (35-1/8)		
	Width	mm (inch)	500 (19-11/16)		
	Depth	mm (inch)	340 (13-13/32)		
Net Weight		kg (lbs)	44 (97)		
Refrigerant Pipe Diameter	Liquid	mm (inch)	6.35 (1/4)		
	Gas	mm (inch)	15.88 (5/8)		
Water Pipe Diameter	Inlet	mm (inch)	28 (1-3/32)		
	Outlet	mm (inch)	28 (1-3/32)		
Water Drain Hose Inner Diameter		mm (inch)	12 (15/32)		
Pump	Motor Type		DC Motor		
	No. of Speed		7 (Software Selection)		
	Input Power	W	68		

Item		Unit	Indoor Unit
Hot Water Coil	Type		Brazed Plate
	No. of Plates		48
	Size (H × W × L)	mm	82 × 93 × 325
	Water Flow Rate	l/min (m ³ /h)	Cooling: 20.1 (1.2) Heating: 25.8 (1.5)
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below
Flow Switch			Electronic Sensor
Protection Device		A	Residual Current Circuit Breaker (30 ~ 40)
Expansion Vessel	Volume	l	10
	MWP	bar	3
Capacity of Integrated Electric Heater		kW	3.00

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.
- Specification are subjected to change without prior notice for further improvement.
- Flow rate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and $\Delta T = 5^\circ\text{C}$.

2. Specifications

2.1 WH-SDC12H6E5 WH-UD12HE5

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/hW		2.42		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		12.00	11.40	
	BTU/h		41000	38900	
	kcal/h		10320	9800	
Heating COP	W/W		4.74	3.44	
	kcal/hW		4.08	2.96	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	11.0	10.0	11.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	6.21 / 245	4.82 / 190	4.29 / 168
	Annual Consumption	kWh	2368	4286	6327
	Class		A++	A++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	9.0	8.0	9.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.05 / 159	3.42 / 134	3.10 / 121
	Annual Consumption	kWh	2970	4840	7147
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 50	Heating: 52	—
	Power Level dB		Cooling: 68	Heating: 69	—
Air Flow		m ³ /min (ft ³ /min)	Cooling: 93.3 (3290) Heating: 80.0 (2830)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil		cm ³	FV50S (1200)		
Refrigerant (R410A)		kg (oz)	2.55 (90.0)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		5.324 / 7.412		
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)	101 (223)		
Pipe Diameter	Liquid	mm (inch)	9.52 (3/8)		
	Gas	mm (inch)	15.88 (5/8)		
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)	50 (0.5)		

Item		Unit	Outdoor Unit		
Refrigeration Charge Less		m (ft)	10 (32.8)		
Compressor	Type		Hermetic Motor		
	Motor Type		Brushless (4-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: 600 (Top), 640 (Bottom) Heating: 510 (Top), 550 (Bottom)		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 51 × 18		
	Size (W × H × L)	mm	903,7 × 1295,4 × 38,1		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 3.56	Heating: 2.53	Heating: 3.31
Maximum Input Power For Heatpump System		kW	5.30		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 24.0 / 5.30k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 26.0 / 6.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	16.0		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 16.0	Heating: 11.7	Heating: 15.0
Maximum Current For Heatpump System		A	24.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 97	Heating: 94	Heating: 96
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	Cooling: 16 ~ 43 Heating: -20 ~ 35		
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55		
Internal Pressure Differential		kPa	Cooling: 36 Heating: 51		
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)	892 (35-1/8)		
	Width	mm (inch)	500 (19-11/16)		
	Depth	mm (inch)	340 (13-13/32)		
Net Weight		kg (lbs)	43 (95)		
Refrigerant Pipe Diameter	Liquid	mm (inch)	9.52 (3/8)		
	Gas	mm (inch)	15.88 (5/8)		
Water Pipe Diameter	Inlet	mm (inch)	32 (1-1/4)		
	Outlet	mm (inch)	32 (1-1/4)		
Water Drain Hose Inner Diameter		mm (inch)	15 (19/32)		
Pump	Motor Type		DC Motor		
	No. of Speed		7 (Software Selection)		
	Input Power	W	92		
Hot Water Coil	Type		Brazed Plate		
	No. of Plates		36		
	Size (W × H × L)	mm	66.7 × 119 × 376		
	Water Flow Rate	l/min (m³/h)	Cooling: 28.7 (1.7) Heating: 34.4 (2.1)		
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below		
Flow Switch			Electronic Sensor		
Protection Device		A	Residual Current Circuit Breaker (30)		
Expansion Vessel	Volume	l	10		
	MWP	bar	3		
Capacity of Integrated Electric Heater		kW	6.00		

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.
- Specification are subjected to change without prior notice for further improvement.
- Flow rate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and $\Delta T = 5^\circ\text{C}$.

2.2 WH-SDC16H6E5 WH-UD16HE5

Item		Unit	Outdoor Unit		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		12.20		
	BTU/h		41600		
	kcal/h		10490		
Cooling EER	W/W		2.56		
	kcal/hW		2.20		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		16.00	13.00	
	BTU/h		54600	44300	
	kcal/h		13760	11180	
Heating COP	W/W		4.28	3.28	
	kcal/hW		3.68	2.82	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	13.0	12.0	12.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	6.20 / 245	4.82 / 190	4.28 / 168
	Annual Consumption	kWh	2801	5146	6911
	Class		A++	A++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	10.0	13.0	10.0
	Tbivalent / TOL	°C	2 / 2	-3 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.30 / 169	3.33 / 130	3.10 / 121
	Annual Consumption	kWh	3104	8076	7955
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 54	Heating: 55	—
	Power Level dB		Cooling: 72	Heating: 72	—
Air Flow		m ³ /min (ft ³ /min)	Cooling: 97.8 (3450) Heating: 90.0 (3180)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil		cm ³	FV50S (1200)		
Refrigerant (R410A)		kg (oz)	2.55 (90.0)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		5.324 / 7.412		
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)	101 (223)		
Pipe Diameter	Liquid	mm (inch)	9.52 (3/8)		
	Gas	mm (inch)	15.88 (5/8)		
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)	50 (0.5)		
Refrigeration Charge Less		m (ft)	10 (32.8)		

Item		Unit	Outdoor Unit		
Compressor	Type		Hermetic Motor		
	Motor Type		Brushless (4-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: 580 (Top), 620 (Bottom)		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 51 × 18		
	Size (W × H × L)	mm	903.7 × 1295.4 × 38.1		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 4.76	Heating: 3.74	Heating: 3.96
Maximum Input Power For Heatpump System		kW	5.74		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 26.0 / 5.74k		
Power Supply 2 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 26.0 / 6.00k		
Power Supply 3 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			— / — / —		
Starting Current		A	21.3		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 21.3	Heating: 16.9	Heating: 17.9
Maximum Current For Heatpump System		A	26.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	A35W7	A7W35	A2W35
			Cooling: 97	Heating: 96	Heating: 96
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	Cooling: 16 ~ 43 Heating: -20 ~ 35		
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55		
Internal Pressure Differential		kPa	Cooling: 48 Heating: 82		
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)	892 (35-1/8)		
	Width	mm (inch)	500 (19-11/16)		
	Depth	mm (inch)	340 (13-13/32)		
Net Weight		kg (lbs)	44 (97)		
Refrigerant Pipe Diameter	Liquid	mm (inch)	9.52 (3/8)		
	Gas	mm (inch)	15.88 (5/8)		
Water Pipe Diameter	Inlet	mm (inch)	32 (1-1/4)		
	Outlet	mm (inch)	32 (1-1/4)		
Water Drain Hose Inner Diameter		mm (inch)	15 (19/32)		
Pump	Motor Type		DC Motor		
	No. of Speed		7 (Software Selection)		
	Input Power	W	142		
Hot Water Coil	Type		Brazen Plate		
	No. of Plates		44		
	Size (H × W × L)	mm	66.7 × 119 × 376		
	Water Flow Rate	l/min (m ³ /h)	Cooling: 35.0 (2.1) Heating: 45.9 (2.8)		
Pressure Relief Valve Water Circuit		kPa	Open: 300, Close: 266 and below		
Flow Switch			Electronic Sensor		
Protection Device		A	Residual Current Circuit Breaker (30)		
Expansion Vessel	Volume	l	10		
	MWP	bar	3		
Capacity of Integrated Electric Heater		kW	6.00		

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.
- Specification are subjected to change without prior notice for further improvement.
- Flow rate indicated are based on nominal capacity adjustment of leaving water temperature (LWT) 35°C and $\Delta T = 5^\circ\text{C}$.

18.2 Heating Capacity Table

18.2.1 WH-SDC03H3E5 WH-UD03HE5

Water Out (°C)	30		35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	3200	1260	3200	1390	3100	1520	3000	1640	2800	1780	2750	1920
-7	3200	1080	3200	1190	3200	1340	3200	1480	3200	1670	3200	1860
2	3200	820	3200	900	3200	1030	3200	1160	3200	1330	3200	1490
7	3200	580	3200	640	3200	770	3200	890	3200	1050	3200	1200
16	3200	500	3200	550	3200	640	3200	720	3200	860	3200	990
25	3200	420	3200	460	3200	550	3200	630	3200	730	3200	820

18.2.2 WH-SDC05H3E5 WH-UD05HE5

Water Out (°C)	30		35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	4200	1750	4200	1940	3800	1960	3400	1980	3200	2050	3000	2120
-7	4200	1460	4200	1620	4000	1720	3800	1820	3700	1950	3550	2080
2	4200	1220	4200	1350	4200	1500	4200	1650	4150	1860	4100	2070
7	5000	970	5000	1080	5000	1280	5000	1480	5000	1680	5000	1890
16	5000	830	5000	920	5000	1150	5000	1380	5000	1530	5000	1680
25	5000	740	5000	820	5000	1020	5000	1220	5000	1350	5000	1490

18.3 Cooling Capacity Table

18.3.1 WH-SDC03H3E5 WH-UD03HE5

Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
18	2400	420	4400	730	3700	490
25	3200	730	4100	860	3500	590
35	3200	1040	3900	1070	3300	740
43	2900	1200	3500	1200	3000	880

18.3.2 WH-SDC05H3E5 WH-UD05HE5

Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
18	4500	890	5000	900	5700	900
25	5000	1430	6300	1500	5400	1060
35	4500	1670	5500	1680	5000	1330
43	3300	1530	4100	1520	4400	1530

18.2 Heating Capacity Table

18.2.1 WH-UD07HE5

Water Out (°C)	35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	4600	1980	4600	2190	4600	2400	4550	2630	4500	2860
-7	5150	1920	5075	2140	5000	2360	4900	2450	4800	2540
2	6550	1960	6575	2290	6600	2620	6300	2815	6000	3010
7	7000	1570	7000	1835	7000	2100	6900	2345	6800	2590
25	7000	970	6740	1140	6480	1310	6240	1430	6000	1550

18.2.2 WH-UD09HE5

Water Out (°C)	35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	5900	2660	5650	2820	5400	2980	5200	3080	5000	3180
-7	5900	2340	5850	2610	5800	2880	5800	2980	5800	3080
2	6700	2140	6650	2380	6600	2620	6300	2815	6000	3010
7	9000	2180	9000	2485	9000	2790	8950	3245	8900	3700
25	9000	1260	8660	1475	8320	1690	8030	1850	7740	2010

18.3 Cooling Capacity Table

18.3.1 WH-SDC07H3E5 WH-UD07HE5

Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
16	4800	800	7200	1160	6000	1130
25	7000	1900	8470	1780	6000	1270
35	6000	2280	6600	2480	6000	1680
43	4850	2650	6000	2820	4800	1980

18.3.2 WH-SDC09H3E5 WH-UD09HE5

Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
16	5400	1000	8400	1620	7000	1610
25	7850	2400	10200	2460	7000	1770
35	7000	2880	7600	3200	7000	2150
43	5200	2850	6990	3840	5600	2550

18.2 Heating Capacity Table

18.2.1 WH-SDC12H6E5 WH-UD12HE5

Water Out (°C)	30		35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	9300	3460	8900	3620	8500	3790	8100	3950	7500	4050	7000	4160
-7	10400	3370	10000	3660	9600	3950	9200	4240	8700	4260	8200	4270
2	11800	3100	11400	3310	11000	3530	10600	3740	9800	3940	9100	4140
7	12000	2100	12000	2530	12000	2960	12000	3390	12000	3780	12000	4160
25	12000	1380	12000	1660	11800	1940	11700	2230	11500	2490	11400	2740

18.2.2 WH-SDC16H6E5 WH-UD16HE5

Water Out (°C)	30		35		40		45		50		55	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
-15	10600	4090	10300	4380	10000	4670	9700	4960	8800	4940	7900	4910
-7	11900	4030	11400	4430	10800	4830	10300	5220	9600	5090	9000	4950
2	13500	3740	13000	3960	12400	4180	11900	4400	10800	4460	9800	4510
7	16000	3210	16000	3740	16000	4270	16000	4800	15200	5110	14500	5410
25	16000	2310	16000	2690	16000	3070	16000	3450	16000	3670	15900	3890

18.3 Cooling Capacity Table

18.3.1 WH-SDC12H6E5 WH-UD12HE5

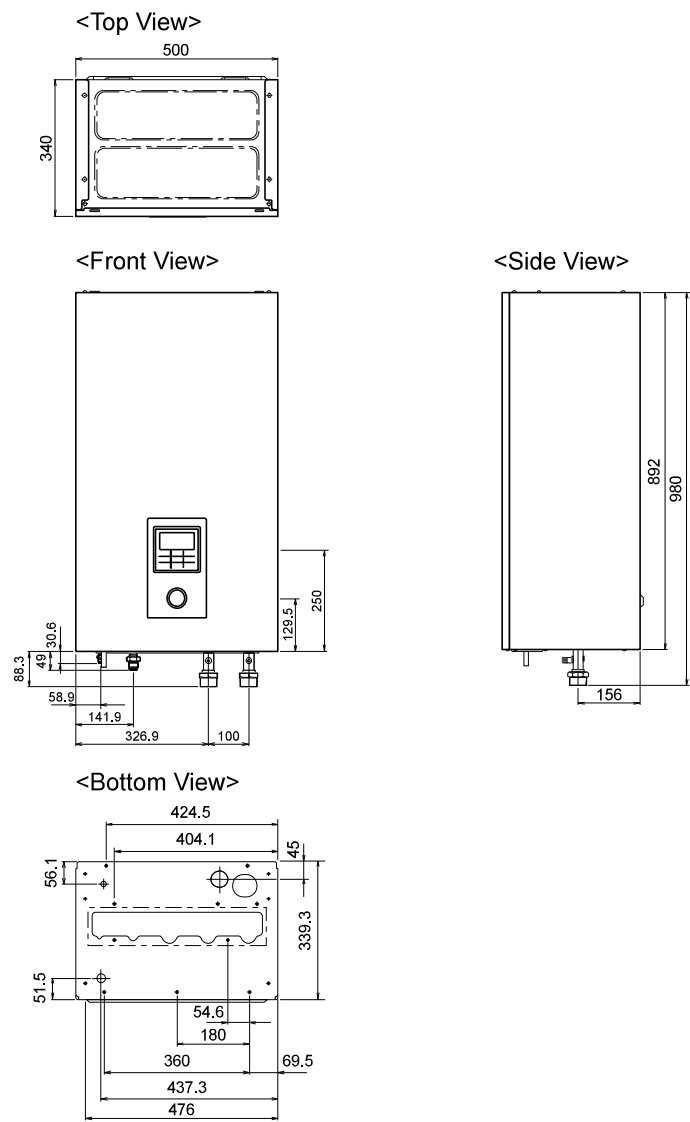
Water In (°C)	12		19		23	
Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
16	7860	1180	13150	1400	10000	1730
25	12080	2900	15700	2050	10000	1970
35	10000	2560	12000	2670	10000	2400
43	7800	3800	11100	3190	8000	2850

18.3.2 WH-SDC16H6E5 WH-UD16HE5

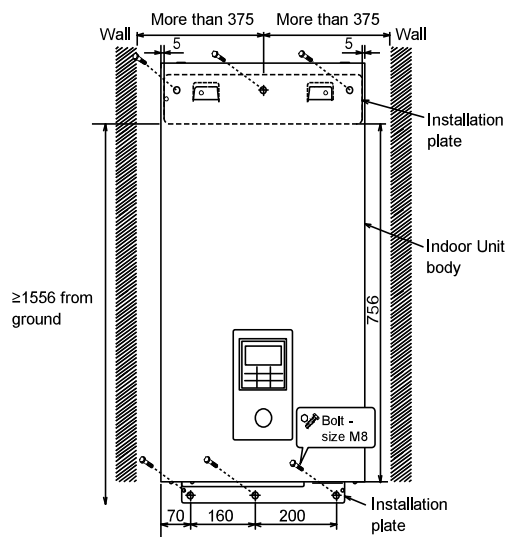
Water In (°C)	12		19		23	
Water Out (°C)	7		14		18	
Outdoor Air (°C)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
16	9200	1620	16400	2580	12200	2450
25	14400	3920	19200	3830	12200	2790
35	12200	4760	15000	4980	12200	2960
43	7750	3400	13800	5950	9700	4000

5. Dimensions

5.1 Indoor Unit

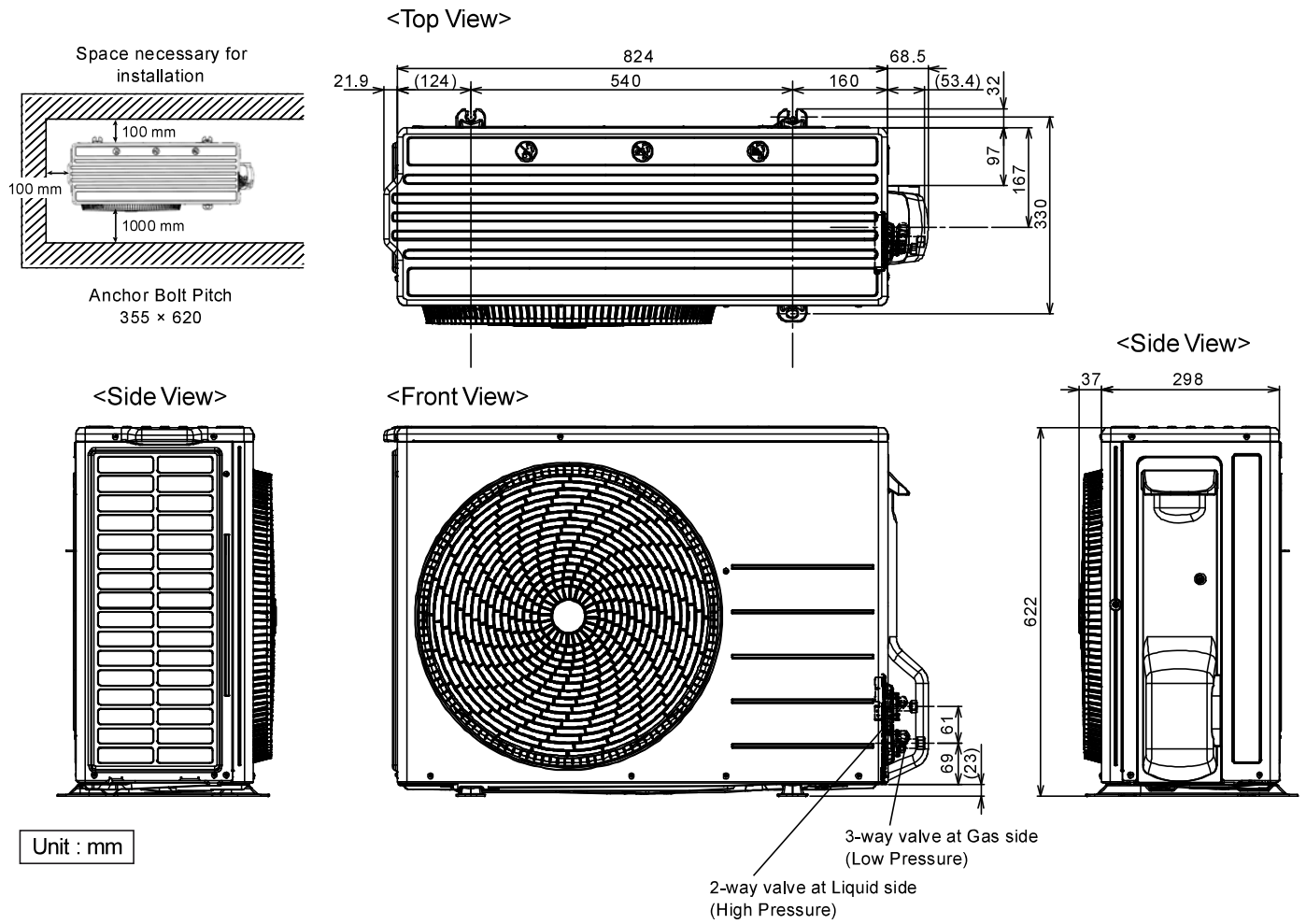


Relative position between the indoor unit and the installation plate <Front View>



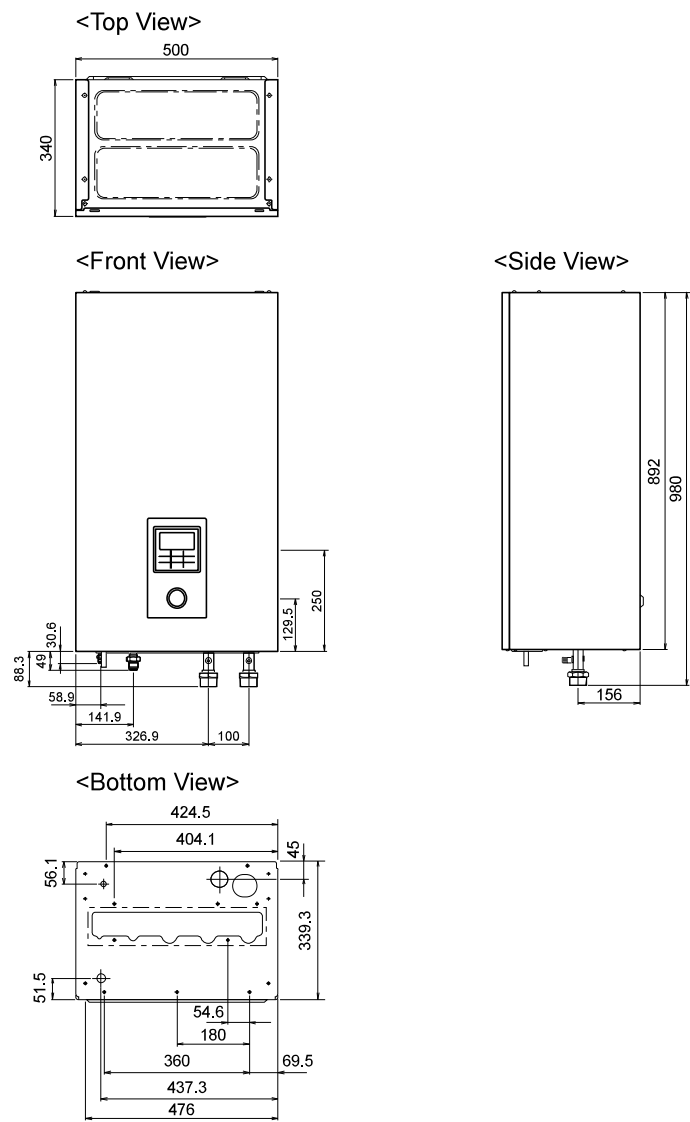
Unit: mm

5.2 Outdoor Unit

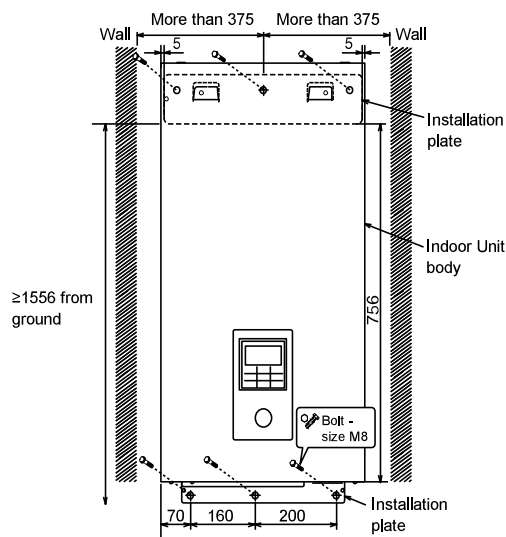


5. Dimensions

5.1 Indoor Unit

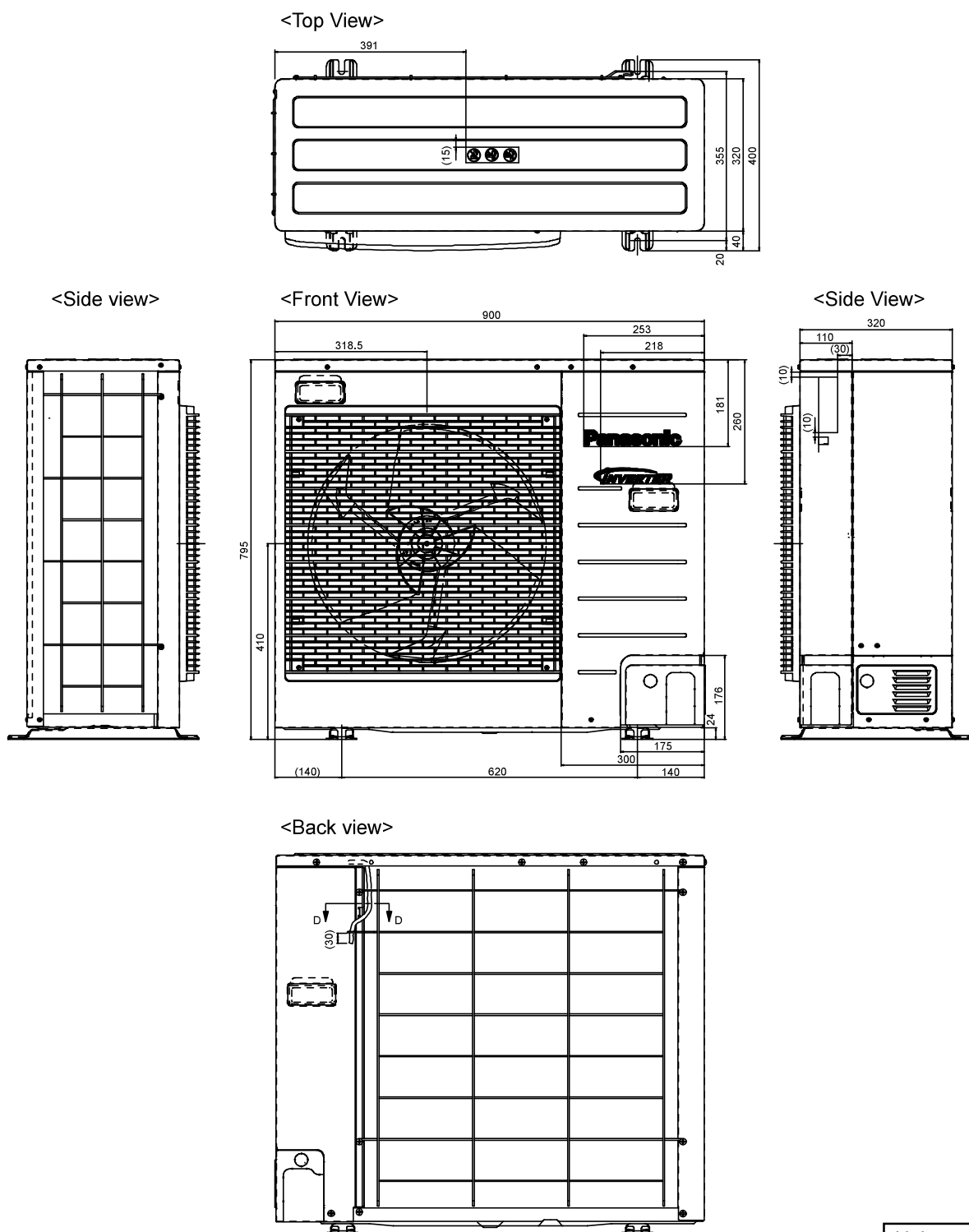


Relative position between the indoor unit and the installation plate <Front View>



Unit: mm

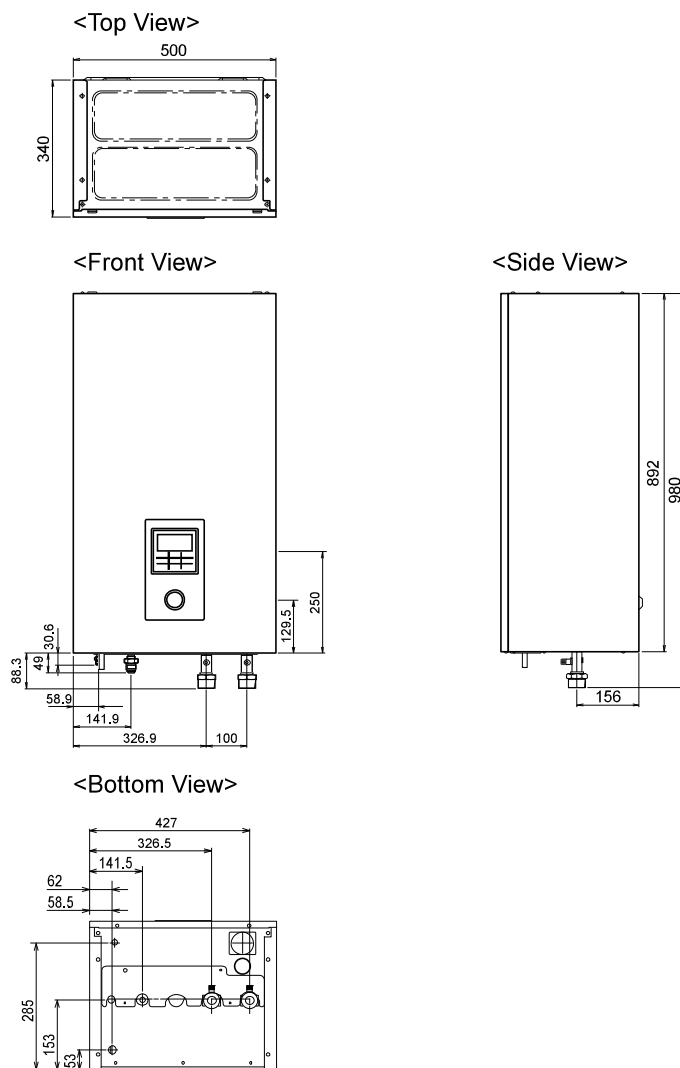
5.2 Outdoor Unit



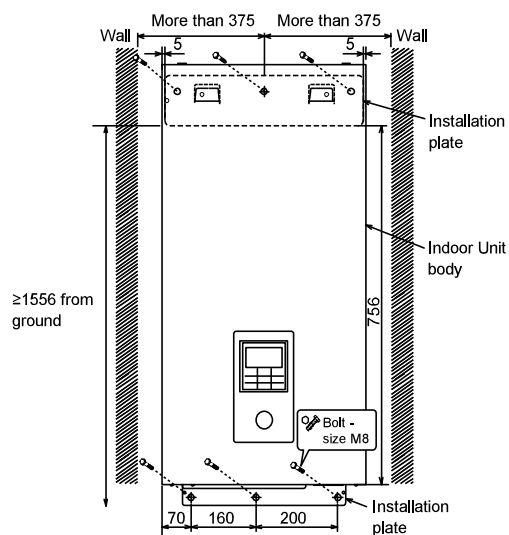
Unit: mm

5. Dimensions

5.1 Indoor Unit



Relative position between the indoor unit and the installation plate <Front View>



Unit: mm

5.2 Outdoor Unit

