

2. Specifications

2.1 WH-MDC05H3E5

Item		Unit	Refrigerant System		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		4.50		
	BTU/h		15300		
	kcal/h		3870		
Cooling EER	W/W		3.28		
	kcal/hW		2.82		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		5.00	4.80	
	BTU/h		17100	16400	
	kcal/h		4300	4130	
Heating COP	W/W		5.08	3.36	
	kcal/hW		4.37	2.89	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	5.0	4.0	6.0
	Tbivalent / TOL	°C	2 / 2	-10 / -10	-15 / -22
	SCOP / ns	(W/W) / %	6.00 / 237	5.05 / 199	4.08 / 160
	Annual Consumption	kWh	1113	1635	3625
	Class		A++	A++	A++
	Medium Temperature Application (W55)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	4.0	5.0	4.0
	Tbivalent / TOL	°C	2 / 2	-7 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.10 / 161	3.55 / 139	2.95 / 115
	Annual Consumption	kWh	1304	2914	3338
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 47	Heating: 49	-
	Power Level dB		Cooling: 65	Heating: 65	-
Air Flow	m ³ /min (ft ³ /min)		Cooling: 55.7 (1970) Heating: 39.3 (1390)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil	cm ³		FV50S (450)		
Refrigerant (R410A)	kg (oz)		1.3 (45.9)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		2.714 / 2.714		
Compressor	Type		Hermetic Motor		
	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	60		
	Fan Speed	rpm	Cooling: 700 Heating: 500		

Item		Unit	Refrigerant System		
Heat Exchanger	Fin material		Aluminium (Pre Coat)		
	Fin Type		Corrugated Fin		
	Row × Stage × FPI		2 × 36 × 18		
	Size (W × H × L)	mm	36.4 × 756 × 902 : 872		
Power Source (Phase, Voltage, Cycle)		Ø	Single		
		V	230		
		Hz	50		
Input Power		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		kW	Cooling: 1.37	Heating: 0.985	Heating: 1.43
Maximum Input Power For Heatpump System		kW	2.84		
Power Supply 1 : Phase (Ø) / Max. Current (A) / Max. Input Power (W)			1Ø / 13.0 / 2.84k		
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)			- / - / -		

Item		Unit	Mono Bloc Unit		
Starting Current		A	4.7		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 6.3	Heating: 4.7	Heating: 6.5
Maximum Current For Heatpump System		A	13.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 94	Heating: 91	Heating: 95
Dimension	Height	mm (inch)	865 (34-1/16)		
	Width	mm (inch)	1283 (50-17/32)		
	Depth	mm (inch)	320 (12-5/8)		
Net Weight		kg (lbs)	94 (207)		
Power Cord	Number of core		-		
	Length	m (ft)	-		
Thermostat			Electronic Control		
Protection Device			Electronic Control		

Item		Unit	Water System
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: 10.0 Heating: 12.0
Water Drain Hose Inner Diameter		mm (inch)	15.0 (19/32)
Pump	Motor Type		DC Motor
	Input Power	W	31
Hot Water Coil	Type		Brazed Plate
	No. of Plates		28
	Size (W × H × L)	mm	119 × 54 × 376
	Water Flow Rate	l/min (m ³ /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
Protection Device		A	Residual Current Circuit Breaker (40)
Expansion Vessel	Volume	l	6
	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 =5°C

2.2 WH-MDC07H3E5

Item		Unit	Refrigerant System		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		6.00		
	BTU/h		20500		
	kcal/h		5160		
Cooling EER	W/W		2.78		
	kcal/hW		2.39		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		7.00	6.60	
	BTU/h		23900	22500	
	kcal/h		6020	5680	
Heating COP	W/W		4.52	3.30	
	kcal/hW		3.88	2.84	
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	2137	3622
	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	-7 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.07 / 160	3.32 / 130	2.95 / 115
	Annual Consumption	kWh	1970	4350	5014
	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: 55.4 (1960) Heating: 45.0 (1590)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil	cm³		FV50S (900)		
Refrigerant (R410A)	kg (oz)		1.35 (47.7)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		2.819 / 2.819		
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: 700 Heating: 580		

Item		Unit	Refrigerant System		
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: 2.16	Heating: 1.55	Heating: 2.00
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)			- / - / -		

Item		Unit	Mono Bloc Unit		
Starting Current		A	7.2		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 9.9	Heating: 7.2	Heating: 9.2
Maximum Current For Heatpump System		A	21.0		
Power Factor Power factor means total figure of compressor and outdoor fan motor.		%	Cooling: 95	Heating: 93	Heating: 95
Dimension	Height	mm (inch)	865 (34-1/16)		
	Width	mm (inch)	1283 (50-17/32)		
	Depth	mm (inch)	320 (12-5/8)		
Net Weight		kg (lbs)	104 (229)		
Power Cord	Number of core		-		
	Length	m (ft)	-		
Thermostat			Electronic Control		
Protection Device			Electronic Control		

Item		Unit	Water System
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: 16.0 Heating: 21.0
Water Drain Hose Inner Diameter		mm (inch)	15.0 (19/32)
Pump	Motor Type		DC Motor
	Input Power	W	42
Hot Water Coil	Type		Brazed Plate
	No. of Plates		28
	Size (W × H × L)	mm	93 × 54 × 325
	Water Flow Rate	l/min (m ³ /h)	Cooling: 17.2 (1.0) 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 (40)
Expansion Vessel	Volume	l	6
	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 =5°C

2.3 WH-MDC09H3E5

Item		Unit	Refrigerant System		
Performance Test Condition			EN 14511		
Cooling Capacity	Condition (Ambient/Water)		A35W7		
	kW		7.00		
	BTU/h		23900		
	kcal/h		6020		
Cooling EER	W/W		2.60		
	kcal/hW		2.24		
Heating Capacity	Condition (Ambient/Water)		A7W35	A2W35	
	kW		9.00	6.80	
	BTU/h		30700	23200	
	kcal/h		7740	5850	
Heating COP	W/W		4.29	3.18	
	kcal/hW		3.69	2.73	
Heating ErP	Low Temperature Application (W35)		Warmer	Average	Colder
	Application	Climate			
	Pdesign	kW	7.0	5.0	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	2137	4230
	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	-7 / -10	-15 / -22
	SCOP / ns	(W/W) / %	4.07 / 160	3.32 / 130	2.95 / 115
	Annual Consumption	kWh	1970	4350	5002
	Class		A++	A++	A+
Noise Level	Condition (Ambient/Water)		A35W7	A7W35	A2W35
	dB (A)		Cooling: 49	Heating: 50	-
	Power Level dB		Cooling: 67	Heating: 68	-
Air Flow	m³/min (ft³/min)		Cooling: 55.4 (1960) Heating: 51.9 (1830)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil	cm³		FV50S (900)		
Refrigerant (R410A)	kg (oz)		1.35 (47.7)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		2.819 / 2.819		
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: 700 Heating: 650		

Item		Unit	Refrigerant System		
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: 2.69	Heating: 2.10	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)			- / - / -		

Item		Unit	Mono Bloc Unit		
Starting Current		A	9.6		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 12.2	Heating: 9.6	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: 95 Heating: 95		
Dimension	Height	mm (inch)	865 (34-1/16)		
	Width	mm (inch)	1283 (50-17/32)		
	Depth	mm (inch)	320 (12-5/8)		
Net Weight		kg (lbs)	104 (229)		
Power Cord	Number of core		-		
	Length	m (ft)	-		
Thermostat			Electronic Control		
Protection Device			Electronic Control		

Item		Unit	Water System
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: 21.0 Heating: 31.0
Water Drain Hose Inner Diameter		mm (inch)	15.0 (19/32)
Pump	Motor Type		DC Motor
	Input Power	W	57
Hot Water Coil	Type		Brazed Plate
	No. of Plates		28
	Size (W × H × L)	mm	93 × 54 × 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 (40)
Expansion Vessel	Volume	l	6
	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 =5°C

2. Specifications

2.1 WH-MDC12H6E5

Item		Unit	Refrigerant System		
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	4.80	
	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	m³/min (ft³/min)		Cooling: 93.3 (3290) Heating: 80.0 (2830)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil	cm³		FV50S (1200)		
Refrigerant (R410A)	kg (oz)		2.1 (74.1)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		4.385 / -		
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) Cooling: 520 (Top), 640 (Bottom)		

Item		Unit	Refrigerant System		
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)			- / - / -		

Item		Unit	Mono Bloc Unit		
Starting Current		A	16.2		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 16.2	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: 96	Heating: 94	Heating: 96
Dimension	Height	mm (inch)	1410 (55-1/2)		
	Width	mm (inch)	1283 (50-1/2)		
	Depth	mm (inch)	320 (12-19/32)		
Net Weight		kg (lbs)	140 (309)		
Power Cord	Number of core		-		
	Length	m (ft)	-		
Thermostat			Electronic Control		
Protection Device			Electronic Control		

Item		Unit	Water System
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: 36.0 Heating: 51.0
Water Drain Hose Inner Diameter		mm (inch)	15.0 (19/32)
Pump	Motor Type		DC Motor
	Input Power	W	80
Hot Water Coil	Type		Brazed Plate
	No. of Plates		36
	Size (W × H × L)	mm	65 × 120 × 376
	Water Flow Rate	l/min (m ³ /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 (40)
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 =5°C

2.2 WH-MDC16H6E5

Item		Unit	Refrigerant System		
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	m³/min (ft³/min)		Cooling: 97.8 (3450) Heating: 90.0 (3180)		
Refrigeration Control Device			Expansion Valve		
Refrigeration Oil	cm³		FV50S (1200)		
Refrigerant (R410A)	kg (oz)		2.1 (74.1)		
F-GAS	GWP		2088		
	CO2eq (ton) (Precharged / Maximum)		4.385 / -		
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)		

Item		Unit	Refrigerant System		
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)			- / - / -		

Item		Unit	Mono Bloc Unit		
Starting Current		A	21.5		
Running Current		Condition (Ambient/Water)	A35W7	A7W35	A2W35
		A	Cooling: 21.5	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.		%	Cooling: 96	Heating: 96	Heating: 96
Dimension	Height	mm (inch)	1410 (55-1/2)		
	Width	mm (inch)	1283 (50-1/2)		
	Depth	mm (inch)	320 (12-19/32)		
Net Weight		kg (lbs)	140 (309)		
Power Cord	Number of core		-		
	Length	m (ft)	-		
Thermostat			Electronic Control		
Protection Device			Electronic Control		

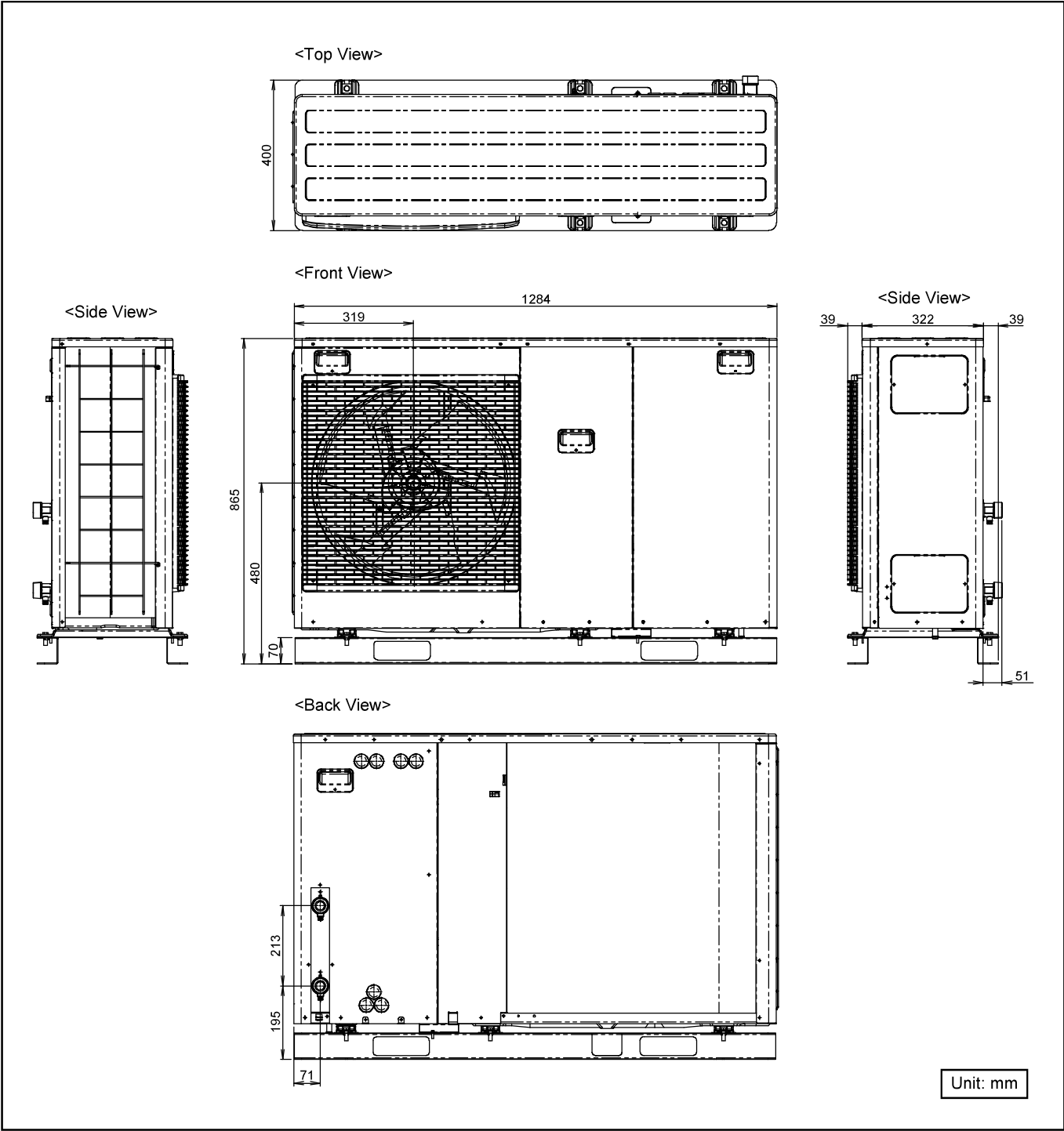
Item		Unit	Water System
Performance Test Condition			EN 14511
Operation Range	Outdoor Ambient	°C	Cooling: 16 ~ 43 Heating: -20 ~ 35
	Water Outlet	°C	Cooling: 5 ~ 20 Heating: 20 ~ 55
Internal Pressure Differential		kPa	Cooling: 52.0 Heating: 88.0
Water Drain Hose Inner Diameter		mm (inch)	15.0 (19/32)
Pump	Motor Type		DC Motor
	Input Power	W	148
Hot Water Coil	Type		Brazed Plate
	No. of Plates		36
	Size (W × H × L)	mm	65 × 120 × 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 (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 =5°C

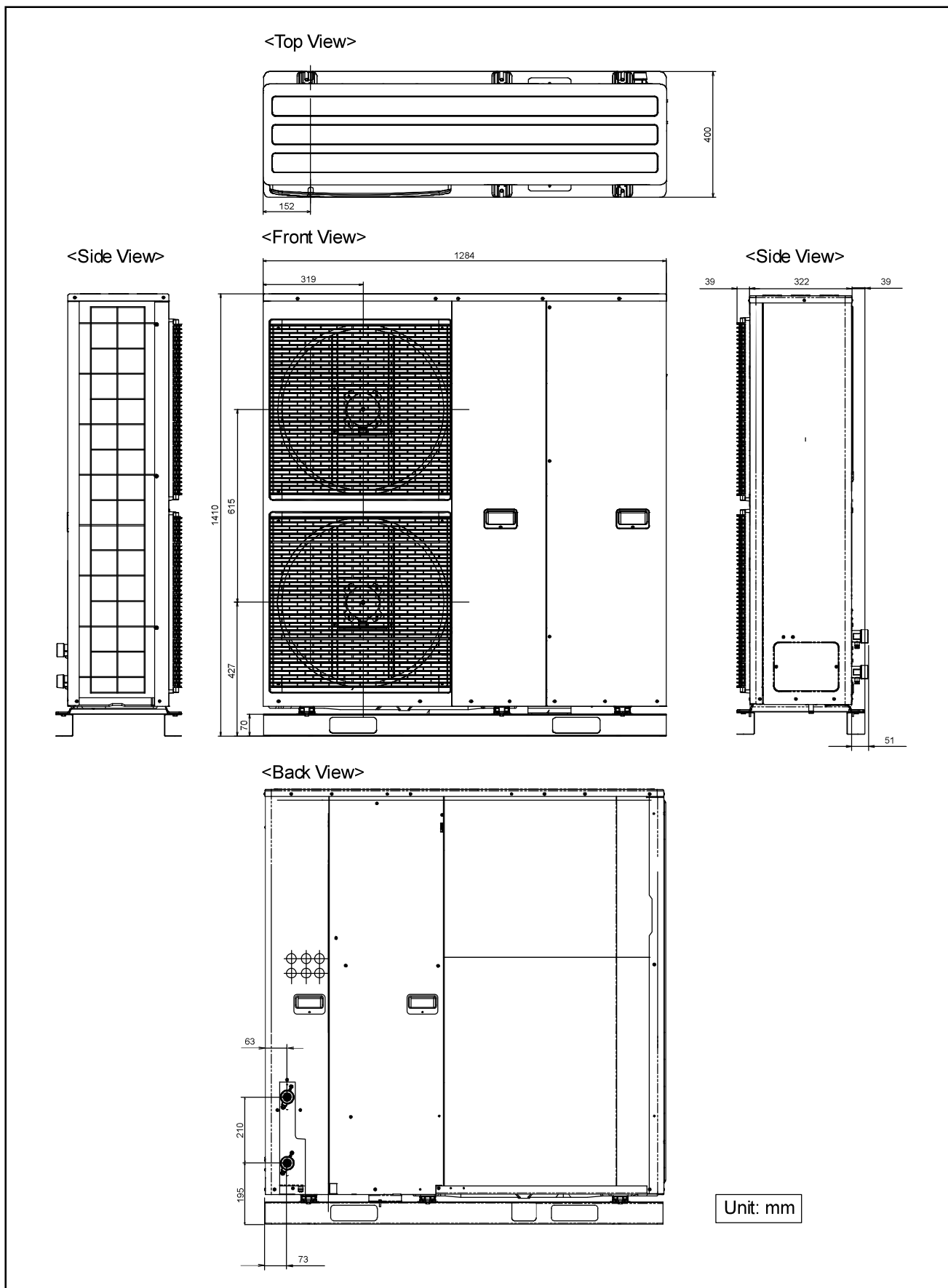
5. Dimensions

5.1 Mono Bloc Unit



5. Dimensions

5.1 Mono Bloc Unit



18.2 Heating Capacity Table

18.2.1 WH-MDC12H6E5

Water Out (°C)	30		35		40		45		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	9300	3460	8900	3620	8500	3790	8100	3950	7000	4100
-7	10400	3370	10000	3660	9600	3950	9200	4240	8200	4210
2	11800	3100	11400	3310	11000	3530	10600	3740	9100	4080
7	12000	2100	12000	2530	12000	2960	12000	3390	12000	4100
12	12000	1380	12000	1660	11800	1940	11700	2230	11400	2740

18.2.2 WH-MDC16H6E5

Water Out (°C)	30		35		40		45		50	
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	10600	4090	10300	4380	10000	4670	9700	4960	7900	4840
-7	11900	4030	11400	4430	10800	4830	10300	5220	9000	4880
2	13500	13740	13000	3960	12400	4180	11900	4400	9800	4440
7	16000	3210	16000	3740	16000	4271	16000	4800	14500	5330
12	16000	2310	16000	2690	16000	3070	16000	3450	15900	3890

18.3 Cooling Capacity Table

18.3.1 WH-MDC12H6E5

Water Out (°C)		7		14		18	
OD Ambient	°C	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)	Capacity (W)	Input Power (W)
	16	7860	1180	13150	2050	10000	1730
	25	12080	2900	15700	3050	10000	1970
	35	10000	3560	12000	3670	10000	2150
	43	7800	3800	11100	3190	8000	2850

18.3.2 WH-MDC16H6E5

Water Out (°C)		7		14		18	
OD Ambient	°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

19.2 Heating Capacity Table

19.2.1 WH-MDC05H3E5

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	5125	2015	5000	2200	4875	2385	4750	2570	4075	2285	3400	2000
-7	4800	1485	4700	1650	4600	1815	4500	1980	4400	2130	4300	2280
2	5100	1340	4800	1430	4500	1520	4200	1610	4100	1665	4000	1720
7	5000	790	5000	985	5000	1180	5000	1370	5000	1565	5000	1760
12	4845	770	4830	885	4815	1000	4800	1120	4740	1245	4680	1370

19.2.2 WH-MDC07H3E5

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	4600	1675	4600	1890	4600	2105	4600	2320	4550	2555	4500	2790
-7	5600	1875	5500	2040	5400	2205	5300	2370	5150	2560	5000	2750
2	6650	1785	6600	2000	6550	2215	6500	2430	6400	2635	6300	2840
7	7000	1325	7000	1550	7000	1775	7000	2000	7000	2235	7000	2470
12	7000	1300	7000	1450	7050	1650	7100	1900	7150	2100	7200	2300

19.2.3 WH-MDC09H3E5

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	6100	2335	5900	2500	5700	2665	5500	2830	5250	2985	5000	3140
-7	6550	2260	6400	2460	6250	2660	6100	2860	5950	3055	5800	3250
2	6850	1915	6800	2140	6750	2365	6700	2590	6500	2775	6300	2960
7	9000	1795	9000	2100	9000	2405	9000	2710	9000	3010	9000	3310
12	9100	1610	9000	1790	9000	2090	9100	2400	9200	2800	9300	3000

19.3 Cooling Capacity Table

19.3.1 WH-MDC05H3E5

OD	WO 7		WO 14		WO 18	
	Q	IP	Q	IP	Q	IP
24	5150	1060	6450	1050	5900	730
35	4500	1370	5520	1360	5100	1000
43	3740	1550	4650	1600	4250	1200

19.3.2 WH-MDC07H3E5

OD	WO 7		WO 14		WO 18	
	Q	IP	Q	IP	Q	IP
24	6850	1780	8150	1800	7100	1200
35	6000	2160	5350	1525	6000	1550
43	4900	2480	4450	1800	5100	1850

19.3.3 WH-MDC09H3E5

OD	WO 7		WO 14		WO 18	
	Q	IP	Q	IP	Q	IP
24	7300	1920	8600	1980	8200	1550
35	7000	2690	6400	1930	7000	1950
43	5250	2840	5400	2250	6000	2300