Specifications

MODEL				MWCP100CR	MWCP135CR	MWCP165CR
POWER	MAIN CIRCUIT			3 PHASE AC 380/440V 50/60Hz		
	CONTROL CIRCUIT			1 PHASE AC 220V 50/60Hz		
PAINTING COLOR				NEW LIGHT BLUE (7.5BG7/2), BLACK		
DIMENSIONS	H x W x D		mm	1650 x 2000 x 1640	1650 x 2300 x 1640	1650 x 2300 x 1640
#1 COOLING CAPACITY (50/60Hz)			kW	88 / 100	120 / 135	142 / 157
#2 COOLING WATER FLOW RATE (FRESH WATER) (50/60Hz)			L / min	332 / 360	461 / 485	551 / 590
#3 HEATING CAPACITY (50/60Hz)			kW	100 / 115	136 / 149	175 / 200
HEAD LOSS (COOLING WATER)			kPa	46	39	60
COMPRESSOR	TYPE			HERMETIC SCROLL TYPE		
	SPEED		r / min	2900 / 3450 (50/60Hz)		
	MOTOR POWER		kW	8.95 x 2 + 4.48 x 1	8.95 x 3 + 4.48 x 1	8.95 x 4
	STARTING MANNER			DIRECT START		
WATER HEAT EXCHANGER	TYPE			WATER COOLED TUBE IN TUBE		
	MATERIAL	TUBE (inner)		CUPRO NICKEL (B10)		
		TUBE (outer)		COLD ROLLED CARBON STEEL SHEET (SPCC)		
	NO.			1		
AIR HEAT EXCHANGER	TYPE			CROSSFINCOIL TYPE		
	MATERIAL	TUBE		COPPER TUBES		
		FIN		ALUMINIUM FINS		
FAN	TYPE			CENTRIFUGAL FAN		
	AIR FLOW RATE		m³/min	175	220	283
	EXTERMAL STATIC PRESS (50/60Hz)		Pa	900 / 1580	1100 / 1900	850 / 1750
	MOTOR POWER		kW	7.5	11	15
	DRIVE			BELT DRIVE		
AIR FILTER				NYLON MESH		
REFRIGERANT CONTROL				ELECTRONIC EXPANSION VALVE	ELECTRONIC EXPANSION VALVE & COPPER TUBE	
TEMPERATURE CONTROL				CONTROL MODULE, MC260/261C		
CAPACITY STEP			%	100-80-40-0, 100-60-40-0, 100-60-20-0	100-86-57-29-0, 100-71-57-29-0, 100-71-43-29-0, 100-71-43-14-0	100-75-50-25-0
PROTECTIVE DEVICES				CIRCUIT BREAKER (FOR COMP. & FAN MOTOR), OVERLOAD PROTECTOR (FOR COMP. & FANMOTOR) , FUSIBLE PLUG, REVERSE PHASE PROTECTOR, HIGH PRESURE SWITCH, LOW PRESURE SWITCH, COMP. MOTOR PROTECTION THERMOSTAT, FREEZE-UP PROTECTION THERMOSTAT, THE COMP. FREQUENT STARTS AND STOPS PROTECTION, TEMPERATURE SENSOR FAULT PROTECTION		
THERMAL & SOUND ISORATOR				CLASS 1 FLEX (NBR / PVC)		
PIPING CONNECTION	CHILLED WATER INLET / OUTLET			3B (80A)		
	UPPER DRAIN OUTLET			1 1 / 4B (32A)		
	LOWER DRAIN OUTLET			1B (25A)		
#4 REFRIGERANT	KIND			R407H		
	INITIAL CHARGED		kg	3.2 x 2 + 1.8 x 1	3.1 x 3 + 1.2 x 1	2.1 x 4
	ADDITIONAL CHARGED			—		1.0 x 4
LUBRICANT OIL	KIND			POE		
	CHARGED		L	3.253 x 2 + 1.774 x 1	3.253 x 3 + 1.774 x 1	3.253 x 4
#4 MACHINE MASS			kg	1210	1540	1585
#4 OPERATING MASS			kg	1270	1630	1685
ACCESSARIES				FUSE		

#1. COOLING CAPACITY IS BASED ON THE FOLLOWING CONDITIONS : AIR HEAT EXCHANGER : INLET AIR TEMP : 31°C D.B., 24°C W.B.
COOLING CAPACITY DOES NOT INCLUDE FAN MOTOR HEAT.
#2. WATER HEAT EXCHANGER : INLET WATER TEMP. 38°C
#3. HEATING CAPACITY INLET CONDITION : INLET AIR TEMP. 10°C D.B.
#4. THE MASS OF REFRIGERANT, MACHINE AND OPERATING MAY BE CHANGED

For any questions or inquiries about sales or after-sales services of maritime HVAC systems and refrigeration system, please contact us through:

WEB **https://www.dmre.daikin.co.jp/english/**

Daikin MR Engineering Search

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Manufactured by McQuay International

MR24-09(202403)SS_G

DAIKIN

Central HVAC System

Heat Pump Deck Unit

[MWCP]

Heat Pump Deck Unit enables heating opeartion by shore power

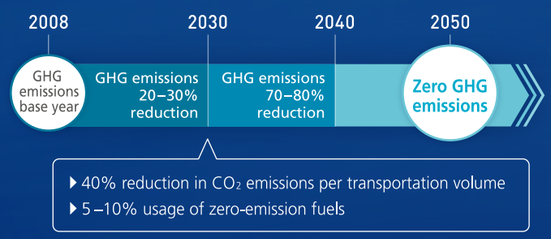
HEAT PUMP DECK UNIT

Heat pump technology contributes to reduce CO_2 emissions

To realize carbon neutrality, IMO renewed and strengthened targets in its GHG emissions reduction strategies in July 2023, and the shipping industry is demanded to further contribution to deal with environmental issues.

Daikin MR Engineering developed a new HVAC system, Heat Pump Deck Unit, which uses eco-friendly heat pump technology. It supplies comfortable air to the vessel, while contributing to reduce CO_2 emission.

<IMO targets on reduction of GHG emissions>

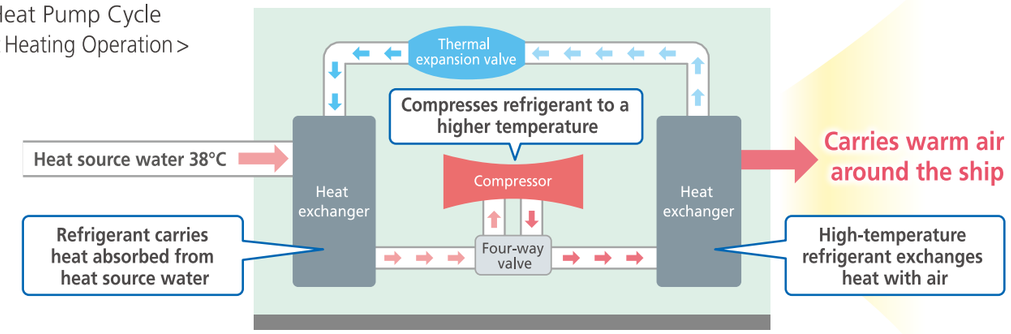


HEAT PUMP DECK UNIT

Steam heat source is unnecessary!

Heat pump HVAC system uses shore power to heat room air

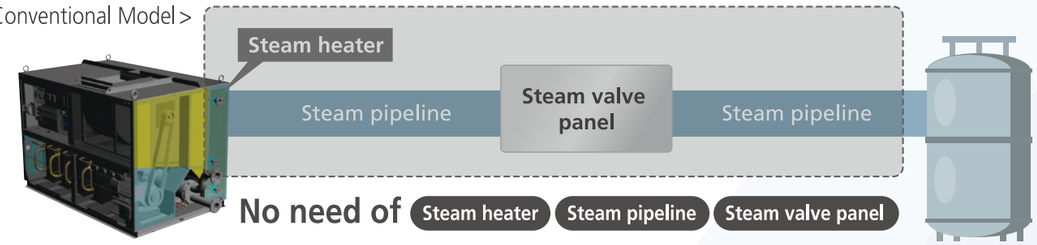
Heat Pump Cycle
<Heating Operation>



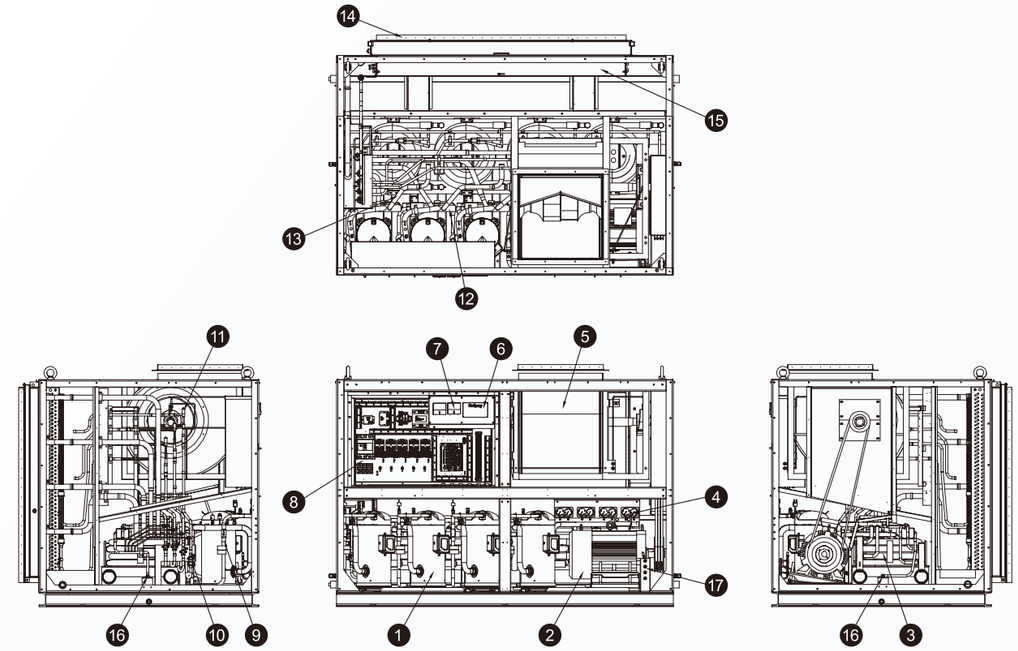
Supplemental components are unnecessary for heat pump system!

Space Saving **Labor Saving** **Cost Saving**

<Conventional Model>



Assembling Drawing



* The above drawing is a assy drawing of the MWCP165CR model, the MWCP135CR has 4 systems, and the MWCP100CR has 3 systems
* MWCP165CR/135CR has part 17, MWCP100CR does not have part 17

1 Compressor	2 Motor	3 Water Heat Exchanger	4 Pressure Gauge
5 Fan	6 Control panel	7 Ammeter	8 Electric control box
9 Check valve	10 Ball valve	11 Thermal expansion valve	12 Four-Way valve
13 System pipeline	14 Filter	15 Air Heat Exchanger	16 Safety valve for Water Heat Exchanger
17 Lubricant refilling hole of motor			