



AIR SOURCE HEAT PUMP - LHPA SERIES



1.0 GENERAL SPECIFICATION

Air to Water Heat Pump. Unit is included with compressor , evaporator , condenser and electrical control panel. Refrigerant is environmental friendly R-134A. Heat Pump can produce 70°C maximum hot water temperature.

2.0 PERFORMANCE

The unit have C.O.P. not less than 3.5 at 30 °C,65 %RH ambient air and 30 °C , 60 °C inlet and outlet hot water.

3.0 EQUIPMENT SPECIFICATION

3.1 COMPRESSOR

Hermetic Scroll type compressor , suitable for high temperature operation with environmental friendly R134a refrigerant.



Copeland
brand products



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3.2 CONDENSER



Condenser is plate heat exchanger, SUS 316 Stainless steel, Copper welding. Refrigerant side is tested at pressure 500 psig and water side is tested at pressure 300 psig.

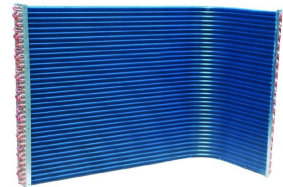


PLATE HEAT EXCHANGER

3.3 EVAPORATOR



Evaporator is rifled copper tube - inner grooved for high efficiency and aluminium blue fin with galvanized end plates.



EVAPORATOR

3.4 REFRIGERANT EQUIPMENTS



Refrigerant equipment are included

- Thermal Expansion Valves (Superheat Adjustable)
- Sight Glass
- Filter Dryer

3.5 WATER PUMP

Hot water circulating pump are end-suction centrifugal pump. Body material is cast iron. The pump shaft, impeller, chamber and filling plugs are stainless steel 304.



WATER PUMP

3.6 CONTROL VALVE



CONTROL VALVE

Control valve is consist of bronze 2 way valve and actuator, which had function to control the hot water outlet temperature for constant.



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3.6 CABINET

Heat pump cabinet is SUS304 Stainless Steel. Cabinet have 7 access door for serving , one for compressor and TXV , one for evaporator and condenser and one for electrical equipment. Cabinet base thickness is 1.5 mm. Heat pump is designed for both indoor and outdoor installation.

3.7 INSULATION

EPDM Close Cell Insulation. Excellent insulator with low thermal conductivity.

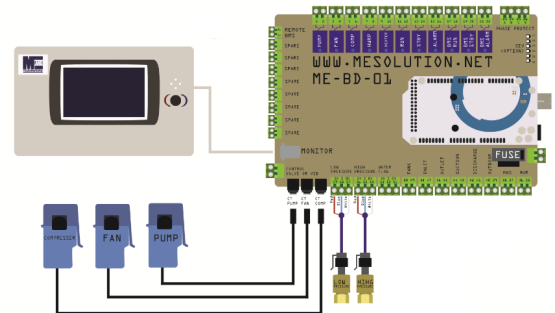
3.8 CONTROL FUNCTION

- Heat Pump Micro Controller for controlling constant 60 °C water temperature and allow you to easily adjust hot water temperature as desire.
- Operating hours counter. Display accumulated total working hours of heat pump. Easily monitoring and planning for preventive maintenance.
- Data Report print out and Service Online by ME Solution program easily for management.
- Controller reserved for external water flow safety switch.

3.9 PROTECTION FUNCTION

- High Pressure Safety Switch.
- Low Pressure Safety Switch.
- Water Temperature Overheat Safety Switch. Limit water temperature which might harm to user.
- Electrical Phases & Voltage Protection.
- Over Current Compressor Protection.
- Over Current Pump Protection.
- Over Current Blower Protection.
- Time delay for compressor protection.
- Auto-Restart Mode

ME-DB-01
Heat Pump Controller
Wiring Diagram



DISPLAY AND CONTROLLER



LHPA SERIES

TECHNICAL DATA OF AIR SOURCE HEAT PUMP

MODEL		LHPA25	LHPA30	LHPA35	LHPA50	LHPA65
HEATING CAPACITY	kW.	25.4	29.6	35.2	50.8	65.6
COOLING CAPACITY	kW. (Btu/h)	20.9 (71,314)	23.1 (78,820)	30.4 (103,730)	41.8 (142,630)	52.4 (178,800)
HOT WATER RECOVERY RATE	Lph	729	850	1,010	1,458	1,901
WATER INLET TEMP.	°C	30				
WATER OUTLET TEMP.		60				
MAX. HOT WATER OUTLET TEMP.		70				
AIR FLOW RATE	m3/hr (cfm)	3,568 (2,100)	4,927 (2,900)	4,927 (2,900)	8,495(4,200)	10,194(6,000)
COMPRESSOR	Type	HERMETIC SCROLL				
	QT.	1			2	
	Refrigerant	R-134a				
ELECTRICAL	V/Ph/Hz	380/3/50				
POWER AT RECOVERY RATE (Included all electrical parts)	kW	5.84	7.06	8.29	11.96	15.90
RLA (@ RECOVERY RATE)	A	12.1	14.1	16.0	24.2	30.9
FLA		17.4	18.3	19.1	34.8	37.2
CASING MATERIAL		SUS304 Stainless Steel				
DIMENSION (W X D X H)	mm	880 x 675 x 1650			1450 x 900 x 1735	
NET WEIGHT (approx.)	kg	245	295	315	425	550
WATER INLET AND OUTLET	Inch	1"		1-1/4"	1-1/2"	
CONDENSATED DRAIN		3/4"			1"	

M & E TEAM WORK CO.,LTD.

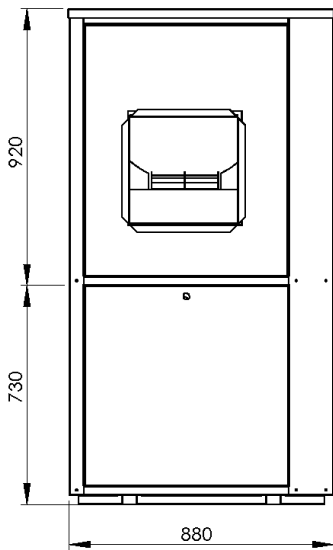
HEAD OFFICE : 133/128 RATTANATHIBET RD. BANGKRASAO MUANG NONTHABURI NONTHABURI 11000
 TEL:(66)2-106-2922 FAX:(66)2-106-2944, E-MAIL : info@leafheatpump.com



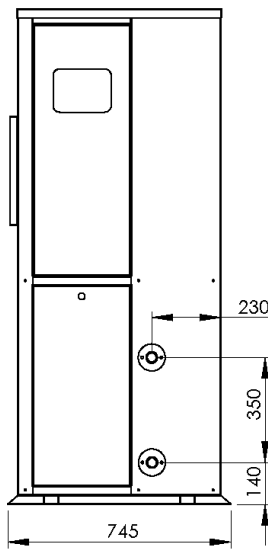
LHPA - 25, 30, 35



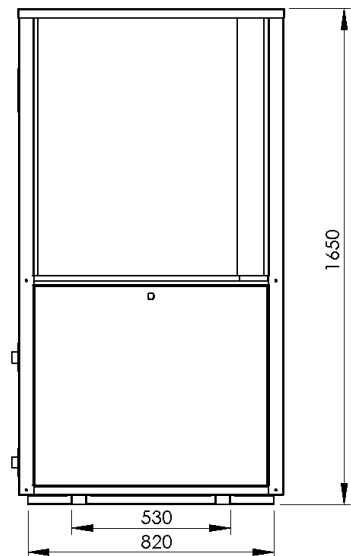
DIMENSION : LHPA 25, 30, 35



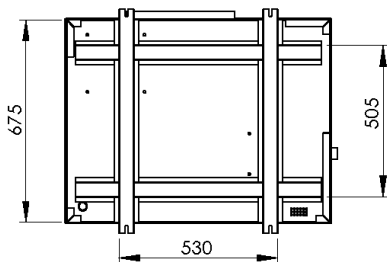
FRONT VIEW



RIGHT VIEW



BACK VIEW



BOTTOM VIEW

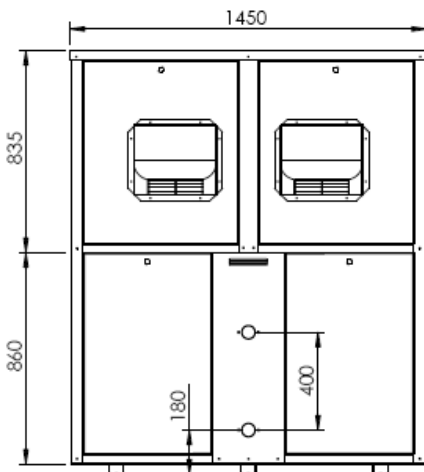
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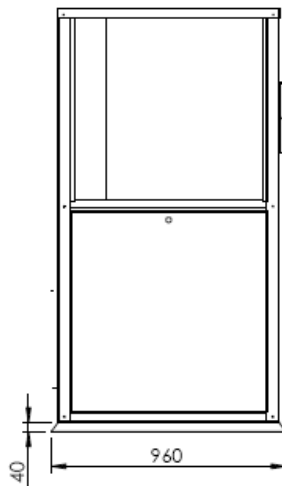
LHPA - 50, 65



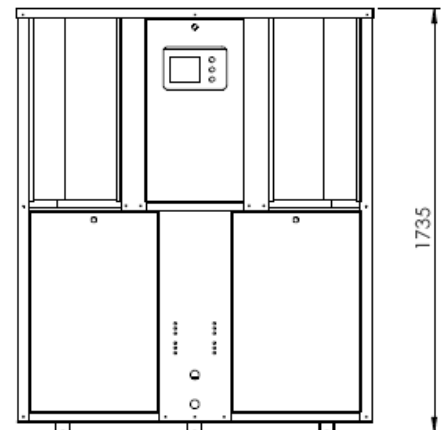
DIMENSION : LHPA 50, 65



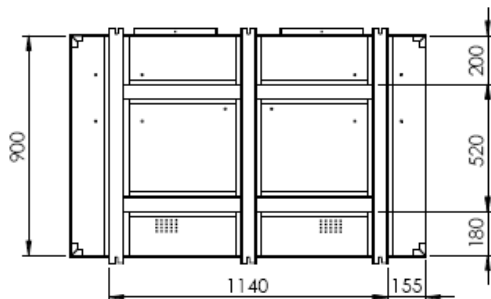
FRONT VIEW



RIGHT VIEW



BACK VIEW



BOTTOM VIEW

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