

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 " COPELAND "

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

**Copeland**
brand products

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 "GRUNDFOSS"

Hot and Cold 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 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 2.0 mm. Heat pump is designed for both indoor and outdoor installation.

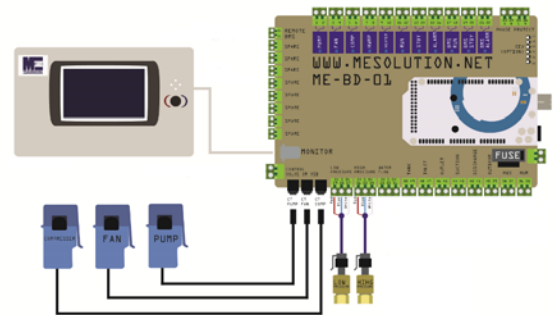
3.7 INSULATION

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.
- 6 point temperature display inside heat pump. Provide good accuracy for heat pump performance monitoring and easily diagnosis heat pump malfunction.
- Controller reserved for external water flow safety switch.

ME-DB-01
Heat Pump Controller
Wiring Diagram



3.9 PROTECTION FUNCTION

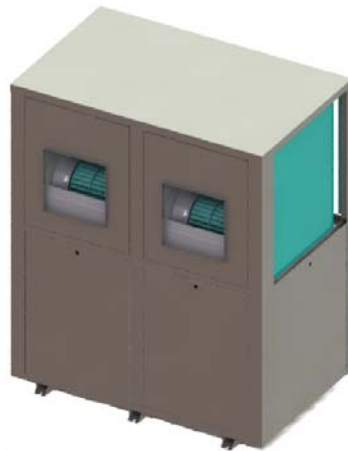
- High Pressure Safety Switch.
- Low Pressure Safety Switch.
- Water Temperature Overheat Safety Switch. Limit water temperature which might harm to user.
- Electrical Phases & Voltage Protection.
- Over Current Compressor Protection.
- Over Current Pump Protection.
- Over Current Blower Protection.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



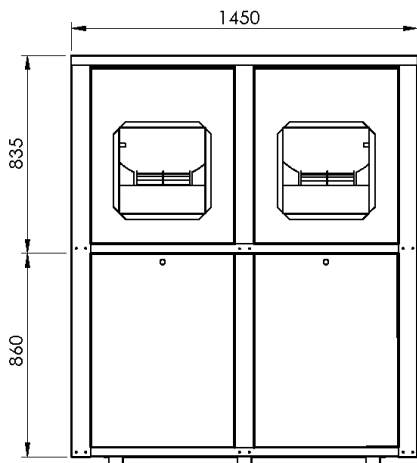
AIR SOURCE HEAT PUMP - 65KW

TECHNICAL DATA OF AIR SOURCE HEAT PUMP

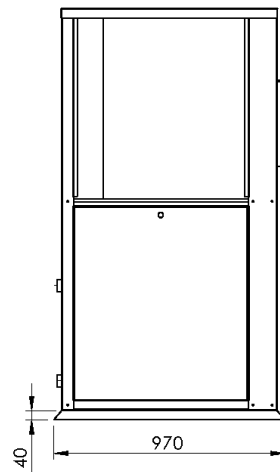
MODEL		65kW
HEATING CAPACITY	kW.	65.6
COOLING CAPACITY	kW. (Btu/h)	52.4(178,800)
HOT WATER RECOVERY RATE	Lph	1,901
WATER INLET TEMP.	°C	30
WATER OUTLET TEMP.		60
MAX. HOT WATER OUTLET TEMP.		70
AIR FLOW RATE	m3/hr (cfm)	10,194(6,000)
COMPRESSOR	Type	SCROLL
	QT.	2
	Refrigerant	R-134a
ELECTRICAL	V/Ph/Hz	380/3/50
POWER AT RECOVERY RATE (Included all electrical parts)	kW	15.90
RLA (@ RECOVERY RATE)	A	30.9
FLA		37.2
CASING MATERIAL		SUS304 Stainless Steel
DIMENSION (W X D X H)	mm	1450x900x1735
NET WEIGHT (approx.)	kg	550
WATER INLET	Inch	1-1/2"
WATER OUTLET		1-1/2"
CONDENSATED DRAIN		1-1/4"



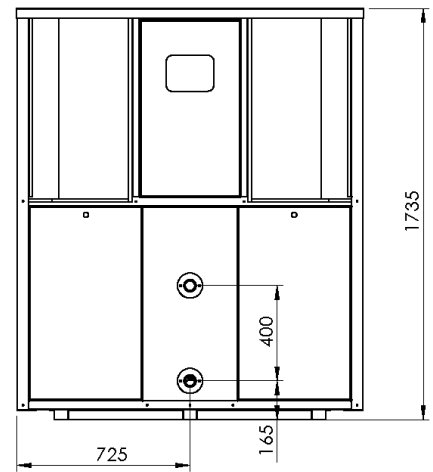
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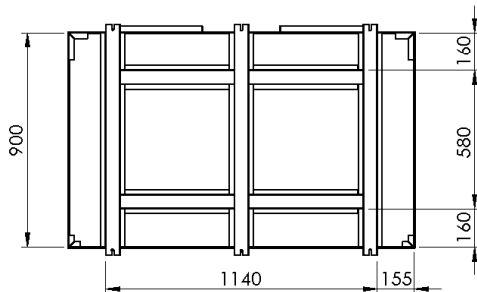
FRONT VIEW



RIGHT VIEW



BACK VIEW



BOTTOM VIEW



AIR SOURCE HEAT PUMP - 65KW

HEAT PUMP PERFORMANCE CURVE FOR 65KW

