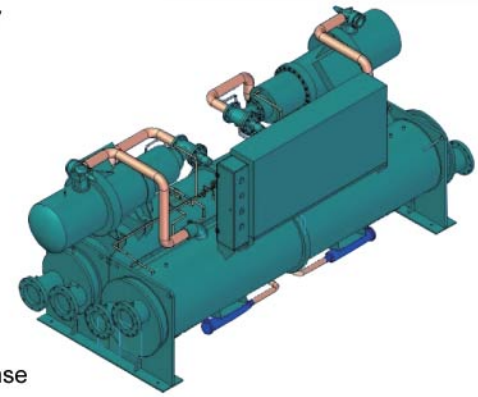
Mammoth
The Leader In Custom HVAC & Energy Saving

1800 Ton High Efficiency Screw Chiller Heat Pump

Unit Features



- Special designed for non-chlorine based HFC-134a refrigerant with efficiency exceeding National Energy Standards Level 1, i.e. above IPLV 9, which enables end user to bee LEED certified.
- Utilizing US Mammoth semi hermetic directly driven twin-screw compressors and stepless control to achieve high efficiency during part load operation. Motor is cooled by liquid refrigerant.
- LCD touch screen controller displays with Chinese or English language and offers numerous diagnoses and operating information. Full control function including stepless control, leaving condenser hot water temperature control and can be connected to BAS protocol.
- Utilization of electronic expansion valve (EXV) provides sensitive response and precise refrigerant flow control, its re-calibration at every startup assures EXV's operation reliability.
- Utilization of Patented liquid sprayed evaporator resulted in high heat transfer efficiency and less refrigerant charges, and thus is more environmental friendly.
- Utilization of Patented Oil Separator with 99.98% efficiency enables the oil return easily, which makes the unit operation more reliable.
- 60℃ Leaving Condenser Water temperature with optional hot water temperature control. The unit is available for applications of either geothermal or water source. Low leaving water temperature can be as low as -8℃ (not for heating the same time), and can be adapted to industrial refrigeration and ice-storage applications.

Item	Screw Type	Centrifugal Type	Remark
Technology Maturity & Reliability	High	Medium	When centrifugal units working under low partial load conditions, surge problems often occur.
Application Flexibility	Good	Good	Screw type units can adjust at different partial load while centrifugal units works economically only when the load is above 80%.
Maintenance Cost	Low	Medium	Screw type is about half cost when compares with centrifugal type.
Service Operating	Easy	Complicated	Screw type is easy to maintain while centrifugal is complicated.

Unit Specification

Parameters \ Model			MCRT0900	MCRT1800
Cooling	Cooling Capacity kW		3071	6142
	Cooling Capacity Ton		873	1746
	Cooling Power Iput kW		497	1005
	Evaporator Load Water Flow Rate m3/h		528	1056
	Evaporator Water Pressure Drop kPa		59	46
	Condenser Source Water Flow Rate m3/h		660	1321
	Condenser Water Pressure Drop kPa		61	42
Heating	Heating Capacity kW		3995	8043
	Heating Power Input kW		797	1593
	Evaporator Source Water Flow Rate m3/h		660	1321
	Evaporator Water Pressure Drop kPa		79	62
	Condenser Load Water Flow Rate m3/h		528	1056
	Condenser Water Pressure Drop kPa		37	25.9
Full Heat Recovery Heat Exchanger	Heating Capacity kW		2945	5890
	Water Flow Rate m3/h		660	1321
	Water Pressure Drop kPa		56	37
	Heat Exchanger Inlet & Outlet Pipe Diameter mm		Φ325	Φ406
	Pipe Connection Method		Victaulic, Flange	
Comrepssor	Type		Semi-Hermetic Screw Type	
	Capacity Control %		25～100(Continuous Capacity Control)	12.5～100(Continuous Capacity Control)
	Power Source		3Ph-380V/50Hz,3Ph-10KV/50Hz	
	Qty		1	2
	Starting Method		Y-△/Soft Start	Soft Startup/Direct Startup /Reactance Startup/Autotransformer Startup
	Rated Current A		1400	2800
	Starting Current A	Circuit 1(Y/△)	3600	3600
		Circuit 2(Y/△)		3600
Control Method			CMC800 Microprocessor Automatically Control	
Protection			High/Low Pressure, High Discharge Temperature,Low Water Temperature, Low Oil Flow Rate, Water Flow Rate, Overload, Phase Protection	
Evaporator Inlet and Outlet Pipe Diameter mm			Φ325	Φ406
Condenser Inlet and Outlet Pipe Diameter mm			Φ325	Φ406
Connection Method			Victaulic, Flange	
R134a Charge Quantity kg			740	1200
Oil Charge Quantity L			100	190
Standard Unit Dimensions		Length mm	5200	7200
		Width(5) mm	2300	2400
		Height mm	3000	3000
Shipping Weight kg			19100	29500
Operating Weight kg			20950	32000

Note:

1, Standard unit water side design pressure is 1.0MPa, optional 2.0MPa.

2, Under nominal cooling condition, entering / leaving source water temperature is 30/35℃, entering / leaving load water temperature is 12/7℃;
Under nominal heating condition, entering source water temperature is 20℃, leaving load water temperature is 60℃,water flow is defined by rated cooling condition.

3, Under nominal full heat recovery condition: Leaving load water temperature is 7℃, leaving domestic hot water temperature is 60℃.

4, The maximum current is 1.25 times as large as rated current,the size of water pipe is for outer diameter.

5, Unit wight and width exclude startup cabinet.

6, Mammoth is committed to a policy of continuous product improvements and thus reverses the right to change specifications and design without notice.