

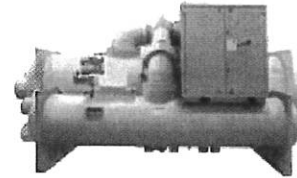
Oregon Air-Rep.

# MAGNITUDE™ Water Cooled Centrifugal Chiller



## Job Information Technical Data Sheet

Job Name	PSU Chiller Project
Date	12/5/2013
Submitted By	Mike Wilson
Software Version	08.90
Unit Tag	CH-1



## Unit Overview

Model Number	Capacity ton	NPLV kW/ton	Voltage	Drive Type	ASHRAE 90.1	LEED EA Credit 4
WME0500S	500.0	0.306	460 V / 60 Hz	VFD/UM	'04, '07 & '10	Pass

## Unit

Model Number: WME0500SSM2R/E3012-JU-2\*\*/C2612-FAYY-2\*\*\*\*/R134-BAAAPAB-U  
 Approval: AHRI and ETL / cETL  
 Vessel Code: ASME

Compressor Quantity	Capacity Control	Refrigerant Type	Refrigerant Weight
1	VFD / Inlet Guide Vanes	R134a	1092 lb

### Evaporator

Entering Fluid Temperature	Leaving Fluid Temperature	Fluid Type	Actual Fluid Flow	Minimum Fluid Flow
55.99 °F	45.00 °F	Water	1090.95 gpm	321.0 gpm
Length	Diameter	Number of Passes	Tube	Wall Thickness
12 ft	30 in	2	Copper	0.025 in
				Fouling Factor
				0.00010 °F.ft <sup>2</sup> .h/Btu

### Condenser

Entering Fluid Temperature	Leaving Fluid Temperature	Fluid Type	Fluid Flow
80.00 °F	89.11 °F	Water	1500.00 gpm
Length	Diameter	Number of Passes	Tube
12 ft	26 in	2	Copper
			Wall Thickness
			0.025 in
			Fouling Factor
			0.00025 °F.ft <sup>2</sup> .h/Btu

## Unit Performance

### Design

Capacity ton	Input kW	Efficiency kW/ton	RLA A	NPLV kW/ton	Part Load Efficiency			Evaporator Fluid		Condenser Fluid	
					75% kW/ton	50% kW/ton	25% kW/ton	Pressure Drop ft H <sub>2</sub> O	Entering Temperature °F	Pressure Drop ft H <sub>2</sub> O	Leaving Temperature °F
500.0	243.6	0.487	343	0.306	0.365	0.267	0.294	17.1	55.99	14.6	89.11

### Performance Points Rated at AHRI Condenser Relief

Point #	% of Design Load	Capacity ton	Input kW	Efficiency kW/ton	RLA A	Evaporator Fluid			Pressure Drop ft H <sub>2</sub> O	Flow gpm	Condenser Fluid			
						Flow gpm	Temperature				Flow gpm	Temperature		Pressure Drop ft H <sub>2</sub> O
							Entering °F	Leaving °F				Entering °F	Leaving °F	
1	100.0	500.0	243.6	0.487	343	1,090.95	55.99	45.00	17.1	1,500.00	80.00	89.11	14.6	
2	75.0	375.0	136.9	0.365	206	1,090.95	53.24	45.00	17.1	1,500.00	72.50	79.12	14.7	
3	50.0	250.0	66.7	0.267	108	1,090.95	50.50	45.00	17.1	1,500.00	65.00	69.34	14.7	
4	25.0	125.0	36.7	0.294	62	1,090.95	47.75	45.00	17.1	1,500.00	65.00	67.21	14.7	