

## Cooling, Heating, Dehumidification & Power System

### What is It?

Air conditioning and power trailer that has:

- Cooling, heating, dehumidification & power functions**
- 140°F ambient rating
- Wide range of flows and pressures
- Can service two disparate models of aircraft simultaneously
- Operates from either on-board diesel genset or facility power or battery pack (future)

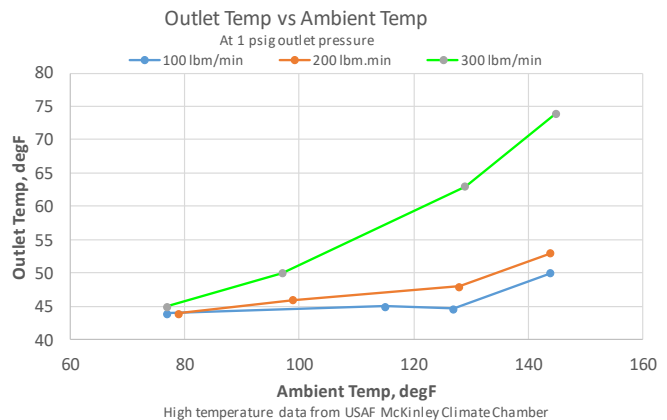
### Why Would I want It?

- GSA Listed: Part # 59500013, under AAR Manufacturing, Special Item # (SIN) 333415HVAC**
- Can be purchased without competing bids, because it was SBIR developed
- Developed for U.S. Air Force to replace numerous models
- Supports any aircraft (F-16 to C-5)
- Uses <10.0 gal/h versus an APU based system at ~40 gal.hr

### Features

- Air Flow:**  
100 lbm/min @ 6 psig to 300 lbm/min @ 1.25 psig
- Dehumidify Mode prevents water from condensing on electronics
- Heating mode to 140°F
- Integrated 60kVA, 400 Hz + 270 VDC, Power Inverter

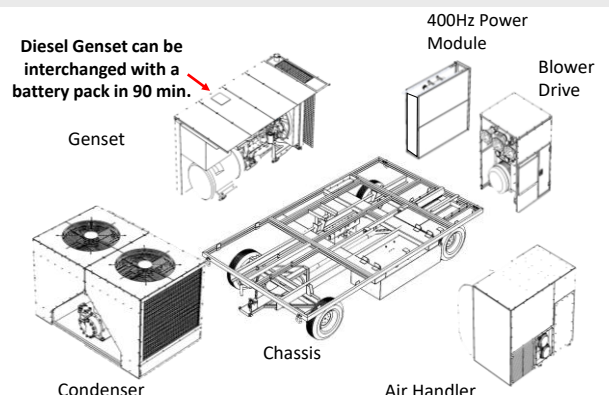
### Performance



### Over 1000 Hrs Field Testing



### Modular Design



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System Characteristics			
COOLING & DEHUMIDIFY TRAILER (DC300)		ELECTRICAL OPTION (DC300E)	
Characteristic	Value	Characteristic	Value
<b>Gross Cooling Capacity</b>	360,000 Btu/hr (30 tons)	<b>AC Power</b>	400 Hz 60 KVA, 0.8 power factor
<b>Inlet Air Temperature</b>	-40 to +140 degF	<b>AC Voltage</b>	115V line-to-neutral 200V line-to-line
<b>Air Discharge Temperature</b>	45 – 80 degF	<b>DC Voltage</b>	270 VDC
<b>Cooling</b>	ambient – 140 degF	<b>DC Current</b>	180 A cont.
<b>Dehumidify/ Heater</b>			
<b>Air Flow and Pressure</b>	100 lbm/min, 6 psig 200 lbm/min, 3.25 psig 300 lbm/min, 1.25 psig		
<b>Dehumidify</b>	To 300 lbm/min, 140°F, <20%RH		
<b>Unit Dimensions</b>	H84 in X W94 in X L169 in		
<b>Refrigerant Charge</b>	78 lbs, R134a	12,000 lbs	
<b>Weight (Wet)</b>	11,000 lbs		
<b>Wheels/ Tires</b>	12 X 7 inch wheel, 6 bolt pattern, Airless tires		
<b>Ducts</b>	Two 8 inch outlets		
<b>Maximum towing speed</b>	20 mph		
<b>Engine</b>	Cummins QSB 6.7L, Tier III		
<b>Fuel</b>	100 gal, JP-8, #2 Diesel, Jet A/B		
<b>Fuel Consumption</b>	6.5 gal/hr >10 hr operation		
<b>Fuel Consumption</b>			
<b>Transport</b>	Prototype system is ATTLA approved		