

# TUG TECHNOLOGIES

## Providing Ground Support Solutions Worldwide



Model shown above includes additional options.

## AC20D Regional Aircraft Air Conditioner

The Davco AC20D diesel-powered air-conditioning unit is designed to supply preconditioned air to the aircraft in order to maintain comfortable aircraft cabin temperature. This is accomplished with one independent 20-ton cooling system and one 30 kW heating unit, making it suitable for a variety of aircraft. Simplicity, ease of service and maintenance, durability and performance were the primary design objectives. With the 28.5 VDC rectifier option, the unit can also provide power to aircraft requiring 28 VDC at 1000 A continuous and 2000 A peak.

**Equipment Sales**  
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**Parts Sales**  
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**Standard Options Include:**

- Condenser coils have configured aluminum fins mechanically bonded to seamless copper tubing and factory tested at 450 psi under water and vacuum dehydrated
- Two vertical discharge, direct-drive, electrically operated fans offer smooth air flow across the condenser coils
- Controlled by a 24-volt control circuit which includes fusing and power transformer
- Wired with magnetic contactors for compressor and condenser motors, three-leg, solid-state compressor overload protection and high/low pressure cutouts
- Charge isolation, reset relay and anti-recycle compressor timer are provided
- Mounted on 4-wheel trailer constructed of rectangular steel tubing
- Front axle has fifth-wheel type steering
- The two-wheel front trailer brakes are activated when the tow bar is in the up and locked position
- All joints and attachments welded
- Covers fabricated from Diamond Plate aluminum
- ECU automatic engine controller
- Engine safety shutdowns have indicator lights for easy problem identification
- PLC used for protection of air conditioning and heating units

**TUG**  
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*If it doesn't say TUG, it's not TUG TUFF*

## Specifications

## Model AC20D

## Regional Aircraft Air Conditioner

### Dimensions

	Base Unit	With Rectifier
Length (overall)	120 in (304.8 cm)	120 in (304.8 cm)
Width	95 in (241.3 cm)	95 in (241.3 cm)
Height	62 in (157.5 cm)	62 in (157.5 cm)
Weight (dry)	5800 lb (2631 kg)	6300 lb (2858 kg)

**Max Towing Speed** 15 mi/h (24.1 km/h)

### Engine – Cummins 4BTA3.9

Type	4-cylinder diesel, direct injection, four-cycle, turbo-charged
Displacement	3.9 L
Horsepower	107 bhp

### Fuel System

Type	Jet A or Diesel
Tank/Capacity	External steel with braided steel fuel lines and 3 in (7.6 cm) fill / 26 gal (98.4 L)

Includes low fuel warning and low fuel shutdown

### Electrical System

Starting System	12VDC
Battery	H.D. 12 volt Optima

### Air Conditioning Unit

Manufacturer	Carrier
Airflow	1,500 CFM
Air pressure	20 in S.P.
Delivered air temp.	35 °F (2 °C) to 130 °F (54 °C)
Cooling capacity	240,000 Btu/h
Heating capacity	30 kw
Storage temp.	-40 °F (-40 °C) to 160 °F (71 °C)
Operating temp.	-25 °F (-32 °C) to 125 °F (52 °C)
Maximum humidity	100 %
Altitude	0-10,000 ft (0 -3,048 m)
Hose	Unit furnished with (1) 20 ft (6 m) long, 12 in (30.5 cm) diameter flexible duct hose with quick release fittings

*Note: Output is dependent upon air pressure drop in the aircraft and ambient temperature. Ratings are at sea level. Ratings can be altered depending upon aircraft requirements.*

### AC Controls

Mode selector switches	Compressor on/off switch
	Blower on/off switch
	Heater on/off switch
PLC controlled functions to protect compressor (blower overload and low freon)	

### Engine Controls (ECU)

Single Switch Starting and Shutdown (toggle)  
Engine Over-speed Shutdown  
Low Oil Pressure Shutdown  
High Water Temperature Shutdown  
Automatic Start Over Crank Shutdown  
Electronic Governor

**Wheels/Tires** 6.00X9 pneumatic tires mounted on 5-lug steel wheels

### Instruments

VDO lighted hour meter, volt meter, temperature gauge (engine), temperature gauge (air) and oil pressure gauge

### Partial List of Options

Safety beacon  
Rectifier - provides 28.5 VDC, 1000 A continuous - 2000 peak power. Includes 30 ft (9.1 m) Mil. Spec. cable with molded plug (3 wires), voltmeter, ammeter, cable power switch (toggle) and pilot light.



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