

# AIR CONDITIONING UNIT

5TR/15TR/24TR/65TR/120TR

( OTHER MODELS AVAILABLE ON REQUEST )



## SMART & FUTURISTIC GSE



65TR AIR CONDITIONING UNIT  
FOR NARROW BODY AIRCRAFT



5TR AIR CONDITIONING UNIT  
FOR PRIVATE JETS AND REGIONAL AIRCRAFT



120TR AIR CONDITIONING UNIT  
FOR WIDE BODY AIRCRAFT

## ▶ Salient Features

- ▶ Diesel engines from Deutz/Cummins equivalent conforming to latest EPA/Euro emission norms
- ▶ Electric driven models
- ▶ Automatic temperature control
- ▶ Cabin heater (Optional)
- ▶ Meets MIL, AHM & ARP standards
- ▶ Digital control system with touchscreen panel (MAK GSEM V8-C)
  - ☞ Interactive GUI visible under all weather conditions
  - ☞ Graphical representation of operational data
  - ☞ Fault log chart & troubleshooting guide
- ▶ MAK RDMS - Remote Diagnosis and Monitoring System (Optional)

**MAK CONTROLS & SYSTEMS PVT. LTD.**

☎ +91 422 4305000    ✉ info@makcontrols.com

**AIR+MAK INDUSTRIES INC.**

☎ +1 662 893 3444    ✉ info@airmak.com

# AIR CONDITIONING UNIT



MAK design and manufacture Air Conditioning Units of various ranges like 5TR, 15TR, 24TR, 65TR & 120TR as per commercial aircraft specifications. MAK has specially developed ACU's for corporate jets with 5TR capacity. MAK ACU's boast of 1 Lakh + hours of incident free operation and find satisfied customers among major civil airlines and defense organizations across the world.

MAK ACU comes with a touchscreen control panel MAK GSEM V8-C and MAK RDMS-A feature rich fleet management software which transmits live operational data to a remote computer/mobile and alerts users in real-time of faults, alerts. With this software, users can plan maintenance schedules, ad-hoc service records, order spare parts... and much more, eliminating need for dedicated manpower per operation location.

## Technical Specifications\*

### PRIME MOVER

Engine	: Deutz/Cummins or equivalent Diesel engine upto Tier4 final
Drive	: Electrical
Alternator (electric drive only)	: Stamford/Marathon or equivalent

### REFRIGERANT SYSTEM

Compressor(Screw/Scroll)	: Bitzer/J&E Hall Screw /Fracold or Equivalent Screw compressor
Condenser/ Evaporator	: Luve/Luvata or Equivalent
Refrigerant	: R134a /R407c or Equivalent environmental friendly refrigerant
Other refrigeration line components	: Danfoss/Parker or equivalent

### AIR FLOW AND TEMPERATURE

Blower	: High pressure centrifugal Blower
Air output flow	: 100 PPM to 860 PPM
Blower output pressure	: Upto 48"H <sub>2</sub> O based on Aircraft requirement
Output temperature	: 36°F to 54°F (2°C to 12°C) (can be customized to suit any requirement)

Commercial utility power as power source option

### MOUNTING CONFIGURATION :

Towable trailer mounted / Self propelled / Skid mounted for truck/ Passenger Boarding Bridge(PBB) mounted

\* Due to continuous development, the dimensions, layout, configuration and specifications are subject to change without notice.

\*\* Electric driven only

## ACU OPERATIONS MONITORING

Following Parameters are displayed through GUI touch screen in graphical format for quick and easy interpretation.

- Engine Oil Pressure
- Engine Coolant Temperature
- Engine RPM
- Fuel Level
- Battery Voltage
- Output Air Temperature
- Set output Air Temperature
- Output Pressure
- Compressor Oil Temperature
- Engine Hours Run
- Battery Charging Current
- Maintenance Schedule

## ACU OPERATION PROTECTIONS

### A. FOR ENGINE

- Low fuel warning / shut down
- Low Lube Oil Pressure Shutdown
- High Coolant Temperature Shutdown
- Over Speed Shutdown
- Low Fuel Shutdown
- Low Coolant Indication
- Charge Fail Indication
- Air Filter Clog Indication

### B. FOR ALTERNATOR\*\*

- Over voltage
- Under voltage
- Over load
- Over frequency
- Under frequency
- Phase reversal

### C. FOR REFRIGERANT COMPRESSOR

- Refrigerant High Discharge Pressure Shutdown
- Refrigerant Low Suction Pressure Shutdown
- High Compressor Oil Temperature shutdown
- Low Compressor Oil Level shutdown
- High Compressor Discharge Temperature shutdown
- High Output Air Temperature Indication

For detailed technical specifications or any other queries please contact us

## MAK CONTROLS & SYSTEMS PVT. LTD.

7/41-B, Avinashi Road, Civil Aerodrome (Post),  
Coimbatore-641014, INDIA



+91 422 4305000



+91 422 4305060



info@makcontrols.com

www.makcontrols.com



## AIR+MAK INDUSTRIES INC.

11154, Wildwood Drive, Olive Branch,  
MS - 38654, USA



+1 662 893 3444



info@airmak.com

www.airmak.com