

AIR CONDITIONING UNIT

5TR/30TR/60TR/65TR/70TR/120TR/140TR/150TR

(OTHER MODELS AVAILABLE ON REQUEST)



AN ISO9001:2015COMPANY

SMART & FUTURISTIC GSE



140TR AIR CONDITIONING UNIT
FOR WIDE BODY AIRCRAFT



5TR AIR CONDITIONING UNIT
FOR CORPORATE JETS



65TR AIR CONDITIONING UNIT
FOR SMALL / NARROW BODY AIRCRAFTS

▶ Salient Features

- ▶ Diesel engines from Deutz/Cummins equivalent conforming to latest EPA/Euro emission norms
- ▶ Direct / Electric driven models
- ▶ Automatic temperature control
- ▶ Low noise level
- ▶ 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 (RDMS)

MAK CONTROLS & SYSTEMS (P) LTD., INDIA

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MAK design and manufacture Air Conditioning Units from 5TR to 150TR. Standard models are 30TR, 60TR, 65TR, 70TR, 110TR & 140TR manufactured as per commercial aircraft specifications. MAK has specially developed ACUs for corporate jets with 5TR capacity. MAK ACUs boast of 1 Lakh + hours of incident free operation and find satisfied customers among major civil airlines and defense organizations across the world.

MAK ACUs 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/Direct
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
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AIR FLOW AND TEMPERATURE

Blower	: High pressure centrifugal Blower
Air output flow	: 100 PPM to 860 PPM
Blower output pressure	: Upto 48"H ₂ 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 Shedule

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

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