Air Conditioning Unit

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

(other models available on request)

140TR Air Conditioning Unit for Wide Body Aircraft

5TR Air Conditioning Unit for Private Jets and Regional Aircraft

65TR Air Conditioning Unit for Narrow Body Aircraft

Smart & Futuristic GSE

Salient Features

- Diesel engines from Deutz/Cummins equivalent conforming to latest EPA/Euro emission norms
- Direct / 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 (RDMS)

Serving Defense and Aviation for Four Decades

Air+MAK Industries Inc., USA
MAK design and manufacture Air Conditioning Units from 3TR 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 3TR 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 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*

<table>
<thead>
<tr>
<th>PRIME MOVER</th>
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<tbody>
<tr>
<td>Engine</td>
<td>Deutz/Cummins or equivalent Diesel engine upto Tier4 final</td>
</tr>
<tr>
<td>Drive</td>
<td>Electrical/Direct</td>
</tr>
<tr>
<td>Alternator (electric drive only)</td>
<td>Stamford/ Marathon or equivalent</td>
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<table>
<thead>
<tr>
<th>REFRIGERANT SYSTEM</th>
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<tbody>
<tr>
<td>Compressor(Screw/Scroll)</td>
<td>Bitzer/J&amp;KE Hall Screw / Frascold or Equivalent Screw compressor</td>
</tr>
<tr>
<td>Condenser/ Evaporator</td>
<td>Luve/Luvata or Equivalent</td>
</tr>
<tr>
<td>Refrigerant</td>
<td>R134a/R407c or Equivalent environmental friendly refrigerant</td>
</tr>
<tr>
<td>Other refrigeration line components</td>
<td>Danfoss/Parker or equivalent</td>
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</tbody>
</table>

### 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
- 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

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For detailed technical specifications or any other queries please contact us

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