

**TECHNICAL SPECIFICATIONS:-****1. Engine Configuration**

- **Type:** Single-shaft gas turbojet engine
- **Afterburner System:** Integrated reheating (afterburner) unit included
- **Nozzle Type:** Cut-off capable and continuously variable (adjustable) nozzle

2. Fuel and Lubrication System

- **Fuel Compatibility:** Operates with ASTM D1655 Jet A or equivalent high-grade aviation kerosene
- **Fuel Tank Capacity:** Minimum 35 liters
- **Oil Tank Capacity:** Minimum 30 liters
- **Fuel Control:** Equipped with an electronically adjustable fuel flow control valve operable via the instrumentation and control panel

3. Performance Parameters

- **Maximum Thrust Output:** ≥ 40 Newtons
- **Compressor Speed (Continuous Operation):** $\geq 90,000$ RPM

4. Combustion System

- **Chamber Design:** Three-zone dilution combustion chamber
- **Ignition:** Integrated flame ignition capability

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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5. Instrumentation & Control Panel

Digital Indicators:

- Shaft rotational speed (RPM)
- Pressure readings:
 - Fan section
 - Air inlet
 - Combustion chamber (inlet & outlet)
 - Turbine outlet
 - Afterburner section
- Temperature readings:
 - Air inlet
 - Combustion chamber (inlet & outlet)
 - Turbine outlet
 - Afterburner section
- Fuel flow rate
- Nozzle opening (as a percentage)
- Generated thrust force

Analog Gauges:

- Fuel level
- Fuel pressure
- Oil temperature
- Oil pressure

6. Structural and Mechanical Configuration

- **Mounting:** All core components including the gas generator, combustion chamber, oil and fuel tanks, pumps, and auxiliary systems shall be mounted on a rigid steel frame for operational stability

7. Safety & Automation

- **Startup & Shutdown:**
 - Fully lockable startup procedure
 - Integrated automatic shutdown system to prevent operator error and protect components from damage
- **System Protection:** Fault detection mechanisms and emergency shutdown protocols included

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8. Data Acquisition & Analysis

- **System Type:** Computer-supported, automatic digital data acquisition
- **Capabilities:** Real-time data recording with PC interface for data transfer and post-test analysis

9. Exhaust System

- **Configuration:** Dedicated exhaust outlet for safe redirection of gases into the atmosphere

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