



DET 200

Dheya Engineering
Technologies
Private Limited

Compact Turbojet Engine · Autonomous Aerial Vehicles

Product Overview

The DET 200 is a high-performance compact turbojet engine purpose-built for autonomous aerial vehicle (AAV) propulsion. Delivering 200 N of maximum thrust from a 1.8 kg package, it combines a thermally efficient design with CANBUS-enabled digital diagnostics — the ideal powerplant for next-generation compact AAV platforms.

Key Highlights

200 N Maximum Thrust	1.8 kg Engine Weight	123,000 RPM Max Speed	< 35 s Startup to Idle	5,000 m Max Altitude	25 h Service Interval
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Technical Specifications

Parameter	Value	Unit
PERFORMANCE		
Maximum Thrust	200	N
Idle Thrust	7	N
Thrust-Specific Fuel Consumption (TSFC)	< 0.161	kg/N-h
Pressure Ratio	3.8	—
Air Flow Rate	0.38	kg/s
OPERATIONAL SPEEDS		
Maximum Speed	123,000	RPM
Idle Speed	38,000	RPM
THERMAL		
Exhaust Gas Temperature @ Maximum Thrust	< 750	°C
Engine Operating Temperature Range	-20 to +55	°C
FUEL SYSTEM		
Fuel Type	Jet A1 / Diesel	—
Fuel Consumption — Full Load	631	mL/min
Fuel Consumption — Idle	85	mL/min
Lubrication — Aeroshell Mix Ratio	5	%
Fuel Pump	BLDC Motor	—
PHYSICAL		
Engine Diameter	111	mm
Engine Length	273	mm
Total Engine Weight	1.8	kg
OPERATIONS		
Startup Time to Idle	< 35	s
Maximum Operating Altitude	5,000	m
Engine Operating Mach Number	0 – 0.6	—
Engine Service Interval	25	h
CONTROL & INTERFACE		
Engine Thrust Control	PWM / CANBUS	—
Engine Starter	BLDC Starter Motor with Bendix Drive	—



Additional Features · Package Contents

Additional Features

- CANBUS real-time diagnostics: fuel flow, fuel consumption, engine RPM, inlet pressure, inlet temperature, pump RPM, and pump power
- Dual 30 W compact glow plug ignition startup system for reliable cold and hot starts
- PWM and CANBUS dual-mode thrust control interface for seamless vehicle integration
- Compatible with Jet A1 and Diesel fuel for broad operational flexibility
- Compact form factor suited to both fixed-wing and multi-rotor autonomous aerial platforms

Package Contents

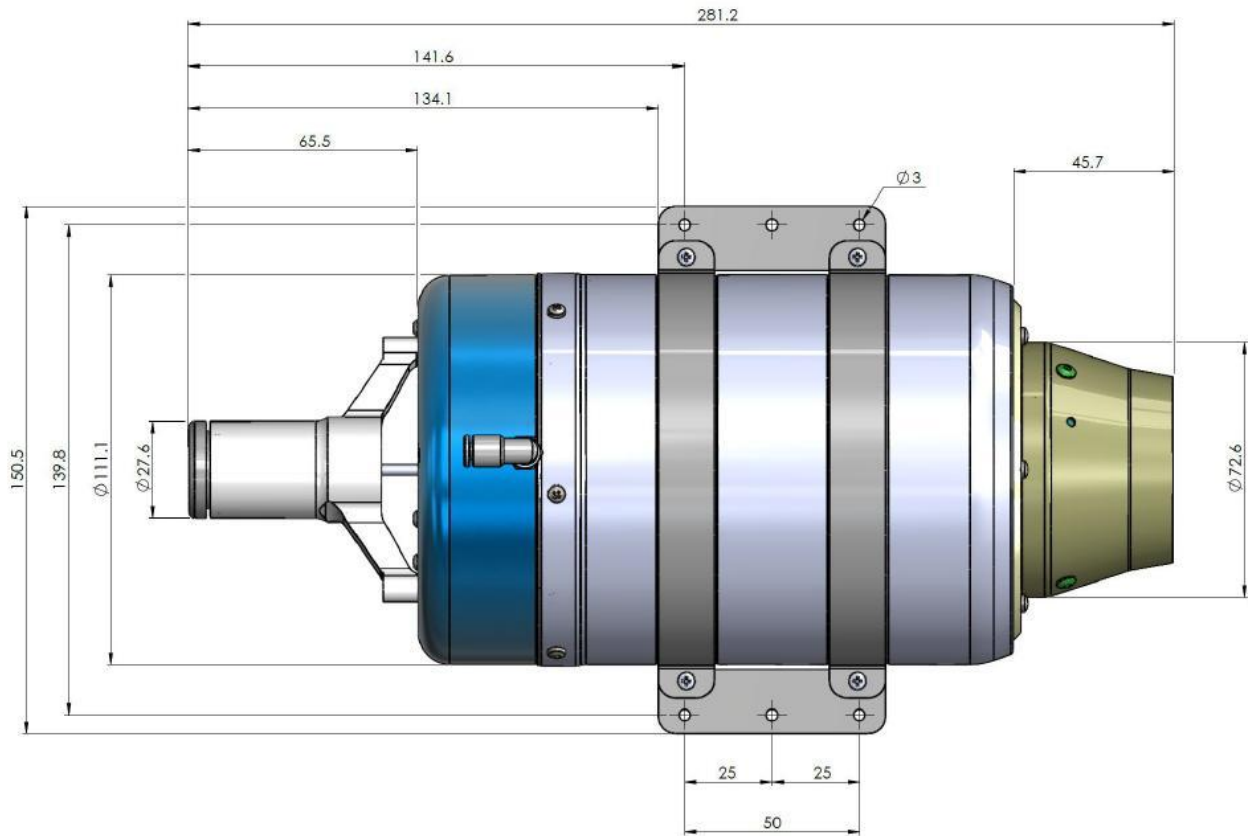
- ✓ Engine Unit
- ✓ Engine Interface Unit
- ✓ BLDC Fuel Pump
- ✓ Battery Pack (LiPo 3S)
- ✓ Supporting Connectors and Cables
- ✓ Engine Mounting Hardware (with screws)
- ✓ FOD Protection Screen

Application Note: The DET 200 is optimised for integration into compact autonomous aerial vehicles requiring sustained thrust in the 50–200 N range. Maximum flight endurance can be specified based on mission profile and onboard fuel capacity. Contact our engineering team for mission-specific sizing.



Dimensional Envelope · General Arrangement

Dimensional Drawing



All dimensions in millimetres (mm)

Engine Photograph



DET 200 — Production Engine Unit