



URBO



High Performance Propulsion for Tactical Missiles and UAVs

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# High Performance Propulsion for Tactical Missiles and UAVs

Pratt & Whitney's TJ150 is a high performance turbojet engine designed for expendable and limited life operation in missiles and unmanned aerial vehicle applications.

## **TJ150 PRODUCT FACTS**



#### UNMATCHED PERFORMANCE

The engine combines the simplicity of a single-spool architecture with high performance turbomachinery components to achieve unmatched performance in an extremely compact installation. The engine's state-of-the-art thrust/frontal area characteristic allows the TJ150 to install in minimal cross-section vehicles where other engines simply do not fit.



#### RELIABILITY

- The TJ150 has a single-stage, mixed flow compressor, which achieves an extraordinary pressure ratio in only one stage of compression. A conventional radial turbine configuration provides outstanding efficiency in a single stage.

- The combustor utilizes a simple spray ring with a unique fuel injection system to provide extremely reliable starting characteristics and excellent blowout margins. The TJ150 has demonstrated pyrotechnic starts to 35,000 feet and windmill starts at lower altitudes.



#### COMMONALITY

- Over 2,600 TJ150-1 engines have been delivered to Raytheon Missile Systems for their MALD® family of decoys and jammer vehicles.
- Other MALD® applications are under study, such as a "delivery vehicle" for generic payloads. All variants will benefit from the use of a common engine, the TJ150-1. Another engine model, the TJ150-3, is currently in development to power the MBDA Missile Systems' SPEAR (Selective Precision Effects At Range) medium range, precision strike tactical missile under the sponsorship of the UK Ministry of Defence.

### **ENGINE SPECIFICATIONS**

Thrust Class	170 lbs
Туре	Single Spool Turbojet
Engine Control	FADEC (Full Authority Digital Engine Control) or Customer Supplied (P&W Supplies Control Logic)
Engine Architecture	Single-Stage Mixed Flow Compressor Annular, Reverse-Flow Combustor Single-Stage Radial Flow Turbine Convergent, Fixed Area Jet Nozzle
Electric Power	Up to 2.0 kW from Embedded PMG (Permanent Magnet Generator)
Engine Life	Up to 2 Hours

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