TDI
A KRATOS COMPANY

TDI-J50 TURBOJET



High-Reliability Turbojet Engines
for Military UAS and Tactical Missiles

kratosdefense.com

PROUDLY MADE IN THE USA

THE SPARTAN TDI-J50



TDI-J50 Turbojet Engine

PRODUCT FACTS

The TDI-J50 turbojet engine is designed to deliver affordable military-grade performance in compact form. TDI engines are tested for reliability and survivability on airborne platforms.

Engine Specifications

Parameter	TDI-J50
Uninstalled Maximum Thrust at Sea-Level Static	75 lb_f (33 daN)
Overall Length (with minimum reference nozzle)	11 in (279 mm)
Nominal Engine Case Diameter	5.0 in (127 mm)
Uninstalled Engine Weight	12 lb_m (5.4 kg)
Maximum Operating Altitude / Mach Number	40,000+ ft (12,192 m) / 0.85+
Maximum Continuous Power Generation	1.5 kW
Approximate Maximum EGT	1,600 °F (871 °C)
Proven Starting Methods	Pyrotechnic, Windmill, Electric
Fuel Compatibility	JP-10, JP-8, JP-5, JET-A, JET-A1

Compact and Power-Dense

- 5.0” O.D., 11” length
- Modular exhaust nozzles adaptable to any installation
- Thrust up to 75 lb_f sea-level static
- Best-in-class TSFC from state-of-the-art turbomachinery
- Integral generator delivers up to 1.5 kW of continuous power

Established ‘Turn-Key’ Propulsion Solutions

- Nearly 40 years of development experience with major defense primes
- 100% designed and produced in the USA
- Scalable production capacity up to 10,000 engines/year
- Fuel and explosives handling/storage and support
- Integration testing, flight test, and full lifecycle support

Simple, Robust Architecture & Subsystems

- Engine and subsystems tested for survivability on air-launched platforms
- Able to withstand high acceleration from ground-launched applications
- Reliable start and operability validated via multiple captive-carriage flight tests

High-Performance, Low-cost Propulsion for Military UAS and Tactical Missiles

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