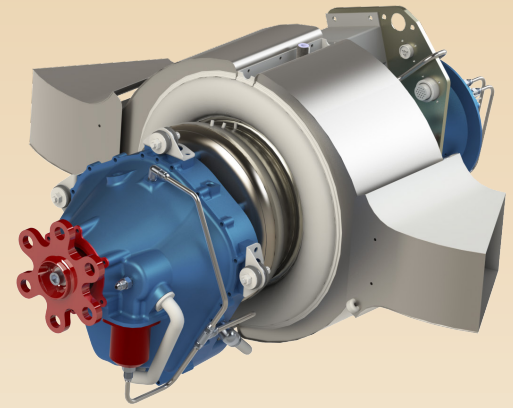




TPR72

FAMILY OF RECUPERATED GAS TURBINE ENGINES

CURRENTLY IN DEVELOPMENT



SPECIFICATIONS (SEA LEVEL ISO STANDARD DAY)

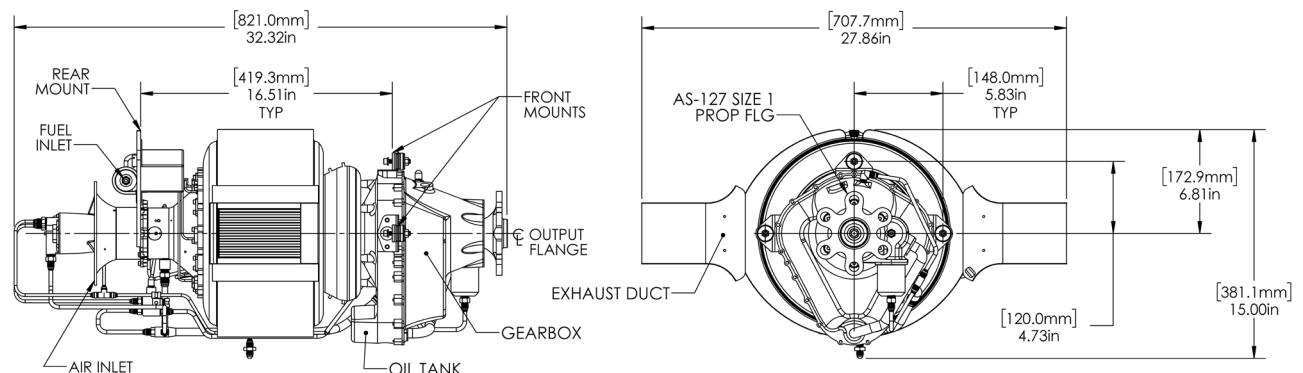
POWER OUTPUT - PROP FLANGE	72 KW @ 1010C TURBINE INLET TEMPERATURE
POWER OUTPUT - ALTERNATOR	5 KW @ 450V RMS, 3000 HZ
MASS (COMPLETE ENGINE WITH ACCYS)	30 KG (66 LB)
OUTPUT SPEED AT FULL POWER	3410 RPM (CW AFT LOOKING FWD)
FUEL	JP-4, JP-5, JP-8, JET A, JET A-1
OIL	MIL-L-23699
ATTITUDE LIMITS	PITCH: ± 45° ROLL: ± 30°

DESCRIPTION

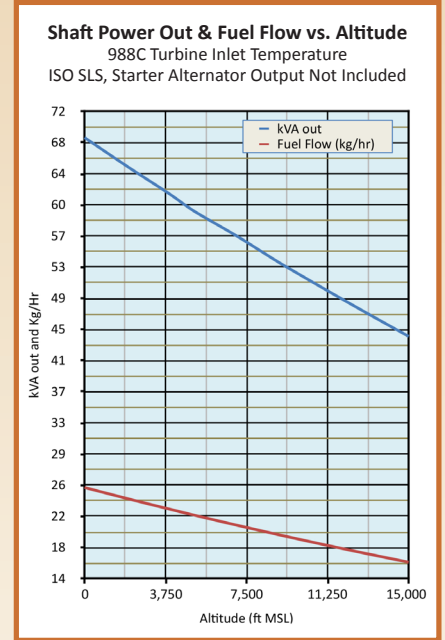
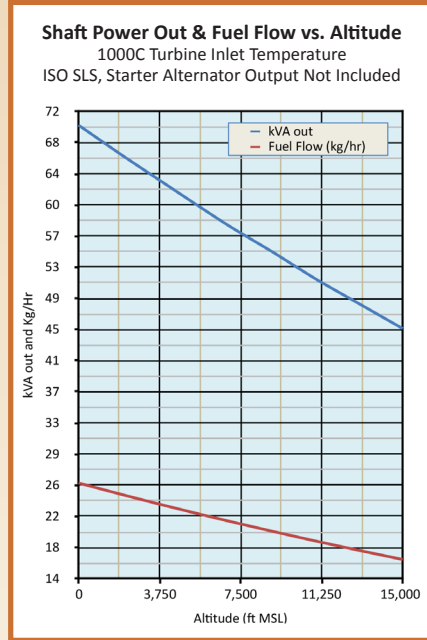
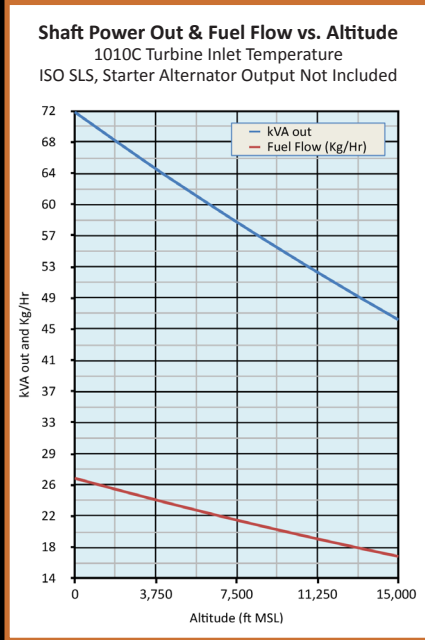
The TPR72 is a 1.5 Spool Gas Turbine Powerplant Intended for Use on Unmanned Vehicles and Ground Power Units.

Features Include:

- Two-Stage Axi-Centrifugal Compressor
- Two-Stage Radial-Axial Turbine
- 22-to-1 Ratio Two Stage Gearbox with Hardened and Ground SAE8620 Gearing
- Reverse-Flow Annular Burner With Patented Shear Atomizing Fuel Nozzles
- Multi-Pass Annular Exhaust Heat Recuperator
- High-Speed, High-Voltage 4/12 Pole, Brushless Starter/Alternator



SEA LEVEL PERFORMANCE



BASIC ENGINE INCLUDES

- High-Voltage Air-Cooled, Brushless Starter Alternator (*Alternate Output Voltages are Available*)
- Low Tension Ignition Unit with Single Igniter Plug
- Variable-Speed Fuel Pump or Current Driven Torquemotor Fuel Valve
- 20 Micron Fuel Filter
- Integral Gearbox Oil Tank
- Oil Pump and Pall AC-6091F-8Y141 3-Micron Filter
- Oil Pressure Switch
- Magnetic Chip Detector
- Electronic Starter Drive Unit
- Power Turbine (Gearbox) Hall-type Speed Sensor
- Gas Generator Hall-type Speed Sensor
- Power Turbine Exit Temperature Sensor (*Type K*)
- 4-Point Engine Mount
- Compressor Inlet Temperature Sensor (*Type K*)
- Burner Plenum Fuel Drain Plug
- Exhaust Collector (*Currently Bifurcated with Reversible Eductors*)

CUSTOMER PROVIDED ACCESSORIES

- Battery (*Currently, the engine requires 225 volts for starting*)
- Air Filter (*if required*)
- Oil Cooler and Required External Lines
- Oil Temperature Sensing Bulb
- Burner Plenum Fuel Drain Plug
- Fuel Tank Boost Pump (*5 PSI above true fuel vapor pressure should be provided to the engine*)