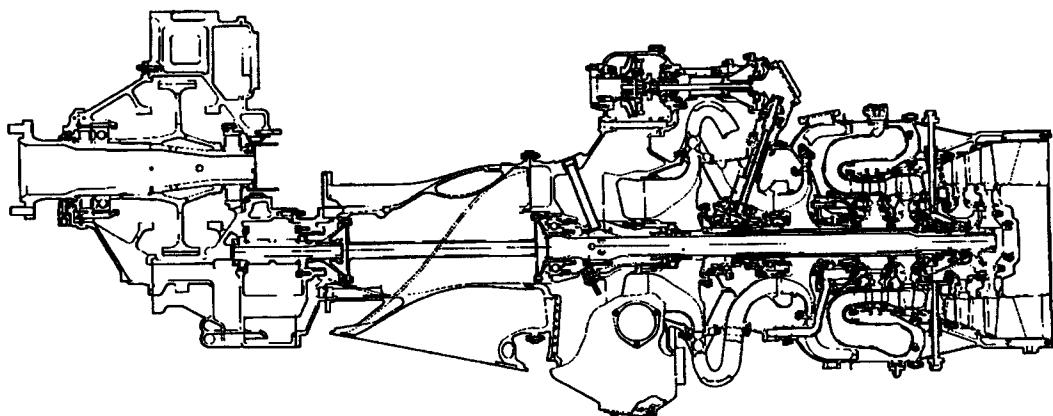


PW127

SALES SPECIFICATION NO. 1009



DESCRIPTION

The PW127 is a free turbine propulsion engine consisting of turbomachine and reduction gearbox modules connected by a drive shaft and integrated structural intake case. The turbomachine is a three concentric shaft design incorporating two centrifugal compressors each driven separately by single-stage turbines, and a two-stage power turbine. The reduction gearbox features a twin layshaft design with antifriction bearings and an offset propeller shaft. The combustion system is comprised of an annular reverse flow combustor, 14 piloted air blast fuel nozzles, and two ignitors. Additional engine features include an electronic power control system with mechanical backup, single oil system designed to prevent cross-contamination, optional scavenge system for oil cooled generators, provision for motive flow, electric torque signal, concentric exhaust, and automatic power augmentation. Maintainability features in addition to modularity, integral mating structure and single oil system include on-the-wing hot section and boroscope inspection, conveniently located accessories and simplified controls rigging.

FEATURES

Engine dry weight	1060 lbs
Output shaft design speed	1200 rpm
Propeller shaft rotation (viewed from rear of engine)	Clockwise
Engine length	84 in
Engine height	33 in
Engine width	26 in

PERFORMANCE

Guaranteed calibration stand performance at 1200 RPM propeller speed, sea level, static, ISA, uninstalled:

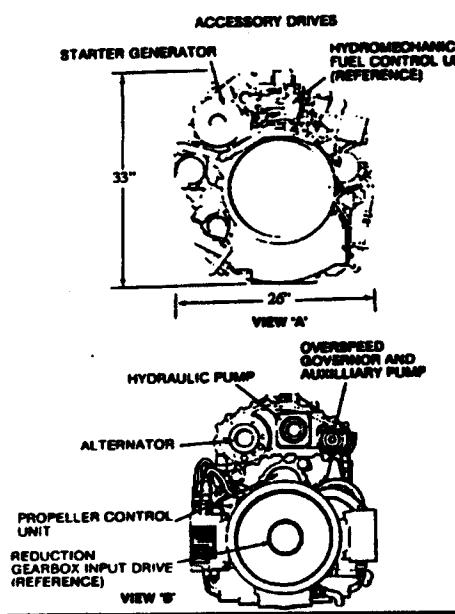
Ratings:	ESHP	SHP	Specific Fuel Consumption lb/eshp/hr
Take-off rating	2880	2750 ⁽¹⁾	.459
Alternate Take-off	2595	2475 ⁽¹⁾	.470
Maximum continuous	2619	2500 ⁽²⁾	.469
Maximum climb	2302	2192 ⁽³⁾	.486
Maximum cruise	2240	2132 ⁽⁴⁾	.490

1. Available to 88.9°F (31.6°C)
2. Available to 106.5°F (41.4°C)
3. Available to 83.1°F (28.4°C)
4. Available to 73°F (22.8°C)

Estimated Performance for this model may be obtained by use of the PWC Computer program. This program is available upon request.



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STANDARD EQUIPMENT

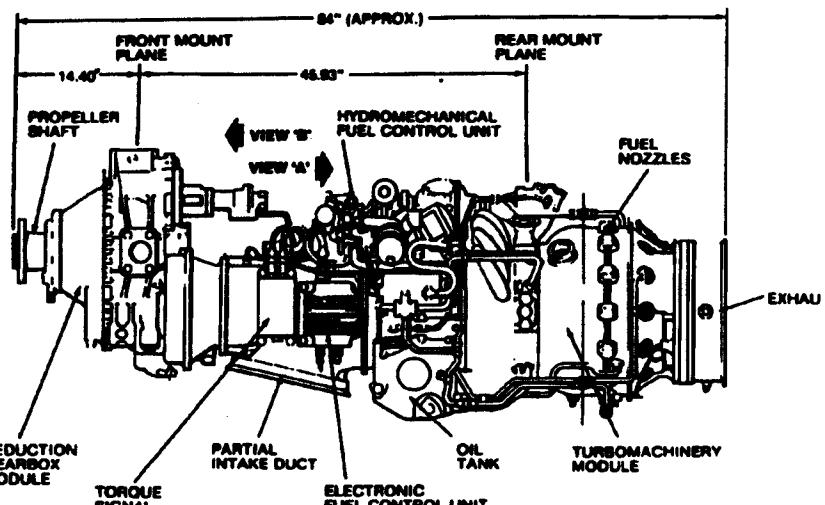
Included in engine price and dry weight.

- Power control system – including fuel pump, hydro-mechanical fuel control, provision for motive flow, electronic control and rating signal
- Engine ignition system – excluding power source
- Integral oil system – including tank
- Electric torquemeter signal
- High rotor speed (NH) and propeller speed (NP) sensors
- Turbine gas temperature thermocouples
- Fireseal attachment ring
- Partial intake duct
- Fuel heater, inlet fuel filter and bypass switch
- Handling bleed valve
- Accessory drives
 - Turbomachine high rotor: starter generator, hand turning
 - Reduction gearbox: alternator, hydraulic pump, propeller control module, propeller overspeed governor, electric auxiliary pump

OPTIONAL EQUIPMENT

Available at increased price and dry weight. List available at customer request.

- Scavenge system for oil cooled alternator
- Low rotor speed (NL) sensor
- Propeller pump and overspeed governor
- Low pressure bleed venturi and check valve
- Chip detectors Bayonet Type – reduction gearbox, turbomachinery and alternator
- Main oil filter flag or switch
- Reduction gearbox scavenge filter flag or switch
- Dual Ignition system
- Propeller brake
- Fuel cooled oil cooler
- Integral breather pipe



Note: Dimensions in Views A and B include approximate removal space requirements.

GENERAL NOTES

Take-off rating is the maximum power certified for single engine Take-off.

Alternative Take-off (A.T.O.) is the power to be set for Normal take-off. Engine control system automatically increases from A.T.O. power to maximum take-off based on engine and aircraft signals indicating requirement.

Max. continuous rating is the maximum power certified for continuous use. Aircraft Type Certification testing and in-flight emergencies are the only conditions for which the use of rated Maximum Continuous Power is authorized. In all other conditions the indicated rating for the corresponding flight condition is the maximum authorized power.

Max. Climb and Max. Cruise are the maximum powers approved by P&WC for climb and cruise operation.

The quoted certified and approved powers are obtainable on a dynamometer at ICAO standard conditions with the specified fuel and oil, using a P&WC designed exhaust duct of 173 sq.in. effective area and without intake duct, compressor airbleed or load on the accessory drives.

Fuel consumption is based on JP-4 with a lower heating value of 18,400 BTU per lb.

For additional information please call:

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