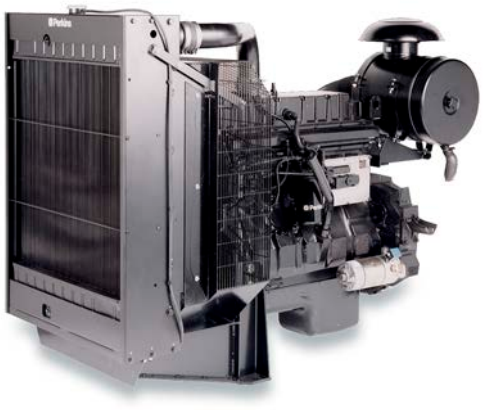
1300 Series 1306A-E87TAG3 Diesel Engine – ElectropaK

173-210 kWm Gross Power 1500 rev/min
202-240 kWm Gross Power 1800 rev/min

The Perkins 1300 Series family of ElectropaK engines has become renowned throughout the power generation industry for the engines' superior performance and reliability.

The 1306A-E87TAG3 engine is a turbocharged and air-to-air charge cooled unit, featuring hydraulically-actuated electronically controlled unit injectors (HEUI) with 'full authority' electronic engine management providing reliable,quiet, economic operation supported by the quick starting, fast response and close control demanded by the electrical power generation market.



High performance productive power

- Hydraulically actuated Electronically controlled Unit Injectors – high-pressure fuel injection gives consistent, reliable high performance.
- Constant electronic engine management and monitoring enable precise fuel metering and injection timing to ensure reliable low temperature starting, superb economy with performance and very close governing.

Quiet, clean power

- A rigid structure minimises noise transmission and helically cut gears provide quiet power transfer to auxiliaries.
- Forced induction and electronic fuel injection control combine to reduce combustion noise while electronically optimised fuel/air mixing ensures complete combustion resulting in virtually smoke free operation with emissions capability matching current and future emissions legislation.

Durable power

- A fully balanced induction-hardened steel crankshaft gives smooth performance with minimised bearing loads.
- Oil cooled pistons with keystone top and second rings give longer life while positive rotational valves and roller cam followers reduce wear on valve seats, tappets and cam lobes.

Reliable power

- Cylinder head coolant is directed to valve bridges and injectors and lubricating oil is cooled in a high efficiency oil cooler, both features enhancing engine reliability.
- Electronic safety shutdown option protects the engine while event and fault warning codes protect operations.

Easy maintenance

- Electronic diagnostics help to keep the engine at its productive best while enabling the operator to plan maintenance. Oil and filter changes at 450 hours reduce down time.
- All engines are supported by the Perkins worldwide network of distributors and dealers.

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	200	160	191	256	180	241
	Standby (maximum)	225	180	210	281	199	267
1800	Prime Power	231	185	221	296	201	269
	Standby (maximum)	253	200	240	322	220	296

1500/1800 rev/min switchable ratings are offered for stand-alone non-load sharing gen set applications.
The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1, DIN 6271. **Derating may be required for conditions outside these; consult Perkins Engines Company Limited.**

Generator powers are typical and are based on an alternator efficiency of 92% and a power factor of 0.8. Performance tolerance is ± 5%. **Fuel specification:** BS 2869: Part 2 1998 Class A2 or ASTM D975 D2. **Lubricating oil:** 15W40 to ACEA E3 or API CG4.

Rating Definitions
Prime Power: Variable load. Unlimited hours usage with an average load factor of 70% of the published prime power rating. A 10% overload is available for 1 hour in every 12 hour of operation.
Standby (maximum): Variable load. Limited to 500 hours annual usage up to 300 hours of which may be continuous running. No overload is permitted.

Perkins®
THE HEART OF EVERY GREAT MACHINE

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1300 Series 1306A-E87TAG3 Diesel Engine – ElectropaK

173-210 kWm 1500 rev/min
202-240 kWm 1800 rev/min

Standard ElectropaK specification

Air inlet
- Mounted air filter and turbocharger

Fuel system
- Hydraulically actuated electronically controlled unit fuel injectors with full authority electronic control
- Electronic governing to ISO 3046-4 with stand-alone isochronous or load-sharing capabilities
- Spin-on fuel filter with pre-filter and hand primer pump

Lubrication system
- Wet rear well steel sump with filler and dipstick
- Full flow spin-on filters
- Tube-type oil cooler thermostatically controlled

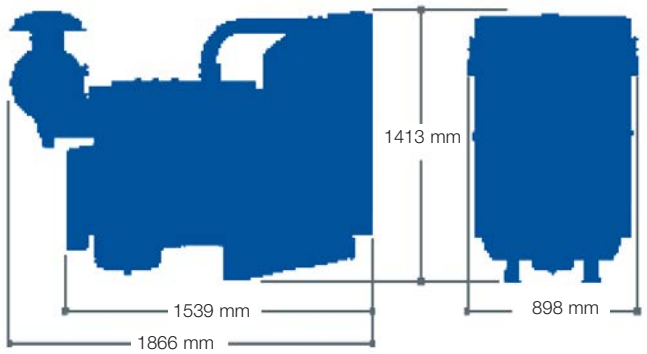
Cooling system
- Thermostatically controlled with belt driven circulating pump and 28 inch belt-driven fan
- Radiator mounted with all guards and pipes
- Air/air charge cooler incorporated in radiator
- Coolant filter/conditioner

Electrical equipment
- 24V starter motor and 24V 45 amp alternator with DC output
- Electronic Control Module mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE 3 J620 Size 11½
- Cast iron SAE 2 flywheel housing

Mountings
- Front engine mounting bracket

Optional equipment
- 12V starter and alternator
- 12V ECM
- Sensor positions for:
  - oil pressure
  - oil temperature
  - coolant temperature
- SAE 1 flywheel housing and flywheel
- Turbocharger exhaust outlet
- Parts manual
- Workshop manual



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	206	43	211	50
Prime Power	208	46	218	54
75% of Prime Power	216	37	234	44
50% of Prime Power	231	27	248	32

General data

Number of cylinders 6
Cylinder arrangement ..... Vertical in-line
Cycle ..... 4 stroke
Induction system ..... Turbocharged, air-to-air chargecooled
Combustion system ..... Direct injection
Cooling system ..... Water-cooled
Bore and stroke ..... 116.6 mm x 135.9 mm (4.6 in x 5.4 in)
Displacement ..... 8.7 litres (531 cubic in)
Compression ratio 16.9:1
Direction of rotation ..... Anti-clockwise, viewed on flywheel
Total lubrication system capacity ..... 26.5 litres (7 US gal)
Coolant capacity ..... 24.2 litres (6.4 US gal)
Dimensions – Length ..... 1866 mm (73.5 in)
Width ..... 898 mm (35.4 in)
Height ..... 1413 mm (55.6 in)
Dry weight (engine) ..... 889 kg (1960 lbs)

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