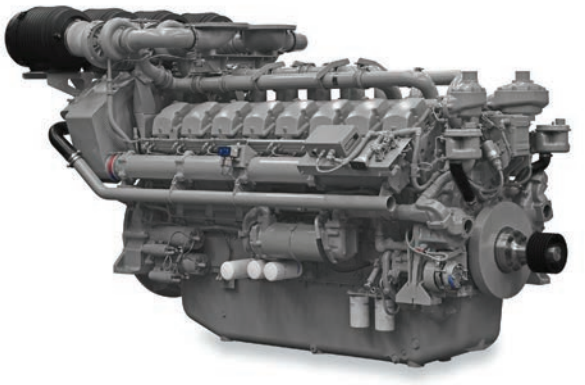
4000 Series 4016-61TRG1, TRG2 Diesel Engine – ElectropaK

4016-61TRG1 – 1684 kWm 1500 rpm
4016-61TRG2 – 1895 kWm 1500 rpm

The Perkins 4000 Series family of 6, 8, 12 and 16 cylinder diesel engines was designed in advance of today's uncompromising demands within the power generation industry and includes superior performance and reliability.

The 4016-61TRG ElectropaK is a newly developed turbocharged, air-to-water charge cooled, 16 cylinder diesel engine.

Their premium design and specification features provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability, low gaseous emissions, overall performance and reliability essential to the power generation market.



Economic power

- Individual four valve per cylinder heads give optimised gas flows, whilst digitally governed unit fuel injectors ensure ultra-fine fuel atomisation and hence controlled rapid combustion, for efficiency and economy
- Commonality of components with other engines in the 4000 Series family allows reduced parts stocking levels

Reliable power

- Developed and tested using latest engineering techniques
- Piston temperature are controlled by an advanced gallery jet cooling system
- All engines are tolerant of a wide range of temperatures without derate

Clean, efficient power

- Exceptional power to weight ratio and compact size for easier transportation and installation
- New designed radiator assemblies with corrosion inhibiting powder coated finish; fewer pipe joints and easier access to reduce maintenance times
- Designed to provide excellent service access for ease of maintenance
- Engines designed to comply with major international standards
- Low gaseous emissions

Product support excellence

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world

Engine Model (1500 rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
4016-61TRG1	Baseload Power	1400	1120	1269	1700	1179	1579
	Prime Power	1850	1480	1648	2208	1558	2088
	Standby (maximum)	2000	1600	1774	2377	1684	2257
4016-61TRG2	Baseload Power	1600	1280	1437	1926	1347	1805
	Prime Power	2000	1600	1774	2377	1684	2257
	Standby (maximum)	2250	1800	1985	2659	1895	2538

The above ratings represent the engine performance capabilities within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS 5514/1.

Ratings conditions: 25ºC air inlet temperature, barometer pressure 100 kPa, relative humidity 30%. Please consult your distributor or the factory for ratings in ambient conditions. *Note:* For full ratings please refer to Perkins Engines Company Limited. All electrical ratings are based on an average alternator efficiency and a power factor of 0.8. **Fuel specification:** BS 2869 Class A1 + A2 or ASTM D975 No 2D.

Rating Definitions
Continuous Baseload: Power available for continuous full load operation. No overload is permitted. **Prime Power:** Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation. **Standby (maximum):** Power available at variable load in the event of a main power network failure for a maximum of 500 hours per year. No overload is permitted.

Photographs are for illustrative purposes only and may not reflect final specification.

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Standard ElectropaK specification

Air inlet
- Mounted air filters and turbochargers

Fuel system
- Direct fuel injection system with fuel lift pump
- Digital governing to ISO 8528-5 class G2 with isochronous capability
- Full-flow spin-on fuel oil filters

Lubrication system
- Wet sump with filler and dipstick
- Full-flow spin-on oil filters

Cooling system
- Two triple thermostats
- System designed for ambients up to 50ºC
- Powder coated radiator comprising: water radiator, air charge-cooled radiator, fuel oil cooling (optional), all pipes, hoses and clips, fan, pulleys, fan belts and safety guards.

Electrical equipment
- 24 volt starter motor and 24 volt alternator with integral regulator and DC output
- Turbine inlet temperature shutdown switch
- Twin high coolant temperate shutdown switches
- Twin low oil pressure shutdown switches
- Air shut off valve wiring harness - fully wired

Flywheel and housing
- Flywheel to SAE J620 size 18, 533.4 mm (21in)
- SAE 00 flywheel housing

Optional equipment
- Choice of either damper guard or radiator drive pulley arrangement
- Immersion heater with thermostat

Note: This list is not exhaustive, further options are available. Please ask your Perkins representative for more details.

General data

Number of cylinders 16
Cylinder arrangement ..... 60º Vee form
Cycle .....4 stroke
Induction system .....Quad turbocharged
Air to water charge cooled
Combustion system.....Direct injection
Cooling system.....Water-cooled
Displacement ..... 61.123 litres (3730 cubic in)
Bore and stroke..... 160 x 190 mm (6.3 x 7.5 in)
Compression ratio 13.6:1
Direction of rotation .....Anti-clockwise, viewed from flywheel end
Firing order 1A, 1B, 3A, 3B, 7A, 7B, 5A, 5B, 8A, 8B, 6A, 6B, 2A, 2B, 4A, 4B
Total lubrication system capacity..... 237.2 litres (62.7 US gals)

4016-61TRG1	Temperate		Tropical	
Coolant capacity	litres	US gals	litres	US gals
	210	55.5	215	56.8
Dimensions	mm	inches	mm	inches
Length	3302	130.0	3302	130.0
Width	1723	67.8	1723	67.8
Height	2128	83.8	2128	83.8

4016-61TRG2	Temperate		Tropical	
Coolant capacity	litres	US gals	litres	US gals
	215	56.8	252	66.6
Dimensions	mm	inches	mm	inches
Length	4542	178.8	4542	178.8
Width	2185	86.0	2185	86.0
Height	2366	93.1	3175	125.0

Total weight (dry)..... 5570 kg (12279.7 lbs)

Final weight and dimensions will depend on completed specification

Fuel Consumption	4016-61TRG1		4016-61TRG2	
	g/kWh	litres/hr	g/kWh	litres/hr
Standby	201	414	207	477
Prime	201	384	205	422
Baseload	206	303	205	342
75% prime	209	300	206	318
50% prime	207	198	210	216
25% prime	230	110	225	116

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