



# 4000 Series

## 4016-61TRG1/2/3

### Diesel Engine - Electro Unit

4016-61TRG1 - 1684 kWm 1500 rpm  
 4016-61TRG2 - 1894 kWm 1500 rpm  
 4016-61TRG3 - 2083 kWm 1500 rpm



#### 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

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.

4016-61TRG Electro Unit 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.

Engine Model (1500 rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
		kVA	kWe	Gross		Net	
				kWm	bhp	kWm	bhp
4016-61TRG1	Baseload Power	1400	1120	1268	1700	1178	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	1779	2377	1684	2257
	Standby Power	2250	1800	1984	2659	1894	2538
4016-61TRG3	Baseload Power	1800	1440	1600	2144	1500	2010
	Prime Power	2250	1800	1975	2647	1875	2513
	Standby Power	2500	2000	2183	2925	2083	2791

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:** 25°C 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.

All information in this document is substantially correct at time of printing and may be altered subsequently

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# 4000 Series

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### Standard Electro Unit 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 50°C

#### Electrical equipment

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

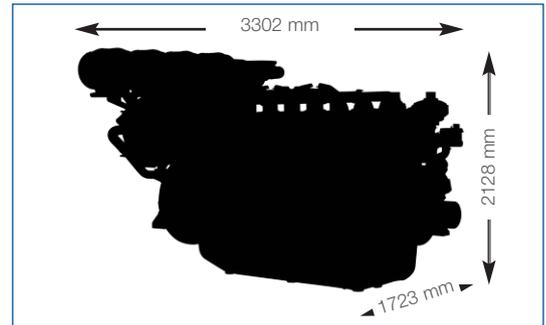
#### Flywheel and housing

- Flywheel to SAE J620 size 18
- 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	60° 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
Bore and stroke	160 x 190 mm
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
Total coolant capacity	95 litres
Length	3302 mm
Width	1723 mm
Height	2128 mm
Total weight (dry)	5570 kg

Final weight and dimensions will depend on completed specification



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