



LBE GENERATORS

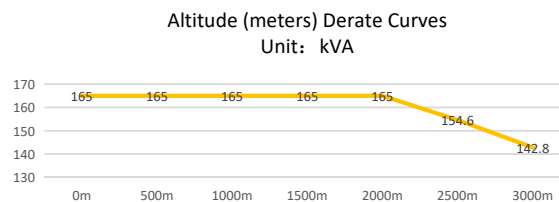
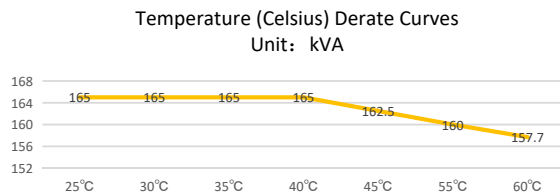
P-152

*LBE POWERING YOUR WORLD
anytime. anywhere*

Powered By Perkins



MODEL			P-152
Power Pf.0.8	Standby	kVA	169
		kW	135
	Prime	kVA	152
		kW	121
	Frequency	Hz	60
	Voltage	V	208/120; 220/127; 416/240; 440/254; 480/277
	Rated speed	rpm	1800



Standard reference Conditions:

Standard reference condition 25°C (77°F) air inlet temp, 100m (328ft) A.S.L 30% relative humidity. Fuel consumption data with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998, Class A2.

Note:

The standby power rating of the generating set is where a variable load limited to an annual usage up to 500 hours is applied, with 300 hours of which may be continuous running. Noting that no overload is permitted

Standard Features

- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set complies with ISO 8528-5, Class G3 requirements for transient performance.
- The generator set accepts rated load in one step.
- The 60Hz generator set engine is certified by the Environmental Protection Agency (EU or MEP) to conform to EU2, EU3 nonroad emissions regulations.(≤560KW)
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.

Generator Features

- The brushless, rotating-field generator has broadrange reconnectability.
- The pilot-excited, permanent-magnet generator (PMG) provides superior short-circuit capability
- Controllers are available for all applications. See controller features inside.
- The low coolant level shutdown prevents overheating (standard on radiator models only).
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
- An electronic, isochronous governor delivers precise frequency regulation.
- Electronic engine controls and a generator microprocessor controller combine to deliver one of the most advanced control systems in today's generator market.



Engine Specifications

1100 Series 1106A-70TG1 Diesel Engine – Electropak

133.5 kWm (179 hp) net prime power @ 1800 rpm

148.4 kWm (199 hp) net standby power @ 1800 rpm

Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of Electropak engines now fit even closer to customers needs.

In the world of power generation success is only gained by providing more for less. With the 1106A-70TG Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These engines are assembled around optimal, efficient manufacturing processes with state-of-the-art technology. They are built to provide the exact power solution for customers who sell their applications into lesser regulated countries.

Focusing on our common platform theme, changes to engine envelope dimensions and connection points have been kept to a minimum.



Specification		
Number of cylinders	6 vertical in-line	
Bore and stroke	105 x 135 mm	4.13 x 5.31 in
Displacement	7.01 litres	428 in ³
Aspiration	Turbocharged	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	18.2:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	18 litres	4.7 US gal
Cooling system	Liquid	
Total coolant capacity	21 litres	5.5 US gal

Percent of prime power	Fuel consumption at 1800 rpm g/kWh	Fuel consumption at 1800 rpm l/hr
110%	209.7	38.8
Prime power	210.9	35.2
75%	210.8	26.5
50%	209.3	18.0
25%	243.1	10.5



ALTERNATOR SPECIFICATION

Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet, Pilot Exciter
Voltage regulator	Solid-State, Volts/Hz
Insulation	NEMA MG1, Class H
Material	Synthetic, Nonhygroscopic
Temperature rise	Prime 130°C, 150°C Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Rotor balancing	125% 60 Hz, 150% 50 Hz
Voltage regulation, no-load to full-load(with < 0.5% drift due to temp. variation)	3-Phase Sensing, $\pm 0.25\%$
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
- Self-ventilated and drip-proof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state volts-per-hertz voltage regulator with $\pm 0.25\%$ no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.



Controller

Audiovisual annunciation with NFPA 110 Level 1 capability. Programmable microprocessor logic and digital display features.

Safeguard circuit protection standard.

12- or 24-volt engine electrical system capability.

Remote start, remote annunciation, and remote communication options. Refer to M6-46 for additional controller features and accessories



Key Features

- 4-line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- LED and LCD alarm indication
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Control logic facilities
- Easy access diagnostic page
- CAN and Magnetic Pick-up / Alt. Sensing
- Fuel usage monitor and low fuel alarms
- Charger alternator failure alarm
- Manual speed control
- Manual fuel pump control
- Engine exerciser
- "protections disabled" feature
- kW overload protection
- Power monitoring
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer
- Unbalanced load protection
- Independent Earth Fault trip
- USB connectivity
- Backed up real time clock
- Configurable display languages
- User selectable RS232 and RS485 communications
- SMS Messaging (additional external modem required)
- Additional display screens to help with modem diagnostics
- Integral PLC editor



Generating Sets Standard and Optional Features

Engine	• 4-stroke, water-cooled diesel engine • Standard air filter • Standard fuel filter • Standard oil filter • Oil temperature sensor • Low coolant level sensor • Radiator with blowing fan • Industrial Grade Silencer • Fuel water separator • Water jacket heater (optional)
Alternator	• Class H insulation • IP23 Protection • Automatic Voltage Regulator (AVR) • PMG excitation (optional) • Single bearing alternator • Class F or class B temperature rise (optional) • Digital Voltage Regulator (optional) • Double bearing (optional) • Anti-Condensation Heater (optional) • IP41 Protection (optional)
Electrical system	• Maintenance-free and anti-explosion battery • Standard breaker • ABB breaker (optional) • ATS (optional) • Battery charger (optional) • GMS monitoring (optional)
Packing	• Engine manual • Alternator manual • Gensets operation and maintenance manual • Tool kit
Baseframe	• Forklift pockets • Pulling slots • Earth wire protection • Built-in anti vibration mountings • Fuel outlet valve • Standard fuel tank • Enlarged fuel tank (optional) • Separated fuel tank (optional)
Canopy	• Weatherproof & sound-attenuated canopy • Sound-absorbing material • Lifting lug • Emergency stop button • Inside silencer



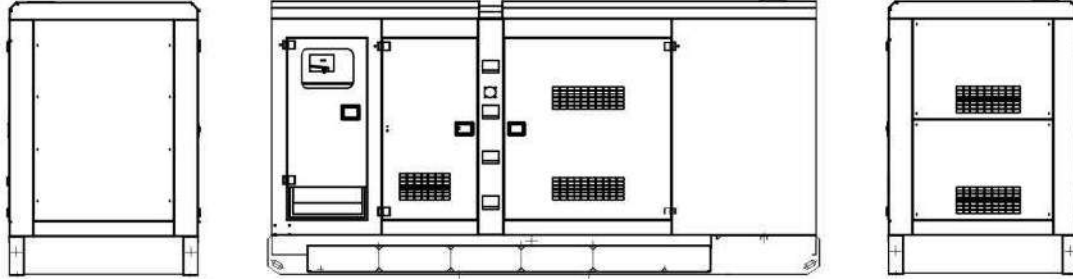
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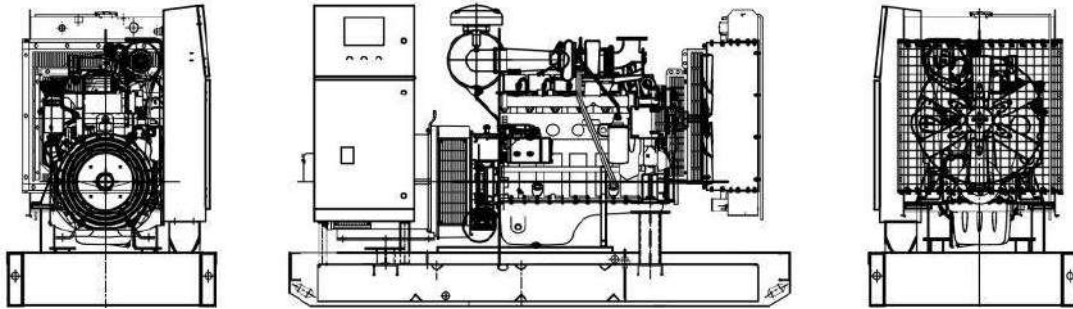
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Overview Dimension & Weight



(Silent type)					
Configuration	L= Length (mm)	W= Width (mm)	H= Height (mm)	Weight (kg)	Fuel Tank Capacity(L)
Silent Type	3360	1110	1700	2100	410



(Open type)					
Configuration	L= Length (mm)	W= Width (mm)	H= Height (mm)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2350	990	1450	1355	210



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