



LBE GENERATORS

*LBE POWERING YOUR WORLD
anytime. anywhere*

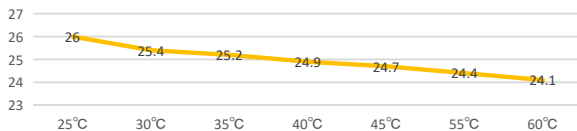
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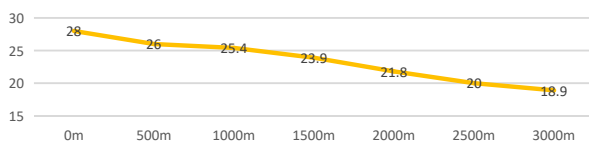


MODEL			
Power Pf.0.8	Standby	kVA	26
		kW	21
	Prime	kVA	24
		kW	19
	Frequency	Hz	60
	Voltage	V	208/120; 220/127; 416/240; 440/254; 480/277
	Rated speed	rpm	1800

Temperature (Celsius) Derate Curves
Unit: kVA



Altitude (meters) Derate Curves
Unit: kVA



Standard Features

- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60Hz generator set offers a AUS 2012 listing and CE 2015 listing.
- 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.

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.

RATINGS: All three-phase units are rated at 0.8 power factor. **Standby ratings:** Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. **Prime power ratings:** Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271. For limited running time and base load ratings



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Perkins engine Model: 404D-22G

Main features:

- The 400 series engine family continues to set new standards in the compact engine market. Developed alongside customers to fulfill their needs in the genset, compressor, agricultural and general industrial markets.
- These new ElectropaKs provide compact power, from a robust family of 3 and 4 cylinder diesel engines designed to provide economic and durable operation at Prime and Standby duties, hitting the key power nodes required by the power generation industry.
- Long-term Power Solution The 400 range of ElectropaKs has been designed to fully comply with stringent EU and EPA emissions regulations, providing an emissions compliant power solution for the future.
- Cost effective power
 - Compact size and low noise
 - Lower fuel consumption and oil use
 - 500 hours service intervals
 - 2 year warranty



Engine Specifications

Engine Brand	PERKINS
Engine Model	404D-22G
Cylinder No.& Configuration	4 cylinder Diesel L type
Working Mode	Naturally Aspirated
Bore x Stroke	mm 84*100
Displacement	L 2.216
Compression Ratio	23.3:1
Rated Power	kW 22
Rated Speed	1800
Lubrication System	Splash Lubrication
Lube Oil	Conforms above CF class or SAE10W-30,15w-40
Lube Oil Capacity	L 10.6
Battery Capacity	6-QW-36(312)*1
Fuel Type	Diesel:0#(Summer),- 10#(Winter),-35#(Cold)
Fuel Consumption 25% load	L/H 2.1
Fuel Consumption 50% load	L/H 3.5
Fuel Consumption 75% load	L/H 4.8
Fuel Consumption 100% load	L/H 6.2



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Alternator

Type	4-Pole, Rotating-Field	➤ NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
Exciter type	Brushless, Permanent-Magnet, Pilot Exciter	➤ Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
Voltage regulator	Solid-State, Volts/Hz	➤ Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the generator field.
Insulation	NEMA MG1, Class H	➤ Self-ventilated and dripproof construction.
Material	Synthetic, Nonhygroscopic	➤ Superior voltage waveform from two-thirds pitch windings and skewed stator.
Temperature rise	130°C, 150°C Standby	➤ Digital solid-state volts-per-hertz voltage regulator with $\pm 0.25\%$ no-load to full-load regulation.
Bearing: quantity, type	1, Sealed	➤ Brushless alternator with brushless pilot exciter for excellent load response.
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	

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



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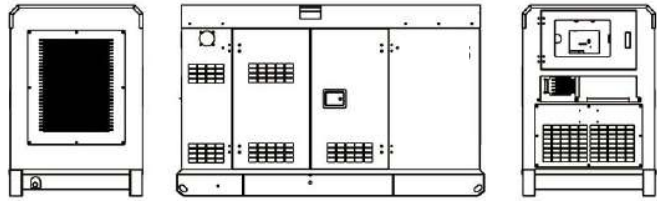
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Generating Sets Standard and Optional Features

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 silence
- Fuel water separator (optional)
- Water jacket heater (optional)

Overview Dimension & Weight



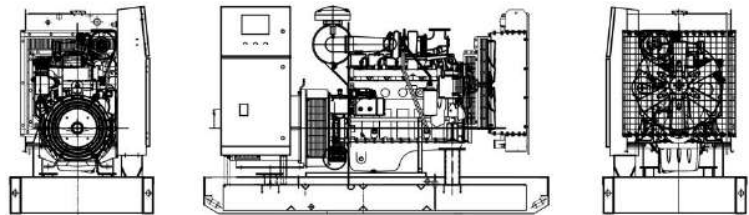
(Silent type)					
Configuration	L= Length (mm)	W= Width (mm)	H= Height (mm)	Weight (kg)	Fuel Tank Capacity (L)
Silent Type	1860	810	1152	680	62

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)
- Condensed 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

(Open type)					
Configuration	L= Length (mm)	W= Width (mm)	H= Height (mm)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	1470	690	1280	445	75

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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