



400 Series

Diesel engine - ElectropaK 404C-22G

20.4 kWm 1500 rev/min

22.6 kWm 1800 rev/min

33.9 kWm 3000 rev/min



The Perkins 400 Series provides compact power from a robust family of 2, 3 and 4 cylinder diesel engines, designed to meet today's uncompromising demands within the power generation industry.

The 404C-22G is a compact 4-cylinder naturally aspirated diesel engine. It's premium features provide economic and durable operation for standby duty, low gaseous emissions, overall performance and reliability.

Compact, Efficient power

A class-leading engine package coupled with an innovative, newly designed cooling pack provides optimum power density, making installation and transportation easier and cheaper. This package has been specially designed to hit the key power nodes required by the power generation industry.

Quiet, clean power

The 404C-22G has an exceptionally low noise signature making it the ideal choice for power generation in any environment. A high compression ratio also ensures clean rapid starting in all conditions. Design features ensure maximum cleanliness in terms of emissions throughout the engines operating life.

Reliable power

Developed and tested using the latest engineering techniques this engine reliably provides power when you need it. Operating and maintenance costs are reduced through excellent fuel and oil economy whilst whole-life costs are enhanced by a 500 hour service interval and a 2 year warranty. Excellent service access further improves maintenance and support is provided by a worldwide network of 4000 distributors and dealers.

Engine speed rev/min	Type of Operation	Typical generator output (net)		Engine Power			
				Gross		Net	
		KVA	kWe	kW	bhp	kW	bhp
1500	Prime Power	20.3	16.3	18.7	25.1	18.5	24.8
	Standby (maximum)	22.7	18.2	20.6	27.6	20.4	27.4
1800	Prime Power	23.4	18.7	22.0	29.5	20.7	27.8
	Standby (maximum)	25.3	20.2	24.3	32.6	22.6	30.3
3000	Prime Power	33.8	27.0	31.2	41.8	30.7	41.2
	Standby (maximum)	36.7	29.3	34.4	46.1	33.9	45.5

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1

Derating may be required for conditions outside these; consult Perkins Engines Company Limited

Generator powers are typical and are based on typical alternator efficiencies and a power factor (cos θ) of 0.8

Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2

Lubricating oil: To API CH4/ACEA E5

Rating Definitions

Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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. No overload is permitted

400 Series 404C-22G

Standard ElectropaK Specification

Air Inlet

Mounted air filters

Fuel System

Mechanically governed cassette type fuel injection pump

Spin-on full flow fuel filter

Lubrication System

Wet steel sump with filler and dipstick

Spin-on-full-flow lub. oil filter

Cooling System

Thermostatically-controlled system with belt driven circulating pump and pusher fan

Mounted radiator and piping

Electrical Equipment

12 Volt starter motor and 12 Volt 55 Amp alternator with DC output

Oil pressure and coolant temperature switches

12 Volt shut off solenoid energised to run

Glow plug cold start aid and heater/starter switch

Flywheel and Housing

1500/1800 rev/min

High inertia flywheel to SAE J620 Size 7 $\frac{1}{2}$ Heavy

Flywheel housing SAE 4 Long

3000/3600 rev/min

High inertia flywheel to SAE J620 Size 7 $\frac{1}{2}$ Light

Flywheel housing SAE 4 Short

Mountings

Front and rear mounting bracket

Literature

User's Handbook

Optional Equipment

Exhaust silencer

Workshop manual

Parts book



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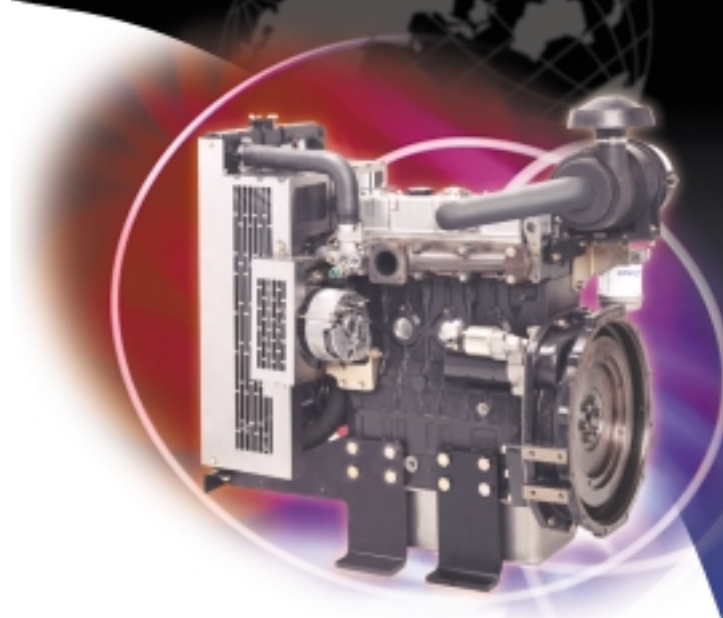
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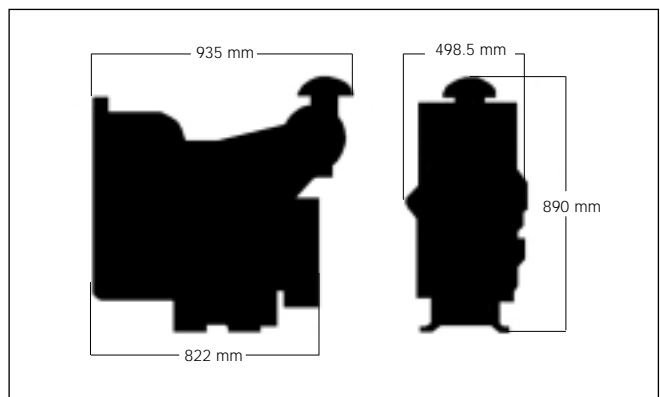
All information in this leaflet is substantially correct at the time of printing but may be changed subsequently by the Company



General Data

Number of cylinders	4
Cylinder Arrangement	Vertical in-line
Cycle	4 stroke
Induction System	Natural Aspiration
Combustion System	Indirect injection
Cooling System	Water-cooled
Bore & Stroke	84 x 100mm
Displacement	2216cc
Compression Ratio	23.3:1
Direction of Rotation	Anti-clockwise viewed on flywheel
Total Lubrication System Capacity	10.6 litres
Total Coolant Capacity	6.98 litres
Length	935mm
Width	498.5mm
Height	890mm
Dry Weight (Engine)	242 kg (1500/1800 rev/min) 218 kg (3000 rev/min)

Fuel Consumption						
Engine speed	1500 rev/min		1800 rev/min		3000 rev/min	
	g/kWh	l/hr	g/kWh	l/hr	g/kWh	l/hr
At Standby Rating	254	6.2	252	7.3	254	10.4
At Prime Power	243	5.4	245	6.4	256	9.5
At 75% Prime Power	243	4.0	247	4.8	269	7.5
At 50% Prime Power	265	2.9	269	3.5	313	5.8



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