

# ENDCAPE GENERATORS

## Technical Data Sheet

Generator Model: EP20A



**Made in Britain**



Frequency	Prime		Standby	
Hz	kVA	kWe	kVA	kWe
50	20	16	22	17.6

### Technical Data Perkins 404A-22G1

Performance		Units	Prime	Standby
			Engine Speed	r/min.
Gross Power		kWm	18.7	20.6
Mechanical Losses		kWm	0.3	0.3
Net Power		kWm	18.4	20.3

General	Cylinders/Type	-	4 Cylinder / In-line / 4 Stroke	
	Aspiration	-	Naturally Aspirated	
	Governing Type	-	Mechanical	
	Governor Accuracy	%	±1.0%	
	Bore x Stroke	mm	84 x 100	
	Cubic Capacity	litres	2.216	

Fuel	Fuel consumption at standby 110% load	litres/h	6.1	
	Fuel consumption at 100% load	litres/h	5.3	
	Fuel consumption at 75% load	litres/h	4	
	Fuel consumption at 50% load	litres/h	2.9	

Air Flow	Engine (combustion) air flow	m <sup>3</sup> /min.	1.45	1.45
	Cooling air flow	m <sup>3</sup> /min.	40.2	

Exhaust	Exhaust Gas Flow	m <sup>3</sup> /min.	3.9	3.9
	Exhaust Gas Temperature	°C	445	505
	Maximum exhaust back pressure	kPa	10.2	

Cooling	Coolant capacity	litres	7	
	Maximum coolant temperature	°C	112	
	Fan Type	-	Pusher Fan	

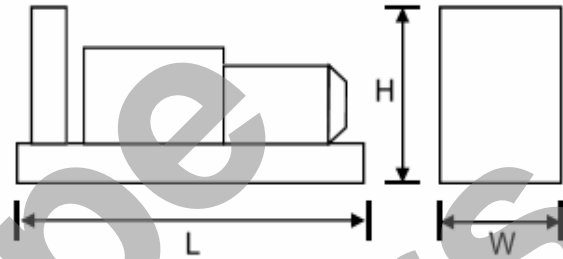
Oil	Engine Capacity	litres	10.6	
	Oil Type	-	API-CG4/CH4	

## Technical Data - Continued

<b>Alternator</b>	Voltage	V	400/230
	Phase	-	3
	Frequency	Hz	50
	Power Factor	p.f.	0.8
	Insulation	-	Class H
	Voltage regulation	-	±1.0%

## Dimensions & Weights

Set Type	Open	Canopy
Length (mm):	1360	1600
Width (mm):	710	740
Height (mm):	1180	1200
Weight (kg):	600	850



## Standard Control System

Endcape recommend and fit Deep Sea Electronics control units to all of their generator sets, these are configured Autostart as standard, and can be setup as AMF as an optional extra.

### Key Features:

- Large easy to read display.
- 3 phase mains & generator voltage sensing.
- Generator load power monitoring (kW, kV A, kV Ar, pf).
- Configurable inputs & outputs
- Low oil pressure, high temperature & engine speed protection
- Voltage, current & load protections
- Load Transfer switch control (AMF configuration only).
- Configurable display languages.
- Comprehensive warning, electrical trip & shutdown protections, and fault logging



## Open Generator Scope

<b>Cooling System</b>	Set mounted with Engine driven pusher type fan. Radiator matrix & fan guarding as standard
<b>Base Frame</b>	Manufactured steel base including day tank for sets up to 700kVA. 800kVA and above base tank is optional extra
<b>General Arrangement</b>	Engine & alternator directly coupled, similar to automotive engine/gearbox, and isolated from steel base via rubber anti-vibration mounts.
<b>Circuit Breaker</b>	Set mounted 3 pole MCCB type housed in manufactured steel & powder coated enclosure.
<b>Exhaust System</b>	Engine fitted with flexible section and flange/adaptor to suit industrial grade silencer (supplied).
<b>Testing</b>	Engine & alternator load tested, and full functionality test to control system prior to despatch

## Acoustic Enclosure (Optional) Features



Typical Sound Level  
67dB(A) @ 7m

- Powder coated steel construction
- High quality corrosion resistant door gear
- Integral fuel tank - bund optional
- Internal secure fill point
- Fitted silencer
- Control panel viewing window
- High density acoustic lining
- Control panel viewing window

## Available Options

- Engine Heaters** Typically used on backup systems an engine pre heater warms the coolant jacket water circuit, which in turn will improve the starting performance, and load acceptance of the generator after start-up. A pre heater will also minimise the emissions on engine
- Anti Condensation Heaters** Installed within backup generator systems, these prevent a build up of moisture and condensation within the alternator when the set is in standby mode
- Battery Charger** An intelligent battery charging system, which monitors and trickle charges the engine starting batteries when the engine is not running. This needs to be connected to a mains auxiliary supply, and is recommended for backup and standby generator installation
- Transfer Switch** For mains failure installations, a transfer switch allows the user to select the supply from either the utility or the generator without having to disconnect & reconnect cables. On automated systems, these are controlled by the generator controller, and during an outage the signal to start the generator, transfer the load to the generator for the duration of the power cut, and return to the mains when the supply resumes is fully automated.
- Fuel Control System** An automated system which will replenish the generator base fuel tank, from a bulk supply, when the level drops to a predetermined level.
- ISO Containers** For larger generators where a close fitting acoustic enclosure is not available, Endcape can install the generator into an acoustically treated 20ft or 40ft container, providing a secure modular power box.

## Definition of ratings and test conditions (unless otherwise stated):

Prime Power (PRP) is the nominal output continuously available, where the average load (variable) does not exceed 70% of the prime power rating. 10% overload is available for a maximum of 1 hour in 12 hours of operation.

Standby rating (LTP) is at variable load, limited to 500 hours usage per year. No overload is permitted.