

ENDCAPE GENERATORS

Technical Data Sheet

Generator Model: **EV650A**



Made in Britain



Frequency	Prime		Standby	
Hz	kVA	kWe	kVA	kWe
50	650	520	715	572.0

Technical Data Volvo TWD1644GE

Performance		Units	Prime	Standby
			Engine Speed	r/min.
Gross Power	kWm	575	630	
Mechanical Losses	kWm	21	21	
Net Power	kWm	554	609	

General	Cylinders/Type	-	6 Cylinder / In-line / 4 Stroke	
	Aspiration	-	Turbocharged, Air-Water CAC	
	Governing Type	-	Electronic	
	Governor Accuracy	%	±0.25%	
	Bore x Stroke	mm	144 x 165	
	Cubic Capacity	litres	16.12	

Fuel	Fuel consumption at standby 110% load	litres/h	145.6
	Fuel consumption at 100% load	litres/h	133.6
	Fuel consumption at 75% load	litres/h	100.2
	Fuel consumption at 50% load	litres/h	67.5

Air Flow	Engine (combustion) air flow	m ³ /min.	39.1	42.1
	Cooling air flow	m ³ /min.	684	

Exhaust	Exhaust Gas Flow	m ³ /min.	93.5	100
	Exhaust Gas Temperature	°C	485	480
	Maximum exhaust back pressure	kPa	9	

Cooling	Coolant capacity	litres	135
	Maximum coolant temperature	°C	107
	Fan Type	-	Pusher Fan

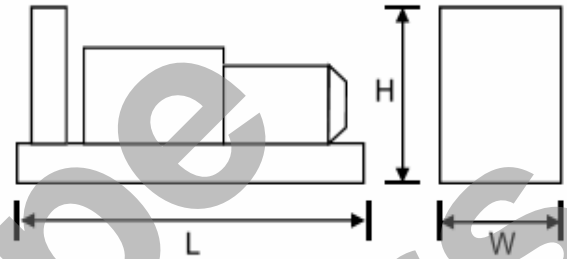
Oil	Engine Capacity	litres	48
	Oil Type	-	API-CG4

Technical Data - Continued

Alternator	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):	3560	Cont
Width (mm):	1710	Cont
Height (mm):	2310	Cont
Weight (kg):	5200	N/A



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

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