

Volvo TAD1242GE	Newage Stamford HCI 444	Generator Model:	BCV 440-50 E2
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50 Hz	3-Phase	Power Factor Cos Φ = 0.8	Emissions Certification Euro Stage 2
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RATINGS	PRIME POWER (PRP)		STANDBY POWER (LTP)		
	kVA	kWe	kVA	kWe	Amps
Voltage					
440/254	400	320	440	352	577
415/240	400	320	440	352	612
400/230	400	320	440	352	635
380/220	400	320	440	352	669

Definition of Ratings & Reference Conditions

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 Power (LTP) is the maximum output available, for up to 500 hours per year, where the average load does not exceed 70% of the standby power rating. No overload is available.

Standard Reference Conditions: air inlet temperature 25°C (77°F), barometric pressure 100kPa, [110m(361ft) altitude], 30% relative humidity.

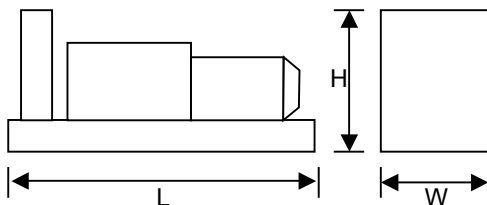
Note: The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.

All power ratings and reference conditions in accordance with ISO 8528-1 and ISO 3046-1.



Key Features:

- Water cooled Volvo Diesel engine with ECU/CANBus
- Single bearing Newage Stamford alternator
- Radiator with pressure cap and drain point
- Fully guarded engine-driven fan
- Fully welded steel skid base with lifting points
- Integral fuel tank with filler cap and gauge
- Heavy duty rubber anti-vibration mountings
- 24V starter batteries and connecting cables
- Separate engine-driven battery charging alternator
- Spin on oil and fuel filters and dry type air filter element
- Industrial silencer (15dBA reduction) supplied loose
- Auto Start control system with digital instrumentation
- Main line circuit breaker
- Factory Test Certificate
- Operation & Maintenance Manual
- Wide range of optional extra features available



Overall Dimensions & Weights - Open Set

Length (L) = 3520mm
 Width (W) = 1250mm
 Height (H) = 1860mm

Dry Weight (inc oil) = 3320kg
 Operating Weight = 3720kg

	Typical Open Generator Sound Pressure Level at 1m, Free Field (dB)							
Overall dBA	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
103	91	93	95	98	99	96	92	87

All specifications and design are subject to change without notice

ENGINE & COOLING SYSTEM
VOLVO TAD1242GE

		SI Units	PRIME	STANDBY
Performance	Engine Speed	r/min	1500	
	Gross Power	kWm	363	398
	Fan Power	kWm	11	11
	Net Power	kWm	352	391
	Emissions Certification		EU Stage 2	
	Altitude Capability	m	1100	1100
General	Cylinders / Type		6 cyl / Inline / 4-stroke	
	Aspiration / Charge Cooling		Turbocharged / Air to Air	
	Governing / Engine Management		Electronic Governor / ECU / CANBus	
	Bore / Stroke	mm	131 / 150	
	Cubic Capacity	litres	12.13	
	BMEP	kPa	2394	2625
Fuel	Fuel Consumption at 100% Power	litres/h	84.7	94.3
	Fuel Consumption at 75% Power	litres/h	63.2	68.9
	Fuel Consumption at 50% Power	litres/h	42.8	46.4
	Total fuel flow	litres/h	130	
	Standard Fuel Tank Capacity	litres	720	
Air	Engine Air Flow	m³/s	0.400	0.433
	Maximum Air Intake Restriction (used filter)	kPa	5.00	
Exhaust	Exhaust Gas Flow	m³/s	1.067	1.150
	Exhaust Gas Temperature	°C	505	525
	Maximum Exhaust Back Pressure	kPa	10.0	
	Typical Exhaust Pipe Diameter	mm	200	
Cooling	Radiator Cooling Air Flow	m³/s	5.9	
	Max Restriction to Cooling Air Flow	Pa	280	
	Max Radiator Air-On Temperature	°C	50	
	Maximum Coolant Temperature	°C	103	
	Coolant Capacity - Engine Only	litres	20	
	Total Coolant Capacity	litres	44	
Oil	Total Oil Capacity incl Filters	litres	35	
	Typical Oil Pressure at Rated Speed	kPa	400	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.22	
Thermal	Heat Rejection to Engine Cooling Water	kW	136	149
	Heat Rejection to Charge Cooler	kW	68	80
	Heat Radiated From Engine (Typical)	kW	18	21
Elec	Electrical System Voltage	V	24	
	Battery Type		2 (Series) 656	
	Battery Capacity SAE CCA	A	810	

ALTERNATOR
NEWAGE STAMFORD HCI 444

		SI Units	PRIME	STANDBY
General Data	Manufacturer		NEWAGE STAMFORD	
	Model (may vary with voltage)		HCI 444 F	HCI 444 F
	Operating Temperature	°C	40	27
	Coupling / No. of Bearings		Direct / Single Bearing	
	Phase / Poles / Winding Type		3-Phase / 4-Pole / Winding 311	
	Power Factor		Cos Φ = 0.8	
	Excitation		Self Excited	
	Insulation System		Class H	
	AVR Type		AS 440	
	Voltage Regulation		± 1.0%	

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STANDARD CONTROL SYSTEM

BC 5310 Digital Auto Start

The standard control system for this model is **BC 5310** (photo), based on the Deep Sea Electronics DSE5310 Digital Auto Start controller.

This provides for the manual and automatic remote start of the generator, together with full CANBus implementation for the control and protection of the engine via the ECU. LCD digital display of :

- Coolant temperature with high temperature alarm and shutdown
- Oil pressure with low pressure alarm and shutdown
- Oil temperature, engine operating hours, battery charge volts and amps
- Volts, with Under/Over Volts protection
- Amps, with Over Current protection
- Frequency, kW, kVA, Power Factor

Also featuring :

- Full RS485 Telemetry implementation
- Automatic cool-down timer function
- Emergency Stop button
- Ample auxillary inputs/outputs for optional features
- Optional (shown) - battery charger and door mounted illuminated switch.



The panel is constructed in 1.5mm steel, powder coated to RAL9001 for a high quality, durable finish.

CONTROL SYSTEM OPTIONS

The **BC 5320** control system (just the DSE5320 module is shown here) has an identical feature set to the BC 5310 but with the addition of full AMF functionality with integrated mains monitoring.



Finally, **BC 5510 & BC 5520** control systems provide the same features as BC 5310 & BC 5320 respectively, plus :

- BC 5510 - Set-to-Set Synchronisation
- BC 5520 - Single Set-to-Mains Supply Synchronisation with integrated mains monitoring

For Multi Set-to-Mains synchronisation, each set requires BC 5510 with the addition of one mains monitoring panel **BC 5560** (not illustrated). See the Synchronisation Guidelines for further details.

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