

Volvo TAD941GE	Newage Stamford HCI 444	Generator Model:	BCV 360-50 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	325	260	360	288	472
415/240	325	260	360	288	501
400/230	325	260	360	288	520
380/220	325	260	360	288	547

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.

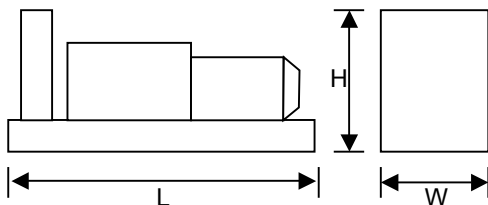
Note: The above ratings may be subject to derate at different operating conditions. Please see the Derate Guidelines on the Broadcrown website.

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) = 3540mm
Width (W) = 1190mm
Height (H) = 1830mm

Dry Weight (inc oil) = 2980kg
Operating Weight = 3540kg

	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
104	92	94	97	99	100	98	93	89

All specifications and design are subject to change without notice

ENGINE & COOLING SYSTEM
VOLVO TAD941GE

		SI Units	PRIME	STANDBY
Performance	Engine Speed	r/min	1500	
	Gross Power	kWm	295	323
	Fan Power	kWm	15	15
	Net Power	kWm	280	308
	Emissions Certification		EU Stage 2	
	Altitude Capability	m	1000	1000
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	120 / 138	
	Cubic Capacity	litres	9.36	
	BMEP	kPa	2520	2759
Fuel	Fuel Consumption at 100% Power	litres/h	69.9	77.2
	Fuel Consumption at 75% Power	litres/h	51.9	56.8
	Fuel Consumption at 50% Power	litres/h	36.0	38.8
	Total fuel flow	litres/h	108	
	Standard Fuel Tank Capacity	litres	600	
Air	Engine Air Flow	m³/s	0.295	0.327
	Maximum Air Intake Restriction (used filter)	kPa	5.0	
Exhaust	Exhaust Gas Flow	m³/s	0.775	0.870
	Exhaust Gas Temperature	°C	519	539
	Maximum Exhaust Back Pressure	kPa	10	
	Typical Exhaust Pipe Diameter	mm	150	
Cooling	Radiator Cooling Air Flow	m³/s	5.4	
	Max Restriction to Cooling Air Flow	Pa	300	
	Max Radiator Air-On Temperature	°C	50	
	Maximum Coolant Temperature	°C	103	
	Coolant Capacity - Engine Only	litres	17	
	Total Coolant Capacity	litres	41	
Oil	Total Oil Capacity incl Filters	litres	35	
	Typical Oil Pressure at Rated Speed	kPa	400	
	Typical Oil Consumption (>250hrs Operation)	litres/h	0.18	
Thermal	Heat Rejection to Engine Cooling Water	kW	129	137
	Heat Rejection to Charge Cooler	kW	51	73
	Heat Radiated From Engine (Typical)	kW	9	10
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 E	HCI 444 E
	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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