

Engine Cummins 6LTAA9.5-G1	Alternator Alternator HCI444ES	Generator Model FB320-C / Open FC320-C / Silent	
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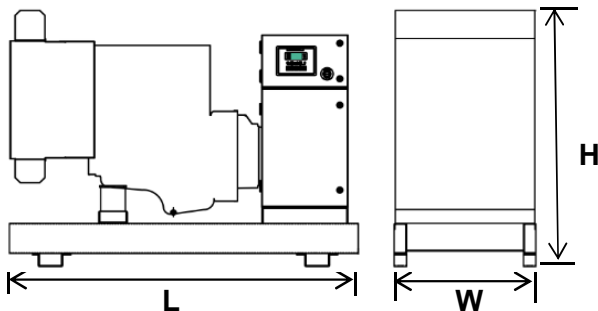
50Hz/1500rpm	3-Phase	Power Factor Factor Cos $\Phi = 0.8$	Emissions N/A
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RATINGS	Prime Power		Standby Power		Rated Current	Fuel Consumption
	(PRP)		(ESP)		Amps	@100% Load
Voltage (V)	kWe	kVA	kWe	kVA	(A)	L/h
400/230	256	320	280	350	461.9	70.0



Key Features:

- High efficient water cooled diesel engine.
- Single bearing with brushless alternators (Class H, with AVR).
- Radiator with pressure cap and drain point.
- Fully guarded engine-driven fan.
- Fully welded steel skid base with lifting holes and fork lift legs.
- Integral fuel tank with filler cap and gauge ($\leq 650\text{kVA}$).
- Heavy duty rubber anti-vibration mountings.
- 12V or 24V maintenance free starter battery 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 LCD show.
- Battery charger provided.
- Main line 3P circuit breaker.
- Rigorous factory test wiring with IEC standard.
- Operation & Maintenance manual & Wiring diagrams.
- Wide range of optional extra features available.



Overall Dimensions & Weights - Open Set

Length (L)-mm:	2950
Width (W)-mm:	1100
Height (H)-mm:	1750
Dry Weight-kg:	2800

Ratings: All three phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor.

Prime Power: Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

Standby Power: Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27 °C.

TIDE Power reserves the right to change the design or specifications without notice and without any obligation or liability.

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Engine		Cummins 6LTAA9.5-G1	
	Units	Prime	Standby
Frequency	Hz	50	
Engine Speed	r/min	1500	

General Performance	Cylinders / Type		6 cyl / In-line / 4-stroke	
	Aspiration		Turbocharged & Charge Air Cooled	
	Governor Type		Electronic Governor	
	Bore / Stroke	mm	116.5 / 148	
	Displacement	Litres	9.5	
	Compression Ratio		TBD	
	Piston Speed	m/s	TBD	
	Brake Mean Effective Pressure	kPa	TBD	
Engine Power	kWm	290		320
Fuel System	Fuel Consumption at 110% Prime Power	Litres/hour	78	
	Fuel Consumption at 100% Prime Power	Litres/hour	70	
	Fuel Consumption at 75% Prime Power	Litres/hour	52	
	Fuel Consumption at 50% Prime Power	Litres/hour	35	
	Fuel Consumption at 25% Prime Power	Litres/hour	18	
	Standard Fuel Tank Capacity	Hours / Litres	8 / 560	
Air System	Maximum Intake Air Restriction with Heavy Duty Air Cleaner			
	- With Clean Filter Element	kPa	3.7	
	- With Dirty Filter Element	kPa	6.2	
	Intake Air Flow	Litres/s	281	310
Exhaust System	Maximum Back Pressure	kPa	8	
	Exhaust Outlet Size	mm	100	
	Exhaust Gas Flow	kg/min	23	25
	Exhaust Gas Temperature	°C	580	600
Oil System	Total Oil System Capacity	Litres	32.4	
	Oil Pan Capacity - Low	Litres	27	
	Oil Pan Capacity - High	Litres	19	
	Maximum Oil Temperature	°C	124	
Cooling System	Coolant Capacity - With Radiator	Litres	11.1	
	Standard Thermostat (Modulating) Range	°C	82-95	
	Maximum Top Tank Temperature	°C	100	104
Electric System	Electrical System Voltage	V	24	
	Battery		Maintenance-free	
	Connecting Cables		Available	
Energy Balance	Heat Radiation	kW	N/A	N/A
	Heat Rejection to CAC	kW	53	66
	Heat Rejection to Coolant	kW	97	107

Alternator

50Hz/1500rpm

		Units		
General Data	Manufacture / Brand		Stamford	
	Model		HCI444ES	
	Coupling / No. of Bearings		Direct / Single Bearing	
	Phase / Poles		3-Phase / 4-Pole	
	Power Factor		Cos Φ = 0.8	
	AVR Regulation		Yes	
	Voltage Regulation		± 0,5 %	
	Insulation Class		H	
	Drip Proof		IP23	
	Excitation		Shunt	
	Altitude	m	≤1000	
	Overspeed	min ⁻¹	2250	

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Tide Power Easycon Function Summary

Controller Model / ComAp	EC 2.0 / Nano Plus	EC 3.0 / AMF20	EC 4.0 / AMF25	EC 5.0 / IG-NT

Controller Photos



Standard Supply	×	●	○	○
Viewable Parameters				
Phase Voltage	×	3	3	3
Current	Instrumentation	●	●	●
Frequency	●	●	●	●
Active Power	×	●	●	●
Reactive Power	×	●	●	●
Apparent Power	×	●	●	●
Power Factor	×	●	●	●
Electric Energy Metering	×	●	●	●
Generator Protection				
Abnormal Voltage	●	●	●	●
Over-current Warning	×	●	●	●
Over current Protection	●	●	●	●
Over Frequency Protection	●	●	●	●
Short Circuit Protection	MCCB / ●	MCCB / ●	MCCB / ●	MCCB / ●
Engine Figure				
Oil Pressure	●	●	●	●
Water Temperature	●	●	●	●
Fuel Meter / Fuel Sensor	●/○	●/○	●/○	●/○
Speed	●	●	●	●
Battery Voltage	●	●	●	●
Elapsed Time	●	●	●	●
Engine Protection				
Low Oil Pressure Warning	×	●	●	●
Low Oil Pressure Protection	●	●	●	●
High Temperature Warning	×	●	●	●
High Temperature Protection	●	●	●	●
Overspeed Warning	×	●	●	●
Overspeed Protection	×	●	●	●
Alternator Charger	●	●	●	●
Functions				
Remote Start	●	●	●	●
AMF (Auto Main Failure)	●	●	●	●
Programmable Input	●	●	●	●
Programmable Output	●	●	●	●
Expand Module	×	○	○	○
Communication Function	×	○	○	● / RS232 / 485
Communication Port	USB	○	○	RS232 / 485
CAN	●	×	●	●
Service Indicate	×	×	●	●
Fault History	●	●	●	●
Gen-Gen Synchronising	×	×	×	●
Gen-Mains Synchronising	×	×	×	●

Remark: ● Standard Supply ○ Available as Optional × Not Available

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Enclosure / Canopy (Sound-attenuated & Weather Protective)

“Ensure a quieter life with our sound attenuation system.”

Features:

Extremely Rugged & Highly Corrosion Resistant Construction

- Body made from 2.0mm sheet steel components with powder coating
- 8-12 hours built-in fuel tank integrated into the skid-mount base
- Excellent design and craftsmanship
- Compact structure and longer service life
- Residential silencer to make sure the sound level.
- Zinc alloy with black powder coated locks and hinges and proven to withstand corrosive conditions.



Easy Commissioning and Maintenance

- Separate & Standing control room at end side, easy reachable electrical power connections, board.
- Side doors allowing 180° opening rotation .
- Radiator fill access through cover in canopy roof.
- Lube oil drain and radiator drain.
- Manual lube oil pump provided.

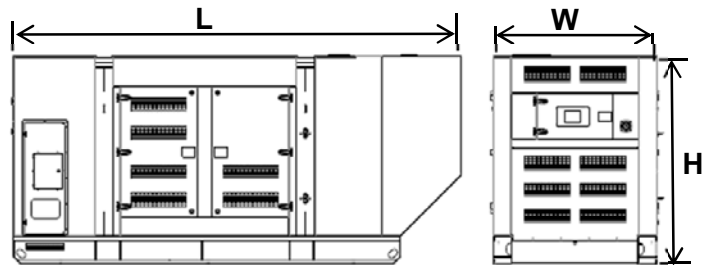


Security and Safety

- Earth leakage protection.
- 40-50mm non-inflammable sponge inside.
- Control panel viewing window in a lockable access door.
- Emergency stop button mounted on canopy exterior.
- Fuel fill and battery can only be reached via lockable access doors.
- Exhaust silencing system enclosed for operator safety
- Efficient management of cooling air to avoid high water temperature, reliable operation under harshest conditions.

Transportability

- Lifting points on top to move genset easily.
- Fork lift legs provided and easy to loose to fix the genset.



Overall Dimensions & Weight & Noice				
Dimensions	Weight	Noice Level	Base Tank @100% Load	
(L x W x H) mm	kg	dB(A) at 7m	Hours	Litres
4200×1500×2122	4150	85	8	560

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Optionals (All depends)

Genset:

Materials & Miscellaneous

Custom-Made solutions

Genset:

Materials & Miscellaneous

- Marine class painting and other special painting
- Standard acoustic enclosure genset
- Extended warranty
- Extended factory test
- Additional sensors
- Off road trailer type
- Standard ATS
- Mounted fire extinguisher
- Additional vibration isolation
- Wooden case packaging
- Tide Power tool kit
- Additional operation manual
- Nylon canvas wrapped packaging
- Iron shelf for double stack shipping
- Water jacket heater
- Additional CE features selection.

- On road trailer (EU) type
- Rental type genset
- Mining type genset
- Marine type genset
- High temp. Radiator for silent type genset
- EPA series gensets

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Optionals (All depends)

Custom-Made solutions

Diesel Engine/ Baseframe Mounted Accessories:

Diesel Engine/ Baseframe Mounted Accessories:

Cooling System

- Engine heat guards
- Low coolant level alarm & shutdown (Depends on engine series)
- High temp. & Anti-erosion radiator upgrade for open type genset
- 50% antifreeze @-36°C

Cooling System

- Anti-erosion radiator for silent type genset
- Remote radiator with heat exchanger
- Remote cooling tower with heat exchanger

Filters

- Extra air filters for time-maintenance
- Double heavy duty air filters
- Extra fuel filters for time-maintenance
- Extra oil filters for time-maintenance

Filters

- Mounted heavy duty air filter

Exhaust

- Residential silencer for open type genset
- Stainless steel silencer and kits
- Heat protection guard

Exhaust

- Mounted heavy duty air filter

Fuel & Oil

- Separated / External fuel tank
- Water - fuel separator
- 3 way fuel valve
- Manual bypass valve
- Lub oil make up tank
- Lub oil drain pump
- Fuel level sensor
- Fuel cooler
- Automatic remote fuel supply with fuel level switch & low fuel level alarm shutdown.
- Coolant heater 220/240V
- Lub-oil heater for severe cold weather

Fuel & Oil

- Bulk base fuel tank
- Bunded base fuel tank

Starting & Charging

- Bulk starting battery -17°C below

Starting & Charging

- None

- Battery removal switch
- Battery heater

Control System & Power Termination:

Control System & Breakers

- Different functional modules with
- Tide Easycon refer to other table
- Mounted audible and visible lighting
- Control panel cover (80kva or below)
- Motorized circuit breaker 3 Poles
- Motorized circuit breaker 4 Poles
- ACB 3 Poles
- MCCB 4 poles
- Different breaker brands, like ABB etc
- Leakage protection switch

Control System & Power Termination:

Control System & Breakers

- Various standard sockets mounted outside the enclosure

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Optionals (All depends)

Custom-Made solutions

Brushless Alternator:

- 12 Lead stator (change voltage depends)
- Interchangeable S.A.E flanges and drive discs
- Convenient filters on air inlets and outlets
- Coastal type [] Alternator painting color P.M.G or auxiliary
- AREP for Leroy-Somer only
- Shunt trip
- Exterior potentiometer
- Auxiliary contacts and double bearing
- Anti-condensation heater
- Stator thermal protection
- Quadrature droop kits

Brushless Alternator:

- Temperature rise class F Marine type alternator IP upgrade HV

Enclosure & Canopy:

Enclosure & Canopy:

Weather protective & Sound proof

- R series
- ISO 20ft containerized
- ISO 40ft containerized
- Stainless steel locks and hinges

Weather protective & Sound proof

- Super silent enclosure
- Weather proof enclosure
- Flat sponge sound absorber enclosure
- Porous sheet with rockwool sound absorber enclosure

Please refer to Tide Power sales department for full details of the above options.

Warranty

Tide Power distributor, dealer, or authorized representative performs startup within 6 months of the date of shipment from the factory, warranty coverage will begin on the startup date (Register the startup date to Tide within 6 months is essential and can be enforced). This warranty does not apply to malfunctions caused by damages, unreasonable use, misuse, repair or service by unauthorized persons, or normal wear and tear.

Warranty Coverage

Generators used to commercial utility source: One (1) year or 1000 hours (whichever occurs first) from date of shipment from the factory or registered startup date.