

# 500 kW Cummins Powered Fully Packaged Diesel Generator

## TRITON

The Triton Power Generation AC commercial series generator set is a fully integrated power generation system providing optimum performance with the reliability and versatility of a Cummins Engine.

Triton strives to meet all quality standards and provides a comprehensive warranty program. Triton meets the following standards: VDE 0530, BS 4999, BS 5000, IEC 34. Manufactured in accordance with ISO 9001.

Optional sound attenuated weather-protective enclosures are available to shield the generator set from extreme operating conditions.

Diesel powered generator sets remain the number-one choice for standby and emergency power systems worldwide. Triton diesel generator sets are the epitome of rugged dependability and reliable mechanical and electrical performance.

## Standard Features

- ▶ Electric Starter
- ▶ Electronic Governor
- ▶ Single Bearing Alternator
- ▶ Insulation class H/H
- ▶ Skid Mounted with Vibration Isolators
- ▶ Dry Type Air Filter
- ▶ Remote Breaker
- ▶ Battery Rack and Cables
- ▶ User Manual
- ▶ Heavy Duty Fabricated Steel Base Frame
- ▶ 8 Hour Base Mounted Fuel Tank
- ▶ One Year Limited Warranty
- ▶ Deep Sea Control Panel

## Model XC500K



- ▶ High quality and reliable
- ▶ Compact design
- ▶ Easy start and maintenance possibility
- ▶ Every gen-set is subject to a comprehensive test program which includes full and overload testing, checking and proving of all control and safety shut down functions

Powered By: CUMMINS

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### GENERATOR ENGINE

Cummins heavy-duty diesel engines use advanced combustions technology for reliable and stable power, low emissions, and fast response to sudden load changes.

Electronic governing is available for applications requiring constant (isochronous) frequency regulation such as Uninterruptible Power Supply (UPS) systems, non-linear loads, or sensitive electronic loads. Electronic governing is standard on 100 kW and up. Optional coolant heaters are recommended for all emergency standby installations or for any application requiring fast load acceptance after startup.

Base Engine	Cummins Model KTA19-G4 Turbocharged
Displacement in3 (L)	912.0 (14.9)
Overspeed Limit, RPM	2150
Regenerative Power, kW	52.20
Cylinder Block Configuration	Cast Iron, In-Line 6 Cylinder
Cranking Current	900 Amps at Ambient Temp. 32°F (0°C)
Battery Charging Alternator	35 Amps
Starting Voltage	24 Volt, Negative Ground
Lube Oil Filter Types	Single Spin-On Canister, Full Flow
Standard Cooling System	122°F (50°C) Ambient Radiator

Power Output	Standby	Prime
Gross Engine Output	755.0 bhp (583.2 kWm)	680.0 bhp (507.3 kWm)
BMEP at Rated Load	353.0 psi (2433.9 kPa)	291.0 psi (2006.4 kPa)
Bore	5.39 in. (136.9 mm)	5.39 in. (136.9 mm)
Stroke	6.65 in. (168.9 mm)	6.65 in. (168.9 mm)
Piston Speed	1995.0 ft/min (10.1 m/s)	1995.0 ft/min (10.1 m/s)
Compression Ratio	17.0:1	17.0:1
Lube Oil Capacity	88.0 qt (83.3 L)	88.0 qt (83.3 L)

Fuel Flow	Standby	Prime
Fuel Flow at Rated Load	112.0 Gal/hr (423.9 L/hr)	112.0 Gal/hr (423.9 L/hr)
Maximum Inlet Restriction	5.0 in. Hg (127.0 mm Hg)	5.0 in. Hg (127.0 mm Hg)
Maximum Return Restriction	3.0 in. Hg (77.5 mm Hg)	3.0 in. Hg (77.5 mm Hg)

Air Cleaner	Standby	Prime
Maximum Air Cleaner Restriction	25.0 in. H2O (6.2 kPa)	25.0 in. H2O (6.2 kPa)

Exhaust	Standby	Prime
Exhaust Flow at Rated Load	3625.0 cfm (102.6 m³/min)	2910.0 cfm (82.4 m³/min)
Exhaust Temperature	925.0°F (496.1°C)	875.0°F (468.3°C)
Max Back Pressure	27.3 in. H2O (6.7 kPa)	27.3 in. H2O (6.7 kPa)

<b>Fuel System</b>	Direct Injection, Number 2 Diesel, Fuel Filter; Water Separator; Automatic Electric Fuel Shutoff
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**RATING DEFINITIONS**

Standby Rating based on: Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capacity is available for this rating.

Prime Rating based on: Applicable for supplying power in lieu of commercially purchased power. Continuous running at variable load for unlimited periods with 10% overload available 1 hour in any 12 hour period.

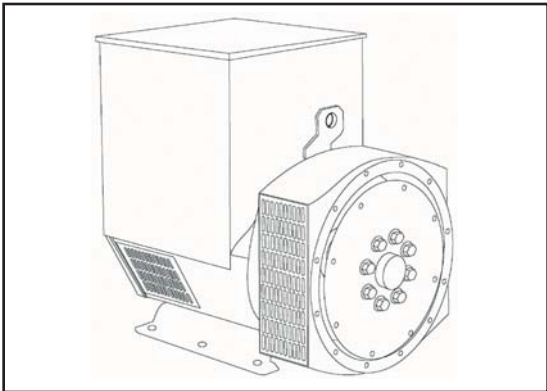
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## STAMFORD NEWAGE GENERATOR END

All Triton generators are built using Stamford Newage Generator Ends in order to provide high quality power generators.

STAMFORD NEWAGE has a long history of producing high-quality reliable products for the power generation market. Their portfolio of high quality generator ends is recognized as an industry standard.

### HC1544D - Technical Data



CONTROL SYSTEM		SELF EXCITED	
A.V.R.	SX 440	SX 421	
VOLTAGE REGULATION	± 1.0%	± 0.5%	WITH 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT		WILL NOT SUSTAIN A SHORT CIRCUIT	
INSULATION SYSTEM		CLASS H	
PROTECTION		IP23	
RATED POWER FACTOR		0.8	
STATOR WINDING		DOUBLE LAYER LAP	
WINDING PITCH		TWO THIRDS	
WINDING LEADS		12	
STATOR WDG, RESISTANCE		0.0047 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED	
ROTOR WDG, RESISTANCE		1.77 Ohms AT 22°C	
R.F.I. SUPPRESSION		BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. REFER TO FACTORY FOR OTHERS	
WAVEFORM DISTORTION		NO LOAD < 1.5% NON DISTORTING BALANCED LINEAR LOAD < 5.0%	
MAXIMUM OVERSPEED		2250 REV/MIN	
BEARING DRIVE END		BALL. 6314 (ISO)	
WEIGHT COMP. GENERATOR		1393 kg	
WEIGHT WOUND STATOR		657 kg	
WEIGHT WOUND ROTOR		563 kg	
WR <sup>2</sup> INERTIA		8.0068 kgm <sup>2</sup>	
SHIPPING WEIGHT (CRATED)		1485 kg	
SHIPPING CRATE SIZE		166cm x 87cm x 124cm	
TELEPHONE INTERFERENCE		50 Hz THF < 2% 60 Hz TIF < 50	
COOLING AIR		1.23 m <sup>3</sup> /sec 2615 cfm 1.59 m <sup>3</sup> /sec 3366 cfm	
VOLTAGE SERIES STAR		380/220 400/231 415/240 440/254 416/240 440/254 460/266 480/277	
VOLTAGE PARALLEL STAR		190/110 200/115 208/120 220/127 208/120 220/127 230/133 240/138	
VOLTAGE SERIES DELTA		220/110 230/115 240/120 254/127 240/120 254/127 266/133 277/138	
KVA BASE RATING FOR REACTANCE VALUES		500 500 500 500 584 618 644 644	
Xd DIR. AXIS SYNCHRONOUS		3.02 2.72 2.53 2.25 3.58 3.39 3.23 2.97	

## DEEP SEA ELECTRONICS CONTROL PANEL 5210

Model 5210 is an Automatic Engine Control Module. The module is used to automatically start and stop the engine, indicating the operational status and fault conditions, automatically shutting down the engine and indicating an engine failure by means of an LCD display and an appropriate flashing LED on the front panel. Selected timers and alarms can be altered by the customer from the front panel. Alterations to the system are made using the 810 interface and a PC. This interface also provides real-time diagnostic facilities.

It is possible to monitor operation of the system either locally or remotely. (Optional: remote communications output versions only.)

### Easy Pushbutton Control

Operation of the module is via pushbutton controls (with security locking facility) mounted on the front panel with STOP/RESET, AUTO, MANUAL, and START buttons. The first three buttons feature LED 'selected' indications. Further buttons provide LCD DISPLAY SCROLL and EVENT LOG VIEW functions.

### Microprocessor Control

The module features 16 bit microprocessor control and a comprehensive list of timers and pre-configured sequences. This allows demanding specifications to be achieved. Configurable expansion facilities are also provided.

### Metering

The 5210 module provides metering via the LCD display with the following instrumentation displays, accessed via the LCD DISPLAY SCROLL push buttons:

- ▶ Generator Volts L1-N, L2-N, L3-N
- ▶ Generator Volts L1-L2, L2-L3, L3-L1
- ▶ Generator Amps L1, L2, L3
- ▶ Generator Frequency Hz
- ▶ Engine Speed RPM
- ▶ Engine Oil Pressure
- ▶ Fuel Level %
- ▶ Engine Temperature
- ▶ Plant Battery Volts
- ▶ Engine Hours Run
- ▶ Generator kVA
- ▶ Generator kW
- ▶ Generator Cosφ

### Additional Features

- ▶ Event Log
- ▶ Digital Inputs
- ▶ Analog Inputs
- ▶ Relay Outputs
- ▶ Multiple Alarm Channels
- ▶ Emergency Shutdowns
- ▶ Built-in Exerciser Scheduler
- ▶ Multi-Functional Timers
- ▶ Magnetic Pickup or Alternator
- ▶ Speed Monitoring
- ▶ System Lock Input
- ▶ And More



Control Panel By:



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### Optional Features

- ▶ Electronic Governor Control System
- ▶ Automatic Fuel Filling System
- ▶ Engine Oil Heater
- ▶ Remote Radiator
- ▶ Low Fuel Level Alarm
- ▶ Charge Voltmeter
- ▶ Charge Ammeter
- ▶ Critical Silencer
- ▶ Enclosure or Soundproof Canopy
- ▶ Residential Silencer
- ▶ PMG
- ▶ Tool Kit



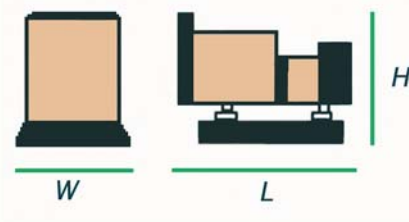
- ▶ U.L. Breaker
- ▶ Anti Condensation Heater for Alternator
- ▶ Sub-base, Remote, or Day Fuel Tank
- ▶ 4 Pole Contactor
- ▶ Oversized Alternator
- ▶ Automatic Transfer Switch
- ▶ Trailer
- ▶ Remote Monitoring System
- ▶ NFPA Controls
- ▶ Manual Sump Oil Drain Pump
- ▶ And More



control your generator remotely



### DIMENSIONS (Open Unit)

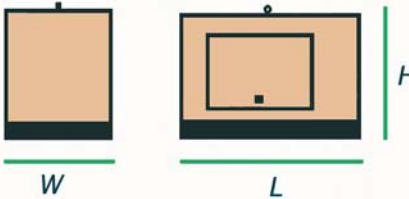


Size (L x W x H) in Inches  
133.8" x 51.18" x 82.67"

Dry Weight in Pounds (lbs)  
8291 lbs.



### DIMENSIONS (Enclosed Unit)



Size (L x W x H) in Inches  
216.5" x 63" x 100.5"

Dry Weight in Pounds (lbs)  
11863 lbs.

