

# 810 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
- ▶ Main Line Circuit Breaker
- ▶ Battery Rack and Cables
- ▶ User Manual
- ▶ Heavy Duty Fabricated Steel Base Frame
- ▶ One Year Limited Warranty
- ▶ Deep Sea Control Panel

## Model XC810



- ▶ 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 QST30-G2
Displacement	1860.0 in <sup>3</sup> (30.5 L)
Overspeed Limit	2100 RPM
Regenerative Power	110.00 kW
Cylinder Block Configuration	Cast Iron, In-Line 12 Cylinder
Cranking Current	1280 Amps at Ambient Temp. 32°F (0°C)
Battery Charging Alternator	35 Amps
Starting Voltage	24 Volt, Negative Ground
Lube Oil Filter Types	Four Spin-On Canister, Full Flow
Standard Cooling System	122°F (40°C) Ambient Radiator

Power Output	Standby	Prime
Gross Engine Output	1200.0 bhp (895.2 kWm)	1085.0 bhp (809.4 kWm)
BMEP at Rated Load	284.0 psi (1958.1 kPa)	257.0 psi (1772.0 kPa)
Bore	5.51 in. (140.0 mm)	5.51 in. (140.0 mm)
Stroke	6.50 in. (165.1 mm)	6.50 in. (165.1 mm)
Piston Speed	1949.0 ft/min (9.9 m/s)	1949.0 ft/min (9.9 m/s)
Compression Ratio	14.0 : 1	14.0 : 1
Lube Oil Capacity	140.0 qt (132.5 L)	140.0 qt (132.5 L)

Fuel Flow	Standby	Prime
Fuel Flow at Rated Load	101.0 Gal/hr (382.3 L/hr)	101.0 Gal/hr (382.3 L/hr)
Maximum Inlet Restriction	4.0 in. Hg (101.6 mm Hg)	4.0 in. Hg (101.6 mm Hg)
Maximum Return Restriction	10.0 in. Hg (254.0 mm Hg)	10.0 in. Hg (254.0 mm Hg)

Air Cleaner	Standby	Prime
Maximum Air Cleaner Restriction	25.0 in. H <sub>2</sub> O (6.2 kPa)	25.0 in. H <sub>2</sub> O (6.2 kPa)

Exhaust	Standby	Prime
Exhaust Flow at Rated Load	6603.0 cfm (186.9 m <sup>3</sup> /min)	5917.0 cfm (167.5 m <sup>3</sup> /min)
Exhaust Temperature	924.0°F (495.6°C)	873.0°F (467.2°C)
Max Back Pressure	41.0 in. H <sub>2</sub> O (10.2 kPa)	41.0 in. H <sub>2</sub> O (10.2 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.

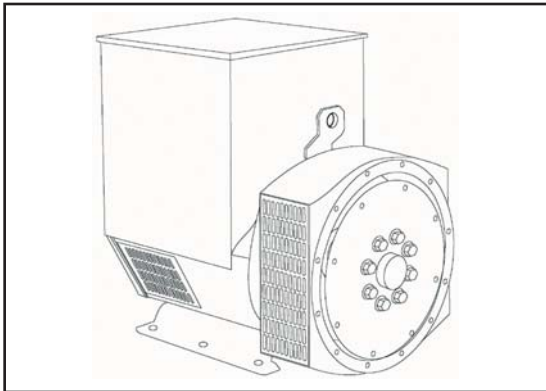
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### STAMFORD NEWAGE GENERATOR END

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.

#### HCI634G - Technical Data



CONTROL SYSTEM	SEPARATELY EXCITED BY P.M.G.						
A.V.R.	MX 321						
VOLTAGE REGULATION	± 0.5%		With 4% Engine Covering				
INSULATION SYSTEM	CLASS H						
PROTECTION	IP23						
RATED POWER FACTOR	0.8						
STATOR WINDING	DOUBLE LAYER LAP						
WINDING PITCH	TWO THIRDS						
WINDING LEADS	6						
STATOR WDG, RESISTANCE	0.003 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED						
ROTOR WDG, RESISTANCE	1.75 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. 6224 (ISO)						
BEARING NON-DRIVE END	BALL. 6317 (ISO)						
WEIGHT COMP. GENERATOR	1965 kg						
WEIGHT WOUND STATOR	934 kg						
WEIGHT WOUND ROTOR	814 kg						
WR <sup>2</sup> INERTIA	18.3482 kgm <sup>2</sup>						
SHIPPING WEIGHT (CRATED)	2023 kg						
SHIPPING CRATE SIZE	183cm x 92cm x 140cm						
	50 Hz			60 Hz			
TELEPHONE INTERFERENCE	THF < 2%			TIF < 50			
COOLING AIR	1.614 m <sup>3</sup> /sec 3420 cfm			1.59 m <sup>3</sup> /sec 3366 cfm			
VOLTAGE STAR	380/220	400/231	415/240	440/254	416/240	440/254	460/266 480/277
VOLTAGE DELTA	220	230	240	254	240	254	266 277

### 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



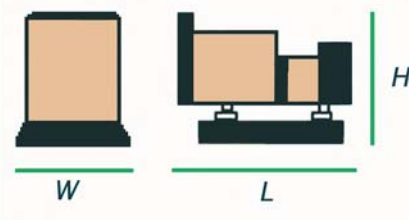
- ▶ U.L. Breaker
- ▶ Anti Condensation Heater for Alternator
- ▶ Sub-base, Remote, or Day Fuel Tank
- ▶ 4 Pole Contactor
- ▶ Oversized Alternator
- ▶ Automatic Transfer Switch
- ▶ Trailer
- ▶ Remote Monitoring System
- ▶ NFPA Controls
- ▶ Manual Sump Oil Drain Pump
- ▶ And More



control your generator remotely

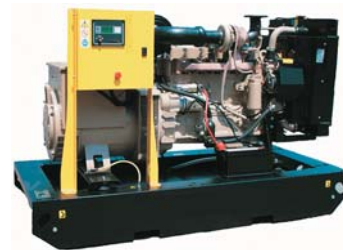


### DIMENSIONS (Open Unit)

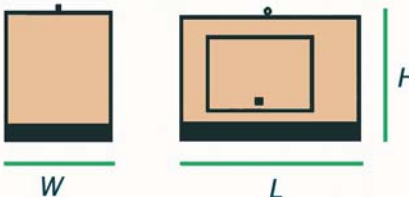


Size (L x W x H) in Inches  
163.39" x 56.69" x 81.1"

Dry Weight in Pounds (lbs)  
15655 lbs.



### DIMENSIONS (Enclosed Unit)



Size (L x W x H) in Inches  
359" x 95.67" x 102"

Dry Weight in Pounds (lbs)  
31752 lbs.



Design and specifications subject to change without notice.  
Dimensions shown are approximate. Contact your  
Triton Power dealer for more information. **DO NOT USE THESE  
DIMENSIONS FOR INSTALLATION PURPOSES.**