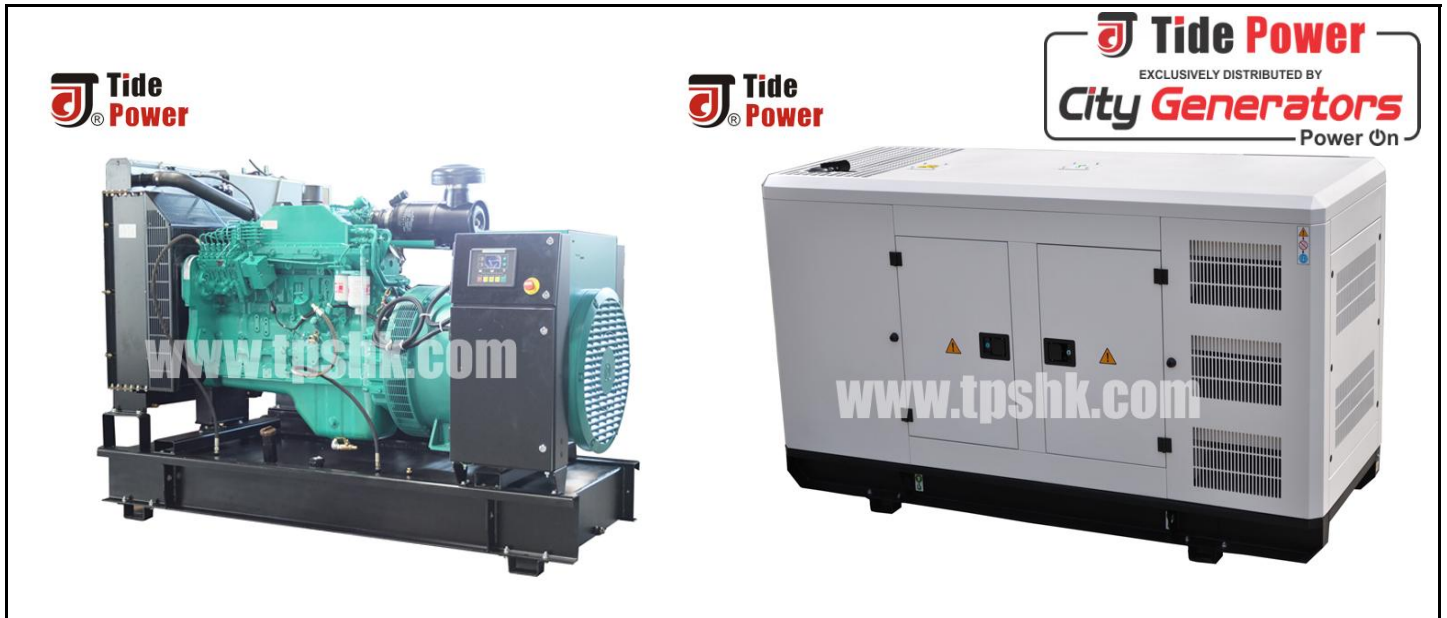


# Technical Data

190-600V DIESEL 01-01-2012



<b>CUMMINS</b> Engine: <b>6CTA8.3-G2</b> Electronic Governor	<b>Alternator:</b> Leroy-somer LSA46.2M3	<b>Generator Model:</b>	<b>TCM180 (Open)</b>
	<b>Optionl:</b> Stamford UCI274G Tide TPA274M7		<b>TCM180C (Silent)</b>

<b>50Hz</b> 1500 r.p.m	<b>3 Phase</b> 4 Wires	<b>Power Factor:</b> $\cos \phi = 0.8$	<b>Emissions Certification:</b>	N/A
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<b>RATINGS</b>	<b>Prime Power</b> (PRP)		<b>Standby Power</b> (LTP)		<b>Rated Current</b> (A)
	kW	kVA	kW	kVA	Amps
Voltage (V)	kW	kVA	kW	kVA	Amps
440/254	144	180	160	200	236.2
<b>415/240</b>	<b>144</b>	<b>180</b>	<b>160</b>	<b>200</b>	<b>250.4</b>
400/230	144	180	160	200	259.8
380/220	144	180	160	200	273.5

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

### Prime Power:

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in 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.

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## Standard Features

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- ▲ High efficient water cooled diesel engine
  - ▲ Brushless alternators (Class H, with AVR.)
  - ▲ Heavy duty rubber anti-vibration mountings
  - ▲ 12/24V starter batteries and connecting cables
  - ▲ Separate engine-drive battery charging alternator
  - ▲ Industrial silencer for open type generator sets
  - ▲ Residential silencer for open type generator sets
  - ▲ Auto start / Digital Tide Easycon Control Panel
  - ▲ Wiring with IEC standard
  - ▲ Factory Test Certificate
  - ▲ Operation & Maintenance Manual & Diagrams
  - ▲ Worldwide Product / Technical Support
- ▲ Radiator with cap and drain point.
  - ▲ Fully guarded engine driven fan
  - ▲ Circuit Breaker - 3 pole (MCCB)
  - ▲ Base fuel tank for 8 hours running at 100% load
  - ▲ Oil filter - Diesel filter - Air filter
  - ▲ Fully welded steel baseframe with lifting and fork-lifting facilities.
  - ▲ Sound proof & Weather protective enclosures for silent type generator sets.

## Optional

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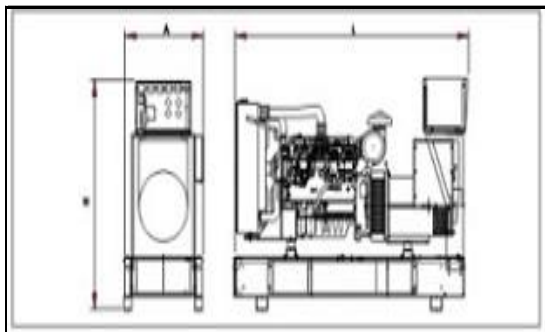
- △ Automatic Transfer Switch (ATS)
  - △ Water - fuel separator
  - △ Water heater for severe cold weather
  - △ Lub-oil heater for severe cold weather
  - △ 50°C-60°C Radiator
  - △ Dual wall fuel tank base
  - △ Fuel level sensor
  - △ Maintenance free battery
  - △ Additional **CE Features** Selection
- △ Extra air filters for time-maintenance
  - △ Extra diesel filters for time-maintenance
  - △ Extra oil filters for time-maintenance
  - △ Separated standing fuel tank
  - △ Low coolant level sensor
  - △ Full range of attachments and options available for alternator

## Overall Dimensions (mm) & Weight (kg)

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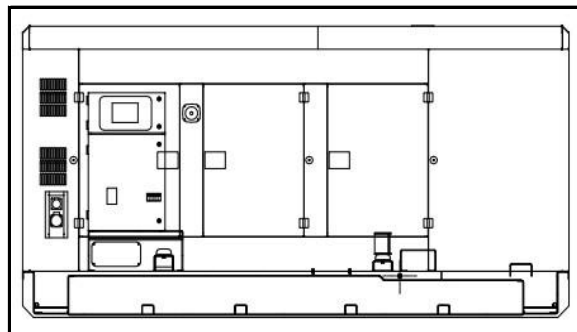
### Open Type

**Length:**  
2400  
**Width:**  
880  
**Height:**  
1550  
**Weight:**  
1400



### Silent Type

**Length:**  
3600  
**Width:**  
1120  
**Height:**  
1850  
**Weight:**  
3000



Dimension and design are subject to change without notice.

## Warranty

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The goods of Tide Power System are under warranty against defects in materials and workmanship for a period of 12 months or 1000 hours whichever come first from the date of delivery to the end user (except the damageable spare parts of genset caused by incorrect man-made operation), and that the aforementioned warranty for the same token is back up by the engine & alternator manufactures and their global distributors.

## Engine Specification

50HZ

### General Performance

Manufacture	DCEC Cummins
Engine Model	6CTA8.3-G2
Engine Type	4 cycle, in-line, 6-cylinder
Engine Speed	1500 r.p.m
Base Output Power	163kW/218hp
Standby Power	180kW/241hp
Governor Type	Electronic
Governor Make / Model	BYC PB/GAC
Air Intake Way	Turbocharged & Aftercooled
Displacement	8.3L
Cylinder Bore * Stroke	114mm × 135mm
NO. of Cylinders	6
Compression Ratio	17.3:1
Engine Idle Speed	700-900 r/min
Piston Speed	6.8 m/s
Intake Air Flow	206 Litres/sec.
Air Cleaner Type	Dry

### Exhaust System

Exhaust Gas Flow	578 Litres/sec.
Exhaust Gas Temperature	536 - 563 °C
Maximum Back Pressure	10kPa
Exhaust Pipe Size	75mm

### Air Intake System

Recommended intake piping size	75mm
Maximum Intake Air Restriction	
- Dirty Element	6kPa
- Clean Element	4kPa

### Lubrication System

Oil Capacity (High - Low)	N/A
Maximum Oil Temperature	121 °C
Minimum Required Lube System Capacity - Sump plus Filters	27.6Litres

### Fuel System

Type Injection System	BYC PB Direct Injection
Fuel Consumption at 100% Standby power	48 Litres/hour
Fuel Consumption at 100% Prime power	42 Litres/hour
Fuel Consumption at 75% Prime power	31 Litres/hour
Fuel Consumption at 50% Prime power	21 Litres/hour
Fuel Consumption at 25% Prime power	13 Litres/hour
Fuel Tank Capacity	
- Open Type Genset	8 Hours at Full Load
- Silent Type Gensets	620 Litres

### Cooling System

Coolant Capacity - Engine Only	12.3 Litres
Standard Thermostat (Modulating) Range	82 - 95 °C
Maximum Top Tank Temperature	
- Standby Power	104 °C
- Prime Power	100 °C

### Electric System

Electrical System Voltage	24V
Battery	Maintenance-free
Connecting Cables	Available

### Thermal

Radiated Heat to Ambient	24-26kW
Heat Rejection to Coolant	83-95kW
Heat Rejection to Exhaust	123-139kW

## Alternator Specification

### General Data

Manufacture / Brand	Leroy-somer
Model	LSA46.2M3
AVR Model	R250
Coupling / Bearing	Direct / Single Bearing
Phase	3 Phase
Power Factor	Cos $\phi$ = 0.8
Winding pitch - Code	2/3 - (N° 6)
Drip Proof	IP 23
Excitation	Shunt

### 50HZ/1500R.P.M

Prime Output Power	144kW/180kVA
Standby Output Power	162kW/203kVA
Insulation class	H
Voltage regulation	± 0,5 %
Total harmonic TGH / THC at no load<2.5 %-on load<2.5%	
Wave form : NEMA = TIF - (*)	< 50
Wave form : I.E.C. = THF - (*)	< 2 %
Altitude	≤ 1000 m
Overspeed	2250 min -1

**TIDE Power comprehensive Easycon range control panels are compact, versatile and easy to use.**

Easycon 2.0L/H (GU601A / Deepsea DSE3110) panel is a key-start auto control panel, it's a basic control panel fits for generators up to 100kVA to provide basic operating parameters display and protection.



Easycon 3.0 L/H (GU641B / Deepsea DSE7210) panel is an auto & digital control panel, it's an entry level control panel which provides full power monitoring and protection facilities. All operating parameters are with LCD display. (Auto Main Failure Version DSE7220 also Available.)



Easycon 4.0L/H (GU620A / Deepsea DSE7310) panel is an auto & digital & Remote control panel which includes all the features of Easycon 3.0, and plus data communication of full telemetry via the RS232/RS485 interfaces, CANBus is also included. (Auto Main Failure Version DSE7320 also Available.)



**Specifications**

<b>4 . 0 L / H</b>	<b>3 . 0 L / H</b>	<b>2 . 0 L / H</b>	Over Speed pre-alarm & shutdown - Low Oil Pressure Pre-Alarm & shutdown - High Water Temp. Pre-alarm & shutdown - Volts, Current, Frequency, Rpm (Instruments)- Fuel Sensor as optional - AMF Module as optional -	Auto Start - Oil Pressure - Genset Running Hours - Battery Voltage and Charging -
		Digital Control Panel - Switch Opening as Optional - Overcurrent Pre-alarm - AMF Module as optional - Overcurrent Shutdown - Power Factor - Prefix Start, Service Indicate, Fault History for Deepsea Module.-		
	Remote Start (Data communication of full telemetry via the RS232/RS485) - CANBus -			