

## PRODUCT OVERVIEW

The GRANDWATT 6L8.3TWG natural gas engine delivers the strong power and durability required for generator, water pumper or compressor applications. Its 6-cylinder in-line block, turbocharged and after-cooled engine features:

- Replaceable wet liners
- Water-cooled exhaust
- Water to air after-cooler with an individual radiator

Superior engine performance is provided by an ECM that integrates and coordinates all critical functions including:

**Ignition System • Variable Air Fuel Ratio Control**  
**Speed Governor • Engine Motor & Protection**

The 6L8.3TWG is a dedicated, factory-built natural gas engine that is based on one of the globally popular diesel engines. It shares many of the same parts and components as its diesel counterpart, and it operates on rich-buring & low-cost natural gas.



# HEAVY-DUTY 8.3L ENGINE

*Industrial Stationary*

## FEATURES & BENEFITS

### ➤ Engine Control Module

Constantly monitors engine sensors, Ignition System, Air Fuel Ratio, Speed Governor and fuel system.

### ➤ High-Energy Ignition System

Performance and longer service intervals, durable spark plugs and coils.

### ➤ High-Efficiency Cooling System

The High-Efficiency engine radiator, Electric fan and the individual High-Efficiency radiator for the water to air after-cooler, to drive more intake air to the cylinders.

### ➤ Accessory Belt Drive System

Self-tensioning serpentine polyvee belt accessory drive system for water pump, engine-mounted fan hub and alternator.

### ➤ Extendable Base Frame

Extendable Base Frame with anti-vibration system allows for easy installation of alternator, water pump or compressor.

### ➤ Optional Control System For Generator Set

Auto & remote start controller with multi-protection & monitors are inside a weather proof enclosure. The highly protective wire harness is adjustable for any configuration.



**Greener • Durable • Economical**

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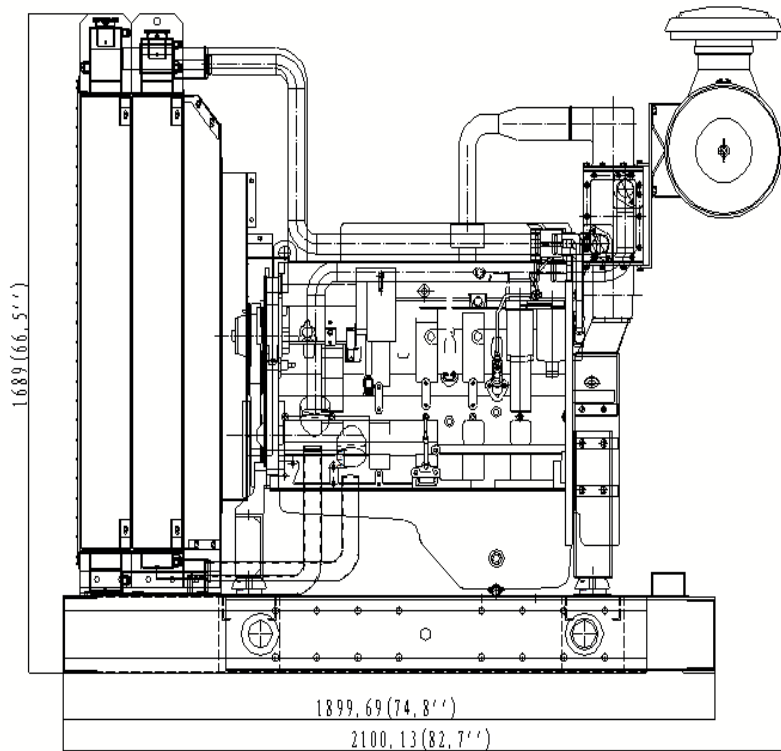
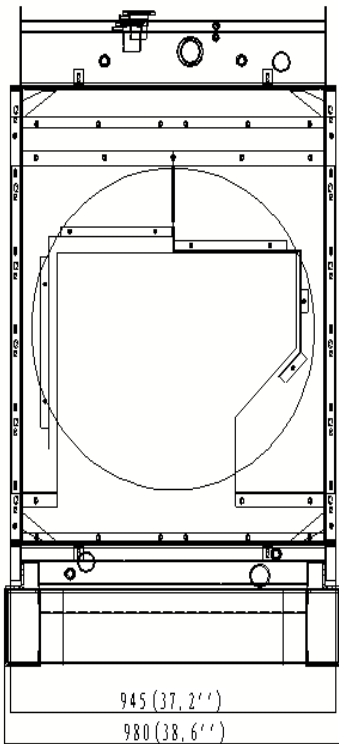
# Natural Gas Engine Kit

## 6L8.3TWG SPECIFICATIONS

Standard Configuration	Std		Metric	
	1500 rpm	1800 rpm	1500 rpm	1800 rpm
<b>General Data</b>				
Number & Type of Cylinders	6 In-Line			
Aspiration	Turbocharged with water after cooler			
Total displacement	506 In <sup>3</sup>		8.3 Liters	
Bore & Stroke	4.5 in × 5.3 in		114 mm × 135 mm	
Compression Ratio	10.5 : 1			
Mean Piston Speed	22.31 ft/s	26.57 ft/s	6.8 m/s	8.1 m/s
Dry Weight ( Only Engine )	1850 lb		840 kg	
<b>Power Rating</b>				
Gross Standby Power ( without Fan )	186 HP	186 HP	139 kw	139 kw
Net Standby Power ( with Fan )	178 HP	178 HP	133 kw	133 kw
Gross Prime Power ( without Fan )	170 HP	170 HP	127 kw	127 kw
Net Prime Power ( with Fan )	162 HP	162 HP	121 kw	121 kw
<b>Cooling System</b>				
Engine Coolant System Capacity	8.7 Gallons		33 Liters	
Turbocharge Coolant System Capacity	8.5 Gallons		32 Liters	
Rated Ambient Temp. of Radiator	104 F		40 ° C	
Max allowable Coolant Temperature	217 F (@ 100% Rated Load)		103 ° C (@ 100% Reated Load)	
<b>Lubrication System</b>				
Engine Oil Capacity	6.3 Gallons		24 Liters	
Max allowable Oil Temperature	250 F		121 ° C	
Oil Pressure at Rating Speed	40-60 psi	40-60 psi	276-414 kPa	276-414 kPa
<b>Exhaust System</b>				
Type	Water Cooled Manifold			
Max allowable Back Pressure	40 inH <sub>2</sub> O	40 inH <sub>2</sub> O	10 kPa	10 kPa
Max allowable Turbine Inlet Temp.	1202 F	1202 F	650 ° C	650 ° C
<b>Air Induction System</b>				
Max allowable Intake Air Restriction				
with Clean Air Filte	14.9 inH <sub>2</sub> O	14.9 inH <sub>2</sub> O	3.7 kPa	3.7 kPa
with Dirty Air Filter	24.9 inH <sub>2</sub> O	24.9 inH <sub>2</sub> O	6.2 kPa	6.2 kPa
Combustion Air required (volume)	305 cfm	305 cfm	8.65 m <sup>3</sup> /min	8.65 m <sup>3</sup> /min
<b>Fuel System</b>				
Fuel Consumption @ Rated Load	69.9 lb/hr	72.3 lb/hr	31.7 kg/hr	32.8 kg/hr
Max EPR Rated Pressure	50-70 psi	50-70 psi	350-500 kPa	350-500 kPa
<b>Electric System</b>				
Electric system Voltage	24 VDC			
Minimum Battery Capacity	150 AH			
Battery Charging Alternator Current	40 A			
<b>Base Frame</b>				
Two Stages Extendable Base Frame				
<b>Anti-vibration System</b>				
4 pcs Vibration Absorbers of 880 lb.		4 pcs Vibration Absorbers of 400 kgf		

*POWER YOUR IMAGINATION*

**6L8.3TWG DIMENSIONS**



**The Engine Supplier**

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