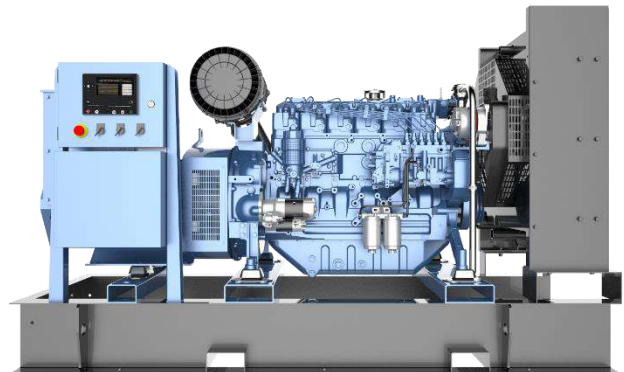


# WPG440\*8

## DIESEL GENERATING SET

### GENERATING SET RATINGS 50Hz – 1500rpm @ 0.8p.f.

Voltage V	PRP		ESP	
	kVA	kWe	kVA	kWe
415/240	400	320	440	350
400/230	400	320	440	350
380/220	400	320	440	350



### PRODUCT FEATURES

#### Engine

- Cast iron frame style body structure
- One-piece forged crankshaft
- Split-cap forged steel connecting rods
- Separate cast iron cylinder heads with 4 valves
- Replaceable dry cylinder liners
- Aluminum alloy pistons with oil cooling gallery

#### Cooling system

- Radiator and hoses supplied separately
- Thermostatically-controlled system with belt driven coolant pump and pusher fan

#### Fuel system

- P type fuel injection pump and injector for higher inject pressure
- Duplex fine filter and water separation filter assembly with transparent cup for better efficiency

#### Lubrication system

- Flat bottom large capacity oil pan
- Spin-on full-flow lube oil filter

#### Electrical system

- 24 Vdc electric starter motor and battery charging alternator
- LOP + HWT sensors

#### Air intake and exhaust system

- Mid-position and below inlet turbocharger optimized for genset application
- Special rear mounted air filter with restriction indicator
- Exhaust manifold shield for heat isolating

#### Alternator

- Brushless, 4 Pole, IP23 drip-proof revolving field design
- Class H insulation and Class H temperature rise
- Low reactance with 2/3 pitch windings on the stator
- Direct-coupled by flexible disc
- Sustained overcurrent >300% in 10 sec
- Direct drive centrifugal blower fan cooling

#### Control module

- DSE control module is ideal for a wide control range to manage, monitor, and diagnose quickly and easily.
- Display status message Provide protection Auto shutdown at fault detection



<b>GENERATING SET SPECIFICATIONS</b>		
Governor and regulation class		In accordance to ISO 8528-5 Class G2 performance
Phase number and connection		3 phase, 4 wires, Y-type
Cooling method		Closed looped water-cooled
Starting method		DC 24V Electric starter
Steady-state voltage deviation		≤± 2.5%
Steady-state frequency band		≤1.5%
<b>ENGINE</b>		
Brand / Model		Weichai / WP13D405E200
Gross Power	kWm	ESP - 405 / PRP - 368
Cylinder / Type / Aspiration		6 / In-line / Turbocharged and Aftercooled
Bore x Stroke	mm	127 x 165
Displacement	L	12.54
Compression ratio		16:1
Brake Mean Effective Pressure	kPa	ESP – 2584

<b>COOLING SYSTEM</b>		
Type of Coolant		Liquid (water + 50% antifreeze)
Total Cooling System Capacity (with Radiator)	L	47
Max coolant temperature – shutdown	°C	105
Cooling Fan Airflow	m <sup>3</sup> /min	398
<b>LUBRICATION SYSTEM</b>		
Operating Temperature range before Engine	°C	78 -105
Oil fuel consumption ratio based on engine fuel consumption data	g/kW.hr	≤ 0.2%
Total system capacity (including filters)	L	34
Type of oil filter		Spin-on full flow filter



FUEL SYSTEM			
Type of fuel filter			Spin-on fuel filter
Min. internal diameter of the supply pipe	mm		12
Min. internal diameter of the return pipe	mm		12
Max. fuel return restriction	Bar		0.5
Max. fuel inlet temperature	°C		50
Fuel supply flow	L/hr		169
Fuel Consumption (Tolerance +3%)			
	Rating	gr/kWh	L/hr
	100%ESP	196.7	94.8
	100%PRP	195.1	85.5
	75% PRP	193.4	63.5
	50% PRP	197.1	43.2
	25% PRP	213.2	23.4
EXHAUST SYSTEM			
Exhaust Gas temperature after the turbocharger	°C		580
Exhaust Gas flow	m <sup>3</sup> /min		ESP -69/ PRP - 63
Max. Exhaust back pressure	mBar		120

ALTERNATOR			
Brand / Model	WEICHA / WHA-400-4/0.4	LEROY-SOMER / TAL-A473-A	
Rated Current	577A	592A	
Coupling / No. of Bearing	Direct / Single	Direct / Single	
Winding Pitch	2/3	2/3	
Type of Excitation	Self-excitation	Self-excitation	
Cooling type	Air	Air	
Voltage regulation method	AVR	AVR	
Insurance	Class H	Class H	
Temperature rise	Class H	Class H	
Protection Grade	IP23	IP23	
Efficiency at 0.8p.f. @100% load	93.2%	93.3%	

CONTROL MODULE	
Back-lit LCD display	
3 Phase generator and 3 Phase Mains monitoring	
Monitoring speed, frequency, voltage, current, oil pressure, coolant temperature and fuel level	
Display warning, shutdown and engine status information	
Hours counter provides accurate information for monitoring and maintenance.	

## Ratings definitions

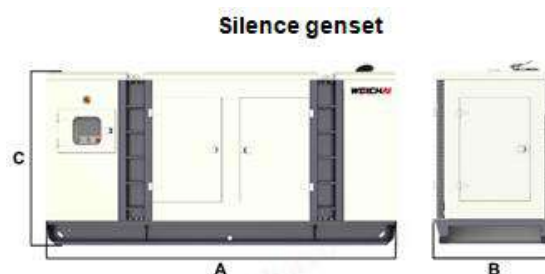
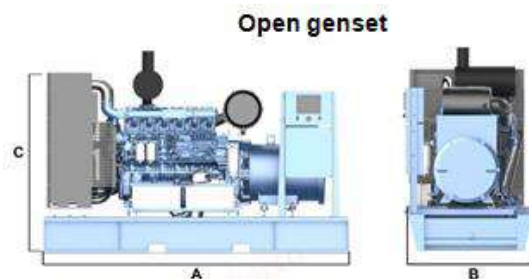
### Emergency Standby Power (ESP):

Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating.

Typical operational hours of the engine are 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

### Prime power (PRP):

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available; however, this is limited to 1 hour within every 12 hour period.




This outline drawing is to provide representative configuration details for Model series only. See respective model data sheet for specific model outline drawing number. Do not use for installation design

## Dimension and Weight

Structure	Model	Dim "A" mm	Dim "B" mm	Dim "C" mm	Dry wt.* kg
Open	WPG440F8	3200	1345	2024	3060
Silence	WPG440L8	4450	1400	2200	3800

\* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

## Codes and standards

ISO 9001	This generating set is designed and manufactured in facilities certified to ISO 9001.	ISO 8528	This generating set has been designed to comply with ISO 8528 regulation.
	The CE marking is only valid when equipment is used in a fixed installation application. Material compliance declaration is available upon request.		

For more information contact your local Weichai distributor or visit [www.weichai.com](http://www.weichai.com)