

## Soundproof /Open type Diesel Generating Sets

Model: **WPK-165**

INDUSTRIAL RANGE

Powered by : **PERKINS**



### ★★★Generating Rates★★★

POWER RATING		RPIME /STANDBY
POWER	KVA	150/165
	KW	120/132
RATED SPEED	RPM	1500
STANDARD VOLTAGE	V	230/400
AVAILABLE VOLTAGE	V	254/440 240/415 230/400 220/380
RATE AT POWER FACTOR	COS Phi	0.8

**Ambient conditions of reference:** 1000 mbar, 25°C, 30% relative humidity. Power according to ISO 3046 Normative.

**P.R.P. Prime Power - ISO 8528-1** : prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals.

The permissible average power output during a 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

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 (ISO 3046-1 Fuel Stop power):** power available for use at variable loads for limited annual time (500h), within the following limits of maximum operating time: 100% load 25h per year – 90% load 200h per year. No overload available. Applicable in case of failure of the main in areas of reliable electrical network. 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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### ★★PERKINS engine Specifications 1500/1800Rpm★★

Engine Model	1006TAG2
Number Of Cylinders &Type	4 stroke,vertical,in-line,6-cylinder
Engine Speed	1500 r.p.m or 1800 r.p.m.
Bore x Stroke (mm)	100mm x 127mm
Rated Speed (Rpm)	1500
Cont. Output (kw/hp)	129.3kw/174hp
Max .Output (Kw)	143kw/193hp
Starting System	Electric
Direction of Rotation	Clockwise ,form the front
Cooling Method	Water-cooled
Starting Battery	2 X 20V/60Ah
Displacement (L)	5.99L
Compression Ratio	17.0: 1
IN taking Method	Turbocharged Air to Air charge cooled
Brake Mean Effective Pressure	1852-2007kPa
Piston Speed	6.35m/S
Combustion Air Flow	10.7M <sup>3</sup> /min
Engine Coolant Flow	140L/min
Specific fuel consumption	Fuel Consumption at 100% standby power 45Liters/hour
	Fuel Consumption at 100% Prime power 41Liters/hour
	Fuel Consumption at 75% Prime power 31 Liters/hour
	Fuel Consumption at 50% Prime power 20Liters/hour
Governing Method	Mechanical
Lubricant system capacity	19Litres
Fuel tank capacity	Open type Genset 8-12 Hours at full load / silent type 620 Liters
Steady speed regulation	≤5%
Instantaneous speed regulation	≤10%
Time required to steady speed	≤5%
Fluctuation rate of speed	±0.5%
Air Filter (type)	Dry
PTO. Flanges	

# WDPOWER

<http://www.wdpowers.com>



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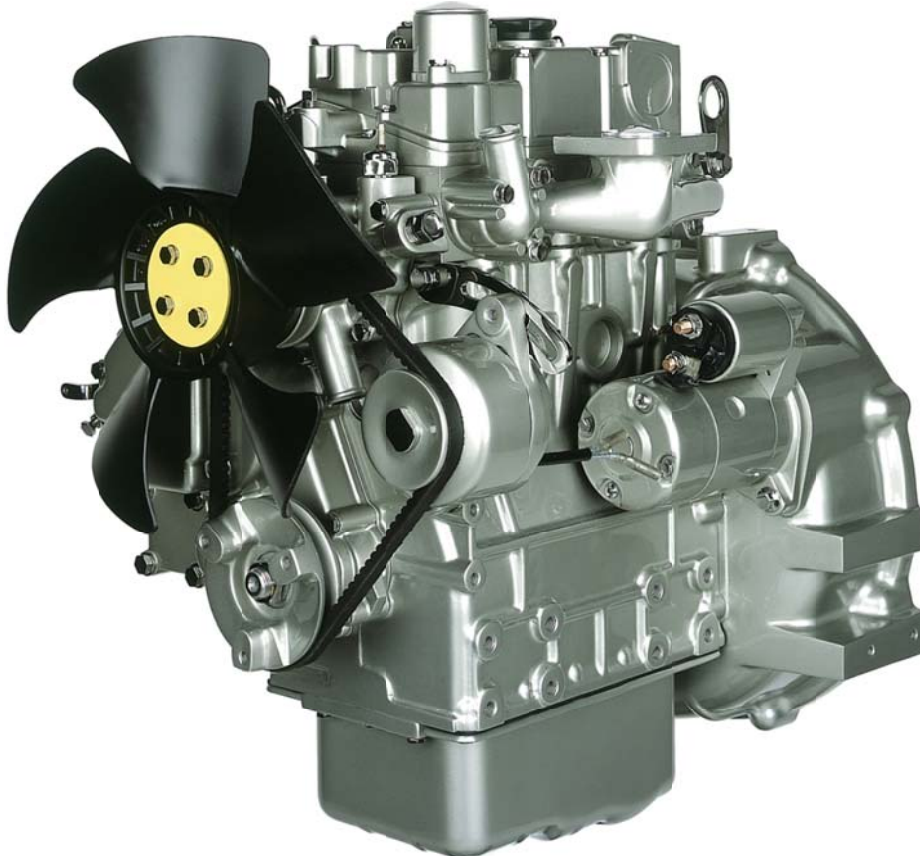
### ★★PERKINS engine Specifications 1500/1800Rpm (2)★★

**ENGINE**--Industrial 4 strokes cooled diesel engine complete with air, fuel and oil filters, electric Starting and charging equipment, engine protection against low water level.

**COOLING**--Radiator and cooling fan complete with protection guards, designed to cool engine at specified output in air temperatures up to 45 °C, radiators suitable for higher temperatures are Available Low water level protection fitted as standard.

**ELECTRICAL SYSTEM**--24V up to .Axial type starter motor, battery charging alternator, high capacity Lead acid battery and battery tray mounted on the generator base frame, and heavy duty Interconnecting cable with termination

**EXHAUST SYSTEM**--Heavy duty industrial exhaust silencer with flexible piping.



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### ★★Alternator Technical Specifications★★

Alternator Brand	Leroy Somer	Stamford
Model	LAS44.2M95	UC1274F
Exciter System	Self-Excited, Brushless	
Phase	3phases and 4wires.	
Cooling Fan	Cast alloy aluminum	
Bearing	Single, double shielded	
Windings	100% copper	
Insulation Type	Class: H	
Connection Type	Reconnect able	
Pitch	2/3	
Amortisseur Winding	Full	
Voltage Regulator	Automatic voltage adjustment <b>A.V.R</b> (ELECTRONIC)	
Steady Voltage Precision	±1%	
Underspeed Protection	Standard	
Over excitation Protection	IP23	
TIF (1960 Weightings)	<50	



**ALTERNATOR**--Brushless, self-exciting, self-regulation, screen- protected, Drip proof rated in Accordance with IEC60034.Voltage regulation maintained within  $\pm 0.5\%$  from no load to full load. Between 0.8 lagging and unity. All standard voltages available.

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### ★★Control Panel Technical Specifications★★

#### Control Panel---GRT168

The base mounted control panel in a vibration isolated sheet steel enclosure. The control panel is equipped as follows:

- A) Instruments: Analogue Voltmeter, Hours Run Meter. Water pressure Meter.
- B) Control module: Standard collocation is **GRT168 Auto start with ATS**
- C) Controls: Emergency Stop Pushbutton, Voltmeter Phase Selector Switch

#### Main Features:

- Automatic mains failure
- Engine control, Generator protection
- Built in alarms and warnings
- Remote Start operation available
- Daily / weekly / monthly exerciser
- Weekly operation schedule programs
- Fuel pump control
- Mains simulation
- Block heater control
- Field adjustable parameters
- Free MS-Windows Remote monitoring
- LED displays
- Configurable analogue inputs
- I/O expansion capability
- ECU control and monitoring via J1940 CANBUS

#### Protection Circuits

- Warning
- Battery charge failure
- Low battery voltage
- Shut downs
- Fail to start
- Emergency stop
- Low oil pressure
- High engine temperature
- Over/Under speed
- Electrical trip
- Generator over current
- Under/Over generator frequency
- Failed to reach loading

#### Instruments

- Engine
- Engine speed
- Oil pressure
- Coolant temperature
- Run time
- Battery volts
- Tor
- Voltage: L-N
- Current L1-L2-L3
- Frequency
- Mains
- Voltage: L-L, L-N



## ★★Generating Sets Standard Features★★

Three phase four wires, output voltage 400V/230V, 50HZ or 60HZ, between 0.8 and 1.0 laggings, protection capability, Brushless, According with the standard of NAME1 and IP23

## ★General Features ★

1. Composed of PERKINS diesel engine and Stamford or Leroy somer alternator
2. Oil and fuel filter fitted, water separator
3. Three phase four wire, output voltage 400V/230V, 50HZ/60HZ, between 0.8 laggings, protection capability
4. According with the standard of NAME1 and IP23.
5. Composed of PERKINS diesel engine and Stamford or Leroy somer alternator
6. Operation & Maintenance manual
7. Change load from 0-100%, within 1.0 %( electric speed regulator), within 4.5 %( mechanical speed regulator)
8. Lube-oil drain valve fitted
9. Electric Starter Charge motor 24 VD.C
10. Water-cooled
11. 8-hours operation base tank
12. Between 0.8 and 1.0 lagging and unity
13. Auto start
14. Optional soundproof and weatherproof canopy
15. Special Integrated Steel Base tank and sprayed overall in gloss enamel paint

## ★Voltage Regulation and Frequency Adjustable ratio:★

Voltage regulation maintained within $\pm 0.51\%$

Between 0.8 and 1.0 lagging and unity

From no load to full load

At speed droop variation upto 4.5%

Change load form 0-100%, within 1% (electric speed regulator), within 4.5% (mechanical speed regulator)

Frequency undulation:

Load form 0-100%, frequency undulation within 0.25%, No load wire volts max undulation ration within 1.8%

Three phase balance load in the order of 5%

Effect factor of telecom

TIF batter than 50

THF to IEC60034 Part 40 Batter than 2%

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### ★★Soundproofed Generator Version Features★★

#### ★Robust Corrosion Resistant Construction★

1. Body made form steel components treated with polyester coating
2. Black finish stainless steel lock and hinges

#### ★Excellent Access for maintenance★

1. Radiator fills access plate
2. Two large doors on each side
3. Lube oil and cooling water drains pipes to exterior of the enclosure

#### ★Security and Safety★

1. Control panel viewing window in a lockable access door
2. Emergency stop push button (red) mounted on the enclosure interior
3. Cooling fan and battery charge alternator fully guarded
4. Exhaust silencing system totally enclosed for operator safely

#### ★Generator Sets Optional Features★

1. Low fuel level, high temperature, low battery, over speed, over crank, run, auto shutdown
2. Automatic fuel filling system
3. Engine oil feeding and drain pump
4. Auto Transfers Switch (ATS)
5. Parallel control panels
6. Circuit Breaker MCCB&ACB
7. Remote control panel
8. Weatherproof/Soundproof canopy, trailer type and open type, provides multiple options and alternatives

#### ★Quality Standards★

ISO9001:2000, ISO3046, ISO14000, ISO8528, BS999, AS1359, ICE34, UL, CE and CCC.