

WGP-P20/S

Perkins Series

Features:

- Rotate speed governor: Mechanical governor
- Excitation system: Self excited, SHUNT
- A.V.R model: AS480
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 24V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy (Only for Soundproofed sets)
- 50°C radiator
- Oil pump on the engine
- Steel base frame with fork holes
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for daily running
- Drain points for fuel tank
- Operation Manual / Specifications



Dimensions and Weights

Model	L	W	H
WGP-P20	1700	650	1200
WGP-P20S	2150	950	1450

Output Ratings

Genset Model	Prime Power	Standby Power
WGP-P20	20kVA/16kW	22kVA/18kW
WGP-P20S	20kVA/16kW	22kVA/18kW

Ratings at 0.8 power factor

Notes:

*Prime Power

Continuous duty operation, under variable load 24/24h-10% over load

**Standby Power

Standby duty, operation under variable load, without over load;

Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998,

Ratings and Performance Data

Engine Model:	Perkins 404A-22G1
Alternator Brand:	Stamford
Alternator Model:	PI 144D
Control System:	Auto Genset / AMF
Circuit Breaker Type:	3 Pole MCCB
Frequency & Phase:	50Hz & 3PH
Engine Speed: RPM	1500
Fuel Tank Capacity: L	
WGP-P20	10 hrs
WGP-P20S	10 hrs
Fuel Consumption: l/hr (100% Load)	
- Prime Power	5.3
- Standby Power	6.1

Engine Model: 404A-22G1 / 20.3 kW @1500rpm

Cooling system

Radiator	
face area	0.167 m ²
rows and materials	2 rows, Aluminium
matrix density and material	14.5 fins/inch Alum
width of matrix	334 mm
height of matrix	500 mm
pressure cap setting	90 kPa
Estimated cooling air flow reserve	0.125 kPa

Fan

diameter	320 mm
drive ratio	1.25:1
number of blades	6
material	plastic
type	pusher

Coolant

Total system capacity	
with radiator	7.0 litres
without radiator	3.6 litres
Maximum top tank temperature	112°C
Max static pressure head on pump	30.4 kPa
Temperature rise across engine	7.5°C
Max permissible external system resistance	TBA kPa
Thermostat operation range	82 - 95°C
Recommended coolant:	50% anti freeze/ 50% water

Duct allowance

Maximum additional restriction (duct allowance) to cooling airflow and resultant minimum airflow

Ambient clearance 50% Glycol	Duct allowance Pa	m ³ /sec
53°C	0	0.67
46°C	125	0.49

Electrical system

alternator	15 amps, 12 V
starter motor	2.0 kW, 12 V
Minimum cranking speed	150 rev/min

Cold start recommendations

Minimum starting temperature	Grade of engine lubricating oil	Battery specifications	
°C			
0	20W	540	1
-15	10W	540	1
-20	5W	600	1

Exhaust system

Maximum back pressure	10.2 kPa
Exhaust outlet size	
horizontal	/
vertical	42 mm

Fuel system

Type of injection	Indirect injection
Fuel injection pump	Cassette type
Fuel injector	Pintle nozzle
Nozzle opening pressure	14.7 Mpa
Maximum particle size	25 microns

Fuel lift pump

type	Mechanical
flow/hour	63 litres/hr
pressure	10 kPa
Maximum suction head	0.8 m
Maximum static pressure head	3 m
Governor type	Mechanical

Fuel specification

USA Fed Off Highway - EPA2D 89.330-96

Europe Off Highway - CEC RF-06-99

Note: For further information on fuel specifications and restrictions estrictions. refer to the OMM Fuels section for this engine model

Fuel consumption

Power rating		
g/kWh (litres/hr)		
110%	100%	75%
4.1	3.7	2.78

Induction system

Maximum air intake restriction	
clean filter	3.0 kPa
dirty filter	6.4 kPa
air filter type	Dry element type

Lubrication system

Lubricating oil capacity	
Maximum sump capacity	10.6 litres
Total system	/
Minimum sump capacity	8.9 litres

Lubricating oil pressure

Minimum sump capacity	120 kPa
relief valve opens	352 - 448 kPa
at maximum no-load speed	TBA
Normal oil temperature	125°C
oil flow at rated speed	10.9 litres/min.

Alternator Model: PI 144D

Alternator Physical Data

Manufactured by:	Stamford
Model:	PI 144D
No. of Bearings:	Single
Insulation Class:	H
Winding Pitch Code:	2/3
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	Self excited,shunt
AVR Model:	AS480

Alternator Operating Data

Overspeed: rpm	2250rpm
Voltage Regulation: (Steady state)	±1.0%
Wave Form NEMA = TIF:	<50
Wave Form IEC = THF:	<2%
Air Flow: m3/s	0.1
Altitude: m	≤1000

Alternator Performance Data:	WGP-P20	WGP-P20S
Time constants/400V:Ms		
T'd	19	19
T''d	5	5
T'do	450	450
Ta	7	7
Short Circuit Capacity** %	1/Xd	1/Xd
Reactances: Per Unit		
Xd	1.61	1.61
X'd	0.15	0.15
X''d	0.11	0.11

Voltage Technical Data WGP-P20

Voltage	Prime kVA	Standby kVA
380/220	20	22
400/230	20	22
415/240	20	22
440/254	20	22

Voltage Technical Data WGP-20S

Voltage	Prime kVA	Standby kVA
380/220	20	22
400/230	20	22
415/240	20	22
440/254	20	22

Control System DSE4620



Features:

- Large back-lit icon LCD display.
- 3-phase generator sensing.
- 3-phase generator and mains (utility) sensing.
- 600 V ph-ph nominal system compatibility.
- Generator & load power monitoring (kW, kV A, kV Ar, pf).
- Generator overload protection (kW).
- Configurable inputs & outputs.
- Fuel & crank outputs.
- Magnetic pick-up speed sensing.
- Battery voltage monitoring.
- Configurable event log (50).
- DSE Configuration Suite PC Software.
- Engine speed protection, engine hours counter, engine pre-heat, engine run-time scheduler, engine idle control for start/stop.

Control System DSE7420

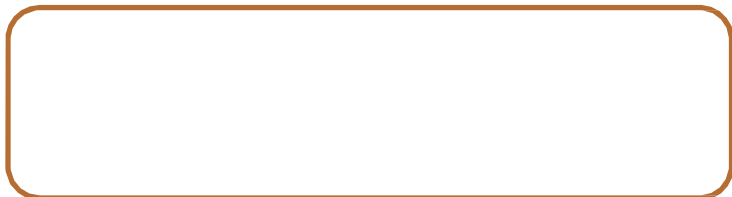


Features:

- Microprocessor control, with high stability and credibility .
- Mains supply and generator operation monitoring.
- Indicating operation status and fault conditions.
- Multiple protections; multiple parameters display such as pressure, temperature.
- Manual and automatic work mode selectable.
- Real time clock for time and date display, overall runtime display, 99 log entries
- Overall power output display.
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed.
- Communication with PC via RS485 or RS232 interface, using MODBUS protocol.
- Engine ECU is available.
- Common USB cable is usable for parameter configuration.
- Multi-language is available

Optional

Engine	Alternator	Generator Set
<ul style="list-style-type: none"> • Water Jacket Preheater • Fuel-water separator • Oil pump • Oil preheater • Battery preheater 	<ul style="list-style-type: none"> • PMG excitation • Alternator heater • Winding Temperature Measuring • Anti-damp and anti-corrosion treatment • Anti-condensation heater 	<ul style="list-style-type: none"> • Tools with the machine • Coolant (-30°C)
Canopy	Fuel System	Control System
<ul style="list-style-type: none"> • Hired type • Trailer 	<ul style="list-style-type: none"> • Low fuel level alarm • Automatic fuel feeding system • Fuel T-valves • Dual Wall Integral Fuel Tanks • Dual Wall Sub-base Fuel Tanks • Automatic Fuel Fill Options • Fuel level shut down sensor 	<ul style="list-style-type: none"> • AMF function • ATS control cabinet • Double HZ & Volt • ABB & MCCB
Air Inlet system	Lube system	Starting /Charging system
<ul style="list-style-type: none"> • Air pre-heater 	<ul style="list-style-type: none"> • Manual sump pump • Lubricant oil pre-heater 	<ul style="list-style-type: none"> • Jacket water heater



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Walt reserves the right to make changes in model, technical specification, color, configuration and accessories without prior notice.

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