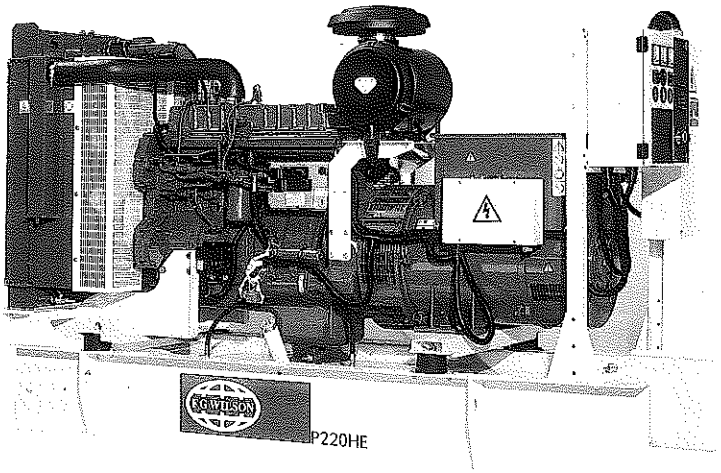
P200H / P220HE



Output Ratings		
Generating Set Model	P200H Prime*	P220HE Standby*
380-415V, 50 Hz	200 kVA 160 kW	220 kVA 176 kW
480V, 60 Hz	225 kVA 180 kW	250 kVA 200 kW

* Refer to ratings definitions on page 4.
Ratings at 0.8 pf

Technical Data		
Engine Make & Model	Perkins 1306-E87TA300	
Alternator Model	LL5014F	
Base Frame Type	Heavy Duty Fabricated Steel	
Circuit Breaker Type/Rating	3 Pole MCCB	
Frequency	50 Hz	60Hz
Engine Speed	1500	1800
Fuel Tank Capacity: Litres (US Gal)	350 (92.5)	
Fuel Consump, P200H: l/hr (US Gal/hr)	42.7 (11.3)	53.0 (14.0)
Fuel Consump, P220HE: l/hr (US Gal/hr)	47.0 (12.4)	58.2 (15.4)

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Engine Technical Data

Physical Data	
Manufacturer:	Perkins
Model:	1306-E87TA300
No. of Cylinders/Alignment:	6 in line
Cycle:	4 Stroke
Induction:	Turbocharged AA Charge Cooled
Cooling Method:	Water
Governing Type:	Electronic
Class:	ISO 8528 G3
Compression Ratio:	16.9:1
Displacement: L (cu.in)	8.71 (532)
Bore/Stroke: mm (in)	116.6 (4.6) / 135.9 (5.4)
Moment of Inertia: kg m² (lb/in²)	0.5360 (762)
Engine Electrical System:	
-Voltage/Ground	24/Negative
-Battery Charger Amps	55
Weight: kg (lbs) -Dry	671 (1480)
-Wet	698 (1539)

Performance	50Hz	60Hz
Engine Speed: rpm	1500	1800
Gross Engine Power: kW (hp)		
-Standby	205 (275)	227 (304)
-Prime	185 (248)	205 (275)
BMEP: kPa (psi)		
-Standby	1899 (275)	1744 (253)
-Prime	1703 (245)	1577 (229)
Regenerative Power: kW	20.8	28.6

Fuel System

Fuel Filter Type:	Replaceable Element
Recommended Fuel:	Class 2 Diesel

Fuel Consumption: L/hr (US Gal/hr)

	110% Load	100% Load	75% Load	50% Load
P200H				
50 Hz	47.0 (12.4)	42.7 (11.3)	32.0 (8.5)	21.4 (5.7)
60 Hz	58.2 (15.4)	53.0 (14.0)	39.7 (10.4)	26.5 (7.0)
P220HE				
50 Hz	n/a	47.0 (12.4)	35.2 (9.3)	23.5 (6.2)
60 Hz	n/a	58.2 (15.4)	43.7 (11.5)	29.1 (7.7)

(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, class 2)

Air System	50 Hz	60 Hz
Air Filter Type:	Replaceable Element	
Combustion Air Flow:		
m^3min (cfm) -Standby:	14.9 (526)	20.2 (713)
-Prime:	14.9 (526)	20.2 (713)
Max. Combustion Air Intake Restriction: kPa (in H_2O)	6.22 (25.0)	6.22 (25.0)
Radiator Cooling Airflow: m^3/sec (cfm)	5.4 (191)	6.9 (244)
External Restriction to Cooling Airflow: Pa (in Wg)	120 (0.48)	120 (0.48)

Cooling System	50 Hz	60 Hz
Cooling System Ambient Capability: °C (°F)	47 (117)	50 (122)
Cooling System Capacity: L (US Gal)	39.8 (10.5)	39.8 (10.5)
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil: kW (Btu/min)		
-Standby:	85.0 (4835)	97.0 (5517)
-Prime:	77.0 (4380)	91.0 (5176)
Heat Radiation to Room: kW (Btu/min) -Standby:	52.2 (2969)	56.2 (3197)
-Prime:	46.7 (2656)	50.0 (2844)
Radiator Fan Load: kW (hp)	6.4 (8.7)	11.2 (15.2)

Lubrication System

Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity L (US Gal):	26.4 (7.0)
Oil Pan L (US Gal):	22.7 (6.0)
Oil Type:	API-CF-4/ACEA E2
Cooling Method:	Water

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industrial (Reactive)	
Silencer Model & Qty:	SD100 (1)	
Pressure Drop Across Silencer System: kPa (in Hg)	tba	tba
Silencer Noise Reduction Level: dB	12	10
Max. Allowable Back Pressure: kPa (in Hg)	10.7 (3.16)	10.7 (3.16)
Exhaust Gas Flow: m^3min (cfm)		
-Standby:	40.3 (1421)	51.3 (1809)
-Prime:	40.3 (1421)	51.3 (1809)
Exhaust Gas Temperature: °C (°F)		
Standby:	526 (979)	477 (891)

Alternator Performance Data

Data Item	50 Hz				60 Hz					
	415/240	400/230 230/115 200/115	380/220 220/110	220/127	480/277 240/139	460/266	380/220 220/110	240/120 208/120	230/115	220/127 440/254
Motor Starting Capability* kVA	435	400	365	475	470	430	295	360	330	400
Short Circuit Capacity** %	300	300	300	300	300	300	300	300	300	300
Reactances: Per Unit										
Xd	2.86	3.08	3.41	2.29	2.89	3.14	4.03	3.84	3.86	3.44
X'd	0.14	0.15	0.16	0.11	0.14	0.15	0.19	0.18	0.16	0.16
X"d	0.081	0.087	0.097	0.065	0.082	0.089	0.114	0.109	0.109	0.097

Reactances shown are applicable to prime ratings

* Based on 30% voltage dip. Improved motor starting capability is available with optional Permanent Magnet generator or AREP excitation

** With optional Permanent Magnet generator or AREP excitation.

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG Wilson	**Overspeed:** RPM	2250
Model:	LL5014F	**Voltage Regulation (steady state)**	+/- 0.5%
No. of Bearings:	Single	**Wave Form NEMA =TIF**	<50
Insulation Class:	H	**Wave Form IEC=THF**	<2%
Winding Pitch Code:	2/3-(No.6)	**Total Harmonic Content LL/LN**	<4%
Wires:	12	**Radio Interference**	Suppression is in line with British Standard BS 800 and VDE class G & N
Ingress Protection Rating:	IP22	**Radiant Heat:** kW (Btu/min)	
Excitation System:	SHUNT	-50 Hz	17.22 (979)
AVR Model:	R448	-60 Hz	16.23 (923)

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

Voltage	Model: P200H Prime		Model: P220HE Standby	
	kVA	kW	kVA	kW
415/240	200	160	220	176
400/230	200	160	220	176
380/220	200	160	220	176
230/115	200	160	220	176
220/127	180	144	200	160
220/110	200	160	220	176
200/115	200	160	220	176

3 Phase Ratings and Performance at 60 Hz, 1800 RPM

Voltage	Model: P200H Prime		Model: P220HE Standby	
	kVA	kW	kVA	kW
480/277	225	180	250	200
460/266	225	180	250	200
440/254	225	180	250	200
380/220	198	158.4	215	172
240/139	225	180	250	200
240/120	225	180	247	198
230/115	210	168	230	184
220/127	225	180	250	200
220/110	198	158.4	215	172
208/120	225	180	247	198

Definitions

Standby Rating

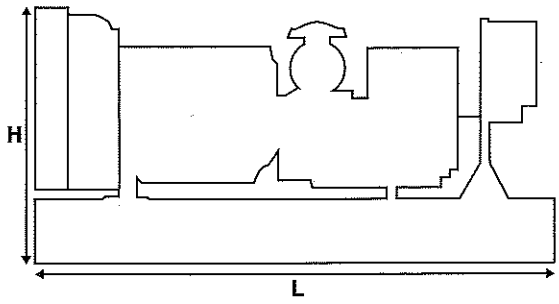
These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO8528-3).

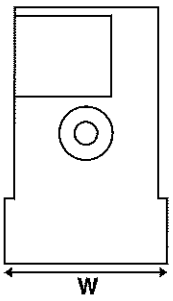
Prime Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

Standard Reference Conditions

Standard reference conditions 27°C (80°F) Air Inlet Temp, 152.4m (500 ft) A.S.L. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load with diesel fuel with a specific gravity of 0.85 and conforming to BS2869: 1988, Class A2.





Weights & Dimensions

Weights: kg (lbs)		Dimensions: mm (in)	
Net (+ lube oil)	2009 (4430)	Length	2953 (116.3)
Wet (+ lube oil & coolant)	2043 (4505)	Width	1003 (39.5)
Fuel, lube oil & coolant	2339 (5158)	Height	1717 (67.6)

General Data

Documents

A full set of operation and maintenance manuals, circuit wiring diagrams, and commissioning/fault finding instruction leaflets.

Control Panel Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3406, IEC 60034, VDE 0530, NEMA MG-1.22.

FG Wilson is a fully accredited ISO9001 company.

Warranty

All equipment is guaranteed for a period of 12 months from date of commissioning or 18 months from shipping, whichever occurs first. Extended warranty terms are available.