

P32P52 / P35E5S



www.FGWilson.com



Generator set picture may contain non-standard options

Output Ratings		
Generating Set Model	P32P5S	P35E5S
	Prime*	Standby*
220-240V, 50 Hz	32.0 kVA	35.0 kVA
	32.0 kW	35.0 kW
240V, 60 Hz	36.0 kVA	40.0 kVA
	36.0 kW	40.0 kW

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

Technical Data		
Engine Make & Model	Perkins 1104A-44G	
Alternator Model	LL2014H	
Base Frame Type	Heavy Duty Fabricated Steel	
Circuit Breaker Type	3 Pole MCB	
Frequency	50 Hz	60Hz
Engine Speed	1500	1800
Fuel Tank Capacity: litres (US gal)	175 (46.2)	
Fuel Consump, P32P5S: l/hr (US gal/hr)	13.0 (3.4)	16.0 (4.2)
Fuel Consump, P35E5S: l/hr (US gal/hr)	14.5 (3.8)	18.9 (5.0)



FG Wilson has manufacturing facilities in the following locations:

Northern Ireland • Brazil • China • India • USA

With headquarters in Northern Ireland, FG Wilson operates through a Global Dealer Network. To contact your local Sales Office please visit the FG Wilson website at www.FGWilson.com



Engine Technical Data

Physical Data		Air System		50 Hz	60 Hz
Manufacturer:	Perkins	Air Filter Type:	Replaceable Element		
Model:	1104A-44G	Combustion Air Flow:			
No. of Cylinders/Alignment:	4 In Line	m ³ /min (cfm)	-Standby:	2.8 (99)	3.4 (120)
Cycle:	4 Stroke		-Prime:	2.8 (99)	3.4 (120)
Induction:	Naturally Aspirated	Max. Combustion Air Intake Restriction: kPa (in H ₂ O)		6.6 (26.5)	6.6 (26.5)
Cooling Method:	Water	Radiator Cooling Airflow: m ³ /min (cfm)		74.4 (2627)	97.8 (3454)
Governing Type:	Mechanical	External Restriction to Cooling Airflow: Pa (in H ₂ O)		120 (0.5)	120 (0.5)
Governing Class:	ISO 8528 G2				
Compression Ratio:	19.25:1				
Displacement: l (cu. in)	4.4 (268.5)				
Bore/Stroke: mm (in)	105.0 (4.1)/127.0 (5.0)				
Moment of Inertia: kg m ² (lb/in ²)	1.14 (3896)				
Engine Electrical System:					
-Voltage/Ground	12/Negative				
-Battery Charger Amps	65				
Weight: kg (lb) -Dry	445 (981)				
-Wet	465 (1025)				
Performance		50 Hz	60 Hz		
Engine Speed: rpm		1500	1800		
Gross Engine Power:					
kW (hp)	-Standby:	45.0 (60.0)	54.0 (72.0)		
	-Prime:	40.5 (54.0)	48.6 (65.0)		
BMEP: kPa (psi)					
	-Standby:	818.0 (118.7)	818.0 (118.7)		
	-Prime:	736.0 (106.8)	736.0 (106.8)		
Regenerative Power: kW		7.0	9.0		
Fuel System					
Fuel Filter Type:	Replaceable Element				
Recommended Fuel:	Class A2 Diesel				
Fuel Consumption: l/hr (US gal/hr)					
	110% Load	100% Load	75% Load	50% Load	
P32P5S					
50 Hz	14.5 (3.8)	13.0 (3.4)	8.8 (2.3)	6.4 (1.7)	
60 Hz	18.9 (5.0)	16.0 (4.2)	10.2 (2.7)	7.6 (2.0)	
P35E5S					
50 Hz	N/A	14.5 (3.8)	9.6 (2.5)	6.8 (1.8)	
60 Hz	N/A	18.9 (5.0)	11.2 (3.0)	8.1 (2.1)	
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)					
Cooling System		50 Hz	60 Hz		
Cooling System					
Capacity: l (US gal)		10.2 (2.7)	10.2 (2.7)		
Water Pump Type:	Centrifugal				
Heat Rejected to Water & Lube Oil: kW (Btu/min)					
	-Standby:	27.4 (1558)	31.0 (1763)		
	-Prime:	24.6 (1399)	30.7 (1746)		
Heat Radiation to Room: kW (Btu/min)					
	-Standby:	9.0 (512)	8.0 (455)		
	-Prime:	8.0 (455)	7.0 (398)		
Radiator Fan Load: kW (hp)		0.5 (0.7)	0.9 (1.2)		
Cooling system designed to operate in ambient conditions up to 50° C (122° F). Contact your local FG Wilson dealer for power ratings at specific site conditions.					
Lubrication System					
Oil Filter Type:	Spin-On, Full Flow				
Total Oil Capacity: l (US gal)	8.0 (2.1)				
Oil Pan: l (US gal)	7.8 (2.1)				
Oil Type:	API CH4 15W-40				
Cooling Method:	Water				
Exhaust System		50 Hz	60 Hz		
Silencer Type:	Level 1				
Silencer Model & Qty:	SD80 (1)				
Pressure Drop Across Silencer System: kPa (in Hg)		0.24 (0.071)	0.56 (0.165)		
Silencer Noise Reduction Level: dB		18.2	16.5		
Max. Allowable Back Pressure: kPa (in Hg)		12.0 (3.5)	15.0 (4.4)		
Exhaust Gas Flow: m ³ /min (cfm)					
	-Standby:	6.9 (244)	9.5 (335)		
	-Prime:	6.9 (244)	9.5 (335)		
Exhaust Gas Temperature: °C (°F)					
	-Standby:	520 (968)	535 (995)		
	-Prime:	520 (968)	535 (995)		

Alternator Performance Data

Data Item	50 Hz			60 Hz		
	240V 240V/120V	230V 230V/115V	220V 220V/110V	220V 220V/110V	240V 240V/120V	230V 230V/115V
Motor Starting Capability* kVA	130	122	115	101	114	108
Reactances: Per Unit						
X_d	1.51	1.65	1.80	2.22	2.43	2.04
X'_d	0.10	0.11	0.12	0.14	0.16	0.13
X''_d	0.048	0.053	0.058	0.071	0.078	0.065

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

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG WILSON	Overspeed: RPM	2250
Model:	LL2014H	Voltage Regulation (steady state):	+/- 0.5%
No. of Bearings:	1	Wave Form NEMA = TIF:	50
Insulation Class:	H	Wave Form IEC = THF:	2.0%
Winding Pitch/Code:	2/3 - 6	Total Harmonic Content LL/LN:	4.0%
Wires:	12	Radio Interference:	Suppression is in line with European Standard EN61000-6
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	
Excitation System:	SHUNT	-50 Hz:	6.1 (347)
AVR Model:	R230	-60 Hz:	8.3 (472)

Technical Data

1 Phase Ratings and Performance at 50 Hz, 1500 RPM

1 Phase Ratings and Performance at 60 Hz, 1800 RPM

Voltage	Prime Model P32P5S		Standby Model P35E5S		Voltage	Prime Model P32P5S		Standby Model P35E5S	
	kVA	kW	kVA	kW		kVA	kW	kVA	kW
240V	32.0	32.0	35.0	35.0	240V/120V	36.0	36.0	40.0	40.0
230V	32.0	32.0	35.0	35.0	240V	36.0	36.0	40.0	40.0
220V	32.0	32.0	35.0	35.0	230V/115V	36.0	36.0	40.0	40.0
230V/115V	32.0	32.0	35.0	35.0	230V	36.0	36.0	40.0	40.0
240V/120V	32.0	32.0	35.0	35.0	220V/110V	36.0	36.0	40.0	40.0
220V/110V	32.0	32.0	35.0	35.0	220V	36.0	36.0	40.0	40.0

Definitions

Standby Rating

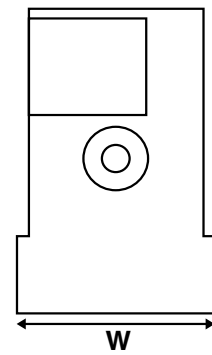
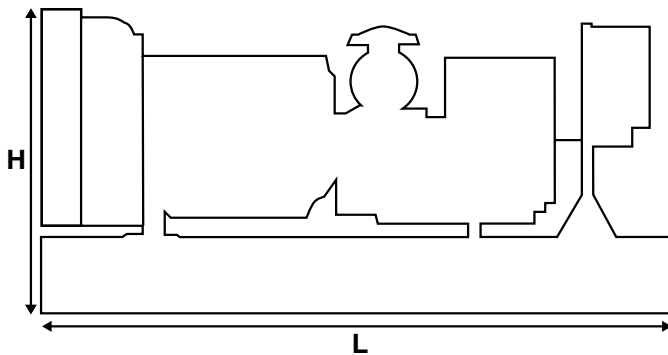
These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

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

Note: Standard reference conditions 27°C (80°F) Air Inlet Temp, 152.4m (500ft) A.S.L., 60% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869:1998, Class A2.



Weights & Dimensions

Weights: kg (lbs)		Dimensions: mm (in)	
Net (+ lube oil)	974 (2147)	Length	2150 (84.6)
Wet (+ lube oil & coolant)	987 (2176)	Width	752 (29.6)
Fuel, lube oil & coolant	1135 (2502)	Height	1366 (53.8)

General Data

Documents

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

Generating Set Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, VDE 0530, NEMA MG-1.22.

FG Wilson is a fully accredited ISO 9001 company.

Warranty

All equipment carries full manufacturer's warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer, or visit our website, www.FGWilson.com