



P88-3

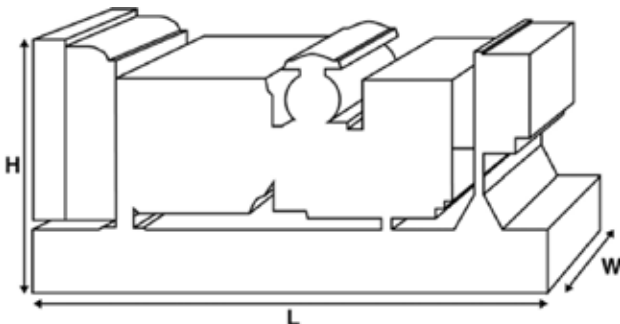
Standard Alternator

Output Ratings

Voltage, Frequency		Prime	Standby
400/230 V, 50 Hz	kVA	80	88
	kW	64	70.4
	kVA		
	kW		



Ratings at 0.8 power factor.
Please refer to the output ratings technical data section for specific generator set outputs per voltage.



Dimensions and Weights

Length	mm	1870 (73.6)
Width	mm	840 (33.1)
Height	mm	1333 (52.5)
Weight (Dry)	kg	939 (2070)
Weight (Wet)	kg	952 (2099)

Ratings in accordance with ISO 8528, ISO 3046, IEC 60034, BS5000 and NEMA MG-1.22.
Generator set pictured may include optional accessories.

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.

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).

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, Class A2.

FG Wilson offer a range of optional features to allow you to tailor our generator sets to meet your power needs.
Options available include:

- Upgrade to CE Certification
- A wide range of Sound Attenuated Enclosures
- A variety of generator set control and synchronising panels
- Additional alarms and shutdowns
- A selection of exhaust silencer noise levels

For further information on all of the standard and optional features accompanying this product please contact your local Dealer or visit:

www.fgwilson.com



Ratings and Performance Data

Engine Make	Perkins		
Engine Model:	1104A-44TG2		
Alternator Make	FG Wilson		
Alternator Model:	FGL30020		
Control Panel:	FG100		
Base Frame:	Heavy Duty Fabricated Steel		
Circuit Breaker Type:	3 Pole MCCB		
Frequency:	50 HZ		60 HZ
Engine Speed: RPM	rpm	1500	1800
Fuel Tank Capacity:	litres (US gal)	180 (47.55)	
Fuel Consumption Prime	litres (US gal)/hr	18.2 (4.8)	
Fuel Consumption Standby	litres (US gal)/hr	20.1 (5.3)	

Engine Technical Data

No. of Cylinders	4		
Alignment	IN LINE		
Cycle	4 STROKE		
Bore	mm (in)	105 (4.1)	
Stroke	mm (in)	127 (5)	
Induction	TURBOCHARGED		
Cooling Method	WATER		
Governing Type	MECHANICAL		
Governing Class	ISO 8528 G2		
Compression Ratio	17.25:1		
Displacement	L (cu. in)	4.4 (268.5)	
Moment of Inertia:	kg m ² (lb/in ²)	1.14 (3896)	
Voltage	12		
Ground	Negative		
Battery Charger Amps	65		
Engine Weight Dry	kg (lb)	463 (1021)	
Engine Weight Wet	kg (lb)	485 (1069)	

Engine Performance Data

		50 Hz	60 Hz
Engine Speed	rpm	1500	1800
Gross Engine Power Prime	kW (hp)	73.4 (98)	84.5 (113)
Gross Engine Power Standby	kW (hp)	80.7 (108)	93 (125)
BMEP Prime	kPa (psi)	1335 (193.6)	1280 (185.7)
BMEP Standby	kPa (psi)	1468 (212.9)	1409 (204.4)



Fuel System

Fuel Filter Type:		Replaceable Element			
Recommended Fuel:		Class A2 Diesel			
Fuel Consumption at		110 % Load	100 % Load	75 % Load	50 % Load
50 Hz Prime:	l/hr (US gal/hr)	20.1 (5.3)	18.2 (4.8)	13.6 (3.6)	9.5 (2.5)
50 Hz Standby	l/hr (US gal/hr)	-	20.1 (5.3)	14.9 (3.9)	10.3 (2.7)
60 Hz Prime	l/hr (US gal/hr)				
60 Hz Standby	l/hr (US gal/hr)	-			

(Based on diesel fuel with a specific gravity of 0.84 and conforming to BS2869 classA2,EN590)

Air System

Air System		50 Hz	60 Hz
Air Filter Type:		Replaceable Element	
Combustion Air Flow Prime	m ³ /min (cfm)	4.8 (170)	
Combustion Air Flow Standby	m ³ /min (cfm)	5.1 (180)	
Max. Combustion Air Intake Restriction	kPa	8 (32.1)	

Cooling System

Cooling System		50 Hz	60 Hz
Cooling System Capacity	l (US gal)	13 (3.4)	
Water Pump Type:		Centrifugal	
Heat Rejected to Water & Lube Oil: Prime	kW (Btu/min)	46 (2616)	
Heat Rejected to Water & Lube Oil: Standby	kW (Btu/min)	51 (2900)	
Heat Radiation to Room*: Prime	kW (Btu/min)	19.9 (1132)	
Heat Radiation to Room*: Standby	kW (Btu/min)	21.6 (1228)	
Radiator Fan Load:	kW (hp)	1 (1.3)	
Radiator Cooling Airflow:	m ³ /min (cfm)	121.2 (4280)	
External Restriction to Cooling Airflow:	Pa (in H ₂ O)	125 (0.5)	

*: Heat radiated from engine and alternator
 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 (2.1)
Oil Pan Capacity:	l (US gal)	7 (1.8)
Oil Type:		API CG4 / CH4 15W-40
Oil Cooling Method:		WATER

Exhaust System

Exhaust System		50 Hz	60 Hz
Maximum Allowable Back Pressure:	kPa (in Hg)	10 (3)	
Exhaust Gas Flow: Prime	m ³ /min (cfm)	12.5 (441)	
Exhaust Gas Flow: Standby	m ³ /min (cfm)	13.3 (470)	
Exhaust Gas Temperature: Prime	°C (°F)	555 (1031)	
Exhaust Gas Temperature: Standby	°C (°F)	580 (1076)	



Alternator Physical Data

No. of Bearings:	1
Insulation Class:	H
Winding Pitch:	2/3
Winding Code	6P/6S
Wires:	4
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R120

* dependant on voltage code selected

Alternator Operating Data

Overspeed: rpm	2250
Voltage Regulation: (Steady state) %	+/- 1.0
Wave Form NEMA = TIF:	50
Wave Form IEC = THF: %	2
Total Harmonic content LL/LN: %	2
Radio Interference:	EN61000-6
Radiant Heat: 50 Hz kW (Btu/min)	7.6 (432)
Radiant Heat: 60 Hz kW (Btu/min)	0 0

Alternator Performance Data 50 Hz:

		415/240 V	400/230 V	380/220 V	
Voltage Code					
Motor Starting Capability*	kVA	130	122	111	144
Short Circuit Capacity**	%	270	270	270	270
Reactances	Xd	3.13	3.37	3.733	2.61
	X'd	0.126	0.136	0.151	0.105
	X''d	0.082	0.082	0.09	0.063

Alternator Performance Data 60 Hz

Voltage Code					
Motor Starting Capability*	kVA				
Short Circuit Capacity**	%	270	270	270	270
Reactances	Xd				
	X'd				
	X''d				

Reactances shown are applicable to prime ratings.

*Based on 30% voltage dip at 0.6 power factor.

** With optional independant excitation system (PMG / AUX winding)



Output Ratings 50 Hz

Voltage Code	kVA	Prime		Standby	
		kVA	kW	kVA	kW
415/240V	80	64	64	88	70.4
400/230V	80	64	64	88	70.4
380/220V	80	64	64	88	70.4
230/115V	80	64	64	88	70.4
220/127V	80	64	64	86	68.8
220/110V	80	64	64		
200/115V	80	64	64	88	70.4
240V					
230V					
220V					

Output Ratings 60 Hz

Voltage Code	kVA	Prime		Standby	
		kVA	kW	kVA	kW
480/277V					
440/254V					
416/240V					
400/230V					
380/220V					
240/139V					
240/120V					
230/115V					
220/127V					
220/110V					
208/120V					
240/120					
220/110					

Modular Acoustic Enclosures

24 – 220 kVA Range



www.FGWilson.com

The intelligent and striking design of the 24 – 220 kVA enclosure range meets the demands of diverse applications. Extremely durable, the enclosures are designed to resist corrosion and handling damage.

Developed through continuing research and development by our specialist engineers, all FG Wilson enclosures are weather resistant and incorporate internally mounted exhaust silencers. These enclosures reduce sound levels to comply with the stage 2 levels of the European Community Directive 2000/14/EC which became effective 3 January 2006.



Excellent Access for Maintenance

- » Side hinged doors on both sides of the enclosure incorporating lift-off hinges at 45 degrees
- » Radiator fill via removable, flush mounted rain cap fitted with compression seal
- » Lube oil drain valves / Coolant drain valves
- » Removable end panels allow access to radiator, exhaust outlet and alternator rear
- » Doors positioned for optimum access to frequently serviced items

Robust/Highly Corrosion Resistant Construction

- » Manufactured from galvanised steel
- » Advanced powder coating paint finish
- » Single piece main roof
- » Baseframe extends beyond enclosure protecting against handling damage
- » Minimal external fixings exposed to environment
- » Zinc plated fasteners
- » Corner posts and air handling units manufactured from high grade composite material



Transportability

- » Optional tested and certified lifting arch
- » Lifting and drag points on baseframe facilitating handling from both sides

Security and Safety

- » Secure, lockable doors prevent unauthorised access to control panel, fuel fill and battery
- » Emergency stop button mounted on exterior, convenient to control panel
- » Cooling fan and battery charging alternator fully guarded

Sound Pressure Levels (dBA) for CAE Enclosure

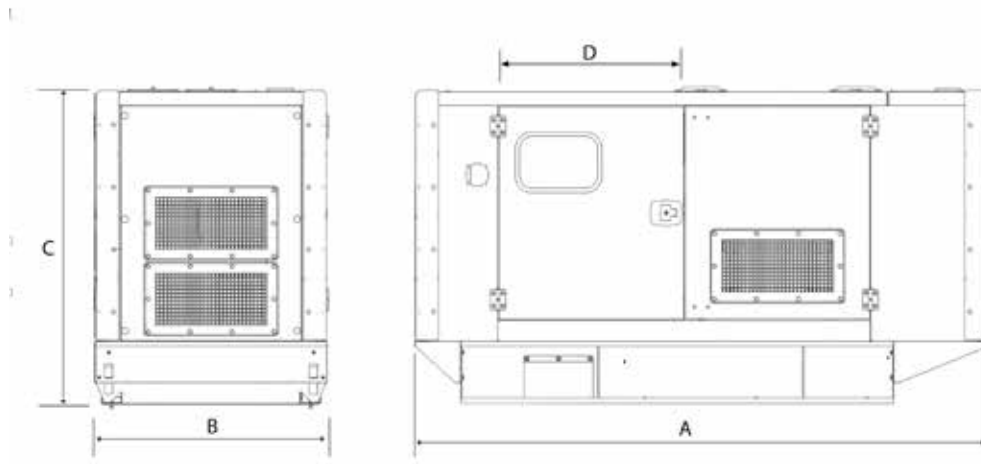
Generator Set Model		50 Hz							60 Hz					
		15 m (50 ft)		7 m (23 ft)		1 m (3 ft)			15 m (50 ft)		7 m (23 ft)		1 m (3 ft)	
		75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	
P33-3	Prime	93	61	62	67	68	76	77	61	63	67	69	77	79
	Standby	93	61	62	67	68	76	77	61	64	67	70	78	80
P33-6	Prime	94	59	61	65	67	75	77	-	-	-	-	-	-
	Standby	94	60	62	66	68	76	78	-	-	-	-	-	-
P50-3	Prime	93	57	58	63	64	74	74	60	61	66	67	76	77
	Standby	93	57	58	63	64	74	75	60	62	66	68	77	78
P50-4	Prime	90	56	56	62	62	74	75	-	-	-	-	-	-
	Standby	90	56	57	62	63	74	75	-	-	-	-	-	-
P55-3	Prime	93	57	58	63	64	74	75	60	62	66	68	77	78
	Standby	93	57	59	63	65	74	76	61	62	67	68	77	79
P55-4	Prime	91	56	57	62	63	74	74	-	-	-	-	-	-
	Standby	91	56	57	62	63	74	75	-	-	-	-	-	-
P65-5	Prime	93	58	60	64	66	74	76	61	63	67	69	77	79
	Standby	93	58	61	64	67	75	77	62	64	68	70	78	80
P65-6	Prime	91	58	59	64	65	75	76	-	-	-	-	-	-
	Standby	91	58	59	64	65	75	76	-	-	-	-	-	-
P88-3	Prime	92	58	59	64	65	76	76	61	61	67	67	78	79
	Standby	92	58	60	64	66	76	77	61	62	67	68	79	79
P88-6	Prime	96	61	61	67	67	79	79	-	-	-	-	-	-
	Standby	96	61	62	67	68	79	79	-	-	-	-	-	-
P110-3	Prime	96	62	63	68	69	80	81	65	65	71	71	84	84
	Standby	96	63	64	69	70	80	81	65	66	71	72	84	84
P110-6	Prime	94	61	62	67	68	79	79	-	-	-	-	-	-
	Standby	94	62	62	68	68	79	79	-	-	-	-	-	-
P150-5	Prime		60	61	66	67	76	76	61	61	67	67	77	77
	Standby		60	61	66	67	76	77	61	61	67	67	77	78
P165-5	Prime		59	59	65	65	74	74	61	62	67	68	77	77
	Standby		59	59	65	65	74	75	62	62	68	68	77	78
P165-6	Prime		58	59	64	65	73	74	-	-	-	-	-	-
	Standby		58	59	64	65	74	74	-	-	-	-	-	-
P175-2	Prime		58	59	64	65	74	74	-	-	-	-	-	-
	Standby		58	59	64	65	74	75	-	-	-	-	-	-
P200-3	Prime	97	62	62	68	68	78	78	65	65	71	71	81	81
	Standby	97	62	63	68	69	78	78	65	65	71	71	81	81
P200-6	Prime		59	60	65	66	74	75	-	-	-	-	-	-
	Standby		59	60	65	66	74	75	-	-	-	-	-	-
P220-3	Prime	97	62	64	68	70	78	79	-	-	-	-	-	-
	Standby	97	63	64	69	70	78	79	-	-	-	-	-	-

Levels in accordance with European Noise Directive (2000/14/EC).

Sound Pressure Levels (dBA) for CAE Enclosure

Generator Set Model		50 Hz						60 Hz						
		15 m (50 ft)		7 m (23 ft)		1 m (3 ft)		15 m (50 ft)		7 m (23 ft)		1 m (3 ft)		
		75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	
P26-3S	Prime	93	61	62	67	68	76	77	61	63	67	69	77	79
	Standby	93	61	62	67	68	76	77	61	64	67	70	78	80
P26-6S	Prime	94	59	61	65	67	75	77	-	-	-	-	-	-
	Standby	94	60	62	66	68	76	77	-	-	-	-	-	-
P40-3S	Prime	93	57	58	63	64	74	74	60	61	66	67	76	77
	Standby	93	57	58	63	64	74	75	60	62	66	68	77	78
P40-4S	Prime	90	56	56	62	62	74	75	-	-	-	-	-	-
	Standby	90	56	57	62	63	74	75	-	-	-	-	-	-
P50-5S	Prime	-	57	59	63	65	74	76	61	62	67	68	77	79
	Standby	-	58	60	64	66	75	77	61	63	67	69	77	79
P55-6S	Prime	-	58	59	64	65	75	76	-	-	-	-	-	-
	Standby	-	58	59	64	65	75	76	-	-	-	-	-	-
P90-3S	Prime	-	62	63	68	69	80	81	65	65	71	71	84	84
	Standby	-	63	64	69	70	80	81	65	66	71	72	84	84
P90-6S	Prime	-	61	62	67	68	79	79	-	-	-	-	-	-
	Standby	-	62	62	68	68	79	79	-	-	-	-	-	-

Levels in accordance with European Noise Directive (2000/14/EC).



Dimensions and Weights for CAE Enclosure

Generator Set Model	A: mm	B: mm	C: mm	D*: mm	Weight: kg FGL	Weight: kg Marelli	Weight: kg LS	Fuel Capacity: l
Three Phase Models								
P33-3	2120	970	1525	718	963	1002	991	161
P33-6	2120	970	1525	718	963	1002	991	161
P50-3	2300	1120	1525	795	1191	1237	1191	219
P50-4	2300	1120	1525	795	1188	1229	1183	219
P55-3	2300	1120	1525	795	1196	1237	1196	219
P55-4	2300	1120	1525	795	1236	1277	1236	219
P65-5	2300	1120	1525	795	1205	1279	1207	219
P65-6	2300	1120	1525	795	1245	1319	1247	219
P88-3	2300	1120	1525	795	1358	1416	1391	219
P88-6	2770	1120	1525	896	1496	1554	1529	250
P110-3	2770	1120	1525	896	1511	1615	1547	250
P110-6	2770	1120	1525	896	1640	1744	1637	250
P150-5	3520	1120	1815	1145	1888	1975	1918	349
P165-5	3520	1120	1815	1145	1981	2113	2016	349
P165-6	3520	1120	1815	1145	2411	2543	2446	349
P175-2	3520	1120	1815	1145	2446	2543	2584	349
P200-3	3520	1320	1815	1080	2172	2203	2198	418
P200-6	3520	1320	1815	1080	2217	2248	2227	418
P220-3	3520	1320	1815	1080	2157	2273	2238	418
Single Phase Models								
P26-3S	2120	970	1525	718	1000	-	991	161
P26-6S	2120	970	1525	718	1000	-	991	161
P40-3S	2300	1120	1525	795	1247	-	1247	219
P40-4S	2300	1120	1525	795	1199	-	1199	219
P50-5S	2300	1120	1525	795	1315	-	1315	219
P55-6S	2300	1120	1525	795	1355	-	1355	219
P90-3S	2770	1120	1525	899	1643	-	1613	250
P90-6S	2770	1120	1525	899	1643	-	1653	250

*Clearance required both sides; Weight with lube oil, no coolant, no fuel.

FG Wilson manufactures product 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.

FG Wilson is a trading name of Caterpillar (NI) Limited.

In line with our policy of continuous product development, we reserve the right to change specification without notice.

24-220 kVAEnclosure/0816/GB
