

Modular Acoustic Enclosures

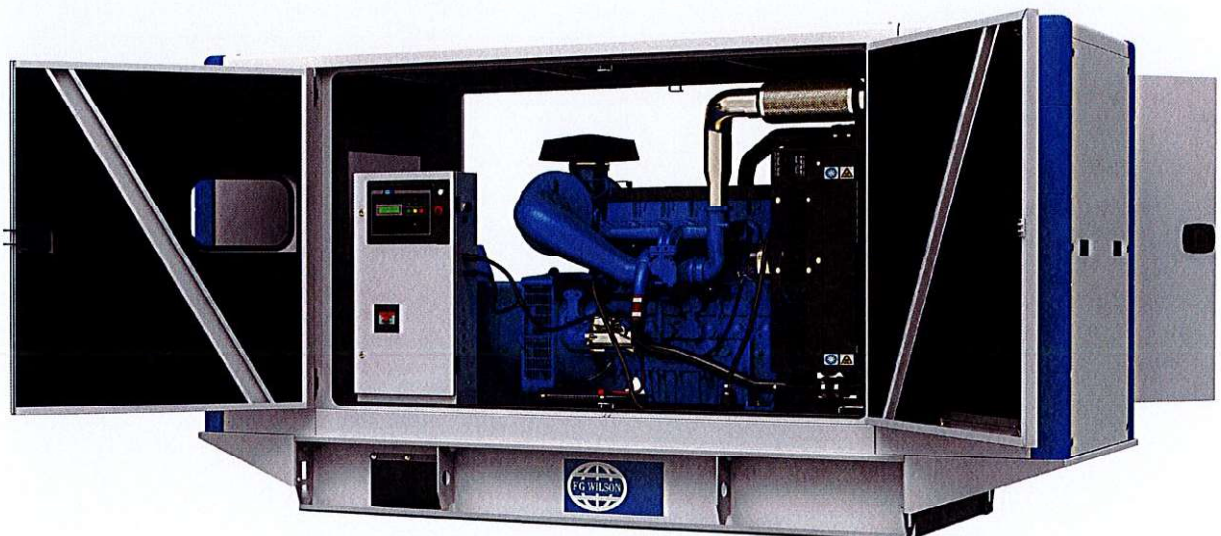
24 – 220 kVA Range



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

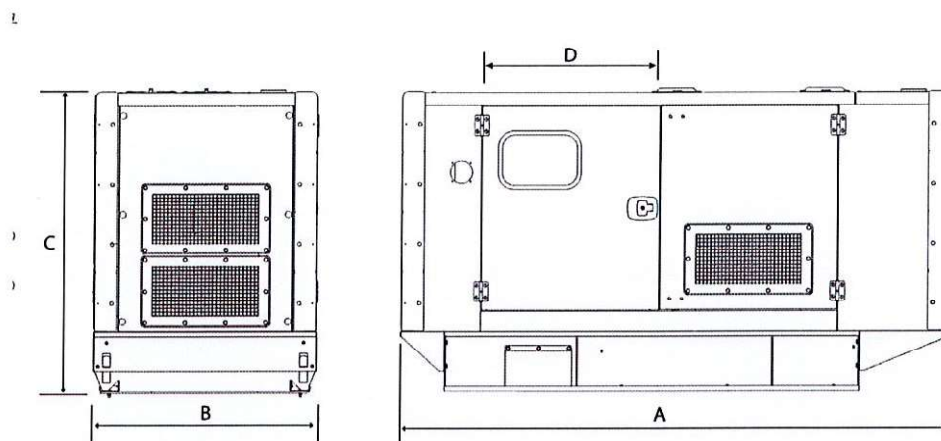
Generator Set Model		50 Hz							60 Hz					
		15 m (50 ft)		7 m (23 ft)		1 m (3 ft)		15 m (50 ft)		7 m (23 ft)		1 m (3 ft)		
		75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	
P33-3	Prime	93	61	62	67	68	76	77	61	63	67	69	77	79
	Standby	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	76	61	61	67	67	77	77
	Standby	60	61	66	67	76	77	77	61	61	67	67	77	78
P165-5	Prime	59	59	65	65	74	74	74	61	62	67	68	77	77
	Standby	59	59	65	65	74	75	75	62	62	68	68	77	78
P165-6	Prime	58	59	64	65	73	74	74	—	—	—	—	—	—
	Standby	58	59	64	65	74	74	74	—	—	—	—	—	—
P175-2	Prime	58	59	64	65	74	74	74	—	—	—	—	—	—
	Standby	58	59	64	65	74	75	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	75	—	—	—	—	—	—
	Standby	59	60	65	66	74	75	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	Fuel Capacity: l
Three Phase Models						
P33-3	2120	970	1525	718	1002	161
P33-6	2120	970	1525	718	1002	161
P50-3	2300	1120	1525	795	1237	219
P50-4	2300	1120	1525	795	1229	219
P55-3	2300	1120	1525	795	1237	219
P55-4	2300	1120	1525	795	1277	219
P65-5	2300	1120	1525	795	1279	219
P65-6	2300	1120	1525	795	1319	219
P88-3	2300	1120	1525	795	1416	219
P88-6	2770	1120	1525	896	1554	250
P110-3	2770	1120	1525	896	1615	250
P110-6	2770	1120	1525	896	1744	250
P150-5	3520	1010	1815	1145	1975	349
P165-5	3520	1120	1815	1145	2113	349
P165-6	3520	1010	1815	1145	2158	349
P175-2	3520	1010	1815	1145	2158	349
P200-3	3520	1320	1815	1080	2273	418
P200-6	3520	1320	1815	1080	2248	418
P220-3	3520	1320	1815	1080	2203	418
Single Phase Models						
P26-3S	2120	970	1525	718	991	161
P26-6S	2120	970	1525	718	991	161
P40-3S	2300	1120	1525	795	1247	219
P40-4S	2300	1120	1525	795	1199	219
P50-5S	2300	1120	1525	795	1340	219
P55-6S	2300	1120	1525	795	1355	219
P90-3S	2770	1120	1525	899	1613	250
P90-6S	2770	1120	1525	899	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/0815/GB



www.FGWilson.com

P50-3

Output Ratings

Voltage, Frequency	Prime	Standby
400V, 50 Hz	45.0 kVA / 36.0 kW	50.0 kVA / 40.0 kW
480V, 60 Hz	50.0 kVA / 40.0 kW	56.3 kVA / 45.0 kW

Ratings at 0.8 power factor.

Please refer to the output ratings technical data section for specific generator set outputs per voltage.

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.

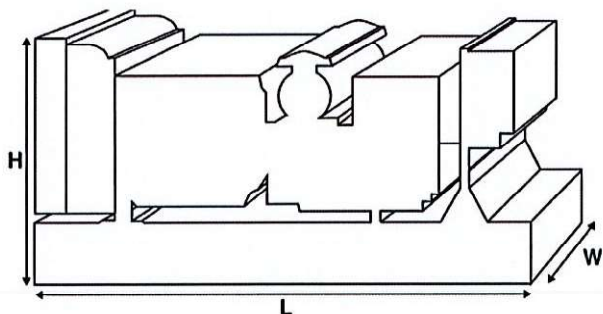


Image for illustration purposes only.

Ratings and Performance Data

Engine Make & Model:	Perkins® 1103A-33TG1	
Alternator manufactured for FG Wilson by:	Marelli	
Alternator Model:	MJB 200 SB4	
Control Panel:	DCP-10	
Base Frame:	Heavy Duty Fabricated Steel	
Circuit Breaker Type:	3 Pole MCB / 3 Pole MCCB	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	1500	1800
Fuel Tank Capacity: litres (US gal)	145 (38.3)	
Fuel Consumption: l/hr (US gal/hr)		
(100% Load)	- Prime	10.5 (2.8) 11.9 (3.1)
	- Standby	11.7 (3.1) 13.4 (3.5)

Available Options

FG Wilson offer a range of optional features to tailor our generator sets to meet your power needs. Options 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

Dimensions and Weights

Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)	Wet kg (lb)
1680 (66.1)	760 (29.9)	1336 (52.6)	797 (1757)	810 (1786)

Dry = With Lube Oil

Wet = With Lube Oil and Coolant

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

Engine Technical Data		
No. of Cylinders / Alignment:		3 / In Line
Cycle:		4 Stroke
Bore / Stroke: mm (in)		105.0 (4.1)/127.0 (5.0)
Induction:		Turbocharged
Cooling Method:		Water
Governing Type:		Mechanical
Governing Class:		ISO 8528 G2
Compression Ratio:		17.25:1
Displacement: l (cu. in)		3.3 (201.4)
Moment of Inertia: kg m² (lb/in²)		1.14 (3896)
Engine Electrical System:		
- Voltage / Ground		12/Negative
- Battery Charger Amps		65
Weight: kg (lb)	- Dry	420 (926)
	- Wet	438 (966)

Performance		50 Hz	60 Hz
Engine Speed: rpm		1500	1800
Gross Engine Power: kW (hp)			
- Prime		42.2 (57.0)	50.5 (68.0)
- Standby		46.5 (62.0)	55.6 (75.0)
BMEP: kPa (psi)			
- Prime		1023.0 (148.4)	1020.0 (148.0)
- Standby		1127.0 (163.5)	1124.0 (163.0)

Fuel System				
Fuel Filter Type:		Replaceable Element		
Recommended Fuel:		Class A2 Diesel or BSEN590		
Fuel Consumption: l/hr (US gal/hr)				
	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	11.7 (3.1)	10.5 (2.8)	7.8 (2.1)	5.6 (1.5)
60 Hz	13.4 (3.5)	11.9 (3.1)	9.1 (2.4)	6.7 (1.8)
	100%	75%	50%	
Standby	Load	Load	Load	
50 Hz	11.7 (3.1)	8.7 (2.3)	6.0 (1.6)	
60 Hz	13.4 (3.5)	10.1 (2.7)	7.2 (1.9)	

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

Air Systems		50 Hz	60 Hz
Air Filter Type:		Replaceable Element	
Combustion Air Flow: m³/min (cfm)			
- Prime	2.9 (102)	3.7 (131)	
- Standby	3.1 (109)	3.9 (138)	
Max. Combustion Air Intake Restriction: kPa (in H ₂ O)		8.0 (32.1)	8.0 (32.1)

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)	- Prime	26.1 (1484)	31.0 (1763)
	- Standby	30.0 (1706)	34.0 (1934)
Heat Radiation to Room: Heat radiated from engine and alternator			
kW (Btu/min)	- Prime	11.5 (654)	13.4 (762)
	- Standby	13.4 (762)	15.3 (870)
Radiator Fan Load: kW (hp)		0.5 (0.7)	0.9 (1.2)
Radiator Cooling Airflow: m³/min (cfm)		86.4 (3051)	105.6 (3729)
External Restriction to Cooling Airflow: Pa (in H₂O)		120 (0.5)	120 (0.5)

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:	
Total Oil Capacity: l (US gal)	
Oil Pan: l (US gal)	
Oil Type:	
Oil Cooling Method:	

Exhaust System		50 Hz	60 Hz
Maximum Allowable Back Pressure: kPa (in Hg)		10.0 (3.0)	15.0 (4.4)
Exhaust Gas Flow: m ³ /min (cfm)			
- Prime		7.0 (247)	8.8 (311)
- Standby		7.7 (272)	9.5 (335)
Exhaust Gas Temperature: °C (°F)			
- Prime		492 (918)	510 (950)
- Standby		537 (999)	551 (1024)

Alternator Physical Data	
Manufactured for FG Wilson by:	Marelli
Model:	MJB 200 SB4
No. of Bearings:	1
Insulation Class:	H
Winding Pitch Code:	2/3 - M0
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	Mark V

Alternator Operating Data	
Overspeed: rpm	2250
Voltage Regulation: (Steady state)	+/- 1.0%
Wave Form NEMA = TIF:	50
Wave Form IEC = THF:	2.0%
Total Harmonic content LL/LN:	2.0%
Radio Interference:	Suppression is in line with European Standard EN55011
Radiant Heat: kW (Btu/min)	
- 50 Hz	5.4 (307)
- 60 Hz	6.3 (358)

Alternator Performance Data:		50 Hz				60 Hz			
Data Item		415/240V	400/230V	380/220V	220/127V	480/277V	380/220V	240/120V	440/254V
			230/115V	220/110V		240/139V	220/110V	208/120V	220/127V
Motor Starting Capability* kVA		50	50	50	60	50	40	40	40
Short Circuit Capacity %		-	-	-	-	-	-	-	-
Reactances: Per Unit									
	Xd	3.170	3.410	3.780	2.820	3.160	3.790	4.200	3.750
	X'd	0.290	0.310	0.340	0.250	0.290	0.430	0.380	0.340
	X''d	0.122	0.131	0.145	0.108	0.121	0.183	0.161	0.144

Reactances shown are applicable to prime ratings.

*Based on 30% voltage dip at 0 power factor.

Output Ratings Technical Data 50 Hz				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
415/240V	45.0	36.0	50.0	40.0
400/230V	45.0	36.0	50.0	40.0
380/220V	45.0	36.0	50.0	40.0
230/115V	45.0	36.0	50.0	40.0
220/127V	45.0	36.0	50.0	40.0
220/110V	45.0	36.0	50.0	40.0
200/115V	45.0	36.0	50.0	40.0

Output Ratings Technical Data 60 Hz				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
480/277V	50.0	40.0	56.3	45.0
220/127V	50.0	40.0	56.3	45.0
380/220V	47.5	38.0	52.3	41.8
240/120V	50.0	40.0	56.3	45.0
440/254V	50.0	40.0	56.3	45.0
220/110V	47.5	38.0	52.3	41.8
208/120V	50.0	40.0	56.3	45.0
240/139V	50.0	40.0	56.3	45.0

General Information

Documentation

A full set of operation and maintenance manuals and circuit wiring diagrams.

Generator Set Standards

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

FG Wilson is a fully accredited ISO 9001 company.

Warranty

All prime equipment carries a one year manufacturer's warranty. Standby equipment, limited to 500 running hours per year, has a two year manufacturer's warranty. For details on warranty cover please contact your local Dealer, or visit our website: FGWilson.com.

Dealer contact details:

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