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# P110-6

Output Ratings		
Voltage, Frequency	Prime	Standby
400V, 50 Hz	100.0 kVA / 80.0 kW	110.0 kVA / 88.0 kW
480V, 60 Hz	- / -	- / -

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.

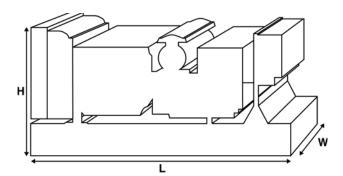




Image for illustration purposes only.

Ratings and Performance Data			
Engine Make & Model:		Perkins®1104D-6	44TAG2
Alternator manufactured for FG Wilson by:		Marelli	
Alternator Model:		MJB 225 MA4	
Control Panel:		PowerWizard 1.1	
Base Frame:	I	Heavy Duty Fabri	cated Steel
Circuit Breaker Type:		3 Pole MCCB	
Frequency:		50 Hz	60 Hz
Engine Speed: RPM		1500	-
Fuel Tank Capacity: litres (US gal)		218 (5	7.6)
Fuel Consumption: I/hr (US gal/hr)			
(100% Load)	- Prime	23.8 (6.3)	-
	Standby	25.5 (6.7)	-

#### **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 ar	nd Weights			
Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	<b>Dry</b> kg (lb)	<b>Wet</b> kg (lb)
1980 (78.0)	890 (35.0)	1435 (56.5)	1232 (2716)	1252 (2760)
Dry = With Lube Oil Wet		Wet = With Lube	e 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 Dat	·a		
No. of Cylinders / Alignment:		4 / In Line	
Cycle:		4 Stroke	
Bore / Stroke: mm (in)		105.0 (4.1)/127.0 (5.0)	
Induction:		Turbocharged Air To Air Charge Cooled	
Cooling Method:		Water	
Governing Type:		Electronic	
Governing Class:		ISO 8528 G2	
Compression Ratio:		16.2:1	
Displacement: I (cu. in)		4.4 (268.5)	
Moment of Inertia: kg	m² (lb/in²)	1.31 (4476)	
Engine Electrical Syst	em:		
- Voltage	e / Ground	12/Negative	
- Battery Cha	rger Amps	65	
Weight: kg (lb)	- Dry	465 (1025)	
	- Wet	474 (1045)	

Performance		50 Hz	60 Hz
Engine Speed: rpm	1	1500	-
Gross Engine Pow	/er: kW (hp)		
	- Prime	94.5 (127.0)	-
	- Standby	105.0 (141.0)	-
BMEP: kPa (psi)			
	- Prime	1719.0 (249.3)	-
	- Standby	1910.0 (277.0)	-

# Fuel System

Fuel Filter Type: Replaceable Element

**Recommended Fuel:** Class A2 Diesel or BSEN590

Fuel Consumption: I/hr (US gal/hr)

	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	25.5 (6.7)	23.8 (6.3)	18.9 (5.0)	12.9 (3.4)
60 Hz	-	-	-	-

	100%	75%	50%
Standby	Load	Load	Load
50 Hz	25.5 (6.7)	20.4 (5.4)	14.2 (3.8)
60 Hz	-	-	-

(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:		Paper El	ement
Combustion Air Flow: m³/min (c	fm)		
	- Prime	6.4 (227)	-
	- Standby	6.6 (231)	-
Max. Combustion Air Intake Restriction: $kPa$ (in $H_2O$ )		8.0 (32.1)	-

Cooling System	50 Hz	60 Hz
Cooling System Capacity: I (US gal)	17.0 (4.5)	-
Water Pump Type:	Centr	ifugal
Heat Rejected to Water & Lube Oil:		
kW (Btu/min) - Prime	e 57.4 (3264)	-
- Standb	y 63.1 (3588)	-
Heat Radiation to Room: Heat radiated from	m engine and alternator	
kW (Btu/min) - Prime	e 24.0 (1365)	
- Standb	y 27.1 (1541)	
Radiator Fan Load: kW (hp)	2.8 (3.8)	-
Radiator Cooling Airflow: m³/min (cfm)	201.0 (7098)	-
External Restriction to Cooling Airflow: Pa (in H <sub>2</sub> O)	125 (0.5)	-

Lubrication System	
Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity: I (US gal)	8.0 (2.1)
Oil Pan: I (US gal)	7.0 (1.8)
Oil Type:	API CC/SE 15W-40
Oil Cooling Method:	Water

Designed to operate in ambient conditions up to  $50^{\circ}$ C (122°F). Contact your local FG Wilson Dealer for power ratings at specific site conditions.

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industi	rial
Silencer Model & Quantity:	SD50	(1)
Pressure Drop Across Silencer System: kPa (in Hg)	2.10 (0.620)	-
Silencer Noise Reduction Level: dB	22	-
	15.0 (4.4)	-
Exhaust Gas Flow: m³/min (cfm)		
- Prime	16.0 (565)	-
- Standby	16.5 (584)	-
Exhaust Gas Temperature: °C (°F)		
- Prime	480 (896)	-
- Standby	506 (943)	-

Alternator Physical Data	
Manufactured for FG Wilson by:	Marelli
Model:	MJB 225 MA4
No. of Bearings:	1
Insulation Class:	Н
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 EN61000-6				
Radiant Heat: kW (Btu/min)					
- 50 Hz	8.7 (495)				
- 60 Hz	-				

Alternator Performance Data:	50 Hz		60 Hz		
Data Item	415/240V	400/230V	380/220V		
Motor Starting	189	168	168		
Capability* kVA	107	100	100		
Short Circuit					
Capacity %	-	-	-		
Reactances: Per Unit					
Xd	2.430	2.620	2.900		
X'd	0.190	0.200	0.220		
X"d	0.088	0.094	0.104		

Reactances shown are applicable to prime ratings. \*Based on 30% voltage dip at 0 power factor.

Voltage	Prime:		Standby:		
	kVA	kW	kVA	kW	
415/240V	100.0	80.0	110.0	88.0	
400/230V	100.0	80.0	110.0	88.0	
380/220V	100.0	80.0	110.0	88.0	

Output Ratings Technical Data 60 Hz						
Voltage	Prime:		Standby:			
	kVA	kW	kVA	kW		

# **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. EU stage IIIa emissions compliant. 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:

### FG Wilson manufactures product in the following locations:

Northern Ireland • Brazil • China • India • USA

**General Information** 

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.