

# P700-1



Image for illustration purposes only.

## Output Ratings

Generating Set Model	Prime	Standby
380-415V,50Hz	635.0 kVA / 508.0 kW	700.0 kVA / 560.0 kW
	/ - -	/ - -

Ratings at 0.8 power factor.

### Prime Rating

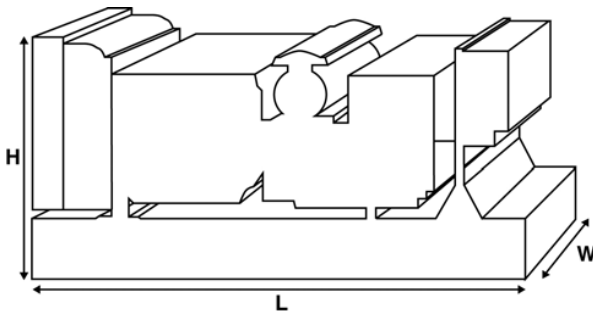
These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

### 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, EN590.



## Ratings and Performance Data

Engine Make & Model:	Perkins 2806A-E18TAG2	
Alternator manufactured for FG Wilson by:	Leroy Somer	
Alternator Model:	LL7024H	
Control Panel:	PowerWizard 1.1+	
Base Frame:	Heavy Duty Fabricated Steel	
Circuit Breaker Type:	3 Pole MCCB	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	1500	-
Fuel Tank Capacity: litres (US gal)	1132 (299.0)	
Fuel Consumption: l/hr (US gal/hr)		
(100% Load)	- Prime	125.6 (33.2) -
	- Standby	139.9 (37.0) -

## Available Options

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

- Upgrade to CE Certification
- A wide range of Sound Attenuated Enclosures
- A variety of generating 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](http://www.FGWilson.com)

## Dimensions and Weights

Length (L) mm (in)	Width (W) mm (in)	Height (H) mm (in)	Dry kg (lb)	Wet kg (lb)
3900 (153.5)	1461 (57.5)	2156 (84.9)	4264 (9400)	4332 (9550)
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. Generating set pictured may include optional accessories.

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Engine Technical Data		
No. of Cylinders / Alignment:	6 / In Line	
Cycle:	4 Stroke	
Bore / Stroke: mm (in)	145.0 (5.7)/183.0 (7.2)	
Induction:	Turbocharged Air To Air Charge Cooled	
Cooling Method:	Water	
Governing Type:	Electronic	
Governing Class:	ISO 8528 G2	
Compression Ratio:	14.5:1	
Displacement: l (cu. in)	18.1 (1104.5)	
Moment of Inertia: kg m <sup>2</sup> (lb/in <sup>2</sup> )	7.05 (24091)	
Engine Electrical System:		
- Voltage / Ground	24/Negative	
- Battery Charger Amps	70	
Weight: kg (lb)		
- Dry	2050 (4519)	
- Wet	2158 (4758)	

Performance	50 Hz	60 Hz
Engine Speed: rpm	1500	-
Gross Engine Power: kW (hp)		
- Prime	584.0 (783.0)	-
- Standby	628.0 (842.0)	-
BMEP: kPa (psi)		
- Prime	2577.0 (373.7)	-
- Standby	2771.0 (401.9)	-

Fuel System				
Fuel Filter Type:	Eco Replaceable Element			
Recommended Fuel:	Class A2 Diesel, BSEN590			
Fuel Consumption: l/hr (US gal/hr)				
	110%	100%	75%	50%
Prime	Load	Load	Load	Load
50 Hz	139.9 (37.0)	125.6 (33.2)	93.3 (24.6)	65.1 (17.2)
60 Hz	-	-	-	-
		100%	75%	50%
Standby		Load	Load	Load
50 Hz		139.9 (37.0)	102.8 (27.2)	70.6 (18.7)
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:	Non Canister	
Combustion Air Flow: m <sup>3</sup> /min (cfm)		
- Prime	37.0 (1307)	-
- Standby	40.0 (1413)	-
Max. Combustion Air Intake Restriction: kPa (in H <sub>2</sub> O)	6.4 (25.7)	-

Cooling System	50 Hz	60 Hz
Cooling System Capacity: l (US gal)	68.5 (18.1)	-
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil:		
kW (Btu/min)		
- Prime	202.0 (11488)	-
- Standby	219.0 (12454)	-
Heat Radiation to Room: Heat radiated from engine and alternator		
kW (Btu/min)		
- Prime	72.9 (4146)	-
- Standby	81.6 (4641)	-
Radiator Fan Load: kW (hp)	9.0 (12.1)	-
Radiator Cooling Airflow: m <sup>3</sup> /min (cfm)	373.2 (13179)	-
External Restriction to Cooling Airflow: Pa (in H <sub>2</sub> O)	125 (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:	Eco, Full Flow
Total Oil Capacity: l (US gal)	62.0 (16.4)
Oil Pan: l (US gal)	53.0 (14.0)
Oil Type:	API CH4 / CI4
Oil Cooling Method:	Water

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industrial	
Silencer Model & Quantity:	IND-Option (1)	
Pressure Drop Across Silencer System: kPa (in Hg)	0.25 (0.074)	-
Silencer Noise Reduction Level: dB	14	-
Maximum Allowable Back Pressure: kPa (in Hg)	6.9 (2.0)	-
Exhaust Gas Flow: m <sup>3</sup> /min (cfm)		
- Prime	106.0 (3743)	-
- Standby	114.0 (4026)	-
Exhaust Gas Temperature: °C (°F)		
- Prime	555 (1031)	-
- Standby	553 (1027)	-



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Alternator Physical Data	
Manufactured for FG Wilson by:	Leroy Somer
Model:	LL7024H
No. of Bearings:	1
Insulation Class:	H
Winding Pitch Code:	2/3 - 6S
Wires:	6
Ingress Protection Rating:	IP23
Excitation System:	AREP
AVR Model:	R450M

Alternator Operating Data	
Overspeed: rpm	2250
Voltage Regulation: (Steady state)	+/- 0.5%
Wave Form NEMA = TIF:	50
Wave Form IEC = THF:	2.0%
Total Harmonic content LL/LN:	4.0%
Radio Interference:	Suppression is in line with European Standard EN61000-6
Radiant Heat: kW (Btu/min)	
- 50 Hz	36.6 (2081)
- 60 Hz	-

Alternator Performance Data:	50 Hz			60 Hz	
	415/240V	400/230V	380/220V		
Data Item					
Motor Starting Capability* kVA	1694	1580	1434		
Short Circuit Capacity** %	300	300	300		
Reactances: Per Unit					
Xd	3.070	3.300	3.660		
X'd	0.160	0.170	0.190		
X''d	0.125	0.135	0.149		

Reactances shown are applicable to prime ratings.  
 \*Based on 30% voltage dip at 0.6 power factor and AREP excitation system.  
 \*\*With optional permanent magnet generator or AREP excitation.

Voltage Technical Data 50 Hz				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
415/240V	635.0	508.0	700.0	560.0
400/230V	635.0	508.0	700.0	560.0
380/220V	635.0	508.0	700.0	560.0

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



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**Documentation**

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

**Generating 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.



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