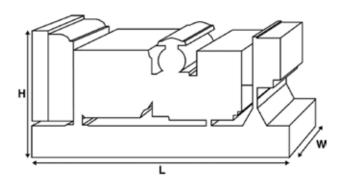


Optional Alternator

Output Ratings						
Voltage, Frequency		Prime	Standby			
400/230 V, 50 Hz	kVA kW	180 144	200 160			
	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	2510 (98.8)		
Width	mm	1010 (39.8)		
Height	mm	1640 (64.6)		
Weight (Dry)	kg	1576 (3474)		
Weight (Wet)	kg	1603 (3534)		

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 Performa	ince Data			
Engine Make		Perkins		
Engine Model:		1106D-E70TAG4		
Alternator Make		Leroy Somer		
Alternator Model:		LL5114D		
Control Panel:		FG100		
Base Frame:		Heavy Duty Fabricated S	Steel	
Circuit Breaker Type:		3 Pole MCCB		
Frequency:		50 HZ	60 HZ	
Engine Speed: RPM	rpm	1500		
Fuel Tank Capacity:	litres (US gal)	394 (104.08)		
Fuel Consumption Prime	litres (US gal)/hr	41.9 (11.1)		
Fuel Consumption Standby	litres (US gal)/hr	45.9 (12.1)		

Engine Technical Data

No. of Cylinders6AlignmentINLINECycle 4 STROKEBore m (n) $05 (4.1)$ Stroke m (n) $105 (4.1)$ Stroke m (n) $105 (3.3)$ Induction $- V$ $VATRE$ Cooling MethodVATRE $VATRE$ Governing Type $- V$ $S08 528 G2$ Governing Class $508 528 G2$ Compression Ratio $- V$ 7427.8 Displacement $Vatre7427.8Noment of Inertia:kg^m(b/n^2)153 (5228)Statey Charger Amps65- VatreStatey Charger Amps65- VatreSingine Power State788 (1737)- VatreStatey Charger Amps50 Sh260 H2Engine Power Staterm150Statey Charger Amps50 Sh260 H2Singine Power StateV(np)171.5 (230)Statey Charger AmpsV(np)180 (253)Engine Power StateV(np)195 (283.7)Statey Charger AmpsV(np)195 (283.7)Statey Charger AmpsV(np)$				
Cycle 4 STROKE Gore m (n) 105 (4.1) Stroke m (n) 135 (5.3) Induction TURBOCHARGED AIR TO AIR CHARGE COOLED Cooling Method VATER Governing Type ELECTRONIC Governing Type Sto 8528 G2 Compression Ratio 168:1 Displacement L (cu. in) 7 (427.8) Moment of Inertia: kg m² (b/in²) 1.53 (5228) Voltage 12 20 Ground I Negative Battery Charger Amps 65 20 Engine Weight Dry kg (b) 822 (1812) Fugine Speed rpm 50 Hz 60 Hz Engine Speed rpm 1500 20 Gross Engine Power Prime KW (hp) 171.5 (230) 60 Hz Batery Charger Amps KW (hp) 188.7 (253) 50 Hz Forgine Power Prime KW (hp) 188.7 (253) 60 Hz	No. of Cylinders		6	
Bore mm (n) 105 (4.1) Stroke mm (n) 135 (5.3) Induction ITRBOCHARGED AIR TO AIR CHARGE COOLED Cooling Method ITRBOCHARGED AIR TO AIR CHARGE COOLED Governing Type ELECTRONIC Governing Type IELECTRONIC Governing Class ISO 8528 G2 Compression Ratio ICI Displacement L (∪.in) Kg m² (lb/in²) 168:1 Noment of Inertia: Kg m² (lb/in²) Kg m² (lb/in²) 1.53 (5228) Voltage 12 Ground Image in the intertion of	Alignment		IN LINE	
stroke mm in → 135 (5.3) Induction IURBOCHARGED AIR TO AIR CHARGE COOLED Cooling Method WATER Governing Type ELECTRONIC Governing Class ISO 8528 G2 Compression Ratio IG.8:1 Displacement L(UIII) Moment of Inertia: kg m² (b/in²) Kottage 12 Ground Vertice Battery Charger Amps So 8128 (T37) Engine Weight Dry kg (b) Kg (b) 748 (1737) Engine Speed rpm Folgine Speed kW (hp) Gross Engine Power Pirime KW (hp) Gross Engine Power Pirime KW (hp) Ku (hp) 1956 (283.7)	Cycle		4 STROKE	
InductionTURBOCHARGED AIR TO AIR CHARGE COOLEDCooling MethodWATERGoverning TypeLectronicGoverning TypeELECTRONICGoverning ClassISO 8528 G2Compression Ratio16.8:1DisplacementL (cu. in)Moment of Inertia:kg m² (lb/in²)Noment of Inertia:kg m² (lb/in²)Voltage12Ground	Bore	mm (in)	105 (4.1)	
Cooling Method WATER Governing Type VATER Governing Type ELECTRONIC Governing Class ISO 8528 G2 Compression Ratio 16.8:1 Displacement L (∠ in) Moment of Inertia: kg m² (lb/in²) Voltage 12 Ground	Stroke	mm (in)	135 (5.3)	
Governing Type IEECTRONIC Governing Class 50 8528 G2 Compression Ratio 158.1 Displacement L (c. in) 7 (427.8) Moment of Inertia: kg m² (lb/in²) 1.53 (5228) Voltage 12 12 Ground Version Negative Battery Charger Amps 65 12 Engine Weight Dry kg (b) 788 (1737) Engine Weight Wet kg (b) 822 (1812) Tengine Perform= 50 Hz 60 Hz Go Negative Figine Speed rpm 1500 Gross Engine Power Star/v KW (hp) 171.5 (230) Gross Engine Power Star/v KW (hp) 188.7 (253) BMEP Prime kpa (psi) 1956 (283.7)	Induction		TURBOCHARGED AIR TO AIR CHAR	RGE COOLED
Governing Class ISO 8528 G2 Compression Ratio 16.8.1 Displacement L (c.u. in) 7 (427.8) Moment of Inertia: kg m² (lb/in²) 1.53 (5228) Voltage 12 12 Ground '	Cooling Method		WATER	
Compression Ratio IoS Displacement L (cu. in) 7 (427.8) Moment of Inertia: kg m² (lb/in²) 1.53 (5228) Voltage 12 Ground Vegative 12 Battery Charger Amps 65 Engine Weight Dry kg (b) 788 (1737) Engine Weight Wet kg (b) 822 (1812) So Hz Form So Hz Go Hz So Hz	Governing Type		ELECTRONIC	
Displacement L (cu in) 7 (427.8) Moment of Inertia: kg m² (lb/in²) 1.53 (5228) Voltage 12 Ground '	Governing Class		ISO 8528 G2	
Moment of Inertia: kg m² (lb/in²) 1.53 (5228) Voltage 12 Ground Negative Battery Charger Amps 65 Engine Weight Dry kg Iv 788 (1737) Engine Weight Wet kg Iv 822 (1812) For Har Go Har For Har Go Har Ingine Performative Kg (lb) For Har Go Har Gross Engine Power Prime KW (hp) BMEP Prime KW (hp) Sec (233.7)	Compression Ratio		16.8:1	
Network Sector And Sector A	Displacement	L (cu. in)	7 (427.8)	
Ground Image: Imag	Moment of Inertia:	kg m² (lb/in²)	1.53 (5228)	
Battery Charger Amps65Engine Weight Drykg ∪ D788 (1737)Engine Weight Wetkg ∪ D822 (1812) Engine Perform babaa 50 Hz 60 Hz Engine Speedrpmfrogs Engine Power PriwekW (hp)171.5 (230)Gross Engine Power StarlykW (hp)188.7 (253)BMEP PrimekPa (psi)1956 (283.7)	Voltage		12	
Engine Weight Dry kg (lb) 788 (1737) Engine Weight Wet kg (lb) 822 (1812) Engine Performator Data 50 Hz 60 Hz Engine Performator Data Ingine Speed rpm 1500 Gross Engine Power Prime kW (hp) 171.5 (230) Image: Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colspa="4"Colspa="4"Colspan="4"Colspan="4"Colspa="4"Colspa=	Ground		Negative	
Engine Weight Wet kg (lb) 822 (1812) Engine Performance Data 50 Hz 60 Hz Engine Speed rpm 1500 Gross Engine Power Prime kW (hp) 171.5 (230) Gross Engine Power Standby kW (hp) 188.7 (253) BMEP Prime kPa (psi) 1956 (283.7)	Battery Charger Amps		65	
Engine Performance Data 50 Hz 60 Hz Engine Speed rpm 1500 Gross Engine Power Prime kW (hp) 171.5 (230) Gross Engine Power Standby kW (hp) 188.7 (253) BMEP Prime kPa (psi) 1956 (283.7)	Engine Weight Dry	kg (lb)	788 (1737)	
Engine Speedrpm1500Gross Engine Power PrimekW (hp)171.5 (230)Gross Engine Power StandbykW (hp)188.7 (253)BMEP PrimekPa (psi)1956 (283.7)	Engine Weight Wet	kg (lb)	822 (1812)	
Engine Speedrpm1500Gross Engine Power PrimekW (hp)171.5 (230)Gross Engine Power StandbykW (hp)188.7 (253)BMEP PrimekPa (psi)1956 (283.7)				
Gross Engine Power PrimekW (hp)171.5 (230)Gross Engine Power StandbykW (hp)188.7 (253)BMEP PrimekPa (psi)1956 (283.7)	Engine Performan	ce Data	50 Hz	60 Hz
Gross Engine Power StandbykW (hp)188.7 (253)BMEP PrimekPa (psi)1956 (283.7)	Engine Speed	rpm	1500	
BMEP Prime kPa (psi) 1956 (283.7)	Gross Engine Power Prime	kW (hp)	171.5 (230)	
	Gross Engine Power Stand	by kW (hp)	188.7 (253)	
BMEP StandbykPa (psi)2153 (312.2)	BMEP Prime	kPa (psi)	1956 (283.7)	
	BMEP Standby	kPa (psi)	2153 (312.2)	



Fuel System					
Fuel Filter Type:			Replaceable Elei	ment	
Recommended Fuel:			Class A2 Diesel		
Fuel Consumption at		110 % Load	100 % Load	75 % Load	50 % Load
50 Hz Prime:	l/hr (US gal/hr)	45.9 (12.1)	41.9 (11.1)	32.9 (8.7)	23.9 (6.3)
50 Hz Standby	l/hr (US gal/hr)	-	45.9 (12.1)	35.9 (9.5)	25.9 (6.8)
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 0.83 and conforming to BS2869 classA2,EN590

Air System		50 Hz	60 Hz	
Air Filter Type:			Replaceable Element	
Combustion Air Flow Prime	m³/min (cfm)	12.8 (452)		
Combustion Air Flow Standby	m³/min (cfm)	13.2 (466)		
Max. Combustion Air Intake Restriction	(Pa	8 (32.1)		
Cooling System		50 Hz	60 Hz	
Cooling System Capacity	l (US gal)	27 (7.1)		
Water Pump Type:			Centrifugal	
Heat Rejected to Water & Lube Oil: Prime	kW (Btu/min)	72.7 (4134)		
Heat Rejected to Water & Lube Oil: Standby	kW (Btu/min)	80.8 (4595)		
Heat Radiation to Room*: Prime	kW (Btu/min)	42 (2388)		
Heat Radiation to Room*: Standby	kW (Btu/min)	45.4 (2582)		
Radiator Fan Load:	kW (hp)	6.3 (8.5)		
Radiator Cooling Airflow:	m³/min (cfm)	328 (11583)		
External Restriction to Cooling Airflow:	Pa (in H2O)	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)	17.5 (4.6)		
Oil Pan Capacity:	l (US gal)	15.5 (4.1)		
Oil Type:		API CH4 / Cl4 15W-40		
Oil Cooling Method:		WATER		

Exhaust System		50 Hz	60 Hz
Maximum Allowable Back Pressure:	kPa (in Hg)	15 (4.4)	
Exhaust Gas Flow: Prime	m³/min (cfm)	30.2 (1067)	
Exhaust Gas Flow: Standby	m³/min (cfm)	31.7 (1119)	
Exhaust Gas Temperature: Prime	°C (°F)	530 (986)	
Exhaust Gas Temperature: Standby	°C (°F)	530 (986)	



Alternator Physical	Data					
No. of Bearings:					1	
Insulation Class:					Н	
Winding Pitch:					2/3	
Winding Code					6	
Wires:					12	
Ingress Protection Rating:					IP23	
Excitation System:					SHUNT	
AVR Model:					R250	
dependant on voltage code selected	d					
Alternator Operatir	ng Data	1				
Overspeed: rpm					2250	
Voltage Regulation: (Steady	state)	%			+/- 0.5	
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)	Btu/min) 15.6 (887)			
Radiant Heat: 60 Hz		kW (Btu/min)				
Alternator Perform	ance D	ata 50 Hz:				
			415/240 V	400/230 V	380/220 V	
Voltage Code						
Motor Starting Capability*	kVA		428	402	369	
Short Circuit Capacity**	%		300	300	300	300
Reactances	Xd		3.827	4.119	4.564	
	X′d		0.292	0.315	0.349	
	X″d		0.157	0.157	0.174	
Alternator Perform	ance D	ata 60 Hz				
Voltage Code						
Motor Starting Capability*	kVA					
Short Circuit Capacity**	%	300	300	300	300	300
Reactances	Xd					
	X′d					

Reactances shown are applicable to prime ratings.

X″d

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

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



Output Ratings 50 Hz

	Prime			Standby
Voltage Code	kVA	kW	kVA	kW
415/240V	180	144	200	160
400/230V	180	144	200	160
380/220V	180	144	200	160
230/115V				
220/127V				
220/110V				
200/115V				
240V				
230V				
220V				

Output Ratings 60 Hz

	Prime			Standby
Voltage Code	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				





Dealer Contact Details

Documentation

Operation and maintenance manual including circuit wiring diagrams.

Generator Set Standards

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

Warranty

The warranty for this product in prime applications is 12 months from date of start-up, unlimited hours (8760). For standby applications the warranty period is 24 months from date of start-up, limited to 500 hours per year.

FG Wilson manufactures product in the following locations: Northern Ireland • Brazil • China • India 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.