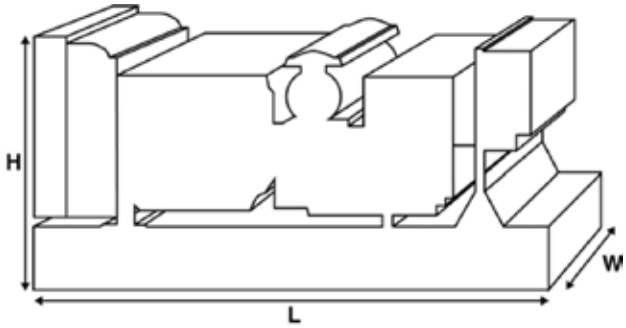
P165-5 - Data Centre Continuous

Output Ratings

Voltage, Frequency		DCC	Overload
400/230 V, 50 Hz	kVA	150	165
	kW	120	132

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	2450 (96.5)
Width	mm	1010 (39.8)
Height	mm	1544 (60.8)
Weight (Dry)	kg	1413 (3115)
Weight (Wet)	kg	1434 (3161)

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

Data Centre Continuous (DCC) Rating

These ratings are applicable for supplying continuous electrical power (with no restrictions on average variable load factor up to 100% constant 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. The DCC rating is also consistent with DCP rating defined in ISO8528-1 (2018)

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

P165-5 DCC

Ratings and Performance Data

Engine Make		Perkins
Engine Model:		1106A-70TAG2
Alternator Make		FG Wilson
Alternator Model:		FGL30100
Control Panel:		FG100
Base Frame:		Heavy Duty Fabricated Steel
Circuit Breaker Type:		3 Pole MCCB
Frequency:		50 HZ
Engine Speed: RPM	rpm	1500
Fuel Tank Capacity:	litres (US gal)	327 (86.38)
Fuel Consumption: DCC	litres (US gal)/hr	32.4 (8.6)
Fuel Consumption: Overload	litres (US gal)/hr	35.1 (9.3)

Engine Technical Data

No. of Cylinders		6
Alignment		IN LINE
Cycle		4 STROKE
Bore	mm (in)	105 (4.1)
Stroke	mm (in)	135 (5.3)
Induction		TURBOCHARGED AIR TO AIR CHARGE COOLED
Cooling Method		WATER
Governing Type		MECHANICAL
Governing Class		ISO 8528 G2
Compression Ratio		16.0:1
Displacement	L (cu. in)	7 (427.8)
Moment of Inertia:	kg m^2 (lb/in^2)	1.53 (5228)
Voltage		12
Ground		Negative
Battery Charger Amps		85
Engine Weight Dry	kg (lb)	788 (1737)
Engine Weight Wet	kg (lb)	822 (1812)

Engine Performance Data — 50 Hz

Engine Speed	rpm	1500
Gross Engine Power: DCC	kW (hp)	136 (182)
Gross Engine Power: Overload	kW (hp)	149.1 (200)
BMEP: DCC	kPa (psi)	1551 (225)
BMEP: Overload	kPa (psi)	1701 (246.7)

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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 DCC	l/hr (US gal/hr)	35.1 (9.3)	32.4 (8.6)	25 (6.6)	16.7 (4.4)
50 Hz Overload	l/hr (US gal/hr)	-	35.1 (9.3)	27.3 (7.2)	18.4 (4.9)

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869 classA2,EN590

Air System

		50 Hz
Air Filter Type:		Paper Element
Combustion Air Flow: DCC	m^3/min (cfm)	10 (351)
Combustion Air Flow: Overload	m^3/min (cfm)	10.6 (374)
Max. Combustion Air Intake Restriction	kPa	5 (20.1)

Cooling System

		50 Hz
Cooling System Capacity	l (US gal)	21 (5.5)
Water Pump Type:		Centrifugal
Heat Rejected to Water & Lube Oil: DCC	kW (Btu/min)	69.1 (3930)
Heat Rejected to Water & Lube Oil: Overload	kW (Btu/min)	75.7 (4305)
Heat Radiation to Room*: DCC	kW (Btu/min)	20.2 (1149)
Heat Radiation to Room*: Overload	kW (Btu/min)	22.3 (1268)
Radiator Fan Load:	kW (hp)	4.5 (6)
Radiator Cooling Airflow:	m^3/min (cfm)	259.2 (9154)
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)	16.5 (4.4)
Oil Pan Capacity:	l (US gal)	14.9 (3.9)
Oil Type:		API CH4 / CI4 15W-40
Oil Cooling Method:		WATER

Exhaust System

		50 Hz
Maximum Allowable Back Pressure:	kPa (in Hg)	6 (1.8)
Exhaust Gas Flow: DCC	m^3/min (cfm)	23.9 (843)
Exhaust Gas Flow: Overload	m^3/min (cfm)	25.3 (895)
Exhaust Gas Temperature: DCC	°C (°F)	471 (880)
Exhaust Gas Temperature: Overload	°C (°F)	471 (880)

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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)	%	+/- 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)	10.1 (574)

Alternator Performance Data 50 Hz:

Voltage Code		415/240 V	400/230 V 200/115 V	380/220 V	220/127 V
Motor Starting Capability*	kVA	233	219	199	259
Short Circuit Capacity**	%	270	270	270	270
Reactances	Xd	3.34	3.6	3.984	2.67
	X'd	0.158	0.17	0.189	0.127
	X"d	0.102	0.102	0.113	0.076

Reactances shown are applicable to DCC ratings.

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

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

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Output Ratings 50 Hz

	Prime		Standby	
Voltage Code	kVA	kW	kVA	kW
415/240V	150	120	165	132
400/230V	150	120	165	132
380/220V	150	120	165	132
230/115V	150	120	165	132
220/127V	150	120	165	132
220/110V	150	120	165	132
200/115V	150	120	165	132
240V				
230V				
220V				

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Dealer Contact Details

STUART GROUP LTD

01953 454540
enquiries@stuartgroup.co.uk
www.stuartgroup.co.uk
Stuart House, Hargham Road, Shropham, Norfolk, NR17 1DT

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

6.8 – 750 kVA electric power generation products in DCC applications the warranty period is 12 months from date of start-up, unlimited hours (8760) or 24 months from date of start-up, limited to 500 hours per year.

730 – 2500 kVA electric power generation products in DCC applications the warranty period is 12 months from date of start-up, unlimited hours (8760 hours) or 24 months from date of start-up, limited to 6000 hours or 36 months from date of start-up, limited to 500 hours per year.

Caterpillar (NI) Limited is the manufacturer of FG Wilson brand diesel generating sets, and our facilities manufacture products in the following locations:
Brazil • China • India
With headquarters in Northern Ireland, FG Wilson products are distributed through a Global Dealer Network.
To contact your local Sales Office, please visit the FG Wilson website at www.fgwilson.com.

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

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