

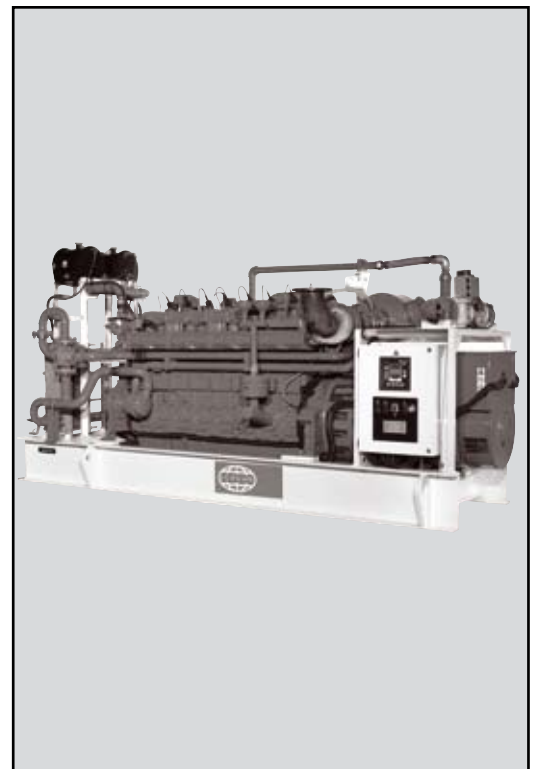
PG475B



Output Ratings	
Generating Set Model	PG475B
	Baseload*
380-415V, 50 Hz	475 kVA
	380 kW

* Refer to ratings definitions on page 4.
Ratings at 0.8 pf

Technical Data	
Engine Make & Model	Perkins 4008TES1
Alternator Model	LL6014J
Base Frame Type	Heavy Duty Fabricated Steel
Circuit Breaker Type/Rating	3 Pole MCCB
Frequency	50 Hz
Engine Speed	1500
Fuel Consumption m ³ /min (cfm)	2.12 (74.8)



Weights & Dimensions

Weights: kg (lbs)		Dimensions: mm (in)	
Wet (+ lube oil & coolant)	6125 (13506)	Length	4560 (179)
		Width	1675 (65.9)
		Height	2265 (89.1)



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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



Engine Technical Data

Physical Data					Air System		50 Hz	
Manufacturer:	Perkins				Air Filter Type:	Replaceable Element		
Model:	4008TESI				Combustion Air Flow:			
No. of Cylinders/Alignment:	8 in-line				m ³ /min (cfm)	35.2 (1243)		
Cycle:	4 Stroke				Max. Combustion Air Intake			
Induction:	Turbocharged				Restriction: kPa (in H ₂ O)	3.73 (15.0)		
Cooling Method:	Water				Radiator Cooling Airflow:			
Governing Type:	Electronic				m ³ /min (cfm)			
Class:	ISO8528 G2				External Restriction to			
Compression Ratio:	9.5:1				Cooling Airflow: Pa (in Wg)	190 (0.75)		
Displacement: L (cu.in):	30.56 (1399)				Cooling System			
Bore/Stroke: mm (in)	160 (6.3) / 190 (7.5)				50 Hz			
Moment of Inertia: kg m ² (lb/in ²)	7.13				Cooling System			
Engine Electrical System:					Capacity: L (US Gal)	90.0 (23.8)		
-Voltage/Ground	24/Negative				Water Pump Type:	Gear driven		
-Battery Charger Amps	32				Heat Rejected to Water & Lube Oil: kW (Btu/min)	327 (18560)		
Weight: kg (lbs) -Dry	na				Heat Radiation to Room: kW (Btu/min) -Standby:	27 (1536)		
-Wet					Heat Rejected to Charge Cooler kW (Btu/min)	85.0 (4825)		
Performance					50 Hz			
Engine Speed: rpm	1500				Radiator Fan Load: kW (hp)	23 (31.0)		
Gross Engine Power: kW (hp)	430 (576)				Lubrication System			
BMEP: kPa (psi)	1121 (162.4)				Oil Filter Type:	Spin-On, Full Flow		
					Total Oil Capacity L (US Gal):	166 (43.9)		
					Oil Pan L (US Gal):	154 (40.7)		
					Oil Type:			
					Cooling Method:	Water		
Fuel System					Exhaust System		50 Hz	
Fuel Filter Type:					Silencer Type:	Level 1		
Recommended Fuel:	Natural gas with lower calorific value of 34.71MJ/m ³ and minimum methane number of 70				Silencer Model & Qty:	SD150		
Fuel Consumption m ³ /min (cfm)					Pressure Drop Across Silencer System: kPa (in Hg)	0.13 (0.52)		
50 Hz	100% Load	75% Load	50% Load	25% Load	Silencer Noise Reduction Level: dBA	18.0		
	2.12 (74.9)	1.60 (56.5)	1.08 (38.1)	0.55 (19.4)	Max. Allowable Back Pressure: kPa (in Hg)	6.9 (27.7)		
					Exhaust Gas Flow: m ³ min (cfm)	97.5 (3442)		
					Exhaust Gas Temperature: °C (°F)	475 (887)		
					Heat Rejected to Exhaust System kW (Btu/min)	356 (20207)		

Alternator Performance Data

Data Item	50 Hz		
	415/240	400/230	380/220
Motor Starting Capability* kVA	1258	1175	1067
Short Circuit Capacity**%	300	300	300
Reactances: Per Unit			
X_d	2.9	3.13	3.46
X'_d	0.12	0.13	0.15
X''_d	0.099	0.106	0.118

Reactances shown are applicable to baseload ratings

* Based on 30% voltage dip. Improved motor starting capability is available with optional Permanent Magnet generator or AREP excitation

** With optional Permanent Magnet generator or AREP excitation.

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG Wilson	Overspeed: RPM	2250
Model:	LL6014J	Voltage Regulation (steady state)	±0.5%
No. of Bearings:	Single	Wave Form NEMA =TIF	<50
Insulation Class:	H	Wave Form IEC=THF	<2%
Winding Pitch (Code):	2/3 (No.6)	Total Harmonic Content LL/LN	<4%
Wires:	12	Radio Interference	Suppression is in line with British Standard BSEN50081 & BSEN50082
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	
Excitation System:	Shunt	-50 Hz:	25.4 (1444)
AVR Model:	R448		

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

Voltage	Model: PG475B Baseload	
	kVA	kW
415/240	475	380
400/230	475	380
380/220	475	380

Definitions

Baseload (Continuous) Rating

These ratings are applicable for supplying continuous electrical power for full load operations. There is no overload available. The ratings represent the engine performance in accordance with ISO3046 at reference conditions equivalent to those specified in ISO3046/1 based on the use of natural gas having a lower calorific value of 34.71MJ/m³

Standard Reference Conditions

Note: Standard reference conditions 27°C (80°F) Air Inlet Temp, 152.4m (500ft) A.S.L. 60% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load using gas fuel with a lower calorific value of 34.71MJ/m³

General Data

Documents

A full set of operation and maintenance manuals, circuit wiring diagrams, and commissioning/fault finding instruction leaflets.

Generating Set Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, VDE 0530, NEMA MG-1.22.

FG Wilson is a fully accredited ISO9001 company.

Warranty

All equipment carries full manufacturer's warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer, or visit our website, www.FGWilson.com

