

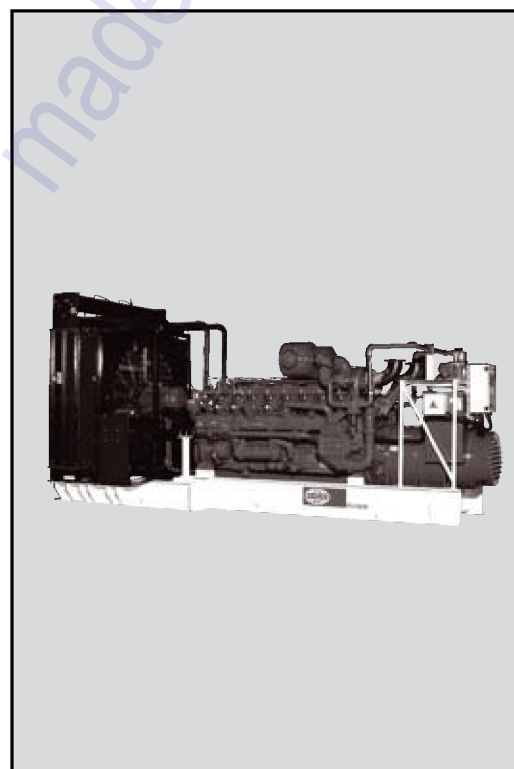
PG1080B2



Output Ratings	
Generating Set Model	PG1080B2 Baseload*
380-415V, 50 Hz	1080 kVA 864 kW

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

Technical Data	
Engine Make & Model	Perkins 4016-61TRS1
Alternator Model	LL8224H
Base Frame Type	Heavy Duty Fabricated Steel
Circuit Breaker Type/Rating	1600A ACB
Frequency	50 Hz
Engine Speed RPM	1500
Fuel Consumption m ³ /hr (cfm)	241.2 (8508)



Weights & Dimensions

Weight: kg (lb)		Dimensions: mm (in)	
Wet (+ lube oil & coolant)	13370 (29476)	Length	6340 (249.6)
		Width	2100 (82.7)
		Height	3370 (132.7)



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Engine Technical Data

Physical Data		Air System	
Manufacturer:	Perkins	Air Filter Type:	Replaceable Element
Model:	4016-61TRS1	Combustion Air Flow: m ³ /min (cfm)	69.1 (2440)
No. of Cylinders/Alignment:	16V	Max. Combustion Air Intake Restriction: kPa (in H ₂ O)	3.73 (15.0)
Cycle:	4 Stroke	Radiator Cooling Airflow: m ³ /min (cfm)	2005 (70813)
Induction:	TurboCharged	External Restriction to Cooling Airflow: Pa (in Wg)	294 (1.18)
Cooling Method:	Water	Cooling System	
Governing Type:	Electronic	Cooling System Capacity: l (US gal)	315 (83.2)
Governing Class:	ISO 8528 G3	Water Pump Type:	Gear Driven
Compression Ratio:	12:1	Heat Rejected to Water & Lube Oil: kW (Btu/min)	649 (36908)
Displacement: l (cu.in)	61.123 (3730)	Heat Radiation to Room: kW (Btu/min)	113 (6426)
Bore/Stroke: mm (in)	160 (6.3) / 190 (7.48)	Radiator Fan Load:	60 (80.4)
Moment of Inertia: kg m ² (lb/in ²)	8.65 (29558)	Lubrication System	
Engine Electrical System:		Oil Filter Type:	Spin-On, Full Flow
-Voltage/Ground	24/Insulated Return	Total Oil Capacity: l (US gal)	286 (75.6)
-Battery Charger Amps	28 Amps at 20°C	Oil Pan: l (US gal)	257 (67.9)
Weight: kg (lb) -Dry	5820 (12831)	Oil Type:	See Perkins Service Bulletin 48
-Wet	6158 (13576)	Cooling Method:	Water
Performance		Exhaust System	
Engine Speed: RPM	1500	Silencer Type	Optional
Gross Engine Power: kW (hp)	912 (1223)	Pressure Drop Across Silencer System: kPa (in Hg)	System Dependant
BMEP: kPa (psi)	1193 (173)	Max. Allowable Back Pressure: kPa (in Hg)	5.9 (1.74)
Fuel System		Exhaust Gas Flow: m ³ /min (cfm)	184 (6506)
Fuel Filter Type:	Non woven PP fabric: 50 micron	Exhaust Gas Temperature: °C (°F)	482 (900)
Recommended Fuel:	Natural gas with lower calorific value of 34.7 MJ/m ³ and minimum methane number of 75. (Alternative gas types can be used: contact Power Solutions.)	Heat Rejected to Exhaust System: kW (Btu/min)	661 (37590)
Fuel Consumption m ³ /hr (cfh)			
100% Load			
241.2 (8508)			
Fuel consumption varies widely within each gas type stated. This is because these gases are available (naturally or produced) with variances in their physical properties.			

Alternator Performance Data

Data Item	50 Hz		
	415/240	400/230	380/220
Motor Starting Capability* kVA	3088	2879	2609
Short Circuit Capacity**%	300	300	300
Reactances: Per Unit			
X_d	2.850	3.070	3.400
X'_d	0.197	0.213	0.235
X''_d	0.110	0.119	0.132

Reactances shown are applicable to baseload ratings

* Based on 30% voltage dip at 0.4 power factor.

** With optional Permanent Magnet generator or AREP excitation.

Alternator Technical Data

Physical Data		Operating Data	
Manufacturer:	FG Wilson	Overspeed: RPM	2250
Model:	LL8224H	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. 6S)	Total Harmonic Content LL/LN:	<3.5%
Wires:	6	Radio Interference:	Suppression is in line with European Standard EN61000
Ingress Protection Rating:	IP23	Radiant Heat: kW (Btu/min)	46.5 (2647)
Excitation System:	AREP / PMG		
AVR Model:	R449		

Technical Data

3 Phase Ratings and Performance at 50 Hz, 1500 RPM

Voltage	Model: PG1080B2 Baseload	
	kVA	kW
415/240	1080	864
400/230	1080	864
380/220	1080	864

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 ISO 3046 at reference conditions equivalent to those specified in ISO 3046/1 based on the use of natural gas having a lower calorific value of 34.71MJ/m³

Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328ft) A.S.L. 30% 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 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.

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

