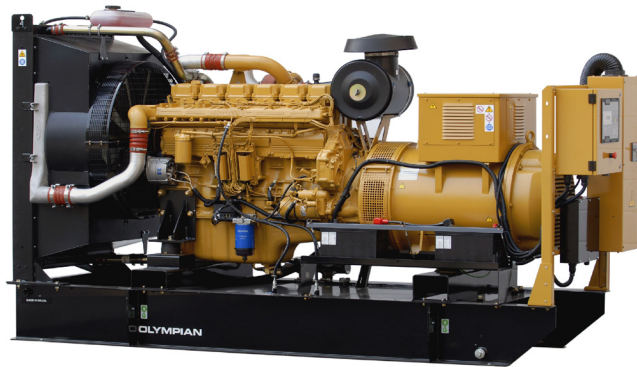


OLYMPIAN™



GES450-1

Diesel Generator Set
Exclusively from your Caterpillar® dealer

Output Ratings

Generating Set Model	Prime*	Standby*
440/254, 380/220 & 220/127, 60 Hz	410 kVA 328 kW	450 kVA 360 kW

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

Technical Data

Engine Make & Model	Scania DC12-60A	
Alternator Model	WEG - GTA311AIVI	
Base Frame Type	Heavy Duty Fabricated Steel	
Circuit Breaker Type/Rating	3 Pole MCCB	
Frequency	50 Hz	60 Hz
Engine Speed	-	1800
Fuel Tank Capacity: litres (US gal)	-	263 (69.4)
Fuel Consumption, Prime: l/hr (US gal/hr)	-	86.5 (22.5)
Fuel Consumption, Standby: l/hr (US gal/hr)	-	92.0 (24.3)

Engine Technical Data

Physical Data			
Manufacturer:	Scania		
Model:	DC12-60A		
No. of Cylinders/Alignment:	6 / In line		
Cycle:	4 Stroke		
Induction:	Turbo - Air to Air		
Cooling Method:	Water		
Governing Type:	Electronic		
Governing Class:	A1		
Compression Ratio:	16:1		
Displacement: l (cu.in)	11.7 (714)		
Bore/Stroke: mm (in)	127 (5.0) / 154 (6.1)		
Moment of Inertia: kg m ² (lb/in ²)	2.74 (9,364)		
Engine Electrical System:			
-Voltage/Ground:	24 / Negative		
-Battery Charger Amps:	65 Amp		
Weight: kg (lb)	-Dry:	980 (2160)	
	-Wet:	1028 (2268)	

Air System		50 Hz	60 Hz
Air Filter Type:	Paper Element		
Combustion Air Flow:			
m ³ /min (cfm)	-Prime:	-	24.7 (872)
	-Standby:	-	25.5 (900)
Max. Combustion Air Intake			
Restriction: kPa (in H ₂ O)	-	4.9 (19.7)	
Radiator Cooling			
Airflow: m ³ /min (cfm)	-	480 (16.951)	
External Restriction to			
Cooling Airflow: Pa (in H ₂ O)	-	196 (0.78)	

Cooling System		50 Hz	60 Hz
Cooling System			
Capacity: l (US gal)	-	63 (16.6)	
Water Pump Type:	Centrifugal		
Heat Rejected to Water & Lube Oil:			
kW (Btu/min)	-Prime:	-	147 (8.360)
	-Standby:	-	156 (8.872)
Heat Radiation to Room:			
kW (Btu/min)	-Prime:	-	32 (1.820)
	-Standby:	-	34 (1.934)
Radiator Fan Load: kW (hp)	-	11.0 (15.0)	
Cooling system designed to operate in ambient conditions up to 50° C (122° F). Contact your local OLYMPIAN dealer for power ratings at specific site conditions.			

Lubrication System	
Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity: l (US gal)	28.0 (7.4)
Oil Pan: l (US gal)	33.0 (8.7)
Oil Type:	API CCMCDS / ACEA E396
Cooling Method:	Water

Performance	50 Hz	60 Hz
Engine Speed: rpm	1500	1800
Gross Engine Power: kW (hp)		
-Prime:	N/A	384.0 (515.0)
-Standby:	N/A	406.0 (544.0)
BMEP: kPa (psi)		
-Prime:	N/A	2190.0 (318.0)
-Standby:	N/A	2314.0 (336.0)

Fuel System				
Fuel Filter Type:	Element			
Recommended Fuel:	Diesel			
Fuel Consumption: l/hr (US gal/hr)				
	110% Load	100% Load	75% Load	50% Load
50 Hz	-	-	-	-
60 Hz	92.0 (24.3)	86.5 (22.9)	64.5 (17.0)	44.2 (11.7)
50 Hz	-	-	-	-
60 Hz	-	92.0 (24.3)	67.9 (17.9)	46.5 (12.3)
(based on diesel fuel with a specific gravity of 0.84 and conforming to BS2869, Class A2)				

Exhaust System		50 Hz	60 Hz
Silencer Type:	Level 1		
Silencer Model & Qty:	SD125 (1)		
Pressure Drop Across			
Silencer System: kPa (in Hg)	-	0.20 (0.059)	
Silencer Noise Reduction			
Level: dB	-	10	
Max. Allowable Back			
Pressure: kPa (in Hg)	-	4.9 (1.44)	
Exhaust Gas Flow: m ³ /min (cfm)			
-Prime:	-	72.0 (2.543)	
-Standby:	-	75.0 (2.649)	
Exhaust Gas Temperature:			
°C (°F)	-Prime:	-	489 (912)
	-Standby:	-	502 (936)

Alternator Performance Data

Data Item	50 Hz				60 Hz				
					380/220V	440/254V 220/127V			
Motor Starting Capability* kVA	-	-	-	-	710	940		-	-
Short Circuit Capacity%	-	-	-	-	300	300		-	-
Reactances: Per Unit									
Xd	-	-	-	-	326	249		-	-
X'd	-	-	-	-	27.40	21.92		-	-
X''d	-	-	-	-	21.12	16.75		-	-

Reactances shown are applicable to prime ratings

* Based on 30% voltage dip at 0.4 power factor and auxiliary coil excitation system.

Alternator Technical Data

Physical Data	
Manufacturer:	WEG
Model:	GTA311 AIVI
No. of Bearings:	1
Insulation Class:	H
Winding Pitch:	2/3
Wires:	12
Ingress Protection Rating:	IP21
Excitation System:	BRUSHLESS
AVR Model:	GRT7-TH4E

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:	5.0%
Radio Interference:	Suppression is in line with European Standard EN61000-6
Radiant Heat: kW (Btu/min)	
-50 Hz	-
-60 Hz	45.5 (2.590)

Consult your Olympian representative for more information

