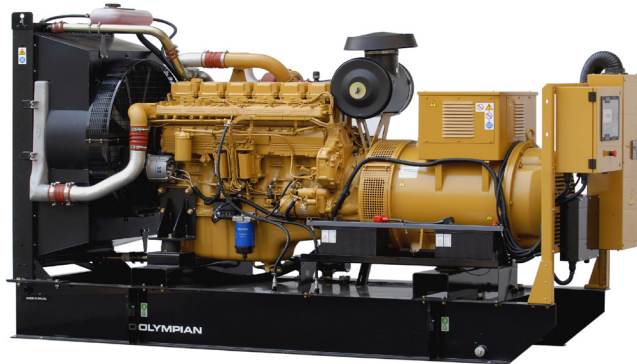


OLYMPIAN™



GES500-1

Diesel Generator Set
Exclusively from your Caterpillar® dealer

Output Ratings		
Generating Set Model	Prime*	Standby*
440/254 , 380/220 & 220/127, 60 Hz	455 kVA 364 kW	500 kVA 400 kW

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

Technical Data		
Engine Make & Model	Scania DC12-53A	
Alternator Model	WEG - GTA311 AIIH	
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)	-	91.5 (24.2)
Fuel Consumption, Standby: l/hr (US gal/hr)	-	103.0 (27.2)

Engine Technical Data

Physical Data			
Manufacturer:	Scania		
Model:	DC12-53A		
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:	-	28.3 (999)
	-Standby:	-	30.0 (1.059)
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:	-	151 (8.594)
	-Standby:	-	171 (9.732)
Heat Radiation to Room:			
kW (Btu/min)	-Prime:	-	34 (1.935)
	-Standby:	-	38 (2.163)
Radiator Fan Load: kW (hp)	-	19.0 (25.4)	
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:	-	421.0 (564.3)
-Standby:	-	445.0 (596.3)
BMEP: kPa (psi)		
-Prime:	-	2400.0 (348.0)
-Standby:	-	2536.0 (368.0)

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	103.1 (27.2)	91.5 (24.2)	68.2 (18.0)	46.7 (12.3)
50 Hz	-	-	-	-
60 Hz	-	103.1 (27.2)	76.0 (20.1)	52.3 (13.8)
(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:	-	69.0 (2.437)	
-Standby:	-	77.0 (2.719)	
Exhaust Gas Temperature:			
°C (°F)	-Prime:	-	459 (858)
	-Standby:	-	494 (921)

Alternator Performance Data

Data Item	50 Hz				60 Hz				
					380/220V	440/254V 220/127V			
Motor Starting Capability* kVA	-	-	-	-	822	1085			
Short Circuit Capacity%	-	-	-	-	300	300	-	-	
Reactances: Per Unit									
Xd	-	-	-	-	373	274	-	-	
X'd	-	-	-	-	29.13	22.60	-	-	
X''d	-	-	-	-	22.67	17.57	-	-	

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 AIIH
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	54.5 (3,102)

Consult your Olympian representative for more information

