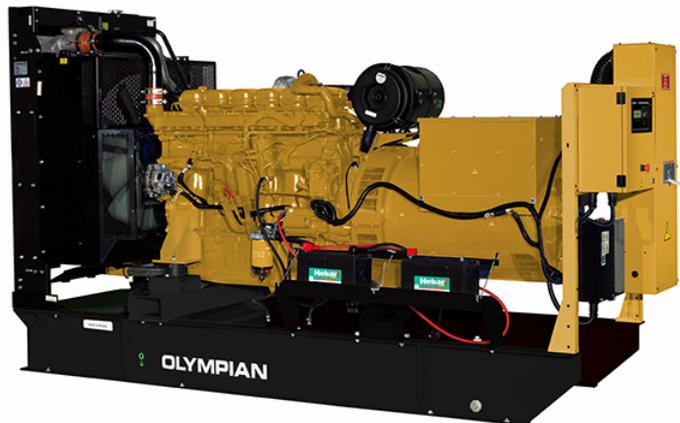


OLYMPIAN™



GES450-5

Diesel Generator Set
Exclusively from your Cat® dealer

Image shown may not reflect actual package

Output Ratings		
Generating Set Model - 3 Phase	Prime*	Standby*
-	-	-
440/254V, 60Hz	410.0 kVA 328.0 kW	450.0 kVA 360.0 kW

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

Technical Data		
Engine Make & Model:	Scania DC13072A	
Alternator Model:	GTA311A141	
Control Panel:	Optional	
Base Frame Type:	Heavy Duty Fabricated Steel	
Circuit Breaker Type:	3 Pole MCCB - Optional	
Frequency:	50 Hz	60 Hz
Engine Speed: RPM	-	1800
Fuel Tank Capacity: litres (US gal)	-	250 (66.0)
Fuel Consumption, Prime: l/hr (US gal/hr)	-	80.4 (21.2)
Fuel Consumption, Standby: l/hr (US gal/hr)	-	88.8 (23.5)

Engine Technical Data

Physical Data	
Manufacturer:	Scania
Model:	DC13072A
No. of Cylinders/Alignment:	6 / IN LINE
Cycle:	4 Stroke
Induction:	Turbocharged Air To Air Charge Cooled
Cooling Method:	Water
Governing Type:	Electronic
Governing Class:	ISO 8528 G1
Compression Ratio:	16.3:1
Displacement: l (cu.in)	12.7 (775.0)
Bore/Stroke: mm (in)	130.0 (5.1)/160.0 (6.3)
Moment of Inertia: kg m ² (lb. in ²)	3.11 (10627)
Engine Electrical System:	
-Voltage/Ground:	24/Negative
-Battery Charger Amps:	10
Weight: kg (lb) - Dry:	1084 (2390)
- Wet:	1100 (2425)

Air System	50 Hz	60 Hz
Air Filter Type:	Replaceable Element	
Combustion Air Flow:		
m ³ /min (cfm) -Standby:	-	28.2 (996)
-Prime:	-	27.4 (968)
Max. Combustion Air Intake		
Restriction: kPa (in H ₂ O)	-	4.9 (19.7)
Radiator Cooling Air Flow:		
m ³ /min (cfm)	-	560.7 (19801)
External Restriction to		
Cooling Air Flow: Pa (in H ₂ O)	-	130 (0.5)

Cooling System	50 Hz	60 Hz
Cooling System Capacity:		
l (US gal)	-	48.0 (12.7)
Water Pump Type:	Centrifugal	
Heat Rejected to Water & Lube Oil: kW (Btu/min)		
-Standby:	-	125.0 (7109)
-Prime:	-	115.0 (6540)
Heat Radiation to Room: Heat radiated from engine and alternator		
kW (Btu/min) -Standby:	-	50.5 (2872)
-Prime:	-	45.9 (2610)
Radiator Fan Load: kW (hp)	-	17.0 (22.8)
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):	45.0 (11.9)
Oil Pan l (US gal):	34.0 (9.0)
Oil Type:	ASTM 2896 TBN 12
Cooling Method:	Water

Performance	50 Hz	60 Hz
Engine Speed: RPM	-	1800
Gross Engine Power: kW (hp)		
-Standby:	-	406.0 (544.0)
-Prime:	-	372.0 (499.0)
BMEP: kPa (psi)		
-Standby:	-	2124.0 (308.1)
-Prime:	-	1946.0 (282.3)

Fuel System				
Fuel Filter Type:	Paper Filter Element			
Recommended Fuel:	Class A2 Diesel			
Fuel Consumption: l/hr (US gal/hr)				
	110% Load	100% Load	75% Load	50% Load
Prime				
50 Hz	-	-	-	-
60 Hz	88.8 (23.5)	80.4 (21.2)	60.5 (16.0)	43.5 (11.5)
Standby				
50 Hz	-	-	-	-
60 Hz	88.8 (23.5)	66.1 (17.5)	46.8 (12.4)	
(based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)				

Exhaust System	50 Hz	60 Hz
Silencer Type:	Industrial	
Silencer Model & Quantity:	IND - 1	
Pressure Drop Across		
Silencer System: kPa (in Hg)	-	0.34 (0.099)
Silencer Noise Reduction		
Level: dB	-	18.3
Max. Allowable Back		
Pressure: kPa (in. Hg)	-	10.0 (3.0)
Exhaust Gas Flow:		
m ³ /min (cfm) -Standby:	-	74.2 (2621)
-Prime:	-	67.3 (2375)
Exhaust Gas Temperature: °C (°F)		
-Standby:	-	456 (852)
-Prime:	-	426 (799)

Alternator Performance Data

Data Item	50 Hz				60 Hz				
						380/220V			440/254V 220/127V
Motor Starting Capability* kVA	-	-	-	-	-	1250	-	-	1800
Short Circuit Capacity** %	-	-	-	-	-	300	-	-	300
Reactances: Per Unit									
Xd	-	-	-	-	-	2.610	-	-	1.870
X'd	-	-	-	-	-	0.160	-	-	0.110
X''d	-	-	-	-	-	0.122	-	-	0.092

Reactances shown are applicable to prime ratings.

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

Alternator Technical Data

Physical Data	
Manufactured for Olympian by:	OLYMPIAN
Model:	GTA311AI41
No. of Bearings:	1
Insulation Class:	H
Winding Pitch - Code:	2/3 - A
Wires:	12
Ingress Protection Rating:	IP21
Excitation System:	AUX COIL
AVR Model:	GRT7-TH4E

Operating Data	
Overspeed: RPM	2160
Voltage Regulation: (steady state)	+/- 0.5%
Wave Form NEMA = TIF:	50
Wave Form IEC = THF:	5.0%
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:	18.5 (1052)

