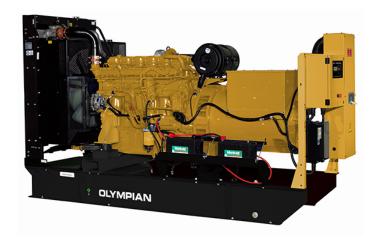
# **OLYMPIAN**<sup>™</sup>



**GES450-5** 

Diesel Generator Set Exclusively from your  $\operatorname{Cat}^{\scriptsize{\textcircled{\scriptsize{\$}}}}$  dealer

Image shown may not reflect actual package

Output Ratings				
Generating Set Model - 3 Phase	Prime*	Standby*		
-	-	- -		
440/254V, 60Hz	410.0 kVA	450.0 kVA		
770/207V, 00112	328.0 kW	360.0 kW		

<sup>\*</sup> Refer to ratings definitions on page 4. Ratings at 0.8 power factor.

Technical Data					
Engine Make & Model:	Scania DC13072A				
Alternator Model:	GTA311AI41				
Control Panel:	Optional				
Base Frame Type:	Heavy Duty Fabricated Steel	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: I/hr (US gal/hr)	-	80.4 (21.2)			
Fuel Consumption, Standby: I/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: I (cu.in)	12.7 (775.0)
Bore/Stroke: mm (in)	130.0 (5.1)/160.0 (6.3)
Moment of Inertia: kg m² (lb. in²)	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:		Replace	able Element
Combustion Air Flo	w:		
m³/min (cfm)	-Standby:	-	28.2 (996)
	-Prime:	-	27.4 (968)
Max. Combustion	Air Intake		
Restriction: kPa (i	n H <sub>2</sub> O)	-	4.9 (19.7)
Radiator Cooling A	ir Flow:		
m³/min (cfm)		-	560.7 (19801)
<b>External Restriction</b>	ı to		
Cooling Air Flow:	Pa (in H <sub>2</sub> O)	-	130 (0.5)

Cooling System	n	50 Hz	60 Hz
Cooling System Ca	apacity:		
l (US gal)		-	48.0 (12.7)
Water Pump Type:		Cent	trifugal
Heat Rejected to V	Vater &		
Lube Oil: kW (Bti	u/min)		
	-Standby:	-	125.0 (7109)
	-Prime:	-	115.0 (6540)
Heat Radiation to	Room: Heat radiated	from engine and a	Iternator
kW (Btu/min)	-Standby:		50.5 (2872)
	-Prime:		45.9 (2610)
Radiator Fan Load	: kW (hp)	-	17.0 (22.8)
Cooling system desig (122°F). Contact you specific site condition	ur local Olympian™		

Spin-On, Full Flow
45.0 (11.9)
34.0 (9.0)
ASTM 2896 TBN 12
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)
<b>BMEP</b> : kPa (psi)		
-Standby:	-	2124.0 (308.1)
-Prime:	-	1946.0 (282.3)

Fuel S	ystem					
Recomr	ter Type: mended Fuel: nsumption: I/hi	0.000 / 12 2.000.				
	110% Load	100% 75% 50% Load Load 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 Syster	n	50 Hz	60 Hz
Silencer Type:	Silencer Type:		ustrial
Silencer Model & C	Quantity:	INI	O - 1
Pressure Drop Acro	oss		
Silencer System:	kPa (in Hg)	-	0.34 (0.099)
Silencer Noise Red	uction		
Level: dB		-	18.3
Max. Allowable Ba	ck		
Pressure: kPa (in.	Hg)	-	10.0 (3.0)
Exhaust Gas Flow:			
m³/min (cfm)	-Standby:	-	74.2 (2621)
	-Prime:	-	67.3 (2375)
Exhaust Gas Temp	Exhaust Gas Temperature: °C (°F)		
	-Standby:		456 (852)
	-Prime:		426 (799)

## **Alternator Performance Data**

		50	Hz				60 Hz		
Data Item						380/220V			440/254V 220/127V
Motor Starting Capability* kVA	-	1	1	1	-	1250	-	1	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:	н
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%		5.0%			
Radio Interference: Supression is in line with European Standard EN61000-6					
Radiant Heat: kW (B	Radiant Heat: kW (Btu/min)				
-50 Hz:		-			
-60 Hz:		18.5 (1052)			

#### **Technical Data**

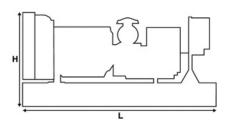
Voltage 50 Hz	Prime		Standby	
	kVA	kW	kVA	kW

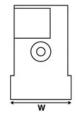
Voltage 60 Hz	Prime		Standby	
	kVA	kW	kVA	kW
220/127V	410.0	328.0	450.0	360.0
380/220V	410.0	328.0	450.0	360.0
440/254V	410.0	328.0	450.0	360.0

#### Weights & Dimensions

Weights: kg (lb)		
Net (+ lube oil)	2919 (6435)	
Wet (+ lube oil & coolant)	2953 (6510)	
Fuel, lube oil & coolant	3164 (6975)	

Dimensions: mm (in)		
Length	3480 (137.0)	
Width	1120 (44.1)	
Height	2075 (81.7)	





**Note:** General configuration not to be used for installation. See general dimension drawings for detail.

#### **Definitions**

#### Standby Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

#### **Prime Rating**

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

#### **Standard Reference Conditions**

Note: Standard reference conditions 25°C (77°F) air inlet temp, 100m (328ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

### **General Data**

#### **Documents**

 $\boldsymbol{\mathsf{A}}$  full set of operation and maintenance manuals and circuit wiring diagrams.

#### **Quality Standards**

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

#### Warranty

All prime equipment carries a one year manufacturer's warranty. Standby equipment, limited to 500 running hours per year, has a two year manufacturer's warranty. For details on warranty cover please contact your local Dealer, or visit our website: www.OlympianPower.com.

www.OlympianPower.com