



KIRLOSKAR DIESEL GENERATING SETS

KG45A / KG45AS

Diesel Generating Set Output Ratings			
Model	Prime Rating at 0.8 pf (lag)	Standby Rating at 0.8 pf (lag)	Phase / Volts / Hz
KG45A (OPEN)	45.0 kVA 36.0kW	50.0 kVA 40.0 kW	3 Phase / 415 V / 50 Hz
KG45AS (SAE)			

- SAE – Sound Attenuated Enclosure
- Ratings are according to ISO 8528; refer to ratings definition on page 2.
- TBA - To Be Announced



Note: Above picture shown for illustrative purpose only, actual product may be different

Features

- Extremely reliable.
- Lower operating cost.
- Easy maintenance – higher uptime.
- Sound attenuated enclosure (canopy) is fully integrated and designed for all weather conditions (weather proof).
- Best in class Sound attenuation – 75 dB(A) at one meter as per ISO 8528
- State of the art generating set control system with high degree of accuracy and reliability. Services etc.
- Superior design standards that minimize power deration even at high ambient temperatures.
- Efficient and prompt after sales service available.
- Winner of the frost & Sullivan Voice of Customer Award in the “Best Bang for Buck” category in the Indian Generating sets Market.



Ratings Definition:

Standby Ratings:

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 commercial 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.

Continuous Rating:

These ratings are applicable for supplying power continuously to a constant load upto the full output rating for unlimited hours. No sustained overload capability is available for this rating.

GENERATING SET SPECIFICATIONS	
Model - Open Type	KG45A
Model - SAE Type	KG45AS
Frequency (Hz)	50
Power Factor	0.8
Phase	Three phase
Line Voltage (Volts)	415
Phase Voltage (Volts)	240
Fuel Tank Capacity (Liters)	Open - TBA
	SAE – 100
Fuel consumption at 100% load (lit/hr) +5% tolerance	11.16
Fuel consumption at 75% load (lit/hr) +5% tolerance	8.40
Sound level at 1 m for Silent Generating set dB(A)	75
Overall dimensions (cms)	Open - TBA
	SAE - 245x120x235
Weight (kgs)	Open Type - TBA
	SAE Type - 1280

CONTROL SYSTEM	
	
Controller Make	Deepsea
Controller Model	DSE 6122
Digital display instrumentation	<ul style="list-style-type: none"> ✔ Generator Voltage ✔ Generator Amps ✔ Generator Frequency ✔ Mains Voltage ✔ Battery Voltage ✔ Engine hours Run ✔ Oil Pressure Gauge ✔ Engine Temperature Gauge ✔ kWh meter ✔ Fuel Level
Shutdowns/Safeties	<ul style="list-style-type: none"> ✔ Fail to Stop ✔ Low Oil pressure ✔ High Engine Temperature ✔ Under/Over-speed ✔ Under/Over voltage ✔ Emergency Stop ✔ Failed to reach loading voltage ✔ Failed to reach loading frequency ✔ Charge Fail ✔ Over Current Low DC Voltage
Automatic Starting & AMF facility	Available

Engine Technical Data

Physical Data	
Engine Make	Kirloskar
Engine Model	HA 494 TC
Number of cylinders	4
Configuration	Inline
Type	Four stroke
Bore x Stroke (mm)	100 x 120
Displacement (cc)	3770
Gross Prime Power KW (hp) at 1500 rpm as per ISO 3046	41.2 (56.0)
Cooling	Air Cooled
Aspiration	Turbo Charged
Compression Ratio	17 : 1
Starting Arrangement	12V Electric

Fuel System	
Type of fuel filter	Two stage spin on type
Governor Type	Mechanical
Class of Governing	ISO 3046 Class A1 & ISO 8528-5, Class G2
Fuel pump type	Inline
Fuel pump make	MICO - BOSCH
Recommended Fuel	Class A2, High speed diesel
Fuel consumption at 100% load (lit/hr)	11.16
Fuel consumption at 75% load (lit/hr)	8.40
Fuel consumption readings are based on diesel fuel with a specific gravity of 0.85 and conforming to BS 2869, Class A2 with +5% tolerance)	

Lubrication System	
Type of lube oil filter	Full flow spin on type
Oil to be used	Multi grade 15W40
Oil pump type	Through G-rotor gear pump
Lub oil sump capacity (lit)	12.5
Lube oil consumption	Less than 0.7% of fuel consumption

Electrical System	
Starting Arrangement	12V Electric
Starter	12V Electric
Starter Battery Rating	120
Battery charging alternator	Engine mounted 12V battery charger
Battery charger amps	35

Alternator Technical Data

Physical Data	
Manufacturer	Stamford
Model	UCI 224 D
Number of bearings	1
Insulation class	H
Winding pitch	2/3
Wires	12
Ingress Protection Rating	IP 23
AVR Model	SX 460

Operating Data	
Over speed (RPM)	2250
Excitation	Self excited
Efficiency (%)	88.5
Total harmonic distortion at full load AC waveform	Less than 5%
Voltage Regulation (%)	± 1.0
Reactance per unit (Xd)	1.95
Reactance per unit (X'd)	0.15
Reactance per unit (X''d)	0.10

Sound Attenuated Enclosure (Canopy) General Data

Sound Level	75 dB(A) at 1 meter as per ISO 8528
Construction	<ul style="list-style-type: none"> ✔ Fully Integrated, metal construction for ALL WEATHER USE (weather proof). ✔ Black zinc die cast, Aluminium hinges or Stainless steel hinges tested to withstand corrosive environment conditions. ✔ Fuel filling spout with lock. ✔ Emergency stop button on canopy exterior. ✔ Provision of glass window for viewing control panel ✔ Provision for lifting canopy
Maintenance	Easy access through lockable doors for operation/maintenance and repair works (including access for radiator service)
Protection Standard	IP 23 Standard

Documents	<ul style="list-style-type: none"> ✔ A full set of Illustrated spare parts catalogue ✔ Operation & Maintenance manual ✔ Circuit Diagrams
Quality Standards	ISO 8528, ISO 3046, IS 100002, BS5514, DIN 6271, ISO 9001, ISO 14001

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