

*Celebrating*  
**30000**  
**HHP GENSETS**



# EFFICIENCY HAS A NEW NAME

# KOEL GREEN

**EFFICIENT**  
**PRODUCTS**



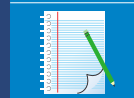
**EFFICIENT**  
**SERVICE**



**EFFICIENT**  
**DELIVERIES**



**EFFICIENT**  
**SOLUTIONS**



**EFFICIENT**  
**NETWORK**



**EFFICIENT**  
**24X7 CARE**



- INDIA'S **#1** GENSET BRAND
- 15 - 5200 kVA



# 320 - 1010 kVA

Remove Watermark Now

Prime Rating at rated rpm (as per ISO8528 ) <sup>1</sup>	kVA	320 HD	380 HD	400 HD	500 HD	600 HD	625 HD	750 HD	900 HD	1010 HD
	kW	256	304	320	400	480	500	600	720	808
Genset Model		KG1-320WS	KG1-380WS	KG1-400WS	KG1-500WS	KG1-600WS	KG1-625WS	KG1-750WS	KG1-900WS	KG1-1010WS
Frequency	Hz	50	50	50	50	50	50	50	50	50
Power factor	lagging	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Voltage (with Three Phase Supply )	V	415 3Ø	415 3Ø	415 3Ø	415 3Ø	415 3Ø	415 3Ø	415 3Ø	415 3Ø	415 3Ø
Governing class (As per ISO 8528 Part-V)		G3	G3	G3	G3	G3	G3	G3	G3	G3
Noise level	dBA	< 75	< 75	< 75	< 75	< 75	< 75	< 75	< 75	NA
Fuel Consumption*	At 100 % Load	Ltrs/hr	69	83.3	86.9	107.5	125.9	130.5	154	197
	At 75 % Load		52.5	61.2	65.1	81.9	94.2	98.6	126.4	163
	At 50 % Load		37.6	44.1	46	57.1	63.8	66.2	89.7	120
Fuel tank capacity	Ltrs	850	850	850	990	990	990	990	990	990
Weight of genset with-canopy (approx.) <sup>^</sup>	Dry	Kg	5910	6000	6050	7200	7700	7800	8300	13600
Overall dimensions of genset	Length	mm	5180	5446	5650	5650	6560	6560	6800	8000
	Width	mm	2000	2000	2000	2000	2000	2000	2300	2300
	Height	mm	2408	2408	2408	2558	2710	2710	2713	2713
Electrical Battery starting voltage	Volts-DC	24	24	24	24	24	24	24	24	24

ENGINE										
Engine Model		DV8TA G1	DV8TA G2	DV8TA G3	DV10TA G1	DV12TA G1	DV12TA G2	DV12ETA G11	DV16ETA G2	DV16ETA G1
Rated output (Prime Continuous rating as per ISO 3046)	kW	294	346	360	447	532	552	662	799	889
	HP	400	470	490	608	723	750	900	1086	1210
No. of cylinder	Number	8	8	8	10	12	12	12	16	16
Cubic capacity <sup>2</sup>	Ltrs	15.92	15.92	15.92	19.9	23.88	23.88	23.88	31.86	31.86
Bore x Stroke	mm	130 x 150	130 x 150	130 x 150	130 x 150	130 x 150	130 x 150	130 x 150	130 x 150	130 x 150
Rated Speed	RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500
Aspiration	NA/TC/TA	TA	TA	TA	TA	TA	TA	TA	TA	TA
Lube Oil change period	hrs	500	500	500	500	500	500	500	500	500
Lube Oil Sump Capacity	Ltrs	44	44	44	50	53	53	53	130	130
Coolant Capacity with Radiator	Ltrs	105	115	115	120	145	145	145	205	205

ALTERNATOR										
Insulation Class		Class H								
Ingression Protection		IP 23								
Alternator Efficiency (at 100% load) 0.8 pf**		94.3	93.3	93.4	94.6	95	95	94.6	95.3	95.1
Alternator Efficiency (at 75% load) 0.8 pf**		93.8	93.8	94	94.9	95.2	95.2	94.9	95.5	95.4
Permissible Voltage Dip at Full Load 0.8 pf Lag		≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %	≤ 20 %
Time Permitted to build up rated voltage at rated RPM		< 5 sec provided engine reach the rated speed								
Short Circuit Withstand Time	sec	3 Times Rated Current for "3 sec"	3 Times rated current for "10 sec "							
Overload Withstand Capacity	%	10% overload for one hour once in 12 hours								

For intermediate ratings, kindly contact nearest KOEL office

910 kVA rating genset is available on order

## Notes

\*With 0.845 Specific Gravity of diesel ( 5 % Tolerance ), For well run engines only  
<sup>^</sup> These weight are for handling & transportation only

\*\* Efficiency of Alternator as per standards IEC 60034-1

For Site Conditions other than standard operating conditions consult KOEL for available prime power.

## Prime rating and Stand-by rating <sup>1</sup>



'Prime power' is designed for Unlimited hours, as compared to 'Emergency stand-by' designed for 200 hours in a year. Prime rated Gensets also permit 10% temporary overloading. Users need to carefully select the Genset rating to meet their requirement. KOEL offers Prime power as a standard offer. Contact KOEL for stand-by ratings.



## Engine capacity does matter <sup>2</sup>

Engine capacity (cc) plays a vital role in Genset performance. Higher engine capacity leads to a robust and stable Genset performance.

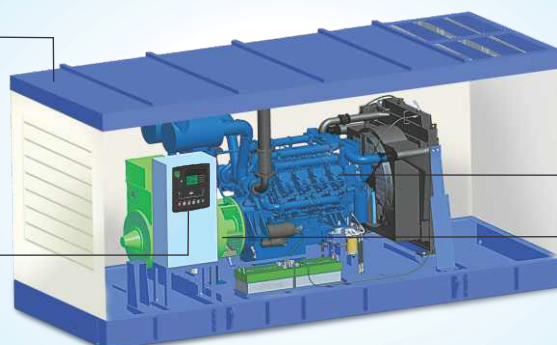
Higher engine capacity also enables the Genset to respond quickly & positively to sudden load additions.

## Canopy

- Ease of Access and Serviceability
- Aesthetically designed, weather and sound resistant enclosure
- Insulation conforms to UL94-HF1 class for flammability

## Controller

- Microprocessor based
- Graphical LCD display
- Best in class monitoring and diagnostic capability
- Integrable with AMF, synchronization & communication configurations



## Engine

- O2E Series: Low emission, high efficiency engines
- Compact, Robust and Rugged Design
- 500 hours lube-oil change period
- Integral set - mounted radiator system, designed & tested for 50°C ambient temperature

## Alternator

- Best In Class Efficiency
- Special Windings to Reduce Harmonics
- Vacuum Pressure Impregnation and epoxy gel coating on the winding

## KOEL's approach to meet revised CPCB norms

Revised CPCB norms are aimed at protecting the environment by reducing Genset emissions and improving emission quality. These are some of the most stringent emission norms in the world.

To meet the new norms, KOEL R&D team had choice of multiple technologies. While selecting the technology, KOEL laid significant emphasis on long term needs of users viz:

- High reliability and durability of Gensets: Owing to extreme operating conditions in India, preference has been given to robust configurations, that have been running successfully for several years.
- Low running costs: An effort to reduce emissions tends to increase the running costs. KOEL succeeded in achieving both in the same design.

- Optimized fuel efficiency as per actual usage: KOEL Green Gen sets are tuned to provide maximum fuel efficiency in the most common operating band. At KOEL, we call it **O2E series** (Optimal Operating Efficiency).
- Affordable, On-site support: Proven technology ensures that product support is available close-by, without waiting for a specialist. KOEL team has taken special efforts to keep complex technologies at bay, which may require high on-site maintenance costs.

All this, while keeping the initial costs within the reach of a smart Genset buyer.

### Integrated



### Best-in-class Fuel Efficiency

KOEL Green Gensets offer a unique combination of CPCB norm compliance and enhanced fuel efficiency. Across the range, KOEL Green Gensets offer substantial savings in fuel cost.

#### O2E Series (Optimal Operating Efficiency):

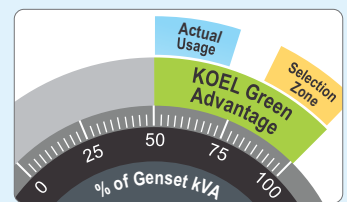
Genset ratings are selected based on the present load and future expansion. Fuel efficiency of most Gensets is optimized at the full rating of the Genset.

In practice, Gensets rarely get loaded to full capacity. Power demand variations across day & night, weekdays & weekends.

Summer & winter lead to an average 50-70% loading on Gensets.

Considering this practical situation, KOEL has extended fuel efficiency optimization from 100%, right up to 50% of rated load.

Combination of best-in-class fuel efficiency & O2E provides a double advantage.



### Integrated



### Genset Controls at your finger-tips

There is no comfort like being in command. KOEL Green Gensets put the command in your hands. Micro-processor based Genset controllers display a host of Genset parameters and put all controls at your fingertips.

#### Monitoring Features –

- Phase Voltages & Currents, Frequency, Reverse power, Genset kVA, kW, kWh, kVAR, Power Factor, Canopy Temperature
- Lube oil Pressure, Engine Temperature, RPM, Run Hours, Number of starts, Fuel Level, Auto / Manual Stop
- Battery charge condition
- AMF feature
- Modbus communication, Synchronization, Remote Monitoring

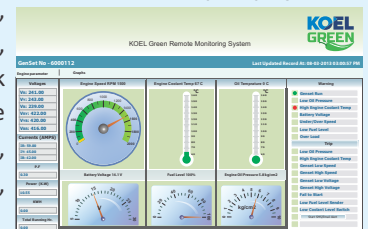
#### Diagnostic Features –

- Battery charging failure, Over/Under speed, Over Current, Over/Under Voltage, Over kW, Phase Seq., Phase missing, Mains Under voltage, Earth Fault trip, Fuel usage Alarm
- Low lube oil Pressure, High Engine Temperature, Low/High battery voltage, Low Fuel Level, Over Crank protection, Routine maintenance indicator, Genset Test Facility, Mains Frequency

#### KG745 Controller



#### KRM Desktop Display



### Integrated



### Peace-of-mind Ownership

KOEL Green Gensets have always been preferred for their robust design and reliability over long usage life.

KOEL Green range carries the confidence of well-established and proven engine platforms. For compliance to revised CPCB

norms, KOEL has carefully selected those technologies which not only retain, but enhance Gensets durability and on-site serviceability.

Thus, KOEL Gensets offer you many years of trouble-free performance; backed by the assurance of prompt support. Peace-of-mind driven by product reliability and low cost of ownership.

# The Promise Behind The Product



## KOEL Green Brand

KOEL Green is the Genset brand of Kirloskar Oil Engines Ltd (KOEL), the flagship company of the century-old Kirloskar Group. KOEL Green is India’s largest selling and most trusted Genset brand for over a decade. Providing back-up power solutions from 2.1 to 5200 kVA for diverse market sectors, “KOEL Green” has over 1 million Gensets in service across the globe.

## Research and Engineering

KOEL Gensets are designed and developed indigenously, using modern design & simulation technologies. KOEL's R&D team combines decades of application knowledge, global technology trends and emerging user expectations to develop best-in-class products for the target markets. The products are launched after extensive validation in world-class facilities.



## State-of-the-art Manufacturing

KOEL Green Gensets are manufactured at the state-of-the-art manufacturing facilities of KOEL and authorized GOEMs across India. Common design, modern infrastructure, trained manpower, stringent process controls and standardized material quality ensure that every KOEL Green Genset complies with the standards and meets KOEL’s stringent quality norms.

## Sales Network

A well-trained network of authorized KG Dealers and GOEM Sales teams is spread across India to serve your requirements. KOEL offices at key locations provide further techno-commercial back-up. KOEL Sales teams are equipped to carry-out load study, Genset sizing and techno-commercial support. Installation and commissioning activities are also undertaken in line with KOEL’s stringent guidelines.



## Service Network

As Genset cannot be driven to a Service Station, service has to come to your door-step. KOEL Green Gensets are supported by over 5000 trained Engineers and over 450 well-equipped service outlets throughout India. Standard and custom-made maintenance packages offer a total-peace-of-mind ownership experience. Service response time and quality is centrally monitored for cross-industry benchmarking and continual improvement. Customers just need to dial our toll free number and service will be available at the door step.

## 7 Easy steps for a happy Genset Ownership

- Insist on a load-study
- Select the Genset rating as per the load-study and with sufficient margin for future load expansion
- Apply site-selection guidelines carefully
- Insist on installation in line with KOEL Green guidelines
- Ensure adequate size and proper connection of cables
- Understand the Genset operation & maintenance procedures during commissioning
- Follow routine maintenance protocols through authorized KOEL Green service dealers

