



WIN ENGINEERING

Power Solutions that give you the winning edge



5 kVA - 5200 kVA

KIRLOSKAR GREEN
INDIA'S #1 GENSET BRAND



320 kVA - 625 kVA

Prime Rating at rated rpm (as per ISO8528) ¹	kVA	320 HD	380 HD	400 HD	500 HD	600 HD	625 HD
	kW	256	304	320	400	480	500
Genset Model		KG1-320WS	KG1-380WS	KG1-400WS	KG1-500WS	KG1-600WS	KG1-625WS
Frequency	Hz	50	50	50	50	50	50
Power factor	lagging	0.8	0.8	0.8	0.8	0.8	0.8
Voltage	V	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
Noise level	dBA	< 75	< 75	< 75	< 75	< 75	< 75
Fuel Consumption*	At 100 % Load	73.0	85.8	89.5	111.0	132.0	137.0
	At 75 % Load	53.0	62.4	65.1	83.2	99.0	102.7
	At 50 % Load	37.6	44.1	46.0	57.1	67.9	70.4
Fuel tank capacity	Ltrs	850	850	850	990	990	990
Dry weight of genset with canopy (approx..)^A	Kg	5910	6000	6050	7200	7700	7800
Wet weight of genset with canopy (approx..)^A	Kg	6650	6750	6800	8050	8550	8650
Overall dimensions of genset (L x W x H)^A	mm	5100 x 2000 x 2408	5375 x 2000 x 2408	5375 x 2000 x 2408	5650 x 2000 x 2558	6660 x 2000 x 2710	6660 x 2000 x 2710
Height including Silencer	mm	2908	2943	2943	3177	3420	3420
Electrical Battery starting voltage	Volts-DC	24	24	24	24	24	24

ENGINE

Engine Model		DV8TA G1	DV8TA G2	DV8TA G3	DV10TA G1	DV12TA G1	DV12TA G2
Rated output (Prime Continuous rating as per ISO 8528-1)	kW	294	346	360	447	532	552
	HP	400	470	490	608	723	750
No. of cylinder	Number	8	8	8	10	12	12
Cubic capacity ²	Ltrs	15.92	15.92	15.92	19.90	23.88	23.88
Bore x Stroke	mm	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
Aspiration	NA/TC/TA	TA	TA	TA	TA	TA	TA
Lube Oil change period	hrs	500	500	500	500	500	500
Lube Oil Sump Capacity	Ltrs	41	41	41	45	50	50
Coolant Capacity	Ltrs	60	112	112	120	135	135

ALTERNATOR

Insulation Class	Class H						
Ingression Protection	IP 23						
Alternator Efficiency (at 100% load) 0.8 p ^{**}	93.8	94.0	94.1	94.8	95.5	95.7	
Alternator Efficiency (at 75% load) 0.8 p ^{**}	94.3	94.4	94.7	95.3	95.8	96.0	
Permissible Voltage Dip at Full Load 0.8 pf Lag	≤ 20 %	≤ 19 %	≤ 19 %	≤ 19 %	≤ 19 %	≤ 19 %	≤ 19 %
Time Permitted to build up rated voltage at Rated RPM	< 5 sec provided engine reach the rated speed						
Short Circuit Ratio	0.55	0.35	0.45	0.45	0.37	0.36	
Short Circuit With Stand Time	sec	< 3 sec					
Overload With Stand Capacity	%	10% overload for one hour once in 12 hours					

For intermediate ratings, kindly contact nearest KOEL office

Notes

^ Tolerances Apply

*With 0.845 Specific Gravity of diesel (5 % Tolerance)

** Efficiency of Alternator as per standards IS 4722 and IEC 34-1

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

Prime rating and Stand-by rating¹



'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 standard offer. Contact KOEL for stand-by ratings.

Engine capacity does matter²



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

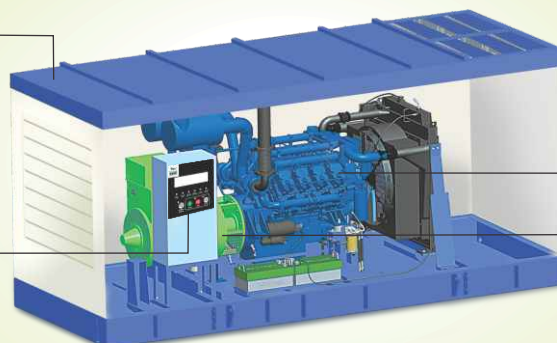
Higher engine capacity also enables Genset to respond quickly & positively to sudden load additions.

Canopy

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

Controller

- Microprocessor based fully configured
- Graphical bigger LCD display
- Best in class monitoring and diagnostic
- 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

Alternator

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

KOEL's approach to meet revised CPCB norms[^]

Revised CPCB norms are aimed at protecting environment by reducing Genset emissions and improving emission quality. These are one 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, 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, after persistent efforts.

- Optimized fuel efficiency as per actual usage: KOEL DG 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 will ensure 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 reach of the smart Genset buyers.

That's what we call **WINgineering!** We Engineer, You Win !!

Edge



Best-in-class Fuel Efficiency

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

O2E Series (Optimal Operating Efficiency):

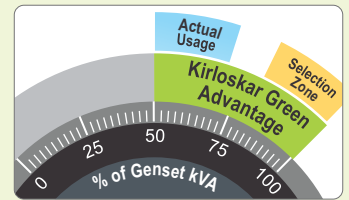
Genset ratings are selected based on present load and future expansion. Fuel efficiency of most Gensets is optimized at the full rating of Genset.

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 double advantage- truly a **winning edge!**



Edge



Genset Controls at your finger-tips

There is no comfort like being in command. Kirloskar 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, KVA_r , KWH, Power Factor, Canopy Temperature
- Lube oil Pressure, Engine Temperature RPM, Run Hours, No. of starts, Fuel Level, Auto / Manual Stop, AMF feature
- Battery charge condition
- Modbus communication, 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 level Alarm

- Low lube oil Pressure , High Engine Temperature, Low/High battery voltage, Low Fuel Level, Over Crank protection, Routine Maint. indicator, Genset Test Facility, Mains Frequency, Fail to crank

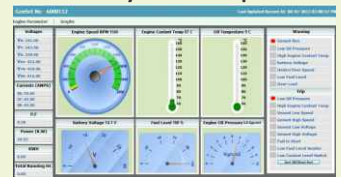
Optional Features-

- Synchronization

KG745 Controller



Complete Genset Control on your desktop



Being in control of your Genset is certainly a **winning edge!**

Edge



Peace-of-mind Ownership

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

Kirloskar 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, KG 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 – your **winning edge!**

[^]As per MOEF norms effective from 1st July 2014

The Promise Behind The Product



Kirloskar Green Brand

Kirloskar Green is the Genset brand of Kirloskar Oil Engines Ltd (KOEL), the flagship company of the century-old Kirloskar Group. Kirloskar Green is India's largest selling and most trusted Genset brand for over a decade. Providing back-up power solutions from 5 to 5200 kVA for diverse market sectors, "Kirloskar Green" has over 1 million Gensets in service across the globe.

Research and Engineering

KG 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

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



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Product improvement is a continuous process. Kindly contact KOEL for latest information

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South: ● Bengaluru: 080 - 2558 7562 ● Chennai: 044 - 23744624 ● Kochi: 0484 - 238 5757 ● Secunderabad: 040 - 2781 9563
East: ● Bhubaneshwar: 0674 - 258 8047 ● Guwahati: 0361 - 245 7616 ● Kolkata: 033 - 217 0858 ● Patna: 0612 - 222 0412
West: ● Ahmedabad: 079 - 2692 9687/ 89 ● Indore: 0731 - 3913100 ● Mumbai: 022 - 6151 1234 ● Pune: 020 - 2581 0341



Enriching Lives

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