Application Specifications
200-1010 kVA

Celebrating 25000 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

KOEL GREEN BY KIRLOSKAR
EFFICIENCY. INTEGRATED

Celebrating 25000 HHP GENSETS

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KOEL GREEN is the market leader and India's #1 Genset Brand . KOEL's customised power solutions suit a wide range of applications, meeting prime power requirements. KOEL GREEN Gensets are available in sound resistant and environment friendly canopies.

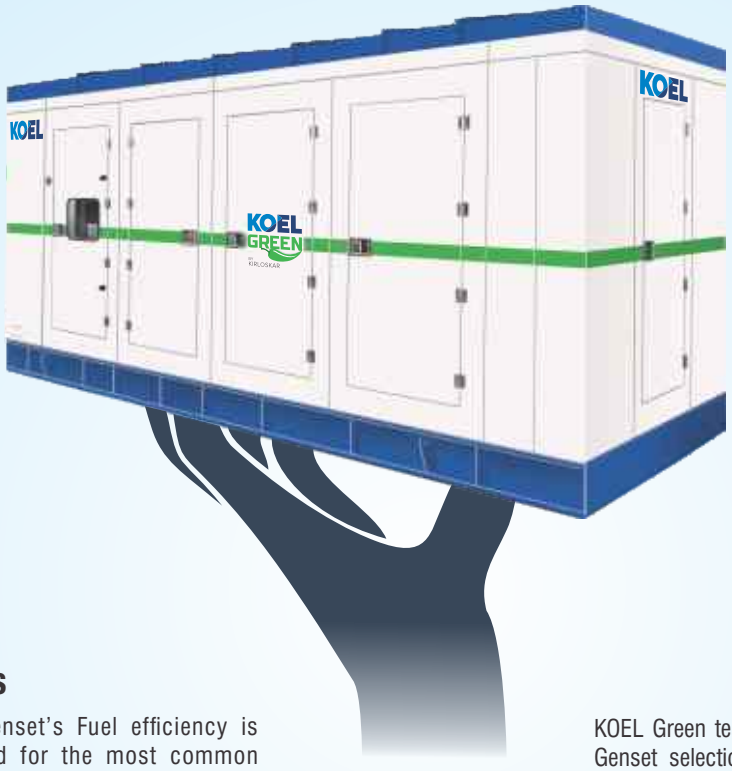
KOEL GREEN high horse power (HHP) range is spearheaded by SL90 and DV series. Upgraded with carefully selected technologies to meet latest CPCB emission norms, both SL90 and DV series Gensets are the most efficient machines delivering clean power to large requirements. Having best-in-class fuel economy, the performance capabilities are further enhanced with best-in-class block loading.

KOEL Green HHP Gensets are extensively used in a variety of applications ranging from standard stand-alone Gensets to auto synchronized Gensets, special applications like Stone Crusher to Heat Exchanger cooled solutions for basement installations.

KOEL Green is celebrating 25,000 HHP Genset sales, a testimony of superlative product performance in most demanding applications and customer's trust in the range .

Celebrating 25000 HHP GENSETS

BACK-UP POWER AT YOUR FINGERTIPS



LOW RUNNING COSTS

KOEL Genset's Fuel efficiency is optimized for the most common usage band of 50-75% loading. Best-in-class fuel economy helps you reduce running costs.

ONE-STOP SOLUTION

KOEL Green team assists you - from Genset selection to synchronisation, from exhaust piping to commissioning. Leverage decades of industry experience for your requirement

QUICK RESPONSE TO STEP-LOAD

KOEL Gensets offer class-leading response to jerk loads/step-loads. This become especially important for starting large motors and operating special purpose machines.

7-DAYS ASSURED DELIVERY

7 days delivery assurance is backed by KOEL's globally-awarded supply chain. This means availability of Genset just when you need it & without blocking your money for long.

GENSET CONTROL AT YOUR FINGERTIPS

Remote monitoring system in KOEL Green Gensets brings performance data, service reminders and alerts right on your desktop. Live information & historical data at your fingertips.

PRODUCT CARE AT YOUR FINGERTIPS

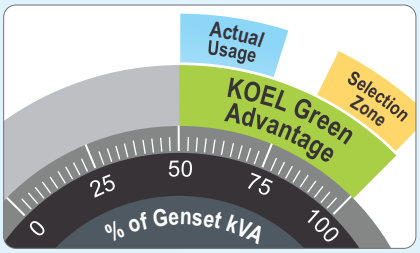
KOEL's trained and experienced product support team is just a call away. Log in your requirement at KOEL Care Centre and we will track it till you are satisfied.

Integrated Efficiency

Best-in-class Fuel Efficiency

KOEL 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.

Integrated Efficiency

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, 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 .

Integrated Efficiency

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, KVAr, KWH, 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

Optional Features –

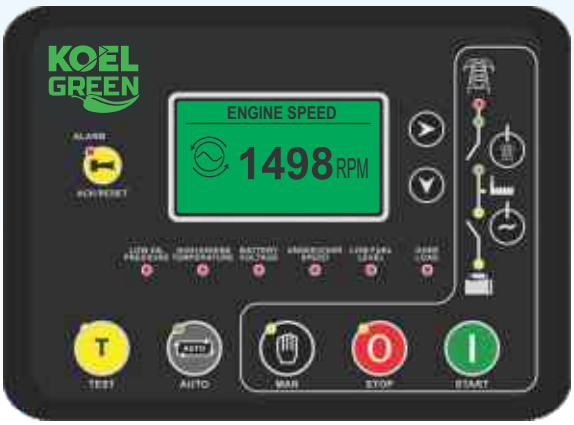
- Modbus communication, Synchronization, Remote Monitoring

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

Genset Controller



Celebrating 25000 HHP GENSETS

KOEL GREEN GENSET - SPECIFICATIONS

GENSET DATA											
GENSET MODEL	**UNIT**	**KG1-200WS**	**KG1-250WS**	**KG1-320WS**	**KG1-380WS**	**KG1-400WS**	**KG1-500WS**	**KG1-600WS**	**KG1-625WS**	**KG1-750WS**	**KG1-1010WS**
kVA RATING	kVA	**200**	**250**	**320**	**380**	**400**	**500**	**600**	**625**	**750**	**1010**
kW Rating	kW	160	200	256	304	320	400	480	500	600	808
Voltage	V	415	415	415	415	415	415	415	415	415	415
Frequency	Hz	50	50	50	50	50	50	50	50	50	50
Phase		3Ø	3Ø	3Ø	3Ø	3Ø	3Ø	3Ø	3Ø	3Ø	3Ø
Power factor	lagging	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Rated speed	RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Method of Starting		Electric (24 V)									
Alternator efficiency at 75% load	%	93.8	93.9	94.3	93.8	94.0	94.9	95.2	96.2	94.9	95.4
DG set Noise level at 1Mtr	dBA	≤ 75 dBA @ 1Mtr (Genset with canopy)									Contact KOEL for Details
Overall thermal efficiency of engines/break thermal efficiency of engines at 100% load	%	41	40.41	42	42.86	43	44	42.86	42.86	41	41
Mechanical efficiency at 100% load	%	94	95	86	88	89	90	88	88	92.6	95.1
OVERALL DIMENSIONS											
Length	mm	4340	4340	5100	5375	5375	5650	6660	6660	6800	7800
Width	mm	1740	1740	2000	2000	2000	2000	2000	2000	2300	2300
Height	mm	1970	1975	2408	2408	2408	2558	2710	2710	2713	2713
Height including silencer	mm	2609	2615	2908	2943	2943	3177	3420	3420	3380	3380
Approx. Dry Weight (with canopy)	Kg	3900	4100	5910	6000	6050	7200	7700	7800	8300	13200
CONSUMPTION											
*Fuel consumption at 100% load	Ltr/Hr	45.9	56.9	69.0	83.3	86.9	107.5	125.9	130.5	154.0	199
*Fuel consumption at 75% load	Ltr/Hr	34.4	42.6	52.5	61.2	65.1	81.9	94.2	98.6	126.4	155
*Fuel consumption at 50% load	Ltr/Hr	25.2	29.9	37.6	44.1	46	57.1	63.8	66.2	89.7	112
Fuel Tank capacity	Ltrs.	460	460	850	850	850	990	990	990	990	990
Lube Oil consumption	g/Hr	117	150	80	93	98	118	140	145	165	226
**Lube Oil change period	Hrs	500	500	500	500	500	500	500	500	500	500
RADIATOR COOLED											
Qty of coolant (Engine)	Ltr	14	14	29	29	29	36	44	44	44	65
Qty of coolant (Radiator)	Ltr	12.95	14.7	20	75	75	75	90	90	90	95
Total qty of coolant (including piping)	Ltr	29.26	31.83	55	115	115	120	145	145	145	180
Cooling / Ventilation Air flow through canopy	m3/min	325	417	762	790	790	1120	1300	1300	1300	1425
Combustion Air inlet flow	m3/min	16.1	20	25.5	28.5	30	38.5	42.5	44	50	60.6
Total Fresh Air required	m3/min	341.1	437	787.5	818.5	820	1158.5	1342.5	1344	1344	1485.6
Operating Temperature range of the Thermostat	Deg C	74-84	74-84	74-88	74-88	74-88	74-88	74-88	74-88	74-88	74-88
Maximum Coolant temp allowed	Deg C	95	95	104	104	104	104	104	104	104	104

KOEL GREEN GENSET - SPECIFICATIONS

GENSET DATA											
GENSET MODEL	**UNIT**	**KG1-200WS**	**KG1-250WS**	**KG1-320WS**	**KG1-380WS**	**KG1-400WS**	**KG1-500WS**	**KG1-600WS**	**KG1-625WS**	**KG1-750WS**	**KG1-1010WS**
kVA RATING	kVA	**200**	**250**	**320**	**380**	**400**	**500**	**600**	**625**	**750**	**1010**
HEAT REJECTION DETAILS											
Heat Rejection to coolant	kW	117	165	209.4	247	260	293.1	335	347.5	450	537
Heat Rejection to CAC (At sea level and 25^{0}C ambient temp.)	kW	37.1	46.7	46.44	58.6	61.7	92.7	105.7	110.1	164	185
Heat Rejection to Exhaust	kW	129	166	240	277	291.6	328.1	391.6	409.6	490	520
Heat Rejection from Engine Surface	kW	33	37	44	45.3	47.7	99.6	113.5	124.9	130	218
AIR INTAKE SYSTEM											
Intake Filter type		Dry									
Dirty Element restriction	mm of H_2O	200	200	635	635	635	635	635	635	635	635
Intake manifold pressure	bar	2.89	3.3	2.94	2.94	2.94	2.94	3.10	3.10	3.20	3.0
Maximum Intake manifold temperature (at Altitude 1000m & at temp 45^0	Deg C	50	50	50	50	50	74	75	75	75	75
EXHAUST SYSTEM											
Exhaust silencer type		Residential									
Max. Permissible exhaust back pressure	mm Hg	50±5								80±5	
Exhaust gas flow	kg/hr	1144	1313	1970	2236	2354	2736	3304	3421	3707	5700
Exhaust gas temperature (Max)	Deg C	500 ± 50								550 ± 50	
Exhaust Smoke level at 100% load (at NTP condition)	FSN	17	15	2						1	1.5
Min exhaust gas pipe size (per bank)(diameter)	mm	106						127		150	200
CONTROLS DATA											
Communications										CAN	
Digital inputs		9 digital i/p								6 digital i/p	
Digital outputs		7 digital o/p								2 digital i/p	
Customer data link (Modbus RTU)		Yes								USB	
Emergency Stop pushbutton		Externally Connected									
Compatible with the following											
Digital I/o module		Yes, Expansion									
Local annunciator		Yes								—	

KOEL GREEN ENGINE - SPECIFICATIONS

ENGINE DATA											
GENSET MODEL	**UNIT**	**KG1-200WS**	**KG1-250WS**	**KG1-320WS**	**KG1-380WS**	**KG1-400WS**	**KG1-500WS**	**KG1-600WS**	**KG1-625WS**	**KG1-750WS**	**KG1-1010WS**
kVA RATING	kVA	**200**	**250**	**320**	**380**	**400**	**500**	**600**	**625**	**750**	**1010**
ENGINE MODEL		**6SL1500TAG2**	**6SL1500TAG3**	**DV8TAG1**	**DV8TAG2**	**DV8TAG3**	**DV10TAG1**	**DV12TAG1**	**DV12TAG2**	**DV12ETAG1**	**DV16ETAG1**
Rated output (prime power rating as per ISO 3046)	kW	183	228	294	346	360	447	532	552	662	889
Rated output (prime power rating as per ISO 3046)	HP	248	310	400	470	490	608	723	750	900	1210
Rated speed	RPM	1500									
No. of cylinders		6	6	8	8	8	10	12	12	12	16
Engine configuration		Inline Type		V Type							
Operating cycle		4 Stroke DI								4 Stroke CRDI	
Displacement (Cubic capacity)	Ltrs.	8.86	8.86	15.92	15.92	15.92	19.90	23.88	23.88	23.88	31.84
Bore x Stroke	mm	118 x 135		130 x 150							
Aspiration		TA (Turbocharged After-cooled)									
Compression Ratio		15.5:1		16.5 ± 1 :1						15.5 ± 1 :1	
Piston speed	m/s	6.75		7.50							
Brake Mean Effective Pressure (BMEP) @ 100 % load (Gross)	bar	16.8	21	15.10						22.6	22.8
Firing order (Starting from flywheel end)		1-5-3-6-2-4		1-5-7-2-6-3-4-8			1-6-5-10-2-7-3-8-4-9	1-12-5-8-3-10-6-7-2-11-4-9			1-15-9-6-10-5-3-13-11-8-2-16-4-14-12-7
Overall dimension (L x W x H) Incl. flywheel & excl. radiator	mm	1634.4 x 1228 x 1380		1410 x 1185 x 1202			1600 x 1185 x 1202	1790 x 1185 x 1202		1833 x 1185 x 1202	2810 x 1295 x 1425
Block loading capacity (as per ISO 3046-Part4)	%	57%	52%	70%	60%	55%	55%	55%	55%	50%	50%
Engine weight (Dry weight of bare engine)	Kg	880		1620			1840	2060			4000
Fuel Type		Diesel									
Fuel Static Injection timing	^{0} BTDC	16+/-1 ^{0}	10+/-1 ^{0}	11 ^{0} BTDC						ECU Controlled	
Fuel Oil		HSD IS 1460									
Fuel Filter Type		Spin on									
Filtration Capacity	Micron	5.00								Pre Filter - 10 Micron Final Filter - 2 Micron	
Fuel transfer pump pressure	kPa	100		250						Not Applicable	
Max lift of fuel transfer pump	meter	1.00								Not Applicable	
Nozzle opening pressure	Kg/cm^2	260+/-10 bar									
LUBE OIL SYSTEM											
Recommended lube oil grade		K-Oil Premium									
Lube oil pump		Gear Pump									
Lube oil sump capacity (Max)	Ltr	27	27	41	41	41	45	50	50	50	130
Lube oil sump capacity (Min)	Ltr	24	24	37	37	37	40	40	40	40	110
Lube oil system capacity	Ltr	29.5	29.5	47	47	47	50	57	57	57	142
Angularity Limit of oil sump	Deg	30 ^{0}		15 ^{0}							
Lube oil Pressure range at rated load	Bar	3.5 - 5.5	3.5 - 5.5	4 - 4.5							
Lube oil filter type		Paper filter with bypass provision & spin on type filter canisters								Spin on	
Filtration capacity	Micron	30	30	30	30	30	30	30	30	12	
Lube oil pump flow rate (At 2935 RPM with 3.5 bar pressure)	LPM	156 (At 1500 RPM with 4 bar pressure)		130 (At 2935 RPM with 3.5 bar pressure)						190 At 2935 RPM with 3.5 bar pressure	400

(Contd...)

KOEL GREEN ENGINE - SPECIFICATIONS

ENGINE DATA											
GENSET MODEL	**UNIT**	**KG1-200WS**	**KG1-250WS**	**KG1-320WS**	**KG1-380WS**	**KG1-400WS**	**KG1-500WS**	**KG1-600WS**	**KG1-625WS**	**KG1-750WS**	**KG1-1010WS**
kVA RATING	kVA	**200**	**250**	**320**	**380**	**400**	**500**	**600**	**625**	**750**	**1010**
COOLING SYSTEM											
Type of cooling		Liquid cooled									
Engine coolant flow rate	LPM	240		530						700	900
Coolant pressure	bar	0.4									
GOVERNOR DATA											
Type		Electronic: Integral with FIP & Isochronous capability									
Whether adjustable droop provided		Yes		Optional						Yes	
Transient speed increase for sudden loading	%	≤12		7						12	
Transient speed decrease for permissible sudden loading	%	≤10		≤10						10	
Increase of load recovery time	Sec	3								4	
Speed raise / lower from panel provided		Yes		Optional							
VALVE MECHANISM											
Type		Over head									
Valve clearance at cold: Inlet / Exhaust	mm	0.24 mm / 0.4 mm		0.35 mm / 0.35 mm							
Valve Timing: Inlet open	Deg	11^0 30' ATDC		1^0 27' BTDC							
Valve Timing: Inlet close	Deg	0^0 30' ABDC		11°27'ABDC							
Valve Timing: Exhaust open	Deg	35^0 BBDC		21°30'BBDC							24°43'BBDC
Valve Timing: Exhaust close	Deg	11^0 BTDC		13° BTDC							7°18'BTDC
OTHER INFORMATION											
Maximum time to start from cold & attain rated Speed & ready to take load	Sec	5		30							
Overload capacity	%	10% overload for one hour once every 12 hours									

Note

1. *Specific gravity of diesel to be considered as 0.845 for LPH calculations (+5 % tolerance on LPH)
2. All canopy dimensions have tolerance of ± 50 mm.
3. Prime Power Rating is the maximum power available continuously for a variable electrical load for unlimited number of hours per year under standard operating conditions.
4. Genset ratings are as per ISO 8528.
5. Width of genset considered without base plate lifting hook.
6. **First oil change at 50 hrs.
7. For the site conditions other than standard operating conditions, consult KOEL for available prime power.
8. Genset weight tolerance +50 Kg.

Celebrating 25000 HHP GENSETS

KOEL GREEN ALTERNATOR - SPECIFICATIONS

ALTERNATOR DATA											
GENSET MODEL	**UNIT**	**KG1-200WS**	**KG1-250WS**	**KG1-320WS**	**KG1-380WS**	**KG1-400WS**	**KG1-500WS**	**KG1-600WS**	**KG1-625WS**	**KG1-750WS**	**KG1-1010WS**
kVA RATING	kVA	**200**	**250**	**320**	**380**	**400**	**500**	**600**	**625**	**750**	**1010**
Make		KG	KG	KG	KG	KG	KG	KG	KG	KG	KG
Insulation Class		Class - H									
Time permitted to build up rated voltage	Sec	< 1 sec, provided engine should reach rated RPM								< 5 sec, provided engine should reach rated RPM	
Permissible Voltage Dip	%	≤20%	≤20%	≤20%	≤20%	≤20%	≤20%	≤20%	≤20%	≤19%	≤15%
Rating of biggest motor to be started DOL with permissible voltage dip when the generator is Unloaded	kW/4pole	50	60	51.20	57.70	60.80	76.00	91.20	95	114	127
50% load	kW/4pole	36	45	25.60	28.90	30.40	38.00	45.60	47.50	105	120
80% load	kW/4pole	28.8	36	10.20	11.60	12.20	15.20	18.20	19.00	48	50
Short circuit withstand time	Sec	"3 sec "			3 Times Rated Current for "10 sec"						
Short Circuit Ratio		0.545	0.45	0.55	0.418	0.422	0.477	0.432	0.414	0.485	0.431
Overload withstand capacity	%	10% Over load for 1 hour once in 12 hours & for 150% for 30 sec									
Over speed capability	RPM	1800 RPM for 2min									
Cooling system of Alternator		Self cooling									
Temperature rise of armature winding	Deg C	<125	<125	<125	<125	<125	<125	<125	<125	<125	<125
Temperature rise of field winding	Deg C	<125	<125	<125	<125	<125	<125	<125	<125	<125	<125
Heating time constant	min	52.00	60.00	45.00	40.00	45.00	45.00	40.00	40.00	45.00	40.00
Cooling time constant	min	110.00	140.00	140.00	110.00	140.00	140.00	110.00	110.00	108.00	95.00
Heat rejection from Alternator	kW	13.30	14.78	16.90	19.40	20.10	21.90	22.60	22.50	34.2	41.6
Alternator Air Flow	m^3/sec	0.26	0.26	0.26	0.92	0.92	0.92	0.92	0.92	1	1.2
Efficiency at 100% FL & rated PF	%	93.5	93.6	93.8	93.3	93.4	94.6	94.8	95.9	94.6	95.1
Efficiency at 75% FL & rated PF	%	93.8	93.9	94.3	93.8	94.0	94.9	95.2	96.2	94.9	95.4
Efficiency at 50% FL & rated PF	%	94.1	94.2	94.6	93.8	94.2	94.6	95.1	96.1	94.8	95.3
Type of Excitation		Self Excited & Self regulated									
Excitation capacity in kW	kW	5.95	5.95	6.00	6.40	6.40	6.40	7.00	7.00	11.90	12.00
Excitation operating current & voltage	V & I	3.9 V, 50 A	4.3 V, 55 A	4.0 V, 55 A	3.0 V, 56 A	3.0 V, 56 A	3.0 V, 56 A	3.5 V, 60 A	3.5 V, 60 A	3.5 V, 48 A	3.5 V, 48 A
Type of AVR		Electronic									
Mounting of AVR		Machine mounted inside the terminal box									
Voltage Regulation	%	±1 %									
AVR Response time	m sec	<75ms									
AVR Range of Voltage adjustment	%	± 5%									

KIRLOSKAR REMOTE MONITORING SYSTEM (KRM)

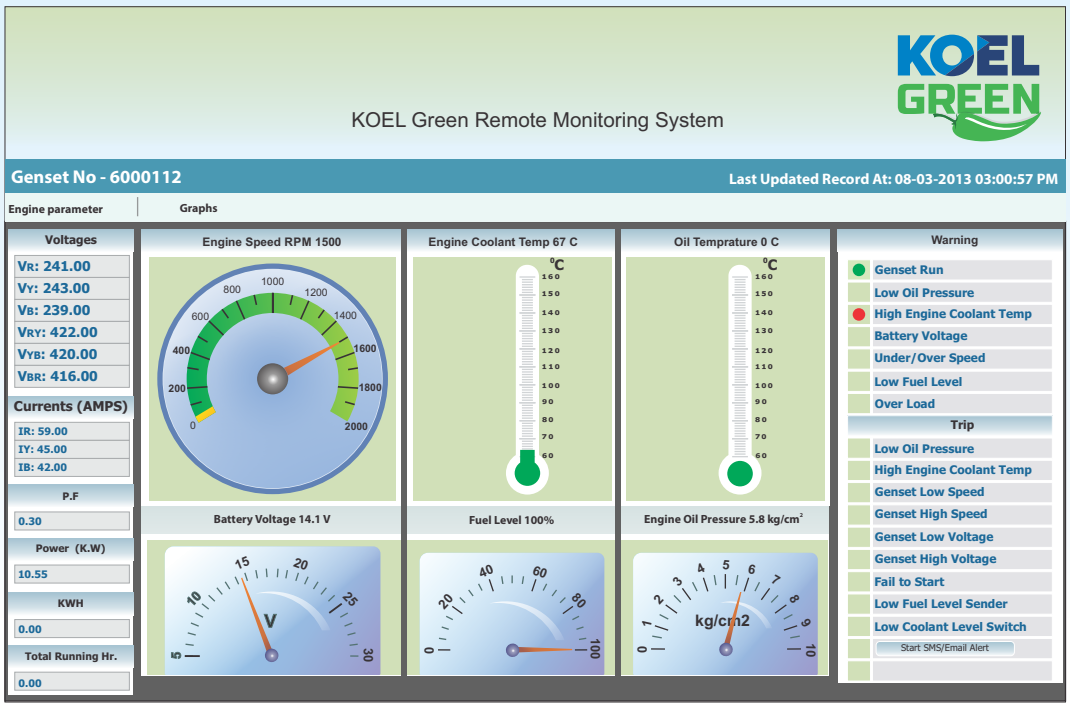
Your Genset now comes with complete remote monitoring control. Being in control of your own Genset is certainly a winning edge !

The KRM system links your Genset with a central monitoring data server through a SIM and internet. The complete monitoring panel with all critical indicators can be viewed on your laptop screen or mobile. You also get all alarms on your mobile phone.

Critical Parameters: Genset Run hrs, Fuel level, Engine oil pressure, Engine temperature, Engine speed (RPM), voltage/ current/ kW, battery monitoring, PF & Frequency, routine maintenance indicator Critical Alarms: Low fuel level, low lub oil pressure, fuel theft, Engine speed, High Engine temperature, Mains On/ Off, Low/ High battery voltage.

Advantages of KRM system: Your Genset will be used most efficiently as it's health meter will always be available at your finger-tips. Being a 'remote control' this health monitoring can be done from wherever you are from the actual location of the Genset. This close monitoring also helps in reducing your operating costs and enhancing reliability of the Genset you own. So in all, you have better return on your investment and enhanced productivity by maximum uptime.

KRM Desktop Display



KG545 / KG745 GENSET CONTROLLER

KG545 GENSET CONTROLLER

KG745 GENSET CONTROLLER

Unique features of KG545 / KG745 Genset Controller

- State of the art Compact Microprocessor based fully configurable technology.
- Integration of all engine and alternator parameters.
- For ease of viewing, high performance graphical LCD and prominent display.
- Event logging history (stores last 100 events with date time stamp and complete measurement
- values) for ease of maintenance/service & preventive maintenance annunciation.
- Remote monitoring of entire Genset (optional).
- Remote start/stop provision (optional).
- Capability of withstanding wide range of operating temperatures (-20 to 70 Deg C).
- Canopy temperature monitoring.
- Individual touch buttons for Manual, Auto and Test mode.
- LED indications for Genset status and alarms.
- Battery condition monitoring.
- Statistical cumulative counters like No. of starts, Engine run Hrs, kWH.
- Setting provision for different parameters and access to set parameters on front panel.
- Common controller for AMF and manual operation.
- Additional provision for three spare digital inputs & two spare digital outputs.
- Manual control for Mains & Genset contactor.

Controller Type	*KG545*	*KG745*
Key Characteristics		
Type of Display	LCD 128 x 64 Dot Matrix type with LED back light	
Overall Dimensions W X L X D (mm)	180 x 126 x 51	240 x 181 x 42
Operating Temperature (Degree C)	-20 to 70	-20 to 70
Conforms to	IEC 68 part 2, EN 50081-1/2, IEC 6100-4-3, AS 3100, AS 3260	
Control Voltage range (VDC)	8-36	8-36
Max Operating Voltage (VRMS, L-N)	350	350
AC Frequency Range (Hz)	40-70	40-70
IP rating	IP 56 Front, IP 20 rear	IP 56 Front, IP 20 rear
Timer	Built in, Multifunction and Settable	Built in, Multifunction and Settable
Type of Termination	Amp DUAC/ Molex Mini Fit JNR	Amp DUAC/ Molex Mini Fit JNR
Inputs		
No of Digital inputs	6	6
Digital Input Rating (mA at 12VDC)	10	10
No of Programmable Digital inputs	2	2
No of Analog inputs	3	3
Analog input rating (mA)	15	15
Outputs		
No of Digital outputs	7	7
Digital output rating (mA, Max 32VDC)	300	300
No of Programmable Digital outputs	4	4
Input Sensors		
Oil Pressure sensor		
Type	Close on Fault	Close on Fault
Rating (ohms)	4-20 mA	4-20 mA
Engine Temperature sensor		
Type	Close on Fault	Close on Fault
Rating	Resistive NTC	Resistive NTC
Fuel Level sensor		
Type	Close on Fault	Close on Fault
Rating (ohms)	Resistive 10 to 180	Resistive 10 to 180
Communication		
Port	RS 485 and RS 232	CAN, RS 485 and RS 232
Protocol	Modbus ASCII RTU	Modbus ASCII RTU
Operational Features	Manual Start/Stop Automatic Start Stop Emergency Stop Auto Mains Failure	Manual Start/Stop Automatic Start Stop Emergency Stop Auto Mains Failure
Measurement Parameters		
Electrical	Genset Voltage (L-N, L-L) Phase Current, Frequency Genset kW, kVAR Genset Pf Genset kWh Switching Device Status Battery Voltage and Charging Status	Genset Voltage (L-N, L-L) Phase Current, Frequency Genset kW, kVAR Genset Pf Genset kWh Switching Device Status Battery Voltage and Charging Status
Engine	Fuel Status Engine Running Hours Engine and Canopy Temperature Engine Speed Oil Pressure Radiator Water Level	Fuel Status Engine Running Hours Engine and Canopy Temperature Engine Speed Oil Pressure Radiator Water Level
Alarms	31 Alarms with LED indication and Display	

SHOPPING MALLS
5 X 500 kVA Typical installation

MODERN SPORTS COMPLEX
6 x 600 kVA Typical installation

STONE CRUSHER
1 x 600 kVA Typical installation

UNDERGROUND INSTALLATION
Using Heat Exchanger configuration

HIGH RISE APARTMENT COMPLEX
Extensive exhaust piping

The Promise Behind The Product

Enriching Lives

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 15 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 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 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 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

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

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Stamp of Authorised Representative

KOEL_DV/SL Application Tech Spec/ JULY2016