



**Best Genset of India**with Complete Power Back-up Solution

# forTomorrow

## #iforTomorrow



### **KOEL iGreen Power Back-Up Solution**

KOEL iGreen presents India's only digital power back-up solution, designed for the users of tomorrow. KOEL iGreen promise world class performance, robust design, digitally connected, ultimate convenient, smart user interface, superior looks and one-stop solution for its esteemed customers.

### Ultimate convenience with AMF

KOEL iGreen gensets comes with an Auto Main Failure panel which are specifically designed to deliver ultimate convenience to user. With mains power failure this panel automatically starts the genset and once the mains power is restored this panel switch off the genset, providing hassle free experience with running cost optimization.



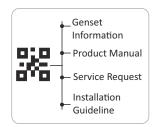


### Genset control at your finger tips

KOEL iGreen gensets are enabled with KOEL remote monitoring system, KOEL remote monitoring enables users to remotely monitor the important parameters of the genset, in case of any critical parameter alert is generated by ECU, KOEL remote monitoring system alerts the user immediately. KOEL remote monitoring system can be accessed via mobile device or desktop and this innovative system also alerts nearest service dealer is case of any emergency break-down.

### QR code enabled genset

KOEL iGreen gensets are QR code enabled and provides genset relevant information to user on a single scan. This QR code can also be used for accessing product catalogue or raising product service requests.





### **Status Indicator**

KOEL iGreen gensets comes with a multicolour genset status indicator which will help user understand the genset running status from a distance with just a glance.

### Aesthetically enhanced genset

KOEL iGreen gensets are aesthetically enhanced range of gensets with improved product life. First of its kind KOEL iGreen gensets comes with a bolt-less designed canopy which along with seamless appearance minimises the canopy deterioration. Building on seamless appearance KOEL iGreen gensets comes with silencer inside the canopy which in turn provides reduced height and symmetrical shape to genset. New attractive colour scheme makes KOEL iGreen gensets more vibrant and green decal reminds KOEL commitment to efficiency in conservation & going green in everything we do.





### **Single Point of Ownership**

KOEL iGreen provides a single point ownership of your complete power back-up ecosystem. These systems are designed to work in coherence with each other and hence are capable of providing a seamless experience to customer. With India's largest service network KOEL iGreen provides a comprehensive warranty for all components of your power back-up ecosystem.

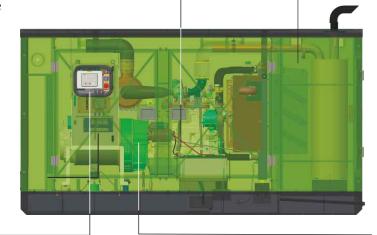
### 5 - 160 kVA

| Prime Rating at rated rpm (as per ISO 8528)              |                          | kVA      | 5                    | 7.5        | 10        | 12.5        | 15                       | 20               |
|--|--------------------------|----------|----------------------|------------|-----------|-------------|--------------------------|------------------|
|  |                          | kW       | 4                    | 6          | 8         | 10          | 12                       | 16               |
| Genset Model   |                          |          | KG1-5AS3             | KG1-7.5AS4 | KG1-10AS5 | KG1-12.5AS2 | KG1-15AS                 | KG1-20WS         |
| 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        | 230 (1Ø ) & 415 (3Ø) |            |           |             |                          |                  |
| Governing class (As per ISO 8528 Part-V)                 |                          |          | G2                   | G2         | G2        | G2          | G2                       | G2               |
| Noise level  |                          | dBA      | <75                  | <75        | <75       | <75         | <75                      | <75              |
| Fuel Consumption*  | At 100% Load             | Ltrs/Hr  | 1.6                  | 2.21       | 3         | 3.45        | 4                        | 5.1              |
|  | At 75% Load              |          | 1.3                  | 1.62       | 2.4       | 2.65        | 3                        | 3.8              |
|  | At 50% Load              |          | 1                    | 1.21       | 1.8       | 1.94        | 2.2                      | 2.7              |
| Fuel tank capacity                                       |                          | Ltrs     | 50                   | 50         | 50        | 50          | 65                       | 65               |
| Weight of genset with                                    | Dry                      | Kg       | 670                  | 680        | 750       | 840         | 880                      | 900              |
| canopy (approx) <sup>©</sup>                             | Wet                      | Kg       | 720                  | 730        | 800       | 890         | 930                      | 950              |
|  | Length                   | mm       | 1417                 | 1767       | 1767      | 1767        | 1740                     | 2205             |
| Overall dimensions of genset <sup>^</sup>                | Width                    | mm       | 820                  | 820        | 820       | 820         | 1050                     | 950              |
|  | Height                   | mm       | 1321                 | 1328       | 1328      | 1321        | 1474                     | 1294             |
| Electrical Battery starting voltage                      |                          | Volts-DC | 12                   | 12         | 12        | 12          | 12                       | 12               |
| ENGINE   |                          |          |                      |            |           |             |                          |                  |
| Engine Model   |                          |          | EA10 G1              | EA10G1     | EA16G1    | EA16G1      | HA294 G1                 | 2R1040 G1        |
| Rated output (Prime Continuous rating as per ISO 8528-1) |                          | kW       | 7.3                  | 7.3        | 11.8      | 11.8        | 15.1                     | 18.8             |
|  |                          | HP       | 10                   | 10         | 16        | 16          | 20.5                     | 25.5             |
| No. of cylinder  |                          | Number   | 1                    | 1          | 2         | 2           | 2                        | 2                |
| Cubic capacity   |                          | Ltrs     | 0.95                 | 0.95       | 1.56      | 1.56        | 1.88                     | 2.08             |
| Bore x Stroke  |                          | mm       | 102X116              | 102X116    | 95x110    | 95x110      | 100 x 120                | 105 x 120        |
| Rated Speed  |                          | RPM      | 1500                 | 1500       | 1500      | 1500        | 1500                     | 1500             |
| Aspiration   |                          | NA/TC/TA | NA                   | NA         | NA        | NA          | NA                       | NA               |
| Lube Oil change period                                   |                          | hrs.     | 500 hrs              |            |           |             | 500                      | 500              |
| Lube oil Sump Capacity                                   |                          | Ltrs     | 3.5                  | 3.5        | 6.5       | 6.5         | 5                        | 5.5              |
| Coolant Capacity   |                          | Ltrs     | NA                   | NA         | NA        | NA          | NA                       | 9                |
| ALTERNATOR   |                          |          |                      |            |           |             |                          |                  |
| Insulation Class   |                          |          | Class H              | Class H    | Class H   | Class H     | Class H                  | Class H          |
| Alternator Efficiency (at 100% load) 0.8 pf**            |                          | %        | 78.1                 | 82.5       | 82.6      | 84.9        | 86                       | 88.9             |
| Max Voltage Dip at Full                                  | Load 0.8 pf Lag          | sec      | <20%                 | <20%       | <20%      | <20%        | <u>≤</u> 20 %            | <u>&lt;</u> 16 % |
| Max Time to build up ra                                  | ted voltage at Rated RPM |          |                      |            |           | < 5 sec p   | rovided engine reach the | e rated speed    |

\*\* 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.

### **Engine**

- Industries most reliable engines, proven over decades
- Low emission, high efficiency engines
- Compact, robust and rugged design
- 500 hours lube-oil change period



## Controller -

- · Microprocessor based with graphical LCD display
- · Best in class monitoring and diagnostic capability
- Communication configuration enabled

### Canopy

- Silencer inside canopy
- Aesthetically designed bolt-less canopy for enhanced product life
- · Weather and sound resistant enclosure
- · Ease of access and serviceability
- Insulation confirms to UL94-HF1 class for flammability

### **Alternator**

- · Best in class efficiency
- · Minimum harmonics interference
- Vacuum pressure impregnation
- · Epoxy gel coating on the winding

<sup>^</sup> Tolerances Apply,  $\,^*$ With 0.845 Specific Gravity of diesel ( 5 % Tolerance )

 $<sup>^{\</sup>rm o}$  These weight are for handling & transportation only

| 25            | 30               | 40          | 45          | 62.5        | 82.5          | 100                     | 125           | 160  |  |  |  |  |
|---------------|------------------|-------------|-------------|-------------|---------------|-------------------------|---------------|--|--|--|--|--|
| 20            | 24               | 32          | 36          | 50          | 66            | 80                      | 100           | 128  |  |  |  |  |
| KG1-25WS      | KG1-30WS         | KG1- 40WS   | KG1 - 45WS  | KG1- 62.5WS | KG1- 82.5WS   | KG1-100WS               | KG1-125WS     | KG1-160WS  |  |  |  |  |
| 50            | 50               | 50          | 50          | 50          | 50            | 50                      | 50            | 50   |  |  |  |  |
| 0.8           | 0.8              | 0.8         | 0.8         | 0.8         | 0.8           | 0.8                     | 0.8           | 0.8  |  |  |  |  |
|               |                  | 415 3Ø      |             |             |               |                         |               |  |  |  |  |  |
| G2            | G2               | G2          | G2          | G2          | G2            | G3                      | G3            | G3   |  |  |  |  |
| <75           | <75              | <75         | <75         | <75         | < 75          | < 75                    | < 75          | < 75   |  |  |  |  |
| 5.8           | 7.6              | 9.2         | 10.3        | 14.1        | 18.8          | 21.9                    | 27.4          | 36.6   |  |  |  |  |
| 4.4           | 5.8              | 7.4         | 8.7         | 11.3        | 13.8          | 16.9                    | 20.2          | 27.7   |  |  |  |  |
| 2.9           | 4.4              | 5.5         | 5.9         | 7.5         | 9.9           | 12.2                    | 15.3          | 19.1   |  |  |  |  |
| 65            | 65               | 100         | 100         | 150         | 150           | 230                     | 230           | 300  |  |  |  |  |
| 1135          | 1135             | 1215        | 1215        | 1420        | 1710          | 2040                    | 2090          | 2730   |  |  |  |  |
| 1185          | 1185             | 1300        | 1300        | 1550        | 1840          | 2240                    | 2290          | 3110   |  |  |  |  |
| 2500          | 2500             | 2750        | 2750        | 2900        | 3200          | 3200                    | 3200          | 4000   |  |  |  |  |
| 950           | 950              | 1050        | 1050        | 1100        | 1100          | 1300                    | 1300          | 1500   |  |  |  |  |
| 1294          | 1294             | 1493        | 1493        | 1581        | 1595          | 1795                    | 1795          | 1915   |  |  |  |  |
| 12            | 12               | 12          | 12          | 12          | 12            | 12                      | 12            | 12   |  |  |  |  |
|               |                  |             |             |             |               |                         |               |  |  |  |  |  |
| 3R1040T G1    | 3R1040T G1       | 3R1040TA G1 | 3R1040TA G1 | 4R810TA G1  |               | 4K1080TA G2             | 4K1080TA G2   | 6K1080TA G2                                      |  |  |  |  |
| 24            | 30.9             | 41.2        | 41.2        | 61          | 74.8          | 114.7                   | 114.7         | 147  |  |  |  |  |
| 42            | 42               | 56          | 56          | 83          | 102           | 156                     | 156           | 200  |  |  |  |  |
| 3             | 3                | 3           | 3           | 4           | 4             | 4                       | 4             | 6  |  |  |  |  |
| 3.12          | 3.12             | 3.12        | 3.12        | 3.24        | 4.16          | 4.32                    | 4.32          | 6.48   |  |  |  |  |
| 105 x 120     | 105 x 120        | 105 x 120   | 105 x 120   | 96 x 112    | 105 x 120     | 105 x 125               | 105 x 125     | 105 x 125  |  |  |  |  |
| 1500          | 1500             | 1500        | 1500        | 1500        | 1500          | 1500                    | 1500          | 1500   |  |  |  |  |
| TC            | TC               | TA          | TA          | TA          | TA            | TA                      | TA            | TA   |  |  |  |  |
| 500           | 500              | 500         | 500         | 500         | 500           | 500                     | 500           | 500  |  |  |  |  |
| 8             | 8                | 8           | 8           | 10          | 10            | 14                      | 14            | 18   |  |  |  |  |
| 14.5          | 14.5             | 11.5        | 11.5        | 17.5        | 24            | 21                      | 21            | 28   |  |  |  |  |
|               |                  |             |             |             |               |                         |               |  |  |  |  |  |
| Class H       | Class H          | Class H     | Class H     | Class H     | Class H       | Class H                 | Class H       | Class H  |  |  |  |  |
| 89            | 89               | 89.2        | 89.2        | 91          | 91.4          | 92                      | 92.5          | 93   |  |  |  |  |
| <u>≤</u> 16 % | <u>&lt;</u> 16 % | < 16 %      | < 16 %      | < 20 %      | <u>≤</u> 20 % | <u>≤</u> 20 %           | <u>≤</u> 20 % | <u>≤</u> 20 %                                    |  |  |  |  |
|               |                  | 1           |             | 1           |               | Voltage recovery time 6 | S sec         | < 1 sec provided engine<br>reach the rated speed |  |  |  |  |



### 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.



### **Best-in-class Fuel Efficiency**

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

savings in fuel cost.

### O2E Series (Optimal Operating Efficiency):

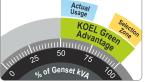
Genset ratings are selected based on the present load and future expansion. Fuel efficiency of most Gensets is optimized at the full rating of the Genset.

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 the 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 efficiency & O2E provides a double advantage.





### 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.



### State of the art Genset Controller

KOEL iGreen 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.

### Diagnostic Features

- Battery charging failure, Over speed and Under speed, Over Current,
   Over voltage and Under Voltage, Over kilo Watt, Phase Seq., Phase missing, Earth Fault trip.
- Low lube oil Pressure, High Engine Temperature, Low and High battery voltage, Low Fuel Level, Over Crank protection, Routine Maintenance indicator, Genset Test

Facility, Mains Frequency.

#### **Optional Features**

- Modbus communication
- Synchronization
- Canopy Temperature



Controller



## KOELiGREEN

ASSURES A SAFE AND RELIABLE POWER BACKUP ECOSYSTEM



## #iforTomorrow

## What KOEL iGreen brings to you

# **Unmatched Convenience**

AMF as standard offering

## Ease of Information

QR code enable genset

## Genset At Your Fingertips

Remote monitoring as standard

## Superior Looks

New attractive colour scheme

# Improved Product Life

Bolt-less designed canopy

## Single Point Of Ownership

Comprehensive warranty from KOEL

## Remote Status Indicator

Multicolour genset status indicator

## Space Saver

Silencer inside canopy with compact design



## **EFFICIENCY. INTEGRATED**

## A KOEL PROMISE

### **Efficient Products**

- India's first IoT enabled digital genset
- Designed for convenient user experience
- Best-in-class fuel efficiency delivered
- Compact design & long life product
- Optimized consumption of lubricant oil
- Optimized total cost of ownership (TCO)
- · All products tested before delivery

### **EFFICIENT**



### **Efficient Solutions**

- Load sizing for every single genset order
- One stop power back-up solutions
- · Serves complete application gamut
- Highly trained & experienced team
- Non-conventional solutions (bio-diesel)
- Specific solution for harsh environments
- Exhaust mgmt., foundation, cabling etc.

### **Efficient Service**

- India's widest service dealer network
- KOEL connect-self-service application
- eFSR-Electronic field service report
- Over 6000 trained service engineers
- Over 600,000 machines under care
- 98%+ parts available at each outlet
- Flexible & economical AMC-Bandhan

#### **EFFICIENT**



**EFFICIENT** 

**DELIVERIES** 

**EFFICIENT** 

PRODUCTS

### **EFFICIENT**



- 250+ expert touch points across India
- 500+ solution oriented professionals
- Uniform customer experience across
- Central system for enquiry to PRF
- Fair trade practices & Price transparency

### **Efficient Deliveries**

- Cost-effective deliveries guaranteed
- Assured 7-day delivery of gensets
- Supports project management system
- Reduced working capital for customer
- Award-winning replenishment model
- Assurance of FRESH products always



### **Efficient 24X7 Care**

- 24 X 7 operational customer care centre
- Team of over 70 trained & focused exec.
- Tracking every service request till closure
- Centrally maintained CRM for all requests
- Satisfaction call after every SR closure
- Central sales lead tracking system
- Continuous NPS and CDI measurement

## KIRLOSKAR OIL ENGINES LIMITED

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