

**karloskar**  
powergen



**OPTIPRIME**

ADVANCED MANUFACTURED GENSETS

117 kVA - 12000 kVA

Better power for a  
*limitless*  
Tomorrow

Cleaner . Reliable . Flexible





# A RICH HERITAGE OF OVER A CENTURY OF ENGINEERING EXCELLENCE.

Kirloskar powergen generating sets prioritize user experience, delivering exceptional features and benefits. Streamlined installation and enhanced dependability to expedited service, reduced maintenance costs, and optimized performance.

Kirloskar Powergen sets itself apart with groundbreaking engineering that establishes new industry benchmarks.

## *limitless* POTENTIAL, SUSTAINABLE PRACTICES

Our state-of-the-art manufacturing facility embodies our commitment to sustainable practices. We partner with nature to power the facility itself, transforming waste into valuable resources. This focus on sustainability inspires both our workforce and surrounding communities. It's here, where cutting-edge technology meets exceptional skills, that we engineer solutions to empower limitless possibilities.



Discover Kirloskar with  
QR Code Scan





# INDEX

OPTIPRIME - The Versatile Power Solutions

Customized Power Solutions to maximizing customer benefits

OPTIPRIME Largest product portfolio

OPTIPRIME Controller: Brain Behind the Power System

OPTIPRIME Configuration tailor made for customer needs

Technical Specifications: 117 kVA to 12000 kVA

Projects Solutions: Complete Solution for every requirement

OPTIPRIME Trigeneration Series

Next Gen Power for Data Centres

OPTIPRIME Synergies with Energy Management systems

OPTIPRIME 1000 kVA - World's smallest footprint

Customized Scalable Solutions

Customer Testimonials

Reliable Service | 24 X 7 Support

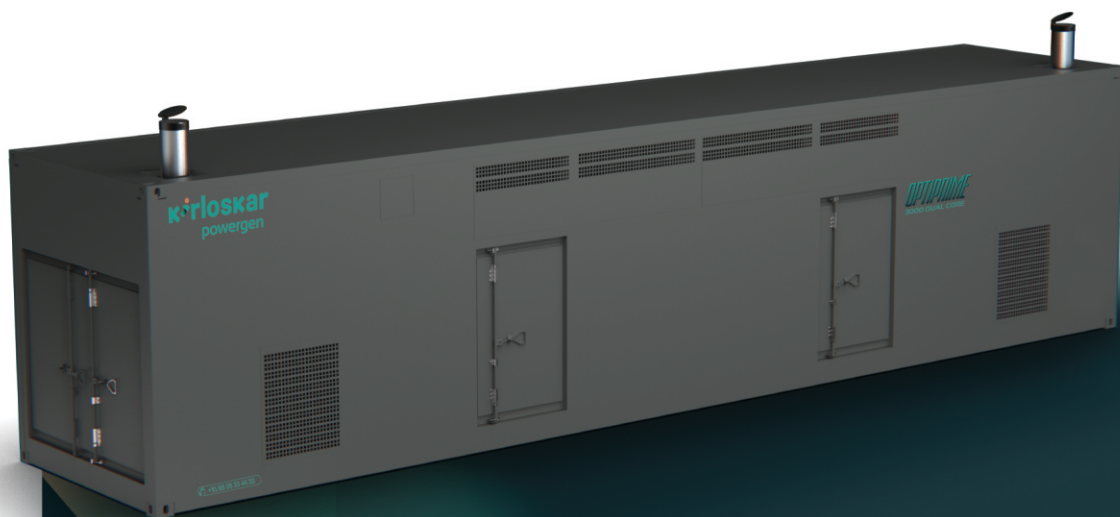
Kirloskar Powergen Product Portfolio



# OPTIPRIME

Advanced Manufactured Gensets

117 kVA - 12000 kVA



## Multi-Core Power Systems

The OPTIPRIME Multi-Core (Dual-Core, Quad-Core, Octa-Core) power systems are custom-engineered solutions tailored to meet the specific needs of each customer's site. These turnkey solutions provide a compact design with exceptional noise reduction. Powered by patented OPTIPRIME technology, they deliver remarkable improvements in total cost of ownership and industry-leading fuel efficiency. The multicore solution offers breakthrough redundancy, further enhancing reliability and ensuring continuous power. Supported by Kirloskar's warranty, customers benefit from reduced operational costs, greater savings, and a minimized footprint. Its versatile design allows for single-unit deployment or combined prime and standby functionality within a single enclosure, providing optimal performance and adaptability for varying power needs.

### The Versatile Power Solution



Infrastructure



Industry



IT/TES



Hospitality



Health



Realty



Government  
& Defense



Logistics

# OPTIPRIME

## Advanced Manufactured Gensets

### BENEFITS

Kirloskar's **OPTIPRIME** delivers a customized and efficient power solution for applications with fluctuating loads. By intelligently managing multi-core operations through a centralized control panel and integrated Power Management System, OPTIPRIME dynamically adjusts to real-time load demands, significantly reducing fuel consumption.



Patented  
Hybrid  
Technology



Multi-core operations  
with In-built  
Synchronisation



Reduced Carbon  
Dioxide Emissions  
by 40%



Optimised Fuel  
Consumption



Reduced  
Ownership Cost



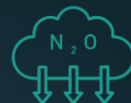
Optimum  
Power



Optimal  
Efficiency



Better  
Flexibility



Reduced Nitrous  
Oxide Emissions  
by 50%



Lower Product  
Footprint -20%  
Reduction in Space

# OPTIPRIME FEATURES

## Prime Rating

Unlimited hours

## Unmatched Footprint

Better Genset performance and optimal footprint

## Emission Compliant

Performance, clean power and reduced costs

## Control Your Power, Anytime, Anywhere

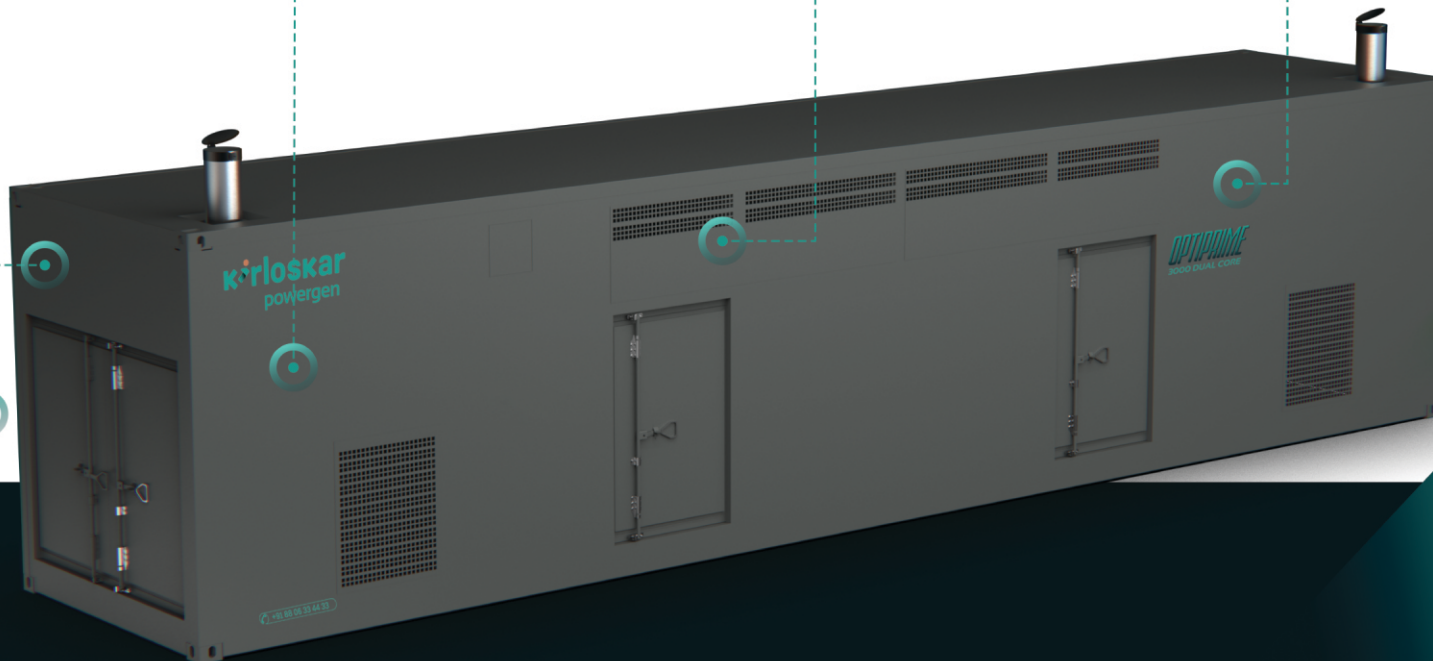
Monitor your Kirloskar genset remotely, receive alerts, and access service with a tap with our Remote Monitoring System

## O2E Series

Optimal Operating Efficiency even at partial loads, further reducing costs.

## Common Rail Direct Injection (CRDi)

Advanced fuel injection for better performance, lower emissions, and smoother operation.







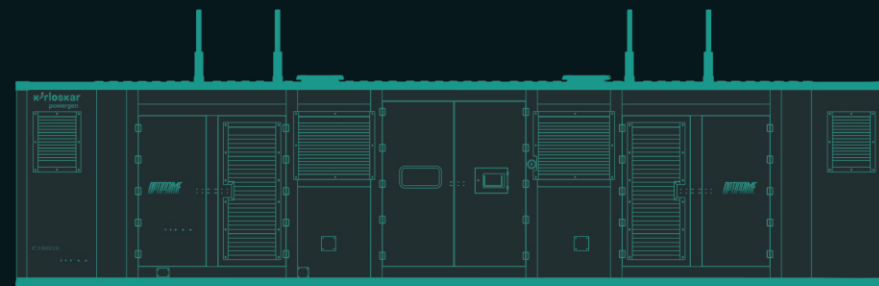
| kVA           | Configuration Options* | Fuel   | Emission Norms | Engine Configurations |
|---------------|------------------------|--------|----------------|-----------------------|
| 125 kVA       | 3                      | Diesel | CPCBIV+        | Dual Core 4R810       |
| 250 kVA       | 3                      | Diesel | CPCBIV+        | Dual Core 4K1080      |
| 320 kVA       | 4                      | Diesel | CPCBIV+        | Dual Core 6K1080      |
| 400 kVA       | 3                      | Diesel | CPCBIV+        | Dual Core 6K1080      |
| 500 kVA       | 2                      | Diesel | CPCBIV+        | Dual Core 6K1080      |
| 500 kVA HD    | 2                      | Diesel | CPCBIV+        | Dual Core SL90        |
| 500 kVA HD    | 2                      | Diesel | CPCBIV+        | Quad Core 4K1080      |
| 640 kVA       | 3                      | Diesel | CPCBIV+        | Dual Core SL90        |
| 700 kVA       | 2                      | Diesel | CPCBIV+        | Dual Core SL90        |
| 1000/1010 kVA | 1                      | Diesel | CPCBIV+/Stack  | Dual Core PV6         |
| 1000/1010 kVA | 2                      | Diesel | CPCBIV+/Stack  | Quad Core 6K          |
| 1000/1010 kVA | 3                      | PNG    | CPCBIV+/Stack  | Dual Core DV12        |
| 1000/1010 kVA | 3                      | PNG    | CPCBIV+/Stack  | Quad Core DV8         |
| 2000 kVA      | 3                      | PNG    | CPCBIV+/Stack  | Quad Core DV12        |
| 1250 kVA      | 3                      | Diesel | CPCBIV+/Stack  | Dual Core DV10        |
| 1250 kVA      | 2                      | Diesel | CPCBIV+/Stack  | Quad Core SL90        |

### Powergen HHP & Integrated Project Solutions

|                   |        |       |                          |
|-------------------|--------|-------|--------------------------|
| 2 MW / 2500 kVA   | Diesel | Stack | Industrial Power Systems |
| 4 MW / 5000 kVA   | Diesel | Stack | Industrial Power Systems |
| 6 MW / 7500 kVA   | Diesel | Stack | Industrial Power Systems |
| 8 MW / 10000 kVA  | Diesel | Stack | Industrial Power Systems |
| 10 MW / 12500 kVA | Diesel | Stack | Industrial Power Systems |

\*Configuration options available: Series/ Parallel/ Stacking etc.

| kVA           | Configuration Options* | Fuel   | Emission Norms | Engine Configurations |
|---------------|------------------------|--------|----------------|-----------------------|
| 1400 kVA      | 2                      | Diesel | CPCBIV+/Stack  | Quad Core SL90        |
| 1500 kVA      | 4                      | Diesel | CPCBIV+/Stack  | Dual Core DV12        |
| 2000 kVA      | 4                      | Diesel | CPCBIV+/Stack  | Dual Core DV16        |
| 2000 kVA      | 1                      | Diesel | CPCBIV+/Stack  | Quad Core D15L6       |
| 2250 kVA      | 3                      | Diesel | Stack          | Dual Core DV16        |
| 2500 kVA      | 4                      | Diesel | Stack          | Dual Core DV16        |
| 2500 kVA      | 4                      | Diesel | Stack          | Dual Core K12         |
| 2500 kVA      | 4                      | Diesel | CPCBIV+/Stack  | Quad Core DV10        |
| 3000/3300 kVA | 4                      | Diesel | Stack          | Dual Core K12         |
| 3000 kVA      | 4                      | Diesel | CPCBIV+/Stack  | Quad Core DV12        |
| 4000 kVA      | 3                      | Diesel | CPCBIV+/Stack  | Octacore D15L6        |
| 4000 kVA      | 4                      | Diesel | Stack          | Quad Core DV16        |
| 5000 kVA      | 4                      | Diesel | Stack          | Quad Core DV16        |
| 5000 kVA      | 4                      | Diesel | Stack          | Quad Core K12         |
| 6000/6600 kVA | 3                      | Diesel | Stack          | Quad Core K12         |
| 8000 kVA      | 3                      | Diesel | Stack          | Quad Core K12 (2026)  |
| 10000 kVA     | 3                      | Diesel | Stack          | Quad Core K16 (2027)  |
| 12000 kVA     | 1                      | Diesel | Stack          | Octacore K12 (2026)   |





# OUR PRODUCT RANGE



117 kVA to 12000 kVA

We'll secure your energy needs, helping achieve your decarbonization goals

## OPTIPRIME 117 kVA - 2000 kVA

|                                                   |                     |                  |                     |                 |                     |                |                |                |
|---------------------------------------------------|---------------------|------------------|---------------------|-----------------|---------------------|----------------|----------------|----------------|
| Prime Rating at rated rpm (as per ISO 8528)       | kVA                 | 700 <sup>#</sup> | 1000 world smallest | 1000            | 1000 <sup>#</sup>   | 1000           | 1000           | 1000           |
|                                                   | kW                  | 560              | 800                 | 800             | 800                 | 800            | 800            | 800            |
| Genset Model                                      | -                   | Optiprime 700    | Optiprime 1000      | Optiprime 1000  | Optiprime 1000      | Optiprime 1000 | Optiprime 1000 | Optiprime 1000 |
| Configuration                                     | -                   | Dual Core SL90   | Dual Core D15L6     | Dual Core D15L6 | Quad Core 6K        | Dual Core Dv8  | Dual Core DV12 | Quad Core DV8  |
| Fuel                                              | -                   | Diesel           | Diesel              | Diesel          | Diesel              | Diesel         | PNG            | PNG            |
| Arrangement                                       | -                   | Series           | Parallel            | Parallel        | Parallel + Stacking | Series         | Parallel       | Parallel       |
| Hot gas discharge                                 | -                   | Side             | Top                 | Top             | Top                 | Side           | Side           | Side           |
| Options available                                 | -                   | 3                | 1                   | 1               | 1                   | 3              | 1              | 1              |
| Frequency                                         | Hz                  | 50               | 50                  | 50              | 50                  | 50             | 50             | 50             |
| Power Factor                                      | Lagging             | 0.8              | 0.8                 | 0.8             | 0.8                 | 0.8            | 0.8            | 0.8            |
| Voltage                                           | V                   | 415              | 415                 | 415             | 415                 | 415            | 415            | 415            |
| Governing class (As per ISO 8528 Part-V)          | -                   | G3               | G3                  | G3              | G3                  | G3             | G3             | G3             |
| Noise level at 1Mtr                               | dBA                 | ≤ 75dBA at 1 m   |                     |                 |                     |                |                |                |
| Fuel Consumption* At 100% Load                    | Ltrs/hr             | 139.42           | 194                 | 194             | 188.56              | 211            | 250.0 SCM/hr   | 117.6 SCM/hr   |
| Fuel Consumption* At 75% Load                     | Ltrs/hr             | 107.56           | 152                 | 152             | 146.64              | 165            | 202.6 SCM/hr   | 94.4 SCM/hr    |
| Fuel tank capacity                                | Ltrs                | 500x2            | 990                 | 990             | 408x2               | 890x2          | N/A            | N/A            |
| Dry Weight of genset with canopy (approx..)       | Kgs                 | 7980             | 10800               | 10800           | 12320               | 13786          | 15600          | 22800          |
| Overall dimensions of Canopy in mm <sup>s</sup>   | Length              | 8500             | 3400                | 4472            | 6500                | 11200          | 3362           | 3410           |
|                                                   | Width               | 1807             | 2400                | 4068            | 2125                | 2125           | 3170           | 4025           |
|                                                   | Height w/o silencer | 2042             | 2900                | 2375            | 5420                | 2655           | 1997           | 2610           |
| Electrical Battery Starting Voltage (Single core) | V                   | 24               | 24                  | 24              | 12                  | 24             | 24             | 24             |

|                                     |   |                     |              |        |
|-------------------------------------|---|---------------------|--------------|--------|
| Sync Controller Model <sup>ss</sup> | - | KG1500              | DSE8610 MKII | KG1500 |
| Incoming Breaker                    | - | Yes- Standard Scope |              |        |
| Outgoing breaker                    | - | Additional Scope    |              |        |



## TECHNICAL SPECIFICATIONS

## GENSET

## SINGLE CORE ENGINE

## SINGLE CORE ALTERNATOR

## SYNCHRONIZATION PANEL

## GENSET

|                                                   |                     |                       |                |                |                |                |                |                     |
|---------------------------------------------------|---------------------|-----------------------|----------------|----------------|----------------|----------------|----------------|---------------------|
| Prime Rating at rated rpm (as per ISO 8528)       | kVA                 | 2500 #                | 2500           | 2500           | 3000           | 3000           | 3300 #         | 4000                |
|                                                   | kW                  | 2000                  | 2000           | 2000           | 2400           | 2400           | 2640           | 3200                |
| Genset Model                                      | -                   | Optiprime 2500        | Optiprime 2500 | Optiprime 2500 | Optiprime 3000 | Optiprime 3000 | Optiprime 3300 | Optiprime 4000      |
| Configuration                                     | -                   | Dual Core DV16        | Dual Core K12  | Quad Core DV10 | Quad Core DV12 | Dual Core K12  | Dual Core K12  | Quad Core DV16      |
| Fuel                                              | -                   | Diesel                |                |                |                |                |                |                     |
| Arrangement                                       | -                   | Stacking              | Stacking       | Parallel       | Parallel       | Parallel       | Parallel       | Parallel + Stacking |
| Hot gas discharge                                 | -                   | Side                  | TOP            | Side           | Top            | Side           | Side           | Side                |
| Options available                                 | -                   | 4                     | 4              | 12             | 1              | 4              | 1              | 3                   |
| Frequency                                         | Hz                  | 50                    | 50             | 50             | 50             | 50             | 50             | 50                  |
| Power Factor                                      | Lagging             | 0.8                   | 0.8            | 0.8            | 0.8            | 0.8            | 0.8            | 0.8                 |
| Voltage                                           | V                   | 415                   |                |                |                |                |                |                     |
| Governing class (As per ISO 8528 Part-V)          | -                   | G3                    |                |                |                |                |                |                     |
| Noise level at 1Mtr                               | dBA                 | 25 dBA Insertion loss |                |                |                |                |                |                     |
| Fuel Consumption* At 100% Load                    | Ltrs/hr             | 494                   | 504            | 522            | 616            | 636            | 616            | 988                 |
| Fuel Consumption* At 75% Load                     | Ltrs/hr             | 374                   | 384            | 394.4          | 505.6          | 468            | 505.6          | 748                 |
| Fuel tank capacity                                | Ltrs                | External fuel tank    |                |                |                |                |                |                     |
| Dry Weight of genset with canopy (approx..)       | Kgs                 | 26400                 | 36500          | 16300          | 35040          | 37500          | 37500          | 52800               |
| Overall dimensions of Canopy in mm <sup>s</sup>   | Length              | 6100                  | 6100           | 4130           | 7606           | 6100           | 4303           | 6100                |
|                                                   | Width               | 2438                  | 2438           | 3170           | 6340           | 4896           | 4244           | 4876                |
|                                                   | Height w/o silencer | 5792                  | 5792           | 2154           | 2575           | 2896           | 2819           | 5792                |
| Electrical Battery Starting Voltage (Single core) | V                   | 24                    |                |                |                |                |                |                     |

## SINGLE CORE ENGINE

|                                                      |      |                  |            |             |             |            |            |            |
|------------------------------------------------------|------|------------------|------------|-------------|-------------|------------|------------|------------|
| Engine Model                                         | -    | DV16ETA G4       | 12K4300-E1 | DV10ETA 4G2 | DV12ETA 4G2 | 12K4300-E2 | 12K4300-E2 | DV16ETA G3 |
| Rated output<br>(Prime Power rating as per ISO 3046) | kW   | 1089             | 1090       | 561.1       | 1294        | 1294       | 1294       | 889        |
|                                                      | HP   | 1460             | 1482       | 763         | 900.6       | 1760       | 1760       | 1210       |
| No. of cylinder                                      | Nos  | 16               | 12         | 10          | 12          | 12         | 12         | 16         |
| Cubic capacity                                       | Ltrs | 31.84            | 51.72      | 19.9        | 23.88       | 51.72      | 51.72      | 31.84      |
| Bore x Stroke                                        | mm   | 130 x 150        | 170 x 190  | 130 x 150   | 130 x 150   | 170 x 190  | 170 x 190  | 130 x 150  |
| Rated Speed                                          | RPM  | 1500             |            |             |             |            |            |            |
| Aspiration                                           | -    | TA               |            |             |             |            |            | 180        |
| Lube Oil change period                               | -    | 500 Hrs / 1 Year |            |             |             |            |            |            |
| Lube oil Sump Capacity (Max)                         | Ltrs | 150              | 285        | 50          | 73          | 285        | 285        | 150        |
| Coolant Capacity of System                           | Ltrs | 180              | 355        | 81.7        | 173.9       | 355        | 355        | 180        |

## SINGLE CORE ALTERNATOR

|                                                 |     |                                              |  |  |  |  |  |  |
|-------------------------------------------------|-----|----------------------------------------------|--|--|--|--|--|--|
| Insulation Class                                | -   | Class H                                      |  |  |  |  |  |  |
| Max Voltage Dip at Full Load 0.8 pf Lag         | sec | <20%                                         |  |  |  |  |  |  |
| max time to built up rated voltage at rated rpm | sec | <2 sec provided engine reach the rated speed |  |  |  |  |  |  |

## SYNCHRONIZATION PANEL

|                                     |   |                      |  |  |  |  |  |  |
|-------------------------------------|---|----------------------|--|--|--|--|--|--|
| Sync Controller Model <sup>ss</sup> | - | KG1500               |  |  |  |  |  |  |
| Incoming Breaker                    | - | Yes - Standard Scope |  |  |  |  |  |  |
| Outgoing breaker                    | - | Additional Scope     |  |  |  |  |  |  |

Notes:

Prime Rating at rated RPM (as per ISO 8528) | \*5% tolerance applicable as per ISO 8528 on fuel consumption : Diesel conforming to IS 1460 and Specific gravity of diesel = 0.845 : The effect of the fuel quality should also take into account on performance. i.e. Methane %: Min 88% & Calorific Value of Fuel: Min 8500 Kcal/m<sup>3</sup> | # Overload power for PRP applications is restricted, Availability of Overload Power for PRP application will be dependent on operating profile. Consult factory for details.

# TECHNICAL SPECIFICATIONS

## OPTIPRIME 5000 kVA - 12000 kVA

### GENSET

|                                                   |                     |                       |                |                |                   |                |                      |                |                |
|---------------------------------------------------|---------------------|-----------------------|----------------|----------------|-------------------|----------------|----------------------|----------------|----------------|
| Prime Rating at rated rpm (as per ISO 8528)       | kVA                 | 5000                  | 5000           | 6000           | 6600 <sup>#</sup> | 8000           | 8000                 | 10000          | 12000          |
|                                                   | kW                  | 4000                  | 4000           | 4800           | 5280              | 6400           | 6400                 | 8000           | 9600           |
| Genset Model                                      | -                   | Optiprime 5000        | Optiprime 5000 | Optiprime 6000 | Optiprime 6600    | Optiprime 8000 | Optiprime 8000       | Optiprime 8000 | Optiprime 8000 |
| Configuration                                     | -                   | Quad Core DV16        | Quad Core K12  | Quad Core K12  | Quad Core K12     | Octacore DV16  | Quad Core K12 (2026) | Octacore DV16  | Octacore K12   |
| Fuel                                              | -                   | Diesel                | Diesel         | Diesel         | Diesel            | Diesel         | Diesel               | Diesel         | Diesel         |
| Arrangement                                       | -                   | Parallel + Stacking   |                |                |                   |                |                      |                |                |
| Hot gas discharge                                 | -                   | Side                  |                |                |                   |                |                      |                |                |
| Options available                                 | -                   | 2                     | 3              | 3              | 3                 | 4              | 4                    | 3              | 1              |
| Frequency                                         | Hz                  | 50                    |                |                |                   |                |                      |                |                |
| Power Factor                                      | Lagging             | 0.8                   |                |                |                   |                |                      |                |                |
| Voltage                                           | V                   | 415                   |                |                |                   |                |                      |                |                |
| Governing class (As per ISO 8528 Part-V)          | -                   | G3                    |                |                |                   |                |                      |                |                |
| Noise level at 1Mtr                               | dBA                 | 25 dBA Insertion loss |                |                |                   |                |                      |                |                |
| Fuel Consumption* At 100% Load                    | Ltrs/hr             | 988                   | 1008           | 1272           | 1272              | 1592           | -                    | 1976           | 1976           |
| Fuel Consumption* At 75% Load                     | Ltrs/hr             | 748                   | 768            | 936            | 936               | 1240           | -                    | 1496           | 1496           |
| Fuel tank capacity                                | Ltrs                | External fuel tank    |                |                |                   |                |                      |                |                |
| Dry Weight of genset with canopy (approx..)       | Kgs                 | 52800                 | 73000          | 75000          | 75000             | 105600         | 75000                | 105600         | 150000         |
| Overall dimensions of Canopy in mm <sup>§</sup>   | Length              | 6100                  | 6100           | 6100           | 6100              | 11410          | 7606                 | 11410          | 7606           |
|                                                   | Width               | 4876                  | 4876           | 4876           | 4876              | 4560           | 2560                 | 4560           | 4244           |
|                                                   | Height w/o silencer | 5792                  | 5792           | 5792           | 5792              | 5040           | 6211                 | 5040           | 6211           |
| Electrical Battery Starting Voltage (Single core) | V                   | 24                    |                |                |                   |                |                      |                |                |

### SINGLE CORE ENGINE

|                                                      |      |                  |            |            |            |            |                   |            |            |
|------------------------------------------------------|------|------------------|------------|------------|------------|------------|-------------------|------------|------------|
| Engine Model                                         | -    | DV16ETA G4       | 12K4300-E1 | 12K4300-E2 | 12K4300-E2 | DV16ETA G3 | 12K4300-E3 (2026) | DV16ETA G4 | 12K4300-E2 |
| Rated output<br>(Prime Power rating as per ISO 3046) | kW   | 1089             | 1090       | 1294       | 1294       | 889        | 1730              | 1089       | 1294       |
|                                                      | HP   | 1460             | 1482       | 1760       | 1760       | 1210       | 2320              | 1460       | 1760       |
| No. of cylinder                                      | Nos  | 16               | 12         | 12         | 12         | 16         | 12                | 16         | 12         |
| Cubic capacity                                       | Ltrs | 31.84            | 51.72      | 51.72      | 51.72      | 31.84      | 51.72             | 31.84      | 51.72      |
| Bore x Stroke                                        | mm   | 130 x 150        | 170 x 190  | 170 x 190  | 170 x 190  | 130 x 150  | 130 x 150         | 130 x 150  | 170 x 190  |
| Rated Speed                                          | RPM  | 1500             |            |            |            |            |                   |            |            |
| Aspiration                                           | -    | TA               |            |            |            |            |                   |            |            |
| Lube Oil change period                               | -    | 500 Hrs / 1 Year |            |            |            |            |                   |            |            |
| Lube oil Sump Capacity (Max)                         | Ltrs | 150              | 285        | 285        | 285        | 150        | 285               | 150        | 285        |
| Coolant Capacity of System                           | Ltrs | 180              | 355        | 355        | 355        | 180        | 355               | 180        | 355        |

### SINGLE CORE ALTERNATOR

|                                                 |     |                                              |  |  |  |  |  |  |  |
|-------------------------------------------------|-----|----------------------------------------------|--|--|--|--|--|--|--|
| Insulation Class                                | -   | Class H                                      |  |  |  |  |  |  |  |
| Max Voltage Dip at Full Load 0.8 pf Lag         | sec | <20%                                         |  |  |  |  |  |  |  |
| max time to built up rated voltage at rated rpm | sec | <2 sec provided engine reach the rated speed |  |  |  |  |  |  |  |

### SYNCHRONIZATION PANEL

|                                       |   |                      |  |  |  |  |  |  |  |
|---------------------------------------|---|----------------------|--|--|--|--|--|--|--|
| Sync Controller Model <sup>\$\$</sup> | - | KG1500               |  |  |  |  |  |  |  |
| Incoming Breaker                      | - | Yes - Standard Scope |  |  |  |  |  |  |  |
| Outgoing breaker                      | - | Additional Scope     |  |  |  |  |  |  |  |

Notes:  
^ These weight are for handling & transportation only, ±5% tolerance apply | \$ Above specifications/dimentions are subject to change without prior notice due to continuous technical development. It may vary depending on customer requirement and customizations required. Efficiency of Alternator as per standards IEC:60034-1 | \$\$ For operation of outgoing breaker higher version of Synchronization controller is required | For Site Conditions other than standard operating conditions consult Kirloskar Oil Engines Ltd.



# BEYOND EFFICIENCY

A Closer Look at Cutting-Edge Technology

Top Mounted Radiator



Low Emission



500 Hours Lube Oil  
Change Period



Efficient CRDi System



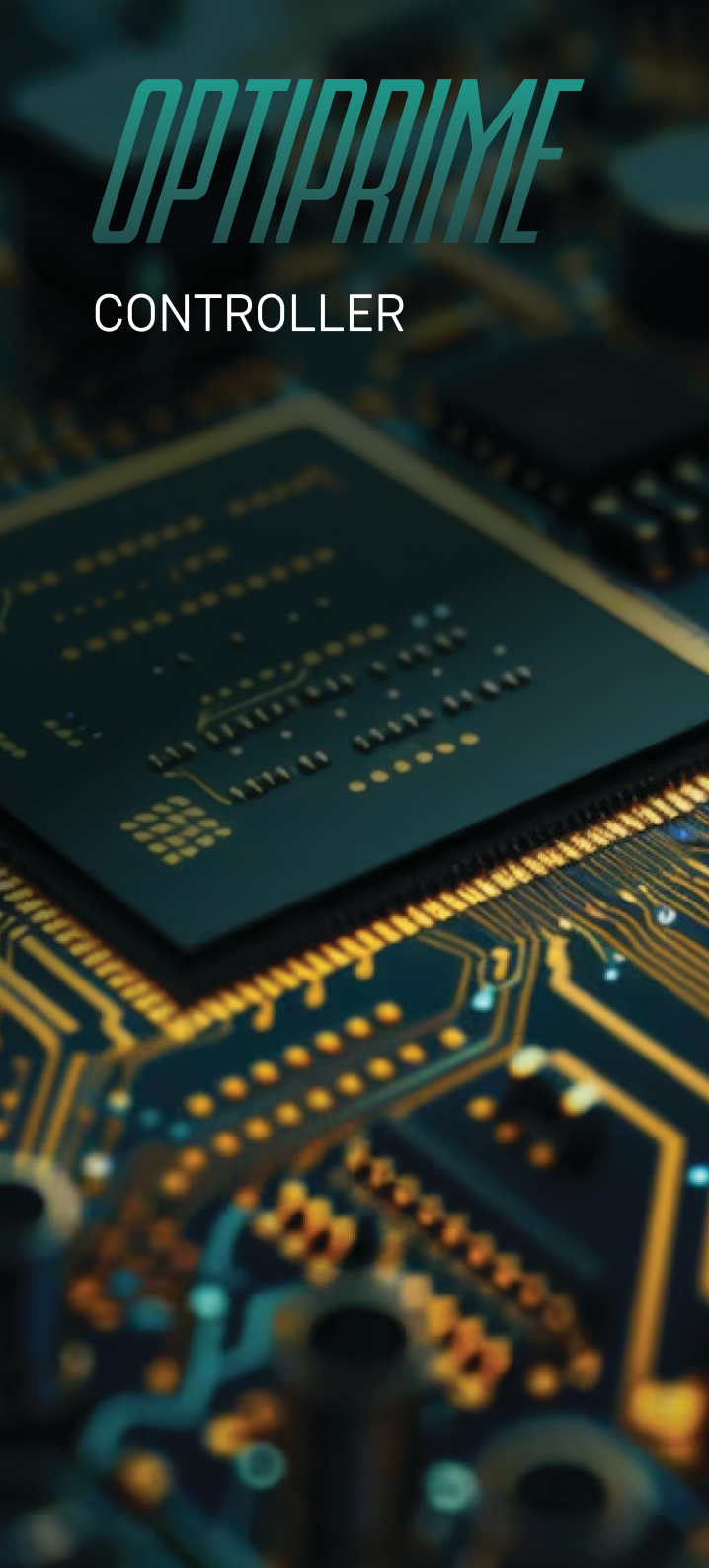
Compact, Robust  
and Efficient



Microprocessor Based Controller

Graphical LCD Display

Advanced Monitoring and Diagnostics



# OPTIPRIME

## CONTROLLER

# THE BRAIN BEHIND OUR POWER SYSTEMS

Multi-Core operation for superior performance and maximizing efficiency

### HMI and SCADA Integration

Provides a user - friendly interface for local and remote monitoring and control, as well as seamless integration with BMS and DMS systems

### Fast Synchronization

Enables rapid synchronization of incoming gensets to the bus, minimizing downtime and disturbances

### Fault Tolerance

Incorporates redundancy measures and fail-safe mechanisms to ensure high availability and prevent single points of failure

### Zonal Centralized Control

Engineered design for domain centralized control to ensure seamless transition between zonal and Core control system ensuring inherent redundancy

### CAN-based

Communication Utilizes a robust CAN bus network for seamless communication between the controller and generator components

### Adaptive Control

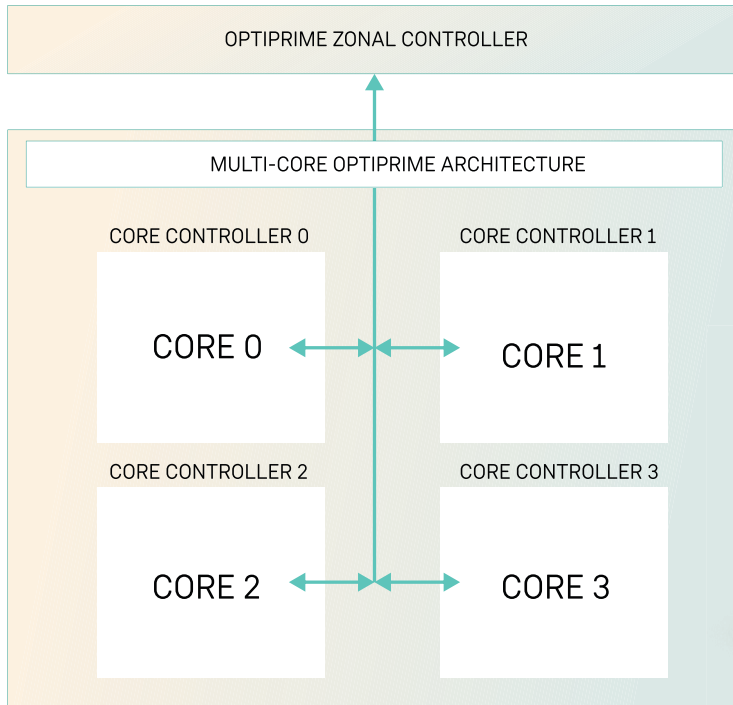
Utilizes AI-based optimization and predictive control to adapt to varying load conditions and optimize efficiency

### Efficient Load Sharing

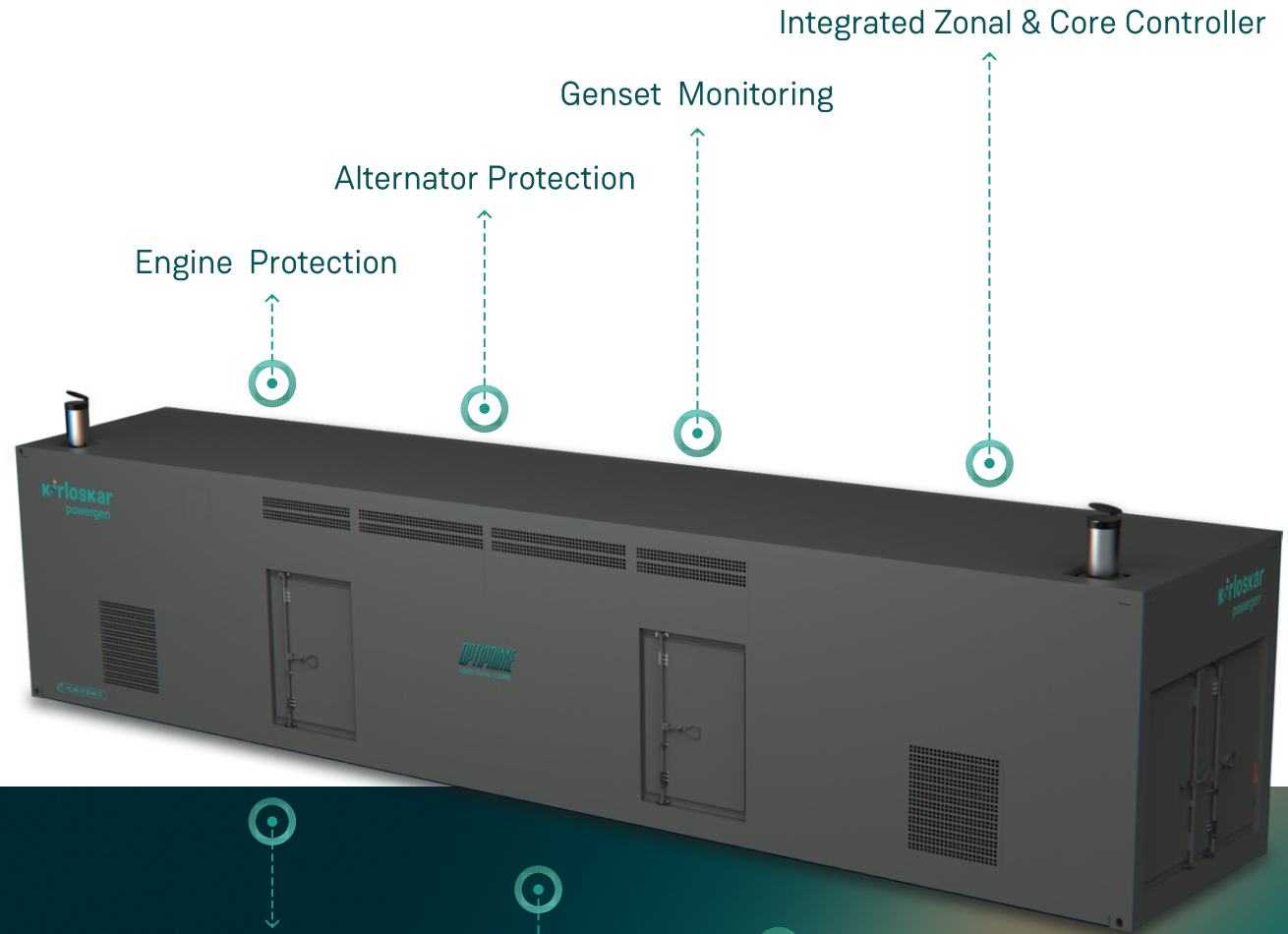
Employs advanced algorithms for precise load sharing between gensets, ensuring optimal fuel consumption and performance

# MULTI-CORE OPERATIONS

TAILOR MADE SOLUTION DRIVEN BY KIRLOSKAR POWERGEN



- Highly reliable OPTIPRIME Controller handles multi core operations driven by individual core controllers.
- Controller handles multiple control loops (Speed, Voltage, Phase Sync ) driving superior performance.



Breaker Monitoring

In-Built Load Sharing Module

Run-Up Synchronization

In-Built Neutral Interlocking Logic



# MULTI-CORE : INNOVATION

## COMBINED WITH OPTIMAL EFFICIENCY

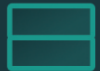
Multiple configuration options available  
based on customer and site requirements



Series



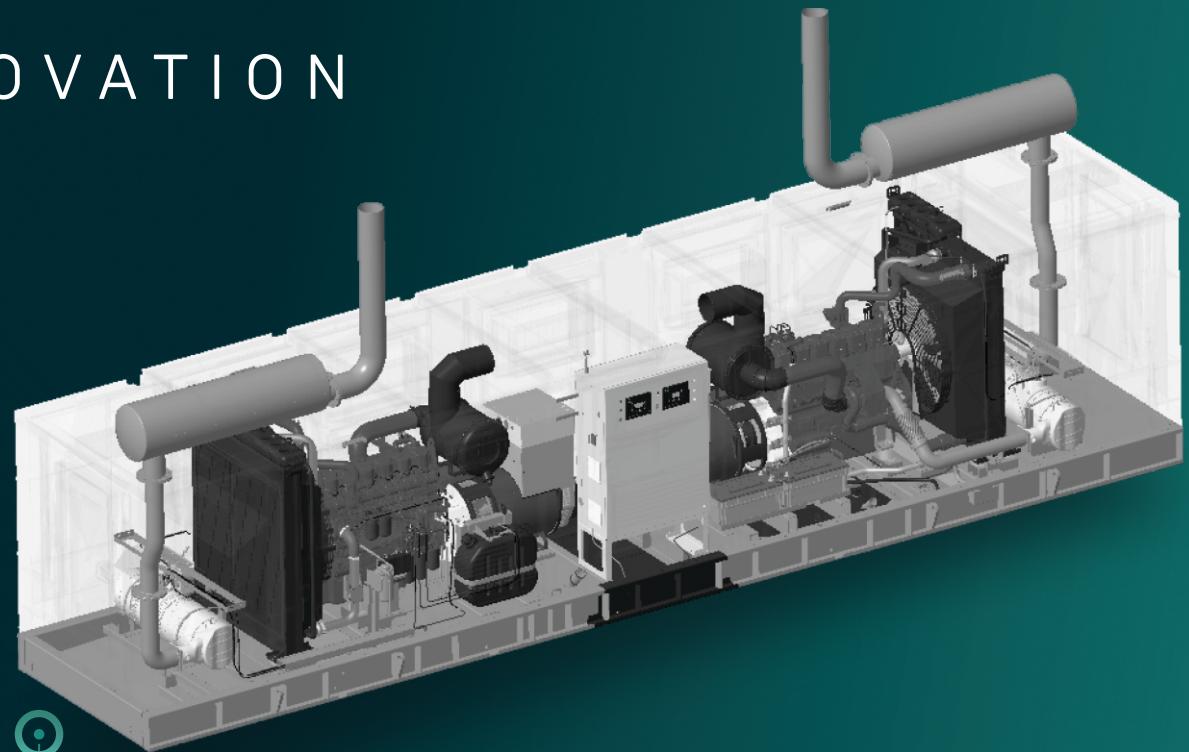
Parallel



Stack

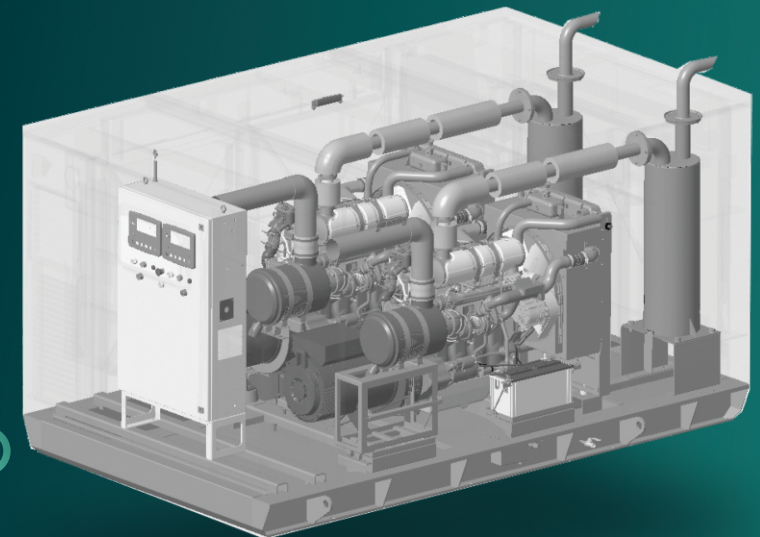


L - Shape



SERIES

PARALLEL





## PROJECT SOLUTION

1000 kVA - 12000 kVA

Kirloskar Powergen's Project Solutions offers comprehensive suite of services, encompassing end-to-end engineering solutions tailored to meet diverse client requirements.

This includes product customization, site-specific adaptations, intricate design and modification capabilities, seamless system integration and robust MEP solutions. Driven by a commitment to delivering turnkey solutions, Kirloskar Powergen empowers customers to personalize their products, ensuring alignment with their unique operational needs and project specifications.



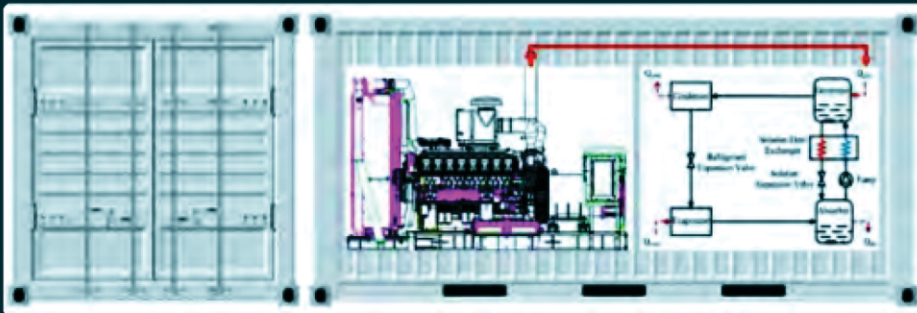


# OPTIPRIME Trigeneration Series

Kirloskar's OPTIPRIME Trigeneration Series delivers a revolutionary solution for businesses with critical HVAC loads, offering uninterrupted power and cooling while significantly reducing diesel consumption. By integrating a trigeneration cycle within the genset, OPTIPRIME allows for downsizing your DG, providing rapid startup times and seamless Automatic Load Transfer / Auto Mains Failure (AMF) to ensure instant power and cooling during outages.

The innovative waste heat recovery system powers grid-independent absorption cooling, extending UPS runtime and optimizing chiller performance, all while maintaining stable and efficient HVAC support for sensitive systems like server rooms.

This prime-rated, standby-ready solution activates in seconds, providing both power and cooling, eliminating thermal build up and maximizing operational uptime, making it the ideal choice for businesses demanding reliability and efficiency.



## SUSTAINABILITY

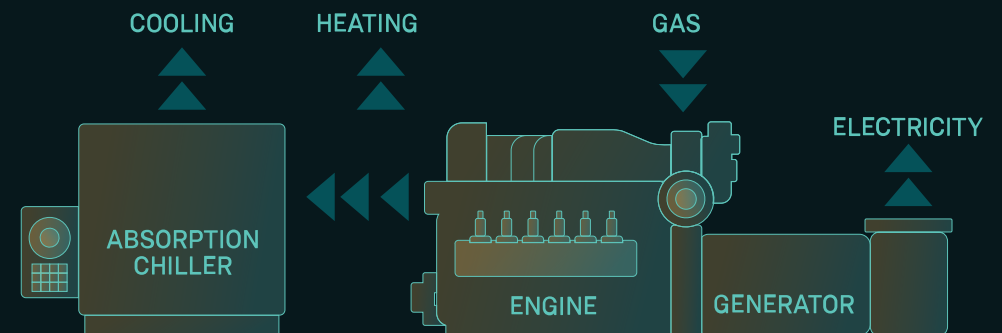


### ECONOMIC ADVANTAGES

- 30-40% reduction in fuel costs
- Up to 50% savings on electricity costs for cooling

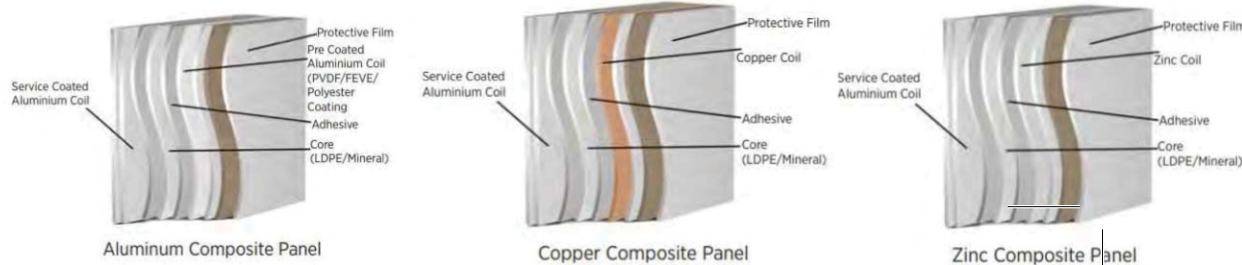
### ENVIRONMENTAL BENEFITS

- 30-50% reduction in CO2 emissions
- Supports ESG & Green Building compliance
- A step towards Net Zero energy goals
- Payback within 1.5 to 4 years





# THE MOST ADVANCED MATERIALS FOR ACOUSTICS & HAZARD MANAGEMENT



## UNMATCHED NOISE ATTENUATION

Our composite material offers clear advantages over traditional metal sheets by reducing noise through the combination of materials with different densities and textures.

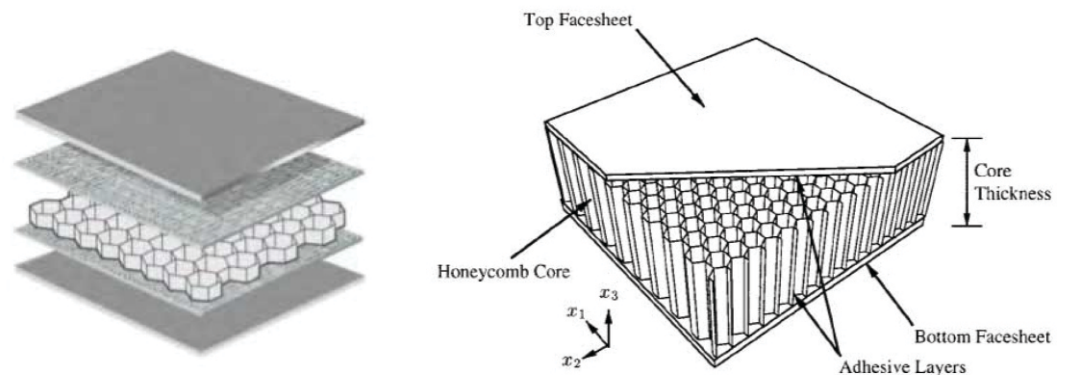
Our panels absorb and dissipate sound energy across a wide frequency range, effectively trapping sound waves and preventing them from travelling further.

This noise reduction is achieved through layered materials within the panels that act as both sound barriers and absorbers.

## HONEYCOMB PANEL FOR UNMATCHED FIRE SAFETY

The unmatched strength of honeycomb panels, particularly aluminium honeycomb panels is a defining characteristic that sets them apart as a superior choice for a wide array of installations and applications. Their unique hexagonal core significantly delays fire spread, maximizing evacuation time, and they are inherently non-combustible. This combination of strength and fire resistance, coupled with their lightweight nature, is crucial in aerospace, metro coaches, and theaters.

We utilize this technology to provide our customers with custom fire-proof power solutions, ensuring their safety and minimizing risk.



# NEXT-GEN POWER FOR DATA CENTRES

Data centres are the backbone of the digital world, demanding uninterrupted power, high efficiency, and seamless integration. Our Optiprime Series—an advanced multicore power generation system designed for superior performance, unmatched efficiency, and seamless integration with data centre infrastructure.

## Scalability & Load Flexibility

Engines turn on/off based on demand, ensuring efficiency.

## Lower Cost & Compact Footprint

Factory-fitted synchronization, lowest cost of ownership.

## Fuel Efficient & Redundant

Optimized load sharing, fail-safe design.

## Industry-Leading Compact Design

Maximized power density, smallest footprint.

## Global Emission Compliance

Meets CPCB IV+, EURO V, and Tier IV Final standards.

## Alternate Fuels Ready

Available in Natural Gas, Hydrogen, and other alternatives.

# POWERING YOUR DATA CENTRE NEEDS

| OPTIPRIME MODEL    | KEY FEATURE                                              |
|--------------------|----------------------------------------------------------|
| 640 kVA Dual Core  | Ideal for data centres with footprint constraints        |
| 1000 kVA Dual Core | A marvel of engineering for high reliability             |
| 2500 kVA Dual Core | Designed from the ground up for large-scale data centres |
| 6600 kVA Quad Core | The ultimate solution for high-density power demands     |



# FUTURE PROOFING YOUR DATA CENTRES

Waste Heat Recovery & Trigenation –  
Convert waste heat into power & cooling.

AI-driven Remote Monitoring &  
Predictive Maintenance.

Seamless Integration with  
BMS, UPS & switchgear.

Up to 50% reduction in CO<sub>2</sub> & NO<sub>x</sub>  
emissions.

Supports ESG compliance &  
Net Zero targets.

Maximized efficiency up to  
85% with Trigenation.

## PERFECT FOR LARGE-SCALE DATA CENTERS

| DATA CENTRE LOAD | OPTIPRIME MODEL | COOLING CAPACITY (TR) |
|------------------|-----------------|-----------------------|
| Data Centre Load | Optiprime 2500  | 600-600 TR            |
| 1-5 MW           | Optiprime 5000  | 800-1000 TR           |
| 5-10 MW          | Optiprime 6600  | 1000-2000 TR          |

6600 KVA - INDUSTRY FIRST QUAD CORE SYSTEM

BEST-IN-CLASS NOISE ATTENUATION & FIRE SAFETY

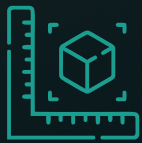
GLOBAL EMISSION COMPLIANCE - CPCB IV+, EURO V, TIER IV FINAL



# OPTIPRIME

WORLD'S SMALLEST  
1000 kVA GENSET

## LOWEST FOOTPRINT



Length : 3400 mm  
Width : 2400 mm  
Height : 2900 mm



## BENEFITS

- World's most compact footprint
- Easy to handle
- Modular Scalability for Future Growth
- Robust Redundancy for Uninterrupted Performance
- Engineered for Better sound attenuation
- Seamless Integration with Building Management Systems
- Advanced Remote Monitoring
- Visually Compelling Enclosure

# ENERGY MANAGEMENT SYSTEM

OPTIPRIME offers state of the art control system which is compatible with large Projects, Building Management Systems, SCADA and can be integrated seamlessly with Battery Storage Systems

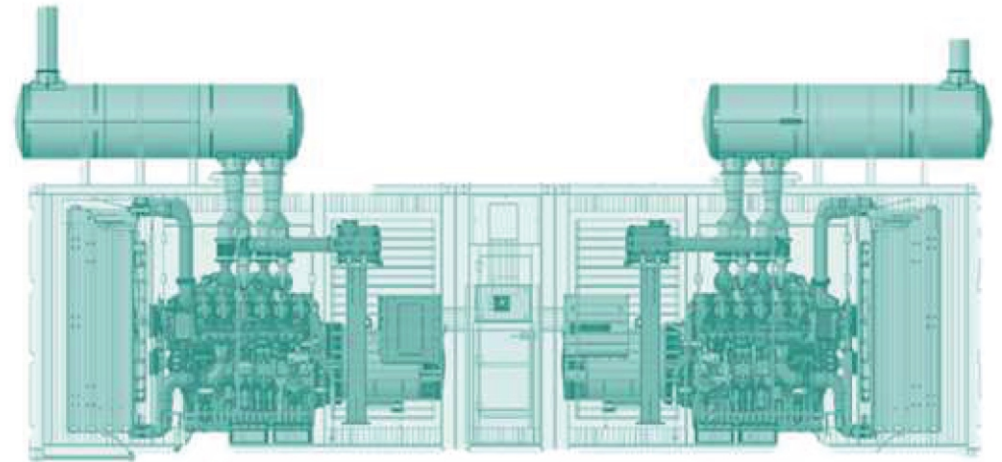


Advanced OPTIPRIME Control System -> Integrates with your DCMS/BMS/EMS



Integrated Battery Energy Storage System -> Custom built to your requirement

Multi-Core patented hybrid technology



## OPTIPRIME: The Complete turnkey solution

- Customized engineered solution
- Complete aftermarket service support with multiple service solution contract options available
- Installation & Commissioning
- Exhaust stack & Sync panel



## Reduction in Total Cost of Ownership

- Backed by Kirloskar warranty
- Improved efficiency at partial loads
- Better fuel consumption
- Leverage indigenized parts

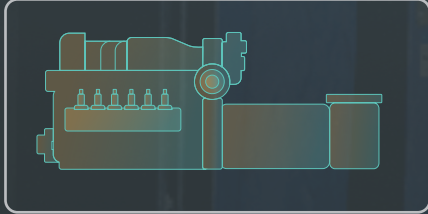


## Increased Flexibility through Hybrid ESS + ICE

- Power redundancy: N+1, 2N & 2N+1
- Compact footprint
- Enhance Reliability
- Ease of handling and transportation
- Fast Paralleling

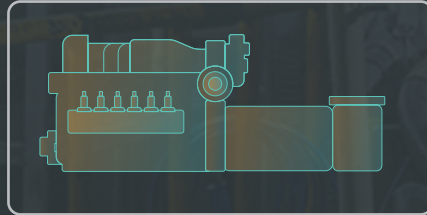
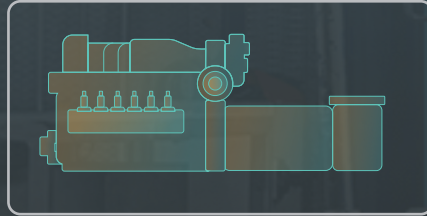


# Customized Scalable Solutions



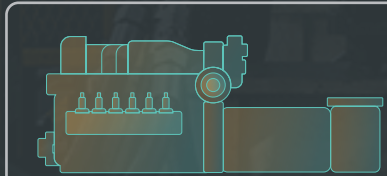
**250 kVA**

(SINGLE CORE-6K ENGINE)



**500 kVA**

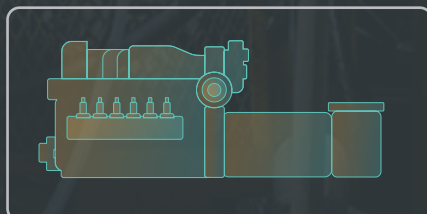
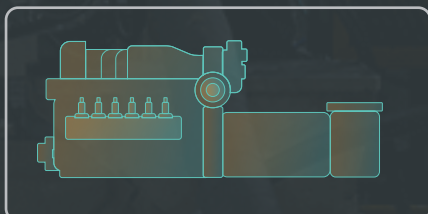
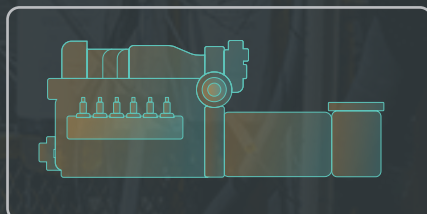
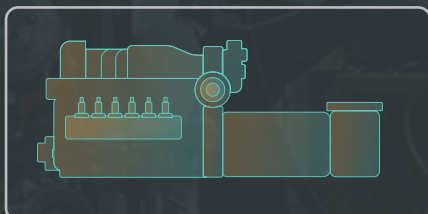
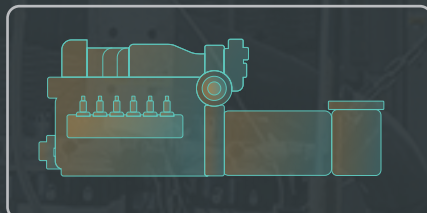
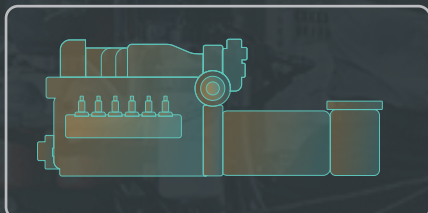
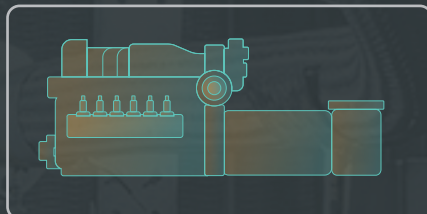
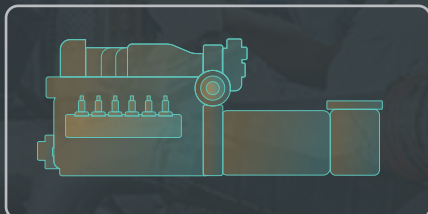
(DUAL CORE-6K ENGINE)



**1000 kVA**

(QUAD CORE-6K ENGINE)





Manufacture your  
genset with our  
Multi-core Technology  
and Electronics

**2000 kVA**

(OCTA CORE-6K ENGINE)

# CUSTOMER TESTIMONIALS

## REAL ESTATE

Kirloskar Powergen's 1000 kVA OPTIPRIME system delivered exceptional reliability and fuel efficiency. Their seamless process, from expert guidance to robust after sales support, was impressive. OPTIPRIME technology has significantly improved our operations and cost savings. We highly recommend Kirloskar Powergen.

## HOTEL BUSINESS

We needed a dependable 400 kVA backup, and Kirloskar Powergen was able to cater our needs. Honestly it just works. Fuel efficiency is good, and their team walked us through all the technicalities and provided sales & service support. When you have a power need, you want someone who gets it done right. Kirloskar Powergen did.

## HEALTH CARE

In a hospital setting, power reliability isn't a luxury, it's a necessity. We chose Kirloskar Powergen's 500 kVA OPTIPRIME system because we needed a brand we could trust and rely on for dependable backup power. When the power goes out, it kicks in instantly. That's what matters in healthcare.



# EFFICIENCY. INTEGRATED

## A KIRLOSKAR PROMISE



### 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



### SERVICE

- India's widest service dealer network
- Kirloskar 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



### 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



### 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.



### NETWORK

- Consistent, reliable & long-established
- 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



### 24x7

- 24x7 operational customer care center
- 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

EFFICIENT



# KIRLOSKAR POWERGEN PRODUCT PORTFOLIO

## 2.8 kW - 12000 kVA

| Kirloskar Powergen Advanced Manufactured Gensets |         |                |                                   |        |                |                  |                                    |        |                |                      |  |
|--------------------------------------------------|---------|----------------|-----------------------------------|--------|----------------|------------------|------------------------------------|--------|----------------|----------------------|--|
| MOBILE & STATIONARY                              |         |                | HHP, OPTIPRIME & CUSTOM SOLUTIONS |        |                |                  | UHHP, OPTIPRIME & CUSTOM SOLUTIONS |        |                |                      |  |
| kVA                                              | Fuel    | Emission Norms | kVA                               | Fuel   | Emission Norms | Model No.        | kVA                                | Fuel   | Emission Norms | Model No.            |  |
| 2.8 kW                                           | Petrol  | CPCBIV+        | 125 kVA                           | Diesel | CPCBIV+        | Dual Core 4R810  | 2500 kVA                           | Diesel | Stack          | Dual Core DV16       |  |
| 4 kW                                             | Petrol  | CPCBIV+        | 250 kVA                           | Diesel | CPCBIV+        | Dual Core 4K1080 | 2500 kVA                           | Diesel | Stack          | Dual Core K12        |  |
| 5 kW                                             | Petrol  | CPCBIV+        | 320 kVA                           | Diesel | CPCBIV+        | Dual Core 6K1080 | 2500 kVA                           | Diesel | CPCBIV+/Stack  | Quad Core DV10       |  |
| 3.5 kVA                                          | Diesel  | CPCBIV+        | 400 kVA                           | Diesel | CPCBIV+        | Dual Core 6K1080 | 3000/3300 kVA                      | Diesel | Stack          | Dual Core K12        |  |
| 5 kVA                                            | Diesel  | CPCBIV+        | 500 kVA                           | Diesel | CPCBIV+        | Dual Core 6K1080 | 3000 kVA                           | Diesel | CPCBIV+/Stack  | Quad Core DV12       |  |
| 7.5kVA                                           | Diesel  | CPCBIV+        | 500 kVA HD                        | Diesel | CPCBIV+        | Dual Core SL90   | 4000 kVA                           | Diesel | CPCBIV+/Stack  | Octacore D15L6       |  |
| 10 kVA                                           | Diesel  | CPCBIV+        | 500 kVA HD                        | Diesel | CPCBIV+        | Quad Core 4K1080 | 4000 kVA                           | Diesel | Stack          | Quad Core DV16       |  |
| 15 kVA                                           | Diesel  | CPCBIV+        | 640 kVA                           | Diesel | CPCBIV+        | Dual Core SL90   | 5000 kVA                           | Diesel | Stack          | Quad Core DV16       |  |
| 15 kVA                                           | Ethanol | CPCBIV+        | 700 kVA                           | Diesel | CPCBIV+        | Dual Core SL90   | 5000 kVA                           | Diesel | Stack          | Quad Core K12        |  |
| 12.5 kVA                                         | PNG     | CPCBIV+        | 1000/1010 kVA                     | Diesel | CPCBIV+/Stack  | Dual Core D15L6  | 6000 / 6600 kVA                    | Diesel | Stack          | Quad Core K12        |  |
| 15 kVA                                           | PNG     | CPCBIV+        | 1000/1010 kVA                     | Diesel | CPCBIV+/Stack  | Quad Core 6K     | 8000 kVA                           | Diesel | Stack          | Quad Core K12 (2026) |  |
| NATURAL GAS                                      |         |                | 1000/1010 kVA                     | PNG    | CPCBIV+/Stack  | Dual Core DV12   | 10000 kVA                          | Diesel | Stack          | Octacore DV16 (2026) |  |
| 25/30 kVA                                        | PNG     | CPCBIV+        | 1000/1010 kVA                     | PNG    | CPCBIV+/Stack  | Quad Core DV8    | 12000 kVA                          | Diesel | Stack          | Octacore K12 (2026)  |  |
| 62.5 kVA                                         | PNG     | CPCBIV+        | 2000 kVA                          | PNG    | CPCBIV+/Stack  | Quad Core DV12   |                                    |        |                |                      |  |
| 82.5 kVA                                         | PNG     | CPCBIV+        | 1250 kVA                          | Diesel | CPCBIV+/Stack  | Dual Core DV10   |                                    |        |                |                      |  |
| 125 kVA                                          | PNG     | CPCBIV+        | 1250 kVA                          | Diesel | CPCBIV+/Stack  | Quad Core SL90   |                                    |        |                |                      |  |
| 250 kVA                                          | PNG     | CPCBIV+        | 1400 kVA                          | Diesel | CPCBIV+/Stack  | Quad Core SL90   |                                    |        |                |                      |  |
| 320 kVA                                          | PNG     | CPCBIV+        | 1500 kVA                          | Diesel | CPCBIV+/Stack  | Dual Core DV12   |                                    |        |                |                      |  |
| 500 kVA                                          | PNG     | CPCBIV+        | 2000 kVA                          | Diesel | CPCBIV+/Stack  | Dual Core DV16   |                                    |        |                |                      |  |
|                                                  |         |                | 2000 kVA                          | Diesel | CPCBIV+/Stack  | Quad Core D15L6  |                                    |        |                |                      |  |

^ Tolerances Apply: # With 0.845 Specific Gravity of diesel (5% Tolerance) || \$ These weight are for handling & transportation only, ±5% tolerance apply || \* Efficiency of Alternator as per standards IEC 60034-1  
|| \*\* For operation of outgoing breaker higher version of Synchronization controller is required || For Site Conditions other than standard operating conditions consult Kirloskar Oil Engines Ltd. || For Site specific layout consult Kirloskar Oil Engines Ltd to ammend the Genset alignment/configuration

# KIRLOSKAR POWERGEN PRODUCT PORTFOLIO

## 2.8 kW - 12000 kVA



### Kirloskar Powergen Advanced Manufactured Gensets

| kVA | Fuel / Model No. | Emission Norms |
|-----|------------------|----------------|
|-----|------------------|----------------|

#### MULTI-CORE PRIME RATINGS WITH RESTRICTED OVERLOAD

|          |                 |         |
|----------|-----------------|---------|
| 500 kVA  | Dual Core 6K    | CPCBIV+ |
| 700 kVA  | Dual Core SL90  | CPCBIV+ |
| 750 kVA  | Tri Core 6K     | CPCBIV+ |
| 1010 kVA | Quad Core 6K    | Stack   |
| 1050 kVA | Tri Core SL90   | Stack   |
| 1100 kVA | Dual Core D15L6 | Stack   |
| 1400 kVA | Quad Core SL90  | Stack   |
| 1650 kVA | Tri Core D15L6  | Stack   |
| 2250 kVA | Quad Core D15L6 | Stack   |

#### HYBRID GENSETS

|                |                      |         |
|----------------|----------------------|---------|
| 10 kVA + 4 kW  | Diesel+Solar+Battery | CPCBIV+ |
| 20 kVA + 8 kW  | Diesel+Solar+Battery | CPCBIV+ |
| 30 kVA + 12 kW | Diesel+Solar+Battery | CPCBIV+ |
| 40 kVA + 16 kW | Diesel+Solar+Battery | CPCBIV+ |

### Kirloskar Powergen Gensets

| kVA | Fuel | Emission Norms |
|-----|------|----------------|
|-----|------|----------------|

#### ALTERNATE FUEL

|          |            |         |
|----------|------------|---------|
| 58.5 kVA | H2: CNG    | CPCBIV+ |
| 15 kVA   | Ethanol    | CPCBIV+ |
| 120 kVA  | H2: Diesel | CPCBIV+ |
| 20 kVA   | IBA        | CPCBIV+ |

#### LHP

|            |        |         |
|------------|--------|---------|
| 7.5 kVA    | Diesel | CPCBIV+ |
| 10 kVA     | Diesel | CPCBIV+ |
| 15 kVA     | Diesel | CPCBIV+ |
| 20 kVA     | Diesel | CPCBIV+ |
| 25 kVA     | Diesel | CPCBIV+ |
| 30 kVA     | Diesel | CPCBIV+ |
| 35 kVA     | Diesel | CPCBIV+ |
| 40 kVA     | Diesel | CPCBIV+ |
| 45 kVA     | Diesel | CPCBIV+ |
| 58.5 kVA   | Diesel | CPCBIV+ |
| 82 kVA     | Diesel | CPCBIV+ |
| 125 kVA    | Diesel | CPCBIV+ |
| 160 kVA    | Diesel | CPCBIV+ |
| 200 kVA    | Diesel | CPCBIV+ |
| 200 kVA HD | Diesel | CPCBIV+ |
| 250 kVA    | Diesel | CPCBIV+ |

| kVA | Fuel | Emission Norms |
|-----|------|----------------|
|-----|------|----------------|

#### MHP

|            |        |         |
|------------|--------|---------|
| 320 kVA    | Diesel | CPCBIV+ |
| 320 kVA HD | Diesel | CPCBIV+ |
| 400 kVA    | Diesel | CPCBIV+ |
| 500 kVA    | Diesel | CPCBIV+ |
| 500 kVA HD | Diesel | CPCBIV+ |
| 625 kVA    | Diesel | CPCBIV+ |
| 625 kVA HD | Diesel | CPCBIV+ |
| 750 kVA    | Diesel | CPCBIV+ |

#### HHP

|               |        |       |
|---------------|--------|-------|
| 1010 kVA      | Diesel | Stack |
| 1250 kVA      | Diesel | Stack |
| 1250 kVA      | Diesel | Stack |
| 1500/1650 kVA | Diesel | Stack |
| 2000 kVA      | Diesel | Stack |
| 2500 kVA      | Diesel | Stack |



ADVANCED MANUFACTURED GENSETS

SHAPING THE FUTURE.  
DELIVERING POWER GLOBALLY.

INGENIOUS DESIGN.  
UNMATCHED PERFORMANCE.

KIRLOSKAR OIL ENGINES LIMITED  
A Kirloskar Group Company

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INDIA



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Fax: +91 (20) 2581 3208, 2581 0209  
Helpline: +91 8806 33 44 33  
koel.sales@kirloskar.com

BETTER  
POWER  
FOR A

*limitless*

TOMORROW

Stamp of  
Authorised  
Representative

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20250926/REV0/DOMESTIC/ Kirloskar powergen\_125-12000 kVA