# Kirloskar Green Gensets

**DV Series** 

Liquid Cooled Silent Gensets

320 to 625 KVA



#### Customized product range :

- Ready to use Generating Sets of the Series available from 320 to 625 kVA.
- Generating sets of the DV Series powered by most efficient Liquid Cooled 4 valve engines.
- DV Series Generating Sets in Multiples are available for synchronization to run in parallel Operations to ensure optimum usage of Generator Set Capacity in various load patterns in place of single large Genset.
- Custom built to ensure your exact power needs.

#### ■ Smart Aesthetics :

- State of the Art Update Competitive Design.
- Compact in size with smaller footprint saves money on Installations / Space.
- Aesthetically Superior and fully integrated weather proof acoustic enclosure.
- Dynamic design with High Quality
   Workmanship acoustics with PU Based UV resistant Powder coating for superior finish and durability.

#### ■ Highest Reliability :

- Superior reliability ensuring Uninterrupted, continuous, Quality power for smooth operation.
- Electronic Governor with Isochronous and Synchronous governing for Reliable, Stable and paralleling Operations.
- Exceedingly rugged and durable design.
- Lower lifecycle costs of ownership.
- Safety against low lube oil, high Coolant temperature, Over Speed, low fuel level and Weak Battery.
- State-of-the-art technology for trouble free operations in low / high ambient temperature, high humidity and high altitude.

#### ■ Unmatched Performance :

- Low fuel consumption ensuring excellent economy.
- Low noise and vibration levels.
- High fuel efficiency at part operating loads.
- Lowest Lubricating oil capacity of lubricating system in its class.
- Long life K-cool super plus coolant for better engine cooling and K-Oil Super for better lubrication and engine life.

#### ■ Environment Friendly :

- The power to preserve save environment and the earth.
- Gensets conform to lower Noise pollution norms as laid down by MOEF/CPCB.
- Engine confirms with the latest stringent MOEF Exhaust Emission norms and International Emission Standards

# Maintenance friendly design, ease of operation :

- Ready to use design.
- Easy serviceability for routine, preventive maintenance, replacements and overhauls.
- Modular design, ensuring lower maintenance cost
- Ensures long maintenance intervals in its class.
- Easy availability of spare parts and services network across the Nation.
- Minimum cost for maintenance, spares and services
- Smart Genset Monitor Control system for closely monitoring, metering and protection of the engine, Genset performance.
- Competitive Annual Maintenance, contracts through Nation wide network of Authorized Service Dealerships.
- Pan India Single Point AMC options.





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#### Standard Features

### ■ Engine



- Efficient Liquid Cooled technology
  - Offering a wide comprehensive range with power output covering from 320 to 625 kVA
  - Available in 8, 10 and 12 cylinder compact configurations
  - Most compact, extremely robust and rugged design.
  - 500 Hrs. of Longer lub-oil change period
  - Lowest fuel consumption in it's class
  - Compliance with latest Emission norms of MOEF
  - Four valve Technology with central Injection system
  - 100% Bio-Diesel compatibility with 100% Power for Lower emissions

#### Alternator



- Kirloskar Green Alternator
- Compact Design with Sealed Bearings for longer life and lesser maintenance
- Best in Class Efficiency
- Positive Voltage built-up
- Special windings to reduce harmonics
- Electronic AVR
- High Short Circuit current capacity upto 300% ensuring controlled regulation even at variable loads
- Epoxy gel coating to suit various environment conditions

#### ■ Control Panel



- State-of-the-art compact Micro-processor based fully configurable Genset Operating, monitoring, metering and protection Control system with LCD Display
- Complete safety for Genset on operating faults
- Real time and 100 event logging facilities for performance monitoring.
- AMF scope in the Controller as standard with Control for Mains and DG set circuit breakers
- User friendly operating systems on Manual, Auto and Test Modes with Touch buttons
- Provision for additional 3 digital inputs and 2 digital outputs
- Compatibility for Remote Monitoring and Remote start stop options

#### Canopy



- Smart, standardized and Dynamic Kirloskar Green Power Ideas modular Design for ease
  of serviceshility
- Aesthetically designed Weather proof, sound proof Acoustic Enclosure meeting stringent and latest MOEF Noise pollution norms
- PU Based powder-coated enclosure, manufactured on high-tech special purpose CNC machines to ensure highest quality on fit, form, finish, function and durability
- Specially designed with adequate air flow to operate at full load, even at 50 deg C air inlet temperature
- Noise and Thermal Insulation material conforms to UL94 HF1 class for flammability
- Green passivated / Black ionized hardware for manufacturing to withstand salt spray and corrosion test as per ASTM B-117
- Designed for Low noise, High reliability, lowest vibrations and user-friendly installations

#### Optional Peripherals



- Auto Mains Failure panel
- Cold starting aid
- Parallel operations and Synchronization of multiple Genset.
- Special air filtration system for dusty atmosphere
- Facility for external agency inspection as per custom and IS Standards
- PMG for non-linear loads
- Power house design support for varying Load Patterns



# **Technical Data Sheet**

### Overall Specifications of DV Series Gensets

## 320 to 625 KVA

### DG Set Specifications

Parameters	Unit	Genset Model						
		KG320 WS2	KG380WS	KG400 WS2	KG500 WS3	KG600 WS3	KG625 WS3	
kVA (kW) Prime Rating at 0.8 PF	kVA(kW)	320 (256)	380 (304)	400 (320)	500 (400)	600 (480)	625 (500)	
Voltage	٧	415	415	415	415	415	415	
Frequency	Hz	50	50	50	50	50	50	
Overall Dimensions with canopy	mm (L×W×H)	5700×2000×2555	5700×2000×2555	5700×2000×2555	6200×2000×2555	6660×2000×2705	6660×2000×2705	
Dry Weight of genset with canopy ( Aprox)	kg.	5750	5850	6000	6655	7500	7500	
Electrical starting system	Volt-DC	24 ( 2 x 12 v)	24 (2 x 12 v)	24 ( 2 x 12 v)	24 ( 2 x 12 v)	24 (2 x 12 v)	24 (2 x 12 v)	
Battery Capacity	Ah	180	180	180	180	180	180	
DG set Noise level asper CPCB Norms	dBA	< 75	< 75	< 75	< 75	< 75	< 75	

## **Engine Specifications**

Parameters	Unit	Engine Model						
		DV8 SR1	DV8 SR2	DV8	DV10	DV12	DV12 SR1	
Rated output ( Prime Rating ) as per ISO 3046	kW(hp)	294 (400)	346 (471)	360 (490)	448(608)	532 (723)	552 (750)	
No. of cylinder	No	8	8	8	10	12	12	
Bore × Stroke	mm	130 × 150	130 × 150	130 × 150	130 × 150	130 × 159	130 × 159	
Aspiration	TA	TA	TA	TA	TA	TA	TA	
Governer / Class		Electronic A1						
SFC at 75% load	(g/Hp-hr)	147*	145*	144*	146*	144*	144*	
SFC at 100% load	(g/Hp-hr)	146*	143*	143*	143*	143*	143*	
Lube oil Consumption	% of SFC	≤ 0.12*	≤ 0.12*	≤ 0.12°	≤ 0.12*	≤ 0.12*	≤ 0.12*	
Lube oil change period	hrs	500	500	500	500	500	500	
Lube oil Sump capacity	Ltrs	41	41	41	45	50	50	

### Alternator Specifications

Parameters	Unit	Alternator Model						
		KG 284 C	KG 354 S1	KG 354 S2	KG 354 MI	354 L1	354 12	
Rating	kVA	320 kVA	380 kVA	400 kVA	500 kVA	600 kVA	625 kVA	
Insulation Class		Н	H	Н	н	Н	н	
Protection	IP	IP23	IP23	IP23	IP23	IP23	IP23	
Time to built up rated voltage at rated RPM	sec	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	
Alternator Efficiency at 100% load	%	93.8	94.1	94.1	94.8	95.5	95.5	
Voltage regulation	%	±1	<u>±</u> 1	±1	±1	±1	±1	
Wave form Distortion at No load and at Non-distorting balance linerar Load	%	< 1.8 & < 4	< 1.8 & < 4	< 1.8 & < 4	< 1.8 & < 4	< 1.8 & < 4	< 1.8 & < 4	

In view of continuous product updation and design changes, all above specifications and dimensions are subject to change without prior notice.

#### Notes:

- Genset ratings are as per ISO 8528 performance class G2.
- 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.
- For the site conditions other than standard operating conditions, consult KOEL for available prime power.
- \*Specific gravity of diesel is considered as 0.845 (+5 % tolerance as per ISO 3046).
- All canopy dimensions have tolerance of ± 50 mm.

