

### **Neutral technical specification 125KVA DG Set (1 Nos)**

<b>Sl. No.</b>	<b>Parameter</b>	<b>Specification</b>	<b>Bidder Specification</b>
1	Genset Rating	125 kVA / 100 kWe	
2	Voltage	415 V	
3	Frequency	50 Hz	
4	Current	174 A	
5	Power Factor	0.8 (Lagging)	
6	Speed	1500 RPM	
7	Engine Model	As per standard	
8	Rated Output	114.7 kW	
9	No. of Cylinders	6	
10	Engine Configuration	Inline	
11	Operating Cycle	4 Stroke	
12	Displacement	7.12 Liters	
13	Bore × Stroke	As per standard	
14	Aspiration	Turbocharged-After cooled (TCA)	
15	Compression Ratio	16.8	
16	Starting System	24 V Electric Start	
17	Overload Capacity	10%	
18	Governing Type / Class	Mechanical / A2	
19	Fuel Type	HSD IS 1460:2005 or latest	
20	Fuel System	Rotary	
21	Fuel Filter Type	Spin-on type with paper element	
22	Fuel Filtration Capacity	5 Micron	
23	Fuel Tank Capacity	250 Liters	
24	Fuel Consumption @ 50% Load	14.54 L/hr	
25	Fuel Consumption @ 75% Load	20.38 L/hr	
26	Fuel Consumption @ 100% Load	27.45 L/hr	
27	Lube Oil Specification	SAE 15W40, API CH4 / CI4 or Better	
28	Lube Oil Consumption	Min. 0.014 L/hr. (0.014% of fuel consumption)	
29	Lube Oil Sump Capacity (Min / Max)	15 L / 18 L	

Sl. No.	Parameter	Specification	Bidder Specification
30	Lube Oil System Capacity	19.8 Liters	
31	Lube Oil Change Interval	500 hrs	
32	Lube Oil Pressure at Rated Load	$\geq 343.3$ kPa	
33	Lube Oil Flow Rate	60 LPM	
34	Cooling System	Water-cooled	
35	Coolant Flow Rate	140 LPM	
36	Total Coolant Capacity	25 Liters	
37	Coolant Operating Temperature	77–94 °C	
38	Max Engine Out Coolant Temp.	105 °C	
39	Intake Air Filter Type	Dry Type	
40	Combustion Air Flow	8.9 m <sup>3</sup> /min	
41	Exhaust Silencer Type	Residential	
42	Exhaust Noise Level @ 1m	< 75 dBA	
43	Max Exhaust Temperature	600 °C	
44	Max Permissible Exhaust Back Pressure	9.99 kPa	
45	Exhaust Gas Flow Rate	0.155 LPS	
46	Alternator Make	Reputed (Stamford / CG / Equivalent)	
47	Alternator Efficiency @ 75% Load	As per OEM	
48	Class of Insulation	Class H	
49	Voltage Regulation	$\pm 1\%$	
50	Max Unbalanced Load (Across Phases)	25%	
51	Phase Configuration	3 Phase	
52	Acoustic Enclosure	CPCB-IV compliant	
53	Genset Overall Dimensions (L × W × H)	As per standard	
54	Genset Dry Weight	As per Standard	
55	Engine Dry Weight	As per Standard	
56	Radiator Weight	As per Standard	

## **Additional Terms and Conditions**

1. Supply shall be on a turnkey basis – The supplier shall be fully responsible for the supply, transportation, installation, and testing, commissioning, and final handover of a fully operational DG set at the designated site.
2. All civil, electrical, exhaust routing, and earthing works related to installation shall be under the supplier's scope in a turnkey contract.
3. Suitable cables for power supply from the alternator to the standard panel and user panel, as per the site requirement, shall be provided by the supplier.
4. The genset shall be supplied with standard accessories, tool kit, operation manual, warranty documents, and basic operator training, wherever applicable.
5. All materials and workmanship shall comply with the relevant IS/IEC standards.
6. The following documents shall be provided with each DG set:
  - Operation & Maintenance (O&M) Manual of Diesel Engine
  - Spare Parts List of Diesel Engine
  - Test Certificate of Diesel Engine
  - Test Certificate of Alternator
7. Service Requirements
  - The manufacturer should have an established after-sales and service network in India.
  - The authorized service partner in India (name and address) must be certified by the manufacturer and mentioned in the quotation.
  - The supplier must indicate the number of similar DG sets installed in reputed organizations across India.
8. Training
  - One-day operator and basic programming training shall be provided at the time of commissioning.
9. Emission Norms Compliance
  - The DG set shall comply with the latest CPCB-IV+ emission standards for air and noise pollution control.
  - The engine and genset must be CPCB-IV+ type-approved by a CPCB-authorized agency.
  - The acoustic enclosure shall meet the permissible noise level limits as per CPCB guidelines.
  - All necessary compliance documentation including type approval, conformity certificates, and test reports shall be submitted along with the supply.

### **Neutral Technical Specification of 15 KVA DG Set (2 Nos)**

SL. No.	Parameter	Specification	Bidder Specification
1	Rating	15 kVA	
2	Rated Power	12 kWe	
3	Frequency	50 Hz	
4	Speed	1500 RPM or Better	
5	Phases	1 Phase	
6	Output Voltage with suitable STD panel	230 V (1 $\phi$ )	
7	Power Factor (Lagging)	0.8 or Better	
8	Current (1 $\phi$ )	65.2 A or Better	
9	Starting System	12 V DC Electrical	
10	Governing Class	A1 or Better	
11	Fuel Tank Capacity	55 Liters or Better	
12	Fuel Type	High Speed Diesel (HSD IS 1460:2005)	
13	Overall Dimensions (L $\times$ W $\times$ H)	Standard (without silencer)	
14	Approximate Weight	Standard	
15	Enclosure Type	IP23	
16	Engine Model	Electric start	
17	No. of Cylinders	3 or Better	
18	Aspiration	Naturally Aspirated	
19	Power Output	20 HP	
20	Bore $\times$ Stroke	As per Standard	
21	Displacement	As per Standard	
22	Fuel Consumption @ 75% Load	2.7 Liters/hour or Better	
23	Fuel Consumption @ 100% Load	3.6 Liters/hour or Better	
24	Lube Oil Specification	SAE15W40 CH4 or Better	
25	Lubrication System Capacity	Max. 6 Liters	
26	Lube Oil Consumption	0.15% of Fuel Consumption	
27	Oil Change Interval	Min.300 hrs (Top-up), 600 hrs (Change)	
28	Radiator Coolant Capacity	Min. 5.5 Liters	
29			
30	Alternator	Stamford/ LS	

SL. No.	Parameter	Specification	Bidder Specification
31	Class of Insulation	Class H	
32	Voltage Regulation	±1%	
33	Max. Unbalanced Load (across phases)	25%	
34	Phase Configuration	1 Phase Only	

### **Additional Terms and Condition**

1. Supply shall be on a turnkey basis – The supplier shall be fully responsible for the supply, transportation, installation, and testing, commissioning, and final handover of a fully operational DG set at the designated site.
2. All civil, electrical, exhaust routing, and earthing works related to installation shall be under the supplier's scope in a turnkey contract.
3. Suitable cables for power supply from the alternator to the standard panel and user panel, as per the site requirement, shall be provided by the supplier.
4. The genset shall be supplied with standard accessories, tool kit, operation manual, warranty documents, and basic operator training, wherever applicable.
5. All materials and workmanship shall comply with the relevant IS/IEC standards.
6. Documentation:  
One complete set of the following documents shall be provided with each DG set:
  - Operation & Maintenance (O&M) Manual of Diesel Engine
  - Spare Parts List of Diesel Engine
  - Test Certificate of Diesel Engine
  - Test Certificate of Alternator
7. Service Requirements:
  - The manufacturer should have an established after-sales and service network in India.
  - The authorized service partner in India (name and address) must be certified by the manufacturer and clearly mentioned in the quotation.
  - The supplier must indicate the number of similar DG sets installed in reputed organizations across India.
8. Training:
  - One day of operator and basic programming training shall be provided at the time of commissioning.
9. Emission Norms Compliance:
  - The DG set shall comply with the latest emission standards prescribed under CPCB-IV+ (Central Pollution Control Board, India – CPCB Phase IV+).

- The diesel generator set shall be compliant with CPCB-IV+ emission norms for air and noise pollution control.
- The acoustic enclosure shall meet noise level limits as per CPCB guidelines.
- Compliance documentation including type approval, conformity certificates, and noise level test reports shall be submitted at the time of delivery.