

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Miscellaneous Application No.46/2024

In

Original Application No.18/2023

Mritunjay Narayan Jha Applicant
Versus
State of UP Respondent

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Respondent

Neeraj Kumar
(Counsel for the Respondent)

Neeraj Kumar

Enrol. No.- D/2106/2005

1103 Nirmal Tower Barakhambha Road

Connaught Place Delhi 110001

Email- Neeraj.enfin@gmail.com

Mob: 9313127275

Place: Delhi

Date:17.11.2024

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Miscellaneous Application No.46/2024

In

Original Application No.18/2023

| | | |
|-----------------------|-------|------------|
| Mritunjay Narayan Jha | | Applicant |
| Versus | | |
| State of UP | | Respondent |

Preliminary Reply filed on behalf of the Respondent

Most Respectfully Showeth:

The answering Respondent is M/s. VA Tech Wabag Limited, represented by its duly authorized signatory Mr. Sunil Kumar Singh S/o., Yogendra Prashad Singh aged about 51 years, working as Additional General Manager of the answering Respondent's company having its project office at Ghaziabad and registered office at WABAG HOUSE, No. 17, 200 Feet Thoraipakkam - Pallavaram Main Road, Sunnambu Kolathur, 600 117 Chennai, Tamil Nadu.

The copy of the letter of authority is attached as **Annexure R-1**.

1. It is submitted that, this answering Respondent, is an Indian multinational company specialized in water and wastewater treatment solutions, and is generally considered a leading player in its field. The Respondent Company is 3rd largest private water operator in global rank among the "World's top 50 private water operators" as per Global Water Intelligence (GWI), for ensuring safe drinking water and a clean environment for over 48 million people across the globe.



2. It is humbly submitted that the answering Respondent is a Contractor for the running/operation & maintenance of 48 MLD Main Pumping Station (MPS) situated at Indrapuram, Ghaziabad as appointed by UP Jal Nigam. The answering Respondent has been performing the work under UP Jal Nigam, Ghaziabad, in line with the Agreement of the Respondent with State Mission for Clean Ganga - Uttar Pradesh, UP Jal Nigam and others (Employer) dated 15.11.2019 and related instructions from the Employer.
3. It is humbly submitted that the Diesel Generators falling under the scope of the Answering Respondent for operations are two DG sets of 320 KVA capacity each, which are used for operating the 48 Main Pumping Stations under the Respondent's operation. However, the alleged report of the Uttar Pradesh Pollution Control Board (UPPCB) mistakenly mentions two DG sets of 700 KVA capacity, which do not pertain to or concern the Answering Respondent.
4. The answering Respondent humbly submits that, the Diesel Generator (DG) referred to in the proceedings is owned by Uttar Pradesh Jal Nigam ("the Employer"). The Respondent as Contractor has no proprietary or ownership rights over the said equipment.
5. It is submitted that, as per the Agreement dated 15th November 2019, executed between the Contractor (Answering Respondent) and the Employers, including Uttar Pradesh Jal Nigam, the role of the Respondent as Contractor is limited to operating the Diesel Generator to ensure uninterrupted power supply for the operation of the facilities. This operational responsibility arises only when grid power is unavailable.
6. The Respondent humbly submits that, recognizing the operational challenges with the existing Diesel Generator, the answering Respondent has proactively submitted a proposal vide its letter dated 01st October 2024 for replacing the old DG with a new 320 KVA DG to the Employer viz., UP Jal Nigam. This step was taken to ensure continued



compliance with the requirements of the project and to preempt potential operational inefficiencies.

The copy of the above-referred proposal letter dated 01.10.2024 is attached herewith as **Annexure R-2**.

7. It is respectfully submitted that, it is pertinent to highlight that the decision to replace the existing Diesel Generator lies solely with the Employer. The Answering Respondent lacks the authority to unilaterally replace or upgrade the Diesel Generator without express approval and direction from the Employers. The Answering Respondent remains committed to fulfilling its contractual obligations under the Agreement and continues to undertake all necessary steps within its contractual scope to ensure smooth operation of the facilities. In the proposal submitted by the Respondent, it has been requested with the Employer that the new Diesel Generators shall fully comply with the guidelines issued by the Central Pollution Control Board (CPCB) for in-use generator sets (noise and emissions).
8. It is further submitted that upon receiving the necessary approval from the Employer for the replacement of the old Diesel Generator with two new 320 KVA DG, the Answering Respondent will require a minimum period of six months to procure, install, and make the new Diesel Generator operational. This timeline is essential to ensure compliance with operational standards and to facilitate seamless integration with the existing facilities. The proposed new Diesel Generators shall include required acoustic enclosures and will be installed with an adequate stack height in accordance with the guidelines issued by the Commission for Air Quality Management (CAQM) regarding the regulation of DG sets. These measures will ensure compliance with environmental standards and minimise noise and emission levels.
9. It is respectfully submitted that the other contentions and allegations raised in the proceedings are not attributable to or pertain to the Answering Respondent. As such, the Answering Respondent is not in a position to provide any response or clarification



on the same. The Answering Respondent requests that the Hon'ble Authority consider this limitation while evaluating the present reply.

10. This Respondent reserves the right to file a detailed reply with documents at a later stage, if required or as directed by the Hon'ble Tribunal.

It is, therefore, most humbly prayed that in the interest of justice and based on the above-stated preliminary reply and facts and circumstances of the case, this Hon'ble Tribunal may graciously be pleased to:

- I. Pass any other order/orders as this Hon'ble Tribunal may deem fit and proper in the interest of justice



Respondent

Neeraj Kumar
(Counsel for the Respondent)

Neeraj Kumar

Enrol. No.- D/2106/2005

1103 Nirmal Tower Barakhambha Road

Connaught Place Delhi 110001

Email- Neeraj.enfin@gmail.com

Mob: 9313127275

Place: Delhi

Date: 16.11.2024

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH
NEW DELHI

Miscellaneous Application No.46/2024

In

Original Application No.18/2023

Mritunjay Narayan Jha

.....

Applicant

Versus

State of UP

.....

Respondent



AFFIDAVIT

I, SUNIL KUMAR SINGH, S/o. YOGENDRA PRASHAD SNGH, aged about 51 years, the authorized signatory, designated as ADDITIONAL GENERAL MANAGER of the answering Respondent's Company viz., M/s. VA Tech Wabag, having office at Lucknow and registered office at Wabag House, 200 Feet Radial Road, Sunambu Kolathur Chennai - 117, do hereby declare and state as under:

1. I am the authorized signatory of the Respondent and am well conversant with the facts of the present case, based on the official records maintained in the office in its due course, thus I am competent to swear the present affidavit before the Hon'ble Tribunal.
2. The accompanying Preliminary Reply filed on behalf of the answering Respondent has been drafted by my Counsel under my instructions and the contents of the same are true and correct to the best of my knowledge.
3. That the contents of the accompanying Preliminary Reply may kindly be read as part of this affidavit as the same has not been repeated herein for the sake of brevity



DEPONENT / RESPONDENT

VERIFICATION

OATH COMMISSIONER

Verified on solemn affirmation at Lucknow on this 15th day of November, 2024 that the contents of the above affidavit are true and correct to the best of my knowledge and belief and nothing material has been concealed there from.

Solemnly affirmed before me on 15/11/24 at 07:00 am/pm by the deponent who is identified by Sri R.K. Verma High Court, Lucknow Bench

OATH COMMISSIONER



DEPONENT / RESPONDENT

R.K. Verma

OATH COMMISSIONER
High Court, Allahabad
Lucknow Bench, Lucknow
S No. 269977 Date 15/11/24

OATH COMMISSIONER

Advocate



LETTER OF AUTHORITY

This is to authorise Mr. Sunil Kumar Singh [Additional General Manager - Operations], bearing Employee No.7830 of VA TECH WABAG LIMITED (the Company), having its registered office at No-17, 200 Feet Thoraipakkam-Pallavaram Main Road, Sunnambu kolathur, Chennai – 600 117 to do the following act, deed and things on behalf of the Company in the matter of Mr. Mritunjay Narayan Jha Vs. State of UP, bearing Miscellaneous Application No. 46/2024 in Original Application No. 18/2023 pending before Hon'ble National Green Tribunal, New Delhi

- (i) To sign and execute all mandated and requisite documents, Memo of compromise, affidavits, papers, petitions, applications, and such other pleadings and documents including but not limited to replies, instructing advocates, lawyers and counsels.
- (ii) To attend, represent, the Company and give/adduce evidence etc., on behalf of the Company.
- (iii) To represent, mediate put forward any settlement proposal before the Court and record settlement and sign any document for recording settlement.
- (iv) To take all such necessary steps to close the case including appearing in person before the said Court and/or any the authorities as may be required and to make any settlement, mention and/or submissions as may be required on behalf of the Company.

Subject to early revocation, this Letter of Authority shall remain valid till the case bearing Miscellaneous Application No. 38/2023 in Original Application No. 196/2022 is disposed of or till Mr. Sunil Kumar Singh ceases to an employee of the Company whichever is earlier.

FOR VA TECH WABAG LIMITED

For VA TECH WABAG LIMITED

Authorised Signatory

P Meenakshi Sundaram
Authorised Signatory

Place: Chennai
Date: 19.10.2024

VA TECH WABAG LIMITED.

CIN: L45205TN1995PLC030231

"Wabag House", No. 17, 200 Feet Thoraipakkam – Pallavaram Main Road, Sunnambu Kolathur, Chennai – 600 117, India

CERTIFIED TRUE COPY OF THE EXTRACT OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF VA TECH WABAG LIMITED AT THEIR MEETING HELD ON FRIDAY, AUGUST 11, 2023, AT "WABAG HOUSE", BOARD ROOM, 8TH FLOOR, NO. 17, 200 FEET THORAIPAKKAM – PALLAVARAM MAIN ROAD, SUNNAMBU KOLATHUR, CHENNAI - 600 117, TAMIL NADU THROUGH VIDEO CONFERENCE AT 11.40 A.M. IST

AUTHORISATION FOR LEGAL MATTERS

"RESOLVED THAT in supersession of the resolution passed by the Board of Directors of VA TECH WABAG LIMITED ("the Company") at their meeting held on August 12, 2018, any one of Mr. Rajiv Mittal, Chairman and Managing Director, Mr. S. Varadarajan, Whole Time Director & Chief Growth Officer, Mr. Skandaprasad Seetharaman, Chief Financial Officer, Mr. Meenakshi Sundaram, Senior Manager-legal, be and is hereby severally authorized to represent, sign and execute all requisite documents, papers, agreements, Vakalatnamas, Plaints, Petitions, Affidavits, Proof Affidavits, claims, counter claims, written statements, objections, applications, other legal pleadings, representation, documents, provide evidence, depute witness to provide evidence, depute, appoint persons on behalf of the Company, with a power to appoint one or more lawyers, counsels, advocates, consultants, Witness and such other persons to do all acts and things, as they may deem fit including representation before any authorities, judicial, quasi-judicial, other departments, for all legal rated matters pertaining to any civil / criminal / Labour litigations, Arbitrations, and other judicial and quasi-judicial proceedings initiated by or against the Company including but not limited to Income Tax Authorities, NCLT, NCLAT, Intellectual Property Authorities, DRT including appellate authorities with regard to any legal matters involving the Company, IPR registrations, applications and separate Power of Attorney's as are required for filing and processing Trade Marks applications in India and other countries."

"RESOLVED FURTHER THAT the above mentioned officers of the Company, be and are severally authorized to make, file and sign any petition, complaints, affidavits, proof Affidavits, notices, appeals, revisions or any proceedings before any Court including the Supreme Court and also to appoint, depute and engage Counsel, Advocate/s, Solicitor/s, Arbitrators, Chartered Accountants, Consultants or Company Secretaries, Witness, or any person as the case may be, for the purpose of providing evidence, attending any case(s) or dispute(s) lodged by or against the Company."

"RESOLVED FURTHER THAT a copy of the above resolution, certified to be true by any one of the Directors or the Company Secretary be issued to any requisite authorities to act thereupon."

CERTIFIED TRUE COPY

For VA TECH WABAG LIMITED


Anup Kumar Samal
Company Secretary & Compliance Officer
 14/09/2023

Sustainable solutions, for a better life

ANNEXURE - R2



Ref.VATW/2024-25/PKG-8/GZBD/UPJN/366
Dt: 01 October, 2024

An ISO 9001 Company

To,

The Executive Engineer,
Construction Division (E/M),
U.P. Jal Nigam (Urban),
Ghaziabad.

VA TECH WABAG LIMITED

Project Office:

56 MLD, STP, Shakti Khand-4,
Indrapuram, Ghaziabad,
U.P. – 201014, India
Web: www.wabag.com

Subject: Proposal for Replacement of Old Diesel Generators (DGs) with New 320 KVA DGs at 48 MLD MPS, Indrapuram, Ghaziabad.

Contract : Operation, Maintenance and Management of the Sewage Treatment System, It's associated Infrastructure and sewer Network of Ghaziabad, Meerut, Muzaffarnagar, Saharanpur, Package : Pilkhuwa, Loni, Anupshahar, Bijnor, Rampur in the state of Uttar Pradesh. (Agreement No. 09/SGRCA/2017-18 (OM&M) Contract Package-8, Zone-Ghaziabad dated 15.11.2019)

Dear Sir,

We are submitting a proposal for replacing the existing 25-year-old diesel generators (DGs) with two new 320 KVA DGs at 48 MLD MPS, Ghaziabad, under the Major Replacement Fund. This replacement is necessary to comply with the National Green Tribunal (NGT) and Central Pollution Control Board (CPCB) directions.

The existing DGs have completed their lifecycle, and replacing them with new ones will ensure efficient and environmentally friendly operations. We have identified suitable models from renowned manufacturers like Kirloskar and Cummins.

Therefore, we are submitting a proposal, which is briefly as follows:

DGs : Power 320 KVA – 02 Nos

Amount : Rs. 90,90,064.77

Therefore, you are requested to review the proposal and grant in-principal approval for the above-mentioned work under the Major Replacement Fund.

We appreciate your prompt attention to this matter and look forward to your approval.

Yours Faithfully,
For VA Tech Wabag Ltd.



Sunil Kumar Singh
(Project Manager, Ghaziabad Zone, Package-8)

Enclosure : Estimate

Copy To: 1. Chief Engineer (GZB Zone), U.P. Jal Nigam (Urban), Ghaziabad.
2. Superintending Engineer, Construction Circle, U.P. Jal Nigam (Urban), Ghaziabad.
3. Superintending Engineer, Construction Circle (E/M), U.P. Jal Nigam (Urban), Ghaziabad
4. The Executive Engineer, Construction Division (Ist), U.P. Jal Nigam (Urban), Ghaziabad.

Sustainable solutions, for a better life



VA TECH WABAG LTD.
"WABAG HOUSE"
No. 17, 200 Feet Radial Road,
Sunnambu Kolathur,
Chennai – 600 117, India

Tel : +91-44-3923 2323
Fax : +91-44-3923 2324
Web : wabag@wabag.in

Regional Offices:
Noida
Kolkata
Pune

03-10-24
डिस्ट्रिक्ट
कार्यालय अधिवासी अभियन्ता
निर्माण खाण्ड (वि०/यौ०)
उ०प्र० जल निगम (नगरीय)
गाजियाबाद

03/10/2024

Received
Arute
3-10-24

3/10/24
मुख्य अभियन्ता (गा० क्षेत्र)
उ०प्र० जल निगम (नगरीय)
गाजियाबाद।

3/10/24


VA Tech Wabag Limited

AGREEMENT NO. 09/SGRCA/2017-18/(OM&M)/CONTRACT PACKAGE-8, ZONE-Ghaziabad



Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad

| Sl. No. | Items | Bill Amount | Remarks |
|---------|--|-------------------------|---------|
| | Replacement Cost | | |
| A | Supply of Diesel Generators with Control Panels Amount | INR 75,82,512.00 | |
| B | Supply of Civil items of DG Foundation and Earthing with Construction Amount | INR 1,74,145.57 | |
| C | Supply of Electrical and Mechanical items with Construction Amount | INR 5,75,156.00 | |
| D | Fixing, Testing and Commissioning Amount | INR 7,58,251.20 | |
| | Net Amount | INR 90,90,064.77 | |



|  VA TECH WABAG LIMITED | | WABAG | | | | |
|---|--|--------------|----------|------------------|-------------------------|---------|
| | | | | | | |
| Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad | | | | | | |
| Supply of Diesel Generators with Control Panels | | | | | | |
| Sr. No. | Item Description | Unit | Quantity | Rate | Amount | Remarks |
| 1 | 320 KVA DG Set (Dimension LXBXH 1128 x 791 x 1277 mm) | | | | | |
| 1.1 | Supply of 320 KVA Silent DG Set as per enclosed Annexure | Nos. | 2.00 | INR 35,70,000.00 | INR 71,40,000.00 | |
| 2 | Freight & Transit Insurance | Nos. | 1.00 | INR 4,42,512.00 | INR 4,42,512.00 | |
| Total | | | | | INR 75,82,512.00 | |



|  VA TECH WABAG LIMITED | | Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad | |  | | Supply of Foundation Materials With Construction | | | | |
|---|---|--|-------|---|-----------------|--|------------------|------|----------|------|
| | | | | | | Sr. No. | Item Description | Unit | Quantity | Rate |
| 1.0 | 320 KVA DG Set (Dimension LXBXH 1128 x 791 x 1277 mm) | | | | | | | | | |
| 1.A | Foundation | | | | | | | | | |
| 1.A.1 | Excavation of DG Foundation below F.G.L | Cum | 5.60 | INR 193.74 | INR 1,084.94 | Refer SOR 20-21, Line item No. 1001, Page No. 08 | | | | |
| 1.A.2 | Sand Filling | Cum | 1.20 | INR 1,116.32 | INR 1,339.58 | Refer SOR 20-21, Line item No. 1003, Page No. 08 | | | | |
| 1.A.3 | PCC (1:2:4) upto FGL | Cum | 1.20 | INR 8,818.68 | INR 10,582.42 | Refer SOR 20-21, Line item No. 1019, Page No. 08 | | | | |
| 1.A.4 | RCC M25 | Cum | 5.6 | INR 11,259.46 | INR 63,052.98 | Refer SOR 20-21, Line item No. 1025, Page No. 08 | | | | |
| 1.A.5 | Steel | Kg | 659.4 | INR 100.00 | INR 65,940.00 | Refer SOR 20-21, Line item No. 1019, Page No. 08 | | | | |
| 1.B | Earthing Pit and Cable Laying | | | | | | | | | |
| 1.B.1 | Excavation for Earthing Pit upto 4.5 Mtrs. | Cum | 9.00 | INR 193.74 | INR 1,743.66 | Refer SOR 20-21, Line item No. 1001, Page No. 08 | | | | |
| 1.B.2 | Excavation for Cable Laying from DG Panel to Substation | Cum | 7.50 | INR 193.74 | INR 1,453.05 | Refer SOR 20-21, Line item No. 1001, Page No. 08 | | | | |
| 1.B.3 | Brick Work for Encasing of Cables | Cum | 3.00 | INR 6,363.88 | INR 19,091.64 | Refer SOR 20-21, Line item No. 1027, Page No. 08 | | | | |
| | Sub-Total | | | | INR 1,64,288.27 | | | | | |
| | Wastage Cost @ 5% | | | | INR 8,214.41 | | | | | |
| | Cartage Cost @ 1% | | | | INR 1,642.88 | | | | | |
| | Total | | | | INR 1,74,145.57 | | | | | |





VA TECH WABAG LIMITED

Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad
Measurement Sheet for Foundation Materials Supply & Construction

| Sr. No. | Item Description | Unit | Qty. (Nos.) | Length | Width | Height | Qty | Reference |
|---------|---|------|-------------|--------|-------|--------|-------|-----------|
| 1 | 320 KVA DG Set (Dimension LxBxH 1128 x 791 x 1277 mm) | | | | | | | |
| 1.A | Foundation | | | | | | | |
| 1.A.1 | Excavation of DG Foundation below F.G.L | Cum | 2 | 2 | 2 | 0.7 | 5.6 | |
| 1.A.2 | Sand Filling | Cum | 2 | 2 | 2 | 0.15 | 1.2 | |
| 1.A.3 | PCC (1:2:4) upto FGL | Cum | 2 | 2 | 2 | 0.15 | 1.2 | |
| 1.A.4 | RCC M25 | Cum | 2 | 2 | 2 | 0.70 | 5.6 | |
| 1.A.5 | Steel | Kg | | | | | 659.4 | |
| 1.B | Earthing Pit and Cable Laying | | | | | | | |
| 1.B.1 | Excavation for Earthing Pit upto 4.5 Mtrs. | Cum | 2 | 1 | 1 | 4.5 | 9.0 | |
| 1.B.2 | Excavation for Cable Laying from DG Panel to Substation | Cum | 2 | 25 | 0.3 | 0.5 | 7.5 | |
| 1.B.3 | Brick Work for Encasing of Cables | Cum | 2 | 25 | 0.2 | 0.1 | 3 | |

Annexure-4



|  VA TECH WABAG LIMITED | | Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad | |  | | Supply of Electrical item | | | | |
|---|---|--|--------|---|-----------------|---------------------------|------------------|------|--------------|------|
| | | | | | | Sr. No. | Item Description | Unit | Quantity | Rate |
| 1.0 | 320 KVA DG Set (Dimension LXBXH 1128 x 791 x 1277 mm) | | | | | | | | | |
| 1.A | Earthing and Electrical Connection | | | | | | | | | |
| 1.A.1 | Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required. | Nos. | 8.00 | INR 15,480.00 | INR 1,23,840.00 | | | | | |
| 1.A.2 | Providing of 50 mm X 10 mm GI Flat in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. | Mtrs. | 40.00 | INR 1,724.00 | INR 68,960.00 | | | | | |
| 1.A.3 | Power Connection from DG Panel to LT panel | Mtrs. | 200.00 | INR 1,260.00 | INR 2,52,000.00 | | | | | |
| 1.A.4 | Accessories for Cable Jointing & Fixing | LS | | | INR 37,800.00 | | | | 15% of Cable | |
| 1.B | DG Installation | | | | | | | | | |
| 1.B.1 | Hiring Charge of Hydra for Unloading, Shifting & Erection of Diesel Generators at Designated Location. | Per Day | 4.00 | INR 15,000.00 | INR 60,000.00 | | | | | |
| Sub-Total | | | | | | INR 5,42,600.00 | | | | |
| Wastage Cost @ 5% | | | | | | INR 27,130.00 | | | | |
| Cartage Cost @ 1% | | | | | | INR 5,426.00 | | | | |
| Total | | | | | | INR 5,75,156.00 | | | | |



VA TECH WABAG LIMITED



Supply of Diesel Generators for 48 MLD MPS Indirapuram, Ghaziabad

Measurement Sheet for Earthing Material

| Sr. No. | Item Description | Unit | Qty. (Nos.) | Length | Width | Height | Qty | Reference |
|---------|---|---------|-------------|---|-------|--------|-----|-----------|
| 1 | 320 KVA DG Set (Dimension LXBXH 1128 x 791 x 1277 mm) | | | | | | | |
| 1.A | Earthing and Electrical Connection | | | | | | | |
| 1.A.1 | Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required. | Nos. | 8 | - | - | - | 8 | |
| 1.A.2 | Providing and fixing 50 mm X 10 mm GI Flat in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. | Mtrs. | 8 | 10 | - | - | 80 | |
| 1.A.3 | Power Connectin from DG Panel to LT Panel | Mtrs. | 4 | 3.5 Core X 150 Sqmm. Armoured Aluminium Cable | | | 200 | |
| 1.B | DG Installation | | | | | | | |
| 1.B.1 | Hiring Charge of Hydra for Unloading, Shifting & Erection of Diesel Generators at Designated Location. | Per Day | 4 | - | - | - | 4 | |



Comparison Sheet

| Specifications of D.G. | Global Elec. & Con. Pvt. Ltd. (L-1) | Clean Earth Facility (L-2) | Jakson (L-3) |
|------------------------|--|-------------------------------------|-------------------------------------|
| Capacity | 320 KVA (CPCB-iv) | 320 KVA (CPCB-iv) | 320 KVA (CPCB-iv) |
| Make | Cummins | Kriloskar | Jakson |
| Model | QSL9-G20 | KG4-320WS1 | CI320D5P |
| Fuel type | High Speed Diesel | High Speed Diesel | High Speed Diesel |
| Noise Level | 75 dB | 75 dB | 75 dB |
| Dimensions | (Dimension LXBXH 1128 x 791 x 1277 mm) | (Dimension LXBXH 4750X1700X2005 mm) | (Dimension LXBXH 5000X1500X2465 mm) |
| Price per unit | 35,70,000.00 | 38,42,000.00 | 39,68,000.00 |
| Total Price | 71,40,000.00 | 76,84,000.00 | 79,36,000.00 |





GLOBAL ELECTRICAL & CONTROLS PVT.LTD

(AN ISO 9001:2008 & "CPRI" CERTIFIED COMPANY)

PLOT NO - 456 , UDYOG KENDRA - 2nd
ECOTECH - 3 , GREATER NOIDA (U.P) - 201306



Ref.: GECPL/544/2024-25

DATE - 30-09-2024

TO

M/s. VA TECH WABAG LIMITED

Graphix Tower Sector-62, Noida, Pin -201301

Kind Attn.: Mr. Ramesh S Ji

Sub. OFFER FOR SUPPLY OF 320 KVA DG SET

Dear Sir,

This refers to your requirement of Electrical Control Panels

We are pleased to make an offer for design, manufacture, shop testing, supply of panels.

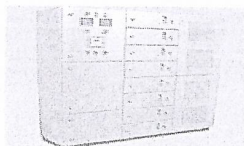
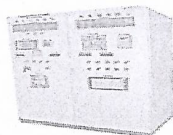
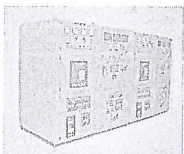
Our offer Consists of the following schedules.-

| | | |
|--------------|---|---|
| Schedule-I | : | Prices Schedule |
| Schedule-II | : | Bill of Materials & Make of Components. |
| Schedule-III | : | General Term & Conditions |

We hope you will find our offer most competitive & in line of your requirement,
However, if you need any further clarifications, Please feel free to get in touch with us,
Looking forward to receive your valued order.

Your Sincerely

GLOBAL ELECTRICAL & CONTROLS PVT. LTD.



Mfg. of : LT PANEL ,APFC ,MCC ,STARTER PANEL ,PLC &SYNCHRONIZATION PANEL , CABLE TRAY e.t.c

Website - www.gecpl.org

MOB - 0120-6857782, 9810243219, 9999982280

GLOBAL ELECTRICAL & CONTROLS PVT.LTD

(AN ISO 9001:2008 & "CPRI" CERTIFIED COMPANY)

PLOT NO - 456 , UDYOG KENDRA - 2nd

ECOTECH - 3 , GREATER NOIDA (U.P) - 201306



ANNEXURE-I "SUMMARY"

| SR. | DESCRIPTION | QTY. | UNIT | RATE IN RS. | AMOUNT IN RS. |
|-----|---|------|------|----------------|------------------|
| 1 | SUPPLY OF 320 KVA CPCB4 DG SET MAKE :- CUMMINS | 2 | NOS | 35,70,000 | 71,40,000 |
| | | | | | |
| | TOTAL AMOUNT IN RS. | | | | 71,40,000 |

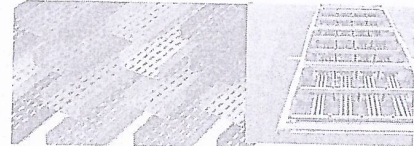
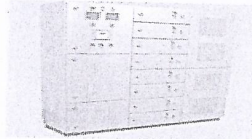
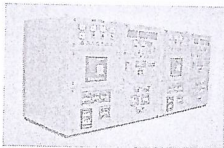
IN WORDS: RS. SEVENTY ONE LAC FORTY THOUSAND ONLY

NOTE: GST EXTRA @ 18 % .
FREIGHT EXTRA AS ACTUAL.

REGARDS

RAJAT, 7550173018

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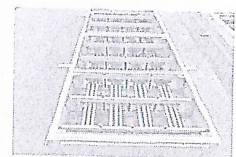
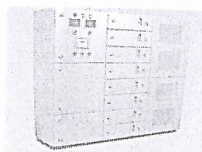
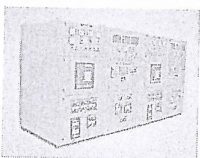
ANNEXURE-III "TERMS & CONDITION"

| | |
|--------------------------|--|
| PRICE | PRICE ARE BASIC , GST & ALL DUTIES ARE EXTRA |
| MODE OF PAYMENT | 40 % ADVANCE AT TIME OF ORDER FINAL AND BALANCE WITH TAX AGAINST PERFORMA INVOICE BEFORE DISPATCH |
| VALADITY | THE PRICE ARE VALID FOR 1 MONTH FROM THE DATE OF QUOTATION GIVING . |
| SPECIFICATION | ALL MATERIAL WILL BE DELIVERD AS PER SPECIFICATION & BILL OF MATERIAL AND AS PER IS/IEC STANDARDS . |
| DELIVERY | THE DELIVERY WILL BE IN 4-6 WEEKS AFTER CONFIRMING THE ORDER ALONG WITH ADVANCE |
| GST | GST WILL BE EXTRA @ 18 %. |
| WARRANTY | ONE YEAR WARRANTY FROM THE DATE OF DELIVERY |
| FREIGHT | FREIGHT WILL BE EXTRA AS ACTUAL & PAYABLE BY BUYER |
| TRANSIT INSURANCE | TRANSIT INSURANCE WILL BE EXTRA AS ACTUAL & PAYABLE BY BUYER |

REGARDS

RAJAT, 7550173018

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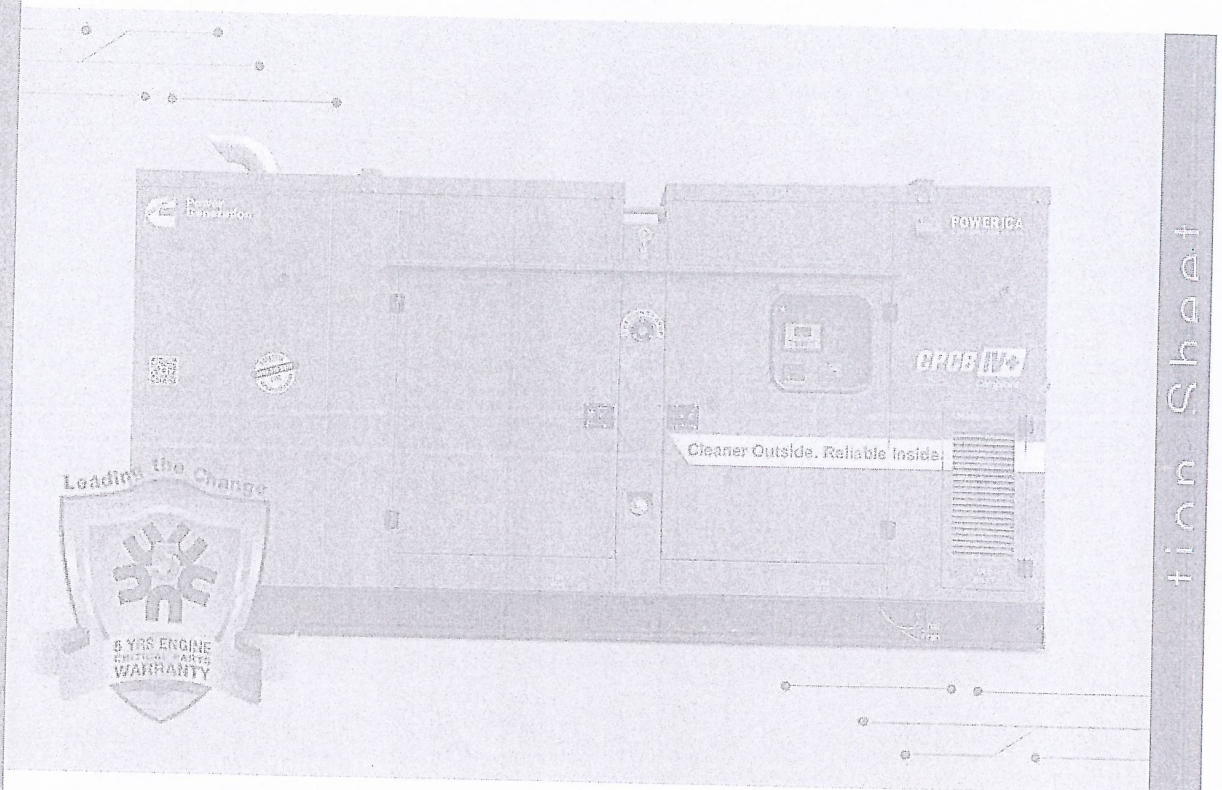
MOB - 0120-6857782, 9810243219, 9999982280

POWERICA
A PROMISE FOR POWER



Diesel Generator Set QSL9 Series

320 kVA, 256 kWe Prime
CPCB IV+ Emission Compliant



Latest Technology and Unmatched Performance

- ▣ The Cummins® QSL9 series rugged engine and world class Stamford alternator powered diesel generator set
- ▣ Proven technology with Cummins New Electronic Fuel System
- ▣ Exhaust after-treatment and in-cylinder solution to meet stringent emission norms
- ▣ Superior finish and aesthetics
- ▣ Compact in size with optimum power to weight ratio

Environment Friendly Power

- ▣ Class defining and technologically advanced engine to meet stringent exhaust emission norms as per the latest MoEF notification
- ▣ The Cummins® diesel generator sets are available with the lowest noise levels in its range

Lowest Operating Cost and Comprehensive Warranty

- ▣ Highly reliable and durable product
- ▣ Maximum efficiency even at part loads, offering the advantage of lowest operating costs
- ▣ 500 Hours/ 1 year service interval
- ▣ Industry acknowledged best-in-class comprehensive warranty on the entire package including rubber components

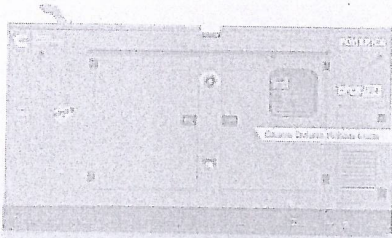
Single Source Power Assurance

- ▣ All the major components - the engine, alternator, aftertreatment system, control system and canopy are designed, manufactured, and tested by Cummins India
- ▣ Best and largest customer support network in India, capable of providing round-the-clock service and spares support

tion Sheet

Engine

- ▣ Cummins® QSL9 series, 6 cylinder, In-line 4 stroke, radiator cooled engine
- ▣ Robust and efficient air handling system with
 - Dry type, Heavy Duty and replaceable paper element air cleaner with restriction indicator
 - Optimized turbocharger for increased altitude capabilities
- ▣ Optimized fuel consumption with common rail electronic injection
- ▣ Spin on single fuel filter with water separator
- ▣ Cooling system is designed and tested for 50°C ambient conditions
- ▣ Full flow spin on lube oil filter
- ▣ First fill of lube oil and coolant
- ▣ Electrical starter motor with soft start engagement feature
- ▣ Battery charging alternator
- ▣ 2 x 12 V DC battery



Alternator

- ▣ STAMFORD HCI444D alternator frames from Cummins Generator Technologies
- ▣ Brushless type, Screen protected, Revolving field, Self-excited alternator conforming to IS/IEC 60034-1
- ▣ Better motor starting capability
- ▣ Best in class efficiency
- ▣ Compact design with sealed bearings for longer life and lesser maintenance
- ▣ Impregnation on all wound components for better mechanical strength

EATS

- ▣ Single module architecture supplied by Cummins Emission Solutions
- ▣ Compact design enabling optimized genset size
- ▣ Integrated control module for engine and EATS
- ▣ Best in class Proven technology for meeting stringent emission norms

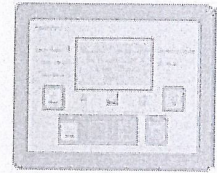
Control Panel

Control panel is powder coated for weather-proof and long-lasting finish. The control panel consists of the following parts:

- ▣ PS0602 Controller
- ▣ Bus bars with suitable capacity with incoming/ outgoing terminals
- ▣ Indicating lamps for 'Load ON' and 'Set Running' Instrument fuses duly wired and ferruled
- ▣ MCCB of suitable rating with short circuit protections
- ▣ AC/DC separation inside control panel for safety

PS0602 Features

- ▣ Cummins® PowerStart™ PS0602 control is a microprocessor based generator set monitoring, metering and control system with LCD display designed to meet the demands of today's engine driven generator set
- ▣ AMF Functionality
- ▣ Electronic Governing
- ▣ CAN (J1939) Compatible
- ▣ Sync Compatible (Capable to accept external speed signal from 3rd party sync controller)
- ▣ Intuitive operator interface which includes LED backlit 128X64 pixel graphic display with tactile feel soft-switches & generator set status LED lamps
- ▣ Remote start-stop
- ▣ Audible & Visual warning for Inducement
- ▣ Suitable for FAE based engine architecture
- ▣ Engine Metering: Oil pressure, Engine temperature, Starting battery voltage, Engine running hours
- ▣ AC Alternator Metering: L-L Voltage and L-N Voltage, Current (phase and total), kVA (phase and total) and Frequency. kWh, Total & per phase (kw & kVA), PF, Utility Voltage and Freq
- ▣ Engine Protection: Low lube oil pressure, High/Low coolant temperature, Battery High/Low/Weak Volts, Fail to Crank/Start, Sensor failure, Cranking lockout, Low fuel level
- ▣ AC Alternator Protection: Over/Under Voltage, Over/Under Frequency, Loss of AC sensing, Overspeed, Over Current, kW Overload
- ▣ Data Logging: Engine hours, Control hours and upto 5 recent fault codes
- ▣ Configurable glow plug control
- ▣ 12/24 Volt DC operation
- ▣ Sleep mode
- ▣ Modbus interface (RS485 RTU)
- ▣ In Power compatible (PC based service tool)
- ▣ Certifications - meets the requirement of relevant ISO, EN, Mil Std. and CE standards
- ▣ Maintenance due alarm based on Engine Run Time and due date
- ▣ Fuel and DEF level visual display
- ▣ Exerciser scheduler



Silencer

- ▣ Hospital Grade Silencer inside canopy with rain cap suitably optimized to meet stringent noise limit
- ▣ Silencer specifically tuned to EATS

Mounting Arrangement

- ▣ Engine and alternator are mounted on a common MS fabricated base frame with AVM pads
- ▣ Skid mounted radiator
- ▣ Base frame with integral fuel tank and DEF tank is provided with drain plug, air vent, inlet and outlet connection and provision for cleaning

Optional

- ▣ Alternator : PMG and Space Heater
- ▣ Controller : PCC3.3

Acoustic Enclosure

- ▣ Specially designed to meet stringent MoEF/ CPCB norms of 75 dBA@1mtr at 75% load under free field conditions
- ▣ The acoustic enclosure is made CRCA sheets in Munsell green shade and a structural/sheet metal base frame painted in black
- ▣ 11 tank pretreatment process and UV resistant powder coating of all parts to withstand extreme environment
- ▣ High quality noise absorbent and fire-retardant grade acoustic Insulation material (Rockwool) complying to IS 8183
- ▣ Top lifting for easy handling at customer site
- ▣ External fuel & DEF filling provision

Remote monitoring system

- ▣ Compact & robust device
- ▣ Real time DG status & monitoring
- ▣ 4G compatible
- ▣ Compatible for 12/24 V DC
- ▣ Reports & Notification – Alerts & Warning
- ▣ Isolated RS 485 interface
- ▣ Device location using triangulation

Technical Data

| Generator Set Specification | |
|---|---------------|
| Model | CI 320D5P |
| Duty | Prime |
| Power Rating kVA / kWe | 320/256 |
| No. of Phases | 3 |
| Output Voltage and Frequency (V and Hz) | 415 V, 50 Hz |
| Power Factor | 0.8 (lagging) |
| Current (A) | 445 |
| RPM | 1500 |

| Engine Specification | |
|--|-----------------------------------|
| Make | Cummins® |
| Model | QSL9-G20 |
| Required Certified Power for Rated kVA (hp) | 395 |
| Cooling | Liquid Cooled (EG Compleat 50:50) |
| DEF | AUS 32 (Premix) as per ISO 22241 |
| Aspiration | Turbocharged, Charge Air Cooled |
| No. of cylinders | 6, In-line |
| Bore (mm) x Stroke (mm) | 114 x 145 |
| Compression ratio | 16.7:1 |
| Displacement (litre) | 8.9 |
| Fuel | High Speed Diesel |
| Performance class of generator set | ISO 8528-5 G2 |
| Starting system | 24 V DC Electrical |
| Lube oil specification | CK4 |
| Lube oil sump capacity, High-Low level (litre) | 30-19.97 |
| Total lubrication system capacity (Litre) | 31.7 |
| Total coolant capacity (litre) | 36 |
| Exhaust pipe size (inch) | 6 |
| Total wet weight (Engine+Radiator)* (kg) | 918.2 |
| Length X Width X Height (Coolpac) (mm) | 1128 x 791 x 1277 |
| Mean Piston speed (m/s) | 7.2 |
| Combustion air intake @100% load (±5%) (cfm) | 689 |
| Exhaust Temperature (°C) | 539 |

Diesel Generator Set QSL9 Series

Specification Sheet

| Alternator Specification | |
|---|--|
| Make | STAMFORD(CGT) |
| Alternator Frame | HCI444D |
| Enclosure | IP 23 |
| Voltage regulation (Max.) | ±1% |
| Class of Insulation | H Class |
| Winding Pitch | 2/3 |
| Stator Winding | Double layer lap |
| Rotor | Dynamically Balanced |
| Waveform distortion/ Total Harmonic Distortion | No load < 1.5 %, Non distorting balanced linear load < 5 % |
| Maximum Unbalanced Load across phases | less than or equal to 25% |
| Telephonic Harmonic factor | < 2% |

| Rating Definitions | Conformance Standards |
|--|---|
| <p>Prime Power (PRP): Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528.</p> | <ul style="list-style-type: none"> • IS/IEC 60034-1 • ISO 1460 • ISO 8528 • ISO 3046 • ISO 9001 • ISO 13018 |

| Typical Enclosed Genset Dimensions | | | | | | | |
|------------------------------------|--------------|-------------|------------|-------------|------------------------------|---------------------------|-------------------------------------|
| Genset Model | Rating (kVA) | Length (mm) | Width (mm) | Height (mm) | Wei Weight ¹ (kg) | DEF Tank Capacity (litre) | Standard Fuel tank Capacity (litre) |
| CI 320D5P | 320 | 5000 | 1500 | 2465 | 4530 | 60 | 515 |

¹ Approximate Weight

Authorised Representative

Powerica Sales Office

Toll Free Number: +91 1800 2666036
 Head Office: +91 22 66562525 | +91 22 4315 2525
 Ahmedabad: +91 7926468550
 Aurangabad: +91 2406601921
 Bengaluru: +91 22 22257333
 Chennai: +91 44 42422222
 Coimbatore: +91 4222205300
 Goa: +91 8322438587
 Kochi: +91 4842353595
 Hyderabad: +91 9849796100

Kolhapur: +91 9011124488
 Madurai: +91 4524200081
 Nagpur: +91 7126631089
 Pune: +91 20 67488299
 Mumbai: +91 9821013074
 Vijayawada: +91 8790100552
 Visakhapatnam: +91 8790100556
 Belapur: +91 9833314448
 Mysore: +91 9686447100
 Rajahmundry: +91 8190100858



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Cummins Power Generation India



"Our energy working for you."

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 PSBU/CPCB IV+/QSL9/Rev-00/07 2023



Cummins India Limited
Power Systems Business
 Cummins India Office Campus
 Tower-A, 8th Floor, S. No. 21
 Balewadi, Pune - 411 045 (India)
 Email : cpindia@cummins.com
 www.cummins.com

POWERICA
 A PROMISE FOR POWER

Powerica Limited
 9th Floor, Bakhtavar, Nariman Point,
 Mumbai - 400 021
 Email : atp@powericaltd.com
 www.powericaltd.com



Clean Earth Facility
Management Services

QUOTATION – 320 KVA CPCB 4 DG SET

Presented To

VA TECH WABAG LIMITED,

**A-13A, 4th Floor Graphix Tower Sector-62,
Noida, Pin -201301**

M2 SQUARE INDIA (Clean Earth Facility Management Services)

CORP. OFFICE: Kota City Post Office, BHATA PADA, Rampura, Kota, Kota, Rajasthan, 324006 (INDIA)

BRANCH OFFICE: Plot No 630 Sector 9 Gurgaon Haryana 122001 (GSTN: 08BAAPK3803N1ZO)

Phone: +91-9958484959 / +91-9821114959 Email: helpdesk@cleaneearthfms.co.in / www.cleaneearthfms.co.in



Clean Earth Facility
Management Services

Ref: CEMS/PLC/ 242504024
Date: 30th/09/2024

Dear Sir,

Greetings from Clean Earth FMS!!!!!!

Through our conversation, I am pleased to submit this techno-commercial proposal from M2 SQUARE INDIA (Clean Earth FMS) for a 320 KVA CPCB 4 DG Set.

Our vision and mission are central to our efforts in providing reliable, efficient, and quality products at your doorsteps.

The proposal outlines the following major modules:

- Annexure 'A' : Price Schedule.
- Annexure 'B' : Customer's Work Scope
- Annexure 'C' : General Term & Conditions.
- Annexure 'D' : Commercial Term & Conditions.

I appreciate your consideration of this proposal. It will be an honour for us to associate with your esteemed organization. Please feel free to contact me if you require any further information or have any questions concerning this proposal.

Thanks, and regards,
Meraj Khan
+91 9958484959

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Clean Earth Facility
Management Services

Annexure A:

Price Schedule for 320 KVA DG Sets.

| Sr No | Item Description | Qty | AOU | Unit Rate | Amount |
|-------|----------------------------------|-----|------|--------------|---------------------|
| 01. | Supply of 320 KVA CPCB 4 DG Sets | 02 | Nos. | 38,42,000.00 | 76,84,000.00 |
| 02. | Total Amount | | | | 76,84,000.00 |

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Annexure: B

Customer's Scope of Work

1. Necessary space for material storage once the material is delivered on-site.
2. Power requirement – 240V AC supply from mains will be required all the time even when DG is not running. This is required to monitor the automation system's functioning.
3. Any Returnable Items, extra consumables, tools, and equipment used for installation, will be M2S property and will be taken back after completion of Job.

Annexure: C

General Terms And Conditions:

- Back-up DG will be provided by the client, whenever there will be constraints for providing the required shutdown as per shared installation requirements.

Any modification outside the scope of work to accommodate the Panel will be within the client's scope.

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Clean Earth Facility
Management Services

Annexure 'D':

Commercial Term & Conditions:

Payment Terms: - 50% advance along with PO, 50 % before despatch against PI.

Price Basis: - Ex-Works.

GST: - 18% Extra. Goods & Services supplied by us to customers will be subject to applicable Central/ State/Integrated or Other GST Taxes. Such Taxes as per provisions of GST laws will be charged separately & borne by the customer. Tax rates are subject to applicable law prevailing at the time of supply of such goods & Services. GST @ 18 % will be charged for all Repair/Services/ Software development Jobs on the Total value of the Invoice in addition to Reimbursement of Site Expenses.

Freight: - As per Actuals in Your Account

Insurance: - In Your Scope

Packing & Forwarding: - As per Actuals in Your Account

Inspection: At Your.

Delivery: - 2 weeks from the date of receipt after technically and commercially clear order. Unless a delivery deadline is agreed upon in writing ("Agreed Upon Delivery Deadline"), delivery deadlines and dates, as well as delivery delays, we report, are only estimates without legal force. Correspondingly, with the reservation of Force Majeure delays in delivery do not result in any rights to cancel the contract or to claim any other right to alter the legal relationship or to claim damages or penalties.

Road Permit/E-way Bill: - By Customer, as applicable under GST or any other law for the time being in force at the time of supply of goods, any delay or costs arising therefrom, in delivery of the ordered goods, on account of delay in submission of the said statutory forms will in no manner be attributed to Clean Earth FMS.

Storage charges: - Storage charges at the rate of 1% per week of the PO value shall be applicable Any charges recovered from the customer would also attract GST.

Changes: - Any technical changes/amendments made in the order after acceptance but before processing of the order by us, will attract an additional 30% change/amendment charges, in addition to the costs of the new instruments added. The customer agrees and understands that once the order is processed, it is not possible to make changes/amendments in the order. Any cancellation, after processing, will attract a compulsory 100 %

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Clean Earth Facility
Management Services

cancellation charge on the P.O, which shall be due and payable immediately on cancellation, and the provisions of, shall become operative

Cancellation: - Any arbitrary cancellation of the order after acceptance but before processing will also attract a compulsory 30% cancellation charge on the P.O. value. Any cancellation, after processing, will attract a compulsory 100 % cancellation charge on the P.O, which shall be due and payable immediately on cancellation, and the provisions shall become operative.

TERMS OF PAYMENT AND CONSEQUENCES ON DEFAULT: - Unless other terms have been agreed upon in writing, our invoices have to be paid by the payment date on the invoice. If no payment is made by the end of this payment period (value date of the full invoice amount credited to our account), the customer is automatically in default of payment. Default of payment has the following consequences: The customer must pay the legal default interest but at least Bank 1 Year MCLR Rate plus 8 percent p.a. prevailing on the date of the default. In addition, the customer must reimburse us for all expenses associated with the default of payment, storage charges, and insurance, e.g., expenses for notification and legal expenses.

Warranty Repairing: - 12 Months from the date of delivery for manufacturing defects
Only for Standard items supplied by us. The failure due to excess electrical supply/Over voltage/misuse of the product will not be covered in warranty.

Validity: - 15 Days

M2 SQUARE INDIA (Clean Earth Facility Management Services)

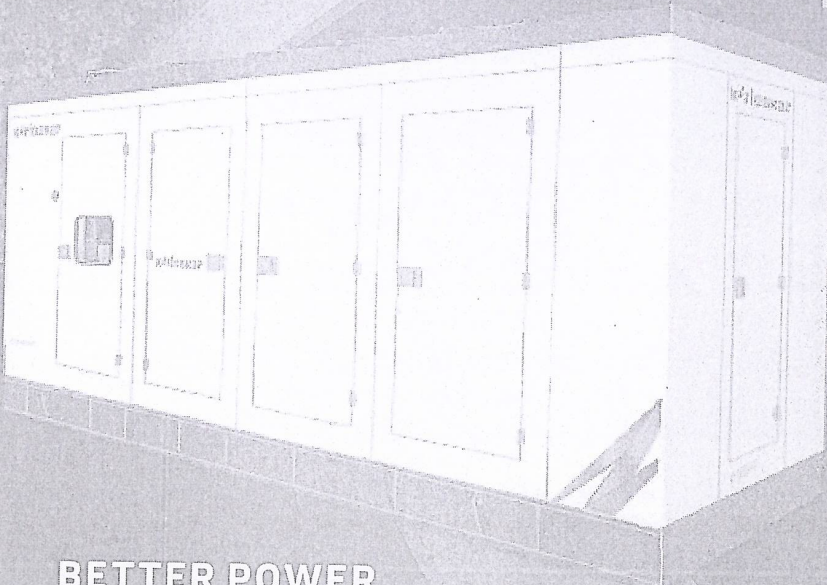
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320-750 kVA
CPCBIV+
COMPLIANT
INDIA'S LARGEST
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BETTER POWER
FOR A

limitless

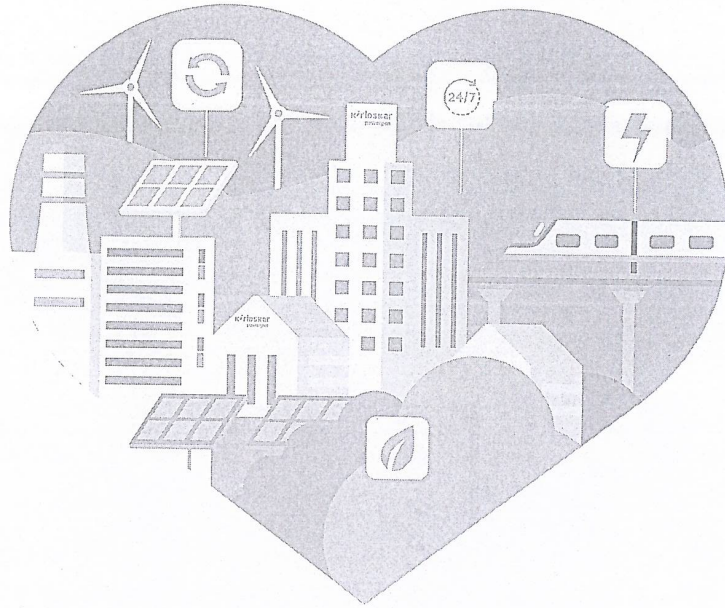
T O M O R R O W

BETTER POWER

FOR A

limitless

T O M O R R O W



A RICH HERITAGE OF OVER A CENTURY OF ENGINEERING EXCELLENCE.

Kirloskar power 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 our Plant with a
QR Code Scan.



320-750 kVA TECHNICAL SPECIFICATIONS

| | | | | | | | |
|--|----------------|--------------------------|-------------|-----------|-----------|-----------|------|
| Prime Rating at rated rpm (as per ISO8528) | kVA | 320 | 400 | 500 | 625 | 750 | |
| | kW | 256 | 320 | 400 | 500 | 600 | |
| Genset Model | | KG4-320WS1 | KG4-400WS11 | KG4-500WS | KG4-625WS | KG4-750WS | |
| Frequency | Hz | | | 50 | | | |
| Power Factor | lagging | | | 0.8 | | | |
| Voltage | V | 415 (3Ø) | | | | | |
| Governing class (As per ISO 8528 Part-V) | | G3 | | | | | |
| DG set Noise level at 1 meter | dBA | <75 (Genset with canopy) | | | | | |
| Fuel tank capacity (Standard DG set) | Ltrs | 600 | 850 | 850 | 990 | 990 | |
| Weight of genset with canopy (approx..) [^] | Dry | Kg | 4090 | 6220 | 6240 | 8150 | 8760 |
| | Wet (w/o fuel) | Kg | 4200 | 6415 | 6435 | 8370 | 9100 |
| Overall dimensions of genset [^] | Length | mm | 4750 | 5575 | 5575 | 6500 | 6800 |
| | Width | mm | 1700 | 2125 | 2125 | 2125 | 2300 |
| | Height | mm | 2005 | 2610 | 2610 | 2710 | 2715 |
| Electrical Battery Starting Voltage | Volts-DC | 24 | | | | | |

ENGINE

| | | | | | | |
|--|----------|--------------|------------|------------|-------------|-------------|
| Engine Model | | 6SL90ETA 4G3 | DV8ETA 4G2 | DV8ETA 4G3 | DV10ETA 4G2 | DV12ETA 4G2 |
| Rated output (Prime Continuous rating as per ISO 8528-1) | kW | 279.5 | 360 | 447.2 | 561.1 | 662 |
| | HP | 380 | 490 | 608 | 763 | 900.6 |
| No. of cylinder | Number | 6 | 8 | 8 | 10 | 12 |
| Cubic capacity ² | Ltrs | 8.86 | 15.92 | 15.92 | 19.9 | 23.88 |
| Bore x Stroke | mm | 118 x 135 | 130 x 150 | 130 x 150 | 130 x 150 | 130 x 150 |
| Rated Speed | RPM | 1500 | | | | |
| Aspiration | NA/TC/TA | TA | | | | |
| Lube Oil change period | hrs. | 500 | | | | |
| Lube oil Sump Capacity | Ltrs | 27 | 40 | 40 | 50 | 73 |
| Coolant Capacity (Engine + Radiator) | Ltrs | 36 | 63.2 | 63.2 | 81.7 | 173.9 |
| Adblue/DEF capacity | Ltrs | 45 | 45 x 2 | | | |

ALTERNATOR

| | | | | | | |
|---|---|--|------|------|------|------|
| Insulation Class | | Class H | | | | |
| Alternator Efficiency (at 100% load) 0.8 pf ^{**} | % | 95.3 | 93.4 | 94.8 | 95.7 | 94.7 |
| Max Voltage Dip at Full Load 0.8 pf lag | | < 20 % | | | | |
| Max Time to build up rated voltage at Rated RPM | | < 2 sec, provided engine reach the rated speed | | | | |

[^] Tolerances Apply

[⊕] These Weight are for handling & transportation only

^{**} Efficiency of Alternator as per standards IEC60034-1

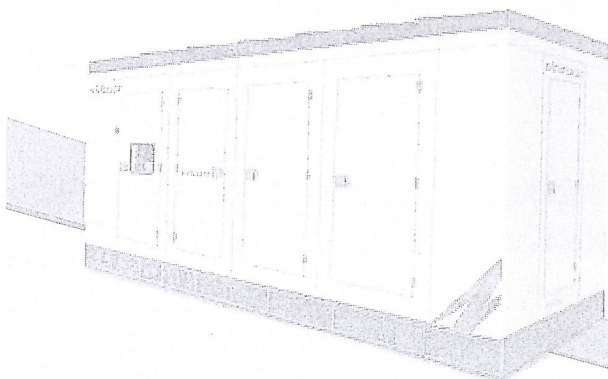
Notes

AdBlue used should follow ISO 22241.

Above specifications are subject to change without prior notice due to continuous technical development.

For intermediate ratings, kindly contact nearest Kirloskar office.

For Site Conditions other than standard operating conditions consult Kirloskar Oil Engines for available prime power.



7 Easy steps for a happy Genset Ownership

- ▣ Insist on a load-study
- ▣ Select the Genset rating as per the load-study and with sufficient margin for future load expansion
- ▣ Apply site-selection guidelines carefully
- ▣ Insist on installation in line with Kirloskar guidelines
- ▣ Ensure adequate size and proper connection of cables
- ▣ Understand the Genset operation & maintenance procedures during commissioning
- ▣ Follow routine maintenance protocols through authorised Kirloskar service dealers

Genset kVA 320 to 750 kVA Features



Prime rating and Stand-by rating

'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. Kirloskar offers Prime power as a standard offer. Contact Kirloskar for stand-by ratings.



No replacement to displacement

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.



Best-in-class Fluid Efficiency (Fuel & DEF)

Kirloskar Gensets offer a unique combination of CPCB norm compliance and enhanced fuel efficiency. Across the range, Kirloskar Gensets offer substantial savings in fuel cost.

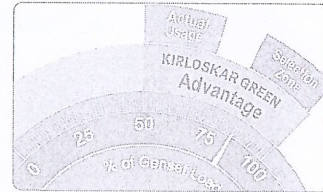
O2E Series (Optimal Operating Efficiency):

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 Gensets.

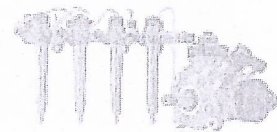
Considering this practical situation, Kirloskar has extended fuel efficiency optimization from 100%, right up to 50% of rated load.

In line with fuel efficiency Kirloskar Genset ensures the better DEF efficiency and accordingly optimized the DEF tank size. Combination of best-in-class fuel efficiency & O2E provides a double advantage.



Common Rail Direct Injection System (CRDi):

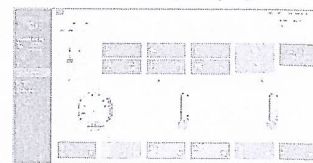
Common rail diesel injection technology, popularly known as CRDi, provides a significant upgrade over traditional mechanical fuel injection systems. CRDi provides precise fuel control, multiple injections, enhanced performance, lower noise and reduced emissions. High pressure common rail system employed on Kirloskar CPCB IV+ Gensets maximizes fuel atomization, delivering a smooth and smoke free performance. Diesel filters with 'A' class filtration are used for CRDi Engines which enhances the filtration efficiency. Common rail fuel injection system will provide a new level of performance, efficiency, and reliability.



Genset Monitoring at Your Finger Tips

Kirloskar gensets are enabled with Kirloskar remote monitoring system which shares Real Time Genset information and location Services. It can be accessed via mobile device or desktop. Kirloskar remote monitoring system also highlights any parameter which needs special attention. These critical indication alerts are sent to user mobile via text message. It also alerts nearest services dealer in case of any emergency break-down.

KRM Desktop Display



Ask your Dealer for KRM
login details & password



On Board Diagnostics :

Superior uptime. Genset comes with advanced diagnostic capabilities, this coupled with Kirloskar remote monitoring system provides real time monitoring of performance, emission and service critical parameters this helps for early diagnosis to fix the issues before system breakdown



State of the art Genset Controller

Kirloskar Genset put the command in your hands. Micro-processor based Genset controllers display a host of genset parameters and put all controls at your fingertips.

Monitoring Features:

- Phase Voltages & Currents, Frequency, Genset kVA, kW, kWh, kVAR, Power Factor
- Lube oil Pressure, Engine Temperature, RPM, Run Hours, Number of starts, Fuel Level, Auto / Manual Stop, Battery charge condition, AMF feature

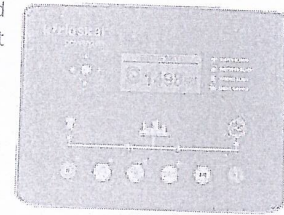
Diagnostic Features:

- Battery charging failure, Over/Under speed, Over Current, Over/Under Voltage, Over kW, Phase Seq., Phase missing, Mains Under voltage, Earth Fault trip, Low fuel level
- Low lube oil Pressure, High Engine Temperature, Low/High battery voltage, Low Fuel Level, Over Crank protection, Routine maintenance indicator, Genset Test Facility, Mains Frequency

Optional Features:

- Modbus Communication
- Synchronization

KG745 Controller



Peace-of-mind Ownership

Kirloskar Gensets have always been preferred for their robust design and reliability over long usage life. Kirloskar range carries the confidence of well-established and proven engine platforms. For compliance to revised CPCB norms, Kirloskar has carefully selected those technologies which not only retain, but enhance Gensets durability and on-site serviceability.

Thus, Kirloskar Gensets offer you many years of trouble-free performance; backed by the assurance of prompt support. Peace-of-mind driven by product reliability and low cost of ownership.



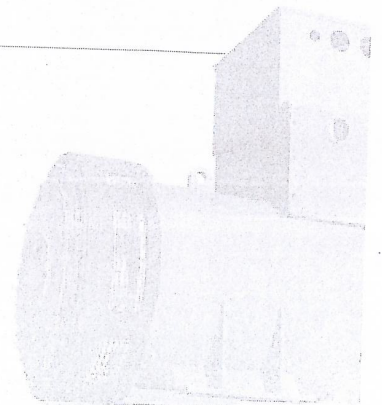
Alternator Features:

Kirloskar Alternator is compact in design & comes with AREP winding and Digital AVR. Auxillary Regulation Excitation Principle (AREP) winding improves the Non-linear load handling capability, Motor starting capacity. Advanced Digital AVR improves the Voltage regulation and Response time.



Compact footprint:

Kirloskar CPCB compliant Gensets are having compact footprint which results in space saving. CPCB compliant technology is upgraded by maintaining the compact footprint of Genset.



kirloskar
powergen

Glimpses CPCB IV+ Genset (320-750 kVA)

Engine

- Efficient CRDI System
 - D2E Series: Low emission, high efficiency engines
- Compact, Robust and Rugged Design
 - 500 hours lube-oil change period
 - Integral set - mounted radiator system, designed & tested for 50°C ambient temperature

Controller

- Microprocessor based
- Graphical LCD display
- Best in class monitoring and diagnostic capability
- Integrable with AMF, synchronization (optional) & communication compatible

DEF Tank

- DEF/Aqueous urea to sets off the chemical reaction with Exhaust gas
- Tank size is optimized in accordance to DEF consumption

Supply Module & DCU

- Control & monitor the DEF

Exhaust Gas Treatment System

- DOC & SCR system sets off the reaction to meet the latest CPCB norms
 - Reduction in NO_x & HC
 - Reduction in PM

D2E - Optimal operating efficiency
DEF - Diesel exhaust fluid
DCU - Dosing control unit
DOC - Diesel oxidation catalyst
SCR - Selective catalytic reduction

| PRICE SCHEDULE FOR SUPPLY OF 1 x 320KVA (CPCB 4 +) DG SET, 415V | | | | | |
|---|--|------|-----|-----------------|--------------|
| S.No. | DESCRIPTION | UNIT | QTY | UNIT RATE (INR) | AMOUNT (INR) |
| 1 | Supply of 320 KVA SILENT DG Set comprising of Cummins make engine model QSL9-G20 developing suitable BHP Coupled to 320 KVA, 415 V STAMFORD make alternator mounted on a common base frame, complete with | Set | 2 | 39,68,000 | 79,36,000 |
| | (a) 515 Litres fuel tank | | | | |
| | (b) Batteries & Leads. | | | | |
| | (c) AVM Pads. | | | | |
| | (d) Silencer | | | | |
| | (e) First fill of lube oil. | | | | |
| | (f) STD controller | | | | |
| | (g) Acoustic enclosure | | | | |
| | (h) Standard Panel | | | | |
| | TOTAL - 320KVA DG SET | | | | 79,36,000 |
| JAKSON NOTE:- | | | | | |
| 1 | Freight Ex-Works, GST extra @ 18% or extra as applicable at the time of dispatch | | | | |
| 2 | Dispatch: 4 to 6 weeks from the date of receipt of approved drawings / advance whichever is later | | | | |
| 3 | Payment terms: 30% advance along with order and balance against proforma invoice before dispatch | | | | |
| 4 | Unloading/ shifting of DG Set, STD manual panel, spares and tools & tackles, any kind of type/routine test on engine and alternator, assembled DG set, CEIG/PCB board approval, Erection material like Exhaust/ Fuel piping, cabling (power & control), earthing, cable tray & its trenches etc. & civil work (major/ minor) shall be in purchaser's/contractor scope. | | | | |
| 5 | Our standard offer is based as per trailing mail only, if any technical specs/SLD/make list/BOQ found then there will be price increase possible & our offer will revise in that case. | | | | |



JL/Wabag/MT/PK/24-25

DATED: 30, SEPT, 2024

TO
M/S WABAG

KIND ATTN.: Mr. PHANI KUMAR E-MAIL: Phani.Kumar@wabag.in

SUBJECT: OFFER FOR SUPPLY OF 1X320 KVA DG SET FOR YOUR 48MLD MPS
INDRAPURAM PROJECT.

Dear Sir,

We invite your attention with reference to your mail enquiry for your requirements of DG set for above project. We are pleased to inform you that we are in position to manufacture and supply the DG sets meeting your requirements.

Our product range includes:

| | |
|---|--|
| * | Complete Range of Diesel Sets from 10 KVA to 3750 KVA (3.0 MW) powered with World-renowned Cummins Engines. |
| * | Complete range of DG Panels i.e. MCC Panels, Control & Relay Panels, AMF Panels, PLC based Auto Synchronizing and Auto Load Sharing Panel etc. |
| * | World class in house Acoustic Enclosure manufacturing |
| * | Turnkey Solutions from concept to commissioning. |
| * | Customised/Containerised Gensets packages. |

We are now submitting our detailed offer as under for your reference and perusal:

| | | | |
|---|--|---|--------------------|
| 1 | Jakson – An Overview | : | Annexure-I |
| 2 | Technical Specification of DG set 320KVA | : | Annexure-II |
| 3 | Technical Specification of Acoustic Enclosure. | : | Annexure-III |
| 4 | Commercial Terms and Conditions. | : | Annexure-IV |
| 5 | Price Schedule | : | Attached in excel` |

We sincerely trust that you will find our proposal fully meeting with your requirement & now look forward to receive your valued order at an early date, which we assure will receive our prompt and careful attention always.

Thanking you,

Yours Sincerely,

For JAKSON LIMITED,

Pradeep Kumar
Manager (Distributer Energy Business)
Email: Pradeep.kumar2@jakson.com
Contact no- 7093322123

Jakson Limited

Headquarters :
A-43, Phase-II (Extension),
Hosiery Complex,
Noida - 201 305 (UP) India.
CIN No.: U74899DL1997PLC038808

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☎ 0120 - 4302646
✉ info@jakson.com
🌐 www.jakson.com

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Jasola, New Delhi - 110076

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☎ +91-11- 46130573
✉ jaksondelhi@jakson.com

Toll Free No. : 18001032600



ANNEXURE-I

JAKSON GROUP-AN OVERVIEW

With more than 7 decades of presence, Jakson Group is a leading diversified Energy Solutions company which offers end to end solutions right from concept to commissioning through diverse strategic business units ranging from Distributed Energy, Solar, EPC to IPP. Over the years, the company has gained longstanding expertise in the Energy Industry - having diversified from a Diesel Generator Manufacturing Organisation into an integrated Energy Solutions Company with extensive presence throughout India including 3 manufacturing facilities equipped with state of the art machinery, 5 Independent Solar Power Plants, 40 Sales Offices and a wide network of channel partners and dealers. Jakson is headquartered in Noida, Uttar Pradesh and has a workforce of over 2200 talented people and an annual revenue exceeding 2500 INR Crores. The company also has business interests in Singapore, Dubai, Bangladesh, Nepal and the African Sub-Continent.

Business Units & Product Offerings:

1) DISTRIBUTED ENERGY

A) Silent Diesel Gensets

Our wide base of over 40,000 customers and unmatched product portfolio of diesel generators, range from 7.5 KVA to 3750 KVA. We produce over 10,000 gensets annually through 2 of our world class manufacturing plants with best-in-class machinery and a truly global approach to manufacturing that ensures the highest quality for its customers. We specialize in the area of providing turnkey solutions which includes end to end captive power solutions for green field projects, designing of power house, supply, installation, testing and commissioning of DG sets and associated works by providing a single window service to our valued customers.

B) Solar Roof Top

Jakson is one of India's leading providers of turnkey solar rooftop services having installed more than 90 MW projects across the country. Catering to the needs of a variety of industrial, commercial and residential users, our services encompass both standardized as well as tailor-made rooftop solutions ranging from a few kilowatts to large utility scale rooftop installations.

C) Energy Storage Solutions

Supporting the "Aatmanirbhar Bharat" mission of the Prime Minister and our commitment towards mitigating climate change, we have taken the lead in developing a Battery Energy Storage System



(BESS) which generates carbon-free power, contemporarily designed to suit all segments and enables uninterrupted power supply while significantly reducing costs. Equipped with a hybrid inverter, lithium ion batteries and smart energy systems, it combines the use of grid power, Solar and DG (Optional), and is scalable to any type of battery as well as to a new energy platform. Its modular construction makes it easy to transport and install while fast-charge capability and low-system energy consumption makes it practical and user-friendly.

A) Defence Solutions

In a short span of few years, Jakson has achieved the capability to develop high-end products complying with JSS-55555, CQAL-640 and EMI/EMC standards for military & Defence applications. It has an in-house prototyping shop, R&D facility and a NABL certified testing facility. We are also a proud member of the Society of Indian Defence Manufacturers (SIDM). We manufacture Mil-grade DG Sets, Power Shelters/Power Packs, and GPU & APU meeting Mil Standards.

2) SOLAR MODULES & PRODUCTS

Jakson ranks amongst the top 10 solar power companies in India with a state-of-the-art module manufacturing facility at Greater Noida, India, having an annual manufacturing capacity of 500 MW being scaled to 1 GW shortly. This Unit comprises of manufacture and sales of Solar PV modules, Module Mounting Structures, Solar Power Packs and other innovative solar products and solutions.

3) EPC-ELECTRICAL PROCUREMENT & CONSTRUCTION

Jakson provides turnkey Engineering, Procurement and Construction (EPC) services for land based solar power plants, rural and urban electrification, electrical substations and transmission, building electrification for industries, data centres, hospitals, metro electrification and distribution franchisees. We have executed over 1GW of solar EPC projects across India and overseas. We have completed 132KV & 220KV substations and transmission lines across India. We have executed prestigious projects such as Rashtrapati Bhawan, Indian Railways, Metro electrification apart from others. The EPC Business is expanding geographically in Africa, Middle-East, Nepal and Bangladesh.

4) IPP-INDEPENDENT POWER PRODUCERS

The Solar IPP Business Unit is focussed on setting up land based solar power plants which sell power to State & Central utilities under long term Power Purchase Agreements (PPAs). The Company currently has a solar IPP portfolio of 300 MW with 60 MW of operational plants in Rajasthan and Uttar Pradesh. The company is setting up another 220 MW of land based solar power plants in the state of Assam and Uttar Pradesh.



ANNEXURE-II
TECHNICAL SPECIFICATIONS OF 320KVA DG SET

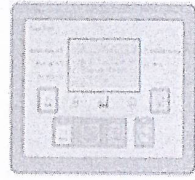
| Generator Set Specification | Technical Specification for 320 KVA (CPCB IV+ Emission Compliant) |
|--|---|
| Genset Model | CI 320D5P |
| Duty | Prime |
| Power Rating kVA / kWe | 320/256 |
| No. of Phases | 3 Phase |
| Output Voltage and Frequency (V and Hz) | 415 V, 50 Hz |
| Power Factor | 0.8 (lagging) |
| Current (A) | 445 |
| RPM | 1500 |
| DG Controller | PSO 602 |
| Silencer | Hospital Grade Silencer inside canopy with rain cap suitably optimized to meet stringent noise limit |
| Remote monitoring system | Yes, Compact & robust device, Real time DG status & monitoring 4G compatible Compatible for 24 V DC, Reports & Notification – Alerts & Warning Isolated RS 485 interface, Device location using triangulation |
| Mounting type | AVM Pad |
| Emission Norm | CPCB IV+ Emission Compliant |
| Rating (kVA) | 320 |
| Length (mm) | 5000 |
| Width (mm) | 1500 |
| Height (mm) | 2465 |
| Wet Weight" (kg) | 4530 |
| DEF Tank Capacity (litre) | 60 |
| Standard Fuel tank Capacity (litre) Inside Enclosure Under the base frame | 515 |
| External Day tank | NA / Not Offered |
| Conformance Standards | <ul style="list-style-type: none"> • IS/IEC 60034-1, • ISO 1460, • ISO 8528, • ISO 3046, • ISO 9001, • ISO 13026 |
| Engine Specification | |
| Make | Cummins |
| Model | QSL9-G20 |
| Required Certified Power for Rated kVA (hp) | 395 |
| Cooling | Liquid Cooled (EG Complete 50:50) |
| Design Ambient temperature | 50 Deg C |
| DEF | AUS 32 (Premix) as per ISO 22241 |
| Aspiration | Turbocharged , Intercooled |
| No. of cylinders | 6, In-line |
| Fuel | High Speed Diesel |
| Performance class of generator set | ISO 8528-5 G2 |
| Starting system | 24 V DC Electrical |
| Battery Capacity & Make | 12V, 95AH, 02 nos Cummins Pulse Value plus |
| Fuel System | Common Rail Electronic Injection System (CREI) |



| | |
|---|----------------|
| Governor | Electronic |
| Exhaust pipe size (inch) | 5 |
| Lube oil specification | CK4 |
| Total lubrication system capacity (Litre) | 31.7 |
| Total coolant capacity (litre) | 36 |
| Alternator specification | |
| Make | STAMFORD (CGT) |
| Alternator Frame | HCI444D |
| Rated Output | 320KVA |
| Enclosure | IP 23 |
| Voltage regulation (Max.) | ±0.5% |
| Class of Insulation | H Class |
| Temperature Rise Limited to | H Class |
| Site Output | 320KVA |

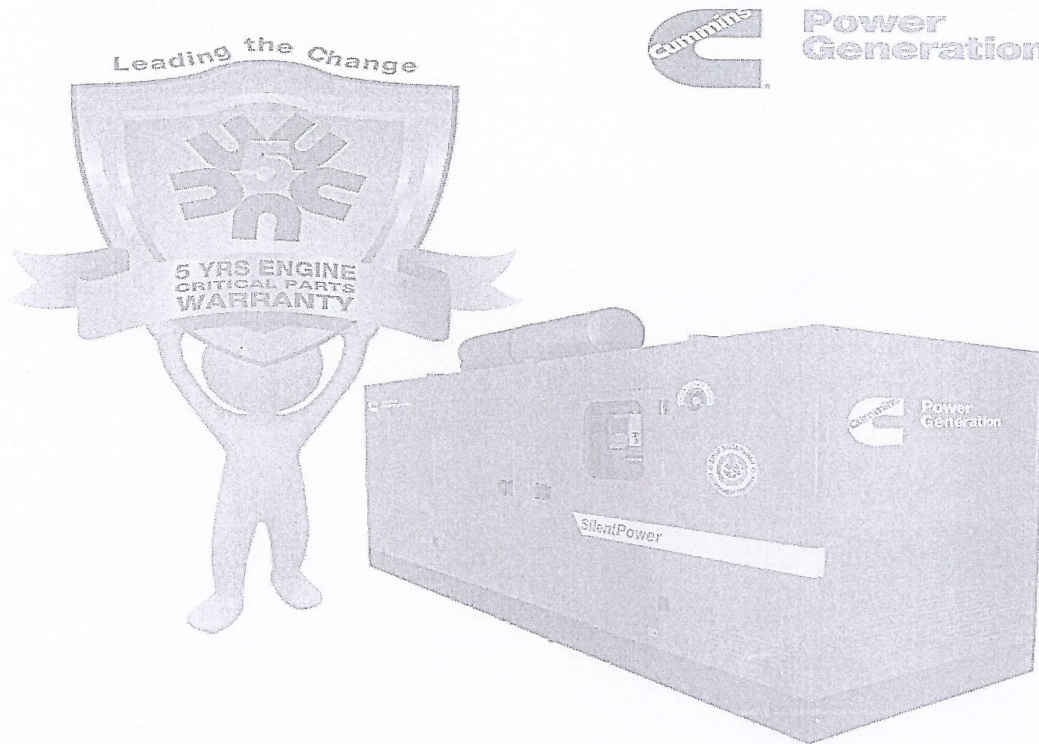


ENGINE CONTROLLER: -

| INTEGRATED DG SET CONTROLLER- PSO 602 | |
|---------------------------------------|--|
| CONTROL | <ul style="list-style-type: none"> ❖ AMF Functionality is inbuilt ❖ Remote start-stop ❖ Modbus interface (RS485 RTU) ❖ Manual Run/ Off / Auto switch ❖ Emergency stop ❖ Configurable glow plug control ❖ Theft proof Fuel & DEF filling arrangement ❖ Data Logging: Engine hours, Control hours and up to 5 recent fault codes ❖ Fuel filling arrangement Outside the enclosure ❖ Suitable for Sync through External Sync controller  |
| METERING ENGINE | <ul style="list-style-type: none"> ❖ Oil pressure ❖ Engine temperature ❖ Engine running hours ❖ Starting Battery Voltage ❖ Lube Oil Temperature & Pressure ❖ Engine Coolant Temperature ❖ Number of Starts. |
| ELECTRICAL | <ul style="list-style-type: none"> ❖ L-L Voltage and L-N Voltage ❖ Current (phase and total) ❖ kVA (phase and total) ❖ Frequency ❖ Kwh (Total & per phase) ❖ kw & kVA ❖ PF ❖ Utility Voltage and Freq |
| ENGINE PROTECTION / WARNING | <ul style="list-style-type: none"> ❖ Over Speed Shutdown ❖ Low Lube Oil Pressure Warning / Shutdown ❖ High Coolant Temperature Warning / Shutdown ❖ Low Coolant Temperature Warning ❖ Low And High Battery Voltage Warning ❖ Weak Battery Warning ❖ Sensor failure ❖ Cranking lockout ❖ Low Fuel Level ❖ Fail To Crank Shutdown ❖ 4-20mA analog input compatible for oil pressure sensor and fuel level ❖ Maintenance due alarm based on Engine Run Time and due. ❖ Exercisers scheduler |
| ALTERNATOR | <ul style="list-style-type: none"> ❖ Loss of AC sensing. ❖ Over Current ❖ High Voltage ❖ Low Voltage ❖ Under / Over Frequency |



5 C WARRANTY CERTIFICATE: -



Cummins Assure

Warranty for Cylinder Head, Camshaft, Crankshaft, Cylinder Block, and Connecting Rod ('5Cs') - the critical engine parts

- ✦ Gets triggered when there is any manufacturing defect in the 5Cs
- ✦ 3 years' additional warranty over and above the standard 2 years' warranty (Total warranty for 5 years or 5000 hours from date of sale, whichever is earlier)
- ✦ Free of cost replacement of any of the 5Cs
- ✦ Covers any progressive damage to the engine
- ✦ Covers the labor charges incurred towards repairs to/ replacement of the 5Cs

Terms and conditions:

The owner to prove that:

- ✦ Operation and maintenance of the Generator Set is performed as per Cummins Operations and Maintenance Manual.
- ✦ Parts and services are purchased from the Cummins Authorized Distributor.
- ✦ Use Cummins recommended Valvoline oil only.

Please get in touch with the marketing team for more information.
Applicable on all diesel generator sets despatched after July 1, 2014.

**Join the ever Expanding Cummins Family!
Be Smart. Buy Smart.**

ANNEXURE-III

TECHNICAL SPECIFICATIONS OF ACOUSTIC ENCLOSURE

1. The acoustic enclosure shall be of modular construction with the provision to assemble and disassemble easily at site.

2. The enclosure is fabricated out of CRCA sheet of 16 SWG.

3. The metal components are hot dipped in NINE TANKS pre-treated before powder coating.

4. The enclosure is powder coated (inside as well outside) with a special pure polyester based powder. All internal Nuts and bolt are made of MS and all external Nuts and Bolts are made of stainless steel.

5. The enclosure are gasketed with high quality EPDM gaskets to avoid leakage of sound.

6. The enclosure handles are lockable type.

7. The insulation of enclosure is done with high quality rock wool/mineral wool confirming to IS 15913 of 100 mm thickness and density at 64 kg /M³

8. The rock wool is further covered with fibre glass cloth and perforated powder coated MS sheet.

9. Specially designed attenuators are provided to control sound at air entry to the container and its exit from the container.

10. This type Acoustic enclosure for 650KVA and above Rating

11. Long water ventilation is provided to meet air requirement for combustion and heat removal.

12. The viewing window is fitted with toughened glass instead of acrylic sheet.

13. As per IS 15913 norms with acoustic enclosure the noise level shall be 75 dBA at one meter under the test condition for upto 1000 KVA.

