



ODISHA POWER GENERATION CORPORATION LIMITED
IB THERMAL POWER STATION
At/PO: BANHARPALI, DIST: JHARSUGUDA – 768 234 (ODISHA)
CIN: U40104OR1984SG001429
TEL: (06645) 289328
Email: manoj.behera@opgc.co.in; pradipta.mohanty@opgc.co.in

NOTICE INVITING TENDER

NIT No. ITPS/Pur/2023-24/71

Date: 29/02/2024

Separate Sealed bids in the prescribed format are invited from bona fide and financially sound reputed Agencies / Registered Firms/Companies for the supply of the following materials at IB Thermal Power Station, Banaharpali.

Sl. No	Material Description	Tender Cost (Rs.)	EMD (Rs.)	Sale of Tender document	Date of receipt & submission /Opening of technical Bid
1.	Procurement of 315 KW HT Conveyor Motor	Rs.1,000.00	Rs.56,000.00	29/02/2024 to 15/03/2024 (Hard copy only)	Up to 3:00 PM on 16.03.2024 / 3:30 PM onwards on 16.03.2024

NB: a) Bidders having the requisite qualifying requirements specified in the bid document shall only be considered for the work.

b) Further please note to submit your offer considering GST provision and its related input tax credit benefits to be passed on to OPGC

- Complete and signed sealed bids in hard copy form only shall be received at the SCM Department, ITPS.
- Bids shall be opened at the SCM Department, ITPS in the presence of the bidders or their authorized representatives, if present at the time of opening.
- If the last date of issue/receipt/opening happens to be a HOLIDAY/office closed, the tender will be issued/received/opened at the respective time on the next working day.
- The photocopies of all the supporting documents required for participating in the tender mentioned in the NIT/Tender paper shall be submitted along with the bid; otherwise, the bid is liable for rejection.
- Bids without EMD will be rejected outright.
- Bids received after the stipulated date & time shall not be entertained.
- OPGC shall not take any liability on account of any postal/courier delay.
- OPGC reserves the right to accept/reject any or all tenders, seek additional clarifications, split up the scope among eligible bidders or cancel the tender altogether without assigning any reasons thereof.

N.B: For further details & downloading of Tender documents, please visit our website www.opgc.co.in.

Important: Agenda/Corrigenda/ Extensions, if any, will be notified on the OPGC website only and will not be published in any other media. Bidders are requested to visit our website regularly for any amendment of the present bid till finalization of the bidding process.

Sd/- AGM- Purchase

SAFE & CLEAN POWER IS OUR COMMITMENT



INFORMATION TO BIDDERS

ODISHA POWER GENERATION CORPORATION LIMITED ("OPGC" OR "OWNER") IS AN ISO 14001 & OHSAS ORGANIZATION AND COMMITTED TO THE SAFETY HEALTH ENVIRONMENT INCORPORATED UNDER THE COMPANIES ACT 1956, INDIA. OPGC STARTED AS A WHOLLY OWNED COMPANY OF THE GOVERNMENT OF ODISHA (THE "GOO") WITH THE OBJECTIVE OF ESTABLISHING, THE ENTIRE GENERATION FROM THESE UNITS IS CONTRACTED TO GRIDCO, THE STATE-OWNED COMPANY, ON THE BASIS OF A LONG-TERM POWER PURCHASE AGREEMENT. AS PART OF ITS CAPACITY ADDITION PROGRAM, OPGC ESTABLISHED TWO ADDITIONAL UNITS OF 2 X 660 MW, BASED ON SUPERCRITICAL TECHNOLOGY, ADJACENT TO THE EXISTING POWER STATION AT THE SAME LOCATION. THE PLANT SITE IS ABOUT 17 KM. FROM BELPAHAR RAILWAY STATION AND 40 KMS. FROM JHARSUGUDA RLY. STATION ON S.E. RLY. ON THE MUMBAI- HOWRAH MAIN LINE.

A. PREPARATION OF BID:

1. The bidder(s) shall submit the bid in two parts, namely-

- I) Techno commercial Bid and
- II) Price bid

PART-I: TECHNO-COMMERCIAL BID

The techno-commercial bid shall consist of the following documents:

- A complete set of original Tender documents as issued to the Bidder duly filled in as prescribed in different clauses of the Tender documents with signature & stamp on all pages as a token of unconditional acceptance.
- Deviation Statement: In normal cases no deviation is admissible, however, in case of any deviation, a deviation statement mentioning clause no and the deviation details is to be submitted by the bidder.
- Tender Cost and Earnest Money Deposit (EMD): A tender cost of **Rs.1000.00/- (Rupees One thousand only)** and EMD of **Rs.56,000.00/- (Rupees Twenty Five Thousand only)** is required to be submitted for the above tender.

The tender cost and EMD shall be in the shape of Demand Draft/Pay Order/Bank Guarantee (BG as per attached format & shall be valid for 06 months) in favour of "ODISHA POWER GENERATION CORPORATION LTD" drawn on State Bank of India (Code-9510) / Union Bank of India (Code-UBIN0806625) / Central Bank of India (Code-283899) shall be submitted.

- Unpriced Bid: Bidders must submit the unpriced bid and must specify whether they have "Quoted" or "Not Quoted" & also indicate the make/brand quoted against each item

unpriced bid format enclosed in the tender document.

- GST Certificate copy.
- PAN Certificate copy
- Supporting documents as mentioned in Qualifying Criteria.
- Dully filled proforma for summary quotation (Annexure-I).

Note: If required additional sheet may be used to furnish all the above information but in the format provided in the general conditions of the contract.

The techno-commercial bid with all its enclosures as mentioned should be put in an envelope, sealed & super scribed as a "techno-commercial bid". This envelope must contain the name of the work, NIT no., the due date of opening and the name & address of the bidder on the bottom left-hand corner of the cover.

PART-I I: PRICE BID

Original price bid duly filled in, signed & stamped on each page shall be submitted. Any price breakup (if required) must be submitted separately. The rates offered by the bidder shall be written in English (clearly handwritten or typed) both in words and figures and shall be free from any aberrations, deletions, corrections and overwriting. In case of any illegibility of the offer submitted by the bidder, the interpretation by OPGC shall be final and binding on the bidder. Insertion, postscript, addition and alteration shall not be accepted after submission of the bid. Price bids of only those bidders will be opened who meet as per qualification criteria given below. The Owner shall not entertain any correspondence with any Bidder about the acceptance or rejection of any Price Bid.

Both the Techno commercial bid and Price bid duly sealed in a separate envelope should be sealed and covered with another bigger envelope and This envelope must contain the name of the work/supply, NIT no., due date of opening and name & address of the bidder on bottom left-hand corner of the cover.

NOTE: TENDERS SUBMITTED WITHOUT THE ABOVE REQUIREMENTS SHALL BE LIABLE FOR REJECTION.

B. OTHER TERM AND CONDITIONS

- 2) OPGC will award the contract to the successful bidder whose bid has been found the evaluated lowest i.e. on L-1 basis. The tender will be finalised on the item-wise L1 basis or package basis considering the bids received. The firm has to accept a part order in case OPGC decides to go for items wise L1 basis Purchase Order.
- 3) OPGC reserves the right to evaluate the quotation on such deviations having financial implications by adding the cost determined by OPGC.

- 4) Wherever it is mentioned in the specification that the contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his cost.
- 5) Before quoting the rates, the bidder should go through the specifications, scope of work, and special conditions of contracts etc. and get himself fully conversant with them.
- 6) The details of items in the price schedule shall be read in conjunction with the corresponding technical specifications. Items of work provided in the price schedule but not covered in the technical specifications shall be executed strictly as per instructions of the engineer in charge.
- 7) The bidders shall quote rates inclusive of the complete cost towards consumables, tools and tackles, equipment, labour, levies, taxes and duties if any, all safety PPE as per OPGC norms to all workmen, rectification, maintenance till handing over, supervision overheads, profits and all incidental charges not specifically mentioned but reasonably implied and necessary to complete the work according to contract.
- 8) OPGC reserves the right to accept the whole or any part of the tender and the bidder shall be bound to perform the same at their quoted rates.

Note:

- Item-wise HSN Code with GST rate applicable to be indicated in the offer
- Further please note to submit your offer considering GST provision and its related input tax credit benefits to be passed on to OPGC
- Bidders have to follow the general instructions while submitting the price bid.
- **EMD Waiver Clause:** All Micro & Small Enterprises (MSEs) who are registered with DIC/KVIC/KVIB/Coir Board/NSIC/DHH/ Udyog Aadhar Memorandum are eligible to get the benefit of exemption from payment of EMD & Tender cost and to get the exemption, the participating bidders have to obtain/register as MSME for the specific service/supply of goods/both.

To get the exemption of EMDs & tender fee, the party has to make an application to the head of supply chain management (SCM) who is conducting the tendering process along with proof of documents regarding eligibility of the exemption at least 2 days before the last day of bid submission. The HOD after due examination will be allowed to participate without submission of EMD& tender fee & the same has to be communicated to the bidder in writing.

- The Earnest Money of all unsuccessful Bidders will be returned within thirty (30) days after the award of the Contract.
- No interest will be payable by the Owner on the said amount covered under Earnest Money / other security deposits.
- On finalization of Tender, Earnest Money deposited in form of DD of successful Bidder will be treated as part of the initial security at the option of the said Contractor or shall be returned to the successful bidder at his option on submission of requisite security deposit.
- A Bidder shall submit the Tender which satisfies each and every condition laid down in this notice and other tender documents, failing which the Tender will be liable to be rejected.

- The ODISHA Power Generation Corporation Ltd. do not bind themselves to accept the lowest or any tender or to give any reasons for their decision. The Owner reserves the right to allow the Public Sector Undertakings price preference facilities as admissible under existing Govt. policy. The prospective Bidders may apprise themselves of the relevant Govt. notification in this regard before submission of their bid. The ODISHA Power Generation Corporation Ltd. reserves the right to accept the whole or any part of the Tender or split the total scope of work among eligible Bidders and Bidder (s) shall be bound to perform the same at his/their quoted rates.
- OPGC reserves the right to accept/reject any or all tenders, split up the scope among eligible bidders or cancel the tender altogether without assigning any reason thereof.
- Bidder has to submit the price bid as per the price bid format.
- Vendors are requested to submit their seal offers at our office by sending through DTDC **COURIER / SPEED POST/REGISTER POST/By Person.**
- The details of items in the price schedule shall be read in conjunction with the corresponding technical specifications. Items of work provided in the price schedule but not covered in the technical specifications shall be executed strictly as per instructions of the Engineer in charge.
- Rate will be valid for the 1 year from the date of award of contract. Extension/Repeat orders can be placed as per the requirement of the OPGC for a period of 6 months for supply.
- OPGC reserves the right to accept the whole or any part of the tender and the bidder shall be bound to perform the same at their quoted rates.

Note: Tenders submitted without the above requirements shall be liable for rejection.

GENERAL INSTRUCTIONS

- 1.0 The offer given must remain valid for 180 days from the date of opening of the bid.
- 2.0 Manuals/pamphlets/leaflets and drawings illustrating technical details/year of manufacture, maker name, and country of origin must be enclosed with the tender, a sample if required should be submitted along with the tender.
- 3.0 The price quoted should be firm and delivery F.O.R destination inclusive of packing, forwarding, transportation and insurance charges except GST which is to be extra as actual.
- 4.0 Quality of materials to be supplied should be brand new, free from all flaws, good finish and should be as per technical specification and relevant to its specification.
- 5.0 Destination means central stores, IB Thermal Power Station, Banharpali.
- 6.0 Whenever tenderers have entered into a rate contract with DGS&D or EPM, they will indicate the same in their tenders and submit a copy of the rate contract as proof of claim.
- 7.0 The quantity indicated in this enquiry is provisional and subject to change as per plant requirement, which may increase or decrease during the contract period. OPGC has no obligation to receive the full ordered quantity.
- 8.0 Warranty will be a minimum of 36 months from the date of receipt of material at the site. A warranty & test certificate has to be provided along with the material.
- 9.0 The undersigned reserves the right to accept/reject any or all the tender without assigning any reason thereof.
- 10.0 Penalty for delay in delivery: - The vendor is liable to pay a penalty at the rate of 0.5 % of the cost of undelivered materials per week or part thereof subject to a maximum 05 % of the cost of undelivered materials. If the delay is beyond 10 weeks or less depending upon the requirement, the buyer reserves the right to cancel the PO and collect the materials from any other source at the risk of the original supplier without making any reference to him. The additional financial involvement occurs if any from procuring other sources shall be recovered from you.
- 11.0 **(a) Preparation of comparative statement:**

The vendor should note the following, loading factors to be used by OPGC during the evaluation process in case the same has not been considered during offer submission.

P&F charges	2%
Freight less than 300 km	3%
300 km. To 500 km	4%
500 km. To 1000 km	5%
Above 1000 km	6%
Insurance	0.086%

(Note: percentage loading will be limited to full truck/trailer load rate for each truck load).

Payment terms loading

1.5% per month (wherever parties have quoted 100% through bank/advance against our standard and payment terms of bid documents)

In case of payment through bank loading for 30 days and in case of advance payment along with PO the loading for the period of delivery period plus 30 days, may be taken. In case of 90% through bank & balance 10% within 30 days after receipt and acceptance of materials.

The loading factor will be $1.5 \times 0.9 = 1.35\%$. Accordingly, for other payment terms, loading factors will be calculated.

12.0 Loading procedures

Basic price	
Packing & Forwarding charges	(on basic price only)
Freight on	(basic + p&f)
Insurance on	(basic + p&f + freight)
GST	(basic + p&f + freight + insurance)
Payment terms loading on	(basic + p&f + freight + gst)

13.0 Weight/length variation

In case the payment is done on weighing the consignment at the site, an allowable tolerance of +/- 0.25% shall be applicable. This tolerance shall be allowed as weighbridge tolerance due to being weighed in two different weighbridge (if available). For any variation beyond this allowable tolerance, necessary adjustments shall be made during releasing payment by way of submission of a credit note by the vendor. If the weight variation is +/- 0.25% from the invoiced weight/challan weight the invoiced weight will be accepted for account as well as payment. If there are three continuous negative tolerance is found no more tolerance shall be allowed. The vendor shall have to submit the credit as per weight by OPGC.

14.0 Force majeure

Any delay or failure to perform the contract by either party caused by acts of god or acts of government or any direction or restriction imposed by the government of India which may affect the contract or the public enemy or contingencies like strikes, riots etc. Shall not be considered as default for the performance of the contract or give rise to any claim for damage. Within 7 days of occurrence and cessation of the event(s), the other party shall be notified. Only those events of force majeure that impede the execution of the contract at the time of its occurrence shall be taken into cognizance.

15.0 Patents, royalties, seller's liability and compliance with regulations

The vendor shall protect and fully indemnify the purchaser from any claims for infringement of patents, copyrights, trade mark or the like. The seller shall also protect and fully indemnify the purchaser from any claims from the seller's workman/employees, their heirs, dependents, representatives etc. Or from any other person/persons or bodies/companies etc. For any act of commission or omission while executing the order. Seller shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the purchaser from any claims/penalties arising out of any infringement.

16.0 Security deposit

The bidder shall submit a security deposit i.e. 05% of the PO basic value in the shape of a DD/irrevocable bank guarantee valid for six months/up to delivery period whichever is later plus a 2-month claim period from a nationalized/scheduled bank executed on non-judicial stamp paper of appropriate value towards execution of the contract. The security deposit shall be released after the supply is complete. If the supplier fails or regrets to observe or perform any of his obligations under the contract, it shall be lawful for the purchaser to forfeit either in whole or part, in his absolute discretion, the security deposit furnished by the supplier. The forfeiture of the security deposit shall be without prejudice to the right of the purchaser to recover any further amount of any liquidated and/or other damages, undue payment or overpayment made to the supplier under this contract or any other contract claim of the supplier shall be entertained against the purchaser either in respect of interest or depreciation in the value of security deposit. Security deposit is to be submitted within 15 days of placement of LOI/PO

17.0 Performance bank guarantee: performance bank guarantee valid for 15 months (12 months + 03 months grace period) from the receipt of materials or 12 months from the date of use shall be submitted by the firm for performance of the equipment or spares supplied by the successful bidder.

18.0 Language

The contract including the purchase order and all schedules, annexures (if any) and related documents and communications and notices issued according to or in connection with its provisions, shall be in English. In the event the contract, its schedules, annexures (if any) or any related document is translated into or is in any other language, the English version thereof shall take precedence and control the interpretation thereof.

QUALIFICATION CRITERIA

The bidders must meet the following Qualifying Requirements for the below.

- a. The Bidder must be a Manufacturer or their authorized dealer/stockiest/distributor of the material. Certificate of incorporation / ISO certification / Factory license/ Authorisation certificate/ Dealership agreement from the manufacturer (Whichever is applicable) shall be submitted as documentary proof.
- b. Bidder must confirm to supply as per technical specification as stipulated in the tender document (Self-declaration to be submitted) and also to visit the site for 1:1 matching with the existing motor before submitting the bid.
- c. The bidder must indicate the make/manufacturer & items quoted in the unpriced bid format enclosed in the tender document.
- d. The bidder must have supplied a *similar product directly to any industry, preferably from govt. organizations/PSU/Private Organizations of repute. Bidder has to submit relevant order copies of the last Five (5) Years meeting any one of the following criteria.
 - i. One purchase order of order value not less than Rs.22.00 Lakh. (OR)
 - ii. Two purchase orders and each order value not less than Rs.16.00 Lakh. (OR)
 - iii. Three purchase orders and each order value not less than Rs.11.00 Lakh.
- e. Average annual financial turnover during the last three years (i.e., 2020-21, 2021-22 and 2022- 23) should be Rs.33.00 Lakh or more. Audited Balance Sheet and profit & Loss A/C must be submitted along with the Techno-commercial Bid. In case the account is not audited for the last financial year (2022- 23), a certificate from a chartered accountant should be produced towards turnover.
- f. The bidder must not have been blacklisted or debarred in the last five years to participate in tendering of similar supply earlier by any Govt./Public Sector Utility / IPP/CPP. Self-declaration certificate shall be submitted along with the technical bid.
- g. Bidder must confirm to the e-RA as stipulated in the tender document (Self-declaration on your letterhead to be submitted).
- h. Must submit a copy of PAN & GST registration along with the technical bids. In case the bidder is registered under MSME/NSIC copy of the certificate is to be submitted in the technical bid.

**Similar product means HT motors of MAKE- ABB/SIEMENS/CGL/BHARAT BIJLEE/BHEL/KIRLOSKAR.*

OPGC reserves the right to do due diligence and take customer feedback to verify the document submitted by the bidders

Note: -

- a) Documentary evidence in support of the above must be submitted along with the Techno Commercial Bid.
- b) Consortium or subcontracting is not permitted.

Notwithstanding anything stated above, OPGC reserves the right to assess the capability and capacity of the Bidder to perform the contract, Limit the restriction or accept the bids of reputed (Branded) manufacturers/vendors should the circumstances warrant such an assessment in the overall interest of OPGC.

AGM- (Purchase)

TECHNICAL SPECIFICATION & PRICE BID/BOQ FORMAT

PRICE BID FORMAT					
Sl.No	MATERIAL DETAILS	QTY.	UOM	Unit Basic Price in (Rs.)	TOTAL AMOUNT in (Rs.)
1	<p>315 KW HT Conveyor Motor</p> <p>Technical Specifications:- Rotor: Copper Pole: 4 3.3 KV, 50 Hz Mounting: B3 Insulation Class: F Duty: S1 IP 55 Frame Size: DC355F3</p> <p>Preferred MAKE: ABB/SIEMENS/CGL/BHARAT BIJLEE/BHEL/KIRLOSKAR.</p> <ul style="list-style-type: none"> Refer attached motor datasheet for 1:1 replacement. 	1	NO		

NOTE: GST EXTRA AS APPLICABLE (% TO BE INDICATED ALONG WITH HSN CODE).

Other commercial conditions if any, shall be indicated.

SPECIAL TERMS AND CONDITIONS OF THE TENDER

1. **Delivery Period & LD Charges:** The material shall be delivered within 45 days from the LOI / PO date. The vendor is liable to pay a penalty at the rate of 0.5 % of the cost of undelivered materials per week or part thereof subject to a maximum of 05 % of the cost of undelivered materials. If the delay is beyond 10 weeks or less depending upon the requirement, the buyer reserves the right to cancel the PO and collect the materials from any other source at the risk of the original supplier without making any reference to him. The additional financial involvement occurs if any from procuring other sources shall be recovered from you.
2. **Special conditions :**
 - a. The item rates shall be firm during the PO delivery period, irrespective of price fluctuations of various commodities or labour rates or any other rate linked to the supply of the material.
 - b. The supply material shall be covered against warranty for 36 months from the date of supply. The defective material shall be repaired/replaced at cost cost-free basis to the purchaser.
 - c. The successful bidder shall take exact dimensions from the site to avoid any fitment issues.
3. **Payment Terms:**

SUPPLY: 90% of the basic price with full taxes and duties will be paid within 30 days of receipt and verification of materials at our site. Balance 10% will be released within 90 days after submission of Performance Bank Guarantee of the equivalent amount till the guarantee period i.e. 18 months from the date of supply or 12 months from the date of supply use whichever is later with an additional validity of 03 months as claim period.
4. **Performance Bank Guarantee:** Performance bank guarantee in the attached format at annexure-II for the above supply will be submitted within 90 days of receipt and acceptance of material at the site which will be valid for 18 months from the date of supply of the material
5. **Reverse Auction:** All the firms must submit their acceptance to the reverse auction conducted by MSTC for the above tender if so specified. Non-acceptance to participate in reverse auction may lead to rejection of the bid submitted by any firm.

OPGC may opt for conducting a reverse auction as per the bids received on one or more stages. Bidders must submit their acceptance for the same.
6. **Acceptance to part order:** All firms must accept part order supply for the above tender. Non-acceptance may lead to rejection of the bid submitted.
7. **Address for Communication:**

Asst. Manager (Purchase) / AGM (Purchase)
Odisha Power Generation Corporation Limited (OPGC)
IB Thermal Power Station, Banharpali
Jharsuguda – 768234 (Odisha)
Ph: 06645 - 289328

ANNEXURE-I
PROFORMA FOR SUMMARY QUOTATION for Technical & un-priced Commercial bid (Part-1)

Tender No.: **ITPS/Pur/2023-24/71**

Date: **29/02/2024**

Sl. No.	Techno Commercial Points	OPGCL Needs	To be filled by the bidder
1	Technical Specification as per Tender Enquiry	Accepted/ Not accepted. If not accepted detail Deviation and proposal.	
2	Credentials as per Qualifying requirement	Submitted / Not submitted as per bid requirement.	
3	The Bidder must be a reputed manufacturer/ authorised dealer/ stockiest of the preferred makes, and financial capability and have supplied such items to other Industrial concerns of repute.	Yes/ No.	
4	All Tests are to be carried out as per the bid document	Yes/ No.	
5	Bidder has to submit requisite EMD either in the shape of DD payable on State Bank of India (Code No. 9510) Banharpali/Central Bank of India, Ib Thermal Power Station (Code- 0283899)/ Andhra Bank, Adapada(Code-0662), Ib Thermal Power Station, Banharpali, Jharsuguda in favour of Odisha Power Generation Corporation Limited.	Submitted/Not submitted details to be mentioned	
6	Price Basis	FOR Destination Ib Thermal Power Station. Parties offering FOR Ex. Works please give the place of works.	
7	Packing & Forwarding charges % or Rs..... in Lump sum Inclusive/ Exclusive.	
8	GST in % % Inclusive/ Extra/Not applicable.	
9	Transportation Cost	Rs.---- per No./Lump sum. As extra/Inclusive	
10	Transit Insurance % extra/inclusive	
11	Odisha Entry Tax% inclusive/Extra	
12	Delivery Schedule	45 days Accepted/ Not Accepted	.
13	Validity of offer	180 days from the due date of opening date of the Part-1 bid.(Techno	

		Commercial). Accepted/ Not accepted.	
14	Liquidated damage clause is applicable if delivery is delayed beyond the quoted delivery date @0.5% per week/part of the week subject to 10 % of PO value.	Accepted/ not accepted. Non-acceptance shall lead to loading of your Offer by 10%.	
15	The bidder has to accept our payment terms as per NIT.	Accepted/ Not accepted. (in case non-acceptance loading shall be done)	
16	Acceptance of part order quantity	Yes/ No	
17	Packing material as per OPGCL term to use non asbestos and environmentally friendly material.	Yes/ No	
18	Payment is to be made through the RTGS mode	Accepted/ Not accepted.	
19	All Bank charges to the vendor account	Accepted/ Not accepted.	
20	Tender Notice NIT general Terms & Conditions	Accepted/ Not accepted.	
21	Acceptance to guarantee clause	Accepted/ Not accepted.	
22	List of Deviation statements from tender norms.	Submitted/ Not submitted	
23	Acceptance to participate in reverse auction	Accepted/Not Accepted	

Authorised Signatory:

Name of the firm:

Designation:

Company Seal:

Bank MANDATE FORM for e-payment
(To be submitted in Duplicate)

To.
Odisha Power Generation Corporation Ltd.,
IB Thermal Power Station,
Banharpali,
Odisha.

Dear Sir,

Sub: - Authorization for release of payment due from OPGC Ltd through e-mode facilities of
RTGS / NEFT / Internet Banking.

We are the regular contractor/Supplier to your organization and are executing work /supplying materials under different Contracts/ Purchase Orders to OPGC Ltd. We request you to release the payment of the outstanding amount electronically i.e., through RTGS, NEFT, Fund Transfer or any other suitable way. The details of our bank account are as follows: -

(Please fill in the information in CAPITAL LETTERS. Please TICK wherever it is applicable)

1. Name of the Party:

2. Address of the Party

.....

City Pin Code

E-mail ID

Permanent Account Number

Telephone/Cell No.....

3. Particulars of Bank :

Bank Name		Branch Name	
Branch Place		Branch City	
Pin code		Branch Code	
MICR No			
Account Type	Savings:	Current:	Cash Credit:
Account No. (as appearing in the Cheque Book) :			
(9-digit code number appearing on the MICR Bank of the cheque supplied by the Bank. Please attach Xerox copy of a cheque of your bank to ensure the accuracy of the bank name, branch name & code and Account number)			
IFSC Code			

4. Date from which the mandate should be effective :

I hereby declare that the particulars given above are correct and complete. If any transaction is delayed or not effected for reasons of incomplete or incorrect information, I shall not hold Odisha Power Generation Corporation Ltd responsible. I also undertake to advise any change in the particulars of my account to facilitate the updation of records for the purpose of credit of amount through the internet / RTGS / NEFT.

Place:

Date:

Signature of the Party / Authorized Signatory

.....

Certified that the particulars furnished above are correct as per our records.

Bank's Stamp: Date:
Banks)

(Signature of the Authorized Official from the

ANNEXURE-II
Rules and Regulations of the e-Reverse Auction

Buyer's Name/Owner	Ib Thermal Power Station (A Unit of Odisha Power Generation Corporation Limited)
Auction To Be Conducted By	MSTC Limited
Name of the work	"Supply of New Desktop" (Two Parts)
Date & Time Of Auction	Auction Date: [To be intimated later] Online e-Reverse Auction Time : [To be intimated later] URL: www.mstcecommerce.com/eprochome/opgc
Special Instructions	Bidding in the last minutes and seconds should be avoided in the bidder's interest. Neither the Service Provider nor OPGC will be responsible for any lapses /failures on the part of the vendor, in such cases.
Auto Extension of Closing Time	5 minutes NB: If any bidder quotes 5 minutes before closing time, the closing time will be extended automatically for another 05 minutes and so on till 05 minutes of idle time between the bids.
Decrement Value	<u>Minimum decrement is Rs. 10,000/- and in multiples of Rs. 10,000/-</u>
Start Price	The start price shall be confirmed before the start of the e-RA and the same should be the lowest IPO/estimated price as decided by OPGC.

1. Bidding would be conducted through two (02) a stage process comprising of a technical bid in which the bidder would be required to provide the details regarding compliance with the eligibility conditions, and a financial bid comprising of the Initial Price Offer (IPO) and the Final Price Offer (FPO) through E-RA.
2. The IPO is to be submitted along with the tender document separately in a sealed envelope and super scribed with "PRICE BID" along with the tender enquiry number & Name of the work. Both the techno-commercial & price bid envelopes should be kept in a third envelope sealed and super-scribed with the tender enquiry number and Name of the work.
3. The financial bid process will comprise two rounds. In the first round, the IPO of the techno-commercially qualified bidders will be opened & ranked based on ascending order for determination of qualified bidders. The best five (L-1 to L-5) bidders would be qualified bidders for E-RA and such qualified bidders shall be eligible to participate in the E-RA and submit their FPO for the bid.
4. For the proposed e-Reverse Auction, the best five (L-1 to L-5) bidders would be qualified bidders and such qualified bidders shall be eligible to participate in the E-RA.
5. Bidders must be registered users to bid for Buyer ("OPGC") in the MSTC portal at www.mstcecommerce.com/eprochome/opgc. Bidders need to have their Login ID and Password before e-Reverse Auction.
6. Bidders have to participate as per the e-Reverse Auction time and date communicated to them & based upon the e-Reverse Auction invitation for a particular Auction.
7. Quotation once submitted through e-Reverse Auction cannot be withdrawn /deleted. Otherwise, the EMD submitted by the bidder shall stand forfeited.
8. Buyer reserves the right to ban the bidder from participating in e-Reverse Auction without any explanation/reason at any stage of e-Reverse Auction.
9. Buyer reserves the right to extend/cancel the e-Reverse Auction.
10. E-Reverse Auction shall be conducted in Indian Rupees only.
11. All prices submitted by the Bidder in e-Reverse Auction shall be as per Tender's Terms & Conditions.
12. Validity of bids: As mentioned in the Tender Document.
13. Written Confirmation shall be taken in advance regarding participation in the e-Reverse Auction to the buyer along with the Authorized person's name and details.

14. Buyer reserves the right to award the Purchase Order / Service Order as per buyer's discretion irrespective of Live Auction Rank.
15. Buyer reserves the right to repeat the e-Reverse Auction of the same package.
16. **After completion of the e-Reverse Auction, the lowest evaluated bid of all the bids submitted in the manual and e-Reverse Auction process shall be considered for award of the Purchase order / Work order.**
17. The bidders shall quote from their offices/places of their choice. Internet connectivity shall have to be ensured by the bidders themselves.
18. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, OPGC at its discretion shall debar the bidder from the e-Reverse Auction/Tender and future participation also.
19. OPGC reserves the right to cancel the e-Reverse Auction process/ tender at any time, before ordering, without assigning any reason and may go for manual opening of price bids as per standard practice.
20. OPGC shall not be liable for any interruption or delay in accessing the MSTC portal irrespective of any cause. In such cases, the decision of OPGC shall be binding on the bidders.
21. Other terms and conditions shall be as per NIT, bidder's techno-commercial Bid and other latest correspondences/ final confirmations, (if any) against the NIT.
22. If any item is not quoted by a bidder, the maximum price quoted by the other participating bidders for that item shall be considered for arriving evaluated price of that bidder.
23. The total L1 Price obtained through e-Reverse Auction shall be proportionately distributed among each line item in line with the price quoted and evaluated in the hard copy price bid.
24. The price quoted in e-Reverse Auction is the total price for all the items and quantity as per the Price Schedule of NIT irrespective of any omission by the bidder in the hard copy price bid.
25. In case, the L1 Bidder in e-Reverse Auction and manual Tender happens to be the same bidder, then the minimum price among both shall be considered as L1. If the bidder disagrees to accept the said condition, then his EMD shall be forfeited. Apart from this, the bidder will be debarred from participating in future e-Reverse Auction/Tender of OPGC.
26. Each Bidder shall get the final loading factor (%age of the quoted price) from OPGC before the e-Reverse Auction for the deviations, if any, taken by them in the techno-commercial bid.
27. The Price quoted in the e-Reverse Auction shall be inclusive of all applicable taxes, duties and levies, and deviations considering the loading factor (got from OPGC/Tender Condition as mentioned in the above clause) on his quoted price. However, the GST shall be paid extra as applicable and not included in the loading factor as well as the total price.

UNDERTAKING

I hereby undertake that I agree to the **"Rules and Regulations of the e-Reverse Auction"** mentioned herein.

Signature:

Name:

Date:

Company Name:

Seal:

PROFORMA FOR BANK GUARANTEE IN LIEU OF DD FOR EARNEST MONEY

(On Non-Judicial stamp paper of appropriate value)

Ref:
Date:
Bank Guarantee
No.

To
Odisha Power Generation Corporation Ltd.,
Ib Thermal Power Station, At/Po-
Banharpali, Dist-Jharsuguda-
768234.

Dear Sir,

In consideration of Odisha Power Generation Corporation having its Registered office at 7th.Floor, Zone – A, Fortune Towers, Chandrasekharpur, Bhubaneswar-751 023 (hereinafter called the "Owner" which expression shall unless repugnant to the subject or context include its successors and assigns) having issued Tender Specification Against NIT

No _____ dt. _____ to M/s _____ having its Registered / Head office at _____ (hereinafter called the Bidder) who wishes to participate in the said tender for and you, as a special favour, have agreed to accept an irrevocable and unconditional Bank Bid Guarantee for an amount of Rs. _____ valid up to _____. On behalf of the Bidder, as a condition for participation in the said tender.

We, the _____ Bank incorporated under _____ law and having one of our branches at _____ and having our registered office/Head office at _____ do here by unconditionally and irrevocably guarantee and undertake to pay to the "Owner" immediately on demand without any demur reservation, protest, contest and recourse to the extent of the said sum of Rs. _____ (Rupees _____ only). Any such claim/demand made by the said "Owner" on us shall be conclusive and binding on us irrespective of any dispute or differences raised by the Bidder. This guarantee shall be irrevocable and shall remain valid up to _____. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s _____ on whose behalf this guarantee is issued.

We, the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the owner in writing and agree that any change in the constitution of the said tenderer or the said Bank shall not discharge our liability. In witness where of the Bank, through its authorised officer, has set its hand and stamp on this _____ day of _____ 20_____

Witness:
(Signature)

Name

(Signature)

Name

(Designation with Bank
stamp) Official Address
Attorney as per Power of Attorney
No. _____

Date _____

PROFORMA OF BANK GUARANTEE FOR MATERIAL PERFORMANCE

(On Non-Judicial Stamp paper of Appropriate Value)

1.0 In consideration of OPGC Ltd. Having its registered office at Zone-A, 7th Floor, Fortune Tower, Chandrasekaharpur, Bhubaneswar-751023, Odisha herein-in after called the "Owner" which expression shall unless repugnant to the subject or context include its successor & assignees) having awarded to M/swith its Registered/Head office at..... here-in after referred to as the "Contractor" which expression shall unless repugnant to the subject or context include its successor, executors & assignees) a contract by issue of Owner's Letter of Intent No. dt. and the same having been unequivocally accepted by the contractor resulting in a contract bearing No.dated valued at Rs.....for and the contractor having agreed to provide a contract performance (Scope of work) Guarantee for the faithful performance of the entire contract equivalent Rs. 10% (ten percent) of the said value of the contract to the owner for satisfactory performance of the equipment/materials supplied (as detailed in the said agreement) during the Guarantee period (as detailed in the said agreement) and for the due fulfillment by the contractor(s) of the terms and conditions contained in the said agreement.

2.0 We(here-in after referred to as " the bank"
(Name & address of Bank)
having its Head Office at do hereby
guarantee and undertake to pay the owner, on demand any and all amount payable by the contractor
not exceeding Rs.
.....(Rupees.....)
only as aforesaid at any time up to (Days/month/year)

3.0 We do hereby
(Name of Bank)
Undertake to pay the amounts due to and payable under this guarantee without any demur, reservation, contest, recourse or protest and/or without any reference to the contractor. Any such demand made by the owner on the Bank shall be conclusive and binding notwithstanding any difference between the owner and contractor or any dispute pending before any court, tribunal or any other authority. The bank undertakes not to revoke this guarantee during the currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the owner discharges this guarantee.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s)/suppliers shall have no claim against us for making such payment.

4.0 We further agree that the
(Name of Bank)

guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all dues of OPGC have been fully paid and its claims satisfied or discharged until OPGC certifies that the terms & conditions of the said Agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5.0 We further agree with the
(Name of Bank)

OPGC that OPGC have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the OPGC against the said contractor(s) and to for bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, postponement or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the OPGC or any indulgence by the OPGC to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

6.0 This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the contractor(s)/suppliers(s).

7.0 Notwithstanding anything contained herein a) Our liability under this bank guarantee shall not exceed Rs.....[Rupees] b) This bank guarantee shall be valid uptoc) We are liable to pay the guaranteed amount or any part thereof under this B.G only and only if the beneficiary/Govt. serves upon the bank a written claim or demand on or before

8.0 Welastly undertake not to revoke this
(Name of Bank)

Guarantee during its currency except with the previous consent of the OPGC in writing.

Dated theday of200...

9.0 Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs.....(Rupees..... only) and this guarantee is valid upto We shall be released and discharged from all liabilities hereunder unless a written claim for payment under this guarantee is lodged on us within three months from the date of expiry of the guarantee i.e on or before Irrespective of whether or not the original guarantee is returned to us. The confirmation of this Bank Guarantee is available within our controlling office. The beneficiary in his own interest should obtain such confirmation from the controlling office at the following address

WITNESS with address

1.

2.

For and on behalf of (the Bank)

Signature

Name

Designation

Authorisation No.

Seal of the Bank

**GA, TECHNICAL DATA SHEET AND PERFORMANCE CURVES OF 315kW
HT MOTOR**

S.No	Description	Drawing No	No of Sheets
1	Technical Data Sheet for 315 kW Motor	3F330742	7
2	DC355F3;Outline Dimension Drawing of HT Motor	A4C 17867-1035	1
3	Assembly Drawing of Phase Segregated Terminal Box	A3C 13780-013	1
4	Neutral Point Terminal Box	A3C 13903	1
5	Arrangement of RTD T.Box	A4C 18243-RTD-BTD	1
6	Heater Terminal Box Assembly	A4C 14150-001	1
7	Torque Vs Speed Characteristic Curve	-	1
8	Efficiency & Power Factor Vs % Load Curve	-	1
9	Current Vs % Speed Characteristic Curve	-	1
10	Current Vs % Time Characteristic Curve	-	1
11	Thermal Withstand Characteristics Curve	-	1
12	Negative Sequence Curve	-	1



**Orissa Power Generation
Corporation Ltd.**

**2X660 MW IB TPS
Units 3&4**



**Development Consultants
Pvt. Ltd**

**Technical Datasheet for
AC Motor**

1.0 GENERAL

- 1.1 Application : Conveyor with Fluid coupling.
13A/B, 16A/B, 17A/B + Spare
- 1.2 Quantity : 7 Nos.
- 1.3 :
- 1.4 Frame Size : DC355F3
- 1.5 Applicable Standard : IS:325

2.0 TYPE AND RATING

- 2.1 Type of Motor : Squirrel Cage Induction Motor
- 2.2 Service : Indoor
- 2.3 Duty Cycle/Designation : Continuous/S1.
- 2.4 Rated Continuous Output
- a) At 40 Deg.C ambient kW : 330
- b) At 50 Deg.C ambient kW : 315
- 2.5 Speed
- a) Rated Speed r.p.m. : 1488
- b) Synchronous Speed r.p.m. : 1500
- 2.6 Rated Voltage & % variation : 3.3 kV, +/-10%
- 2.7 Rated Frequency & % variation : 50Hz, +3% to - 5%
- 2.8 Combined voltage and frequency
Variation % (absolute sum) : 10%
- 2.9 Full load current Amps : 67.5
- 2.10 No load current Amps : 19 (max.)



**Orissa Power Generation
Corporation Ltd.**

**2X660 MW IB TPS
Units 3&4**



**Development Consultants
Pvt. Ltd**

**Technical Datasheet for
AC Motor**

2.11 Power Factor

- a) Full load : 0.87
- b) 3/4 load : 0.85
- c) 1/2 load : 0.80
- d) No load : 0.123
- e) Starting : 0.20

2.12 Efficiency at rated voltage and frequency

- a) Full load % : 94.0
- b) 3/4 load % : 93.2
- c) 1/2 load % : 92.0

3.0 PERFORMANCE

3.1 Method of Starting : DOL

3.2 Starting Current

- a) Starting Current at 100% voltage % FLC : 600% (Inclusive of IS tolerance)
- b) Starting Current at 110% voltage % FLC : 660% (Inclusive of IS tolerance)

3.3 Torque

- a) Full load torque kg.m : 206
- b) Starting Torque at rated voltage kg.m : 227 (110%FLT)
- c) Pull out torque kg.m : 453 (220%FLT)

3.4 Starting time at (% of Voltage) **80% 100% 110%**

- a) With load sec. : 2.5 1.5 1.2
- b) Without load (driven equipment
Coupled) sec : 1.3 0.7 0.6



**Orissa Power Generation
Corporation Ltd.**

**2X660 MW IB TPS
Units 3&4**



**Development Consultants
Pvt. Ltd**

**Technical Datasheet for
AC Motor**

3.5 Safe stall time at (% of Voltage) **80% 100% 110%**

a) Hot condition sec. : 25 15 12

b) Cold condition sec. : 30 20 16

3.6 Time Constant

a) Heating time constant min : 45

b) Cooling time constant min : 100

3.7 Starts

a) Permissible No. of equally spaced starts per hour : Three (3)

b) Permissible No. of starts in quick succession : Two (2)

3.8 Voltage required at motor terminals to start with connected load and accelerate to full speed without exceeding acceptable winding temperature : 80% Rated Voltage

3.9 Noise level at 1 m : 85 dB

3.10 Vibration level : 2.8 mm/sec.

3.11 Suitable for sudden application of 150% rated voltage during bus transfer : Yes



3.12 Capable of operating satisfactorily at full load for 5 minutes without injurious heating with 75% rated voltage at motor terminals : Yes

3.13 Capable of withstanding the stresses imposed if started at 110% of rated voltage : Yes



4.0 CONSTRUCTION

4.1 Degree of Protection of Enclosure : IP 55

4.2 Method of Cooling : TEFC / IC411

	Orissa Power Generation Corporation Ltd.	2X660 MW IB TPS Units 3&4	
	Development Consultants Pvt. Ltd	Technical Datasheet for AC Motor	

- | | | | |
|------|---|--|---------------|
| 4.3 | Insulation Class/Type | : Class F/VPI | |
| 4.4 | Temperature Rise Over 50 Deg.C ambient
(By resistance) | : Class B | |
| 4.5 | Tropicalized (Yes/No) | : Yes | |
| 4.6 | Winding Connection | : Star | |
| 4.7 | Bearings | D.E. | N.D.E. |
| | a) Make | : FAG/NTN/NSK/Equivalent | |
| | b) Type | : NU220-C3 | 6220-C3 |
| | c) Recommended lubricant | : Grease | Grease |
| | d) Is lubricant normally available IOC
equivalent | : Yes | |
| | e) Insulation of bearing to prevent
shaft current | :Yes(Insulated bkt. at NDE side) | |
| 4.8 | Motor Terminal Box | | |
| | a) Type | : PSTB for Stator & Non-PSTB for Neutral | |
| | b) Degree of Protection | : IP 55 | |
| | c) Fault withstand Current KA | : 43.7 kA | |
| | d) Fault Current Withstand Time Sec. | : 0.25 Sec | |
| | e) Suitable Cable Size | : 1x3Cx185 Sq. mm, Al. XLPE | |
| | f) Position | : RHS from DE | |
| | g) Capable of being turned 360 ⁰
in steps of 180 ⁰ | : Yes | |
| 4.9 | Painting | : Light Grey #631 as per IS-5 | |
| 4.10 | Direction of rotation viewed from DE | : Bi-Direction | |

	Orissa Power Generation Corporation Ltd.	2X660 MW IB TPS Units 3&4	
	Development Consultants Pvt. Ltd	Technical Datasheet for AC Motor	

5.0 **ACCESSORIES**

5.1 Space Heaters

- a) No. x Watt : 2 x 43 W
- b) Volt, phase, frequency : 240V, 1Ph., 50 Hz

5.2 Winding temperature detector

- a) Type : Pt.100, Simplex, Resistance type, 3 wire Platinum wound 100 ohms at 0°C
- b) Nos. furnished : 12 nos. (4 Nos per phase)

5.3 Bearing temperature detector

- a) Type : Pt.100, duplex resistance type, 3 wire, Platinum wound 100 ohms at 0°C
- b) Nos. furnished : 2 Nos. (1 No. per bearing)

5.4 Temperature Indicators

- a) Type : Mercury in steel dial type (DTT)
- b) Nos. provided : 2 Nos.
- c) Locations : 1 No. per bearing

5.5 Temperature Alarm Contact

- a) Nos. provided : 1 NO + 1 NC
- b) Locations : DTT
- c) Contact rating : 5A @ 240 VAC & 0.5A @ 220VDC

5.6 Flow Switch

- a) Type : Not Applicable
- b) Nos. provided : Not Applicable



**Orissa Power Generation
Corporation Ltd.**

**2X660 MW IB TPS
Units 3&4**



**Development Consultants
Pvt. Ltd**

**Technical Datasheet for
AC Motor**

c) Locations : Not Applicable

d) Contact Rating : Not Applicable

5.7 Current Transformer for differential protection

a) Nos. provided : Not Applicable

b) Current Ratio : Not Applicable

c) Class : Not Applicable

d) Knee point voltage : Not Applicable

e) Excitation current at VK/2 : Not Applicable

5.8 Accessory Terminal Box

a) No. provided : 2 Nos.(1 No. for Space Heater
1 Nos. for RTD & BTM)

b) Suitable cable size : As per GAD

5.9 Speed Switch

a) Type : Not Applicable

b) Nos. provided : Not Applicable

c) Locations : Not Applicable

d) Contact Rating : Not Applicable

5.10 Vibration Pads : 2 Nos. (X & Y axis) in DE &
2 Nos. (X & Y axis) in NDE

6.0 GROUNDING

6.1 No. of grounding pads provided

a) On motor body : 2 Nos.

b) On terminal box : 2 Nos.

7.0 MISCELLANEOUS

7.1 Type of mounting : Horizontal Foot (B3)



**Orissa Power Generation
Corporation Ltd.**

**2X660 MW IB TPS
Units 3&4**



**Development Consultants
Pvt. Ltd**

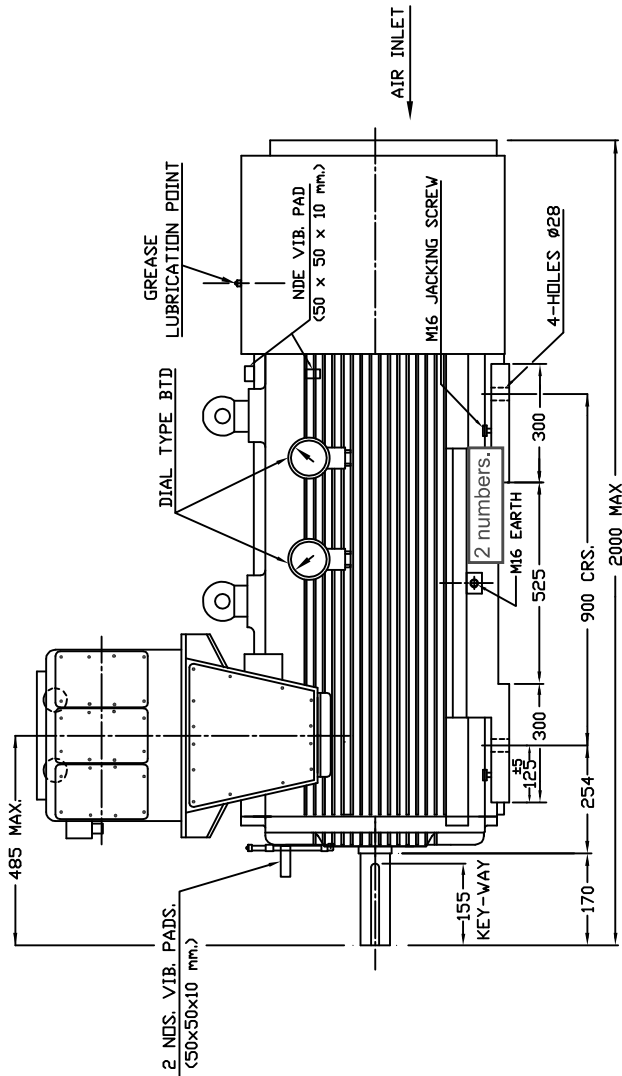
**Technical Datasheet for
AC Motor**

- 7.2 Overall dimension (L x B x H) in mm : As per GAD
- 7.3 Moment of Inertia (Sq.GD)
- a) Rotor Kg.Sq.m : 36
 - b) Load Kg.Sq.m : 28.2 (Primary side of fluid coupling)
- 7.4 Weight
- a) Stator Kg : 1890
 - b) Rotor Kg : 760
 - c) Total Kg : 2650
- 7.5 Document Enclosures
- a) Motor General Arrangement : Yes
 - b) Motor Stator Terminal Box GA : Yes
 - c) Motor Neutral Terminal Box GA : Yes
 - d) Motor RTD Terminal Box GA : Yes
 - e) Motor Space Heater Terminal Box GA : Yes
 - f) Motor Performance Curves : Yes

Note: All above performance figures except as specified are subject to IS tolerance.

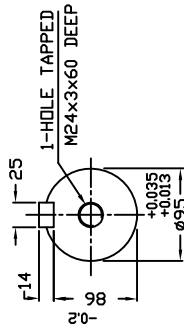
R1, Rev.01, Dt: 30.07.15

ALL DIMENSIONS ARE IN mm.



ACCESSORIES

1. 1 NO. P.S.T.B. & 1 NO. N.P.T. BOX. (NON P.S.T.B.)
2. 12 NOS. RTD Pt.100-SIMPLEX TYPE
3. 2 NOS. BTD Pt.100-DUPLEX TYPE
4. 2 NOS. DIAL TYPE BTD.
5. 1 NO. HEATER T. BOX.
2X43WATTS, 240V SUPPLY, 1PH, 50HZ. SP.HEATER.

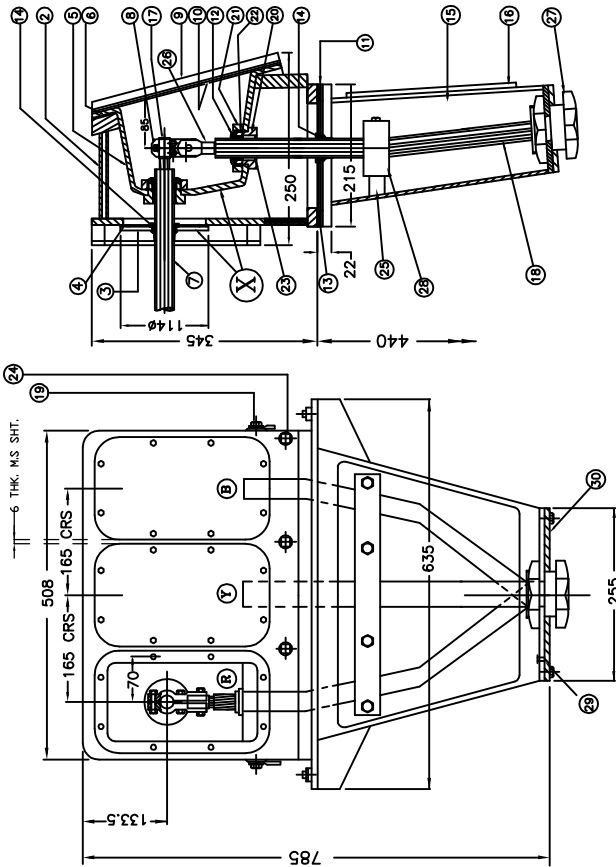


DETAILS OF SHAFT DRIVE END

**CONFIDENTIAL AND PROPERTY OF Marathon Electric Motors (India) Limited,
NOT TO BE REPRODUCED OR LENT WITHOUT PERMISSION**

DRAWING NO.
A3C 13780-013

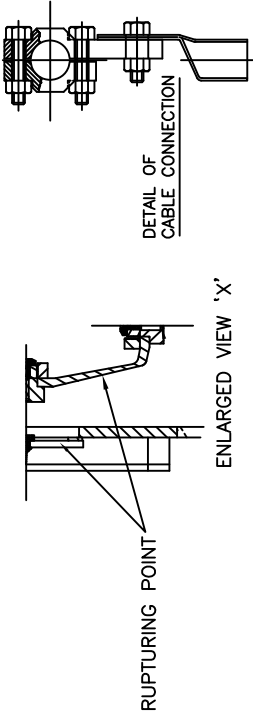
REV.
05



NOTE :-

1. T.BOX IS SUITABLE FOR FAULT LEVEL OF 43.7 KA FOR 0.25 SEC
2. PROVISION OF EARTHING TERMINATION ON THE BOX GIVEN-REF. ITEM NO.19
3. MIN. CREEPAGE DISTANCE = 116 mm.
4. MIN. DISTANCE BETWEEN PHASE & EARTH = 70 mm.
5. DEGREE OF PROTECTION IP55.
6. CABLE SIZE : 1x3Cx185 Sq.mm. 3.3KV, XLPE ARMoured CABLE
7. PAINT SHADE 631 OF IS:5, EPOXY
8. T.BOX IS SUITABLE FOR ROTATION IN STEPS OF 180°
9. JOINT BOX(FOR PHASE SEGREGATION) – EPOXY MOULDED(2 mm. THK.)
10. GLAND PLATE : HOT/COLD ROLLED SHEET(3 mm. THK.)

ALL DIMENSIONS ARE IN mm.
IF IN DOUBT, PLEASE ASK DESIGN DEPT.



1	30	DETACHABLE GLAND PLATE	HOT/COLD ROLLED SHEET(3 mm. THK.)
1	29	DRAIN PLUG(M6)	STAINLESS STEEL
1	28	CABLE SUPPORT	FRP
1	27	DOUBLE COMPRESSION CABLE GLAND	BRASS NICKEL PLATED.
3	26	THIMBLE(CUSTOMER CABLE)	COPPER TIN PLATED
1	25	BOSS	M.S.
3	24	DESICCATOR & HUMIDITY INDICATOR	M.S. PLATED
3	23	GLAND WASHER	NYLON
3	22	GLAND BUSH	NEOPRENE
3	21	RING NUT	NYLON
3	20	GLAND BODY	NYLON
1	19	EARTHING TERMINAL M12 WITH THIMBLE	M.S
1	18	CUSTOMER CABLE 1x3Cx185 Sq.mm. 3.3KV, XLPE ARMoured CABLE	
3	17	FERRULE(MOTOR CABLE)	COPPER TIN PLATED
1	16	SLG. CHAMBER COVER PLATE	M.S.
1	15	SEALING CHAMBER	M.S.
3	14	GROMMET	NEOPRENE
1	13	TERMINAL SEALING PLATE	FRP
3	12	GLAND NUT	NYLON
1	11	GASKET FOR SLG. CHAMBER	NEOPRENE
3	10	EPOXY LINING ON TERMINAL COVER	EPOXY
3	9	TERMINAL COVER	M.S.
3	8	CABLE CLAMP	TINNED COPPER
1	7	CABLE (MOTOR)	CSP/SILICON CABLE
3	6	GASKET FOR LID	NEOPRENE
3	5	JOINT BOX	EPOXY MOULDED
1	4	GASKET FOR SLG. PLATE	NEOPRENE
1	3	SEALING PLATE (ROUND)	FRP
1	2	TERMINAL BOX	M.S.
1	1	P.S.T.B. ASSLY.	
MATERIAL SPEC.			
DRAWING NO.			
DESCRIPTION			
REF. DRG.			
A3C 13780-003			
QUANTITY			
G4	G3	G2	G1
PT.			

REV.	CHK'D	K.B/24.07.15	REV.	CHK'D	P.D/14.05.14	REV.	CHK'D	P.D/07.05.14	REV.	CHK'D	P.D/03.05.14
05	APPV	DPL/24.07.15	04	APPV	DGM/14.05.14	03	APPV	DGM/14.05.14	02	APPV	DGM/07.05.14
CUSTOMER DETAILS		GLAND PLATE THK.		PT. 30 ADDED.		NOTE 9 ADDED.		PT 29 ADDED.		CABLE SIZE CHANGED	
ADDED		CHANGED.									

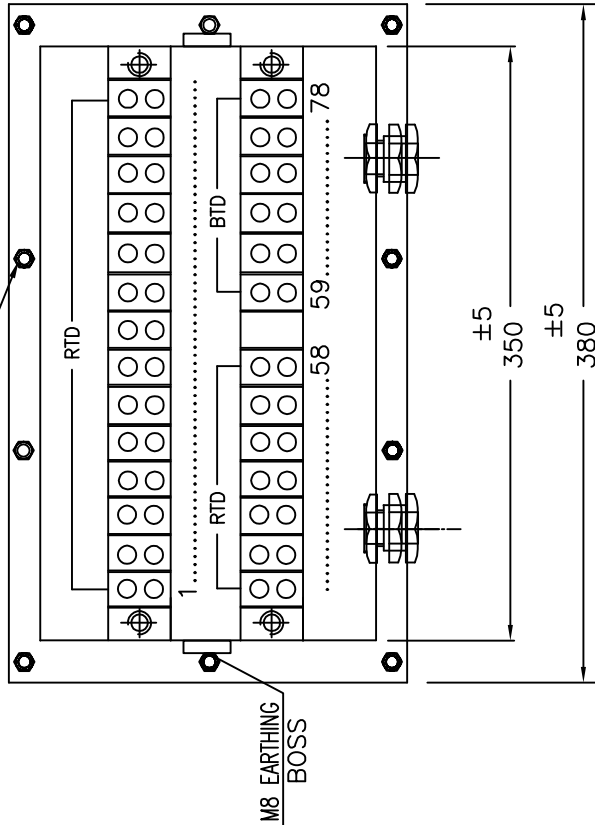
ASSLY. DRG. OF PHASE SEGREGATED TERMINAL BOX.			
GEN.	TOLERANCE	DRAWN	P.DAS
SCALE	NTS.	CHECKED	---
		APPV'D	G.MONDAL
		15.02.2008	15.02.2008
		DRAWING NO.	
		REV NO.	
		05	

CONFIDENTIAL AND PROPERTY OF Hecstion Electric Motors (India) Limited.
NOT TO BE REPRODUCED OR LENT WITHOUT PERMISSION

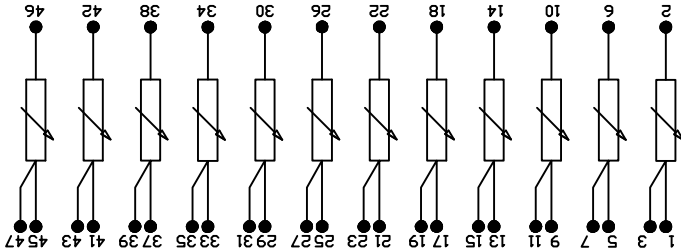
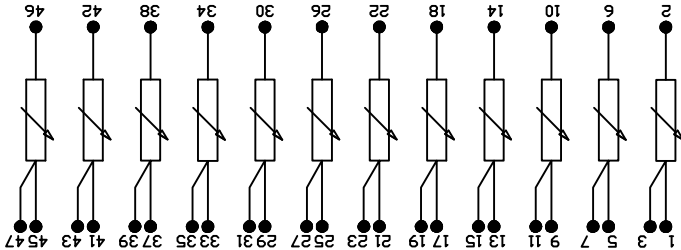
T.BOX./.... /A3C13780-013/A3C13780-013-03.05.14

DRAWING NO. REV.
A4C 18243-RTD-BTD 01

10 NOS. M5 X 20 LG. SCREW.

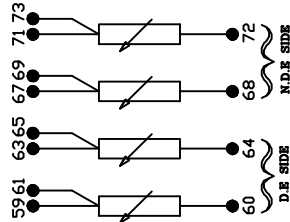


CONNECTION DIAGRAM FOR RTD



DEGREE OF PROTECTION OF T. BOX - IP55

CONNECTION DIAGRAM FOR DUPLEX BTD



NOTE : 20% SPARE TERMINALS PROVIDED.

REV.	CHK'D.	REV.	CHK'D.	REV.	CHK'D.	REV.	CHK'D.	REV.	CHK'D.
APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.	APPV'D.
20% SPARE TERMINALS PROVIDED.									

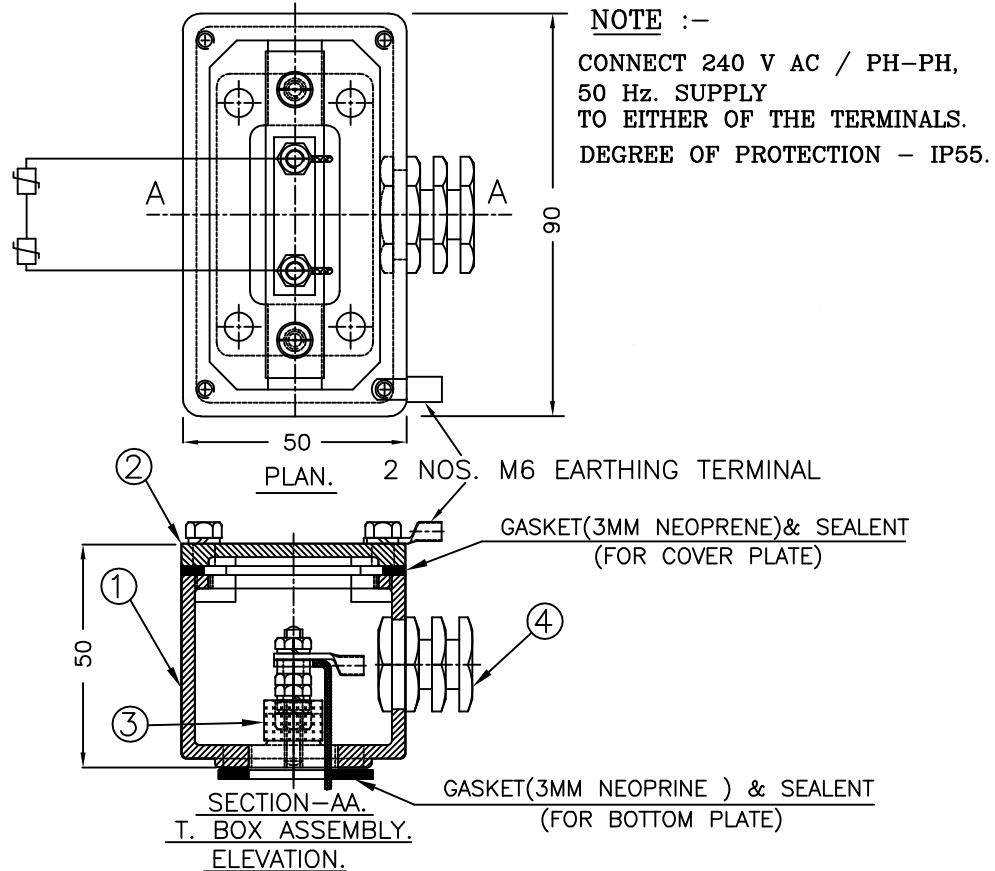
ARRANGEMENT OF RTD T.BOX				DRAWING NO.		REV. NO.	
GEN.	TOLERANCE	DRAWN	TRACED	RANJAN.C	16.04.2014		
SCALE	NTS.	CHECKED	P.DAS		16.04.2014		
		APPV'D	G.MONDAL		16.04.2014		


CONFIDENTIAL AND PROPERTY OF Marathon Electric Motors (India) Limited
NOT TO BE REPRODUCED OR LENT WITHOUT PERMISSION

T.BOX.../...../A4C18243_RTBD_ARRGN/A4C18243_RTBD_ARRGN-16.04.14

REV.	CHK'D	REV.	CHK'D	REV.	CHK'D	REV.	CHK'D	REV.	CHK'D
	APPV'D.		APPV'D.		APPV'D.		APPV'D.		APPV'D.

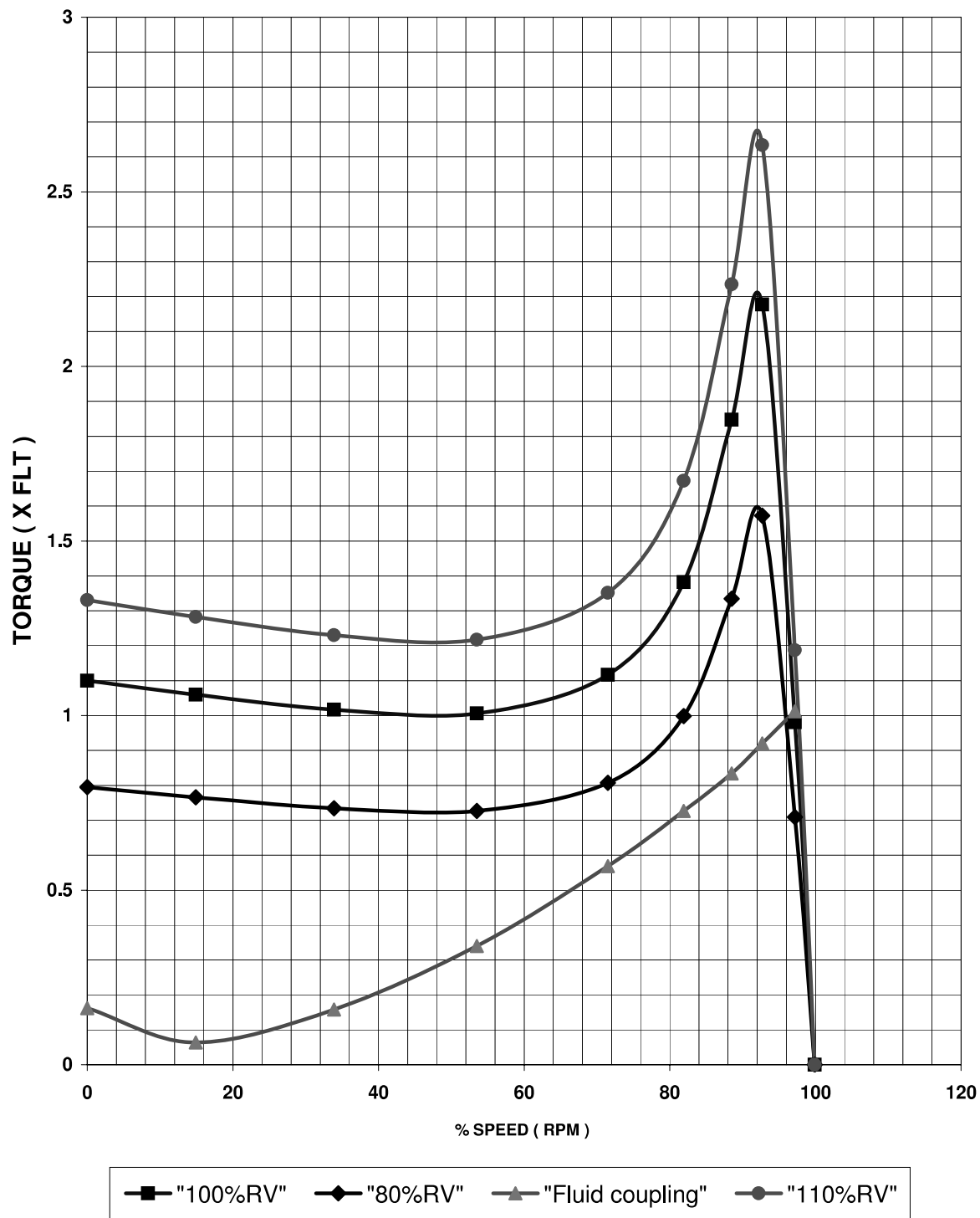
ALL DIMENSION, IN MM. UNLESS STATED OTHERWISE

CONNECTION & ASSEMBLY DRAWING FOR
SPACE HEATER

				4	DOUBLE COMPRESSION GLAND 2C x 2.5 SQ. mm	BRASS NICKEL PLATED				
				3	TERMINAL BAR.	D.M.C.				
				2	COVER.	ALUMINIUM				
				1	TERMINAL BOX.	ALUMINIUM				
G4	G3	G2	G1	PT. NO.	D E S C R I P T I O N	MATERIAL SPEC. DRAWING NO.				
QUANTITY										
REF. DRG.										
					HEATER TERMINAL BOX ASSLY.					
GEN. TOLERANCE					DRAWN	RANJAN.C	22.07.2014	DRAWING NO.		REV NO.
					TRACED	-	-			00
SCALE					CHECKED	P.DAS	22.07.2014			
N.T.S					APPV'D	P.K.PAL	22.07.2014			
										

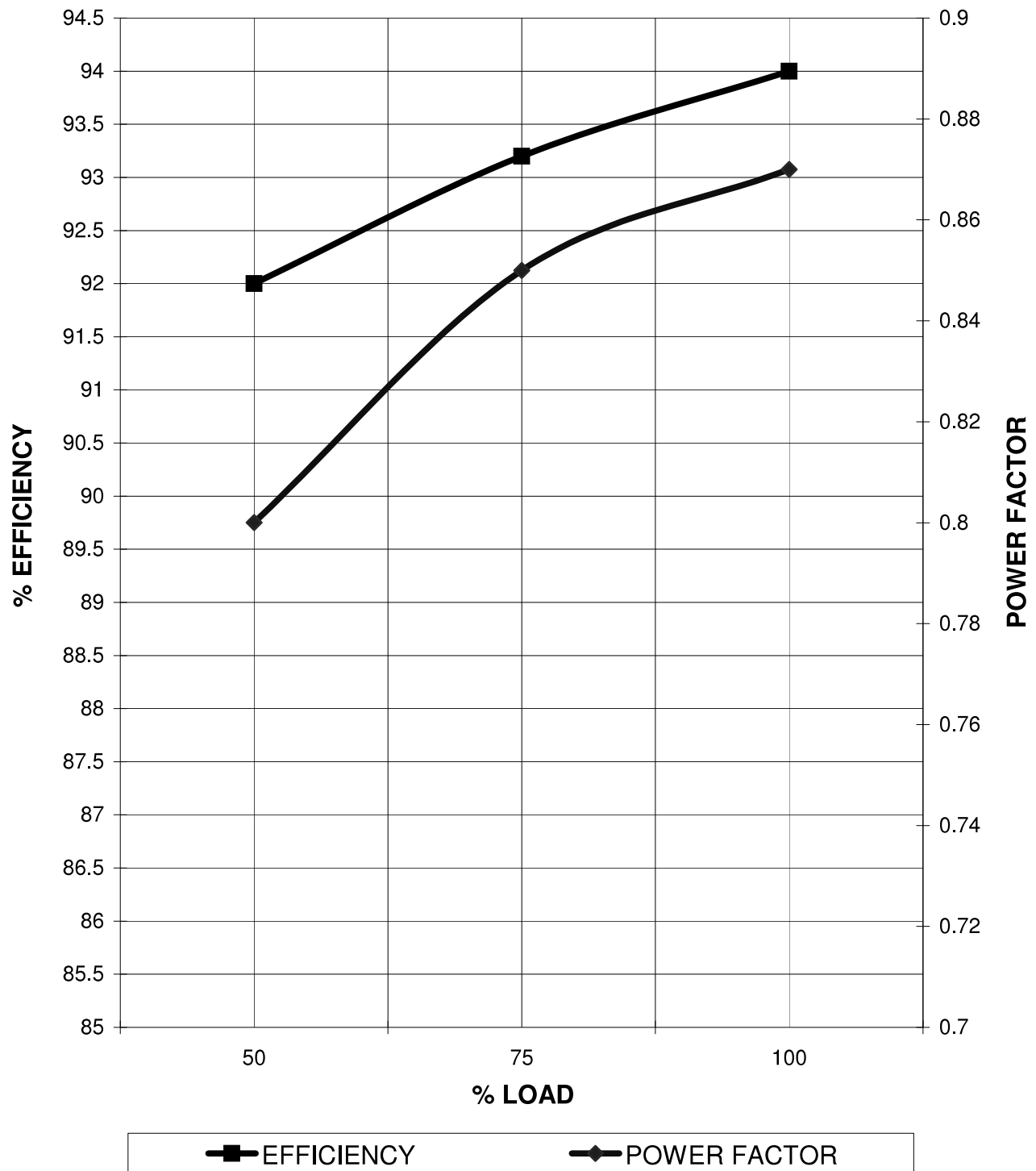
T.BOX.../...../A4C14150-001-24.07.15

TORQUE Vs. SPEED CHARACTERISTIC CURVE
315 KW, 4 POLE, 3300 V, DC355F3 MOTOR

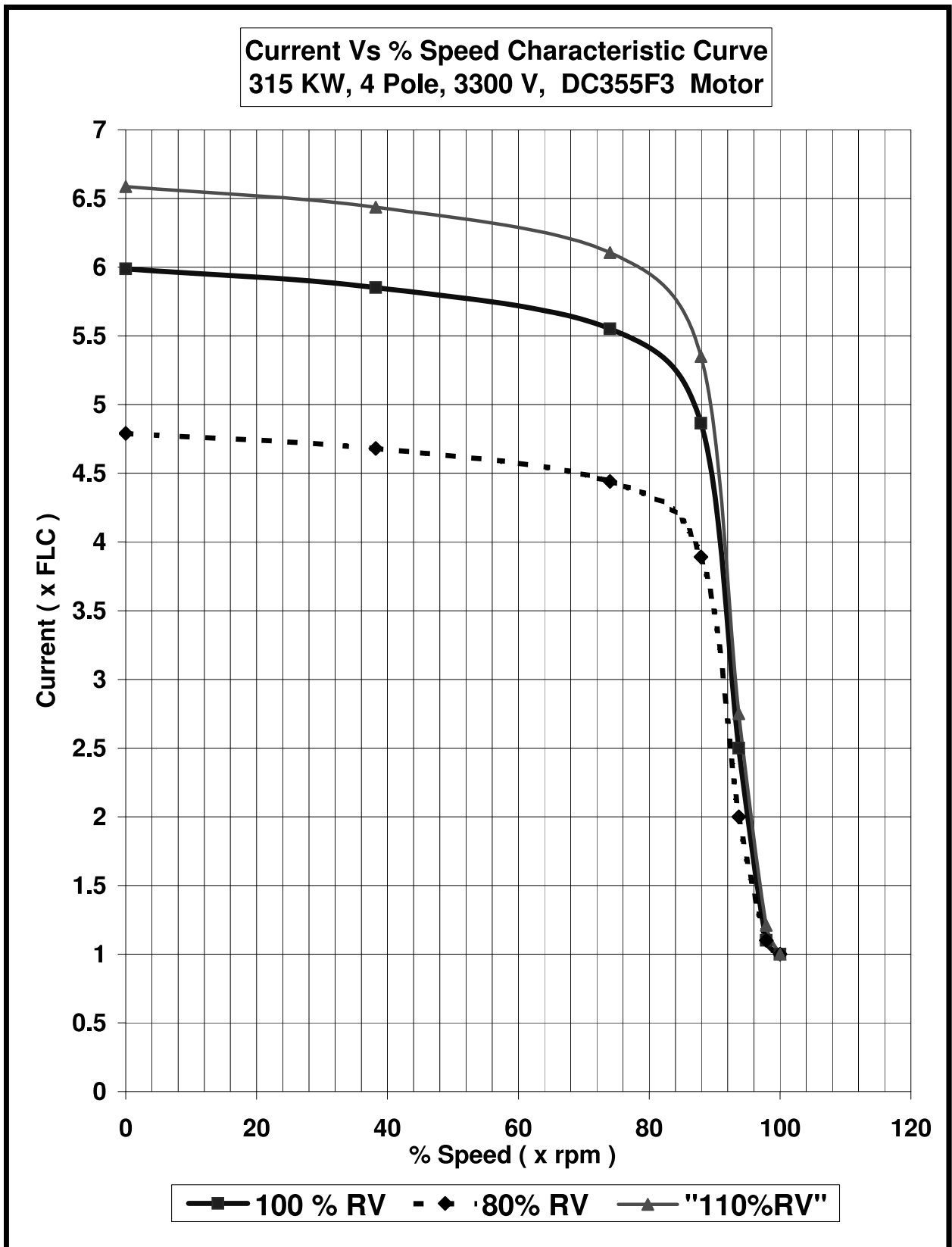


CLIENT ; ORISSA POWER GENERATION CORPORATION Ltd.
CONSULTANT : DEVELOPMENT CONSULTANTS Pvt. Ltd.
PROJECT : 2 X 660 MW 1B. TPS UNIT: 3 4

EFFICIENCY & POWER FACTOR VS % LOAD CURVE
315 KW, 4 POLE, 3300 V, DC355F3 Motor

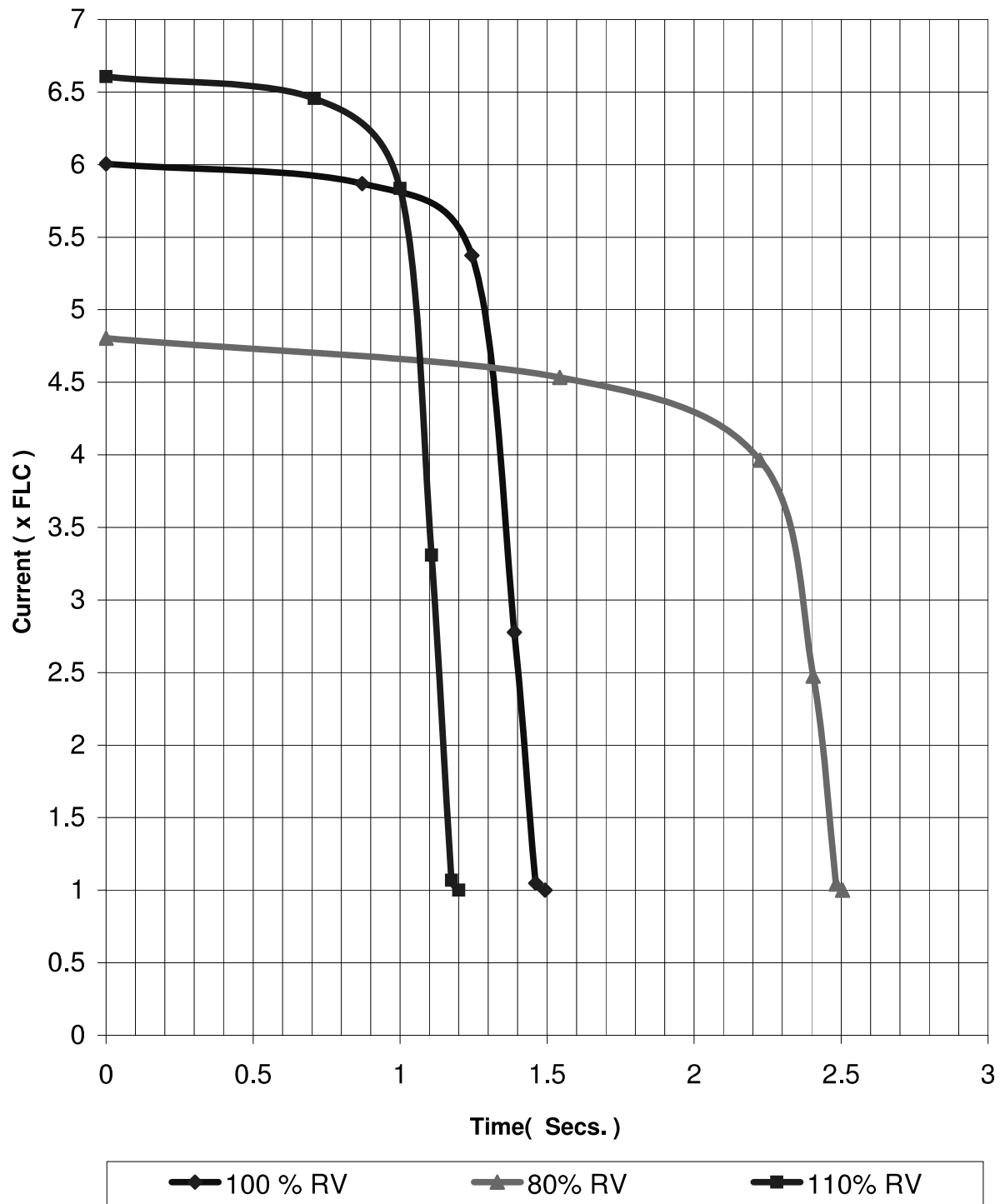


CLIENT ; ORISSA POWER GENERATION CORPORATION Ltd.
CONSULTANT : DEVELOPMENT CONSULTANTS Pvt. Ltd.
PROJECT : 2 X 660 MW 1B. TPS UNIT: 3 4

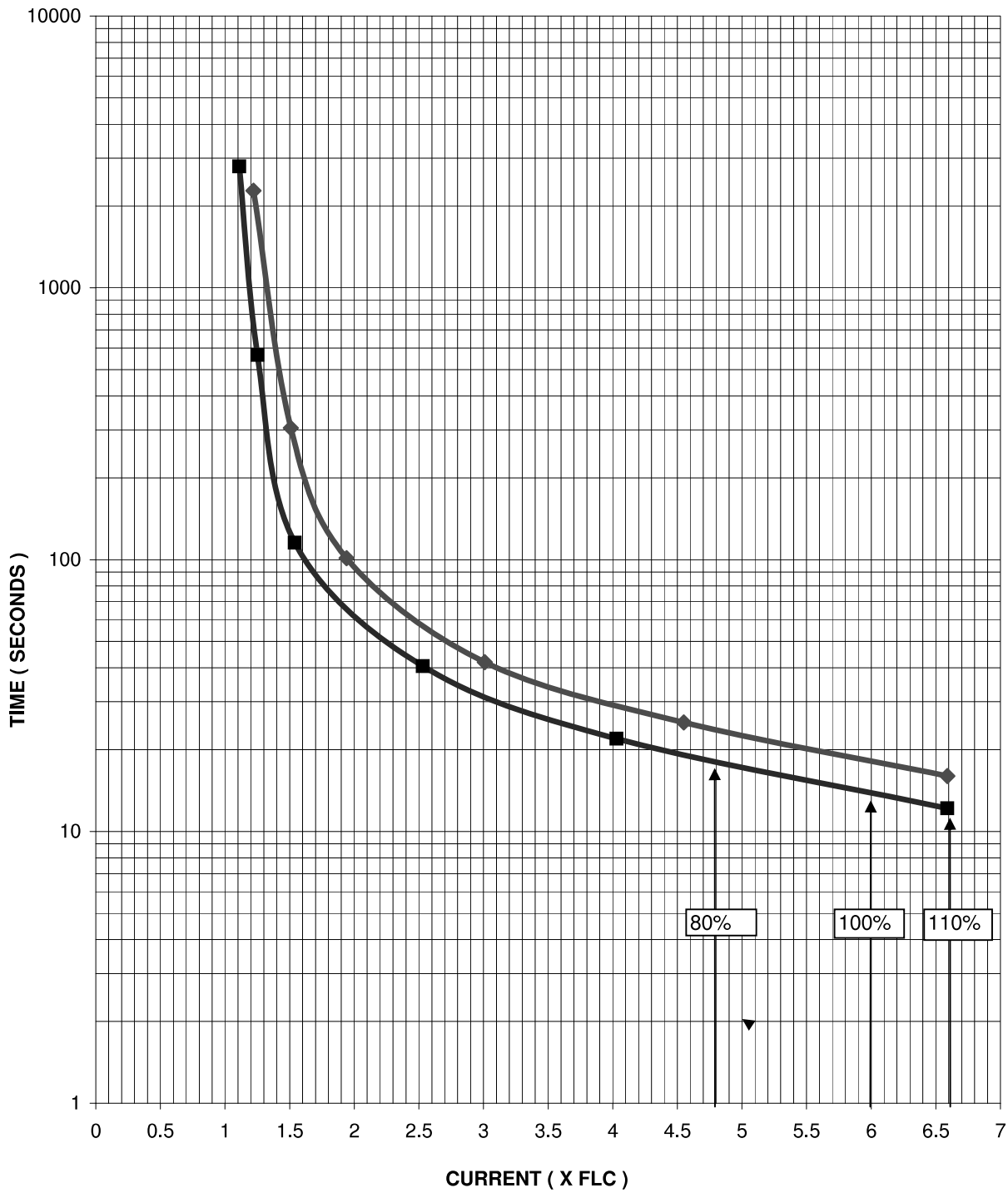


CLIENT ; ORISSA POWER GENERATION CORPORATION Ltd.
CONSULTANT : DEVELOPMENT CONSULTANTS Pvt. Ltd.
PROJECT : 2 X 660 MW 1B. TPS UNIT: 3 4

Current Vs % Time Characteristic Curve
315 KW, 4 Pole, 3300 V, DC355F3 Motor



THERMAL WITHSTAND CHARACTERISTICS CURVE
315 KW, 4 POLE, 3300 V, DC355F3 Motor



■ HOT

◆ COLD

