

 434-003	<h1>ENQUIRY</h1>	Bharat Heavy Electricals Limited (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.		Phone: 0431-2577434 FAX : 0431-2520383 Email: npeswar@bheltry.co.in nagarajank@bheltry.co.in	
		ENQUIRY NO.	DATE	DUE DATE FOR QUOTATION	
		EN:SAC- 214	02.12.2013	30.12.2013	
		Please quote Enquiry No., and due date in correspondences This is only a request for quotation and not an order.			
SL.NO.	MATERAIAL CODE DESCRIPTION DRAWING NO TDC NO.	UNIT	QUANTITY	DELIVERY SCHEDULE QUANTITY DATE	
	<p>SUPPLY OF GEAR BOXES(BEVEL GEAR TYPE-MULTI TURN) FOR VALVES ACTUATORS.</p> <p><u>{This enquiry is for Gear boxes (Bevel Gear type)}</u></p> <p>Offer for all the Gear boxes as per the specification</p> <p>The Price offered for all items must be on F.O.R –Trichy basis for indigenous vendors and FOB Nearest Sea/Air port for foreign vendors.</p> <p><u>Note:</u> Test Certificates are required Guarantee Certificate is required</p>	<p style="text-align: center;">AS PER ENCLOSED ANNEXURE-1</p> <p><u>Annexure:</u></p> <ol style="list-style-type: none"> 1. General terms & Conditions of Enquiry. 2. Scope of Supply &Special Conditions of contract. 3. Copy of Technical Delivery Condition. 4. Terms & Conditions for Indigenous/Import 5. Required Delivery: As mentioned in our annexure-1 <p><u>Date , Time & Venue of tender</u> A)Technical Bid opening : 30.12.2013 at 14.30 IST at Valves Purchase Conference Hall , Building No 24,BHEL Tiruchirappalli-620 014,Tamil Nadu State,India. B) Price Bid will be opened for vendors those who's offers are technically suitable alone. The intimation regarding price bid opening will be informed later.</p>			
<p>The rate of Excise Duty and Sales Tax, Prevalent on the date of quotation, should be clearly indicated in the quotation itself. If these particulars are not provided, the quotation is liable for rejection.</p> <p>Please, submit your lowest quotation in duplicate subject to our terms and conditions overleaf, for the above materials, so as to reach us on or before the due date by 2 P.M.</p> <p>Quotation will be opened at 2.30 p.m. on the due date in the presence of tenderers who may like to present .</p> <p>Last tenders are liable to be rejected.</p>				<p>Yours faithfully,</p> <p>For Bharat Heavy Electricals Ltd Sr. Manager (Valves Purchase)</p>	



Bharat Heavy Electricals Ltd

(A.Govt.of India Undertaking)

Valves Purchase,Tiruchirappalli- 620 014. INDIA

E-mail:npeswar@bheltry.co.in

Tele: (0431)2577434

Fax: (0431)2520383

Requirements (qty) & List of specification to Enquiry No: EN/SAC/214
(as per the Range furnished in the specification)

Sl.No	Torque	Thrust	QTY
1	11	2700	25
2	35	6300	25
3	50	16000	100
4	75	10000	10
5	100	19000	100
6	150	20000	300
7	200	32000	145
8	300	35000	125
9	400	45000	25
10	600	63000	60
11	800	82000	10
12	1200	120000	15

- *The quantity indicated are indicative & approximate only*

The following specifications are enclosed for which the comments may be furnished in the relevant column provided

Purchase Specification for Gear Boxes : **MOU/TP-VALVE/VALVE GEAR BOX/ REV 00**



Bharat Heavy Electricals Ltd

(A.Govt.of India Undertaking)

Valves Purchase,Tiruchirappalli- 620 014. INDIA

Phone : 91- 0431-2577434

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Scope of supply & SPECIAL CONDITIONS OF ENQUIRY

EN: SAC-214/RC

Date:23.11.2013

We require the Gear boxes (Bevel gear type) as per the technical delivery conditions for our production. Kindly send your competitive offer immediately for our consideration. The tender will be opened positively **on 30.12.2013 at 14.30 IST.**

1. Kindly go through the enclosed specification Nos: **MOU/TP-VALVE/VALVE GEAR BOX/ REV 00**, and submit your competitive offer in duplicate indicating compliance or deviation for each point of the specification with a validity of 1-1/2 years for ordering.

You may have to submit the tender in two parts i.e. **Technical cum commercial bid in separate sealed cover and Price bid in another cover separately**. After technical conformance the price bid will be opened.

2. Your offer shall be supported by relevant technical documents like Quality plans, catalogues, leaflet, General arrangement drawings etc for technical evaluation and for getting customer approvals.

3 Operational spares required adaptors (drive sleeve) may be offered

5.Kindly quote your rates on firm price basis with the offer validity of minimum 1-1/2 years (18 months) from the date of tender opening since being Rate Contract. The same shall be per unit basis for each item and on FOR, BHEL, Trichy for Indigenous vendors and FOB Nearest AIR/SEA Port for foreign vendors.

6.Only Manufacturers are eligible to participate in this bid. Traders & Dealers are not eligible to participate in this bid. If authorized dealer of a manufacturer is participating in the bid they have to furnish the mutually signed Agency Agreement.

7.Kindly quote for enclosed specification or equivalent that meets Technical Delivery Conditions (copy attached).

8.The quantity indicated are approximate only as per last year (2011-12) requirement.

9.The purchase orders will be released based on our production plan periodically based on the delivery requirement in the same. Offers not meeting this delivery will not be considered.

10. Prices shall be firm till entire execution of the Purchase Order. Price variation clause is not acceptable.

11.Lowest prices received against BHEL enquiries need not be the technically acceptable one and in that case, BHEL reserves the right not to consider the same.

12.Supplier's has to submit test reports for each sl nos as per our TDC conditions and packing also to be done for each item separately

13.For indigenous vendors:-100% payment will be made after 45 days on acceptance of material at BHEL Stores. No other Payment term is acceptable to BHEL.

For Foreign vendors:-100% Payment against this contract will be made to the seller on collection basis. You have to send the documents to our banker M/S. State Bank of India, Kailasapuram, Tiruchirappalli-620014. The original clean HAWB(in case of Air)/Original Bill of Lading(In case of Ship) issued by our forwarding agency ,original invoice, Packing list with your signature, Certificate of origin, Test certificates as per respective TDC Etc are to be sent in triplicate to our bankers.

14. One copy of Test certificates/non negotiable documents shall accompany the dispatches.

Contd...2...

EN: SAC-214/RC

Date: 23.11.2013

15. Delivery schedule shall be strictly as per BHEL requirements only which is indicated in the Enquiry / Purchase Order sheet that will be issued. In case of delay in delivery, beyond the end delivery dates given in the Purchase Order sheet, Liquidated Damage clause will be applicable at the rate of 0.5 % of the total order value per week or part there of subject to a maximum of 10% of the total order value. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part there of subject to a maximum of 10% of the total order value.

16. The delivery of the item shall be strictly as per BHEL's enquiry/ Purchase orders. In case of urgency, the delivery period have to be altered to meet BHEL's production plan.

17. Confirmation for compliance is to be given in the offer for all the conditions specified in the respective Technical Deliver Conditions.

18. Highest rate bidder will not be considered for this tender. BHEL reserves the right to counter-offer with vendors other than L1, in order to have broader vendor base for ensuring delivery. The loading pattern will be followed as furnished below as an example:

(i) If one vendor alone accepting the counter offer rates, loading shall be 60:40 on L1:L2.

(ii) If L2 & L3 vendors are accepting the counter offer rates, loading shall be 50:30:20 on L1:L2:L3.

(iii) If L2, L3 & L4 vendors are accepting the counter offer rates, loading shall be 40:30:20 :10 on L1:L2:L3 & L4.

19. Every dispatch of material shall accompany the packing list, detailing the Numbers of items. An advance Copy of dispatch details shall be furnished to purchase/Valves/BHEL/Tiruchy-14.

20. The materials are to be dispatched with proper packing and binding.

21. BHEL reserves the right to finalize the tender either through **price bid open** or **through Reverse Auction route**. A typical copy of "Business Rules and Conditions" of Reverse Auction is enclosed herewith for information and reference.

22. The offers are invited in two parts.

- a) Techno commercial bid covering Technical Conditions, Delivery conditions, acceptance of all our commercial conditions and a copy of un priced price bid. **(Please submit a separate envelope super scribing the enquiry no for techno commercial bid).**
- b) **The vendors already under MOU (covered in our approved vendor list) have to submit the compliance of Specification and the commercial condition exclusively in this NIT separately.**
- c) Price bid covering only unit price each case. **(Please submit a separate envelope super scribing the enquiry no for price bid.)**

23. Techno Commercial bid will be opened first. Price bid of technically suitable vendors only will be opened with prior intimation.

24. If the supply is short the extra cost to BHEL in replenishing the short fall will be debited to the vendor.

25. In addition to all the above conditions, BHEL standard terms & conditions given as a separate annexure shall also be applicable to the extent they are not superseded by the above conditions.

26. **Non-adherence to these special conditions of enquiry and BHEL's standard terms and conditions will lead to disqualification of offer.**

27 The tenders may be dropped in the tender box is placed in the location in **"Purchase/ Valves,
Third floor, Building-24,
BHEL-Trichy-14"**.

EN: SAC-214

Date: 23.11.2013

GENERAL TERMS AND CONDITIONS OF Reverse Auction:-

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.

- a. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- b. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- c. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
- d. Business rules like event date, time, and Start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
- e. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event.
- f. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
- g. Reverse auction will be conducted on scheduled date & time.
- h. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
- i. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
- j. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.

Note For vendors who are not in our list of approved vendors:-

Vendors who are not in our list of approved vendors are required to full fill the following conditions.

- The vendors should submit the offers along with duly filled vendor registration forms which can be down loaded from our website www.bhel.com. Vendors should also apply through the web and furnish the reference no in the hard copy also. Offer without the above forms & the relevant supporting documents will not be considered for technical evaluation.
- For indigenous sources, BHEL team shall visit the vendor works to enlist them in our vendor directory and then their offer will be technically evaluated.
- The import sources will be enlisted in our vendor directory based on D & B (M/s DUN & Bradstreet) statement & filled in Vendor registration forms and then their offer will be technically evaluated
- The vendor should submit credentials of supplying their products for a minimum of 3 years to 2 power plants
- The vendor should also submit credentials of supplying their products to other similar valve manufacturers.
- The vendor should support the technical suitability with Endurance Certificates as per IS:9334.

Along with the offer (Technical/Commercial bid and price bid in two separate sealed covers) you are requested to indicate from whom you are going to source the components also send a typical type Test Certificate for the components from that maker. Without the type Test Certificate, your offer may not be considered for further processing's.

**N.Parameswaran
SM / Purchase/Valves**



Bharat Heavy Electricals Ltd.
(A Govt. of India Undertaking)
VALVES PURCHASE,
TIRUCHIRAPPALLI- 620 014. INDIA



PHONE: 91-0431-257 7434
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EMAIL: npeswar@bheltry.co.in

INDIGENOUS ENQUIRY

TERMS AND CONDITIONS

1. QUOTATIONS :

- a. Each tender should be sent in double cover, should be sealed and super scribed with correct Tender No., item of supply and due date of opening. The outer cover should only bear the address of this office and should not have any indication that a tender is within. Two or more quotations should not be sent in one cover but the quotation against each tender should be sent separately to avoid confusion. Tender should not be addressed to any individual's name but only by designation.
- b. Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested. All amounts shall be Indicated both in words as well as figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- c. Price should be F.O.R. dispatching station inclusive of risk in transit and remain valid for 120 days from. The due date.
- d. If any Sales Tax is payable as extra to the quoted price, it should be specifically stated in quotation along with CST & T.N.G.S.T No. failing which the purchaser will not be liable for payment of Sales Tax. Our T.N.G.S.T No. 3550005 Dated 01-04-1995 C.S.T. No. 259383 Dt. 11.06.1991.
- e. No revision of prices will be entertained after tenders are opened.
- f. Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.
- g. Products with I.S.I. certification marks will be preferred.
- h. The purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.

2. SAMPLES :

Wherever possible samples should be submitted separately whether specifically requested or not so as to reach the purchaser on or before its due date of the enquiry. They should be clearly marked with the enquiry No. and the date on the outside cover to facilitate identification.

3. PACKING AND MARKING:

The supplier shall arrange for securely protecting and packing the stores to avoid lose or damages during transit.

4. TERMS OF PAYMENT :

100% Payment will be made after 45 days on acceptance & satisfactory receipt of materials. Where required by the purchaser, the successful tenderer must send the operation and maintenance manuals, test certificates, drawings, etc., for the materials should be sent immediately after dispatch of the materials and a statement to that effect should be made in the Invoice. Failure to comply with this provision will result in delay in payment of the bills. Goods dispatched either by V.P.P. or by thro' document presented through bank will not be accepted unless agreed to by the Purchaser.

The Original Excise Duty Gate Pass or certified extract form Excise Duty Ledger should accompany the material. A Photostat copy of the above gate pass for each delivery challan should be submitted along with the original bills submitted directly to BHEL Department.

5 LIQUIDATED DAMAGES:

It is clearly understood among the parties to the contract that 'Time is the essence of the Contract. Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of ½ % of the full value of PO for each week of delay to the maximum of 10% or part thereof will be levied without prejudice to any other relief of compensation due to the purchaser under any other condition of this contract.

6 RISK PURCHASE:

Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss, which the purchaser may sustain by reason for such risk purchases in addition to penalty at the rate mentioned in clause 6 above.

7 PREFERENTIAL DELIVERY :

It should be noted if a contract is placed on a higher tender as a result of this invitation to tender in preference to the lowest acceptable offer in consideration of the earlier delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price F.O.R. destination, including all elements of freights, sales tax, duties and other incidents, incidental in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.

8 MODVAT / CREDIT:

If any Excise Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for his input materials, the effect of proforma invoice should be passed on to the purchaser; Tenderer under MODVAT shall be preferred.

9 GENERAL :

The Purchaser reserves the right to split up the tender and place order for individual items with different tenders and also increase or decrease the quantity.

Any other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.

File : Anx-enq-ind-txt



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(A Govt. of India Undertaking)

**Valves purchase,
Tiruchirappalli - 620 014. India**

PHONE: 91-0431-257 7434
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EMAIL: npeswar@bheltry.co.in

IMPORT ENQUIRY TERMS AND CONDITIONS

1 OFFER

Offer in ENGLISH LANGUAGE and in TRIPLICATE in a SEALED COVER SUPERSCRIBING the Enquiry Number and the due date shall be submitted addressed to

THE SR. MANAGER
PURCHASE VALVES
BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPPALLI - 620 014
TAMIL NADU, INDIA

Offers should be firm for net FOB Nearest AIR / SEA Port price and C & F Madras Port price, indicating the shipping specifications and the earliest delivery in respect of offers from overseas suppliers. Offers from indigenous sources shall be firm for FOR / TIRUCHIRAPPALLI.

11: DOCUMENTS

- (i) Offers should be accompanied by detailed technical literature, Catalogue and detailed dimensional drawings in ENGLISH and in TRIPLICATE, or otherwise, the offers will not be considered.
- (ii) In case overseas suppliers route their offer through their accredited selling agents, a letter of authority should be furnished mentioning the name and address of their selling agents who are authorised to bid, negotiate and conclude a Contract on their behalf.

III AGENCY COMMISSION:

- (i) In respect of offers from overseas suppliers, agency commission, if any, payable to their agents in India, shall invariably be shown separately in the proforma invoice and this will be paid by us in India, in Indian Rupees, on satisfactory completion of the Contract.
- (ii) If Overseas Principal has any tie up with any third party in respect of Agency Commission it should be declared while submitting the offers.
- (iii) Copies of current Agency Agreement / Authorization Letter in respect of Agency Commission shall be furnished along with order, if not made available earlier.
- (iv) For calculation of Rupee equivalent of Agency Commission, exchange rate as prevailing on the date of order will be taken.

Continued... 2

IV SPARES:

The tenderer should quote separately for spares that are required for two years trouble free operation. The spares offer should accompany the offer of main equipment; otherwise the quotation will be overlooked.

V VALIDITY:

The offers for main equipment and spares shall be kept open for acceptance for 120 days (one hundred and twenty days) from the date of opening of the tender.

VI TEST CERTIFICATES, OPERATING AND MAINTENANCE MANUALS:

The tenderer shall clearly mention in their offer, that the Test Certificate and Operating and Maintenance Manuals, etc., as called for in the technical specification, in the required number of copies will be provided at no extra cost. If any amount is payable as extra, the same shall be indicated separately in the offer.

VII TERMS OF PAYMENT:

In the event of an order, the purchaser will arrange for 100% payment against presentation of documents through Bank.

VIII GENERAL:

- (i) Preference will be given to suitable indigenous or ex-stock imported offers failing which imported offers from incoming consignment against the indigenous supplies "Stock and sale licence" will be accepted. If "stock and sale licence" is not available with the indigenous suppliers, the same shall be indicated in their offer.
- (ii) **Bank Guarantee:** The supplier in the event of an order should furnish a Bank Guarantee from an approved Bank at no extra cost in a proforma which will be Supplied to the Supplier, along with the order, for an amount equivalent to 10% of the value of the contract. The Bank Guarantee should remain in full force and effect during the period that would be taken for successful completion of the contract and shall continue to be enforceable till 12 months from the date of receipt of consignment at purchaser's site or 18months from the date of last shipment at the Port of Delivery whichever is earlier.

IX LD / PENALTY FOR DELAY IN DELIVERY:

"If the supplier fails to deliver the Raw Materials / equipment / components within the period specified in the contract the Purchaser shall deduct Liquidated Damages a sum equivalent to 0.5% of the price for each week of delay upto a maximum of 15% of the price of the delayed / undelivered goods. If the delay in delivery of a part contributes to delay in execution of total system, LD will be recovered on the total contract price"



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 1 of 15

TECHNICAL SPECIFICATION

For supplying

VALVES GEAR BOXES



Contents

Scope

- 1.0 General conditions
- 2.0 Technical requirements
- 3.0 Documentation requirements
- 4.0 Quality requirements
- 5.0 Terms and Conditions
- 6.0 MOU Commercial Terms & Conditions



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 3 of 15

SCOPE

By this MOU, The specification for the Valve gearboxes is mutually agreed and applicable for the purchase orders finalised against the valve gearbox requirements from BHEL/Trichy during the period of validity of this MOU.

Project / order specific requirements will be indicated with each items of the order. However this specific requirement is over and above the specification finalized in this MOU.



1.0 General requirements

- 1.1 During the validity of this MOU, only MOU specification will be applicable for all enquiries and it will not be discussed for any deviation/clarification etc.
- 1.2 In case of the conflict in any requirement between MOU and project specific specification, the requirement of the project section is the final and binding.
- 1.3 It is agreed that no deviations will be taken by the vendors on the specification while submitting their offers against future enquiries.
- 1.4 Since this MOU specifications is standardized and an understanding has been reached, the future enquiries will be floated on "SINGLE BID SYSTEM" only. Hence, if any offer is found with deviations, the same will be totally rejected and will not be considered for further evaluation
- 1.5 The validity of this MOU is for TWO years from the date of signing. After the expiry of the period, the same can be extended further with or without any modifications. However, in case any changes are required, the MOU may be amended before the expiry of the validity.
- 1.6 If any special or non-standard tools are required for installation, operation or maintenance, the same shall be supplied along with the equipment.
- 1.7 Trouble-free operation of the equipment shall be guaranteed for a period of 12 months from the date of commissioning OR 18 months from the date of dispatch whichever is earlier.
- 1.8 Since the vendors works alone is approved by BHEL, it is agreed the vendor will manufacture this item in their own works only and will not off-load the jobs to any other suppliers without the written approval by BHEL.
- 1.9 All components shall be packed in such a way that they should not get damaged during transport.
- 1.10 BHEL and the Vendor shall have an involvement which will commence at bid stage and follow through the completion and acceptance, thus ensuring total conformity to Purchaser's requirements.



2.0 Technical Requirements

PRODUCTENGINEERING/VALVES	VAL/BG/SPEC/006Rev.:03
BHEL/TIRUCHIRAPPALLI-14	DATE:10-06-2013

SPECIFICATION FOR BEVEL GEAR OPERATORS FOR VALVES

1. **TYPE:**

All gear operators shall have bevel gear transmission with completely enclosed construction complying to IP65 or better. The gear casing shall be designed adequately to withstand shock and vibration of the pipeline. The design shall be compact and less weight and shall not cause any trouble during operation at sites.

2. **LUBRICANT:**

The Gearbox shall be filled with suitable lubricant. The specification of lubricant shall be furnished. There shall be no leakage of lubricant from the gearbox. The grease used shall be suitable for an ambient temperature of 80 deg. Centigrade.

2. **HANDWHEEL:**

All the gear operators shall have suitable hand wheel and the size of the hand wheel shall be designed to give the required input torque. The hand wheel shall be malleable iron or steel. The maximum hand wheel diameter shall not be more than 750mm.

3. **BASE:**

The gear operator shall have base suitable to take the thrust with ball/roller bearings. An Aluminum Bronze drive sleeve with a pilot bore shall be provided as a standard supply. If specified in the Purchase Order, Ni-Resist drive sleeve is to be supplied. The drive sleeve will be threaded by BHEL to suit the stem thread.

4. **ASSEMBLY:**

The assembly of all gears, shafts etc... shall be done properly to have smooth operation without any noise. Also the Gearboxes shall be suitable for mounting in any position.

5. **OUTPUT SHAFT FLANGE:**

The flange for connecting the valve shall have dimensions as per BHEL requirement indicated in the table.

6. **INPUT SHAFT FLANGE:**

Wherever gearboxes are required to be assembled with Electrical Actuator, Gear operators are to be supplied with input flanges to suit the keyed shaft of the actuator. Details of the input flange for each model shall be furnished. Applicable Actuator models that can be coupled with each Gearbox shall also be indicated.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 6 of 15

7. **RANGE:**

The gear operators with torque, thrust, maximum stem acceptance diameter, base details, etc., shall be supplied as per the details given below.

Sr.No.	Torque (kg-m) – Max.	Thrust (kgf)	Max. Stem Dia (mm)	Flange OD (mm)	Bolt Circle Dia (mm)	Locating Dia (mm) h7	Threaded hole size (mm)	Threaded hole depth (mm)	No. of Holes	Handwheel dia (mm)	Gear Ratio	Stem cover length (slotted) (mm)
1	11	2700	40	125	102	70	M10x1.5	16	4	250	2:1	200
2	35	6300	46	178	139.7	95.2	M16x2	26	4	310	2.5:1	250
3	50	16000	52	178	139.7	95.2	M16x2	22	4	310	4:1	250
4	75	10000	55	210	165.1	127	M20x2.5	26	4	460	3:1	250
5	100	19000	65	210	165.1	127	M20x2.5	30	4	460	4:1	250
6	150	20000	62	289	254	152.4	M16x2	34	8	460	4.11:1	400
7	200	32000	86	289	254	152.4	M16x2	25	8	460	6:1	400
8	300	35000	85	343	298.5	177.8	M20x2.5	31	8	610	6:1	300
9	400	45000	102	343	298.5	177.8	M20x2.5	25	8	610	8:1	300
10	600	63000	115	412	355.6	215.9	M24x3	45	8	610	9:1	400
11	800	82000	121	406	355.6	215.9	M24x3	30	8	610	8:1	400
12	1200	120000	130	476	406.4	228.6	M30x3.5	50	8	760	10:1	500

8. **MATERIAL:**

All machined components like bevel gear, bevel pinion, drive sleeve etc., shall be from superior grade material suitable for the application and shall be heat treated to the design requirement.

9. **STEM PROTECTION:**

All gear operators shall have stem protection covers. Stem protection covers are to be provided with a 'SLOT' for stem position indication. The length of stem protection cover shall be as indicated in the table. Wherever different length of stem protection cover is required, the same has to be supplied as indicated in the purchase order. The thread



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 7 of 15

connection of the Stem Protection Cover shall be indicated in the GA drawing & Catalogue.

10. DRAWING:

Supplier to furnish the general arrangement drawing and cross sectional drawing of the gear operator incorporating the material specification for all critical components and overall dimensional details for BHEL approval. Also complete dimensional drawing of drive sleeve is to be furnished for all models.

11. TYPE TESTS:

The gear operator shall be tested to the design requirement of torque and thrust and type test certificates shall be furnished. The mechanical efficiency shall not be less than 95%.

12. FINAL ASSEMBLY:

To be inspected visually for surface smoothness, painting finish and smooth operation.

13. NAME PLATE:

Nameplate made of suitable corrosion resistant material, preferably stainless steel, is to be fixed on to the gearbox casing. The name plate contain the following information as minimum:

- Maker's Name.....:
- Model Number
- Serial Number
- Output Torque.....:
- Permissible Thrust.....:
- Gear Ratio.....:
- Material Code(as indicated in P.O):.

14. VENDOR TO FURNISH THE FOLLOWING DETAILS:

- Name of Supplier.....:
- Gear Box Model No.:
- G.A. Drawing No.....:
- Cross sectional Drg. No.:
- Drive sleeve Drg. No.....:
- Lubricant Details
- Bearing details.....:
- Suitability for Outdoor Application...: :

The vendor shall furnish the above details against each model of the Gearbox offered and enclose all the drawings & documents along with the offer.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 8 of 15

15. **Recommended spares:**

The supplier shall indicate the list of commissioning spares if any and operational spares for five years of trouble free operation.

16. **General:**

The vendor shall confirm compliance of each of the above points and also furnish a separate deviation list, in case of any deviation in any of the clause. Even in case of no deviation the vendor shall explicitly mention as "NO DEVIATION".



3.0 Documentation Requirements

The following documents are to be attached with this MOU
a. GA drawings for all models including dismantling clearances.
b. The dimension drawing of the blank adopter bush
c. Dimensional catalogue with maximum spindle acceptance details
d. Outline dimension of gear box.
e. General arrangement drawing of gear box consisting following as minimum
1. Identification of critical component with its material composition.
2. Mounting flange dimension
3. Hand wheel dimensions
4. Weight of gear box
5. Stem protection cover length, thread size and type
f. The 3D CAD format shall be available for all the models.
g. Quality plan.
h. Type test certificates



4.0 Quality requirements

4.1 INSPECTION AND TEST REQUIREMENTS

All equipments shall be subject to inspection by BHEL/ Client and/or their nominated inspecting authority. Vendor shall make all provisions in his shop/sub-vendors shops for complete inspection and test of gear boxes

4.2 Tests & Inspection:

- 4.2.1 During fabrication/testing, the gearboxes shall be subjected to inspection by BHEL/CUSTOMER or by any agency authorized by them. Manufacturer shall furnish all necessary information concerning the supply to BHEL/CUSTOMER inspectors.
- 4.2.2 All routine tests as specified by the applicable standards shall be conducted.
- 4.2.3 Shop tests shall be witnessed by an inspector of BHEL/CUSTOMER or of an agency authorized by customer.
- 4.2.4 Quality plan for the gear boxe to be followed.

4.3 Painting, Protection, Packing, Supply and Identification:

4.3.1 **Surface Preparation:** Weld slag & spatter shall be removed and the surfaces to be coated shall be free from contamination. Surface defects shall be removed by suitable methods. Sharp edges shall be smoothed by grinding. Prior to surface preparation oil, grease, drilling emulsions, cutting emulsions and preservative agents shall be carefully removed by suitable solvents. The surface shall be carefully dried with clean cloth to prevent the dissolved impurities from spreading over the entire surface. The surface shall be cleaned by wire brush and shot blasting if required. Proper adhesiveness of paint to the surface shall be ensured.

4.3.2 Paint Shade

The enclosures shall be treated and prepared for painting with suitable painting system for withstanding 500Hrs of salt spray as per ASTM B-117/ ISO 9227 standard.

4.4 Packing & Transport:

The gearbox shall be supplied to site packed in wooden crates / Carton boxes. They shall be wrapped with polythene sheets. They shall have skid bottoms for handling.

All spares shall be packed separately in boxes marked SPARE

Special precaution notations such as Fragile. This side up, centre of gravity, weight, and Owner's particulars. Purchase number etc. shall be clearly marked on the package together with other details as per purchase order.

The equipment may be stored in a covered shed for long periods before installation. The packing should be suitable for such storage.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 11 of 15

4.T.0	TEST REQUIREMENTS FOR GEAR BOXES
4.T.1.0	ROUTINE TEST:
4.T.1.1	Dimensions: Overall and mounting
4.T.1.2	Details of painting as per specification and vendor practice: Anti-corrosiveness Epoxy.
	i. Shade.
	ii. Finish
	iii. Paint thickness
4.T.1.3.	Manual operation through hand wheel.
4.T.1.10	T.1.10 Leakage test for gear case (visual).
4.T.2.0	TYPE TEST certificates shall be provided for Thrust & Torque
4.T.2.5.	Enclosure protection for the total assembly.

4.N.0.	NOTES:
4.N.0.1.	The quality plans shall be approved by BHEL.
4.N.0.2.	All testing facilities shall be arranged by the vendor, at his works before calling BHEL representative for inspection.
4.N.0.3.	Approved drgs., PO specification and relevant standards if any shall be made available during testing / inspection.
4.N.0.4.	All measuring and testing instruments shall be periodically calibrated from National test house and certificates made available during inspection.
4.N.0.5	All relevant GA drawings, data sheets & wiring diagrams shall be submitted as controlled copy and approval shall be obtained from BHEL. All supply shall be as per these documents.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 12 of 15

5.0 TERMS AND CONDITIONS-General

1. QUOTATIONS:

a. Submission of Tender: The bidder shall submit the bid online in BHEL e-Procurement portal at

["https://bheleps.buyjunction.in"](https://bheleps.buyjunction.in)

The bidder would be required to register on the above e-procurement portal for submitting their bids.

Sealed cover bids / e-Mails / FAX / Manual offer will NOT be considered.

b. Late tenders: Late tenders shall not be considered under any circumstance.

c. Duties and Taxes: If any Sales Tax is payable as extra to the quoted price, it should be specifically stated in quotation along with CST & T.N.G.S.T No. failing which the purchaser will not be liable for payment of Sales Tax. Our T.N.G.S.T No. 3550005 Dated 01-04-1995 C.S.T. No. 259383 Dt. 11.06.1991.

d. PVC: Price Variation clause not acceptable. Prices should be firm. No revision of prices will be entertained after tenders are opened

e. Catalogue: Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary. Products with ISI certification will be preferred

f. Samples: Samples should be submitted separately if specially requested in tender before due date of the enquiry. They should be clearly marked with the enquiry No and date on the outside cover to facilitate identification

g. Deviation: Any deviations from the specification are to be furnished separately as "Schedule of Deviation". If there is no deviation vendor should indicate "No Deviation".

2. COMMERCIAL TERMS & CONDITIONS:

a. Terms of Payment:

• **FOR TRICHY:** Payment 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores.

b. Liquidated Damage: A sum equivalent to 0.5% of price for each week of delay up to a maximum of 15% of the delayed/ undelivered goods.

c. Delivery Terms: Price should be quoted FOR BHEL Trichy/FOR site as mentioned in enquiry inclusive of freight and insurance in transit.

d. Validity of Offer: Prices should be valid for one year from the date of opening of this tender.

e. Taxes & Duties: Excise duty, sales tax and other levies (if any) shall be indicated as extra in the offer.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 13 of 15

- f. Risk Purchase:** Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of seller either the whole of goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. Supplier shall be liable for any loss which the purchaser may sustain by reason for such risk purchases.
- g. MODVAT/CREDIT:** If any Excise Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for his input materials, the effect of Performa invoice should be passed on to the purchaser; tenderer under MODVAT shall be preferred.
- h. Performance Bank Guarantee:** If tender Calls for Performance Bank Guarantee, Vendor should provide a performance bank guarantee (PBG) for 10% of the total Purchase order value valid for warranty/guarantee period with an additional claim period of 2 months.
- i. Miscellaneous:** Any Other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.
- j. Delivery period:** Delivery schedule shall be strictly as per BHEL tender requirement which are as indicated against each item in our tender.

3. GENERAL CONDITIONS

- a.** BHEL reserves the right to finalize the tender as per item sl no wise or as a total package or project wise. Separate orders will be released for each project and documents should be supplied for each order separately.
- b.** BHEL reserves the right to increase or reduce or split the Tender Quantity and to NOT to order for some or all material based on the changes in project.
- c.** BHEL shall have the right to visit vendor works during the execution of contract along with end customer for verifying status, inspection and testing of the material.
- d.** BHEL reserves the right to negotiate or re-float the tender in case the quoted prices are not acceptable.
- e.** Supplier shall arrange packing to avoid lose or damages during Road Transport, Site handling & Storage.
- f.** Purchase Order, PO Item Sl No, Material code, Quantity should marked the Packing clearly.
- g.** Confirmation for compliance is to be given in the offer for all the conditions specified above and to the respective Purchase Specification.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

MOU/TP-VALVE/VALVE GEAR BOX/ REV 00

Page 14 of 15

4. DOCUMENTATION:

- a. **With Consignment:** Original duplicate for transporter copy, Invoice, Packing List, Delivery Challan, O&M manual copy of Material Test Certificate, Test Certificates, Calibration Report, Compliance Certificate, Guarantee/Warranty Certificate etc...
- b. **Online Submission:** Supplier should upload the soft copy of Test Certificates in BHEL website <http://vis.bheltry.co.in/vis/index.jsp> at Vendor information system tab.
- c. **To Finance:** Original and Duplicate Invoice for payment should be sent directly to
Senior Manager
Finance/Valves-Bills section
BHEL TRICHY 620014
- d. **To Purchase:**
 - i. **FOR BHEL TRICHY case**-Copy of Invoice, Packing list, LWB and Delivery challan.
 - ii. **FOR Site case** -Original Excise Invoice, Original LWB, Original Packing List, Original IBR documents, Original despatch clearance Certificate, Original Inspection report, Test certificates as per PO, Original Site Acknowledgment etc
- e. **Identification:** Material code, Purchase Order, PO item SI No, Unique SI No if any should be provided in all despatch documents, materials and packing clearly.

5. DISCLAIMER CLAUSE:

Neither the Organization (Bharat Heavy Electricals Ltd.) nor the service provider (mjunction Services Ltd.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.



6.0 MOU Commercial Terms & Conditions

a. Terms of Payment:

- **FOR TRICHY:** Payment 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores.

b. Liquidated Damage: A sum equivalent to 0.5% of price for each week of delay up to a maximum of 15% of the delayed/ undelivered goods.

c. Delivery Terms: Price should be quoted FOR BHEL Trichy inclusive of freight and insurance in transit.

d. Validity of Offer: Prices should be valid for One Year from the date of finalizing the tender.

e. Taxes & Duties: Excise duty, sales tax and other levies (if any) shall be indicated as extra in the offer.

f. Delivery period: Delivery schedule shall be 12 weeks from date of ordering.

g. Counter offer: BHEL reserves the right to counter-offer with vendors in order to have broader vendor base for ensuring delivery.

h. Acceptance of standard terms and conditions