



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

### ENQUIRY

### NOTICE INVITING TENDER

Phone: +91 431 257 7771  
Fax : +91 431 252 0719  
Email : rpmuthu@bheltry.co.in  
Web : [www.bhel.com](http://www.bhel.com)

#### TWO PART BID

Tender to be submitted in two parts.

Enquiry  
Number:

**2631000064**

Enquiry  
Date:

**20.07.2010**

Due date for submission  
of quotation:

**20.08.2010**

You are requested to quote the Enquiry number, date and due date in all your correspondences. This is only a request for quotation and not an order.

Please note that under any circumstances both **delayed offer** and **late offers** will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

Item	Description	Quantity
10	<b>VERTICAL MILLING M/C (Heavy duty knee Type)</b> as per the technical specification, BHEL commercial terms & conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	<b>1 No.</b>
<b>Important points to be taken care during submission of offer</b>  <b>1. Checklist to be duly filled and enclosed along with your offer, failing which the offer will not be considered for evaluation.</b>  <b>BHEL's General guidelines / instructions including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <a href="http://www.bhel.com">http://www.bhel.com</a> or from the Government tender website <a href="http://tenders.gov.in">http://tenders.gov.in</a> (public sector units) Bharat Heavy Electricals Limited page) under Enquiry reference “ 2631000064”.</b>		
Tenders should reach us before 14:00 hours on the due date Tenders will be opened at 14:30 hours on the due date Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present		Yours faithfully, For BHARAT HEAVY ELECTRICALS LIMITED  Dy.Manager / MM / Capital Equipment



**ENQUIRY**  
(INDIGENOUS)

# BHARAT HEAVY ELECTRICALS LIMITED

( A Government of India Undertaking )  
HIGH PRESSURE BOILER PLANT  
PURCHASE DEPARTMENT - FOSSIL BOILERS  
THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

PHONE : 2577771  
GRAMS : BHARATELEC  
FAX NO: 2520719  
E-mail: rpmuthu@bheltry.co.in  
Web:

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429-002/A

Vendor Code :	Enquiry No	Enquiry Date	Due Date for Quotation
Vendor Name :	2631000064	20.07.2010	20.08.2010
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order			

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	Vertical Milling M/c.- Heavy Duty Knee Type (Specification Enclosed) Vertical Milling M/c.-heavy duty Knee Ty	NO	1.000	1.00	30.04.11

## General Note:

## COMMERCIAL TERMS AND CONDITIONS

Bhel commercial terms & conditions with Price Bid and Bank Guarantee formats along with technical specifications can be download from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units>Bharat Heavy Electricals limited page) under Enquiry reference "2631000064".

## 1. QUOTATIONS

The Bidders shall submit the offer in TWO INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.

Envelope I This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "Part I - Technical and commercial bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.

Envelope II This sealed envelope should contain price details. This envelope should be clearly marked "Part II - Price bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.

Both the envelopes ( Part I & II) shall be put in one cover, duly sealed, superscribing as Part I and Part II of Enquiry No., due date of opening and the address and reference of the Bidder.

The above offer should reach this office on or before the due date by 14.00 Hrs (IST).Late offers will not be considered.

## 2. POINT TO POINT CONFIRMATION TO BHEL'S SPECIFICATION AND COMMERCIAL

The offers should reach us before the time of opening of tenders.  
The offers will be opened at 14:30 hours on the due date in the presence of the tenderers who may like to be present.  
Late tenders are liable to be rejected.

Yours faithfully,  
For BHARAT HEAVY ELECTRICALS LIMITED

**R. PACHAMUTHU**  
MANAGER / PURCHASE  
(FOSSIL BOILERS)

MM / Capital Equipment  
BHEL TRICHY



# BHARAT HEAVY ELECTRICALS LIMITED

( A Government of India Undertaking )  
HIGH PRESSURE BOILER PLANT  
PURCHASE DEPARTMENT - FOSSIL BOILERS  
THIRUCHIRAPALLI - 620014  
TAMILNADU (INDIA)

PHONE : 2577771  
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2631000064 / 20.07.2010

TERMS AND CONDITIONS SHOULD BE PROVIDED IN THE ENCLOSED SHEET.

3. DETAILED CATALOGUE AND DRAWINGS SHOULD BE SENT ALONG WITH YOUR TECHNICAL OFFER.

**Enclosures:**

"LD clause has to be confirmed without fail."

"Payment to vendors will be made only thro E-Payment mode"

The offers should reach us before the time of opening of tenders.  
The offers will be opened at 14:30 hours on the due date in the presence of the tenderers who may like to be present.  
Late tenders are liable to be rejected.

Yours faithfully,  
For BHARAT HEAVY ELECTRICALS LIMITED

**R. PACHAMUTHU**  
MANAGER PURCHASE  
FOSSIL EQUIPMENT  
MM / 620014  
BHEL TRY - 620 014.

**PART A.****SECTION – I : COMPANY PROFILE**

The BIDDER is requested to provide details listed in the table given below :

<b>S.No.</b>	<b>PARTICULARS</b>	<b>VENDOR's RESPONSE</b>
<b>1.0</b>	Number of Years of Experience of the BIDDER (Original Equipment Manufacturer) in the field of Design, Manufacture, Supply and Commissioning of MILLING Machines.	
<b>2.0</b>	Number of Milling Machines supplied and installed till date with details on customers	
<b>3.0</b>	Details on Standards or Codes followed in the Design of Milling Machine	
<b>4.0</b>	Details of Manufacturing Facilities	
<b>5.0</b>	Details of Quality System (with Stages of Internal Inspection) followed for the Fabrication / Machining and Testing of Bandsaws	
<b>6.0</b>	Details on AFTER-SALES-SERVICE Set-Up in INDIA for providing timely service support to BHEL	

**SECTION – II : QUALIFYING CRITERIA**

The BIDDER has to meet the following requirements to get qualified for submitting an offer for the Vertical Milling Machine :

[Additional Sheets shall be attached with the OFFER, to provide requisite details]

<b>S.No.</b>	<b>REQUIREMENTS</b>	<b>VENDOR's RESPONSE</b>
<b>7.0</b>	Only those BIDDERS (Original Equipment Manufacturer), who have supplied and commissioned at least One Knee Type Vertical Milling machine with milling spindle power of 7.5 Kw or more shall quote.	
<b>8.0</b>	The Machine supplied under <b>Clause No. 7.0</b> , should presently be working satisfactorily for more than one year after commissioning. However, if such a machine has/had been supplied to BHEL, then such machine should be presently working satisfactorily since its commissioning and acceptance in BHEL. The following information should be	

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PART A - SPECIFICATION FOR HEAVY DUTY KNEE TYPE VERTICAL MILLING MACHINE

	submitted by the BIDDER about the companies where similar machines have been supplied.	
<b>9.0</b>	Name of the Customer / Company where the machine is installed.	
<b>10.0</b>	Complete Postal Address of the Customer.	
<b>11.0</b>	Year of Commissioning.	
<b>12.0</b>	Parameters of Machine(s) supplied and application for which the machine is supplied.	
<b>13.0</b>	Name and designation of the contact person of the Customer.	
<b>14.0</b>	Phone No., FAX No. and e-mail address of the contact person of the Customer.	
<b>15.0</b>	Performance certificate from the customers regarding satisfactory performance of Knee Type Vertical Milling Machine supplied to them (Original Certificate or Through E-mail directly from the customer) in the FORMAT given in <b>SECTION - IV</b> . The original performance certificate may be returned after verification by BHEL, if required by the vendor.	

**SECTION - III : BID / OFFER FORMAT**

The BIDDER has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser :

<b>S.No.</b>	<b>REQUIREMENTS</b>
<b>16.0</b>	The BIDDER shall submit the offer in TWO PARTS - Technical [with <b>PART A &amp; PART B</b> ] & Commercial and Price Bid.
<b>17.0</b>	The OFFER shall contain a comparative statement of Technical Specifications given by BHEL and the Offer Details submitted by the Bidder, against each Clause. A just 'YES' or 'CONFIRMED' or 'NO-DEVIATION' or 'COMPLIES' or 'ACCEPTED' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.
<b>18.0</b>	The Technical Offer shall be supported by Product Catalogue and Data Sheets in ORIGINAL and complete technical details of 'Bought-Out-Items' with copies of Product Catalogue
<b>19.0</b>	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation of the inclusion of all the accessories, tooling, attachments, auxiliary parts, spares, consumables, etc. with the main and basic equipment, to meet the technical specification requirements.
<b>20.0</b>	Earlier performance and field experience (service support) with BHEL (if any) will be a reckoning factor for the technical qualification of the OFFER.

**SECTION - IV : PERFORMANCE CERTIFICATE**

**PERFORMANCE CERTIFICATE – [SAMPLE FORMAT]**

(On Customer's Letter Head)

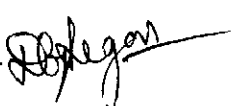
1. Supplier of the Equipment/Machine :
2. Type & Model of the Equipment :
3. Month & Year of Commissioning :
4. Application for which Machine is used :
5. a. Milling Spindle power (KW) :  
b. Table size :  
c. Spindle Speed Range :
6. Performance of the Machine : Satisfactory /  
Good /  
Average /  
Not Satisfactory
7. Feed-Back on 'After Sales Service' from Supplier :
8. Remarks / Reasons for Recommendation :

3

Date:

Signature & Seal of the Authority  
Issuing the Performance Certificate

D G Sekar



S Selladurai



SP Vijay Kumar



**PART-B****TECHNICAL SPECIFICATION OF HEAVY DUTY KNEE TYPE VERTICAL MILLING MACHINE**

Clause	PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
1.0	<b>PURPOSE &amp; WORKPIECE MATERIAL</b>		
1.1	<b>PURPOSE:</b> The machine is intended for machining ferrous & non-ferrous, castings and forgings of valve and soot blower components.		
2.0	<b>CONFIGURATION:</b> Knee Type Vertical		
3.0	<b>Construction :</b> The machine should have a rigid construction suitable for heavy stock removal	Vendor to confirm	
3.1	Machine should be metric execution.	Vendor to confirm	
4.0	<b>TABLE</b>		
4.1	Size of Table (L X B): Approx. 2000 X 350 mm	Vendor to specify	
4.2	Work piece Clamping area : Min. 1400 mm X 300 mm	Vendor to confirm	
4.3	Max. Weight of Work-piece: - 500 Kg.	Vendor to confirm	
4.4	Details of T-Slots (No / Size / Pitch):	Vendor to specify	
4.5	Power operated traverses – Longitudinal – 1200 mm or more Transverse / cross – 320 mm or more Vertical – 425 mm or more	Vendor to specify	
4.6	Min. distance from left hand table end to centre of spindle – 185mm	Vendor to specify	
4.7	Load carrying capacity of Table:	Vendor to specify	
5.0	<b>MILLING SPINDLE</b>		
5.1	Taper in Spindle:	ISO # 50	
5.2	Spindle Motor Power (AC Continuous Duty S1): The spindle motor shall be of reputed make acceptable to BHEL (Details of model, make, type etc. to be furnished in the offer)	Min. 7.5 KW Vendor to specify	

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDER'S OFFER With Technical Details
5.3	Spindle speed range : around 40 to 1800 RPM	Vendor to specify
5.4	No of speed ranges : around 18	Vendor to specify
5.5	Min./Max distance from spindle lower face to table top – 60/500 mm	Vendor to specify
5.6	Vertical quill movement – min. 70 mm	Vendor to specify
5.7	Swivelling of milling head - 45 deg. on either side	Vendor to specify
6.0	<b>FEEDS</b>	Vendor to specify
6.1	Rapid feeds – Longitudinal, cross & vertical	Vendor to specify
6.2	Cutting Feed range Longitudinal & Cross travel– around 20 to 1500 mm/min Vertical travel – around 4 to 300 mm/min	Vendor to specify
6.3	Feed drives shall be through AC servo motors. Vendor to furnish details of the make, rating and model no. of the AC servo motors and the AC servo drives with the offer	Vendor to specify and furnish the details
6.4	Details of the feed mechanism for the longitudinal, cross and vertical movements to be furnished with the offer	Vendor to furnish
6.5	DRO with scales shall be provided for the longitudinal, cross and vertical axes. The make shall be HEIDENHAIN / FAGOR/ELECTRONICA.	Vendor to confirm and furnish details.
7.0	<b>MACHINE LIGHTS</b>	
7.1	Machine Lights for sufficient illumination should be provided for clear visibility.	Vendor to confirm
7.2	Light fittings, consumables, adapters/receptacles should have compatibility with Indian equivalents	Vendor to confirm
8.0	<b>Lubrication System</b>	
8.1	Lubrication system, preferably centralised, for lubrication of all rotating & moving parts, guide ways, lead screws, gears, spindle etc..	Vendor to specify
8.2	<b>First filling of all required Oils &amp; Grease etc.</b> Should be supplied by vendor.	Vendor to specify



Clause	PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
9.0	<b>COOLANT SYSTEM:</b>		
9.1	Re-circulating flood coolant system with filtration to filter chips and swarf	Vendor to specify	
9.2	Coolant collection and recirculation system should be leak proof to avoid spillage on shop floor.	Vendor to Confirm	
9.3	Coolant pump & motor details are to be submitted with the offer.		
9.4	Coolant Tank Capacity:	Vendor to specify	
10.0	<b>ELECTRICAL:</b>		
10.1	415V $\pm$ 10%, 50 HZ $\pm$ 3 HZ, 3 Phase AC (3 wire system with out neutral) Power Supply will be provided by BHEL at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets, shall be the responsibility of vendor. Requirement of grounding/earthing with required material details is to be informed by vendor well in advance so that the same could be incorporated during construction of foundation.	Vendor to Confirm	
10.2	<b>Tropicalisation:</b> All electrical / electronic equipment shall be tropicalized.	Vendor to Confirm	
10.3	All electrical & electronic control cabinets & panels should be dust and vermin proof and shall have IP 54 protection.	Vendor to Confirm	
10.4	All electrical components in the cabinets should be mounted on DIN Rail	Vendor to Confirm	
10.5	Motors and drives shall be of ABB/SIEMENS/Mitsubishi/ any other reputed make acceptable to BHEL.	Vendor to Confirm	
10.6	Vendor should ensure proper earthing for the machine and its peripherals.	Vendor to Confirm	
11.0	<b>SAFETY ARRANGEMENTS:</b>		
11.1	Machine should have adequate and reliable safety interlocks or devices to avoid damage to the machine, work piece and the operator due to the malfunctioning or mistakes.	Vendor to Confirm	

PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
Clause		
11.2	All the pipes, cables etc. on the machine should be well supported and protected. These should not create any hindrance to machine operator's movement for effective use of machine.	Vendor to Confirm
11.3	All the rotating parts used on machine should be statically & dynamically balanced to avoid undue vibrations.	Vendor to Confirm
11.4	Emergency Switches at suitable locations as per International Norms should be provided.	Vendor to Confirm
12.0	<b>ENVIRONMENTAL PERFORMANCE OF THE MACHINE:</b>	
12.1	Maximum noise level shall not exceed 85 dB(A) at normal load condition, 1 meter away from the machine.	Vendor to Confirm
12.2	There shall not be any emissions from the machine except fumes of cutting fluid during machining.	Vendor to Confirm
12.3	There should not be any effluent from the machine. In case there are any effluents from the machine, requisite effluent treatment plant or pollution control device should be built into the machine by the supplier.	Vendor to Confirm
12.4	No hazardous chemicals shall be used in the machine.	Vendor to Confirm
12.5	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to Confirm
12.6	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.	Vendor to Confirm
13.0	<b>TOOLINGS</b>	
13.1	<b>Adaptors for milling:</b> The vendor shall supply the following milling adaptors (Screwed end) a) ISO # 50 - MT # 4 : 2 nos. b) ISO # 50 - MT # 3 : 2 nos c) ISO # 50 - MT # 2 : 2 nos d) ISO # 50 Adaptors for face/shoulder mills with ID=22,27,32,40mm: each 1 no.	Vendor to confirm

<b>PARTICULARS AND BHEL SPECIFICATION</b>		<b>BIDDER'S OFFER With Technical Details</b>
<b>Clause</b>		
14.0	<b>LEVELING &amp; ANCHORING SYSTEM</b>	
14.1	Complete anchoring system including foundation bolts, anchoring steel materials, fixators, leveling shoes etc should be supplied.	Vendor to confirm
15.0	<b>TOOLS FOR OPERATION &amp; MAINTENANCE</b>	
15.1	Necessary tools like Torque Wrench, Spanners, Keys, grease guns etc for operation and maintenance of the machine should be supplied. List of such tools should be submitted with offer.	Vendor to confirm Vendor to submit
16.0	<b>ACCESSORIES</b>	
16.1	MACHINE VICE: Qty. 1 No. 1. Type: Heavy Duty 2. Minimum opening of jaws: 200 mm	
17.0	<b>SPARES:</b>	Vendor to specify
17.1	1) The Vendor shall recommend and submit list of spares required for the machine for two years of trouble free operation on three shifts /day basis under two headings as a) <b>Mechanical spares</b> and b) <b>Electrical &amp; electronic spares.</b>	Vendor to Submit
17.3	2) Un-priced list of spares with quantities, specified at a&b above, should be submitted with this technical offer. All types of spares for the total machine and its accessories should be available for minimum ten years, after supply of the machine. If any spares or controls are likely to become obsolete within this period, the vendor should inform BHEL and provide details of it's suppliers to enable BHEL to procure them in advance.	Vendor to Confirm
17.4	In case of ordering, a complete list of spares for the machine and its accessories along with spares specification / type / model, and name & address of the spare supplier shall be submitted along with documentation while supplying the machine.	Vendor to confirm

Clause	PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
18.0	<b>DOCUMENTATION:</b>		
18.1	Along with the offer the vendor should furnish a dimensioned layout drawing of the machine and its accessories		
18.2	<b>3 sets of following documents (3 Hard copies) in English language should be supplied along with the machine</b>	Vendor to confirm	
18.2.1	Operating manuals of Machine	Vendor to confirm	
18.2.2	Detailed Maintenance manual of machine with all drawings of machine assemblies/sub-assemblies/parts including Electrical /lubrication / Coolant circuit diagrams.	Vendor to confirm	
18.2.3	Catalogues / O&M Manuals of all bought out items.	Vendor to confirm	
18.2.4	Detailed specification of all fittings	Vendor to confirm	
18.2.5	<b>Bearings:</b> Make & Specification for all bearings used in the machine.	Vendor to Specify	
18.2.6	PLC program printouts (Ladder diagram & Statement list) with comments in English. – if M/C incorporates PLC controls	Vendor to confirm	
18.2.7	PLC program & PLC data on CD. – if M/C incorporates PLC controls	Vendor to confirm	
18.2.8	The vendor shall submit complete Master List of parts used in the machine.	Vendor to Submit	
18.3	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to confirm	
19.0	<b>TRAINING:</b>		
19.1	The Vendor shall train Three BHEL Engineers in Operation and Maintenance (Mechanical, Electrical/ Electronics and CNC System) of the Machine at Vendor's works for a period not exceeding 3 working days.	Vendor to confirm	
19.2	Travel fare, boarding & lodging for the BHEL Engineers shall be borne by BHEL		

Clause	PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
19.3	The Vendor shall impart training to BHEL's Machine Operators and Maintenance crew in Operation and Maintenance after the commissioning of the Machine at BHEL works for not less than 6 working days	Vendor to confirm	
19.4	Competent, English speaking experts shall be arranged by the vendor during training for satisfactory & effective training of BHEL personnel	Vendor to confirm	
19.5	Vendor to quote on the basis of per man per day for training at vendor's works.	Vendor to specify	
20.0	<b>FOUNDATION:</b>		
20.1	Vendor shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Intent (LOI). Vendor shall submit complete foundation details including static and dynamic loads within three months after getting BHEL's approval. The layout should consist of all requirements pertaining to complete machine including space requirement for accessories. BHEL shall construct complete foundation for the machine.	Vendor to confirm	
20.2	The Vendor shall indicate detailed specifications of grouting compound and Grouting procedure etc. for foundation bolts of the machine.	Vendor to Specify	
21.0	<b>ERECTION &amp; COMMISSIONING</b>		
21.1	<p>1. Supplier to take full responsibility for supervision of the erection. Start up, testing of machine, it's control system &amp; all types of other supplied equipment, machining of test pieces etc. are the responsibility of the supplier.</p> <p>2. Service requirement like power, air &amp; water shall be provided by BHEL at only one point to be indicated by supplier in their foundation/layout drawings.</p> <p>3. Other requirements like crane and helping personnel shall also be provided by BHEL, free of cost.</p>	Vendor to confirm	

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDER'S OFFER With Technical Details
21.2	Tools, Tackles, Test Mandrels, instruments and other necessary equipment required to carry out all above activities should be brought by the supplier.	Vendor to confirm
21.3	The supplier shall arrange commissioning spares required for commissioning of the machine.	Vendor to confirm
21.4	Portion, if any, of the machine, accessories and other supplied items where paint has rubbed off or peeled during transit or erection should be repainted and merged with the original surrounding paint by the vendor. For this purpose, the vendor should supply sufficient quantity of touch-up paint of various colors of paint used.	Vendor to confirm
21.5	Schedule of Erection and Commissioning shall be submitted with the offer.	Vendor to confirm
21.6	Duration, terms & conditions for E&C should be furnished with this technical offer in detail. Charges for the same shall be submitted with the price bid.	Vendor to confirm
22.0	<b>ACCURACY TESTS:</b>	
22.1	<b>GEOMETRICAL ACCURACY:</b>	
22.2	Geometrical Accuracy Tests shall be in accordance with manufacturer's standard. Detailed Test Charts for the same, clearly showing the accuracies to be achieved on the machine, shall also be submitted with the offer.	Vendor to confirm
22.3	All the above accuracies to be demonstrated to BHEL engineers during pre-acceptance tests at Suppliers works and during Erection & Commissioning at BHEL Works.	Vendor to confirm
23.0	<b>AMBIENT CONDITIONS &amp; THERMAL STABILITY:</b>	
23.1	Power Supply : AC 415 V $\pm$ 10% Frequency : 50 Hz $\pm$ 3HZ Phases : 3 phase 3 wire system Compressed air supply: 60-70 psi Ambient Temperature: max 45 °C Relative Humidity = 85% Vendor to confirm that machine is suitable for above conditions	Vendor to confirm

PARTICULARS AND BHEL SPECIFICATION		BIDDER'S OFFER With Technical Details
23.2	Weather conditions are tropical. Atmosphere may be dust laden during some part of the year. Machine will be installed in the normal shop floor condition. Vendor to confirm that machine is suitable for above	Vendor to confirm
23.3	Thermal Stability of the machine shall be good enough to withstand the specified ambient conditions in order to meet the accuracy requirements of BHEL components. Vendor to confirm for trouble-free operation of the machine.	Vendor to confirm
23.4	The Vendor should confirm that the machine and its accessories is suitable for continuous operation at its full capacity for 24 hours a day and 7 days a week through out.	Vendor to confirm
24.0	<b>MACHINE ACCEPTANCE:</b> (Tests/Activities should be Performed by Vendor)	
24.1	<b>Tests/Activities should be carried out at supplier's works on the machine before dispatch:</b>	
24.2	Geometrical accuracies as per test chart.	
24.3	The machine should be tested for continuous running of 48 hrs. If any break down occurs during this test, the test should be repeated for 48 hrs from restarting.	Vendor to confirm
24.4	Demonstration of all features of the machine, control system & accessories.	Vendor to confirm
24.5	Machining of test piece . Vendor to supply test piece and tooling for it's machining.	Vendor to confirm
24.6	<b>Tests/Activities should be carried out at BHEL works while commissioning the machine:</b>	
24.7	Geometrical accuracies as per test chart.	Vendor to confirm
24.8	The machine should be tested for continuous running of 48 hrs. If any break down occurs during this test, the test should be repeated for 48 hrs from restarting.	Vendor to confirm
24.9	Demonstration of all features of the machine, control system & accessories to the satisfaction of BHEL for efficient and effective use of the machine	Vendor to confirm

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDER'S OFFER With Technical Details
24.10	Machining test piece . Test pieces and tooling for it's machining shall be arranged by BHEL	Vendor to confirm
25.0	<b>PACKING</b>	
25.1	Sea worthy & rigid packing for all items of complete machine, all Accessories and other supplied items to avoid any damage/loss in transit. When machine is dispatched in containers, all small loose items shall be suitably packed in boxes.	Vendor to specify
26.0	<b>GUARANTEE</b>	
26.1	18 months from despatch OR 12 months from the date of acceptance of the machine at BHEL.	
27.0	<b>GENERAL</b>	
27.1	Machine Model:	
27.2	Total connected load (KVA): Vendor to specify	
27.3	Floor area required (Length, Width, Height) for complete machine & accessories: Vendor to specify.	
27.4	Make of bought out items to be furnished to BHEL for approval	
27.5	Painting of Machine / Electrical Panels: SYNTHETIC ENAMEL GLOSSY FINISH APPLE GREEN PAINT . AS PER IS 5/1994.Shade : (ISC)NO-281.	
27.6	Total weight of the machine: Vendor to specify	
27.7	Weight of heaviest part of machine: Vendor to specify	
27.8	Weight of the heaviest assembly / sub-assembly of the Machine: Vendor to specify	
27.9	Dimensions of largest part/ sub-assembly/ assembly of the machine: Vendor to specify	



## GENERAL TERMS AND CONDITIONS OF RA

- 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.
- For the proposed RA, technically and commercially acceptable bidders only shall be eligible to participate.
- In case of RA, BHEL will engage the services of a service provider for conduct of the RA who will provide all necessary training and assistance to the bidders before commencement of on line bidding on internet.
- Business rules governing the RA will be communicated to the bidders through service provider for compliance.
- Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of RA. Without the compliance, the vendor will not be eligible to participate in the event.
- BHEL will provide a sample calculation sheet (in EXCEL format) which would help the bidders to arrive at “Net Cash outflow to BHEL” considering various price / cost elements 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) etc. for each of the bidders to enable them to arrive at “Net Cash outflow to BHEL” which is the amount the bidder would be bidding during the RA.
- RA will be conducted on scheduled date & time and at the end of event, the lowest bidder value will be known on the network.
- The lowest bidder has to Fax the duly signed “Price Break-up” in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
- 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 further business with BHEL, as per the prevailing procedure.
- BHEL reserves the right to negotiate if need be, with the “L1” vendor of the Reverse Auction