



**PURCHASE ENQUIRY**

To M/s	Our E-mail : <a href="mailto:smb@bhelswr.co.in">smb@bhelswr.co.in</a>	
	ENQUIRY No :	XI062 E
	ENQ.DATE	04.01.2012
	DUE DATE	24.01.2012

Dear sir,

Kindly submit your sealed quotation by Speed Post / Registered Post / Courier / Air Mail in **two bids viz. (1) Technical cum Commercial Bid & (2) Price Bid** for the material indicated below confirming acceptance to the terms and conditions enclosed, so as to reach our office on or before 02.00 PM on the due date. Quotation may be sent by Fax only if asked so by BHEL / with prior permission of BHEL.

S. No	Description of Material	Unit	Qty	Delivery Schedule	Material Required at (Destination)
01	SUPPLY OF HYDRAULIC POWER PACK FOR BOLT TENSIONING MACHINE AS PER SPECIFICATION GIVEN IN ANNEXURE-I	Nos.	03 Nos.	Within 01 month from the P.O. date	As per Annexure-II

**A) GENERAL TERMS AND CONDITIONS OF CONTRACT**

Cl. No.	DESCRIPTION
01	Each tender should be sent in a double cover, inner cover should be sealed with tenderer's distinctive seal. The outer cover should bear the address of this office and super scribed with correct Enquiry No. and Due Date. Tender should be free from CORRECTION AND ERASURES. Corrections, if any must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount in figures and words, amount quoted in words shall prevail.
02	Technical cum Commercial bid will be opened at 3:00 PM on Due Date. The Technical cum Commercial bid should accompany copy of documents like authorized dealership certificate, earlier supply order details of similar equipment and their performance feedback from customers, company profile and present status, product catalogue of the models offered, technical specifications of the product, commercial Terms & Conditions and other relevant documents etc.
03	Price bid of technically accepted bidders only will be opened. No revision of prices will be entertained after Tenders are opened, unless mentioned in our enquiry / asked so by BHEL.
04	Manufacturer's name, Trade Mark or Patent No. if any, shall be specified in the Technical cum Commercial Bid
05	Please mention the relevant national / international standard code of the product quoted for in the Technical cum Commercial bid.
06	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.
07	Late tenders (received after Due Date) will be rejected.
08	Price quoted shall be valid for 60 days from the date of opening
09	Price shall be quoted as per enclosed 'Price Format' only. Quotations not accompanying filled in 'Price Format' are likely to be rejected. Please fill in all the columns of all formats

**BHARAT HEAVY ELECTRICALS LIMITED**  
**PS-WR:HQ:NAGPUR**

PUR-F31/01

Page 2 of 12

ENQUIRY NO. XI062 E

DT.04.01.2012

DUE DATE: 24.01.2012

10	The price quoted should be as applicable to DGS & D (Govt. of India) and other Govt. Organizations. In case DGS & D rate / Running Contract is not existing, but a contract is in vogue with any BHEL Unit, reference of the same shall be furnished and same may be applicable to this contract.
11	SECURITY DEPOSIT: The supplier shall have to furnish Security Deposit (Cash/DD/Bank Guarantee from a Scheduled Bank) if so specified in the tender under Special Terms & Conditions.
12	PACKING AND MARKING: The supplier shall arrange for secure protective packing of the goods suitable for tropical conditions to avoid loss, damage, atmospheric action during handling and transit. The packing standards will comply with relevant national standard/carrier's conditions of packing or established practice. If any damage is sustained and the carrier or underwriter attributes it to improper packing, the seller shall be liable to replace the material or reimburse the value of the loss notwithstanding any transit insurance arranged by him or not. The following marking shall be made on each package in black bold letters. NAME & ADDRESS OF CONSIGNEE, DIMENSION OF PACKAGE, WEIGHT DETAILS: GROSS, TARE & NETT These markings should be stenciled or written in bold letters on the package. Should the package be small, suitable cards/metal tags giving these details may be tagged or nailed
13	INSPECTION: Final inspection will be carried out the destination/site/Purchaser's works by the authorized inspecting Officer, if so specified in the tender under Special Terms & Conditions. Whenever preliminary or stage inspection is to be carried out at supplier's works the same is subject to final acceptance after receipt of the material at the destination/Purchaser's works and the decision of the purchaser shall be final. The propriety of goods shall not pass until final acceptance by the purchaser
14	REJECTION: The seller shall intimate the purchaser in writing within 15 days (after being intimated about rejection of goods) regarding disposal action of the rejected material. If no advice is received within this time the purchaser shall be at liberty to return the material at the cost and risk of the seller after receiving the cost if any paid by the Purchaser including inward freight and other incidental charges. The Purchaser will not be responsible for the rejected material thereafter and no claim will rest on him.
15	Delivery: Purchaser shall not be liable to receive and pay for any supply made after delivery date stipulated in the order unless the delivery date is formally extended by the purchaser. Wherever the terms of delivery of the order is other than F.O.R. destination, delivery date will be reckoned as the date of dispatch or the date of readiness after inspection of the material where the Purchaser has agreed for inspection or collection.
16	Test certificate: The seller shall carry out such tests as prescribed by the purchaser / as required in accordance to the relevant national or international standards, in his works and/or and other places as stipulated in the order. Necessary test certificate shall be submitted with delivery of materials. The seller shall also provide at no extra cost the required number of catalogues, drawing and other manuals related to materials under this order.
17	TERMS OF PAYMENT: Payment will normally be made within a month of receipt of material in good condition at destination. Any other payment terms have to be mutually agreed. The seller shall send dispatch documents, invoice etc. in such quantum and a manner as provided in the order. (i) It is expressly understood that in the event of rejection of the materials for which payment has been made against document's through bank the Purchaser reserves the right to claim from the seller the amount paid and the incidental charged incurred in the same manner i.e. negotiating return dispatch documents, through Bank and the Seller shall honour such claim and retire the documents from the Bank. (ii) Bank charges for any payment claimed through Bank shall be borne by the seller and the seller shall also agree to bear any demurrage or other charges arising out of any delay in retirements or documents from Bank due to delayed, insufficient incorrect information furnished. (iii) The seller shall also ensure that the Carriers do not delay dispatch of the consignment once the carrier's receipt is obtained.
18	GUARANTEE/WARRANTY: The materials shall be warranted for design material and workmanship and also for performance warranty as specially stipulated by the purchaser in the order in its annexure.
19	INSURANCE: Wherever specifically agreed to and directed, the supplier will insure the goods for all transit risks up to delivery of the goods at the final destination. In all other cases supplier must furnish particulars of dispatch for each consignment immediately after the dispatch of goods. Failure to do this will make the supplier responsible for making good any loss, which otherwise might have been recovered from underwriters.

**BHARAT HEAVY ELECTRICALS LIMITED**  
**PS-WR:HQ:NAGPUR**

PUR-F31/01

Page 3 of 12

ENQUIRY NO. XI062 E

DT.04.01.2012

DUE DATE: 24.01.2012

20	<p><b>DELIVERY FAILURE, TERMINATION &amp; LIQUIDATED DAMAGE:</b> The parties hereto agree that the timely dispatch/delivery and completion of the other schedules as stipulated in order/contract shall be the essence of the Order/Contract. If the seller/contractor fails to complete the dispatch/ delivery and other schedules within the time period stipulated in the order/contract, or within any extension of time granted by the purchaser, it shall be lawful for the purchaser to recover damages for the breach of order/contract without prejudice to any other rights and/or remedies provided for, in order/contract and hereunder.</p> <p>The purchaser reserves the right to recover from the Seller/Contractor, as agreed liquidated damages and <b>not by way of penalty</b>, a sum equivalent to half percent {½% of the total contract price per week part thereof, subject to a maximum of ten percent @ 10%} of the total contract price excluding elements of taxes, duties and freight, if seller/contractor has failed to deliver any part of the goods within the period stipulated in the Order/Contract.</p> <p>The purchaser reserves the right to purchase from elsewhere on account of and at the risk and cost of the seller /contractor without notice to the seller /contractor of goods not so delivered or their equivalent , without canceling the order/contract in respect of the goods not yet due for delivery.</p> <p>The purchaser reserves the right to cancel the order/contract or a portion thereof for the goods not so delivered at the risk and cost of the seller/contractor and the seller/contractor shall be liable to the purchaser for any excess costs thereof.</p>
21	<p><b>RISK PURCHASE :</b> In the event the supplier has failed to deliver or dispatch whole of the goods or any part within the time stipulated or if the same were not available in his stock, the best and the nearest available substitute thereof may be purchased/arranged by purchaser from elsewhere at the risk and the cost of the seller. The purchaser at his option will be entitled to terminate the contract and seller shall be liable for any loss which the purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in clause 20 above.</p>
22	<p><b>PREFERENTIAL DELIVERY :</b> It should be noted that if an Order is placed on a higher tenderer 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 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 freight, sales tax, duties and other incidentals in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and contract.</p>
23	<p>Purchaser reserves its right to the Public Enterprises price preference facilities as admissible under the Govt. of India policy from time to time.</p>
24	<p>This order or any part thereof shall not be sub-contracted without the purchaser's consent.</p>
25	<p><b>METRIC SYSTEM:</b> Supplier is requested to indicate metric system measurements in all documents.</p>
26	<p><b>INDEMNITY:</b> The Seller shall indemnify the Purchaser against any claim due to any breach of patent, negligence, defective material or injury to seller or his agent.</p>
27	<p>In the event of any reduction in the price, due to change of Govt. duties after award to the work and before delivery commencement, purchaser is entitled to such reduction and may negotiate fresh price at its discretion.</p>
28	<p><b>GENERAL:</b> The purchaser reserves the right to split up the tender and place orders for individual item on different suppliers and also increase or decrease the quantity.</p>
29	<p><b>DISPUTES &amp; ARBITRATION:</b> All cases of disputes will be resolved according to the Indian Arbitration Act 1940</p>
30	<p><b>FORCE MAJEUR:</b> Acts of God, Acts of Government, War, Sabotage, Riots, Civil commotion, Police action, Revolution, Natural Calamities, Epidemic and other similar causes over which the supplier has no control, will amount to Force Majeure. Delay attributable to Force Majeure will be condoned; however the onus of establishing the reason of delay lies with the Supplier.</p>
31	<p>In case of any contradictions between General and special terms and conditions, the provisions in Special Terms &amp; Conditions will prevail.</p>

Yours faithfully,  
For BHARAT HEAVY ELECTRICALS LTD.

Engineer (PURCHASE)

**BHARAT HEAVY ELECTRICALS LIMITED  
PS-WR:HQ:NAGPUR**

PUR-F31/01

Page 4 of 12

ENQUIRY NO. XI062 E

DT.04.01.2012

DUE DATE: 24.01.2012

**B) SPECIAL TERMS AND CONDITIONS OF CONTRACT**

CI No.	Description
01	<b>Qualification Requirements:</b> Bidder should have manufactured & supplied at least 03 nos. of high pressure i.e. 700 bar Hydraulic Power Packs in the last 03 years as on 31/12/2011. (Bidder shall submit the Purchase Order copy along with proof for completion of supply)
02	Tender should be submitted in two parts (1) technical bid comprising product catalogue, copy of relevant Indian Standards and Commercial Terms and conditions as enclosed. And (2) Price bid in prescribed price format in a separate sealed envelope. (Split up of Basic rate, Excise Duty, Sales tax / VAT must be furnished in the price bid)
03	<b>Earnest Money Deposit (EMD):</b> Refundable, Non-interest bearing EMD of Rs.40,000/- (Rupees Forty Thousand) is applicable for this Tender. EMD shall be paid ONLY by Account Payee Demand Draft in favour of "Bharat Heavy Electricals Limited" payable at Nagpur.
04	<b>Payment Terms: 90% BASIC+100% TAXES AND DUTIES AGAINST SUPPLY OF MATERIAL AT DESTINATION AND SUBMISSION OF ORIGINAL INVOICE WITH COMPLETE DOCUMENTS TO BHEL-PSWR, HQR, NAGPUR WITHIN 30 DAYS. BALANCE 10% AGAINST INSTALLATION &amp; SUBMISSION OF PERFORMANCE BG EQUAL TO THE GUARANTEE PERIOD AND AMOUNT.</b>
05	Pre dispatch inspection shall be carried out at supplier's works. Bidder shall intimate BHEL 07 days in advance within the delivery period for inspection.
06	Bidder to submit "Un Priced Price format" duly filled and signed along with the technical bid. The price should be quoted as specified in the price format with split up details.
07	Bidder must confirm whether Excise Invoice shall be given or not. In case bidder confirms that excise invoice shall be given, then the evaluation of bid shall be on the basis landed cost to BHEL <b>excluding</b> Excise Duty.
08	In case bidder fails to supply the material as per delivery schedule of this tender, LD shall be levied as per clause no.20 of GCC of this tender specification.
09	BHEL reserves the right to reject or accept the tender without assigning any reasons whatsoever.
10	The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com ---> Tender Notification ---> List of Banned Firms )
11	Octroi at destination, if applicable, will be paid by BHEL on submission of original Octroi receipt.
<b>12) This is to inform you that BHEL has switched on to payment through Electronic Fund Transfer (EFT)/ RTGS. The following details are to be furnished by you pertaining to your Bank Accounts where proceeds will be transferred through our Banker:</b> <ol style="list-style-type: none"><li>1. Name of the Company</li><li>2. Name of Bank</li><li>3. Name of Bank Branch &amp; Branch Code</li><li>4. City</li><li>5. Account Number</li><li>6. Account type</li><li>7. IFSC code of the Bank Branch</li><li>8. MICR Code of the Bank Branch</li></ol>	

Certified that I have read all the terms and conditions of this tender including Special terms and conditions and agree to them without any deviation.

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Signature & Seal of Tenderer

**BHARAT HEAVY ELECTRICALS LIMITED  
PS-WR:HQ:NAGPUR**

ENQUIRY NO. XI062 E

DT.04.01.2012

Page 5 of 12  
DUE DATE: 24.01.2012

**TECHNO-COMMERCIAL TERMS & CONDITIONS: (PART OF TECHNICAL CUM COMMERCIAL BID)**

SN	DESCRIPTION OF T & C	TERMS & CONDITIONS AS QUOTED IN THIS TENDER
01	DELIVERY TERMS	<b>F.O.R. DESTINATION ONLY</b>
02	PLACE OF DELIVERY	<b>As per Annexure-II</b>
03	DELIVERY PERIOD FROM THE DATE OF ORDER	<b>WITHIN 01 MONTH FROM P.O. DATE</b>
04	CURRENCY OF PAYMENT	INR
05	PACKING & FORWARDING CHARGES	Included @ _____ % (or) Extra@ _____ % (or) NA
06	EXCISE DUTY/CVD ( % RATE)	Included @ _____ % (or) Extra@ _____ % (or) NA
07	EXCISE /CVD INVOICES	<b>SHALL BE PROVIDED/ NOT PROVIDED</b>
08	<b>CST/ VAT WITHOUT CONCESSIONAL FORMS "C" / "D" ( % RATE)</b>	Included @ _____ % (or) Extra@ _____ % <b>NO "C" OR "D" FORM WILL BE ISSUED BY BHEL</b>
09	OCTROI / ENTRY TAX AT DESTINATION	Extra, if applicable shall be paid by BHEL on submission of original receipt.
10	INSTALLATION & TRAINING CHARGES	Included @ _____ % (or) Extra@ _____ % (or) NA
11	SERVICE TAX on Sn.10	Included @ _____ % (or) Extra@ _____ % (or) NA
12	FREIGHT CHARGES UP TO DESTINATION	Included @ _____ % (or) Extra@ _____ % (or) NA
13	TRANSIT INSURANCE CHARGES	<b>BY BHEL. SUPPLIER HAS TO INTIMATE THE DISPATCH DETAILS TO BHEL'S UNDERWRITERS AS SOON AS THE MATERIAL IS DISPATCHED.</b>
14	ANY OTHER CHARGES (please specify here the nature of charge)	<b>(AMOUNT TO BE SPECIFIED IN THE PRICE FORMAT)</b>
15	PAYMENT TERMS (Specify scope of Banker's Charges at both ends / Demand Draft Charges)	<b>90% BASIC + 100% TAXES AND DUTIES AGAINST SUPPLY OF MATERIAL AT DESTINATION AND SUBMISSION OF ORIGINAL INVOICE WITH COMPLETE DOCUMENTS TO BHEL-PSWR, HQR, NAGPUR WITHIN 30 DAYS. BALANCE 10% AGAINST INSTALLATION &amp; SUBMISSION OF PERFORMANCE BG EQUAL TO THE GUARANTEE PERIOD AND AMOUNT. PAYMENT WILL BE RELEASED THROUGH RTGS/EFT (ELECTRONIC FUND TRANSFER) MODE ONLY (PL REF SPECIAL TERMS AND CONDITIONS). NO DD/CHEQUE PAYMENT.</b>
16	MODE OF DISPATCH	BY ROAD / RAIL / SHIP / AIR / CARGO COURIER / SPECIAL MESSENGER / HAND DELIVERY
17	NAME OF THE GOODS MANUFACTURER / PRINCIPALS	
18	TRADE NAME / MODEL NUMBER OF GOODS	
19	WARRANTY / GUARANTEE CONDITIONS	
20	PRODUCT CATALOGUE / WRITE UP	ENCLOSED / NOT ENCLOSED
21	CONTACT PERSON'S NAME, E-MAIL ID, PHONE NO	

SIGNATURE & SEAL OF TENDERER

**This sheet should be duly filled, signed and sent as a part of technical bid. Otherwise the offer will not be considered for further processing**

**BHARAT HEAVY ELECTRICALS LIMITED  
PS-WR:HQ:NAGPUR**

ENQUIRY NO. XI062 E

DT.04.01.2012

Page 6 of 12  
DUE DATE: 24.01.2012

**PRICE FORMAT**

NAME OF THE TENDERER: \_\_\_\_\_

SELLER'S REF. No. \_\_\_\_\_ DATE : \_\_\_\_\_

S.N	DESCRIPTION	PRODUCT - 1	PRODUCT-2
A	ITEM DESCRIPTION AS PER ENQUIRY (PLEASE QUOTE THE BRAND NAME AND MODEL NUMBER)		
B	QUANTITY OFFERED		
C	UNIT RATE		
D	CURRENCY		
E	DISCOUNT (%AGE & AMOUNT)		
F	DISCOUNTED UNIT RATE		
G	DISCOUNTED BASIC PRICE (G = B x F)		
H	PACKING & FORWARDING CHARGES		
I	EXCISE DUTY (PERCENTAGE AND AMOUNT)		
J	IMPORT DUTY (PERCENTAGE & AMOUNT)		
K	SALES TAX AS APPLI. WITHOUT C-FORM (PERCENTAGE & AMOUNT)		
L	FREIGHT UPTO DESTINATION		
M	INSTALLATION & TRAINING CHARGES		
N	SERVICE TAX ON INSTALLATION & TRAINING		
O	TRANSIT INSURANCE	<b>BY BHEL</b>	
N	OCTROI CHARGES / ENTRY TAX AT DESTINATION	<b>EXTRA, IF APPLICABLE ON PRODUCTION OF ORIGINAL OCTROI RECEIPT.</b>	
P	TOTAL PRICE AT DESTINATION ( SUM of 'G' to 'N')		

NOTES:

1. PLEASE USE ADDITIONAL SHEETS IF NECESSARY.
2. FURNISH FURTHER BREAK UP OF PRICE IF NECESSARY.

**SIGNATURE OF THE TENDERER WITH SEAL**

## **ANNEXURE-I**

### **Specifications for “Hydraulic Power pack of Bolt Tensioning Machine”**

**1. APPLICATION:**

The Hydraulic Power Pack (HPP) is required for feeding high pressure oil to Gun of tensioning/ breaking of the special bolts required in ESP of the thermal power plant. The application is also similar to that found in the Railways. The special bolt has got a bush which is pushed by the special gun and the bolt is pulled, simultaneously. After the desired axial movement and clamping of the sheet metal parts together, the extra portion of the bolt is broken for which a weakening grooves is provided in the bolt. The power pack is required for this.

**2. WORK / JOB DETAILS:**

As describe above, the sheets of ESPs are to be fastened together. The special bolt has got the controlled dimensions and comes with a bush which is loose in the start and after pushing fits snugly on the bolt to result into a proper fastening as good as riveting.

The bolt has got different diameters so that desired force fit is obtained. The extra length piece gets broken after the fastening operation and tightening of the bush over the bolt takes place with proper interference.

The HPP shall be suitable for this.

**3. PHYSICAL CONSTRUCTION:**

The hydraulic power pack consists of a tank, pump, motor, pressure relief valve, pressure switch and other items. Also 2 nos. of slender hoses are connected to the gun for forward and return oil supply.

A small electrical panel is also enclosed so that solenoid can be actuated by pressing of the switch and pressure control also can be ensured.

The details are enclosed in the hydraulic circuit diagram enclosed which is typical and actual needs to be made to suit the application. Similarly, electrical circuit diagram is made typical and actual detailed should be made to suit the application. Small amount of redundancy to be kept

**4. CAPACITY / RATING:**

Overall weight of the system should be in vicinity of 100 Kg.

**4.1 Hydraulic Power pack:**

Working Pressure: 550kg/cm sq min Forward

Return pressure: 300kg/cm sq min

Max system pressure 25 % above the working (i.e. 690 bars)

Discharge: 3 lit/min (approx.)

Type of pump: Suitable

Pressure switch: for return pressure control and unloading to the tank

Tank capacity: Max. 25 to 30 liters

Pressure relief valve:

Solenoid D.C. valves: As per circuit

Voltage of solenoid valve: 24 VDC

Pressure gauge to show pressure with gauge isolator

Reservoir : Inlet with Filter, Breather; Drain Plug; Oil Level Sight Glass Gauge; Suction Strainer;

Outlet fitted with filter.

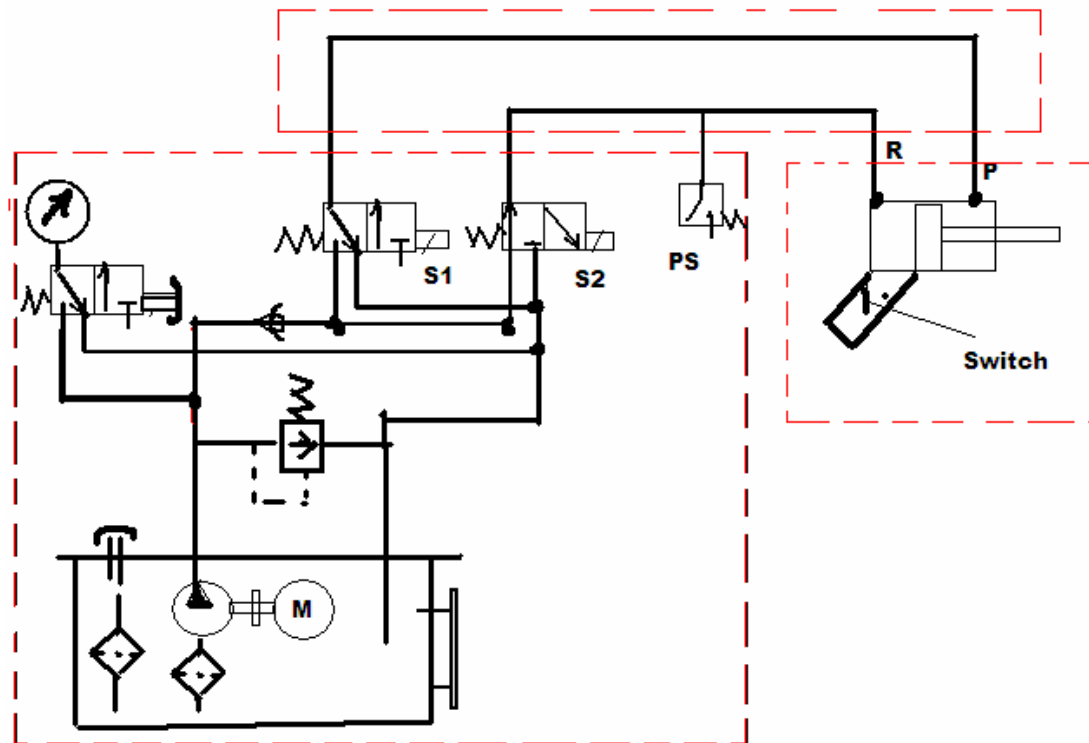


Fig: Hydraulic Circuit Diagram

#### 4.2 Electrical Motor:

Suitable Capacity, 3phase, 440V, 50Hz along with starter (Siemens/Compton/L & T/ABB/ KEC)

#### 4.3 Electrical:

Supply: 3 phase, 415 VAC, +/- 10 %

Rectifier to suit the application, 24 VDC +/- 5 %

Motor Contactor, Timer Relay, Emergency stop, Amps Overload Trip, Oil Temperature/Level, 24V DC Electrical Connector, Sleep Mode (Motor should switch off after some time if not in use), Electrical Power Cable Surge arrestor & pressure switch etc to be included.

#### 4.4 Connecting Hydraulic hoses:

To suit the application: 15 m long:

- (1) Should be able to withstand 1.5 x Max. Working pressure of Power pack.
- (2) Fitted with Hydraulic Quick Coupler- 3/8" typical
- (3) Both for forward and return paths

#### 4.5 Connecting electrical wire:

To suit the application: 15 m long (mechanically strong)



**5. CAPABILITIES AND FEATURES: FOR EXPLANATION**

The trigger at the gun will actuate the hydraulic cylinder (inbuilt for push pull action and after pushing of the bush and fitting it, will break the extra portion and as soon as the trigger is released, the direction of gun gets reversed (with reduced pressure setting so that at the end of the stroke the glands is not shocked. (This shall be set on the pressure switch)

The gun shall be connected with the hydraulic power pack by 2 hoses (armoured and mechanically strong) and an electrical wire (mechanically strong) for easy actuation.

The Gun should be lightweight and compact so that there is no fatigue to the operator, with a built in electrical trigger switch (sufficiently rugged)

**6. CONTROL PANELS:**

The panel should take 3 phase input and should drive the 3 phase main pump motor but for controls and solenoids etc 24 VDC should be made available through the transformer rectifier package or through electronic control.

The provision of motor safety, isolation switches should be there.

The control box should be very compact.

There should be provision of thermal over load relay (TOL) for setting current, Timer and pressure switch also apart from fuses to save the solenoids, emergency stop switch & oil temperature and level switch.

All the items should be of reputed make and should be easily available from the market.

**Principal of operation: -**

- 1) When both hoses and control cord are connected to the Power pack, the pull and return cycles of the tool are controlled by the trigger switch located in the tool.
- 2) When the trigger switch is depressed the solenoid valve located in the Power pack is energized and directs the pressurized oil flow to the pull side. This also allows the oil in the return side of the tool to return to the tank.
- 3) When the trigger switch is released the solenoid valve gets de-energized, reversing the oil flow.
- 4) At the end of cycle the Power pack will move to idle mode.
- 5) The electric motor will automatically switch off if the trigger switch is not operated for certain period of time (adjustable).
- 6) The power pack will automatically start up on pressing of trigger switch.

**7. INPUT CONDITIONS:**

Only electrical supply shall be given

**8. ENVIRONMENTAL CONDITIONS:**

Machine will be normally used in the closed sheds but on few occasions can be used in semi open shed also

**9. SCOPE OF SUPPLY:**

The Power pack for bolt tensioning machine along with other relevant items as described below:

Sl. No	Description	Quantity	Remarks
1	Hydraulic power pack with electrical control (for Bolt tensioning machine)	One set	As per this specifications
2	Hydraulic hoses along with quick coupling for forward and return liquid path: Length 15 m	One set	
3	Seal kit for pump, and valves	5 sets	
4	Fuses for solenoid protection	5 Nos.	

**10. PREDISPATCH INSPECTION / TESTING (AT SUPPLIER WORKS):**

The HPP shall be inspected before dispatch at the works of Vendor.

**11. SPARES:**

Seal kit for repairs of hydraulic 5 sets, as mentioned in scope of supply for all valves, pumps and pressure switch are to be included. List of other spares recommended, if any, to be given and their prices should be mentioned in the price bid.

**12. FINAL INSPECTION (TESTING):**

All the HPP shall be tested for No load operation. Few machines shall be tested for full load operation and for proving of the application. Mock loads shall be created, if actual load / jobs are not available.

The machine shall be tested for:

- (a) Functioning
- (b) Health of various sub systems

**13. ERECTION AND COMMISSIONING BY SUPPLIER:**

As the HPP shall be small and stand alone type, no erection as such is necessary but supplier or their representative to commission and establish load testing on few machines using BHEL people on actual or mock up jobs. No load test on all HPPs should be demonstrated. Commissioning could be done at different sites.

**14. GUARANTEE CLAUSE:**

HPP should be guaranteed for a period of 12 months after commissioning.

**15. TRAINING AT SUPPLIER'S WORKS & BHEL SITE:**

Vendor to impart training to BHEL' 02 engineers for operation as well as maintenance for a period of 2 days at his works and 02 days at BHEL site (max 3 sites)

**16. SAFETY AND ENVIRONMENT:**

Suitable safety arrangements should be built in the HPPs for the safety of the operator as well as safety of other people working near by. No effluent of any kind or material of any kind harmful to working people or the environment should be used on the machine.

**17. DOCUMENTATION REQUIRED BY BHEL ALONG WITH SUPPLY OF MACHINE :**

- (A) Operation manual
- (B) Spare parts manual
- (C) Maintenance manual
- (D) Manuals of B.O. components used

**18. EXPERIENCE CLAUSE / PERFORMANCE CERTIFICATE:**

Vendor should be in the line of manufacturing of hydraulics power packs and should have made same or similar machines in the past. Supplier should have manufactured at least 5 nos. of high pressure i.e. 700 bar HPPs previously and at least one machine should be working out of these for a period of 3 years.

**19. CUSTOMER LIST AND REFERENCE:**

Vendor to enclose the customer list to whom these HPPs have been supplied earlier with full address and telephone no., web address and email details along with model number of the HPPs supplied.

**20. DOCUMENTATION AND WRITEUP TO ILLUSTRATE VARIOUS CAPABILITIES, RELATED DIAGRAMS, PICTURES, MOVIES ETC. AND ITS CD (SOFTCOPY), ETC.**

Vendor to give full catalogues, pictures, circuits, video clips of the HPPs which they are offering along with the technical offer.

**21. PACKING:**

Sea worthy packing is to be used while dispatching the machine.

**22. PAINTING:**

HPPs should be painted with green color and guns should be painted with orange color of 2 coats of Primers and 2 coats of finish paints. Total thickness of paint approx 120 microns.

**23. TRANSPORTABILITY:**

This HPP shall be transported from one location to another site and therefore should have a very rugged shock proof control panel etc so that no damage occurs during the transportation. Features included for achieving this is to be mentioned. No parts should be protruding and wherever feasible, guards are to be put.

**24. LIFTING PROVISIONS:**

HPPs should have lifting provisions for use with cranes.

**25. EASE OF HANDLING:**

The HPP should be wheel mounted with towing capability so that one person can move it very easily on the floor. The castor wheel size should be approx 6" and should be strong.

**BHARAT HEAVY ELECTRICALS LIMITED**  
**PS-WR:HQ:NAGPUR**

ENQUIRY NO. XI062 E

DT.04.01.2012

Page 12 of 12  
DUE DATE: 24.01.2012

**ANNEXURE-II**

<b>Sl. No.</b>	<b>CONSIGNEE ADDRESS</b>	<b>QTY (in Nos.)</b>
01	BHEL SITE OFFICE – DAINIK BHASKAR DAINIK BHASKAR NEAR VILLAGE BARADARHA, DISTT: JANJGIR – CHAMPA, CHHATTISGARH	<b>01</b>
02	BHEL-SITE OFFICE 1260 MW VISA POWER LIMITED VILL. DEORI, POST-DONGITARAI , P.S.-BHUPDEOPUR, DIST.- RAIGARH (C.G.) 496001	<b>01</b>
03	BHEL-SITE OFFICE PLOT NO. A-1, MIDC MUSALGAON, SINNAR, NASIK.	<b>01</b>

Engineer/Pur