



BHARAT HEAVY ELECTRICAL LIMITED

UNIT'S ADDRESS

UNIT'S PHONE NOS.

CONTACT PERSON'S NAME/DESIGN./PHONE NO.

E-MAIL (FROM PURCHASE DEPTT.)

Enquiry No. : _____

Due Date : _____

Supplier Qtn. No.: _____

Date : _____

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR
PRESSURE TESTING PUMP

NOTE:-

1. Vendor must submit complete information against clause no. 15.0 The offer meeting this clause would only be processed.
2. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.
3. The offer and all documents enclosed with offer should be in English language only.

ADDRESS OF THE SUPPLIER :	ADDRESS OF THE INDIAN AGENTS :
TELEPHONE NOS.:	TELEPHONE NOS.:
FAX NOS.:	FAX NOS.:
E-MAIL ADDRESS :	E-MAIL ADDRESS :

SCOPE: SUPPLY, ERECTION & COMMISSIONING OF VERTICAL SLOTTING MACHINE COMPLYING WITH SPECIFICATION AS BELOW

SL. NO	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY	OFFERED	DEVIATIONS	REMARKS
1.0	PURPOSE & WORKPIECE MATERIAL				
1.1	Purpose: (Operations/Jobs involved)	Pressurizing water in pumps components like casings for Hydro-static test purpose			

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1.2	Work Piece Material: (Material detail, Hardness etc.)	Alloy Steels/Medium carbon steel			
2.0	SPECIFICATION:				
2.1	CAPACITY & SIZE				
		Horizontal portable type Reciprocating Hydraulic High pressure Triplex Plunger Pump			
2.2	Working pressure	1200 kg/cm ²			
2.3	Discharge capacity	5 Litres/minute			
2.4	RPM	Vendor			
2.5	Number of stage	Vendor			
2.6	Speed of Motor	1500 RPM(Maximum)			
2.7	Type of coupling	Love-Joy			
2.8	Couling guard	Vendor			
2.9	Starter	Vendor			
2.10	Induction motor (Siemens, Crompton Greeves, Kirloskar or Bharat Bijli make are acceptable)	Vendor			
2.11	Two NRV on Discharge line	Vendor			
2.12	Moto Power	20HP(minimum)			
2.13	Plungers	Forging			
2.14	Connecting Rod	Forging			
2.15	Crane - Shaft	Forging			
2.16	Gear - Shaft	Forging			
2.17	Type of bearing / lubrication	Anti - Fiction Type / Greese Lubricated from SKF or equivalent			
2.18	Gland	Gunmetal			
2.19	Discharge header pipe with 4 connections of M20 x 1.5(Male)	Vendor to confirm			

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3.0	Base plate:- Common base plate with lifting hooks attached with four C.I. Wheeled trolley and draw bar for easy movement	Vendor			
4.0	ACCESSORIES				
4.1	Pressure regulator-cum automatic Unloaded valve	Stainless steel			
4.2	Safety valve	Spring Loaded Stainless Steel			
4.3	Pressure relief valve	Spring Loaded Stainless Steel			
4.4	Isolating valve	Stainless steel			
4.5	2 nos. of Pressure Gauge with range 0-1200 kg/cm ² with 0.5% accuracy	Vendor			
4.6	Material for all valves , plunger, valve chamber & other important internals	Wear resistance Stainless steel			
5.0	CONSTRUCTION:				
5.1	Vendor to furnish details of material, hardness & constructional details, including explanatory drawings, of various components/assemblies like	Vendor to furnish relevant details along with the offer			
6.0	AMBIENT CONDITIONS & THERMAL STABILITY :				
6.1	Total machine should work trouble free and efficiently under following operating conditions. Power Supply: Voltage: 415 V +10% / -15% Frequency: 50 Hz ± 3% No. of phases = 3 Ambient Conditions: Temperature = 5 to 45 degree celsius Relative Humidity = 95% max. (Confirm that machine is suitable for above and details of provisions on the machine for the same should be furnished)	Confirm			
6.2	Weather conditions are tropical, Atmosphere may be dust laden during some part of the year. Machine shall be kept in the normal shop floor condition. Max. temperature variation is 25 deg Celsius in 24 hours.	Confirm			

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6.3	The machine including attachments & accessories should be suitable for 24 hrs. continuous operation to its full capacity for 24 hour a day and 7 days a week throughout. Vendor to ensure and confirm the same.	Confirm			
6.4	(a) Maximum noise level shall be 85 dB(A) at normal load condition, 1 meter away from the machine with correction factor for back ground noise, if necessary. This will be measured as per international standards like DIN 45635 - 16. Supplier to demonstrate compliance to noise level, if so required.				
6.5	(b) There shall not be any emissions from the machine .				
6.6	(e) If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.				
6.7	(f) Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.				
7.0	ELECTRICAL :				
7.1	415V + 10% / -15%, 50HZ +/-3%, 3 Phase AC (3 wire system with out neutral) Power Supply Voltage 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 same could be incorporated during construction of foundation.	Confirm			
7.2	Motors shall conform to IEC or Indian Standards	Confirm			
7.3	Vendor should ensure the proper earthing for the machine and its peripherals.	Required			
8.0	SPARES:				

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8.1	Itemised breakup of mechanical, hydraulic, electrical and electronic spares used on the machine in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis should be offered by vendor. The list to include the following in addition to recommended spares (Unit price of each item of spare should be offered)	Vendor			
9.0	DOCUMENTATION				
9.1	5 set of Detailed Operation & Maintenance manual of machine with all drawing of machine assemblies/sub-assemblies/parts, automatic lubrication system, including Electrical circuit diagraph, list of bought out items with their vendor's name and part no. All Assembly / Sub Assembly Drawings shall be supplied with part list for procurement of spares in future, to be supplied along with the machine.				
10.0	COMMISSIONING				
10.1	Supplier to take full responsibility for start up, testing of machine, it's control & all types of other supplied equipment .	Vendor			
10.2	All tests, as mentioned at clause 11 (Machine Acceptance) shall form part of the commissioning activity.	Vendor			
10.3	Commissioning spares, required for commissioning of the machine within stipulated time, shall be brought by the supplier on returnable basis.	Confirm			
11.0	MACHINE ACCEPTANCE: (Tests/Activities should be Performed by Vendor)	Confirm			
11.1	Tests/Activities should be carried out at supplier's works on the machine before dispatch :	Confirm			
11.1.1	Inspection by BHEL Engineers before despatch				
11.1.2	Demonstration of all features of the machine, control system & accessories	Vendor			
11.2	Tests/Activities should be carried out at BHEL works while commissioning the machine :	Vendor			
11.2.1	Full load test to demonstrate the maximum pressure & delivery capacity of the machine.	Confirm			

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11.2.2	Demonstration of all features of the machine, control system & accessories to the satisfaction of BHEL for efficient and effective use of the machine	Confirm			
11.2.3	Training of BHEL machine operators in operation of complete machine & accessories etc by the supplier's experts / engineers during their stay at BHEL works	Confirm			
11.2.4	Demonstration by actual use of all supplied attachments and accessories to their full capacity.	Confirm			
12.0	PACKING:				
12.1	Rigid packing for all items of complete machine, all accessories and other supplied items to avoid any damage/loss in transit.	Confirm			
13.0	GUARANTEE :				
13.1	As per BHEL terms and conditions.	Confirm			
14.0	GENERAL :				
14.1	Machine Model	Specify			
14.2	Total connected load (KVA):	Specify			
14.3	Floor area required (Length, Width, Height) for complete machine & accessories	1.5 metre ² (approx.)- Vendor to Specify			
14.4	Painting of Machine / Electrical Panels : RAL 6011 Apple Green (Polyurethane Paint)	Confirm			
14.5	Total weight of the machine	Specify			
14.6	Weight of heaviest part of machine	Specify			
14.7	Weight of the heaviest assembly and sub-assembly of the Machine.	Specify			
14.8	Dimensions of largest part of the machine	Specify			
14.9	All motors shall be of Siemens/Crompton/ABB/Kirloskar/GEC	Vendor to confirm specify MAKE			
15.0	REFERENCE LIST / QUALIFYING CONDITIONS : Vendor to submit, along with offer, reference list of customers where similar machines have been supplied mentioning broad specifications of the supplied machine i.e. Model, Pressure, Discharge etc.	Specify			

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15.1	Only those vendors, who have supplied and commissioned atleast one Reciprocating Hydraulic High pressure Triplex Plunger Pump (Working Pressure , Discharge capacity in LPM) or higher size for similar applications in the past five years and such machine is working satisfactorily for more than one year, after commissioning should quote. The following information should be submitted by the vendor about the companies where similar machines have been supplied. This is required from all the vendors for qualification of their offer.	Confirm			
	1. Name of the customer / company where similar machine is installed.				
	2. Complete postal address of the customer.				
	3. Month & Year of commissioning.				
	4. Application for which the machine is supplied with details of accuracies achieved on the job.				
	5. Name and designation of the contact person of the customer.				
	6. Phone, FAX no. and email address of the contact person of the customer.				
	7. Performance certificate from the customers regarding satisfactory performance of machine supplied to them				
	8. BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/incorrect the offer shall be rejected.				