

Tender No ———

Section IV

Hydraulic Press to Specification No.CR / IR / HP-300T/200T/2025

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In case, any of the conditions mentioned here under are contrary to those mentioned elsewhere in the tender document, conditions mentioned in this document shall supersede the corresponding conditions given elsewhere in the tender document.



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Section-IV

**IMPORTANT FEATURES OF THE TENDER**

**1. INSTRUCTIONS TO TENDERERS FOR FILLING TECHNICAL BID**

- 1.1 Unless otherwise stated, latest alterations/ revisions of specifications/ standards/ drawings shall be applicable. In respect of safety standards and environmental standards relevant to the machine, the machine manufacturers shall ensure compliance with International (CE/ISO/DIN/JIS)/National standards (IS) (wherever applicable).
- 1.2 Tenderers should offer and quote for all the specified concomitant accessories, as these are considered essential for commissioning and utilization of the machine. Even if bidder does not recommend the purchase of any of these accessories, the price must be quoted for comparison purposes and their recommendation/suggestion to be indicated in the offer. Tenderers should also quote for optional accessories, spares and consumable spares as asked in the specifications.
- 1.3 In case, any item is required in sets, please specify nos. /pieces per set. This is essential for proper technical evaluation of the offer. Offers received without this may be considered as incomplete and liable to be rejected.
- 1.4 The bidder should quote only for the specified make of sub-assemblies and equipment wherever specified. In case, some other make is quoted, specific reasons for the same including its features/ advantages over specified makes should be submitted. Past performance of a same/similar machine from two or more end users may be submitted to evaluate performance of other items offered. Details of industries/ entities/ Customers/ products using the offered brand, details of manufacturer, should be submitted to evaluate the market presence of the make quoted; in case details are not submitted alternate brand/ item will not be considered & offer will be evaluated accordingly.
- 1.5 In case there is a contradiction in any information provided (between any parametric values given in the specification and those given in the brochure or some other document enclosed by the tenderer), unless specifically mentioned in the deviation cum confirmation statement under Annexure A of Section VI, the values as given in the specification shall be taken as confirmed by the tenderer and offer evaluated accordingly.
- 1.6 Bidder or his authorized agent, in their own interest, should visit the consignees listed in clause 3 Section-IV with prior appointment with Controlling Officer of the consignee and acquaint themselves with existing process of manufacturing/remanufacturing, site conditions, availability of material handling facilities etc.
- 1.7 The Tenderer should also furnish ' Statement of Deviations' from tender specifications ( as per Annexure A Section VI ) along with the offer.
- 1.8 Bidder shall furnish Clause wise comments and information asked for against various clauses , wherever specified.



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2.	<b>DESCRIPTION:</b> Hydraulic Press as per Specification No. CR / IR / HP-300T/200T/2025
2.1.1	The Press shall be capable of pre-shortening & testing of draft gears indicated in Annexure-E. (Applicable for Schedule-1A & 1B).
2.1.2	The Press shall be capable of Pressing the stators and Rotors of 3-Phase Traction Motors, De-shafting & Re-Shafting of armatures mounted on special Jigs indicated in Annexure-E (Applicable for Schedule-1C).
2.1.3	Press structure shall be able to support a work piece weight up to rated capacity.
2.1.4	Operating in semi-automatic mode with quick approach, slow down just before pressing, pressing for a pre-determined period of time, slow release and quick return. It shall also be possible to execute each of these operations individually.
2.1.5	The press shall be easy to operate and operator friendly.
2.1.6	The hydraulic press shall be safe to operate.
2.1.1	The Press shall be capable of preshortening& testing of draft gears indicated in Annexure-E. (Applicable for Schedule-1A & 1B).
2.1.2	The Press shall be capable of Pressing the stators and Rotors of 3-Phase Traction Motors, De-shafting & Re-Shafting of armatures mounted on special Jigs indicated in Annexure-E (Applicable for Schedule-1C).

Schedule-1A		
Applicable to consignee		
2.2	Leading parameters	
2.2.1	Major parameters: (Note: No deviation in major parameter shall be accepted. )	
1.1	Type of press	Open front "C" frame vertical type
1.2	Pressing force	200 T (minimum) (In down ward direction)
2.2.2	Other parameters	
1.1	Return Load capacity	50 T (minimum)
1.2	Stroke (adjustable)	700 mm (minimum)
1.3	Daylight :	900mm (minimum)

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1.4	Working table size (LR x FB)	1600mm x 1200mm (minimum)
1.5	Working Height	700mm (Max.)
1.6	Throat distance	600 mm
1.7	Ram block size	600x500 mm
1.8	Ram speeds (max. permissible variation: $\pm 10\%$ )	
	Approach speed:	50mm/sec.
	Pressing speed:	5mm/sec.
	Return speed:	75mm/sec.
1.9	Geometrical accuracies of the press	As per IS: 14877 (Pt. I) : 2000 Grade 2
1.10	Motor Power	20 HP
1.11	Power supply	415V+10% -20%, 50Hz +/-3%
1.12	Hydraulic oil tank capacity	450 Liters
1.13	Two nos. separate earth pits will be provided and connected.	
Note:- (i) This press is preferred with heat resistant ram bottom to prevent heat transmission to piston oil seals during welding of draft gear rear plate in pressed condition.		

Schedule-4B		
Applicable to Consignee		
2.2	Leading parameters	
2.2.1	Major parameters: (Note: No deviation in major parameter shall be accepted.)	
4.1	Type of press	Open front "C" frame vertical type
4.2	Pressing force	200t (minimum) (in down ward direction)
2.2.2	Other parameters	
4.1	Stroke (adjustable)	600 mm (min)
4.2	Daylight	800 mm approx.
4.3	Working table size (LXB)	2000X 900 mm (min)
4.4	Ram Block size (LXB)	660x660 mm
4.5	Working height	700-750mm.
4.6	Parallelism between top and bottom heads:	0.05mm per 300mm
4.7	Flatness of surfaces	0.03mm per 300mm



1.8	Ram speeds (max. permissible variation: $\pm 10\%$ ) i) Approach speed ii) Pressing speed iii) Return speed	40 mm/sec. 06 mm/sec. 60 mm/sec.
1.9	Geometrical accuracies of the press	As per IS: 14877 (Pt. I): 2000 Grade 2
1.10	Motor Power	20 HP
1.11	Power supply	415V $\pm 10\%$ -20%, 50Hz, $\pm 3\%$
1.12	Hydraulic oil tank capacity	450 Liters (minimum)
1.13	Two nos. separate earth pits will be provided and connected.	
<b>Note:</b> This press is preferred with heat resistant ram bottom to prevent heat transmission to piston oil seals during welding of draft gear rear plate in pressed condition		

Schedule-1C		
Applicable to Consignee -		
2.2	Leading parameters	
2.2.1	Major parameters: (Note: No deviation in major parameter shall be accepted.)	
1.1	Type of press	Four-Column type
1.2	Capacity of press	300T (minimum) (in downward direction)
2.2.2	Other parameters	
1.1	Daylight (Distance between top & bottom platens)	2000 mm
1.2	Stroke (adjustable)	1000 mm (min)
1.3	Working table size	2000 mm x 2000 mm (min)
1.4	Parallelism between top and bottom heads	0.05 mm per 300 mm
1.5	Flatness of surfaces	0.03 mm per 300 mm
1.6	Vertical Ram speeds (max. permissible variation: $\pm 10\%$ )	
	Approach speed:	25 mm/sec.
	Pressing speed:	1.6 mm/sec.
	Return speed:	30 mm/sec.
1.7	Motor Power	15 kW (minimum)
1.8	Trolley (To carry out the job for performing the shaft pressing in and pressing out work)	
(i)	No. of Trolley (Motorised)	02
(ii)	Electric Motor Power	3.5 kW (minimum)
(iii)	Load on each Trolley	5T
(iv)	Trolley Speed	76 mm/Seconds
1.9	'U' Cut in slide/top bed & lower bed of trolley side	350mm

  
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1.10	Bed Level	Ground Level
1.11	Mode of operation	In-Inch and Single Cycle
1.12	Pit Depth below lower bed for replacement of Shaft	1400 mm with diameter of 350 mm.
1.13	Geometrical accuracies of the press	As per IS-14877 (Pt. I) : 2000 Grade 2
1.14	Power supply	415V+10% -20%, 50Hz +/- 3%
1.15	Hydraulic oil tank capacity	600 Liters (Approx.)
1.16	Two rise-separate earth pits will be provided and connected.	

**2.3 Performance Standards:**

The machine should have geometrical accuracies as per Indian Standard Specifications IS: 14877(Pt.1):2000 Grade 2 or equivalent International Standards which shall be mentioned in the offer.

**2.4 Productivity: Not Applicable**

**2.5 Prove out at firm's premises:**

(i) A load test shall be carried out at the manufacturer's works. Rigidity of the machine shall be demonstrated to the satisfaction of the appointed Inspector of Inspecting Agency. The major parameters including ram speeds and accuracies specified should be proved out during inspection of the machine.

The firm is required to demonstrate the following at the time of inspection to the inspecting authority, in addition to their normal checks carried out during assembly testing as part of quality control measures on the machine.

- All the property of the Consignee loaned to the Contractor in connection with contract shall remain the property of the Consignee. The Contractor shall use such property for the purpose of the execution of the contract and for no other purpose whatsoever.
- All such property shall be deemed to be in good condition when received by the Contractor unless he shall have within twenty-four hours of the receipt thereof notified the consignee to the contrary. If the Contractor fails to notify any defect in the condition or quality of such property, he shall be deemed to have lost the right to do so at any subsequent stage.
- The Contractor shall return all such property and shall be responsible for the full value thereof to be assessed by the Consignee whose decision shall be final and binding on the Contractor. The Contractor shall be liable for loss or damage to such property from whatever cause happening while such property is in the possession of or under the control of the Contractor, his servants, workmen or agents.

(ii) Geometric and performance tests as per clause 2.3.

**2.6 Prove out at consignee's works:**

2.6.1 The machine performance shall be demonstrated by the supplier or his agent for proving out successful commissioning at the consignee's works for a period of two shifts of eighthour each for a period of 02 days. The required operations of all the components listed in Annexure-E, shall be proved out at the consignee's premises as the part of commissioning process.



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**Note:** Tools & Equipment required for installation of the machine and Set of Test Mandrels/Special Gauges for checking & alignment of machine should be brought by the bidder. The bidder can take back these items after installation & commissioning of the machine, which are in not in the scope of supply. The bidder shall also be responsible for any deviation/rejection in prove out of the components due to wrong tooling, die, punches or malfunctioning of the machine during prove out and also for the delay in bending due to improper recommended tooling etc. Any changes in tooling during prove out shall be at the responsibility and cost of the bidder. The bidder shall supply the changed toolings at prove out stage as per requirement. In case prove out of components is delayed beyond three months, the supplier to submit the detailed action plan completing prove out in a time bound manner in next one month. In case the prove out is further delayed on account of supplier, the supplier will be required to submit bank guarantee for the cost of the machine already paid to the firm, which shall be valid for 06 months. Indian Railway can encash bank guarantee in case prove out is not satisfactorily completed as per the milestone given by the supplier.

- 2.6.2 Productivity/ Performance test shall be performed for one/ two consecutive shifts for a period of 02 days covering the components as per clause within the time period for installation, commissioning and prove out, stipulated in the Delivery Schedule Chart (clause 7 of section-IV. The cycle time/ productivity per item/ component shall be arrived at by calculating the average of the time taken per products of the total numbers produced in a shift or over the time/Quantity specified for the test. If the cycle time/ Productivity is as per clause 2.4 of Section IV, the machine shall be considered as commissioned. Thereafter the performance shall be watched for a period of one month by the consignee before the final PTC is issued.
- 2.6.3 If the supplier fails to demonstrate during the first Performance/ Productivity Guarantee Test/, the Performance as per above Clause, the Railway shall permit the supplier to carryout necessary modifications and repairs to the equipment and to repeat the Performance/ Productivity Guarantee Test.
- 2.6.4 Extra cost incurred for retention of specialists and for modifications and repairs to the equipment in connection with the repetition of Performance/ Productivity/ Guarantee Test shall be borne by the contractor.
- 2.6.5 In case the supplier fails to demonstrate the performance Guarantee figures stipulated in clause as per clause 2.4 of Section IV above, even after repeated tests, the Railway reserves the right to reject the machine or accept it with lower performance. Railway shall be entitled to recover from the Contractor as penalty as given below, for accepting the machine with lower performance.

Productivity Drop	Rate of penalty (% of the contract value) net cumulative
Up to 5%	2%
More than 5 % to 10%	4%
More than 10% to 15%	6%
More than 15 %	Rejection and Railways will have option to encash PBG, record poor performance other steps as per tender conditions like recovery etc.

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- 2.6.6 The repetition of performance guarantee/ tests shall be completed within 90 days after the expiry of stipulated time period provided in the contract for Installation, commissioning and proving out of machine .
- 2.6.7 Offers not meeting the cycle time at bid stage itself i.e. as per clause 2.4 shall not be considered even with loading penalty.
- 2.6.8 Any break down time caused by reasons beyond the control of contractor during prove out will not be reckoned for the purpose of levying the penalty.
- 2.6.9 If the supplier fails to demonstrate during the first Performance/ Productivity Guarantee Test/, the Performance as per Clause 2.6.1 above, the Railway shall permit the supplier to carryout necessary modifications and repairs to the equipment and to repeat the Performance/ Productivity Guarantee Test. Joint Inspection in presence of inspecting agency, consignee and supplier, shall be carried out before permitting supplier for any modification/ repair (if any).

### 3. QUANTITY & CONSIGNEE

S. No.	CONSIGNEE	Qty	Specification No.
1.	Carriage Repair Workshop, Matunga (Smithy Shop/ MTN)	01	CR / IR / HP-300T/200T/2025

### 4. SCOPE OF SUPPLY

4.1The scope of supply shall include design, manufacture, supply, installation, testing, commissioning and proving of machine on turnkey basis. It shall include all the concomitant accessories/equipments (Clause 4.2 of Section IV) as detailed in the specification and other concomitant accessories/ equipment, which the manufacturer considers essential to make the machine fully operational, when installed and commissioned. It shall also include installation and commissioning of related equipment (Clause 12 of Section V), training of personnel in operation and maintenance of machine (Clause 10 of Section V) and supply of technical documentation (Clause 4 of Section V). The Preventive Maintenance during warranty and Comprehensive Annual Maintenance Contract after warranty shall be as per Clause no. 16 & 17 respectively of Section V of specification of this tender.

#### 4.1 CONCOMITANT ACCESSORIES

4.2.1The machine should be accompanied with the following concomitant accessories:  
(Quantity of each item shall be indicated in the bid)

Schedule-1A Common to all Schedules	
i.	First fill of oils and lubricants- required for successful commissioning of the machine (Quantity of each item shall be indicated in the bid).





ii.	Maintenance tools (List of tools indicating make, description & quantity shall be furnished in the bid)	1 set
iii.	Compatible Servo controlled voltage stabilizer (Ref. Cl.2.13.2 of Sec. V)	1 no.
iv.	Compatible ultra-isolation transformer (Ref. Cl.2.13.3 of Sec. V)	1 no.
v.	Electrical cables to connect electrical control cabinet, press terminal box and control desk	10 metre (minimum)
vi.	Necessary tools and fixtures capable of carrying out the required operations for the components mentioned in Annexure-E <b>Note-</b> The details of the toolings required for different components mentioned in Annexure – E for these consignees shall be provided in the offer	1 set
vii.	Any other accessory/ equipment, which the manufacturer considers essential to make the machine fully operational, when installed and commissioned connected to power source and give the specified output/productivity	

#### 4.2 OPTIONAL ACCESSORIES

Any other accessory which can improve the productivity, performance, reliability, efficiency, or enhance the capability of the machine as a whole or part thereof, should be quoted as optional accessory. Cost of optional accessories shall be quoted separately and shall not be included in the basic price of the machine. Cost of optional accessories will not be taken for commercial evaluation of the firms.

#### 5.0 EVALUATION CRITERIA


Total value of the offer will be calculated based on

- The cost of the basic machine, Cost of the concomitant accessories, Cost of Preventive maintenance during warranty according to tender specifications
- Cost of Turnkey Charges viz. construction of foundation, installation & commissioning etc.
- Net Present Value (NPV) of the total Cost of comprehensive CAMC for five years after the warranty as per clause 17 of Section-V.
- Duties and taxes as quoted by the bidder, insurance and freight.

#### 6.0 OTHER ITEMS TO BE QUOTED

The following items will need to be quoted additionally though will not be part of commercial evaluation:

- Optional Accessories with break-up of individual items as specified in clause 4.3 of section IV.
- Spares for two years' normal operation and maintenance as per clause 5 of Section V.

  
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- iii. Consumables as per clause 6 of Section V with breakup of individual items as applicable.

## 7.0 DELIVERY SCHEDULE CHART

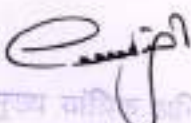
In the event of acceptance of the offer, the machine(s) shall be supplied as per the following Milestone Chart:

Name of machine: Hydraulic Press

Specification No.: CR / IR / Hyd. Press C-Frame 200T/ 2025

S.No.	Activity	Activity Code	Outer Limit of Time Schedule
1.	Issue of LOA	D1	-
2.	Submission of PBG By Successful Bidder	D2	D1+30 days
3.	Issue of Contract by CENTRAL RAILWAY(after verification of PBG)	D3	D2+30 days
4.	Submission of GA drawings to consignee by Successful Bidder/Supplier along with information on power and other utilities required for machine.	D4	D3 + 45 days
5.	Approval of GA drawings by consignee (to be governed by clause 11.2 of section-V)	D5	D4+ 45 days
6.	Confirmation of availability of clear site by consignee	D6	By D5 (i.e. at the time of approval of GA drg.
7.	Completion of foundation	D7	D6+150 days or latest by D 8
8.	Supply/ Delivery of machine	D8	D5 + 180 days
9.	Power connection for the machine and other on site requirement to be provided by railways	D9	D8 + days
10.	Railway to give call to supplier for the commissioning of machine	D10	D8+ 7 days
11.	Installation, commissioning and proving out of machine by supplier	D11	D9 + 120 days or D10+ 120 days (whichever is later)
12.	Issue of PTC by consignee	D12	D11 + 30 days
13.	Warranty by supplier	D13	D11 + 2 years
14.	Comprehensive Annual Maintenance Contract	D14	D13 + 5 years

Notwithstanding the delivery period indicated elsewhere in the tender document, the delivery indicated in this schedule shall be taken as overriding and final.

  
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**8.0 PaymentTerms :**

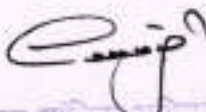
8.1 **Payment for supply of machine** - 80 % amount of the cost of Machine along with Concomitant Accessories shall be released against I/C issued by the TPI agency and Joint Receipt Inspection Note as per Annexure B of Section – VI duly certified by the consignee gazetted officer and Balance 20% payment shall be released on issue of Prove Out Test Certificate (PTC) as per Annexure I of Section – VI against submission of WBG for 10 % of the value of contract (excluding CAMC charges) towards security for warranty period valid till 02 months beyond the expiry of warranty period.

8.2 **Payment for construction of Foundation, Installation, Testing, Commissioning and Proving out** – 80% on issue of Joint Commissioning Note as per Annexure – C of Section – VI by the consignee and Balance 20% on issue of Prove Out Test Certificate (PTC) as per Annexure I of Section – VI alongwith submission of WBG valid till 02 months beyond the expiry of warranty period.

Note: The supplier shall arrange certification by an RCC Consultant, who should be a Chartered Engineer registered with the Institution of Engineers, that: -

- a) The design of the machine foundation &
- b) Construction of the foundation is in accordance with the latest version of the relevant part of the Indian Standards for Code of Practice for design & construction of machine foundation as specified in IS:2974.

The original certificate issued by the consultant for certification of both the design & construction of the foundation and a copy of his registration certificate from the Institution of Engineers shall be submitted by the supplier to the consignee.

  
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