

TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

NAME OF THE ITEM	QUANTITY
HYDRAULIC PRESS BRAKE MACHINE	1

**1. INSTALLATION, COMMISSIONING AND TRAINING**

- 1.1. The ordered goods are required to be installed within 15 days of receipt of goods at final destination. Installation should be carried out only by expert engineers of Supplier / Manufacturer. During the course of installation, necessary training on operation and maintenance of the goods shall be imparted to Institute's Scientist / Engineers/Technicians.

**2. WARRANTY**

- 2.1. Comprehensive on-site warranty for **one year** must be provided to be effective from the date of completion of installation and commissioning and/or final acceptance of the items / equipment at the final destination. Further information about warranty is available in the detailed specifications of the equipment.

**QUALIFICATION CRITERIA**

BIDDER MUST BE THE ORIGINAL EQUIPMENT MANUFACTURER [OEM] OF THE EQUIPMENT BEING OFFERED BY THEM. NECESSARY DOCUMENTS IN THIS REGARD MUST BE FURNISHED BY THE BIDDER.

*( Accordingly, Para 1 of the Invitation For Bids / NIT stands amended to the extent mentioned above )*

**Hydraulic Press Brake Machine**

	Description	Specification of <b>Hydraulic Press Brake Machine with NC System (Axis X &amp; Y) compatibility</b>
1	Bending Capacity (plate of tensile strength of 45 Kg/mm <sup>2</sup> )	5 x 2500 mm 6 x 2000 mm <b>(Mention Std. machine model , Make with catalogue or website reference)</b>
2	Bending Force in KN	100 T or more
3	Hydraulic Pressure of the machine	Detail Calculation in support of Machine force calculation to be provided by OEM/Supplier
4	Bending Length:	2500mm or higher
5	Internal Radius of Bend	a) 02 mm for 2mm/3mm thickness and b) 05 mm for other thickness
6	Distance Between columns/ clear pass	2000mm or more
7	Stroke length	150mm or better
8	Day Light	300mm or better
9	Throat (Minimum)	200mm or more
10	Table Width	To be mentioned by Supplier
11	Approach/Working/Return Speed mm/sec	25/5/30 or Higher
12	Accuracy	<b>As per DIN 55222 Class I / IMTMA Equivalent</b>
13	Motor	All requisite ISI marked Electric motors of reputed makes Kirloskar / Siemens / ABB or Equivalent
14	X-Axis Back gauge Control	400mm or more
15	Y-Axis RAM Stroke Control	200 mm or more Adjustable Stroke Control
17	Machine Construction Materials	<ul style="list-style-type: none"> <li>• Hydraulic Seals: Simrit/Sambhen/Equivalent</li> <li>• Padings: Simrit/Sambhen/Equivalent</li> <li>• Hydraulic Pumps: Integral gear Pump (Bosch/Rexoroth/Atos/Voith/equivalent)</li> <li>• Hydraulic valves; Bosch/Rexoroth/Atos</li> <li>• PLC: Schinder/Siemens/Fuji</li> <li>• Electrical Elements: Siemens/L&amp;T/Schinder</li> </ul>
18	Safety & others	<ul style="list-style-type: none"> <li>• Rear Side Safety</li> <li>• Side Safety Guards</li> <li>• Emergency Switch on Foot Pedal</li> <li>• Emergency Switch</li> <li>• Technical Parameter/ Database.</li> <li>• Overload Limiter</li> <li>• Safety Package for Power Failure</li> <li>• Built in Alarm description</li> </ul>
19	ESSENTIAL ACCESSORIES	One set of hardened and ground ( ≈ 50- 55 HRc ) Multi V die & punch to suit from 1mm to 6 mm thick plate in appropriate steps. Punch and Die should be in segments of 835 mm and one segment should be together segmented in to 100 LH + 100RH+10+15+20+40+50+100+200+rest piece OR Suitably)

		<ul style="list-style-type: none"> <li>• Hardness and materials to be specified by Bidder</li> <li>• Schematic Drawing of offered tools to be provided</li> <li>• Front &amp; Rear Sheet Support</li> <li>• Manual Crowning System</li> <li>• Press Brake Die &amp; Punch Cabinet ( Storage)</li> <li>• Maintenance Tool Kit</li> </ul> <p>The OEM to provide catalogue / drawings of the items offered.</p>
20	PRE-DESPATCH INSPECTION	<p>Before inspection of the machine at OEM's works, bending of the Standard Test piece will be carried out by the OEM. All the tooling, work holding devices &amp; Standard test piece will be supplied by the OEM at free of cost for bending of generic components.</p> <ul style="list-style-type: none"> <li>• Machine Accuracy: as per DIN 55222 Class I / IMTMA Equivalent</li> <li>• Parallelity (Press Beam/Table ) : 50-200 Microns/ 2000mm</li> <li>• Perpendicularity (Press Beam/Table Stroke ) : 60-100 micron per 150mm</li> <li>• Angular Accuracy +/- 45 Minutes</li> <li>• Bow/camber +/- 2mm per 2000mm</li> </ul> <p><b><i>These are acceptance criteria along with bending capacity and bending force.</i></b></p>
21	INSTALLATION & COMMISSIONING OF THE MACHINE	<p>Installation, commissioning &amp; proving of the machine to its desired capacity and complete at Customer sites at Durgapur (West Bengal) and will be done by the OEM's engineer. Commissioning work including acceptance test/component trial will be carried out by the OEM's Expert.</p> <p>During commissioning at least 05 nos. Of different test pieces will be produced on the machine and test pieces will be inspected for dimensional tolerance, for components of size 5 x 2500 mm and 6 x 2000 mm for materials having tensile strength of 45 Kg/mm<sup>2</sup>.</p> <p>The commissioning will be treated as complete when we issue the certificate of acceptance. Installation, commissioning &amp; proving of the machine to its desired capacity and complete satisfaction</p>
22	TRAINING	<p>The OEM shall have to provide training exclusively for minimum five working days in the field of operation, maintenance (mechanical/hydraulic/electrical) etc.</p>
23	WARRANTY & SERVICE BACK UP	<p>The complete machine must have comprehensive onsite warranty 12 Months from the date of successful commissioning.</p> <p><b>Service Backup Undertaking from OEM in original to be Submitted by Supplier for Machine, Drives Motors and</b></p>

		<b>Power source to provide service for Minimum Five Years.</b>
24	DOCUMENTATION	Three sets of Hardcopies in English language and one set of soft copy in English language Programming, Operating and Maintenance manual. a) Mechanical b) Electrical c) Hydraulic
25	IMPORTANT Notes	<ul style="list-style-type: none"> <li>• Vendors should provide in the technical document compliance sheet against the specification of CSIR-CMERI.</li> <li>• Comments like yes, agreed, will be given at the time of supply, confirmed and will be completed ARE NOT ACCEPTABLE where numerical values are required to be quoted.</li> </ul>
26	Qualification Criteria	<p>a) The machine model being offered must be a standard latest model and available on Vendor Website.</p> <p>b) The offered machine should have NC Compatibility in X &amp; Y axis. (This Feature may be added at later stage). <b>An under taking in this regard (NC Compatibility) is required to be given by the OEM.</b></p> <p>c) The OEM Must have supplied at least 02 ( Two) numbers of similar offered Machines to any of the Govt. Agencies OR Reputed Private Limited Organisations (Including R&amp;D Institutes/ Educational Institutes of national repute) and which are working satisfactorily (<b>Documentary evidence must be submitted</b>). <b>Documentary Evidence Includes the Installation Certificate, Contact Persons name, address and Contact Details.</b></p>

