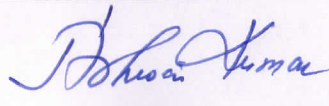



NC 2 Axis [X & Y - Axis] Hydraulic Press Brake Machine

	Description	Specification Indented By CMERI
1	Bending Capacity (plate of tensile strength of 45 Kg/mm ²)	6 x 2500 mm 8 x 1250 mm (Mention Std. machine model , Make with catalogue or website reference)
2	Bending Force in KN	1000KN(Minimum) or more
3	Hydraulic Pressure of the machine	Detail Calculation with Drawing of Piston / Cylinder in support of Machine force calculation to be provided by OEM/Supplier
4	Bending Length:	2500mm or higher
5	Internal Radius of Bend	11mm or less
6	Distance Between columns	2500mm or more
7	Stroke length	150mm or better
8	Day Light	350mm or better
9	Throat (Minimum)	250mm or more
10	Table Width	To be mentioned by Supplier
11	Approach/Working/Return Speed mm/sec (Higher Speeds may be quoted as optional)	30/5/60 or more
12	Accuracy	As per DIN 55222 Class I / IMTMA Equivalent <ul style="list-style-type: none"> ➤ Parallelity (Press Beam/Table) : 50-100 μ (Microns) / 2500mm ➤ Perpendicularity (Press Beam/Table Stroke) : 60-100 μ (micron) per 150mm ➤ Angular Accuracy +/- 45 Minutes ➤ Bow/camber +/- 2mm per 2500mm
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 With Hardened & Ground Ball Screw 4 Flip type fingers Back Gauge Accuracy +/- 0.1 mm AC Servo Driven Motors
15	Y-Axis RAM Stroke Control	200 mm or more Accuracy: +/- 0.05 mm or better

		Adjustable Stroke Control Optical/magnetic linear scale for Y-axis Y1-Y2 Beam Tilting Feature
16	TYPE OF CONTROL	<p>Reputed make of latest generation & Version Control system with following facility</p> <ul style="list-style-type: none"> • Direct Angle Programming • Angle Correction • Back Gauge Control and retraction • Tool Library • Pressure Control <p>MEMORY CAPACITY & SCREEN SIZE TO BE MENTIONED BY OEM. CONTROL system should equipped with air conditioning unit if required to operate in Environmental temperature ~ 50°C and humidity 95%.</p>
17	Machine Construction Materials	<ul style="list-style-type: none"> • Hydraulic Seals: Simrit/Sambhen/Equivalent • Padings: Simrit/Sambhen/Equivalent • Hydraulic Pumps: Integral gear Pump (Bosch/Rexoroth/Atos/Voith/equivalent) • Hydraulic valves; Bosch/Rexoroth/Atos • Timer Belt: Specify the Manufacturer • Ball Screw: THk /Hiwin • LM Guide: THk/Hiwin • A/C servo Motor: Schinder/Siemens/Fanuc/Fuji • PLC: Schinder/Siemens/Fuji • Electrical Elements: Siemens/L&T/Schinder • Optical Linear Scale: Hiedenhien/Givi/Equivalent
18	Safety & others	<ul style="list-style-type: none"> • Rear Side Safety • Side Safety Guards • Emergency Switch on Foot Pedal • Emergency Switch on Extreme Corner of Machine away from Controller • All Drives and movements should have over shooting limits • Technical Parameter/ Database. • Overload Limiter

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		<ul style="list-style-type: none"> • Safety Package for Power Failure • Built in Alarm description • Data Interface facility by USB for input output interface will be preferred if provided as std.
19	ESSENTIAL ACCESSORIES	<p>One set of hardened and ground (\approx 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)</p> <ul style="list-style-type: none"> • Hardness and materials to be specified by Bidder • Schematic Drawing of offered tools to be provided • Front & Rear Sheet Support • Manual Crowning System <p>The OEM to provide catalogue / drawings of the items offered.</p>
20	Optional	<ul style="list-style-type: none"> • Press Brake Die Cabinet • Tool Rack Cabinet • Maintenance Tool Kit (Minimum)
21	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 & 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"> • Machine Accuracy: as per DIN 55222 Class I / IMTMA Equivalent • Parallelity (Press Beam/Table) : 50-100 Microns/ 2500mm • Perpendicularity (Press Beam/Table Stroke) : 60-100 micron per 150mm • Angular Accuracy +/- 45 Minutes • Bow/camber +/- 2mm per 2500mm <p><i>These are acceptance criteria along with bending capacity and bending force.</i></p>
22	INSTALLATION & COMMISSIONING OF THE MACHINE	<p>Installation, commissioning & proving of the machine to its desired capacity and complete at Customer sites [One at Ludhiana (Punjab) and another 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</p>

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		<p>of size 6 x 2500 mm and 8 x 1250 mm for materials having tensile strength of 45 Kg/mm².</p> <p>The commissioning will be treated as complete when we issue the certificate of acceptance. Installation, commissioning & proving of the machine to its desired capacity and complete satisfaction</p>
23	TRAINING	The OEM shall have to provide training exclusively for minimum five working days in the field of programming, operation, maintenance (mechanical/hydraulic/electrical) etc.
24	WARRANTY & SERVICE BACK UP	<p>The complete machine must have comprehensive onsite warranty 12 Months from the date of successful commissioning.</p> <p>Service Backup Undertaking from OEM in original to be Submitted by Supplier for Machine, Drives Motors, Controller and Power source to provide service within Seven Days for Minimum Five Years.</p>
25	DOCUMENTATION	<p>Three sets of Hardcopies in English language and one set of soft copy in English language Programming, Operating and Maintenance manual.</p> <p>a) Mechanical b) Electrical c) Hydraulic 4) CNC System</p>
26	IMPORTANT Notes	<ul style="list-style-type: none"> • Vendors should provide in the technical document compliance sheet against the specification of CSIR-CMERI. • 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. • The machine model being offered must be a standard latest model. • The OEM Must have supplied at least 5 (Five) numbers of similar offered Machines to any of the Govt. Agencies (Including R&D Institutes/ Educational Institutes of national repute) and which are working satisfactorily (Documentary evidence must be submitted). Documentary Evidence Includes the Installation Certificate, Contact Persons name, address and Contact Details.

Dr. Anil Kumar *Agar*