


Revised 14/11/18

PLASMA CUTTING MACHINE		
TECHNICAL DATA : Complete integrated system of Power Source & CNC Gantry System		
S.No.	Technical Specifications	Value
1	Thickness Cutting (Pierce) Capacity	25mm for MS, 16 mm for SS
2	Working Width (cutting)	1400 mm
3	Working Length (cutting)	6000 mm
4	Z-axis CNC stroke	200 mm minimum (For Torch)  Optional Manual Lifting of Torch apart from programmable : 300 mm or more ( To accommodate the range 0 to 500 mm)
5	Job setting Facility	Laser Pointer
6	Automatic Height Controller with collision sensor	Must be Provided
7	Track for double-sided longitudinal drive system	Should be there
8	Energy supply with suitable Hose and cable Package via facilities drag chain	To be Provided
9	Digitally Micro-processor controlled Air Plasma Source with facility to use of Gas for SS & Al Cutting.	Digitally Micro-processor controlled Plasma Source <b>Make: Hypertherm / Kjellberg / ESAB / Thermal Dynamics / Lincoln</b> Input power: 440 V+10 % to -10%, 3 Phase, 50/60 Hz. Output current: 5-130 Amps. Or Suitable Duty Cycle: 130 Amps. or more @ 100% Max. OCV: 425 V or better Power Factor: 0.90 or better Fire Protection : IP23S
13	ACCURACY :	Axis positioning accuracy : $\pm 0.15\text{mm}/4\text{m}$ or better Repetitive accuracy : $\pm 0.2\text{mm}/5\text{m}$ or better Diagonal accuracy ; $\pm 0.3\text{mm}/4\text{m} \times 1.5\text{m}$ or better Cutting Accuracy Reference Standard : DIN EN ISO 9013
14	<b>CNC Controller (Including Air conditioner for Control Panel )</b>	<ul style="list-style-type: none"> <li>• Latest High End suitable Control system or any other internationally reputed systems,</li> <li>• The Controller must have all the facilities of inbuilt programming.</li> <li>• Data Interface facility by RS 232/RS 422 &amp; USB for input output interface</li> </ul>

  
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		<p>to be provided as standard.</p> <ul style="list-style-type: none"> <li>• Overload Limiter, Under voltage Monitoring &amp; Protection</li> <li>• Facilities of Graphic simulation of cutting process.</li> <li>• Data base files for automatic plasma process and control through CNC</li> <li>• The Controller must have all the facilities of inbuilt programming.</li> <li>• The control must have the facility for part programme transfer from an existing standard CAD/CAM system.</li> <li>• System memory = 512 MB or higher &amp; Hard disk Size: 10 GB or more</li> <li>• 15 inch or larger TFT/LCD screen with key Pad &amp; display in English language</li> <li>• Feed override facility.</li> <li>• <b>All the functions of different programming codes are to be opened to work. Locked and unlocked codes list must be supplied by the OEM.</b></li> <li>• Built in Alarm description</li> <li>• Programming in interactive &amp; ISO</li> <li>• Absolute &amp; incremental programming</li> <li>• Canned/macro programming cycle for regular shapes must be there.</li> <li>• Move, Rotate, Copy, Mirror, Co-ordinate rotation, Scaling - Cutting sequence of the parts within a nested plan</li> <li>• Cutting sequence within a part</li> <li>• Bridges, stitches, links - Common cuts</li> <li>• Gap between parts, lead length and position configurable according to process</li> <li>• Pre-selection of the machine, thickness and type of material.</li> </ul> <p><b>DISPLAY FEATURES :</b></p> <p>Machine position, Distance to go, PROGRESS line, Error message if any.</p>
15	<b>SAFETY FEATURES</b>	Collision safety, Protection against Over load. Emergency stop, Safety Package for Power Failure must be there.
16	Essential Items/accessory	<ol style="list-style-type: none"> <li>1. <b>Water Table 1500x3000 mm with Drawing</b></li> <li>2. Licensed Software Single-user program preparation &amp; Nesting Software</li> </ol>

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		<p>3. Isolation Transformer for Power Source with Specification</p> <p>4. UPS for CNC Gantry System with Specification</p> <p>5. Gas manifold</p> <p>6. Suitable Oxy-Acetylene Cutting Set Up for Gantry System including Torch and other Accessories.</p> <p>7. <b>Optional items if any required for smooth operation of machine not mentioned in the specification, OEM has to be mention it &amp; Quote for same as optional.</b></p>
17	PRE DESPATCH INSPECTION	Before inspection of the machine at OEM's works, 5 Test pieces 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. Test Pc Drawing Will be provided by CSIR-CMER-COEFM.
18	INSTALLATION & COMMISSIONING OF THE MACHINE	<p>Installation, commissioning &amp; proving of the machine to its desired capacity and complete at Customer site 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 5 nos. Of different thickness and materials test pieces will be produced on the machine and test pieces will be inspected for dimensional accuracy.</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>
19	TRAINING	The OEM shall have to provide onsite training to 3-5 persons exclusively for minimum seven working days in the field of programming, operation, maintenance (mechanical/hydraulic/electrical) etc.
20	WARRANTY & SERVICE BACK UP	<p>The complete machine must have comprehensive onsite warranty from the date of successful commissioning as per below period:</p> <p>Machine : 12 Months</p> <p>Controller &amp; Power Source : 24 Months</p> <p><b>Service Backup Undertaking from OEM in</b></p>

*J. D. L. K.*



		original to be Submitted by Supplier for Gantry System, Controller and Power source within Seven Days for Minimum Five Years.
21	DOCUMENTATION	Three sets of hardcopy in English language and one set of soft copy in English language Programming, Operating and Maintenance manual. Both for CNC System & Plasma Source. a) Mechanical b) Electrical
22	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> <li>• THE MACHINE MODEL BEING OFFERED MUST BE A STANDARD LATEST MODEL.</li> <li>• THE DATE OF DISPATCH SHOULD BE WITHIN ONE YEAR FROM DATE OF MANUFACTURING.</li> <li>• THE OEM MUST HAVE AT LEAST 05 INSTALLATIONS OF THE OFFERED SYSTEM IN INDIA (DOCUMENTARY EVIDENCE MUST BE SUBMITTED).</li> </ul>

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