

**TENDER SPECIFICATION OF CNC PLASMA AND FLAME METAL SHEET CUTTING MACHINE FOR
CSD ORGANISATION**

1. **Name of the Item.** CNC Plasma and Flame Metal Sheet Cutting Machine.
2. **Purpose.** The machine will be used in the Platter & Welding Workshop of BN Dockyard to automatically cut metal plates (marine grade mild steel, stainless steel, and aluminium) of various sizes and thicknesses.
3. **Quantity.** 1 (one).
4. **Manufacturer, Principal Supplier & Local Supplier.** Names and full address are to be mentioned in the following table.

Ser	Description	Remarks
a.	Brand/Manufacturer	To be mentioned
b.	Principal Supplier	To be mentioned
c.	Local Supplier	To be mentioned

5. **Year of the Manufacture.** 2024 or later. The item should be brand new and original.
6. **Country of Origin.** USA, UK, EU Countries, Canada, Japan, Australia, South Korea, Türkiye and New Zealand.
7. **Manufacturing Country.** Same as the Country of Origin.
8. **Certificate/Document of Authentication.** The local supplier must provide the following original certificate(s)/ document(s) with the offer/quotation of the item as regard to the authority of the source and item(s) to establish a chain of links from the source to supply:
 - a. One certificate/ document from the manufacturer in favour of the supplier (in the case of the manufacturer as the direct source).
 - b. Two certificates/ documents, one from the manufacturer to the authorised agent and the other from the authorised agent to the supplier (in case the authorised agent is the immediate source).
 - c. Three certificates/ documents, first one by the manufacturer to the authorised agent, second one by the authorised agent to the sub-agent and third one by the sub-agent to the supplier (in case of the sub-agent as immediate source). If the supplier cannot obtain the first certificate (by the manufacturer to an authorised agent), then relevant documents to prove the agency-ship of its claimed agent of the recognised manufacturer must be produced.
9. **Standard.** The CNC Plasma and Flame Metal Sheet Cutting Machine is to be designed and constructed according to international standards. The standard to which the quoted CNC Plasma and Flame Metal Sheet Cutting Machine complies is to be specified in detail (ISO/ABS/BV/LR/DNV/KR or any other equivalent global standard).



10. **Ambient Condition.**

Ser	Description	Remarks
a.	Air Temperature	5°C to 45°C
b.	Relative humidity	Up to 95%
c.	Location	Close to the seashore

11. **Scope of Supply.** The scope of supply includes the following:

- a. 01 x CNC Plasma and Flame Metal Sheet Cutting Machine with all items necessary for immediate operation without the requirement of any other items (attachments, accessories, consumables, etc) (as per paragraphs 12 to 14).
- b. Optional items (as per paragraph 15).
- c. Tools and special tools (as per paragraphs 16 and 17).
- d. Spare Parts (as per paragraph 18).
- e. Documents and certificates (as per paragraphs 19 and 20).
- f. Installation, Test/Trial, Acceptance and Training (as per paragraphs 21 to 22).
- g. Warranty and Guarantee (as per paragraphs 23 and 24).
- h. Any other issue relevant (if any).

12. **Technical and Operational Data.** Detail technical and operational data of the CNC Plasma and Flame Metal Sheet Cutting Machine are to be provided as follows:a. **General.**

Ser	Description	
(1)	Type	CNC Plasma and Flame Metal Sheet Cutting Machine
(2)	Brand	To be mentioned
(3)	Model	To be mentioned
(4)	CNC Carriage for Plasma and Flame Torches	The CNC-controlled carriage shall be fitted with 01 x Plasma cutting torch and 01 x Flame cutting torch
(5)	Cutting Medium	Plasma and Flame (Acetylene, LPG and CNG)
(6)	Effective Cutting Length and Width	The effective cutting length and width of the metal sheet will be not less than 6 m x 1.5m. (LXW)
(7)	Rail's Length and Width	To be mentioned
(8)	Size of Cutting Table	To be mentioned (fume extractor is not required)
(9)	Structure and Linear Guideway	Rigid metal structure and smooth linear guideway (detail to be provided)
(10)	Power supply	400V (±10%), 50 Hz, 3 phase



Ser	Description	
(11)	Power supply unit	If there is any requirement for a separate Power supply unit (PSU) or any Transformer/converter/stabilizer unit, all such requirements are to be clearly mentioned in the offer and must be included in the quoted price
(12)	Rated power	To be mentioned
(13)	Electrical attachments	All necessary electrical accessories e.g. automatic speed control via frequency converter, starter, overload protection contactors, relays, On/ Off control, etc, to be provided
(14)	Protection from dry running, overload and overheating	To be mentioned
(15)	Positioning accuracy	±0.5 mm (Maximum)
(16)	Positioning speed	10 m/minute (Minimum)
(17)	Monitor	10 inch (minimum) color touch screen with keyboard and USB / HDMI port (for input)
(18)	UPS	One UPS of appropriate power rating
(19)	Plasma System	
	a. Brand of Plasma power pack	Hyperthermia/equivalent (To be mentioned)
	b. Model	To be mentioned
	c. Cutting thickness	3 mm to 50 mm for MS
	d. Cutting thickness	3 mm to 25 mm for SS and Aluminum
	e. Cutting speed	To be mentioned
	f. Number of Plasma cutting torch	01
	g. Cooling System	Air cooled preferred (to be mentioned)
(20)	Rated Input Capacity	25 KVA (approximately)
(21)	Dimensions	To be mentioned
(22)	Cutting Power Source	
	a. Input Voltage	220V
	b. Rated frequency	50 Hz
	c. Phase	Single phase
	d. Rated duty cycle	60-80%
(23)	Cutting Torch	
	a. Rated current	120-130A (approximately)
	b. Rated duty cycle	60-80%
	c. Cooling System	To be mentioned
	d. Cable Length	30 to 50 meters
	e. Gas to be used	Compressed Air
	f. Shape of the cutting torch	Straight type (long handle-short handle)

b. **Arrangement/option of safety and protection of torch:** To be mentioned.



c. **Air Compressor with Air Reservoir.**

Ser	Description	
(1)	Brand	Ingersoll/ equivalent (To be mentioned).
(2)	Model	To be mentioned
(3)	Manufacturer	To be mentioned
(4)	Air delivery pressure and FAD	To be mentioned (to be sufficient for the machine's smooth operation)
(5)	Storage capacity	Pressurized air storage tank with sufficient smooth operation of the machine (to be mentioned).
(6)	Cooling System	Air-cooled
(7)	Accessories	Standard accessories and tools for normal operation, along with at least two complete sets of extra air filters, are to be provided.

d. **Flame Cutting System.**

Ser	Description	
(1)	Brand	To be mentioned (Brand of special accessories/auxiliaries like Gas Console, Pressure Regulator, Ignition system, Torch, Height Controller, Gas panel, etc. are to be mentioned separately).
(2)	Model	To be mentioned
(3)	Maker	To be mentioned
(4)	Cutting gas	Acetylene, LPG and CNG.
(5)	Cutting thickness	3 mm to 100 mm.
(6)	Cutting speed	To be mentioned.
(7)	Number of the flame cutting torch	01

e. **Nesting Software.** Fast CAM Pro/ Hypertherm Turbonest/ Hypertherm ProNest/ SigmaNest or any other (to be mentioned) with license.

13. **Standard Accessories.** Standard accessories must include all items and accessories essential to operating the CNC Plasma and Flame Metal Sheet Cutting Machine, whether mentioned in the specification or not. The price of standard accessories is to be included in the FOB value. However, an itemised price list of standard accessories is to be provided with the offer for reference value only.

14. **Cables.** Standard electric cables are to be supplied with the main equipment during installation without additional cost.

15. **Optional Items.** The quotation should include a list of optional items (if any) required to operate the CNC Plasma and Flame Metal Sheet Cutting Machine. When evaluating the comparative prices of the suppliers, only the prices of selected items by BN will be added to the total price.



16. **Standard Tools.** 1 (one) set of standard tools for maintenance of the CNC Plasma and Flame Metal Sheet Cutting Machine is to be provided. The price of standard accessories is to be included in the FOB value. However, an itemised price list of standard tools is to be provided with the offer for reference value only.

17. **Special Tools.** A recommended list of special tools required for maintaining the CNC Plasma and Flame Metal Sheet Cutting Machine is to be submitted with the quotation indicating the itemised price. That price will be added to the total price while evaluating the comparative price of the suppliers

18. **Spare Parts.** A recommended list of spare parts required for 5 (five) years of satisfactory operation must be provided, indicating the itemised price. Only the prices of selected items by BN will be added to the total price while evaluating the comparative price of the suppliers. The list must include the following:

Ser	Description	Remarks
1.	Hand gloves	5 pairs
2.	Plasma torch cable	2 sets
3.	Air Regulator	2 pieces
4.	Welding Respirators	20 pieces
5.	Goggles	3 pieces
6.	Nose musk	6 pieces

19. **Documents/Manuals.** 2 (Two) sets of the following documents in English are to be provided with CNC Plasma and Flame Metal Sheet Cutting Machine (free of cost):

Ser	Description
a.	Operation and Maintenance manual.
b.	Parts catalogue.
c.	Performance/ test certificate.

20. **Quality Assurance Certificate.** Type Approval Certificate and Quality Assurance Certificate in respect of the associated equipment are to be provided at the time of delivery of the items

21. **Installation, Test, Trial and Acceptance.** The buyer will perform installation, tests and trials of the item at Chattogram in the presence of the supplier's representative. After a satisfactory test and trial, an acceptance certificate will be signed jointly by the supplier's and buyer's representatives.

22. **Training.** The supplier/maker's installation engineer will provide operation and maintenance training in Bangladesh to the operators for 5 (five) days after the CNC Plasma and Flame Metal Sheet Cutting Machine is tested, trialled and commissioned. The bidder will quote the cost of training separately in their financial offer. The supplier will bear the cost of the trainers' air ticket, internal transportation, accommodation, food, medical support, etc.

23. **Warranty.** The principal/maker will give a warranty for trouble-free operation for at least 1 (one) year from the date of acceptance by the buyer. During the warranty period, if the CNC Plasma and Flame Metal Sheet Cutting Machine remains non-operational due to any action



pending by the supplier, the warranty will be extended for the same period. The warranty covers all parts and labour (including the cost of the service engineer) throughout the warranty period.

24. **Guarantee.** The manufacturer will guarantee to supply the spare parts for at least 5 (five) years at a reasonable price. The annual increase in the price of spares should not be more than 5% of the price list provided with the quotation.

25. **Shipment.**

- a. The supplier will arrange the shipment of all items by sea to Chittagong Port, Bangladesh.
- b. All items are to be delivered in sea-worthy packing to ensure safe transportation by sea.
- c. All packages must have detailed packing notes showing their contents, and they must be marked with the consignee's name, address, and gross weight.
- d. The supplier will arrange transportation of all supplied items from Chittagong port to the NSD Chattogram.
- e. **Port of Shipment.** Any port of the manufacturing country. In case of shipment through any port of the manufacturer's authorised dealer, the relevant manufacturer's certificate is to be provided as proof of the genuineness of the offered item.

26. **Delivery.**

- a. The items are to be delivered within **9 (Nine) months** from the date of signing the contract to the following consignee:

The Commanding Officer
Naval Stores Depot Chattogram
New Mooring, Chattogram, Bangladesh

- b. The supplier will carry the items from Chittagong Port to NSD Chattogram at the cost and risk of the supplier.
- c. **Place of Delivery.** NSD Chattogram.

27. **Validity of Offer.** The offer should remain valid till 180 days from the date of tender opening.

28. **Currency.** Foreign Currency.

29. **Terms of Payment.** L/C for full purchase amount will be opened in favour of the principal supplier under the following payment terms:

- a. 80% of the total CFR value will be paid on delivery of the items described under the scope of supply and on production of necessary shipping documents.




b. The remaining 20% of the CFR value will be paid upon producing an 'Acceptance Certificate' after a satisfactory test and trial jointly carried out by the buyer's and supplier's representatives.


30. **Condition for Acceptance of Quotation.** The quotation has to have supporting documents (booklets, leaflets, catalogues, brochures, etc.) with details about the CNC Plasma and Flame Metal Sheet Cutting Machine. The quotation will not be accepted if detailed information regarding specifications, maker's books and catalogue for the quoted model of the CNC Plasma and Flame Metal Sheet Cutting Machine, spare parts, accessories, scope of supply, etc, are not provided.

31. **Compliance Statement.** A compliance statement fulfilling all the tender requirements is to be submitted with the offer to evaluate the quotations. Merely stating 'Yes' or 'No' will not suffice; rather, detailed descriptions/information as required are to be provided. An incomplete compliance statement may contribute to the cancellation of the offer. If any clause of this specification is not commensurate with the offered CNC Plasma and Flame Metal Sheet Cutting Machine, the deviation must be spelt out clearly.


RAFIQUL ISLAM
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Member/Secy
Date: 14/08/24

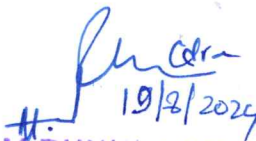

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Member
Date:


14.08.24
KAISER MAHMUD
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Member
Date:


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DNAI&S
Member
A.K.M. IKRAMUL HOSSAIN
Captain BN
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Naval Headquarters
Banani, Dhaka-1213
Date: 18-08-24


A H M RAFIQUL ISLAM
Commodore BN
Director of Naval Engineering
Naval Headquarters
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19/8/2024
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