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**TENDER SPECIFICATION OF UNIVERSAL MILLING MACHINE**

1. **Name of the Equipment.** Universal Milling Machine.
2. **Purpose.** Universal Milling Machine will be used in the dockyard to fabricate/ repair various parts of ship's machinery, vehicle accessories etc. The machine will be able to cut various type of gear, groove, key, key way, hexagonal, square, slid, slot, surface, drilling, boring, etc.
3. **Quantity.** 01 (one) in number.
4. **Manufacturer, Principal Supplier & Local Agent.** Names and full addresses are to be mentioned in the following table.

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

5. **Year of Manufacture.** 2025 or later. The item should be brand new and original.
6. **Country of Origin.** USA, UK, EU Countries, Switzerland, Norway, Canada, Japan, Australia, South Korea, Turkiye (Turkey) and New Zealand.
7. **Manufacturing Country.** USA, UK, EU Countries, Switzerland, Norway, Canada, Japan, Australia, South Korea, Turkiye (Turkey) and New Zealand.
8. **Certificate/Document of Authentication.** The local agent must provide following certificate(s)/ document(s) with the offer/quotation as regard to the genuineness of source and item(s) in order to establish chain of links from the original source to supply:
  - a. One certificate/document by the manufacturer in favour of the supplier (in case of manufacturer as direct source).
  - b. Two certificates/documents, one by the manufacturer to authorized agent and other by the authorized agent to supplier (in case of authorized agent as immediate source).
  - c. Three certificates/documents, first one by the manufacturer to authorized agent, second one by authorized agent to sub-agent and third one by sub-agent to supplier (in case sub-agent as immediate source). If the supplier is unable to obtain the first certificate (by manufacturer to authorized agent), then it has to produce relevant document to prove agency-ship of its claimed agent of the recognized manufacturer.
9. **Standard.** The Universal Milling Machine is to be designed and constructed fulfilling the requirement of international standard. The standard to which the quoted Universal Milling Machine complies with is to be specified (ISO or similar).
10. **Operating Environment of Machine.** The environment under which the machine will be operated and their performances will be measured is as under:

1.	Air temperature	+05°C to +45°C.
2.	Relative humidity	Up to 95% (non-condensing)
3.	Location	Close to the sea



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11. **Scope of Supply.** The scope of supply is to include the followings:

- a. Main item (01 x Universal Milling Machine) complete with all items necessary for immediate operation without the requirement of any other items (attachments, accessories, consumables, etc) (as per paragraph 12 and 14).
- b. Optional items (as per paragraph 15) (as selected by BN).
- c. Cutting Tools & Special tools (as per paragraph 16 & 17).
- d. Spare Parts (as per paragraph 18).
- e. Document and certificates (as per paragraph 19 and 20).
- f. Installation, Test/ trial & acceptance and Training (as per paragraph 21, 22 and 23).
- g. FAT and PSI (as per paragraph 24)
- h. Warranty (as per paragraph 25).
- j. Any other issue relevant (if any).

12. **Technical Specification.**

a. **General Data.**

(1)	Type	Universal Milling Machine
(2)	Brand	To be mentioned
(3)	Model	To be mentioned
(4)	Table Size (LxB)	Length: 1600-1900 mm Breadth: 350-450 mm
(5)	Table Swivel Deg +/-	45 Degree
(6)	X-Longitudinal Travel	1200 mm – 1550 mm
(7)	Y-Cross Travel	350 mm – 450 mm
(8)	Z- Vertical Travers	450 mm – 600 mm
(9)	T-slot	3-5 slots, 12-18 mm width, 50-80 mm spacing (To be mentioned)

b. **Spindle Specification.**

(1)	Spindle taper	ISO 40, ISO 50, NT 40, NT 50 (To be mentioned)
(2)	Spindle speed range	30-1800 RPM (variable or step)
(3)	No. of Speed steps(RPM)	8 to 18 (depending on model)
(4)	Spindle motor power	5-10 HP (To be mentioned)
(5)	Swivel angle of spindle head Deg +/-	±45 Degree (To be mentioned)

c. **Feed and Rapid Traverse.**

(1)	Feed rate	To be mentioned
(2)	Rapid traverse speed	To be mentioned





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(3)	Automatic feed	Available in longitudinal, cross and vertical directions
(4)	Feed motor	3-5 HP (To be mentioned)

d. **Other Features.**

(1)	Overarm	Adjustable (for horizontal milling)
(2)	Arbor Diameter	25 mm to 40 mm (To be mentioned)
(3)	Table load capacity	Minimum 1100 kg
(4)	Coolant System	To be mentioned
(5)	Coolant Motor	0.1-0.3 HP (To be mentioned)
(6)	Electrical Power Source	400 V AC, 50Hz, 3 phase

e. **Dimensions.**

(1)	(1) Overall length (mm)	Max. 2500 (Approx) To be mentioned.
(2)	(2) Overall height (mm)	Max. 2400 (Approx) To be mentioned.
(3)	(3) Overall breadth (mm)	Max. 2500 (Approx) To be mentioned.
(4)	Total weight of the machine with standard accessories (kg)	To be mentioned.

f. **Working Area.**

(1)	(1) Length (mm)	To be mentioned.
(2)	(2) Height (mm)	To be mentioned.
(3)	(3) Breadth (mm)	To be mentioned.

13. **Safety Devices.** All required safety devices as per standard Classification Society including (but not limited to) following should be incorporated with the machine:

- (1) Overload safety device.
- (2) Short circuit protection.
- (3) Chips guard.
- (4) Low lubrication oil pressure cut out.
- (5) During operation of the machine if any of the gears is not properly engaged, the automatic system will prevent motion.

14. **Standard Accessories.** The list of standard accessories must include all items and accessories which are essential to operate the Universal Milling Machine, whether those are mentioned in the specification or not are also to be submitted. 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. The list should include the following:

Ser	Name of Items
a.	Digital Read Out System (DRO)
b.	Coolant system with electric coolant pump
c.	Working LED lamp
d.	Tool and tool box
e.	Foundation bolt kit
f.	Central auto lubrication system
g.	Chips tray
h.	Circuit breaker(necessary range) for connection with machine's cable

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j.	The work table should rotate $\pm 45^\circ$ and apply to automatic and rapid feed
k.	Voltage converter (If required)
l.	01 x Vertical attachment
m.	01 x Slotting attachment
n.	01 x Universal dividing head
p.	01 x Universal vice (Swivel & tilting included)
q.	01 x Rack cutting attachment
r.	01 x Rotary table (Size: 12 inch)
s.	03 x Indexing Plates (Standard size)

15. **Optional Items.** The quotation should include a list of optional items (if any) required to operate the Universal Milling 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. **Cutting Tools.** The bidder will supply complete package including all types of gear cutter. A list of module gear cutter and end mill cutter, whether those are mentioned in the specification or not are also to be submitted. The price of cutting tools 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. The list should include the following:

a. **Gear Module Cutter.**

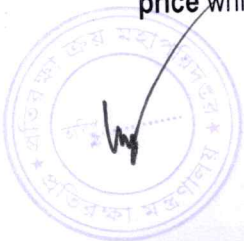
Set No	Module No	Cutter No	Qty (pcs)
Set no-01	M-11	#1 to #8	08
Set no-02	M-12	#1 to #8	08
Set no-03	M-13	#1 to #8	08
Set no-04	M-14	#1 to #8	08
Set no-05	M-15	#1 to #8	08

b. **End Mill Cutter.**

Ser	Cutting edge outer diameter	Qty (Pcs)
1	10 mm	06
2	12 mm	06
3	14 mm	06
4	16 mm	06
5	18 mm	04
6	20 mm	04
7	25 mm	06
8	30 mm	04
9	32 mm	04
10	36 mm	04

17. **Special Tools.** A recommended list of special tools (if required) for carrying out maintenance of the Universal Milling 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.** Following spare parts are to be provided with the Universal Milling Machine. List of spare parts is to be mentioned in the quotation with item wise price. The **prices will be added to the total price** while evaluating the comparative price of the bidders. The list should include the following:





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S No	Description	Qty
a.	Clamping kit	01 Set
b.	Cam Ring	01 Pcs
c.	Belt	01 Set
d.	Machine Lamp	01 Pcs
e.	Rotary Switch	01 Pcs
f.	Collets	01 Set
g.	Power Feeder	01 Set

19. **Documents.** 02 (two) sets of following documents in English language are to be supplied with the machine:

- a. The instruction manual includes technical specifications, installation, operation, and maintenance.
- b. Spare parts catalog and its components.
- c. Factory test certificate/performance certificate.

20. **Quality Assurance Certificate.** Quality assurance certificate in respect of the associated equipment in regards to its manufacturing and performance is to be provided at the time of delivery of the items.

21. **Installation.** The item will be installed at BN Dockyard (Machine Shop) by the supplier in presence of the representative of the buyer. All necessary installation materials are to be supplied with the complete set without additional cost.

22. **Test/ Trial and Acceptance.** The supplier will carry out test and trial of the Universal Milling Machine in presence of buyer's representative. After satisfactory test, trial and necessary training programme, an acceptance certificate will be signed jointly by the supplier's representative and the representative of buyer.

23. **Training.** The manufacturer's/supplier's installation engineer will provide operation and maintenance training in Bangladesh to 05 (Five) operators for 02 (Two) days after test, trial and commissioning of the Universal Milling Machine. Cost of training is to be borne by the supplier.

24. **Pre-Shipment Inspection (PSI) and Factory Acceptance Test (FAT).**

a. Pre-shipment Inspection (PSI) and Factory Acceptance Test (FAT) will be carried out by 03 (Three) BN officers for 03 (Three) days, excluding the journey period, at the buyer's expense. The supplier should inform the buyer about the date and schedule of PSI and FAT at least 8 (eight) weeks before the commencement of the said PSI and FAT. After inspection, a joint inspection report will be prepared and signed by both the seller and buyer's representatives.

b. On return from the country of supplier, the BN officers will submit a report to DNE. DNE, through DTS, will, in turn, forward the final decision along with the PSI and FAT report within 02 weeks, based on which DGDP will render clearance for the shipment of stores to the supplier concerned. The supplier will not ship any item of the contract without clearance from the DGDP.

c. All types of movement/ transportation (air, sea, road, rail) of the BN officers within the manufacturer/ supplier's country, reception and arrangement for entry into the country/ concerned area for the PSI and FAT are to be borne by the supplier

25. **Warranty.** Warranty for trouble free operation is to be given by the supplier/ manufacturer for all the supplied items for a period of 12 months from the date of acceptance by the buyer. During the warranty period, if the Universal Milling Machine remains non-operational for any action pending by the supplier, the warranty





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period will be extended for the same period. The warranty covers all parts and labour (including service engineer's cost) throughout the warranty period. For warranty repair/ replacement, the supplier will collect the defective item from NSD Chattogram/ NSSD Dhaka (as applicable) and re-supply the same to collecting place after warranty repair or for replacement.

26. **Guarantee.** The manufacturer will guarantee to supply the spares for at least 10 years at reasonable price. Yearly increase of price of spares should not be more than 5% of the price provided in the quotation.

27. **Shipment.** The following information is to be provided (if applicable):

a. The supplier will arrange shipment of all items by sea port/ air port to Chittagong/ Dhaka, Bangladesh.

b. All items are to be delivered in sea-worthy packing to ensure safe transportation by sea/ air.

c. All packages are to have packing notes showing their contents in details and all packages shall be marked with the name and address of the consignee and gross weight.

d. The supplier will arrange transportation of all supplied items from Chittagong port/ Dhaka air 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.

28. **Delivery.**

a. The items are to be delivered within **09 (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. **Place of Delivery.** NSD Chattogram.

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

30. **Currency.** Foreign Currency.

31. **Terms of Payment.** L/C for the 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.

32. **Condition for Acceptance of Quotation.** Quotation has to have supporting documents (booklets, leaflet, catalogue, brochure etc) having detailed particulars of the offered Universal Milling Machine. If detailed information regarding specifications, maker's books and catalogue about the same model of Universal Milling Machine quoted, spare parts, accessories, scope of supply, etc are not provided, the quotation will not be accepted.

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33. **Compliance Statement.** A compliance statement fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes' or 'No' will not suffice and detailed description/information as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered Universal Milling Machine, the deviation has to be spelt out clearly.

**Enclosure:**

1. Figure of Universal Milling Machine - 01 (One) page.



SAMPLE UNIVERSAL MILLING MACHINE

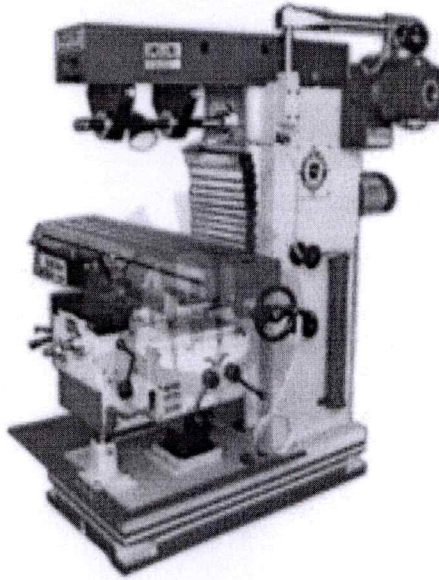


Fig: Universal Milling Machine  
(Not as reference, for general idea only)

