

DETAILS OF METAL TUBE MANUFACTURING MACHINE & METAL TUBE LOADING / FILLING MACHINE

Name of Machine	Specification	A/U	Qty																																																																																
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Required raw materials for 1,00,000 numbers trial production will be provided by supplier. Separate price offer to be submitted by supplier. Following information must be given as under :</p> <table border="1"> <thead> <tr> <th>Ser</th> <th>Training</th> <th>Details</th> <th>Supplier's Opinion</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td rowspan="3">Local Training</td> <td>Trainer Type (Local/ Foreign)</td> <td></td> </tr> <tr> <td></td> <td>Number of Trainer</td> <td></td> </tr> <tr> <td></td> <td>Training Schedule</td> <td></td> </tr> </tbody> </table> </td> </tr> </table>	1.	Specification of the Machine	-	a.	Press capacity	To be mentioned	b.	Stroke	To be mentioned (stroke must be adjustable)	c.	Raw material to be used for metal tube	Copper & Aluminium (drawable)	d.	Maximum drawable length of metal tube	105 mm or To be mentioned (drawing attached).	e.	Number of strokes/min	Minimum 90 or To be mentioned	f.	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	<p>g. Supplier must submit local training plan along with the offer.</p> <p>h. Required tools, gauge & die-punch for 2.5 million numbers metal tube production should be supplied along with the machine.</p> <p>j. Separate list with price of tools, gauge & die-punch for 2.5 million numbers metal tube production to be submitted with the offer.</p> <p>k. Required gauges for metal tube (including length, outer and inner gauge) for 2.5 million to be supplied with the machine.</p> <p>l. The machine should have periodical calibration facilities.</p> <p>m. Necessary support of heat and surface treatment will be given by BOF. Supplier should provided heat and surface treatment procedure.</p>		
7.	Conditions:		
	a. Following documents should be provided along with the offer:		
	(1) Separate price offer for machine with required standard attachments, accessories, hand tools, standard control unit & PLC based software or latest version software.		
	(2) 01 (one) spare set of PLC, cards, sensors and other related items should be supplied with the machine and separate price list should be provided along with the offer.		
	(3) List of standard and optional attachment, accessories and hand tools.		
	(4) The manufacturer's name and address must be mentioned in the offer if the principal/firm is a Trading House/General Order Supplier.		
	(5) Certificate of assurance of appointed dealer from original manufacturer along with dealership certificate for supply of offered stores is to be provided, if the principal is a Trading House/General Order Supplier.		
	(6) Certificate of authority by the principal about appointment of local agent with the authority of signing the contract on behalf of principal should be provided with the offer.		
	(7) Brochure/Leaflet of the machine and other accessories should be provided.		
	(8) List of vendor items (if any) should be provided.		
	(9) Separate price offers for each optional attachment, accessories, spares and the items mentioned in the indent should be provided.		
	(10) First-moving spare parts for the machine should be provided with machine and list including price should be submitted by the bidder with the offer.		
	(11) Detail specification of all mechanical, electrical and electronic components should be provided.		
	b. Following documents should be provided along with the machine:		
	(1) 02 copies operation, program, repair and maintenance manual (must contains electrical, electronics, control and hydraulic cum pneumatic diagram) in English (hard and soft copy) will have to provide along with the machine.		
	(2) Soft and hard copy of machine software with upload and download procedure should be provided with the machine.		
	(3) Software and firmware with necessary cable to be provided for future use in the new PLC and HMI.		
	8. Training should include following subjects:		
	a. Operational training:		
	(1) Basic machine operation, familiar with different parts with their functions.		
	(2) Production related all data entry and related know-how.		
	(3) Basic trouble shooting with safety/security related matters.		
	b. Technical and maintenance training:		
	(1) Operation of mechanical, hydraulic, pneumatic, electrical and electronics system.		
	(2) Control system with PLC and HMI.		
	(3) Program loading, unloading in the existing PLC/HMI and future PLC/HMI if needed.		
	c. Cost of lodge & food for the supplier's expert during the time of training should be mentioned in the offer.		
	d. Civil work for necessary foundation of machine will be done by BOF with the technical assistance of machine supplier. Installation and trial run should be done by the supplier within 30 days after acceptance the machine by BOF.		
	9. Warranty/guarantee :		
	a. Warranty/guarantee for 01 (one) year after acceptance to be provided by the manufacturer for replacement of defective/faulty parts or any break down of the machine during warranty/guarantee period operation at free of cost.		
	b. Five years warranty will have to be provided by the manufacturer for ensuring the supply of spare parts with escalation increment of price per year.		
	10. Other Condition :		
	a. All bidders (Foreign/Local) need to give presentation on technical and financial matters at BOF.		

(a)	(b)	(c)	(d)
Metal Tube Loading / Filling Machine	Metal tube loading / filling machine with all standard attachment and accessories (PLC based or Mechanically automated) :	No	01 (One)
1.	Specification of the Machine		
a.	External diameter of tube	5 mm to 9 mm	
b.	Internal diameter of tube	As per attached drawing	
c.	Tube Length	38 mm to 91 mm	
d.	Production Rate (5 steps filling)	Complete filling of 600 tube/hour or To be mentioned	
e.	Rotating speed	To be mentioned	
f.	Number of parts per cycle	To be mentioned	
g.	Number of work stations	To be mentioned	
h.	Electrical power supply	To be mentioned	
j.	Electrical protection grade	To be mentioned	
k.	Compressed air supply	6 bars (Pneumatic system)	
l.	Working temperature range	21 ^o C ± 5 ^o C or To be mentioned	
m.	Powder/Chemical Mixture	Mixture of high & low explosives (4 press/number of press ot be metioned)	
n.	Type of Sealing	Two layers of sealing by tin foil & center hole copper washer/To be mentioned	
p.	Accuracy of powder level inspection	± 0.1 mm or To be mentioned	
q.	Accuracy of powder dosing	To be mentioned	
r.	Volume of powder dosing	To be mentioned	
s.	Max compression strength per station	To be mentioned	
t.	Noise level	Max 85 dB(A) or standard	
u.	Overall dimensions (LxWxH)	To be mentioned	
2.	Country of Origin	Group B	
3.	Country of Manufacturing & Assembly	Country of origin	
4.	Country of Main Component	Country of origin	
5.	Country of Shipment	Country of origin	
6.	Conditions		
a.	The following manuals to be provided:		
	(1) Operator/User manual.		
	(2) Operation, Repair and Maintenance manual.		
	(3) Diagram of Mechanical, Electrical, Pneumatic and Electronics system used in the machine to be included in the manual in details.		
	(4) Parts Catalogue.		
b.	Year of manufacturing of machine should not be before the year of signing the contract. The year should be embossed in the main body.		
c.	Components to be fed automatically.		
d.	The supplied machine should be capable of loading/filling of detonation explosive into metal tube as per attached sample.		
e.	The machine should have proper safety and security for explosion.		
f.	Installation, trial run, operation and maintenance training (07 working days) is to be provided by the supplier at BOF site. Also trial production of tube loading/filling of at least 1,00,000 nos (as per sample) at BOF site should be given by the machine supplier. Required raw materials for 1,00,000 nos trial production will be provided by BOF. Following information must be given as under :		
	Ser	Training	Supplier's Opinion
	a.	Local Training	
		Trainer Type (Local/ Foreign)	
		Number of Trainer	
		Training Schedule	

(a)	(b)	(c)	(d)
	<p>g. Supplier must submit local training plan along with the offer.</p> <p>h. Required tools, gauge & die-punch for 2.5 million production should be supplied along with the machine.</p> <p>j. Separate list with price of tools, gauge & die-punch for 2.5 million production to be submitted with the offer.</p> <p>k. The machine should have minimum 5-steps pressing capacity. Quantity of powder/chemical and pressing length should be as per the requirement of user.</p> <p>l. Machine should have the capability of auto acceptance and auto rejection.</p> <p>m. The machine should be compatible of filling Mercury Fulminate base explosive or to be mentioned separately (if other type of filling used).</p>		
7.	Conditions:		
	a. Following documents should be provided along with the offer:		
	(1) Separate price offer for machine with required standard attachments, accessories, hand tools, standard control unit & PLC based software or latest version software.		
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	c. Cost of lodge & food for the supplier's expert during the time of training should be mentioned in the offer.		
	d. Civil work for necessary foundation of machine will be done by BOF with the technical assistance of machine supplier. Installation and trial run should be done by the supplier within 30 days after acceptance the machine by BOF.		
9.	Warranty/guarantee :		
	a. Warranty/guarantee for 01 (one) year after acceptance to be provided by the manufacturer for replacement of defective/faulty parts or any break down of the machine during warranty/guarantee period operation at free of cost.		
	b. Five years warranty will have to be provided by the manufacturer for ensuring the supply of spare parts with escalation increment of price per year.		

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N.B.

1. **02 machines should be procured as a package.**

Terms & Conditions

Supplier must mention their compliance on the following mentioned points :

1. A principal/manufacturer can submit **only one offer through one local agent** for any individual item. Offers through multiple local agents by same principle/manufacturer will be **treated as rejected**.
2. To ensure unhindered LC handling the principal must provide a certificate to confirm that their LC operating bank has RMA (Relationship Management Agreement) with the local Banks of Bangladesh.
3. Supplier must **clearly mention** (in the technical offer) that as principal/manufacturer they poses necessary **export permit** from the concern ministry or any other authority of their country. They must also submit a certificate in this regards as per the attached specimen format at Annex F.
4. Before signing the contract, Performance Guarantee @ 10% of total LC value is to be submitted by the Principal in favour of Commandant, Bangladesh Ordnance Factories, Gazipur Cantonment, Gazipur through any scheduled Bank located in Bangladesh (As per the format at Annex D).
5. A separate **certificate should be provided** by the principal **originally signed** (Computerized or digitally edited signature will not be accepted) stating that they are aware of the requirement of the PG and if the contract is awarded they will be bound to provide the PG as per the format at Annex E.
6. The stores should be supplied to BOF at **supplier's cost**.
7. On arrival of the stores at BOF, the supplier must complete installation, commissioning, trial run & trial production within 01(one) month (from the date of entry at BOF). Otherwise, penalty will be imposed at the rate of 2% but not less than 1% and will not exceed 10% of the total CFR/LC vale (As applicable).
8. If the supplier fails to deliver the stores within the stipulated period, the followings will be applicable:
 - a. Cancel the contract and/or,
 - b. Decision at the discretion of BOF.
9. Inspectorate is the authority in all matters pertaining to Inspection. Any verdict by the inspectors regarding rejection, acceptance, and /or deviation of machine involving price reduction will be treated as final and will not be subject to arbitration.
10. The Supplier must submit the following **attested documents** with the schedule :
 - a. **Trade License**
 - b. **Tin Certificate**
 - c. **Up to date VAT Registration certificate.**