



**GOVERNMENT OF PAKISTAN
PAKISTAN ORDNANCE FACTORIES
TENDER ENQUIRY.**

To

M/s _____

Dear Sirs,

Reference: **TENDER ENQUIRY # 008-FP-B-52-SCM (R&D) - Capt-Pur-III, Dated: 30-04-2022.**

You are requested to submit quotations for the items(s) noted in the Schedule to the Tender as per **PPRA Rule 36(b)**.i.e. Signal Stage Two Envelope Offers should be sent duly sealed in an envelope. Please note the following instructions for filling the tender:-

1. **SUBMISSION OF TENDER**

1.1 Tenders will be **opened at 1200 hours on 11-06-2022 and must reach Bid Center Adjacent to Rabita Hall** on or before **1130 hour upto due date**. The tender received late will not be entertained. You may witness the opening of the tender if you so desire. If a representative is deputed, he should bring a letter of authority from you.

1.2 Only one tender should be included in one envelope. The outside of the envelope should be inscribed with: - Tender Enquiry #: **008-FP-B-52-SCM (R&D) - Capt-Pur-III DT: 30-04-2022.**

Tender to be opened on: **11-06-2022.**

Address as follows: - **GM-Purchase-I, BID Center Adjacent to Rabita Hall POF Wah Cantt, Pakistan.**

1.3 If envelope does not indicate reference of T.Es or received late the same may be returned un-opened.

2. **GENERAL INSTRUCTIONS REGARDING PREPARATION OF QUOTATIONS
& EVALUATION CRITERIA**

2.1 The prices should be filled in column 5 and delivery date in column 6 of the schedule to this Tender Enquiry. The undertaking should be signed at the bottom of the Schedule which shall form the Quotation. You may use a separate sheet if necessary.

2.2 As per **PPRA rule 36 (b)** single stage two envelope procedure will be applied for open competitive bidding. For Plant and Machinery, you are required to quote in **two parts:-**

Part I **"TECHNICAL OFFER"** It should exclusively give technical details and literatures/brochures of the offered plant, machinery and equipment; validity date; delivery schedule; and signed undertaking given on the schedule to this Tender Enquiry. It must not indicate price, costs etc.

Part II **"COMMERCIAL OFFER"** It should indicate the commercial terms e.g. price, terms of payment, mode of payment, mode of supply.

Each part should be placed in a separate sealed cover. The envelopes should be inscribed with: Part I "Technical Quotation without price" and Part II "Commercial Quotation with Price."

2.3 **The quotation must be extendable if required but must remain valid for, at least 120 days from the date of opening of tenders.**

2.4 Procurement will be made strictly as per PPRA rules and contract will be placed in favour of lowest evaluated bidder.

2.5 In the event of non-acceptance of offer, intimation may be given to the bidders on their request.

2.6 Conditional offers or alternative offers are likely to be ignored.

2.7 Quotations should be based on C&F. The consignment will be shipped through Pakistan National Shipping Corporation (PNSC) In case there is no PNSC service in the country of shipping, please quote on C & F basis. The freight should be indicated separately. Insurance premium should not be included in the quoted price. However where insurance is considered necessary, advice to that effect should be given in the quotation.

2.8 Submission of the offer through an agent in Pakistan should be avoided. In case it is considered inevitable, the agent's quotation must invariably be accompanied by the original proforma invoice B from the principals/ manufacturers.

2.9 Country of origin and port of shipment to be stated.

2.10 The offer of principal must clearly indicate whether the rate quoted is inclusive of agent's commission, and if inclusive rate of commission included be specified.

2.11 Suppliers will render necessary information regarding hazardous effects on environment, of the materials/products supplied by them, in their quotations and shipping/Dispatch documents.

2.12 If the requisite information is not furnished on the T.E form or offer received is not in conformity with the requirement of the T.E or received late/after due date such offer shall be ignored.

2.13 Special conditions must be carefully studied and conformed.

3. **INSPECTION**

3.1 Supplies shall be subject to the inspection and acceptance by the **Pre-shipment inspection (PSI) team (06 inspectors)** nominated by the purchaser. All expenses of the PSI team including Air travel from and to Pakistan, boarding lodging and inland travel will be at the supplier's account. Inspection facilities such as tools, test equipment, instruments etc will be provided by the supplier in accordance with the relevant specification.

(**Note:** In case of more than one consignment/ part pre-shipment inspection criteria/procedure will be the same as located above for each & every consignment/part,)

3.2 Relevant PSI clauses are as under:-

Pre-Shipment Inspection & Trainings:

- a. Free of cost training on operating, installation/Commissioning, operation, maintaining, and troubleshooting for 02 weeks for total 06 x POF Engineers / Technicians.
- b. Pre-shipment inspection/acceptance of machine at firm's premises will be conducted. The inspection team besides others will particularly carryout trial run of the machines and it will be considered satisfactory subject to production of sample parts as per POF drawing (02 x Components).
- c. Visa processing & fee, boarding& lodging, inland travelling and air tickets will be borne by the supplier.
- d. Installation & commissioning of the machines at POF Wah Cantt shall be the responsibility of the machine supplier. The machines will be tried out for capacity run for at least one day full capacity as claimed by supplier.

3.3 Where considered necessary by the Purchaser, stores may be obtained on Warranty/Guarantee, subject to inspection on receipt. Rejected stores will be removed and replaced with the acceptable stores by the Supplier at his own expense, within a specified time.

3.4 **TENDER SAMPLE**. Where required offer must accompany tender sample strictly according to the description given in tender Enquiry. Offer not accompanied by tender sample will NOT be entertained excepting the established and reputable firms who have either previously satisfactorily supplied the same or similar stores or have submitted an acceptable samples thereof against previous T.E.

4.1 **ACCPTANCE OF OFFERS**

4.1.1 The procuring agency may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. The procuring agency shall upon request communicate to any supplier or contractor who submitted a bid or proposal, the grounds for its rejection of all bids or proposals, but is not required to justify those grounds.

4.1.2 Procuring agency shall incur no liability, solely by virtue of its invoking sub-rule (1.1) towards suppliers or contractors who have submitted bids or proposals.

4.1.3 Notice of the rejection of all bids or proposals shall be given promptly to all suppliers or contractors that submitted bids or proposals.

4.2 **PERFORMANCE BOND**

(a) The successful bidders will provide Performance Bond at the rate upto **10% of C&F** value of contract in favour of the Controller Military Accounts (CMA) POF Wah Cantt. The Performance Bond will be furnished in the form of Deposit At Call Receipt (CDR) from any scheduled Bank in Pakistan or an unconditional bank guarantee on prescribed proforma covered by any scheduled bank in Pakistan. The **Performance Bond shall be furnished within 45 days** from the date of opening of Letter of Credit. It shall be valid for a period of 12 months after the date of expiry of letter of credit. If the Performance Bond is not furnished within the prescribed time of 45 days, the Purchaser reserves the right to:

- i. **Impose penalty @ 1 % per month of the value of CDR/BG.**

(Clause-4.2 (a i) is not applicable in case of procurement of Plant / Equipment / Machinery items)

OR

- ii. **Cancel the contract and make other arrangements for purchase of the stores at the risk and expense of the Supplier.**

(b) No Performance Bond will be required if the total C&F value of the contract is **less than US\$ 50,000** and contract is placed directly on the foreign Supplier.

4.3 **FAILURE TO SUPPLY THE STORES**

All deliveries must be completed by the specified date. If the failure to deliver the stores within the scheduled time should have arisen from "Force Majeure", which the Purchaser may admit as reasonable ground for further time, he will allow such additional time as he may consider to have been required by the circumstances of the case. Otherwise, he will be entitled, at his discretion, to cancel the contract; and/or, claim liquidated damages **upto 2%** but not less than **1%** of the contract price of the items and their quantities for each and every month or part of a month, beyond the specified delivery date, during which these may not be delivered, subject to a maximum of **10% of the total contract value** of particular store which remained unsupplied either in part or in full or, to purchase, from elsewhere, the unsupplied stores at the risk and cost of the Supplier.

4.4 PAYMENT

Payment will normally be made by means of an irrevocable letter of credit. Unless otherwise stated **80% payment** will be released on submission of Dispatch documents (including acceptance certificate issued by PSI team duly signed by the firm) to Bank while balance **20% payment** will be released on receipt, installation / commissioning, successful trial and final acceptance of store/machine by the competent authority i.e. Director R&D. All Bank charges incurred in Pakistan in connection with the establishment of L.C. will be borne by the Purchaser, whereas all Bank charges incurred in connection with drawing of payment including charges for confirmation of L.C. by the advising Bank/Foreign Bank will be borne by the Supplier.

5. SECURITY OF INFORMATION

The tendered and his employees must not communicate any information relating to the sale/purchase of stores under this enquiry to any person other than the manufacturer or to any press or agent not authorized in writing by POFs to receive it. Please return the Schedule to the Tender duly signed by the specified date, along with the specifications drawings etc. if any, enclosed herewith - even if you are unable to quote.

6. WARNING

In case the firm abstain from making offers or fail to return/acknowledge the tender form by the specified date on three consecutive occasions, no further tender enquiry may be issued to them and their names would liable to be removed from the approved list.

Note: Offers/bids through E-Mails & Fax are not acceptable. Only one competitive offer/bid must be submitted on firm's original letter head pad through Mail/Courier.

Yours faithfully,

(IRFAN GHALIB)
DIRECTOR SUPPLY CHAIN MANAGEMENT
PAKISTAN ORDNANCE FACTORIES
WAH CANTT, PAKISTAN.

Contact Info:

☎ 051-9055 - 22269, 21087, 21088
Fax: i. 051-9271400 ii. 051-9314100
Email: procurement@pof.gov.pk

PAKISTAN ORDNANCE FACTORIES

SCHEDULE TO T.E. NO. 008-FP-B-52-SCM (R&D) - Capt-Pur-III DT: 30-04-2022

(1) **FOR Plant & Machinery:-**

(1)	(2)	(3)	(4)	(5)		(6)
<u>Item No.</u>	<u>Description with Specs. etc.</u>	<u>Unit</u>	<u>Qty</u>	<u>Price per Unit C & F</u>		<u>Delivery Date/ Period</u>
				<u>In Figures</u>	<u>In Words</u>	
1.	Powder Bed Fusion Metal 3D Printer: Direct Metal Laser Sintering (DMLS) & Selective Laser Melting (SLM) Specification Attached As per Annexure "A"	No.	01 No			IMMEDIATE

(2) **Special Conditions:-**

- a. Commercial offers will be opened of those bidders who will qualify in technical evaluation.
- b. contract will be placed in favour of lowest evaluated bidder in the light of PPRA rules as per **POF Contract format POF-1282** and other terms and conditions mutually agreed between POF and the contractor / firm.
- c. The supplier will submit an undertaking to ensure availability / supply of spares for machine upto a period of 10 – 15 years.
- d. Obtaining of Export permit from the concerned Govt. will be the responsibility of the firm / bidder. Non issuance of Export permit from the country of origin shall not constitute **"Force Majeure"**
- e. Installation/commissioning, successful trail and local onsite training to POF Personnel will be arranged by the supplier.
- f. The supplier will provide **warranty / guarantee certificate (on POF format)** which will be valid for a period of **24 months** after successful installation and commissioning of the machine.
- g. Local agent in Pakistan for after Sales Service.

(3) **Undertaking:-**

Should our offer be accepted, we hereby undertake to supply the stores/render the services contracted on the basis of General Conditions of Contract embodied in Form POF 1282, and to deposit the performance bond within the prescribed time, failing which it will constitute a breach of contract, and POF will have the right to purchase the stores/services elsewhere at our risk and cost.

Place:

Date:

Name:

Position:

Address:

Income Tax G.I.R.No.

Signatures of Tenderer

SPECIFICATIONS OF POWDER BED FUSION (PBF) METAL 3D PRINTER (DMLS/SLM)

Description		
a.	Powder Bed Fusion (PBF)	Powder Bed Fusion (PBF) 3D printing technology spawns products with precision. This 3D printing technique enables the manufacturing of a vast array of geometrically complex products using a heat source, mainly laser or electron beams, to fuse powder particles layer-by-layer, therefore forming a solid part. Manufacturers can benefit from substantial freedom of design considering that PBF presents several viable technologies and materials.
b.	Selective Laser Melting (SLM) & Direct Metal Laser Sintering (DMLS)	<p>The same technical principle is used to produce Selective Laser Melting (SLM) and Direct Metal Laser Sintering (DMLS) parts, but is exclusively used to produce metal parts.</p> <p>SLM achieves a full melt of the powder so that single-component metals, such as aluminum, can be used to create light, strong spare parts and prototypes.</p> <p>DMLS sinters the powders and is restricted to alloys, including titanium-based alloys.</p> <p>These methods require added support to compensate for the high residual stress and to limit the occurrence of distortion. Applications include production of parts, prototypes, etc.</p>
1.	Purpose	
	For producing Metal parts & prototypes based on F3 (Form, fit & Function) strategy	
2.	Technical Data	
a.	Powder Bed Fusion Metal 3D Printer	E-Plus-3D: EP-M300 METAL 3D PRINTER or Equivalent
b.	Build Chamber	X-axis: 305mm; Y-axis: 305mm; Z-axis: 450mm; Build Volume: 41.86 Liters (0.04186 m ³) or Equivalent
c.	Optical System	Fiber Laser; 400W-1000W; No. of Lasers: 1-2
d.	Spot Size / Focus Diameter	90-130µm
e.	Scan Speed	7m/s – 15m/s
f.	Layer Thickness	20-120µm
g.	3D Print Material	Additive Manufacturing Metals & Alloys: Titanium Alloy, Aluminum Alloy, Nickel Alloy, Maraging Steel, Stainless Steel, Tool Steel, Cobalt Chrome, Copper Alloy, etc.
h.	Gas Supply	Ar/N ₂
i.	Power Supply	400V± 05%; 32 A – 65 A; 50/60 Hz
j.	Initial Material Requirement	100 kg – MS1 100 kg – AlSi10Mg 100 kg - 20MnCr5CaseHardeningSteel

	k.	Software	i. 3D printing data and build preparation software
			ii. 3D printing real time process quality control software
	i.	Accessories	Compatible inert gas (Ar/N ₂) generator
			Compatible material sieving, filling, conveying and lifting system
			Compatible recirculating powder filter system
			Compatible metal SLM/DMLS vacuum-cleaner-type unit
			Compatible air compression equipment
			Compatible wire cutting machine to remove parts
			Compatible heat treatment & curing equipment
			Compatible shot peening equipment for post processing
		Compatible Sand Blaster for post processing	
3.	Spare Parts Requirement		
	a.	Two years essential maintenance and operation spares shall be required. 02 x sets of essential spares	
	b.	It shall be guaranteed that spares shall be available and provided, as & when required on payment basis, for at least 10 -15 years after the handover and successful commissioning of machine.	
	c.	The machine must include 2 x Toolkits, essential for its setting and complete maintenance work.	
4.	Pre-Shipment Inspection & Training		
	a.	Free of cost training on operating, installation/Commissioning, operation, maintaining, and troubleshooting for 02 weeks for total 06 x POF Engineers / Technicians.	
	b.	Pre-shipment inspection/acceptance of machine at firm's premises will be conducted. The inspection team besides others will particularly carryout trial run of the machines and it will be considered satisfactory subject to production of sample parts as per POF drawing (02 x Components).	
	c.	Visa processing & fee, boarding& lodging, inland travelling and air tickets will be borne by the supplier.	
5.	Installation & Commissioning		
	a.	Installation & commissioning of the machines at POF Wah Cantt shall be the responsibility of the machine supplier. The machines will be tried out for capacity run for at least one day full capacity as claimed by supplier.	
	b.	The supplier will provide 02 years warranty/guarantee certificate, which will be valid for a period of 24 months after successful installation and commissioning of the machine.	
	c.	03 x SETS of following documents in English language will be provided by the supplier:	
		i. Schematic Diagram of each Printed Circuit Board (PCB).	
		ii. Operation and maintenance manual.	
		iii. Control circuit diagram of machine.	
		iv. Detail of motors, sensors, optical system and their control.	
		v. List of spares & consumables for 15 x years.	
6.	OEM Country of Origin		
	EU, UK, USA, China, and Japan with CE marking products.		
7.	Payment Terms and Condition		
	a.	80% payment on receipt of shipment documents on C&F (cost and freight) basis.	
	b.	20% payment after satisfactory installation & commissioning of machines	
8.	Terms & Condition		
	Provision of Export License and necessary documents will be responsibility of OEM & Supplier		