



NATIONAL INNOVATION FOUNDATION - INDIA
(Autonomous Body of Department of Science & Technology, Govt. Of India)

TENDER DOCUMENT

FOR

**SUPPLYING OF MACHINES AND EQUIPMENT'S FOR
WORKSHOP**

Cost of the Tender Rs. 500/-

Date of Tender Issue	: 07/02/2018 at 12:00 hrs
Last date of Tender submission	: 27/02/2018 at 10:30 hrs
Opening of Technical Bids	: 27/02/2018 at 11:00 hrs
Opening of Financial Bids	: 03/03/2018 at 14:00 hrs

National Innovation Foundation-India is an Autonomous Body of the Department of Science and Technology, Govt. of India providing institutional support to grassroots innovators and outstanding traditional knowledge holders.

NIF invites sealed tender for supplying of machines and equipment's for workshop. The sealed bidding documents should be delivered in the Administration Section of NIF on or before the stipulated date and time. The technical bid and the financial bid must be sealed in separate envelopes super-scribing "**Technical Bid**" and "**Financial Bid**" and both these two envelopes must be placed in a third envelope super-scribing "**Tender for Supplying of Machines and Equipment's for Workshop**". This third envelope should be **sealed (glued along with tapped). Stapled or open tender will be forfeited**. It should be delivered to: "The Director / Chief Innovation Officer, National Innovation Foundation - India, Grambharti, Amrapur, Gandhinagar - Mahudi Road, Gandhinagar - 382650." Latest by 10.30 AM on 27th February 2018.

The technical bids will be opened on 27th February 2018 at 11:00 AM, at address given above. The financial bids of successful bidders will be opened on 3rd March 2018 at 2:00 PM at NIF Grambharti office. The term and conditions are as follows:

Any queries related to this tender may be addressed only through email to pc@nifindia.org.

Terms & Conditions:

1. The tenderer/bidder may be a proprietary firm, Partnership firm, Limited Company, Corporate body legally constituted engaged in manufacturing /marketing of production machines /equipment's (copy of registration of firm to be attached).
2. Applicant should not have been blacklisted by the Depts./Ministries of the Govt. of India/State Govt. /PSUs (A declaration has to be submitted).
3. Interested bidders who wish to participate in the tender shall pay Rs. 500/ (Rupees Five hundred only) as Tender Fee in the form of Demand Draft (valid for 90 days) drawn in favour of '**National Innovation Foundation-India**' payable at Ahmedabad from any Nationalized /scheduled bank.
4. The bidder shall furnish, as part of the bid, an interest free EARNEST MONEY DEPOSIT (EMD) of amount mentioned in annexure 2 for each machine /equipment separately in the form of Demand draft (valid for 90 days) drawn in favour of '**National Innovation Foundation-India**' payable at Ahmedabad from any Nationalized /scheduled bank.
5. Tender Fees and Earnest Money Deposit (EMD) in the form of Demand Draft only shall be placed in a sealed Envelope 1 super scribed as "Tender Fees and Earnest Money" with name of machine (s).
6. The tenderer /bidder should submit duly filled check list of technical bid (annexure 1) along with supporting documents and catalogues of machines quoted in the envelope of technical bid.
7. The technical and financial bids should be quoted separately in different sealed envelopes for each machine. Both envelopes must be kept in an

envelope which should be superscripted as “Tender for supply of
(Name of machine)”

8. Sealed Bid may be submitted to the address given above.
9. The EMD of the unsuccessful bidders will be discharged/returned at the earliest after completion of the tender process. The successful bidder's EMD will be discharged upon the bidder's acceptance of the Letter of Intent/purchase order satisfactorily. The EMD may be forfeited:
 - a. If the bidder withdraws his/her bid during the period of bid validity specified by the bidder in the Bid form;
 - b. In the case of successful bidder, if the bidder fails to sign the contract or fails; or Fails or refuses to honour his/her own quoted price for any of the items or part thereof.
 - c. In both the above cases bidder will not be eligible to participate in the tender for one year from the date of issue of Letter of intent.
10. The financial bids of those bidders will be considered who qualify under technical bid. The financial bids of successful bidders will be opened on 3rd March 2018 at 2:00 PM, at address given above.
11. The prices quoted must be inclusive of all taxes, cost of software, training /machine demonstration, loading & unloading, transport insurance (wherever applicable) and transportation charges to deliver the equipment/machine at address given above.
12. Submitted quotations should be valid for at least 90 days
13. The vendor should supply machines within 30 days of placing the purchase order.
14. Vendor has to set up and demonstrate equipment before that the delivery would not be deemed to be complete.
15. In case the quotation is being submitted by authorized agent of the principal manufacturing company, the authorised sales agency ship certificate from the principal should be furnished along with the quotation. Quotations without this authorization certificate will be rejected.
16. The quotation should include comprehensive warranty for at least 2 years and one year free service.
17. Special discount/rebate wherever admissible keeping in view that items are being procured for educational purpose in respect of Public Institution of national importance may please be indicated.
18. Vendors should attach the relevant brochure/leaflet for the models/options quoted.
19. Vendors should attach users list with their contact details.
20. Necessary certificate should be enclosed by the vendor in case of proprietary nature of the quoted items.
21. Incomplete and conditional submitted tenders would be summarily rejected.
22. Late/delayed tenders received at the venue mentioned above due to any reason, whatsoever, will not be accepted under any circumstances.
23. The Bidder shall bear all costs associated with the preparation and submission of its Bid. NIF shall, in no case, be responsible or liable for these costs, regardless of the conduct or the outcome of the Bidding process.

24. The tenderer should sign (not initials) at each page of the technical and financial bid documents and all its annexures. No page should be removed/ detached from the tender document.
25. In case two or more agencies are found to have quoted the same rates, the competent authority, NIF shall decide about the agency to which the offer shall be granted based on the past credentials/ report on the past performance of the firm, and length of experience etc. The decision of the competent authority, NIF shall be final and binding, and no communication in this regard will be entertained.
26. The 80 % payment will be released after delivery of machines/ equipment in good condition, successful commissioning, installation, testing of machines or equipment.
27. The remaining 20% payment will be released after satisfying all the conditions as per the tender terms and condition, satisfactory functioning of the machines/equipment supplied and after furnishing of Guarantee/ Warranty documents and the performance security.
28. The successful bidder needs to submit performance security (5 % of the final price /contract value of the machine) in the form of Demand Draft or Bank guarantee from a commercial bank which should be valid for a period of 60 days beyond the completion of all contractual obligations of the supplier including warranty.
29. The Performance security shall be forfeited and credited to the Institute in the event of breach of contractual obligation by the supplier, in terms of relevant contract.
30. NIF reserve the rights to cancel the tender process, without giving any reasons.
31. The conflicts or disputes that may arise in relation to the subject, content, interpretation, implementation and enforcement of this agreement will be solved, firstly, by the Monitoring Committee setup jointly for good governance and then, by equity arbitration. In the event, efforts by Monitoring Committee and an equity arbitration attempt fails, then the legal jurisdiction to be approached shall be within the jurisdictions of Gandhinagar only.

Annexure 1
Format for technical bid of the tender (NIF/2018/ADM/004)
Tender submitted for supply of(name of machine /equipment)

Sl. No.	Description of requirement	Enclosed	Enclosure No.
1.	Whether the firm is registered with proprietary firm, Partnership firm, Limited Company, Corporate body legally constituted engaged in manufacturing / marketing of production machines / equipment	Yes/No	
2.	Declaration by the bidder that he /she has not been blacklisted by the Deptts/Ministries of the Govt. of India/State Govt./PSUs	Yes/No	
3.	Copies of Balance Sheet and Income Tax Return for last 3years duly certified by CA	Yes/No	
4.	Copy of Registration Certificate of the firm	Yes/No	
5.	Copy of PAN/TAN/GST issued by Income Tax Dept.	Yes/No	
6.	Partnership deed, if applicable	Yes/No	
7.	Details of other organizations where similar machines have been supplied (copy of work orders to be attached)	Yes/No	
8.	Demand draft of Rs...../-as tender fee enclosed in separate envelope along with Technical Bid	Yes/No	
9.	Demand draft of Rs...../-as EMD enclosed in separate envelope along with Technical Bid	Yes/No	
10.	Technical specification of the machine	Yes/No	
11.	Financial Bid proforma/quotation completed and sealed in a separate envelope	Yes/No	

Declaration of the Tenderer:-

This is to certify that I/We before signing this tender have read and fully understood all the terms and conditions contained herein and undertake myself/ourselves to abide by them.

(Signature of Tenderer with seal) Name:

Place:

Seal :

Date:

Office Address:

List of machines

S No	Machine name	Estimated value, Rs	EMD, Rs
1.	Plant for powder coating	10,00,000	20,000
2.	Plant for nickel/nickel chrome plating	4,00,000	8,000
3.	CNC router	8,00,000	16,000
4.	PCB engraver	4,00,000	8,000
5.	Injection moulding machine	10,00,000	20,000
6.	3D scanner	10,00,000	20,000
7.	Tablet coating machine	4,00,000	8,000
8.	Tablet punching machine	7,00,000	14,000
9.	Spray dryer	10,00,000	20,000

Details of machines along with specifications

1) PLANT FOR POWDER COATING

Particular	Detail
Technology	Plant for powder coating, suitable for Mild Steel/ Stainless Steel, Aluminium, Zinc alloys, Cast iron, etc. The plant should include all sub systems / equipment / accessories required for fulfilling the job, desired specification of major subsystems is given below
Pre-treatment Tanks	<ul style="list-style-type: none"> • Minimum Five tanks (Degreasing Tank, Derusting Tank, water rinse tank, Activation Tank, Passivation tank, etc) each of size around 3000 lit (3000 x 1000x 1000) mm, made from 3 mm MS sheet having inside surface/lining of durable FRP and stiffened by 5 mm angle/channel. • The tanks should have water inlets, overflow connection and drain connections with valves and pipes of appropriate quality and length.
Moisture Separator	<ul style="list-style-type: none"> • Compressor - 5 HP -15 CFM @ 150 PSIG along with electric motor and stand with Air Pipe Line, Air Gun for Cleaning the Booth Chamber
Powder Spray System	<ul style="list-style-type: none"> • It should have light weight Electrostatic Powder Spray Gun (100 kV) able to absorb power voltage spikes and surges and filter out most unwanted power signals. • The gun should have filter/sieve in the line to provide uncontaminated powder for coating. • It should have powder delivery rate around 400 g /min at bulk density around 0.7 g/cc. • It should have 5 m long power hose of 12 mm dia (ID). • It should have LED display for high voltage, Spraying Current and other necessary parameters. All necessary accessories should be provided with the gun.
Powder Spray Booth with Recovery	<ul style="list-style-type: none"> • Single Cyclone, Batch Type Booth having minimum dimension of (1600 mm W x 1400 mm H x 1150 mm L) with doors of adequate size in front and sides). • The recovery system should ensure that over-sprayed powder should be recovered properly through cyclone, filter or after filter accessories and ensures that the air exhausted from the recovery booth is clean enough to be circulated back into the shop-floor. • Required size of motor and necessary accessories like filters, hoses, Exhaust ducting, conveyor track, etc to be provided by the supplier.
Powder Curing Oven	<ul style="list-style-type: none"> • Batch Type Floor Mounted, Direct Gaseous fuel fired oven of minimum internal dimensions 2000 mm x 1500 mm x 1500 mm.

	<ul style="list-style-type: none">• It should be able to provide heat load 28000-30,000 kcal/h, hot air upto 220-225 degree C in a period of 60-70 minutes.• It should have burner of capacity 75000 kcal/h and hot air blower of capacity 2 hp.• It should have digital type temperature controller and control panel consisting of TIC, Timer, Contactor, Relay, Push buttons, On-Off switch etc.• It should be energy efficient, having proper insulation so that outside surface temperature shall not exceed 10 to 12 degree C above the ambient temperature.• It must provide uniform temperatures throughout the working area of the oven ensuring uniform powder curing. Adequate number of ducts should be provided.• Required number of gas cylinders, gas pipes of required length, regulators, manifold, pressure gauges and other necessary accessories to be provided by the supplier.
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2) PLANT FOR NICKEL AND NICKEL -CHROMIUM PLATING

Particular	Detail
Technology	Plant for nickel / nickel chrome plating / coating, suitable for coating on parts of various sizes made from Mild steel angle, bars, flats, sheets, etc.
Capacity of tank	2000 x 1000 x 1000 mm to take care of jobs of various sizes upto 1500 mm in length
Plating thickness required	Minimum 10 micron
Material of parts to be coated	Mild steel, alloy steels, aluminum, etc.
Finishing	Over the significant surface, there shall be no clearly visible plating defects such as blisters, pits, roughness, cracks, unplated areas, stains or discoloration.
Accessories	The plant should include all sub systems / equipment / accessories required for fulfilling the job and should meet BIS standard IS 1068: 1993. The bidder should quote the price including cost of all essential accessories to make the plant fully functional

3) CNC ROUTER

Particular	Detail
Working Area (X, Y, Z)	1300 x 2500 x 250 mm
Suitable for materials	Suitable for high-volume processing of non-ferrous metal sheets, such as PVC board, acrylic, insulation materials, wood and composite panels. Suitable for sheet processing, cutting, slotting, engraving, etc.
Spindle	6 kW Air Cooled (HSD Italian)
Spindle Speed	18000 RPM
Maximum Traveling Speed	30 m/min
Cutting Tool Diameter	Ø3 to Ø16 mm
X and Y Axis Traveling	Rack & Pinion
Table Structure	Heavy duty rigid mild steel frame structure
Operating System	High Speed Advanced System
Driving System	AC Servo Motor (of reputed make)
Power Supply	AC 440V/3PH
Repeatability	0.025(+/-mm)
Memory	Minimum 4 GB
Interface	USB, Wi-fi
Engraving Speed	Upto 20000 mm/min
Command	CAD/CAM Software with G Code
Software	Licensed version (having at least 5 years permission to free use)
Computer operating system	Windows 10
Computer	Core i7 6th Gen, 2GB Graphics, 1 TB Hard disk, WiFi, etc
Provision of remote operation	Additional remote operation
Voltage stabilizer	Standard voltage stabilizer of suitable specifications
Accessories	The bidder should quote the price including cost of all essential accessories, tools, bits, tool kit, etc to make the machine fully functional

4) PCB ENGRAVER

Particular	Detail
Minimum table size	350 x 200 mm
Travel in Z Axis	Upto 40 mm
Spindle Speed	Upto 20,000 RPM
Spindle Speed Control	Manual
Feed Rate	Upto 5000 mm/ min
Contouring Feed Rate	Upto 1000 mm/ min
Spindle Motor	100 Watts
Axes Motors	Stepper
Power requirement	Preferably single phase electricity
Command	CAD/CAM Software with G Code,GRBL FILES
Minimum Accuracy	100 Micron

5) INJECTION MOULDING MACHINE

Particulars		Specification
Technology		Horizontal, fully automatic screw type injection moulding machine
Target material		Thermosetting resins including Acrylonitrile-Butadiene-Styrene (ABS), Nylon PA, Polycarbonate PC, Polypropylene (PP), Polystyrene GPPS, etc.
Drive		Power driven
Control		Fully automatic
Feeding type		Horizontal
Accessories		All standard accessories including PLC, power supply, voltage stabiliser, chiller, etc required for making machine functional to be included The machine should have provision of adjustment of injection volume according to job size.
Injection unit	Screw type	C
	Short weight	500 g/s
	Screw diameter	50-55 mm
	Injection pressure	1440 bar
	Injection rate	200 ml/s
	L/D Ratio	18-20
	Plasticizing rate	25-30 g/s
	Minimum screw stroke	250 mm
	Screw speed	240-260 rpm
	Heating capacity	10-12 kVA
	System pressure	150 bar
Clamping unit	Mold clamping force	150 tons
	Clamp stroke	480-500 mm
	Maximum day light	1000 mm
	Mold height	Upto 500 mm
	Table size	750 x 900 mm
	Ejector stroke	150 mm
Ejector force	5 -6 ton	

6) 3D SCANNER

Particular	Detail
Capacity	Upto 250 mm diameter and 250 mm height
Mode	Objects should be kept on the table, scanner should have moving HD camera head Or the scanner should have provision to rotate the object keeping HD camera at fixed positions.
Resolution/Precision	Minimum 5 mega pixel
Export formats	STL, OBJ, PLY, XYZ, etc.
Table load capacity	Upto 100 kg (in case job has to be kept on table), in case job is kept at one place, there should be no limit of load.
Senor positioning	Tripod or column type stand with provision of rotation /swivel axis and locking at any position
Object positioning	Rotary table or stationary if camera is rotated
Camera and video projector	Industrial camera with high quality lens. Video projector with special lens for large focal range, including remote control, etc.
Power requirement	It should be able to operate with 230 V single phase power supply. The machine should have inbuilt voltage stabilizer to take care of fluctuating power supply
Software	The software should have the provision of Scanning directly into product (Import points, Import mesh), Point editing, Advanced mesh editing (Sandpaper, Sculpt etc.), Intelligent extraction of surfaces / solids / sketches, Complete sketching and solid modelling, 2D drawing creation, etc.
Accessories	High quality tripod, connecting cables, adapters for power supply, calibration panels, etc, to be supplied along with the scanner.

7) Tablet Coating Machine- Semi-automatic/automatic

Sr. no.	Specifications
1	cGMP Design - Current Good Manufacturing Practices compliance
2	All contact parts SS 316/304 & non-contact parts SS 304
3	Conventional coating system for manual film and sugar coating (Automatic spraying system for tablet film coating on conventional coating)
4	Machine should be fitted with SS enclosure for easy cleaning of outside covering and mounted on anti-vibration pad.
5	Movable hot air blowing system with electric heater
6	Easy to replace polishing pan and other size coating pan
7	Loading capacity: Minimum 2 to 3 kg
8	Pan Size: Depending on loading capacity
9	Machine should have pan motor, blower motor, heater and other necessary systems required for coating as per standard specification
10	Stainless steel Table top body mounted on castor wheels for Mobility
11	Control: Microprocessor based Digital controller. Proper safety measurements
12	Power supply: 230V, Single Phase, 50/60 HZ

8) Tablet Punching Machine - Semi-automatic/automatic

Sr. no.	Specifications
1	cGMP Design - Current Good Manufacturing Practices compliance
2	All contact parts SS 316/304 & non-contact parts SS 304
3	Multi-station (5 to 10 stations)/double punch/ rotary press
4	Tooling - D , B and BB type
5	Maximum compression force (up to 6 tones)
6	Maximum diameter of tablet (≈ 16 mm) and depth of fill (≈ 17 mm)
7	Pre compression Adjustment, Tablet thickness adjustment and indicator for tablet thickness control system
8	Production capacity: minimum 1000 tablets/hour
9	Machine should have necessary systems required as per standard specification with smooth functioning
10	Control: Microprocessor based Digital controller. Proper safety measurements
11	Power supply: 230V, Single Phase, 50/60 HZ

9) Spray Dryer

S. No	Item	Specification	Details
1	Evaporation Capacity	1 Ltr/hr - Maximum 20 ml- Minimum	Instrument evaporation capacity should be between 1 liter higher and volume 20 ml minimum.
2	Nozzle Specification	Two-fluid, co-current, SS-316 L	Two-liquid high precision nozzle, thermostatically controlled nozzle
3	Dimensions of nozzle	.7mm, 1.4 mm, and 2.0mm	Nozzle diameter: 0.7 mm, 1.4mm and 2.0mm ii. Nozzle cap: 1.4 mm, 2.0 mm & 2.8 mm diameter
4	Integrated nozzle cleaning device	auto-de-blocking device	clogging can be removed by simple operation within 2 to 30 seconds
5	Drying temperature	50-250°C	Drying temperature should be 220°C or more.
6	Air Flow	10-35 cu.m/hr	Air flow with integrated aspirator up to 35 m ³ /h or more
7	Power Rating	Upto 3000W	
8	Voltage	220 V ± 10%	
9	Power Rating	Upto 3000W	
10	Mean Dwell time	1-2	
11	Material of Construction	Stainless steel 316L	Acid-resistant stainless steel, 3.3 Borosilicate glass, Fluoroelastomer Polymer (FPM), Silicone should be the material of the product collection chamber or bottle.
12			Control and Display system
13	Upgradation		Upgradation is possible in the instrument.
14	Spray gas		Compressed air 200-1000 l/hr, 5-8 bar.
15	Heater Capacity	2.5- 3.0KW	