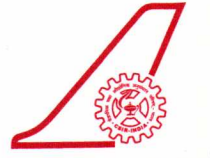


वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
Council of Scientific & Industrial Research
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं
National Aerospace Laboratories



CSIR - NAL Estd. 1959
ISO 9001 : 2015
Certified Organization

INVITATION FOR BIDS/NIT

Tender No: APMF/PUR/2K19/183

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl.No.	Description of Items	Unit	Quantity
1	Supply, installation & commissioning of Cylindrical Grinding Machine (Details as per Annexure – A)	No.	1

Single / Two Bid	Two
Bid Security (EMD) (in INR)	Rs 40,000/-

1.Tender Documents May be downloaded from Central Public Procurement Portal <https://www.etenders.gov.in>. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website <https://www.etenders.gov.in>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

2.Tenderers can access tender documents on the website (For searching in the NIC site <https://www.etenders.gov.in>, kindly go to Tender Search option, select tender type and select ' Council of Scientific and Industrial Research' in organization tab and select 'NAL-Bengaluru-CSIR' in department type Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://www.etenders.gov.in> as per the schedule given in the next page.

3.Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different foreign principals in one tender.

4.Unsolicited / conditional / unsigned tenders (Quotations) shall not be considered. Quotations received after the due date and time shall be summarily rejected.

5.The amount of the Performance Security shall be 10% of the contract value to be submitted within 21 days from the date of Purchase Order valid up to 60 days after the date of completion of performance obligations including warranty obligations.

P.T.O

पी बी सं. 1779, एचएएल एयरपोर्ट रोड , बेंगलूर- 560 017, भारत,
P B No 1779, HAL Airport Road, Bengaluru - 560 017, INDIA
फोन / Phone : (का./ Off) : +91 - 80 - 2508 6097 / 6710, फैक्स / FAX : +91-80-2526 9611



<http://www.nal.res.in>



purchaseccadd@nal.res.in

6.The Bid Security/Earnest Money Deposit shall be deposited through Bank Guarantee/Demand Draft drawn in favour of "The Director, National Aerospace Laboratories, Bengaluru". The original Bid Security/EMD must be delivered to address mentioned below on or before bid submission date and time failing which the bid shall be summarily rejected.

Controller of Stores & Purchase
Purchase Section
CSIR- National Aerospace Laboratories
PB No.1779, HAL Airport Road, Kodihalli, Bengaluru - 560017
Karnataka-India
Tel # : 080 25086040/6097/6710
Fax # : 080 25269611
Email : purchasek@nal.res.in, purchasecadd@nal.res.in

7. Bidder Eligibility Criteria

(i)The bidder should have supplied at least two numbers of similar machines in the last three years. The bidder to provide list of installation in India along with the copies of Purchase Order, customer satisfactory report and year of supply.


(ii)The bidder should enclose the test charts for the machine supplied and also provide details of customers, contact persons and phone number.

(iii)The bidder should have sales and service office in India and should be capable of attending and resolving technical issues within 48 hours of lodging the complaints. Bidder to provides details of sales and service office in India.

(iv)Not providing the above details could lead to disqualification of bid.

8. The Bidder shall comply the terms and conditions of the tender, failing which; the offer shall be liable for rejection.

9.The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.


Raman Kumar
Section Officer (S&P)
For & Behalf of CSIR

Supply, Installation & Commissioning of Cylindrical Grinding Machine

Quantity-01 No.

Technical Specifications of Cylindrical Grinding Machine

Note: Vendors should provide the compliance statement in tabular format only. Appropriate values shall be furnished wherever possible.

SL.NO.	Description	Specifications	Bidders Compliance & Remarks
1.0	Capacity		
1.1	Swing Over Table	200 mm or more	
1.2	Distance Between Center	375 mm or more	
1.3	Grinding Length	375 mm or more	
1.4	Grinding Diameter (Max/Min OD)	100 mm /6 mm	
1.5	Grinding Diameter (Max/Min ID)	80 mm /10 mm	
1.6	Max. weight of job between centers	25 Kgs. Or more	
1.7	Max. weight of job on chucking application (including chuck weight)	10 Kgs. Or more	
2.0	Wheel Head		
2.1	Grinding Wheel Size (OD x ID x Width)	350x127x40 (mm) or better	
2.2	Spindle Speed	2000 rpm or better	
2.3	Spindle Motor Power	3.5 kW or more	
2.4	Peripheral (surface) Speed	Bidder to specify	
2.5	Rapid Approach	Bidder to specify	
2.6	Infeed with hand wheel	20 mm or better	
2.7	Max. Plunge Feed on Dia.	1.5 mm or better	
2.8	Minimum increment on diameter	0.001 mm	
2.9	Infeed rate on diameter (coarse / fine)	Required, bidder to specify	
3.0	Table		
3.1	Table Speed	0.1-4 m/min or better	
3.2	Table Stroke	400 mm or better	
3.3	Minimum automatic Travel	Bidder to specify	
3.4	Maximum swivel of Table	0° to +25° or better	
4.0	Tail Stock		
4.1	Centre Taper	MT-3	
4.2	Quill Travel	25 mm or better	
4.3	Taper Correction Range	Required, Bidder to specify	
5.0	Work Head		
5.1	Taper Bore	MT-4	
5.2	Spindle Speed	90-900 rpm or better	

5.3	Spindle Motor Power in 2 steps	Required, Bidder to specify	
6.0	Internal Grinding		
6.1	Standard Spindle Size (Dia. x Length) Max RPM for Bore Diameter from 10 to 80 mm.	Required, Bidder to specify standard spindle size (Dia. x length and max'm rpm)	
6.2	Motor Power (kW)	Bidder to specify	
7.0	Hydraulic Unit		
7.1	Tank Capacity	Required, Bidder to specify	
8.0	General		
8.1	Operational Voltage	415+/-10% AC 3 Phase	
8.2	Total Power Requirement (kW)	Bidder to specify	
8.3	Floor Space including std. coolant Tank (L x W)	Bidder to specify & provide machine layout drawing	
8.4	Coolant System	Required	
8.5	Machine Lamp	Required	
8.6	Dressing attachment with Diamond	Required	
8.7	Coolant Splash Guards	Required	
8.8	Mounting / Leveling Pad	Required	
8.9	Grouting Bolt	Required	
9.0	Accuracy Test Details:		
9.1	Bed: Level in Longitudinal Direction	0.02/1000mm	
9.2	Bed: Level in Transverse Direction	0.02/1000mm No twist permitted	
9.3	Table: Alignment, Guideways of work head and tailstock to table movement	0.01/1000mm	
9.4	Work head Live Centre true	0.005mm	
9.5	Work head: Spindle axis(taper, true)	Nearest Nose:0.005mm At 375mm: 0.015mm	
9.6	a) Work head: Spindle axis with table movement in vertical plane b) In Horizontal plane	a) 0 to 0.02/375mm (raising toward free end of mandrel) b) 0 to 0.01/375mm (free end inclined towards grinding wheel)	
9.7	Work head: Live centre Axial slip of Spindle	0.01mm	
9.8	Work head: (Swivel, Spindle axis, with infeed of wheel (i.e. with wheel head guide ways)	0 to 0.02/375mm	
9.9	a) Tailstock: sleeve with the table movement in vertical plane	a) 0 to 0.02/100mm (front end raising only)	

	b) In Horizontal plane	b) 0 to 0.01/100mm (front end inclined towards grinding wheel)	
9.10	a) Tailstock: Centre axis (taper) with table movement in vertical plane b) In horizontal plane	a) 0 to 0.02/375mm (free end on mandrel raising) b) 0 to 0.01/375mm (free end inclined towards grinding wheel)	
9.11	a) Work head and tailstock centre. Alignment with table movement in vertical plane b) In Horizontal plane	a) 0 to 0.01mm (raising towards tailstock end) b) 0 to 0.01mm (towards wheel at tailstock end)	
9.12	Wheel head: Spindle taper true	0.005mm or better	
9.13	Wheel head: Spindle axial slip	0.01 mm or better	
9.14	a) Wheel head: Spindle axis with table movement in Vertical plane b) in Horizontal plane	a) 0 to 0.01/100mm (raising towards free end on mandrel) b) 0 to 0.01/100mm (free end of mandrel inclined towards the table)	
9.15	Wheel head: Spindle in-feed movement straight (rise and fall)	0.05mm on total infeed length	
9.16	Wheel head: Fine infeed sensitive	0.002mm or better	
9.17	Quick approach to work repeats accurately to grinding position	0.003mm or better	
9.18	Wheel head: Infeed motion square with table movement Horizontal plane	0.01mm on total length of infeed motion	
9.19	Alignment of height of work head spindle axis with internal grinding spindle axis measured over the table.	0.02mm or better	
9.20	Parallelism of internal grinding spindle to table movement a) In Vertical plane b) In Horizontal plane	a) 0.01/100mm (mandrel to rise towards the face end only) b) 0.01/100mm (mandrel to point	

		towards the operator)	
9.21	Working accuracy of machine: Grinding between centres a) Roundness of work piece b) Cylindricity of work piece up to 375 mm length	a) 0.003mm or better b) 0.010 mm or better	
10.0	Warranty	Required, On-Site Comprehensive warranty for a period of 24 months from the date of acceptance of Machine	
11.0	Training	Required, Four working days at APMF, CSIR-NAL, Belur Campus, Bangalore-560 037	
12.0	Repeatability of wheel head slide	Required, Bidder to specify	
13.0	Automatic Grinding Cycle	Required, Bidder to specify	
14.0	Essential Standard Accessories		
14.1	2 Point Steady Rest (6-85 mm)	1 No.	
14.2	3 Point Steady Rest(6 -85 mm)	1 No.	
14.3	Side and Angle Dresser	1No.	
14.4	Wheel Balancing Stand	1No.	
14.5	Sine Bar	1No.	
14.6	3 Jaw Chuck (3 Inches)	1No.	
14.7	Diamond for Dresser (single point) for external wheel 2Crt	1 No.	
14.8	Additional Grinding Wheel (350 x40 x27), A463k5v10	1 No.	
14.9	One set of drivers (6-85 mm)	1 set	
15.0	Precision carbide tipped center MT-3 (Full)	1 No.	
15.1	Precision carbide tipped center MT-3 (Half)	1 No.	

Other Terms & Conditions:

1. The Cylindrical Grinding machine should be of proven design and of latest technology.
2. The machine shall be compact, rigid and equipped with wide range of accessories to machine all types of materials viz. Steels, 17-4 PH Stainless steels, MDN 250 etc. typically encountered in aerospace applications.

APMF/PUR/2K19/183

3. The machine quoted should be of standard type and technical broucher should accompany the quote.
4. Delivery schedule- 6 months from the date of issue of Purchase Order.
5. Installation & Commissioning: The scope of supply shall include installation and commissioning of machine at CSIR-NAL, APMF, BELUR. The supplier shall arrange all necessary material handling equipment and man power for installation of machine as designated site at CSIR-NAL, APMF, Belur, Bangalore free of cost.
6. Bidder should come and inspect the place of installation and commissioning.

APMF/PUR/2K19/183

SCHEDULE CUM CRITICAL DATE SHEET

1	Name of Organization	CSIR-National Aerospace Laboratories, Bengaluru	
2	Tender Reference No	APMF/PUR/2K19/183	
3	Tender Type (Open/Limited/EOI/Auction/Single)	Open Tender	
4	Type/Form of Contract (Work / Supply / Auction / Service / Buy / Empanelment / Sell)	Supply	
5	No of Covers (One/Two/Three/Four)	Two	
6	Tender Category (Services/Good/Works)	Good	
7	Allow Resubmission (Only in online mode within scheduled period)	Yes	
8	Allow Withdrawal (Only in online mode within scheduled period)	Yes	
9	Allow Offline Submission	No	
10	Work Item Title	Supply, installation & commissioning of Cylindrical Grinding Machine (Details as per Annexure - A)	
11	Work Description	Supply, installation & commissioning of Cylindrical Grinding Machine (Details as per Annexure - A)	
12	Delivery Schedule	6 Months from the date of purchase order	
13	Product Category (Civil Works / Electrical Works / Fleet Management / Computer Systems)	R & D Equipment	
14	Is Multi Currency Allowed	No	
15	a) Tender Publishing Date -	13 Jan 2020	1800 Hrs
	b) Document download start Date:	13 Jan 2020	1800 Hrs
	c) Bid Submission Start Date	13 Jan 2020	1800 Hrs
	d) Bid Submission End Date-	06 Feb 2020	1000 Hrs
	e) Bid Opening Date-	07 Feb 2020	1100 Hrs
16	Bid Validity Days	90 days	
17	Address for communication	Stores and Purchase Officer CSIR-National Aerospace Laboratories, HAL Airport Road, Kodihalli, Bengaluru - 560017	
18	Inviting Officer	Director, CSIR-NAL	
19	Contact No	25086097, 25086710	
20	E-mail Address	purchasecadd@nal.res.in/spo@nal.res.in	
21	Detailed specification of item	Invitation for bids / NIT	
22	Tender Terms & Conditions & Instruction for online bid submission	The prospective bidders are requested to refer to the Standard Tender Document available on NAL internet(www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids.	