

**Procurement of a Five axes simultaneously controlled High Precision Vertical Machining Centre
(Traverse : 1000mm X1200mm X 1000mm)**

Tender No. : NAL/PUR/APMF/352/17-Z

ANNEXURE –II (Part A : Technical clarifications)

With reference to the Pre-Bid meeting held on 02/02/2018 at 10.00 hrs on the above subject, the following Technical Specifications of Chapter -04 of the tender document are amended as listed below.

Clause No./Sl.No.	Description	Specification as per the tender	Revised specification as on 02/02/2018
B.	SPINDLE:	Spindle sound level shall be below 45 decibels	Spindle sound level shall be below 45 decibels in Laboratory evaluation. Lab certificate preferred.
H.	CNC CONTROLLER	*Electronic hand wheel, USB, PCMCIA/CF card reader, LAN Connectivity and RS-232-C input/output interfaces shall be provided as standard.	*Electronic hand wheel, USB, PCMCIA/CF card reader(optional) , LAN Connectivity and RS-232-C input/output interfaces shall be provided as standard.
K.	.EXPERIENCE:	<p>* The manufacture should have sufficient experience in supply of similar or larger size machines. The machining centre quoted by the vendor shall be of a standard product of the vendor and details of similar installations in India or worldwide are to be made available and enclosed with the offer. The vendor shall enclose copies of Purchase order, Customers satisfactory report, Laser and ball bar test report of such machine.</p> <p>*The supplier should furnish customer list with the relevant details like Contact person, Phone Number, Address of supply, Year of supply etc. (Refer Performance Statement Form Chapter-8, Annexure-D</p>	<p>The manufacture should have sufficient experience in supply of similar or larger size machines. The machining centre quoted by the vendor shall be of a standard product of the vendor and details of similar installations in India or worldwide are to be made available and enclosed with the offer. The vendor shall enclose copies of Purchase order, Customers satisfactory report, Laser & ball bar test report and Geometric accuracies test report of similar type of the machine/Model quoted by the firm.</p> <p>*The supplier should furnish customer list with the relevant details like Contact person, Phone Number, Address of supply, Year of supply etc. (Refer Performance Statement Form Chapter-8, Annexure-D</p>
4.1.2	Table Size	1000mm X900 mm or more	1000mm X900 mm or more/ Diameter 1350 mm or more
5.1.2	X-axis	1000 mm or more	Description to be read as X-axis/Y-axis
5.1.3	Y-axis	1200 mm or more	Description to be read as Y-axis/X-axis
5.1.5	Continuous vertical Tilting A or B Axis on the spindle head	+110° to -30° or better	The total swivel range shall be equal to or more than 125° ;(Preferred range: -15° to +110° or more)
12.1.1	ACCURACY (as per VDI -DGQ 3441):	----	Description to be read as ACCURACY (as per VDI –DGQ 3441) for full traverse
	LINEAR AXES (X, Y & Z)		
12.1.2	Positional accuracy(Pa)	0.008 mm or finer	Description to be read as Positional accuracy(P)
12.1.4	Repeatability (U)	0.005 mm or finer	Description to be read as Mean Reversal Error (U)
	ROTARY AXES(A/B & C)		
12.1.5	Positional accuracy(Pa)	±5 arc sec	Description to be read as Positional accuracy(P)
12.1.5	Positional accuracy(Pa)	±5 arc sec	8 arc sec or finer
12.1.6	Positional Scatter(Ps)	7 arc sec	6 arc sec
12.1.7	Repeatability (U)	6 arc sec	Sl.no. 12.1.7 deleted.
18.1.23	LED/LCD Screen size and display	19" inch or more , color display	15" inch or more , color display
18.1.32	PCMCIA Card /CF Card reader	Required	Optional
18.1.36	Fail safe to Z-axis on power failure- Required	Required	Description to be read as Fail safe to Z-axis on power failure

20.1.2	Variations in voltage Frequent fluctuation The system must be able to function under the above fluctuations of voltage and frequency	-15% to +10% +/- 2Hz	Description to be read as: Variations in voltage Frequency fluctuation The system must be able to function under the above fluctuations of voltage and frequency
31.1.1	LIST OF USERS IN INDIA	a. The vendor shall provide the list of installations in India along with copies of Purchase order, Customers satisfactory report, Laser and ball bar test report of the machine. b. The supplier should furnish customer list with the relevant details like contact person with Phone Number , Address of supply, Year of supply etc.	Description to be read as: LIST OF USERS IN INDIA / WORLD WIDE
31.1.1	LIST OF USERS IN INDIA	a. The vendor shall provide the list of installations in India along with copies of Purchase order, Customers satisfactory report, Laser and ball bar test report of the machine. b. The supplier should furnish customer list with the relevant details like contact person with Phone Number , Address of supply, Year of supply etc.	a. The vendor shall provide the list of installations in India / Worldwide along with copies of Purchase order, Customers satisfactory report, Laser & ball bar test report , Geometric accuracies test report of similar type of the machine/Model quoted by the firm . b. The supplier should furnish customer list with the relevant details like contact person with Phone Number , Address of supply, Year of supply etc.
4.4.(v)	Training at Machine Builders site :		
4)	Nature of Training	Training in respect of operation, programming, maintenance of the machine, Use of Radio probes for job measurement, offsets measurements and Laser for tool measurement, Post processor software usage shall be provided. The duration of the training shall be for a period of five working days for three (3) Engineers at machine tool builders place at no cost to CSIR-NAL.	Training in respect of operation, programming, maintenance of the machine, Use of Radio probes for job measurement, offsets measurements and Laser for tool measurement, Post processor software usage shall be provided. The duration of the training shall be for a period of five working days for three (3) Engineers at machine tool builders place at no cost to CSIR-NAL. Note: Local Hospitality /Boarding/lodging /Airfare from Bangalore to Machine builder's place and back are to be borne by the supplier.
4.6	Delivery Schedule	8 months from the date of Purchase order or Letter of Credit.	10 months from the date of Purchase order or Letter of Credit.
	Additional clause /Specifications :		
19.1.17	Geometrical Accuracies :		
19.1.18	Circularity in XY plane, YZ plane, ZX plane using ball bar	--	≤0.006 mm for a radius of 150mm.
19.1.19	Squareness of Axes movements in XY,YZ and ZX plane	--	≤0.01mm
19.1.20	Straightness of X,Y And Z axes movements	--	≤0.006 mm
19.1.21	Flatness of the Table	--	≤0.02mm for the full table .

ANNEXURE –II (Part B : Commercial clarifications)

1. The representatives of the Bidders , requested CSIR-NAL to provide Bank details for online payment of the EMD since the time was short for submitting the technical bid & Commercial bid. The Bank details are enclosed herewith:

Electronic Payment Mandate Form

(Mandate for receiving payments through RTGS/NEFT from MSTC Limited)

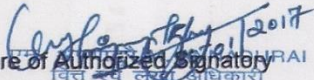
01	Principal Name	The Director, NAL
02	Address with Phone No.	P.B No.1779, Old Airport Road, Kodihalli, Bangalore – 560 017 080-25086001
03	Permanent Account Number (PAN)	AAATC2716R
04	Particulars of Account	
	a) Name of the Bank	State Bank of India
	b) Name of the Branch	NAL
	c) Branch Code	004815
	d) NEFT code of the Bank	
	e) City name	Bangalore
	f) Branch Location	Old Airport Road, Kodihalli
	g) Branch Telephone No.	080-25277165/25271225
	h) Bank IFSC Code	SBIN0004815
	i) 9 – Digit MICR	560002035

(Where MICR is starting with “0”, Please take the correct code from your bank for proper identification of city, bank, branch)

	j) Type of the Account (S.B. Current or Cash Credit) with code (010/011/013)	Savings Bank Account 010
	k) Account Number (as appearing on the Cheque Book)	30268539001
05	Email address of Principal	director@nal.res.in
06	Date of Effect of RTGS/NEFT in your Bank	

(Please enclose a cancelled un-signed cheque leaf to enable us to verify the details mentioned above)

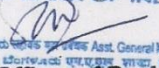
We hereby declare that the particulars given above are correct and complete. If the transaction is delayed lost because of incomplete or incorrect information, we would not hold the company responsible.


 Signature of Authorized Signatory
 Finance & Accounts Officer
 राष्ट्रीय वास्तविक प्रयोगशालाएं
 National Aerospace Laboratories
 बेंगलूरु/Bengaluru-560017

Bank Certificate

We certify that _____ has an _____ with _____
 us and we confirm that the details given above are correct as per our records.

Date _____
 Place _____

भारतीय स्टेट बैंक का भारतीय स्टेट बैंक
 For STATE BANK OF INDIA

 Asst. General Manager
 560002035, बेंगलूरु/बंगलूरु
 Authorized Officer of Bank

2. The revised schedule for submission of Bids and Opening of Bids is as follows :

Date & Time of Submission of Bid		Date and Time of Opening of Bid (Part-I – Technical Bid Only)	
Date	Time (IST)	Date	Time (IST)
28-Feb-2018	10:00 Hrs	01-Mar-2018	11:00 Hrs