



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008 (ODISHA)**

An Institute of National Importance under Ministry of HRD, GOI

**NOTICE INVITING TENDER**

**Tender Notification No: NITR/PW/ME/2018/51**

**Dated: 10/09/2018**

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **Semi-automatic pick and place machine and accessories.**

Last date of Submission of Bid : **03/10/2018 at 11:00 AM**

Opening date of technical Bid : **04/10/2018 at 11:00 AM**

**For Details:**

[http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx)

**Contact:** Dr. Tarapada Roy , ME; Ph: +91-661-2462507;

Email: [tarapada@nitrkl.ac.in](mailto:tarapada@nitrkl.ac.in)

Bidding through: <https://eprocure.gov.in/eprocure/app>

**sd/-  
REGISTRAR**



**NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA-769008, ODISHA**

**(TENDER NOTICE NO.: NITR/PW/ME/2018/51 dated: - 10/09/2018)**

**(PURCHASE OF Semi-automatic picks and place machine and accessories)**

<b>Item No</b>	<b>DESCRIPTION</b>	<b>Quantity</b>
1	<b>Semi-automatic pick and place machine</b>	1 Unit
2	<b>High Precision Manual Stencil Printer</b>	1 Unit
3	<b>Hot Air Convection Reflow Oven</b>	1 Unit

1. Quantity required : **as mentioned above(All information regarding technical specification provided in the Annexure-I)**
2. Delivery : Within 60 days from the date of purchase order
3. **Last Date of submission of Tender : 03/10/2018 at 11:00 AM**
4. **Date of opening of technical bid : 04/10/2018 at 11:00 AM**
5. The firm should not have been black listed at any time.
6. The submission of following bids by the tenderer should be through <https://eprocure.gov.in/eprocure/app>. Please follow the guidelines as per the portal.

**PURCHASE OF Semi-automatic pick and place machine and accessories**

**(Tender Notice No.: NITR/PW/ME/2018/51 dated: 10/09/2018) Due on 03/10/2018 at 11:00 AM**

7. **Liquidated damage clause** will be charged for any delay in supply of goods.
8. The validity of the tender shall be 90 days from the date of opening of the bids.
9. Detailed advertisement including all tender documents is also available in our website at [http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx) .
10. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

**(REGISTRAR)**  
**NIT, Rourkela**  
**Fax No- 0661-2462022**  
**Ph. No -0661-2472021**

**Specifications of Semi-automatic pick and place machine and accessories**

Item No	DESCRIPTION
1.	<p><b><u>Specifications of Semi-automatic pick and place machine:</u></b></p> <p><b>SEMI AUTOMATIC PICK AND PALCE</b> WITH INTERFACE SOFTWARE</p> <p><b>PCB holder:</b> Micro adjust holder (X, Y, theta)</p> <p><b>Placement speed:</b> 400-600 cph</p> <p><b>Placement speed IC:</b> 100-200 cph</p> <p><b>Dispensing Speed:</b> 1000-1500 dots/hour</p> <p><b>Tunable capacity:</b> 45 or 90 bins</p> <p><b>Tape/stick capacity:</b> 12 feeders (8 mm, 12mm, 16mm, SOP-8 to PLCC84)</p> <p>Traytable capacity: 1 jdec</p> <p><b>Mini tray 40 ×40 mm capacity:</b> 22 pieces per turntable</p> <p><b>Backside feeder capacity:</b> 25 ×8 mm tapes instead of turntable</p> <p><b>Tape strip feeder:</b> 3 ×8 mm +1 ×12 mm+1 ×16 mm</p> <p><b>Component range:</b> 0402 to infinite, 0201 with optional micro camera</p> <p><b>Min. lead pitch:</b> 0.4 mm (with prism)</p> <p><b>Min. PCB dimension:</b> 25 ×25 mm</p> <p><b>Min. PCB dimension:</b> 410 ×246 mm</p> <p><b>Temperature:</b> 15-25° C</p> <p><b>Pickup needle set:</b></p> <p>Inner diameters 0.4mm, 0.51 mm, 0.84mm, 1.6 mm, fine pitch needle (out. Diameter 6 mm), and automated placement</p>
2.	<p><b><u>Specifications of High Precision MANUAL STENCIL PRINTER:</u></b></p> <p>Application: Print the Solder Paste onto the Bare PCB thru Laser cut Stencil, this sources applying Controlled Amount of the Solder Paste in Good Printing Accuracy &amp; repeatability.</p> <p>i. Localization way: trilateral positioning or PIN location</p> <p>ii. Calibration method: manual fine-tuning</p> <p>iii. Calibration direction: X direction, Y direction,</p>

	<p>iv. Screen printing effective area: 400mm × 250mm</p> <p>v. Overall dimension: 565mm × 430mm × 255mm</p>								
3.	<p><b><u>Specifications of Hot Air Convection Reflow Oven:</u></b></p> <p>The heating zone quantity: upper3/down2</p> <p>The length of the heating zone: 960mm</p> <p>The heating type: intelligent level sirocco and rapid infrared heating</p> <p>The cooling zone quantity: 1</p> <p>Maximum width of PCB board: 300MM</p> <p>The operation direction: left→right</p> <p>The speed of conveyer belt: 0-1600mm/min</p> <p>The power supply: Three phase 5 line 380V 50/60Hz</p> <p>Peak power: 4.5KW</p> <p>Heating up time: Around 15 mins</p> <table> <tr> <td>Temperature control range:</td> <td>Room temperature to 300°C</td> </tr> <tr> <td>Temperature control mode:</td> <td>PID closed-loop control</td> </tr> <tr> <td>Temperature control accuracy:</td> <td>±1°C</td> </tr> <tr> <td>PCB temperature distribution deviation:</td> <td>±2°C</td> </tr> </table>	Temperature control range:	Room temperature to 300°C	Temperature control mode:	PID closed-loop control	Temperature control accuracy:	±1°C	PCB temperature distribution deviation:	±2°C
Temperature control range:	Room temperature to 300°C								
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PCB temperature distribution deviation:	±2°C								

**Other Qualification Criteria: .**

1. Web references must be provided along with the technical bid.
2. Pointwise technical compliance along with any deviation of the mentioned specifications (**Annexure-I**) must be indicated along with technical documents.
3. Customized equipment and accessories (as per **Annexure-I**) will not be accepted. The standard equipment and accessories (as per **Annexure-I**) will only be accepted.
4. Make and model no. should be mentioned along with the technical bid
5. Dealership Certificate and Proprietary Nature Certificate (If applicable) must be provided along with technical bid.