



**Tender Ref. No.: NSIC/NEEMKA/T&D/FBD/2017-18/02(F)**

## **Tender Document For Supply of CNC Tooling**

**NSIC- Technical Services Centre**  
(A Government of India Enterprise)  
Tigaon Road, Neemka Faridabad-121004  
(Haryana)

Tel No. 0129-2401101, 2401102, 2401104

Email: [ntsceneemka@nsic.co.in](mailto:ntsceneemka@nsic.co.in)

Website: [www.nsic.co.in](http://www.nsic.co.in)

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**NOTICE INVITING TENDER**

The National Small Industries Corporation Ltd. (NSIC), Neemka, Faridabad invites sealed tender in Two bid system (Technical & Commercial bid in two separate envelopes) from eligible and qualified Original Equipment Manufacturer/ Authorized Distributors of OEM / Authorized Dealers of OEM for the Supply of CNC Tooling.

The details are summarized below:-

a)	Tender number	Reference number for inviting bids through this tender is <b>TENDER NO.: NSIC/NEEMKA/T&amp;D/FBD/ 2017-18/02(F)</b>
b)	Purchaser	The National Small Industries Corporation Ltd. which is a Government of India Enterprise under the Ministry of Micro, Small & Medium Enterprises.
c)	Usage of Tooling	The purchaser would place the CNC Tooling in their educational training centre and shall be utilized for Imparting skill and entrepreneurship development training.
d)	Scope of Tender	Supply of Tooling
e)	Specification/ Details of Tooling	The detailed specifications of Tooling are specified in tender and placed at <b>Annexure-A</b>
f)	Web page for details of tender	Web page: <a href="http://www.nsic.co.in/tenders.asp">http://www.nsic.co.in/tenders.asp</a> The prospective bidders are advised to remain in touch with the website for any update in respect of this tender.
g)	Locations of supplies	The Tooling (s) is/are proposed to be supplied at NSIC-Technical Services Center at Neemka Faridabad (Harayana) 121004.
h)	Earnest Money Deposit (EMD) along with Tender	EMD of Rs. 61,000/- (Rupees Sixty One Thousand Only) shall be submitted in the form of D.D. in favour of <b>“NSIC- Technical Services Center, Neemka, Faridabad. A/c</b> payable at Faridabad and to be placed in the Technical Bid envelope while submitting the tender.
i)	Exemption from the payment of EMD and Tender fee	The exemption for the payment of EMD as well as tender fee will be applicable to the Udyog Aadhaar/NSIC/ District Industry Centre registered units for the goods for which said tender is floated.

j)	Cost of Tender Documents	The tender document can be collected from the office of the Dy. General Manager, NSIC-Technical Services Centre, Tigaon Road, Neemka, Faridabad in between the period from 20 <sup>th</sup> <b>January 2018 to 6<sup>th</sup> February 2018</b> (except Saturday & Sunday) between 10:30 hours to 15:30 hours against payment of Rs. 1000/- (Rupees One thousand only) (Non- refundable) by way of demand draft, in favour of “ <b>NSIC Ltd.</b> ” payable at Faridabad. Alternatively tender form can be downloaded from our website <a href="http://www.nsic.co.in">www.nsic.co.in</a> from 20th January <b>2018 to 6<sup>th</sup> February 2018</b> . In case the tender downloaded for submission of offer, the tender fee of Rs. 1000/- in form of demand draft in favour of “ <b>NSIC Technical Services Center, Neemka, Faridabad.</b> A/c payable at Faridabad shall be enclosed
k)	Last date of submission of tender	<b>Tender must be delivered to the address below on or before 6<sup>th</sup>, February 2018 up to 15.45 hours.</b> Late bids will be rejected. The Dy. General Manager, NSIC- Technical Services Centre, Tigaon Road, Neemka, Faridabad-121004
l)	Date of opening of Technical Bid (Envelope-1)	<b>The technical bid for the tender shall be opened on 6<sup>th</sup>, February 2018 at 16:45 hours at the address as under:</b> The Dy. General Manager, NSIC- Technical Services Centre, Tigaon Road, Neemka, Faridabad-121004
m)	Date of opening of Commercial Bid (Envelope-2)	The date for opening second envelope containing Commercial Bid will be intimated to the qualified bidders separately.

**Note:** In case of any further details required, the same can be collected from the office of The Dy. General Manager, NSIC-Technical Services Centre, Tigaon Road, Neemka, Faridabad-121004 from 20<sup>th</sup> **January 2018 to 6<sup>th</sup> February 2018** (except Saturday & Sunday) between 11:30 hours to 15:30 hours.

Dy. General Manager  
NSIC- Technical Services Centre Neemka

**INSTRUCTIONS TO THE TENDERERS**

The Tender shall be submitted in accordance with these instructions, as under.

**1. Abbreviations:**

Throughout this tender document”, the word/ term:

- a) “NTSC” means NSIC-Technical Services Centre
- b) “NSIC” means The National Small Industries Corporation Ltd.
- c) “day” means Calendar day
- d) “working day” means Monday to Friday in week
- e) “tender” means tender number **NSIC/NEEMKA/T&D/FBD/ 2017-18/02(F)**
- f) “Tooling” means the Tooling/ Tooling’s accessories as detailed at Annexure-A.
- g) If context so requires, “singular” means “plural” and vice versa.
- h) “EMD” means Earnest Money Deposit.
- i) “Purchaser” means The National Small Industries Corporation Ltd
- j) “Bid” means the document and financial details submitted by bidder.
- k) “Bidder” means the eligible and qualified Original Equipment Manufacturers / Authorized Distributors/ Authorized Dealers.
- l) “Tenderer” means the eligible and qualified Original Equipment Manufacturers / Authorized Distributors/ Authorized Dealers.
- m) “OEM” means Original Equipment Manufacturers

**2. Eligible Bidder:**

- a) The intending Bidder, in case of Original Equipment Manufacturers shall submit a self-declaration on their letter-head, along with the Technical Bid, confirming that they are regular in manufacturing & supplying the similar Tooling, as asked in this tender, for the last ten (10) years.
- b) The Original Equipment Manufacturers shall possess ISO Certificate for their establishment. The copy of the valid ISO Certificate shall be placed with the Technical Bid.
- c) The intending Bidder, in case of Authorized Distributor of OEM / Authorized Dealer of OEM shall possess valid authorized Distributorship / Dealership license from Original Equipment Manufacturers who should have valid ISO Certificate and shall be engaged in regular manufacturing and supply of similar Tooling for the last ten (10) years. The Bidder shall enclose the copy of the same in Technical bid while submitting the tender.

**3. Location of supplies:**

a) The details of location where the Tooling(s) supplied through this tender are as under:

#	Location	Address for supplies
1	Neemka, Faridabad, Haryana	NSIC- Technical Services Centre, Tigaon Road, Neemka, Faridabad-121004(Haryana)

b) The bidder is free to inspect the location(s) in the premises before submitting the bid under this tender.

c) It may be noted that the Dy.General Manager, NTSC Neemka have full rights to cancel the tender even after calling the offers from bidders but before the issue of supply order to execute the supply by the bidder. The reason for cancellation of supply to the designated location would not be disclosed.

**4. Scope of Supplies:**

a) The Tooling shall be supplied in compliance to the specifications mentioned in Annexure- A of the tender.

b) The specifications of the Tooling as mentioned in the Annexure-A are the requirements of tender, however higher specifications of Tooling may be considered subject to their cost economics i.e. competitiveness in financial terms for the particular location.

**5. Delivery**

a) The purchaser interested for complete delivery of Tooling by the bidder within thirty (30) calendar days from the date of issue of supply order. However, the bidder has an option to submit the best delivery time, but in any case the delivery should be before 30 days from the date of issue of supply order by purchaser.

b) The Tooling shall be inspected on receipt at site and bidder shall be responsible for any damage during the transit of Tooling.

c) The bidder shall not arrange part shipments and/or trans-shipments without the permission of purchaser. The insurance cover including insuring the goods against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery shall be obtained by the bidder in his own name and not in the name of purchaser. The purchaser will as soon as possible but not later than 30 days from the date of arrival of goods at destination shall notify the bidder of any loss or damage to the goods.

**6. After Sales Services**

a) The bidder shall ensure to render after sales services to the satisfaction of purchaser.

b) The bidder will depute their engineer within two working days to attend the service call received in writing from purchaser.

**7. Manuals:**

The bidder to supply three (03) sets of the manuals in hard format along with Tooling.

**8. Tender documents:**

- a) The tender document can be collected from the office of the Dy.General Manager, NSIC-Technical Services Centre, Tigaon Road Neemka. in between the period from 20<sup>th</sup> **January 2018 to 6<sup>th</sup> February 2018** (except Saturday & Sunday) between 10:30 hours to 15:30 hours against payment of Rs. 1000/- (Rupees One Thousand only) (Non-refundable) by way of demand draft, in favour of “**NSIC – Technical Services Center, Neemka, Faridabad. A/c** payable at Faridabad.

Alternatively tender form can be downloaded from our website [www.nsic.co.in](http://www.nsic.co.in) from **20<sup>th</sup> January 2018 to 6<sup>th</sup> February 2018**. In case the tender downloaded for submission of offer, the tender fee of Rs. 1000/- in form of demand draft in favour of “**NSIC-Technical Services Center, Neemka, Faridabad. A/c** payable at Faridabad shall be enclosed with Technical Bid of the tender while submitting the tender.

The other option is to pay Rs. 1000 by RTGS/NEFT to the bank of purchaser as detailed under:

ACCOUNT NAME	BANK NAME	BANK A/C NO.	BANKIFSC CODE
NSIC- Technical Services Center, Neemka	Corporation Bank, Sec-14 Faridabad	124601601000320	CORP0001246

The bidder is requested to attach the Bank Statement / RTGS Slip in the Technical Bid, to prove the transfer of payment to the purchaser’s Account.

- b) At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The prospective bidders are advised to remain in touch with the Website for any update in respect of this tender.

**9. Authorization for Submission of Tender:**

- a) **The original and all copies of the bid shall be signed by a person duly authorized** to sign on behalf of the Bidder. The written confirmation of authorization (in form of letter on the bidder’s letter head) to sign on behalf of the bidder confirming the signature as a person duly authorized to sign should be attached with the technical bid of the tender.
- b) The person signing the tender form or any other documents on behalf of the Bidder shall be deemed to warrant that he has authority to bind the Bidder. If it subsequently comes to light that the person so signed had no authority to do so, the purchaser may without prejudice to any other civil & criminal remedies cancel the tender and hold the Bidder liable for all costs, charges and damages.

**10. Earnest Money & Tender Fees Deposit:**

- a) The EMD shall be submitted in the first envelope super-scribed as “Technical Bid”, of prescribed amount by way of Demand Draft drawn in favour of “NSIC-Technical Services Center, Neemka, Faridabad A/c , only for the Tooling(s) quoted by the Bidder. No cash towards EMD shall be accepted. The offers without EMD from the Bidders shall be rejected.
- b) In case tender documents downloaded from website, Tender Fee of Rs. 1000/- shall be submitted by way of D.D. drawn in favour of “NSIC Technical Services Center, Neemka, Faridabad A/c along with the Technical Bid of the tender documents. Tender fee is non-refundable. The option for payment by RTGS/NEFT is also available and bank details of purchaser, are as under:

ACCOUNT NAME	BANK NAME	BANK A/C NO.	BANKIFSC CODE
NSIC- Technical Services Center, Neemka	Corporation Bank, Sec-14 Faridabad	124601601000320	CORP0001246

The bidder is requested to attach the Bank Statement / RTGS Slip in the Technical Bid, to prove the transfer of payment to the purchaser's Account.

- c) EMD and tender fee submission is exempted for the bidders those having valid registration under Udyog Aadhaar, Single Point Registration Scheme of NSIC and all micro and small enterprises registered with Director of Industries from DIC for the Tooling for which this is tender issued. To support this, the self-certified scan copy of such valid registration/ exemption certificate is to be attached with technical bid.
- d) The Purchaser shall not be liable for payment of any interest on EMD.
- e) Any request by the bidders to consider their EMD already furnished by them to any of the other office of the purchaser, for any other contract/ tender will not be considered as EMD for this tender.
- f) The EMD will be returned to the unsuccessful bidders soon after the orders are placed on the successful bidder. In case of successful bidder, the EMD will be returned along with 20% payment as per payment terms mentioned at Para 25 of Instructions to the Tenderers.

#### **11. Submission of Tender:**

- a) The bidder to examine all instructions, forms, terms and specifications in the tender documents and to furnish with its bid all documents or information as required by bidding document.
- b) The language for all the correspondence and documents related to the tender shall be in English/ Hindi only. Moreover, the printed literature/technical details for the Tooling shall also be in English/ Hindi.
- c) The tender must be placed in a properly sealed bigger envelope addressed to The Dy.General Manager, NSIC-Technical Services Centre, Tigaon Road Neemka, Faridabad-121004(Haryana) and the said bigger envelope shall contain two sealed envelopes containing Technical & Commercial bids. The bigger envelope must be super-scribed "Tender for purchase of CNC Tooling" with tender enquiry number and its due date. The two sealed envelopes inside the bigger envelope must be super-scribed as:

*Envelope No-1: The said envelope is for technical bid & shall be super- scribed as "Tender for the Supply of CNC Tooling - Technical Bid"*

*Envelope No-2: The said envelope is for commercial bid & shall be super- scribed as "Tender for the Supply of CNC Tooling- Commercial Bid".*

- d) If both or either of the envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
- e) All the columns of the tender shall be duly, properly and exhaustively filled in.  
Any cutting/over writing etc. in the tender must be signed by the person who is signing the tender.
- f) Tenders received in open covers/ letters/ fax/ email will not be considered.

#### **12. Financial Bid Submission:**

- a) Bidder shall take into account all costs including unloading at the location of purchaser, cartage etc. for giving delivery of Tooling at site(s) as detailed at Para 3 of Instructions to Tenderers before quoting the rates. In this regard no claim what so ever shall be entertained.
- b) The price quoted in financial bid shall be firm and shall include all applicable taxes. Any variation in the taxes, duties, levies etc. till supply of Tooling to the location(s) shall be to the bidders account.
- c) No extra payment shall be paid on account of any discrepancy in nomenclature of items. The Bidder shall seek clarifications if any before submitting the tender.
- d) No representation for the enhancement of the prices of the accepted tender or alteration of the terms and conditions will be entertained till supplies are completed to the designated location.

**13. Last date of Submission of Tender:**

- a) The tender should reach the office of the Dy. General Manager, NSIC-Technical Services Centre, Tigaon Road, Neemka, Faridabad by 6 February 2018 up to 15.45 hours.
- b) The purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Tender Documents, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. The prospective bidders are advised to remain in touch with website for any update in respect of their tender.
- c) The purchaser shall not consider any bid that arrives after the deadline for submission of bids. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected and may be returned unopened to the Bidder.

**14. Opening of Technical Bid:**

- a) The technical bid of tenders will be opened at NTSC-Neemka on 6<sup>th</sup>, February, 2018 at 16:45 Hours. The Bidder or their authorized representative (One person only) may be present at the time of opening of the tender.

**15. Opening of Commercial Bid:**

- a) The Commercial Bid of only technically qualified bidders will be opened on the stipulated due date. The date & time for opening of Commercial Bid shall be intimated to the technically qualified bidders through email, after the evaluation of Technical Bid.

**16. Validity of Tender:**

- a) The tender shall be valid for a period of 120 days from the date of opening of the Technical Bid of tender. Terms and financial details submitted in the bid shall be treated as firm during the said period of 120 days.
- b) In exceptional circumstances, prior to the expiry of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.

**17. Evaluation of Bids:**

- a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected.
- b) If there is an error in a total corresponding to the addition or subtraction of sub totals, the subtotals shall prevail and the total shall be corrected; and
- c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- d) To assist in the examination, evaluation, comparison of the bids and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing only.
- e) If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.
- f) The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to supply order, without there by incurring any liability to Bidders. In case

of annulment, all bids submitted and specifically Bid document, EMD deposits shall be promptly returned to the Bidders.

- g) The Purchaser shall compare the evaluated prices of all substantially responsive bids to determine the lowest evaluated bid . The comparison shall be on the basis of landed cost.
- h) At the time the Contract is awarded, the Purchaser may increase the Quantity of Tooling without any change in the unit prices or other terms & conditions of the bid and the Bidding Documents subject to the acceptance of bidder in writing for the same.
- i) The purchaser have right to verify the particulars furnished by the bidder independently.

**18. Earnest Money Forfeit:**

- a) If any Bidder withdraws his tender before the period of 120 days from the date opening of technical bid or makes any modifications in the terms and the conditions of the tender which are not acceptable to the purchaser, then the purchaser shall, without prejudice to any other rights or remedy, be at liberty to forfeit the EMD.
- b) The EMD will also be forfeited in following cases:
  - i. If the bidder fails to accept the order based on his offer (bid) and within the prescribed time.
  - ii. If the bidder fails to supply the Tooling with specifications as mentioned in Annexure –A
  - iii. If the bidder delays supplies beyond a reasonable time resulting in disruption of project.
  - iv. Bidder for any reason whatsoever withdraws the tender after it is accepted or become unable or fails to execute the orders within stipulated delivery period.
  - v. Submission of misleading/contradictory/false statement or information and fabricated/invalid documents is detected before or after the issue of order to execute the supplies.
  - vi. The successful bidder does not submit Indemnity Bond within the prescribed time.

**19. Notification of Award:**

Prior to the expiry of the period of bid validity, the purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter shall specify the sum that the Purchaser will pay to the bidder in consideration of the supply of Tooling's.

**20. Packing:**

- a) The bidder shall provide packing of the Tooling/ equipment, as is required to prevent their damages or deterioration during the transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit. In case the consignment received with damaged packaging, the purchaser would not accept the delivery.
- b) The Tooling shall be securely boxed, crated and protected from mechanical damage, moisture etc. suitable for both storage and transit according to the nature of the material and mode of transport. The bidder shall be responsible for any loss/ damage during transportation to the designated location.

**21. Delivery Time:**

- a) The bidder shall indicate the period within which the ordered quantity will be supplied. The bidder shall note that in case bidder fails to supply within the period of delivery indicated by the bidder in technical bid of this tender, penalty @ 1% of value of the order per week of delay would be levied subject to maximum 4 weeks. It means, the bidder shall have the liability of delayed supply to the maximum of 4 weeks after expiry of scheduled delivery date. After that the supply order shall be cancelled and EMD will be forfeited and bidder will be debarred from participation in any future tenders.
- b) The successful Bidder shall, within a week from the date of receipt of communication of acceptance of quotes from purchaser shall intimate his acceptance of the order. The successful bidder shall complete supplies strictly as per the accepted delivery period.

**22. Payment:**

- a) The 80% payment of total bill will be made by the purchaser by crossed account payee cheque/RTGS/NEFT for which the bidder shall send bills in duplicate (original + copy) after Supply of Tooling, giving the reference number of the purchase order along with copies of delivery note of Tooling(s), from designated purchaser department. The details about the designated purchaser department who is authorized to take the delivery of Tooling(s) shall be informed to the successful bidder through the supply order placed for the supply of Tooling(s).
- b) The 20% payment of total bill along with EMD deposit will be released to bidder after one month from the date of Supply of Tooling at site.

**23. Causes of Rejection of Tender:**

- a) While submitting the tender, if any of the prescribed conditions are not fulfilled or are incomplete in any form, the tender is liable to be rejected.
- b) If any Bidder stipulates any condition of his own, such conditional tender is liable to be rejected.

**24. Claims:**

- a) If the material supplied are found to be off size and shape different than those in the accepted offer and are of specifications lower than those stipulated in the accepted offer, the purchaser shall have right to totally reject the Tooling/ equipment and/or to claim for compensation from bidder. The bidder shall reimburse to purchaser, the claim lodged in writing within 15 (fifteen) days of its demand. The bidder shall also compensate for losses, if any, sustained by purchaser due to defective packing and/or wrong marking of the Tooling/ equipment.
- b) The bidder shall be responsible for arranging the rejected Tooling/ equipment to be removed at his cost from purchaser premises.

**25. Address for communication:**

- a) All the communication with respect to the tender shall be addressed to:

The Dy.General Manager,  
NSIC- Technical Services Centre,  
Tigaon Road, Neemka, Faridabad-121004

**26. Force Majeure:**

- a) In the event of any unforeseen circumstances directly interfering with the supply of goods/work/service arising during the execution of order such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, earthquakes, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the Bidder shall, within a week from the commencement thereof, notify the same in writing to the Purchaser with reasonable evidence thereof. Either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other.

**27. Code of Ethics:**

- a) The Purchaser as well as the Bidder shall observe the highest standard of ethics including laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988", during the procurement or execution of such contracts. If the bidders are found in Bid pooling or against law against fraud and corruption then their firms may be blacklisted.

**28. Jurisdiction:**

- a) In the event of any dispute the legal matter shall be subjected to the jurisdiction of Court in Haryana State Only.

*We confirm with our acceptance to the instructions (S.No-1 to 27 above) as given above.*

**BIDDER'S NAME & SIGNATURE WITH SEAL**

*These duly signed "Instructions to the Tenders" as under shall be attached with technical bid of the tender as a mark of acceptance of bidder and any tender not confirming the instructions as under is liable to be rejected*

**Details of Requirements and Technical Specifications of Tooling (Preferred make – Sandvik/ISCAR/ Kennametal/ TaeguTec/Walter/Mitsubishi/Tungaloy/Kyocera/Korloy/Seco/SumiTomo)**

Sr No	Description	Specification
<b>1</b>	<b>Face Milling Cutter Dia 80 mm with inserts and holder</b>	
1.1	Face Milling Cutter Dia 80 mm	Tool cutting edge angle -45 degree
		Cutting diameter -80 mm
		No of inserts - 6
		Depth of cut maximum - 6 mm
		Hand - Right
		Adaptive interface machine direction
		Arbor -ISO 6462 -A (hexagon socket head cap screw) - metric: 27
		Cutting pitch differential
1.2	Inserts	Inscribed Circle Diameter - 13 mm
		Insert shape code - S
		Cutting edge effective length - 8.8 mm
		Wiper edge length - 2 mm
		Corner radius - 0.8 mm
		Major cutting edge angle - 45 deg
		Hand - Right
		Coating - CVD Ti (C, N) + Al2O3 + TiN
		Insert thickness - 5.6 mm
1.3	Basic Holder BT 40 to face mill arbor dia 27 mm	Adaptive interface workpiece direction
		Arbor -ISO 6462 -A/B (center bolt/washer) - metric: 27
		Connection retention knob thread size M16
		Connection diameter - 27 mm
		Functional length - 100 mm
		Body material code - Steel
<b>2</b>	<b>Shoulder milling cutter dia 54 mm with inserts and holder</b>	
2.1	Shoulder milling cutter dia 54 mm	Cutting diameter - 54 mm
		No of inserts - 5
		Depth of cut maximum - 10 mm
		Maximum ramping angle - 1.4 deg
		Cutting pitch differential
		Adaptive interface machine direction
		Arbor -ISO 6462 -A (hexagon socket head cap screw) -metric: 22
		Hand - Right
		Connection diameter - 22 mm
		Functional length - 40 mm
		Body material code - Steel

2.2	Inserts	Insert width - 6.8 mm
		Cutting edge effective length - 10 mm
		Wiper edge length - 1.2 mm
		Corner radius - 0.8 mm
		Major cutting edge angle - 90 deg
		Hand - Right
		Coating - CVD Ti (C, N) + Al2O3 + TiN
		Insert thickness - 3.59 mm
2.3	Basic Holder BT 40 to face mill arbor dia 22 mm	Adaptive interface work piece direction
		Arbor -ISO 6462 -A/B (center bolt/washer) - metric: 27
		Connection retention knob thread size - M16
		Connection diameter - 22 mm
		Functional length - 100 mm
		Body material code - Steel
<b>3</b>	<b>Shoulder milling cutter dia 32 mm, long 192 mm with inserts and holder</b>	
3.1	Shoulder milling cutter dia 32 mm long 192 mm	Cutting diameter - 32 mm
		No of inserts - 2
		Depth of cut maximum - 10 mm
		Maximum ramping angle - 5.5 deg
		Usable length - 192 mm
		Cutting pitch differential -true
		Adaptive interface machine direction
		Capto (bolt & segment clamping) - size C5
		Hand - Right
		Damping property - True
		Connection diameter - 50 mm
		Functional length - 217 mm
		Body material code - Steel
3.2	Inserts	Insert width - 6.8 mm
		Insert shape code - L
		Cutting edge effective length - 10 mm
		Wiper edge length - 1.2 mm
		Corner radius - 0.8 mm
		Major cutting edge angle - 90 deg
		Hand - Right
		Coating - PVD (Ti,Al)N2
		Insert thickness - 3.59 mm
3.3	Basic Holder BT-40 to C5	Adaptive interface machine direction
		MAS-BT403 -AD/B central/flange coolant - BT40
		Connection retention knob thread size M16
		Connection diameter - 50 mm
		Functional length - 90 mm
		Body material code - Steel

<b>4</b>	<b>High Feed Milling Cutter Dia 25 mm with inserts and holder</b>	
4.1	High Feed Milling Cutter Dia 25 mm	Tool cutting edge angle - 10 deg
		Cutting diameter - 10.9 mm
		Maximum cutting diameter - 25 mm
		No of inserts - 2
		Maximum ramping angle - 14.5 deg
		Adaptive interface machine direction
		Cylindrical shank without clamping features -metric: 20.0
		Hand - Right
		Connection diameter - 20 mm
		Functional length - 180 mm
		Body material code - Steel
4.2	Inserts	Inscribed circle diameter - 9.5 mm
		Insert shape code - S
		Cutting edge effective length - 5.77 mm
		Wiper edge length - 0.66 mm
		Corner radius - 1.4 mm
		Major cutting edge angle - 10 deg
		Hand - Neutral
		Coating - CVD Ti(C,N)+Al <sub>2</sub> O <sub>3</sub> +TiN
		Insert thickness - 4.5 mm
4.3	Basic Holder BT-40 to Side Lock Dia 20 mm	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40
		Adaptive interface workpiece direction Cylindrical clamping (ISO9766 drill shank) - metric: 20
		Connection retention knob thread size M16
		Connection diameter 20 mm
		Functional length - 75 mm
		Body material code - Steel
<b>5</b>	<b>Round Milling Cutter Dia 20 mm with inserts and holder</b>	
5.1	Round Milling Cutter Dia 20 mm	Cutting diameter - 20 mm
		Maximum cutting diameter - 32 mm
		No of inserts - 2
		Depth of cut maximum - 9 mm
		Maximum ramping angle - 12 deg
		Cutting pitch differential - true
		Adaptive interface machine direction
		Cylindrical shank without clamping features -metric: 25.0
		Hand - Right
		Connection diameter - 25 mm
		Connection diameter tolerance - h7
		Functional length - 190 mm
		Body material code - Steel

5.2	Inserts	Inscribed circle diameter - 12 mm
		Insert shape code - R
		Corner radius - 6 mm
		Hand - Neutral
		Coating - PVD (Ti,Al)N
		Insert thickness - 3.969 mm
5.3	Basic Holder BT-40 to Side Lock Dia 25 mm	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40
		Adaptive interface workpiece direction Cylindrical clamping (ISO9766 drill shank) - metric: 25
		Connection retention knob thread size M16
		Connection diameter 25 mm
		Functional length - 80 mm
		Body material code - Steel
<b>6</b>	<b>Solid Carbide Endmill</b>	
6.1	Solid Carbide Endmill Dia 16 mm	Cutting diameter -16 mm
		Peripheral effective cutting edge count -4
		Connection diameter tolerance - h6
		Coating - PVD TiAlN
		Connection diameter - 16 mm
		Max ramping angle - 5 deg
		Flute helix angle - 50 deg
		Cutting material hardness $\leq$ 48 HRC
6.2	Solid Carbide Endmill Dia 12 mm	Cutting diameter -12 mm
		Peripheral effective cutting edge count -4
		Connection diameter tolerance - h6
		Coating - PVD TiAlN
		Connection diameter - 12 mm
		Max ramping angle - 5 deg
		Flute helix angle - 50 deg
		Cutting material hardness $\leq$ 48 HRC
6.3	Solid Carbide Endmill Dia 10 mm	Cutting diameter -10 mm
		Peripheral effective cutting edge count -4
		Connection diameter tolerance - h6
		Coating - PVD (Ti,Al)N2
		Connection diameter - 10 mm
		Max ramping angle - 5 deg
		Flute helix angle - 50 deg
		Cutting material hardness $\leq$ 48 HRC
6.4	Solid Carbide Endmill Dia 8 mm	Cutting diameter -8 mm
		Peripheral effective cutting edge count -4
		Connection diameter tolerance - h6
		Coating - PVD TiAlN
		Connection diameter - 8 mm

		Max ramping angle - 5 deg
		Flute helix angle - 50 deg
		Cutting material hardness $\leq$ 48 HRC
<b>7</b>	<b>Solid Carbide Ball Nose</b>	
7.1	Solid Carbide Ball Nose Dia 3 mm	Cutting diameter - 3 mm
		Corner radius - 1.5 mm
		Maximum ramping angle -15 deg
		Flute helix angle - 30 deg
		Cutting material hardness $\leq$ 48 HRC
		Peripheral effective cutting edge count - 2
		Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 3
		Coating -PVD AlCrN
		Functional length - 38 mm
		Connection diameter - 3 mm
7.2	Solid Carbide Ball Nose Dia 4 mm	Cutting diameter - 4 mm
		Corner radius - 2 mm
		Maximum ramping angle -15 deg
		Flute helix angle - 30 deg
		Cutting material hardness $\leq$ 48 HRC
		Peripheral effective cutting edge count - 2
		Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 4
		Coating -PVD AlCrN
		Functional length - 57 mm
		Connection diameter - 6 mm
7.3	Solid Carbide Ball Nose Dia 6 mm	Cutting diameter - 6 mm
		Corner radius - 3 mm
		Maximum ramping angle -15 deg
		Flute helix angle - 30 deg
		Cutting material hardness $\leq$ 48 HRC
		Peripheral effective cutting edge count - 2
		Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 6
		Coating -PVD AlCrN
		Functional length - 57 mm
		Connection diameter - 6 mm
7.4	Solid Carbide Ball Nose Dia 8 mm	Cutting diameter -8 mm
		Corner radius - 4 mm
		Maximum ramping angle -15 deg
		Flute helix angle - 30 deg
		Cutting material hardness $\leq$ 48 HRC
		Peripheral effective cutting edge count - 2

		Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 8
		Coating -PVD AlCrN
		Functional length - 63 mm
		Connection diameter - 8 mm
<b>8</b>	<b>Solid Carbide Drill with Tap</b>	
8.1	Solid Carbide Drill Dia 5mm for M6	Cutting diameter - 5 mm
		Achievable hole tolerance - H9
		Coating - PVD (Ti,Al)N
		Connection diameter - 6 mm
		Point angle - 140 deg
		Overall length - 66 mm
8.2	Tap M6	Thread diameter size - M6
		Thread pitch - 1 mm
		Thread tolerance class - 6H
		Substrate - HSS-E
		Coating - PVD TiAlN+WC/C
		Functional length - 80 mm
		Flute count - 3
		Flute helix angle - 48 deg
Standard - DIN371		
8.3	Solid Carbide Drill Dia 6.8 mm for M8	Cutting diameter - 6.8 mm
		Achievable hole tolerance - H9
		Coating - PVD (Ti,Al)N
		Connection diameter - 8 mm
		Point angle - 140 deg
		Overall length - 91 mm
8.4	Tap M8	Thread diameter size - M8
		Thread pitch - 1.25 mm
		Thread tolerance class - 6H
		Substrate - HSS-E
		Coating - PVD TiAlN+WC/C
		Functional length - 90 mm
		Flute count - 3
		Flute helix angle - 48 deg
Standard - DIN371		
8.5	Solid Carbide Drill Dia 8.5mm for M10	Cutting diameter - 8.5 mm
		Achievable hole tolerance - H9
		Coating - PVD (Ti,Al)N
		Connection diameter - 10 mm
		Point angle - 140 deg
		Overall length - 89 mm
8.6	Tap M10	Thread diameter size - M 10
		Thread pitch - 1.5 mm
		Thread tolerance class - 6HX
		Substrate - HSS-E-PM

		Coating - PVD (Ti,Al)N
		Functional length - 100 mm
		Flute count - 3
		Flute helix angle - 48 deg
		Standard - DIN371
8.7	Solid Carbide Drill Dia 10.2mm for M12	Cutting diameter - 10.2 mm
		Achievable hole tolerance - H9
		Coating - PVD (Ti,Al)N
		Connection diameter - 12 mm
		Point angle - 140 deg
		Overall length - 102 mm
8.8	Tap M 12	Thread diameter size - M 12
		Thread pitch - 1.75 mm
		Thread tolerance class - 6HX
		Substrate - HSS-E-PM
		Coating - PVD (Ti,Al)N
		Functional length - 110 mm
		Flute count - 4
		Flute helix angle - 48 deg
		Standard - DIN371
<b>9</b>	<b>Fine Boring Head Dia 3 to 36mm with sleeve and basic holder</b>	
9.1	Fine Boring Head Dia 3 to 36mm	Minimum cutting diameter - 3 mm
		Maximum cutting diameter - 36 mm
		Adaptive interface machine direction Capto (bolt and segment clamping) -size C5
		Adaptive interface workpiece direction Cylindrical clamping w/ flats (sleeve) - metric: 20
		Connection diameter - 50 mm
		Functional length - 85 mm
		Body diameter - 80 mm
		Body material code - Steel
		Least count adjustment - 0.002 mm
9.2	Sleeve For Fine Boring Head	Adaptive interface machine direction Cylindrical shank without clamping features -metric: 20.0
		Adaptive interface workpiece direction Cylindrical clamping (sleeve) -metric: 16
		Connection diameter for boring head - 20 mm
		Connection diameter for boring bar - 16 mm
9.3	Basic Holder BT 40 TO C5	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40
		Adaptive interface workpiece direction Capto (bolt clamping) -size C5

		Connection retention knob thread size - M16
		Connection diameter - 50 mm
		Functional length -50 mm
<b>10</b>	<b>Boring Bar &amp; inserts for Fine Boring Head</b>	
10.1	Boring Bar Dia 3 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 3 mm
		Usable length - 15 mm
		Hand - Right
		Substrate - Brazed Carbide Insert
		Connection diameter - 16 mm
		Functional length - 76 mm
10.2	Boring Bar Dia 5 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 5 mm
		Usable length - 25 mm
		Hand - Right
		Connection diameter - 16 mm
		Functional length - 86 mm
		Body material code - Carbide
10.3	Boring Bar Dia 8 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 8 mm
		Usable length - 40 mm
		Hand - Right
		Connection diameter - 16 mm
		Functional length - 101 mm
		Body material code - Steel
10.4	Boring Bar Dia 14 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 14 mm
		Usable length - 84 mm
		Hand - Right
		Connection diameter - 16 mm
		Functional length - 145 mm
		Body material code - Carbide
10.5	Boring Bar Dia 17 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 17 mm

		Usable length - 96 mm
		Hand - Right
		Connection diameter - 16 mm
		Functional length - 157 mm
		Body material code - Carbide
10.6	Boring Bar Dia 20 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 20
		Minimum bore diameter - 20 mm
		Usable length - 70 mm
		Hand - Right
		Connection diameter - 20 mm
		Functional length - 144 mm
		Body material code - Steel
10.7	Boring Bar Dia 26 mm for Fine Boring Head	Tool cutting edge angle - 92 deg
		Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 20
		Minimum bore diameter - 26 mm
		Usable length - 70 mm
		Hand - Right
		Connection diameter - 20 mm
		Functional length - 144 mm
		Body material code - Steel
10.8	Carbide Insert	Inscribed circle diameter - 3.969 mm
		Insert shape code - T
		Cutting edge effective length - 6.42 mm
		Corner radius - 0.2 mm
		Hand - Leftleft
		Clearance angle major - 7 deg
10.9	Carbide Insert	Inscribed circle diameter - 5.556 mm
		Insert shape code - T
		Cutting edge effective length - 8.97 mm
		Corner radius - 0.397 mm
		Hand - Neutral
		Clearance angle major - 7 deg
<b>11</b>	<b>Finish Boring Head with Basic Holder</b>	
11.1	Finish Boring Head Dia 35 to Dia 45	Minimum cutting diameter - 35 mm
		Maximum cutting diameter - 45 mm
		Maximum adjustment limit - 5 mm
		Tool cutting edge angle - 92 deg
		No of inserts- 1
		Connection diameter - 32 mm
		Functional length - 48 mm
		Body diameter - 32 mm
		Body material code - Steel



11.2	Basic Holder BT-40 to Capto C3	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40
		Adaptive interface workpiece direction Capto (bolt clamping) -size C3
		Connection retention knob thread size - M16
		Connection diameter - 32 mm
		Functional length - 60 mm
		Body material code - Steel
<b>12</b>	<b>OD Turning Holder for Rough with Inserts</b>	
12.1	OD Turning Holder For Rough	Tool cutting edge angle - 95 deg
		Tool lead angle - (-)5 deg
		Adaptive interface machine direction Rectangular shank -metric: 20 x 20
		Hand - Leftleft
		Shank width - 25 mm
		Shank height - 25 mm
		Functional length - 150 mm
		Functional width - 32 mm
		Functional height - 25 mm
		Body material code - Steel
12.2	OD Turning Inserts	Insert size and shape - CN1204
		Inscribed circle diameter - 12.7 mm
		Insert shape code - C
		Cutting edge effective length - 12.096 mm
		Corner radius - 0.794 mm
		Hand - Neutral
		Coating - CVD Ti(C,N)+Al2O3+TiN
		Insert thickness - 4.763 mm
<b>13</b>	<b>OD Turning Holder for Finish with Inserts</b>	
13.1	OD Turning Holder For Finish	Tool cutting edge angle - 93 deg
		Tool lead angle - (-)3 deg
		Adaptive interface machine direction Rectangular shank -metric: 20 x 20
		Hand - Left
		Shank width - 20 mm
		Shank height - 20 mm
		Functional length - 125 mm
		Functional height - 20 mm
		Body material code - Steel
		Master insert identification - DNMG 11 04 08



ISO 9001 : 2008

13.2	OD Turning Inserts	Operation type - Finish
		Insert size and shape - DN1104
		Inscribed circle diameter - 9.525 mm
		Insert shape code - D
		Cutting edge effective length - 10.828 mm
		Corner radius - 0.794 mm
		Hand - Neutral
		Coating - CVD Ti(C,N)+Al2O3+TiN
		Insert thickness - 4.763 mm
<b>14</b>	<b>ID Turning Boring Bar with Inserts</b>	
14.1	ID Turning Boring Bar Dia 6 mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 6
		Minimum overhang - 9 mm
		Hand - Left
		Functional length - 80 mm
		Functional width - 4.5 mm
		Body diameter - 6 mm
		Master insert identification - TCMT 06 T1 02
		Cutting approach angle - 91 deg
14.2	ID Turning Boring Bar Dia 8mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 8
		Minimum overhang - 12 mm
		Hand - Left
		Functional length - 100 mm
		Functional width - 5 mm
		Body diameter - 8 mm
		Master insert identification - CCMT 06 02 04
		Cutting approach angle - 91 deg
14.3	ID Turning Boring Bar Dia 10 mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 10
		Minimum overhang - 15 mm
		Hand - Left
		Functional length - 125 mm
		Functional width -6 mm
		Body diameter - 10 mm
		Master insert identification -CCMT 06 02 04
		Cutting approach angle - 91 deg
14.4	ID Turning Boring Bar Dia 12 mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 12
		Minimum overhang - 18 mm
		Hand - Left
		Functional length - 150 mm
		Functional width -9 mm
		Body diameter - 12 mm
		Master insert identification -CCMT 06 02 04
		Cutting approach angle - 91 deg

14.5	ID Turning Boring Bar Dia 16 mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 16
		Minimum overhang - 24 mm
		Hand - Left
		Functional length - 200 mm
		Functional width -11 mm
		Body diameter - 16 mm
		Master insert identification -CCMT 09 T3 08
14.6	ID Turning Boring Bar Dia 20mm	Adaptive interface machine direction
		Cylindrical shank w/ 3 flats -metric: 20
		Minimum overhang - 30 mm
		Hand - Left
		Functional length - 250 mm
		Functional width -13 mm
		Body diameter - 20 mm
		Master insert identification -CCMT 09 T3 08
14.7	Insert	Insert size and shape - CC0602
		Inscribed circle diameter - 6.35 mm
		Insert shape code - C
		Cutting edge effective length - 6.048 mm
		Corner radius - 0.397 mm
		Hand - Neutral
		Coating - CVD Ti(C,N)+Al2O3+TiN
		Insert thickness - 2.381 mm
		Clearance angle major - 7 deg
14.8	Insert	Insert size and shape - CC09T3
		Inscribed circle diameter - 9.525 mm
		Insert shape code - C
		Cutting edge effective length - 8.872 mm
		Corner radius - 0.794 mm
		Hand - Neutral
		Coating - CVD Ti(C,N)+Al2O3+TiN
		Insert thickness - 3.969 mm
		Clearance angle major - 7 deg
<b>15</b>	<b>Parting Holder for 2 mm &amp; 3 mm Inserts</b>	
15.1	Parting Holder	Cutting depth maximum - 15 mm
		Adaptive interface machine direction
		Rectangular shank -metric: 20 x 20
		Workpiece side body angle - 0 deg
		Maximum overhang - 33.5 mm
		Hand - Left
		Shank width - 20 mm
		Shank height - 20 mm
Functional length - 125 mm		



15.2	2 mm Parting Carbide Insert	Cutting width - 2 mm
		Corner radius left - 0.2 mm
		Corner radius right - 0.2 mm
		Cutting depth maximum - 19 mm
		Hand - Neutral
		Coating - PVD (Ti,Al)N+TiN
		Clearance angle major - 7 deg
		Total length - 19 mm
15.3	3 mm Parting Carbide Insert	Cutting width - 3 mm
		Corner radius left - 0.2 mm
		Corner radius right - 0.2 mm
		Cutting depth maximum - 18.9 mm
		Hand - Neutral
		Coating - PVD (Ti,Al)N
		Clearance angle major - 7 deg
		Total length - 18.9 mm
<b>16</b>	<b>OD Threading holder with Inserts</b>	
16.1	OD Threading holder	Adaptive interface machine direction - Rectangular shank -metric: 20 x 20
		Hand - Right
		Shank width - 20 mm
		Shank height - 20 mm
		Functional length - 125 mm
		Functional width - 25 mm
		Functional height - 20 mm
		Shim protection to insert
16.2	OD Threading Inserts	Thread form type - WH55
		Standard number - ISO 228-1982
		Thread type - Ext
		Thread per inch - 8
		Thread profile type - F
		Tooth count - 1
		Thread tolerance class - A
		Theoretical thread height - 2.52 mm
		Inscribed circle diameter - 9.525 mm
		Hand - Right
		Coating - PVD (Ti,Cr,Al)N+(Ti,Al)N
		Insert thickness - 3.969 mm
<b>17</b>	<b>ID Threading holder with Inserts</b>	
17.1	ID Threading Boring Bar Dia 16mm	Adaptive interface machine direction Cylindrical shank w/ 3 flats -metric: 16
		Minimum bore diameter - 20 mm
		Minimum overhang - 27 mm
		Maximum overhang - 48 mm
		Usable length - 48 mm
		Hand - Right

		Shank height - 15 mm
		Functional length - 200 mm
		Functional width - 12 mm
		Body diameter - 16 mm
17.2	ID Threading Inserts	Thread form type - M60
		Standard number - ISO 965-1998
		Thread type - INT
		Thread pitch - 1.5 mm
		Thread profile type - F
		Tooth count - 2
		Thread tolerance class - 6
		Theoretical thread height - 0.96 mm
		Inscribed circle diameter - 9.525 mm
		Hand - Right
		Coating - PVD (Ti,Cr,Al)N+(Ti,Al)N
		Insert thickness - 3.969 mm

**ANNEXURE -B**

**(Undertaking from Bidder on their official stationery)**

To,  
The Dy.General Manager  
NSIC- Technical Services Centre,  
Tigaon Road, Neemka,Fariadabad-121004

Sir,

Subject: Undertaking for the participation in the tender No. NSIC/NEEMKA/T&D/FBD/ 2017- 18/02(F) Due for opening of technical bid on 6<sup>th</sup> February 2018

Dear Sir,

HAVING EXAMINED AND PERUSED THE FOLLOWING DOCUMENTS

1. Notice Inviting Tender
2. Instruction To The Tenderer
3. Technical Specifications of Tooling (Annexure-A)
4. Annexure – C (Technical Bid)
5. Annexure – D (Commercial Bid)

I/We .....do hereby submit the above tender in prescribed formats duly completed in all respects in accordance with the conditions applicable. If this tender is accepted, I/We agree to abide by and fulfill all the terms and conditions in the tender documents

I/We hereby distinctly and expressly declare and acknowledge that before the submission of this tender, I/We have carefully followed the instructions and I/We have understood the existing system of supply at the location(s) of purchaser including the scope and nature of duties expected from the Bidder.

I/We distinctly agree that I/We would hereafter make no claim or demand upon the purchaser based upon or arising out of any alleged misunderstanding or misconceptions or mistake on my/our part of the said stipulations, restrictions and conditions.

I/ We declare that our unit has never made any default in supplying the Tooling/ equipment to Government / Semi Government/ Central or State Public sector enterprise(s) in terms of quality and financial agreed supply conditions.

Any notice required to be served on me/us shall be sufficiently served on me/us by post (registered or ordinary) or courier or left at my/our address furnished herein.

.....  
.....  
.....  
.....

I/We fully understand the terms and conditions in the tender documents.

I/We understood that the purchaser is not bound to accept any proposal that it may receive without assigning any reason.

Dated this.....day of.....2018

Authorized Signatory  
Seal

FORMAT & REQUIREMENTS FOR SUBMITTING TECHNICAL BID

1. **Tender Ref. No:** NSIC/NEEMKA/T&D/ FBD/2017- 18/02(F)
2. **Name of Bidder:** .....
3. **Complete office address of Bidder**.....
4. **Tender fee payment details** (if tender document downloaded from website)  
Details of DD/RTGS/NEFT by which tender fee paid.....
5. **Confirmation of acceptance of Technical Specifications for the supply of CNC Tooling:**

Sr No	Description	Specification	Qty	Acceptance to the Specification as placed at Annexure-A and agreed to supply with required Quantity (write YES/ NO only)	If marked "NO" in the column before, specify the deviation in specification of the Tooling offered for the supply.
1	<b>Face Milling Cutter Dia 80 mm with inserts and holder</b>				
1.1	Face Milling Cutter Dia 80 mm	Tool cutting edge angle -45 degree Cutting diameter -80 mm No of inserts - 6 Depth of cut maximum - 6 mm Hand - Right Adaptive interface machine direction Arbor -ISO 6462 -A (hexagon socket head cap screw) - metric: 27 Cutting pitch differential	2		
1.2	Inserts	Inscribed Circle Diameter - 13 mm Insert shape code - S Cutting edge effective length - 8.8 mm Wiper edge length - 2 mm Corner radius - 0.8 mm Major cutting edge angle - 45 deg Hand - Right Coating - CVD Ti (C, N) + Al2O3 + TiN Insert thickness - 5.6 mm	20		

1.3	Basic Holder BT 40 to face mill arbor dia 27 mm	Adaptive interface workpiece direction Arbor -ISO 6462 -A/B (center bolt/washer) -metric: 27 Connection retention knob thread size M16 Connection diameter - 27 mm Functional length - 100 mm Body material code - Steel	2		
2	<b>Shoulder milling cutter dia 54 mm with inserts and holder</b>				
2.1	Shoulder milling cutter dia 54 mm	Cutting diameter - 54 mm No of inserts - 5 Depth of cut maximum - 10 mm Maximum ramping angle - 1.4 deg Cutting pitch differential Adaptive interface machine direction Arbor -ISO 6462 -A (hexagon socket head cap screw) - metric: 22 Hand - Right Connection diameter - 22 mm Functional length - 40 mm Body material code - Steel	2		
2.2	Inserts	Insert width - 6.8 mm Cutting edge effective length - 10 mm Wiper edge length - 1.2 mm Corner radius - 0.8 mm Major cutting edge angle - 90 deg Hand - Right Coating - CVD Ti (C, N) + Al2O3 + TiN Insert thickness - 3.59 mm	20		
2.3	Basic Holder BT 40 to face mill arbor dia 22 mm	Adaptive interface workpiece direction Arbor -ISO 6462 -A/B (center bolt/washer) -metric: 27 Connection retention knob thread size - M16 Connection diameter - 22 mm Functional length - 100 mm Body material code - Steel	2		

3		Shoulder milling cutter dia 32 mm, long 192 mm with inserts and holder			
3.1	Shoulder milling cutter dia 32 mm long 192 mm	Cutting diameter - 32 mm No of inserts – 2 Depth of cut maximum - 10 Mm Maximum ramping angle - 5.5 deg Usable length - 192 mm Cutting pitch differential - True Adaptive interface machine Direction Capto (bolt & segment clamping) - size C5 Hand – Right Damping property - True Connection diameter - 50 Mm Functional length - 217 mm Body material code - Steel	2		
3.2	Inserts	Insert width - 6.8 mm Insert shape code - L Cutting edge effective length - 10 mm Wiper edge length - 1.2 mm Corner radius - 0.8 mm Major cutting edge angle - 90 deg Hand – Right Coating - PVD (Ti,Al)N2 Insert thickness - 3.59 mm	20		
3.3	Basic Holder BT-40 to C5	Adaptive interface machine Direction MAS-BT403 -AD/B central/flange coolant - BT40 Connection retention knob thread size M16 Connection diameter - 50 Mm Functional length - 90 mm Body material code – Steel	2		

4	High Feed Milling Cutter Dia 25 mm with inserts and holder		
4.1	High Feed Milling Cutter Dia 25 mm	Tool cutting edge angle - 10 Deg Cutting diameter - 10.9 mm Maximum cutting diameter - 25 mm No of inserts - 2 Maximum ramping angle - 14.5 deg Adaptive interface machine direction Cylindrical shank without clamping features -metric: 20.0 Hand - Right Connection diameter - 20 mm Functional length - 180 mm Body material code - Steel	2
4.2	Inserts	Inscribed circle diameter - 9.5 mm Insert shape code - S Cutting edge effective length - 5.77 mm Wiper edge length - 0.66 mm Corner radius - 1.4 mm Major cutting edge angle - 10 deg Hand - Neutral Coating - CVD Ti(C,N)+Al2O3+TiN Insert thickness - 4.5 mm	20
4.3	Basic Holder BT-40 to Side Lock Dia 20 mm	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40 Adaptive interface workpiece direction Cylindrical clamping (ISO9766 drill shank) - metric: 20 Connection retention knob thread size M16 Connection diameter 20 mm Functional length - 75 mm Body material code – Steel	2

5	Round Milling Cutter Dia 20 mm with inserts and holder																	
5.1	Round Milling Cutter Dia 20 mm	<table border="1"> <tr><td>Cutting diameter - 20 mm</td></tr> <tr><td>Maximum cutting diameter - 32 mm</td></tr> <tr><td>No of inserts - 2</td></tr> <tr><td>Depth of cut maximum - 9 mm</td></tr> <tr><td>Maximum ramping angle - 12 deg</td></tr> <tr><td>Cutting pitch differential - true</td></tr> <tr><td>Adaptive interface machine direction</td></tr> <tr><td>Cylindrical shank without clamping features -metric: 25.0</td></tr> <tr><td>Hand - Right</td></tr> <tr><td>Connection diameter - 25 mm</td></tr> <tr><td>Connection diameter tolerance - h7</td></tr> <tr><td>Functional length - 190 mm</td></tr> <tr><td>Body material code - Steel</td></tr> </table>	Cutting diameter - 20 mm	Maximum cutting diameter - 32 mm	No of inserts - 2	Depth of cut maximum - 9 mm	Maximum ramping angle - 12 deg	Cutting pitch differential - true	Adaptive interface machine direction	Cylindrical shank without clamping features -metric: 25.0	Hand - Right	Connection diameter - 25 mm	Connection diameter tolerance - h7	Functional length - 190 mm	Body material code - Steel	2		
Cutting diameter - 20 mm																		
Maximum cutting diameter - 32 mm																		
No of inserts - 2																		
Depth of cut maximum - 9 mm																		
Maximum ramping angle - 12 deg																		
Cutting pitch differential - true																		
Adaptive interface machine direction																		
Cylindrical shank without clamping features -metric: 25.0																		
Hand - Right																		
Connection diameter - 25 mm																		
Connection diameter tolerance - h7																		
Functional length - 190 mm																		
Body material code - Steel																		
5.2	Inserts	<table border="1"> <tr><td>Inscribed circle diameter - 12 mm</td></tr> <tr><td>Insert shape code - R</td></tr> <tr><td>Corner radius - 6 mm</td></tr> <tr><td>Hand - Neutral</td></tr> <tr><td>Coating - PVD (Ti,Al)N</td></tr> <tr><td>Insert thickness - 3.969 mm</td></tr> </table>	Inscribed circle diameter - 12 mm	Insert shape code - R	Corner radius - 6 mm	Hand - Neutral	Coating - PVD (Ti,Al)N	Insert thickness - 3.969 mm	20									
Inscribed circle diameter - 12 mm																		
Insert shape code - R																		
Corner radius - 6 mm																		
Hand - Neutral																		
Coating - PVD (Ti,Al)N																		
Insert thickness - 3.969 mm																		
5.3	Basic Holder BT-40 to Side Lock Dia 25 mm	<table border="1"> <tr><td>Adaptive interface machine direction</td></tr> <tr><td>MAS-BT403 -AD/B</td></tr> <tr><td>central/flange coolant - BT40</td></tr> <tr><td>Adaptive interface workpiece direction</td></tr> <tr><td>Cylindrical clamping (ISO9766 drill shank) - metric: 25</td></tr> <tr><td>Connection retention knob thread size M16</td></tr> <tr><td>Connection diameter 25 mm</td></tr> <tr><td>Functional length - 80 mm</td></tr> <tr><td>Body material code – Steel</td></tr> </table>	Adaptive interface machine direction	MAS-BT403 -AD/B	central/flange coolant - BT40	Adaptive interface workpiece direction	Cylindrical clamping (ISO9766 drill shank) - metric: 25	Connection retention knob thread size M16	Connection diameter 25 mm	Functional length - 80 mm	Body material code – Steel	2						
Adaptive interface machine direction																		
MAS-BT403 -AD/B																		
central/flange coolant - BT40																		
Adaptive interface workpiece direction																		
Cylindrical clamping (ISO9766 drill shank) - metric: 25																		
Connection retention knob thread size M16																		
Connection diameter 25 mm																		
Functional length - 80 mm																		
Body material code – Steel																		

6		ISO 9001 : 2008		Solid Carbide Endmill	
6.1	Solid Carbide Endmill Dia 16 mm	Cutting diameter -16 mm Peripheral effective cutting edge count -4 Connection diameter tolerance - h6 Coating - PVD TiAlN Connection diameter - 16 mm Max ramping angle - 5 deg Flute helix angle - 50 deg Cutting material hardness $\leq$ 48 HRC	4		
6.2	Solid Carbide Endmill Dia 12 mm	Cutting diameter -12 mm Peripheral effective cutting edge count -4 Connection diameter tolerance - h6 Coating - PVD TiAlN Connection diameter - 12 mm Max ramping angle - 5 deg Flute helix angle - 50 deg Cutting material hardness $\leq$ 48 HRC	4		
6.3	Solid Carbide Endmill Dia 10 mm	Cutting diameter -10 mm Peripheral effective cutting edge count -4 Connection diameter tolerance - h6 Coating - PVD (Ti,Al)N <sub>2</sub> Connection diameter - 10 mm Max ramping angle - 5 deg Flute helix angle - 50 deg Cutting material hardness $\leq$ 48 HRC	4		
6.4	Solid Carbide Endmill Dia 8 mm	Cutting diameter -8 mm Peripheral effective cutting edge count -4 Connection diameter tolerance - h6 Coating - PVD TiAlN Connection diameter - 8 mm Max ramping angle - 5 deg Flute helix angle - 50 deg Cutting material hardness $\leq$ 48 HRC	4		

7	Solid Carbide Ball Nose				
7.1	Solid Carbide Ball Nose Dia 3 mm	Cutting diameter - 3 mm Corner radius - 1.5 mm Maximum ramping angle -15 deg Flute helix angle - 30 deg Cutting material hardness $\leq$ 48 HRC Peripheral effective cutting edge count - 2 Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 3 Coating -PVD AlCrN Functional length - 38 mm Connection diameter - 3 mm	4		
7.2	Solid Carbide Ball Nose Dia 4 mm	Cutting diameter - 4 mm Corner radius - 2 mm Maximum ramping angle -15 deg Flute helix angle - 30 deg Cutting material hardness $\leq$ 48 HRC Peripheral effective cutting edge count - 2 Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 4 Coating -PVD AlCrN Functional length - 57 mm Connection diameter - 6 mm	4		
7.3	Solid Carbide Ball Nose Dia 6 mm	Cutting diameter - 6 mm Corner radius - 3 mm Maximum ramping angle -15 deg Flute helix angle - 30 deg Cutting material hardness $\leq$ 48 HRC Peripheral effective cutting edge count - 2 Adaptive interface machine direction Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 6 Coating -PVD AlCrN Functional length - 57 mm Connection diameter - 6 mm	4		

7.4	Solid Carbide Ball Nose Dia 8 mm	Cutting diameter - 8 mm	4		
		Corner radius - 4 mm			
		Maximum ramping angle -15 deg			
		Flute helix angle - 30 deg			
		Cutting material hardness $\leq$ 48 HRC			
		Peripheral effective cutting edge count - 2			
		Adaptive interface machine direction			
		Cylindrical shank (DIN1835-A / DIN6535-HA) -metric: 8			
		Coating -PVD AlCrN			
		Functional length - 63 mm			
Connection diameter - 8 mm					
<b>8</b>	<b>Solid Carbide Drill with Tap</b>				
8.1	Solid Carbide Drill Dia 5mm for M6	Cutting diameter - 5 mm	4		
		Achievable hole tolerance - H9			
		Coating - PVD (Ti,Al)N			
		Connection diameter - 6 mm			
		Point angle - 140 deg			
		Overall length - 66 mm			
8.2	Tap M6	Thread diameter size - M6	4		
		Thread pitch - 1 mm			
		Thread tolerance class - 6H			
		Substrate - HSS-E			
		Coating - PVD TiAlN+WC/C			
		Functional length - 80 mm			
		Flute count - 3			
		Flute helix angle - 48 deg			
Standard - DIN371					
8.3	Solid Carbide Drill Dia 6.8 mm for M8	Cutting diameter - 6.8 mm	4		
		Achievable hole tolerance - H9			
		Coating - PVD (Ti,Al)N			
		Connection diameter - 8 mm			
		Point angle - 140 deg			
		Overall length - 91 mm			
8.4	Tap M8	Thread diameter size - M8	4		
		Thread pitch - 1.25 mm			
		Thread tolerance class - 6H			
		Substrate - HSS-E			
		Coating - PVD TiAlN+WC/C			
		Functional length - 90 mm			
		Flute count - 3			

		Flute helix angle - 48 deg			
		Standard - DIN371			
8.5	Solid Carbide Drill Dia 8.5mm for M10	Cutting diameter - 8.5 mm	4		
		Achievable hole tolerance - H9			
		Coating - PVD (Ti,Al)N			
		Connection diameter - 10 mm			
		Point angle - 140 deg			
		Overall length - 89 mm			
8.6	Tap M10	Thread diameter size - M 10	4		
		Thread pitch - 1.5 mm			
		Thread tolerance class - 6HX			
		Substrate - HSS-E-PM			
		Coating - PVD (Ti,Al)N			
		Functional length - 100 mm			
		Flute count - 3			
		Flute helix angle - 48 deg			
		Standard - DIN371			
8.7	Solid Carbide Drill Dia 10.2mm for M12	Cutting diameter - 10.2 mm	4		
		Achievable hole tolerance - H9			
		Coating - PVD (Ti,Al)N			
		Connection diameter - 12 mm			
		Point angle - 140 deg			
		Overall length - 102 mm			
8.8	Tap M 12	Thread diameter size - M 12	4		
		Thread pitch - 1.75 mm			
		Thread tolerance class - 6HX			
		Substrate - HSS-E-PM			
		Coating - PVD (Ti,Al)N			
		Functional length - 110 mm			
		Flute count - 4			
		Flute helix angle - 48 deg			
		Standard - DIN371			

9	Fine Boring Head Dia 3 to 36mm with sleeve and basic holder			
9.1	Fine Boring Head Dia 3 to 36mm	Minimum cutting diameter - 3 mm Maximum cutting diameter - 36 mm Adaptive interface machine direction Capto (bolt and segment clamping) -size C5 Adaptive interface workpiece direction Cylindrical clamping w/ flats (sleeve) -metric: 20 Connection diameter - 50 mm Functional length - 85 mm Body diameter - 80 mm Body material code - Steel Least count adjustment - 0.002 mm	1	
9.2	Sleeve For Fine Boring Head	Adaptive interface machine direction Cylindrical shank without clamping features -metric: 20.0 Adaptive interface workpiece direction Cylindrical clamping (sleeve) -metric: 16 Connection diameter for boring head - 20 mm Connection diameter for boring bar - 16 mm	1	
9.3	Basic Holder BT 40 TO C5	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40 Adaptive interface workpiece direction Capto (bolt clamping) -size C5 Connection retention knob thread size - M16 Connection diameter - 50 mm Functional length -50 mm	1	

10	Boring Bar & inserts for Fine Boring Head				
10.1	Boring Bar Dia 3 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 16 Minimum bore diameter - 3 mm Usable length - 15 mm Hand - Right Substrate - Brazed Carbide Insert Connection diameter - 16 mm Functional length - 76 mm Body material code - Carbide	1		
10.2	Boring Bar Dia 5 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 16 Minimum bore diameter - 5 mm Usable length - 25 mm Hand - Right Connection diameter - 16 mm Functional length - 86 mm Body material code - Carbide	1		
10.3	Boring Bar Dia 8 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 16 Minimum bore diameter - 8 mm Usable length - 40 mm Hand - Right Connection diameter - 16 mm Functional length - 101 mm Body material code - Steel	1		
10.4	Boring Bar Dia 14 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction	1		

		Cylindrical shank w/ 3 flats - metric: 16 Minimum bore diameter - 14 mm Usable length - 84 mm Hand - Right Connection diameter - 16 mm Functional length - 145 mm Body material code - Carbide		
10.5	Boring Bar Dia 17 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 16 Minimum bore diameter - 17 mm Usable length - 96 mm Hand - Right Connection diameter - 16 mm Functional length - 157 mm Body material code - Carbide	1	
10.6	Boring Bar Dia 20 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 20 Minimum bore diameter - 20 mm Usable length - 70 mm Hand - Right Connection diameter - 20 mm Functional length - 144 mm Body material code - Steel	1	
10.7	Boring Bar Dia 26 mm for Fine Boring Head	Tool cutting edge angle - 92 deg Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 20 Minimum bore diameter - 26 mm Usable length - 70 mm Hand - Right Connection diameter - 20	1	

		mm		
		Functional length - 144 mm		
		Body material code - Steel		
10.8	Carbide Insert	Inscribed circle diameter - 3.969 mm	10	
		Insert shape code - T		
		Cutting edge effective length - 6.42 mm		
		Corner radius - 0.2 mm		
		Hand - Left		
		Clearance angle major - 7 deg		
10.9	Carbide Insert	Inscribed circle diameter - 5.556 mm	10	
		Insert shape code - T		
		Cutting edge effective length - 8.97 mm		
		Corner radius - 0.397 mm		
		Hand - Neutral		
		Clearance angle major - 7 deg		
<b>11</b>	<b>Finish Boring Head with Basic Holder</b>			
11.1	Finish Boring Head Dia 35 to Dia 45	Minimum cutting diameter - 35 mm	1	
		Maximum cutting diameter - 45 mm		
		Maximum adjustment limit - 5 mm		
		Tool cutting edge angle - 92 deg		
		No of inserts- 1		
		Connection diameter - 32 mm		
		Functional length - 48 mm		
		Body diameter - 32 mm		
		Body material code - Steel		
11.2	Basic Holder BT-40 to Capto C3	Adaptive interface machine direction MAS-BT403 -AD/B central/flange coolant - BT40	1	
		Adaptive interface workpiece direction Capto (bolt clamping) -size C3		
		Connection retention knob thread size - M16		
		Connection diameter - 32 mm		
		Functional length - 60 mm		
		Body material code - Steel		

12		OD Turning Holder for Rough with Inserts		
12.1	OD Turning Holder For Rough	Tool cutting edge angle - 95 deg	2	
		Tool lead angle - (-)5 deg		
		Adaptive interface machine direction		
		Rectangular shank -metric: 20 x 20		
		Hand - Lefteft		
		Shank width - 25 mm		
		Shank height - 25 mm		
		Functional length - 150 mm		
		Functional width - 32 mm		
		Functional height - 25 mm		
		Body material code - Steel		
		Master insert identification - CNMG 12 04 08		
12.2	OD Turning Inserts	Insert size and shape - CN1204	20	
		Inscribed circle diameter - 12.7 mm		
		Insert shape code - C		
		Cutting edge effective length - 12.096 mm		
		Corner radius - 0.794 mm		
		Hand - Neutral		
		Coating - CVD Ti(C,N)+Al <sub>2</sub> O <sub>3</sub> +TiN		
		Insert thickness - 4.763 mm		
13		OD Turning Holder for Finish with Inserts		
13.1	OD Turning Holder For Finish	Tool cutting edge angle - 93 deg	2	
		Tool lead angle - (-)3 deg		
		Adaptive interface machine direction		
		Rectangular shank -metric: 20 x 20		
		Hand - Lefteft		
		Shank width - 20 mm		
		Shank height - 20 mm		
		Functional length - 125 mm		
		Functional height - 20 mm		
		Body material code - Steel		
		Master insert identification - DNMG 11 04 08		
13.2	OD Turning Inserts	Operation typr - Finish	10	
		Insert size and shape - DN1104		
		Inscribed circle diameter - 9.525 mm		

		Insert shape code - D			
		Cutting edge effective length - 10.828 mm			
		Corner radius - 0.794 mm			
		Hand - Neutral			
		Coating - CVD Ti(C,N)+Al2O3+TiN			
		Insert thickness - 4.763 mm			
<b>14</b>	<b>ID Turning Boring Bar with Inserts</b>				
14.1	ID Turning Boring Bar Dia 6 mm	Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 6 Minimum overhang - 9 mm Hand - Left Functional length - 80 mm Functional width - 4.5 mm Body diameter - 6 mm Master insert identification - TCMT 06 T1 02 Cutting approach angle - 91 deg	2		
14.2	ID Turning Boring Bar Dia 8mm	Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 8 Minimum overhang - 12 mm Hand - Left Functional length - 100 mm Functional width - 5 mm Body diameter - 8 mm Master insert identification - CCMT 06 02 04 Cutting approach angle - 91 deg	2		
14.3	ID Turning Boring Bar Dia 10 mm	Adaptive interface machine direction Cylindrical shank w/ 3 flats - metric: 10 Minimum overhang - 15 mm Hand - Left Functional length - 125 mm Functional width - 6 mm Body diameter - 10 mm Master insert identification - CCMT 06 02 04 Cutting approach angle - 91 deg	2		

14.4	ID Turning Boring Bar Dia 12 mm	Adaptive interface machine direction	2		
		Cylindrical shank w/ 3 flats - metric: 12			
		Minimum overhang - 18 mm			
		Hand - Left			
		Functional length - 150 mm			
		Functional width -9 mm			
		Body diameter - 12 mm			
		Master insert identification - CCMT 06 02 04			
Cutting approach angle - 91 deg					
14.5	ID Turning Boring Bar Dia 16 mm	Adaptive interface machine direction	2		
		Cylindrical shank w/ 3 flats - metric: 16			
		Minimum overhang - 24 mm			
		Hand - Left			
		Functional length - 200 mm			
		Functional width -11 mm			
		Body diameter - 16 mm			
		Master insert identification - CCMT 09 T3 08			
Cutting approach angle - 91 deg					
14.6	ID Turning Boring Bar Dia 20mm	Adaptive interface machine direction	2		
		Cylindrical shank w/ 3 flats - metric: 20			
		Minimum overhang - 30 mm			
		Hand - Left			
		Functional length - 250 mm			
		Functional width -13 mm			
		Body diameter - 20 mm			
		Master insert identification - CCMT 09 T3 08			
Cutting approach angle - 91 deg					
14.7	Insert	Insert size and shape - CC0602	10		
		Inscribed circle diameter - 6.35 mm			
		Insert shape code - C			
		Cutting edge effective length - 6.048 mm			
		Corner radius - 0.397 mm			
		Hand - Neutral			
Coating - CVD					

		Ti(C,N)+Al <sub>2</sub> O <sub>3</sub> +TiN			
		Insert thickness - 2.381 mm			
		Clearance angle major - 7 deg			
14.8	Insert	Insert size and shape - CC09T3	10		
		Inscribed circle diameter - 9.525 mm			
		Insert shape code - C			
		Cutting edge effective length - 8.872 mm			
		Corner radius - 0.794 mm			
		Hand - Neutral			
		Coating - CVD			
		Ti(C,N)+Al <sub>2</sub> O <sub>3</sub> +TiN			
		Insert thickness - 3.969 mm			
		Clearance angle major - 7 deg			
<b>15</b>	<b>Parting Holder for 2 mm &amp; 3 mm Inserts</b>				
15.1	Parting Holder	Cutting depth maximum - 15 mm	1		
		Adaptive interface machine direction			
		Rectangular shank -metric: 20 x 20			
		Workpiece side body angle - 0 deg			
		Maximum overhang - 33.5 mm			
		Hand - Left			
		Shank width - 20 mm			
		Shank height - 20 mm			
		Functional length - 125 mm			
15.2	2 mm Parting Carbide Insert	Cutting width - 2 mm	10		
		Corner radius left - 0.2 mm			
		Corner radius right - 0.2 mm			
		Cutting depth maximum - 19 mm			
		Hand - Neutral			
		Coating - PVD (Ti,Al)N+TiN			
		Clearance angle major - 7 deg			
		Total length - 19 mm			
15.3	3 mm Parting Carbide Insert	Cutting width - 3 mm	10		
		Corner radius left - 0.2 mm			
		Corner radius right - 0.2 mm			
		Cutting depth maximum - 18.9 mm			
		Hand - Neutral			
		Coating - PVD (Ti,Al)N			

		Clearance angle major - 7 deg			
		Total length - 18.9 mm			
<b>16</b>	<b>OD Threading holder with Inserts</b>				
16.1	OD Threading holder	Adaptive interface machine direction - Rectangular shank -metric: 20 x 20	1		
		Hand - Right			
		Shank width - 20 mm			
		Shank height - 20 mm			
		Functional length - 125 mm			
		Functional width - 25 mm			
		Functional height - 20 mm			
		Shim protection to insert			
		Clearance angle major - (-) 10 deg			
16.2	OD Threading Inserts	Thread form type - WH55	10		
		Standard number - ISO 228-1982			
		Thread type - Ext			
		Thread per inch - 8			
		Thread profile type - F			
		Tooth count - 1			
		Thread tolerance class - A			
		Theoretical thread height - 2.52 mm			
		Inscribed circle diameter - 9.525 mm			
		Hand - Right			
		Coating - PVD (Ti,Cr,Al)N+(Ti,Al)N			
		Insert thickness - 3.969 mm			
<b>17</b>	<b>ID Threading holder with Inserts</b>				
17.1	ID Threading Boring Bar Dia 16mm	Adaptive interface machine direction	1		
		Cylindrical shank w/ 3 flats - metric: 16			
		Minimum bore diameter - 20 mm			
		Minimum overhang - 27 mm			
		Maximum overhang - 48 mm			
		Usable length - 48 mm			
		Hand - Right			
		Shank height - 15 mm			
		Functional length - 200 mm			
		Functional width - 12 mm			
		Body diameter - 16 mm			

17.2	ID Threading Inserts	Thread form type - M60	10		
		Standard number - ISO 965-1998			
		Thread type - INT			
		Thread pitch - 1.5 mm			
		Thread profile type - F			
		Tooth count - 2			
		Thread tolerance class - 6			
		Theoretical thread height - 0.96 mm			
		Inscribed circle diameter - 9.525 mm			
		Hand - Right			
		Coating - PVD (Ti,Cr,Al)N+(Ti,Al)N			
		Insert thickness - 3.969 mm			

**6. Confirmation for supply to the location(s):**

#	Details	Location
		Neemka, Faridabad (Haryana)
1	Tentative quantity required	As given at point no 5
2	Consent to supply: (write YES/ NO only in the cells placed under location)	

**7. EMD payment details** (Not applicable if the bidder is holding valid registration/ exemption certificate, as per Para 12 (c) of Instruction to Tenderers): Details of DD/RTGS/NEFT by which EMD paid

.....  
The EMD of Rs. 61,000/- (Rupees Sixty One Thousand Only) shall be submitted.

**8. PAN of bidder** (self-attested copy to be enclosed) .....

**9. GST registration number of bidder** (self-attested copy to be enclosed)

.....

**10. Delivery period after receipt of supply order from purchaser:** The purchaser interested for complete delivery of Tooling by the bidder within thirty (30) calendar days from the date of issue of supply order. However, the bidder has an option to submit the best delivery time, but in any case the delivery should be before 30 days from the date of issue of supply order by purchaser. Delivery to be completed in number of days ..... (Calendar Days in words) for delivery from the date of issue of supply order by purchaser.

11. **Details of address with contact details from where the bidder planned to offer After Sales Services during the Warranty period:**

#	Location
	Neemka, Faridabad(HR)
Details of address of bidder for rendering After Sales Services	

12. **Details of address with contact details for at least three (03) purchaser to whom the bidder supplied similar Tooling in the last ten (10) years:** *The format for submission of details for at least three purchaser are as under: (the bidder can furnish details of even more than three purchaser)*

- Address of Purchaser with contact details (email and phone no.): .....
- Details of order for supply placed to bidder: .....
- Description and quantity of ordered equipment: .....
- Value of order in rupees: .....
- Date of completion of delivery: .....

***(The purchaser shall have liberty to contact any or all of purchaser to assess the performance of Tooling supplied by bidder)***

13. **Documents - Details to be enclosed with the Technical bid by bidder are as under:**

- In case the bidder is Original Tooling Manufacturer, the bidder to submit a self-declaration on their letter-head, confirming that they are regular in manufacturing & supplying the similar Tooling, as asked in this tender, for the last ten (10) years.
- In case the bidder is Authorized Distributor of OEM / Authorized Dealer of OEM, the bidder to attach self-certified valid authorized Distributorship / Dealership license from Original Equipment Manufacturer who should have valid ISO Certificate and shall be engaged in regular manufacturing and supply of similar Tooling for the last ten (10) years.
- The original Tooling Manufacturer attach the self-certified copy of valid ISO Certificate for their establishment.
- In case the bidder is Authorized Distributor of OEM / Authorized Dealer of OEM, the bidder to attach the self-certified copy of valid ISO Certificate of their OEM.
- Undertaking as per annexure-B on official stationery.
- Duly signed all pages of "Instructions to Tenderers" of the tender document as a mark of acceptance.
- The letters substantiating performance from at least three (03) other purchasers, to whom, the similar Tooling supplied by the bidder in last ten (10) years, to access performance of the Tooling supplied by your organization.
- Technical Literature of Tooling(s) with particular reference to the model of Tooling proposed to supply against this tender along with reference of website to assess the further features.
- Authorization letter in favour of personnel to sign the tender behalf of bidder.
- Self-certified copy of valid certificate for claiming EMD exemption.
- Self-certified copy of valid certificate for claiming Tender Fee exemption.
- Self-attested copy of valid GST registration.

- m) Self-attested copy of valid PAN.
- n) The Bidders shall furnish complete Technical details of Tooling/equipment offered to supply through the participation of this tender (use separate sheet to elaborate the details of technical specifications)
- o) To submit all supporting information with respect to the technical data, drawings or booklets of product. Any product brief, test certificates available may be enclosed.

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 120 days from the date of opening the Technical Bid of the tender.
- b. No price of any Tooling/ Equipment/ Spares/ Accessories shall be given in Technical Bid.
- c. All above Tooling should be provided with safety features/ curtains etc. wherever applicable.

Name & Signature of the authorized bidder with stamp  
Contact details of authorized person of bidder who have signed the tender.

Name.....  
Designation.....  
Phone (office).....  
Phone (Mobile).....  
E mail.....

**FORMAT FOR SUBMISSION OF COMMERCIAL BID**

1. Tender Ref. No: NSIC/NEEMKA/T&D/ FBD/2017- 18/02(F)
2. Name of the Bidder: .....
3. The financial offer to execute the supply as per the tender:

**a. Supply of Tooling to Neemka, Faridabad (Haryana) location:**

#	Details	Basic price for supply of single unit (In Rs.)	Quantity to be supplied (In No.)	Total basic price (Multiply column no 2 and 3) (In Rs.)
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
a.	Offered financials for the Supply of tendered items at site as agreed in the technical bid tender no. NSIC/NEEMKA/T&D/FBD/2017-18/02(F)			
b.	Amount of taxes & duties for the supply of total quantity as detailed at row ‘a’ above to the location at Neemka, Faridabad (Haryana) (Row a) (In Rs.)			
c.	Total Price of CNC Tooling including taxes & duties for the supply of total quantity as detailed at row “a” above to Neemka, Faridabad (Haryana) location (Row a+b) (In words) ..... ..... ..... .....			

The followings to be noted while submitting financial details for the supply of Tooling to the individual location:

- a. The competitiveness of the bid shall be made on the basis of total value of bid for all the Items for designated location of NSIC Technical Services Center, Neemka. The bidder shall offer their most competitive offer.
- b. The purchaser will not issue any form (“C” and “D”) toward rebate / exclusion of GST etc.
- b. The bidder will not be entitled to any increase in rate of taxes occurring during the period of delivery even if there is delay in supplies / completion attributed to him.
- c. The Total Cost quoted above should be inclusive of basic price, statutory levies and taxes, duties, Transportation, Incidental Services (including Insurance, Loading/ Unloading, Packing & Forwarding charges etc.).
- d. The price competitiveness shall be given due consideration while analyzing the Commercial Bid.

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 120 days from the date of opening the Technical Bid of the tender.
- b. Agree to three (03) sets of Manuals with Tooling.
- c. Agree that the offer price is valid for a period of 120 days from the date of opening of technical bid of this tender.

Further confirm that we agree with the terms and conditions specified in “Instructions to Tenderers” and if selected, the execution of supplies would be made in compliance.

Name & Signature of the authorized bidder with stamp  
Contact details of authorized person of bidder who have signed the tender.

Name.....  
Designation.....  
Phone (office).....  
Phone (Mobile).....  
E mail.....