

National Wind Tunnel Facility

Indian Institute of Technology, Kanpur

Enquiry No: NWTF/SS/2025-26/01

Opening Date: April 24, 2025

Closing Date: May 04, 2025 (05:00 PM)

Subject: Purchase of Machine Lead Screw Jack.

Quotation for the item mentioned above is requested in a sealed envelope. The quotation should reach on or before May 04, 2025 (05:00 PM) to the address given below.

Technical Specifications:

- **Load Capacity:** Minimum 200 kN
- **Screw Diameter:** ≤ 65 mm
- **Lead Size:** 12 mm
- **Linear Speed:** up to 500 mm/min
- **Gear Ratio:** Approx. 24:1
- **Start-up Torque (at full load):** Approx. 160 Nm
- **Thread Form:** Metric trapezoidal
- **Torque Proportionality:** Torque requirements should be approximately proportional to applied load across a range of 25%–100% of rated load
- **Screw Configuration:** Translating screw type
- **Lifting Screw Type:** Right-hand single start
- **Worm Shaft:** Standard type with both ends accessible
- **Lift Stroke (Raise):** 500 mm
- **Lifting Screw End Type:** Threaded
- **Gearbox Mounting:** Base mount
- **Screw Material:** Standard alloy steel or stainless steel
- **Screw Protection:** Cover pipes for screw protection must be included

Functional Features:

1. Anti-Backlash Mechanism:

The screw jack must incorporate a mechanism to minimize axial backlash under reversing load conditions (tension to compression).

- Adjustable axial backlash (minimum 0.025 mm)
- Should provide dual load path to maintain load in case of wear
- Optional wear indication feature (visual or sensor-based) desirable

2. Anti-Rotation Feature:

A keying mechanism must be present to prevent lifting screw rotation during operation without requiring external end-fixing.

- Should be integrated within the gearbox unit
- Compact and maintain standard dimensional profile

- Round cover pipe for ease of installation

3. Safety Nut Feature:

The jack should be optionally configurable with a safety nut to enhance operational safety.

- The safety nut must take overload in the event of primary nut wear or failure
- Visual wear indication through gap reduction between nuts
- Should be specified for load direction — sketch to be provided during ordering

4. Engineering Guide: Side Load Rating

The screw jack must be capable of sustaining **excessive side loads** without performance degradation or premature wear.

- Vendor must provide tabulated side load ratings from an engineering guide or performance catalogue.
- Ratings must indicate maximum allowable side loads relative to lift stroke, position, and load centre distance.
- Structural guidance on jack mounting and bracing under side load conditions should be provided.

5. Lubrication Requirements

- Both worm gear set and lifting screw must be **grease lubricated**.
- A **forced grease lubrication system** must apply a consistent film of lubricant directly onto the screw threads during operation.
- Lubrication system should be enclosed and service friendly.

6. Corrosion Protection

- All components, especially exposed parts (screw, housing, hardware), must be treated or coated to resist corrosion in humid or semi-aggressive industrial environments.
- Acceptable methods: zinc plating, epoxy coating, powder coating, or stainless-steel variants.
- Fasteners and external components must also have adequate corrosion resistance.

TERMS & CONDITIONS:

- **PRICES:** FOR IIT Kanpur
- **DELIVERY:** Maximum 3 months
- **VALIDITY:** Minimum 90 days
- **WARRANTY:** At least one year
- **PAYMENT:** 100% after delivery
- **Local Content:** Local content should be provided in the format attached

Address for correspondence:

Mr. Sharad Saxena
National Wind Tunnel Facility
Indian Institute of Technology, Kanpur
KANPUR-208016, UP
Email: saxenas@iitk.ac.in
Phone: 0512-259-6320

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date: _____

To,
The Officer-in-charge
Central Stores & Purchase
IIT Kanpur-208016

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: - _____

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

_____ as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Certificate for Tender
(To be given on Company Letter Head)

Date: _____

To,
The Officer-in-charge
Central Stores & Purchase
IIT Kanpur-208016

Sub: Certificate of compliance as per Rule 144 (xi) GFR's 2017

Tender Reference No: _____

Name of Tender / Work: -

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Declaration for Local Content

**(To be given on OEM Letter Head - For tender value below Rs.10 Crores)
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for
tender value above Rs.10 Crores)**

Date: _____

To,
The Officer-in-charge
Central Stores & Purchase
IIT Kanpur-208016

Sub: Declaration of Local content

Tender Reference No: _____

Name of Tender / Work : _____

1. Country of Origin of Goods being offered: _____
2. We hereby declare that items offered has _____% local content.
3. Details of location(s) at which the local value addition is made: _____

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

*“*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.”*

**Yours Faithfully,
(Signature of the OEM, with Official Seal)**

Bid Security Declaration
(To be given on Company Letter Head)

Date: _____

To,
The Officer-in-charge
Central Stores & Purchase
IIT Kanpur-208016

Sub: Certificate for bid security declaration

Tender Reference No : _____
Tender ID : _____

Name of Tender / Work: -

"I/We have read the clause regarding Bid Security Declaration/Earnest Money Deposit and I/We are fully aware that if I/We withdraw or modify the bid during the period of validity I may be suspended for a period of 3 years ."

Yours Faithfully,
(Signature of the Bidder, with Official Seal)