



Indian Institute of Technology Jodhpur

N.H. 62, Nagaur Road, Karwar, Jodhpur - 342030, Rajasthan (India)

☎ 02912801826 | ✉ office_enauto@iitj.ac.in

Website: Department: www.iitj.ac.in/enauto | IITJ: www.iitj.ac.in

INDIAN INSTITUTE OF TECHNOLOGY JODHPUR

Request For Technical Information and Pro Forma Quotations

For Procurement of FTIR Emission Analyzer

1. Introduction

The Indian Institute of Technology Jodhpur (IIT Jodhpur) intends to procure an **FTIR Emission Analyzer** for advanced emission characterization for alternative fuel studies.

Before initiating the formal procurement process, the Institute invites Technical Information and Indicative Pro Forma Quotations from eligible Original Equipment Manufacturers (OEMs) or their authorized representatives.

2. Purpose

The objectives are to:

- Obtain technical information from prospective OEMs/authorized representatives.
- Obtain indicative Pro Forma Quotations for budget estimation.
- Identify suitable FTIR-based systems for simultaneous multi-component exhaust gas analysis for various alternative fuels.
- Evaluate systems suitable for integration with engine testing facilities.

3. Disclaimer

This document is issued **only for obtaining technical information and indicative Pro Forma quotations.**

Submission of information under this proposal:

- shall **not** be treated as a financial bid;
- shall **not** constitute any commitment on the part of IIT Jodhpur to procure the equipment;

4. Equipment Details

- Name of Equipment: **FTIR Emission Analyzer**
- Quantity: **01**
- Broad Functional Requirements:
Attached

(The above requirements are indicative and may be revised after evaluation of the responses.)



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5. Eligibility Criteria

Interested firms should:

- Be an Original Equipment Manufacturer (OEM) or an authorized distributor/dealer.
- Have experience in supplying similar equipment.
- Have adequate installation and after-sales service support in India.

6. Information/Documents to be Submitted

The interested firms shall submit the following (*Annexure-I*):

1. Company Profile.
2. Details of the OEM.
3. Product Brochure/Catalogue.
4. Detailed Technical Specifications.
5. Compliance with the Broad Functional Requirements.
6. List of previous users/clients with installation reports
7. Details of Warranty.
8. Details of After-Sales Service Support.
9. Authorization Letter from OEM (where applicable).
10. Any additional technical information relevant to the offered equipment.

7. Pro forma Quotation

- Interested firms are requested to submit a Pro forma Quotation (*Annexure-II*) along with their Request for Technical Information and Pro Forma Quotations response. Indicative **Pro Forma** quotation in Indian Rupees (INR), including the cost of the equipment, essential accessories, taxes, duties, freight, insurance, installation, commissioning, training, and any other associated charges. Wherever applicable, the Annual Maintenance Contract (AMC) and/or Comprehensive Maintenance Contract (CMC) charges and spare parts shall be quoted separately as additional charges.
- Expected delivery schedule and other relevant technical and commercial information.

Important Note:

- The **Pro Forma** quotation is required only for cost estimation and budget planning purposes.
- The prices quoted shall be indicative/non-binding.
- The Pro Forma quotation shall not be treated as a financial bid.
- Submission of a **Pro Forma** quotation shall not confer any right or preference in the subsequent procurement process.

8. Presentation/Demonstration



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The Institute may invite for a technical presentation or product demonstration. The date and venue shall be communicated separately.

9. Submission:

Interested firms may submit their Proforma Quotations on or before the due date in sealed cover or through email (as applicable).

The envelope/email should be superscribed as:

"Request For Technical Information and Pro forma Quotations for Procurement of FTIR Emission Analyzer"

8. Important Dates

Activity	Date
Publication	22-07-2026
Last Date for Submission	01-08-2026
Technical Presentation (if required)	To be informed
Clarification Meeting (if required)	To be informed

10. General Terms & Conditions

1. This **Request for Technical Information and Pro forma Quotations** is issued only for obtaining technical information and **Pro Forma** estimates.
2. The Institute reserves the right to accept or reject any or all responses without assigning any reason.
3. Submission of a **Request for Technical Information and Pro forma Quotations** does not create any contractual obligation.
4. The Institute may seek additional information, technical clarifications, demonstrations, or presentations from any participant.
5. The Institute may modify the technical requirements based on the responses received.
6. The final technical specifications may be prepared by the User Committee after evaluating all **Request for Technical Information and Pro forma Quotations** responses.
7. The subsequent procurement, if any, shall be carried out through an appropriate procurement method in accordance with the GFR 2017 and applicable procurement rules.



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8. Participation in this **Request for Technical Information and Pro forma Quotations** does not automatically entitle any firm to participate in or receive any preference during the subsequent tender process.

11. Contact Details

Name: Srijit Biswas

Designation: Assistant Professor

Department: Energy and Automotive Engineering

Email: sbiswas@iitj.ac.in



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Annexure-I

Request For Technical Information and Pro forma Quotations Response Format

1. Name of the Firm:
2. Registered Address:
3. Name of OEM (if applicable):
4. Contact Person:
5. Email:
6. Phone:
7. Product Name and Model:
8. Brief Technical Description:
9. Compliance with Broad Functional Requirements:
10. List of previous users/clients with installation reports:
11. After-Sales Service Details:
12. Any Additional Features:
13. Remarks (if any)



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Annexure-II

Format for Pro forma Quotation

Sl. No.	Description	Amount (INR)
1	Indicative Pro forma quotation in Indian Rupees (INR), including the cost of the equipment, essential accessories, taxes, duties, freight, insurance, installation, commissioning, training, and any other associated charges.	

Warranty Period: _____

AMC/CMC Charges (after warranty): _____

Delivery Period: _____

Authorized Signatory

Name: _____

Designation: _____

Company Seal & Signature



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Technical Specifications - FTIR Emission Analyzer

Sl. No.	Parameter	Technical Specification
1	Equipment Type	FTIR (Fourier Transform Infrared) Emission Analyzer
2	Measurement Target	Direct measurement of exhaust gas from internal combustion engines
3	Measurement Principle	Fourier Transform Infrared (FTIR) Spectroscopy
4	Standard Measured Components	CO, CO ₂ , NO, NO ₂ , NO _x , NH ₃ , CH ₄ , N ₂ O, SO ₂ , H ₂ O and HCHO, HCOOH, CH ₄ , C ₂ H ₄ , C ₂ H ₆
5	Sampling Method	Direct raw exhaust gas sampling
6	Sample Gas Flow Rate	Approximately 3.5 L/min
7	Operating Environment	Ambient temperature: 5°C to 40°C; Relative humidity: Less than 80% RH (non-condensing)
8	Power Supply	AC 100-240 V, 50/60 Hz
9	Power Consumption	Approximately 2.2 kVA (steady state); 2.8 kVA (maximum)
10	CO Measurement Range	0-200 ppm, 0-1000 ppm, 0-5000 ppm, 0-2 vol%, 0-10 vol%
11	CO ₂ Measurement Range	0-1 vol%, 0-5 vol%, 0-20 vol%
12	NO Measurement Range	0-200 ppm, 0-1000 ppm, 0-5000 ppm
13	NO ₂ Measurement Range	0-200 ppm
14	N ₂ O Measurement Range	0-200 ppm
15	NH ₃ Measurement Range	0-100 ppm, 0-1000 ppm
16	SO ₂ Measurement Range	0-200 ppm
17	H ₂ O Measurement Range	0-24 vol%
18	CH ₄ Measurement Range	0-500 ppm
19	Hydrocarbon Measurement Range	C ₂ H ₄ : 0-500 ppm; C ₂ H ₆ : 0-500 ppm; C ₃ H ₆ : 0-200 ppm; 1,3-C ₄ H ₆ : 0-200 ppm; iso-C ₄ H ₈ : 0-200 ppm; C ₇ H ₈ : 0-500 ppm; C ₆ H ₆ : 0-500 ppm
20	Zero Noise	0.5 to less than 2% of full scale (depending on measurement component)



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21	Response Time	1.5 s or less (200 ppm CO); 3 s or less (100 ppm NH ₃)
22	Repeatability	Within ±1.0% of full scale
23	Zero Drift / Span Drift	Within ±1.0% of full scale over 8 hours
24	Features	Automatic liquid nitrogen replenishing device and vacuum-side leak check facility