



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai 400076

Ref. PR No.1000052230

RFx. No.6100002682

Technical Specifications

Sr. No.	Item Description and Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
01	<p>4- Component Universal Piezo Electric Dynamometer for Turning, Milling, Drilling Application</p> <p>1.1 DYNAMOMETER:</p> <p>4- Component Universal Quartz based Dynamometer for Turning, Milling, Drilling Application</p> <p>Range : Fx,Fy : -55 KN Fz : -520 KN Mz : -200...200 Nm</p> <p>Sensitivity : Fx, Fy :- 7.8 PC/N Fz :-3.5 PC/N Mz : - 160 PC/Nm</p> <p>Cross Talk: ± 2%</p> <p>Linearity: (All Range) ± 1% FSO</p> <p>Operating Temperature: 0-70 deg C</p> <p>Protection Class: IP67</p> <p>1.2 CONNECTING CABLE: Connecting Cable with Fischer connector both end of Connector, Length- 5 Meter Length</p> <p>1.3 Tool Holder: tool size up to 20x20 mm for Turning Operation</p> <p>1.4 MULTICHANNEL CHARGE AMPLIFIER WITH INTEGRATED DATA ACQUISITION SYSTEM</p> <p>a) 4- Channel Version for multi component Force – Torque measurement</p> <p>b) Data Acquisition software for acquiring</p>		



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- and displaying Force and Torque
- c) Measuring Range: ± 100 PC to 1,000,000 PC
 - d) Frequency Range >0- 100KHz
 - e) ADC > 24 Bit Resolution
 - f) Output Voltage > +/-10V
 - g) Linearity > 0.01 %
 - h) Ethernet Interface
 - i) Virtual Channels for Real time calculation

1.5 ACQUISITION / ANALYSIS SOFTWARE FOR DESKTOP/LAPTOP VERSION OF PC

- a) Windows based simple operation
- b) Configuration and control measuring instruments through Ethernet.

- c) Useful signal evaluation and calculation function
- d) Simultaneous recording up to 4 or 8 channel measuring Channel.
- e) Software should be ideal for acquisition and evaluation of physical measure and

Facility for graphical, Calculation function and documentation of the measurement. Min, Max, Mean, Average function Filters Facility

1.6 Documentation, Warranty & Training

- a) Full technical datasheet, API documentation, and user manual to be provided.
- b) Minimum warranty: **12 months** on Hardware and lifetime license for software.
- c) A 1-2-day training session (onsite or remote) will be provided for Dynamometer operation, streaming setup, and functioning.
- d) The training cost will be borne by the company itself.