



higher education
& training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



BUFFALO CITY
TVET COLLEGE

REQUEST FOR QUOTATION: MECHANICAL ENGINEERING TEACHING **MODELS**

Kindly see the attached request for quote (RFQ). Quotations should be forwarded to quotations@bccollege.co.za.

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADE MARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS 'OR EQUIVALENT.

Kindly submit the following **REQUIRED** documents when responding to the RFQ

- Signed quotation (quotations not signed will be eliminated)
- Declaration forms (SBD 4, 8 and 9)
- Certified BBBEE certificate (0 points will be awarded for BBBEE certificates that are not certified)
- Valid Tax Clearance Certificate
- CSD report
- Company Registration
- Bank Confirmation Letter (not older than 3 months)
- Quotations must be detailed as per specification
- All quotations submitted via email addresses other than the one listed above will not be considered.

Closing Date 14 April 2023 at 12:00 Pm. No late or hand delivered documents will be accepted. ONLY EMAILED DOCUMENTS WILL BE ACCEPTED

Enquiries: Ms Thembakazi Mati

043 704 9280 / 043 704 9241

SPECIFICATION FOR MECHANICAL ENGINEERING TEACHING MODELS– ST MARKS CAMPUS



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Date: 24 March 2023

| No. | Description | Quantity |
|-----|---|------------|
| 1 | <p>Flexible Tyre Coupling Highly elastic, lubrication free couplings that tolerate large PART# AFFAT amounts of misalignment in all planes as well as offering simple installation and inspection without disrupting the drive. The Fen flex coupling also has excellent shock absorbing properties while reducing vibration and torsional oscillations.</p> | 01 |
| 2 | <p>Cutaway Valves Check valves Ball valves Butterfly valves Gate valves Diaphragm valves Needle valves Globe valves Solenoid valves Pinch valves</p> | 01 of Each |
| 3 | <p>Cutaway Pumps Multi-stage centrifugal electropump Open rotor centrifugal electric pump Internal gear pump Rotary lobe pump Helical screw pump / Progressive cavity pump</p> | 01 of Each |
| 4 | <p>Gearboxes Radicon gearbox Hypoid gearbox Helical bevel Gearbox spur Gearbox worm</p> | 01 of Each |
| 5 | <p>Forces Kit <i>Key Features</i> One of a series of 18 kits for experiments in fundamental engineering science topics <ul style="list-style-type: none"> • For use on any engineering course from foundation to postgraduate • Flexible and modular with sensible size parts – each kit fits onto the Work Panel (ES1) for experiments and simple classroom demonstrations • Supplied in a hard-wearing storage tray with moulded insert to hold parts securely and a graphical list to help check the kit contents • Rugged and durable parts for safe ‘hands-on’ experiments – allowing better understanding • Contains all parts needed for experiments with centres of gravity and angles and coplanar forces. </p> | 01 |
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| 6 | <p>Moments Kit Key Features One of a series of 18 kits for experiments in fundamental engineering science topics</p> <ul style="list-style-type: none"> • For use on any engineering course from foundation to postgraduate • Flexible and modular with sensible size parts – each kit fits onto the Work Panel (ES1) for experiments and simple classroom demonstrations • Supplied in a hard-wearing storage tray with moulded insert to hold parts securely and a graphical list to help check the kit contents • Rugged and durable parts for safe ‘hands-on’ experiments – allowing better understanding • Provides experiment capabilities into the principles of moments, beam reactions, beam balances and levers | 01 |
| 8 | <p>Simple Mechanism Kit. Key Features One of a series of 18 kits for experiments in fundamental engineering science topics</p> <ul style="list-style-type: none"> • For use on any engineering course from foundation to postgraduate • Flexible and modular – each kit fits onto the Work Panel (ES1) for experiments and classroom demonstrations • Supplied in a hard-wearing storage tray with moulded insert to hold parts securely and a graphical list to help check the kit contents • Rugged and durable parts for safe ‘hands-on’ experiments – allowing better understanding • Contains all parts needed for experiments showing the deflection of beams with different supports direction to another. | 01 |
| 9 | <p>Indirect 4 Stroke Diesel Engine (on base)</p> <p>The most rational training model of a 4-stroke diesel engine sectioned for training purposes. Indirect injection, complete with injection pump, injector, pre-chamber, preheating glow plug, cooling system, distribution circuit, etc. Operated manually through a crank handle. In order to simulate the active stage of the cycle a small bulb lights up during the expansion phase.</p> | 01 |
| 10 | <p>4 Stroke Petrol Engine Model (on base)</p> <p>The most rational training model of a 4-stroke petrol engine. Complete with sectioned carburettor and coil ignition, cooling system, distribution system, spark coil, etc. During the combustion phase a bulb lights up to simulate the mixture ignition. The engine is operated manually through a crank handle.</p> | 01 |

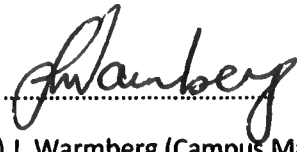
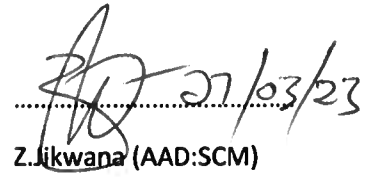
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| 11 | 2 Stroke Petrol Engine (on base) Piston displacement 46 cu. cm Air cooling system Electronic ignition Box carburettor | 01 |
| 12 | Steam Engine Model (on base) - manual Educational model of a modern horizontal steam engine with piston valve control. The model can be put in motion by turning the flywheel, thus showing the manner of operation of the engine and of the built-on centrifugal governor. | 01 |
| 13 | Starter Motor For Cars (on base) – manual Approx weight and dimension 25x20cm x20h; Net weight 6kg; Gross weight 10kg | 01 |
| 14 | ENGINE VIDEO SYSTEM (on panel) Luminous training panel with silk-screened plexiglass front painted with different colours to better show the most important functions inside an internal combustion system. The ignition, lubrication, carburetting, cooling and supercharging system (different colours) are shown separately by some lamps flashing one after the other to give the movement impression. Perfect operation of the panel is got by means of an electric board. | 01 |
| 15 | Petrol Electron Injector Cutaway model of an electro injector for multipoint injection engines. The following parts are shown: <ul style="list-style-type: none"> • Injector body • Needle • Magnetic core • Winding • Electric connector | 01 |
| 16 | Single Body Carburettor (on base) - static | 01 |
| 17 | Injectors (on base) - static Careful section of two different injectors (direct and indirect injection type) showing their internal parts and relevant operation. | 01 |
| 18 | Engine Cooling System Block-head canalisation <ul style="list-style-type: none"> • Water pump • Thermostatic valve • Water temperature bulb • Expansion tank • Radiator • Connecting pipe | 01 |
| 19 | Educational Model of Planetary Gear on base. This model shows very clearly and instructively the operating system of a planetary gear and the available gearshift possibilities. Topical as in every automatic motorcar transmission there is a planetary gear. | 01 |

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M. Zihlwele (Sen. Admin Officer) J. Warmberg (Campus Manager)

A handwritten signature in black ink, written in a cursive style. The name 'Warmberg' is clearly legible.A handwritten signature in black ink, followed by the date '27/03/23' written to the right of the signature. The signature is stylized.

Z. Likwana (AAD:SCM)