BAR LINKAGES KIT

ES15

A set of bars and pivot joints for students to understand different bar linkages and mechanisms.

KEY FEATURES

- One of a series of 18 kits for experiments in fundamental engineering science topics
- 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 an assortment of different length bar 'links' and joints needed for over 10 suggested experiments in bar linkages

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TECQUIPMENT

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DESCRIPTION

This versatile kit is part of a series that allows many experiments using different arrangements of their parts. Students, teachers or lecturers fit the parts of the kit to the work panel (ES1) (supplied separately) to study or show an engineering science topic.

This kit includes a selection of over 20 perforated bars of different lengths and pivots or 'joints' to allow students to create an unlimited choice of linkages.

Students assemble the bars and joints in any arrangement and note how the linkage converts movement from one form to another (for example: rotary motion to linear motion). Bar linkages are one of the most basic mechanisms used in mechanical engineering.

The kit includes magnetic 'wipeable' sheets and holders for non-permanent markers so the student can trace the relative movements of the linkages or joints.

The kit introduces students to key engineering terms such as four-bar linkages, rotary and linear movement, and planar linkages.

TecQuipment supplies a memory stick with the work panel (ES1). It includes all the worksheets, guidance notes and lecturer notes (with answers) needed for typical experiments with each kit. The selection of parts in the kits and the choice of fixing points on the work panel means that teachers or lecturers may extend the experiments to an even greater range.

NOTE: The kit is for use with the ES1 work panel (supplied separately).

STANDARD FEATURES

- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- ISO9001 certified manufacturer

LEARNING OUTCOMES

- Four-bar linkages: crank rocker, double rocker, drag link and parallelogram
- Straight line linkages: Watt's straight line, Chebyshev, Peaucellier-Lipkin, Hart's inversor, Robert's and Hoeken's
- Pantograph
- Ackermann steering

OPERATING CONDITIONS

FOR USE IN:

Well lit classroom or laboratory

STORAGE TEMPERATURE RANGE:

–25°C to +55°C (when packed for transport)

OPERATING TEMPERATURE RANGE:

+5°C to +40°C

OPERATING RELATIVE HUMIDITY RANGE:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

ESSENTIAL SERVICES

A level bench or desktop of at least 500 mm wide x 500 mm front to back.

ESSENTIAL BASE UNIT

Work Panel (ES1)

SPECIFICATIONS

TecQuipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

STORAGE TRAY (WITH CLIP-ON LID):

450 mm x 320 mm x 85 mm

NETT WEIGHT:

3.6 kg

PACKED VOLUME AND WEIGHT:

Approximately 0.015 m^3 and 4.1 kg

MAIN PARTS:

- 4 bars with 17 holes
- 6 bars with 13 holes
- 6 bars with 9 holes
- 6 bars with 5 holes
- Joints and pen holders
- Magnetic wipeable sheets
- Non-permanent markers
- Screwdriver and spanner

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