# 

# STF3 EQUILIBRIUM OF A RIGID BODY

A kit for use with the work panel that demonstrates the forces around a ladder-type structure.





STATICS FUNDAMENTALS

# **KEY FEATURES**

- One of a series of kits for experiments in statics fundamentals topics
- Fits to the Work Panel (STF1) for a complete range of experiments that explore the classic 'forces around a ladder' problem
- Hands-on approach for improved understanding
- Highly visual and robust ideal for classroom demonstrations and for use by small groups of students
- Magnetic bases allow accurate and easy positioning of the experiment's parts
- Supplied in a hard-wearing storage tray
- Includes a fully illustrated user guide

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# STF3 EQUILIBRIUM OF A RIGID BODY

# DESCRIPTION

For use with the Work Panel (STF1), the kit allows several experiments with a rigid body – a ladder structure.

Students or teachers fit the magnetic parts of the kit to the Work Panel (STF1) to study or demonstrate the forces around an inclined ladder-type structure.

The kit holds a model ladder at different angles with or without a 'climbing mass' and measures the horizontal and vertical forces.

The versatility of the kit means that you can adjust the ladder angle between more than 15 to 45 degrees and try it with or without a climbing mass at any position along its length.

TecQuipment supplies each kit with a fully illustrated user guide containing theory, experiments and typical results.



# **STANDARD FEATURES**

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

# **LEARNING OUTCOMES**

- Horizontal and vertical reaction forces on a ladder
- Safe angles for a ladder
- A climbing mass on a ladder
- A ladder at different angles

## **ESSENTIAL BASE UNIT**

• Statics Work Panel (STF1)

## **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 strong, level bench or desktop of at least 1100 mm wide x 540 mm front to back (for the STF1).

# **SPECIFICATIONS**

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

#### NETT WEIGHT:

3.9 kg + 1 kg storage tray

#### PACKED VOLUME AND WEIGHT:

Approximately 0.015 m<sup>3</sup> and 6 kg

#### PARTS:

- Model ladder
- Magnetic pulleys
- Spring balances
- Magnetic ladder hook and plate points
- Magnetic hook points
- Lightweight hooks
- Weight hangers and weights

