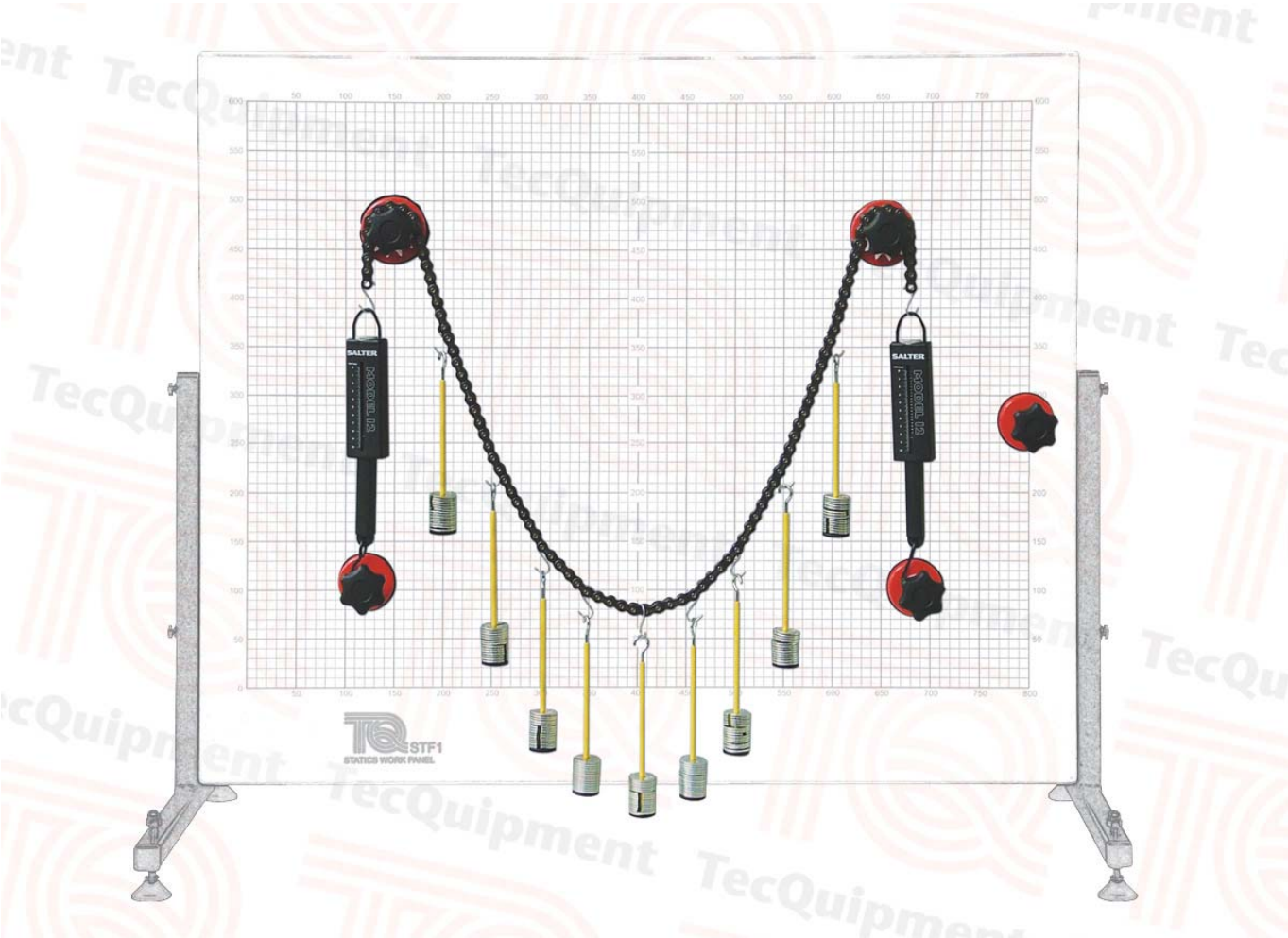
STF2 Suspension Cable Demonstration

Shows the tensions and shapes in a suspension cable, comparing them with theory



- One of a series of kits for experiments in statics fundamentals topics
- Fits to the Work Panel (STF1) for a complete range of suspension cable experiments
- 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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TecQuipment

STF2 Suspension Cable Demonstration

Description

For use with the Work Panel (STF1), the kit allows several experiments with a suspension cable.

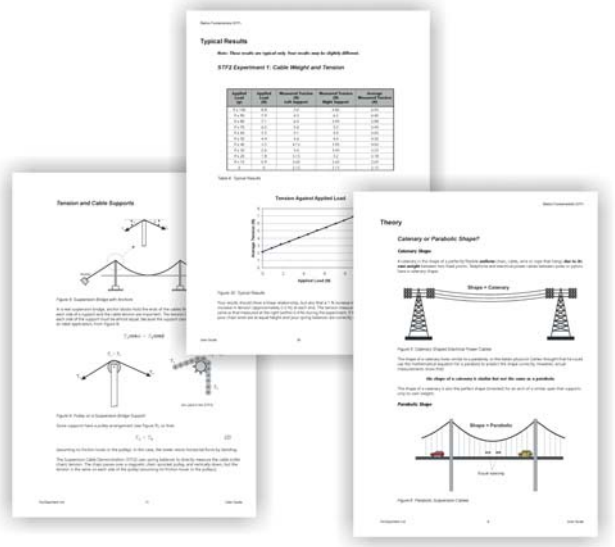
Students or teachers fit the magnetic parts of the kit to the Work Panel (STF1) to study or demonstrate the shapes and tensions in a suspension cable.

The kit compares a suspension cable with a catenary cable and analyses results using catenary and parabolic theory.

It includes a roller chain (the cable), held by magnetically mounted sprocket pulleys and a set of weight hangers and weights. Spring balances measure the tension in the cable.

The versatility of the kit means that you can create symmetrical and non-symmetrical cables, with point loads or with evenly-spread loads.

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



Pages from the user guide

Standard Features

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

Experiments

- Analysis using catenary and parabola theory
- Cable weight and tension
- Comparison of a symmetrical suspension cable and catenary
- Unsymmetrical suspension cable
- A point load on a suspension cable

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

Nett weight: 3.8 kg + 1 kg Storage Tray

Packed volume and weight:
Approximately 0.015 m^3 and 6 kg

Parts:
- Roller chain
- Magnetic chain sprocket pulleys
- Spring balances
- Magnetic hook points
- Lightweight hooks
- Weight hangers and weights

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