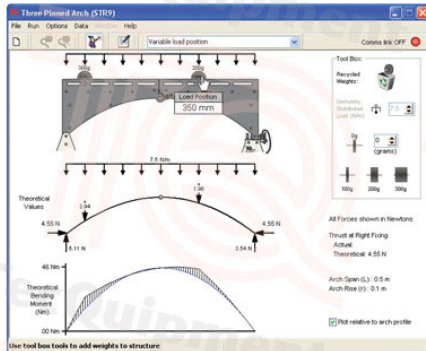


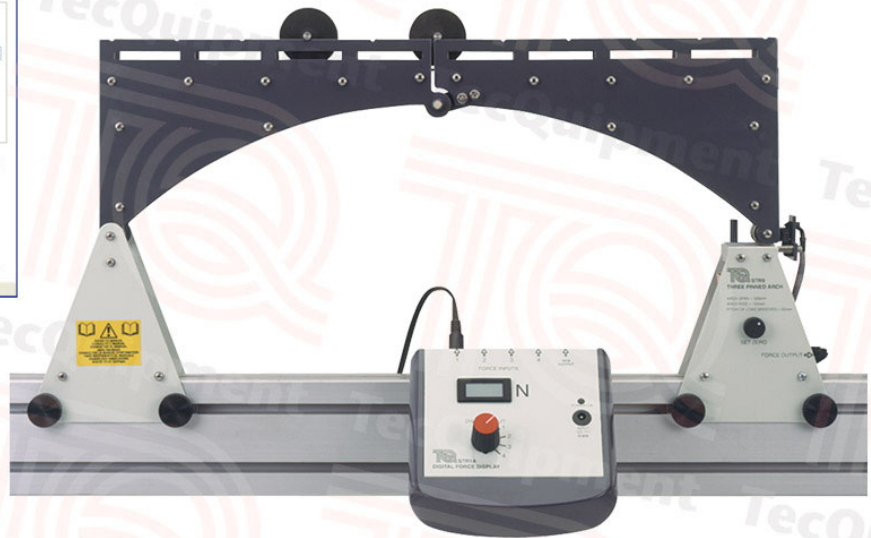
STR9

Three-Pinned Arch

For studying the characteristics of a three-pinned arch under various load conditions



Screenshot of the optional TecEquipment Structures Software



Shown fitted to the Structures Test Frame and connected to a Digital Force Display (both supplied separately)

- High-quality structures teaching module for students of mechanical, civil and structural engineering
- Allows safe and practical experiments into three-pinned arches
- Realistic and verifiable experiment results
- Optional TecEquipment's Structures Software package for extra 'virtual' experiments that simulate and confirm the results from your hardware and allow extended experiments
- Optional STR2000 unit with TecEquipment's Structures Software package for automatic data acquisition **and** virtual experiments
- One of many interchangeable experiment modules from TecEquipment's modern, flexible and cost-effective Structures teaching system
- Ideal for classroom demonstrations, or students working in pairs or small groups

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- An ISO 9001 certified company

STR9

Three-Pinned Arch

Description

The experiment hardware fits onto a Structures Test Frame (STR1, available separately). Students apply various loads at set positions along the top of a simple 'determinate' three-pinned arched structure. They can also apply a uniformly distributed load (UDL).

The structure has a pivot at one end and at the crown. The arch rolls against a load cell at the opposite end. The load cell connects to a Digital Force Display (STR1a, available separately) to measure and display the thrust reaction. The equipment includes a lead to connect the load cell to a Digital Force Display (STR1a).

The lecturer guide provides details of the equipment including sample experiment results. The student guide describes how to use the equipment and gives experiment procedures.

For extra 'virtual' experiments, TecEquipment can supply the optional TecEquipment Structures Software (STRS), for use on a suitable computer. The virtual experiments simulate the tests you can perform with the hardware. They also extend the choice of tests beyond that available using only the hardware, for example: higher loads, uniform loads or different test specimens. This extends the student's learning experience.

For automatic data acquisition of your experiment results, TecEquipment can supply the optional Automatic Data Acquisition Unit (STR2000). Supplied as standard with the STR2000 is TecEquipment's Structures Software that displays and logs your experiment results and gives the extra virtual experiments.

Standard Features

- Supplied with lecturer guide and student guide
- Two-year warranty
- Made in accordance with the latest European Union directives

Experiments

Studies of the:

- characteristics of a three-pinned arch;
- relationship between applied loads and horizontal thrust produced from a simple determinate arched structure.

Also:

- Appreciation of footing stability and economy

Essential Ancillaries

- Structures Test Frame (STR1)
- Digital Force Display (STR1a)

Recommended Ancillaries

- Structures Software (STRS) for virtual experiments
- or**
- Automatic Data Acquisition Unit (STR2000) for automatic data acquisition and virtual experiments

Operating Conditions

Operating environment:
Laboratory environment

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

Specifications

Nett dimensions and weight:
700 x 310 x 70 mm, 4.5 kg

Packed dimensions and weight:
Approximately 0.078 m³, 6 kg

Arch:
100 mm rise, 500 mm span, 9 loading positions

Masses:

- 1 x 100 g
- 1 x 200 g
- 1 x 300 g
- 2 x pair of uniformly distributed loads

Accessories:
Rule

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