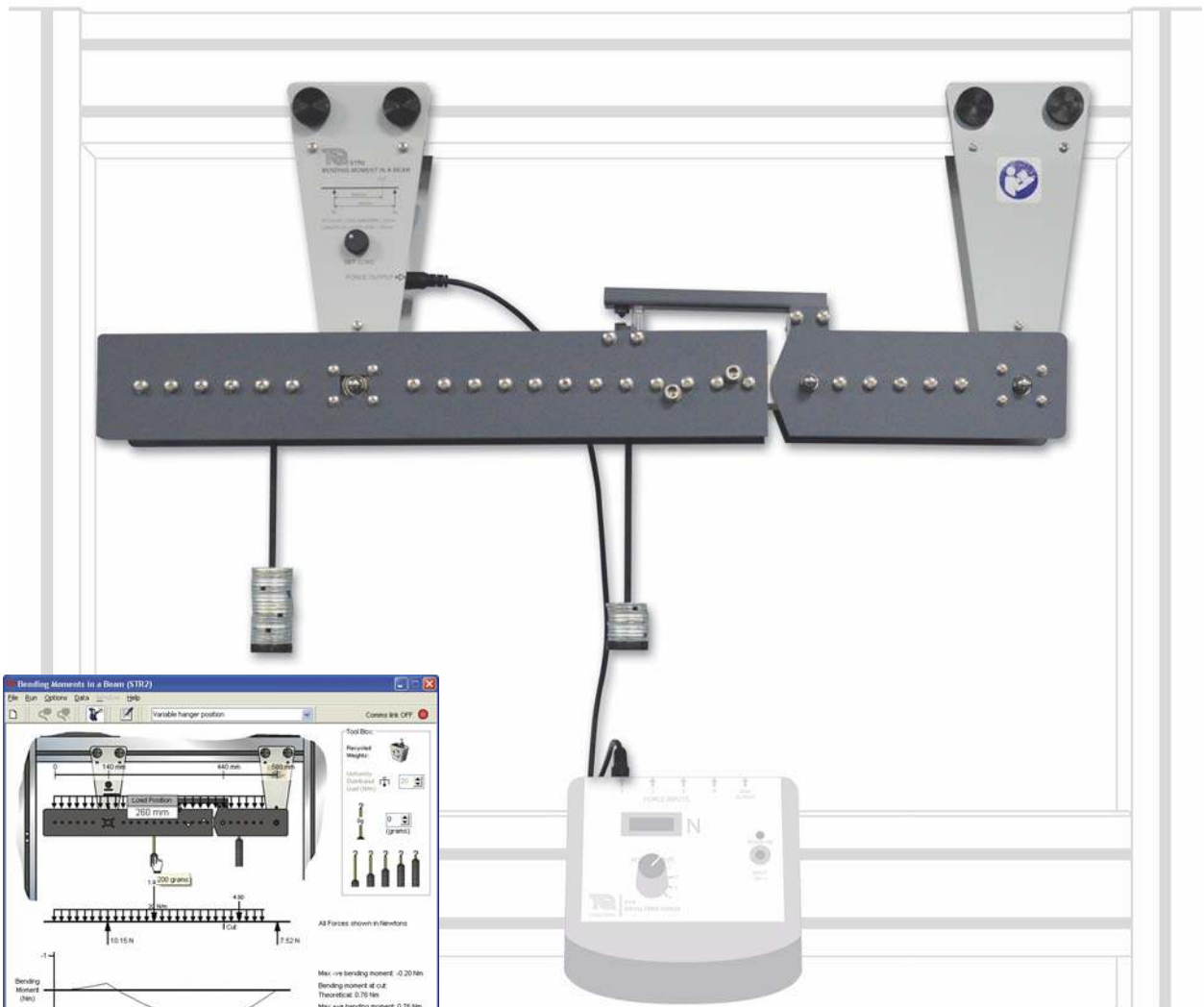


BENDING MOMENTS IN A BEAM

STR2

Illustrates and proves the basic theory of bending moments in a beam.



SCREENSHOT OF THE OPTIONAL TECQUIPMENT STRUCTURES SOFTWARE

LEARNING OUTCOMES:

- Bending moment variation at the point of loading
- Variation of bending moment away from the point of loading
- Examination of various other loading cases, including loads traversing the beam

The experiment hardware is a simply supported beam 'cut' by a pivot. Students apply loads at set positions using hangers holding various masses. To stop the beam collapsing, a moment arm bridges the 'cut' onto a load cell, thus reacting to (and measuring) the bending moment force.

ESSENTIAL BASE UNIT:

- Structures Test Frame (STR1) 188

ESSENTIAL ANCILLARIES:

- Digital Force Display (STR1a) 189

RECOMMENDED ANCILLARIES:

- Structures Software (STRS) for virtual experiments 190
- OR
- Automatic Data Acquisition Unit (STR2000) for automatic data acquisition and virtual experiments 189