



## 'NPL Force Measurement Capability'

The National Physical Laboratory (NPL) provides you with a single source solution for all of your force measurement and calibration needs and also undertakes mechanical tests using force transducers or meters.

NPL can provide accurate measurements up to 30 MN and hire out our machines and trained staff to help you at all stages of your testing.

NPL maintain the UK standard of Force, making our services directly traceable to the National Standard kilogram.

### Services

#### Force transducer calibration (UKAS accredited up to 5 MN)

- Calibration of force transducers and load cells (up to 30 MN) to national & international standards including:
- BS EN ISO 376
- ASTM E74
- BS 8422
- Also to Client specific calibration requirements

#### Extensometer rigs

- Calibrations to ISO 9513 & ASTM E83 standards UKAS accredited
- Realignments & adjustments
- Spares & repairs

#### Strain cylinders

- Verification of strain cylinders, central to maintaining measurement uniformity of concrete cube testing machines used throughout the construction industry
- NPL's UKAS accredited strain cylinder certification service provides a direct comparison to the UK's two master reference strain cylinders

#### Force Calibration machines – Consultancy, design, manufacture

- Consultancy & advice to develop or improve the performance of existing equipment
- Equipment / facility design
- Manufacture, installation & commissioning of calibration facilities
- Problem solving – to overcome challenges involving deadweight, hydraulic and lever amplification, and reference transducer machines

#### UKAS accredited calibration of DC ratio meter indicators for force transducers

## On-site services

- Calibration of compressive & tensile machines
- In tension up to 8 MN to ISO 7500-1 & ASTM E4
- In compression up to 12 MN to ISO 7500-1 & ASTM E4
- Calibration to customers own requirements & procedures
- Industrial force standards
- Verification of machines from 1.5 N to 30 MN in compression
- Verification of machines from 1.5 N to 8 MN in tension

## Force measurement – consultancy & training

- Consultancy services covering all aspects of force measurement
- Training specific to force measurement and its application

## Equipment hire

- Customers wishing to perform tests or calibrations to their own procedures can hire NPL's facilities, together with a qualified operator who will assist with setting up and operation of the machines.

Our machines include the following:

- 2.5 kN Deadweight Force Standard machine
- 20 kN Deadweight Force Standard machine
- 120 kN Deadweight Force Standard machine
- 1.2 MN Deadweight Force Standard machine
- 5 MN Hydraulic Amplification Force Standard machine
- 12 MN Hydraulic Force Standard machine
- 30 MN Hydraulic Force Standard machine

## Further information

Please contact NPL to discuss your requirements and book in your order. Measurements at NPL are offered on a pre-booked only basis, as service capacity on the specialist equipment is limited. Prompt acceptance of our quotation will help minimise any lead-time.

For further information on this service or to discuss your particular measurement or calibration requirement, please contact:

## Measurement Services

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