

Tuff Trench Testing (Tough Trench)

Load Testing:

Concentrated load tests have been carried out to the National Grid T/SP/E/42 October 2005 Specification on the 1200 x 800 Tuff Trench. The concentrated load tests have shown that when firmly bolted down, the 1200 x 800 Tuff Trench meets the requirements of the National Grid Specification.

The requirement is that the trench cover shall be strong enough to support pedestrians and light vehicles whilst spanning a maximum trench width of 700mm. The trench cover shall be capable of supporting a maximum weight of 400kg and the failure load is no more than 800kg, when loaded at the centre.

The specification requires that the trench cover shall not deflect more than 45mm when supporting 4kN wheel load.

All testing and information was outsourced and collected by:

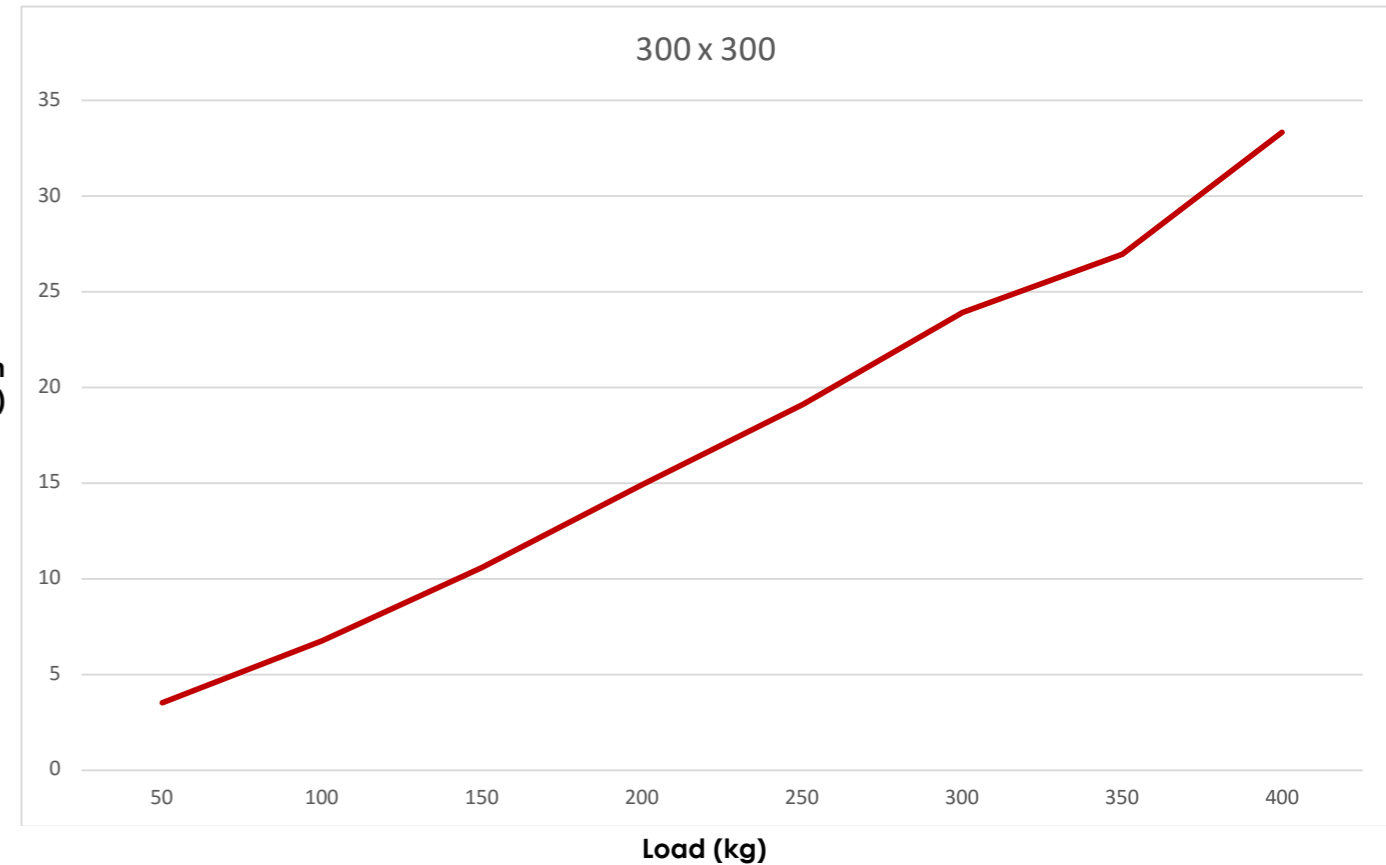


Quarryside Business Park
Holmethorpe Industrial Estate
Watercolor, Thornton Side
Redhill, Surrey RH1 2LJ

Loading Plate Size (mm)	Fixings	Load (Kg)	Deflection (mm)
300 x 300	Bolted	200	14.8
		400	33.3
200 x 200	Bolted	200	21.6
		400	40.2

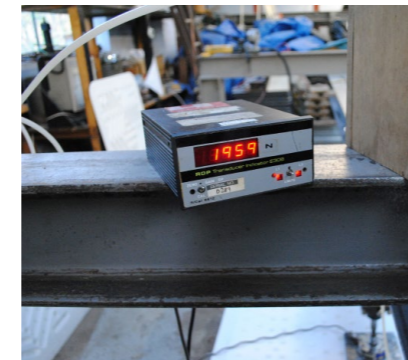
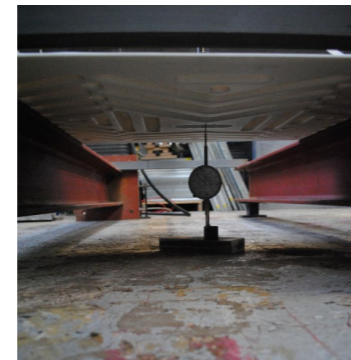
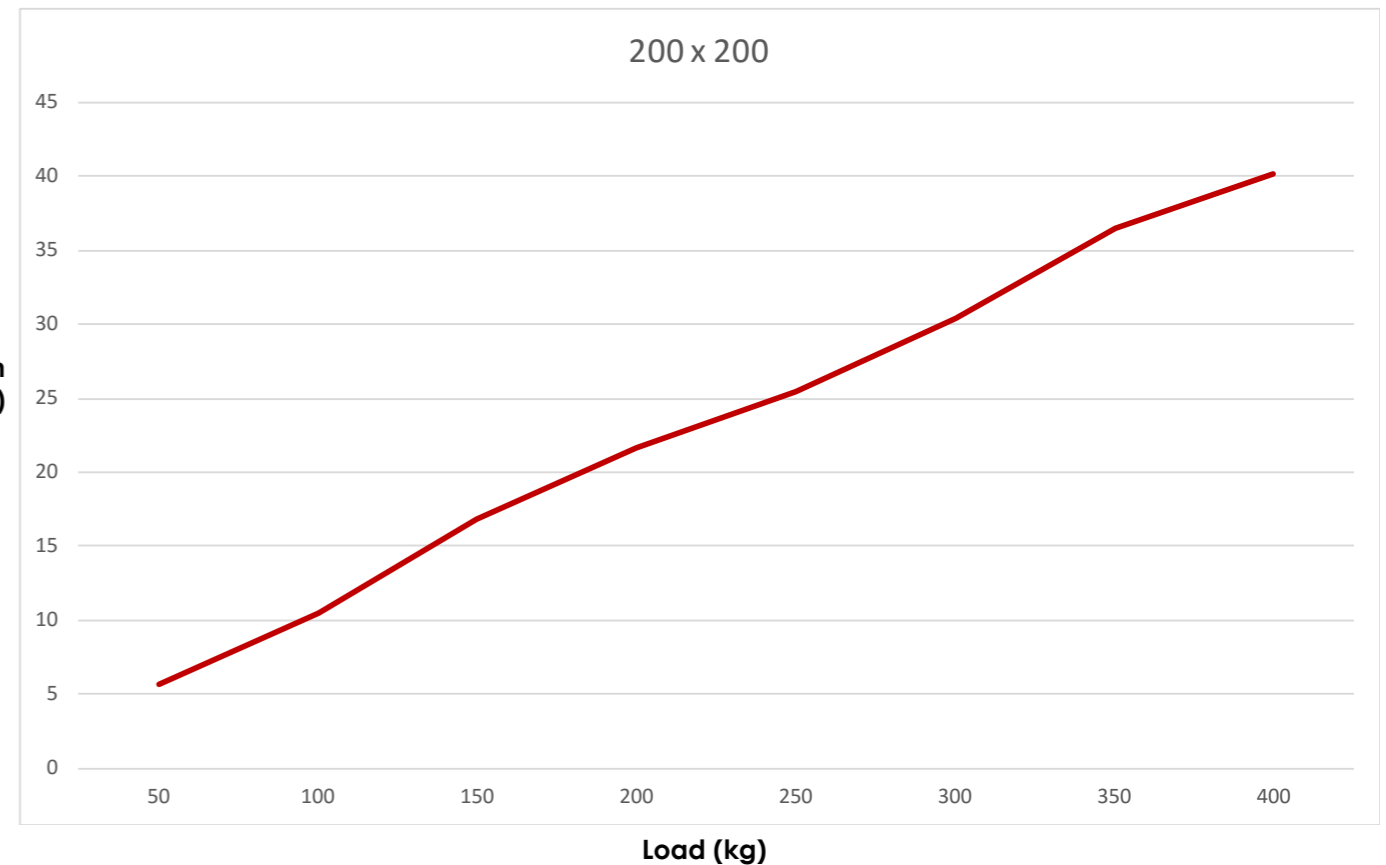
The table above displays results from the Tuff Trench withstanding a load of 400kg, whilst only deflecting by 33.30mm & 40.20mm. **These are a Pass.** The cover made it past 800kg with no failure on both plate sizes.

Deflection (mm)



Both charts show the Deflection of the Tuff Trench when put under loads of up to 400Kg. This loading was within a 5 minute time span.

Deflection (mm)



Slip Resistance:

A flat section of the trench cover, without the anti-slip projections, has been tested in accordance with BS 7976: Part 2: 2002 'Pendulum Testers - Method of Operation'. The test has been performed with two sliders. These are: -

- Slider 45 (Standard Simulated Shoe Sole).
- Slider 55 (Tyre Tread)

The results have been compared with the HSE and UK slip Resistance Group 2005 slip potential classification. Pendulum test values are: 0 - 24 (High Slip Potential), 25 - 35 (Moderate Slip Potential), 36 + (Low Slip Potential). The following are the results:

- Slider 45 - Dry 41 Wet 33
- Slider 55 - Dry 89 Wet 41

Results show no significant slip hazard.