

Modulus of Rupture (Bending Strength)



Modulus of Rupture Machines measure the flexural breaking load (Bending Strength) of sample bars/ ceramic tiles up to 700mm square by applying a three point load to the test piece. The range of Bending Strength machines available cover uses in tableware, sanitaryware, porcelain and ceramic tile manufacturing plants.

Principle of Operation

The sample piece is placed centrally across the two lower adjustable tension rods set a known distance apart. A third fixed tension rod, set exactly at the centre of the lower tension rods then is driven either up or down (depending on the model) against the sample. The test piece is subject to a three point strain. At the optimum point the test piece will snap, and the maximum finger on the dial gauge will remain at the maximum point.

The Modulus of Rupture is then calculated using the

standard formula $M = \frac{3PL}{2bd^2}$ where P is the breaking load on the scale, L is the distance between the lower tension rods on which the sample of breadth (b) and depth (d) is supported. The Modulus of Rupture should be calculated by taking an average result from 10 test samples.

Mechanical Modulus of Rupture Machines

The rise and fall platform is driven by an electric motor, which delivers a constant speed of elevation to the lower platform. The dial gauge on the spring balance is fitted with a maximum finger which indicates the breaking point in kilograms. This range of machines is suitable for tiles up to 40cm x 40cm

Specifications

Powered by a 0.18kW motor, for 220/240V single phase supplies

Product Code

10 kg scale (x 50g)	MOR/10
25 kg scale (x 100g)	MOR/25
50 kg scale (x 200g)	MOR/50
100 kg scale (x 500g)	MOR/100

