
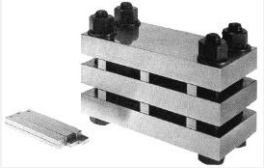


COMPRESSION SET METHODS A and B	TECHNICAL DATASHEET
<p>Applications in which the rubber will be subjected to compressive stresses in air or liquid media.</p> <p>METHOD A: CONSTANT FORCE IN AIR</p> <p>METHOD B: CONSTANT DEFLECTION IN AIR</p> <p>Choice between methods is optional, however Method B must be adopted unless otherwise stated.</p> <p>Method B is NOT suitable for vulcanized harder than 90 IRHD.</p> <p>Intended to measure the ability of rubber compounds to retain elastic properties after prolonged action of compressive stresses. Compression set tests are mainly applicable to service conditions involving static stresses. Tests are usually performed at high temperatures.</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Method A</p> </div> <div style="text-align: center;">  <p>Method B</p> </div> </div>

**Method A:**

The stress is applied at a constant force on a specimen with a  $\phi$  of 29.0 mm ( $\pm$  0.5 mm). Compression set is equipped with a spring, accurately calibrated in order to feature an elastic constant of 70 kN/m ( $\pm$ 3.5 kN/m) at a force of 1.8 kN. The spring is supplied with a calibration diagram. Plotting of spring deformation is originated by a Vernier scale, at a 1/20 mm accuracy, directly applied onto movable platen in the middle. Compression set can be oven or cryostat tested at 70°C/-30°C, basing on ASTM Standards.

**Specifications:**

- Accurate execution of mechanical parts made of galvanised steel, painted with epoxy resins.
- Compression spring made of music wire, treated and stabilised at 70°C for 170 hours. The spring is accurately worked to achieve the elastic constant. as required by the standards. Supplied with a calibration diagram.
- Plotting system for the deformation is based on a Vernier scale fitted onto the movable platen in the middle. System, sliding on a graduated scale with zero set facility, features an accuracy of 1/20 mm, that corresponds to a load of 357 g.
- Tightening knob operates the upper movable platen by means of a thrust ball bearing, for insuring an accurate application of load on the specimen.
- Overall dimensions: mm 150 x 150 x 400 h
- Weight: approx 13 Kg.

Reference standards	
ASTM	D 395

Code	Description
10006500	Compression set Method A

**Method B:**

The test allows to stress the specimen under compression, through the method of constant deflection. Any specimen has a  $\phi$  of 29.0 mm ( $\pm$  0.5 mm), or 130 mm ( $\pm$  0.2 mm). The configured compression set is conditioned in a cell along a pre-set time at a pre-set temperature. Once cycle is completed, the specimen deflection due to constant deflection is controlled.

**Specifications:**

- Set of three carbon steel platens with accurately ground surfaces at a rate lower than 0.2  $\mu$  and nickel plated.
- Set of test spacers, including 6 + 6 ground bars 9.38 mm ( $\pm$ 0.5 mm) and 4.5 mm ( $\pm$  0.1 mm) thick respectively (additional spacers upon request).
- 4 high resistance bolts, including nuts and washers.
- Wrench for tightening the platens.

Reference standards	
ASTM	D 395
ISO	815

Code	Description
10007000	Compression set Method B

