

Steinfurth Rotation Tester for Sport Closures

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...for standardised safety tests on sport closures (standardised simulation of human jaw)

Rotation Tester for Sport Closures

The Rotation Tester for Sport Closures (RTSC) is an appliance designed for use on an automatic tensile testing machine. It consists of a preform fixture mounted to a wheel, a bite mechanism with integrated adjustment fixture and a safety coupling.

The purpose of this device is the simulation of a human attempting to open the spout cap of a sports closure, especially with his or her teeth.

The design of the clamp assembly complies with ISBT physical performance testing methods #102 and #103.

It simulates a human (infant) jaw with teeth. The bite force is set by shifting a weight along a threaded rod. It can be measured using a standard load cell.

With the specimen preform with closure in place, the closure is rotated around the position of the clamped spout, possibly resulting in completely removing or damaging the spout cap. The Rotation Tester for Sport Closures (RTSC) is an appliance designed for use on an automatic tensile testing machine.

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Technical Information Advantages

Bite force (max.): 141 N / 31.7 lbf

Specimen diameter between jaws (bottom end): 30 mm / 1.2 in

Specimen diameter in preform clamp (top end): 15...27 mm / 0.6..1.2 in

Supply pressure: 7.5...10 bar / 110..145 psi

Dimensions of applicable load cell (h x w x l): 64 mm x 13 mm x 51 mm or 2.5 in x 1/2 in x 2 in

Suitable screws for load cell: DIN EN ISO 4762 – M6 x 20 or Hex socket head screw UNC 1/4” x 3/4 in

Load cell capacity: 200 N / 45 lbf