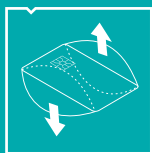


## Card quality testing Bending test



bending

### BT110-3

The Bending Tester BT110-3 is used to perform mechanical bending stress tests on all types of ID-1 smart cards. The purpose of this test is to determine any adverse mechanical or functional effects of bending stress in a card test sample.

Using the BT110-3 bending along the short and long axis is possible. The bending height and the number of stress cycles are adjustable. The machine will stop automatically after completing the pre-set test cycles.

### Technical specifications

- card formats: ID-1, according to ISO 7810
- test specification: corresponding to ISO/IEC 10373-1:2006(E) "Identification cards – Test methods – Part 1: General characteristics"
- retainer: 5 spaces in portrait format (bending along the short axis), and 5 spaces in landscape format (bending along the long axis)
- number of bending cycles: n is adjustable (1 - 999,999), 4 x 250 cycles are recommended by the ISO standards, automatic stop after reaching of pre-set test cycles
- test frequency:  $f=0.5$  Hz

### facilities:

- electrical supply: 110/230 V, 50/60 Hz
- power: 60W

### environmental conditions:

- ambient temperature:  $22^{\circ}\text{C} \pm 10^{\circ}\text{C}$
- degree of relative humidity: max. 70%
- condensation of water: not allowed

### machine dimensions:

- length: 556 mm
- width: 490 mm
- height: 250 mm
- weight: 29 kg

## Card quality testing Torsion test



torsion

### TT100-3

The Torsion Tester TT100-3 is used to perform mechanical torsion stress tests on all types of ID-1 smart cards. The purpose of this test is to determine any adverse mechanical or electrical effects arising from repeated application of torsional stress to a card test sample.

Using the TT100-3 torsion along the long axis of the card is possible. 10 cards can be tested simultaneously. The torsion angle and the number of stress cycles are adjustable. The machine will stop automatically after completing the pre-set test cycles.

### Technical specifications

- card formats: ID-1, according to ISO 7810
- test specification: corresponding to ISO/IEC 10373-1:2006(E) "Identification cards – Test methods – Part 1: General characteristics"
- retainer: 10 spaces in landscape format (torsion along the long axis)
- number of torsion cycles: n is adjustable (1 - 999,999), 1,000 cycles are recommended by the ISO standards, automatic stop after reaching of pre-set test cycles
- test frequency:  $f=0.5$  Hz
- torsion angle:  $\alpha$  is adjustable ( $0^\circ - 30^\circ$ ),  $15^\circ \pm 1^\circ$  are recommended by the ISO standards

### facilities:

- electrical supply: 110/230 V, 50/60 Hz
- power: 60W

### environmental conditions:

- ambient temperature:  $22^\circ\text{C} \pm 10^\circ\text{C}$
- degree of relative humidity: max. 70%
- condensation of water: not allowed

### machine dimensions:

- length: 655 mm
- width: 267 mm
- height: 265 mm
- weight: 28 kg