

Product Information

TNJ-007 Mattress Durability Comprehensive Tester

1) Purpose of equipment

Mattress Rolling Machine has been manufactured to determine the durability of any type of mattress and boxspring unit, regardless of the materials of construction, by simulating long-term use conditions.

2) Standard :

ASTM F1566, BS EN1957, QB/T 1952.2-2011



Test items: include the following tests and measurement projects:

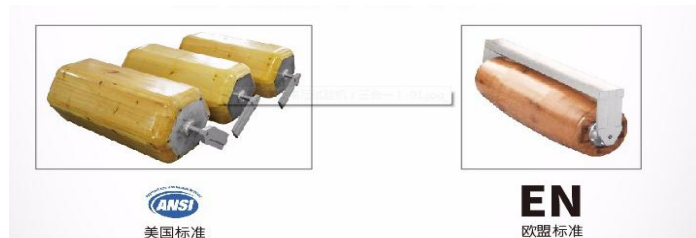
1. Durability test for the bed surface. (simulating the effects to the mattress after the body of people rolls on it)
2. Durability test for bed edge. (simulate a people sits on the edge of the mattress)
3. Height measurement of the mattress.--thickness test
4. Measurement of the Hardness value.--hardness test

Equipment characteristics:

1) Durability Test Applications & Test Purpose

Mattress Durability Tester using a horizontal hexagonal wooden drum roll or cylinder (both ends of the diameter of 250 mm, the middle part of the 300 mm, rolling back and forth on the mattress, simulate human motion to assess the durability of the mattress.

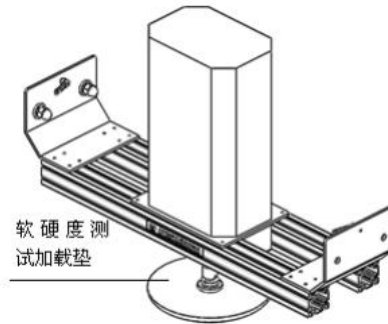
Roller for bed surface durability test:



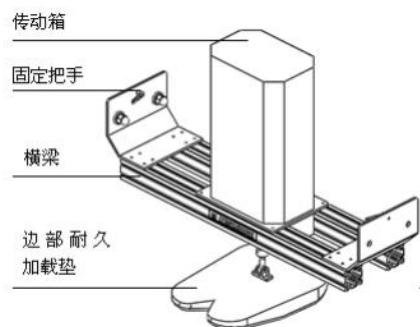
2) EN Hardness and Height Change Test

Mattress Hardness and Height Change Test Applications & Test Purpose:

The mattress test machine combines the loading device (roll) with a hardness measuring device. Thus, firmness test can be carried out according to ASTM F 1566 or EN 1957, without the need for a rearrangement of the specimen, which would falsify the measured values. It can also display height change by servo measuring system.

Loading pad for hardness test:**3) Edge Test****Test Standard:** EN1725**Applications& Test Purpose:**

The machine increases mattress fatigue test function, it simulate human sitting on the edge of mattress, with 1000N force to test the fatigue of mattress for 5000 cyclic according to EN1725.

Edge loading pad for bed edge durability test:**Technical parameters:**

Rolling test stroke: The mattress mid-line left and right are both 500 mm.

Rolling test speed: 16±2Cycles per minute (or specified by customer)

Cylinder Roller: 1400N, The middle diameter: 300mm, Both ends diameter: 250mm, length: 1000

Hexagon style wooden roller: size as standard requirement

Counter: 0~999999can be set.

The control way of rolling: Touch screen + PLC control

Loading cushion on the edge: buttocks shape, 380mmx 495mm

Loading parts on the edge: The midpoint on the long edge of the mattress.200 mm from edge.

Loading force on the edge: 1000N

Loading time on the edge: 3S

Position of measurement: Mattress center, Left and right are both 250mm, the midpoint on the long edge of the mattress 200 mm inward.

Loading plate of measurement: Diameter 355mm, Radius of curvature of the end R800mm

Capacity of force sensor: 2kN

Loading speed of measurement: 90±5mm/min

Stroke: 500mm

Drive motor: Servo motor