



**AUTOMATIC
PENDULUM IMPACT
TESTER**

SOMEX
... INNOVATION

AUTOMATIC PENDULUM IMPACT TESTER

BENEFITS

- Introducing automation to a manual & time consuming test
- Automatic detection of failure
- Reduces potential for Repetitive Strain Injury

FEATURES

- Test square & non round containers
- 'Wizard' for easy teaching of new containers
- Complies with requirements of DIN 52295 & DIN 51222



INCREASED PRODUCTIVITY

- Increased operator utilization
- Increased precision & repeatability
- Eliminate false positive/negative failures



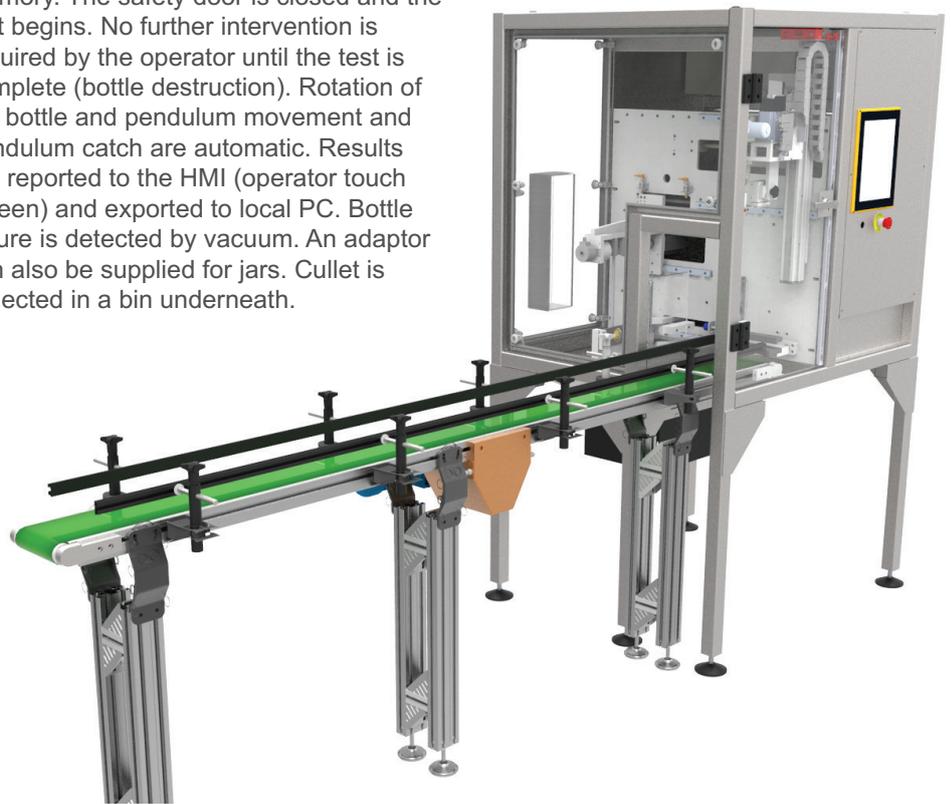
OPERATION

- Bottles/Jars are automatically fed by conveyor to a pick up location from where they are picked for positioning in the anvil. The container is held securely against the anvil by a set of clamps. Using a selected test profile from the machine memory, the pendulum axis performs the test routine until bottle failure or until the test routine is complete. Results include the last pendulum angle, height and rotation.

1. BASIC MACHINE FUNCTION AND DESCRIPTION:

TECHNICAL INFORMATION

- A device which automates pendulum impact testing of glass bottles & jars. Using precise state of the art control and measurement technology the pendulum can be released from any angle to impact with the specimen bottle or jar. All axis of movement or rotation are automatic.
- Round, non round & square containers can be tested.
- Designed to ensure the bottle is held firmly against the anvil, and the pendulum capture mechanism ensure no 'double hits' even at the lowest impact angle.
- The bottles are held internally on the neck finish. A test profile (bottle dimensional details and test requirements) is selected from a library and loaded to the machine memory. The safety door is closed and the test begins. No further intervention is required by the operator until the test is complete (bottle destruction). Rotation of the bottle and pendulum movement and pendulum catch are automatic. Results are reported to the HMI (operator touch screen) and exported to local PC. Bottle failure is detected by vacuum. An adaptor can also be supplied for jars. Cullet is collected in a bin underneath.



2: COMPLIANCE WITH TEST STANDARD:

The Somex device meets the requirements of DIN 52295 & DIN 51222
Somex complies with the following key criteria:

- Bottle to be supported directly opposite point of impact
- Bottle supported in a V shaped bracket, open angle 120 Deg.
- The pendulum rod and impact head would comply with DIN 52295 (5.2.1 & 5.2.3 respectively)
- Pendulum to impact at lowest point of the arc
- Pendulum capture to ensure 'double bounce' does not occur.
- Pendulum mounted on a frictionless bearing
- The release mechanism should not accelerate or decelerate the pendulum

3. SUMMARY OF TECHNICAL SPECIFICATION:

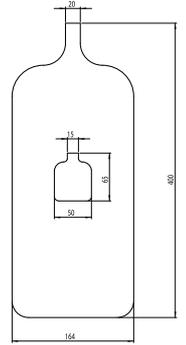
Pendulum Angle: 17 – 120 IPS
 Units: IPS/Deg./Velocity/Velocity2/Kin./Imp.

Bottles(mm):

Container diameter: Min: 40 Max: 164
 Container height: Min: 65 Max: 400
 Internal Neck Finish Bottle: Min: 15 Max: 30

Jars(mm):

Container diameter: Min: 50 Max: 164
 Container height: Min: 65 Max: 150
 Internal Neck Finish Jar: Min: 40 Max: 80



Cavity correlation: Yes, (numeric, automatic increment, programmable)
 Neck Clamping system: Bottles – expandable rubber diaphragm
 Jars – vacuum cone
 Remote diagnostics: Yes, (requires connection to network port with internet, RJ 45)
 User Interface: Touch screen HMI
 Output interface: Ethernet TCP socket connection
 Programming: Easy to use 'wizard' for profile creation.
 Profile storage: Unlimited
 Feed conveyor: 1.8 Meter feed conveyor supplied as standard.
 Additional 1 meter sections can be added (optional extra)
 Cullet collection: Cullet bin, (customer supplied)
 Dimensions: 1475 x 840 x 1865 (excl. feed conv.)
 Weight: 150 Kg's approx (excl. feed conv.)
 Voltage: <5A 110V (60Hz) or 230V (50Hz).
 Compressed Air: 5 Bar 200L/min
 Operating Temp: 10 – 45 Deg. C

4. AXIS OF MOVEMENT:

Controlled movement as standard on the following axis:

- Θ Theta incremental rotation of the bottle/jar.
- Z linear vertical movement of the bottle/jar.
- R pendulum angle.
- X1 pendulum linear axis
- X2 container transfer axis
- Y axis container diameter at pick up

5. OPERATOR INTERFACE:

Roburst uses a rugged 12.1" Panel PC, layout is intuitive and easily understood, with the use of symbols rather than text where possible. Text has been translated to several languages, also includes a 3 colour light tower.

Results include:

- Max pendulum strike angle (in selected units).
- Failure Yes/No.
- Bottle rotational angle of failure.
- Cavity No.
- Date/Time.
- Test number

