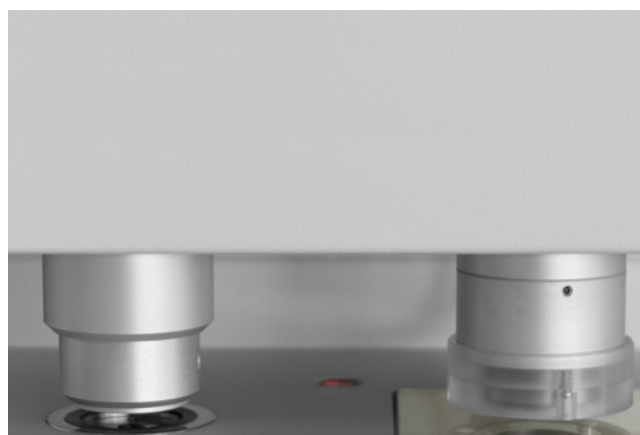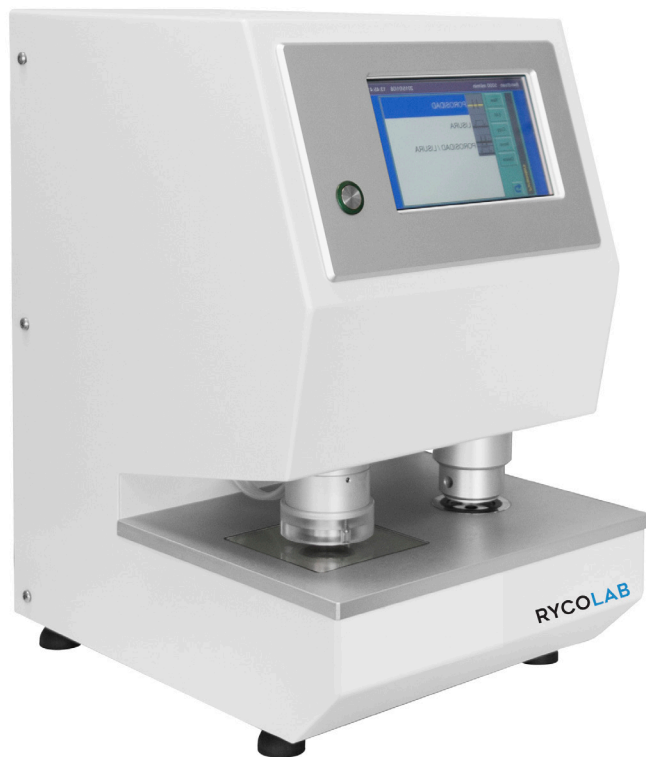# Bendtsen Roughness and Air Permeability Tester

Product code RL-BRAPT-A

RYCOLAB

Testing heads for air permeability and for roughness with photo detection cell

Usage

Measures the air permeability and surface roughness according to Bendtsen method.

Applicable standards

ISO 8791-1, ISO 8791-2, ISO 5636-1, ISO 5636-3, SCAN P21, SCAN P84, IS 9894, DIN53108, BS 4420.

Characteristics

- Fully automated measuring cycle, sample is not influenced manually.
- Adjustable feet for the equipment leveling.
- Big Color Touch Screen 7".
- Full Statistics, with graphs, average, deviation, min and max value, etc.
- Automated system for aligning measuring and positioning head on sample under constant pressure of 98Kpa. (490 kPa Optional).
- Test Pressures according to standard: 0,74 – 1,47 – 2,20 kPa
- Glass measuring surface attached to the equipment.
- Photocell for automatic test when positioning the sample, or manual test.
- RS- 232 interface for connection to management and control programs.
- USB connection for maintenance and USB printer
- 3 machine configurations
  - » Bendtsen Roughness : 1 x Roughness measuring head
  - » Bendtsen/Gurley Porosity: 1 x Porosity measuring head
  - » Bendtsen Roughness-Porosity: 1 x Roughness measuring head and 1 x Porosity measuring head
- Measuring range from 0 to 3000 ml/min (other ranges under request).

Connections

Electricity: 110-230 V, 50-60 Hz (40W)
Air: 400-600 kPa

Dimensions

Dimensions: 27 x 68 x 60 cm (W x D x H)
Net weight: 1 head: 23kg; 2 head: 28kg

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Test description

Surface roughness :
The operator places the sample below the measuring head. By pushing the start button, the measuring head lowers onto the sample and gently clamps it. The test starts. As soon as the preset flow rate (e.g.1,47 ml/min) is stable, the measuring value is displayed. The test time is adjustable from 1-40 seconds. After test performance, the sample is released. The measuring head returns to its initial position and the device is ready for further measurements.

Air permeability :
The operator places the sample below the measuring head. By pushing the start button, the measuring head lowers onto the sample and gently clamps it. Air flows through the sample at a selected pressure (e.g.1,47 KPa). As soon as the preset flow rate is stable, the measuring value is displayed. The test time is adjustable from 1-40 seconds. Gurley values are calculated according to the standard and are displayed in Gurley seconds by default.

User interface

- Machine controlled by means of a touch screen and an auxiliary button.
- Through the visualization and control screen, the total control and configuration of the machine can be managed.
- Easy and intuitive operation of the control menu, configurable in different languages.
- Two result tables with a maximum of 10 result types and 20 test results per table.
- Possibility of display a diagram showing different test results.
- Statistical control. Mean value, standard deviation and maximum and minimum values.
- Value in µm/Pa*sec shown in statistics.
- Periodical program updating (without additional costs).
- Maintenance Menu, Set-Up and Calibration.

Specifications

- Measuring ranges:
  - » 0 - 3.000 ml/min flow rate
  - » Pressure difference: $\pm$0.5% of the final value
- Measuring accuracy:
  - » Pressure differential : $\pm$0.005kPa linear
  - » Flow : $\pm$0.5% of the final value
  - » Accuracy of test duration: $\pm$0.5s
- Roughness:
  - » Measuring land: Ø31.5mm,150µm, 267g
  - » Test duration, Dwell time: 1-40 seconds (adjustable)
- Air permeability:
  - » Measuring area : 10 $\pm$ 0.2 cm²
  - » Test duration, , Dwell time: 1 –40 seconds (adjustable)
  - » Display in ml/min or µm/Pa*sec
  - » Gurley Value: Seconds