Bendtsen Roughness and Air Permeability Tester

Usage

For measuring the roughness and the air permeability according to the Bendtsen method, Gurley porosity is calculated from the measured values.

Applicable Standards

ISO 5636-3, ISO 8791-2, TAPPI UM 535, SCAN P21, CAN P60

Characteristics

This device comes with a built in touch-screen and an industrial computer. All the parts are built into a sturdy aluminum frame. The device is equipped with up to 3 measuring heads for top and bottom roughness measurements as well as for air permeability. Flow rate range is 25 – 5000 ml/sec. Other flow rates ranges upon request.

Test description

The sample to be tested is placed in the measuring area. By pushing the start button on the touch screen the measurement cylinders lower onto the sample. The measuring head is set free and actuated by gravity on the sample. A pressure difference is generated between the inner measuring head and the environment. The device detects the air that's flowing out between the blade of the measuring head and the sample. As soon as the flow is stable the device shows the values in ml/sec on the display. The air permeability head lowers on the surface of the sample as well and locks the measuring area towards the outer air. An air stream through the paper is established and as soon as the flow rate is stable the device shows the values in ml/min and in Gurley seconds (calculated) on the display.

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

Specifications

- Fully automatised measuring cycle
- Flow rate of 5-1000ml; other or extended flow rates upon request
- Up to two measuring heads: roughness top and

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Figure: Touch screen with multilingual display option

air permeability

- Test pressure selectable according to standard: 0,74kPa, 1,47kPa, 2,20kPa
- Statistic with graphs, max, min, mean, standard deviation
- Photocell detection of the sample, automatic start of the measurement
- RS232 and USB port, Windows based software, CE mark
- Holder for automatic alignment of the sample made from acrylic glass
- Automatic compensation of atmospheric pressure
- Paper thickness range from 60 g/m² up to 200 g/m² and from 40 µm to 200 µm thickness
- Testing heads for air permeability and for roughness with photo detection cell
- Display of the values (Instrument with 2 heads) and calculation of the Gurley values in seconds

Maßangaben

	Net	Gross
Width	270	450
Depth	680	800
Height [mm]	600	800
Weight [kg]	28	43

Verbindungen

Electricity: 110 – 230 V, 50 – 60 Hz AC
Air: 600 kPa

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