

AUTOMATIC FREENESS TESTER

Schopper-Riegler

This instrument is used to determine the freeness and the drain ability speed of wood fibre, ground wood and mechanical pulp.

Refining pulp is one of the most important stages in the paper production process and influences strongly the sheet forming and its physical properties.

The Schopper Riegler value ($^{\circ}\text{SR}$) is a measurement of the rate at which a diluted pulp suspension may be de-watered and is specified according to the Zellcheming Merkblatt V/7/61.

Pulp (2 g od) is smoothly dispersed in the water and put into the drainage chamber where the sealing cone is closed.

The sealing cone is lifted pneumatically from the drainage chamber and the suspension is dropped through the wire screen, which is mounted in the drainage chamber. Depending on the condition of the fibre suspension the water flows more or less quickly from the drainage chamber, through a side outlet into a measuring cylinder.

The water is measured in the cylinder and this is the freeness $^{\circ}\text{SR}$. That is 10 ml water 1 $^{\circ}\text{SR}$.

Attention should be paid to the water hardness, which should always be the same, otherwise there are relevant differences in the measuring results, even with the same suspension.

Specifications

The Schopper Riegler comprises a drainage chamber equipped with a wire screen, a sealing cone, and a funnel mounted on a suitable support. All parts are made of non-corrosive material. The drainage chamber is a cylinder having an internal diameter of 137 mm; at its lower end is a 45° tapered section, followed by a cylindrical part having a diameter of 112.9 ± 1 mm.

The wire screen is of phosphor bronze, and fits tightly into the cylinder 25 mm below the taper. It is plane, is mounted perpendicular to the cylinder axis, and has a thickness of 0.40 mm. It has 24 weft and 32 warp meshes per 10 mm, the weft strands having a thickness of 0.17 mm and the warp strands 0.16 mm.



Features

- Applicable to all kind of pulps in aqueous suspension
- Robust stainless steel version
- With digital display (indication of freeness value and four de-watering times) and level-sensor
- Easy to operate
- With RS-232 interface for data transfer to PC (software and cable included)

Physical specifications

Dimensions

64 x 53 x 12 cm (WxDxH)

Net Weight

33 kg

Standards

ISO 5267/1, ZM V/7/61, SCAN C19 M3, BS 6035/1

Performance data

Connections

Electrical 230V, 50Hz

Compressed air 600 kPa

Delivery content

- Schopper Riegler
- 2 acrylic glass measuring cylinders
- 1 spare sieve
- 1 hook wrench
- software and cable

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