



Features:

- Cake and depth filtration with different suspensions and filter medium layers

With Tesca Cake and depth Filtration Apparatus, the processes of in-depth filtration and cake filtration can be observed and investigated. The suspension (water and diatomite as the solid) flows from the hopper into the top of the filter element, where the solids are separated off. The filtrate flows through a flow meter into the drain. The filter element has a porous filter medium at the bottom. In cake filtration, the filter medium provides the foundation for the build-up of the filter cake. In-depth filtration, the filter medium supports the bulk solids (filter medium layer; gravel). Twin-tube manometers measure the pressure loss over the filter element.

Specifications:

1. Fundamentals of cake and depth filtration
2. Filter element with sintered filter medium on

Note: Specifications are subject to change.

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its bottom to capture the particles

3. Pressure loss measurement with twin-tube manometers
4. Height-adjustable filler hopper made of DURAN glass
5. Flowmeter with a needle valve for adjustment

Technical Specifications:

Filter element

- Filter chamber height: 85mm
- Inside diameter: approx. 37mm
- Cross-sectional area: approx. 11cm²
- Tube material: DURAN glass

Filter medium, sintered filter SIKA 100

- Pore size: 100µm
- Thickness: 2mm
- Material: sintered metal

Measuring ranges

- Flow rate: 40...360mL/min
- Pressure: 2x 0...500mmWC
- Temperature: -10...100°C
- Measuring cups
- 1x 1000mL, scale division: 10mL
- 1x 100mL, scale division: 2mL

Experiments:

- Fundamentals of filtration: Darcy's equation
- Depth filtration with different bulk solids and suspensions
- Cake filtration with different suspensions
- Identification of characteristic filtration values

Requirements:

- Mains Power 220 – 240V @ 50Hz, 1Ph