



Features:

- Cake filtration with a Nutsche Vacuum Filter

Tesca Nutsche Pressure Filters Apparatus are used for discontinuous cake filtration of suspensions with high solid concentrations. The suspension production unit produces a suspension of diatomite and water and delivers it from above into the Nutsche filter. In the bottom flange of the Nutsche filter is a recessed sieve base with a filter cloth. A growing filter cake accumulates on the filter cloth made from the separated solid material. The applied positive pressure in the top section of the Nutsche filter pushes the filtrate through the filter cake and the filter cloth. It is collected in the bottom section of the tank. After filtering, the filter cake obtained is washed with a washing liquid (water) and is then dried by an airflow.

Specifications:

1. Nutsche vacuum filter for discontinuous

Note: Specifications are subject to change.

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cake filtration

2. Open 2-part vessel with flange and recessed sieve base
3. Bottom section to draw in and collect filtrate
4. Top section with an inserted filter bag to form a filter cake
5. Polyester filter bag
6. Manometer to indicate negative pressure in the bottom section
7. 2 sight glasses to observe level in the bottom section
8. Production and transport of suspension with a suspension production unit

Technical Specifications:

Vessel

- Inside diameter: approx. 300mm
- Capacity: approx. 55L
- Permissible pressure: -1bar
- Permissible temperature: -10...100°C
- Material: stainless steel

Manometer

- Measuring range: -1...0bar
- Diameter: 160mm

Experiments:

- Basic principle and method of operation of a Nutsche vacuum filter
- Fundamentals of cake filtration: Darcy's equation
- Mass and thickness of filter cake dependent on filtrate quantity

Requirements:

- Mains Power 220 – 240V @ 50Hz, 1Ph