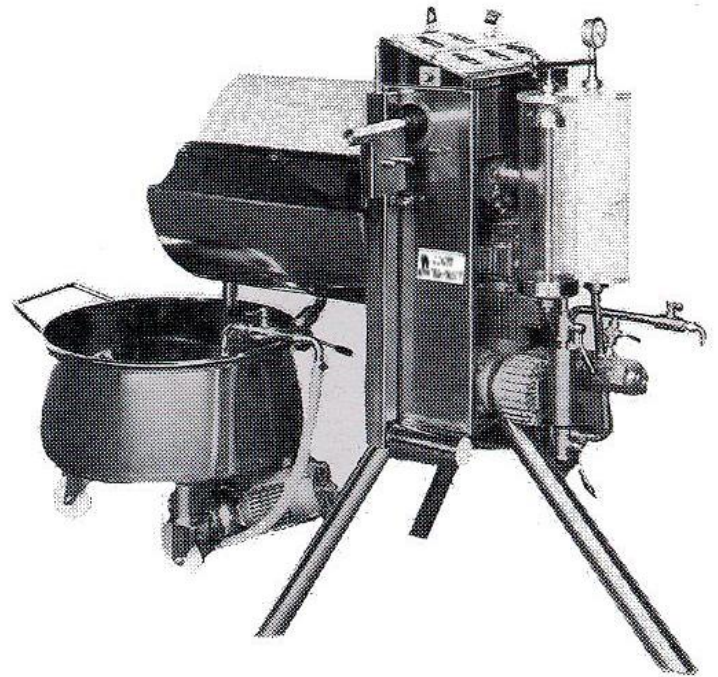


GPC FR1

Rotary vacuum filter

DESCRIPTION

- The rotary vacuum filter permits flow rates of 500-600 L/h. The required vacuum is generated by a vacuum pump. The system is similar to those found in industry.
- The unit is delivered complete with instrumentation and with technical documentation and instructions.
- The unit is designed and manufactured to industrial standards.
- This unit is designed for various levels and fields of study.
- This equipment is designed to enable monitoring of processes.

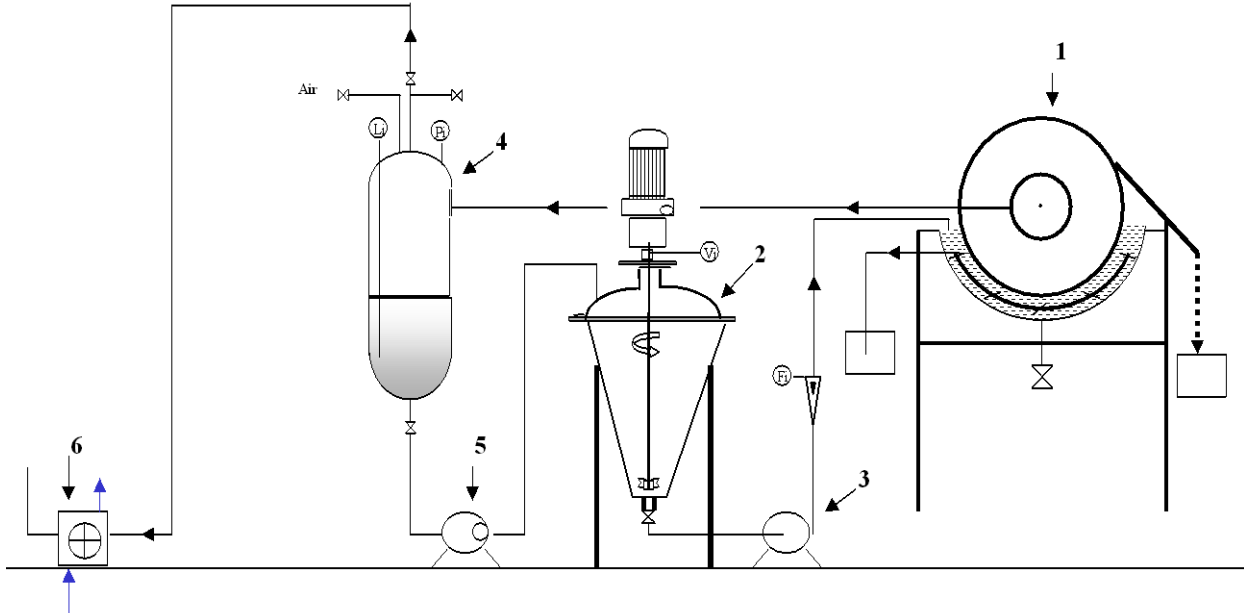


SUGGESTED APPLICATIONS

- Filtration and clarification.
- Influence of the press cake thickness at a constant pressure
- Resistance of the press cake
- Study of continuous filtration
- Working with a constant flow rate
- Influence of pressure, rotation speed of the drum, and the supply flow rate on the filtration process.
- Influence of the concentration of the solution on the filtration process.

GPC FR1

SCHEMATIC DIAGRAM



Instruments:

- Electromagnetic flow meter: stainless steel body, 0 – 2000 L/h, 4-20 mA outlet (for supervision) for the supply of the product to filter
- Capacitive level sensor with PTFE or stainless steel gear, L = 900 mm, 4-20 mA outlet (for supervision) for the extraction tank
- Piezoresistive pressure sensor: -1 / 3 bar (5 psi), 4-20 mA outlet (for monitoring) on the extraction tank
- Inductive sensor for the rotation speed

Control panel:

ON/OFF and electric safety features

ON/OFF of filter drum, pumps, agitator, plate and control of the variation of motors speed are possible (option for supervision)

Safety features:

The unit is certified by concerned organisations and is designed to conform with safety standards

CE Certification, ISO 9001 Certification

Electric protection, differential breaker

Emergency stop

Pipeline:

316 L stainless steel, ¼ turn valves (stainless steel body), PTFE seal

Frame: stainless steel

GPC FR1

TECHNICAL CHARACTERISTICS

1. Rotative filter

- Construction: 316 L stainless steel
- Filtering section: 0.1 m²
- Tight **drum** consists of a ferrule and a lateral flange, that are carried by a crossing shaft. The ferrule is divided into two similar sections and is covered by draining panels. Pipelines for the filtrate extraction link each section to the supplier.
 - Rotation speed of the drum: 0.33 at 3 rpm
 - Motor efficiency of the drum: 0.18 kW
- A vat supports the drum-shaft bearing. It is equipped with an overflow system, and an emptying pipeline with valve
- **An oscillating agitator** (constists of a tandem zig-zag harrow) is controlled by a moto-reducer
 - Oscillation number: 27 / min
 - Motor efficiency: 1/20 CV
- The discharge of the cake is made by air blowing: 1 m³/h à 0.6 bar (9 psi)
- The supply is connected to the vat

2. Supply tank

- Capacity: 200 litres - 304 L stainless steel
- Cylinder/cone shaped
- Agitation system: moto-reducer of 0.37 kW - speed: 0-600 rpm.
- Stainless steel emptying valve

3. Supply pump

- 316 L – stainless steel
- Flow rate: 10-1000 L/h
- 0.37 kW motor

4. Extraction tank for the filtrate

- Capacity: 150 litres - 304 L-stainless steel
- Stitching for vacuum work, with manual valve for vacuum adjustment (option: electro-pneumatic valve for the regulation)
- With pressure and level measurement
- Blowing stitching for the discharge of the cake
- Stainless steel emptying valve

5. Extraction pump for the filtrate

- Pneumatic pump with diaphragm: 0-1200 L/h
- For charged, viscous or corrosive liquids
- Reduced maintenance, Easy starting

6. Vacuum pump

- With liquid rings (lost water: 4 L/min.)
- Aspired air flow rate: 45 m³/h
- Motor's efficiency: 1.5 kW

GPC FR1

UTILITIES

Electricity: 230 V – 50 Hz

Network water

Evacuation

DIMENSIONS AND WEIGHT

Length: 2 200 mm

Width: 1 000 mm

Height: 1 800 mm

Weight: 150 kg