

Pressofiltro® Nutsche Filter / Filter Dryer



Pressofiltro® agitated Nutsche filters / filter dryers in pharmaceutical design

- In compliance with **cGMP and FDA** guidelines, also available in **steam sterilizable** and/or **aseptic** designs.
- Double mechanical seals, externally interchangeable, dry running contacting or non contacting lift-off type seals as well as liquid lubricated seals.
- Calculation, design and manufacture in accordance with the **Pressure Equipment Directive (PED) 97/23/EC** and/or the **ASME** pressure vessel code, Section VIII, with **U-Stamp**.
- Openable filter bottom with conventional C-clamps or bayonet locking system.
- Easily interchangeable filter plates, secured from below the filter bottom.
- Welded multilayer filter versions, with flat, homogeneous, easy to clean and to inspect filter surfaces.
- Excellent cleanability using CIP systems, simple validation.
- Heated or unheated agitator, agitator with two, three or four arms, with simultaneous axial and radial agitator movements for efficient mixing and agitating as well as for the smoothing of the cake.
- Large heating area resulting in an outstanding heat transfer rate by heating the vessel walls, the vessel bottom as well as the agitator blades. Optional supplemental heating with **microwaves**.
- Good emptying characteristics due to narrow agitator to wall/bottom clearances and a unique agitator blade design.

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Applications for the Pressofiltro® agitated Nutsche filters / filter dryers

Pressofiltro® agitated Nutsche filters or filter dryers are versatile units designed for multipurpose production facilities. To meet the demanding requirements for filters used in the manufacture of pharmaceutical ingredients, the filters are designed to meet stringent cGMP and FDA guidelines.

Excellent cleanability using CIP systems, simple validation. An openable filter base provides for good access to the filter internals for cleaning and inspection. Easily interchangeable filter plates, with flat, homogeneous filter surfaces for good cleanability and inspection. Multilayer and/or conventional filter materials.

Good drying performance with special agitator design, large heat exchange areas.

Typical design parameters for Pressofiltro® agitated Nutsche filters / filter dryers

Filter area:	0.03 to 16 m ²
Slurry volume:	8 - 40000 liters
Operating temperature:	-10 to 151 °C (15 to 300°F) or per requirements
Operating pressure:	-1 to +4 barg (FV to 60 psig) or per requirements
Product wetted materials:	Stainless steels, Nickel based alloys such as Hastelloy C 22 or Alloy 59, Titanium, etc., Sealing materials: PTFE gaskets, O-Rings in FFKM or FEP encapsulated
Area classification:	EC type examination certificate 03ATEX0246X per the 94/9/EC directive, or with electrical components UL approved for operation in a Class 1, Division 1 or 2, Groups C&D environment
Heated areas:	All product wetted components, including agitator
Accessories:	Dust filter with automatic back cleaning, sampling valve, CIP system, sight glass with vessel light, vacuum system with condenser, heating and cooling unit etc.
Controls:	Control cabinet with PLC, HMI with touch screen, MCC, interface for DCS

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