

# INSTRUCTIONS FOR USE

## PURAFIX® / FIBRAFIX® / VERSAFIX® Depth Filter Sheets

### Installation of PURAFIX®, FIBRAFIX®, VERSAFIX® depth filter sheets

Before use, check the filter sheet conditions. Defective filter sheets should not be used. The sheets must be inserted with the non-filtrate side (inlet/rough side) against the non-filtrating elements or frames and the filtrating side (outlet/fine side) against the filtrating elements of the filter.



#### NOTE

For the NOVOX® ST and OD plate and frame filter press, the filter sheets must be centered and cover all sides of the elements so that they protrude a few millimeters above the filter elements.

### Wetting the filter sheets

- Gently press the plate and frame filter (approx. 50 % pressing power)
- Fill the filter with water (e. g. tap water or WFI) by slowly opening the inlet keeping the venting valves open
- Once purged, open the outlet valve to drain and close the venting valves, adjust filter pressing power as required
- Apply back pressure of about 0.2 bar (2.9 psi) by closing the filter outlet slightly
- Rinse for 5 minutes to wet all filter sheets
- Stop the water supply and close the filter pack with full power

For manually operated, smaller filters, the wetting of the filter sheets can also be from the outside.

### Rinsing the filter sheets

- Use 50 L/m<sup>2</sup> of a process-compatible solution (e. g. WFI) indicatively (might vary depending on filter sheet type)
- The rinsing flow rate shall be approximately 1.5 × L/m<sup>2</sup>×h to the given filtration flow for the corresponding product to be filtered

If rinsing is not desired or tolerated (insoluble products such as high percentage distillates or oils), the product to be filtered may be first recirculated to remove possible small fibers and/or diatomite particles.

### Sterilization

- Slightly open (release) the plate and frame filter press (to ease the materials expansion due to the increasing temperature)
- Fill the system with water, slightly open all outlet valves
- Heat up the filter until the required sterilization temperature of 85 °C is reached at all outlet valves
- Maintain temperature for at least 20 minutes
- Turn off the hot water supply
- Cool down gradually the filter to room temperature with cold sterile water while recirculating it into the system

To save energy, it is recommended in k) and l) to heat up during recirculation.



#### NOTE

Sterilization is not fully completed until all parts that come into contact with the product have been sterilized. For alternative sterilisation methods, please contact your FILTROX representative.

### Filtration

- Slowly start filling the filter by opening the inlet valve and all venting valves (ensure complete venting), the outlet valve should be closed
- Once properly vented, open the outlet valve, close the venting valves and start the filtration (if required, the initial filtered volume may be separated from filtrate to avoid any dilution with rinsing water)
- Adjust the flow rate to the installed filter sheet grade, process requirements, and filtration targets for the product to be filtered
- Ensure continuous and uniform flow rate
- Avoid any abrupt changes in filtration flow, pressure shocks, gas bubbles as well as stop and go



#### NOTE

Observe the maximum recommended flow rate, operating pressure and temperatures. Further information can be found in the corresponding technical data sheet.

### Regeneration

As the filter press is generally an open system, the regeneration of the filter sheets is not recommended for hygienic reasons. Please contact the technical support for more information.

### Replacement of filter sheets

The depth filter sheets must be replaced as soon as the maximum permissible differential pressure has been reached. Please refer to the specified pressure limits in the corresponding data sheet.

### Note on disposal

The respective official regulations for disposal must be followed depending on the filtered product. Uncontaminated sheets can be disposed of as non-hazardous waste. Please refer to your local environmental authority for more information.

### Shelf life and storage

The filter sheets should be stored in their original packaging in a dry, odor-free and well-ventilated area. Temperature fluctuations can lead to condensation formation and should therefore be avoided. The filter sheets are intended for immediate use. Filter sheets for food & beverages should be used within 60 months from date of manufacture. Filter sheets for life science applications should be used within 36 months from date of manufacture. Further information is given in the corresponding technical data sheet for filter media.

### Technical Support

Contact your local FILTROX representative or our experts at [applications@filtrox.com](mailto:applications@filtrox.com). We will be happy to help you to find the best possible filtration solution for your product.

### Remarks

All information is based on current knowledge and does not claim to be complete. No liabilities can be derived from this information. FILTROX reserves the right to make changes in the course of technical improvement.