



INSTALLATION PROCEDURE  
WETTING PROCEDURE  
CONTACT INFORMATION



## FLUOROFLOW® MEMBRANE

FLUOROFLOW-HSA

FLUOROFLOW-SELECT (DRY AND WET-PACK CARTRIDGES)

### PRODUCT LINES

FLUOROFLOW-UC

FLUOROFLOW-HSA-UC

FLUOROFLOW-SELECT-UC (WET-PACK ONLY)

Parker Hannifin Corporation  
Bioscience & Water Filtration Division  
2340 Eastman Avenue  
Oxnard, California, USA 93030  
+1 877 784 2234  
[bwf.oxn.support@support.parker.com](mailto:bwf.oxn.support@support.parker.com)  
[www.parker.com/bioscience](http://www.parker.com/bioscience)

Fluoroflow® is a registered trademark of Parker Hannifin Corporation.

If you have a wet-packed Fluoroflow cartridge, please go to section 5 for the installation procedure of a wet-packed cartridge.

If you are using Fluoroflow for gas application, DO NOT WET THE CARTRIDGE follow the installation procedure for the dry cartridge in Section 1.

## 1. PROCEDURE FOR DRY FILTER CARTRIDGE INSTALLATION

1. Cut open the bag at the end by the O-rings. To reduce possible contamination, the bag should remain on the filter as a holding tool during installation, therefore do not remove the bag from the filter.
2. Lubricate the o-rings if necessary with water or chemical that is compatible with the application requirements. This will ease the installation and reduce possible o-ring damage.
3. Insert the end cap with the O-rings into the housing using a slight twisting motion. Direct pushing may cause the O-rings to roll out.
4. Once the filter is fully inserted, rotate the filter 90 degrees in either direction to reduce O-ring installation stress.
5. Remove the bag and assemble the housing.

## 2. FLUOROFLOW FILTERS USE ALL FLUOROPOLYMER BUILDING MATERIALS. DUE TO ITS HYDROPHOBIC NATURE, FLUOROPOLYMER DOES NOT WET SPONTANEOUSLY BY PROCESS FLUIDS WITH SURFACE TENSION ABOVE 32 DYNES/CM.

1. For process fluids with surface tension less than 27 dynes/cm, you do not need to pre-wet the filter, follow the procedure for Dry Filter Cartridge Installation as for gas application in Section 1.
2. For process fluids with surface tension over 32 dynes/cm, Fluoroflow filters must be pre-wetted with 100% IPA or 60/40 IPA/water. Please follow the procedures for pre-wetting and installation in Section 3.
3. For process fluids with surface tension between 28 and 32 dyne/cm, PTFE membrane may be wet with pressure intrusion. By increasing the pressure on the upstream of the membrane, the process fluid is forced into the pores of the membrane. However, you may choose to pre-wet the filter by following the procedures in section 3.

## 3. PRE-WETTING PROCEDURE

**NOTE 1:** It is recommended that the procedure be performed off-line using a flushing stand. It will avoid contamination in the process stream with the wetting solution.

**Note 2:** IPA solutions may be flammable. Handle with extreme care in a well-ventilated area, away from flames and sparks while wearing protective clothing.

### A. PROCEDURE FOR NON-WETTING STATION

1. Place the cartridge in a vertical container with sufficient height so the IPA can completely cover the cartridge.
2. Fill the container with 60/40 IPA/water or 100% IPA in the area outside the filter.
3. Slowly lower the cartridge with the open end up, and closed end down into the wetting solution until the cartridge is completely immersed. This allows the membrane to wet from the outside to the inside and reduces the possibility of entrapping air in the membrane.
4. Let the cartridge soak in the wetting solution for at least 10 minutes.
5. Drain the filter and install it in the filter housing. Be aware that the filter will contain approximately 100 ml per 10" filter of IPA into the installed system. If IPA will cause a problem in the system, the filter should be flushed with DI water before installation in section 4.



## B. PROCEDURE FOR USE WITH A WETTING STATION

1. Wetting stations are remotely located from the final installation point to avoid problems associated with open alcohol contamination and minimize disposal cost of IPA.
2. They incorporate filter housings in which 60/40 IPA/water or 100% IPA is recirculated.
3. Let the wetting solution recirculate for minutes to thoroughly wet the cartridge before being drained.
4. Flush the filter with ultra pure DI water for at least 30 minutes at 2 gpm per 10" filter in order to flush out the IPA.
5. The cartridge is now ready for use. Use a plastic bag for transportation to the fab to prevent filter contamination and possible membrane de-wetting.
6. Follow the procedure to install a wetted filter in Section 4.

## 4. INSTALLATION PROCEDURE FOR A PRE-WETTED CARTRIDGE

1. Insert the O-ring fitting into the housing bore with a twisting motion. Pushing the O-ring fitting directly into the O-ring bore may cause the O-ring damage. (Caution: Excessive twisting in the middle of the cartridge may cause damage to the membrane.)
2. Once the filter is fully inserted, rotate the filter 90 degrees in either direction to reduce O-ring installation stress.
3. Install filter bowl and open vents on housings.
4. Slowly start the flow of DI water (Use process fluid if the filter has already been flushed with DI water in the wetting station, skip step v. and go to step vi directly.) while venting air to prevent the filter from de-wetting. In some cases, process fluid is used to flush out IPA when it is not compatible with DI water. Please check the compatibility before you start this step.
5. Once the air is completely vented from the housing, flush the filter with ultra-pure DI water for at least 10 minutes at 2 gpm to eliminate IPA. Change feed to process fluid. (If a process fluid is used to flush off IPA, flush time and volume may vary depending on the chemical used. Make sure all IPA is eliminated.)
6. Continue venting housing till the process is running fully.

\*\* If flow is not as expected, repeat the wetting procedure. Low flow rate is very likely caused by membrane de-wetting from improper venting during installation. If the problem persists, please contact Parker at [bwf.oxn.support@support.parker.com](mailto:bwf.oxn.support@support.parker.com) for assistance.

## 5. INSTALLATION PROCEDURE FOR WET- PACKED CARTRIDGES

Parker offers Fluoroflow filters that are pre-wetted, flushed with ultra-pure DI water, and triple-bagged in bacteria-free ultra-pure DI water in a certified clean environment. Wet packing eliminates the lengthy wetting procedure before installation and significantly reduces flushing time. Ultraclean products are also wet-packed to ensure an extractable level of less than 5 ppb for 16 metals.

1. Carefully open the inflated bag and remove the cartridge. The cartridge is triple-bagged. The outer bags can be removed when the cartridge is brought into successively cleaner operational areas.
2. Cut the final bag open close to the O-rings, dispose of the water, keep the bag in place on the filter, and install the filter within 20 minutes.
3. Make sure that both the O-rings and housing bore have been wetted with ultra-pure water and handle the filter using the inner bag for contamination protection
4. Insert the O-ring fitting into the housing bore with a twisting motion. Pushing the O-ring fitting directly into the O-ring bore may cause O-rings damage. (Caution: Excessive twisting in the middle of the cartridge could damage the membrane.)
5. Once the filter is fully inserted, rotate the filter 90 degrees in either direction to reduce o-ring installation stress. Install filter bowl and open vents on housings.
6. Slowly start the flow of process fluid while venting air to prevent the filter from de-wetting.
7. Continue venting until the air is completely vented and the process is running fully.

\*\* In rare cases, lower-than-expected flow may be experienced. The low flow is likely caused by membrane de-wetting from improper venting during installation. Flow can be restored by the IPA re-wetting procedure. Please refer to the pre-wetting procedure for dry Fluoroflow cartridges. If the problem persists, please contact Parker at [bwf.oxn.support@support.parker.com](mailto:bwf.oxn.support@support.parker.com) for assistance.

## 6. INTEGRITY TESTING

Parker tests every Fluoroflow product in accordance with their Quality Assurance Program before it is shipped. Additional testing by the user is considered optional. However, if you feel in-house testing is necessary, please contact Parker for testing procedures.

