**FiberFlo®
Hollow Fiber Cartridge Filter**

**Housing Installation**
Housings for the FiberFlo® HF should be installed as shown in Diagrams 1 or 2, with the appropriate isolation valves and pressure gauges. Diagram 1 is an example of a single filter element housing. If the filter and housing assembly are to be integrity tested, each housing should have the additional valves and fittings as shown in Diagram 3.

**Diagram 1 – Single Housing Filter**

**Diagram 2 – Multiple Filter Housing**

**Diagram 3 – Diffusive Flow Integrity Test**

**Filter Cartridge Installation**
1. Shut off flow by closing valves V1 and V2. To release pressure open valves V3 and V4. Do not attempt to remove the housing bowl/covers until pressure gauges read “0” psi.
2. Remove the housing bowl/covers and remove the old filter.
3. Open the new filter’s plastic bag at the O-ring end of the cartridge (Note: Do not touch the filter directly as this will cause contamination). Wet the O-rings with distilled water or the solution being filtered. With the new filter still in the bag, push the cartridge up into the head of the housing. Use a twisting motion until the filter cartridge is firmly in place to ensure proper seating of the filter O-rings.
4. Mix the appropriate concentration of chemical in purified water from a reverse osmosis or deionization system. Then verify the concentration with appropriate test strips.
5. Partially open valve V5 the filter cartridge is firmly in place to ensure proper seating of the filter O-rings. Push the cartridge up into the head of the housing. Use a twisting motion until distilled water or the solution being filtered. With the new filter still in the bag, allow the system to run under these conditions for 10 minutes. This will fully wet the filter as well as provide a brief rinse of the filter.
6. Examine the filter by passing a 10 mL sample of the water from the filter through an analytical column. If the solution is cloudy or discolored, rinse the filter until eluates are clear and colorless.
7. Close valve V5, than close valve V3.
8. The filter is now ready for integrity testing or to be placed into service.

**Integrity Test by Diffusive Flow (Diagram 3)**
**CAUTION:** DO NOT BUBBLE POINT THE FIBERFLO HF. BUBBLE POINT PRESSURES WILL DAMAGE THE MEMBRANE FIBERS, A DIFFUSIVE FLOW MEASUREMENT IS RECOMMENDED TO VERIFY FILTER INTEGRITY.
**CAUTION:** ALWAYS WEAR PROTECTIVE EYEWEAR NEAR PRESSURIZED VESSELS.

**Example:** A housing containing a single 30” long filter should have a diffusive flow of less than 240 ml/min (i.e. 80 x 3 = 240).

**Filter Sanitization**

**Approved Sanitizer’s and Contact:**

| Minncare® | 1% for 30 minutes minimum, 96 hrs maximum |
| Sodium Hypochlorite | 200 ppm for 6 hours |
| Hydrogen Peroxide | 1% for 6 hours |
| Formaldehyde | 2% for 6 hours |

**Sanitizing Recommendations**

These guidelines are provided to support the chosen sanitizer’s specific directions for use. Reference each sanitizer’s material data sheet for special handling procedures.

1. Make sure the system is free from other chemicals that may react with the solution being used.
2. Mix the appropriate concentration of chemical in purified water from a reverse osmosis or deionization system. Then verify the concentration with appropriate test strips.
3. The diluted solution should be pumped through the filter housing. Alternately, the filter may be removed from the housing and soaked in the solution. If the filters are removed from the system and soaked, it is important that the entire filter be submerged and the contact time doubled. The O-rings should be removed, cleaned and then soaked separately. (Sterile gloves should be worn when handling the filter.) If the filter is disinfected more than once per month, the O-rings should be replaced every three months, only if the filter is removed from the housing.
4. After the desired contact time, the filter should be thoroughly rinsed to drain. The time required to rinse the filter will vary from system to system. Residual test strips or some other appropriate means of testing the residual concentration should be used to verify when the filter has adequately rinsed prior to placing in service.

**Note:** Minncare® is the recommended sanitizer because of its biocidal activity, ease of disposal, and the ability to measure residual concentrations with test strips.

**Water Treatment Applications**

The particular placement of FiberFlo® HF filter housings in water treatment systems depends on the desired performance. One suggested location would be directly downstream of the water treatment equipment as final filtration. The FiberFlo® HF will remove pyrogens, bacteria, and fine particulates that might be shed by reverse osmosis and ion exchange systems, storage tanks, filters, or by other equipment located upstream.

The FiberFlo® HF also can be installed at the point of use, where the filter will remove contaminants from the water treatment equipment and form the distribution piping.

**Medical Applications**

The FiberFlo® Hollow Fiber Filter is designed to remove particulate, remove bacteria and reduce pyrogen levels in your water system.

**CAUTION:** When used as a medical device, federal (U.S.A.) law restricts this device to sale by or on the order of a physician.

**CAUTION:** THIS DEVICE DOES NOT TREAT WATER; IT WILL ONLY REMOVE CONTAMINANTS BY FILTRATION. TO OBTAIN CHEMICALLY PURE WATER, IT IS NECESSARY TO USE THIS FILTER IN CONJUNCTION WITH OTHER WATER TREATMENT DEVICES SUCH AS REVERSE OSMOSIS SYSTEMS OR DEIONIZATION BEDS. THIS FILTER SHOULD NOT BE PLACED FOLLOWING OTHER THESE TREATMENT DEVICES.

**CAUTION:** THIS FILTER SHOULD BE SANITIZED WITH THE REST OF THE WATER SYSTEM OR WHEN BACTERIAL COUNTS EXCEED THE USERS ESTABLISHED LEVELS. UNDER NORMAL USAGE, IT IS RECOMMENDED THAT THE SYSTEM BE SANITIZED AT LEAST WEEKLY UNTIL THE APPROPRIATE SANITIZATION PATTERN CAN BE ESTABLISHED.

**CAUTION:** THIS FILTER SHOULD BE REMOVED FROM SERVICE IF THE PRESSURE DROP ACROSS IT IS 30 PSI OR GREATER. UNDER NORMAL CONDITIONS, THE FILTER IS EXPECTED TO LAST UP TO 6 MONTHS OR DEIONIZATION BEDS. THIS FILTER SHOULD NORMALLY BE PLACED FOLLOWING OTHER THESE TREATMENT DEVICES.

**Other Applications**

For assistance on other applications, contact Minntech Filtration Technology’s Technical Service Department.

**Minntech BV**

1406 MT Heerlen, the Netherlands

Phone: +31 45.5.471.471
Fax: +31 45.5.429.695

**Minntech Corporation**

1406 MT Heerlen, the Netherlands

Phone: +31 45.5.429.695
Fax: +31 45.5.429.695

**Minntech Japan Corporation**

10F City Square Tsukiji Bld.

Phone: +81.3.6226.5885
Fax: +81.3.6226.5886

**Minntech® Hollow Fiber Filter is designed to remove particulate, reduce bacteria and reduce pyrogen levels in your water system.**