

# NEPHROS

Instructions for Use Part #: 70-0502 / 70-0226

## NanoGuard™-F 20" & 30 GPM Vessel HD

### Introduction

The NanoGuard-F provides the ultimate, self-cleaning barrier for challenging water conditions. Nephros filter technology is capable of significantly reducing total suspended solids by trapping particulates as small as 5nm in size. This document must be read before the use of the NanoGuard-F 20" (70-0502) and 30 GPM Vessel HD (70-0226) to ensure safe and effective operation.

### Warnings & Precautions

**Pressure & Temperature:** The NanoGuard-F is not intended for hot water applications and an inlet pressure regulator is recommended where inlet pressure may exceed 60 psi.

**Replacement:** The filter should be replaced when the flow rate begins to noticeably decrease. It is recommended to establish a maintenance schedule of replacing the filter at least every 12 months (dependent on water quality). The cap seal O-ring should be inspected every time the vessel is opened and replaced if necessary. It is recommended to establish a maintenance schedule of replacing the O-ring at least every 6 months (dependent on usage and observed wear).

### Vessel Installation

The installation of the 30 GPM Vessel requires:

- Tapping into an existing section of the distribution line between the water source and the equipment.
- Installation of a siphon resistant drain line, which includes a flush port valve, between the flush port of the filter vessel and an existing drain. This can be accomplished with a back-flow prevention device (e.g. check valve) or by maintaining a suitable air gap between the outlet of this line and drain.

Contact Nephros for additional support with vessel and install components. Anti-seize should be used on all SS hardware to prevent galling/seizing. It is recommended that customer approved O-ring lubricant is used on the cap seal Buna O-ring (e.g. silicone grease). Do not overtighten cap hinge nut/washer assembly to ensure the cap can be seated properly.

### Filter Installation & Replacement

1. Prior to handling filters, wash hands and wear disposable gloves.
2. Turn off the water source upstream of the filter(s) and vent any excess pressure from the vessel via the vent or flush port.
3. Loosen and unhinge the (3) eye nuts, open cap plate, and remove the top plate by unscrewing (6) 1/4-20 bolts. Remove old filters (for replacement).
4. Open a new filter pack, remove filter, and insert one end of the filter into one of the seats in the bottom plate. Repeat until all filters are seated. Note: It may be necessary to use a twisting motion to ensure that the filter is firmly in place and the O-rings seat properly.
5. Replace the top plate ensuring all filters are aligned with the O-ring cups and are seated properly. Replace 1/4-20 bolts, close the cap plate, and re-tighten the eye nuts.
6. Open the flush port valve and the water inlet source for 60 seconds to prime the filter.
7. Close the flush port valve, open the vent, and continue to fill the vessel and prime the filters for 5 minutes to purge them of trapped air.
8. Close the outlet valve and vent and verify that there are no leaks.

### Filter Operation

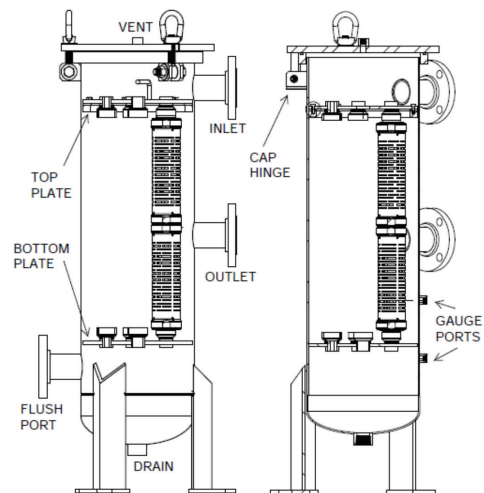
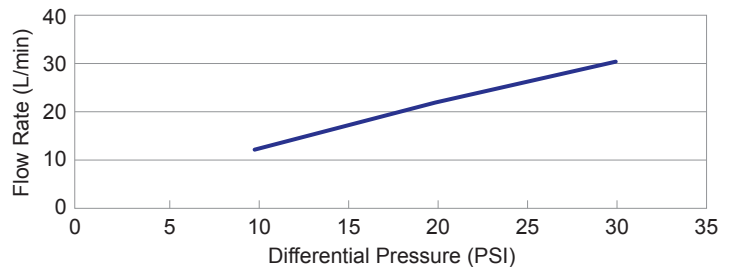
This product is designed with flush capability for periodic filter flushing. Optimal frequency and duration of the flush cycle is dependent on the application and water quality. For optimal performance, it is recommended to perform a flush at least once/day for a time period which yields at least one liter of flush water per 10" filter segment (e.g. 6x 20" filters = 12x 10" segments = 12 liters of flush water). The NanoGuard-F is intended for long term continuous use. Once it completes its useful life, the filter should be replaced and discarded. Do not attempt to sterilize or reuse it.

### Housing and Plumbing Disinfection

The filter vessel and plumbing lines can be disinfected with a diluted 1:100 bleach/water solution. Personal protective equipment (gloves, lab coat, glasses, etc.) should be used when handling the disinfectant, filter and vessel. Ensure to properly rinse the vessel and plumbing lines after a disinfection dwell time of 10-30 minutes.

**Note:** To confirm that the chlorine residuals have been effectively removed from the rinse water, Nephros recommends using Serim® Guardian Residual Chlorine Test Strips, 5100A. Follow all instructions from the test strips manufacturer to obtain proper results.

### NanoGuard-F Clean Water Flow Rate (per 10" segment)



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