US Water Systems
Pulsar Magna Pre-Filter

Owners Manual
320-USP-MF-10, 320-USP-MF-20

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Unpacking / Inspection

Be sure to check the entire system for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact US Water Systems at 1-800-608-8792 to report any shipping damage within 24 hours of delivery. Claims made after 24 hours may not be honored.

Small parts, needed to install the system, are in a parts bags. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

Safety Guide

- Check and comply with your provincial / state and local codes. You must follow these guidelines.
- Use care when handling the filter system. Do not turn upside down, drop, drag or set on sharp protrusions.
- **WARNING**: This system does not remove biological contaminants. US Water Systems recommends that bacteria levels be checked periodically to ensure there is no bacteria present. Coliform and E.coli most importantly.
Magna Benefits

- **Magna Seal** - It has a positive “o-ring seal” unlike traditional “flat top” filters.
- **Magna Media** – A 10” filter has 18 square feet of pleated polyester commercial grade media, and a 20” filter has 36 square feet of pleated polyester commercial grade media – compare that to other brand pleated filters which have 30-50% less.
- **Magna Contaminant Capacity** – Traps 12 times sediment depth filters, 8 times string wound filters, 2 times other pleated sediment filters.
- **Magna Clear Sump** – Enables you to see when the filter is getting dirty.
- **Magna Made in USA** – Nothing made outside of the U.S. and conforms to NSF/ANSI 61 Certified by WQA.

Magna is a Latin word which means “great,” and that is the true and accurate meaning of the Pulsar Magna Filter. The Magna Filter comes in two sizes: 4.5” x 10” for homes up to 3 bathrooms and 4.5” x 20” for homes with more than 3 bathrooms. This is a true commercial-grade filter.

Features

- Cartridge has 222 double o-ring seal for a positive barrier
- System conforms to NSF/ANSI 61 Certified by WQA
- Low pressure drop - typically < 3 PSID (clean)

Specifications

- Micron Rating: 5 Microns
- Media: Pleated Polyester
- Peak Flow:
  - 4.5” x 10” - 12 GPM
  - 4.5” x 20” – 25 GPM
- Maximum Pressure: 100 PSID
- Pipe Size: 1” MNPT
Pulsar Magna Filter Installation Instructions

Maintenance
The Magna Pre-filter can be installed for up to a year. The Magna filter should be changed annually or sooner depending on the water usage or water conditions.

Pretreatment Guidelines
- Turbidity < 3 NTU
- pH 5-9.5
- Iron < .3 ppm
- Manganese < .05 ppm

This systems’ performance is dependent upon the incoming water quality and factors such as iron, sulfur and manganese need to be addressed ahead of the Pulsar Magna Pre-Filter. Life expectancy of the filter varies with the water supply, but many users experience filter change intervals in excess of a year when coupled with proper pre-treatment.

Where to Install
The Magna Pre-filter should be installed as the first line of treatment in the Pulsar system. In cases where there is extreme sediment levels in the water, it may be beneficial to install a backwashing sediment filter before the Magna Pre-filter. Water feeds with iron and other precipitants may cause premature failure. If there are known extreme contaminant levels, those contaminants should be removed first. For installation questions please call 1-800-698-8792.

WARNING: *If extreme contaminant levels are present in the feed water, iron removal and sediment control should be installed prior to the Pulsar Magna.*
1. Install the Pulsar Magna system in the desired location in the water treatment system. Typically this will be the first component in the line of treatment. The cap is marked “Cartridge INLET” (Bag Outlet) and “Cartridge OUTLET” (Bag INLET) on the top of the housing. We will be using the cartridge inlet and outlets configuration.

2. Mount the housing to the bracket using the supplied screws, orienting the housing to match the applications' desired flow direction.
3. Install the supplied 1 1/2” x 1” reducing nipples in the housing. Be sure to use Teflon tape on the fittings. Tighten them with channels locks. If flex pipes with rubber gaskets are used there is no need to Teflon tape the outer fittings. If a normal plumbing fitting is used then be sure to Teflon tape the outer fitting.

4. Mount the Pulsar filter to the wall using the necessary fasteners for the wall type. Mark the hole locations on the wall using a marker or pencil while holding the filter housing level. If this is to be mounted to a studded wall, a mounting board can be used. A shelf board or plywood can be mounted to the studs, then the filter housing can be screwed to the plywood or shelf board. (Shelf board pictured below).
5. Shut off the water and release the water pressure at the lowest sink or spigot. Cut the pipe and connect it to the filter. Connect the inlet plumbing to the inlet on the filter housing (Bag outlet, cartridge inlet). Tighten with channel locks.

6. Connect the inlet plumbing to the outlet on the filter housing (Bag inlet, cartridge outlet). Tighten with channel locks.

NOTE: The connections above are made using the installation kits used with the US Water Systems Modular Filtration System. These flex pipes have a rubber gasket and do not require Teflon tape. If pipe fittings are used be sure to use Teflon tape on the threads prior to installing the fitting on the filter housing. If copper pipe and fittings are being used make sure all solder joints within 12-15” of the filter housing are completed and the pipe is cool, prior to connecting it to the housing fittings.
1. Remove the sump from the filter housing and install the filter. A very small amount of silicone grease or water can be used to lubricate the O-rings on the filter. The filter housing cap has a couple that will accept the o-ringed nipple on top of the filter. Install the filter so the nipple on the top is fully seated in the filter housing cap.

2. Lubricate the O-ring on the filter housing sump and install it. Tighten the filter sump hand tight. That should be adequate. Do not use abrasive tools to tighten the housing or damage may occur.
Pulsar Filter Startup Instructions

1. Open a faucet or spigot down stream of the Pulsar filter. Slowly open the water shutoff valve and let the filter fill. Air will be pushed out of the filter through the open spigot or faucet downstream. Once there is no air coming out of the faucet or spigot, place a bucket under the filter housing and push the red pressure relief button on top of the filter housing until only water and no air is coming out.

2. Shutoff the spigot or faucet down stream and dry the filter housing. Check for leaks. If there are no leaks the system is installed and ready for use.
1. Shutoff the water supply.
2. Open a faucet of spigot closest to the filter housing and allow all the water to empty from the plumbing system.
3. Push the red button on the top of the filter housing to release the remaining water pressure.
4. Remove the sump by turning it counterclockwise.

**WARNING!** If the pressure is not released, the filter sump will be very difficult to get loose. It is imperative that the water pressure is released prior to attempting to remove the filter sump.

5. Remove the sump by spinning it counterclockwise until the sump is completely removed.
6. Remove the old filter and discard.

7. Lubricate the O-rings and install the new filter in the filter housing cap.

8. Lubricate the o-ring for the sump and lubricate the sump threads with food grade silicone grease.
9. Install the filter sump in the filter cap by turning it clockwise until it is hand tight.

![Image of filter sump installation]

**NOTE:** The housing should spin tight fairly easily. If not, add more lubrication to the sump threads. This will aid with removing the sump when the filter needs to be replaced again.

10. Turn on the water supply and open a spigot downstream of the Pulsar filter to release the air.

11. Once the air has been released, push the red button on top of the filter housing to release any additional air in the filter housing.

![Image of filter housing with red button being pressed]

12. Check the housing for leaks and repair as necessary.
For the lifetime of the original purchaser, at the original residential place of installation of this Pulsar Water Conditioning System, US WATER SYSTEMS, INC. warrants the following:

**FIVE YEAR COVERAGE**

**Filter Housing**
We warrant that for five (5) years from the date of purchase, we will replace the filter housing at no charge to you except for transportation and standard labor charges. Damages due to environmental issues or improper installation are not covered.

**GENERAL PROVISIONS**
This warranty does not apply to any commercial or industrial installations or to any part of the water conditioner which has been subjected to misuse, neglect, alteration or accident; or to any damage caused by fire, flood, freezing, Acts of God, or any other casualty, or if the original serial numbers have been removed.

These warranties are in lieu of all other warranties expressed or implied, and we do not authorize any person to assume for us any other obligation on the sale of this water conditioner. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of US WATER SYSTEMS, INC.

To obtain warranty service, call or write: US WATER SYSTEMS, INC., 1209 Country Club Road, Indianapolis, IN 46234 (800) 608-USWA.

Any implied warranties of fitness or merchantability are limited to the terms of this expressed warranty and there are no warranties which extend beyond those herein. US WATER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion or limitations of incidental or consequential damages so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty may be transferred to a subsequent owner with written approval of US WATER and payment of standard transfer fee.