

ALKANANO

AlkaNano is a point-of-use drinking water system that produces great tasting water that is free of bacteria, viruses, over 85% of pharmaceutical drugs, fluoride, chlorine, lead, heavy metals and contaminants. The nanofiltration filter removes contaminants, bacteria, viruses and over 85% of pharmaceutical drugs. The ceramic complex final filter provides increased pH, higher levels of healthful minerals, a lower ORP (Oxidation Reduction Potential), a smaller water cluster size, an increase in active hydrogen ions, and also gives the water antioxidant properties.

Overview: The AlkaNano uses six advanced filtration components providing eight filtration stages, with three 10" vertical stages and three horizontally mounted inline filters labeled Stage 1– 5 Micron Carbon Block Sediment, Stage 7 - .01 Nanofiltration Filter, and Stage 8 – Ceramic Complex Alkalizing Antioxidant Filter.

Included Components:

1. Triple filter wall mount housing designed to be installed either under a sink or in a basement or lower level (additional tubing required for lower level installations).
2. Inline horizontally mounted 5 micron Carbon Block Sediment filter. (Stage 1)
3. 10" bone char fluoride adsorption filter removes fluoride and arsenic. (Stage 2)
4. 10" 3 lb KDF media with 0.6 lb granulated activated carbon filter. (Stage 3 & 4)
5. 10" .5 micron powdered carbon microfiltration filter, removes MTBE, VOCs, lead, mercury, chlorine, etc. (Stage 5 & 6)
6. 14" .01 micron nanofiltration filter, removes viruses, bacteria, pathogens, and over 85% of pharmaceutical drugs. (Stage 7)
7. 14" inline ceramic complex filter, connected by plastic clips to the 5 micron carbon block sediment filter, mounted horizontally. (Stage 8)
8. Quick connects throughout for all ¼" tubing connections, including on the brushed nickel ceramic disk designer faucet.
9. Brushed nickel lead-free ceramic disk designer faucet with standard sink installation components, including a John Guest quick connect that is screwed onto the end of the faucet for fast and easy connection of the blue tubing from the output of the system.
10. Two 5 foot lengths of flexible LLDPE ¼" BPA free tubing – one blue, and one red. Red is used to connect to the cold water source and to the John Guest ball valve (shut-off valve) installed in the input of the 5 micron horizontally mounted inline sediment filter. The blue tubing is connected to the output of the system and to the John Guest quick connect that is screwed onto the bottom of the supplied faucet.
11. John Guest ball valve shut-off valve, to make it easy to shut off water for initial filter flushing and future filter changes, connected to the 5 micron sediment filter.
12. Filter Wrench, to enable easy opening of the filter housings (three vertical components).
13. Five Year Limited Warranty



**OPUS Healthy
Water Systems**

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ALKANANO FILTRATION UNIT DESCRIPTION:

Stage 1 – Horizontally Mounted 5 Micron Carbon Block Sediment Filter: This is an inline horizontally mounted unit mounted on the metal bracket of the system with plastic clips. Under normal use, this filter should last a year; however, depending on the quantity of water purified and the level of sediment in your water, it may require changing more often. Replace this filter if the water pressure drops to an unacceptable level, but at minimum it should be changed annually.

- This filter is labeled **Stage 1 – 5 Micron Carbon Block Sediment Filter**. If water pressure drops significantly, change this filter.

Stage 2 – Bone Char Fluoride Filter: This is the left vertical stage of the three vertically mounted filters. This filter is specifically designed to remove fluoride.

- This filter is labeled **Stage 2 – Bone Char Fluoride Filter** on the metal bracket above the filter. Under normal use, replace this filter annually.

Stage 3 and 4 – 3 lb KDF Media/0.6 lb GAC: This is the middle, or centre vertical stage of the unit. This filter consists of two components (two stages), including the equivalent of 3 pounds of KDF media and over half a pound of granulated activated carbon (GAC). KDF media is a copper-zinc formulation that uses electrochemical and catalytic technology to remove chlorine, lead, mercury, iron, aluminum, arsenic, chromium, copper, manganese, nickel, chloroform, lindane, trichloroethane, nitrates, nitrites and hydrogen sulfide from water. KDF media has a mild antibacterial, algacetic, and fungicidal effect, and may reduce the accumulation of lime scale.

- The metal bracket above this filter is labeled **STAGE 3 & 4 – 3 lb KDF/GAC**. Replace this filter annually with normal use.

Stage 5 & 6 – .5 Micron MTBE/VOC/Lead/Mercury Microfilter: This is the right vertical stage of the unit that is installed after the 15 minute flushing of the Stage 2 bone char filter, and the Stage 3 & 4 KDF/GAC filter. The filter consists of a .5 micron carbon microfiltration filter that has multiple functions, including:

- Removing chlorine; odors; dissolved and particulate lead; mercury (99.5% removal rate for lead and mercury); giardia, cryptosporidium, entamoeba and toxoplasma cysts. A unique feature of this filter is the filtration of MTBE and VOCs – contaminants that very few filtration systems can remove.
- Trapping particles from the bone char fluoride filter in Stage 2, and the KDF/GAC filter in Stage 3 & 4.
- The metal bracket above this filter is labeled **Stage 5 & 6 – .5 Micron VOC/MTBE Carbon Filter**. Replace this filter annually with normal use.

Stage 7 – .01 Micron Inline Nanofiltration Filter. Mounted horizontally on the unit with two plastic clips to the 5 micron sediment filter on the top metal bracket, this filter blocks protozoa, (cryptosporidium, giardia), bacteria (campylobacter, salmonella, shigella, E. coli), and viruses (enteric, hepatitis A, norovirus, rotavirus). This filter is an excellent low cost alternative to germicidal ultraviolet radiation, and will provide peace of mind should the municipal water supply fail to provide sterilization. This filter does not affect the mineral content in water, maintaining the pH of the incoming water. **This filter is labeled Stage 7 Nanofiltration Filter.**

Stage 8 – Ceramic Complex Alkalizing Antioxidant Filter: A large 14 inch horizontally mounted inline filter. Using six different types of ceramic beads, this filter alkalizes the water purified by the previous six stages by raising its pH level and also lowers its oxidation reduction potential (ORP) to give it antioxidant properties. It also softens the water (with synthetic-zeolite balls with a high ion exchange function) and can remove residual chlorine, odours, or heavy metals. This filter is labeled **Stage 8 – Ceramic Complex Filter**. Replace this filter annually with normal use.

NOTE ABOUT QUICK CONNECTS:

All OPUS water purification systems utilize quick connects for all tubing connections, including the connection to the John Guest ball valve (shutoff valve), faucet (there is a small gray piece with the quick connect supplied with the faucet) and input and output of the water filtration system. The quick connect allows easy insertion and removal of 1/4" tubing. To remove the tubing, you must hold in the "ring" or collar that is on the outside of the tubing (the ring or collar surrounds the tubing and is part of the quick connect). When you hold in the ring (sometimes you need a flathead screwdriver, but usually your finger will do) the tubing will easily slide out. If you try to pull out the tubing without holding in the ring, you can damage the quick connect fitting.

INSTALLATION INSTRUCTIONS

STEP 1 – INSTALL THE SUPPLIED FAUCET TO YOUR SINK. Drill a 5/8" hole if required.

If your sink or countertop doesn't have a hole for the supplied faucet, a 5/8" hole must be drilled to allow faucet installation. After the faucet has been installed, mount the unit under your sink or in a location that provides easy access for future filter changes.

Note 1: Most plumbers cannot drill into quartz, granite, or similar countertops for faucet installation. If you have a quartz, granite or solid countertop, we recommend contacting the countertop supplier to drill the 5/8" hole required for faucet installation.

Note 2: Your plumber must provide a connection to your cold water pipe and to the input of the AlkaNano system. We recommend SharkBite U362 1/2" TEE, and a Dahl straight shut-off ball valve (1/2" PEX 1/4" OD). These are included if you choose an Aviva recommended plumber. If you choose to use your own plumber, these parts are available for \$42.00 plus tax.

- After the faucet has been installed, mount the unit under your sink or in an area that provides easy access for filter changes. The 5 foot length of 1/4" red tubing is used to connect the cold water source to the AlkaNano Water Input (the blue and white John Guest shut-off valve that is inserted into the horizontally mounted 5 micron carbon block sediment filter).
- During installation and filter flushing, the blue tubing that connects to the faucet is connected to the output on the right side of the system, bypassing the Stage 7 Nanofiltration filter and the Stage 8 Ceramic filter. After flushing is complete, a short white piece of tubing connects the right side of the system (Stage 5&6) to the Stage 7 Nanofiltration filter, and another short piece of white tubing connects the output of the Stage 7 Nanofiltration filter to the final Stage 8 Ceramic filter.

Important Note Regarding Filter Flushing: The Stage 3 & 4 KDF/GAC Filter and the Stage 5 & 6 .5 micron microfiltration VOC/MTBE carbon filter must be removed from the middle and right filter containers after receiving the system and re-installed with proper flushing, as described below. OPUS recommends choosing a plumber experienced in OPUS water filtration installations.

STEP 2 – BONE CHAR FLUORIDE FILTER FLUSH

1. The first step in the installation process is flushing the bone char fluoride filter of fine particulates or powder. Failure to follow this important step will result in bone char particles clogging the KDF/GAC filter (Stage 3 & 4) and the .5 micron Stage 5 & 6 filter. If proper flushing is not performed as described in this document, you will need to replace these two filters.

To prepare for flushing the bone char fluoride filtration filter installed in Stage 2 (left vertical housing), remove the filters from the center and right filter housings. Using the supplied filter wrench, turn the middle and right white filter housings to the left to open and remove the filters.

The filters are labeled *Stage 3 & 4 – KDF/GAC Filter*, and *Stage 5 & 6 – .5 Micron MTBE/VOC* on the frame above the filter housings. Replace the empty housings. Make sure the O-ring (rubber washer) is visible in the groove of the filter housing when you screw it back onto the system.

Labels and plastic should already be removed from all installed filters when you receive the unit, but if there are labels or plastic wrapping on the filters, remove them prior to re-installing (as described below) after flushing. After opening the filter housings and removing the filters from the center and right housings, replace the empty filter housings onto the filtration system by turning to the right.

2. The blue 1/4" tubing should be connected to the output on the right side of the system (Stage 5&6) bypassing the final two filters (Stage 7 Nanofiltration and Stage 8 Ceramic Filter)

3. Turn on the water using the John Guest ball valve that is connected to the horizontally mounted Stage 1 5 micron carbon block sediment filter, and run water through the system for 15 minutes.

4. Water will pass through the 5 micron horizontally mounted sediment filter, through the bone char fluoride filter in the left housing, through the two empty filter housings, and out the faucet.

STEP 3 – KDF/GAC FILTER FLUSH

1. After the bone char fluoride filter has been flushed for 15 minutes, turn off the water using the John Guest ball valve (connected to the 5 micron filter). I recommend leaving the faucet open to ensure the water has been turned off, and no water is entering the filtration system.

2. When no water exits the faucet, it is safe to remove the center vertical filter housing which previously had the KDF/GAC installed. Dump out the water and install the Stage 3 & 4 KDF/GAC filter. This is a two toned filter, with the black activated carbon media at the top, and a gold colored media at the bottom.

Make sure that the round flat rubber washer is in place in the center of the top of the filter when you put it in the filter container. Screw on the container tightly using the supplied filter wrench. Also, ensure that the black O-ring is in the groove near the top of the white filter housing, or the unit will leak.

3. Turn on the water using the John Guest ball valve that is connected to the stage one 5 micron sediment filter, and run water through the system for 15 minutes.

STEP 4 – INSTALL THE .5 MICRON MICROFILTRATION FILTER IN POSITION 3 (STAGE 5 & 6)

1. After you have flushed the system as described in Steps 2 and 3, turn off the water to the system by closing the John Guest ball valve installed in the horizontally mounted Stage 1 sediment filter. Keep the faucet valve in the open (lower) position to ensure no water is flowing through the unit.

2. Unscrew the Stage 5 & 6 right vertical filter housing using the supplied filter wrench, and install the .5 micron MTBE/VOC filter (Stage 5 & 6 combined into one filter). This filter is white in color, with green rings on each end. You can install this filter in either direction. Flush the .5 micron filter for about five minutes.

STEP 5 – CONNECT STAGE 5 & 6 (RIGHT SIDE OF UNIT) TO THE HORIZONTALLY MOUNTED STAGE 7 NANOFILTRATION FILTER AND STAGE 8 CERAMIC COMPLEX FILTER

1. Remove (gently pull out) the blue ¼" tubing that connects to the quick connect on the right side of the unit (and to the faucet) by holding in the ring (collar) that surrounds the tubing.
2. Insert the short white piece of tubing that is connected to the input of the Stage 7 Nanofiltration filter to the quick connect on the right side of the system. This connects Stage 5 & 6 on the right side of the unit to the Stage 7 Nanofiltration filter and Stage 8 Ceramic Complex Alkalizing Filter.

STEP 6 – CONNECT BLUE TUBING TO STAGE 8 OUTPUT (CERAMIC COMPLEX FILTER OUTPUT)

Connect the ¼" blue tubing that connects to the faucet, which was previously connected to the right side of the filtration system (after Stage 5 & 6) to the quick connect that is attached to the output on the right side of the Stage 8 ceramic complex filter.

STEP 7 – FLUSH THE CERAMIC COMPLEX FILTER

Turn on the John Guest ball valve and allow water to run through the system for a full 30 minutes to flush the ceramic complex filter. A minimum of 24 gallons are required to flush the ceramic complex filter. If you detect an unusual taste, you may need to flush for another 15 to 30 minutes.

You can now enjoy great-tasting, chemical and contaminant free, health-promoting, alkaline, antioxidant, calcium-rich water.

OPTIONS FOR ALKANANO:

- Upgrade to designer ceramic disk NSF certified faucet - \$60.00
- Grohe Concetto Designer Kitchen Faucet (matches NSF water filter faucet) - \$400.00
- John Guest Union "T" to allow connection to a refrigerator or second tap - \$5.00
- Additional LLDPE ¼" ID tubing - \$1.00 per foot

AlkaNano Description

PLU	Model	Height	Width	Depth	Max Flow Rate	Description	Price
20671	AlkaNano	17"	17"	6"	2-4 Litres Per Minute	6 filter, 8 stage water purification system, with .5 micron micro-filtration, chlorine, heavy metal, fluoride, VOC, MTBE, major contaminant and chemical filtration, with .01 micron nanofiltration and ceramic complex alkaline antioxidant filter.	\$749.99

AlkaNano Filter Change Pricing and Frequency

PLU	Model	Stage	Location	Function	Change Every	Price
23788	OPUS Inline Sediment	1	Top Horizontal	5 Micron Carbon Sediment Filtration	6 Months-1 Year	\$40.00
17800	Bone Char Fluoride filter	2	Left Vertical	Fluoride Filtration Using Bone Char	1 Year	\$70.00
9395	3 lb KDF / 0.6 lb GAC	3 & 4	Middle Vertical	Chlorine, Heavy Metals, THMs	1 Year	\$150.00
14256	.5 Micron Carbon Block	5 & 6	Right Vertical	Chlorine, Lead, Mercury, MTBE, VOC	1 Year	\$50.00
19761	.01 Micron Nanofiltration	7	Top Horizontal	Bacteria, Viruses, Pharmaceutical Drugs	1 Year	\$100.00
26870	Ceramic Alkaline Filter	8	Top Horizontal	Alkalizing, pH Boosting, Ionizing	1 Year	\$100.00
21516	Annual Filter Change	All		Annual Kit with 6 Filters	1 Year	\$510.00

Winnipeg Installation Options

13824	Standard Drinking Water System, Under Counter Installation, with included faucet, within Winnipeg City Limits	\$150.00
17549	Minimum Additional Charge for Basement Install, one floor below kitchen sink, including up to 40 feet ¼" tubing	\$100.00
15250	Annual Filter Change, on-site (not including filters, which are priced above) including filter flushing as required	\$90.00
18053	SharkBite ½" TEE (combine with PLU 18052 for highest quality installation)	\$16.00
18052	½" PEX ¼" OD DAHL Straight Ball Valve (combine with 18053 for highest quality installation)	\$26.00
11852	¼" John Guest Union "T" to allow two outputs from one input, to allow connection to a refrigerator, second tap, etc.	\$5.00
	¼" BPA Free Linear Low Density Polyethylene Tubing (LLDPE), per foot (White (9678), Blue (9679), or Red (9680))	\$1.00

ANNUAL COST TO OPERATE: \$510.00

MONTHLY COST: \$42.50

WEEKLY COST: \$9.81

DAILY COST: 1.40

COST PER GALLON: \$0.28

COST PER LITRE: 6.1 CENTS

5 YEAR LIMITED WARRANTY

**Designed, Engineered, and Tested by Nathan Zassman, President
OPUS Water Purification Systems**