WATTS®

WATER QUALITY & CONDITIONING PRODUCTS

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

MODEL: WQCFU-T-11KIT

Hollow Fiber Technology

System Tested and certified by WQA against NSF/ANSI Standards 42 and 53 for the reduction of the claims specified on the performance Data sheet.

Please read carefully before proceeding with installation. Your failure to follow any attached instructions or operating parameters may lead to the product's failure.
Refer to enclosed warranty for operating parameters to ensure proper use with your water supply.

DISTRIBUTED BY:

Manual Date: 4/28/09

Thank you for your purchase of a state of the art Watts system.

Your new three stage unit is equipped with a unique swivel valve assembly. This allows for a simple and sanitary filter change. This three stage system is equipped with a sediment prefilter, a high quality carbon block filter and the Ultra Filtration membrane.

The sediment filter reduces sand, silt, sediment and rust particles that may be in your water. The second stage is a heavy duty lead and chemical reducing carbon filter block. This specialty formulated block is capable of reducing lead as well as harmful Volatile Organic Chemicals (See performance data sheet for complete list of VOC's). It is estimated that VOC's are present in one-fifth of the nation's water supplies. These water contaminants can enter ground water from a variety of sources including localized use of herbicides and pesticides, gasoline or oil spills, leaking underground fuel tanks, septic system cleaners, and chemicals used in the dry-cleaning industry. The third stage is our state of the art UF Hollow Fiber Technology membrane.

Ultra filtration is a membrane filtration process which uses standard home water pressure to push water through its semi permeable membrane. Suspended particles and materials of high molecular weight are unable to pass through the 0.02 micron UF membrane, allowing only fresh clean water and dissolved minerals to pass through. Historically this separation process has been used in large municipal water treatment plants and hospitals; however through advances in technology it is now available to you as a powerful under sink water filtration plant in your home.

Ultra filtration is capable of running at low water pressures, does not require a separate water holding tank, does not alter the pH of your water and does not require electricity. Due to this provides a continuous supply of premium quality drinking water directly to your tap.

System Maintenance

Just because you can not taste it, does not mean that it is not there. Many contaminants in the drinking water are undetectable to the taste. Additionally, over time if you do not replace the filter elements, other bad tastes and odors will be apparent in your drinking water. This is why it is important to change your filters at the recommended intervals as indicated in this system manual.

When replacing any of the filter elements, pay special attention to any cleaning instructions.

Table of Contents

Service Record

Model Number:_____ **Serial Number:**_____

Date of Purchase:_____ **Date of Install:**_____ **Installed by:**_____

Date	Sediment Filter (6 months)	LCV Block (6 months)	UF Membrane (12 months)	Date	Sediment Filter (6 months)	LCV Block (6 months)	UF Membrane (12 months)

NOTES:

Operational Parameters

Caution: Water supply line to the system must be from the cold water supply line.
Installation needs to comply with state and local plumbing regulations.

	Maximum	Minimum
Operational Temperature	100°F (40.5°C)	40°F (4.4°C)
Operating Pressure	85 psi (5.98 kg/cm²)	20 psi (1.406 kg/cm²)
pH Parameters	10	5
Flow Rate	0.5 GPM @ 60 psi	

Contents of Under Counter System

1 3 Stage Filter Unit
3 Filters
1 Parts Bag
1 Faucet Assembly
If any of the items are missing, please contact your dealer.

Tools Recommended For Installation

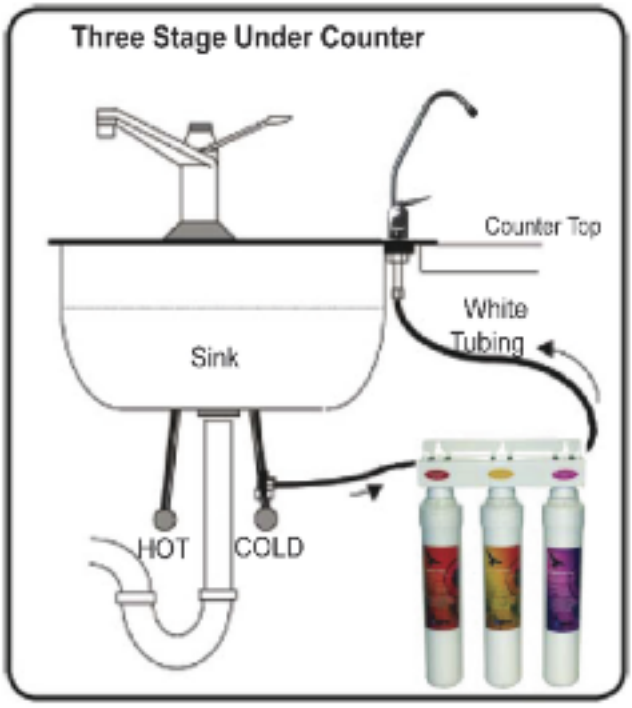
A small knife
Variable speed drill
1/8" (3mm), 1/4" (6.4 mm) and 7/16" (11.0mm) drill bits
1/2" Diamond Tip Drill bit (for porcelain sinks)
1/2" hole punch (for stainless steel sinks)
1/2" and 5/8" open-end wrenches (or adjustable wrenches)
Phillips screwdriver

Installation

This system has been designed to fit under most kitchen sinks. Please read the entire manual carefully before proceeding with installation.

Step 1: Mounting System Under Sink

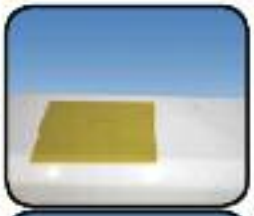
(A) Locate a space under the sink that allows the unit to be mounted close to the cold water supply and allows for easy access during maintenance and filter changes. System must be installed to the cold water supply only. Allow approximately 2" (5cm) clearance between the bottom of the filter housing and the floor of the sink cabinet.
(B) Using the mounting holes on the bracket, mark the location for the mounting screws on the cabinet wall under the sink.
(C) Screw the (2) screws into the wall at the marked location.
(D) Hang the module on the screws using the mounting holes in the bracket.



Drill a Hole for the Faucet in a Porcelain Sink

Note: ***Most sinks are pre drilled with 1 ⅛" or 1 ¼" diameter hole that you can use for your faucet. (If you are already using it for a sprayer or soap dispenser, see step 1)***

Porcelain sinks are extremely hard and can crack or chip easily.
Use extreme caution when drilling. Watts accepts no responsibility for damage resulting from the installation of faucet.
Diamond tip drill bit is recommended for drilling in porcelain.



Step 1 Determine desired location for the faucet on your sink and place a piece of masking tape over where the hole is to be drilled. Mark the center of the hole on the tape.

Step 2 Using a variable speed drill set on the slowest speed, drill a 1/8" pilot hole through both porcelain and metal casing of sink at the marked center of the desired location. Use lubricating oil or liquid soap to keep the drill bit cool (If drill bit gets hot it may cause the porcelain to crack or chip).

Step 3 Using a 1/2" Drill Bit, proceed to drill the larger hole. Keep drill speed on the slowest speed and use lubricating oil or liquid soap to keep the hole saw cool during cutting.

Step 4 Make sure the surroundings of the sink are cooled before mounting the faucet to the sink after drilling and remove all sharp edges.

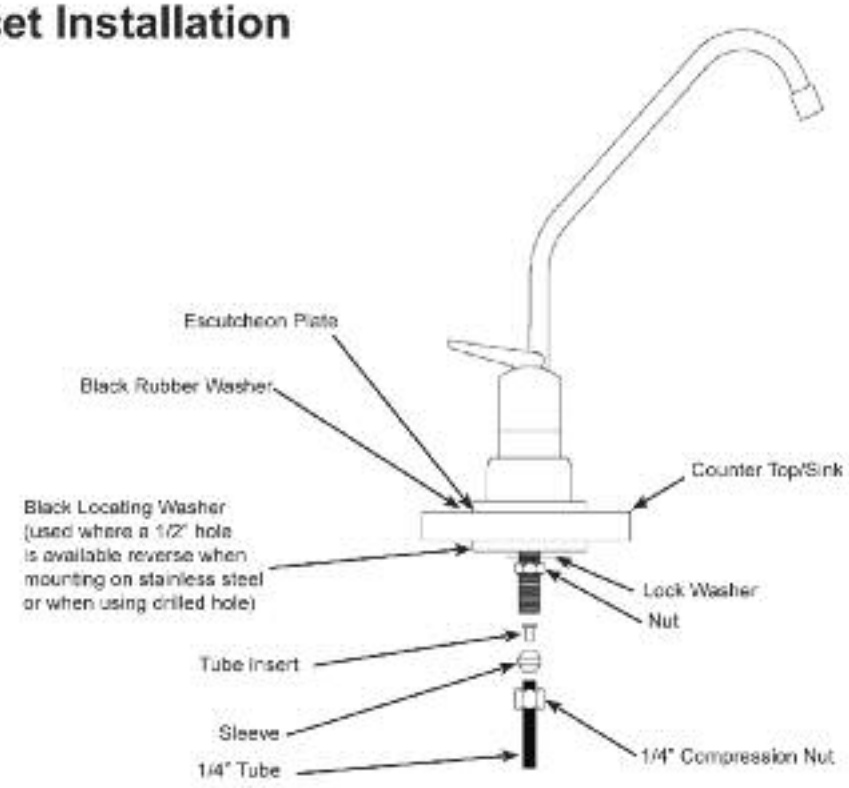
Punch a Hole for the Faucet in a Stainless Steel Sink

Note: ***If mounting faucet to a Stainless Steel Sink you will need a 1/2" Hole Punch. The faucet opening should be centered between the back splash and the edge of the sink, ideally on the same side as the vertical drain pipe.***

Step 5 Drill a ¼" pilot hole. Use a 1/2" Hole Punch and an adjustable wrench to punch the hole in the sink.

The faucet can now be installed.

Faucet Installation



Step 6 Place the escutcheon chrome plate and the black rubber washer on the faucet shank. (Parts found in faucet parts bag).

Step 7 Insert the faucet shank through the hole in sink and let it rest on the sink top.

Step 8 From the underside of the sink slide on the locating washer, lock washer and brass nut onto the shank. Check orientation of faucet then tighten brass nut securely.

Connecting tubing to the faucet

Step 9 Locate tubing from the filter system. Place the brass nut onto the tube, followed by the plastic sleeve (tapered end pointing to the end of tube) and then place the brass insert into the end of the tube.

Step 10

Insert the tubing into the end of the faucet shank and use a wrench to tighten the brass nut securely.

Adapt-a-Valve Installation

Caution: Water supply line to the system must be from the cold water supply line. Hot water will severely damage your system.

(A) Turn off the main supply water to the house.
Note: Housing plumbing may be the opposite of that shown in Figure B.
(B) Turn off the cold water supply to the faucet by turning the angle stop valve clockwise until it is completely off. Drain any water in the line by opening the faucet cold side.
(C) Attach adapt-a-valve as illustrated in the center photo below, choosing the configuration that fits your plumbing.
(D) Attach the loose end of the tubing to the Adapt-a-Valve, remove a brass nut, plastic sleeve and brass insert from the parts bag. Place nut on the tube first, then the plastic sleeve (small taper end of plastic sleeve must point to the end of tube) and then insert the brass Insert into the end of the tube (see Figure C). Insert the tubing into the ¼" opening on the adapt-a-valve until it stops. Slide nut and sleeve down and thread onto the male pipe threads. Use a ½" wrench to securely tighten.
(E) Turn on water supply and open the Adapt-a-valve. Check for leaks.

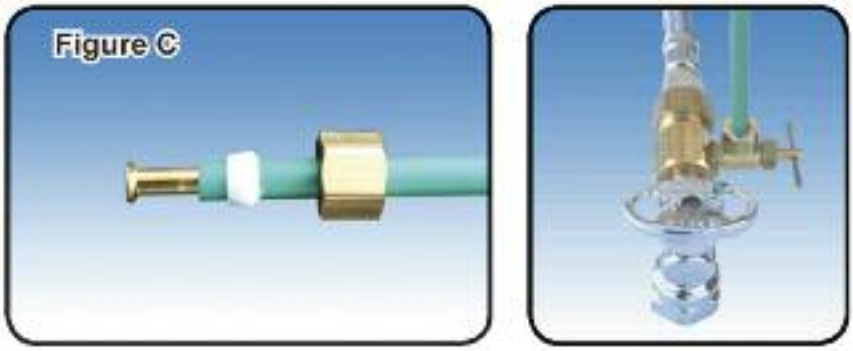
Figure B

Configuration for 3/8" compression fittings

Correct installation of the Adapta Valve

Configuration for 1/2" fittings

Figure C



System Start Up

(A) Turn faucet handle to the open position to start the flow of water through the unit. Run 3 gallons of water through the unit in order to flush out the normal black carbon fines (it will "sputter" until the air is purged out) from the unit. Initially, the water may appear cloudy which is due to tiny air bubbles and it will clear up shortly. Close the faucet when finished.

(B) Check for leaks. If you have any leaks, shut off the water supply to your system, tighten any fittings / housings and restart unit.

Changing The Filter Cartridges

Your system is equipped with valved heads which will automatically turn off the water supply to each filter when the filter is releaszed, thus you do not need to turn off the incoming water supply at the Adapt-a-Valve. The faucet must be off when filters are replaced.

6 Month System Maintenance

Replace:
√ One sediment filter
√ One LCV Block
√ One UF Membrane

Step 1 Place a towel under the Filter Unit to catch any excess water that may drip out from the filters during the changeover.

Step 2 **To remove a filter cartridge:** Rotate filter 1/4 turn counter clockwise. Pull cartridge downward (from the head) to remove. Dispose of old filter.

Step 3 **To install a filter cartridge.** Orient the cartridge with the label facing to left (9 o'clock position). Push cartridge into head and rotate 1/4 turn.

Optional Filters:

√ Granular Activated Carbon

Performance Data Sheet
Watts Water Quality & Coditioning Products
13700 Hwy 90 West
San Antonio, Texas 78245

GENERAL USE CONDITIONS:

1. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

2: Operating Temperature:	**Maximum 100° F (40.5° C)**	**Minimum 40° F (4.4° C)**
3: Operating Water Pressure:	**Maximum 85-psi (5.98 kg/cm²)**	**Minimum 20-psi**
4: Maximum flow Rate:	**0.50 gpm (1.89 lpm)**	
5: Rated Capacity:	**300 Gallons (1,350 liters)**	

RECOMMENDED REPLACEMENT PARTS AND CHANGE INTERVAL:

Note: Depending on incoming feed water conditions replacement time frame may vary.

Description	Part Number	Change Time Frame
Stage 1: Sediment	WQCSC11	6 Months
Stage 2: Carbon	WQCCC11	6 Months
Stage 3: UF Membrane	WQCHFC11	12 Months

This system has been tested according to NSF/ANSI Standard 53 for the reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42 and 53. Testing performed under standard laboratory conditions, actual performance may vary.

Contaminant	Influent Challenge Concentration	Percent Reduction Achieved	Maximum Permissible Product Water Concentration
Chlorine Taste & Odor	2.0 mg/L + 10%	97%	> = 50%
Particles Class IV	13,000 Particles /ml	96%	> = 85%

Substance	Percent Reduction	Influent Challenge Concentration (mg/L unless noted)	Maximum Permissible Product Water Concentration
ALACHLOR*	>98%	0.05	0.001
ATRAZINE*	>97%	0.1	0.003
BENZENE*	>99%	0.081	0.001
BROMODICHLOROMETHANE (TTHM)*	>99.8%	0.300 +/- 0.30	0.015
BROMOFORM (TTHM)*	>99.8%	0.300 +/- 0.30	0.015
CARBOFURAN (Furadan)*	>99%	0.19	0.001
CARBON TETRACHLORIDE*	98%	0.078	0.0016
CHLOROBENZENE (Monochlorobenzene)*	>99%	0.077	0.001
CHLOROFORM (TTHM)*	>99.8%	0.300 +/- 0.30	0.015
CRYPTOSPORIDIUM (see Cyst)	99.99%	minimum 50,000/mL	99.95%
CYST	99.99%	minimum 50,000/mL	99.95%
2, 4-D*	98%	0.110	0.0017
DBCP (see Dibromochloropropane)*	>99%	0.052	0.00002
1,2-DCA (see 1,2-DICHLOROETHANE)*	96%	0.088	0.0048
1,1-DCE (see 1,1-DICHLOROETHYLENE)*	>99%	0.083	0.001
DIBROMOCHLOROMETHANE (TTHM;Chlorodibromomethane)*	>99.8%	0.300 +/- 0.30	0.015
DIBROMOCHLOROPROPANE (DBCP)*	>99%	0.052	0.00002
o-DICHLOROBENZENE (1,2 Dichlorobenzene)*	>99%	0.08	0.001
p-DICHLOROBENZENE (para-Dichlorobenzene)*	>98%	0.04	0.001
1,2-DICHLOROETHANE (1,2-DCA)*	96%	0.088	0.0048
1,1-DICHLOROETHYLENE (1,1-DCE)*	>99%	0.083	0.001
CIS-1,2-DICHLOROETHYLENE*	>99%	0.17	0.0005
TRANS-1,2- DICHLOROETHYLENE*	>99%	0.085	0.001
1,2-DICHLOROPROPANE (Propylene Dichloride)*	>99%	0.08	0.001
CIS-1,3- DICHLOROPROPYLENE*	>99%	0.079	0.001
DINOSEB*	95%	0.17	0.0002
EDB (see ETHYLENE DIBROMIDE)*	>99%	0.044	0.00002
ENDRIN*	95%	0.053	0.00059

Substance	Percent Reduction	Influent Challenge Concentration (mg/L unless noted)	Maximum Permissible Product Water Concentration
ENTAMOEBA	99.99%	minimum 50,000/mL	99.95%
ETHYLBENZENE*	>99%	0.068	0.001
ETHYLENE DIBROMIDE (EDB)*	>99%	0.044	0.00002
FURADAN (see CARBOFURAN)*	>99%	0.19	0.001
HALOACETONITRILES (HAN)*			
BROMOCHLOROACETONITRILE	98%	0.022	0.0005
DIBROMOACETONITRILE	98%	0.024	0.0006
DICHLOROACETONITRILE	98%	0.0096	0.0002
TRICHLOROACETONITRILE	98%	0.015	0.0003
HALOKETONES (HK):*			
1,1-DICHLORO-2-PROPANONE	99%	0.0072	0.0001
1,1,1-TRICHLORO-2-PROPANONE	96%	0.0082	0.0003
GIARDIA LAMBLIA (see Cyst)	99.99%	minimum 50,000/mL	99.95%
HEPTACHLOR*	>99%	0.25	0.00001
HEPTACHLOR EPOXIDE*	98%	0.0107	0.0002
HEXACHLOROBUTADIENE (Perchlorobutadiene)*	>98%	0.044	0.001
HEXACHLOROCYCLOPENTADIENE*	>99%	0.060	0.000002
LEAD pH 6.5	99%	0.15 +/- 10%	0.010
LEAD pH 8.5	99%	0.15 +/- 10%	0.010
LINDANE*	>99%	0.055	0.00001
METHOXYCHLOR*	>99%	0.050	0.0001
METHYLBENZENE (see TOLUENE)*	>99%	0.078	0.001
MONOCHLOROBENZENE (see CHLOROBENZENE)*	>99%	0.077	0.001
PCE (see TETRACHLOROETHYLENE)*	>99%	0.081	0.001
PENTACHLOROPHENOL*	>99%	0.095	0.001
PERCHLOROBUTADIENE (see HEXACHLOROBUTADIENE)*	>98%	0.044	0.001
PROPYLENE DICHLORIDE (see 1,2 -DICHLOROPROPANE)*	>99%	0.060	0.001
SIMAZINE*	>97%	0.120	0.004
SILVEX (see 2,4,5-TP)*	99%	0.270	0.0016
STYRENE (Vinylbenzene)*	>99%	0.15	0.0005
1,1,1-TCA (see 1,1,1 - TRICHLOROETHANE)*	95%	0.064	0.0046
TCE (see TRICHLOROETHYLENE)*	>99%	0.180	0.0010
1,1,2,2- TETRACHLOROETHANE*	>99%	0.081	0.001
TETRACHLOROETHYLENE*	>99%	0.081	0.001
TOLUENE (Methylbenzene)*	>99%	0.078	0.001
TOXOPLASMA		minimum 50,000/mL	99.95%
2,4,5-TP (Silvex)*	99%	0.270	0.0016
TRIBROMOACETIC ACID*		0.042	0.001
1,2,4 TRICHLOROBENZENE (Unsymtrichlorobenzene)*	>99%	0.160	0.0005
1,1,1-TRICHLOROETHANE (1,1,1-TCA)*	95%	0.064	0.0046
1,1,2-TRICHLOROETHANE*	>99%	0.150	0.0005
TRICHLOROETHYLENE (TCE)*	>99%	0.180	0.0010
TRIHALOMETHANES (TTHM) (Chloroform; Bromoform; Bromodichloromethane; Dibromochloromethane)	>99.8%	0.300 +/- 0.30	0.015
Unsym-Trichlorobenzene (see 1,2,4-TRICHLOROBENZENE)*	>99%	0.150	0.0005
Vinylbenzene (see STYRENE)*	>99%	0.150	0.0005
XYLENES (TOTAL)*	>99%	0.070	0.001

Limited Warranty

This Drinking Water Filter Unit is warranted against defects in material and workmanship for a period of one year from the date of installation, not to exceed 2 years from the date of manufacture. Expendable items such as filter cartridges and membranes are not covered by this warranty.

How to obtain Warranty Service: Contact the dealer that you purchased the system from. Watts will work in conjunction with our dealer to repair or replace at our discretion any unit that is determined to be defective. No returns will be accepted with out the proper return authorization number.

What this warranty does not cover: This warranty does not cover defects resulting from improper installation, from abuse, misuse, misapplication, improper maintenance, neglect, alteration, accidents, casualties, fire, flood, freezing, environmental factors, water pressure spikes or other such acts of God.
Return shipping charges are not included in this warranty and are the responsibility of the end user.

This warranty will be void if defects occur due to failure to observe the following conditions:

1. The Drinking Water Filter Unit must be hooked up to a potable municipal or well cold water supply.
2. The hardness of the water should not exceed 10 grains per gallon, or 170 ppm.
3. Maximum incoming iron must be less than 0.2 ppm.
4. The pH of the water must not be lower than 2 or higher than 11
5. The incoming water pressure must be between 40 and 100 pounds per square inch.
6. Incoming water to the RO cannot exceed 105 degrees F (40 degrees C.)
7. Incoming TDS/Total Dissolved Solids not to exceed 1800 ppm.
8. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

This warranty does not cover any equipment that is relocated from the site of its original installation.

This warranty does not cover any equipment that is installed or used outside the United States of America and Canada.

LIMITATIONS AND EXCLUSIONS:

WATTS WILL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WATTS WILL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WATER DAMAGE, TRAVEL EXPENSE, TELEPHONE CHARGES, LOSS OF REVENUE, LOSS OF TIME, INCONVENIENCE, LOSS OF USE OF THE EQUIPMENT, AND DAMAGE CAUSED BY THIS EQUIPMENT AND ITS FAILURE TO FUNCTION PROPERLY. THIS WARRANTY SETS FORTH ALL OF WATTS RESPONSIBILITIES REGARDING THIS EQUIPMENT.

OTHER CONDITIONS:

If Watts chooses to replace the equipment, it may be replace with reconditioned equipment. Parts used in repairing or replacing the equipment will be warranted for 90 days from the date the equipment is returned to you or for the remainder of the original warranty period, whichever is longer. This warranty is not assignable or transferable.