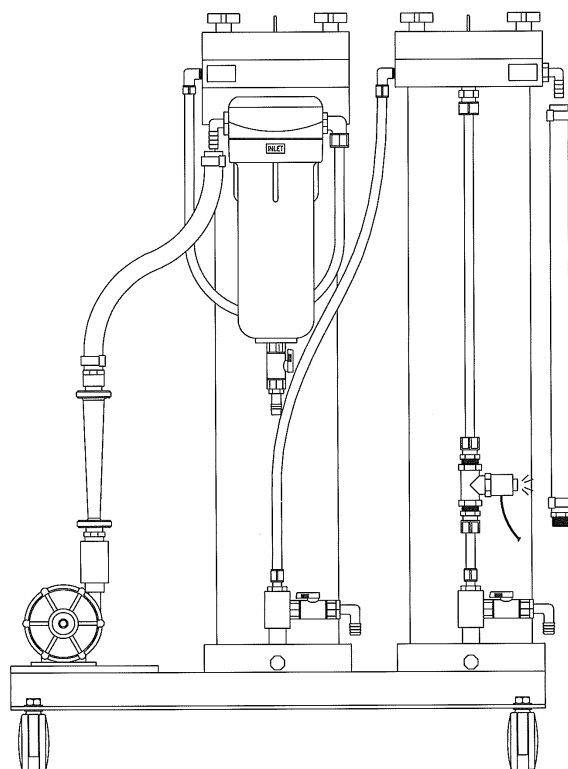




# **SILEX DEIONIZER**

## **OPERATION & MAINTENANCE MANUAL**

**MODEL: 00M10800, 00M20800  
& 00M30800**



**Manufactured With Pride  
In The USA**

[www.amerewater.com](http://www.amerewater.com) • 800-535-5585

AmeriWater • 3345 Stop 8 Rd. • Dayton, OH 45414

# TABLE OF CONTENTS

|                                                                 |           |
|-----------------------------------------------------------------|-----------|
| <b>YOUR SILEX SYSTEM.....</b>                                   | <b>1</b>  |
| <b>ABOUT THE 00M10800, 00M20800 &amp; 00M30800 MODELS .....</b> | <b>1</b>  |
| How does the Silex Deionizer work?.....                         | 1         |
| How does the regeneration work?.....                            | 1         |
| About the resin pack.....                                       | 1         |
| <b>SILEX FEATURES.....</b>                                      | <b>2</b>  |
| <b>INSTALLATION-COMMON SITUATIONS OF USE...</b>                 | <b>3</b>  |
| <b>INSTALLATION-10 EASY STEPS.....</b>                          | <b>4</b>  |
| <b>RESIN PACK &amp; FILTER EXCHANGE.....</b>                    | <b>7</b>  |
| Resin Pack Exchange.....                                        | 7         |
| Filter Cartridge Replacement.....                               | 8         |
| <b>RESIN PACK REGENERATION.....</b>                             | <b>9</b>  |
| <b>SYSTEM BUILD DRAWING.....</b>                                | <b>10</b> |
| <b>IWAKI PUMP .....</b>                                         | <b>11</b> |
| Installation.....                                               | 11        |
| Operating Tips.....                                             | 11        |
| Typical WMD/MD Series Pumps Components.....                     | 12        |
| <b>SILEX WARRANTY POLICY .....</b>                              | <b>13</b> |

# **YOUR SILEX SYSTEM**

## **ABOUT THE 00M10800, 00M20800 & 00M30800 MODELS**

This Silex is available in a one, two, or three series housing configuration with a magnetic drive recirculation pump that pulls the water from the process rinse tank through the columns with carbon, deionizer resin or special selective resin and returns it to the tank at a flow rate of three gallons per minute.

The system can be used on both hazardous waste and non-hazardous waste applications. When close looping a hazardous waste system the resin packs are removed, drummed up, and new packs are put back in the Silex. When the drum(s) are full, the waste is manifested to a hazardous waste disposal facility.

## **HOW DOES THE SILEX DEIONIZER WORK?**

Silex is a simple, maintenance-free system. When the monitor light signals that the product water quality has dropped below the desired quality setpoint, simply exchange the resin packs and send them to AmeriWater for regeneration.

**NOTE:** AMERIWATER DOES NOT REGENERATE RESIN PACKS THAT HAVE BEEN USED IN HAZARDOUS WASTE APPLICATIONS.

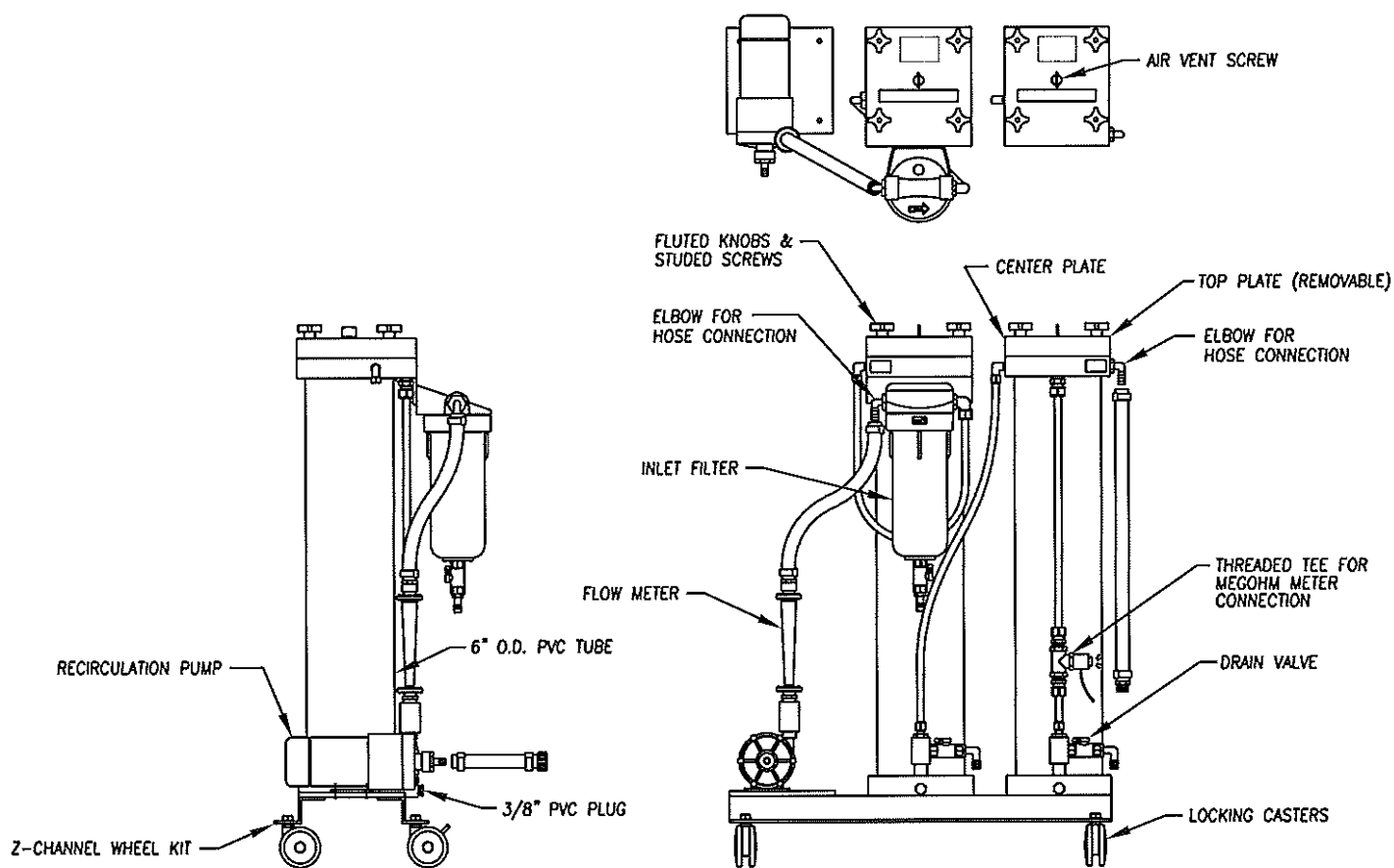
## **HOW DOES THE REGENERATION WORK?**

The AmeriWater regeneration center maintains the resin used in the Silex Deionizer for non-hazardous applications. When resin packs are exhausted, replace the packs in the Silex system with “stand-by” resin packs and return the exhausted pack to AmeriWater for regeneration. The resin will be regenerated and shipped within 24 hours of receipt. It’s as simple as that!

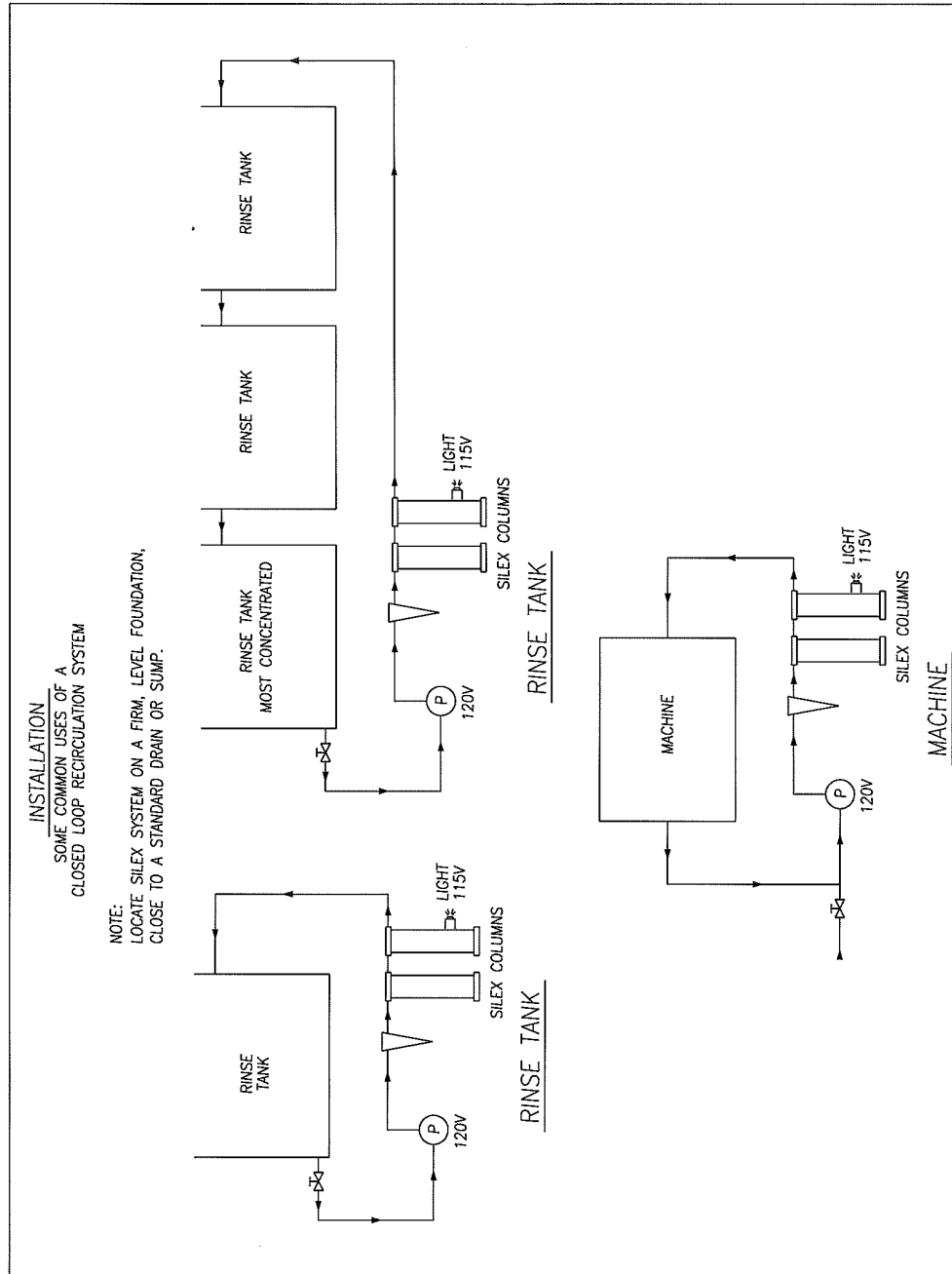
## **ABOUT THE RESIN PACK**

The resin has a shelf life of approximately one year. The resin pack consists of resin contained in a polypropylene bag that never has to be opened. Resin packs are shipped in plastic sleeves to prevent the exchangers from drying out.

# SILEX FEATURES



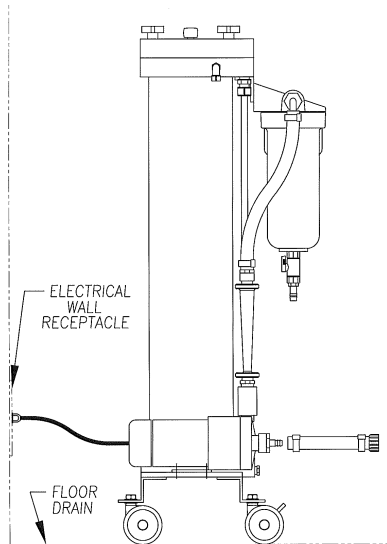
# INSTALLATION – COMMON SITUATIONS OF USE



## INSTALLATION IN 10 EASY STEPS

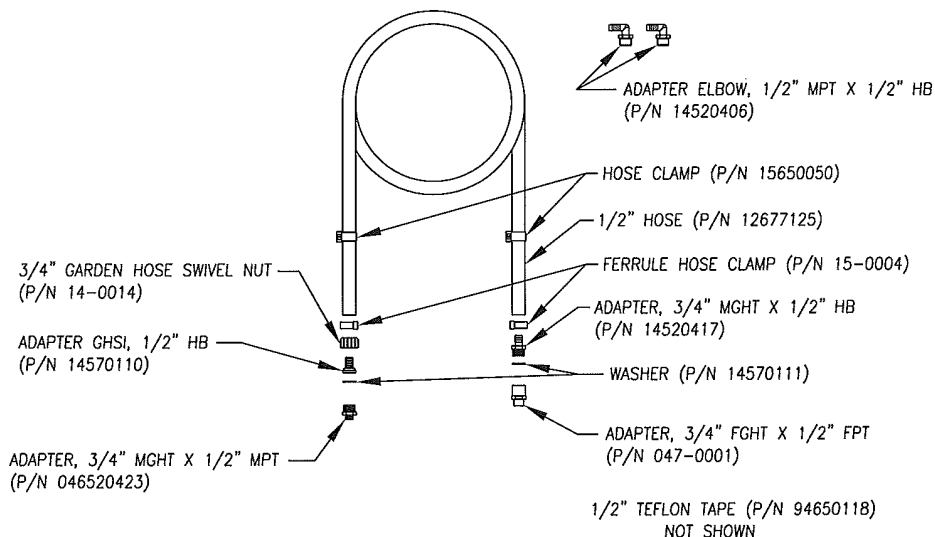
1. Locate the Silex system on a firm, level foundation.
2. It is recommended, but not required, to locate the system near a standard floor drain or sump.

**CAUTION:** Vent all plumbed drain lines in accordance with local plumbing codes and / or local regulations. If a drain is not feasible, mount the system on a raised platform so that it can be drained into a container.



3. It is recommended to install cut-off valves on the inlet and outlet sides of each unit to facilitate changing of resin packs.
4. Connect the inlet supply hose to the hose barb fitting on the left side of the system (while facing the label). Use the hose clamps provided with the system to secure the hose to the hose barb fitting.

### SILEX HOSE KIT # 0119-0006



NOTE: CUSTOMER TO CUT HOSE AND INSTALL HOSE CLAMPS AS REQUIRED.

**NOTE:** 16 feet of hose has been provided with the Silex system. Cut the hose to the desired lengths for the inlet hose and outlet hose and install the provided fittings as needed (See Silex Hose Ass'y. drawing ).

5. Connect the outlet hose to the hose barb fitting on the right side of the system (while facing the label). Use the hose clamps provided with the system to secure the hose to the hose barb fitting.
6. The Silex Deionizer is designed to operate at pressures up to 50 PSI (**P**ounds per **S**quare **I**nch). The maximum flow for each deionizer is 3 GPM (**G**allons **P**er **M**inute).
7. Install the optional pre-filter, post-filter, and/or monitors (if applicable) per the instructions provided with the optional equipment.

8. Install the resin pack(s):

- a. Remove the cover plates by unscrewing the four black knobs on each plate. To break the seal between the cover plates and the upper plates, use a slotted screw driver in the pry notch located in the top of each upper plate. Open the drain valve at the bottom of each column.



- b. Remove the resin pack from the shipping box and open the tied end of the plastic sleeve. DO NOT remove the resin pack from the plastic sleeve at this time.



- c. Stretch the resin pack over your arm to elongate the pack, and feed it into the Silex column allowing the pack to slide out of the plastic sleeve.



- d. Replace the cover plate and tighten the black knobs. Be sure to tighten the knobs evenly by screwing in the knobs in opposite corners simultaneously. Repeat for the other two corners.



- e. Close the drain valve at the bottom of the column.

- f. Repeat steps a. through e. for each of the columns.

9. Open the air vents located on the top of the cover plates and turn on the water supply. Tighten the air vents closed when water begins to escape through the vents.

10. Allow several gallons of water to run through the Silex system. Continue running water through the system until the water quality light changes from red to green. The green light indicates that the Silex is producing deionized water.



# RESIN PACK & FILTER EXCHANGE

## Resin Pack Exchange

1. Turn off the water supply to the Silex system.
2. Open the air vents located in the center of the cover plates.
3. Place a container under the Drain Valves located on the bottom plates of the system. Open the valves and allow the water to drain into the container. The container may be emptied at a drain.
4. Remove the cover plates by unscrewing the black knobs located at each corner of the cover plates.
5. Pull the exhausted resin pack part of the way out of the column and lay it over the top of the system.

**NOTE:** If the Drain Valve located on the bottom plate is not open, a vacuum will be created making it difficult to remove the resin pack.

6. Slowly pull the exhausted pack over the side of the column while sliding it out of the column and into the plastic sleeve that it was shipped in.
7. Remove the new resin pack from the shipping box and open the tied end of the plastic sleeve. Stretch the resin pack over your arm to elongate the pack. Feed the pack into the column allowing it to slide out of the plastic sleeve. Save the plastic sleeve for the return shipment of the resin pack at the next exchange in non-hazardous applications.
8. Carefully wipe the O-rings and the grooves on the top plate and cover plate to remove any debris from the surfaces that must seal together.
9. Replace the cover plates and tighten the knobs. To ensure proper tightening and a good seal, tighten the knobs in opposite corners simultaneously. Repeat for the other two corners.
10. Turn on the water supply to the Silex system and remove trapped air by loosening the air vents located in the center of the cover plates. Tighten the air vents when water begins to escape through the vent. This ensures that all of the air has been removed from the system and maximizes the life and efficiency of the resin packs.
11. Allow water to run through the system for 1 minute prior to placing the Silex system in service.

## **Filter Cartridge Replacement**

Carbon prefilter cartridges should be replaced each time the resin pack(s) are exchanged.

1. Turn off the water supply to the system.
2. Place a container under the filter housing sumps and open the filter drain ports on the bottom of the sumps to drain the water out of the filter housing. Close the filter drains when water ceases to flow out of them.
3. Use the filter wrench supplied in the installation kit to turn the filter housing counterclockwise.
4. Remove and discard the old filter cartridge(s).
5. Partially unwrap the plastic from the new filter cartridge. Holding the end covered in plastic, place the new filter cartridge in the housing. Discard the plastic wrapper after installation.
6. Screw the filter housing back on making sure the O-ring is in the groove and is not pinched.

# RESIN PACK REGENERATION

Regeneration certificates are used to simplify the exchange of your exhausted Silex system packs for non-hazardous applications. The certificate has been purchased and will be used as payment for the resin pack regeneration service. Simply follow these steps:

1. Fill out a regeneration certificate by printing your name, phone number, company and address.
2. When you send each pack to AmeriWater, enclose the regeneration certificate in the box. AmeriWater will ship you a freshly regenerated resin pack.
3. To order more certificates, contact the company that originally sold you the deionizer.
4. It is recommended to send the exhausted resin to AmeriWater immediately after exchange. This will allow time for shipment and will maintain your uninterrupted supply of deionized water.

## Certificates Make Exchanging Packs a Breeze!



The image shows a 'Resin Regeneration Certificate' form from AmeriWater. The form is titled 'Resin Regeneration Certificate' and includes a small illustration of a woman using a deionizer. The text on the form explains that the certificate is used as payment for resin pack regeneration service and provides instructions on how to use it. It also includes a section for filling out return shipment information, with fields for Name, Phone, Company, Address, City, and State/Zip. At the bottom, there is a section for shipping the exhausted pack and certificate to AmeriWater Inc., with the address 1257 Stanley Ave., Dayton, Ohio 45404. The form also displays the website www.amerewater.com, the number 415865, and the product name 45101C Ultra Pure Resin Pack.

**AmeriWater®**

### Resin Regeneration Certificate

This certificate has been purchased and will be used as payment for the resin pack regeneration service.

When you send each pack to AmeriWater, enclose this regeneration certificate in the box. AmeriWater will ship you a freshly regenerated resin pack. To order more certificates, contact the company that originally sold you the deionizer.

Fill out for return shipment to:

Name \_\_\_\_\_

Phone ( ) \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Zip \_\_\_\_\_

www.amerewater.com

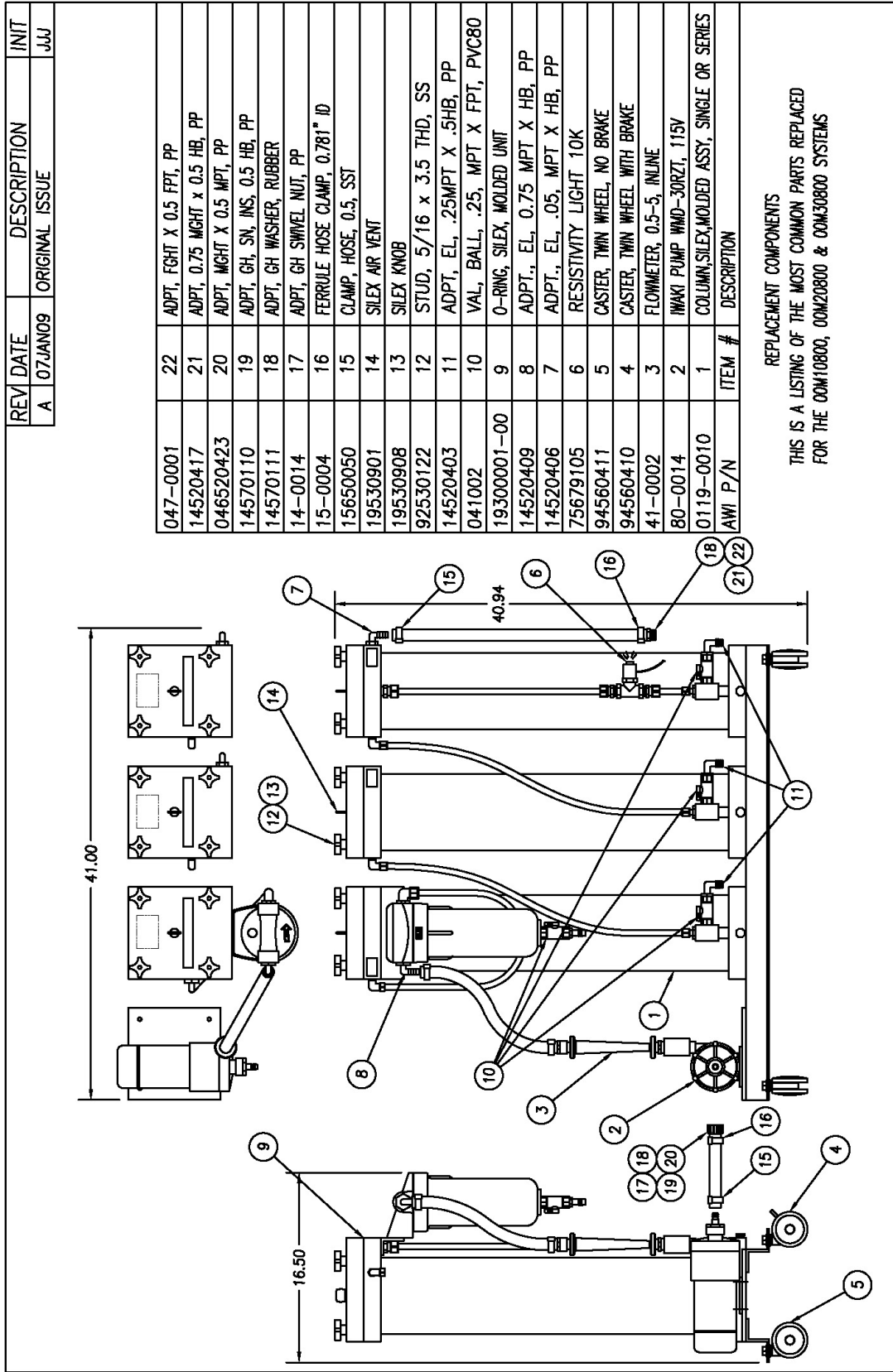
**415865**

**45101C Ultra Pure Resin Pack**

Ship exhausted pack and certificate to:  
AmeriWater Inc.  
1257 Stanley Ave.  
Dayton, Ohio 45404

Fill out and enclose in box for return shipment

- NO Paperwork
- NO Phone Calls
- NO Purchase Orders



  
**IWAKI AMERICA MAGNETIC DRIVE PUMPS**  
**OPERATING INSTRUCTIONS**

**INSTALLATION:**

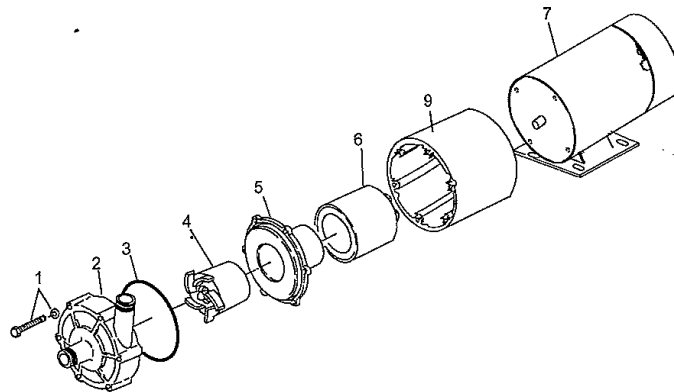
1. Secure the pump to floor or platform by bolting down the baseplate using all four bolt holes provided. For a detailed dimensional pump drawing, visit our website at [www.iwakiamerica.com](http://www.iwakiamerica.com).
2. Check power source for proper voltage and phase. Plug the pump power cord into a switched, grounded outlet or hardwire into a properly grounded circuit. Use appropriate wiring materials and abide by all local and national standards for electrical codes.
3. Connect the inlet and outlet fittings of the pump with the appropriate size tubing or pipe connections.
  - A. For tubing connections, use standard hose clamps to secure tubing. **DO NOT OVER-TIGHTEN.**
  - B. For pipe thread connections, use pipe tape to insure a good seal. **DO NOT OVER-TIGHTEN.**
  - C. For convenient disconnection of pumps installed with rigid pipe, install unions near both inlet and outlet connections.
4. **DO NOT OPERATE PUMP DRY!**
  - A. All magnetic drive pumps, when put in operation, must be primed with liquid unless the pump is installed below the level of the liquid and is provided with true flooded suction.
  - B. To prime, pour liquid into the outlet tubing or piping and allow it to fill the pumping chamber. The pump will normally prime with less effort when a foot valve is installed at the end of the suction line; this will also eliminate the need to reprime each time the pump is turned off.
5. With inlet and outlet valves open, the pump can be started. The pump flow rate can be regulated by a valve on the discharge side. If flexible tubing is used, a simple tubing clamp can be employed to restrict flow. **NEVER RESTRICT SUCTION.**

**OPERATING TIPS:**

- A. If the pump is to be left idle for extended periods, flush the pump with water to prevent crystallization of the fluid inside the pump chamber.
- B. If the fluid to be pumped contains suspended solids, install a strainer in the suction plumbing, periodically inspect the suction strainer and remove any built-up debris.
- C. See pump specifications for specific gravity capabilities of individual models.
- D. The impeller may decouple from the drive magnet for several reasons; e.g. if temperature, viscosity or specific gravity are too high. This is usually indicated by initial pumping, then a complete cutoff of flow. Turn off power to the motor, allow it to stop rotating, then start it again. The pump should reconnect automatically. If the problem recurs, check for excess temperature, viscosity, or specific gravity.

5 BOYNTON ROAD HOLLISTON, MA 01746-1446 USA  
TEL: 508-429-1440 FAX: 508-429-1386 [www.iwakiamerica.com](http://www.iwakiamerica.com) P/N 180146.D1 3/2/06

TYPICAL WMD



| Item No. | Description  | Item No. | Description                             |
|----------|--------------|----------|-----------------------------------------|
| 1        | Screw        | 5        | Rear Casing                             |
| 2        | Front Casing | 6        | Drive Magnet                            |
| 3        | O-Ring       | 7        | Motor Assembly                          |
| 4        | Impeller     | 8        | Retainer<br>(MD-100R, -100F, -55F only) |
|          |              | 9        | Bracket                                 |



## ***Warranty Policy***

The buyer has a lifetime warranty on the PVC housing and a one year warranty on all other equipment and parts, excluding non-durable components (e.g., resin packs, carbon packs, filter cartridges, and water quality monitors); provided that the system is not subject to abuse, misuse, alteration, neglect, freezing, accident or negligence; and provided further that the system is not damaged as the result of any unusual force of nature such as, but not limited to, flood, hurricane, tornado or earthquake.

The warranty covers the replacement of equipment and/or parts only. The warranty does not cover labor charges or travel expenses resulting from the service of equipment. The manufacturer is excused if failure to perform its warranty obligations is the result of strikes, government regulation, materials shortages, or other circumstances beyond its control.

To obtain warranty service, notice must be given to the manufacturer within 30 days of the discovery of the defect.

There are no warranties on the SILEX system beyond those specifically described above. All implied warranties, including any implied warranty of merchantability or of fitness for a particular purpose are disclaimed to the extent they might extend beyond the above periods. The sole obligation of the manufacturer under these warranties is to replace or repair the component or part which proves to be defective within the specified time period, and the manufacturer is not liable for consequential or incidental damages. No dealer, agent, representative, or other person is authorized to extend or expand the warranties expressly described above.

Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damage, so the limitations and exclusions in the warranty 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.

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 **WARNING**

This product can expose you to chemicals such as vinyl chloride (used in the production of PVC) or Nickel (used in the production of stainless steel), that are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

---

Dear Valued Customer,

California Proposition 65 (Prop 65) is the Safe Water and Toxic Enforcement Act of 1986. The State of California began enforcing amendments to California Prop 65 at the end of August 2018. Prop 65 requires manufacturers to provide a clear and reasonable warning to residents of California about chemicals used in products that they purchase that are included on the Prop 65 Chemical List. The chemicals included on the list are chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm. One such chemical is Vinyl Chloride, a compound used to produce Polyvinyl Chloride (PVC). The AmeriWater system you have purchased may contain PVC or stainless steel parts.

While warnings are only required in the State of California, AmeriWater has initiated the use of Prop 65 labeling for all products to ensure compliance with California regulations. Please note that the above warning does not necessarily mean that the product that you have purchased is unsafe. Products that have been cleared for market by FDA have been determined to be safe and effective by the United States Food and Drug Administration. The warning is simply a requirement by the State of California. If you wish to obtain additional information, please visit: [p65warnings.ca.gov](http://p65warnings.ca.gov). You may also contact your AmeriWater representative if you have any questions.

Thank you for your understanding and we look forward to continuing to serve you.