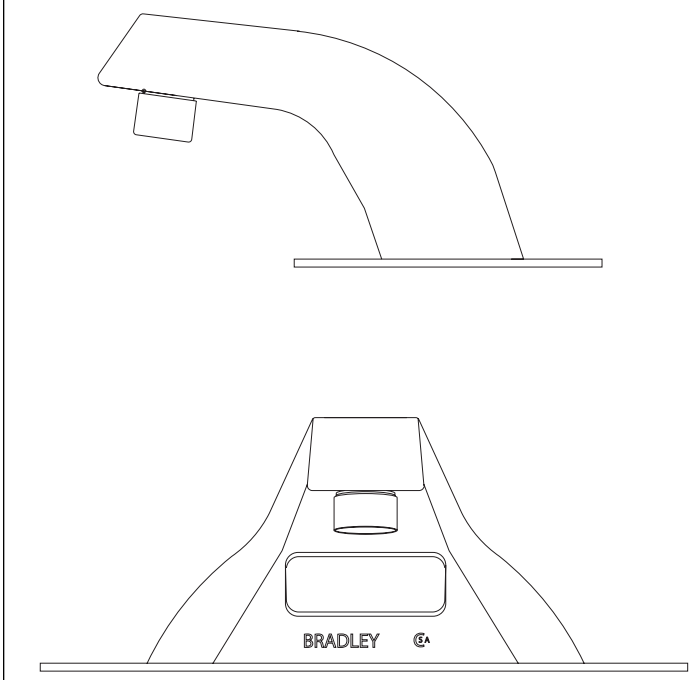

Installation

Aerada™ 900 Series Futura Faucet

With Accu-Zone® (AZ) Infrared Control

S53-141	**4" Centerset**
S53-148	**4" Centerset, no Solenoid Valve**
S53-186	**4" Centerset with 8" Trim Plate**
S53-285	**Centershank**
S53-286	**Centershank, no Solenoid Valve**
S53-287	**4" Centerset with 8" Trim Plate, no Solenoid Valve**
S53-288	**Centershank with 8" Trim Plate, no Solenoid Valve**
S53-290	**Centershank with 8" Trim Plate**

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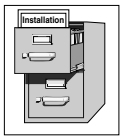
P.O. Box 309, Menomonee Falls, WI USA 53052-0309
PHONE 1-800-BRADLEY FAX (262) 251-5817
http://www.bradleycorp.com

Supplies Required for Installation:

- 120 VAC power source and 120 VAC/24 VAC transformer (transformer available from Bradley)
- FOR TRANSFORMER INSTALLATION: Remote wiring from faucet to transformer; location and electrical box for transformer provided if required by local code
- Tempered/cold supply piping and fittings to solenoid valve (1/8" NPT)
- 1/4" O.D. copper tubing
- Pipe fittings as required
- Pipe sealant
- 18-gauge two-conductor lamp cord (if additional wire length is required)
- OPTIONAL: Thermostatic mixing valve with stop/check/strainer valves (available from Bradley)

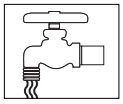
IMPORTANT!



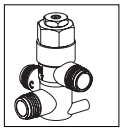
Read this entire installation manual to ensure proper installation, then file it with the owner or maintenance department. To avoid personal injury and/or damage to the faucet, turn OFF electrical power to the outlet before beginning installation or any cleaning, troubleshooting or maintenance task.

Pressurized plumbing fixtures must be installed in accordance with manufacturer's recommendations. The supply piping to these devices must be securely anchored to the building structure to prevent unnecessary movement of the installed device when operated by the user. Use extreme caution when installing the device to prevent damage to the exposed significant surface. Compliance and conformity to local codes and ordinances is the responsibility of the installer.

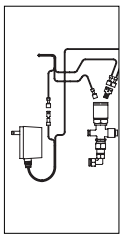
Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Flush water supply lines before making connections. DO NOT use pipe dope on any faucet or supply connections. Possible solenoid contamination could occur which will void any warranty. Teflon tape is the recommended sealant.

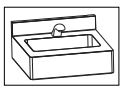


The incoming water supply can be tempered or cold. An optional Bradley Vernatherm™ thermostatic mixing valve delivers tempered water at a temperature no greater than 105°F. The faucet operates at a flowing water pressure of 20–80 PSI. A vandal-resistant .5 GPM flow restrictor ensures a constant flow rate at all pressures.



An optional transformer may be used in conjunction with the 900 Series Futura (AZ) faucets. The transformer MUST be 24 VAC. Connection to 120 VAC could result in personal injury and will result in damage to the sensor. Refer to the installation manual for remote transformer mounting instructions. One transformer operates up to four faucets at one time. Additional transformer(s) are required for installations with more than four faucets.

Connection of leads other than shown may cause permanent damage to the sensor.



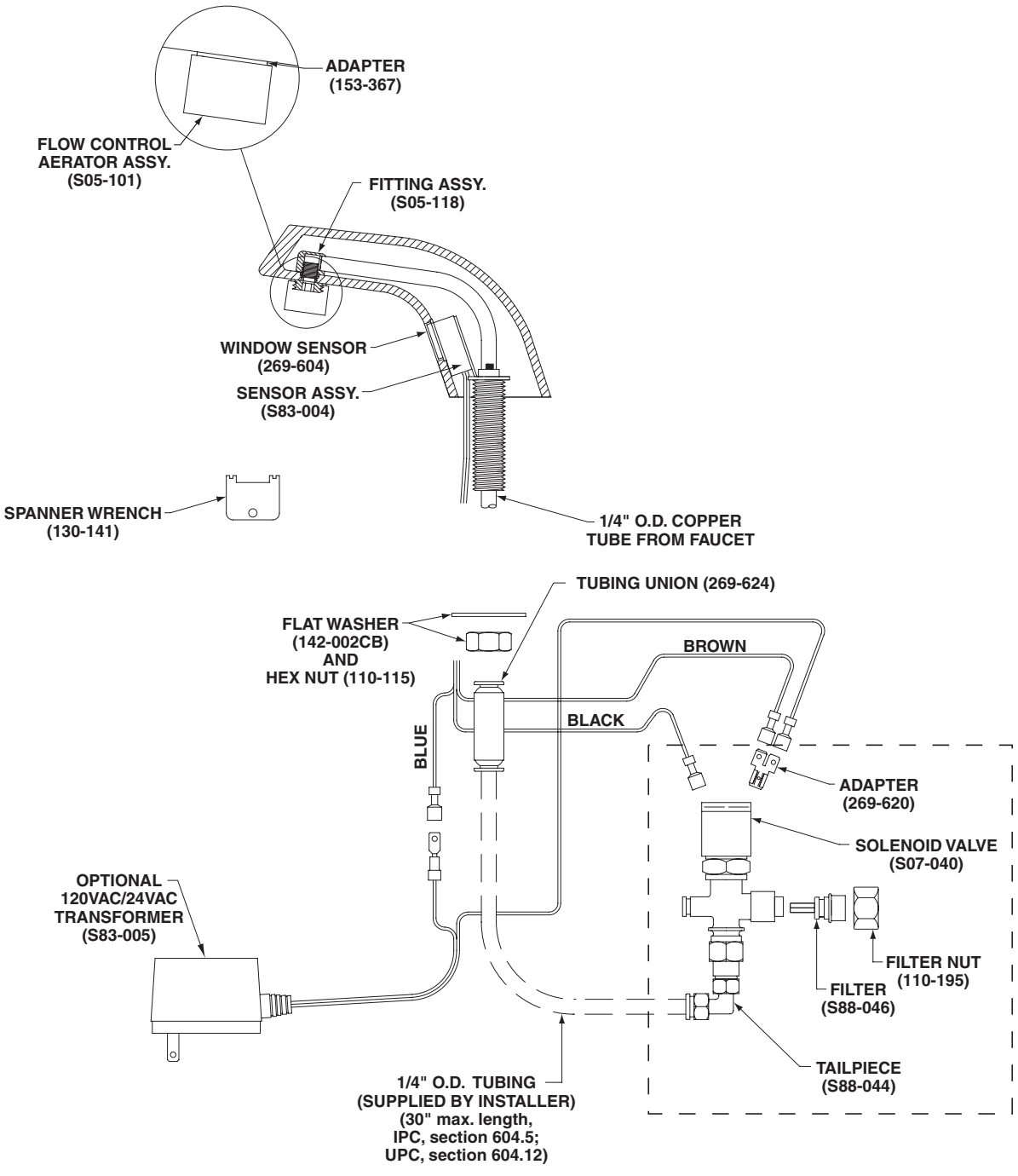
When the faucet is mounted on a fixture with a stainless steel bowl, it is recommended that the bowl have a satin finish rather than a mirrored or highly-polished finish.

Product warranties may be found under "Product Information" on our web site at www.bradleycorp.com.

Components for Aerada™ 900 Series Futura

(AZ) with Centershank Mounting

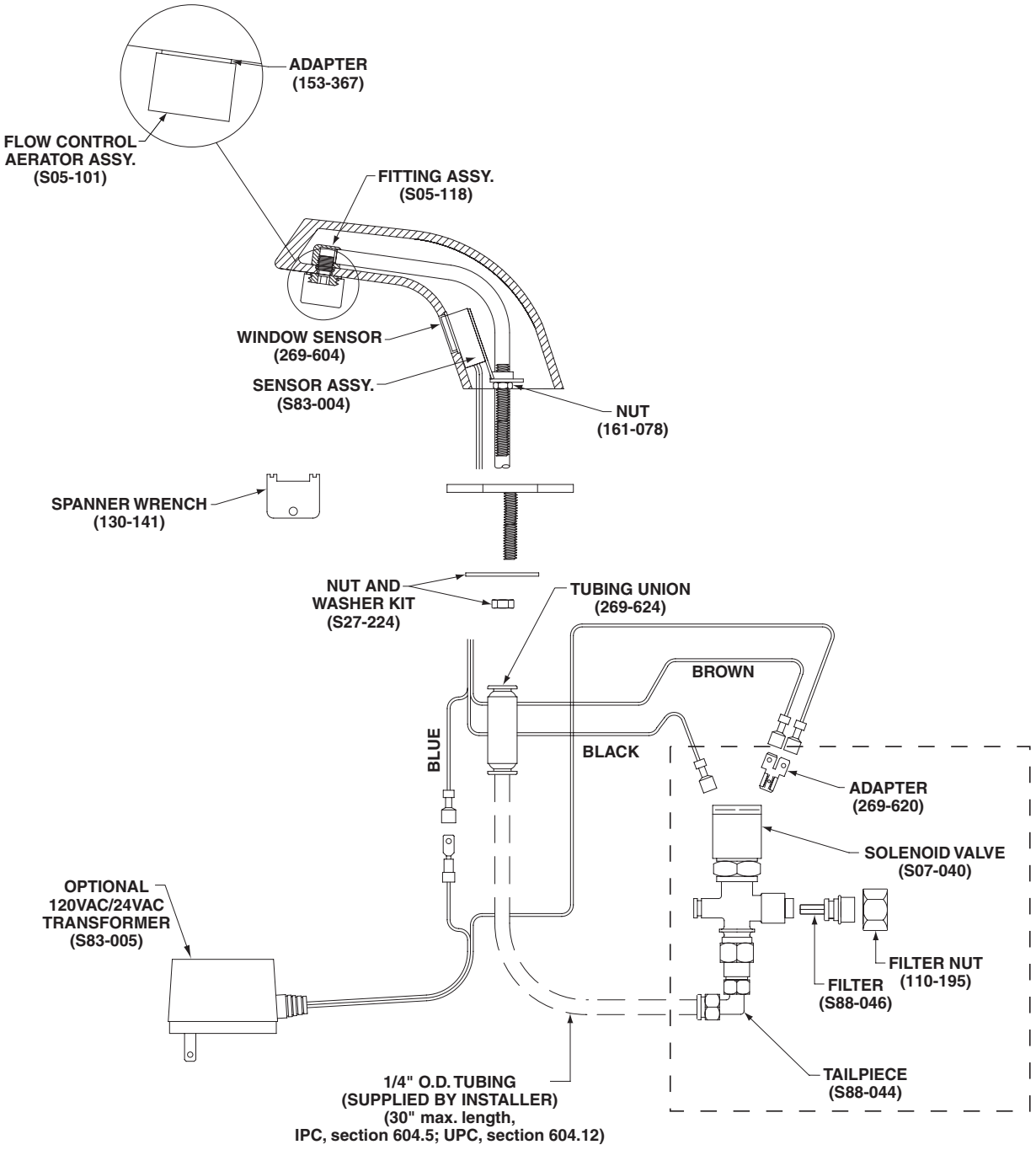
NOTE FOR MODELS WITHOUT SOLENOID VALVE: The adapter, filter nut, filter and tailpiece (shown below within the dotted lines) are not included with faucets ordered without a solenoid valve.



Components for Aerada™ 900 Series Futura

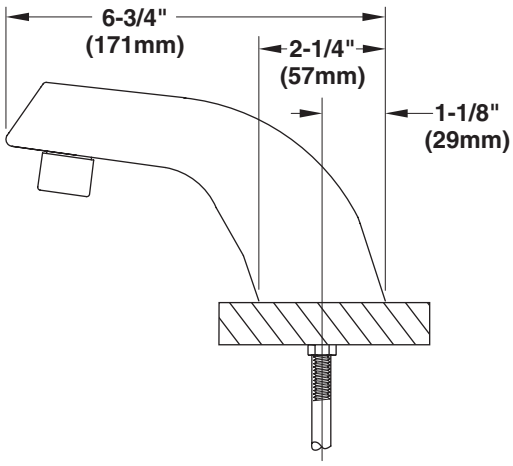
(AZ) with 4" Centerset Mounting

NOTE FOR MODELS WITHOUT SOLENOID VALVE: The adapter, filter nut, filter and tailpiece (shown below within the dotted lines) are not included with faucets ordered without a solenoid valve.

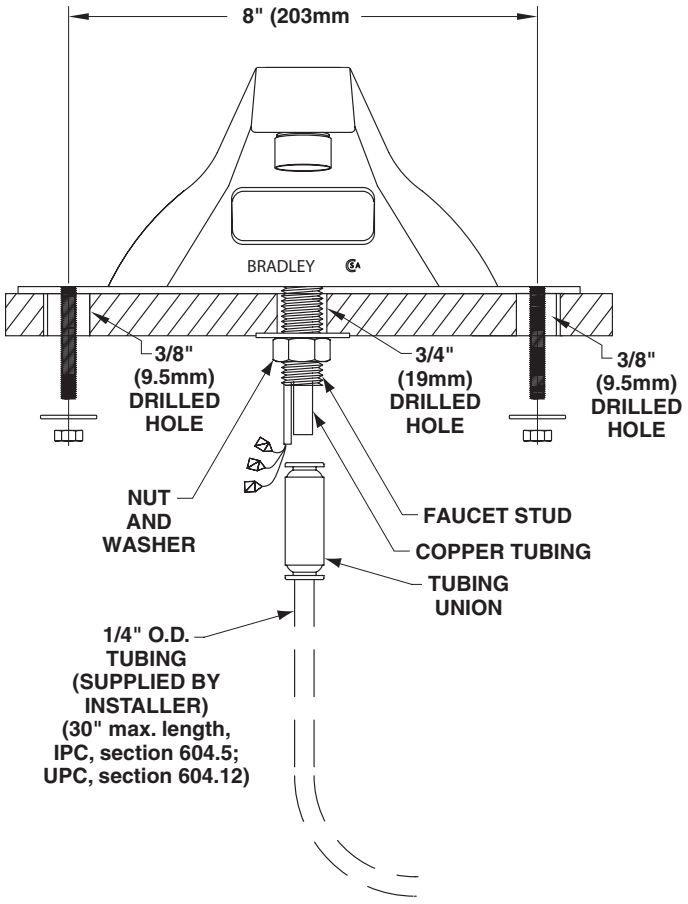


1 Mount the 900 Series Futura (AZ) Faucet

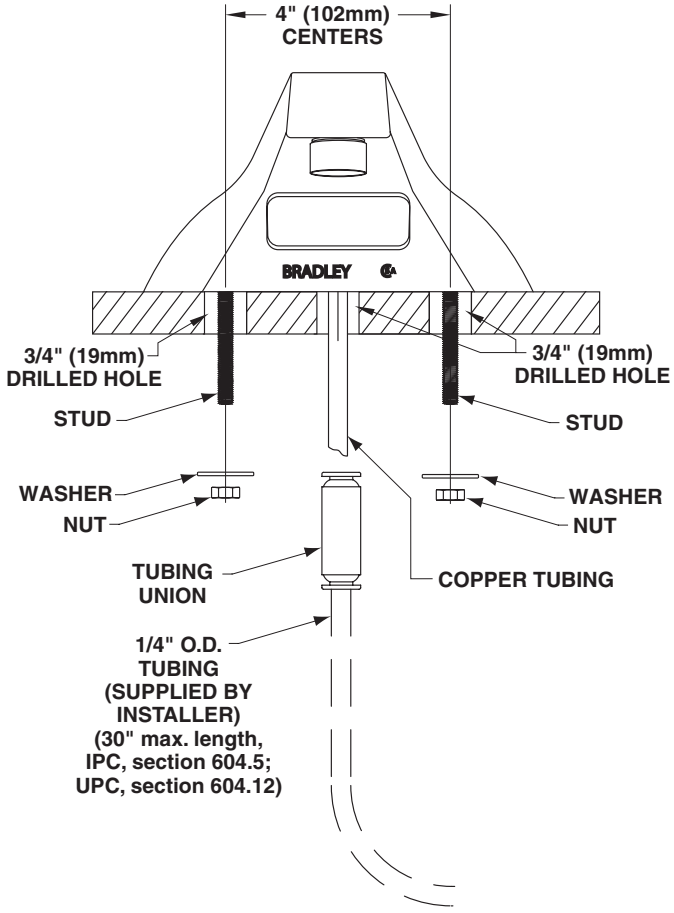
900 Series Futura (AZ) Faucet Dimensions



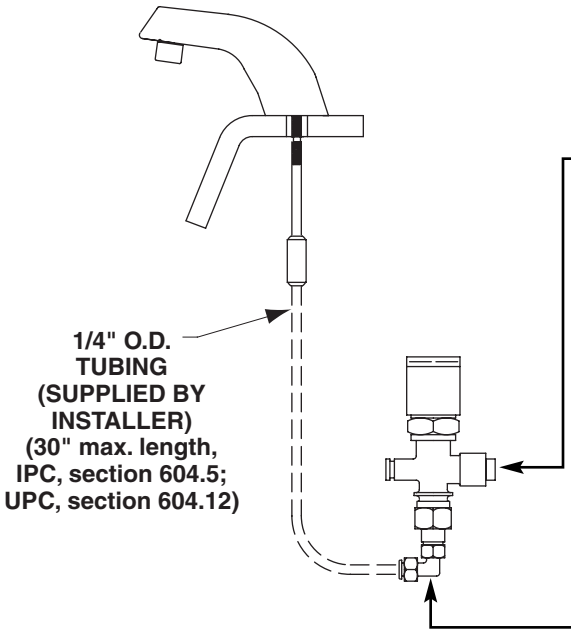
900 Series Futura (AZ) with Centershank (shown with optional 8" trim plate)



900 Series Futura (AZ) with 4" Centerset



2 Connect the Water Supply



A **Connect the tempered or cold water supply to the solenoid valve's 1/8" female NPT supply inlet fitting (piping supplied by installer).**

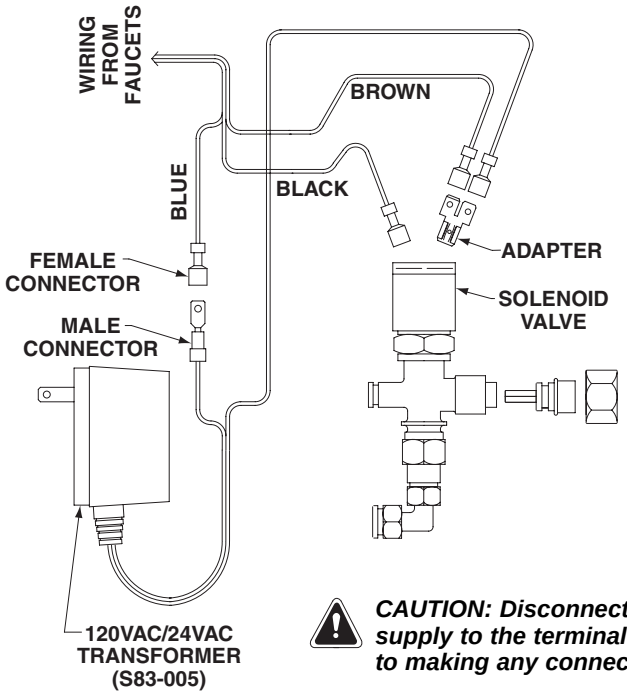
NOTE: Twenty inches (508mm) of wire and six inches (152mm) of copper tubing are provided with the faucet.

B **Insert 1/4" O.D. copper (or plastic) tubing from the faucet into the solenoid tailpiece. Cut tube squarely as required.**

NOTE: DO NOT crush the end of the tubing. Tube end MUST be square and inserted completely to obtain a good seal with the fitting.

3 Connect the Electric Supply

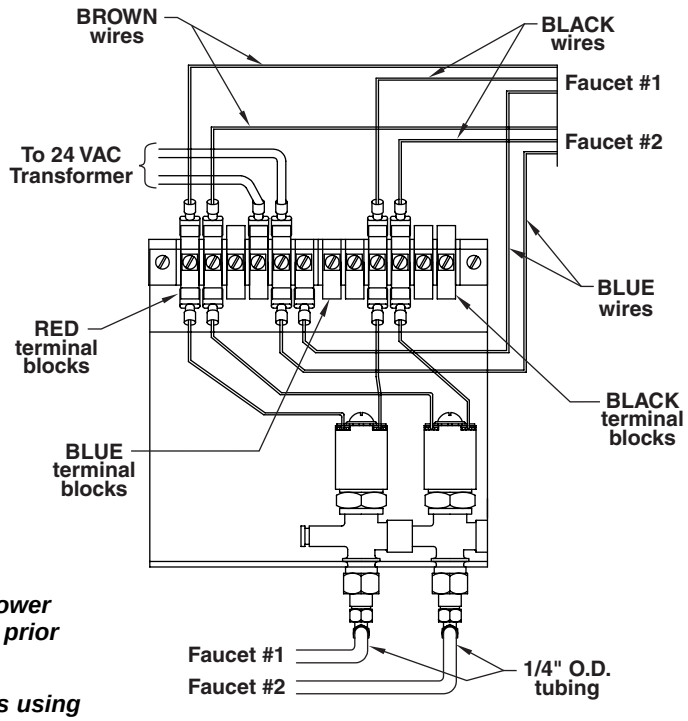
Single-Faucet Installation



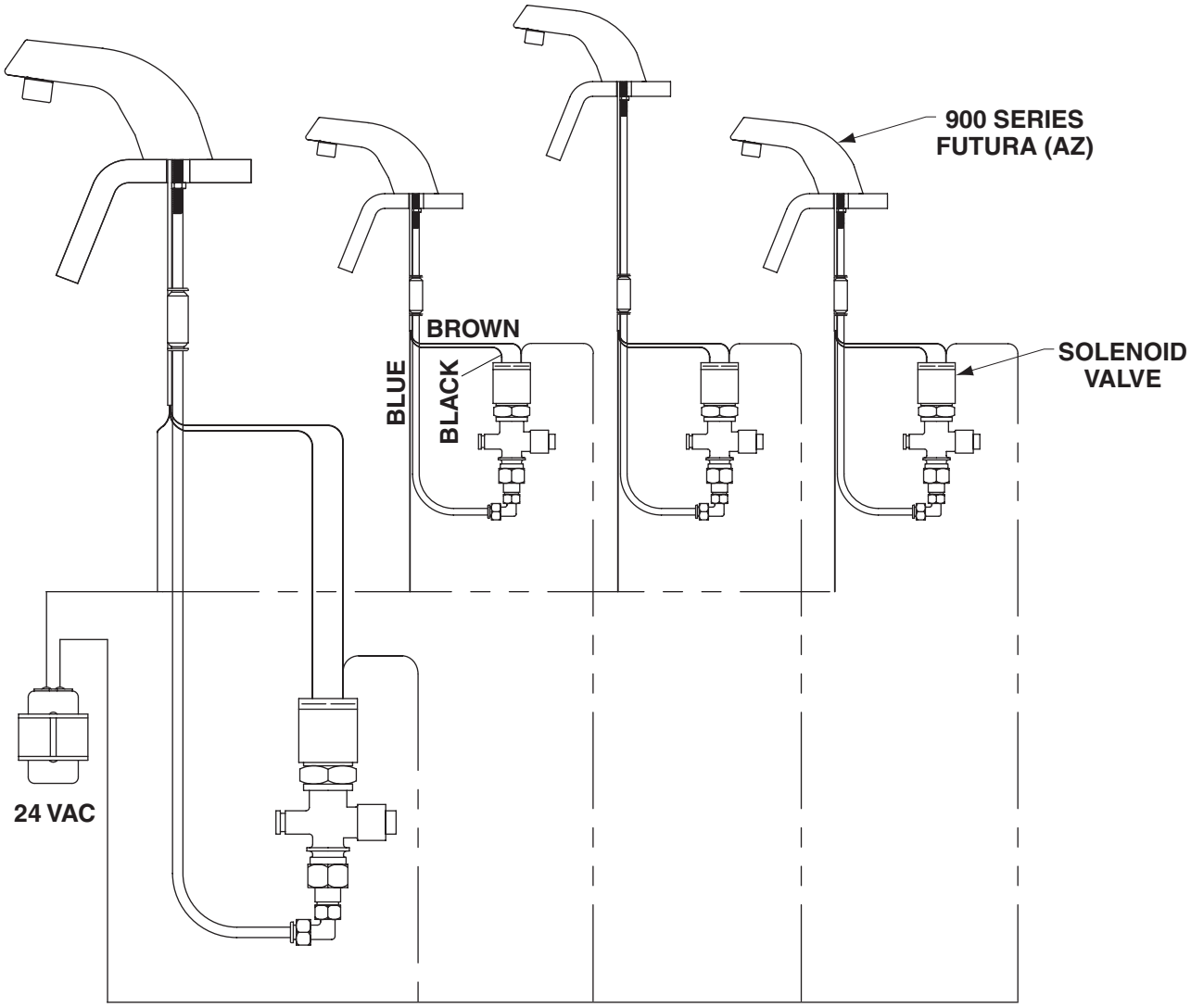
CAUTION: Disconnect the power supply to the terminal block prior to making any connections.

NOTE: Bradley recommends using a switched circuit for ease of cleaning and maintenance.

Dual-Faucet Installation



Multiple-Faucet Installation



Solenoid Valve Troubleshooting

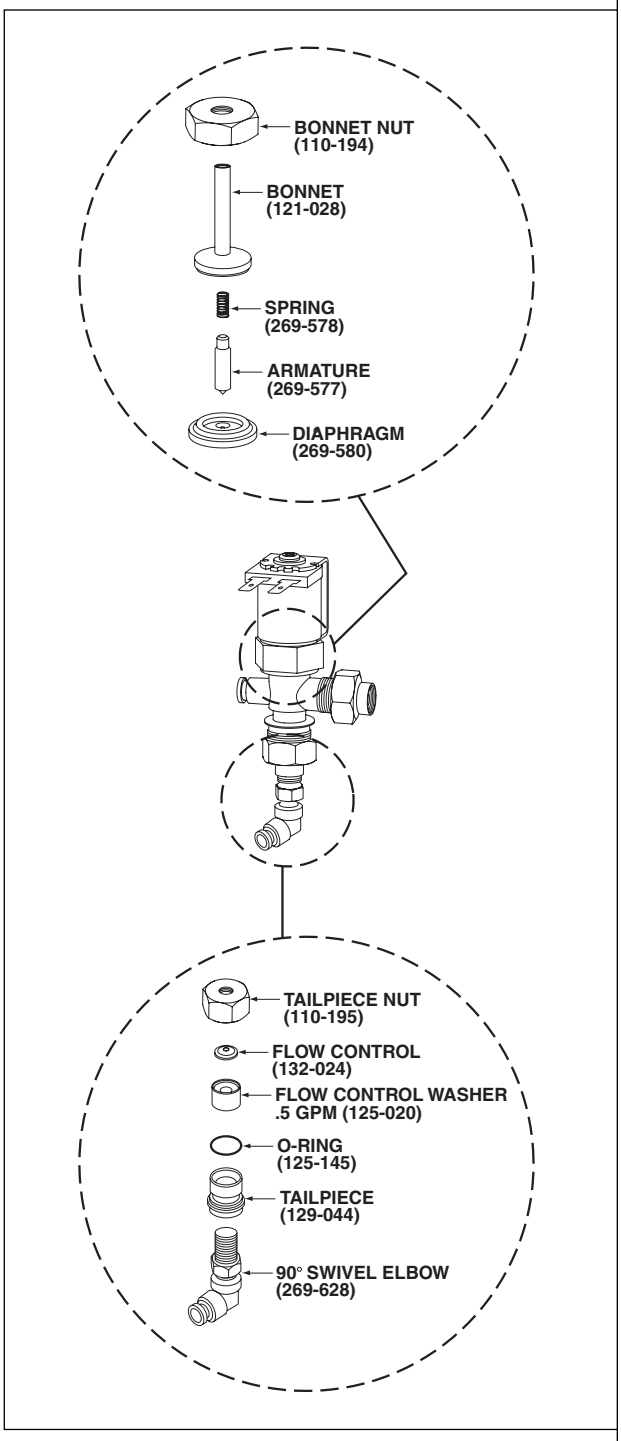
PROBLEM: An individual operating station drips and fails to shut off.

CAUSE: There is debris trapped between the diaphragm and the valve seat.

SOLUTION: Remove debris between the diaphragm and the valve seat.

1. Using a small wrench, loosen the bonnet nut, unscrewing counterclockwise, and gently tip forward to remove from the valve body. Be careful not to lose the armature or spring.
2. Remove the diaphragm. Remove any particles that have been trapped between the diaphragm and the valve seat. Rinse off the diaphragm and inspect for damage. Make sure both orifices are open.
3. Reassemble in reverse order. Do not overtighten the bonnet nut or you may crack the plastic valve body. Hand tight plus 1/8 turn is sufficient.
4. Reconnect the wiring per diagram on page 6 (for single- or dual-faucet installation) or page 7 (for multiple-faucet installation).

NOTE: For instructions on cleaning the solenoid filter, see page 9.



PROBLEM: An individual operating station fails to turn on.

CAUSE: A failed coil for the valve, or loose electrical connection to the terminal.

SOLUTION: Test the station to determine the cause.

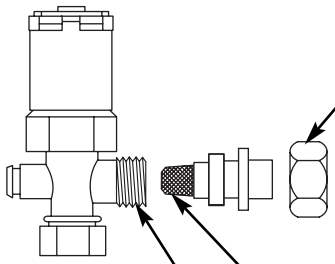
1. Disconnect the wires from the coil of an adjacent valve. Disconnect the wires from the problem valve and reconnect to the adjacent valve.
2. Turn on electrical and water supplies to the unit. Pass your hand in front of the sensor of the problem station, and the adjacent station should operate.

   If the adjacent station operates and cycles normally, replace the coil on the problem valve.

   If the adjacent valve fails to turn on, inspect the wires from the sensor cable and do the following:

   - make sure there are no breaks and that the fully insulated disconnect terminals are firmly crimped in place;
   - turn off electrical and water supplies;
   - reconnect to the adjacent valve and turn on electrical and water supplies to the unit
   - pass your hand in front of the sensor. If the station still fails to turn on, replace the sensor (for instructions on replacing the sensor, see page 9).

Cleaning the Solenoid Filter



A **Unscrew the filter nut to access the filter.**

B **Flush the filter clean with water.**

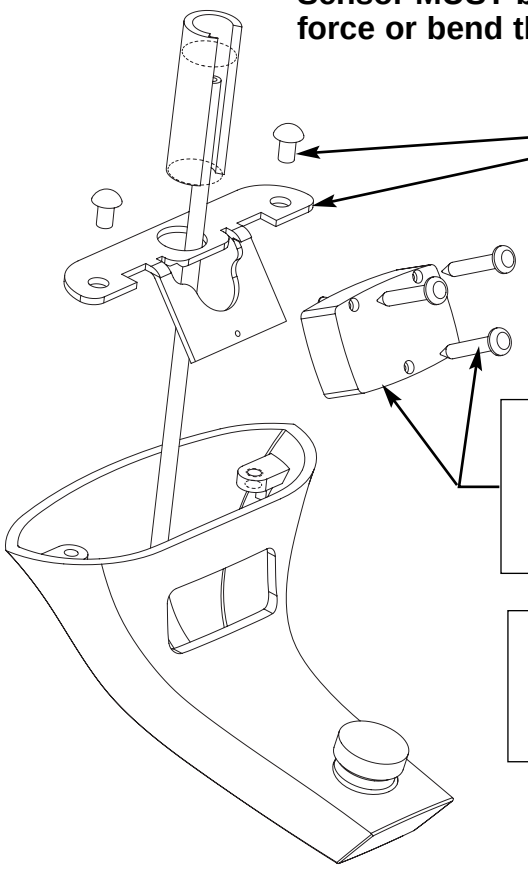
C **Reconnect the filter nut to the solenoid.**

NOTE: Hand-tighten only! DO NOT overtighten!

Replacing the 900 Series Futura (AZ) Sensor

WARNING: To avoid personal injury and/or damage to the faucet, TURN OFF the electrical power and water BEFORE beginning any cleaning, troubleshooting or maintenance task.

Sensor MUST be flush to and parallel with the lens as shown. DO NOT force or bend the bracket!



A **Remove the screws from the bottom of the faucet body and remove the bracket from the faucet shell.**

B **Remove the screws securing the existing sensor to the bracket and remove the sensor.**

Secure the new sensor to the bracket with the screws.

C **Reinstall the faucet according to the instructions on page 5.**

Connect the sensor wire leads as shown on page 6.

Vernatherm™ Valve Troubleshooting

NOTE: Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:

- *If stop/check valves are used, make sure that they are fully open*
- *Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop/check valves*
- *check the hot water heater output to make sure that it is at least 20° F above the set temperature.*

Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

NOTE: Refer to the Vernatherm™ parts list on page 11 when troubleshooting the valve.

Problem: Limited water flow

Cause: Dirt and debris have built up in the valve or strainer.

1. Remove and clean the strainer. If strainer needs to be replaced, order Bradley part no. 173-028.
2. Check the piston for smooth movement.

To check the valve's piston for free and smooth movement, follow the procedures outlined below:

1. Remove the valve's cap and thermostat.
2. Push down on the piston with your finger (the piston should move freely). If the movement is not as it should be, the piston needs to be cleaned. Follow the method outlined below for cleaning the piston and valve body:
   - Remove the thermostat.
   - Lift the piston out with a needle-nose pliers and remove the spring.
   - Any cleaner suitable for brass and stainless steel may be used (if cleaning with suitable cleaner is not sufficient to remove debris, a 400-grit sandpaper may be used to polish and hone the piston and valve body).
   - Snap spring into piston (will detent) and reassemble into the valve body. Retest the piston.
3. If, after a thorough cleaning, the piston does not move freely, the piston must be replaced. Contact your Bradley representative and ask for Repair Kit (part number S65-259).

Problem: External leaks in the system

Cause: O-rings have been damaged.

Solution: Replace O-rings where necessary. For replacement of the O-rings, contact your Bradley representative and ask for Repair Kit (part number S65-259).

Problem: Improper water temperature or temperature fluctuation

Cause: Thermostat is slowly failing or not working at all.

Solution: Check the thermostat for proper operation.

1. At room temperature (80° F or less) remove cap and thermostat.
2. Place thermostat into container with 115° F water. The pushrod should pop out of the thermostat approximately 1/10".
3. If thermostat pushrod does not pop out, the thermostat must be replaced. Contact your Bradley representative and ask for Repair Kit (part number S65-259).

Cause: Valve temperature is not properly set.

Solution: Adjust the temperature. Using a blade screwdriver, turn the adjustment stem **counterclockwise** to **increase** the temperature or **clockwise** to **decrease** the temperature.

Vernatherm™ Thermostatic Mixing Valve S59-4004XS

Repair Kit S65-259

Item	Qty	Description
4	1	Thermostat
6	1	O-Ring
7	1	O-Ring

S45-2082 Checkstop and Supply Hose Kit