

If, at any time, you are not 100% satisfied with the Intellifaucet, you may return it for replacement or a refund, whichever you prefer. Call Hass Manufacturing Company at (518) 274-3908 prior to returning the product for a return authorization number and shipping instructions.

## COPYRIGHTS AND PATENTS

This manual, computer programming, printed circuit board designs, and product design are copyrighted by Hass Manufacturing Company, with all rights reserved.

The Intellifaucet is patented.

## SAFETY

The Intellifaucet uses 12 volts DC in the main unit. Follow these safety precautions when using the Intellifaucet:

- Use grounded outlet
- Do not bypass any fuses
- Do not open the case when power is applied
- Do not submerge the Intellifaucet or the power supply in water.

\*\*\* IMPORTANT \*\*\*

Observe all safety precautions when using any electrical appliance.

## FCC NOTICE

The Intellifaucet generates and uses radio frequency energy. If not installed in accordance with the operating instructions, technical and service information, it may interfere with radio and television reception.

The Intellifaucet has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules. These rules are designed to provide reasonable protection against such interference when operated in a residential area. If the unit interferes with radio or television reception, which can be determined by switching the unit off and on, the user is encouraged to try one of these actions:

- Move the receiving antenna
- Relocate the receiver with respect to the Intellifaucet

• Plug the Intellifaucet into a different electrical outlet from the radio or television so the Intellifaucet and the receiver are on different branch circuits.

If necessary, contact Hass Manufacturing Company for additional suggestions. The manufacturer is not responsible for any radio or television interference caused by unauthorized modifications to this equipment.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

## OTHER PRODUCTS

Contact HMC for sales literature on any of the following products:

1. Intellifaucet Computer-Controlled Bath and Shower Valve - Installs in shower wall for no-scald, no-freeze showers. Ask for Data Sheet 10692.
2. Intellifaucet Batch and Temperature Control System - Dispenses fixed quantities of water at precise temperature. Ask for Data Sheet 10603.
3. Intellifaucet "K" series Computer-Controlled Mixing Valves - For flow rates from 0.5 to 42 GPM. Ask for Data Sheet 10537.
4. Electronic Control Valve - Proportional valve for industrial applications. Ask for Data Sheet 10540.

# Hass Manufacturing Company

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Part No. 10750  
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## INSTRUCTIONS

### 1092 INTELLIFAUCET D250 COMPUTER CONTROLLED MIXING VALVE

## INSTALLATION

### Requirements

Adequate supplies of hot and cold water must be provided. WATER MUST BE FILTERED WITH 50 MICRON OR FINER FILTER MEDIA. Do not connect the output of the Intellifaucet to a closed system (such as a processing machine) without using an anti-siphon vacuum breaker, such as a Watts 288A. For instant hot water, install a recirculating loop on the hot water supply. A chiller may be needed to get very cold water.

### Mechanical Connections

The Intellifaucet is shipped mounted to the wall bracket. Fasteners are supplied to attach the wall bracket to wood or masonry walls. Use unions on all pipe connections. Use a flat bladed screwdriver to open and close the valves. Remove access caps and put screwdriver in slot of motor shaft.

1. Prepare mounting surface, attach wall bracket and attach Intellifaucet to the bracket.
2. Connect pipe fittings to the Intellifaucet valves. HOT IS ON THE LEFT; COLD IS ON THE RIGHT.
3. Connect the pipe fitting to the outlet.
4. Close valves and slowly pressurize the system checking all connections for leaks.
5. Flush air from the system by slowly opening the valves.
6. After the air is flushed from the system, gently close the Intellifaucet's valves by hand.

### Electrical Connections

1. Connect the Intellifaucet to the AC adaptor.
2. Plug the AC adaptor into an OUTLET

5634  
Ser. # 9910-1092-0003

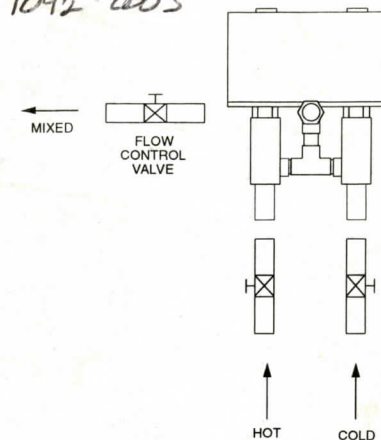


FIGURE 1- MECHANICAL CONNECTIONS

EQUIPPED WITH A GROUND FAULT INTERRUPTER.

## OPERATION

To start the Intellifaucet, rotate the control knob to the desired temperature setting. The water will turn on. The ready light glows when the temperature is within 0.5 degree F of the setting. Rotate to off to turn off the water. Use an external valve for flow control.

## MAINTENANCE AND REPAIR

### Seat seal replacement

The seat seals and plunger are replaced as a unit called the plunger assembly. When replacing the plunger assemblies, replace the stem seal O-rings. New plunger assemblies and O-rings are available from HMC. (NS) means not shown in the figure.

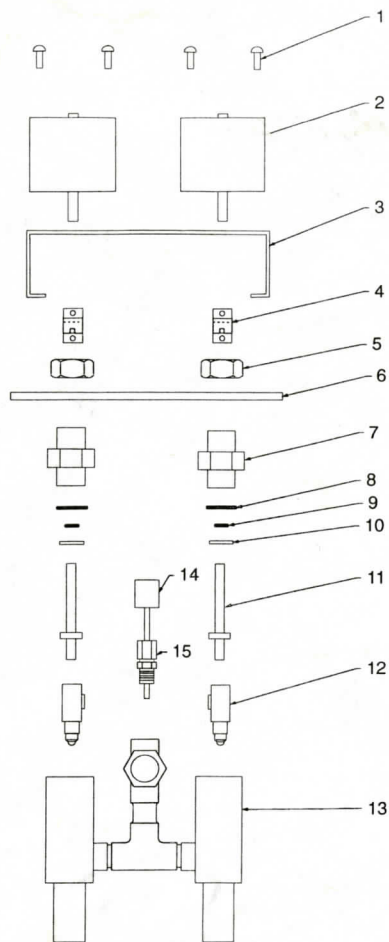


FIGURE 2 EXPLODED DIAGRAM

**PARTS LIST**

1. Screw (12)
2. Step Motor (2)
3. Motor Platform (1)
4. Coupling (2)
5. Nut (2)
6. Plate (1)
7. Bonnet (2)

8. O-ring, Bonnet (2)
9. O-ring, Stem (2)
10. Thrust Washer (2)
11. Stem (2)
12. Plunger Assembly (2)
13. Faucet Assembly (1)
14. Thermocouple Probe (1)
15. Compression Fitting (1)

**Disassembling the Intellifaucet**

Removing the cover

1. Unplug the AC adaptor (NS).
2. Turn off the water supplied to the Intellifaucet.
3. Remove the caps (NS). Insert a flat blade screwdriver into the slot on the motor shaft. Open the valves one rotation by rotating counterclockwise as seen from above.
4. Remove the 6 cover screws (NS).
5. Gently lift the cover (NS) straight up. Avoid damaging the front panel gasket (NS).
6. Remove the two screws (NS) holding the front panel (NS) to the base. These screws are located on the underside of the base.
7. Gently disconnect the thermocouple plug (NS) (bright yellow).
8. Pull the front panel forward and away from the unit and set aside.
9. Remove the 2 faucet-base retaining nuts (#5).
10. Gently lift the base (#6) off the faucet and set aside.
11. Loosen the bonnet (#7).
12. Remove the bonnet (#7). While unscrewing the bonnet, hold the stem (#11) stationary to prevent it from jamming up against the underside of the bonnet. The stem assembly is removed with the bonnet.
13. Unscrew the plunger assembly (#12) from the stem (#11). This is a left hand thread.
14. Loosen the coupling (#4) set screws and remove the coupling from the stem (#11).
15. Remove the stem (#11) from the bonnet (#7) exposing the O-ring (#9) inside.
16. Replace the O-ring (#9) with a fresh one. Lubricate the O-ring with Parker Super O Lube or equivalent (silicon-based grease) when assembling. Lubricate the stem threads with Never-Seez or food grade anti-seize lubricant.

Reassemble in reverse order of disassembly.

**IMPORTANT! MAKE SURE SEAT SEAL IS NOT SEATED WHEN TIGHTENING BONNET.**

**CALIBRATION**

Adjust the SPAN screw and the ZERO screw to calibrate the Intellifaucet as follows.

Calibration Procedures

1. Set a 16 ounce container so that the outlet of the Intellifaucet fills the container and spills over into a drain.
2. Place a reference thermometer in the 16 ounce container.
3. Set the Intellifaucet for 68 degrees F. Press START.
4. Wait 2-5 minutes. Read and record the reference temperature.
5. Set the Intellifaucet for 102 degrees F. Press START.
6. Wait 2-5 minutes. Read and record the reference temperature.
7. Set up a table as follows: (example values)

T setpoint	T actual	Difference (T actual - T setpoint)
70.0	69.2	-0.8
105.0	104.1	-0.9

There are four possible cases:

- Case 1: Both differences equal 0. The unit is calibrated.
- Case 2: Both differences are equal, but not equal to 0. Rotate the ZERO pot clockwise to lower the actual temperature, counterclockwise to raise it. Start over at 4 until results lead to Case 1.
- Case 3: The difference at the higher temperature is more positive than the difference at the lower temperature. Rotate the SPAN pot screw counter-clockwise. Start over at 4 until results lead to Case 2.
- Case 4: The difference at the lower temperature is more positive than the difference at the higher temperature. Rotate the SPAN pot screw clockwise. Start over at 4 until results lead to Case 2. Repeat calibration as needed.

**TROUBLESHOOTING**

If a problem exists which is not listed in the chart, contact HMC. We will help you to solve the problem as quickly as possible.

Symptom	Cause	What to do
Valves do not open	over-tightened	loosen valves with screw-driver
Nothing happens	Power cords not connected	Check cables
	Device is not plugged in	Plug in
Valves cycle	Supply to valves not correct	Check plumbing - Hot on left cold on the right
	Flow is restricted	Check plumbing

**CLEANING**

Clean the Intellifaucet with a mild soap on a damp cloth. Do not use cleanser or other abrasive cleaners as they may scratch the surfaces.

**WARRANTY**

Hass Manufacturing Company (HMC) warrants the Intellifaucet main unit, power supply and cabling against defects in materials and workmanship for a period of Five (5) years from the date of original retail purchase. If you discover a defect, HMC will, at its option, repair, replace, or refund the purchase price of the product at no charge to you, provided you return it during the warranty period, transportation prepaid, to HMC. Prior to returning the product for warranty consideration, call Hass Manufacturing Company at (518) 274-3908 for a return authorization number and shipping instructions.

This warranty does not apply if the product has been damaged by accident, misuse, abuse or misapplication, has been modified, or if any serial number has been removed or defaced.

**SATISFACTION GUARANTEE**