

## **BEFORE YOU BEGIN - Just Right® Installation Tips**



Just Right is designed to be used in a single loop plumbing system. Just Right will not work in systems where there is any type of restriction within the recirculation loop such as a check valve, trap, pre-heat tank, filter or water softener. This includes the check valves or heat traps built into certain water heaters as an energy savings feature. If you are unsure if your water heater has such a device, contact the water heater's manufacturer prior to installation of Just Right.

All of the hot water plumbing in the loop, including the return line, must be above the water-heater tank. The #1 recommended position for the Just Right is 18" above the water heater in the drop line to the water heater. If possible, avoid branching off from the cold-water supply between the Just Right and the water heater.

The recommended installation of the return line is from the farthest fixture back to the Just Right, creating a continuous, downward slope. Long horizontal segments or trap bends along the return line may limit the effectiveness of the Just Right.

The return line should not be insulated and should not be of a material that is a better insulator than the supply line.

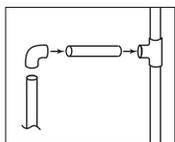
NIBCO recommends a bleed valve in the return line just before it connects to the Just Right for bleeding air out of the return line.

Variations in plumbing system dynamics may cause noise or turbulence resulting in "clicking" or "thumping" sounds. Installation of a piston-activated water-hammer arrestor or creating a bypass line around the Just Right may be necessary to alleviate these situations.

Multiple return lines may be used to service opposite ends of a system with a centrally located water heater. In such instances, flow-balancing valves will be necessary on each return line prior to converging into the Just Right via a tee connection.

*For technical assistance, please call NIBCO Technical Services at 1-888-446-4226.*

*Printed on recycled paper using soy based inks.*



**STEP NO. 3:** This tee is the beginning of your return line:

- To this tee, connect a straight length of 1/2" tube that extends no more than 1-1/2" from the stub end of the tee.

- To the end of that length, attach a 90° elbow.
- From that elbow, route the return line through the house to the **Just Right**® unit. But do not yet connect the return line to the unit.
- The return line does not have to be installed with a downward grade.
- Small traps should not be a problem.

**STEP NO. 4:** Purge the entire system of air. First, open the main water valve. Then open all of the faucets in the building.

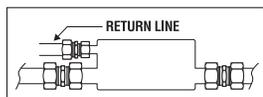
**If no reduction in riser, go to Step No. 5**

**If reduction in riser:**

- Remember return line is not attached.
- Water will flow out of return line, use hose or bucket to catch water.
- Make sure all air is purged from return line and go to Step No. 6.

**STEP NO. 5:** Purge all the air from the return line by momentarily opening the shutoff valve controlling the farthest hot-water faucet. This action will prevent the line from becoming air-locked, resulting in valve shudder, water hammer, and poor or no convection flow. If any traps have been plumbed into the return line, take extra care when purging the system of air.

- Remember return line is not attached.
- Water will flow out of return line, use hose or bucket to catch water.



**STEP NO. 6:** Connect the return line to the **Just Right**® unit using the 1/2"x 5/8" compression fitting provided.

**STEP NO. 7:** Turn on the tap at the farthest hot-water faucet and let it run until the hot water arrives.

The **Just Right**® unit is now ready for operation, with no maintenance or service required.

FLOW THROUGH CAPACITY		
Supply Pressure (psi)	Flow rate (GPM) <i>Just Right</i> ®	Flow rate (GPM) 3/4" Type L Copper Tube
40 psi	12.0	14.0
60 psi	17.0	18.5
80 psi	19.5	20+

### Helpful Hints

- **The main hot-water service line to the building must be located above the water heater.**
- Maximum one unit per main cold water inlet to building.
- The device works best in a single plumbing loop.
- Maximum two loop system can be used if return lines are tied together just before return line stub out. Valves for balancing are needed in the return lines.
- No restriction to the direction in which the **Just Right**® can be installed. Follow the flow arrows.
- The return line is normally laid adjacent to the hot and cold water lines. Unless there is a shorter way back to the **Just Right**® unit, follow their routes.
- The entire hot-water loop, including the return line, must be completely purged of air for the **Just Right**® unit to work properly.
- **Just Right**® has a built-in check valve. This prevents cold water flow into the hot water line.
- The **Just Right**® unit will break the electrical continuity of a copper plumbing system. If you are grounding to such a system, you should refer to local codes.
- **The *Just Right*® recirculation device includes a rolling plastic ball that seats in position as differential pressure occurs when faucets are turned on/off or as mixing of hot and cold water is demanded. Associated with these natural occurrences in some installations, is a hydraulic noise, typically heard as a thumping sound that accompanies the seating of the ball.**

Patent #5,331,996; 5,518,022

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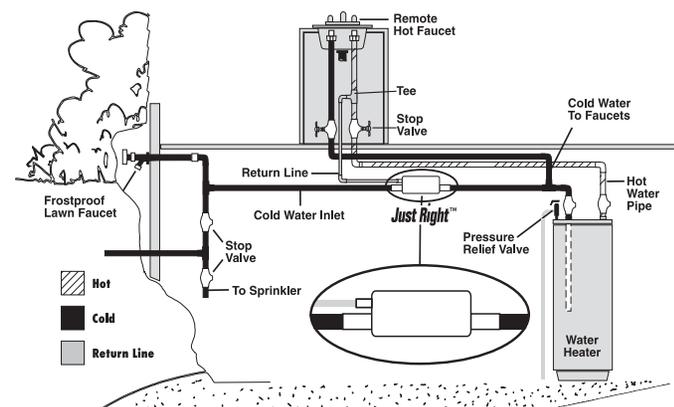
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# Just Right.™

Hot Water In Seconds!

## Installation Instructions

### What is *Just Right*®?



**Just Right**® is a hot water-circulating device that joins the water heater and potentially every hot-water outlet in the home in a single plumbing loop. Made with NIBCO FlowGuard® Gold™ CPVC (chlorinated polyvinyl chloride), the unit uses the principle of convection to keep hot water rising and cold water falling in a recirculation loop. This creates a continuous stream through the loop, delivering hot water within seconds after turning on the tap.

### Where can I install *Just Right*®?

**Just Right**® is intended for use in residential and some light commercial applications, including both new and existing structures.

## How do I begin?

**STEP NO. 1:** Make certain, for both new and retrofit work, that your main hot water line is positioned above your water heater. This condition will usually be found in buildings with basements or crawl spaces. The water heater is typically located in these areas, with the hot-water line running above it. **Just Right** will also work in buildings with slab construction, but only if the hot water line is positioned above the water heater—not in the slab.

**STEP NO. 2:** Make certain, if you are retrofitting, that you can run a return line between the faucet farthest from the water heater and the **Just Right** device. If you are not sure, call NIBCO at 1-888-350-0833.

**STEP NO. 3:** Make certain to read all the installation instructions on the following pages. Installation by a licensed plumber is recommended.

## What parts and supplies do I need?

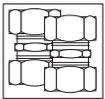
The **Just Right** package includes all three compression fittings you need to connect the device to the recirculation loop:

- One 1/2" x 5/8" fitting: the 1/2" side of the fitting connects to the 3/8" stub-out on the device; the 5/8" side connects to the 1/2" hard-copper return line from the farthest hot-water faucet in the loop.

**NOTE:** On retrofit projects, where permitted by local plumbing codes\*, it may be easier to create the return line using 3/8" soft copper tubing. In that case, substitute a 1/2" x 1/2" compression fitting for the 1/2" x 5/8" compression fitting provided.



- Two 7/8" x 7/8" compression fittings for connecting the stub-outs on either side of the **Just Right** device to the 3/4" copper or CPVC water-supply line.

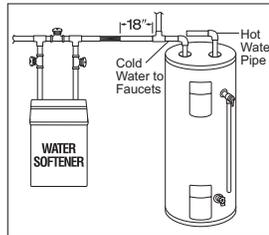


\*The plumbing code in Massachusetts, for example, requires hard copper tubing.

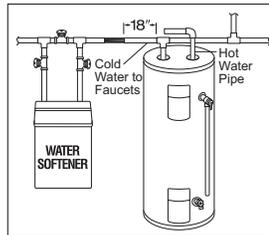
## Installing the **Just Right** Device

**STEP NO. 1:** Turn off the water supply at the main shutoff valve. Then turn on a faucet to drain the plumbing system of all water.

**STEP NO. 2:** Locate the point of installation by finding the main, cold-water offshoot from the cold-water pipe that contains the main shutoff valve and supplies the water heater.



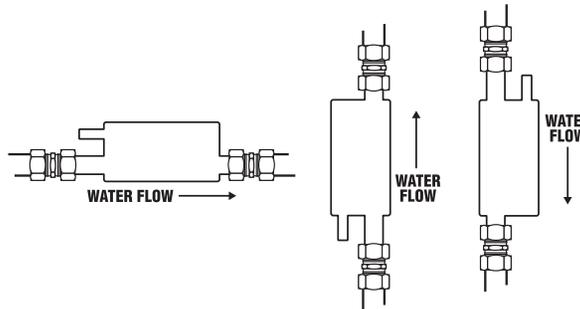
- If this offshoot is situated before the water heater, locate the point of installation 18" to 24" upstream from the offshoot; that is, back toward the main shutoff valve.



- If this offshoot is situated after the water heater, locate the point of installation 18" to 24" upstream from the tee that branches off the main cold-water line to the water heater.

**NOTE:** The 18" represents the maximum amount of warm water flowing through the cold-water side-convective process.

- If the system has a water softener, locate the point of installation after the softener connection and before the offshoot.

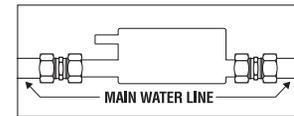


- There is no restriction to the direction in which the **Just Right** can be installed. Just follow the flow arrows.

**STEP NO. 3:** Install the **Just Right** unit into the cold-water pipe. If you are retrofitting, you must make two cuts into the cold-water pipe:

- The first cut should be positioned right at the point of installation.
- The second cut should be positioned 9-1/4" upstream; that is, toward the main shutoff valve.

■ Make these two cuts and discard the 9-1/4" section of tubing. Fit a garden hose over the upstream segment, with the hose's opposite end leading to a floor drain. Then open the main shutoff valve to clear the line of any excess solder, flux or debris.



Finally, use the two 7/8" x 7/8" compression fittings to connect the two, larger stub-outs on either side of the device to the water line.

## Installing the Return Line

For the **Just Right** device to work properly, you must connect it to the hot water faucet that is farthest and at the highest most accessible point from the water heater. NIBCO recommends that you use 1/2" hard copper tubing or 3/8" soft copper tubing, where permitted by local plumbing codes\*, for this return line. However, if the plumbing system is made of CPVC, this material is also acceptable for the return line.

**NOTE:** Making this tee connection off the riser to the farthest hot-water faucet should be no problem on a new-construction project. Every retrofit situation, however, is different. The layout of the plumbing system may prevent you from making that tee connection without substantial alterations. If that is the case, locate the tee in the main hot-water line as close to the farthest hot-water faucet as is accessible.

### If no reduction in riser...

**STEP NO. 1:** Locate the farthest hot-water faucet and close its shutoff valve, located under the sink or lavatory.

**STEP NO. 2:** Install a tee in the hot-water riser between that hot water tap and its shutoff valve. Go to Step No. 3.

### If reduction in riser...

**STEP NO. 1:** Locate the farthest hot water faucet.

**STEP NO. 2:** Install the tee in the hot water riser as high as possible before the shut off valve. Or in the riser just before the subfloor.