

LIMITED WARRANTY

Products manufactured by ReadyTemp Corporation, are warranted to the original consumer only, and to be free of defects in material and workmanship for a period of **two (2) years** from the date of purchase. All terms of this warranty shall only be valid if the READYTEMP® OPTIMIZER has not been tampered with or show signs of abuse, we will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair, or if the product was not installed in accordance with printed installation and operation instructions. To obtain service under this warranty, the defective product must be returned to the distributor, dealer of *ReadyTemp Corporation* from which it was purchased and must be accompanied by a copy of the original invoice, proof of purchase and installation date, failure date. The distributor or dealer will contact the *ReadyTemp Corporation* Factory Service Department for instructions. Any defective product to be returned to the factory must be sent freight prepaid, with documentation supporting the warranty claim. This warranty is in lieu of any other warranties, expressed or implied

ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE LIMITED IN DURATION FOR THE **TWO (2) YEAR** PERIOD SPECIFIED ABOVE IN THIS LIMITED WARRANTY. OUR OBLIGATION UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS OF THE READYTEMP OPTIMIZER HOT WATER CIRCULATING SYSTEM.

Limitation of Liability

Regardless of whether any remedy set forth in this agreement fails of its essential purpose, to the extent permitted by law, in no event will ReadyTemp Corporation, be liable to you for any loss of time, inconvenience, lost profits, lost savings or incidental expenses, indirect, incidental, special or consequential damages, arising out of your use or inability to use the product or the breach of this agreement even if advised of the possibility of such damages, whether from corrosion or any other causes. ReadyTemp Corporation, reserves the right to change the design in its products without any obligation to modify any previous product this warranty is in lieu of any other warranties, expressed or implied.

Damages

Under no circumstances and under no legal theory, tort, contract, or otherwise, shall ReadyTemp Corporation or its suppliers or resellers be liable to you or any other person or entity in any way for any indirect, special, incidental, or consequential damages of any character including, without limitation, damages for loss of goodwill, work stoppage, or any and all other commercial damages, residential damages or losses, or for any damages of any kind or nature in excess of ReadyTemp Corporation, list price for the product purchased, even if ReadyTemp Corporation, shall have been informed of the possibility of such damages, or for any claim by any other party. Furthermore, some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation and exclusion may not apply to you. You assume full responsibility for the selection of any product(s) purchased from ReadyTemp Corporation To achieve your intended purposes, for the proper installation and use of any product(s) purchased from ReadyTemp Corporation And for verifying the results obtained from use of said product.

NOTE: A small amount of water, if any, in your READYTEMP® OPTIMIZER is the result of QC testing. In keeping with Green Friendly Company qualification guidelines multiple types of packing materials, i.e. used air filled bags, used shipping container, bubble wrap, miscellaneous stuffing materials, foam popcorn, etc recycled from part shipments or other previous shipments we receive. Recycling reduces needless land filling, is good for the environment and should not be mistaken as indicators of being a used product.

Inspect and immediately report any damage or concerns of quality upon receipt by calling ReadyTemp Corporation at 760-586-6030

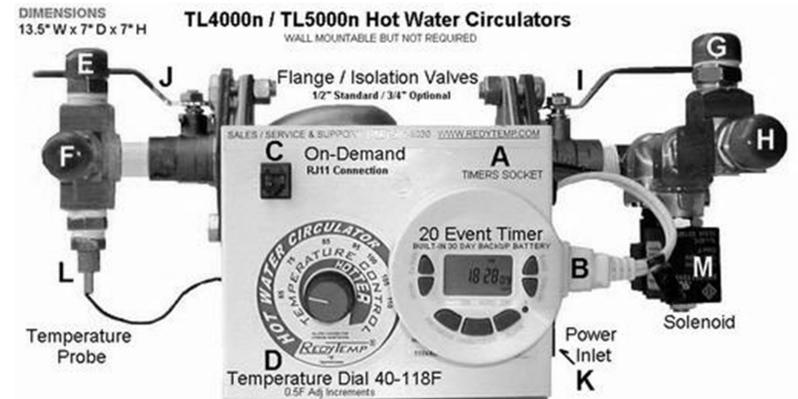


HOT WATER *OPTIMIZER*

CONVENIENCE – COMFORT – CONTROL – EFFICIENCY

TL 4000/5000

ON-DEMAND ♦ CIRCULATOR ♦ RE-CIRCULATOR
AND
FREEZE PROTECTION



CAUTION: To AVOID DAMAGING solenoid NEVER PUT PRESSURE or LEVERAGE on "M". USE WRENCHING POINTS ONLY

IF DESIRED: The HOT (left) and COLD (right) assemblies rotate by loosening the two (2) flange bolts.

NOTE: Connecting supply valves to "F" and "H" is most efficient. "E" and "F" are interchangeable. Same applies to "G" and "H"

OWNERS MANUAL

UNIT SERIAL# _____
on label near timer

CONGRATULATIONS, and sincere thanks from the ReadyTemp family for purchasing the world's most advanced hot water re-circulation / circulation and on-demand system. READYTEMP® OPTIMIZER is engineered with 21st century technology to maximize efficiency, comfort and water savings. The system provides an instant (Ready) means of optimizing the water temperature (Temp) throughout your home, giving your entire family the convenience of instant hot water at your desired temperature and readiness. And, by using the READYTEMP® OPTIMIZER system, the conservation of our earth's precious water supply is an added benefit.

It has always been our goal to offer consumers the best technology, the highest quality in a homeowner friendly appliance that will supply many years of service and convenience to discriminating consumers. We extend our appreciation to you for incorporating the READYTEMP® OPTIMIZER into your household appliances, and trust that you too will want to be added to our list of satisfied customers.

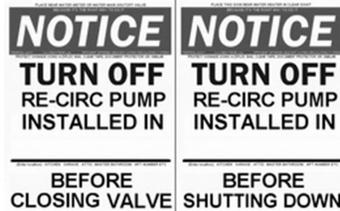
Sincerely,

The ReadyTemp Family

READYTEMP USES A "WATER COOLED PUMP" NEVER OPERATE PUMP WITHOUT WATER. DOING SO MAY DAMAGE UNIT AND VOID WARRANTY.

In keeping with ReadyTemp tradition of "industry first's" We strongly recommend placing the below signage in clear sight of water heater and water main / meter or any / all shut-off valves that directly affect the homes water supply. Doing so alerts person(s) that a recirculation system is installed on the property and must be turned off before shutting off water supply. We also recommend protecting signage / printout with document protector or covering with clear tape to protect from moisture. Half-page sized printouts of this label can be downloaded at:

www.readytemp.com/STOP_BEFORE_CLOSING_WATER_VALVE.jpg



Own a "TANK" water heater? Download our Water Heater Purge Table at

<http://www.ReadyTemp.com/water-heater-purge-table.pdf>

Purging a quart from your water heater every 3 months helps prevent sediment buildup in your water heater making it last longer and run more efficient

ReadyTemp Corporation
www.ReadyTemp.com

ON-DEMAND PUSH BUTTON OVERRIDE CONTROL INSTALLATION **DO NOT** CONNECT TO HOME PHONE JACK OR TELEPHONE (doing so may damage unit and void warranty)

The READYTEMP® OPTIMIZER is engineered with single-cycle override capability or On-Demand hot water delivery via momentary contact of the 2 middle wires in the phone jack of the controller.

The installation is simple and easy requiring a "momentary contact" switch or "NON-ILLUMINATING" (without light bulb or it will always be enabled) doorbell button available at home improvement / hardware stores for around \$2.00. You will also need a single 2 wire or 4 wire phone cord easily available at 99 cent stores or electronics stores. Simply cut the connector off one end of the phone cord, strip and connect the two middle wires within the cord to the momentary contact switch / doorbell switch connection screws. Temporarily unplug the main power cord from the back and then plug the opposite end of the phone cord into the READYTEMP® OPTIMIZER. By pressing the button, "while in OFF-SCHEDULE" operation AND when the water temperature is below set point, the READYTEMP® OPTIMIZER will override the controlled device and run for ONE (1) cycle only (until temp equals set point) and stop. It is easy to imagine the simplistic installation of multiple switches throughout a home using a multi-phone jack connector and run multiple switches within the home. Wireless activation that uses the homes power lines to transmit commands is simple and easy to setup. Read more <http://www.readytemp.com/hotwatercirculationcontrol.htm>



+++ CONNECTING WHITE CONTROL BOX WIRES+++
CAUTION: ELECTRICAL SHOCK HAZARD ALWAYS UNPLUG MAIN POWER
GRASPING FIRMLY CONNECT THE MALE AND FEMALE QUICK-CONNECTORS AS FOLLOWS
CONNECT PUMPS Yellow, White and Green wires to CONTROLLERS Y, W, and G wires
CONNECT Black 2-Wire SET to TEMPERATURE PROBES Black 2-Wires
Plug SOLENOID 3-prong power cord into controller
NOTE: GREEN WIRES are COMMON GROUND



Warning: Discharge static electricity by touching any grounded metal before touching circuitboard or wires

FOR REFERENCE PURPOSES ONLY - FOR SUPPORT CALL
(760) 586-6030 Or email info@ReadyTemp.com

OPERATING INSTRUCTIONS

AUTOMATIC SCHEDULED OPERATIONS:

Utilizing the supplied timer, READYTEMP® OPTIMIZER can be scheduled to have hot water ready during your chosen time periods optimizing your lifestyle and water savings.

MANUAL / SWITCHED OPERATION:

Wireless wall switch controllers can replace the timer as a means of operation, including X-10 home automation products to turn the unit “ON” or “OFF” manually.

PUSH-BUTTON / TIMER OVERRIDE / ON-DEMAND OPERATION:

By installing a momentary contact switch (doorbell button) the READYTEMP® OPTIMIZER can be operated on a single cycle basis as well as allow operation during scheduled-off time periods. Purchase any standard 2 or 4 wire phone cord. Cut one end of the phone cord off and connect the two middle wires from the phone cord to momentary contact switch. Plug the other end of the phone cord into the phone jack on the front of the READYTEMP® OPTIMIZER.

WIRELESS / REMOTE CONTROL:

READYTEMP® OPTIMIZER can be operated “wirelessly” by unplugging the timer and replacing it with any number of wireless / remote outlet control or X-10 home automation devices available at most home improvement stores and the internet.

CONTINUOUS OPERATION:

Can be set for continuous operation by removing the timer and plugging in the short white cord to where the timer was plugged. Now the unit will cycle 24 hours a day based on temperature.

TEMPERATURE CONTROL:

Turn the adjustment knob clockwise to increase the temperature cycle zone, counter clockwise to decrease. Most homeowners set their dial to between the 1 o'clock to 3 o'clock positions on the dial. Finding your homes unique delta-T “sweet spot” can be achieved by following this basic rule: If you turn on the “COLD WATER” faucet where the unit is installed and you get more then 2-3 seconds of “warmish” water then simply turn the temperature control knob counter clockwise “just a hair”. Wait 1 hour for the homes plumbing to adapt to any new settings. Adjust the knob clockwise if the water from the hot water faucet is not hot enough. Setting the temperature dial “too high” will cause “hot” water to be placed into the cold line.

PIPE FREEZE PROTECTION:

READYTEMP® OPTIMIZER Installation should be just past the zone where freezing pipes occur. Initial temperature setting should be 10 – 15F higher than the space temperature where unit is installed. Place unit in continuous operation mode. Protection effectiveness can be measured by opening a cold water tap upstream from the unit and feeling how cool or warm the first-out water feels. If the water is icy cold then raise the temperature slightly and retest in 30 minutes. If system will not be utilized for hot water convenience during other seasons, we recommend programming timer to run one time per week for 5 minutes. Doing so prevents water within the pump from becoming stagnant and has significantly prolonged the life of the pump for others (record is 18 yrs).

VACATIONS / DISABLED OPERATION:

When going on vacation or long periods of no hot water usage or any other time when hot water or no water will be available, simply unplug the power cord from the wall outlet.

PUMP CYCLES / OPERATION:

Many factors influence pumping cycles, i.e. outside temperature, length of water travel, diameter of pipes, pipes in cement slab/foundation, insulated / non-insulated pipes. Anticipating hot water usage periods accurately and using a control which best fits your lifestyle is the second part to an optimized hot water system. Person who travels a lot often find motion sensors or sound sensors to be more efficient then using a timer.

PRECAUTIONS

Before operating the unit, please read this instruction guide thoroughly and with understanding before handling / installing unit. Keep this guide for future use.

IMPORTANT SAFEGUARDS

To avoid electrical shock, unplug main power cord before opening controller. Refer servicing to qualified personnel only. Have a dry towel at the ready when installing or uninstalling unit to wipe up any water on unit or area of installation.

When using electrical products—especially when children are present—basic safety precautions should always be followed, including;

- Operate the unit only on 120—Volt AC.
- **Unplug the unit from the wall outlet when it is not going to be used for an extended period of time.** To disconnect the cord, pull it out by grasping the plug. **Never pull it by the cord.**
- Do not handle the plug or cord or unit if water is present on floor, near unit’s power connections or with wet hands. Dry area’s thoroughly before connecting or disconnecting to / from power outlets.
- Never operate this product if it has a damaged cord or plug; if it is not working properly; or if it has been dropped or damaged.
- Use this product only for its intended use as described in this instruction guide
- Under no circumstances should READYTEMP® OPTIMIZER’s pump be allowed to run without making sure that valves in the suction and discharge lines of the pump are open allowing for circulation to exists

WARNING: WHEN USING THIS PRODUCT PLEASE PAY CLOSE ATTENTION TO THE FOLLOWING SAFETY TIPS TO ACHIEVE THE BEST RESULTS FROM YOUR UNIT.

- READYTEMP® OPTIMIZER performs well with the water heater temperature set at a minimum 120 F. **Some states prohibit water heater temperatures to be set above 120 degrees F to avoid scalding.** If the water heater is set below 120 degrees F, you may experience warm water at your cold water faucet.
- Turn-Off / Unplug the unit whenever the water heater or **water supply is shut off.** We recommend placing a 3x5 signage next to shut-off valves at the heater and main shut-off valves as shown on Page 2 of this manual Continued use of the unit in this condition will result in damage of the pump and VOID WARRANTY.
- If a water leak occurs, follow safety instructions above before disconnecting the electrical plug from the wall outlet. Then turn-off the hot and cold water outlet valves.

WARNING

Proprietary information: The product(s) and documentation provided hereunder are ReadyTemp Corporation trade secret, patented proprietary products and information. Customer agrees not to disclose such materials to any other party and not to reverse engineer or use the products in any manner except as contemplated in this User Guide.

TANKLESS WATER HEATERS(TL4000/5000)

NOTE: Some tankless water heaters have flow limitations set by the manufacturer. Using flex hoses ensures flow limitations are not exceeded. When hoses larger then typical flex hoses are used flow rates can be manipulated by partial closing the outgoing isolation valve ONLY IF NEEDED.

COMMON QUESTION: What size wire is required when extending the temperature probe and/or wires connecting to the RJ11 phone jack?

ANSWER: These wires DO NOT carry any power. The controller is only measuring changes in resistance on these wires. Phone wire is acceptable. If the wires will be laid side-by-side along 220v wires then shielded wires must be used to prevent interference.

OPEN LOOP “UNDER-SINK” INSTALLATION 4000N/5000N

To ensure proper installation, please read these instructions completely before proceeding. Your READYTEMP® OPTIMIZER needs only pump and temp probe wire quick-connectors re-connected. Ensure solenoid’s 3-prong cord (TL4000N/5000N models only) is plugged into controller’s side socket. DO NOT plug solenoid power cord into a wall socket.

Examine the plumbing system in your home to determine the furthest fixture from the hot water heater. Test when hot water has not been used for an hour or more. Turn the hot water faucet on at this fixture and wait until hot water arrives. If this “is” the fixture at the end of the line, hot water should be readily available at other fixtures leading back to the water heater. Repeat the test at another fixture if the results prove incorrect.

NOTE: Some homes may have two hot water main supply lines, requiring two READYTEMP® OPTIMIZER units or a single unit on the most active line.

Remove all articles from under the desired plumbing fixture. Have a towel and small bucket available for any water spills.

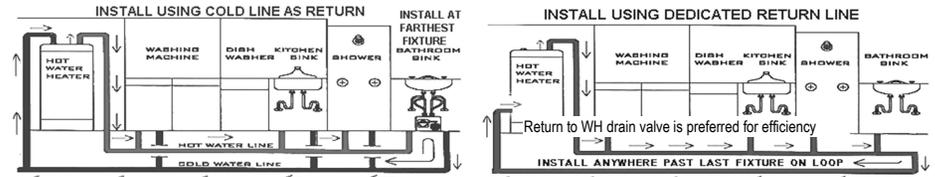
1. Shut the hot and cold water supply valves under the sink by turning both valves completely clockwise. (15 seconds)
2. Turn the hot and cold water faucets to the “Open” position. Make sure there is no water flow through the faucets before proceeding. (5 seconds)
3. Disconnect the existing supply lines or tubes “faucet end ONLY” from the faucets. An 8” crescent, 7/8” wrench or Basin Wrench (preferred), can be used for this job. (10 minutes)

NOTE: Fittings can be purchased that allow connecting the shutoff end of existing faucet hoses to the unit if disconnecting the faucet end is difficult. These are available at home improvement stores. Just tell them “I need an adapter to go from (your hose size) to ½” male NPT connection.”

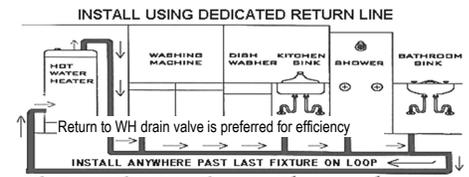
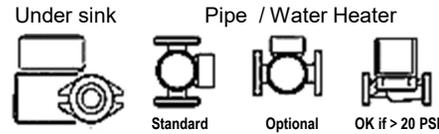
4. Find the two flex lines provided (N models only) connect and tighten one to each faucet adapter. (5 minutes) (Some flanges allow rotation of fittings after loosening 2 flange bolts to customize installation). See rotation arrows in diagram on following page.
5. Set the READYTEMP® OPTIMIZER under the sink on a towel/carpet/mouse pad to prevent vibration sounds). Connect HW supply to “F” and HW faucet “E” (left side) and CW supply “H” and CW faucet “G” (right side) flex lines to the units. Use wrench to tighten connections, but do not exceed more than a half turn after they first get snug. Double check all connections before proceeding. (5 minutes)
6. Open hot and cold water faucets, then fully OPEN hot water supply valve (turning counter clockwise). **SLOWLY** open two green-handled isolation valves (open=handle inline with pipe) (**hot side first, then cold side**) allowing water to fill pump. Let water run 15 seconds or more until air within the line is purged, and then turn off hot faucet. Open CW supply valve, then turn off cold faucet. Inspect all connections for any leaks. Wipe up all water from unit, floor and hands. **DO NOT PROCEED WITHOUT FIXING ANY LEAKS.** (2 minutes)
7. Find the disconnecting power cord provided and plug it into the power inlet socket on the side of the unit’s control box. Plug the power cord into existing (some area electrical codes may require ground-fault circuit interrupters -- GFCI or GFI) 115 volt AC outlet. (30 seconds)

When installing under a kitchen sink, the outlet of choice is often controlled by the garbage disposal switch and may not allow usage correctly. If this is the case consider sharing the outlet used by the dishwasher. If there is no outlet in the sink cabinet, consult a licensed electrician for installation of an outlet.

Check TIMER switch ENSURE unit is “ON”. The pump should start circulating the cold water out of the hot water lines. **THOROUGHLY PURGE AIR FROM SYSTEM BY OPENING / CLOSING COLD WATER FAUCET REPEAT x 3 or more UNTIL PUMP RUNS SILENT.**



PUMP INSTALL ORIENTATION



CLOSED-LOOP SYSTEM INSTALLATION



To change flow direction rotate pump head



Rotate Flanges if desired by loosening 2 bolts

All wires have quick connects pre-installed making strategic relocation of temperature probe and / or wall mounting control box easy. To wall mount control box ensure main power cord is unplugged from control box. Remove 2 screws on each side, pull off cover. Unscrew loosen base plate retaining screws and lift off base from pump. Mount to wall using appropriate hardware. Replace control box cover using 4 screws.

MOUNTING PUMP (not required)

If mounting is desired use metal “L” brackets or metal strapping tape depending on the environment. Avoid humming by placing rubber/foam/cushion material between wall and pump. Maintain true “horizontal” positioning of pump body.

“CLOSED LOOP” SYSTEM INSTALLATION 4000D/5000D

This installation should only be performed by a certified plumber or other qualified professional with adequate knowledge of household water distribution systems. Any questions should be answered before beginning the installation. Prepare a bucket and towels for use during installation. Decide on point of installation for pump, pump flow and final position of pump once installed. For maximum green efficiency, consider locating the water contacting temperature probe “L” (see above illustration) just after the last hot water usage point on the loop. Doing so will minimize pump cycle runtime and reduce demand on water heater by eliminating wasteful end-of-loop pipe heating. For superior energy savings insulate hot water loop pipes.

Shut off home water main. Drain home hot water supply by opening hot water faucets. Drain water heater if installing to drain valve. Follow your water heaters safety instructions for proper shutdown and restart.

Orientate the pumps supply and return to match your loops direction of flow. See above illustration. Ensure no debris exists in the lines before making connections. Connect using appropriate fittings as needed.

With both isolation valves connected to loop and **CLOSED**. **OPEN** the home main water supply and check for leaks. If, no leaks exist, **slowly** open both isolation valves to allow water to fill the pump. Fully **open two or more hot water faucets for 30 seconds with pump operating to evacuate air from the system until pump runs nearly silent**. Plug-in the main power cord to the control box “K” and set desired temperature “D”. Don’t hesitate to call with questions or concerns using number on the unit label or inside this manual. Save this manual for future reference. Pull out timer and set program times using included timer instructions. Before replacing timer into socket, write unit model / serial number on cover of this owner’s manual. Please **download and save to pc**, then open and fillout <http://www.ReadyTemp.com/registrationcard.pdf> click submit button to email form.