

CHOOSING A UNIT



TANKLESS
MEANS
ENDLESS
HOT
WATER.

IT'S LIKE
THIS...

FOR
GROWN-UPS.

GAS VS GAS

QUALITY
MANY LEADING BRANDS ARE MANUFACTURED IN JAPAN, WHERE TANKLESS TECHNOLOGY HAS BEEN REFINED AND PRODUCED FOR DECADES. WE RECOMMEND CHOOSING A UNIT THAT IS ENERGY STAR QUALIFIED, WITH AN ENERGY FACTOR OF AT LEAST 0.82; A WARRANTY OF AT LEAST 12 YEARS HEAT EXCHANGER / 5 YEARS PARTS / 1 YEAR LABOR; AND 3RD PARTY CERTIFICATIONS LIKE CSA AND UL.

FLOW RATE & BTU REQUIREMENT CONSIDERATIONS
WHAT ARE YOUR GALLONS PER MINUTE (GPM) VERSUS TEMPERATURE RISE REQUIREMENTS? *The more BTUs you have, the greater the water flow will be at any specific temperature rise. Try comparing units at a 70°F temperature increase.*

CONSIDER THE MINIMUM BTU FOR APPLICATIONS USING PREHEATED WATER (SOLAR PREHEAT SYSTEM). THE LOWER THE MINIMUM BTU, THE MORE IMMEDIATELY THE WATER HEATER WILL REACT TO PREHEATED WATER AND PRODUCE A SMALL CHANGE IN TEMPERATURE (110°F + 10°F = 120°F).

VENTING
IDEALLY, A TANKLESS WATER HEATER SHOULD BE INSTALLED ON AN OUTSIDE WALL, AND BE VENTED THROUGH THE SAME WALL TO KEEP VENT RUNS AS SHORT AS POSSIBLE. MOST GAS TANKLESS WATER HEATERS REQUIRE A SPECIAL CATEGORY III STAINLESS STEEL VENT PIPE, SO IT'S A GOOD IDEA TO PLAN YOUR SYSTEM WITH THESE TWO REQUIREMENTS IN MIND.

OTHER CONSIDERATIONS
SAFETY ENGINEERING, MULTI-UNIT LINKING, WHETHER OR NOT A REMOTE CONTROL AND POWER CORD ARE INCLUDED, HIGH-ALTITUDE CAPABILITIES, FREEZE PROTECTION AND A LOW NOX BURNER ARE ALL THINGS YOU SHOULD LOOK FOR IN A UNIT.

GAS VS ELECTRIC

- WHAT'S YOUR PREFERENCE?**
GAS OR ELECTRIC?
- COST OF OPERATION**
WHAT IS THE COST OF ELECTRICITY VERSUS THE COST OF GAS (NATURAL OR PROPANE) IN YOUR AREA? *Historically, gas has been less expensive than electricity in most parts of North America -- this is important, as the cost of energy will ultimately determine the operating cost of a unit.*
- CAPACITY**
HOW MUCH HOT WATER IS REQUIRED? *Gas units produce enough hot water to run 2-3 major functions simultaneously and offer the ability to link multiple units together for a larger tankless system. On the other hand, electric units have the capacity to run 1-2 major functions simultaneously.*
- EASE/COST OF INSTALLATION**
WHAT ARE YOUR INSTALLATION REQUIREMENTS? SPACE? INSIDE? OUTSIDE? *Gas tankless water heaters are wall-mounted, larger and may require exhaust venting to the outdoors, while electric units are typically smaller, wall-mounted, and do not require venting to the outdoors.*
- ENERGY EFFICIENCY**
GAS UNITS CLAIM ~84% EFFICIENCY, AND ELECTRIC UNITS CLAIM 99% EFFICIENCY. *Gas and electric units will both have fully modulating heating coils. This allows the heater to use only the minimum required energy at any given moment. Many gas units are ENERGY STAR® qualified.*

ELECTRIC VS ELECTRIC

- COMPARING UNITS**
BECAUSE MOST ELECTRIC UNITS ARE 99% EFFICIENT, AND HAVE COMPARABLE EXPECTED LIFETIMES, ELECTRIC TANKLESS WATER HEATERS ARE BEST COMPARED BY PERFORMANCE AND RELIABILITY.
- QUALITY**
PURCHASING A UNIT WITH 3RD PARTY CERTIFICATION(S), SUCH AS UL OR ETL IS VERY IMPORTANT. THE BEST WAY TO JUDGE THE QUALITY OF AN ELECTRIC TANKLESS UNIT IS TO LOOK AT THE COMPANY PRODUCING IT. DO THEY HAVE A LONG TRACK RECORD OF RELIABILITY AND GOOD CUSTOMER SERVICE? IT PAYS TO DO YOUR HOMEWORK HERE.
- CAPACITY**
THE GREATER THE KW OF A UNIT, THE MORE HOT WATER IT WILL PRODUCE. IT IS VITAL TO KNOW YOUR VOLTAGE BEFORE DETERMINING THE KW -- LOWER VOLTAGE MEANS LOWER KW. HIGHER KW MEANS MORE HOT WATER, BUT REQUIRES LARGER OR MULTIPLE WIRES AND CIRCUIT BREAKERS. **IT IS CRITICAL TO CHOOSE A UNIT YOUR ELECTRICAL SYSTEM CAN HANDLE IN ADDITION TO PROVIDING ADEQUATE HOT WATER.**
- OTHER CONSIDERATIONS**
OTHER FEATURES TO CONSIDER ARE ACTIVATION FLOW RATE, ABILITY TO WORK WITH PREHEATED WATER, TEMPERATURE CONTROL, WARRANTY AND OVERALL BUILD QUALITY.

CHECKLIST

INSTALLATION

PREFERRED ENERGY SOURCE?
 NATURAL GAS
 PROPANE
 ELECTRIC

CLIMATE WHERE THE UNIT WILL BE INSTALLED?
 WARM CLIMATE
 COLD CLIMATE

APPROXIMATE INCOMING WATER TEMPERATURE?
 40°F 50°F 60°F 70°F

HOW MANY BATHROOMS?
 1 2 3 4+

IS THERE A SHOWER WITH MULTIPLE SHOWER HEADS?
 YES NO

ARE ANY FAUCETS MORE THAN 25 FEET FROM THE WATER HEATER?
 YES NO

GAS UNITS

IS THERE AN EXTERIOR WALL TO VENT A GAS UNIT THROUGH?
 YES NO

APPROXIMATE DISTANCE FROM GAS METER TO WATER HEATER?
 10ft 20ft 30ft 40+ ft

GAS LINE SIZE? (INSIDE DIAMETER)
 1/2" 3/4" 1"+

ELECTRIC UNITS

AMPS COMING INTO THE BUILDING WHERE THE UNIT WILL BE INSTALLED?
 100 200 300+

AVAILABLE VOLTAGE?
 208V 220V 240V

APPROXIMATE DISTANCE FROM GAS METER TO WATER HEATER?
 10ft 20ft 30ft 40+ ft



We encourage you to contact WaiWela, or a knowledgeable plumber/general contractor who can further educate you about installation details of either type (gas or electric), and answer any further questions you may have.

SYSTEM SIZING GUIDE

RESIDENTIAL SYSTEMS HOT WATER PERFORMANCE

MODEL	WARM CLIMATE	COLD CLIMATE
PH2-28RDVS		
PH2-25RDVS		
PH2-20RDVS		
PH2-28ROF		CAUTION OUTDOOR UNITS SHOULD NOT BE INSTALLED WHERE FREEZING IS LIKELY
PH2-25ROF		
PH2-20ROF		
WET-12 (240V*)		
WET-23 (240V*)		
WM-2.5 @ 4.0		

LEGEND

- REPRESENTS A SINGLE MAJOR USE*, LIKE A SHOWER, IN A WARM CLIMATE
- REPRESENTS A SINGLE MAJOR USE*, LIKE A SHOWER, IN A COLD CLIMATE
- REPRESENTS A SINGLE MINOR USE*, LIKE A SINK, IN A WARM CLIMATE
- REPRESENTS A SINGLE MINOR USE*, LIKE A SINK, IN A COLD CLIMATE

* MAJOR USE = 2-2.5GPM | MINOR USE = 1-1.5GPM

COMMERCIAL & MULTI-UNIT SYSTEMS



MULTI-UNIT INSTALLATION
WAIWELA TANKLESS WATER HEATERS WERE USED IN THE LARGEST TANKLESS INSTALLATION IN NORTH AMERICA!

TO DETERMINE MULTI-UNIT SYSTEM OUTPUT:
(GPM) * (# of Units) = total system output or GPH

EXAMPLES*

2 Units : (4.7 GPM) * (2) = 9.4 GPM
 6 Units : (4.7 GPM) * (6) = 28.2 GPM
 12 Units : (28.2 GPH) * (12) = 3,384 GPH

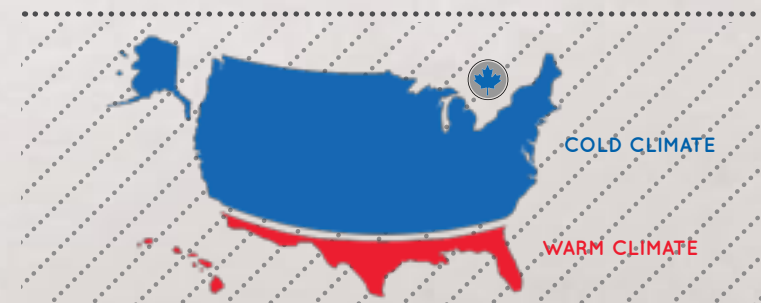
*THESE EXAMPLES ARE BASED ON PH2-26 MODEL PERFORMANCE, BUT CAN SIMPLY BE ADAPTED TO CALCULATE FOR OTHER MODELS.

FLOW RATES

TEMPERATURE RISE (°F)	35	45	50	60	70	77	80	90	100
PH2-28RDVS @ PH2-28ROF	9.5	7.4	6.6	5.5	4.7	4.3	4.1	3.7	3.3
PH2-25RDVS @ PH2-25ROF	8.4	6.7	6.1	5.1	4.3	3.9	3.8	3.4	3.0
PH2-20RDVS @ PH2-20ROF	6.4	5.6	5.1	4.2	3.6	3.3	3.2	2.8	2.5
WET-12 (240V*)	2.0	1.7	1.6	1.3	1.1	1.0	0.98	0.87	0.76
WET-23 (240V*)	3.0	3.0	3.0	2.6	2.2	2.0	1.9	1.7	1.5

* CUSTOMERS ON 208V CAN EXPECT A 20% REDUCTION IN PERFORMANCE

CLIMATE MAP



ATTENTION
THESE ESTIMATES ARE FOR SIZING PURPOSES ONLY. PLEASE CONTACT US IF YOU NEED FURTHER ASSISTANCE.

WAIWELA

Quality Water Heating Products



ELECTRIC



GAS



MINI TANK



ACCESSORIES

AVAILABLE LOCALLY AT:

WAIWELA

FOR MORE INFORMATION VISIT WWW.WAIWELA.COM, OR CALL 800.605.6542

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GAS TANKLESS WATER HEATERS

QUICK FACT
GAS TANKLESS WATER HEATERS ARE GREAT FOR EVERYTHING FROM A SELDOM-USED VACATION HOME, TO THE MAIN WATER HEATER IN A HOME WITH MULTIPLE SHOWERS, OR EVEN COMMERCIAL APPLICATIONS SUCH AS A LAUNDROMAT OR CAR WASH.

	PH2-28RDVS & PH2-28ROF	PH2-25RDVS & PH2-25ROF	PH2-20RDVS & PH2-20ROF
Capacity & Flow Rate	(See Performance Charts On Back Side)		
Temperature Range	85°F - 140°F (or 185°F with Hi-Temp Commercial Chip)		100°F - 140°F
Gas Input Maximum (BTU)	199,900	180,000	150,000
Gas Input Minimum (BTU)	11,000		
Energy Factor*	0.82		
Dimensions (H x W x D)	25 5/8" x 13 7/8" x 9 7/8" (INDOOR MODEL)	23 5/8" x 13 7/8" x 8 7/8" (OUTDOOR MODEL)	
Weight	54 lbs		
Gas & Water Connections	3/4" MNPT		
Venting	3"/5" Stainless Steel Concentric Venting Required (NOT REQUIRED ON OUTDOOR MODELS)		

Remote Controller (UMC-117) INCLUDED

DIRECT VENT VS OUTDOOR

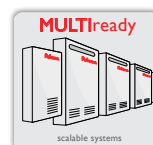
WHAT'S THE DIFFERENCE?

DIRECT VENT INDOOR (FAN ASSISTED SEALED COMBUSTION)

- Combustion air is supplied to the gas burner directly from the outdoors.
- The heater itself has a sealed cover and does not use any air from the space where it is installed.
- One concentric pipe (pipe within a pipe) opening, run from the water heater through the wall or roof of the home; for exhaust and fresh air intake.
- Used where tight construction may cause various appliances to compete for the same air.
- Can be vented vertically or horizontally.

OUTDOOR

- Water heater receives combustion air from the environment around it and expels exhaust the same way.
- We recommend these models for warm climates only.



PH2 DIRECT VENT



PH2 OUTDOOR



All gas tankless water heaters are available in Natural Gas (N) and Liquid Propane (P) models.

FEATURES

- Residential & Commercial Applications
- 2010 Federal Tax Credit Approved
- 0.26GPM Minimum Flow Rate / 0.4 GPM Activation
- Integrated Appliance Adapter & Condensate Drain To Simplify Venting On Indoor Direct Vent Models
- Supports Both Horizontal & Vertical Venting
- Wired Temperature Remote Control Included
- Connect Up To 20 Units In Tandem
- High Altitude Capable
- Self Diagnostic System
- Supplied 120V Power Cord On Indoor Direct Vent Models
- Freeze Protected To -30°F
- Low NOx Burner
- Accepts Preheated Water Up To 140°F
- Made In Japan

SAFETY

- **ICAD** Incomplete Combustion Avoidance Device // Monitors Combustion For Evidence Of Unsafe Carbon Monoxide
- **Overheat Limit Wrap** Resin Film Surrounds The Combustion Chamber, Detecting Overheating
- **Flame Failure Monitor** Flame Rods Ensure Proper Firing & Detect Flame Failure
- **Anti-Scald Protection** Temperature Controller Can Be Adjusted To Prevent Scalding

CONVENIENCE

- **Digital Controller** Changes Temperature Settings Immediately & Precisely With The Touch Of A Button, And Functions As A Diagnostic Display
- **Endless Hot Water** Never Run Out Of Hot Water Again

WARRANTY

- **12 Year**** Limited Warranty On Heat Exchanger
- **5 Year**** Limited Warranty On Parts
- **1 Year**** Limited Warranty On Service

*SOURCE: U.S. Dept of Energy **For Residential Application. Commercial Warranty is 5 year, 5 year, 1 year.

ELECTRIC TANKLESS WATER HEATERS

QUICK FACT
ELECTRIC UNITS REQUIRE INDEPENDENT ELECTRICAL CIRCUITS USING CORRECTLY RATED WIRE AND CIRCUIT BREAKERS, SO BE THOROUGH WHEN SIZING AND CHOOSING AN ELECTRIC UNIT.



WET-23



WET-12



FEATURES

- On Demand Hot Water
- Continuous Hot Water
- Lower Installation Cost
- Easy Installation
- Cut Energy Waste
- Anti-Scald Protection
- Precise Temperature Control
- Can Be Supplied With Hot or Cold Water
- Compact Size
- Designed For Durability
- LEED Energy Certified
- 99% Energy Efficient

APPLICATIONS

- Whole House
- Garage / Workshop
- Shower
- Solar Backup

WARRANTY

- **1 Year** Limited Warranty On Parts
- **5 Year** Limited Warranty On Leaks

	WET-12 (240V)	WET-23 (240V)
Phase	1	
kW	11.5 kW	22.5 kW
Amps	48	96
Breaker Size	1 x 60 Amp	2 x 60 Amp
Wire Size	1 x 6/2 AWG	2 x 6/2 AWG
Activation Flow	0.7 GPM	0.7 GPM
Max Flow	2.0 GPM	3.0 GPM
Temperature Range	100°F - 140°F	
Dimensions (H x W x D)	13" x 5 1/2" x 4"	14 1/2" x 10 3/4" x 4 1/4"
Weight	5 lbs	10 lbs
Pipe Fittings	1/2" NPT	3/4" NPT
Flow Rate	(See Performance Charts On Back Side)	

MINI TANK WATER HEATERS

QUICK FACT
MINI TANK UNITS ARE SPACE AND WATER-SAVING UNITS, PERFECT FOR UNDER-THE-SINK APPLICATIONS AT THE POINT OF USE, SUCH AS BATHROOMS, GARAGES & KITCHENS FOR WASHING HANDS



WM-2.5



FEATURES

- Under Sink Installation
- Floor Or Wall Mount
- Install At Point-of-Use
- Adjustable Thermostat
- CFC Free
- Glass-Lined Tank
- Attached Power Cord

APPLICATIONS

- Kitchen
- Garage / Workshop
- Maintenance Closet
- Restrooms
- Any Under-The-Sink Application

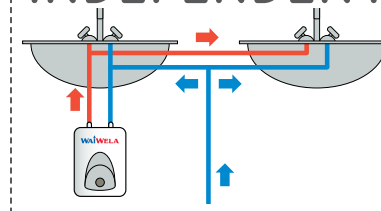
WARRANTY

- **6 Year** Limited Warranty On Inner Tank
- **2 Year** Limited Warranty On Parts

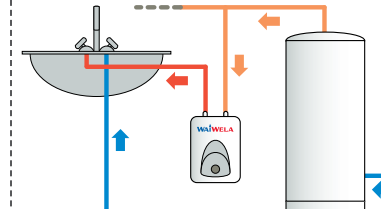
	WM-2.5	WM-4.0
Capacity	2.5 Gallons	4.0 Gallons
Voltage	120V	
Amperage	12 Amps	
Temperature Range	50°F - 140°F	
Weight (Empty)	20 lbs	24 lbs
Dimensions	15 1/2" (H)	20 1/4" (H)
	11 3/4" (W)	11 3/4" (W)
	10 3/8" (D)	10 3/8" (D)
Water Connections	1/2" NPT	
Relief Valve	INCLUDED	

APPLICATION EXAMPLES

INDEPENDENT



IN-LINE



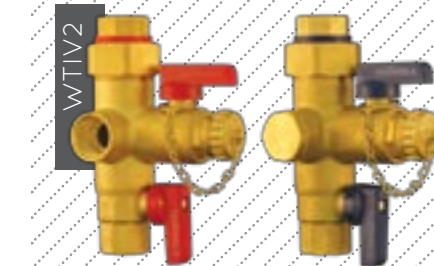
WATER TEMPERATURE

■ COLD ■ WARM ■ HOT

ATTENTION MINI TANK WATER HEATERS ARE NOT "INSTANTANEOUS," & REQUIRE APPROXIMATELY 30 MINUTES TO RECOVER ONCE HOT WATER HAS BEEN DEPLETED.

TIV

TANKLESS INSTALLATION VALVES



TIVs ARE DESIGNED TO SAVE INSTALLATION TIME WHILE ASSURING THAT INSTALLATION IS COMPLETED IN A PROFESSIONAL MANNER. THE LONG TERM BENEFITS ARE EASE OF MAINTENANCE & THE ABILITY TO DO THE MAINTENANCE YOURSELF, IF YOU SHOULD CHOOSE TO DO SO.

FEATURES

- Hot Water Valve Is Coded **RED**
- Cold Water Valve Is Coded **BLUE**
- Heavy Duty Brass Construction
- Union Assembly Connects To Water Heater For Easy Removal
- Full 3/4" I.D. Valve Body
- Hot Water Valve Includes A Female NPT Port To Receive Pressure Relief Valve
- Both Valves Include A Drain/Flush Port With An Isolation Ball Valve That Terminates With A Capped Threaded Male Hose Fitting
- Designed To Work With Un-Clog-It Kit
- Designed For Tankless Water Heaters With 3/4" Water Connections
- Designed For Use With Recessed Boxes & Pipe Covers
- Ensures An Easy And Proper Installation
- Ideal For Future Maintenance & Service
- Compatible With All Gas & Electric Models

TIVs ARE AVAILABLE IN EITHER:

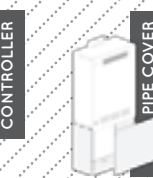
WTIV1	3/4" SWT (SWEAT)
WTIV2	3/4" FNPT (THREAD)
WTIV1-P	3/4" SWT (SWEAT W/ PRV*)
WTIV2-P	3/4" FNPT (THREAD W/ PRV*)

*PRESSURE RELIEF VALVE

ACCESSORIES

FOR GAS TANKLESS WATER HEATERS

	PH2-28RDVS	PH2-25RDVS	PH2-20RDVS	PH2-28ROF	PH2-25ROF	PH2-20ROF
REMOTE CONTROLS MAIN, BATH1 & BATH2	X	X	X	X	X	X
VENTING 3"/5" CONCENTRIC VENT PIPE	X	X	X			
COMMERCIAL UP TO 185°F W/ HI-TEMP CHIP	X	X		X	X	
TIVS TANKLESS INSTALLATION VALVES	X	X	X	X	X	X
UNCLOGIT DO-IT-YOURSELF DESCALING KIT	X	X	X	X	X	X
COSMETIC PIPE COVER	X	X	X	X	X	X
COSMETIC RECESSED BOX				X	X	X
LINK UP TO 20 UNITS DUONEX, MIC-180, MIC-6 & MICS-180	X	X	X	X	X	X



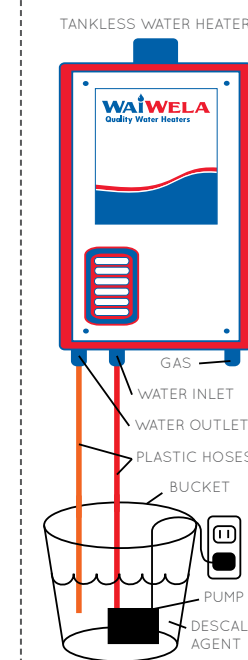
UN-CLOG-IT

DIY DESCALING KIT



SAFE, FAST & EFFECTIVE DO-IT-YOURSELF METHOD OF DISSOLVING MINERAL BUILD-UP FROM WATER LINES

APPLICATION EXAMPLE



IN THE BOX

- **CHEMICAL DESCALING AGENT** Five Pounds of Sulfamic Acid Dry Color Coded Red Yields Ten One-Gallon Treatments
- **PUMP, HOSES & HOSE FITTINGS** Submersible Pump (Corrosion Resistant, UL Listed) Hoses (1/2" Clear Plastic, Food Grade)
- **THREAD PIPE FITTINGS** Heavy Duty Brass Swivels 3/4" Female Garden Hose 1/2" FNPT & 3/4" FNPT

APPLICATIONS

- Tankless Water Heaters
- Spa & Hot Tub Heaters
- Ice Machines
- Coffee Brewing Equipment
- Water Coolers
- Air Conditioners
- Cooling Jackets
- Humidifiers
- Solar Panels
- Compatible With All Gas & Electric Models