Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 2/4/2025
Return Request: 2/14/2025
Project: City Of Sherwood Public Works (Administration Building)
Supplier: Falk
Manufacturer: Various
Submittal: Plumbing Equipment
Submittal Number: 22 33 00-01
Drawing # and Installation: Plumbing Drawings

ARCHITECT
Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

ENGINEER
Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

GENERAL CONTRACTOR
Baldwin & Shell
1000 W. Capitol Ave.
Little Rock, AR 72201
501-374-8677

MECHANICAL SUBCONTRACTOR
Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.
24-6084
sean@comfortar.com

ET-1

Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

LEAD FREE*

Series PLT

Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

PLT-5-M1	¾" male connection, tank volume 2.1 gal.
PLT-12-M1	¾" male connection, tank volume 4.5 gal.
PLT-20-M1	¾" male connection, tank volume 8.5 gal.
PLT-35-M1	1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.

Standards

Models PLT-5, PLT-12 and PLT-20 are Listed by IAPMO.
Certified to ANSI/NSF 61
Model PLT-35
Certified to ANSI/NSF 61

(73˚F/23˚C)

Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.
In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

***The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

WATTS®

Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber

Inlet Connection: Stainless Steel

Technical Information

DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	WATER SIDE VOLUME AT 150PSI (GALLONS) PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS) 20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

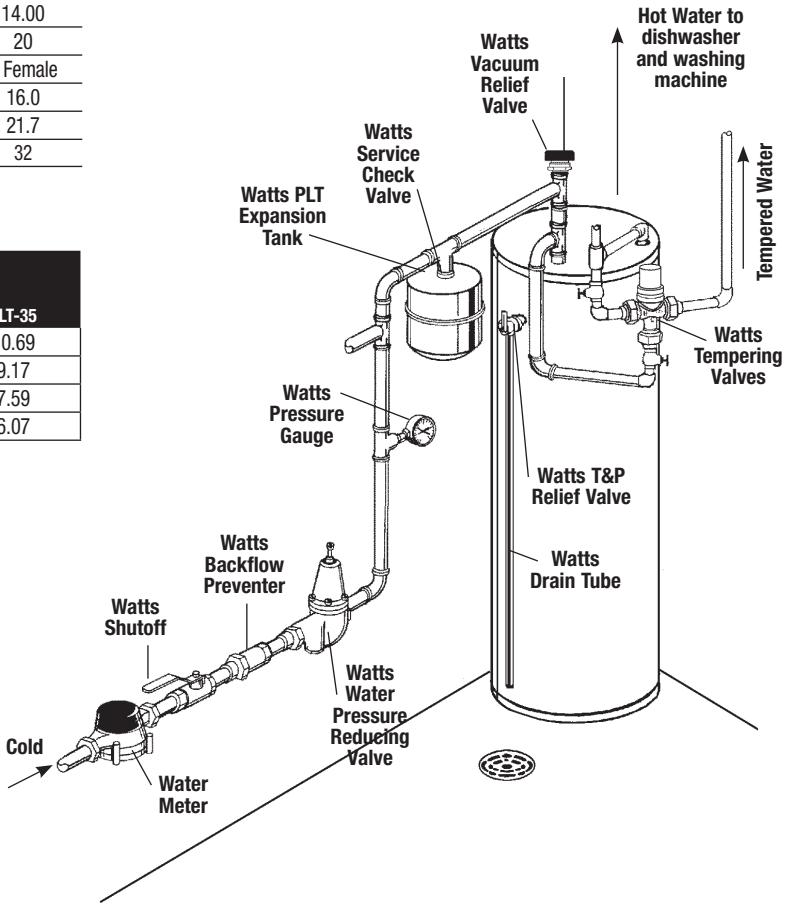
PLT-5 ←

PLT-12

PLT-20

PLT-35

Multiple tanks required - consult factory



WATTS®

USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (888) 208-8927 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

DWH-1

COMMERCIAL-GRADE

RESIDENTIAL / COMMERCIAL GAS WATER HEATERS

TANKLESS CONDENSING HIGH EFFICIENCY

Ultra-Low NOx gas tankless water heaters with condensing technology featuring up to 0.95 Uniform Energy Factor (UEF) which lowers operating costs and is environmentally friendly.

FEATURES:

ULTRA-LOW NOX CONDENSING TECHNOLOGY PROVIDES UP TO 0.95 UNIFORM ENERGY FACTOR

DURABLE HEAT EXCHANGER

- Primary Heat Exchanger is constructed of Commercial-Grade Copper that is more resilient to erosion and is 25x better at heat transfer than stainless steel thus stabilizing outgoing water temperatures quicker
- Secondary Heat Exchanger is made of Type 316L Stainless Steel to protect against corrosion

CONTINUOUS MAXIMUM FLOW RATES UP TO 10.0 GPM

ENERGY STAR® QUALIFIED+

AVAILABLE IN NATURAL GAS OR PROPANE (LP)

INDOOR MODEL - INCLUDES INTEGRATED TEMPERATURE CONTROLLER AND ADVANCED DIAGNOSTICS TO SIMPLIFY TROUBLESHOOTING

OUTDOOR MODEL - INCLUDES A WALL MOUNT TEMPERATURE REMOTE CONTROLLER AND ADVANCED DIAGNOSTICS TO SIMPLIFY TROUBLESHOOTING

FACTORY-INSTALLED POWER CORD INCLUDED FOR INDOOR MODELS

GTS-540 MODELS

- Can be used in residential and commercial applications
- Easy-link up to 4 heaters
- Multi-link up to 20 heaters

COMMON VENT UP TO 8 UNITS

COMPLIES WITH LEAD FREE STANDARDS

SAFETY FEATURES:

- Air-Fuel Ratio (AFR) Sensor
- Exhaust & Water Temperature Safety Control
- Overheat Cut-Off Fuse

INTERNAL FREEZE PROTECTION SYSTEM

POWER DIRECT VENT DESIGN

- Exhaust, 3" PVC Venting up to 70 feet or 4" PVC Venting up to 100 feet
- Provides flexible venting with PVC, CPVC, or ABS Pipe for Intake and Exhaust (solid core only). Canadian Installations Require ULCS636 Listed PVC or CPVC Pipe for Venting.
- Category III or IV venting can be used

ACCESSORIES

- Pipe Cover
- Neutralizer Kit
- Isolation Valve Kits
- Concentric Termination

WARRANTY

- 15-year limited warranty on heat exchanger in residential applications
- 5-year limited warranty on heat exchanger in commercial applications
- 5-year limited warranty on all parts

+Select models

INDOOR MODELS
GTS-240, GTS-340, GTS-540

OUTDOOR MODELS
GTS-240, GTS-340, GTS-540

Meets: SCAQMD Rule 1146.2 California and Texas

DESIGN CERTIFIED

ENERGY STAR

NSF 540 models only

LOW-LEAD IAPMO R&T

AHRI CERTIFIED® www.ahridirectory.org

ANSI Z21.10.3 CSA 4.3

SOLID. STATE.

COMMERCIAL-GRADE

RESIDENTIAL / COMMERCIAL GAS WATER HEATERS

Model Number	Type	Gas Consumption Input		Inlet Gas Pressure		UEF	Maximum GPM*	Hot/Cold Connections	Gas Connection	Dimensions in Inches			Approx Shipping Weight (lbs)
		Minimum BTU/H	Maximum BTU/H	Minimum in. W.C.	Maximum in. W.C.					Height	Width	Depth	
Indoor Models													
GTS-240-NIH	Natural	15,000	160,000	4.0	10.5	0.94	6.6	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
GTS-240-PIH	Propane	13,000	160,000	8.0	14.0	0.94	6.6	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
GTS-340-NIH+	Natural	15,000	180,000	4.0	10.5	0.95	8	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
GTS-340-PIH+	Propane	13,000	180,000	8.0	14.0	0.95	8	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
GTS-540-NIH	Natural	15,000	199,000	4.0	10.5	0.93	10	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
GTS-540-PIH	Propane	13,000	199,000	8.0	14.0	0.93	10	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	71
Outdoor Models													
GTS-240-NEH+	Natural	15,000	160,000	4.0	10.5	0.95	6.6	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	69
GTS-240-PEH+	Propane	13,000	160,000	8.0	14.0	0.95	6.6	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	69
GTS-340-NEH	Natural	15,000	180,000	4.0	10.5	0.94	8	3/4" NPT	3/4" NPT	23-5/8	17-3/4	11-1/4	69
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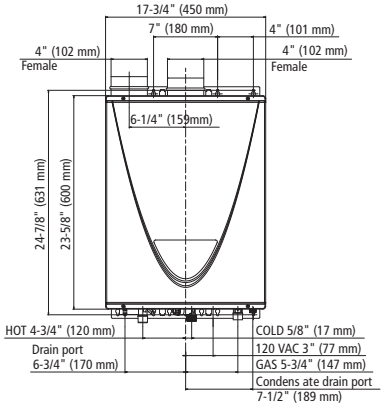
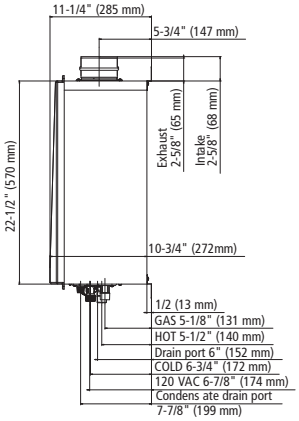
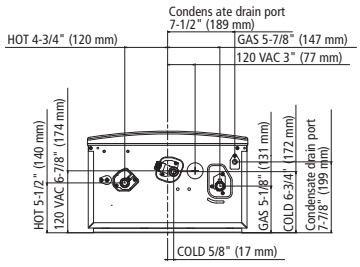
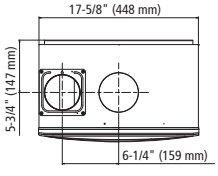
All dimensions are in inches.
15-150 psi Water Pressure. 40 psi or above is recommended for maximum flow.
*Current numbers based on factory testing; 0.4 GPM required for continuous fire after initial ignition.
Indoor models are certified from sea level to 10,100 ft. elevations.
Outdoor models are certified from sea level to 6,000 ft. elevation.
The manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligation.
+ENERGY STAR® Qualified

INDOOR MODELS

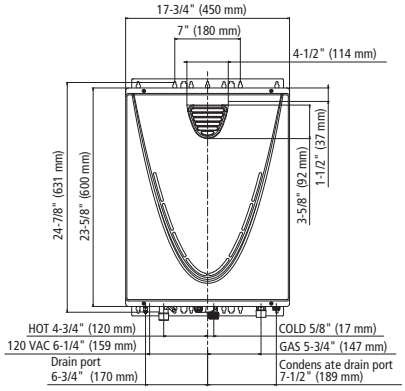


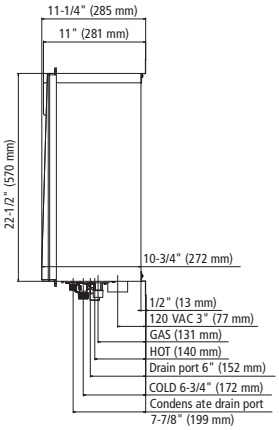


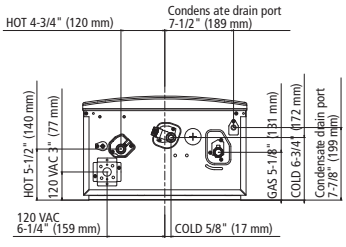


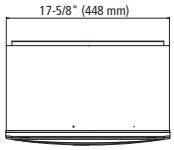


OUTDOOR MODELS

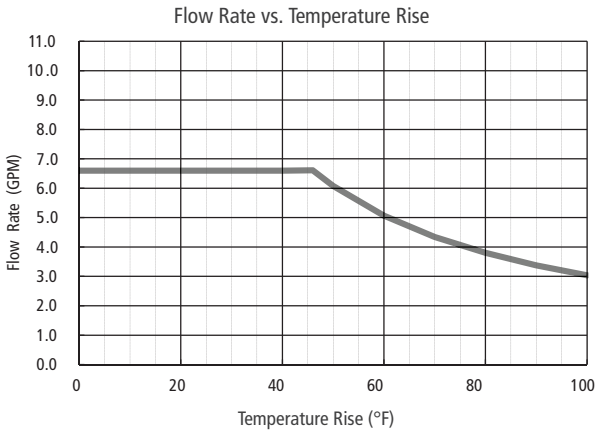


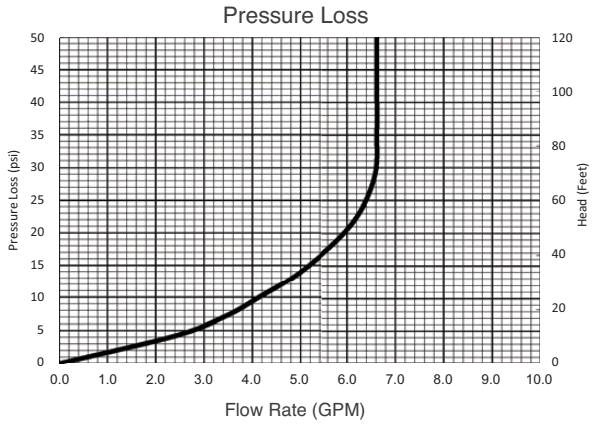




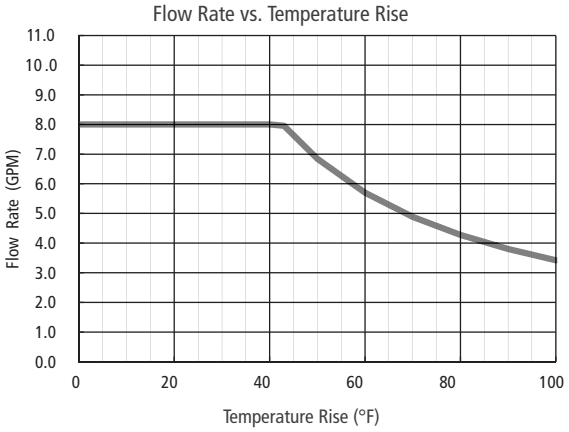


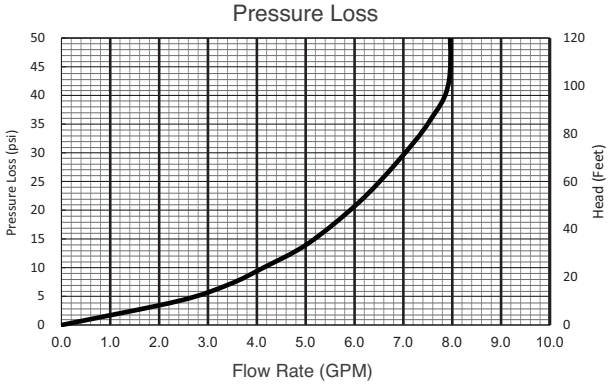
240 MODEL



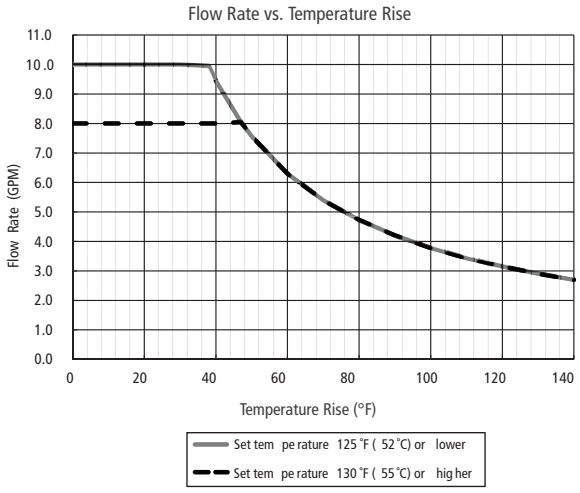


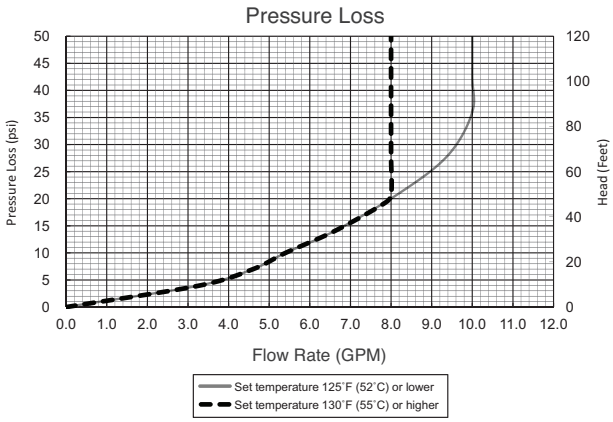
340 MODEL





540 MODEL





TANKLESS CONDENSING HIGH EFFICIENCY SPECIFICATIONS

The fully modulating, on-demand, condensing gas fired tankless water heater(s) shall be State model GTS540, having a maximum input rating of 199,000 Btu/h and available in NG or LP. The heater shall have ¾ in. male NPT water and gas connections. The inlet gas supply pressures shall be 4.0 in. WC (min.) up to 10.5 in. WC (max) for NG and 8.0 in. WC (min.) up to 14 in. WC (max.) for LP. The indoor heater(s) shall incorporate an integrated temperature controller that will provide diagnostic information, fault history, and heater set temperature. The outdoor heater(s) shall be factory supplied with a temperature remote, 100209924, that can be installed up to 400 ft. from the heater using 18 gauge (minimum) control wire. The temperature remote shall provide diagnostic information, fault history, and heater set temperature. The heater(s) shall operate using 120 V / 60 Hz power source. The indoor heater(s) will incorporate a factory installed power cord.

The indoor heater(s) shall be vented with 3" or 4" diameter schedule 40 PVC, CPVC, ABS, or Category IV vent pipe with a length not to exceed 70 ft. (equivalent) for 3" vent or 100 ft. (equivalent) for 4" vent, terminating horizontally or vertically. The intake pipe may use material such as PVC, ABS, aluminum, or Category IV pipe and cannot exceed 70 ft. (equivalent) for 3" vent or 100 ft. (equivalent) for 4" vent. The outdoor heater(s) shall be constructed with an integral exhaust vent on the front of the heater.

The water heater(s) shall use a commercial-grade copper, fin tube primary heat exchanger with quick release brass or bronze waterways. The secondary heat exchanger shall be constructed from stainless steel 316L. The heater(s) shall be controlled by an on-board solid-state printed circuit board which uses the following factory installed components: thermistors to monitor water temperature and exhaust temperature; a flow sensor to measure flow rate; a flame sensor to monitor combustion; an Air-Fuel Ratio Rod to measure and adjust air input in order to maintain optimal combustion efficiency. The heater also consists of in-line fusing and surge absorbers for electrical surge protection, an electronic spark igniter, aluminized stainless steel burners, hi-limit temperature switches to monitor water and exhaust temperatures, modulating gas valve, dual freeze protection that will automatically fire the heater (indoor model only) and use heating blocks to protect the heat exchanger, and an overheat cutoff fuse.

The heater(s) can manifold to Easy-Link up to 4 heaters to provide additional capacity. The Easy-Link controls shall be built onto the on-board solid-state printed circuit board and does not require external controls. The linking control wire shall be supplied with the heater. The heater(s) can use a Multi-Unit controller, 100112691, to manifold 5-20 heaters. The Easy-Link and Multi-Unit Controller shall modulate the system for the most efficient performance. The Easy-Link and Multi-Unit Controller shall rotate the priority heater every 12 hours of operation time or 100 starts for balanced duty/cycle operation.

The heater(s) shall be CSA approved for sale in the United States and Canada, has a minimum uniform energy factor of 0.93, meets the energy efficiency requirements of the U. S. Department of Energy and ASHRAE 90.1-2007, complies with Ultra-Low NOx emissions of 14 ng/J or 20 ppm, and shall be certified to NSF 5 Standards.

For Residential and Commercial Applications

Product Submittal Form

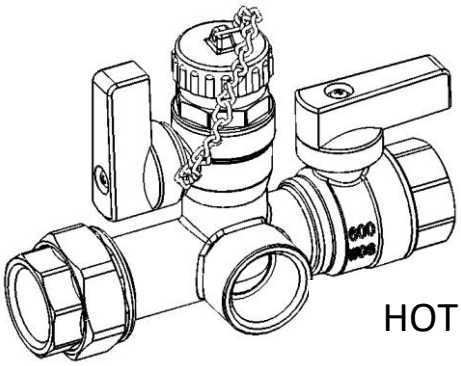
Job Name:	Engineer/Architect:
Job Location:	Wholesaler:
Submittal Date:	Contractor:

TWV30X/TWV3SX/TWVR3 Tankless Water Heater Hot/Cold Service Valves

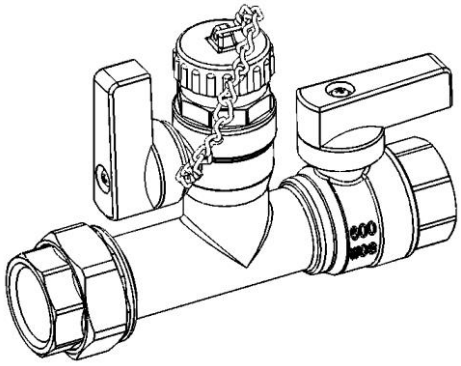
Use: For use in potable water distribution systems for water flow control. Valves connect directly to cold water inlet and hot water outlet of the tankless water heater. Use for appliance maintenance and emergency shut-off.

Design Features:

- **Compact design** ideal for recessed and cover box installations.
- **Captive coupling nut and washer** reduces the opportunity for component loss making installation easier.
- **Captive washer** won't kink or tear during installation.
- **Forged, one-piece construction** reduces the potential for pinhole leaks.
- **Integrated drain valve** with independent, quarter-turn operation allows for quick system diagnostic testing and maintenance.
- **Built-in side port** for the pressure relief valve reduces the number of connections and simplifies the installation.
- **Color-coded handles** for immediate system identification.
- **Right-sized** for tight installations.
- **No-lead brass material** meeting compliance for safe drinking.



HOT



COLD/RECIRCULATION

Operating Specifications:

Temperature: 40° - 180° F

Pressure: 125 PSI maximum

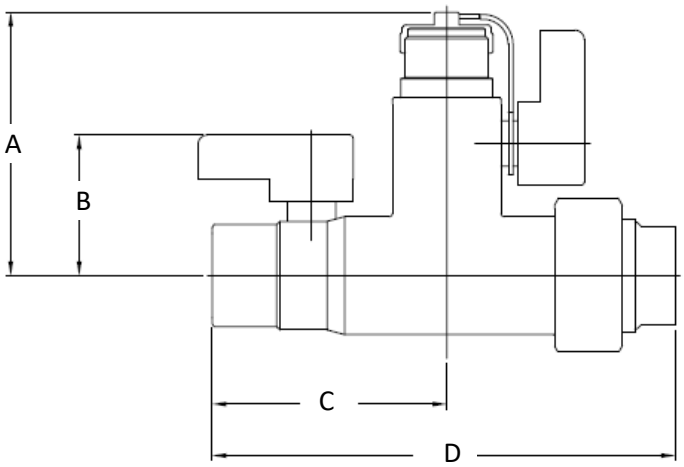
VALVE MATERIAL SPECIFICATIONS	
Body	*Forged brass*
Stem	*Brass*
Handle	*Aluminum, coated*
Handle Screw	*Steel, zinc plated*
Flat Seal	*Rubber*
Coupling Nut	*Forged brass*
Drain Cap	*Forged brass*
Cap Gasket	*Rubber*
Seat	*PTFE*
Ball	*Brass, chrome plated*

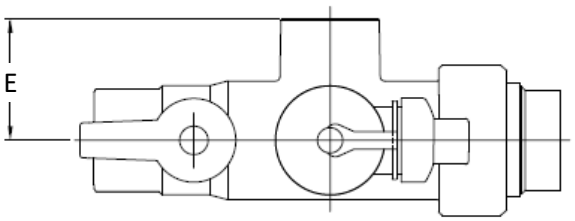
Product Submittal Form

TWV30X/TWV3SX/TWVR3 Tankless Water Heater Hot/Cold Service Valves

Part Listing:

☐	TWV30X	3/4" IPS x 3/4" IPS Hot/Cold Service Valves Only
☐	TWV30RX	3/4" IPS x 3/4" IPS Hot/Cold Service Valve Kit with 200K Pressure Relief Valve
☐	TWV3SX	3/4" Sweat x 3/4" IPS Hot/Cold Service Valves Only
☐	TWV3SRX	3/4" Sweat x 3/4" IPS Hot/Cold Service Valve Kit with 200K Pressure Relief Valve
☐	TWVR30RX	3/4" IPS x 3/4" IPS Hot/Cold/Recirculation Service Valve Kit with 200K Pressure Relief Valve
☐	TWVR3SRX	3/4" Sweat x 3/4" IPS Hot/Cold/Recirculation Service Valve Kit with 200K Pressure Relief Valve





PART SPECIFICATIONS *(Inches)*					
Model	***DIM. A***	***DIM. B***	***DIM. C***	***DIM. D***	***DIM. E****
TWV30X/TWV30RX/TWVR30RX	3"	1-3/4"	2-5/8"	5-1/8"	1-1/8"
TWV3SX/TWV3SRX/TWVR3SRX	3"	1-3/4"	2-5/8"	5-1/8"	1-1/8"

*Dimension for hot valve with pressure relief valve port

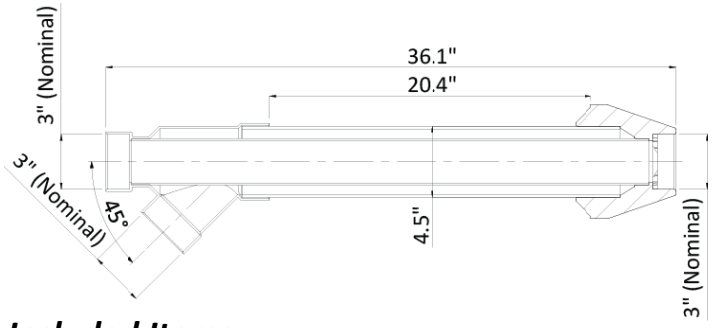
Listings and Certifications:

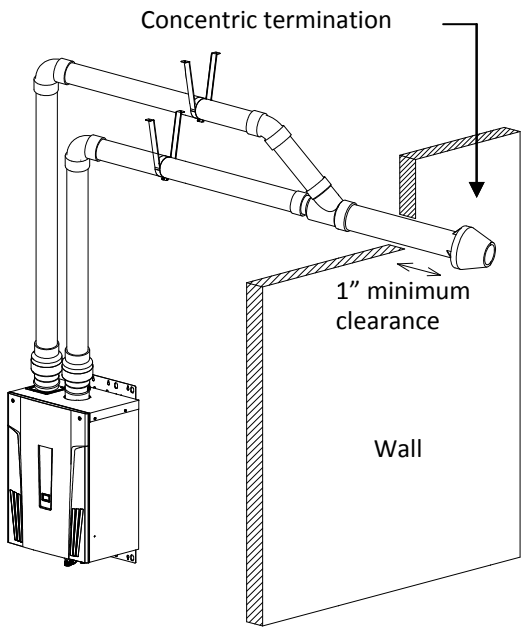
- IAPMO listed to IAPMO/ANSI Z1157 including NSF/ANSI 14

INSTALLATION INSTRUCTIONS

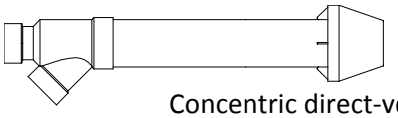
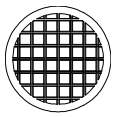
TH-CVPVC33

3” Sidewall Direct-Vent Concentric Termination Kit





Included Items

 Concentric direct-vent termination (Qty.1)
 Bird screen (Qty.1)
 Installation Instructions (Qty.1)
Stainless steel screw & nut set (Qty.1)

GENERAL

WARNING

Improper installation can cause nausea or asphyxiation, severe injury or death from carbon monoxide and flue gas poisoning. Improper installation will void product warranty.

When installing the vent system, all applicable national and local codes must be followed. If you install thimbles, fire stops or other protective devices and they penetrate any combustible or noncombustible construction, be sure to follow all applicable national and local codes.

The TH-CVPVC33 termination kit is only to be used with the Takagi T-H2-DV model and is only to be used as a sidewall termination (horizontal). The TH-CVPVC33 is not to be used as a roof termination (vertical). Doing so will void the warranty of the Takagi water heater. **Please follow all instructions in the T-H2-DV Installation Manual for proper venting.**

The T-H2-DV must be vented in accordance with the section “Venting of Equipment" of the latest edition of the Natural Fuel Gas Code: ANSI Z223.1/NFPA 54 and/or Section 7 of the CAN/CSA B149.1 Natural Gas and Propane Installation Code in Canada, as well as all applicable local building codes.

Vent installations in Canada which utilize plastic venting must use vent systems that comply with ULC S636. The TH-CVPVC33 concentric vent termination kit is certified to ULC S636 for use with IPEX PVC vent system. Please follow the procedures outlined in the IPEX System 636 Installation Guide on the use of solvents and cements, available at www.ipexinc.com.

Takagi Industrial Co.USA, Inc
5 Whatney, Irvine, CA 92618 Tel: 949.770-7171 Fax: 949.770.3171
www.takagi.com

Concentric vent kit assembly

1. Once the proper location has been determined, cut a hole in the wall large enough to accommodate the outer pipe.
2. Solvent cement the inner pipe to the concentric Y-fitting.
3. Solvent cement the outer pipe to the concentric Y-fitting.
4. Slide the assembly through the wall penetration.
5. To permanently affix the termination cap, it should be solvent cemented to the inner pipe. For installations where removal of the cap may be required for service or cleaning, it can be fastened mechanically with the supplied screw & nut set. For either installation method, the outer pipe is only a friction fit with the cap.
6. Once the cap is installed, and the kit is secured as outlined below, the kit can be connected to the venting system.

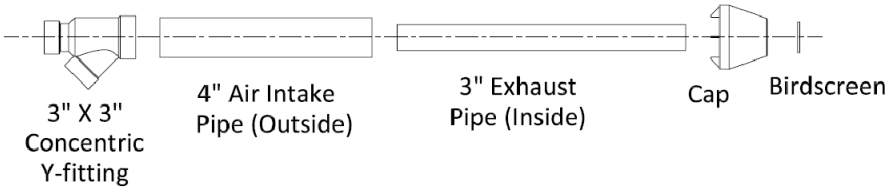
Installation / support procedures

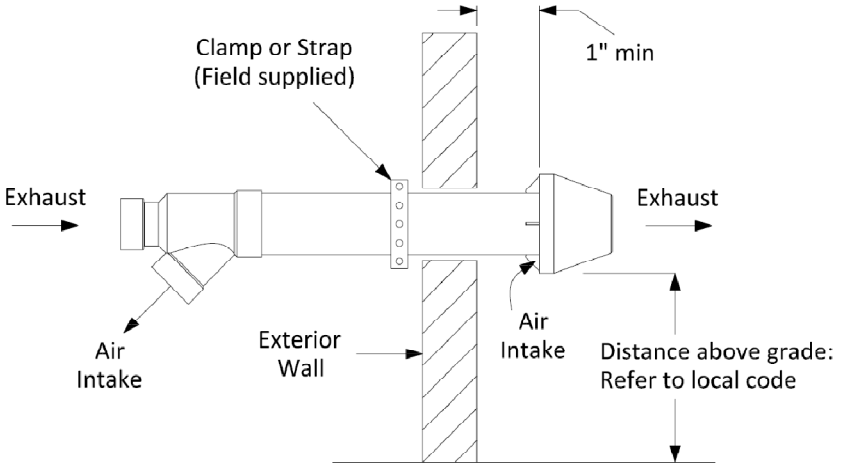
1. Kits must be securely fastened to structure, to ensure dimensions shown below are maintained.
2. Straps are field supplied. Use straps, clamps, or equivalent that will not score or damage the pipe. Expansion and contraction should be addressed between appliance and termination point.
3. All penetrations must be sealed according to local codes. Caulking for sidewall terminations is typical. Use only PVC/CPVC compatible sealing material.
4. The weight of the concentric kits must be supported by the clamps/straps and not by the vent system it connects to.

Mechanically fastened termination cap

If the cap is to be mechanically fastened, please follow the instructions below:

1. Locate the drill location dimple on the outside of the cap.
2. At this location, drill a 3/16” hole through the cap and the inner pipe wall. Ensure that the path of the hole is perpendicular to the inner pipe, NOT the outside of the cap.
3. Insert the screw and tighten the bolt. Do not over tighten.



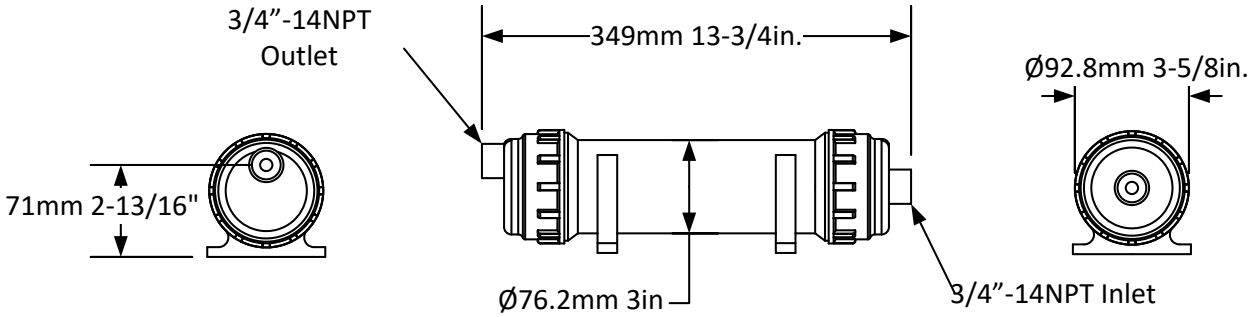


NC-1 Condensate Neutralizer Technical Information

KIT CONTENTS :

No.	Parts Description
A	Two NC Series O-Rings for Canister
B	Two NC Series Unions
C	One NC Series Y Connector - Nylon
D	Three 3/4" NPT to 1/2" Hose Barb Fittings
E	Six Hose Clamps
F	10ft of 1/2 Vinyl Tubing
G	Two Base/Wall Mounting Clamps

DIMENSIONS :



WEIGHT : 2 kg, 4.4 lbs. (dry weight with Media)

SPECIFICATION :

The condensate neutralization capsule shall be AXIOM INDUSTRIES LTD. model NC-1. System shall include 1 litre (0.26 U.S. gallon) transparent capsule made from corrosion resistant materials with two 3" fill/access openings, 3" inlet and outlet screen, 3/4"-14NPT threaded inlet, 3/4"-14NPT threaded outlet, two ¾" MNPT x ¾" FNPT unions, three 3/4" NPT to ½" hose barb fittings, ½" barbed Y fitting, six hose clamps, 10 ft of 1/2" ID vinyl tubing, two base/wall mounting clamps.

OPTIONAL ACCESSORIES :

- ☐ **NM-1** -- Replacement LipHter+ neutralization media (Exact Refill)
- ☐ **NM-1BULK** -- Replacement LipHter+ neutralization media (Up to 15 Refills)

LIMITED WARRANTY :

The “NC-1” is warranted against defects in materials and workmanship for one year.

Project _____ **Location** _____
Consultant _____ **Contractor** _____
Unit Tag _____ **Sales Agent** _____

SB-CN-NC1-01

HWRP-1

Submittal Data Information

101-192

0034e™

ECM High-Efficiency Circulator

Effective: March 10,2020

Supersedes: New

Job: _____ Engineer: _____ Contractor: _____ Rep: _____

ITEM NO.	MODEL NO.	

Specifications

- Maximum Shut-off Head: 34 feet
- Maximum Flow: 50 gpm
- Maximum Operating Pressure: 150 psi (10.3 bar)
- Maximum Water Temp: 230°F (110°C)
- Minimum Water Temp: 14°F (-10°C)
- Electrical specifications:
  - Voltage: 115V/208/230, 50/60 Hz Single phase
  - Operating Power Range: 10 - 170W
  - Max. AMP Rating: 1.48 (115V) - 0.70 (230V)
- Equipped with a Cast Iron or Stainless Steel casing
- Suitable for chilled water systems
- Stainless Steel model suitable for open loop potable water systems
- Taco circulators are for indoor use only
- Acceptable for use with water or maximum of 50% water/glycol solution

Materials of Construction:

Casing:	Cast Iron or Stainless Steel
Stator Housing:	Composite
Control Base:	Composite
Control Cover:	Composite
Cartridge:	Composite
Impeller:	Composite
Shaft:	Ceramic
Rotor:	Neodymium
Bearings:	Ceramic
Thrust Bearing:	Carbon
O-Ring & Gaskets:	EPDM

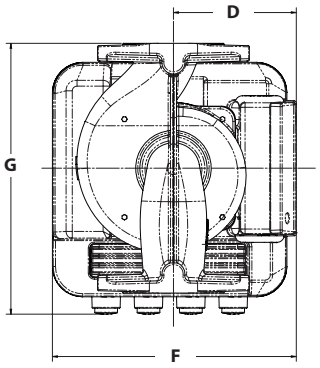
Certified to NSF/ANSI 61 & 372

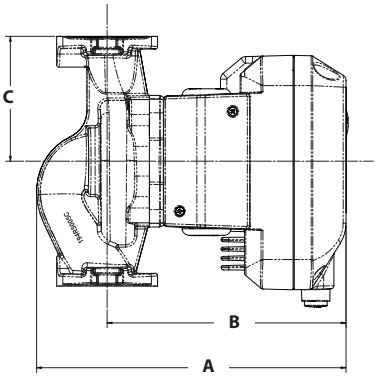
Stainless Steel Model

Applications

Cast Iron Model: Closed loop, pressurized heating and chilled water HVAC systems
Stainless Steel Model: Open loop, potable water systems

The 0034e is a high-performance, variable speed, wet-rotor circulator with high-efficiency ECM permanent magnet technology. With 5 easy settings, its variable speed performance curves are equivalent to the Taco 009, 0010, 0011, 0012, 0012 3-Speed, 0013, 0013 3-Speed & 0014. Ideal for large residential and light commercial hydronic heating, chilled water cooling and domestic hot water systems. The 0034e reduces power consumption by up to 85% compared to equivalent AC permanent split capacitor circulators.





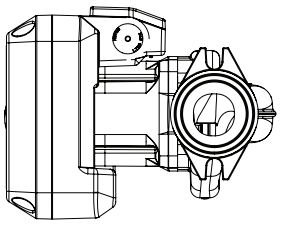
Pump Dimensions & Weights

Model Number Part Number	Casing	Flange Type	A	B	C	D	F	G	Wt.lbs. [kg]
			Inches [mm]						
0034e-F2 VM3450-HY1-FC2A00	Cast Iron	R	8.05" [205]	6.22" [158]	3.25" [83]	3.20" [81]	6.22" [158]	7.05" [179]	10.5 [4.8]
0034e-SF2 VM3450-HY1-FS2A00	Stainless Steel								

Electrical Data

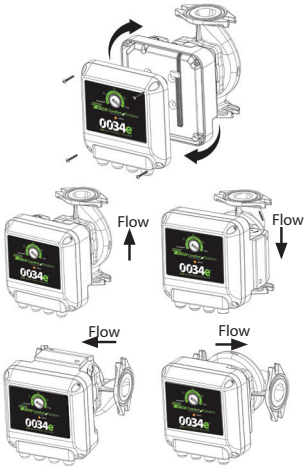
Model	Volts	Hz	Ph	Max Amps	Watts	RPM
All Models	115/208/230	50/60	1	1.48	10 - 170	830 - 4300
Motor Type	ECM, Permanent Magnet, Electronically Protected					

Flange Orientation

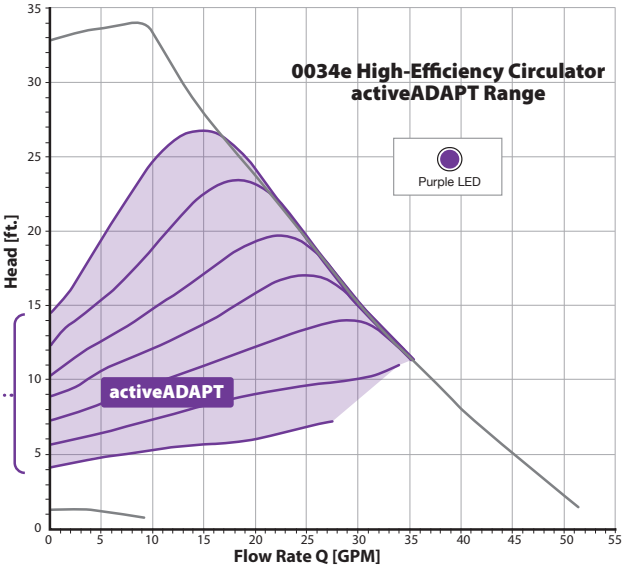


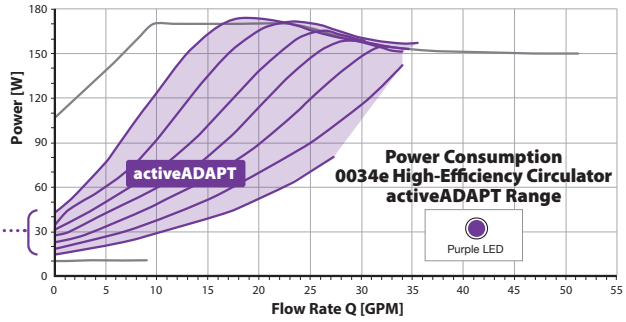
Rotated (R)

Rotatable Control Cover to allow mounting in any orientation

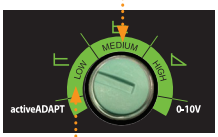


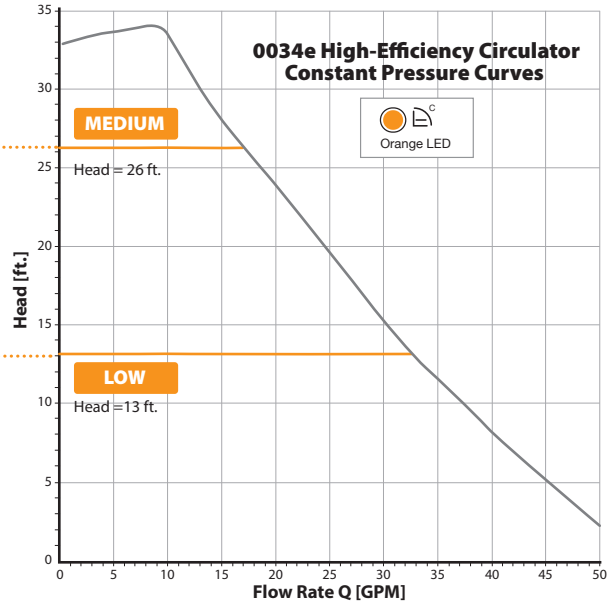
activeADAPT™ Mode:
activeADAPT is an operating mode designed for constant circulation systems. On this setting, the circulator will sense changes in system flow and head conditions and adjust the operating curve automatically.

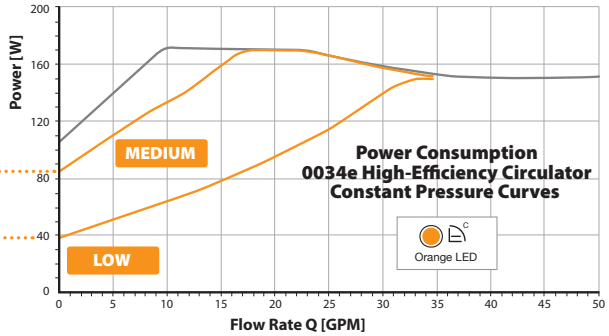




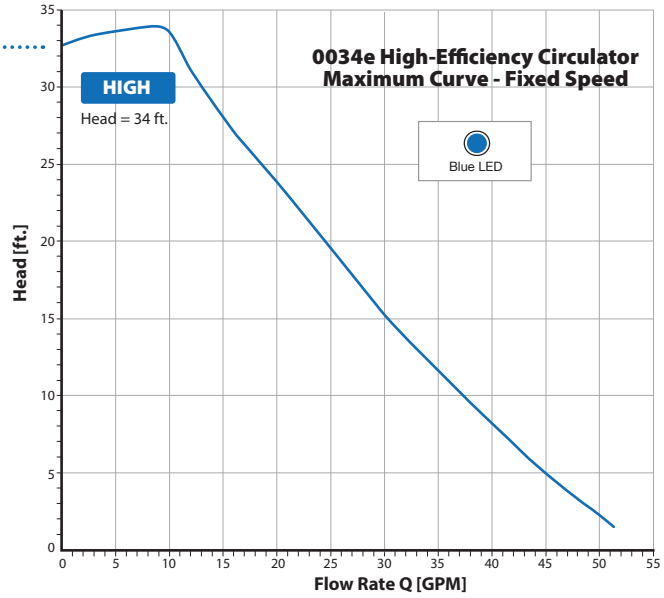
Constant Pressure Mode:
At Low setting the circulator will vary speed to maintain 13 feet of head constant pressure. At Medium setting the circulator will vary speed to maintain 26 feet of head constant pressure.

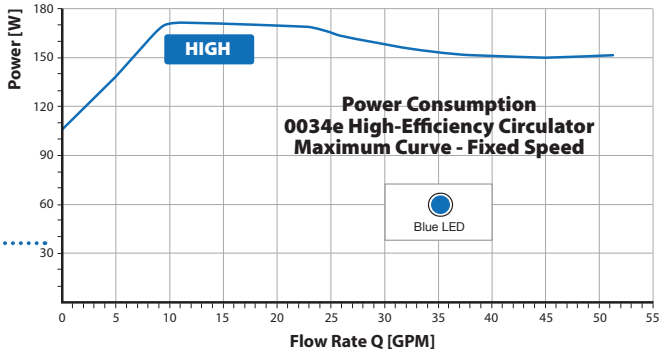






Fixed Speed Mode:
At High setting the circulator always operates at full speed.





0-10V DC or PWM External Input:
The circulator will vary its speed and performance based on a 0-10V DC analog or PWM digital signal external input.

PWM (Pulse Width Modulation)