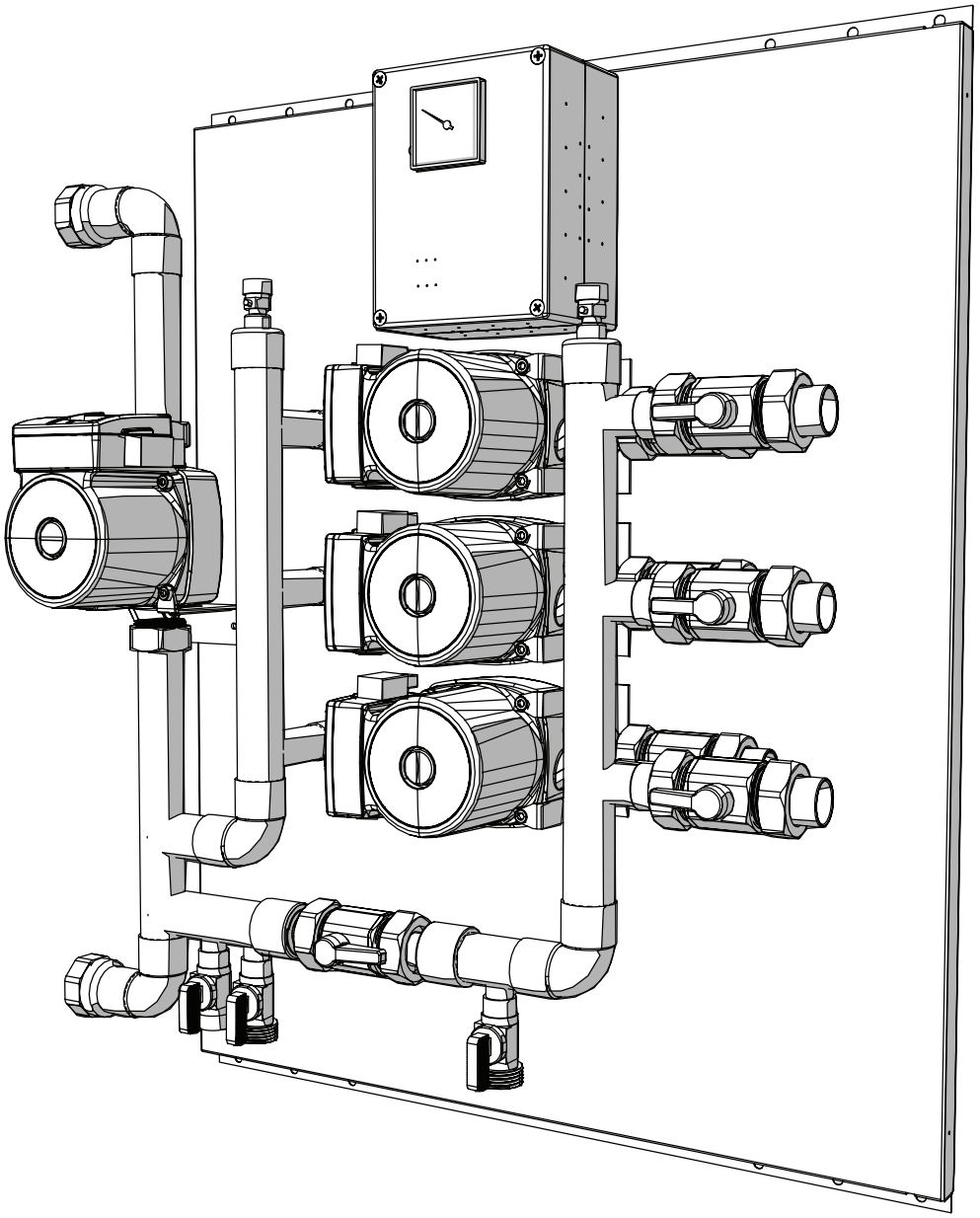
Tamas Hydronic Systems Inc.

Tamas Hydronic Panels
User Guide
Version 1.1



Weil-McLain Boiler Series

Installation and Commissioning Guide

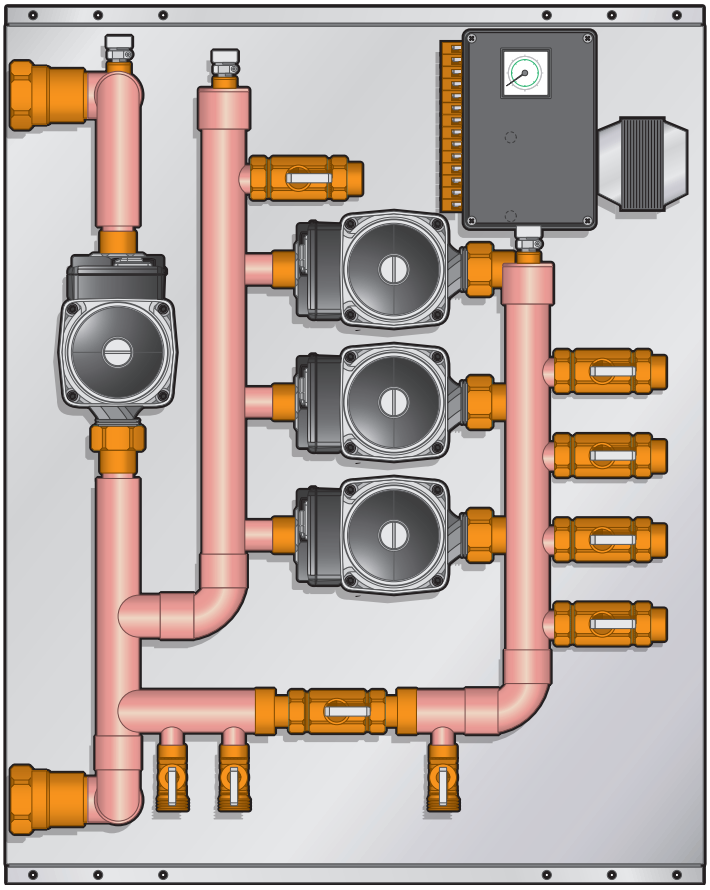
4516 112 Ave S.E. Calgary, Alberta • Tel: (403) 279 0020 • Fax: (403) 279 0747

www.tamashydronic.com

This User Guide is Applicable to:

Weil-McLain Boiler Panels - Stainless Steel ECO Panels	
T-BO-WD-1100-S	Stainless Steel ECO Panel with (1) DHW Zone
T-BO-WD-1200-S	Stainless Steel ECO Panel with (1) DHW Zone with Priority and (1) High Temp Zone
T-BO-WD-1300-S	Stainless Steel ECO Panel with (1) DHW Zone with Priority and (2) High Temp Zones
T-BO-WD-1400-S	Stainless Steel ECO Panel with (1) DHW Zone with Priority and (3) High Temp Zones
Weil-McLain Boiler Panels - DHW Priority	
T-BO-WD-1100	ECO Panel with (1) DHW Zone
T-BO-WD-1200	ECO Panel with (1) DHW Zone with Priority and (1) High Temp Zone
T-BO-WD-1300	ECO Panel with (1) DHW Zone with Priority and (2) High Temp Zones
T-BO-WD-1400	ECO Panel with (1) DHW Zone with Priority and (3) High Temp Zones
Weil-McLain Boiler Panels - No DHW	
T-BO-WO-1100	ECO Panel with (1) High Temp Zone
T-BO-WO-1200	ECO Panel with (2) High Temp Zone
T-BO-WO-1300	ECO Panel with (3) High Temp Zones
T-BO-WO-1400	ECO Panel with (4) High Temp Zones

*** Note:**
The following parts lists and application drawings are general samplings. Each panel configuration dictates the required components, including pump type. See the Technical Data section of the manual for specific information on each part in your particular variation of the Tamas Weil-McLain Eco Boiler Panel.



T-BO-WO-1301 Model Shown

Description

The Weil-McLain Eco Boiler Series panel contains a series of expandable panels suited for a variety of applications and building sizes using the Weil-McLain Eco Boiler Series.

Use

When a Weil-McLain Eco Boiler Series panel is connected to a Weil-McLain Eco Boiler system, the panel regulates the water distribution quantity to accommodate demand.

Optional secondary injection mixing components, as well as low and high temperature zones can be added to the system. This enables the panel to accommodate DHW priority or fancoil applications.

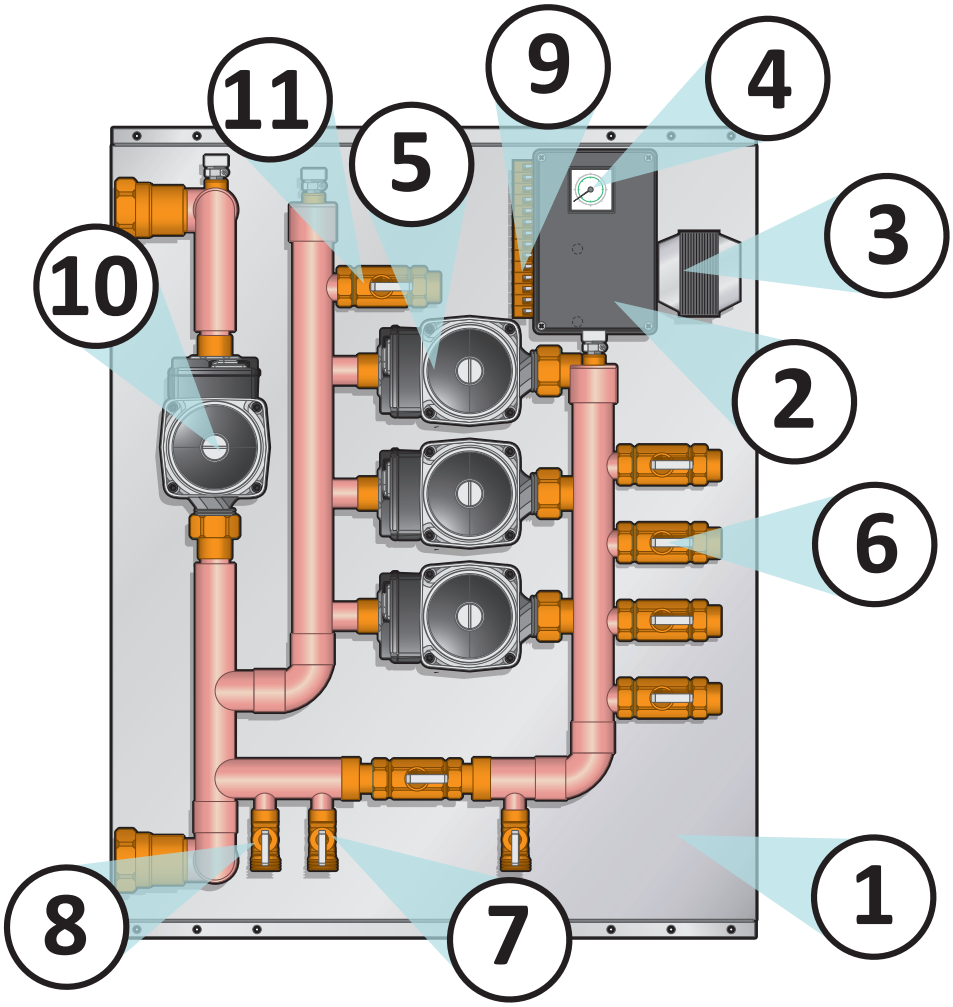
The board can accommodate up to four zones plus the boiler pump. Boiler pump is a UPS 15-58 suitable for Eco models 70, 110 and 155.

Main Features

- Hydraulic seperation between the primary and the secondary
- Box with terminal board for electrical connections
- Possibility of 2 zones on the secondary side for mixed/unmixed water
- Powder coated enclosure
- ETL approved
- Compatible connections: 1” or ¾”

Technical Data

- Max. Operating Temperature: 90°C/194°F
- Max. Ambient Temperature: 50°C/122°F
- Max. Operating Pressure: 10 Bar/145 PSI
- Power supply: 120V 15A



Components			
1	*22” x 26” Galvanized Back Plate*	6	*Ball Valve - 3/4” I.D. or 1” O.D.*
2	*Control Box with Power Cable*	7	*Hose Bib Hook-up 1/2”*
3	*24V AC Transformer with Internal Fuse*	8	*Expansion Tank Hook-up 1/2”*
4	*Temperature Gauge*	9	*Terminal Block*
5	*Zone Pumps (UPS 15-58)*	10	*Boiler Pump (UPS 15-58)*
		11	*Take-off Valve*

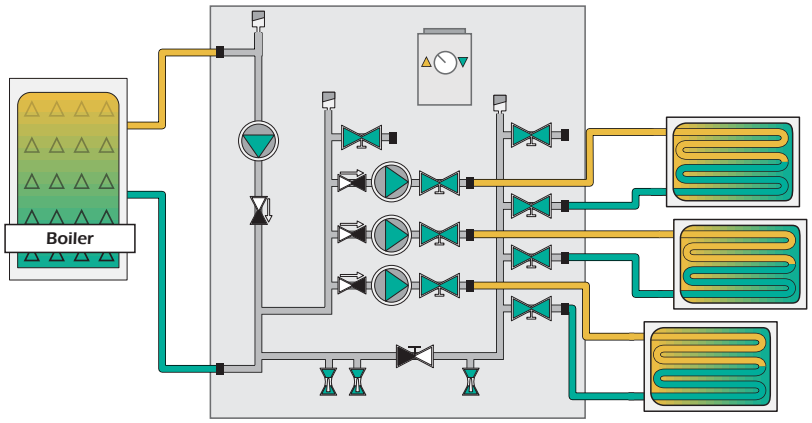
Operation of the Primary

The primary circuit is composed of a boiler pump, manual air vent and ball valves for the pump maintenance.

When the Weil-McLain Eco Boiler Series panel is connected to the boiler, the panel regulates the water distribution quantity to accommodate the demand

The hydraulic separation (close tees) permits the dynamic separation of the primary and secondary flow

The boiler pump circulates the water through the primary circuit and keeps the temperature on the primary loop



Regular Operation

Operation of the Secondary

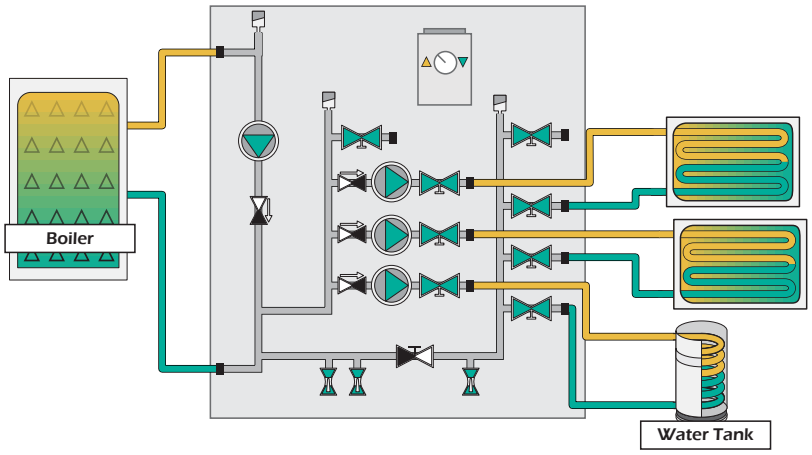
On the secondary side, different configurations are possible; one, two, three or four zones can be supplied.

If the zone temperature falls below the users designated setting on a thermostat (sold separately), for example, the panel initiates a signal back to the boiler and turns on the boiler pump and zone pumps.

When the zone temperature is satisfied, the thermostat or aquastat disconnects the boiler and the zone pump.

Operation of the Domestic Hot Water (DHW)

When a domestic hot water demand to the boiler is signalled, the panel disconnects the active zone pumps and sends a message to the Weil-McLain Eco Boiler to rise the internal temperature. This water is heated and distributed as domestic hot water. When the domestic hot water demand is satisfied; the Weil-McLain Eco Boiler disconnects the high temperature target output and reverts to the pre-set zone temperatures that were previously active. This method of providing precedence to the domestic hot water requirements before the zone heating load of a building is known as domestic hot water priority.



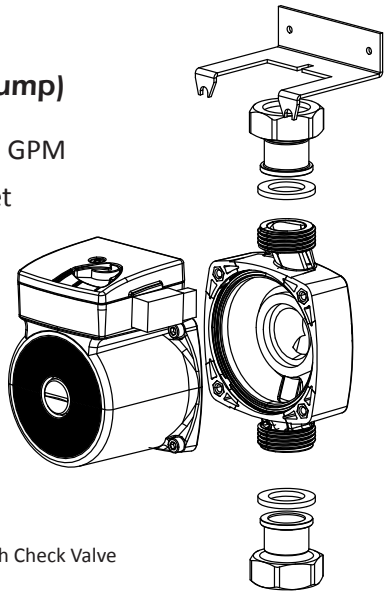
DHW Operation

Pump Circulator

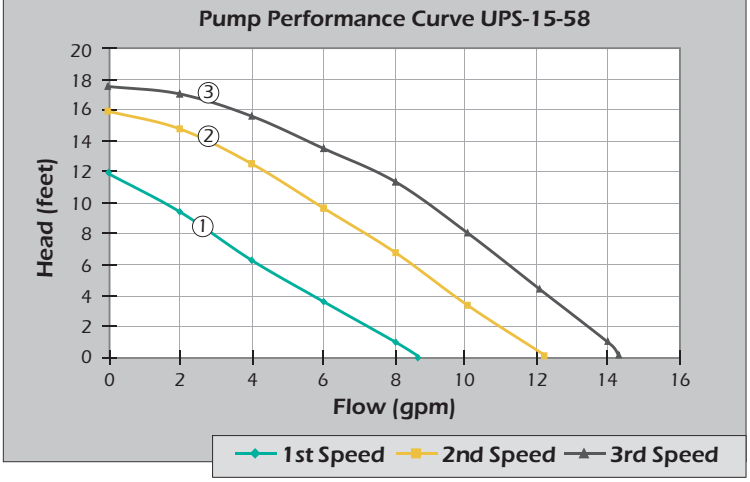
UPS-15-58 (3 Speed Pump)

- Flow range: 0 - 17 U.S. GPM
- Head range: 0 - 19 Feet
- Motors: 2 Pole, Single Phase
- Maximum fluid temperature: 230°F(110°C)
- Minimum fluid temperature: 36°F(2°C)

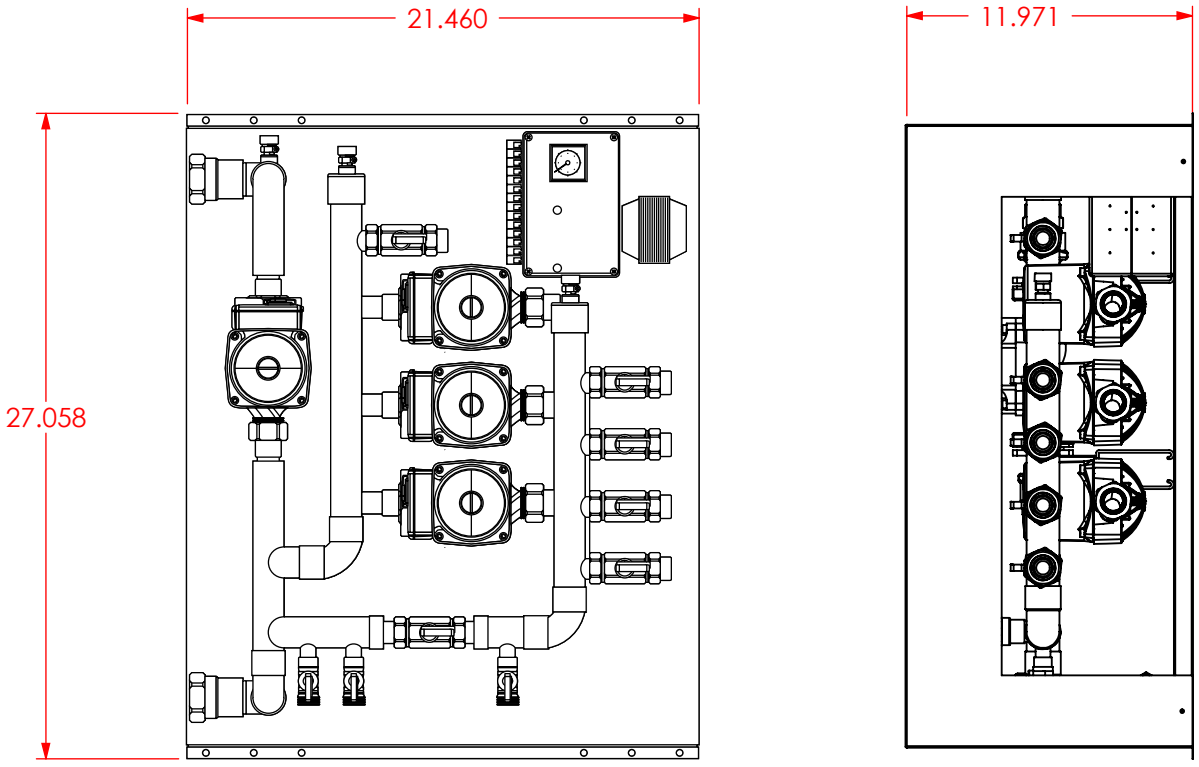
* Maximum fluid temperature with Check Valve present: 200°F



		AMPS	WATTS	HP	CAPACITOR
115V	Spd. 3	0.75	85	1/25	10mF/180V
	Spd. 2	0.66	75	1/25	10mF/180V
	Spd. 1	0.51	60	1/25	10mF/180V



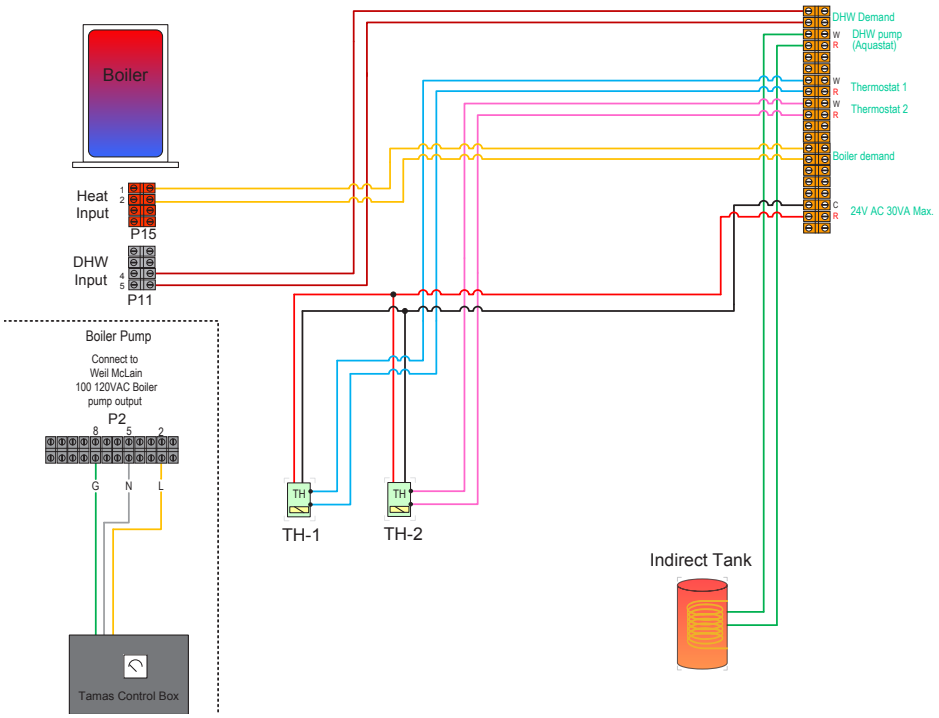
Dimensions



NOTE: Dimensions are in inches.

Wiring

All electrical wiring to the Tamas panel (including grounding) must conform to local electrical codes and/or National Electrical Code, ANS/NFPA No. 70 - latest edition, or the Canadian Electrical Code, C22.1 – Part 1.



Heat Demand - P15 Heat Input (Weil-McLain)

Connect the Heat Demand on the Tamas Panel to the P15 Heat Input, pins (1-2) on the Weil McLain terminal block to start the boiler on a call for heating.

DHW Demand - P11 DHW Input (Weil-McLain)

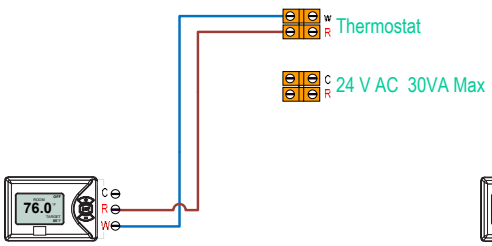
Connect the DHW Demand on the Tamas Panel to the P11 DHW Input, pins (4-5) on the Weil McLain terminal block to start the boiler on a call for DHW.

Thermostat 1-2

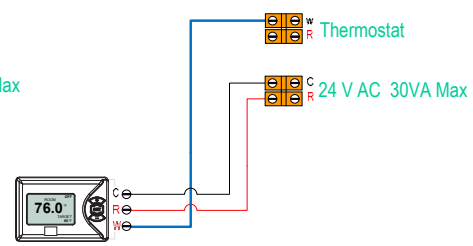
Connect the thermostat for a space heating zone to the terminal block on the Tamas Panel. Do not supply 24V power to the thermostat circuits or attempt to supply 24V AC for any other application.

For the thermostats that require continuous 24V AC power source, connect the thermostat power input to the 24V AC terminal on the Tamas Panel.

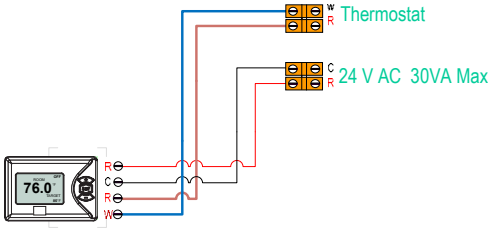
2 Wire Thermostat



3 Wire Thermostat



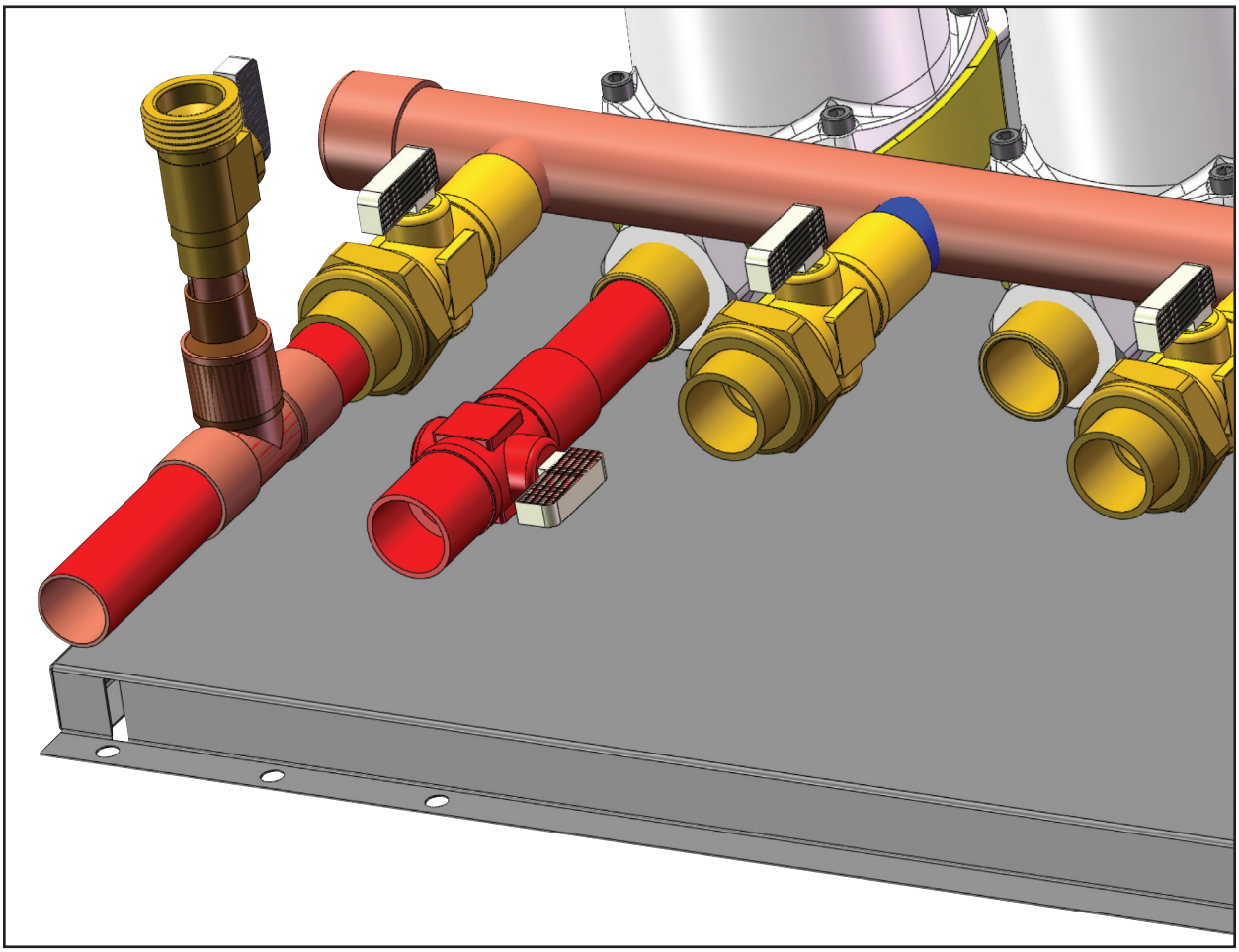
4 Wire Thermostat

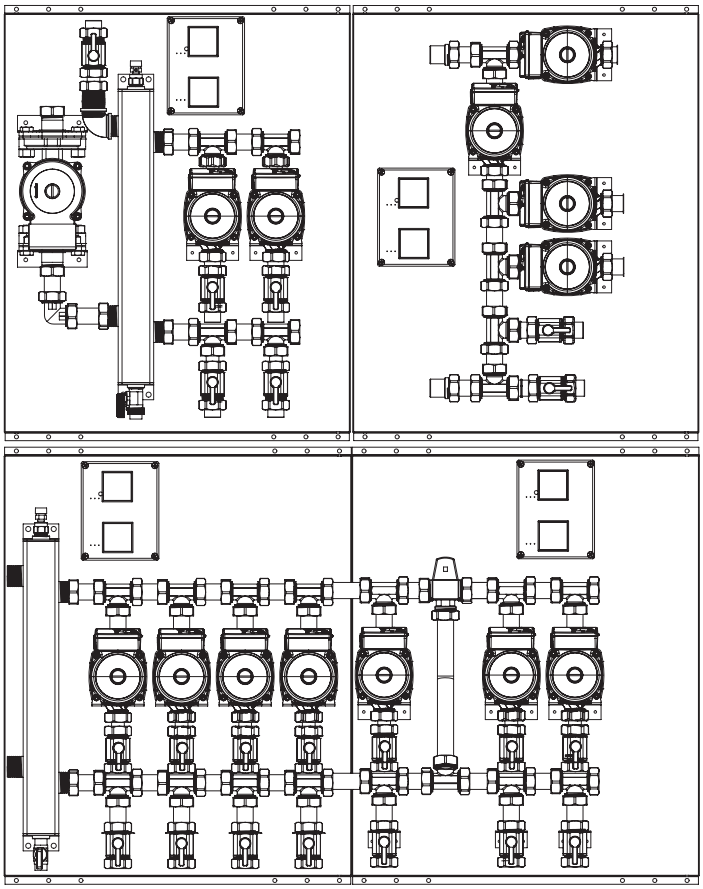


System Filling Procedure

1. Disconnect power from the Tamas Hydronic panel
2. Install recommended purging valve on return zone line.(field supplied see below drawing)
3. Close all isolation valves to the zones
4. Begin filling the panel through the provided hose bib connection on the panel
5. Open the return isolation valve on the panel
6. Begin filling the system
7. Slowly open the purging valve on the return side of the zone line to let the air out of the system
8. After the above procedure is done, close the air purging valve
9. Finally close all the valves to isolate the zone from the panel before moving on to the next zone.
10. Repeat this procedure based on the amount of zones on the board
11. Once all the zones have been purged, you can open all the isolation valves

IMPORTANT *This procedure is applies to filling the system one zone at a time.*



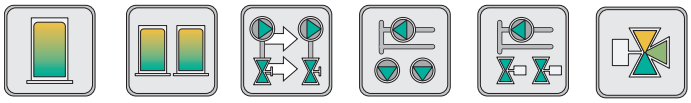


Tamas Hydronics Modular Panels

The Tamas Modular Panel line contains a series of expandable hydronic panels suited for a variety of applications and building sizes.

The comprehensive system provides a versatile method of distributing heat to a multitude of applications. Indoor/outdoor reset controls are utilized to improve system efficiency and management. Specific panels allow for system expansion, multiple boiler management , injection mixing and domestic hot water.

Available panels: Boiler, Staging, Expansion, Low Temperature Injection (Pump, Valve, TMV)



Safety Precautions

During installation and operation, please avoid injury from touching the hot surface of the pipe. The installation and service should be done by qualified personnel only. Please follow all warning signs on the panel for your own safety while dealing with installation and service.

Limited Warranty

Tamas Hydronic Systems Inc. warrants each of its products to be free from defects in workmanship and materials under normal use and service for a period of 24 months from date of purchase from a Tamas Hydronic Systems inc. authorized Dealer.

If the product proves to be defective within the applicable warranty period, Tamas Hydronic Systems inc. on its sole discretion will repair or replace said product. Replacement product may be new or refurbished of equivalent or better specifications, relative to the defective product. Replacement product need not be of identical design or model. Any repair or replacement product pursuant to this warranty shall be warranted for not less than 90 days from date of such repair, irrespective of any earlier expiration of original warranty period. When Tamas Hydronic Systems Inc. Provides replacement, the defective product becomes the property of Tamas Hydronic Systems Inc.

Warranty Service, within the applicable warranty period, may be obtained by contacting your nearest Tamas Hydronics Systems inc. office via the original Authorized Agent and requesting a Return Material Authorization Number (RMA #). Proof of purchase in the form a dated invoice/receipt must be provided to expedite the issuance of a Factory RMA.

After an RMA number has been issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit. The RMA number must be visible on the outside of the package and a copy included inside the package. The package must be mailed or otherwise shipped back to Tamas Hydronic Systems Inc. with all costs of mailing/shipping/insurance prepaid by the warranty claimant.

Any package/s returned to Tamas Hydronic Systems Inc. without an approved and visible RMA number will be rejected and shipped back to purchaser at purchaser's expense. Tamas Hydronic Systems Inc. Reserves the right, if deemed necessary, to charge a reasonable levy for costs incurred, additional to mailing or shipping costs.

Limitation of Warranties.

If the Tamas Hydronic Systems Inc. product does not operate as warranted above the purchasers sole remedy shall be, at Tamas Hydronic Systems Inc.' s option, repair or replacement. The foregoing warranties and remedies are exclusive and in lieu of all other warranties, expressed or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose/application. Tamas Hydronic Systems Inc. neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale, installation maintenance or use of Tamas Hydronic Systems Inc. products.

Tamas Hydronic Systems Inc. shall not be liable under this warranty; if its testing and examination discloses that the alleged defect in the product does not exist or was caused by the purchasers or third persons misuse, neglect, improper installation or testing, unauthorized attempts to repair or any other cause beyond the range of intended use, or by accident, fire, lightning or other hazard.

Limitation of Liability.

In no event will Tamas Hydronic Systems Inc. be liable for any damages, including loss of data, loss of profits, costs of cover or other incidental, consequential or indirect damages arising out of the installation, maintenance, commissioning, performance, failure or interruption of a Tamas Hydronic Systems Inc. product, however caused and on any theory of liability. This limitation will apply even if Tamas Hydronic Systems Inc. has been advised of the possibility of such damage.

Local Law.

This limited warranty statement gives the purchaser specific legal rights. The purchaser may also have other rights which vary from state to state in the United States, from Province to Province in Canada and from Country to Country elsewhere in the world.

To the extent this Limited Warranty Statement is inconsistent with local law, this statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this statement may not apply to the purchaser. For example, some states in the United States, as well as some governments outside the United States (including Canadian Provinces), may:
Preclude the disclaimers and limitations in this statement from limiting the statutory rights of a consumer (e.g. United Kingdom);
Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations; or
Grant the purchaser additional warranty rights which the manufacturer cannot disclaim, or not allow limitations on the duration of implied warranties.

Notes:

Custom, Reliable Hydronic Systems

Tamas Hydronic Systems Inc.
4516 112 Avenue SE
Calgary, Alberta T2C 2K2

Phone: 1 (403) 279 0020
Fax: 1 (403) 279 0747
info@tamashydronic.com

/TamasHydronicSystems
/TamasHydronic
/company/tamas-hydronic-systems