



Hydronic Application Guide

PASSION IN WATER

2020-2021



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## Welcome to 2020-2021!

If you are reading this, you already know the passion that Able Distributors has for hydronics. At Able, choosing the products that we represent is a serious decision. We look at the company, the people, the products, the pricing, the warranties, and most importantly, what is the company willing to do when things go wrong? Are they willing to stand with us and **ALWAYS** do the right thing for the customer? If the answer is anything less than **HELL YES**, we are not interested.

Able has had the good fortune to have found a company in NTI that embodies all that we find best. They are run by a team that is committed to nothing less than exceptional products. Every part that makes up every boiler must mean something and have a purpose that drives its performance. And, most importantly, they step up before they are asked to protect their reputation and the reputation of their products when things are uncertain.

Earlier this year NTI, issued a recall on a small grommet seal in select Tft boilers. The probability of this component becoming an issue was small but NTI got in front of it, communicated with us and our contractors, and came up with a streamlined service and reimbursement plan that actually enhanced the overall feeling around both NTI and their Tft boiler.

## So, what are we prepared to do this year to top what we have already accomplished in Chicago?

- 1.) More inventory and more options.
  - a.) Expanded Tx offering
  - b.) Full line of Lx commercial boilers in stock
  - c.) Upgrades to existing Tft models
- 2.) Dialed in help selecting the best boiler for every individual application
- 3.) More application drawings to show you cool piping options and tricks to reduce labor and increase performance
- 4.) More “stuff” around the boiler to make the job faster, easier, smarter.

Thanks for everything you do that allows Able Distributors to serve the Chicago market and continue to do what we love!

Michael

## NTI – Trinity Fire Tube Boiler: The One That Started Everything

We hesitate to say that any product can "do it all", but the Tft can do it all. This is the pinnacle of high-efficiency condensing technology for the residential market.

### Features

- AIC Fire Tube Heat Exchanger – Large volume of water, low pressure drops, and stainless steel, 'nuff said
- Honeywell Sola Control – Touchscreen, controls up to three pumps, three different temperature set points, outdoor reset, easy set up, and up-front diagnostics.
- Convenient Connections – top and bottom for water and gas
- Integrated LWCO
- Stainless steel connections for water
- Victaulic fittings for added strength
- 75VA transformer provides the perfect ignition every time
- Five-year parts and HX warranty

The Tft by NTI sets the standard for fire tube boilers. It's perfect for multi-zone applications, multi-temp applications, indirect-fired water heaters, large residential and commercial applications, and snow melt systems. Ability to connect multiple boilers together with no extra controls needed (Sola), the Tft is the perfect do everything boiler. Use it when you want to give your customer the very best modulating/condensing boiler made in North America.







## Trinity Tx Boiler: Focused & Efficient

Not every job requires multiple temperatures and massive amounts of energy. Sometimes—many times—what the job requires is focus and simplicity. The Tx boiler embodies these ideas. One look under the hood and you will understand why we love this boiler. It is simple to pipe, simple to wire, simple to diagnosis and simple to fix.

### Features

- Giannoni stainless steel heat exchanger
- Simple Tx controller with outdoor reset, lead lag, and self-diagnostic display
- Includes a low-loss header to create a “primary loop”
- Easy Access – Hinged control panel makes field wiring and accessing internal components simple
- Three pump outputs (no external controller needed!)

With a limited number of sizes, these boilers are perfect for typical Chicago applications. They're easy to install, easy to vent, and easy to program. The Trinity Tx boiler checks all the boxes needed for everything from simple radiant basement jobs all the way to a whole house changeout.



## Trinity Tx Combi: Two for the Price of One



Over the last few years, we have run into hundreds of jobs that require BOTH DHW and hydronic heating applications. Many times, these applications require a reasonable amount of domestic water—maybe three to five gallons a minute. Something you would see in a two-or-three bedroom house with a few bathrooms and a few kids.

We took one look at the Tx Combi (combination domestic and hydronic) boiler and knew we had a winner on our hands. Well, after three years, it's safe to say that we had no idea how much of a winner we had! This is one of our most popular boilers for all of the reasons below.

### Features

- Giannoni stainless steel heat exchanger
- Simple Tx controller with outdoor reset, lead lag, and self-diagnostic display
- Includes a low-loss header to create a “primary loop”
- Easy Access – Hinged control panel makes field wiring and accessing internal components simple
- Three pump outputs (no external controller needed!)
- Limited sizes (151-200k) BTU
- Internal pump and DHW heat exchanger integrated
- DHW priority and pre-heating

With only two sizes and a healthy amount of hot water delivery, these may be our most popular every day option. The days of having a separate boiler and hot water heater (If you're going to go with an additional gas-fired appliance, we prefer the Rinnai Sensei tankless, by the way) are over. One boiler to rule them all is the name of the game at Able. The next time you run across a job that requires a reasonable amount of hot water and a reasonable amount of hydronic heating (baseboard, radiant, radiators, whatever,) the Tx Combi is the one boiler that does it all.





## Trinity Lx Condensing Boilers: Floor-Mounted & Ready for the Big League

Sometimes you simply don't have the room to hang that beautiful condensing boiler on the wall. Maybe the ceiling is too low or you're replacing a cast iron or copper boiler that has existing piping. Perhaps there is simply not enough wall space for all of the other items required to get the job done. NTI's Trinity Lx boiler comes in sizes starting at 150-200k. These are perfect for residential retrofit applications.

We are now stocking all sizes ranging from the aforementioned 150k all the way up to 800k. These boilers are built for big jobs that require serious BTUs to get the job done.

### Features

- Patented 316L Stainless Steel heat exchanger
- 7" color touch screen with easy diagnostics and troubleshooting functions
- Convenient floor mount
- Cascade up to eight boilers together without the need for extra controls
- Easy Access – Hinged control panel makes field wiring and accessing internal components simple
- Three pump outputs (no external controller needed!)
- Largest BTU range (150-800k) **IN STOCK**





# WATER HEATERS

## **Trin & Stor Indirect-Fired Water Heaters:** Get More from Your NTI Boiler



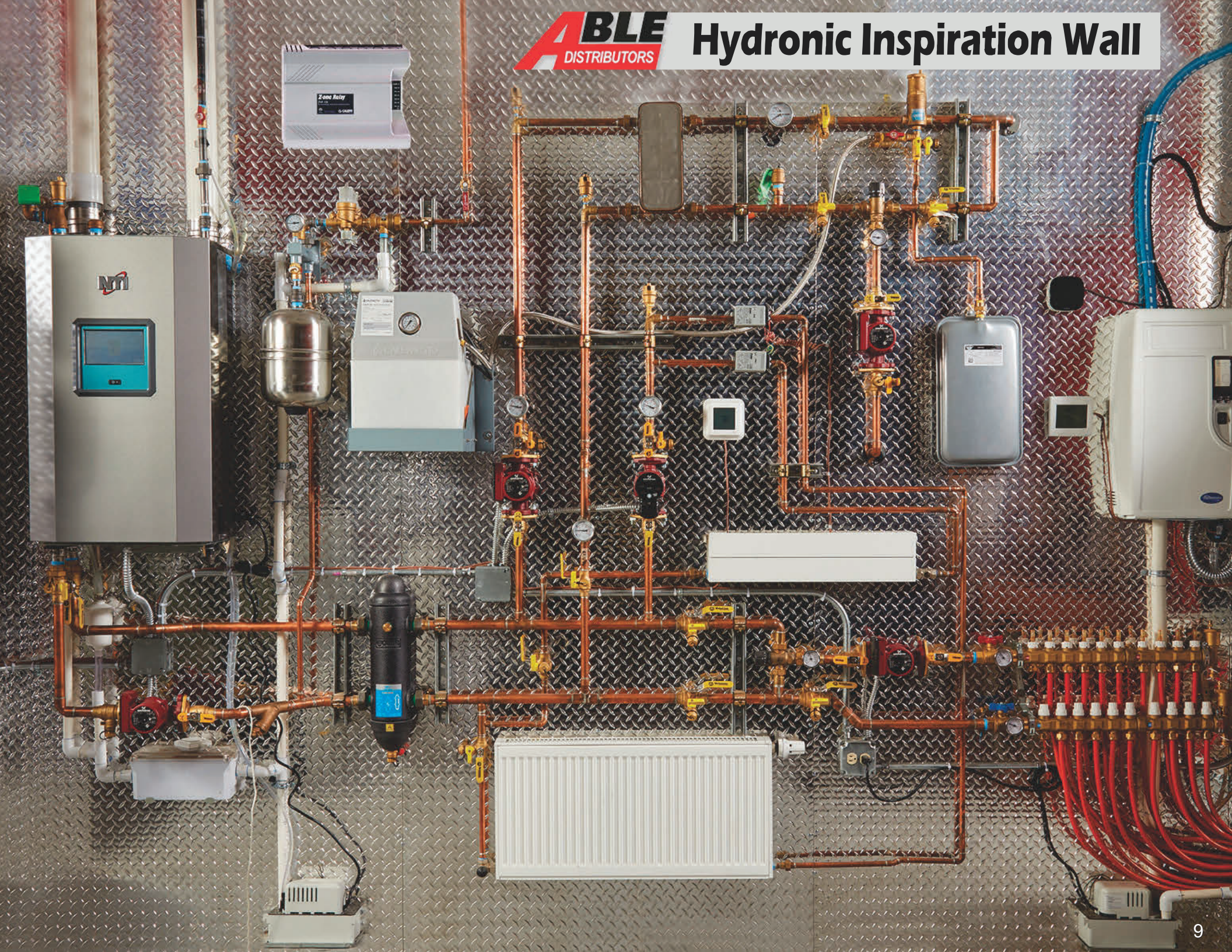
When people think of NTI, they think of condensing boilers. That's not the only area in which NTI excels; they also produce the best—and most complete line—of indirect-fired water heaters in the industry.

With sizes ranging from 40 gallons all the way up to 119 gallons, the NTI Trin & Stor can deliver in excess of 480 gallons of water per hour! If you've got an ultra-efficient NTI boiler, why wouldn't you incorporate it into your DHW system?

### Features

- 316L Stainless Steel
- 3" of EPS foam insulation to keep temperature loss under a degree per hour (think insulated thermos bottle)
- Sizes from 40-119 gallons all stocked at Able Distributors
- Easy Integration – Works perfectly with all NTI boilers acting like another heating zone (with priority of course!)
- No venting or gas connections required







19.



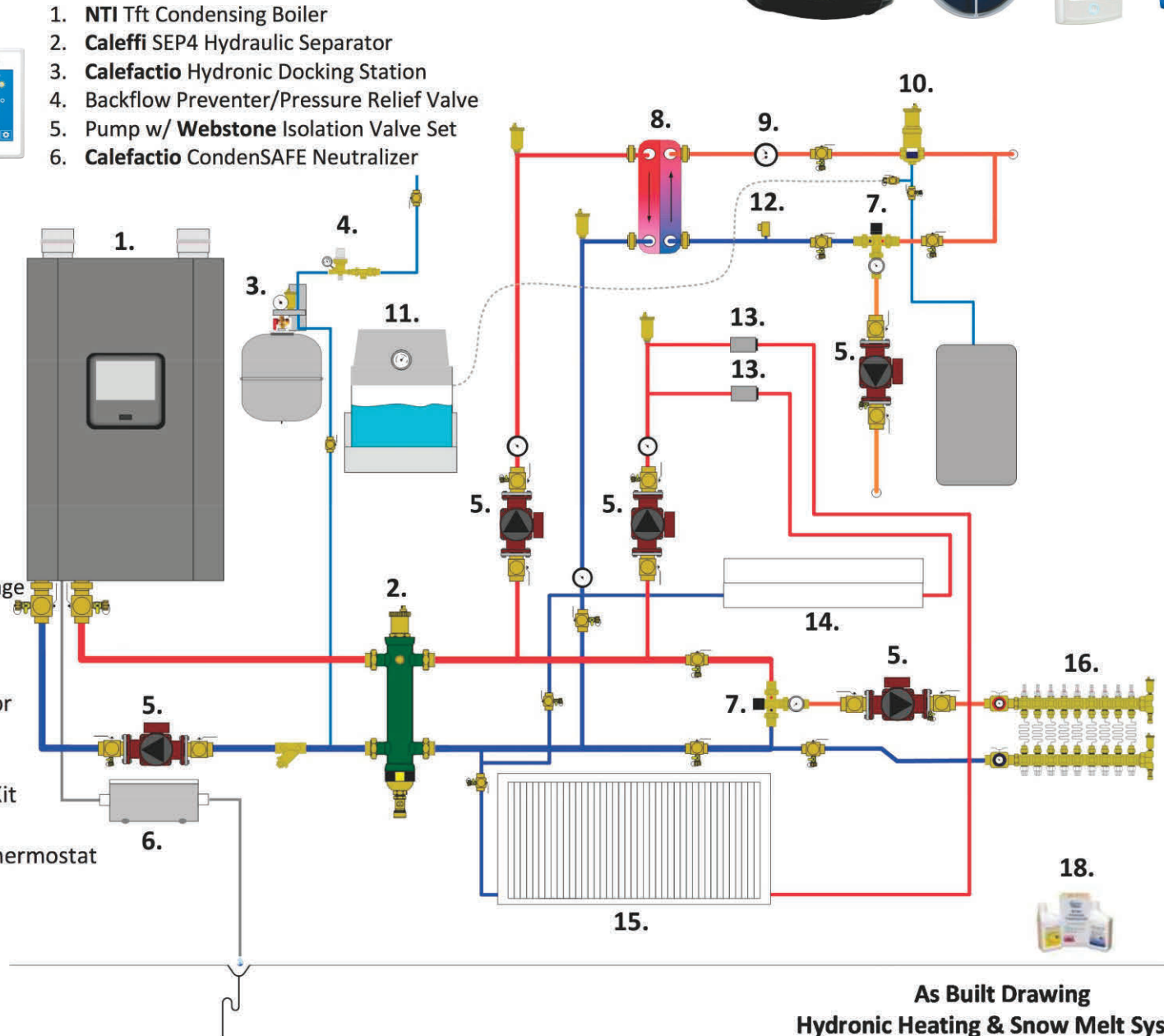
17.



17.

7. Caleffi 521 MixCal Mixing Valve
8. SWEP B10 Flat Plate Heat Exchanger
9. Pressure & Temperature Gauge
10. Caleffi 551 DISCAL Air Separator
11. Calefactio GMP6 Glycol Makeup Package
12. Pressure Relief Valve
13. Caleffi Zone Valves
14. Runtal UF Series Baseboard
15. DiaNorm Type 22 Flat Panel Radiator
16. Caleffi Radiant Manifold w/ Fittings
17. Caleffi Switching Relay
18. Fernox Boiler Chemical Treatment Kit
19. ecobee ecobee4 Smart Thermostat  
Honeywell T4 Pro Programmable Thermostat  
tekmar 562 Wi-Fi Thermostat
20. tekmar 090 Snow/Ice Sensor  
tekmar 095 Snow Sensor  
tekmar 654 Snow Melting Control  
tekmar 670 Snow Melting Control

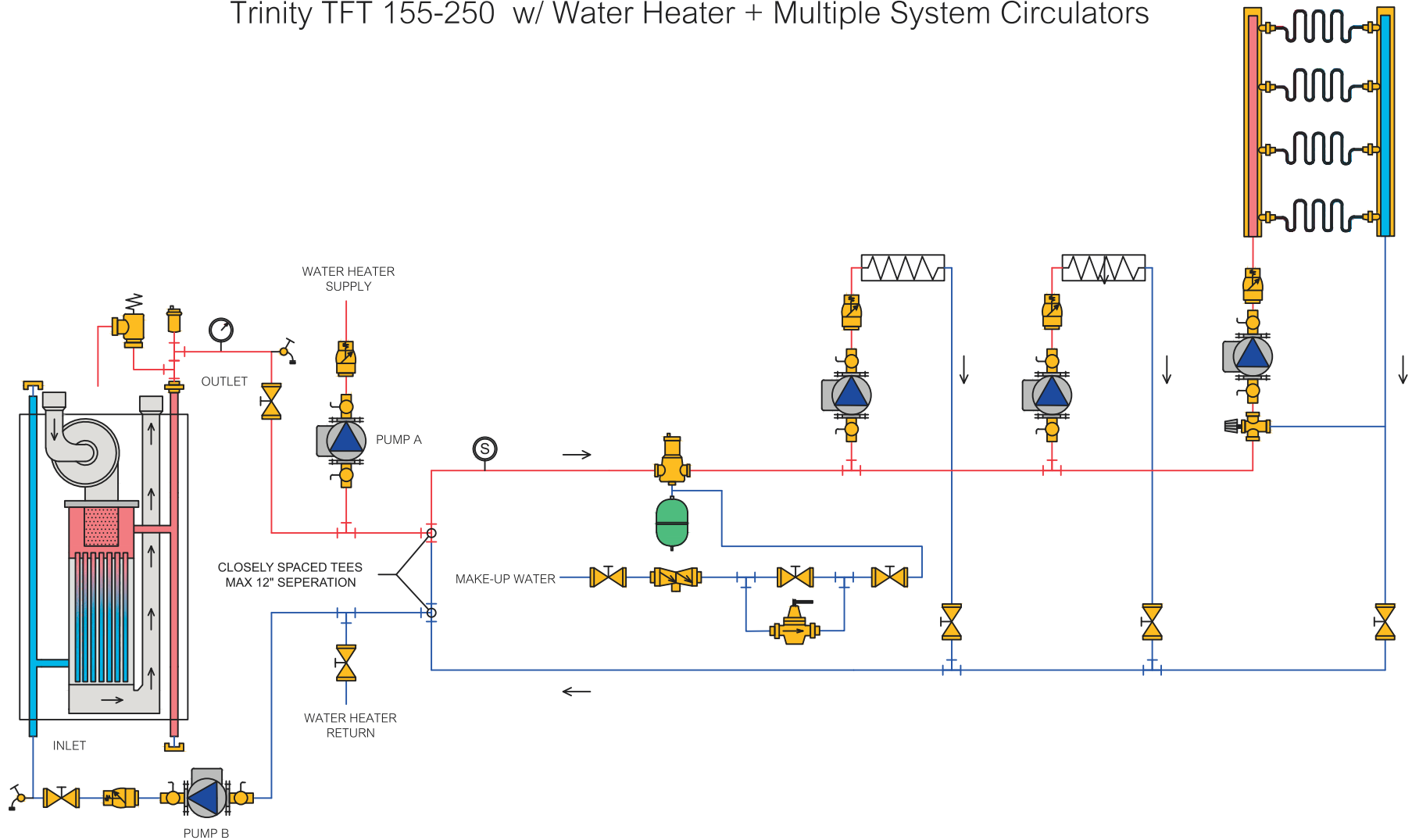
20.



**As Built Drawing  
Hydronic Heating & Snow Melt System**



# Trinity TFT 155-250 w/ Water Heater + Multiple System Circulators



NOTICE: This illustration is used for system piping concept only.

## LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	3-way mixing valve		globe valve		check valve		temperature guage
	central air seperator		isolation valve		union		system sensor
	auto air vent		pressure reducing valve		strainer		cap
	backflow preventor		pressure relief valve		zone valve		drain valve
	flow-check valve		pressure & temperature valve		expansion tank		baseboard
	pressure guage		circulator w/ isolation flanges		flow switch		zone load

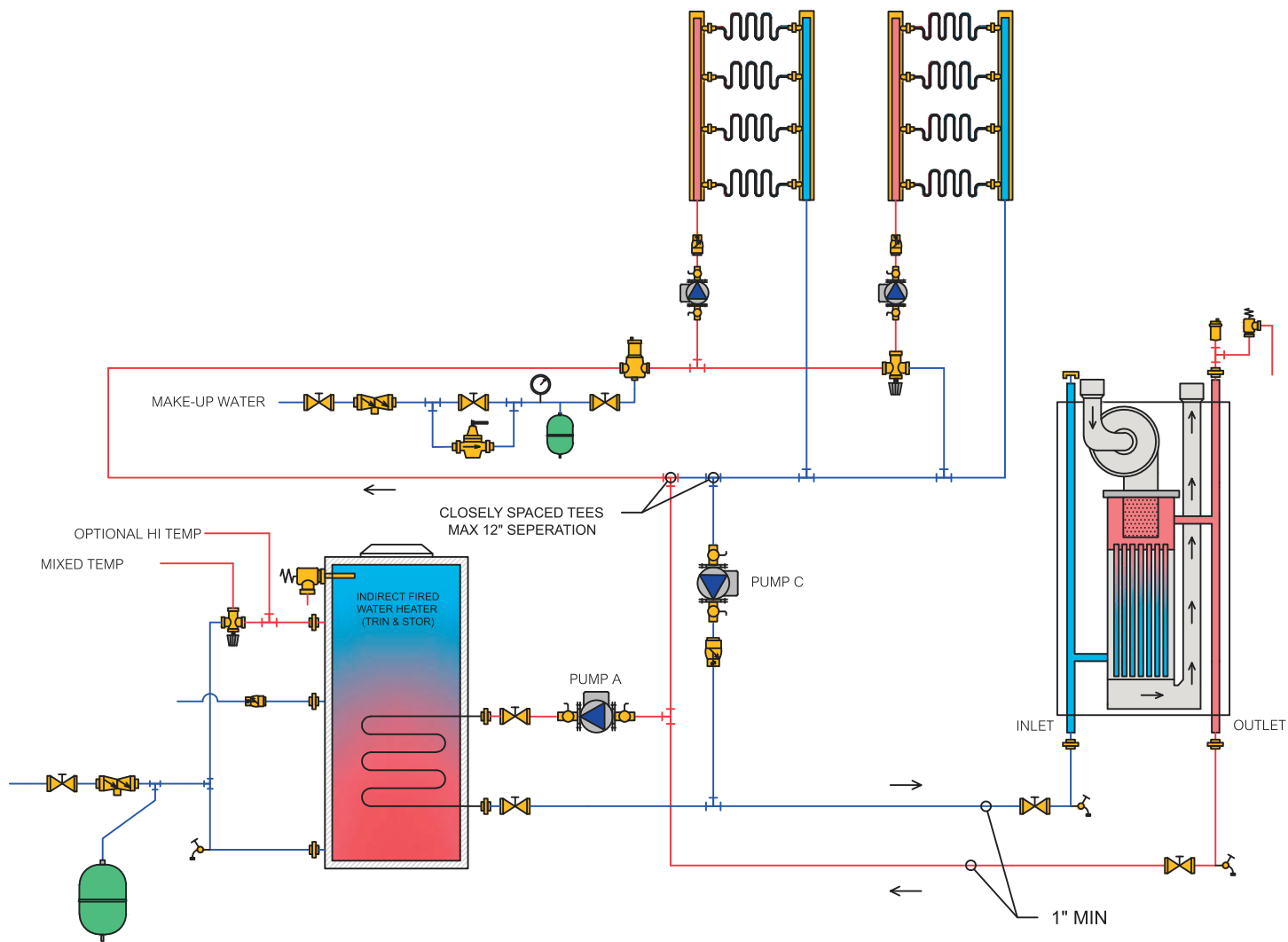
DWG BY - SMCAL EER  
 CHKD BY - SMCAL EER  
 APPD.BY - APPROVER  
 EFF DATE - 2014-09-03

TITLE Trinity TFT 155-250 w/ Water Heater + Multiple System Circulators  
 MODEL Trinity TFT 155-250  
 DWG. NO.



-09) \R&D\CAD BLOCKS\PLUMBING SCHEMATIC COMPONENT DRAWINGS\PLUMBING SCHEMATIC LAYOUTS\TFT SERIES\TFT155-250\_WITH\_MULTIPLE\_ZONES\_+\_INDIRECT.DWG LAYOUT1

Trinity TFT 155-250 w/ Multiple Zones + Indirect



NOTICE: This illustration is used for system piping concept only.

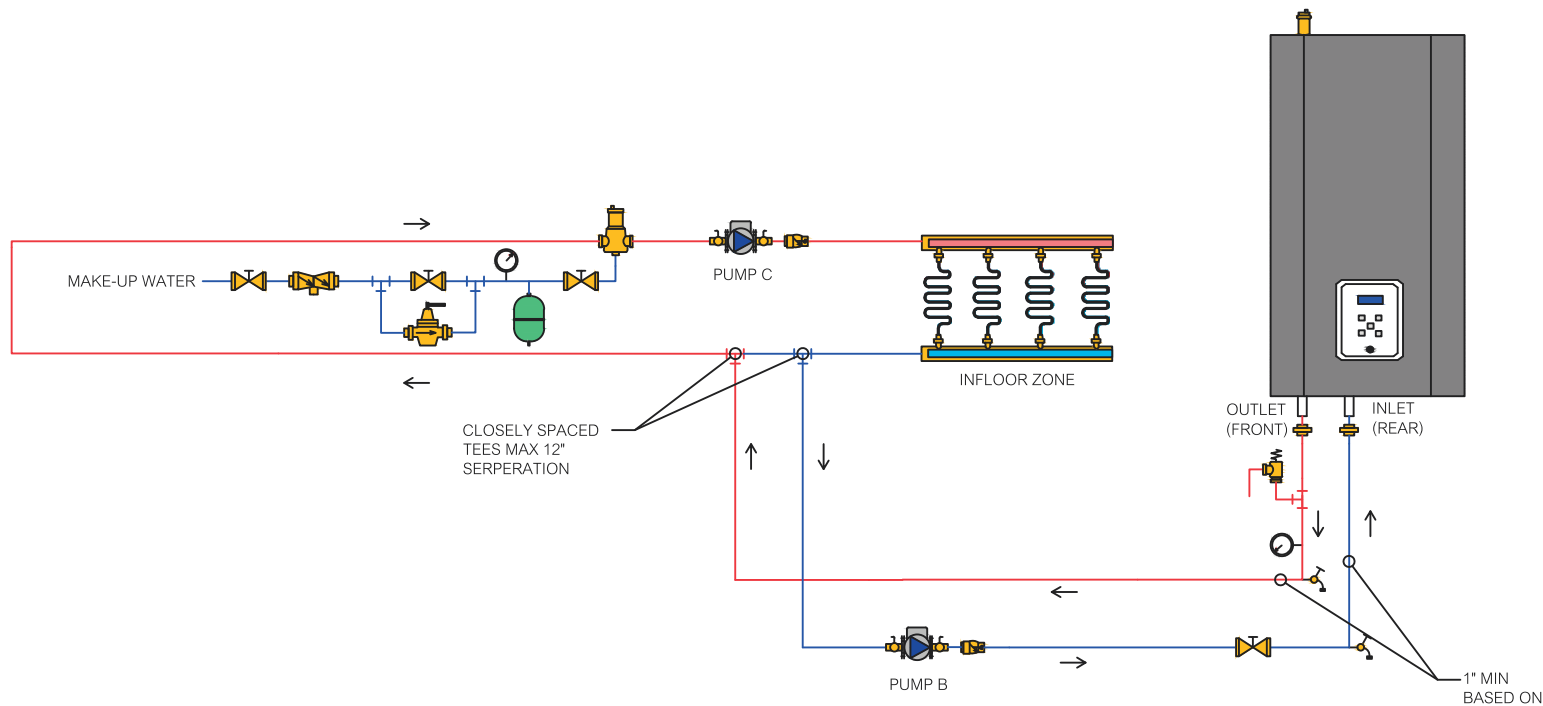
LEGEND							
	3-way mixing valve		globe valve		check valve		temperature guage
	central air seperator		isolation valve		union		system sensor
	auto air vent		pressure reducing valve		strainer		cap
	backflow preventor		pressure relief valve		zone valve		drain valve
	flow-check valve		pressure & temperature valve		expansion tank		baseboard
	pressure guage		circulator w/ isolation flanges		flow switch		zone load



























DWG BY - SMCALEER	TITLE	TFT155-250_With_Multiple_Zones + Indirect
CHKD BY - SMCALEER	MODEL	TFT155-250 + Multiple Zones + Indirect
APPD.BY - ENGINEERING	DWG. NO.	
EFF DATE - 2014-06-10		

001\_N\_DRIVE (1-20-09)\R&D\CAD BLOCKS\PLUMBING SCHEMATIC COMPONENT DRAWINGS\PLUMBING SCHEMATIC LAYOUTS\TX SERIES\TX81\_WITH\_RADIANT\_INFLOOR.DWG LAYOUT1

Trinity TX81 w/ Radiant\_Infloor



NOTICE: This illustration is used for system piping concept only.

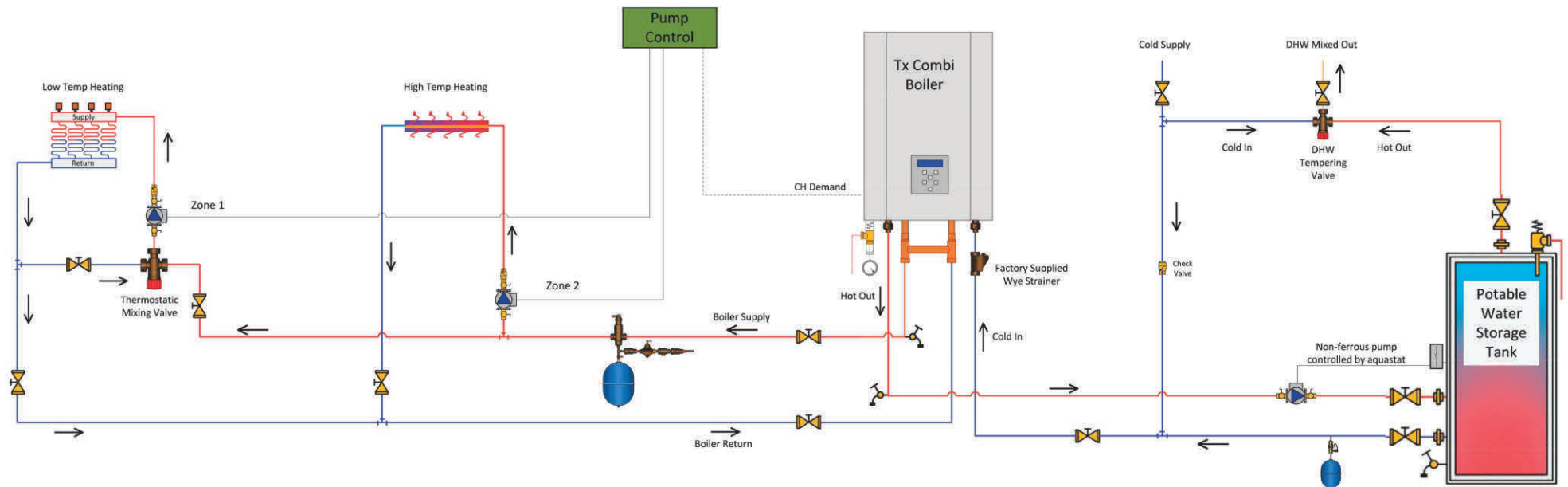
LEGEND							
	3-way mixing valve		globe valve		check valve		temperature guage
	central air seperator		isolation valve		union		system sensor
	auto air vent		pressure reducing valve		strainer		cap
	backflow preventor		pressure relief valve		zone valve		drain valve
	flow-check valve		pressure & temperature valve		expansion tank		baseboard
	pressure guage		circulator w/ isolation flanges		flow switch		zone load


























DWG BY - JMACLEOD	TITLE TX151_With_Radiant_Infloor
CHKD BY - JMACLEOD	MODEL TX81+Radiant_Infloor
APPD.BY - ENGINEERING	DWG.NO.
EFF DATE - 2014-06-10	



# Tx Combi with Low and High Temp Heating + DHW Storage Tank



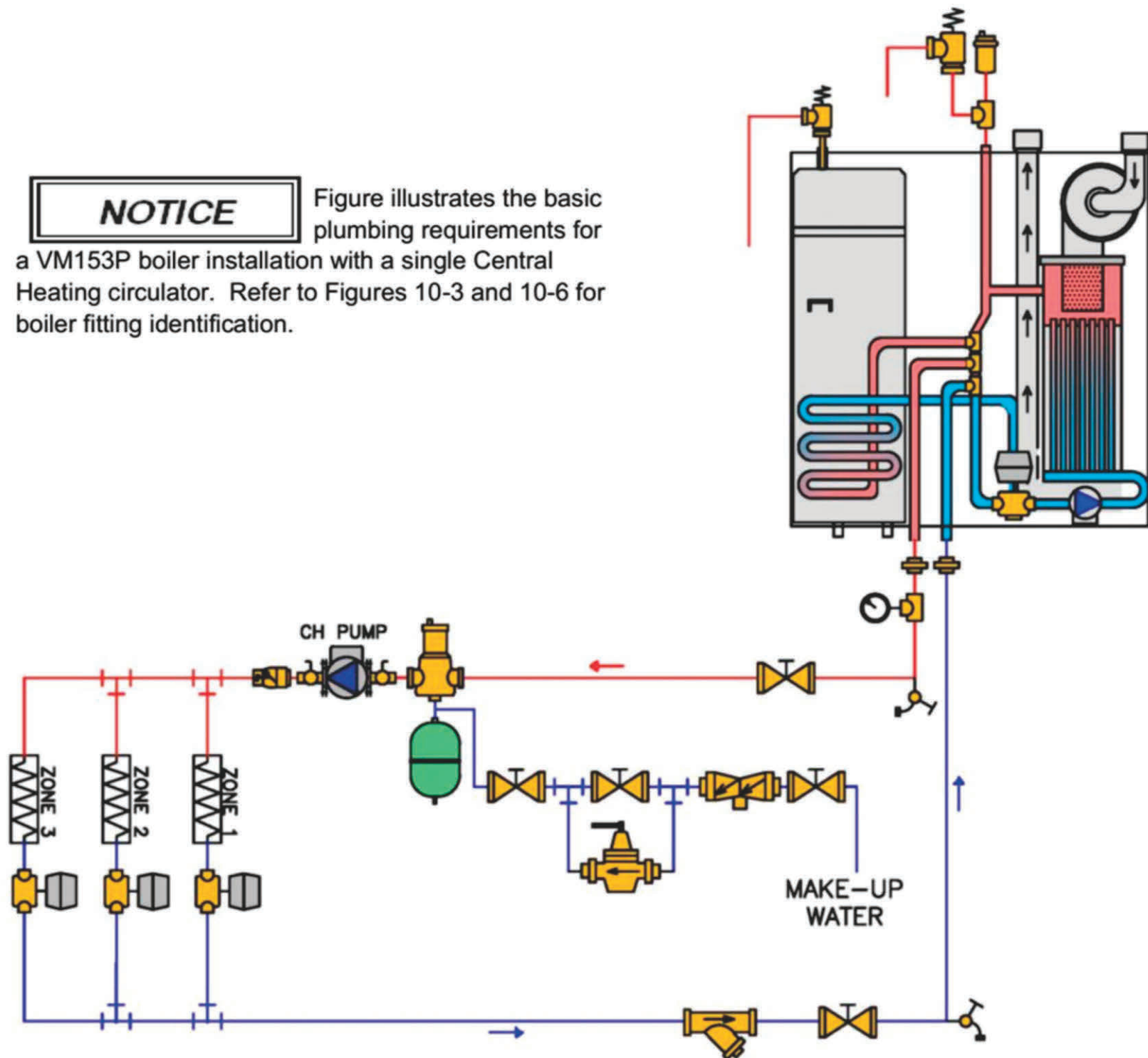
**NOTICE:** This illustration is used for system piping concept only.

LEGEND							
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	3-way mixing valve		globe valve		check valve		temperature gauge
	central air separator		isolation valve		union		system sensor
	auto air vent		pressure reducing valve		strainer		cap
	backflow preventor		pressure relief valve		zone valve		drain valve
	flow-check valve		pressure & temperature valve circulator w/ isolation flanges		expansion tank		baseboard
	pressure gauge		flow switch		zone load		

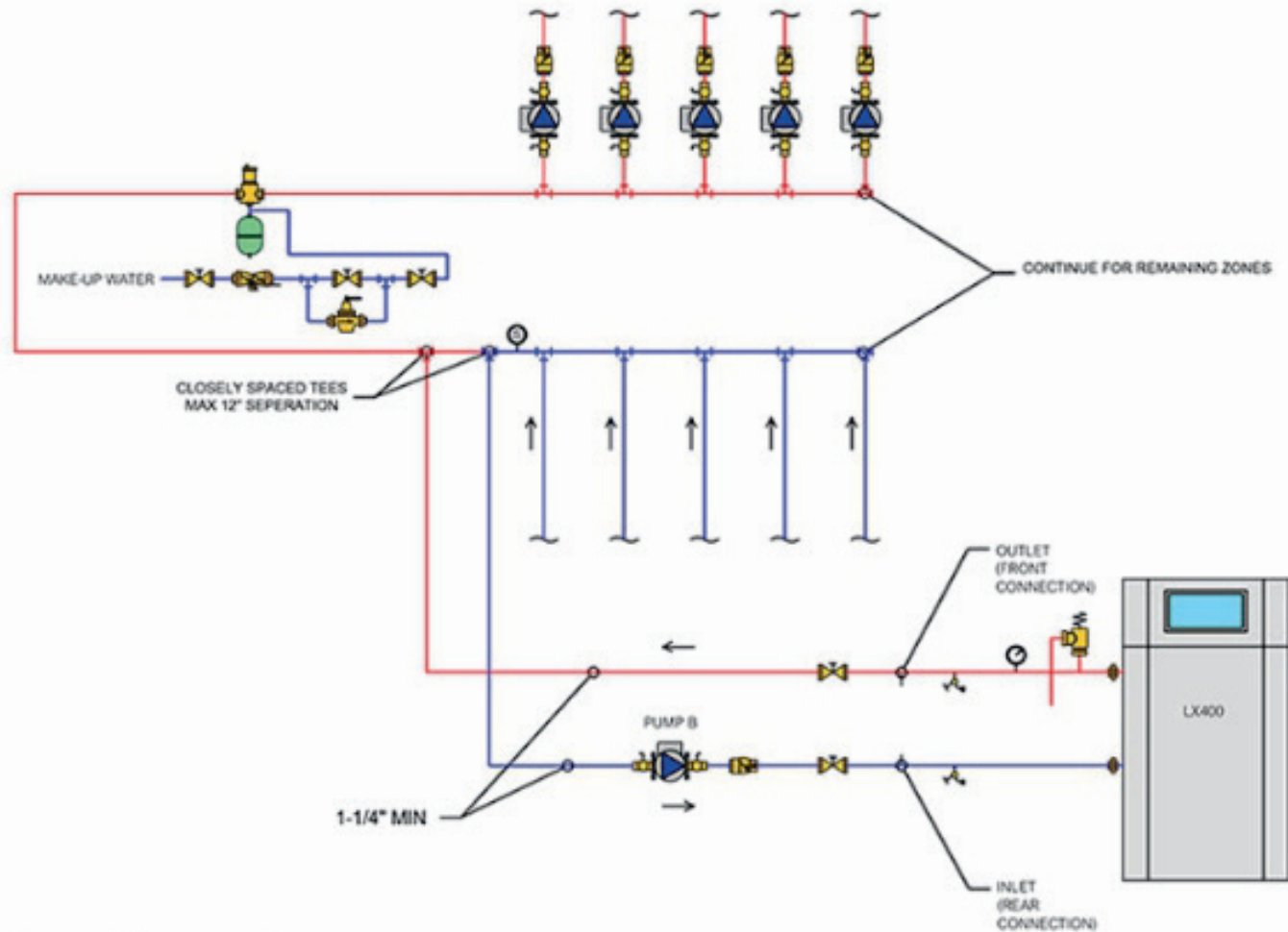
DRAWN BY	TITLE
JOHN MCARTHUR	Tx Combi Boiler w/Heating and DHW Tank
DATE	DESCRIPTION
5/7/2016	

**NOTICE**

Figure illustrates the basic plumbing requirements for a VM153P boiler installation with a single Central Heating circulator. Refer to Figures 10-3 and 10-6 for boiler fitting identification.



## LX400 w/ Multiple Heating Zones



**NOTICE:** This illustration is used for system piping concept only.

### LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	3-way mixing valve		globe valve		check valve		temperature gauge
	central air separator		isolation valve		union		system sensor
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	backflow preventor		pressure relief valve		zone valve		drain valve
	flow-check valve		pressure & temperature valve circulator w/ isolation flanges		expansion tank		baseboard
	pressure gauge		flow switch		zone load		

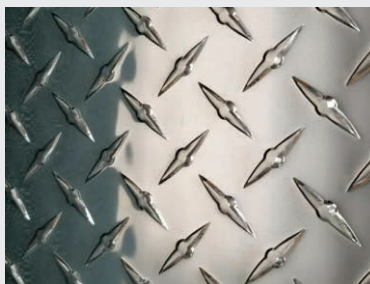
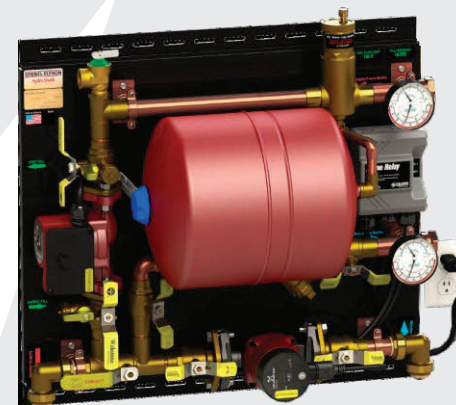
DWG BY - JMACLEOD  
 CHKD BY - JMACLEOD  
 APP'D BY - APPROVER  
 EFF DATE - 2014-06-10

TITLE LX400 w/ Multiple Heating Zones  
 MODEL LX400  
 DWG NO.





# Must-Have Hydronic Accessories





# Fernox CFP Protocol

Clean. Flush. Protect. C-F-P. It's as easy as 1-2-3.

- Step One: Clean
  - Every boiler installation deserves a fresh start. Cleaning out the system improves efficiency and heat transfer and extends the life of the boiler and the system.
  - Drain the system and fill it with clean water then add either Fernox Cleaner F3 or Fernox Cleaner F5 Express. One bottle is sized to clean the average system—about 25 gallons. Don't worry about using too much, you can't overdose a system with Fernox Cleaner.
  - Allow the system to operate normally. The minimum time for this step is one hour but one week is recommended for older systems with oxide and lime scale buildup.
  - As the systems runs, the Fernox chemicals clear out everything. All the grit and grime built up from years of use is stripped away, leaving the system as good as new.
- Step Two: Flush
  - After the cleaning chemicals have circulated for the proper amount of time, drain the system completely. This step likely won't be pretty, but the system will be in much better shape.
- Step Three: Protect
  - Now that you've done the hard work of cleaning, it's time to make sure that the system stays clean. Enter Fernox F1 Protector.
  - F1 Protector not only prevents corrosion and lime scale buildup, it also reduces operational noise, keeps pumps running smoothly, and eliminates cold spots and unnecessary venting in radiators. (There's a reason it's recommended in every NTI manual!)

\*\*\*Valid now through the end of heating season, all Fernox commissioning kits are 10% off when purchased with an NTI boiler.\*\*\*

## Calefactio GMP: 6 Glycol Break Tank Package



Able Distributors has been selling glycol break tanks for nearly 20 years. Throughout that time, we never saw a model that was particularly different than what we were selling, let alone a significant improvement. Until we saw Calefactio's GMP-6 package. This glycol break tank is a step up in every possible regard.

### Features

- Low Power Requirements
- Improved Pressure – The GMP-6 can handle up to 60 PSI, more than 300% of the standard for other tanks!
- Low Noise – A braided, flexible hose prevents vibrations from travelling to the tank
- Installation Shelf – Included with every GMP-6, the installation shelf allows you to locate the tank where it makes the most sense for the system.
- Self-Priming Pump – This device can fill and pressurize closed loop hydronic systems.



## Calefactio CondensSAFE: Condensate Removal System



Condensing boilers are great, but they come with one unfortunate byproduct: condensate. Condensate can wreak havoc on drain pipes and septic systems if left untreated. That's where CondensSAFE comes in!

### Features

- Unique Installation – The CondensSAFE System does not require a bypass and it is the only neutralization system that can be hard-piped
- Modular Design – The CondensSAFE system can cover anywhere from 1,000 BTU up to 1,575,000 BTU
- Affordable – Calefactio kept the price on this system down, making it an easy addition for homeowners who are concerned about damaging their septic system or piping

## **Calefactio:** Hydronic Docking Station

Most modern boilers are wall-mounted units by design. This is partially a function of their smaller size and partially a function of the shrinking size of equipment closets. Wall-mounted boilers can provide some unique challenges when it comes to installing additional components. You could usually find a spot for everything, but it was rarely convenient or attractive.



Enter the Docking Station. This product provides a clean, hassle-free entry point for the hydronic system. A remarkably simple product, the Hydronic Docking Station features a connection for:

- The boiler
- An expansion tank with service valve
- A pressure gauge
- An automatic air vent
- Your GMP6 or the cold-water supply

Boom! One product, five connections, and you're done. You've got a location for everything, it looks great, it's easily accessible for servicing and maintenance. We can't imagine buying a condensing boiler without one of these.

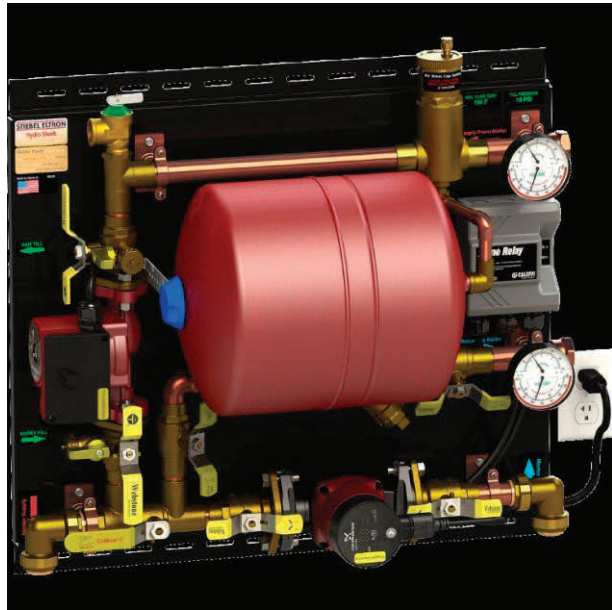
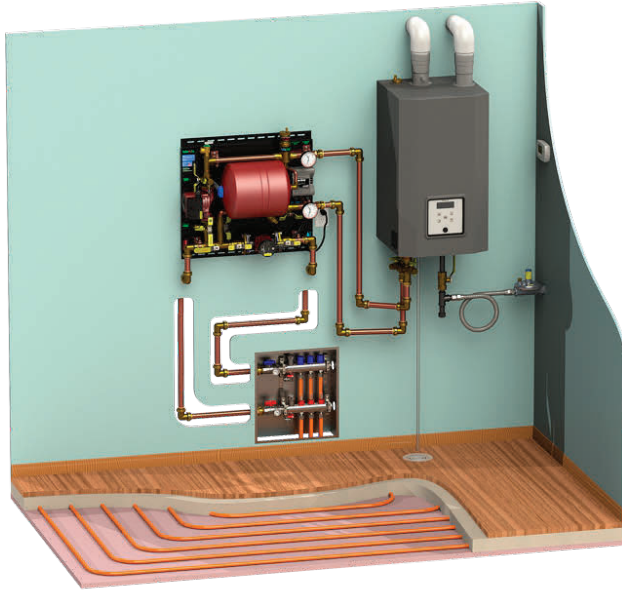
## **Zilmet:** Flat Expansion Tanks



These space-saving expansion tanks are the perfect companion to any boiler. Traditional round expansion tanks take up a significant amount of space and can look haphazard mounted on the wall. Zilmet's flat models complement modern boilers nicely and make for a cleaner, more professional installation.

- Size Options – 2.1-gallon, 4.8-gallon, and 6.3-gallon models available
- Maximum depth of 6"
- Includes a welded mounting bracket & union with double service check

## Radiant Pro Panel

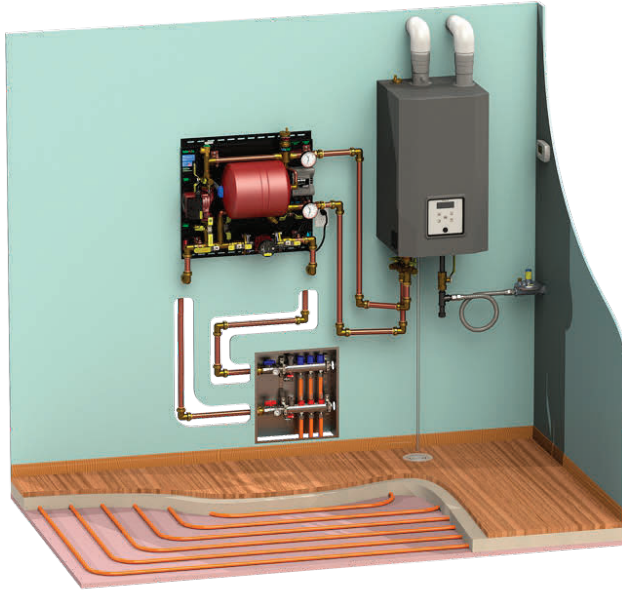


The most common hydronic job is a single-zone heat application with a condensing boiler. We see these day in, day out and even the simplest primary/secondary piping job typically requires 20+ individual components and 15+ man hours to complete. It is an intricate, intense process that requires tremendous attention to detail. Or, at least it did, until now! Able Distributors has partnered with Radiant Pro to create the “must have” item of this hydronic heating season: The Radiant Pro Panel.

The Radiant Pro Master 1 Zone Panel (H70- 1ZPANEL-3SPEED) is a single-product solution designed to provide a uniform single-zone radiant installation that is quicker and easier than the traditional method. Essentially, it's a complete primary/secondary piping package, it includes pre-installed premium components, and it's on a ready-to-install panel.

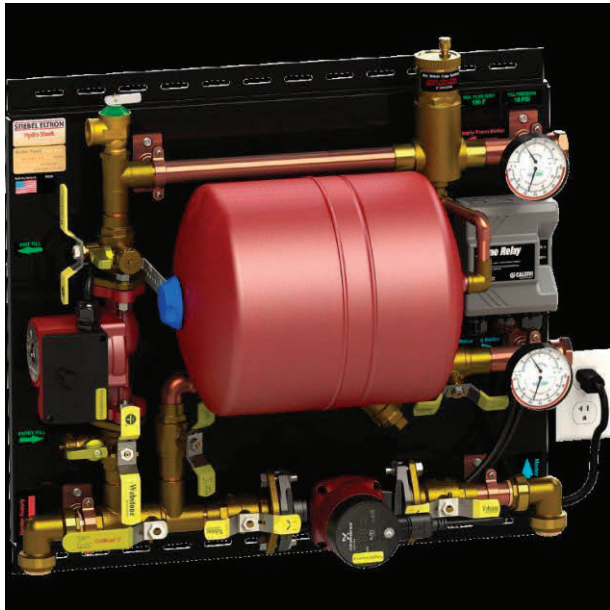


## The Components

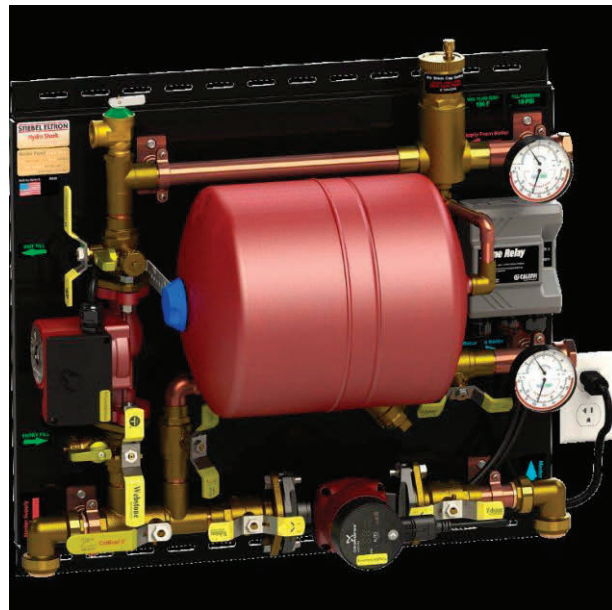
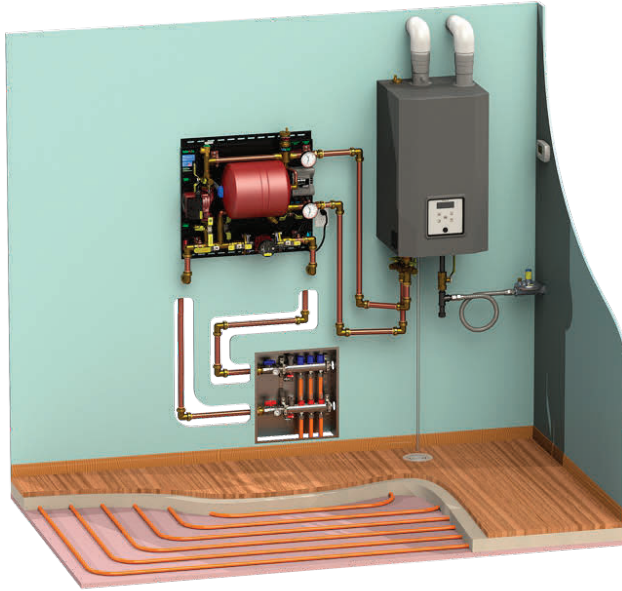


A Radiant Pro Panel takes the number of components in a standard single- zone job from 20+ down to one without sacrificing any quality. We designed these panels specifically for Able contractors and included premium components to ensure that every system is as reliable and effective as possible.

Below is a full list of components for the Radiant Pro Panel. [Please note that they are available with a standard 3-speed Grundfos circulator or a Grundfos Alpha2 VS ECM circulator. For the VS model, just ask for H70-1ZPANEL- ECM]



## The Benefits



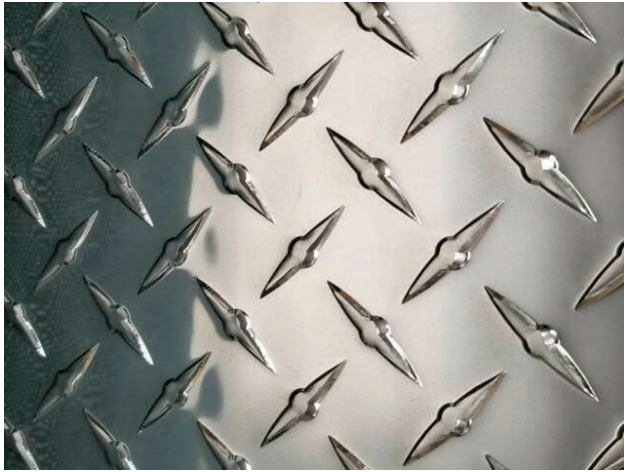
**Speed** – With one of these panels, a contractor can install a complete primary/secondary loop in about four hours—by themselves. Four 1" connections, one 120 V plug, and you're ready for heating.

The Radiant Pro Panel reduces the labor required for a single-zone radiant job by up to 75%! Your time is invaluable, don't you want more of it?

**Consistency** – If time is the most difficult element to manage on a hydronic job, space is a close second. The Radiant Pro Panel provides perfect piping in a 24" x 26" x 10" package. No surprises, no workarounds needed, just a completely consistent installation experience.

**Simplicity** – Everything you need, installed before you need it. Caleffi pump panels, Grundfos circulator pumps, Webstone isolation fittings. We designed this panel as a plug-and-play product to streamline your hydronic jobs and make your life easier.

## Diamond Plate



It's no secret that we're big on aesthetics at Able. To us, no job is complete until it looks great. Also, as a contractor, your installation is your calling card. If you want to generate word-of-mouth business and create repeat customers, an installation that looks clean and sharp is the best place to start.

The quickest, most cost-effective way to spruce up any hydronic install is with diamond plate. Adding a sheet of diamond plate behind the equipment and accessories instantly improves the appearance.

## Caleffi: SEP4 Hydraulic Separator



When it comes to saving time on a hydronic installation, Caleffi's SEP4 can give the Radiant Pro Panel a run for its money. This is a 4-in-1 hydraulic separator that is capable of maintaining two distinct circuits.

- Hydraulic Separation – A low pressure loss zone is created within the unit allowing for two hydraulically separated circuits
- Air Separation – Dual coalescing elements paired with an automatic air vent for maximum protection
- Microparticle Dirt Separation – Removes particles as small as 5 microns
- Magnetic Separation – A neodymium rare-earth magnet removes 150% more impurities than standard separators



## Pumps & Fittings

All of the most popular products from your favorite brands:

**GRUNDFOS** 

 **CALEFFI**

**Webstone**®  
a brand of **NIBCO**®

## Notes

## Notes

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