

PIPER

The Food-Focused Equipment Company

MULTIPLE WELL HOT FOOD DROP-INS

(2-6)HFW, (2-6)MD

Installation and Operating Manual



For service information call 800-544-3057

Please have the following information available before calling. Information can be found on the identification/certification tag:

- Model Number
- Serial Number
- Date of Purchase
- Part Description and number as shown in parts list



**IMPORTANT INFORMATION
READ BEFORE USE**

This manual contains important safety information concerning the maintenance, use and operation of this product. Failure to follow these instructions could result in damaging equipment, voiding the warranty, serious injury or even death.

Piper Products, Inc
300 South 84th Avenue
Wausau, WI 54401

Phone: 715-842-2724 . FAX: 715-842-3125

WATER QUALITY WARNING

IMPORTANT!

YOUR LOCAL WATER CONDITIONS MAY PERMANENTLY DAMAGE THIS APPLIANCE. FAILURE TO PROPERLY TREAT WATER MAY RESULT IN DAMAGE AND WILL VOID YOUR WARRANTY. ENSURE THAT YOUR WATER SUPPLY MEETS THESE MINIMUM WATER QUALITY SPECIFICATIONS BELOW BEFORE INSTALLING.

FAILURE TO MEET THESE REQUIREMENTS, AND PROVIDE PROOF OF WATER QUALITY, ***WILL VOID MANUFACTURERS WARRANTY.***

Parameter	Unit	Value
Alkalinity	ppm	30
Aluminum	ppb	15
Total Hardness	ppm	7
Calcium	ppm	6

Parameter	Unit	Value
Magnesium	ppm	1
Free Chlorine Residual	ppm	0.5
PH	s.u	8
Sodium	ppm	7

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INTRODUCTION

Congratulations! You have just purchased one of the finest pieces of equipment on the market today. Before installing or operating your new Piper equipment, you should read through this manual. This manual should be retained for further reference as it contains installation and operating instructions, service tips, part lists and warranty information.

For your safety, read and follow all cautions and warnings.

FREIGHT DAMAGE CLAIMS

Your Piper equipment was carefully inspected and packed before leaving our factory. The transportation company assumes full responsibility for safe delivery of this equipment. Piper Products cannot assume responsibilities for damage or loss incurred in transit. Visible damage or loss should be noted on the freight bill and signed by the person making the delivery.

A freight claim should be filed immediately with the transportation company. If damage is unnoticed or concealed until equipment is unpacked, notify the transportation company immediately and tell them you want to file a concealed damage claim. This must be done within five (5) days after delivery was made. Be sure to retain all packing material and cartons.

WARNING

Installation of this equipment should be done only by persons qualified or licensed to install electrical equipment. All electrical and plumbing must meet local, state, and federal codes.

Plumbing installation must be performed by a qualified plumber.

Adjustments and service work should be performed only by a qualified service technician. Service is available through Authorized Piper Parts and Service Distributors throughout the United States. For a complete listing of these see www.piperonline.net.

This equipment is intended for commercial use only. Not for household use. Use of other than genuine Piper replacement parts or service work performed by other than an authorized Piper service agent will void the warranty.

Do not use any corrosive cleaners. Piper only approves soap and water for cleaning stainless steel.

THEORY OF OPERATION

The Hot Food Drop-Ins are designed to maintain prepared foods at a serving temperature of 140° to 160° Fahrenheit for one to two hours.

The Hot Food Drop-Ins may be operated with wells dry or wet depending on the type of food being served. Notice when operated dry the stainless steel well will discolor due to the high heat.

Each individual well is controlled by a positive off adjustable thermostat or infinite switch, depending on the model designation. The knob is marked with an off position and numbered from 1 through 10 with 1 being the lowest setting and 10 being the highest. These numbers do not relate to a set temperature as this will vary due to the ambient conditions and different types of operation.

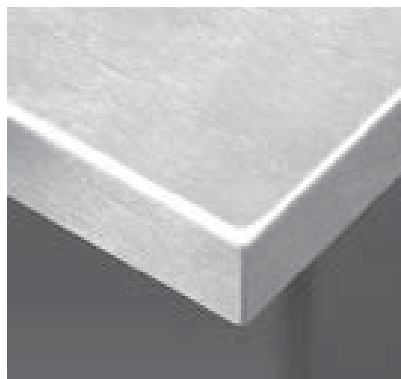
MODEL DETAILS AND DISTINCTIONS

HFW-Style Drop-Ins

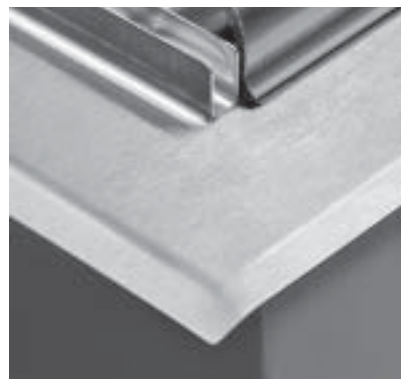
- 90° Turn-Down top panel
- Full-length insulated wrapper around all wells
- Infinite control standard
- 2 through 6-well sizes
- Single control box

MD_Style Drop-Ins

- Flanged top panel
- Individually wrapped wells
- Thermostat control standard
- 2 through 6-well sizes
- 2 & 3-well units have a single control box; 4, 5 & 6-well units have 2 control boxes



DETAIL OF TURN-DOWN TOP



DETAIL OF FLANGED TOP

INSTALLATION

Adjustments and service work must be performed only by a qualified service technician. Service is available through Authorized Piper Parts and Service Distributors throughout the United States. For a complete listing of these see www.piperonline.net.

Note: Control panel is connected to the drop-in by flex conduit. Make sure that control panel cutout is within reach of the conduit.

- Carefully remove unit from carton or crate. Remove all loose packing materials, making sure that no small parts or accessories are lost. Inspect the unit for concealed damage before discarding packing materials.
- It is the responsibility of the installer to comply with all local codes.
- Make sure drop-in is accessible and serviceable from the bottom.
- Read all instructions carefully before proceeding.
- Refer to pages 6 and 7 for additional information regarding cutout sizes.

Installation Procedure:

1. Locate and layout the drop-in cutout in countertop per dimensions on pages 6 and 7.
2. Locate and layout the control panel cutout in front apron per dimensions on pages 6 and 7.
3. Ensure that all layout dimensions are correct, then cutout countertop for drop-in and apron for control panel.
4. For units installed with a wood-mounting kit, see page 8 for installation instructions.
5. Place (2) 2" x 4" boards across counter cutout. Set drop-in onto boards.
6. Lower control panel down through countertop cutout and pass through apron cutout.
7. Lift drop-in unit and remove boards from cutout. Lower drop-in into cutout. Check that drop-in fits into cutout properly and that drop-in flange fits tightly to countertop on all sides.
8. Remove drop-in from countertop and place boards back across cutout. Set drop-in onto boards once again. Apply a heavy bead of adhesive sealant rated 400° Fahrenheit or above to underside of drop-in mounting flange.
9. Reinstall drop-in. Remove any excess sealant from around outside of drop-in flange. From underneath, insert 8" or 10" slotted screwdriver into the drop-in locking tab slots and twist in a clockwise motion. This will lock the well into place.
10. Place control panel into apron cutout and fasten into place with washers and nuts provided.
11. Check unit nameplate for electrical requirements. Make sure that the control knob is set to the "OFF" position. Using electrical methods approved by local and national electrical codes, run wiring from electrical panel to control panel area. Make sure that wiring used is properly sized and rated. See wiring diagrams on pages 18-21.
12. Remove access plate located on back of control box. Route conduit with field wiring into control box. Connect field wiring to terminal block provided in the control box in accordance with electrical codes and wiring diagrams on pages 18-21. Be sure that unit is properly grounded.

INSTALLATION (continued)

13. Turn all control knobs in control panel to the “OFF” position. Turn electrical power “ON” at the main switch.
14. Turn each of the control knobs to the number 4 setting. Each pilot light should come on and the bottom of the wells should begin to warm up.
15. After five (5) minutes turn all control knobs to “OFF”. This completes installation of the unit.



ELECTRICAL CONNECTION

WARNING!!!! DO NOT USE EXTENSION CORDS (VOIDS WARRANTY)

Ground:



The electrical outlet must be provided with an efficient ground, and the voltage and the frequency of the electrical line matches those indicated on the data plate.

If unsure about the efficiency of the ground, have your electrical circuit checked by a qualified technician.



• **For Autofill units - Customer must provide water shut-off valve near the unit**



CAUTION: Bottom of well will heat rapidly and may cause severe burns if touched. Well will turn a blue-black color due to the high heat produced when operated dry. This is normal and will not harm the well.

CAUTION: The food well is suitable for installation in a wooden enclosure provided the top panel is metal and the minimum spacing to a combustible surface is:

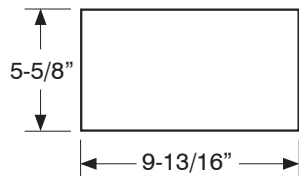
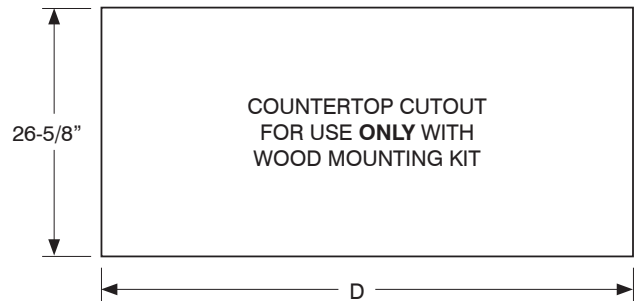
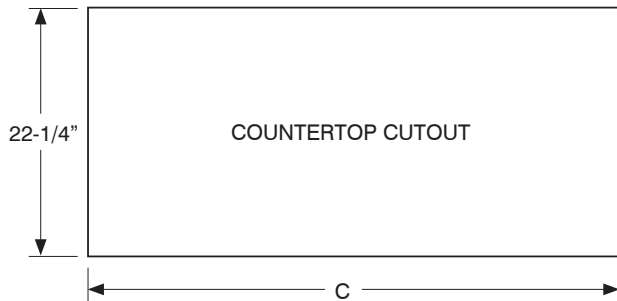
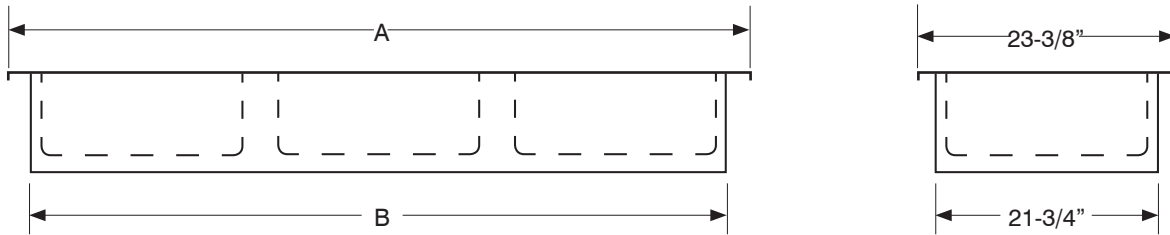
Bottom of food well to bottom of wooden panel - 5-1/2”

Front and rear of food well to front and rear of wooden panel - 3-1/4”

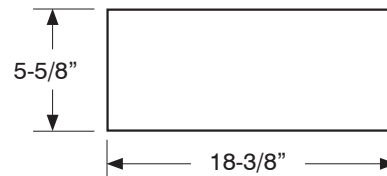
Side of food well to side of wooden panel - 2-3/4”

Distance between food wells - 1-1/4”

COUNTERTOP CUTOUT DIMENSIONS HFW-STYLE WELLS - TURN-DOWN TOP



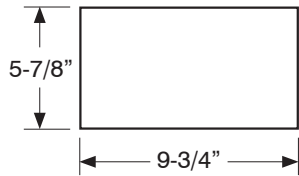
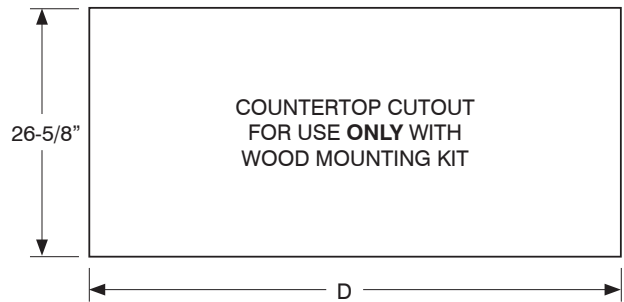
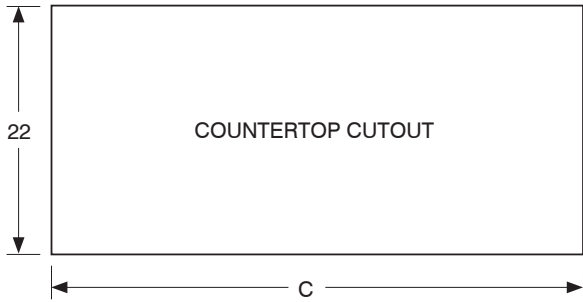
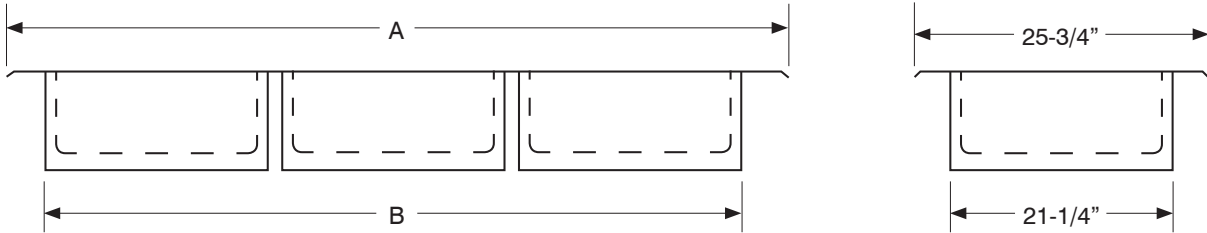
CONTROL PANEL CUTOUT
2 WELL UNIT



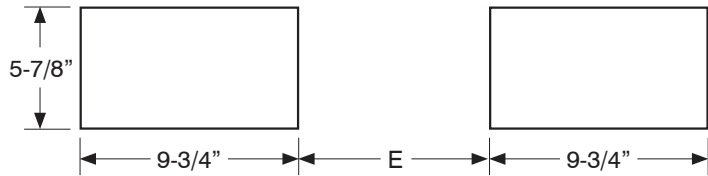
CONTROL PANEL CUTOUT
3, 4, 5 & 6 WELL UNITS

MODEL NO.	(A)	(B)	(C)	(D)
2-HFW	29-3/4"	28-1/8"	28-5/8"	32-5/8"
3-HFW	44-1/8"	42-1/2"	43-3/4"	46-5/8"
4-HFW	58-1/2"	56-7/8"	58"	60-5/8"
5-HFW	72-7/8"	71-1/4"	72"	74-5/8"
6-HFW	87-1/4"	85-5/8"	86-1/8"	88-5/8"

COUNTERTOP CUTOUT DIMENSIONS MD-STYLE WELLS - FLANGED TOP



CONTROL PANEL CUTOUT
2 & 3 WELL UNITS



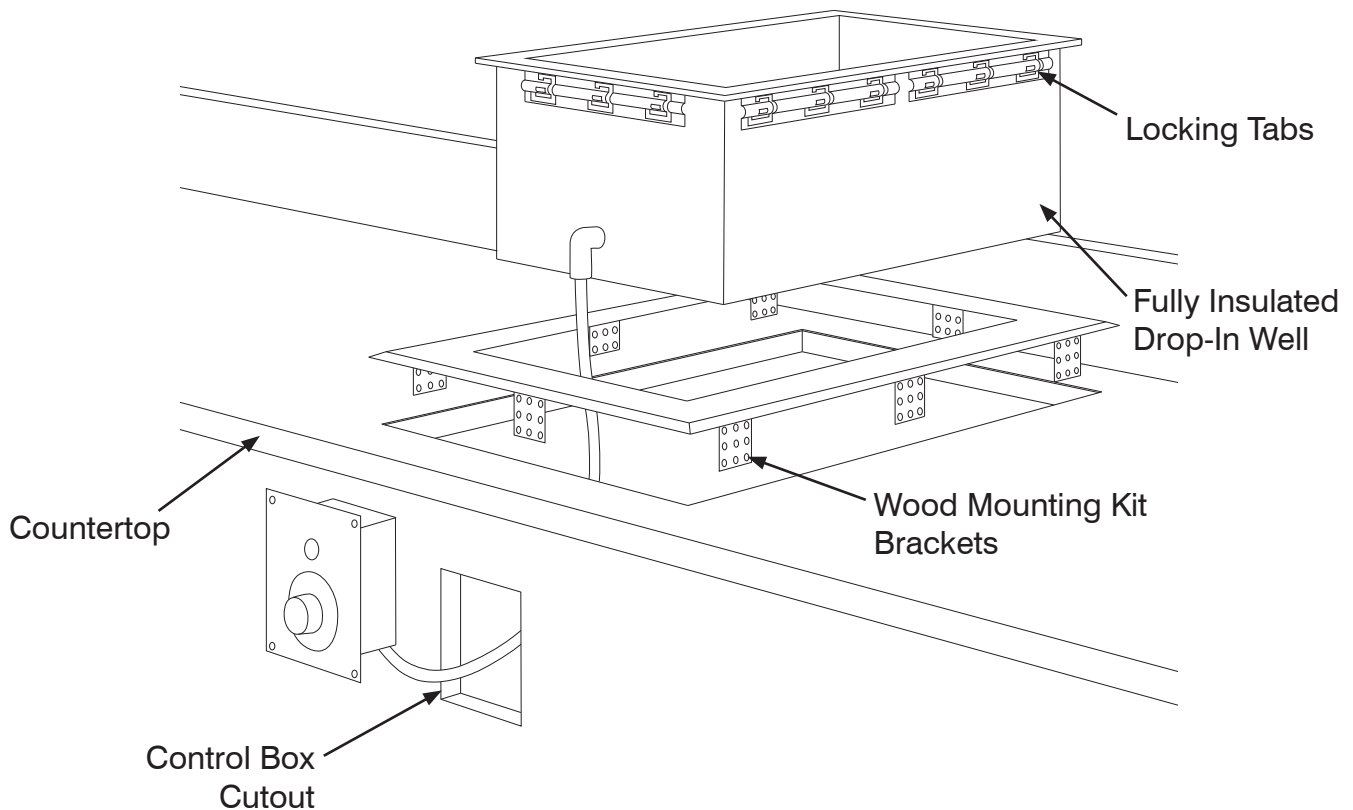
CONTROL PANEL CUTOUT
4, 5 & 6 WELL UNITS
(2 HOLES REQUIRED)

NOTE: CONTROL PANEL CUTOUTS SHOULD BE CENTERED ON THE LENGTH OF THE DROP-IN UNIT

MODEL NO.	(A)	(B)	(C)	(D)	(E)
MD-2	31-5/8"	27-1/8"	28"	32-5/8"	
MD-3	45-5/8"	41-5/8"	42"	46-5/8"	
MD-4	59-5/8"	55-1/8"	56"	60-5/8"	18-1/4"
MD-5	73-5/8"	69-1/8"	70"	74-5/8"	18-1/4"
MD-6	87-5/8"	83-1/8"	84"	88-5/8"	32-1/4"

Wood Top Mounting Kit and Drop-In Well - Installation instructions

1. Cut proper size hole in wood countertop. See pages 6-7.
2. Cut the hole for control panel in cabinet face. See diagram below. For cutout dimensions see diagram on pages 6-7.
3. Insert wood mounting kit into the counter cutout. Screw or nail mounting kit to wood countertop using the vertical brackets. Secure each bracket to the countertop for the best seal.
4. Apply a generous, continuous bead of high-temp sealant (silicone sealant to be rated at a minimum of 400° Fahrenheit) onto underside of the food well flange. Drop the well into the mounting kit, and guide the control box through the cabinet cutout.
5. From underneath, insert a slotted screwdriver into the locking tab slots and twist to pull tab outward to lock the well into place. The tab should push against the underside of the wood mounting kit. For a secure fit, use every tab available.
6. Screw the control box into the cabinet face.



START-UP AND OPERATION

DRY OPERATION

- Make sure that each well is empty and clean. Place cover over each well. Turn each thermostat to the number 10 setting and allow wells to pre-heat for approximately 30 minutes. After 30 minutes turn thermostats back to the number 6 or 7 setting until food is placed into wells.

NOTICE: Well will turn a blue-black color due to the high heat produced when operated dry. This is normal and will not harm the well.

- Uncover food wells and place pans of prepared food into the well. NEVER place food directly into food well. Temperature of food being placed into food well must be 160° Fahrenheit minimum. Turn thermostat to desired operating setting. This setting will vary according to room conditions and type of food being served.



CAUTION: Never add water to a food well that has boiled dry or has been operated dry until the well has cooled.

- Always keep food pans covered when not serving. Change pans of food often to insure that proper serving temperature is maintained.

WET OPERATION

- **IMPORTANT:** Make sure that food wells are at room temperature and that each well is empty and clean. If table is equipped with optional drains be sure that drain valve is closed.
- Fill each well with HOT tap water to the water fill mark located at the end of each well. Approximately 3/4" of water per well. Cover each well using a tight fitting cover or food pan.
- Turn each thermostat to the number 10 setting and allow wells to pre-heat for approximately 45 minutes.
- Uncover food wells and place pans of prepared food into the well. NEVER place food directly into food wells. Temperature of food being placed into food well must be 160° Fahrenheit minimum. Turn thermostat to desired operating setting. This setting will vary according to room conditions and type of food being served.
- Periodically check the water level in each food well. It is very important that food wells not be allowed to boil dry. When approximately one half of the water has boiled off, hot tap water should be added to bring water level up to the fill mark.



CAUTION: Never add water to a food well that has boiled dry. This will cause damage to the food well. Allow pan to cool before adding water.

WET OPERATION(continued)

- Always keep food pans covered when not serving. Change pans of food often to insure that proper serving temperature is maintained.
- After the serving period turn thermostats to “OFF” position and allow wells to cool before cleaning.
- Always drain or remove water from all wells after each meal. If unit is equipped with drains, place a bucket under the drain pipe and open drain valve. When bucket is full, close drain valve and empty bucket. Repeat this until all wells are drained.
- Clean each well using a soft cloth or sponge with a mild detergent. Rinse completely with warm water and then dry.
- A plastic scouring pad and a mild detergent may be used to remove any hardened food or scale deposits.

NOTICE: Do not use steel wool to clean wells.

- Use a soft cloth or sponge with a mild detergent to clean all exposed surfaces of the table. Rinse completely with warm water and dry.

MAINTENANCE

To obtain the best performance from your equipment, it should be cleaned daily and maintained in good condition.



SAFETY / ENVIRONMENTAL CAUTION

PERSONAL PROTECTION:

Check your company safety and environmental policy before cleaning or servicing.



Safety Tip! : Utilize protective gloves and safety glasses

ELECTRICAL POWER:



Before performing EXTENDED CLEANING where electrical components can become wet, the power switch must be turned to OFF and the unit disconnected from the power source.



WARNING: Do not use any chlorinated or highly caustic cleaners, acids, ammonia or other corrosive cleaners. These may cause corrosion and/or damage to the stainless steel. Piper only approves soap and water for cleaning stainless steel. Do not allow water to stand in wells for long periods of time. Well must be emptied and cleaned after every serving period.

REQUIRED MONTHLY MAINTENANCE:

- Check thermostat settings
- Check operating temperature of unit
- Check and clean drainage lines
- Check electrical connection

GENERAL CLEANING



CAUTION: BURN HAZARD: Some exterior surfaces on unit will get hot. Use caution when touching these areas.

DO NOT clean the unit while it contains any food product. Remove food product and allow unit to cool completely before cleaning or servicing.

CAUTION: Prior to cleaning or maintenance, turn all switches “OFF” and disconnect the power.

All food wells should be cleaned daily.

Stainless Steel and Aluminum:

- Piper only approves soap and water for cleaning stainless steel.
- **NOTICE: Do NOT use chlorinated cleaners.**

General Surfaces, Fiberglass:

- Clean surfaces with a soft cloth or sponge utilizing a mild detergent. Rinse completely with warm water and then dry.
- **NOTICE: Do NOT use steel wool**

Hardened Foods or Scale Deposits:

- Clean hardened foods or scale deposits by utilizing a plastic scouring pad and a mild detergent. Rinse completely with warm water and dry.
- **NOTICE: Do NOT use steel wool**

TROUBLESHOOTING GUIDE

If problems are not found by the following checks, then you should contact your Authorized Parts and Service Dealer for service. They have the necessary parts and training to repair your unit quickly and efficiently.

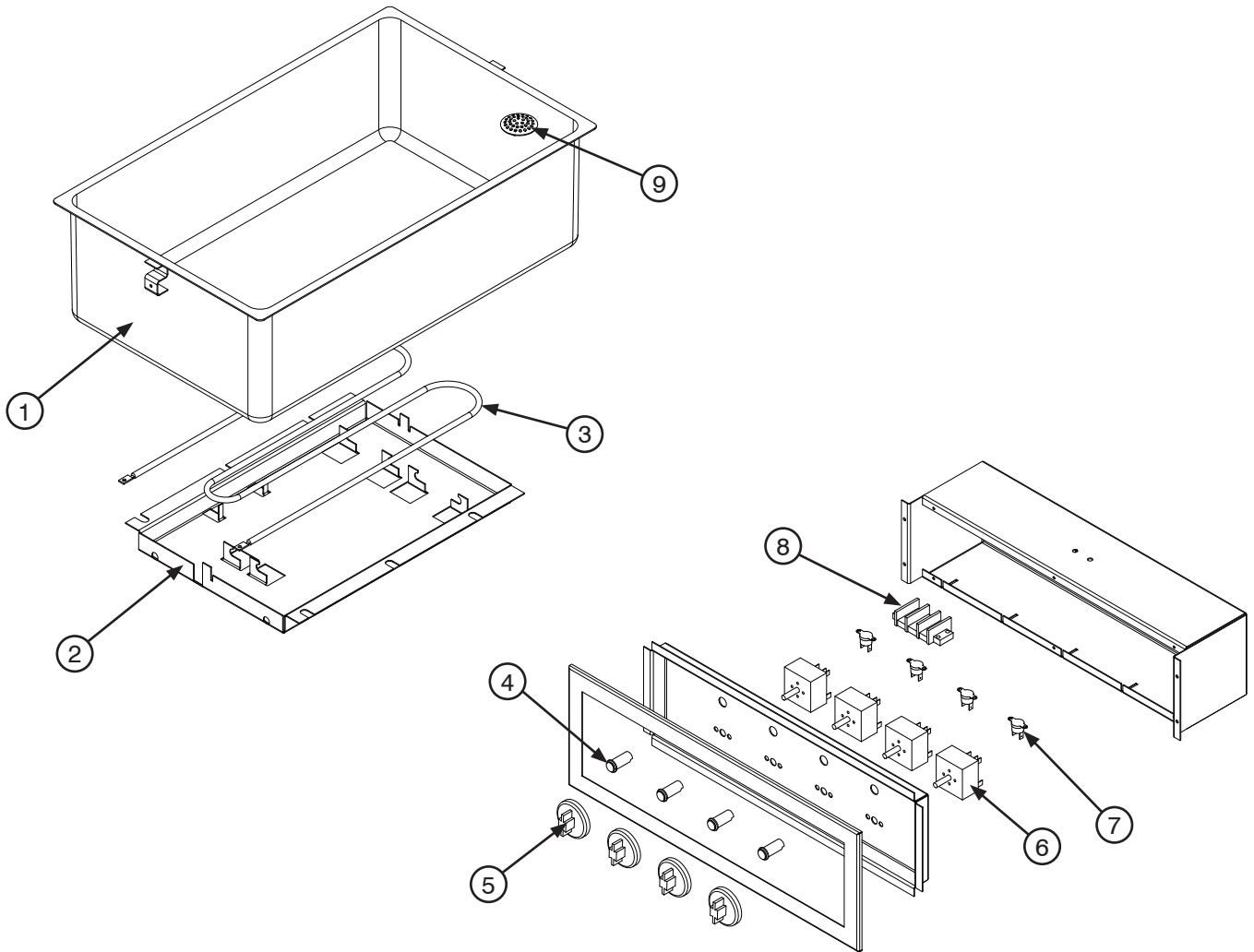


DANGER: Disconnect all power to unit before servicing.

SYMPTOMS	POSSIBLE CAUSE	REMEDIES
Pilot light is off, pan does not heat.	No electrical supply	Is the unit plugged in?
		Check circuit breaker and fuse.
		Check switch on control panel is in "ON" position.
		Call a service technician.
Pilot light is on but wells not heating	Temperature control	Is the temperature control set properly?
Unit does not heat to proper temperature	Too much water	Wells should have about 1" of water in them.
	Not pre-heated	Has the unit been allowed to pre-heat for at least 30 minutes with lids on?
	Temperature control	Is the temperature control set properly?
	Voltage	Call a service technician.
Does not maintain temperature	Water level	Wells should have about 1" of water in them.
	Food longer than 2 hours	Food should not be kept in units for long periods of time.
	Not Pre-heated	Has the unit been allowed to pre-heat for at least 30 minutes?
	Food Temperature	Were pans of food placed into the unit at or above 160°?
	Temperature control	Is the temperature control set properly?
	Voltage	Call a service technician.
Auto-Fill unit overflows	Sensor	Clean water level sensor.
		Call a service technician.
Auto-Fill Unit doesn't fill	Water or Sensor	Ensure water supply is on.
		Ensure sensor is clean and dry

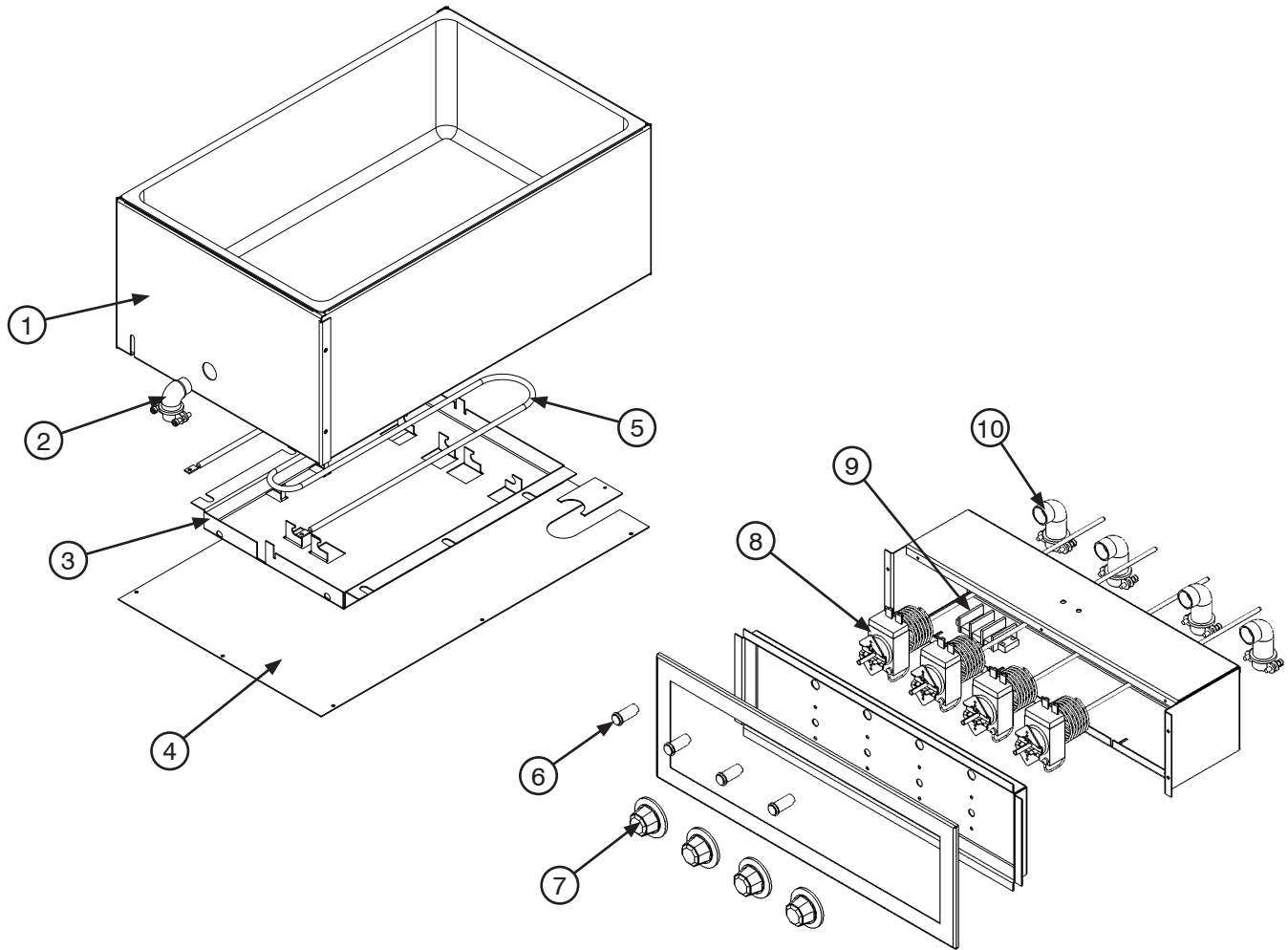
Call Piper Products directly at 800-544-3057 if you need further assistance.

REPLACEMENT PARTS HFW-STYLE



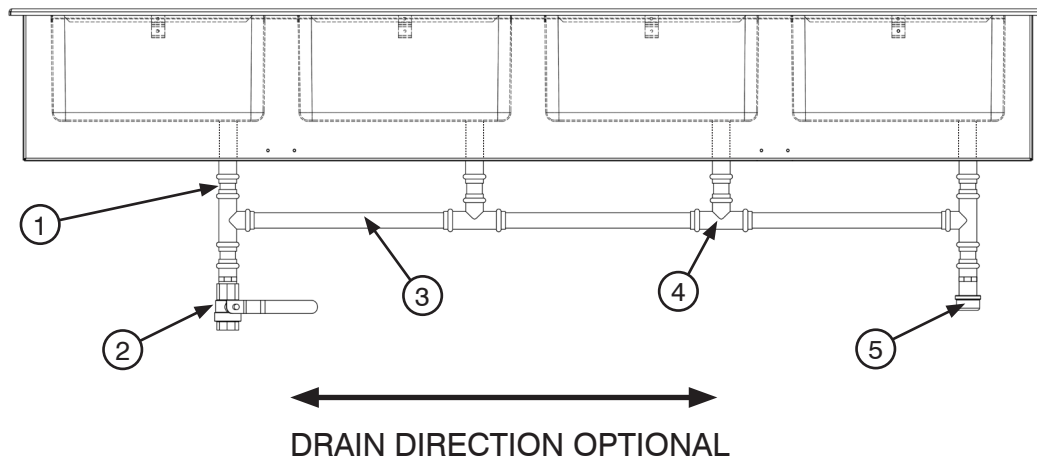
ITEM NO.	PART NUMBER	DESCRIPTION
1	0869605-S	BOTTOM MOUNT CORNER DRAIN WITH STUDS
	0869605-OD-S	BOTTOM MOUNT NO DRAIN WITH STUDS
2	0676970	ELEMENT SHIELD
3	0113613	ELEMENT: 208/240 VOLT, 1200/1600 WATTS
4	0189500	PILOT LIGHT
5	0177950	KNOB: INFINITE CONTROL
	0178525	KNOB: THERMOSTAT CONTROL
6	0083200	INFINITE CONTROL
	0113618	THERMOSTAT CONTROL - 48"
7	0113614	HIGH LIMIT THERMOSTAT
8	0113907	TERMINAL BLOCK
9	0777335	DRAIN SCREEN

REPLACEMENT PARTS MD-STYLE

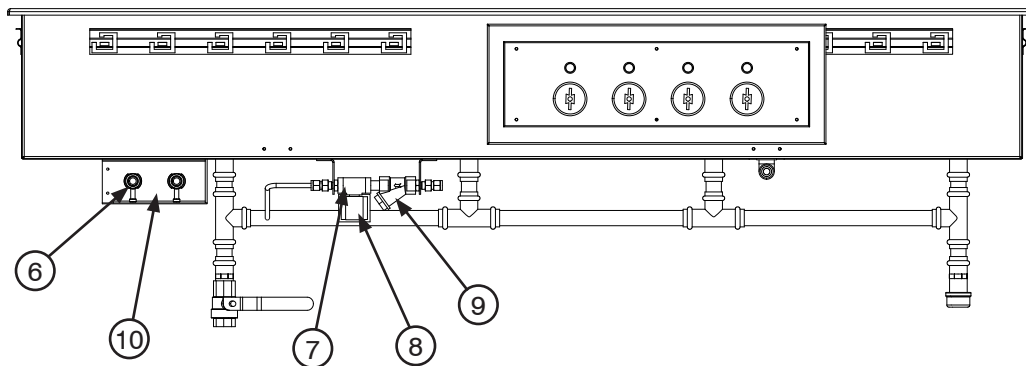


ITEM NO.	PART NUMBER	DESCRIPTION
1	11-0000603-010	COMPLETE WELL ASSEMBLY INCLUDING ELEMENT 120V, 1200 WATT, CORNER DRAIN
	11-0000603-000	COMPLETE WELL ASSEMBLY INCLUDING ELEMENT 208V, 1200 WATT, CORNER DRAIN
2	13-500929	3/8 90 DEGREE SNAP-TITE CONNECTOR
3	0676970	HEATER SHIELD
4	0677618	COVER
5	0113612	ELEMENT: 120 VOLT, 1200 WATT
	0113613	ELEMENT: 208/240V, 1200/1600 WATT
6	0189500	PILOT LIGHT
7	0178525	KNOB: THERMOSTAT CONTROL KNOB
8	0113618	THERMOSTAT CONTROL
9	0113907	TERMINAL BLOCK
10	0079850	CONNECTOR - 7382V 3/4 K/O 90 BOX

REPLACEMENT PARTS MANIFOLD DRAIN ASSEMBLY

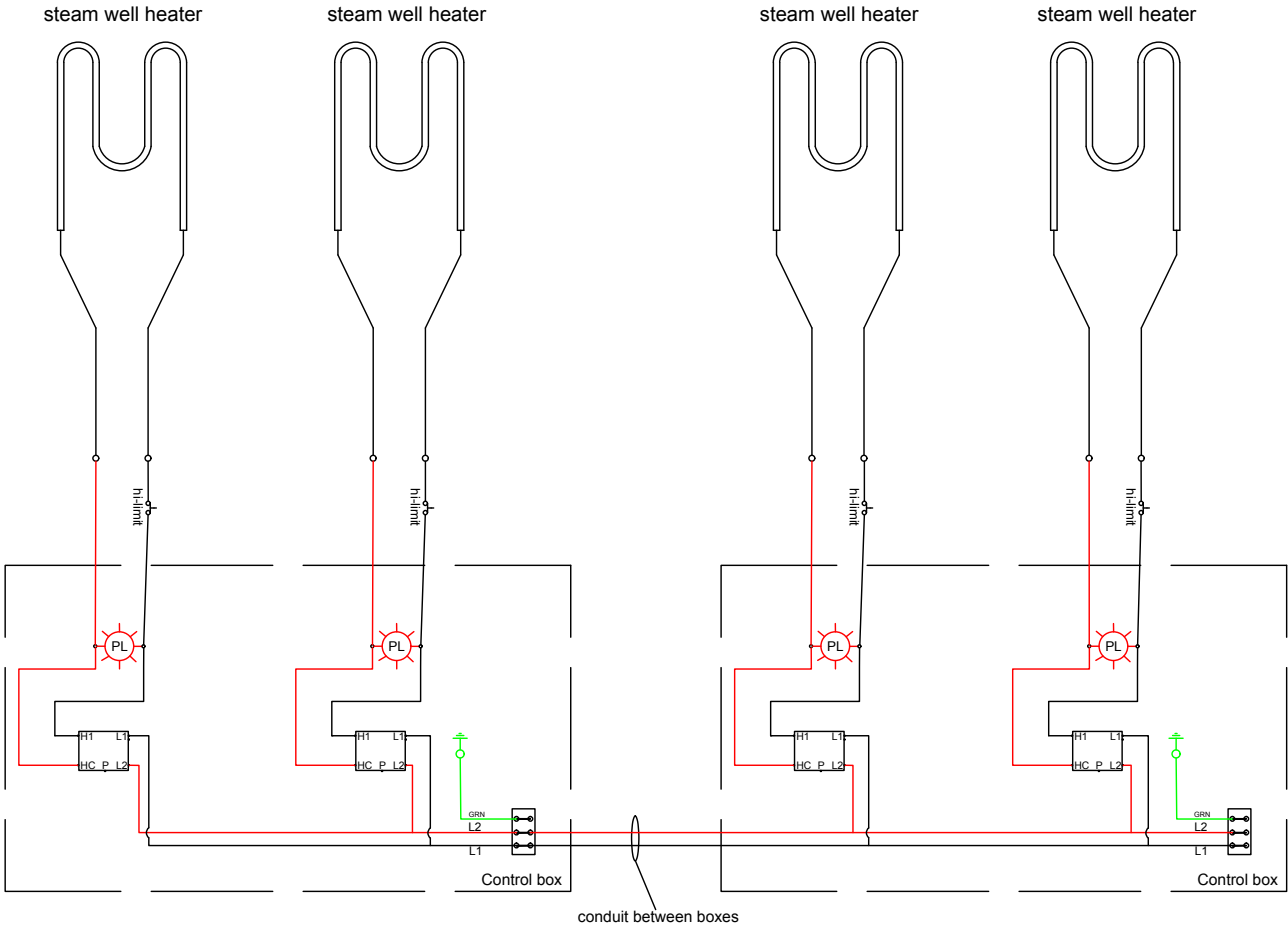


REPLACEMENT PARTS AUTOFILL ASSEMBLY

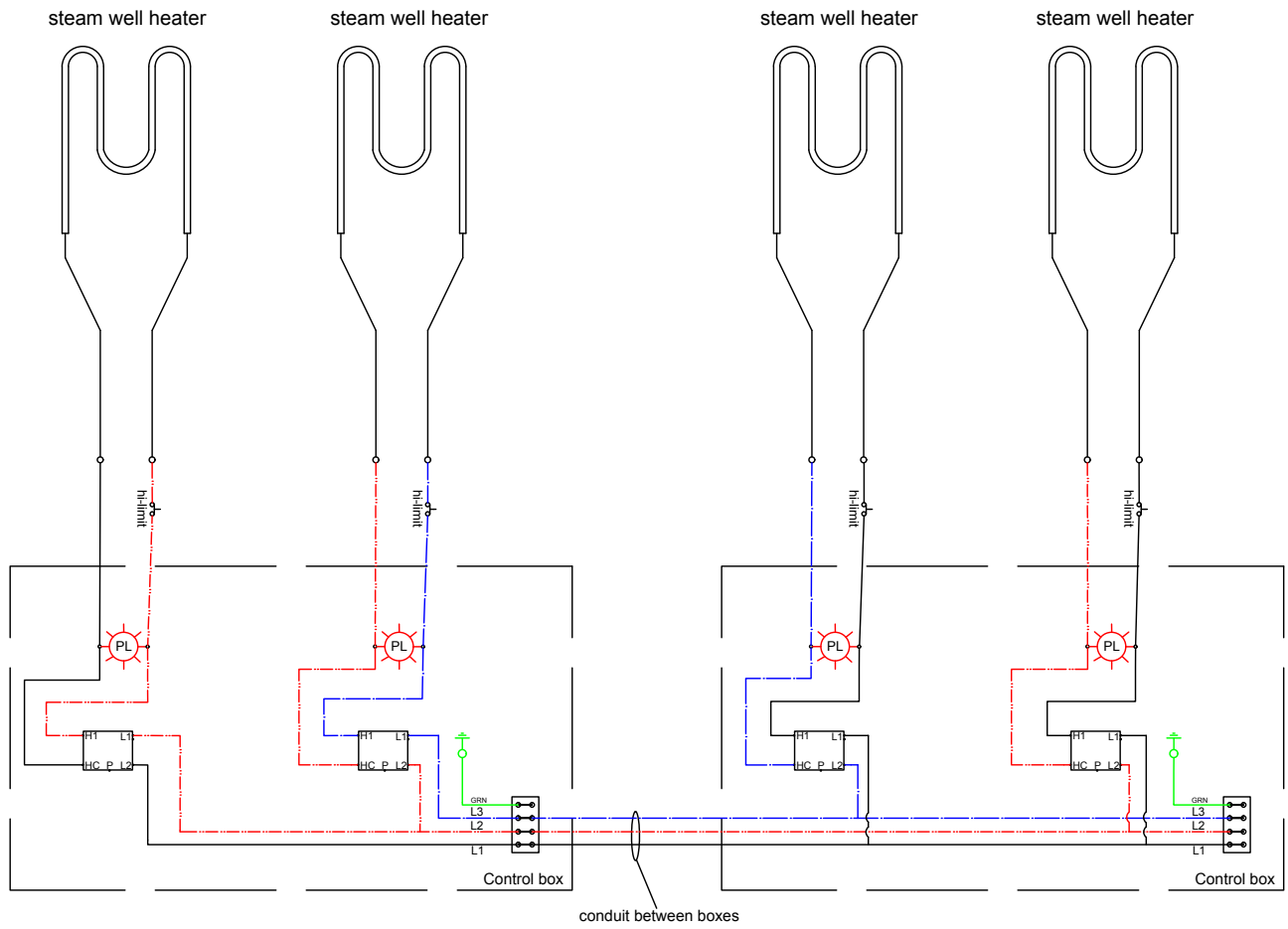


ITEM NO.	PART NUMBER	DESCRIPTION
MANIFOLD DRAIN COMPONENTS		
1	0114590	UNION
2	0376625	VALVE
3	0679807	TUBE
4	0114593	TEE
5	0114592	CAP
AUTO-FILL PARTS		
6	0081000	CONNECTOR 1/2" CONDUIT
7	0113952	SOLENOID VALVE BODY
8	0113953	COIL - 208/240 VOLT
	13-501408	COIL - 120 VOLT
9	0111961	FILTER
10	0113947	WATER FILL CONTROL BOARD (LOCATED IN CONTROL BOX)

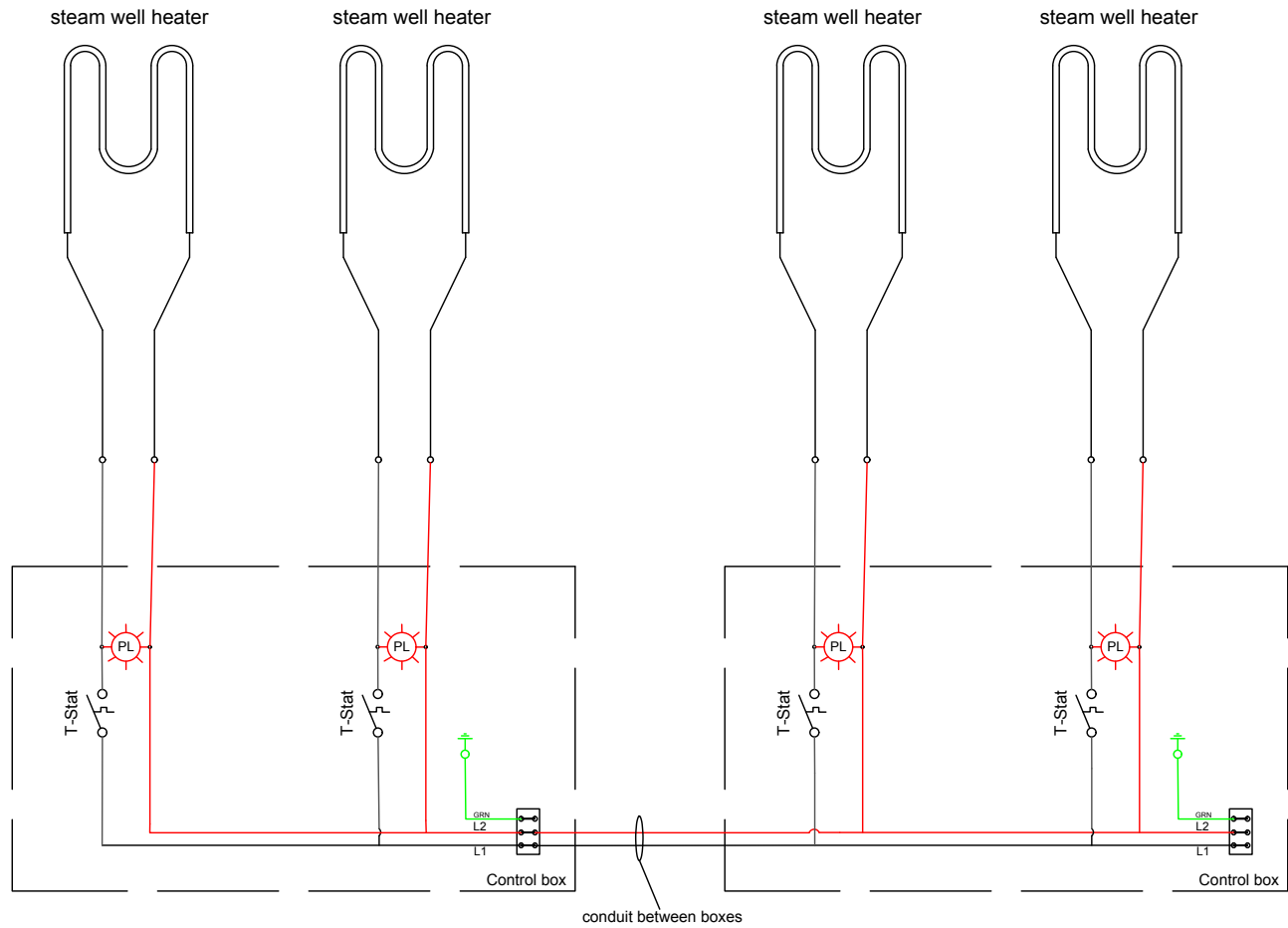
WIRING DIAGRAM HFW-STYLE SINGLE PHASE



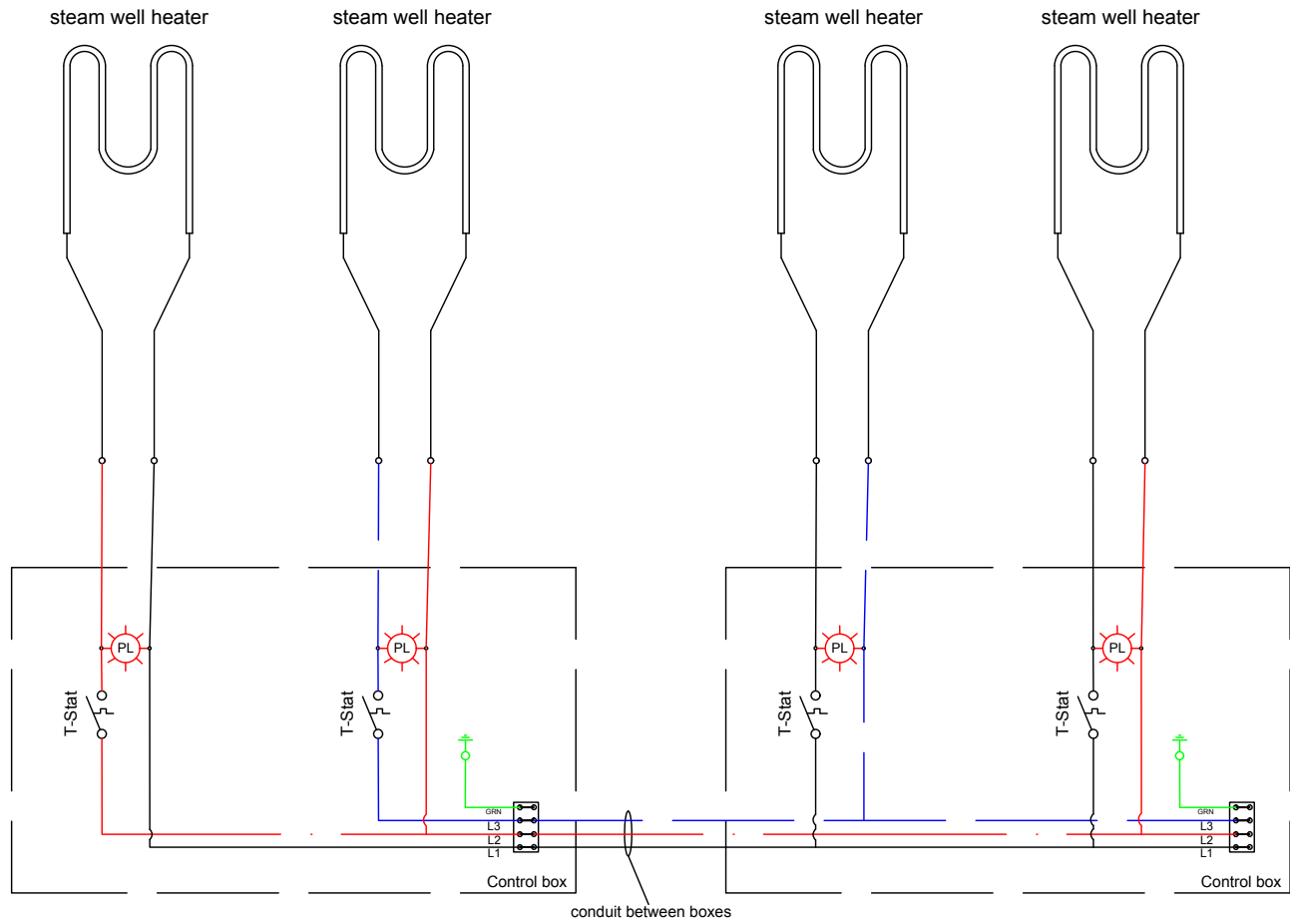
WIRING DIAGRAM HFW-STYLE THREE PHASE



WIRING DIAGRAM MD-STYLE SINGLE PHASE



WIRING DIAGRAM MD-STYLE THREE PHASE

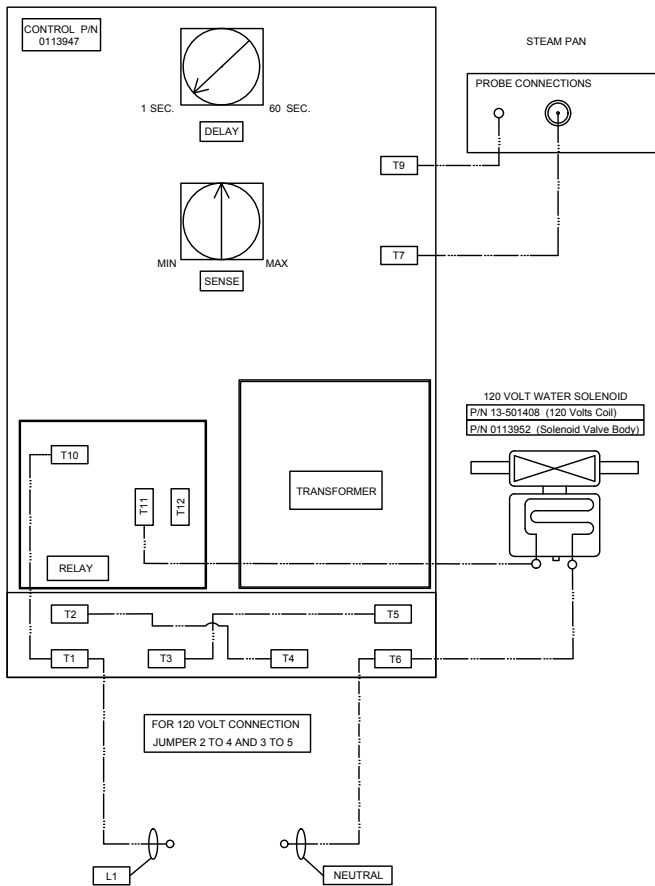


WIRING DIAGRAM AUTOFILL

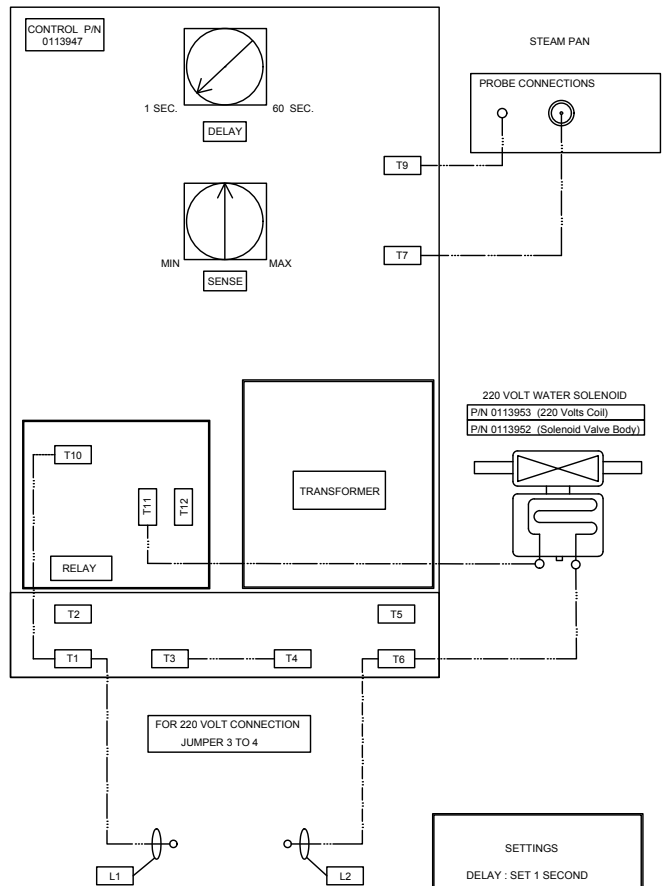
WARNING:
FAILURE TO PROPERLY SET DELAY AND SENSE WILL RESULT IN:

- ▼ DELAY : THE PAN WILL OVERFILL
- ▼ SENSE : FLOAT CONTROL WILL NOT RECOGNIZE THE PAN PROBES

AIROTRONICS FLOAT LEVEL CONTROL = 120 VOLT CONNECTION



AIROTRONICS FLOAT LEVEL CONTROL = 220 VOLT CONNECTION



SETTINGS
DELAY : SET 1 SECOND
SENSE : MIDDLE SET POINT

PIPER PRODUCTS, INC. LIMITED WARRANTY

Piper Products, Inc. warrants to the original purchaser that its equipment will be free from defects in the materials and/or parts for a period of 12 months from date of shipment and reported to the factory.

The purchaser is responsible for having equipment properly installed, operated under normal conditions with proper supervision and to perform periodic preventative maintenance. Equipment failures caused by inadequate water quality, improper cleaning, harsh chemicals, or acids are not covered under warranty.

The manufacturer's obligation under this warranty shall be the replacement or repair of defective parts within the warranty period. Excessive labor (more than 1/2 hour) required to access Piper equipment built into cabinets, tables or structures by others, is NOT covered under labor warranty. Example: Piper multiple- or single-well food wells. All labor shall be performed during regular working hours. Overtime premium will be charged to buyer. After thorough examination, the decision of the Piper Products Service Department shall be final.

Any defective parts to be repaired or replaced must be returned to Piper Products, Inc., 300 South 84th Avenue, Wausau, WI 54401, transportation charges prepaid, and they must be properly packed and tagged. The serial and model number of the equipment and date of original installation of such equipment must be given. However, after one year we will not assume any responsibility for any expenses (including labor) incurred in the field incidental to the repair or replacement of equipment covered by this warranty. Our obligation hereunder to repair or replace a defective part is the exclusive remedy for breach of this warranty; and we will not be liable for any other damages or claims, including consequential damages.

If, upon inspection by Piper Products, Inc. or its Authorized Service Agency, it is determined that this equipment has not been properly installed or has not been used in an appropriate manner, has been modified, has not been properly maintained, the warranty will be void. Also, if the nameplate or other identifying marks have been removed, defaced or changed or the unit has been repaired or altered by persons other than expressly approved by Piper Products, Inc., the warranty will be void. If the equipment has been subjected to misuse or misapplication, neglect, abuse, accident, damage during transit or delivery, fire, flood, riot or acts of God, then this warranty shall also be void. When any situation occurs which voids the warranty the manufacturer shall not be liable for any damage to any person or any property which may result from the use of the equipment thereafter.

Warranty is limited to Piper manufactured products only and does not apply to other equipment which may be connected to or installed within.

No representative, dealer, distributor or any other person is authorized or permitted to make any other warranty or obligate Piper Products, Inc. to any liability not strictly in accordance with this policy.

This warranty is in lieu of all other warranties expressed or implied, including any warranty of merchantability, and fitness for a particular purpose. Piper Products does hereby exclude and shall not be liable to purchaser for any consequential or incidental damages including but not limited to damages to property, damages for loss of use, loss of time, loss of profits or income, resulting from any breach of warranty.

NOTES

PIPER

The Food-Focused Equipment Company

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