Owner's Manual — Phoenix 4800P Industrial Desiccant Dehumidifier

Installation, Operation & Service Instructions

Read and Save These Instructions

Congratulations on your purchase of the Phoenix 4800P dehumidifier. This dehumidifier offers the finest in air-drying equipment. However, this machine can only provide maximum service and performance if properly installed, operated and maintained.

This owner's manual is provided to acquaint you with the dehumidifier so that the installation, operation and maintenance can proceed successfully. Ultimate satisfaction depends on the quality of the installation and thorough understanding of the operation of this equipment. The dehumidifier is built around tested engineering principles and has passed a thorough inspection for quality of workmanship and function.

Phoenix 4800P (with cage)
PN 4028004

FOR YOUR SAFETY: DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

⚠WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information, call a qualified installer, service agency or the gas supplier.

FOR YOUR SAFETY: If you smell gas: **DO NOT** try to light any appliance. **DO NOT** touch any electrical switch. **IMMEDIATELY** call your gas supplier from a location away from the device. If the gas supplier cannot be reached, call the fire department.

Phoenix 4800P (without cage)
PN 4029192

The Phoenix 4800 P

- 3032 pints/day AHAM
- 4800 CFM process airflow
- Dries in temperatures to 140°F
- Reaches dew points as low as -40°F
- 48"W x 120"L x 72"H
- 1550 lbs. (Standard machine weight only)
- 240 volt, single phase

Specifications subject to change without notice.

⚠ GENERAL HAZARD WARNING

Failure to comply with the precautions and instructions provided with this unit can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, carbon monoxide poisoning, and/or electrical shock.

Only persons who can understand and follow the instructions should use or service this unit.

If you need assistance or unit information such as an instruction manual, label, etc., contact a qualified installer, service agency, gas supplier, or the manufacturer.

⚠ WARNING

FIRE, BURN, INHALATION, AND EXPLOSION HAZARD.

Keep solid combustibles, such as building materials, paper, or cardboard, a safe distance away from the unit as recommended by the instructions. Never use the unit in spaces which do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.

⚠ WARNING

Do NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

⚠ WARNING

Installation must conform to applicable local codes and/or the National Fuel Gas Code, ANSI Z223.1, the Standard for the *Storage and Handling of Liquefied Petroleum Gasses*, ANSI/NFPA 58 and the *Natural Gas and Propane Installation Code*, CSA B149.1.

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these.

⚠ MISES EN GARDE GENERALES

Le non-respect des mises en garde et des instructions fournies avec ce radiateur peut entrainer la mort, de graves blessures et des pertes materielles ou des dommages a la propriete resultant d'un incendie, d'une explosion, de brulures, d'asphyxie, d'empoisonnement au monoxyde, de carbone et/ou d'un choc electique.

Seules les personnes aptes a comprendre et a suivre les instructions devraient se servir de ce radiateur ou le reparer.

Si vous avez besoin d'aide ou d'informations concernant ce radiateur ou le reparer.

⚠ Avertissement

Risque d'incendie, de brulures, d'inhalation et d'explosion. Garder les combustibles solides, tels les materiaux de construction, le papier et le carton, a bonne distance de ce radiateur, comme il est recommande dans les instructions. ne jamais utiliser cet appareil dans des endroits qui contiennent ou pourraient contenir des combustibles volatiles ou en suspension dans l'air tels l'essence, les solvants, les diluants pour peinture, les particules de poussieres ou des produits chemiques inconnus.

Table of Contents

Serial No._____

Purchase Date_____

Dealer's Name_____

Read the operation and maintenance instructions carefully before using this unit. Proper adherence to these instructions is essential to obtain maximum benefit from your Phoenix 4800P.

1 Specifications

Specifications for 4800P

Part No.	4028004 (with cage) 4029192 (without cage)
Power	240 volt, 70 Amp single phase
Water Removal	3032 pints/day @ AHAM
Blower	4800 CFM Process Air Flow 2000 CFM Reactivation Air Flow
Operating Range	-10°F to 140°F
Filters	Process filter size: (2) 20" x 20" x 2" Reactivation filter size: (1) 20" x 20" x 2"
Duct Options	Process Inlet: 18" Flex-Duct Process Outlet: 18" Flex-Duct/Lay Flat
Warranty	1 Year 100% Parts & Labor

Dimensions

	Machine only	With cage
Width	48"	48"
Height	66"	72"
Length	120"	120"
Weight	1550 lb	1675 lb

Accessories

4028364	18" Flex-Duct
4028374	18" Lay Flat Duct
4028365	20" Flex-Duct
4028375	20" Lay Flat Duct
4027327	External Temperature control
4020175	External Dehumidistat

Air Filter Replacement

4028635	20" x 20" x 2" Filter

2 Operation

The function of the dehumidifier is to remove moisture (in the vapor state) from an air stream. This is accomplished by exposing the air to an adsorbing media (desiccant) in a sealed air stream (process). After the desiccant has adsorbed moisture, it is exposed to a second air stream at an elevated temperature (reactivation). This causes the moisture to be driven out of the desiccant preparing it for more moisture adsorption. This process is done on a continuous basis, providing a constant drying process. The two air streams (process and reactivation) are separated by seals, which contact the desiccant media. Figure 1 illustrates the relationship of the seals and airflow pattern. The dehumidifier is designed with the two air streams flowing in opposite directions (counter flow) thereby maximizing the energy efficiency of the equipment.

Principle of Operation

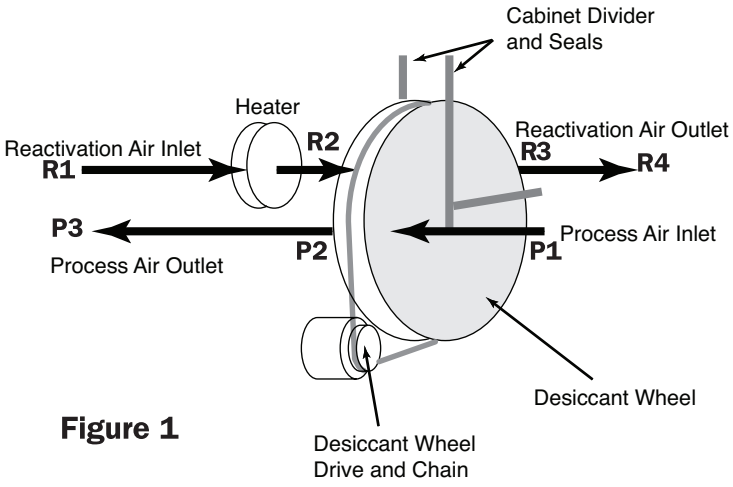


Figure 1

2.1 How the Phoenix 4800P Works

The Phoenix 4800P has two separate air streams that run through it – Process and Reactivation (Fig. 1).

Process Air Stream:

P1 – 4800 CFM of air enters the machine (Process Air Inlet) and...

P2 – ...water vapor from incoming air is deposited (adsorbed) on the desiccant wheel.

P3 – 4800 CFM of dry air exits the machine (Process Air Outlet).

Reactivation Air Stream:

R1 – 2000 CFM of air enters the machine (Reactivation Air Inlet) and...

R2 – passes through the heater.

R3 – Water vapor is picked up (desorbed) from the desiccant wheel by the hot air and...

R4 – ... 2000 CFM of wet air exits the machine (Reactivation Air Outlet).

3 Installation

Proper installation is critical to the performance of the Phoenix 4800P. Follow the guidelines below to maximize service life and performance.

3.1 Inspection

Thoroughly inspect the machine to insure no damage has occurred during shipping or on the job site.

The hose assembly shall be visually inspected prior to each use of the heater. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation. The replacement hose assembly part is listed in the service parts list.

3.2 Location

Note the following precautions when locating the Phoenix 4800P:

The 4800P must be located outdoors with reactivation outlet pointed away from open windows or building fresh air inlets. Position unit for shortest, straightest duct run to structure. Provisions for adequate combustion and ventilation air must be provided in accordance with section 5.3 of the National Fuel Gas Code ANSI Z223.1.

Always ensure the 4800P is located with the reactivation outlet pointed such that the reactivation air exhausts to the atmosphere in an unoccupied area and can NOT be drawn into any nearby structure. Do not exhaust reactivation air across walkways or towards buildings, openable windows, or building openings. Do not allow the reactivation outlet to become obstructed by snow, construction debris, etc. Maintain a minimum 4' clearance around electric and gas meters, regulators, and relief equipment. Locate device a minimum of 10' from combustible constructions. Be aware that reactivation air contains flue gasses that, over time, can degrade some building materials. Do not connect device to a chimney flue serving a separate appliance designed to burn solid fuel.

Do not direct process or reactivation air streams toward any Propane-gas container within 20' (6m).

3.3 Set-Up

When conditions warrant the use of a desiccant dehumidifier, use one of the setups described below to achieve efficient drying, while avoiding secondary damage. Review Section 2.1 to understand the desiccant drying process.

Neutral Pressure Setup

Many drying applications require neutral pressure operation. In this setup, the Process Air Inlet pulls air from the affected area (drying chamber) and returns dried, processed air to the affected area via the Process Air Outlet.

Positive Pressure Setup

For Positive Pressure operation, the Process Air Inlet pulls air from outside the drying chamber, while the Process Air Outlet is ducted into the chamber.

3.4 Ducting

The duct requirements of the 4800P are much more critical than those of refrigerant-based dehumidifiers. **ALL SUPPLY AND RETURN AIR DUCTING FOR THE 4800P MUST BE AIR AND VAPOR TIGHT.** This is extremely important for proper performance. Ensure that reactivation discharge air does not enter the process or reactivation inlets.

Using excess duct length significantly reduces air flow through duct. This is true in any application. If the job at hand needs a short length of duct, cut a section to the appropriate length. If air flow is restricted by excess length, performance will suffer. The same can be said of excess bends in the ducting.

Two different duct sizes are used on the 4800P. All ducting materials are available from Therma-Stor LLC (see accessories list in Section 1).

Process inlet / Reactivation inlet: 18" (minimum) flex duct.

To attach flex ducts to the process air intake, push the wire of the first few loops beyond the 2 holes in the duct collar. Push the metal rod through the duct and duct collar piercing the duct in two places. Tape or a hose clamp can be used to create an airtight seal. Alternatively, the duct wire can be pushed past the weld beads on the duct collar and the duct can be secured with hose clamps or ratcheting straps. If using only one inlet connection, the other can be left closed.

Process outlet: 18" (minimum) flex or lay flat plastic duct.

To attach flex ducts to the process air outlet, push the wire of the first few loops beyond the 2 holes in the duct collar. Push the metal rod through the duct and duct collar piercing the duct in two places. Tape or a hose clamp can be used to create an airtight seal. Alternatively, the duct wire can be pushed past the weld beads on the duct collar and the duct can be secured with hose clamps or ratcheting straps.

When using lay flat ducting, slip over the outlet collar and zip-tie or duct tape in place.

3.5 Avoiding Secondary Damage

The Phoenix 4800P is a powerful tool capable of removing a great deal of water from most environments. Care must be taken to avoid secondary damage of over-drying and or unexpected condensation.

The Phoenix 4800P removes vapor water from the incoming process air stream and transfers it to the outgoing reactivation air stream. The reactivation exhaust air is hot and wet.

Take care to prevent the reactivation exhaust air stream from causing secondary damage due to condensation. Always ensure the 4800P is located with the reactivation outlet pointed such that reactivation air will NOT be drawn back into the structure.

The Phoenix 4800P does not produce liquid water internal to the machine. There is no condensate pump and no drain hose.

The 4800P desiccant dehumidifier will continue to remove water from already dry, cold air. It is possible to over-dry objects and or structures.

Care must be taken to avoid secondary damage due to over-drying.

3.6 Electrical Requirements

A 240 volt, 70 amp, single phase power source is required to operate the Phoenix 4800P.

All local and state codes must be strictly adhered to and good electrical practices should be followed to achieve the best installation possible. The 4800P must be properly wired to an adequate power source. The electrical grounding of the appliance shall be in compliance with the *National Electrical Code, ANSI/NFPA70,* or the *CSA C22.1 Canadian Electrical Code, Part I*. Serious damage to the motors and controls can occur if incorrect voltage is applied.

(See *Electrical Schematic* drawing in the back of this manual for internal wiring.)

4 Operating Instructions

Refer to the Operating Instructions label located next to the control panel of your 4800P.

⚠WARNING

User-supplied power cord, cord grip, and branch protection appropriate for the electrical load must be supplied. See device for FLA rating.

The Phoenix 4800P dehumidifier comes complete and ready for operation. All that is required is to provide the proper power source, propane supply, and duct connections (described above).

4.1 Connect and Start-Up Procedure

1. **STOP!** Read the safety information on unit label.
2. Turn off all electric to this appliance - Selector Switch turned to **STAND BY** position. Main Disconnect turned to **OFF** position.
3. Connect propane gas source to second stage regulator inlet (5-20 psig). Regulator located below reactivation inlet duct.
4. Open gas supply shut off valve.
5. Open appliance shut off valve.
6. Energize power source and turn Main Disconnect switch to **ON**.
7. Turn Selector switch to **RUN**.
8. Set process damper to obtain a maximum of 1.5" water column pressure as read on pressure gauge.
9. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

4.2 Cool Down

1. Set Selector Switch to STAND BY.
2. COOL DOWN light will come on for 5 minutes.
3. When COOL DOWN light is off, Main Disconnect can be switched to OFF.

⚠WARNING

Failure to follow **COOL DOWN PROCEDURE** may result in damage to unit due to overheating. **ALWAYS** follow **COOL DOWN PROCEDURE** before shutting unit down.

4.3 Shut Down & Disconnect Procedure

1. Verify COOL DOWN light is not illuminated and Cool Down Procedure has been followed.
2. Close appliance shut off valve.
3. Close gas supply shut off valve.
4. Turn Main Disconnect switch to OFF.
5. Disengage Power Source.
6. Lock Out Power Source.
7. Disconnect Power Cable.
8. Disconnect gas source.

5 Control Panel

5.1 Main Disconnect

The main disconnect switches power from the source to the panel. Power must be disconnected at the source prior to accessing control panel. Access to the control panel with power applied is ONLY by qualified service personnel with the appropriate personal protective equipment

⚠CAUTION

Power is present up to disconnect even in OFF position. Disconnect power at the source before opening panel.

5.2 Standby Light

The STANDBY indicator lamp illuminates to indicate that power is supplied to the control panel.

5.3 Selector Switch

When the selector switch is moved to the "RUN" position, the 4800P starts dehumidifying. The machine will continue to dehumidify in all conditions until the power is turned off. No dehumidistat is provided to monitor process inlet air condition (see over-dry warning section 3.5). An external control (dehumidistat, thermostat or other contact) can be wired in place of the jumper across terminals 100 and 3070. The external control must be designed to operate a 24 VAC circuit.

5.4 Alarm (Light and Horn)

The alarm indicator lamp illuminates (and horn sounds) to indicate that a fault condition exists. All flashing faults flash for only 5 minutes after the fault occurs:

- **No flash** - An immediate alarm sounds after turning the unit on. This can be due to any pressure switch being closed on start-up.
- **1 flash** - Combustion Blower fault. Blower is not developing enough pressure differential (airflow) to support proper combustion.
- **2 flashes** - Differential pressure between reactivation and process ducts too great. May be indicative of blocked process inlet ducting.
- **3 flashes** - Failure to ignite after 3 trials for ignition. Check gas supply. Ignitor failure may also produce this fault.
- **4 flashes** - Reactivation or process blower motor overload relay tripped.
- **5 flashes** - High reactivation temperature. Temperature approaching the desiccant wheel may be in excess of 350°F. Air flow through the reactivation section may be restricted. Ensure proper gas is supplied to the unit.

An external alarm can be wired to relay output terminals 4440 and 4442. Relay contacts are rated 5A resistive/2A inductive at 12/24 V AC/DC, 5A resistive/3A inductive at 115/120/230/240 VAC

5.6 Hour Meter

The hour meter will run whenever the 4800P is operating. This hour meter measures the cumulative time of operation in one-tenth hour increments. This meter is often used to verify hours on a job or to schedule maintenance.

6 Maintenance

6.1 General Maintenance

A definitive time schedule should be established for inspecting all rotating parts and components. Inspection requirements depend on the frequency of operation,

transport, and operating conditions. Periodically check the condition of the air filter, rotating parts, and fasteners to ensure they are secure and in proper working order. Periodically check airflow to make sure there are no obstructions to airflow in outlet or inlet ductwork.

Recommended minimum inspections:

- Upon installation
- After 1 week of operation.
- Annually thereafter or upon loss of performance.

Note: The appliance and its inidividual shut off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of ½ psig (3.5 kPa).

6.2 Cabinet

⚠CAUTION

Disconnect power before removing access panels.

Remove panel fasteners and panels from unit to access internal components. The condition of the cabinet gaskets should be observed during inspection and servicing to insure a good seal. Any leaks must be sealed and panels securely fastened for proper dehumidifier operation. Burner compartment may be cleaned by removing burner panel and using compressed air to loosen contaminants. Follow up by vacuuming loose debris.

6.3 Filter

The maintenance interval for the filter depends directly on the cleanliness of the air entering the dehumidifier. It is suggested that a program be established to assure that the filters are replaced or cleaned prior to becoming clogged to the point they create a system problem.

Three aluminum (20"x20"x2") air filters must be checked regularly. Two filters are located near the process air inlet. The other one is located near the reactivation air inlet.

Wash the filters with fresh water. Clean the filter from the downstream side, forcing debris toward the filter inlet. Dry the filters completely before installing them in unit. Replacement filters can be ordered from the factory or purchased locally if available.

DO NOT operate the unit without the filters or with less effective filters as the desiccant wheel inside the unit will become clogged and require disassembly to clean.

6.4 Blower and Motor

Blower and motor bearings are permanently lubricated and do not require maintenance. Blower wheel - inspect wheel blades for accumulation of dust and dirt. Clean thoroughly with compressed air and or vacuum. The wheel should not strike the housing or the inlet ring. Make sure wheel is rotating in the proper direction.

6.5 Drive Motor

The media drive motor is permanently lubricated and requires no maintenance.

6.6 Rotor Drive Chain

A spring loaded tensioner keeps the chain sufficiently tensioned. Check the chain for signs of excessive wear. Replace as necessary. If additional tension is required, simply tighten the nuts on the tension springs as required.

6.7 Seals

High temperature seals separate the process and reactivation compartments. Normally, the seals will not require service or replacement. However, should damage occur, or if poor performance as the result of an air leak is suspected, the following inspection must be performed to determine whether the seals should be replaced:

Inspection:

1) Turn the unit off and remove the access covers.
2) Visually inspect for gaps between the desiccant media and the seals.
3) If significant gaps, wear, or damage are observed, the seal needs to be replaced.

6.8 Desiccant Media

The silica gel desiccant media supplied with the dehumidifier will last indefinitely under ideal conditions. Due to the nature of desiccants they make very good filters. The life of the desiccant is directly related to the airborne contaminates passed through it. Atmospheric contaminants, exposure to acidic gases/or air streams, and contact with petroleum based airborne particles can reduce the efficiency of the desiccant media. The preferred method of cleaning is to blow dust out with compressed air. Proper filtration and preventing contact with chemicals will greatly improve the life of the desiccant. Inspect the face of the media to see that no surface damage has occurred. If damage is noticed, please contact Therma-Stor at 1-800-533-7533 for assistance. The rotor should turn smoothly upon the shaft, if not check the support bearings.

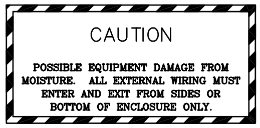
⚠CAUTION

Servicing the Phoenix 4800P with its high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

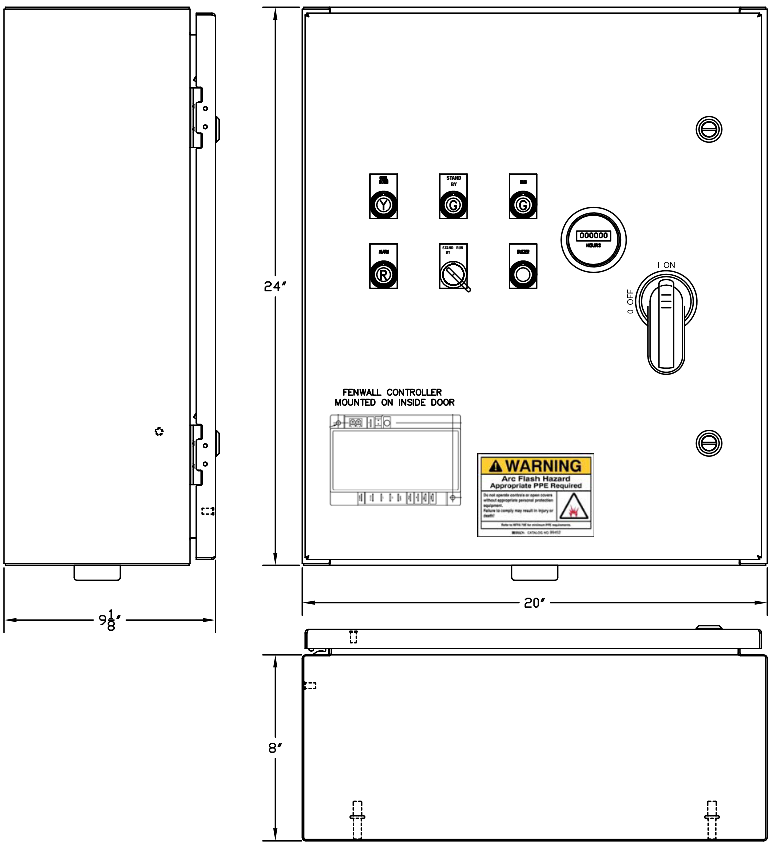
⚠CAUTION

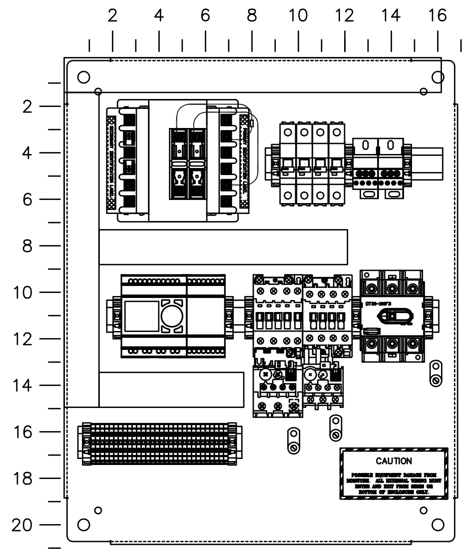
ELECTRICAL SHOCK HAZARD: Electrical power must be present to perform some tests; these tests should be performed only by a qualified service person.

7 Panel Layout/Wiring Diagram



AFFIXED TO MAIN SUBPANEL



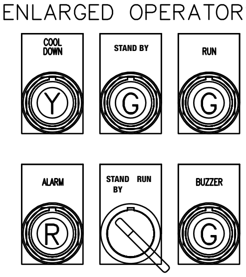


ENLARGED TERMINALS

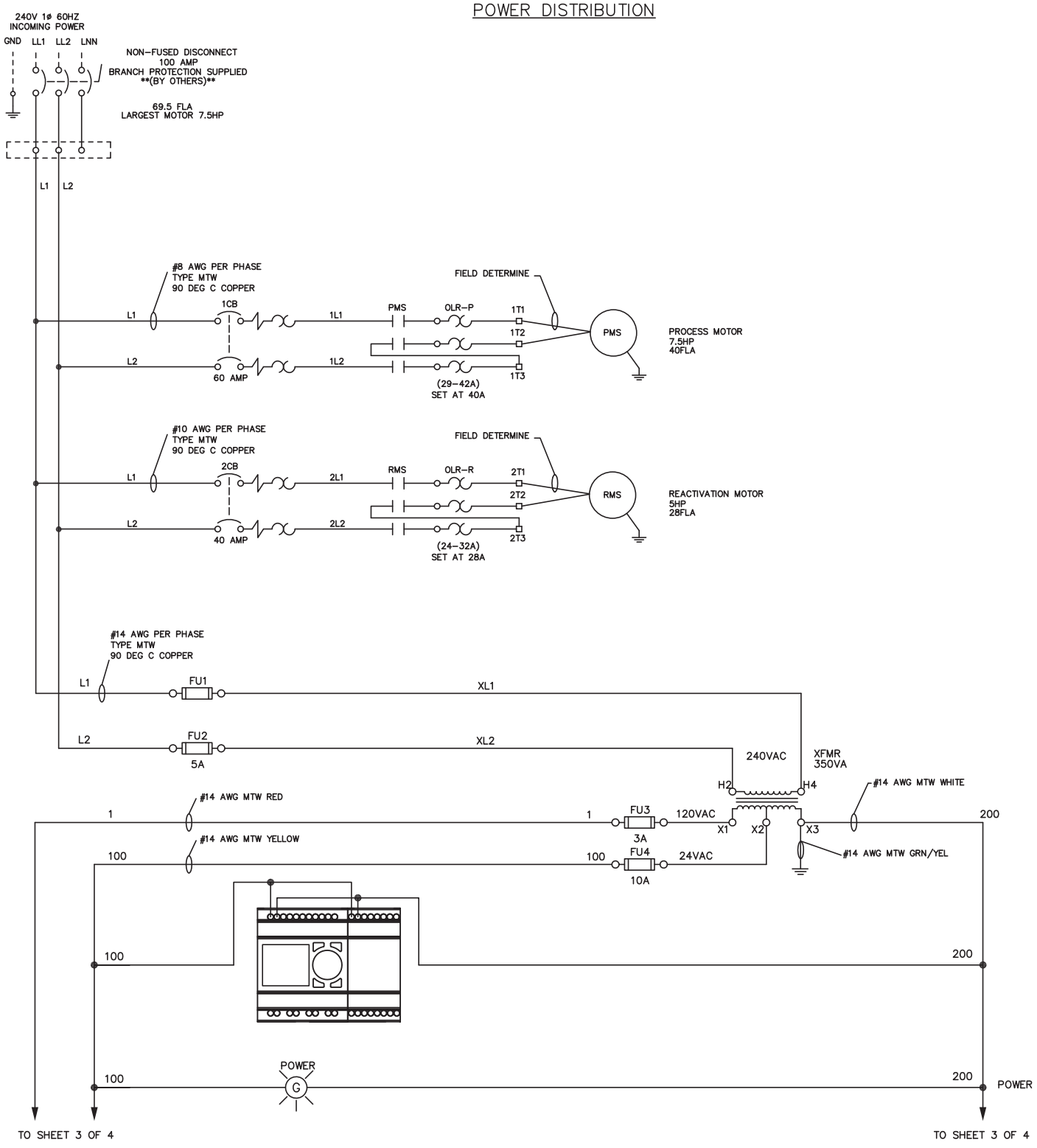
1	1	100	100	100	100	100	200	200	200	200	200	3070	3090	3110	3130	3150	3210	3420	3440	4060	4380	4440	4442	----	S1	S2	GND	GND	GND

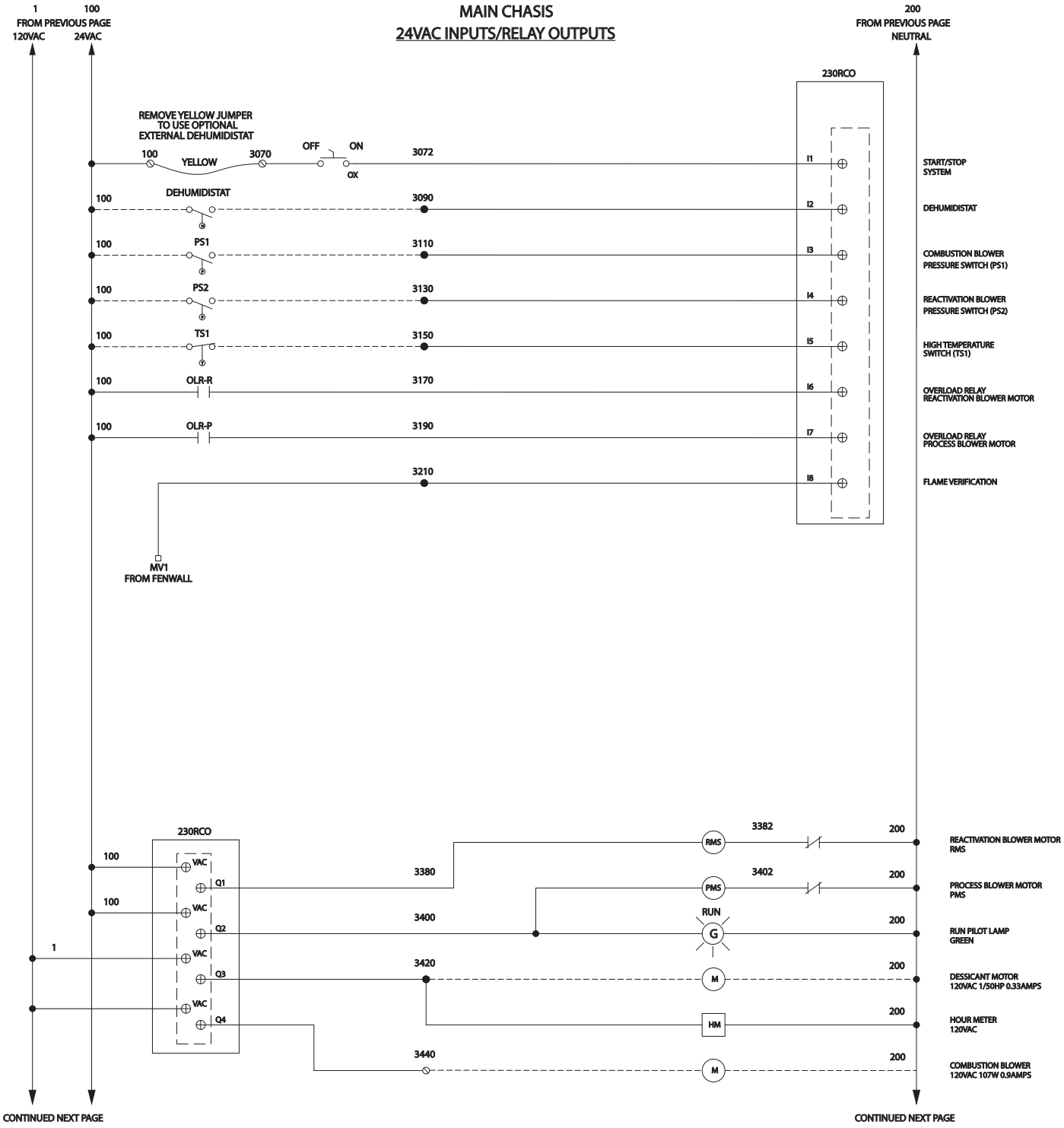
USE UL/CUL–APPROVED CONNECTORS SUITABLE FOR LOCATION

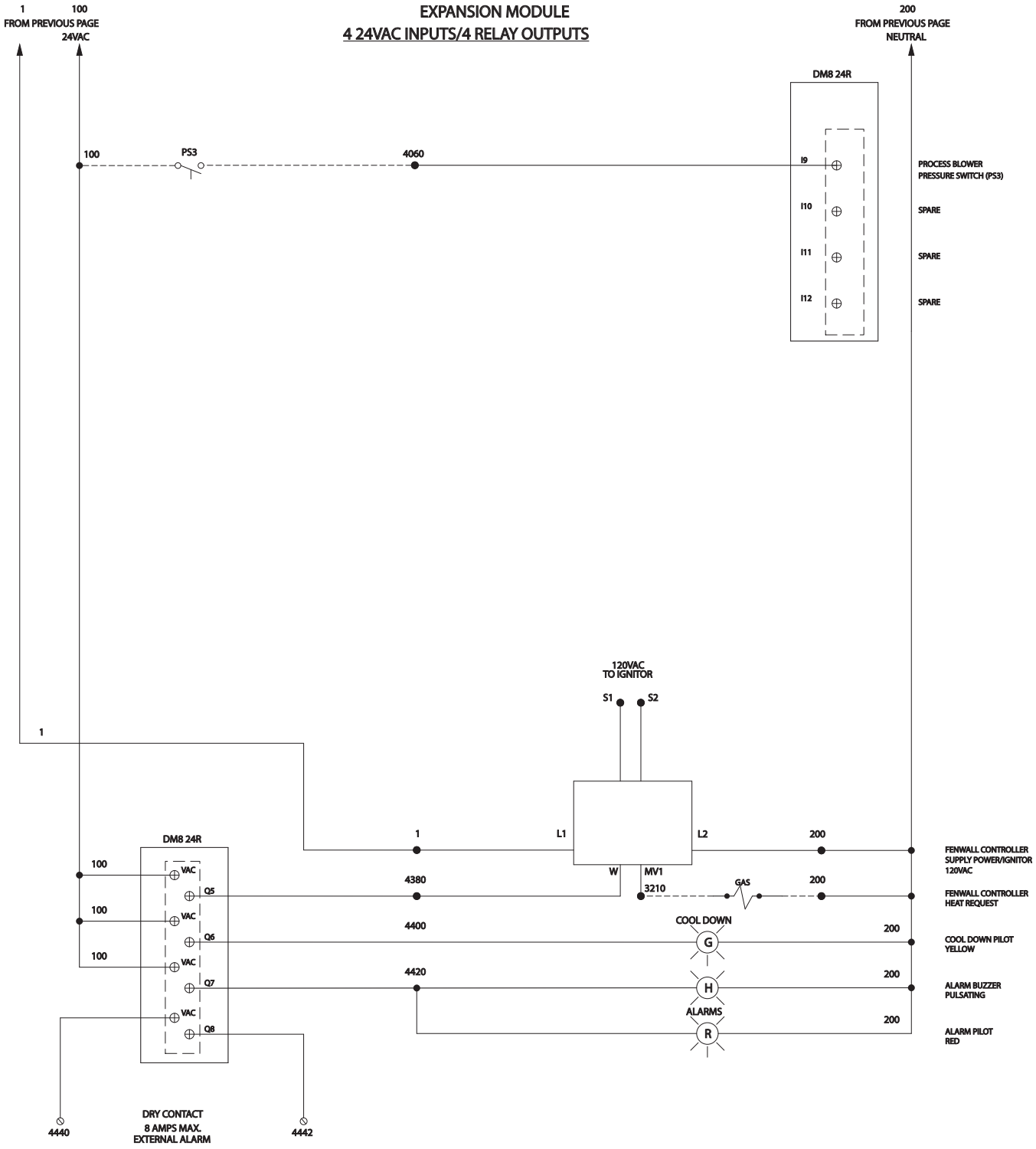
ENLARGED OPERATORS



POWER DISTRIBUTION




MAIN CHASIS
24VAC INPUTS/RELAY OUTPUTS
1
FROM PREVIOUS PAGE
120VAC
100
24VAC
200
FROM PREVIOUS PAGE
NEUTRAL
230RCO
REMOVE YELLOW JUMPER
TO USE OPTIONAL
EXTERNAL DEHUMIDISTAT
100
YELLOW
3070
OFF
ON
OX
3072
I1
START/STOP
SYSTEM
DEHUMIDISTAT
3090
I2
DEHUMIDISTAT
PS1
3110
I3
COMBUSTION BLOWER
PRESSURE SWITCH (PS1)
PS2
3130
I4
REACTIVATION BLOWER
PRESSURE SWITCH (PS2)
TS1
3150
I5
HIGH TEMPERATURE
SWITCH (TS1)
OLR-R
3170
I6
OVERLOAD RELAY
REACTIVATION BLOWER MOTOR
OLR-P
3190
I7
OVERLOAD RELAY
PROCESS BLOWER MOTOR
3210
I8
FLAME VERIFICATION
MV1
FROM FENWALL
230RCO
VAC
Q1
Q2
Q3
Q4
3380
3400
3420
3440
RMS
3382
PMS
3402
RUN
G
M
HM
REACTIVATION BLOWER MOTOR
RMS
PROCESS BLOWER MOTOR
PMS
RUN PILOT LAMP
GREEN
DESSICANT MOTOR
120VAC 1/50HP 0.33AMPS
HOUR METER
120VAC
COMBUSTION BLOWER
120VAC 107W 0.9AMPS
CONTINUED NEXT PAGE
CONTINUED NEXT PAGE


EXPANSION MODULE
4 24VAC INPUTS/4 RELAY OUTPUTS
1
FROM PREVIOUS PAGE
24VAC
100
200
FROM PREVIOUS PAGE
NEUTRAL
DM8 24R
100
PS3
4060
I9
PROCESS BLOWER
PRESSURE SWITCH (PS3)
I10
SPARE
I11
SPARE
I12
SPARE
120VAC
TO IGNITOR
S1
S2
1
L1
L2
200
W
MV1
3210
GAS
200
FENWALL CONTROLLER
SUPPLY POWER/IGNITOR
120VAC
FENWALL CONTROLLER
HEAT REQUEST
DM8 24R
100
VAC
Q5
4380
100
VAC
Q6
4400
COOL DOWN
G
200
COOL DOWN PILOT
YELLOW
100
VAC
Q7
4420
H
200
ALARM BUZZER
PULSATING
VAC
Q8
ALARMS
R
200
ALARM PILOT
RED
4440
DRY CONTACT
8 AMPS MAX.
EXTERNAL ALARM
4442

8 Troubleshooting

⚠CAUTION *ELECTRICAL SHOCK HAZARD: Electrical power must be present to perform some tests; these tests should be performed only by a qualified service person.*

Refer to section 5.4 regarding interpeting flashing faults.

Trouble	Probable Fault	Probable Cause	Corrective Action
Unit Stopped (fan off, no heater)	Power/Control Failure	1. Main power off	Check main power and cable
		2. Main disconnect open	Close or replace disconnect
		3. Selector switch open	Close or replace switch
		4. Dehumidistat	Repair or replace
Fan off (Rotor turns)	Power/Mechanical Failure	1. Motor circuit breaker or overload tripped	Reset circuit breaker or overload
		2. Contactor failure	Repair or replace
		3. Motor winding failure	Repair or replace
		4. Fan motor failure	Repair or replace
Unit running but humidity rises	Excessive infiltration of humid air into the controlled area	1. Excessive unconditioned make-up air	Reduce make-up air
		2. Leaking ducts or air handling equipment outside controlled area	Seal leaks
		3. Access opening to area not sealed	Close and seal
		4. Area not vapor tight	Seal with paint or vapor barrier
	Faulty humidity controls	1. Dehumidistat needs adjustment	Re-adjust
		2. Improper settings	Re-adjust
		3. Defective	Replace
	Inadequate air flow	1. Dirty filter	Clean or replace
		2. Obstruction at inlet, outlet or ducting	Remove obstruction
		3. Clogged desiccant media (high pressure differential across media)	Remove and replace media rotor
	Inadequate or no reactivation heat	1. No Fuel	Check for fuel in tank, verify valves open
		2. No power to ignition module	Watch for igniter glow through inspection window, verify power to transformer and ignition module
		3. Overtemp switch failure	Check continuity of overtemp switches
		4. Igniter failure	If ignition module has power, watch for igniter glow through inspection window
		5. Gas Valve Failure	With gas valves OFF, power on the device and check for voltage at the gas valve
		6. Ignition control failure	Check power to ignition module, replace if igniter outputs are never energized and LED never blinks (allow several minutes to verify)
	Air seals and gaskets	1. Air leaking into dehumidifier	Replace access door gaskets
		2. Air bypassing media or leaking seals	Check media position, replace seals
	Ineffective desiccant media	1. Chain	Repair or replace
		2. Motor/gear box	Repair or replace
		3. Damaged desiccant rotor	Repair or replace
		4. Contaminated or damaged desiccant	Replace desiccant rotor

9 Service Parts

Item	Part No.	Description
1	4020175	Humidity Control
2	4028010	Magnehelic Gauge
3	4028013	Thermostat, 350°F
4	4028015	Ignition Module
5	4028016	Hot Surface Ignitor
6	4028033	Inspection Window Glass 6x6
7	4028559	Inspection Window Glass 4x4
8	4028626	Process Blower
9	4028627	Reactivation Blower
10	4028635	Washable Air Filter 20x20x2
11	4029107	Duct Cover
12	4029314	Duct Cover Retainer
13	4031199	Gas supply hose, 15 ft

Phoenix 4800 Limited Warranty

Warrantor:
Therma-Stor LLC
4201 Lien Rd
Madison, WI 53704
Telephone: 1-800-533-7533

Who Is Covered: This warranty extends only to the original end-user of the 4800P and may not be assigned or transferred.

First Year Warranty: Therma-Stor Products warrants that, for one (1) year the 4800P will operate free from any defects in materials and workmanship, or Therma-Stor Products will, at its option, repair or replace the defective part(s), free of any charge.

End-User Responsibilities: Warranty service must be performed by a Servicer authorized by Therma-Stor Products. If the end-user is unable to locate or obtain warranty service from an authorized Servicer, he should call Therma-Stor Products at the above number and ask for the Therma-Stor Products Service Department, which will then arrange for covered warranty service. Warranty service will be performed during normal working hours.

The end-user must present proof of purchase (lease) upon request, by use of the warranty card or other reasonable and reliable means. The end-user is responsible for normal care. This warranty does not cover any defect, malfunction, etc. resulting from misuse, abuse, lack of normal care, corrosion, freezing, tampering, modification, unauthorized or improper repair or installation, accident, acts of nature or any other cause beyond Therma-Stor Products' reasonable control.

Limitations and Exclusions: If any 4800P part is repaired or replaced, the new part shall be warranted for only the remainder of the original warranty period applicable thereto (but all warranty periods will be extended by the period of time, if any, that the 4800P is out of service while awaiting covered warranty service).

UPON THE EXPIRATION OF THE WRITTEN WARRANTY APPLICABLE TO THE 4800P OR ANY PART THEREOF, ALL OTHER WARRANTIES IMPLIED BY LAW, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL ALSO EXPIRE. ALL WARRANTIES MADE BY THERMA-STOR PRODUCTS ARE SET FORTH HEREIN, AND NO CLAIM MAY BE MADE AGAINST THERMA-STOR PRODUCTS BASED ON ANY ORAL WARRANTY. IN NO EVENT SHALL THERMA-STOR PRODUCTS, IN CONNECTION WITH THE SALE, INSTALLATION, USE, REPAIR OR REPLACEMENT OF ANY 4800P OR PART THEREOF BE LIABLE UNDER ANY LEGAL THEORY FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES INCLUDING WITHOUT LIMITATION WATER DAMAGE (THE END-USER SHOULD TAKE PRECAUTIONS AGAINST SAME), LOST PROFITS, DELAY, OR LOSS OF USE OR DAMAGE TO ANY REAL OR PERSONAL PROPERTY.

Some states do not allow limitations on how long an implied warranty lasts, and some do not allow the exclusion or limitation of incidental or consequential damages, so one or both of these limitations may not apply to you.

Legal Rights: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.