


**APD 1-9 HPD 1-9  
OPERATING MANUAL**

 **DRI-AIR** INDUSTRIES, INC.  
16 THOMPSON ROAD  
P.O. BOX 1020  
EAST WINDSOR, CT 06088-  
1020

Tel. (860) 627-5110

FAX (860) 623-4477

Internet <http://www.dri-air.com>

e-mail: [sales@dri-air.com](mailto:sales@dri-air.com)

## CONTENTS

DRYER OPERATION/FEATURES -----	4
AIR FLOW SCHEMATIC FOR APD 1-9 DRYERS -----	6
AIR FLOW SCHEMATIC FOR HPD 1-9 DRYERS ----- (HIGH PERFORMANCE MODEL SHOW)	7
DRYER CYCLE DIAGRAM -----	8
PLC STANDARD ELECTRICS -----	9
INSTALLATION PROCEDURE -----	10
Electrical Connection -----	10
Check for correct motor rotation -----	10
Compressed Air Connection -----	10
START-UP PROCEDURE -----	11
Standard Electrics -----	11
To Set Temperature: -----	11
Microprocessor Control -----	12
CLOSED LOOP LOADING SYSTEM -----	13
Receiver Installation -----	13
Vacuum Check -----	14
Adjustment of Sensors -----	14
Material Flow Adjustment -----	15
BASIC TROUBLE SHOOTING for CLOSED LOOP LOADING SYSTEM -----	16
Material will not feed. -----	16
CLL MAINTENANCE -----	16
Daily Maintenance: -----	16
Monthly Maintenance: -----	16
DRYER OPERATION-TROUBLE SHOOTING -----	17
DRYER OPERATION-DETAILED DIAGNOSIS -----	18
DRI-AIR ROTARY ZONE VALVE -----	19
PARTS LISTS	
ARID-X 18 - 35 APD 1-4 and HPD 1-4 -----	20
ARID-X 50 - 100 APD 5-9 and HPD 5-9 -----	21

## **DRYER OPERATION/ FEATURES**

The ARID-X dryer series is a dual bed design that provides a constant supply of dry air to the material hopper. While one bed is removing moisture from the process air the other is regenerating by heating the desiccant to a high temperature. Once the regenerated bed cools down, the Zone Valve switches the airflow, and the newly regenerated bed is used to desiccate the process air stream. The saturated bed is now regenerated in the same manner, completing the regeneration cycle. The cycle is depicted Page 8.

The airflow design of the ARID-X dryers makes the regeneration cycle more efficient because we utilize a small amount of the desiccated process air rather than ambient air to regenerate the desiccant bed. This reduces the impact of the high moisture content of the ambient air, which would contaminate the desiccant bed, and allows the dryer to attain a lower dew point. Please see the Air Flow Schematic on Page 6.

### **HP4-X Design**

Our patented HP4-X design incorporates 4 desiccant beds where two are stacked, one over the other. This nearly doubles the amount of desiccant available for drying the process air stream, and because of the tower design, the dryer is able to regenerate the desiccant in the same time as our ARID-X series. This allows the dryer to operate in very high humidity conditions without affecting the process air dew point. In fact, this design produces dew point levels of – 40' to -80' C for faster more complete drying of your material. Please see the Air FLOW Diagram on Page 7.

### **Hopper Design**

Dri-Air's "all stainless" hopper design utilizes a stainless steel inner shell surrounded by a stainless steel jacketed insulation layer. The easily removable stainless steel spreader cone promotes proper material flow to ensure that the material is dried efficiently and no dried material is left at the hopper bottom that needs to be fed out prior to operating. You must ensure that your hopper is adequately sized for your usage rate and is kept filled, to ensure that you have sufficient time to dry the material.

## **DRYER OPERATION/ FEATURES (Cont.)**

### **Closed Loop Loading System**

Dri-Air's closed loop loading system utilizes a dedicated blower, small receiver, filtration system and desiccated air to move the material from the dryer hopper to the molding machine. This eliminates the possibility that your material will be contaminated with moisture as with some other material transfer systems, helping to eliminate defects resulting from moisture contamination. Please refer to the Closed Loop Loader System section of this manual for the proper installation and maintenance.

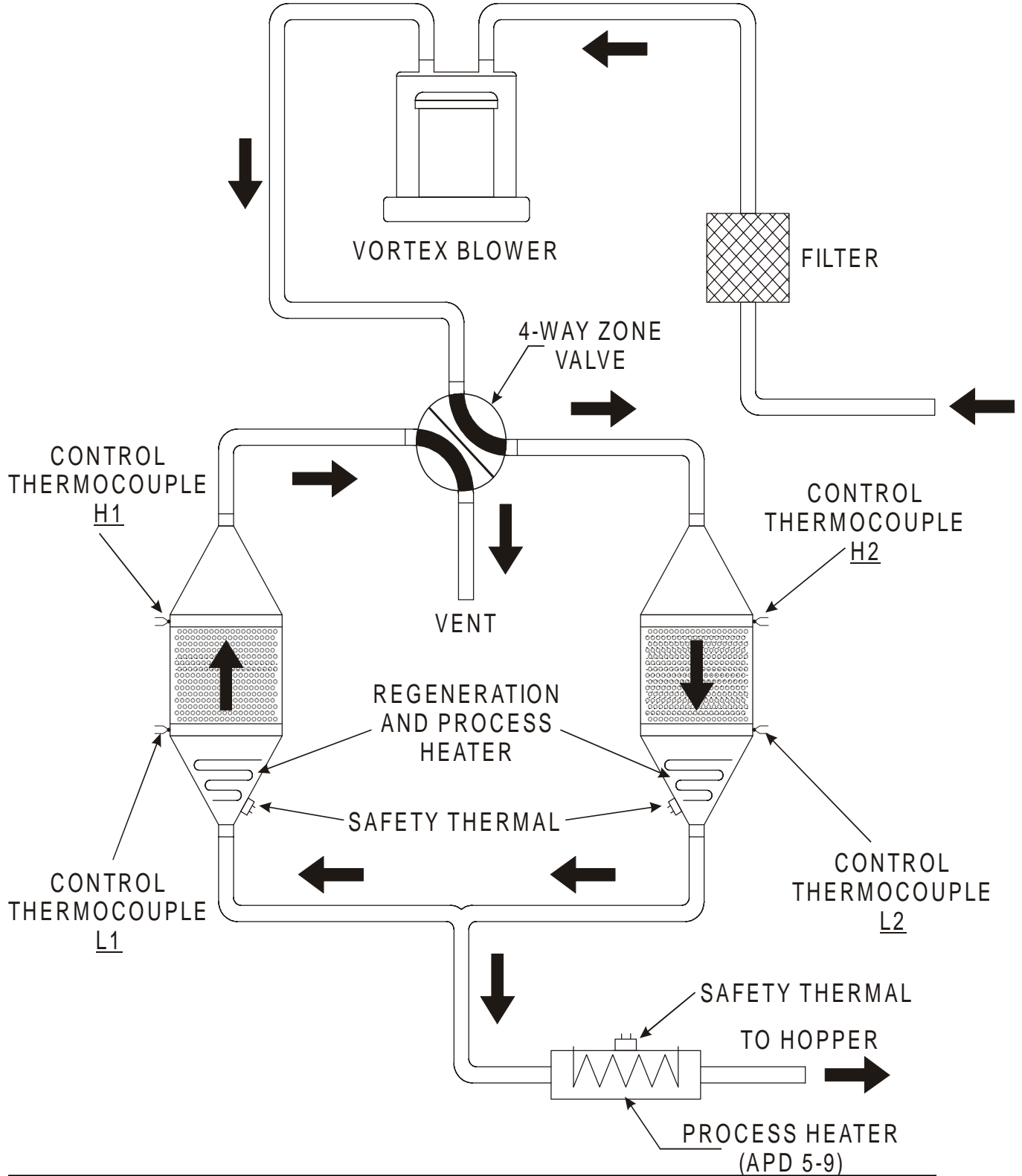
### **Dryer Controls**

The ARID-X series can be supplied with the standard PLC Control Module or the advanced Microprocessor Control Module, while the HP4-X series is only available with the Microprocessor Control Module.

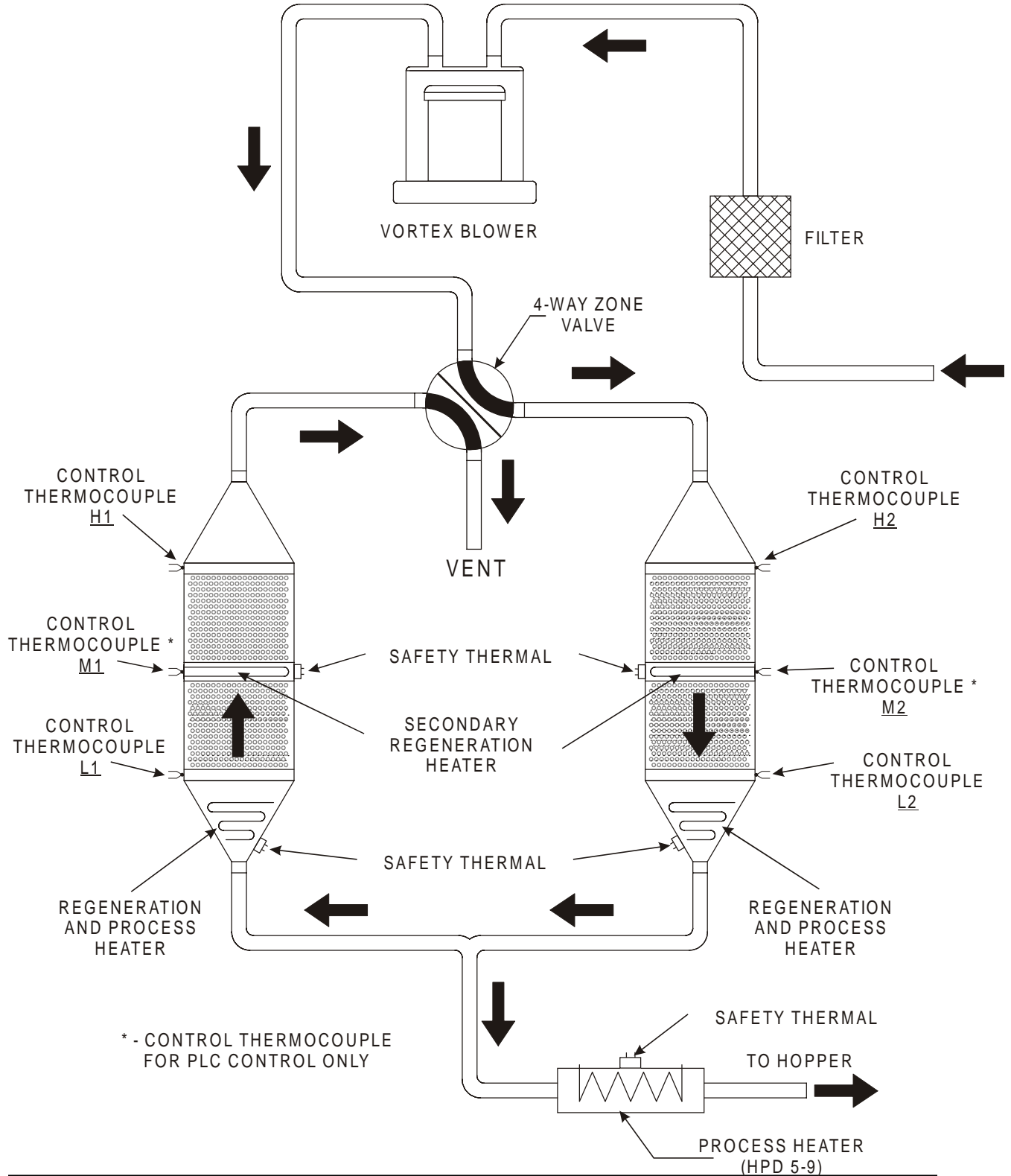
The PLC Control module includes a PLC control board, display board, temperature controller and touch pad that is programmed for the drying cycle described above. The controller, display board and touch pad indicate the machine status, alarms, set points and allow you to enter operational settings for the dryer. These are explained in more detail later in this manual.

The Microprocessor Control Module is one of the most sophisticated yet operator friendly controls on the market. It has many more features than the PLC control module that provide the operator with more control and operational flexibility with the dryer. These features and the operating instructions are covered in detail in the Microprocessor Control Instruction Manual included with your dryer.

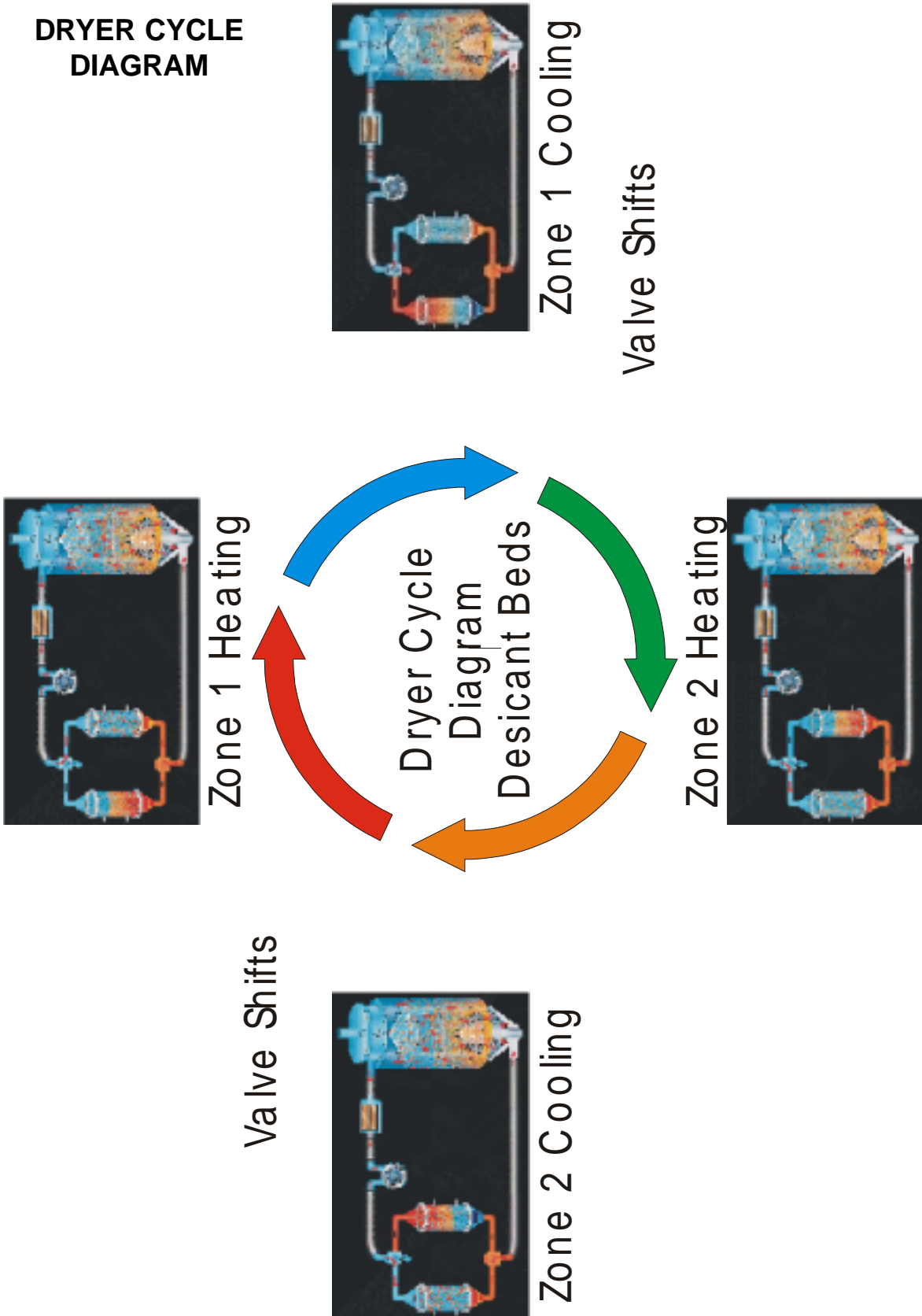
**AIR FLOW SCHEMATIC  
FOR APD 1-9 DRYERS**



**AIR FLOW SCHEMATIC  
FOR HPD 1-9 DRYERS**



**DRYER CYCLE  
DIAGRAM**

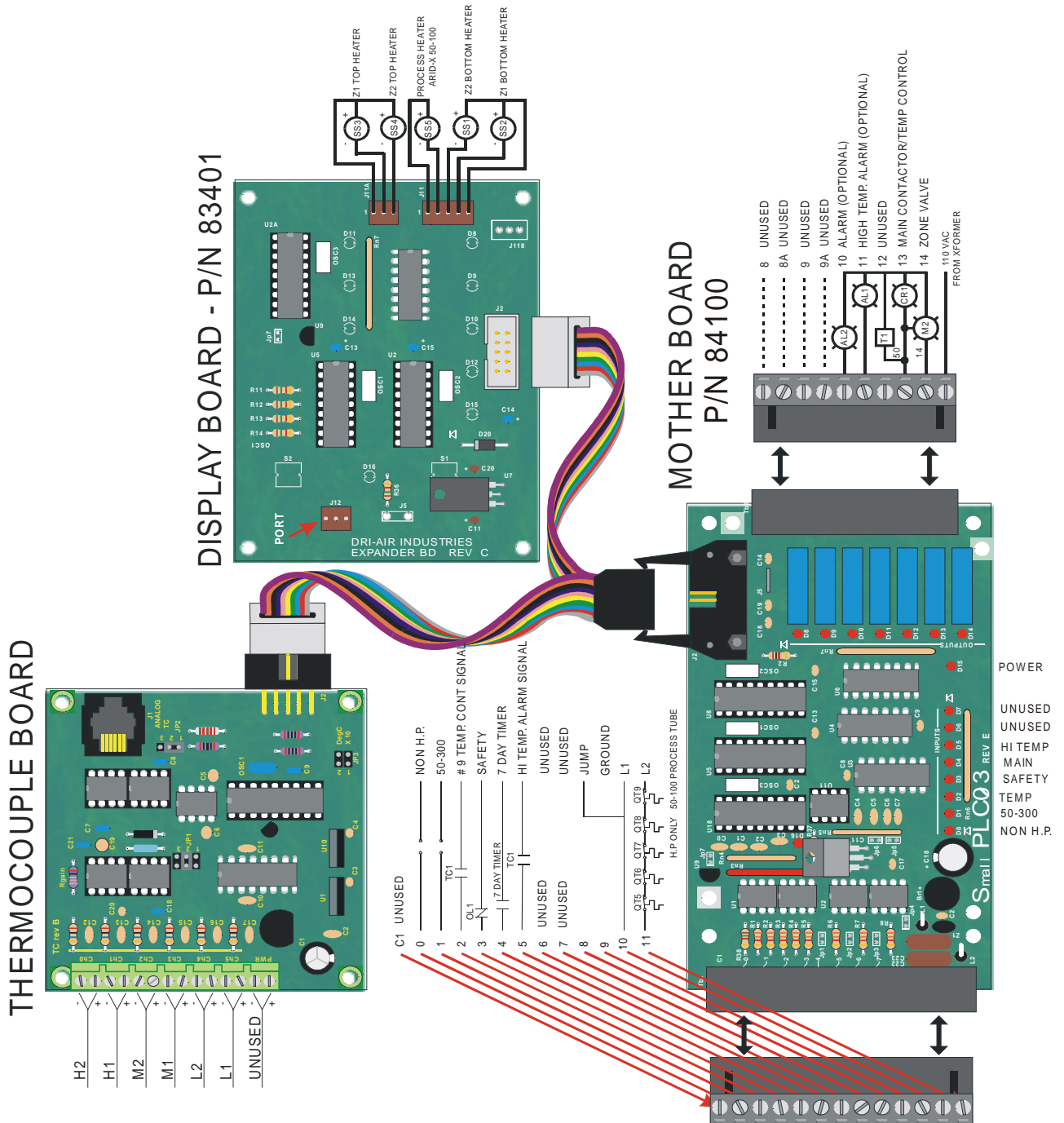




**PLC STANDARD ELECTRICS**

The control package includes a PLC controller which is programmed for the drying cycle previously discussed. The display board indicates the machine status, heater operation and alarms. See section on start up for details.

Below are descriptions of the inputs and outputs of the PLC which are used for trouble shooting. A lit LED indicates the input or output is actuated. All inputs are 12 volts AC and all outputs are 110 volts AC and 15 v DC to the heater relays. Refer to the electrical schematic for more detail.



## INSTALLATION PROCEDURE

For all Dri-Air models except ARID-X 10, AHM-1, & PDII

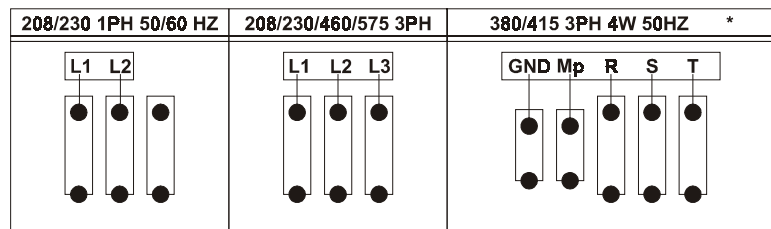
### Electrical Connection:

Open electrical access door on the front of the machine by turning the disconnect off and turning the lower clamping screw 1/2 turn counterclockwise. Locate the disconnect by following the operating handle down to the electrical panel.

Insert the incoming power cable or conduit through the hole provided on the side of the machine.

« **use approved wire and fastening means** «

Wire incoming power to the top of the disconnect as shown in the diagrams below.



**NOTE:**

**When 3 wire supplies are used in place of 4 wire supplies, a control transformer is required.**

**3 PHASE DRYER INSTALLATION**  
**CHECK FOR CORRECT MOTOR ROTATION**  
**BEFORE RUNNING DRYER**

To check motor rotation.....

Leave the electrical cabinet door open so the blower can be observed. Turn on the power to the dryer and press the **ON/START** touch pad and then immediately press the **OFF/STOP** touch pad. Observe the cooling fan on the top of the blower motor and verify the fan is turning clockwise. If the motor is not turning clockwise, switch any two adjacent supply wires.

### Compressed Air Connection:

Compressed air is only required for dryers which have the closed loop loader as part of the system. For those units:

CONNECT COMPRESSED AIR TO INLET ON FRAME UNDER DRYER. The closed loop system includes a regulator that is set to the proper pressure and an automatic drain water separator. Maximum incoming pressure not to exceed 145 psi (1.0 mpa).

The unit is now ready for operation.

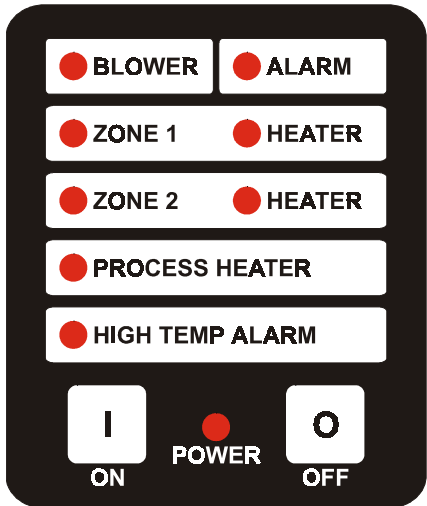
## START-UP PROCEDURE Standard Electrics

Operating this unit is very simple. Once the dryer is connected to the facility power supply, the unit can be started by turning the disconnect located on the electrical panel enclosure to the ON position and pressing the ON button on the Control Panel Key Pad. To shut the dryer off, simply push the OFF button on the Control Panel Key Pad and turn the disconnect to the OFF position.

Setting the process air temperature is done using the Digital Controller.

For a more detailed explanation, see the following sections.

### Control Panel - Operating Display

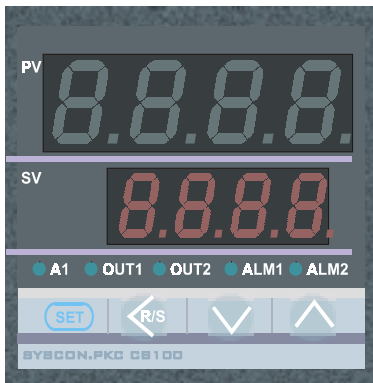


Turn power on at dryer using disconnect.

1. POWER light indicates power to the unit is on.
- Press ON button on key pad
2. Illuminated BLOWER Light indicates Blower is on.
  3. Flashing ZONE light indicates bed is in Regeneration cycle.
  4. Steady ZONE light means bed is in cooling cycle.
  5. Illuminated HEATER light indicates heater is on.

Alarm Conditions:

6. Flashing HIGH TEMP. ALARM indicates an over or under temp alarm. Unit shuts down.
7. Steady HIGH TEMP. ALARM light indicates thermocouple has failed. Further diagnostics are required.
8. Flashing ALARM light indicates a safety override condition has occurred. Dryer shuts down.



### Digital Controller - Setting Process Air Temperature:

Press SET button - temperature set display will flash.

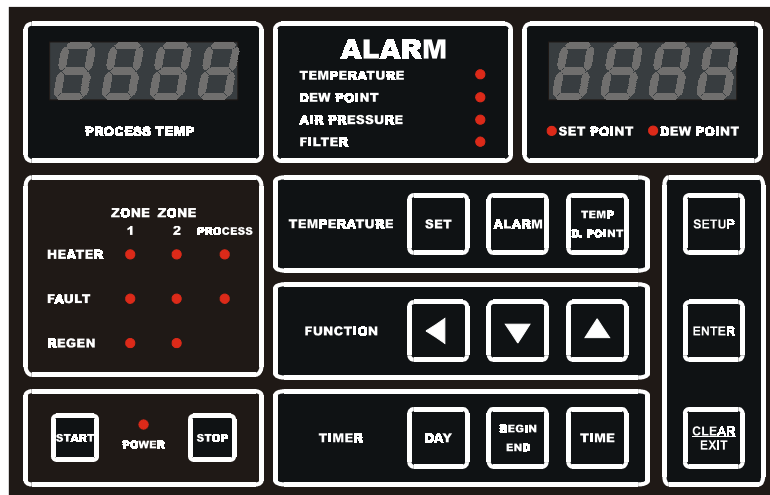
Press up arrow to increase temperature and down arrow to decrease temperature.

Press SET again to enter the new temperature.

If the display flashes, the temperature is out of the control range.

If the display shows 0000 the thermocouple is not connected or is faulty.

### Microprocessor Control



1. Power light indicates there is power on.
2. After initializing, dri Air will be displayed.
3. Press START to start the dryer.
4. To set the temperature:
  - press SET - right display shows set temp
  - change setting using arrow keys
  - press ENTER to input new setting
5. Left display indicates actual temperature
6. Right display shows dewpoint or set temp
  - press TEMP D.POINT button to change
7. To set high temp alarm: (degrees over setting)
  - press ALARM - right display shows setting
  - change setting using arrow keys
  - press ENTER to input new setting
8. Status block indicates heater on or fault
9. See manual for setting 7-day timer .
10. Configuration of the dryer parameters is done using the setup button. see manual.

For a more detailed explanation of the features and operation of our Microprocessor Controller, please consult the Microprocessor Operating manual enclosed with this unit.

## **CLOSED LOOP LOADING SYSTEM**

The closed loop loading system uses a separate vortex blower to provide the vacuum and “pressure assist” necessary to move the dried resin from the hopper take-off box to the receiver mounted on the feed throat of the molding machine.

At the start of the loading sequence, the lower proximity switch on the receiver senses there is no material. The blower starts, and the loader valve on the inlet line to the blower is opened. Because the receiver is sealed to the feed throat, a vacuum is created within the take off box, pulling material from the hopper.

The outlet of the blower ( pressure side) blows air into the take off box to help move the material to the receiver and close the air loop. When the upper proximity switch on the receiver senses material, the blower is stopped and the loader valve is closed to prevent anymore material from being conveyed and left in the hose to possibly be contaminated with moisture.

To operate the system, complete the installation steps detailed below and turn on the system by actuating the toggle switch labeled **LOADER** on the front of the electrical panel enclosure. If the Dual Closed Loop Loading option has been installed, please consult the [Dual Closed Loop Loader Operating Manual](#) enclosed with your dryer.

## **RECEIVER INSTALLATION**

Prior to installing the receiver, you must inspect the surface of the molding press feed throat that the receiver is being installed upon to ensure that it is clean and flush. Surface irregularities must be removed, or a gasket installed, so that there will be no vacuum leaks between the receiver and feed throat after installation.

### **IMPORTANT**

If the molding machine is equipped with a slide gate, swing arm, starve feeder, additive feeder, or feed throat vent, you must ensure these are sealed, as the system may not work properly. If it is impractical, or impossible to seal off the aforementioned equipment, Dri Air Industries has a Flap Valve, available for purchase, that will enable the loading system to function properly.

To install the receiver, simply drill holes in the bottom flange of the receiver to match the hole pattern on the molding press feed throat and affix the receiver with bolts sufficient to accommodate the operating stresses. A silicone gasket is provided with the receiver to ensure a tight seal between the receiver bottom and the feed throat. Connect the plug for the upper proximity switch into the line labeled H and connect the lower proximity switch plug into the line labeled L. Connect the material feed hose and vacuum hose as shown in drawing 82222 in the appendix to this manual.

## VACUUM CHECK

Prior to production operation of the loading system, we strongly recommend that you ensure the loading system is properly sealed. To test the seal, follow the steps detailed below.

*While the loader is running, close the hopper slide gate and remove the material wand and attached hose from the takeoff box. Check the vacuum level by placing your hand over the wand. Return the wand to the take-off box.*

*Remove the hose from the bottom port of the blowback filter canister. Place your hand over the filter canister port. Compare this vacuum level to the level observed at the material wand. The two vacuum levels should be the same.*

Any difference between the vacuum levels is caused from leaks in the loading system. Check for loose hoses, missing gasket on the cyclone, or other possible sources of leaks described below.

The most likely source is the seal between the feed throat and receiver, or the configuration of the feed throat and material feeder associated with the molding press. The presence of vacuum leaks at these locations may exhibit the following characteristics:

- Material in the receiver may be seen to bubble or move when loading, as a leak at the feed throat causes air to be drawn in at the bottom of the receiver rather than from the take off box.
- Poor transfer of material from the take-off box to the receiver.
- Large amounts of material or dust being pulled into the blowback filter cannister.

If any of these occurrences are observed, the steps to improve the vacuum seal detailed in the previous section on Receiver Installation will be required.

## PROXIMITY SENSOR ADJUSTMENT

The proximity sensors supplied with the receiver may require adjustment to operate properly. When positioning the sensors, ensure that they are placed as close as possible to the outer surface of the receiver as they operate by sensing the density of the material in the receiver. Vertically position the lower sensor to set the material level at which the load cycle will initiate and the upper sensor to set the material level at which the load cycle will stop. **CAUTION: Do not overfill the receiver as material may be drawn back into the blowback filter canister.**

To adjust the sensor's sensitivity, turn the adjustment screw on the back of the sensor. The adjustment screw turns a 20 turn potentiometer with a clutch to prevent over adjustment. If you are unsure as to the current setting of the sensor, turn the screw 20 turns **counterclockwise**. The LED should light with no material in front of the sensor. Turn the screw 4-6 turns **clockwise** and proceed as directed below.

With no material in front of the sensor, the LED on the back of the sensor should be lit. If not, turn the adjustment screw located on the end of the sensor **counterclockwise** until the LED turns on.

With material in front of the sensor, the LED on the back of the sensor should be off. If not, turn the adjustment screw **clockwise**, until it turns off.

## **MATERIAL FLOW ADJUSTMENT**

Material flow to the receiver should be continuous and smooth. Irregularities in flow rate and volume can be affected by the position of the material wand inserted into the take-off box or the density of the resin. To adjust the flow, take the steps detailed below.

Upon initial operation of the loading system, push the wand in until it stops. Then pull it out 1 to 2 inches and tighten the set screw on the take-off box material outlet. Operate the loading system and observe how the material flows into the receiver. If the flow rate is not as desired, the wand can be adjusted **out** to reduce the flow of material conveyed, or **in**, to increase the amount. Typically, loading times are 5-6 seconds for a 2" receiver and 15-20 seconds for the 4" receiver.

If the material flow is irregular, with "slugs" of resin being delivered to the receiver, the wand is most likely pushed too far into the take-off box. This "chokes" off the air flow required to convey the material, causing the irregular flow. To remedy this condition, pull the wand out slightly and the material will flow more evenly and quickly.

If little or no material is conveyed and there are no blockages in the take-off box or material hose the wand may be pulled too far out of the take-off box. Push the wand in until you get the desired flow rate.

**Material will not feed.****BASIC TROUBLE  
SHOOTING for  
CLOSED LOOP  
LOADING SYSTEM**

1. Ensure the proximity sensors are adjusted and working properly. Both sensors LED's should be lit when the receiver is empty. Check that the sensors are tightened on the bracket and the cable connectors are tight and correct.
2. Check system for leaks. Tighten hose clamps. Check seal at receiver/feed throat interface by comparing vacuum levels as directed in previous section on Receiver Installation.
3. Ensure the blower operates. Check the electrical system to see if the relay is working and that the blower overload is not tripped. Trip window will be orange/yellow if tripped. Check to see that the blower rotation is correct (clockwise).
4. Ensure that the compressed air is connected to the system and the pressure regulator is set to 60 psi. Does the air valve open when the system calls for material? The air line to the valve can be easily disconnected by pushing in on the plastic sleeve and removing the hose. The air line should be pressurized when the system is loading.
5. Ensure the drain valve at the bottom of the filter is closed properly.

**CLOSED LOOP LOADER  
MAINTENANCE****Daily Maintenance:****Clean filter when loader is not working.**

The filter is cleaned automatically with an air blast at the start of each loading cycle. The canister needs to be drained periodically by opening the valve at the bottom of the canister. Gently bang on the side of the canister with your hand to loosen any fines and close the valve.

**Monthly Maintenance:**

Clean filter sock by removing the quick clamp on the filter and removing the top cover. Remove the bag assembly and blow off with an air gun. Install bag assembly, top cover and quick clamp checking that the seal is proper. This maintenance may need to be performed more frequently if your material is dusty, or less frequent if your material is clean. We strongly recommend it be performed every 6 months regardless of material conditions

Tighten all hoses and hose clamps and check for leaks.



## **DRYER OPERATION TROUBLE SHOOTING**

The new Dri-Air Standard PLC and MICROPROCESSOR Electrics were designed for quick diagnosis of problems.

The following steps should be done before proceeding with other diagnostic steps.

### **1. Check the Power Circuit:**

- a. Incoming fuses or circuit breaker
- b. All dryer fuses:  
Each fuse, with the exception of the main fuses, has a blown fuse indicator light that illuminates when the fuse is blown.
- c. Is power supplied to the unit?
- d. Check heater continuity using a volt ohmmeter.

### **2. Compressed Air:**

#### **For those models that require compressed air.**

- a. Is compressed air connected with at least 60 PSI
- b. Check water separator and drain if necessary
- c. Pressure gage should read 60 PSI

### **3. Air Flow Circuit:**

- a. Ensure Zone Valve position corresponds to the regeneration cycle by comparing the Zone position lights on the Zone Valve to the ZONE position lights on the dryer panel.
- b. Make sure that all hoses are connected, not crushed, and free from obstructions.
- c. Inspect filter and make sure cover is tight and the filter is clean.

### **4. Control Circuit:**

- a. Using the PLC/MICRO Display Panel ZONE indicator lights as a guide for the dryer regeneration cycle, check that all inputs/outputs are proper for the part of the regeneration cycle that the machine is in.
- b. Monitor the PLC output lights to ensure the corresponding LED on the power board is illuminated and there is an output voltage to the heater.

### **5. Operating Conditions:**

- a. Check the process temperature. It should **not** be set below 140° F (60° C) because the unit will go into high temp alarm.

## **DRYER OPERATION DETAILED DIAGNOSIS (PLC Controlled Dryer)**

For MicroControlled dryers please see the  
Microprocessor Control Instruction Manual

### **Machine will not start: Power light is not on.**

1. Check circuit breakers (CB1) or incoming fuses inside control box to see if they are tripped or blown. Reset circuit breakers by turning them off and then on.
2. Check small fuses (FU1 & FU2) next to contactor. The LED will be lit if they are blown. Replace if necessary by opening the fuse holder and put new fuse into holder.
3. Check that incoming power to the unit is proper.
4. Check safety snap discs.

### **Alarm light is flashing: Unit will not run. Main contactor is not pulling in.**

1. Check the motor overload OL1 located in the panel. If it is tripped, the window will show as orange/yellow. Reset overload by pushing in the reset button.

### **Machine will not run: High Temp Alarm Light flashing.**

This indicates that the temperature has exceeded the high limit programmed into the temperature control or the set temperature can not be reached.

*Press stop and restart machine holding in the start button. Monitor the actual temperature to see if it exceeds the set point or can not reach the set point. If it can not reach set point, see section below.*

### **Machine will not run: High Temperature Alarm Light on, not flashing:**

1. This indicates an “open” thermocouple or the temperature in the desiccant tower exceeded 900° F.

### **Machine will not reach temperature:**

1. If the process heater light is not lit.
  - A. Check output from temperature controller and input to PLC.
  - B. Check the thermocouple. The tip should be in the middle of the hose.
2. If the process heater light is lit.
  - A. Check fuses on power board
  - B. Check solid state relays on power board.
  - C. Check that the air flow is not obstructed.
  - D. Check blower rotation
  - E. Check heater for continuity.

Check the limit first by pressing the SET button on the temperature control and holding until AL is displayed. The setting shown indicated the amount over set point that the alarm will be actuated. It is factory set to 50°F (30°C) and should not be set below 30°F (16°C) or it will actuate too soon.

**If the temp exceeds the set point check the following:**

1. Remove the hose from the top of the hopper to check air flow. There should be air flow out of the hopper with a suction on the hose. If there is little or no flow, check the inlet hose.
2. Inspect the filter to make sure that it is clean and not affecting the air flow.
3. Check the power boards to see if one of the solid state relays has failed on. Using an ammeter or voltmeter on the output to the heater, see if there is power when the LED is not lit which will indicate a failed relay.
4. Check the valve position.

## **DRI-AIR ROTARY ZONE VALVE**

The Dri-Air rotary valve is designed to provide very little flow restriction and no leakage. It incorporates high temperature, self adjusting seals for years of trouble free service. The electrical controls are built into the end of the valve and include position lights.

Trouble shooting is easy. If the lights indicating position do not match the zone displayed on the control panel, or there are no lights, the valve is not working properly. See if the cam is actuating a switch.

### **DO NOT PUT FINGERS INTO VALVE WITH POWER ON**

Check all electrical connections to make sure they are tight.

Contact factory with the serial number of the dryer for a replacement valve.

**APD 1-4 and , HPD-1-4**
**PARTS LISTS**

	<u>DESCRIPTION</u>	<u>APD</u>	<u>HPD</u>			
<b><u>GENERAL</u></b>	Dryer Filter Element	81055	81055			
	Zone Valve	83705	83705			
	Thermocouple (Process)	82174	82174			
	Desiccant 80082 (Lbs/Machine)	8 lbs.	14 lbs.			
	Tower Clamp	81017	81017			
	Tower Gasket	81028	81028			
	Regeneration Valve	NR	NR			
	Pressure Switch	NR	NR			
	Regulator	NR	NR			
	MAC Valve	NR	NR			
	Caster (Swivel)	81799	81799			
	Caster (Fixed)	81798	81798			
	<b><u>CLOSED LOOP LOADER</u></b>	Filter Element	82389	82389		
Blowback Valve		82695	82695			
Proximity Switch (K10203 Std. El.)		81180	81180			
Proximity Switch (K15208 Micro)		82298	82298			
Regulator		82995	82995			
Air Valve (SMC)		84220	84220			
Load Valve		84229	84229			
	<b><u>STD</u></b>	<b><u>MICRO</u></b>				
<b><u>ELECTRICAL</u></b>	Disconnect	82308	82308			
	Temperature Control (RKC CB-100)	84016	NR			
	Main Board	84100	82071			
	Display Board	83401	82072			
	Thermocouple Board	84049	NR			
	Transformer	83437	84131			
	Current Transformer	NR	82246			
	Main Contactor	82270	82270			
	Solid State Relay	82302	82302			
	IEC Contactor	80576	80576			
	IEC Contactor *	84860	84860			
	Power Board	83493	83493			
	Power Board (208 & 230 v Dryers)	84080	84080			
	Single Pole Relay	82496	82496			
	Double Pole Relay	80587	80587			
	Dual Solid State Board	NR	82870			
	Toggle Switch	80466	80466			
	Safety Thermal Switch (Tower)	80221	80221			
	Thermocouple (Tower)	82174	82174			
	TRI-Solid State Board	NR	83468			
Dewpoint Sensor	81908	81908				
Solid State Timer (Blowback)	83318	83318				
Solid State Timer (Cleanout)	83527	83527				
Solid State Timer (Auger Delay)	83442	83442				
	<b><u>208V</u></b>	<b><u>230V</u></b>	<b><u>400V</u></b>	<b><u>480V</u></b>	<b><u>575V</u></b>	
<b><u>HEATERS</u></b>	Regeneration (Cone Style)	83342	83373	83982	83374	84235
	HP Center (Flat Style)	82373	82373	83958	82505	84260
	Process	NR	NR	NR	NR	NR

**NOTE:**  
TO ORDER BLOWERS OR  
OVERLOAD REFER TO  
PART NUMBER ON ITEM.

**\***  
IEC CONTACTOR USED IN ALL  
FM, PD & HM DRYERS AND CLL  
POWER PACKS WITH SERIAL  
NUMBERS GREATER THAN  
D14650

**APD 5-9 and , HPD-5-9**

	<u>DESCRIPTION</u>	<u>APD</u>	<u>HPD</u>		
<b><u>GENERAL</u></b>	Dryer Filter Element	81331	81331		
	Zone Valve	83705	83705		
	Thermocouple (Process)	82174	82174		
	Desiccant 80082 (Lbs/Machine)	30 lbs.	50 lbs.		
	Tower Clamp	81172	81172		
	Tower Gasket	82795	82795		
	Regeneration Valve	NR	NR		
	Pressure Switch	NR	NR		
	Regulator	NR	NR		
	MAC Valve	NR	NR		
	Caster (Swivel)	81799	81799		
	Caster (Fixed)	81798	81798		
	<b><u>CLOSED LOOP LOADER</u></b>	Filter Element	82389	82389	
Blowback Valve		82695	82695		
Proximity Switch (K10203 Std. El.)		81180	81180		
Proximity Switch (K15208 Micro)		82298	82298		
Regulator		82995	82995		
Air Valve (SMC)		84220	84220		
		<b><u>STD</u></b>	<b><u>MICRO</u></b>		
<b><u>ELECTRICAL</u></b>	Disconnect	82308	82308		
	Temperature Control (RKC CB-100)	84016	NR		
	Main Board	84100	82071		
	Display Board	83401	82072		
	Thermocouple Board	84049	NR		
	Transformer	83437	84131		
	Current Transformer	NR	82246		
	Main Contactor	82270	82270		
	Solid State Relay	82302	82302		
	IEC Contactor	80576	80576		
	IEC Contactor *	84860	84860		
	Power Board	83493	83493		
	Power Board (208 & 230 v Dryers)	84080	84080		
	Single Pole Relay	82496	82496		
	Double Pole Relay	80587	80587		
	Dual Solid State Board	NR	82870		
	Toggle Switch	80466	80466		
	Safety Thermal Switch (Tower)	80221	80221		
	Safety Thermal Switch (Process)	80551	80551		
	Thermocouple (Tower)	82175	82175		
	Transformer .050	82245	82245		
TRI-Solid State Board	NR	83468			
Dewpoint Sensor	81908	81908			
Solid State Timer (Blowback)	83318	83318			
Solid State Timer (Cleanout)	83527	83527			
Solid State Timer (Auger Delay)	83442	83442			
		<b><u>230V</u></b>	<b><u>400V</u></b>	<b><u>480V</u></b>	<b><u>575V</u></b>
<b><u>HEATERS</u></b>	Regeneration (Cone Style)	81351	81766	81366	81432
	HP Center (Flat Style)	82364	83934	82493	83372
	Process	82343	84204	82319	84065

**NOTE:**

TO ORDER BLOWERS OR  
OVERLOAD REFER TO  
PART NUMBER ON ITEM.

\*.

IEC CONTACTOR USED IN ALL  
FM, PD & HM DRYERS AND CLL  
POWER PACKS WITH SERIAL  
NUMBERS GREATER THAN  
D14650





