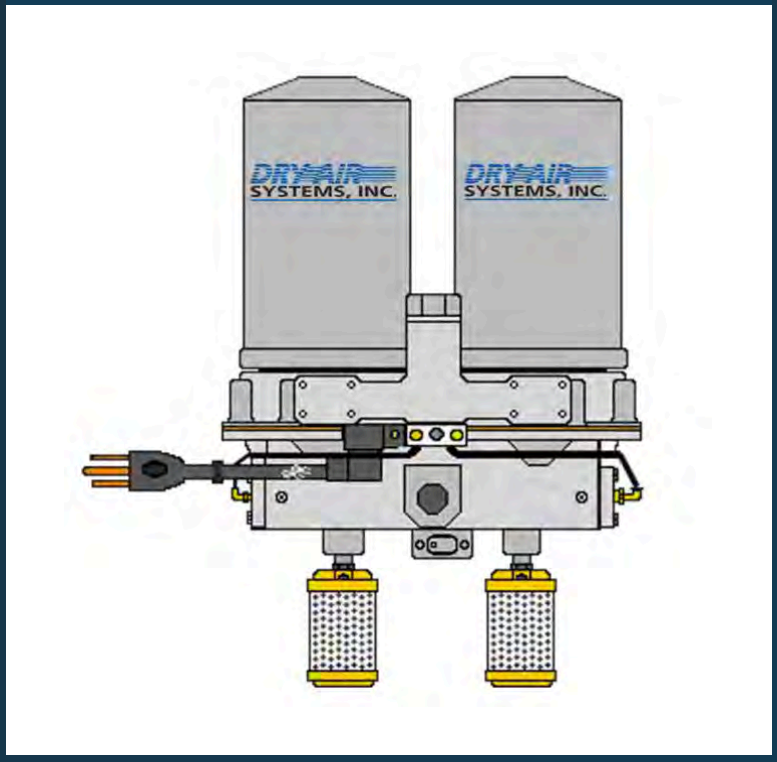
WWW.DRY-AIR-SYSTEMS.COM

# Air-Pak Air Dryer Owner's Manual




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# SAFETY MESSAGES IN MANUAL AND IN WARNING LABELS

Safety messages appearing in the manual and on warning labels utilize signal words that translate to a level of risk. Below are the definitions of the words used:

| | |
|---|---|
| **WARNING:** | Indicates a hazardous situation that, if not avoided, could result in death or serious injury. |
| **CAUTION:** | Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. |
| **REMINDER:** | Indicates a risk of property damage and includes suggestions for proper use. |

Warning labels are attached to the air dryer. They look something like those below. Be sure that these labels are visible and in place. If they become damaged or illegible, contact Dry Air Systems for replacement labels







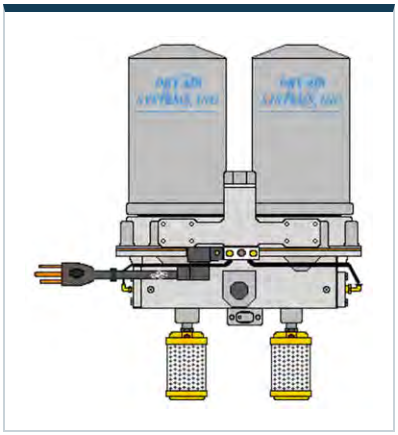
**WARNING**

Read, understand and follow safety precautions and instructions in this manual and in the labels attached to the dryer system. Failure to do so could result in serious injury, death and property damage.

# *AIR-PAK* Dryer Systems

## Protect compressed air lines from oil, water and particulate.

The easy to maintain AIR-PAK is a compact heatless desiccant air dryer which delivers high quality compressed air capable of achieving superior pressure dew points -40°F or lower. Use the AIR-PAK when precision work requires high quality air.

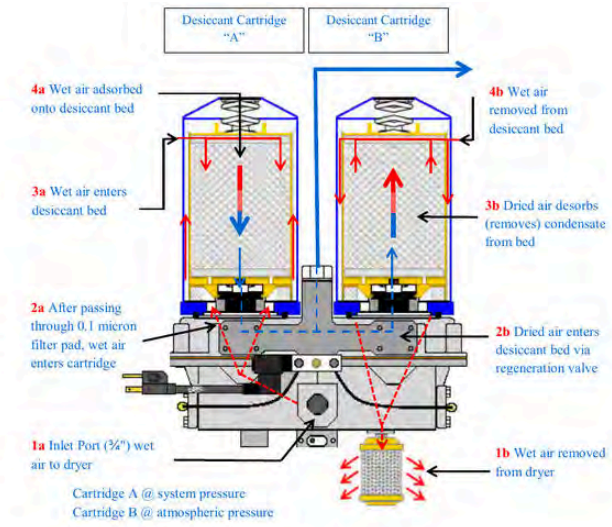


## Reduce energy and operating costs with the *AIR-PAK*.

Contaminated compressed air lines decreases productivity, elevates operating costs, and increases maintenance requirements.

### BENEFITS INCLUDE:

- Extends service life of pneumatic driven devices
- Designed for Waterborne paint that requires clean, dry air that is paramount to the successful application of a waterborne system
- Reduces prep time in spray application
- Requires less electrical usage than alternatives
- Avoid expensive downtime to repair or replace equipment
- Eliminates rework due to compressed air contaminants
- Modular design allows for quick, easy and flexible expansion



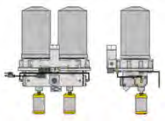

### LISTED ARE TYPES OF OPERATIONS FOR AIR-PAK

- Paint/foam spraying
- Sand/shot blasting
- Air tools
- Vehicle wash stations
- Packing equipment
- Lab measurement equipment
- Drilling equipment
- Railcar braking systems & Loci's
- Mining car dump stations
- Dust collection systems
- Baghouse equipment
- Bottling equipment
- Plasma cutting
- Drag line shovels
- Batch mixing
- Rail maintenance equipment

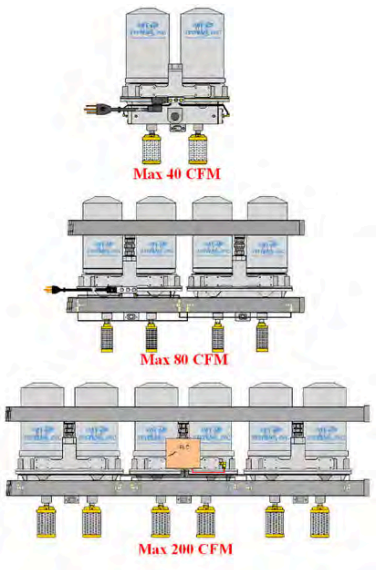
**Simple and easy to service:** Maintenance personnel can easily spin off the desiccant cartridges and replace service components in a matter of minutes.

**Designed for outdoors** - complies with NEMA 4 Standard - when equipped with thermostatically controlled heater package keeps dryer performing during winter months.

# SPECIFICATIONS

| MICRO LOGIC TIMERS | PROGRAMMABLE LOGIC CONTROLLER | PNEUMATICALLY CONTROLLED |
|---|---|---|
| | **ELECTRICAL REQUIREMENTS** | Class 1 div 2 |
| **(MLT)** | **(PLC)** | **(PC)** |
| 110 volt .072 ampere NEMA 4 | 110 volt .090 ampere NEMA 4 | Meets NEMA 7 Requirements |
| 24 volt 3.33 ampere NEMA 4 | - | - |
| 12 volt 6.88 ampere NEMA 4 | | |
| | **OPTIONAL HEATERS** | |
| 110 volt, 75 watts, .68 ampere each | 110 volt, 75 watts, (.68 ampere) each | NA |
| 24 Volt, 75 watts, 3.12 ampere each | 24 Volt, 75 watts, (3.12 ampere) each | |
| 12 Volt, 75 watts, 6.25 ampere each | 12 Volt, 75 watts, (6.25 ampere) each | |
| | **INLET/OUTLET PORTS** | |
| ¾" NPT <40 cfm | 1 ½" NPT | ¾" NPT <80 cfm |
| 1 ½ NPT manifolds> 60 cfm | | 1 ½ NPT manifolds> 60 cfm |
| | **OPERATING PRESSURES (ALL DRYER SYSTEMS)** | |
| 90 - 190 PSI | 90 -190 PSI | 90 - 190 PSI |
| | **WEIGHT W/ 4 LB. DESICCANT CARTRIDGES** | |
| < 40 CFM 50 lbs | <120 cfm - 100 lbs | <40 CFM 50 lbs |
| <80 CFM 100 lbs | <200 cfm - 150 lbs | <80 CFM 100 lbs |
| | <240 cfm - 200 lbs | <120 CFM 100 lbs |
| | <400 cfm - 300 lbs | <200 cfm - 150 lbs |
| | <600 cfm - 450 lbs | <240 cfm - 200 lbs |
| | <800 cfm - 500 lbs | <400 cfm - 300 lbs |
| | | <600 cfm - 450 lbs |
| | | <800 cfm - 500 lbs |
| | **DIMENSIONS** | |
| 2 desiccant w/ 4 pound cartridges | H = 21.00" W = 10.75" L= 13.62" |  |
| 4 desiccant w/ 4 pound cartridges | H = 21.00" W = 10.75" L= 30.40" | |
| 6 desiccant w/ 4 pound cartridges | H = 21.00" W = 10.75" L= 51.00" | |
| 8 desiccant w/ 4 pound cartridges | H = 44.00" W = 10.75" L= 51.00" - 2 rows | |
| 12 desiccant w/ 4 pound cartridges | H = 44.00" W = 10.75" L= 51.00" - 2 rows | |
| 18 desiccant w/ 4 pound cartridges | H = 66.00" W = 10.75" L= 51.00" - 3 rows | |
| 24 desiccant w/ 4 pound cartridges | H = 112.00" W = 10.75" L= 51.00" - 4 rows | |
| | **WEIGHT W/ 8 LB. DESICCANT CARTRIDGES** | |
| < 40 CFM 65 lbs | <60 cfm - 70 lbs. | <60 cfm - 70 lbs. |
| <80 CFM 140 lbs | <180 cfm - 140 lbs. | <180 cfm - 140 lbs. |
| | <300 cfm - 210 lbs. | <300 cfm - 210 lbs. |
| | <420 cfm - 280 lbs. | <420 cfm - 280 lbs. |
| | <480 cfm - 350 lbs | <480 cfm - 350 lbs |
| | <600 cfm - 420 lbs | <600 cfm - 420 lbs |
| | <960 cfm - 675 lbs | <960 cfm - 675 lbs |
| | **DIMENSIONS** | |
| 2 desiccant w/ 8 pound cartridges | H = 32.00" W = 10.75" L= 13.62" |  |
| 4 desiccant w/ 8 pound cartridges | H = 32.00" W = 10.75" L= 30.40" | |
| 6 desiccant w/ 8 pound cartridges | H = 32.00" W = 10.75" L= 51.00" 1 rows | |
| 12 desiccant w/ 8 pound cartridges | H = 65.00" W = 10.75" L= 51.00" 2 rows | |
| 18 desiccant w/ 8 pound cartridges | H = 102.00" W = 10.75" L= 51.00" 3 rows | |
| 24 desiccant w/ 8 pound cartridges | H = 134.00" W = 10.75" L= 51.00" 4 rows | |
| | **DESICCANT CARTRIDGES** | |
|  | 4 pounds molecular sieve per cartridge |  |
| | 8 pounds molecular sieve per cartridge | |
| | **MODULAR (EXPANDABLE)** | |
| Yes | Yes | Yes |

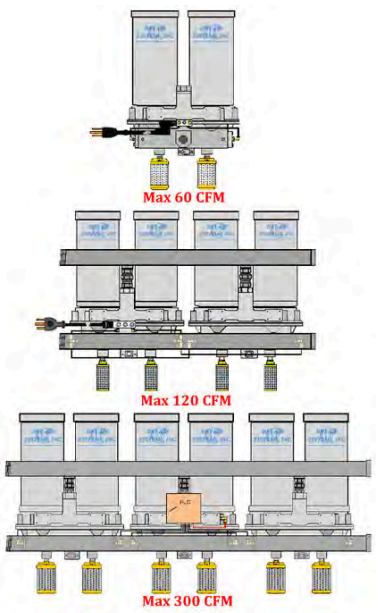
# APPLICATIONS




## Air-Pak Dryer w/ 4 LB. Cartridges

| COMPRESSOR HP | MAX CFM | 110 VAC STANDARD | NUMBER OF CARTRIDGES | PART NUMBER |
|---|---|---|---|---|
| 5 | 20 | MLT | 2 | **JP2A** |
| 7.5 | 27 | MLT | 2 | **JP2A** |
| 10 | 40 | MLT | 2 | **JP2B** |
| 15 | 60 | MLT | 4 | **JP3B** |
| 20 | 80 | MLT | 4 | **JP3B** |
| 30 | 120 | PLC | 4 | **JP4C** |
| 50 | 200 | PLC | 6 | **JP6C** |
| 60 | 240 | PLC | 8 | **JP8C** |
| 75 | 300 | PLC | 10 | **JP10C** |
| 100 | 400 | PLC | 12 | **JP12C** |
| 150 | 600 | PLC | 18 | **JP18C** |
| | 800 | PLC | 24 | **JP24C** |

MLT = Micro Logic Timer
PLC = Programed Logic Control
Filtration: JP Series dryers .3 micron,
Custom Air-Pak Systems Available
Heaters - Optional 75Watt 120 VAC, 12, or 24 VDC
Divide number of cartridges by 2 e.g., JPC-6 requires 3 heaters
All dryers assembled, tested and include manifolds and mounting




## Air-Pak Dryer w/ 8 LB. Cartridges

| COMPRESSOR HP | MAX CFM | 110 VAC STANDARD | NUMBER OF CARTRIDGES | PART NUMBER |
|---|---|---|---|---|
| 10 | 40 | MLT | 2 | **JP2B-L** |
| 15 | 60 | MLT | 2 | **JP2B-L** |
| 20 | 120 | MLT | 4 | **JP3C-L** |
| 30 | 180 | PLC | 4 | **JP4C-L** |
| 50 | 300 | PLC | 6 | **JP6C-L** |
| 75 | 420 | PLC | 8 | **JP8C-L** |
| 100 | 480 | PLC | 10 | **JP10C-L** |
| 125 | 600 | PLC | 12 | **JP12C-L** |
| 150 | 960 | PLC | 18 | **JP18C-L** |
| | 1320 | PLC | 24 | **JP24C-L** |

MLT - Micro Logic Timer
PLC - Programed Logic Control
Filtration: - JP Series dryers .3 micron
Custom Air-Pak Systems Available
Heaters - Optional 75Watt 120 VAC, 12, or 24 VDC
Divide number of cartridges by 2 e.g., JPC-6 requires 3 heaters
All dryers assembled, tested and include manifolds and mounting

- Read entire instruction manual before installation or servicing of AIR-PAK
- Never connect or disconnect a pipe/line containing air pressure or remove a component, fitting or pipe plug unless you are certain all air pressure has been shut off and relieved
- Always wear proper eye protection and never look directly into ports of dryer
- Never exceed recommended working air pressure of 190 psi/13.1 bar
- A by-pass system recommended making servicing of dryer units easier and safer
- Use only proper tools and observe all precautions pertaining to the use of those tools

**WARNING**

**Read, understand and follow safety precautions and instructions in this manual and in the labels attached to the dryer system. Failure to do so could result in serious injury, death and property damage.**

## GENERAL MOUNTING INSTRUCTIONS:

- Allow 2″ min above cartridges for cartridge removal
- Air line routing and connections may be modified to accommodate space and application, e.g., inlet left - outlet right, inlet/outlet right side.
- All air line connections require thread sealant
- Aluminum threads require an anti-seize compound (included within dryer service kits)
- Optional thermostatically - controlled heaters available for MLT and PLC dryer systems
- AIR-PAK dryer systems must be mounted with the exhaust ports positioned downward and desiccant cartridges in upright position
- Manifold design may be either square or round

# BASIC OPERATION AND INSTALLATION MOUNTING INSTRUCTIONS

### Micro Logic Timer

(MLT) manages regeneration cycles by energizing and de-energizing the air control valve at two-minute intervals. However, when the air dryer is initially powered on, the MLT begins a startup sequence of four ten-second cycle intervals, and when completed, MLT begins cycling every two minutes.



An LED on the MLT will be "on" during energized (charge) cycle and "off" during de-energized (regeneration) cycle. When LED is on, the left desiccant cartridge receives wet air and the right desiccant cartridge regenerates. After two minutes MLT (dryer) switches, LED is off as left canister now begins regeneration process and right desiccant cartridge receives wet air. A light flow of air from the desiccant cartridge through dryer's exhaust port is normal during regeneration cycle. There should be no venting of air from desiccant cartridge when receiving wet air.

When dryer cycles, there will be a momentary burst of air from one exhaust port (muffler). This is normal and will occur each time dryer cycles. Four cartridge MLT systems will have two cartridges regenerating one from each dryer unit, e.g., cartridges 1, 3 charge cycle, cartridges 2, 4 regeneration cycle

1. AIR-PAK dryer systems must be mounted with the exhaust ports positioned downward and desiccant cartridges in upright position
2. Power source: 120 Volt AC (grounded) surge protected (recommended) electric receptacle required for MLT and PLC dryer systems
3. Mount down stream of air compressor reservoir
4. Mount dryer with sufficient space around unit(s) to facilitate service and to provide visual access for periodic inspection allowing at least a 2" clearance above desiccant cartridges for removal
5. Installing a series of lines and shut-off valves in conjunction with installation of dryer systems provides a by-pass system providing the ability to maintain operation of air system, when servicing unit

## 40 Max CFM (JP2A, JP2B) 60 Max CFM (JP2B-L) Dryer Systems w/ MLT

#### MOUNTING

1. Determine proper location for dryer as described in "General Mounting Instructions"
2. Mount base assembly at chosen location making certain a minimum 2" clearance above desiccant cartridges for future service. Mark mounting hole locations and attach dryer to mounting location with a minimum of two (2) 3/8" bolts, lock washers and nuts
3. Use thread sealant on air line fittings to prevent air leaks

a. Connect air line coming from compressor reservoir to dryer inlet port

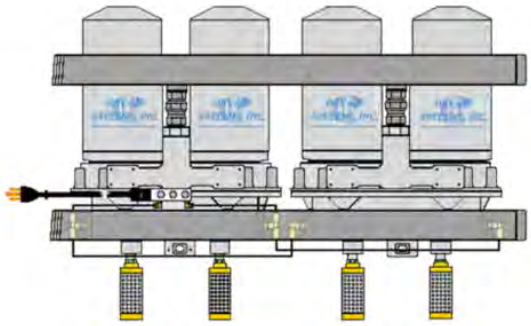
b. Connect dryer outlet port to air system

4. Apply an anti-seize, if equipped, onto muffler threads and install muffler into each exhaust port of dryer
5. Plug-in MLT power cord to 110 -120 Volt AC surge protected grounded receptacle

> **REMINDER:** 12 & 24 VDC MLT's are polarity sensitive and will not operate if power (+) and neutral (-) leads are switched

6. Ensure that all air line fittings are properly connected
7. **CAUTION:** Slowly pressurize system
8. Check air line fittings for leaks and repair as necessary
9. Observe dryer operation for proper function as described in BASIC OPERATION AND INSTALLATION MOUNTING INSTRUCTIONS pg. 9-11

## 80 Max CFM (JP3B) 100 Max CFM (JP3C-L) Dryer Systems w/ MLT

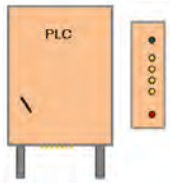


### MOUNTING

1. Determine proper location for dryer as described in “General Mounting Instructions” pg. 8
2. Install wall strut with slots against the wall and on top
3. Mount dryer base assemblies into wall strut slots
4. Assemble inlet and outlet manifolds to base assemblies making sure to apply an anti-seize (included with dryer) to threads of each retainer bolt. Inlet and outlet ports may be installed on right or left side of dryer to accommodate hose routing
5. Connect air lines to inlet and outlet ports of manifolds using appropriate thread sealant on air line fittings to prevent leaks
6. Install black ¼" air line so it connects front left port of dryer control unit to left front port of dryer auxiliary unit
7. Install ¼” air line so it connects right rear port of dryer control unit to right rear port of dryer auxiliary unit.
8. Apply anti-seize onto muffler threads and install muffler into each exhaust port of dryer
9. **CAUTION:** Slowly pressurize system
10. Check air line fittings for leaks and repair as necessary
11. Observe dryer operation for proper function as described in AIR-PAK OPERATION/CYCLE section

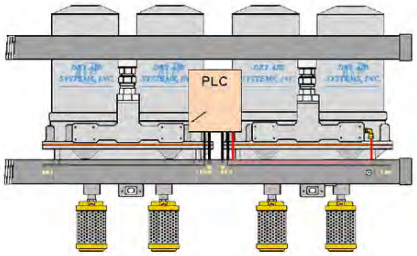
## Programmable Logic Control (PLC) 120 thru 800

Programmable Logic Control (PLC) manages regeneration cycles by energizing and de-energizing air control valves within PLC at 45-second intervals. When PLC is initially powered on, it begins a startup sequence cycling each dryer one time at five-second intervals then continues to cycle dryers at 45-second cycle intervals.




During operation, a light flow of air from ONE exhaust port (muffler) is normal as this represents regeneration cycle of desiccant. The air flow will switch from one exhaust port (muffler) to the next one approximately 45 seconds in conjunction with PLC cycles. Example: 120 cfm – 1 cartridge regenerates every 45 seconds as three cartridges continue to receive wet air. Multiple row dryer systems will regenerate one cartridge from each row e.g., cartridge 1 row 1 - cartridge 1 row 2, etc.

Dryer cycles produce a momentary burst of air from one exhaust port (muffler). This is normal and will occur each time dryer cycles.




### MOUNTING

1. Determine proper location for AIR-PAK as described in “General Mounting Instructions pg. 7”
2. Install wall strut with small slots next to wall and on top
3. Mount dryer base assemblies into wall strut(s)

a. 120 cfm (1 row with 2 dryer units - 4 cartridges 1 PLC)
b. 200 cfm (1 row with 3 dryer units - 6 cartridges 1 PLC)
c. 240 cfm (2 rows with 4 dryer units - 8 cartridges 1 PLC)
d. 400 cfm (2 rows with 6 dryer units - 12 cartridges, 1 PLC
e. 600 cfm (3 rows with 9 dryer units - 18 cartridges, 1 PLC
f. 800 cfm (4 rows with 12 dryer units - 24 cartridges, 1 PLC

**REMINDER:** Top rows of 240 – 800 cfm dryer systems have “T” fittings on side of dryer
*Bottom row of dryers have 90º fittings on sides of dryers*

4. Assemble inlet and outlet manifolds to base assemblies making sure to apply an anti-seize (included with dryer) to threads of each retainer bolt. **REMINDER:** Inlet and outlet ports may be installed on right or left side of dryer to accommodate hose routing
5. Connect high-pressure air lines to inlet and outlet ports of manifolds applying appropriate thread sealant on air line fittings to prevent leaks
6. PLC signal line connections:

a. 120 & 200 systems - connect first ¼” air line to 90º fitting located on primary unit die cast aluminum manifold to PLC fitting identified "Pilot" (see “System Illustrations” pg. 43)

**b.** Connect four (4) ¼" (120 cfm system) or six (6) ¼" (200 cfm system) air lines from signal ports of PLC to fitting located on sides of dryers

**c.** 240 – 800 cfm systems - connect first ¼" air line to 90° fitting located on a primary units' die cast aluminum manifold to PLC fitting identified "Pilot" (see "AIR DRYER SYSTEMS")

**d.** Connect ¼" air lines from signal ports of PLC to "T" fitting on each side of dryers located on top row(s) of dryer system (see "System Illustrations" pg. 43)

**e.** Connect ¼" air line from top row "T" fittings to dryers located directly below

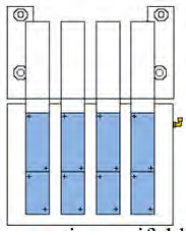
**f.** Connect ¼" air line to 90°fittings located on bottom row of dryers

**7.** **CAUTION:** Slowly pressurize system

**8.** Check air line fittings for leaks and repair as necessary

**9.** Observe dryer operation for proper function as described above in "Programmable Logic Control"

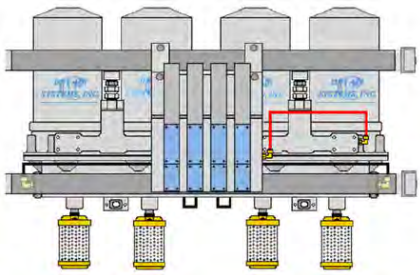
## Pneumatically Controlled (PC) 40 thru 200 CFM AIR-PAK Dryer Systems



Pneumatic Control (PC) manages regeneration cycles by metering a measured air flow through pneumatic manifold at approximately 60 second intervals– no electrical requirements. Example: 120 cfm – 1 cartridge regenerates every 60 seconds as three cartridges continue to receive wet air.

During operation, a light flow of air from ONE exhaust port (muffler) is normal as this represents regeneration cycle of desiccant. The air flow will switch from one exhaust port (muffler) to the next one approximately 60 seconds in conjunction with pneumatic manifold cycles.

Dryer cycles produce a momentary burst of air from one exhaust port (muffler). This is normal and will occur each time dryer cycles.



### MOUNTING

**1.** Determine proper location for dryer system as described in "General Mounting Instructions" pg. 7

**2.** Install wall strut with small slots next to wall and on top.

**3.** Mount dryer base assemblies as follows:

**a.** 40 CFM (2 cartridges) units direct to wall or at point of use

**b.** 80 cfm (primary and auxiliary unit – 4 cartridges

**c.** 120 cfm 2 auxiliary units (4 cartridges)

**d.** 200 cfm 3 auxiliary units (6 cartridges)

**4.** Assemble inlet and outlet manifolds to base assemblies making sure to apply an anti-seize (included with dryer) to threads of each retainer bolt.

**REMINDER:** Inlet and outlet ports may be installed on right or left side of dryer to accommodate hose routing

5. Connect high-pressure air lines (190 psi/13.1 bar max) to inlet and outlet ports of manifolds

**REMINDER:** Use appropriate thread sealant on air line fittings to prevent leaks

6. 80 CFM:

a. Install black ¼" air line to connect front right side port of dryers' primary unit to right front port of dryer's auxiliary unit

b. Install black ¼" air line from left side of primary unit to left side of auxiliary unit

7. 120 /200 CFM units:

a. Connect one ¼" air line from primary unit with a 90° fitting located on a dryer's die cast aluminum manifold to pilot port of PC control

b. Install ¼" air lines one to each remaining connectors located at back of PC

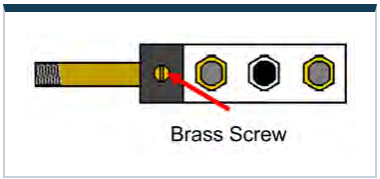
8. **CAUTION:** Slowly pressurize system

9. Check air line fittings for leaks and repair as necessary

10. Observe dryer operation for proper function as described above in "Pneumatic Control"

# ANNUAL INSPECTIONS

## MLT (Micro Logic Timer) Dryers




Operational Check:

1. Check electrical power to MLT
2. Check all air connections for leaks or damaged signal lines
3. Unit should exhaust (discharge) every *two minutes*
4. Refer to flow diagram detailed in FLOW DIAGRAM
5. If dryer fails to cycle, unplug timer, and manually cycle dryer several times turning small brass screw from 12 o'clock position to 2 o'clock position (approximately ¼ turn) located on spool valve. If dryer cycles manually, return brass screw back to original vertical position and reference "Troubleshooting AIR-PAK Air Dryer Systems".

## PLC (Programmable Logic Control) Dryers




Operational Check:

1. Check electrical power to PLC (Green light on switch)
2. Check all air connections for air leaks or damaged signal lines
3. Unit should exhaust (discharge) every *45 seconds*
4. Refer to flow diagram detailed in FLOW DIAGRAM
5. If dryer fails to cycle refer to TROUBLE SHOOTING AIR-PAK AIR DRYER SYSTEMS

## PC (Pneumatic Control) Dryers



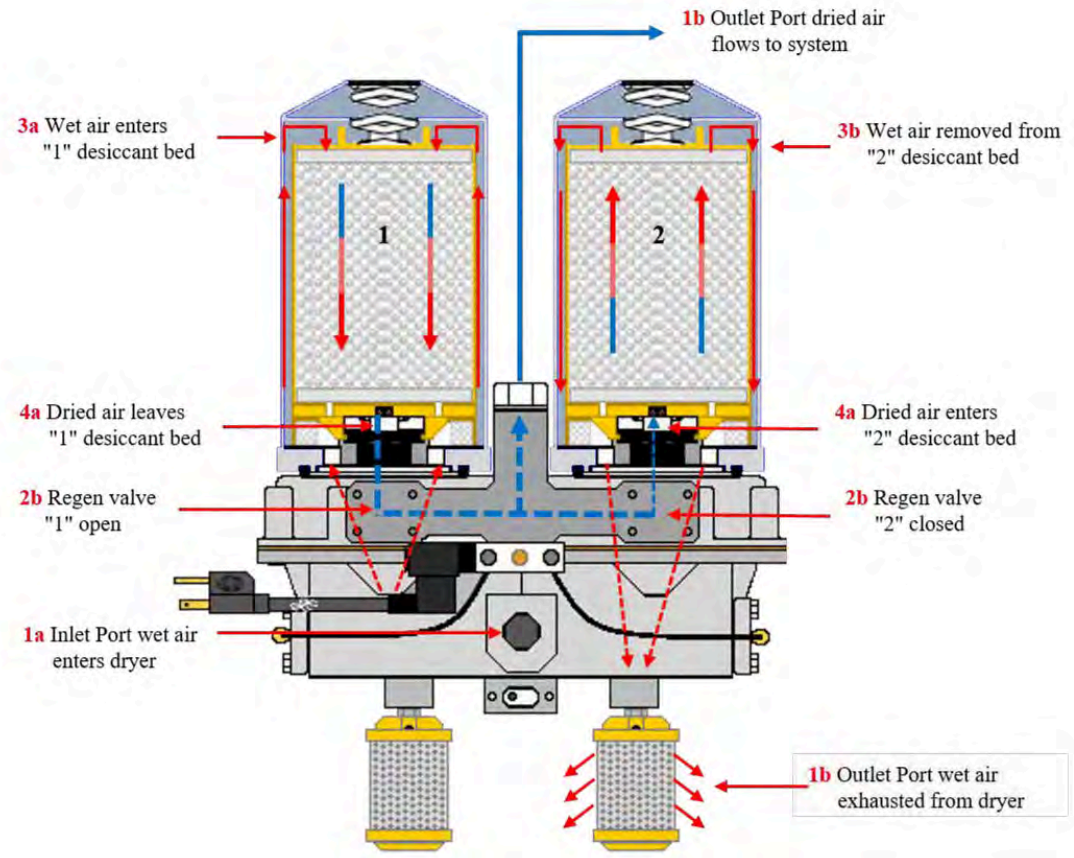
Operational Check:

1. Check pneumatic connections for leaks, broken pilot signal lines, etc.
2. Unit should exhaust (discharge) *approximately every 60 seconds*
3. Refer to flow diagram detailed in FLOW DIAGRAM
4. If dryer fails to cycle, refer to TROUBLESHOOTING AIR-PAK AIR DRYER SYSTEMS

# FLOW DIAGRAMS

## Twin Tower w/MLT

The descriptions detailed in this twin tower schematic represent the sequencing of airflow as it relates to the actual drying process and transition - wet to dry - within all dryer systems including both Programmable Logic (PLC) and Pneumatically Controlled (PC) systems



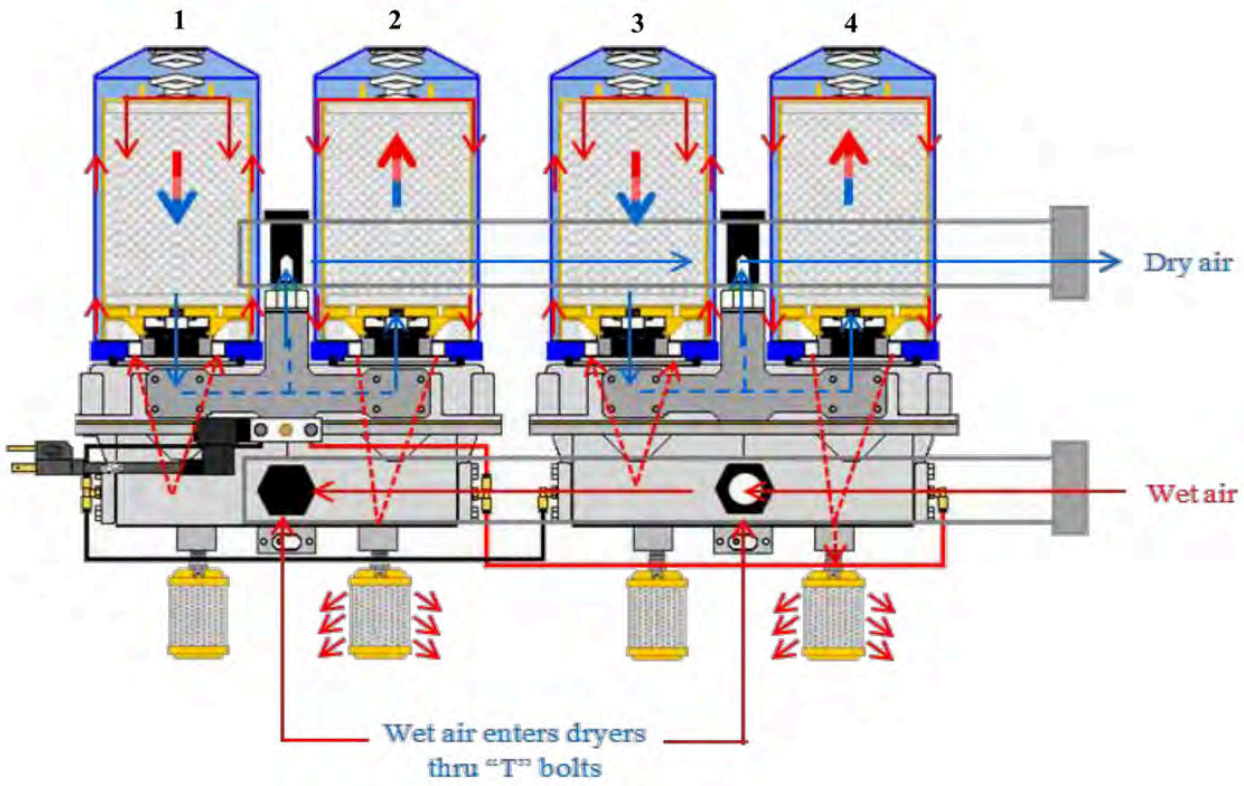

| WET AIR | TRANSITION AIR | DRY AIR | INTERNAL FLOWS |
|---|---|---|---|

**TOTAL CYCLE SEQUENCE 240 SEC.**

Cartridge 1 receives wet air for 120 sec. while cartridge 2 regenerates for 120 for sec. - MLT switches
Cartridge 2 receives wet air for 120 sec. while cartridge 1 regenerates for 120 for sec. - MLT switches

## 80 CFM w/MLT

The descriptions detailed on page “Twin Tower w/MLT” schematic represents the sequencing of air flow as it relates to the actual *drying process and transition* - wet to dry - within all dryer systems including Programmable Logic (PLC) and Pneumatically Controlled (PC) systems




| WET AIR | TRANSITION AIR | DRY AIR | INTERNAL FLOWS |
|---|---|---|---|

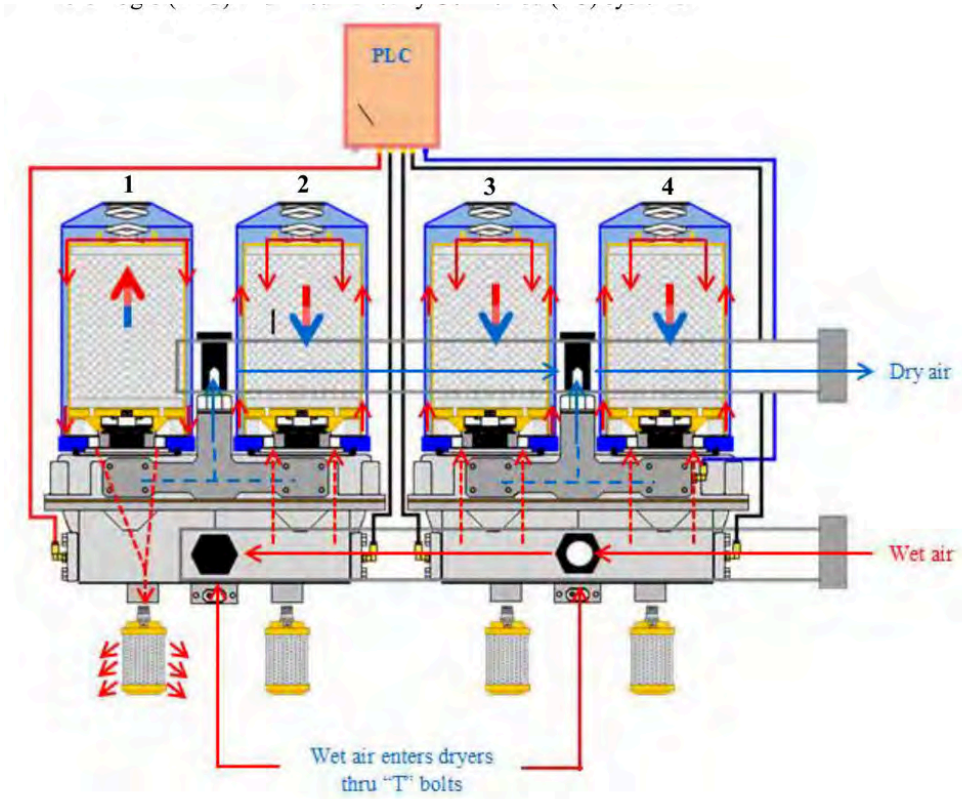
**TOTAL CYCLE SEQUENCE 120 SEC.**

Cartridge 1, 3 receives wet air for 120 sec. Cartridge 2, 4 regenerate for 120 for sec. MLT switches
Cartridge 2, 4 receives wet air for 120 sec. Cartridge 1, 3 regenerate for 120 for sec. MLT switches

# 120 CFM w/PLC and PC systems

**REMINDER:** PC controller not illustrated however, distributes pilot signals in same sequence as a PLC controller.

The descriptions detailed on page “Twin Tower w/MLT” schematic represents the sequencing of air flow as it relates to the actual *drying process and transition* - wet to dry - within all dryer systems including Programmable Logic (PLC) and Pneumatically Controlled (PC) systems.




| WET AIR | TRANSITION AIR | DRY AIR | INTERNAL FLOWS |
|---|---|---|---|

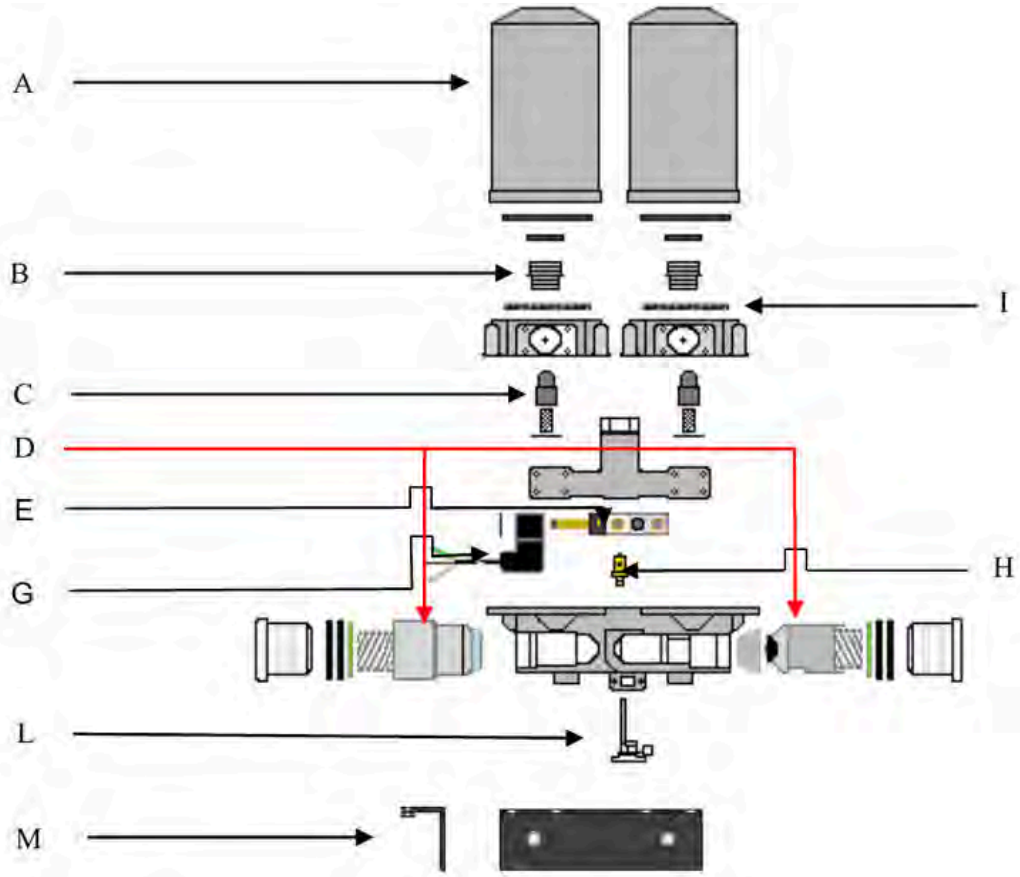
**PLC TOTAL CYCLE SEQUENCE 180 SEC.**
Cartridge 1 regenerates for 45 sec. Cartridge 2, 3, 4 receives wet air. PLC switches
Cartridge 2 regenerates for 45 sec. Cartridge 1, 3, 4 receives wet air. PLC switches

**PC TOTAL CYCLE SEQUENCE 240 SEC.**
Cartridge 1 regenerates for 60 sec. Cartridge 2, 3, 4 receives wet air. PC switches
Cartridge 2 regenerates for 60 sec. Cartridge 1, 3, 4 receives wet air. PC switches

# SERVICE COMPONENTS w/ 4LB. cartridges

## Service Schematic AIR-PAK Dryer w/ MLT

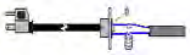
(Represents one dryer within MLT dryer system)



# Micro Logic Timer (MLT) Applications (5 – 200 CFM Dryer Systems)

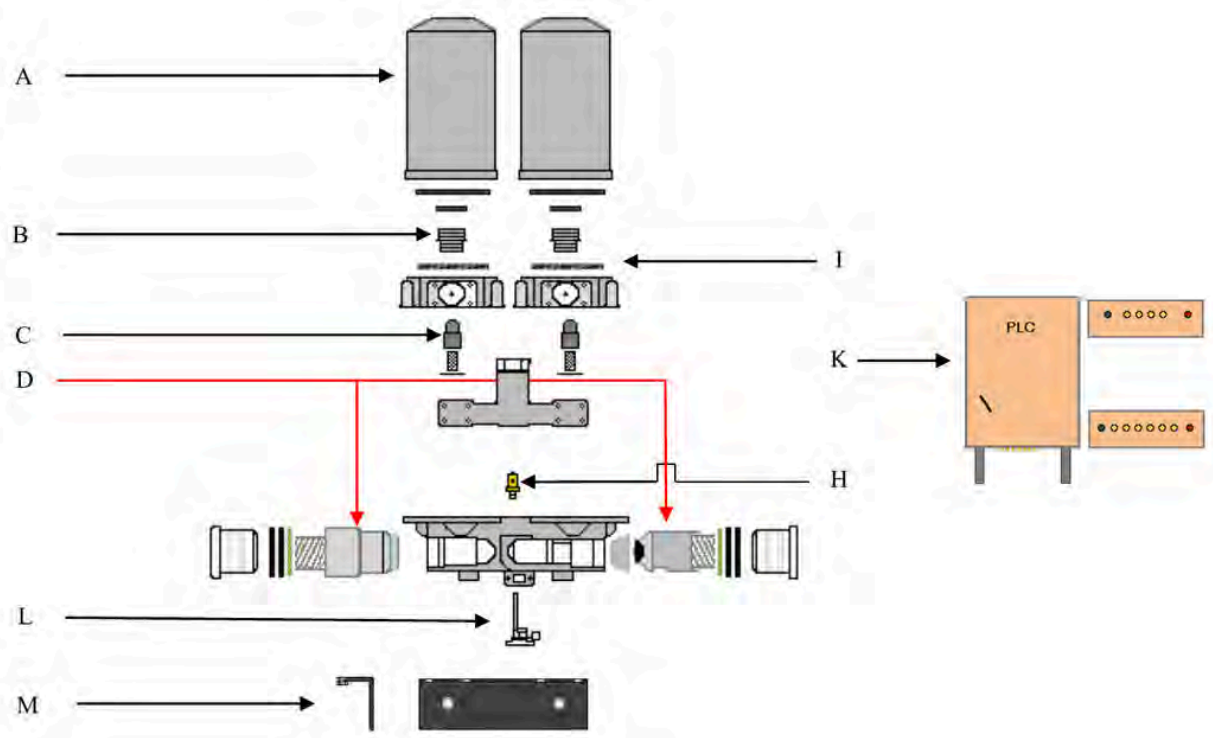
1. Identify dryer system by counting numbers of desiccant cartridges, e.g., 2, 4, 6
2. Locate service component identity, e.g., A, B, C, etc.
3. Under "QTY", order appropriate number of kits specific to cartridge totals



| ILLUSTRATION | PART NUMBER | ILLUSTRATION REF | Air-Pak w/4lb. Desiccant Cartridges 2 QTY | 4 QTY | 6 QTY | CONTENTS OF SERVICE KIT |
|---|---|---|---|---|---|---|
|  | 619832 | A | 1 | 2 | 3 | Grey Cartridges -Full Service Kit |
| | 619700 | A | 1 | 2 | 3 | Blue Cartridges -Full Service Kit |
| | 619950 | A | 1 | 2 | 3 | White Cartridges -Full Service Kit **Includes 2 each desiccant cartridges, inlet & purge valves** |
| | 619830 | A | 1 | 2 | 3 | Grey Desiccant Cartridge Kit |
| | 619704 | A | 1 | 2 | 3 | Blue Desiccant Cartridge Kit |
| | 619951 | A | 1 | 2 | 3 | White Desiccant Cartridge **Includes 2 desiccant cartridges** |
|  | 619702 | D | 1 | 2 | 3 | Valve Service **Includes 2 inlet check valves, 2 purge valves** |
|  | 619708 | C | 1 | ~ | ~ | .014 Regeneration valve kit |
| | 619715 | C | ~ | 2 | ~ | .030 Regeneration valve kit |
| | 619730 | C | ~ | ~ | 3 | .060 Regeneration valve kit |
|  | 619755 | E | 1 | 1 | 1 | Air Control Valve - Two air lines |
|  | 619790 | G | 1 | 2 | 3 | 110 Volt Micro Logic Timer (MLT) |
| | 619912 | G | 1 | 2 | 3 | 12 VDC Micro Logic Timer (MLT) |
| | 619924 | G | 1 | 2 | 3 | 24 VDC Micro Logic Timer (MLT) |
|  | 619740 | H | 1 | 2 | 3 | Pressure Relief Valve |
|  | 619750 | L | 1 | 2 | 3 | 110 VAC Heater Kit (optional) |
| | 619782 | L | 1 | | | 12 VDC Heater Kit (optional) |
| | 619784 | L | 1 | | | 24 VDC Heater Kit (optional) |
|  | 619860 | I | 1 | 2 | 3 | .3 Micron Disc Filter |
|  | 619760 | B | 2 | 4 | 6 | Cartridge Stud for Grey Cartridges |
| | 619765 | B | 2 | 4 | 6 | Cartridge Studs for Blue, White, Purple Cartridges |
|  | 619770 | | 1 | 2 | 3 | Small Mufflers (optional) |
| | 619915 | | 1 | 2 | 3 | Large Mufflers (optional) |
| *Not Shown* | 619942 | | 1 | ~ | ~ | Wall Strut w/slot for two cartridge dryer system |
|  | 619990 | M | 1 | 2 | 3 | Wall Mount Bracket |

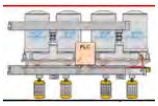
## Service Schematic AIR-PAK Dryer w/ PLC

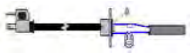
(Represents one dryer within PLC dryer system)



# Programmable Logic Control (PLC) Applications (120, 240 400, 600, 800 CFM Dryer Systems)

1. Identify dryer system by counting numbers of desiccant cartridges, e.g., 2, 4, 6
2. Locate service component identity, e.g., A, B, C, etc.
3. Under "Qty", order appropriate number of kits specific to cartridge total

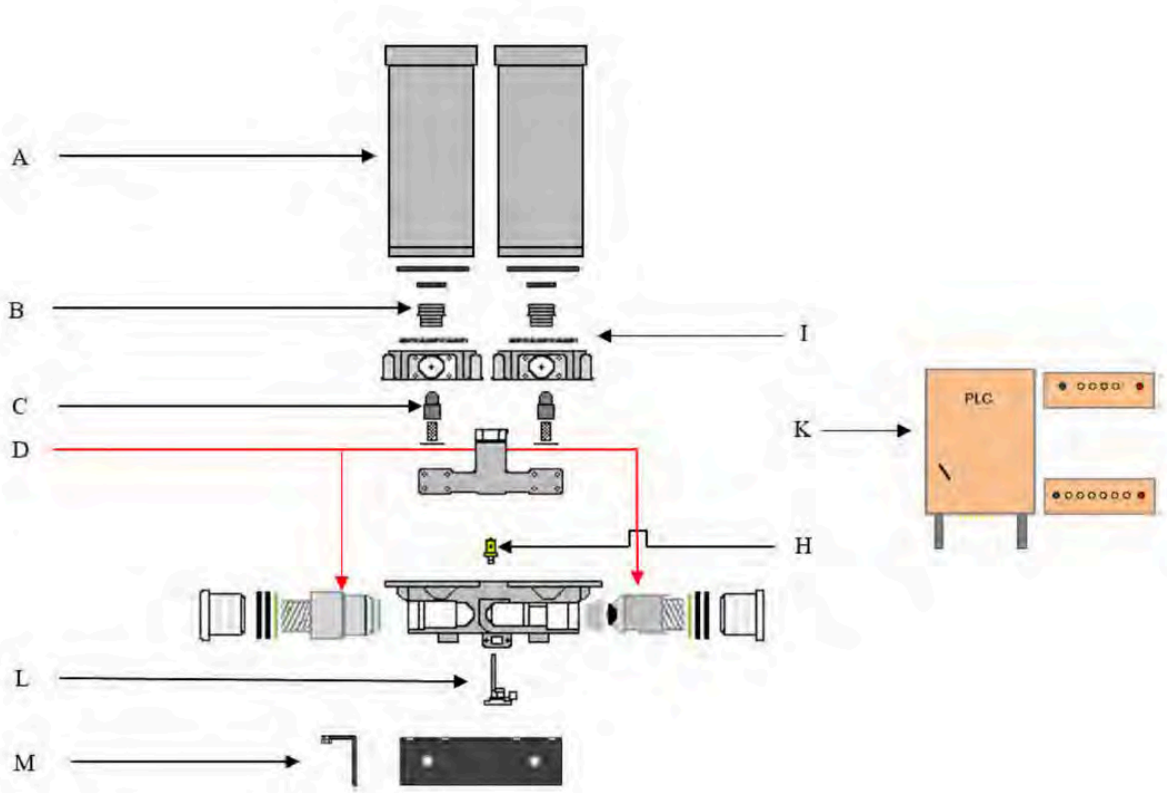


| ILLUSTRATION | PART NUMBER | ILLUSTRATION REF | Air-Pak w/4lb. Desiccant Cartridges 4 QTY | 6 QTY | 8 QTY | 10 QTY | 12 QTY | 18 QTY | 24 QTY | CONTENTS OF SERVICE KIT |
|---|---|---|---|---|---|---|---|---|---|---|
|  | 619832 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Grey Cartridges -Full Service Kit |
| | 619700 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Blue Cartridges -Full Service Kit |
| | 619950 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | White Cartridges -Full Service Kit **Includes 2 each desiccant cartridges, inlet & purge valves** |
| | 619830 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Grey Desiccant Cartridge Kit |
| | 619704 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Blue Desiccant Cartridge Kit |
| | 619951 | A | 2 | 3 | 4 | 5 | 6 | 9 | 12 | White Desiccant Cartridge **Includes 2 desiccant cartridges** |
|  | 619702 | D | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Valve Service **Includes 2 inlet check valves, 2 purge valves** |
|  | 619715 | C | 2 | ~ | ~ | ~ | ~ | ~ | ~ | .030 Regeneration valve kit |
| | 619730 | C | ~ | 3 | 4 | 5 | 6 | 9 | 12 | .060 Regeneration valve kit |
|  | 619812 | F | ~ | 1 | ~ | | ~ | ~ | ~ | 110 Volt Programed Logic Control |
| | 619820 | F | ~ | ~ | 1 | | 1 | 1 | 1 | 110 Volt Programed Logic Control |
|  | 619740 | H | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Pressure Relief Valve |
|  | 619750 | L | 2 | 3 | 4 | 5 | 6 | 9 | 12 | 110 VAC Heater Kit (optional) |
| | 619782 | L | 2 | 3 | 4 | 5 | 6 | 9 | 12 | 12 VDC Volt Heater Kit (optional) |
| | 619784 | L | 2 | 3 | 4 | 5 | 6 | 9 | 12 | 24 VDC Volt Heater Kit (optional) |
|  | 619860 | I | 1 | 3 | 4 | 5 | 6 | 9 | 12 | .3 Micron Disc Filter |
|  | 619760 | B | 2 | 6 | 8 | 10 | 12 | 18 | 24 | Cartridge Stud for Grey Cartridges |
| | 619765 | B | 2 | 6 | 8 | 10 | 12 | 18 | 24 | Cartridge Studs for Blue, White, Purple Cartridges |
|  | 619770 | | 2 | 4 | 6 | 8 | 12 | 18 | 24 | Small Mufflers (optional) |
| | 619915 | | 2 | 4 | 6 | 8 | 12 | 18 | 24 | Large Mufflers (optional) |
| *Not Shown* | 619942 | | 1 | 1 | 1 | 2 | 2 | 3 | 4 | Wall Strut w/slot for two cartridge dryer system |
|  | 619990 | M | 2 | 3 | 4 | 5 | 6 | 9 | 12 | Wall Mount Bracket |

# SERVICE COMPONENTS w/ 8LB. Desiccant Cartridges

## Service Schematic AIR-PAK Dryer w/ PLC

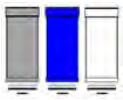
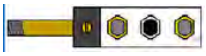
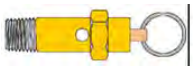
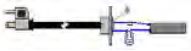
(Represents one dryer within PLC dryer system)



# Micro Logic Timer (MLT) & Programmed Logic Controller (PLC) Dryer Systems

1. Identify dryer system by counting numbers of desiccant cartridges, e.g., 2, 4, 6
2. Locate service component identity, e.g., A, B, C, etc.
3. Under "QTY", order appropriate number of kits specific to cartridge totals

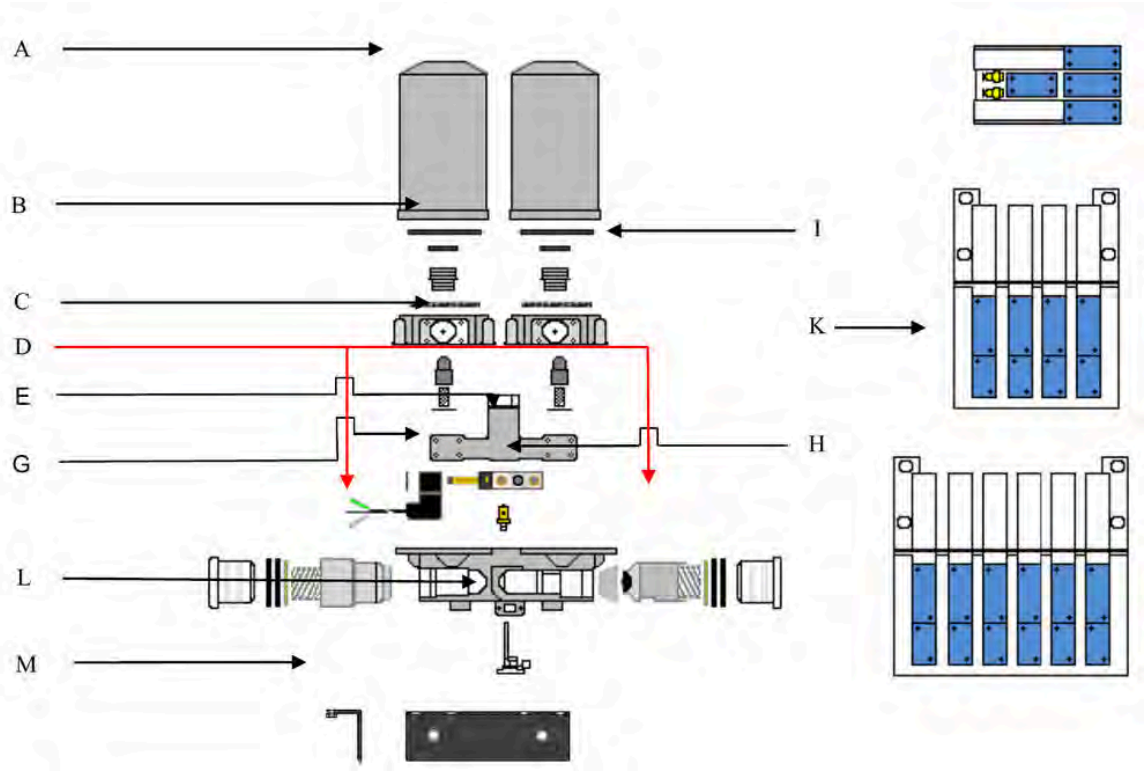



| ILLUSTRATION | PART NUMBER | ILLUSTRATION REF | Air-Pak HC w/8lb. Desiccant Cartridges 2 OR 4 QTY | 6 QTY | 10 QTY | 12 QTY | 18 QTY | 24 QTY | CONTENTS OF SERVICE KIT |
|---|---|---|---|---|---|---|---|---|---|
|  | 650830 | A | 2 | 3 | 5 | 6 | 9 | 12 | Grey Cartridges -Full Service Kit |
| | 650700 | | 2 | 3 | 5 | 6 | 9 | 12 | Blue Cartridges -Full Service Kit |
| | 650951 | | 2 | 3 | 5 | 6 | 9 | 12 | White Cartridges -Full Service Kit **Includes 2 each desiccant cartridges, inlet & purge valves** |
| | 4055A002 | A | 2 | 3 | 5 | 6 | 9 | 12 | Grey Desiccant Cartridge Kit |
| | 4055A020 | | 2 | 3 | 5 | 6 | 9 | 12 | Blue Desiccant Cartridge Kit |
| | 4055A012 | | 2 | 3 | 5 | 6 | 9 | 12 | White Desiccant Cartridge **Includes 2 desiccant cartridges** |
|  | 619702 | D | 2 | 3 | 5 | 6 | 9 | 12 | Valve Service Kit **Kits includes 2 inlet check valves, 2 purge valves** |
|  | 619730 | C | 1 | 3 | 5 | 6 | 9 | 12 | .060 Regeneration valve kit |
|  | 619755 | E | 1 | ~ | ~ | ~ | ~ | ~ | Air Control Valve - Two air lines |
|  | 619790 | G | 1 | ~ | ~ | ~ | ~ | ~ | 110 Volt Micro Logic Timer (MLT) |
| | 619924 | | | | | | | | 12 VDC Micro Logic Timer (MLT) |
| | 619912 | | | | | | | | 24 VDC Micro Logic Timer (MLT) |
|  | 619812 | K | 1 | ~ | ~ | ~ | ~ | ~ | 110 Volt Programed Logic Control |
| | 6198xx | | ~ | ~ | 1 | ~ | ~ | ~ | 110 Volt Programed Logic Control |
| | 619820 | | ~ | 1 | ~ | 1 | 1 | 1 | 110 Volt Programed Logic Control |
|  | 619740 | H | 2 | 3 | 5 | 6 | 9 | 12 | Pressure Relief Valve |
|  | 619750 | L | 2 | 3 | 5 | 6 | 9 | 12 | 110 VAC Heater Kit (optional) |
| | 619782 | | 2 | 3 | 5 | 6 | 9 | 12 | 12 VDC Volt Heater Kit (optional) |
| | 619784 | | 2 | 3 | 5 | 6 | 9 | 12 | 24 VDC Volt Heater Kit (optional) |
|  | 619760 | I | 1 | 3 | 5 | 6 | 9 | 12 | Disc Filter |
|  | 619760 | B | 4 | 6 | 10 | 12 | 18 | 24 | Cartridge Stud for Grey Cartridges |
| | 619765 | | 4 | 6 | 10 | 12 | 18 | 24 | Cartridge Studs for Blue, White, Purple Cartridges |
|  | 619770 | | 4 | 6 | 10 | 12 | 18 | 24 | Small Mufflers (optional) |
| | 619915 | | 4 | 6 | 10 | 12 | 18 | 24 | Large Mufflers (optional) |
| *Not Shown* | 619942 | | 1 | ~ | ~ | ~ | ~ | ~ | Wall Strut w/slot for two cartridge dryer system |
|  | 619990 | M | 2 | 3 | 5 | 6 | 9 | 12 | Wall Mount Bracket |

# SERVICE COMPONENTS Pneumatically Controlled

## Service Schematic AIR-PAK Dryer Pneumatically Controlled

(Represents one dryer within PLC dryer system)



# Micro Logic Timer (MLT) & Programmed Logic Controller (PLC) Dryer Systems

1. Identify dryer system by counting numbers of desiccant cartridges, e.g., 2, 4, 6
2. Locate service component identity, e.g., A, B, C, etc.
3. Under "QTY", order appropriate number of kits specific to cartridge totals

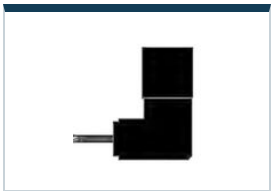


| ILLUSTRATION | PART NUMBER | ILLUSTRATION REF | Air-Pak Explosion Proof 2 QTY | 4 QTY | 6 QTY | 8 QTY | 12 QTY | CONTENTS OF SERVICE KIT |
|---|---|---|---|---|---|---|---|---|
|  | 619832 | A | 1 | 2 | 3 | 4 | 6 | Grey Cartridges -Full Service Kit |
| | 619700 | | 1 | 2 | 3 | 4 | 6 | Blue Cartridges -Full Service Kit |
| | 619950 | | 1 | 2 | 3 | 4 | 6 | White Cartridges -Full Service Kit<br>**Includes 2 each desiccant cartridges, inlet & purge valves** |
| | 619830 | A | 1 | 2 | 3 | 4 | 6 | Grey Desiccant Cartridge Kit |
| | 619704 | | 1 | 2 | 3 | 4 | 6 | Blue Desiccant Cartridge Kit |
| | 619951 | | 1 | 2 | 3 | 4 | 6 | White Desiccant Cartridge<br>**Includes 2 desiccant cartridges** |
|  | 650830 | A | 1 | 2 | 3 | 4 | 6 | Grey Cartridges -Full Service Kit |
| | 650700 | | 1 | 2 | 3 | 4 | 6 | Blue Cartridges -Full Service Kit |
| | 650951 | | 1 | 2 | 3 | 4 | 6 | White Cartridges -Full Service Kit<br>**Kits includes 2 each desiccant cartridges, inlet check valves, purge valves** |
| | 4055A002 | A | 1 | 2 | 3 | 4 | 6 | Grey Desiccant Cartridge Kit - includes 2 cartridges |
| | 4055A020 | | 1 | 2 | 3 | 4 | 6 | Blue Desiccant Cartridge Kit - includes 2 cartridges |
| | 4055A012 | | 1 | 2 | 3 | 4 | 6 | White Desiccant Cartridge Kit - includes 2 cartridges<br>**Kits includes 2 each desiccant cartridges, inlet check valves, purge valves** |
|  | 619702 | D | 2 | 3 | 5 | 6 | 9 | Valve Service Kit<br>**Includes 2 inlet check valves, 2 purge valves** |
|  | 619708 | C | 1 | ~ | ~ | ~ | ~ | .014 Regeneration valve kit |
| | 619715 | | 1 | 2 | ~ | ~ | ~ | .030 Regeneration valve kit |
| | 619730 | | ~ | ~ | 3 | 4 | 6 | .060 Regeneration valve kit |
|  **HIGH CAPACITY DRYERS ONLY** | 619730 | C | 1 | 2 | 3 | 4 | 6 | .060 Regeneration valve kit |
|  | 619995 | K | 1 | 1 | ~ | ~ | ~ | Two (2) Stack Pneumatic Controller |
|  | 619997 | K | ~ | 1 | ~ | 1 | ~ | Four (4) Stack Pneumatic Controller - includes mounting hardware |
| | 619989 | K | ~ | ~ | 1 | ~ | 1 | Six (6) Stack Pneumatic Controller - includes mounting hardware |
|  | AP619986 | | 2 | 4 | 6 | 8 | 12 | Pneumatic timer valve with air chamber |
|  | AP619988 | | 2 | 24 | 6 | 4 | 6 | 5/2 Valve for pneumatic timer |
|  | AP619981 | | 1 | ~ | ~ | ~ | ~ | Acrylic Manifold for pneumatic controller |
| | AP619983 | | ~ | 1 | ~ | 1 | ~ | |
| | AP619984 | | ~ | ~ | 1 | ~ | 1 | |
|  | 619740 | H | 2 | 3 | 5 | 6 | 9 | Pressure Relief Valve |
|  | 619760 | I | 1 | 3 | 5 | 6 | 9 | Disc Filter |
|  | 619760 | B | 4 | 6 | 10 | 12 | 18 | Cartridge Stud for Grey Cartridges |
| | 619765 | | 4 | 6 | 10 | 12 | 18 | Cartridge Studs for Blue, White, Purple Cartridges |
|  | 619770 | | 4 | 6 | 10 | 12 | 18 | Small Mufflers (optional) |
| | 619915 | | 4 | 6 | 10 | 12 | 18 | Large Mufflers (optional) |
| *Not Shown* | 619942 | | 1 | ~ | ~ | ~ | ~ | Wall Strut w/slot for two cartridge dryer system |
|  | 619990 | M | 2 | 3 | 5 | 6 | 9 | Wall Mount Bracket |

# TROUBLESHOOTING AIR-PAK AIR DRYER SYSTEMS

## MLT, PLC and Pneumatically Controlled Operation/Cycle & Problem Scenarios

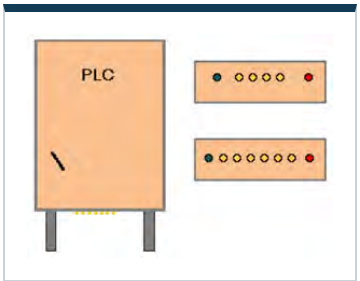
**Micro Logic Timer** (MLT) manages regeneration cycles by energizing and de-energizing the air control valve at two-minute intervals. However, when the air dryer is initially powered on, the MLT begins a startup sequence of four ten-second cycle intervals, and when completed, MLT begins cycling every two minutes.



An LED on the MLT will be "on" during energized (charge) cycle and "off" during de-energized (regeneration) cycle. When LED is on, the left desiccant cartridge receives wet air and the right desiccant cartridge regenerates. After two minutes MLT (dryer) switches, LED is off as left canister now begins regeneration process and right desiccant cartridge receives wet air. A light flow of air from the desiccant cartridge through dryer's exhaust port is normal during regeneration cycle. There should be no venting of air from desiccant cartridge when receiving wet air.

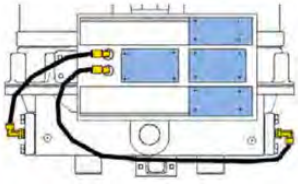
When a dryer cycles, there will be a momentary burst of air from one exhaust port (muffler). This is normal and will occur each time dryer cycles. Four cartridge MLT systems will have two cartridges regenerating one from each dryer unit, e.g., cartridges 1, 3 charge cycle, cartridges 2, 4 regeneration cycle

**Programmable Control Box** (PLC) controls regeneration cycles by energizing and de-energizing air control valves at 45-second intervals.




A flow rate of approximately 3.5 cfm (99.1 lpm) air from ONE exhaust port (muffler) per dryer row occurs as normal regeneration air flow for desiccant bed drying. This air flow will alter in 45 second intervals from one exhaust port(s) to other in conjunction with PLC cycles. With dryer cycles (switching from one cartridge to other), a momentary burst of air expels from one exhaust port as remaining cartridges continue to receives wet contaminated air. This short burst of air is normal occurring each time dryer cycles.

**Pneumatically Controlled** (PC) dryer systems regenerate by energizing and de-energizing air control valves at approximately one (1)-min intervals.



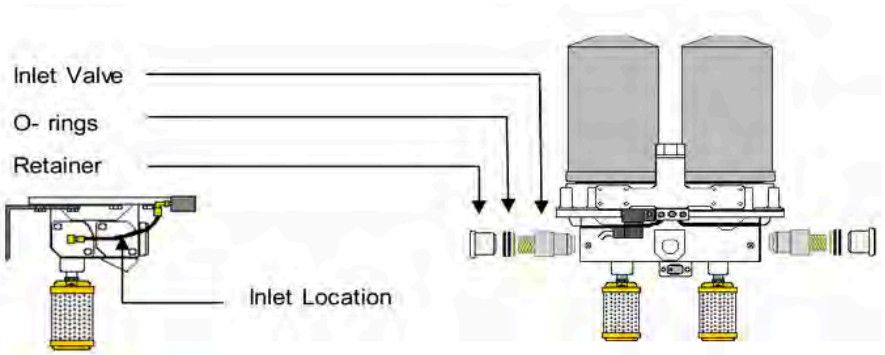
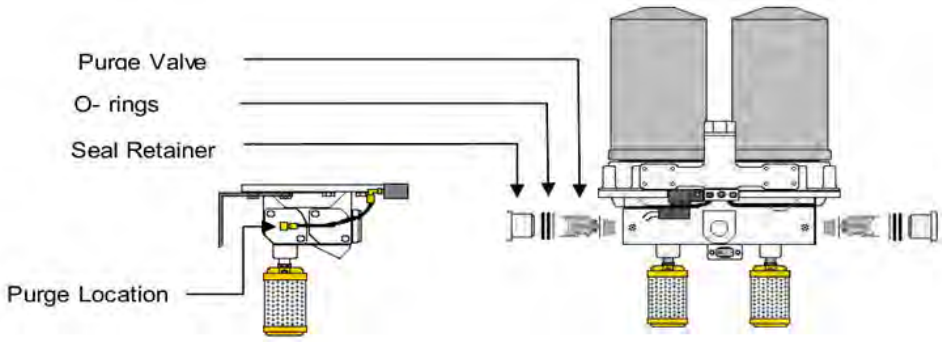
Pneumatic Controller (PC) #619985 Shown

A continuous flow rate of approximately 3.5 cfm (99.1 lpm) air from ONE exhaust port (muffler) per dryer row occurs as normal regeneration air flow for desiccant bed drying. This air flow will alter in 60-second intervals from one exhaust port(s) to other in conjunction with Pneumatic cycles. When dryer cycles (switching from one cartridge to other) a short burst of air expels from one exhaust port as remaining cartridges continue to receive wet contaminated air. This short burst of air is normal occurring each time dryer cycles.

# Troubleshooting AIR-PAK Dryer Systems

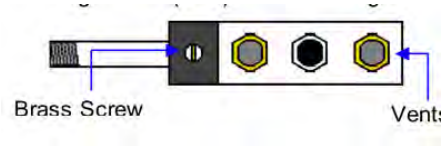



**NOTE: Light air flow of 1.6 cfm from either exhaust port (muffler) is normal as this represents the regeneration cycle**

| POSSIBLE CAUSE | REMEDY | KIT ID'S |
|---|---|---|
| Worn inlet check valves (O-rings) | Clean cavities and replace valve assemblies included in service kit | **B** |
|  | | |
| Worn purge valve or dirt/foreign material stuck in purge valve | Clean cavities and replace purge valve assemblies included within service kit | **B** |
|  | | |
| Regeneration valve not closing | Clean cavities and replace regeneration valve assemblies within service kit | **C** |
|  | | |

# Troubleshooting AIR-PAK Dryer Systems cont'd

## Dryer will not cycle (switch) every two minutes (Micro Logic Timer (MLT models only)

| POSSIBLE CAUSE | REMEDY | KIT ID'S |
|---|---|---|
| Micro logic timer (MLT) malfunctioning   | Test: Unplug timer, manually cycle dryer by turning brass screw in valve assembly to 2 o'clock (1/4 turn right) and back to 12 o'clock position | |
| | Ensure MLT is connected to power source | |
| | Replace MLT timer part service kit | F |
| Air control valve malfunction, i.e., leaking | Replace air control valve | E |
| Air tubing connecting air control valve and valve housing and/or manifold damaged or missing | Replace ¼ air line tubing | |
| Air Control air vents clogged (plugged) | Clean air control vents | |

## Inadequate air flow (volume) after SFD air dryer (all models)

| POSSIBLE CAUSE | REMEDY | KIT ID'S |
|---|---|---|
| Desiccant cartridges require service w .1 micron filter | Replace desiccant cartridges - service kit | A |
| Air flow restriction | Contact Dry Air Systems @ 314 344-1114 | |

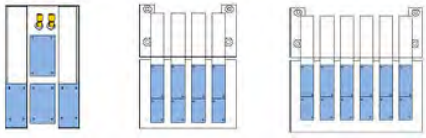
## Water in air system (all models)

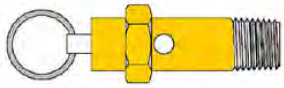
| POSSIBLE CAUSE | REMEDY | KIT ID'S |
|---|---|---|
| Desiccant cartridge contaminated | Replace desiccant cartridges - service kit | A |
| Micro Logic Timer (MLT) malfunctioning | Replace MLT | F |
| Air control valve malfunctioning | Replace air control valve assembly | E |
| Regeneration valve malfunctioning | Replace regeneration valves | C |
| 1/4" tubing connecting air control valve and valve housing and/or manifold damaged or missing | Repair or replace ¼ air line tubing | D |
| Worn, stuck or clogged purge valve | Replace purge valve assemblies | D |
| Purge Valves incorrectly serviced | Align exhaust ports in purge valve as detailed within service kit instructions | |
| Compressed air usage exceeds drying capacity of dryer system | Contact Dry Air Systems @ 314 344-1114 | |

## Dryer will not cycle (switch) every 45 seconds (Programmable Logic Control PLC Models Only)

| POSSIBLE CAUSE | REMEDY | |
|---|---|---|
| Programmable Control Box (PLC)   | Ensure PLC is connected to power source (green light) | |
| | Ensure air pressure though pilot signal line | |
| | Disconnect one ¼ pilot air line at a time from PLC checking for steady air flow during a regeneration cycle, if not replace PLC | E |
| ¼ tubing connecting air control valve and valve housing and/or manifold damaged or missing | Repair or replace ¼ air line tubing and check all fittings for cracks or leaks | |
| Air Control air vent clogged (plugged) | Clean air control vent | |

# Troubleshooting AIR-PAK Dryer Systems cont'd

| Dryer will not cycle (switch) approximately 60 seconds Class 1 Div 2 (Pneumatically Controlled Models only) | | |
|---|---|---|
| **POSSIBLE CAUSE** | **REMEDY** | |
| Pneumatic Control Valves  | Contact Dry Air Systems @ 314 344-1114 for further information | **E** |
| ¼ tubing connecting air control valve and valve housing and/or manifold damaged or missing | Repair or replace ¼ tubing and check all fittings for cracks or leaks | |

| Pressure relief valve opens (all models) | | |
|---|---|---|
| **POSSIBLE CAUSE** | **REMEDY** | **KIT ID'S** |
| System pressure exceeds 200 psi (13.7 bar) relief valve setting  | Reduce system pressure | |
| Pressure control valve malfunction | Replace pressure relief valve service kit | **G** |

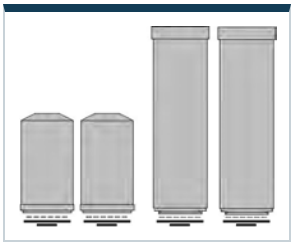
| Inadequate air flow (volume) after SFD air dryer (all models) | | |
|---|---|---|
| **POSSIBLE CAUSE** | **REMEDY** | **KIT ID'S** |
| Desiccant cartridges require service w .1 micron filter | Replace desiccant cartridges - service kit | **A** |
| Air flow restriction | Contact Dry Air Systems @ 314 344-1114 | |

| Water in air system (all models) | | |
|---|---|---|
| **POSSIBLE CAUSE** | **REMEDY** | |
| Desiccant cartridge contaminated | Replace desiccant cartridges - service kit | |
| Micro Logic Timer (MLT) malfunctioning | Replace Micro Logic Timer (MLT) | **G** |
| (PLC) malfunctioning | Replace Programmable Logic Control (PLC) | **F** |
| Pneumatic Control unit malfunctioning | Replace Pneumatic Control Unit assembly (PC) | **E** |
| Air control valve malfunctioning | Replace air control valve assembly | |
| Regeneration valve malfunctioning | Replace regeneration valves | |
| 1/4" tubing connecting air control valve and valve housing and/or manifold damaged or missing | Repair or replace ¼ air line tubing | |
| Worn, stuck or clogged purge valve | Replace purge valve assemblies | |
| Purge Valves incorrectly serviced | Align exhaust ports in purge valve as detailed within service kit | |
| Compressed air usage exceeds drying capacity of dryer system | Contact Dry Air Systems @ 314 344-1114 | |

| Inoperable Heaters (if equipped) | | |
|---|---|---|
| **POSSIBLE CAUSE** | **REMEDY** | |
| Water in air dryer inlet/purge valve frozen | Replace heater assemblies | **L** |
| Air Dryer does not exhaust | Replace heater assemblies | **L** |
| Air dryer will not exhaust (purge) under 32° F | Replace heater assemblies | **L** |

# SERVICE REPLACEMENT PROCEDURES AIR-PAK AIR DRYING SYSTEM

## Desiccant Cartridge Kit Options "A"



**Full Service Kits include:**

4 lb. #619832 #619700 #619950 - 8 lb. #650830 #650700 #650951

- 2 desiccant cartridges
- 2 purge and 2 inlet check valves

**Desiccant Cartridge Kits include**

4 lb. #619830 #619704 #619951 – 8 lb. #4055A002 #4055A020 #4055A012

- 2 desiccant cartridges

**WARNING**

**Read, understand and follow safety precautions and instructions in this manual and in the labels attached to the dryer system. Failure to do so could result in serious injury, death and property damage.**

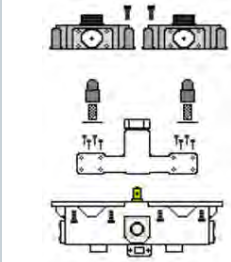
1. **WARNING:** Relieve all system air pressure.
2. Using a strap wrench, turn the desiccant cartridge counterclockwise and remove it. Discard.
3. Remove and discard O-ring from adapter plate stud.
4. Clean top surface of adapter plate and threaded stud
5. Apply a light coating of grease on O-ring (included in kit). Install O-ring on stud.
6. Apply a generous coat of grease on the new desiccant cartridge gasket surface
7. Thread new cartridge onto stud turning clockwise. When gasket contacts adapter plate, tighten cartridge 1/2 to 3/4 turn

**REMINDER:**

**DO NOT OVER-TIGHTEN as it will result in damage to dryer and make it difficult to remove desiccant cartridge!**

## Adapter Plate/Cartridge Stud (B)

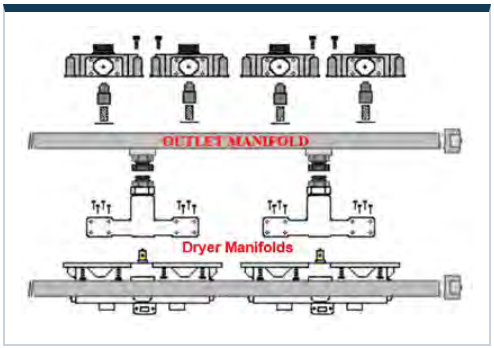
#619734 - #619735
(Instructions for <40 cfm dryers)



1. **WARNING:** Relieve all system air pressure
2. Remove air line from outlet port of dryer
3. Remove 8 screws (4 on each side) of dryer manifold and remove manifold from dryer and discard 2 O-rings
4. Remove spring and regeneration valve from defective adapter plate and second adapter plate
5. Remove 6 - ⅜" bolts attaching adapter plate to valve body
6. Remove 2 - ⅜" Allen head bolts from top of adapter plate and remove adapter plate, gasket and/or O-ring
7. Remove all remaining gasket material from valve housing and clean sump of valve house
8. Position gasket and/or O-ring onto valve body
9. Align adapter plate with holes onto valve body
10. Install new O-rings onto air dryer manifold and position into adapter plates
11. Reinstall 8 screws (4 on each side) and torque to 5 – 6 ft. lbs.
12. Reattach the 6 bolts through valve body into adapter plate – do not tighten

13. Reattach 2 - ⅜" Allen head bolts through adapter plate into valve body
14. Torque all bolts to 50 – 60 ft. lbs.
15. Reinstall both regeneration valves and springs into adapter plates
16. Install 2 new O-rings onto shoulders of manifold and install into adapter plates
17. Reinstall 8 screws (4 on each side) into manifold and torque to 5 – 6 ft. lbs.
18. Reconnect air line to outlet port of manifold
19. ***Slowly*** apply air pressure and check for leaks

## Instructions for 80- 800 cfm air dryer systems




1. **WARNING:** Relieve all system air pressure
2. Remove air line from outlet manifold
3. Disconnect JIC fittings at swivel (nut) and place outlet manifold to side
4. Remove 8 screws (4 on each side) of dryers' manifold and remove manifold(s) from dryer and discard O-rings
5. Remove spring and regeneration valve from defective adapter plate(s)
6. Remove 6 - ⅜" bolts attaching defective adapter plate to valve body
7. Remove 2 - ¼" Allen head bolts from top of adapter plate and remove adapter plate, gasket and/or O-ring
8. Remove all remaining gasket material from valve housing and clean sump of valve housing
9. Position new gasket and/or O-ring onto valve body
10. Align adapter plate with holes onto valve body
11. Reattach the 6 bolts through valve body into adapter plate – do not tighten
12. Reattach 2 ⅜" Allen head bolts through adapter plate into valve body – do not tighten
13. Install new O-rings onto air dryer manifold and position into adapter plates
14. Reinstall 8 screws (4 on each side) and torque to 5 – 6 ft. lbs.
15. Reconnect outlet manifold at JIC fittings and tighten
16. Torque all bolts attaching new adapter plate to 50 – 60 ft. lbs
17. **CAUTION:** Slowly pressurize system and check for any air leaks

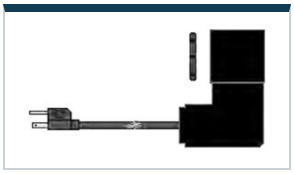
## Desiccant Cartridge, Filter Element w/ Internal .1 Micron Filter Plate Replacement "F"

#619760



1. **WARNING:** Relieve all system air pressure
2. Using a strap wrench, turn the desiccant cartridge counterclockwise, remove, and discard
3. Remove and discard O-ring from adapter plate stud and filter elements
4. Clean top surface of adapter plates and threaded studs
5. Position new .3-micron filter element around each stud and onto adapter plate
6. Using grease supplied, apply a light coating onto O-rings and install onto threaded studs
7. Apply a generous coat of grease on new cartridge gasket surface
8. Thread new cartridge onto studs turning clockwise. When gasket contacts adapter plate, tighten cartridge 1/2 turn. **DO NOT OVER TIGHTEN!**
9. **CAUTION:** Slowly pressurize system and check for any air leaks

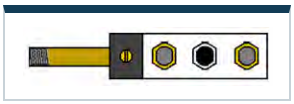
## Micro Logic Timer Replacement (MLT) item "G"



#619790 (MLT Dryer Systems only)

1. Disconnect power cord from electrical outlet or VDC power source
2. Remove round locking screw by turning counterclockwise
3. Remove MLT from stem of air control valve
4. Install new MLT onto stem of air control valve
5. Reinstall round locking screw by turning clockwise (hand tighten only)
6. Reconnect MLT to electrical or VDC power source (timer will cycles)

## Air Control Valve - MLT Dryer Systems "E"



#619925 (two air lines)
#619755 (three air lines)

1. Disconnect power from MLT

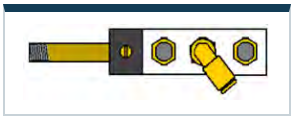
1.1. With system pressurized, cycle dryer several times turning small brass screw from 12 o'clock position to 2 o'clock position approximately ¼ turn (located right of MLT)

1.2. If exhaust air burst ***does not occur***, replace valve

1.3. If exhaust air burst does occur, ***turn screw back to original position*** counter-clockwise (screw slot must be in vertical position for normal operation)

1.4. Failure of dryer to exhaust also be due to malfunctioning MLT or purge valve. Refer to "MLT Dryer Systems Operation/Cycle & Problem Scenarios"

2. If valve #619925 is diagnosed as faulty, replace as follows:



2.1. **WARNING:** Relieve all system air pressure

2.2. Unplug MLT from power source

2.3. Remove two (2) air lines connected to fittings in air valve

2.4. Remove plastic retaining nut and MLT from valve stem and set aside both for re-assembly later

2.5. Remove three (3) screws holding valve to manifold. Remove valve and discard

2.6. Install new push connect air line fittings to open ports of new valve

2.7. Install new small O-ring on top of valve (use small amount of grease to hold in place)

2.8. Attach valve to manifold with three (3) screws included within kit

2.9. Tighten screws to 15-20 in lb.

2.10. Re-connect two (2) air lines to push connect fittings in back ports of valve

2.11. Re-assemble MLT assembly onto valve stem and secure with retaining nut (finger tight)

2.12. Re-connect electrical power (110 - 120 volt)

3. If valve is diagnosed as faulty, replace 619755 as follows:

3.1. **WARNING:** Relieve all system air pressure

3.2. **WARNING:** Unplug MLT from power source

3.3. Remove three (3) air lines connected to fittings in air valve (2 in back – 1 in front)

3.4. Remove plastic retaining nut and MLT from valve stem and set aside both for re-assembly later

3.5. Remove three (3) screws holding valve to manifold remove valve and discard

3.6. Install new (3) push connect air line fittings to open ports of new valve

3.7. Attach valve to manifold with three (3) screws included within kit

3.8. Tighten screws to 15-20 in lb.

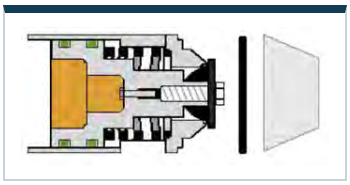
3.9. Re-connect air line from manifold to front port of air valve

3.10. Re-connect two remaining air lines to back ports of valve

**3.11.** Re-assemble MLT assembly to valve stem and secure with retaining nut (finger tight)
**3.12.** Re-connect electrical power (110 - 120 volt)

## #619702 Valve Service Kit

### Purge (Exhaust) Valves - (All models)

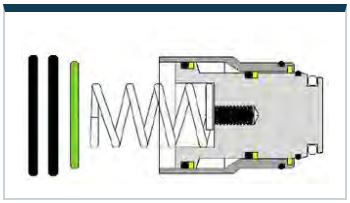


1. **WARNING:** Relieve all system air pressure
2. Remove two bolts that attach the purge valve retainer and remove from housing
3. Remove the purge valve assembly and O-ring from the purge cavity, trash screen and discard
4. Clean the cavity thoroughly
5. Remove the three (3) O-rings from retainer and discard
6. Using lubricant supplied, lightly grease all three new O-rings
7. Install on the retainer, the two (2) larger O-rings. Then install the third (smaller) O-ring
8. Apply a light coating of grease around the O-ring seat on valve assembly and install the thin O-ring on the purge valve seat
9. Insert valve assembly into cavity and insure that hole in valve sleeve aligns over housing exhaust port (muffler). Use care not to dislodge the thin O-ring from its seat

**REMINDER:**
**IF THE DRYER PURGE VALVE PORT DOES NOT ALIGN WITH HOUSING EXHAUST PORT, DRYER WILL NOT EXHAUST!**

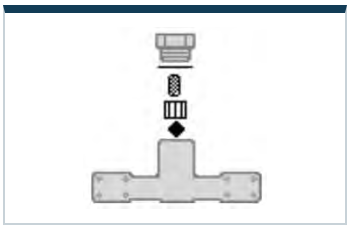
1. Install retainer to housing
2. Apply a light coating of grease on the threads of the two retainer bolts
3. Install two retainer bolts and tighten to 15 ft. lb.

### Inlet Check Valves - (All models)



1. **WARNING:** Relieve all system air pressure
2. Remove two bolts from inlet check valve retainer and remove seal retainer
3. Remove inlet check valve spindle from cavity and discard
4. Clean cavity thoroughly
5. Remove all O-rings from retainer and discard
6. Install two (2) large O-rings and (1) smaller O-ring into grooves of seal retainer
7. Lubricate O-rings on check valve sleeve and install valve assemble (small end first) into the inlet cavity. Make sure spindle is completely seated
8. Lubricate O-rings on seal retainer and reinstall retainer. *AVOID TWISTING SEAL RETAINER*
9. Apply a light coating of grease on the threads of the two retainer bolts
10. Reinstall the retainer bolts torque to 15 ft. lb.

### Outlet Check Valve – (MLT equipped dryers only)



1. **WARNING:** Relieve all system air pressure
2. Disconnect air line from dryer outlet port
3. Remove check valve nut
4. Remove and discard O-ring, spring, spindle, and ball
5. Clean nut and check valve cavity thoroughly

**REMINDER: If excessive oil is evident in check valve cavity, oil separator and desiccant cartridges require servicing**

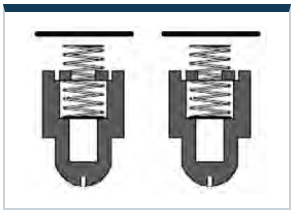
6. Install new ball into cavity
7. Install spindle with spring pocket facing up into cavity
8. Place spring into spring pocket of spindle
9. Apply a light coating of grease onto O-ring and place onto check valve nut
10. Apply light coating of grease to nut threads Install nut and tighten to 60 ft. lbs.
11. Re-connect air line to outlet port
12. **CAUTION:** Slowly pressurize system and check for any air leaks

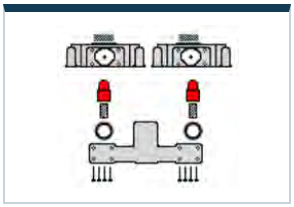
## Regeneration Valve

- #619708 #619715 #619730

### Dryers not equipped with AIR-PAK manifold kits

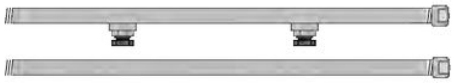


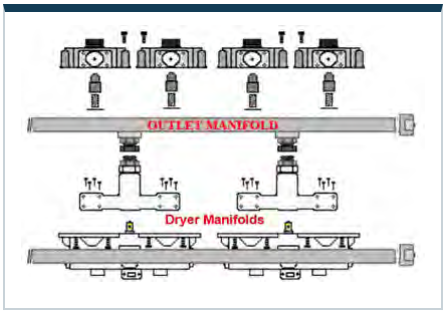




1. **WARNING:** Relieve all system air pressure
2. Disconnect air line from dryer outlet port
3. Remove the eight (8) socket head bolts fastening manifold to dryer
4. Remove manifold
5. Discard O-rings, springs and regeneration valves
6. Clean valve cavities in housing
7. Position new valve spindles into cavities with spring pockets out
8. Position springs into valves
9. Lubricate new O-rings and install onto manifold bosses
10. Position manifold onto adaptor castings ensuring O-rings are properly positioned in bores.
11. Install eight (8) socket head bolts and tighten to 5-6 in. lbs. Torque.
12. Reconnect air line to outlet port.
13. **CAUTION:** Slowly pressurize system and check for any air leaks

### Dryers equipped with AIR-PAK manifold kits



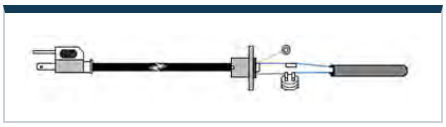



1. **WARNING:** Relieve all system air pressure
2. Remove air line from outlet port manifold
3. Disconnect JIC fittings at swivel (nut) and place outlet manifold to side
4. Remove 8 screws (4 on each side) of dryers' manifold and remove manifold(s) from dryer and discard O-rings
5. Remove spring and regeneration valve from defective adapter plate(s)
6. Discard O-rings, springs and regeneration valves
7. Clean valve cavities in adapter plate
8. Position new valve spindles into cavities with spring pockets out

9. Position springs into valves
10. Lubricate new O-rings and install onto manifold bosses
11. Position dryers' manifold(s) onto adaptor plate ensuring O-rings are positioned properly in bores.
12. Install eight (8) socket head bolts and tighten to 5-6 in. lbs. Torque.
13. Reconnect outlet manifold at JIC fittings and tighten
14. Reconnect air line to outlet manifold
15. **CAUTION:** Slowly pressurize system and check for any air leaks

## Heater Assembly (if equipped)

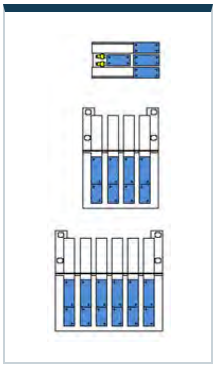
110 Volt #619750, 24 VDC #619784, 12 VDC #619782



**REMINDER: Heater prevents inlet and purge valves from freezing when dryer mounted in an area where ambient air temperatures may fall below 32° F (0° C)**

1. Disconnect heater lead wire
2. Remove two screws attaching heater connector to casting
3. Remove heater/thermostat assembly and discard
4. Slide new O-ring over heater and thermostat into position around connector flange
5. Apply a light coating of anti-seize to the heater element and thermostat cavity
6. Insert heater element into hole and twist slightly to spread anti-seize
7. Place thermostat into position in cavity and ensure thermostat sits flat in cavity
8. Place foam cube on top of thermostat and bring heater connector into position over cavity and secure heater connector using the (2) 8-32 × 1/2″ screws
9. Reconnect heater

## Reset pneumatic control system to home (run) position (40, 80, 120)



#619785,

1. Remove one small valve identified as L25320 from assembly, and with regulated air pressure (35 min – 120 max psi), carefully blow into port 1
2. Remove other small valve identified as L25320 from assembly and with regulated air pressure (35 min – 120 max psi) carefully blow into port 12

#619787 or #619789

1. Remove one small valve identified as L25320 from assembly and with regulated air pressure (35 min – 120 max psi) carefully blow into port 12
2. Reinstall valve
3. ***Slowly*** Return air pressure to unit and check for 45 second cycles

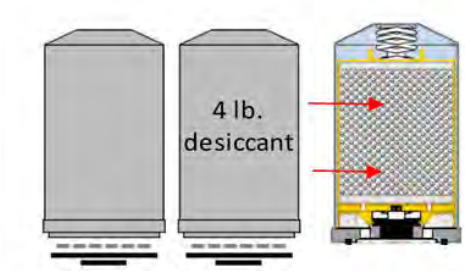
**REMINDER: An erratic cycle may occur and expected sequence normally after one complete cycle**

# Service Components

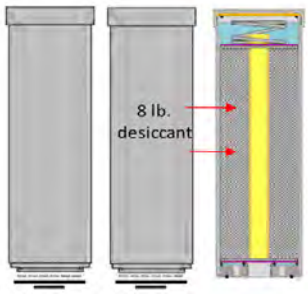
## ILLUSTRATIONS




Valve Body Related Valve Positions



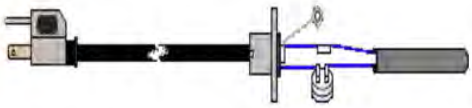

Desiccant Cartridges included in kits
#619832, #619700, #619950,
#619830, #619704, #619951,



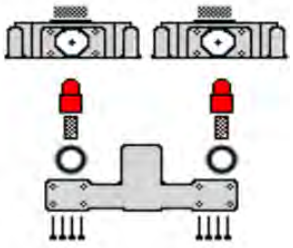

Desiccant Cartridges included in kits
#650830, #650700, #650951,
#4055A002, #4055A020, #4055A012



#619790 - 110 Volt Micro Logic Timer
#916912 - 12 VDC Micro Logic Timer
#619924 - 24 VDC Micro Logic Timer

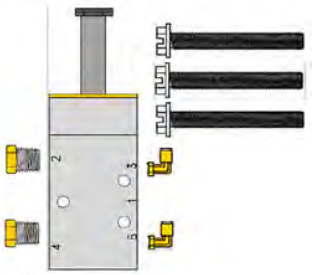


#619750 - 110 VAC Heater Kit (optional)
#619782 - 12 VDC Heater Kit (optional)
#619784 - 24 VDC Heater Kit (optional)



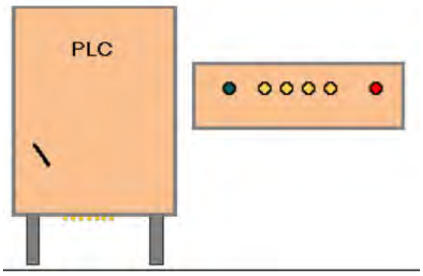
619708 - .014
619715 - .030
619730 - .060

Regeneration Valves included in kits
#619708, #619715, #619730

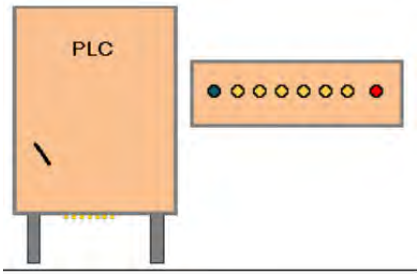


Air Control Valve Kit
#619755 (two pilot air lines)

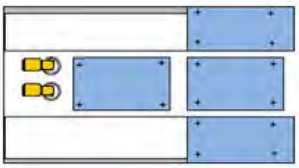
## Component Illustrations, cont'd



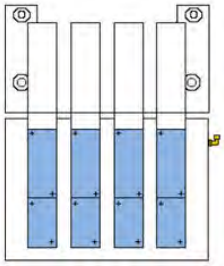

#619812 - 110 VAC PLC
with 4 or 8 cartridges



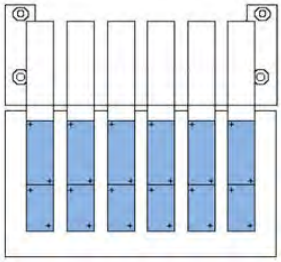

#619820 - 110 VAC PLC
with 4, 6, 10, 12, 18, 24 cartridges



Pneumatic Control Service Valves
#619785



Pneumatic Control Service Valves
#619787

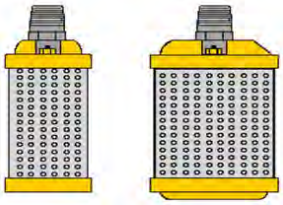


Pneumatic Control Service Valves
#619789

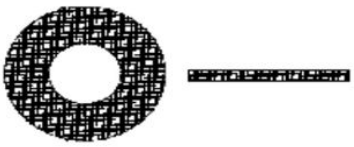


Wall Mount Bracket
#619990

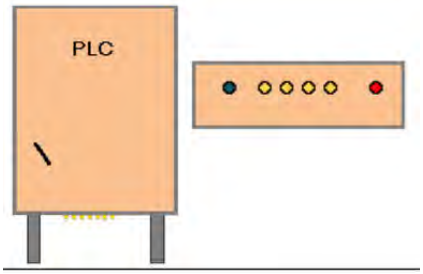
## Component Illustrations, cont'd



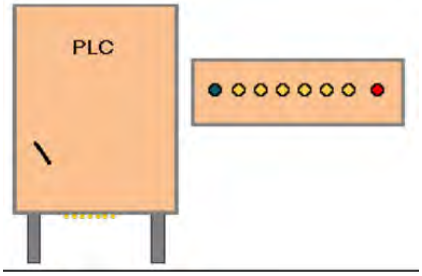
#619770 - Small Mufflers
#619915 - Large Mufflers



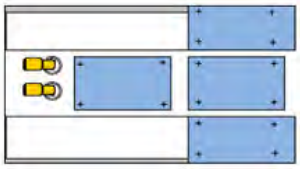
.3 Micron Disc Filter
#619860



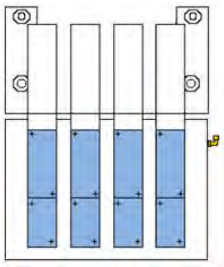

#619812 - 110 VAC PLC
with 4 or 8 cartridges



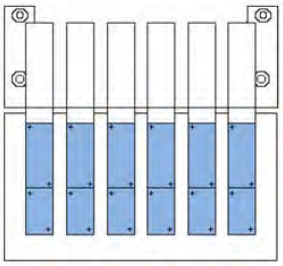

#619820 - 110 VAC PLC
with 4, 6, 10, 12, 18, 24 cartridges



Pneumatic Control Service Valves
#619785



Pneumatic Control Service Valves
#619787



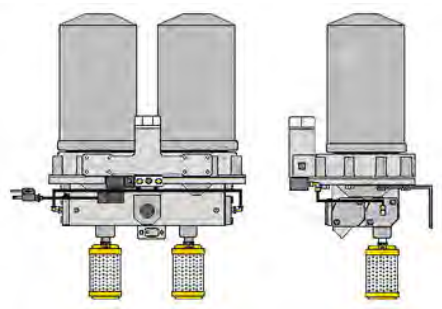
Pneumatic Control Service Valves
#619789



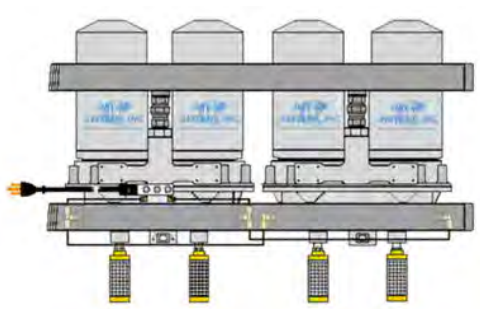
Wall Mount Bracket
#619990

# AIR DRYER SYSTEMS w/ 4lb

## Micro Logic Timer (MLT) models



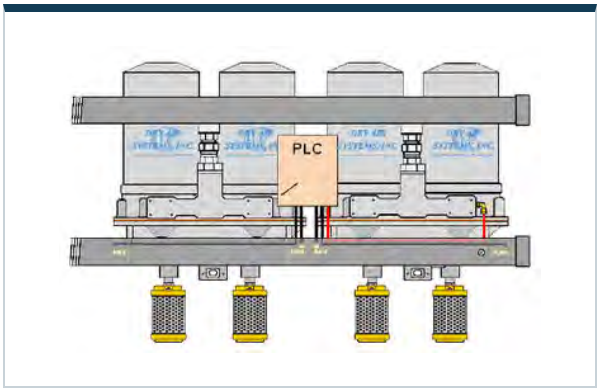
| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP2A** | 27 | .3 | 23.00" | 13.62" | 10.75" |
| **JP2B** | 40 | .3 | 23.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3C** | 60 | .3 | 23.00" | 32.50 | 10.75" |
| **JP3C** | 80 | .3 | 23.00" | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

## Programmable Logic Control PLC models



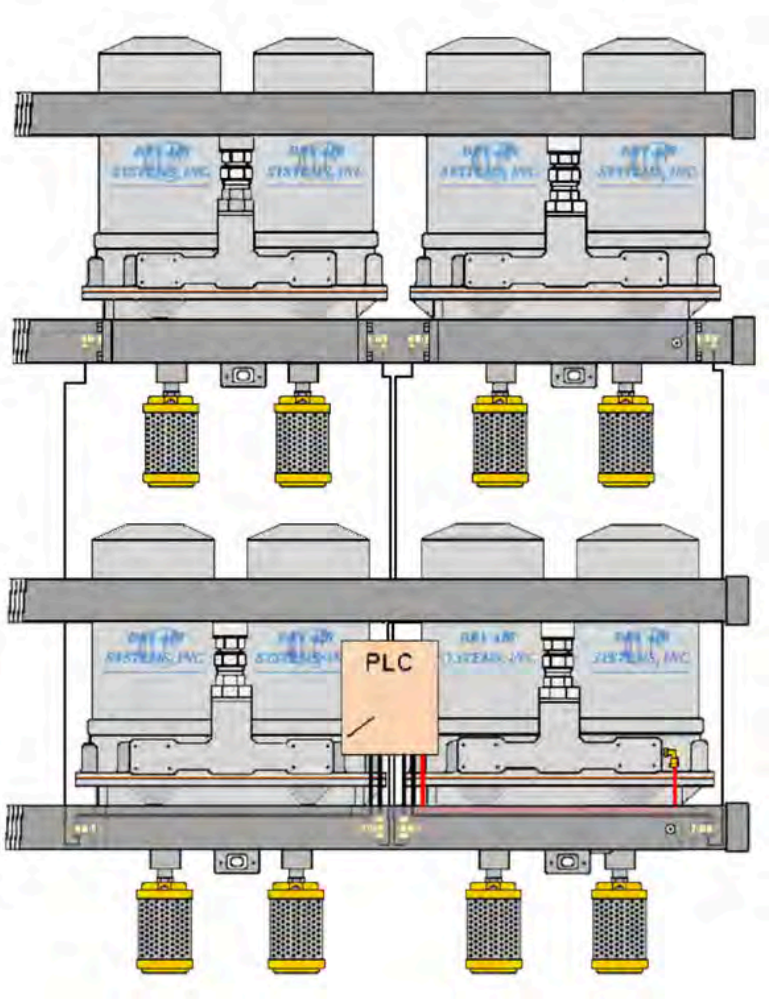

| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP4C** | 120 | .3 | 23.00" | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |




| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP4C** | 120 | .3 | 23.00" | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

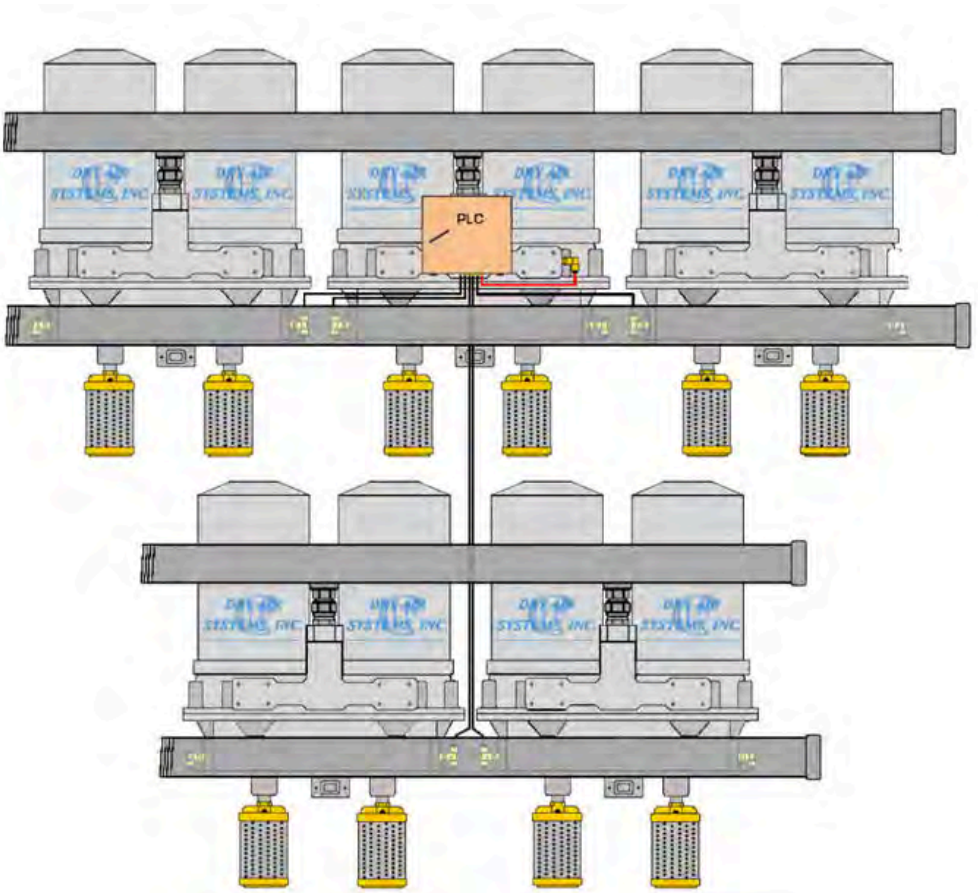
## Programmable Logic Control PLC models




| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS H | L | W |
|---|---|---|---|---|---|
| **JP8C** | 240 | .3 | 53.00 | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

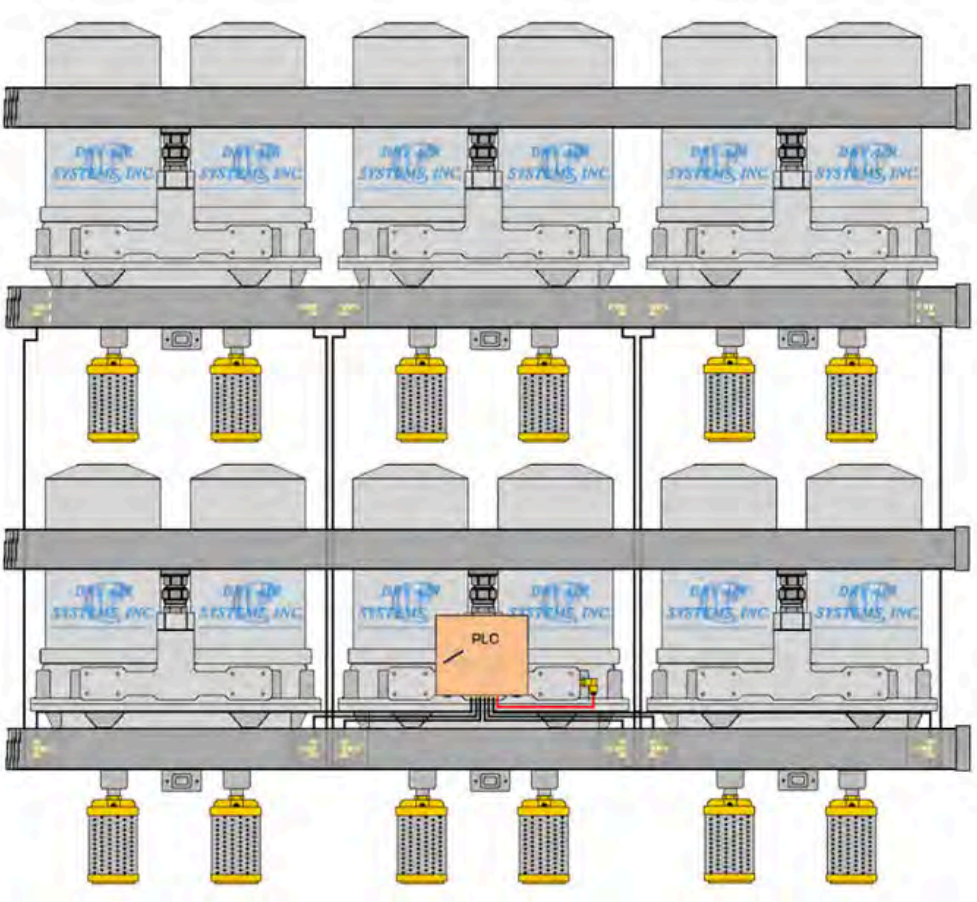
## Programmable Logic Control PLC models




| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP10C** | 300 | .3 | 53.00 | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

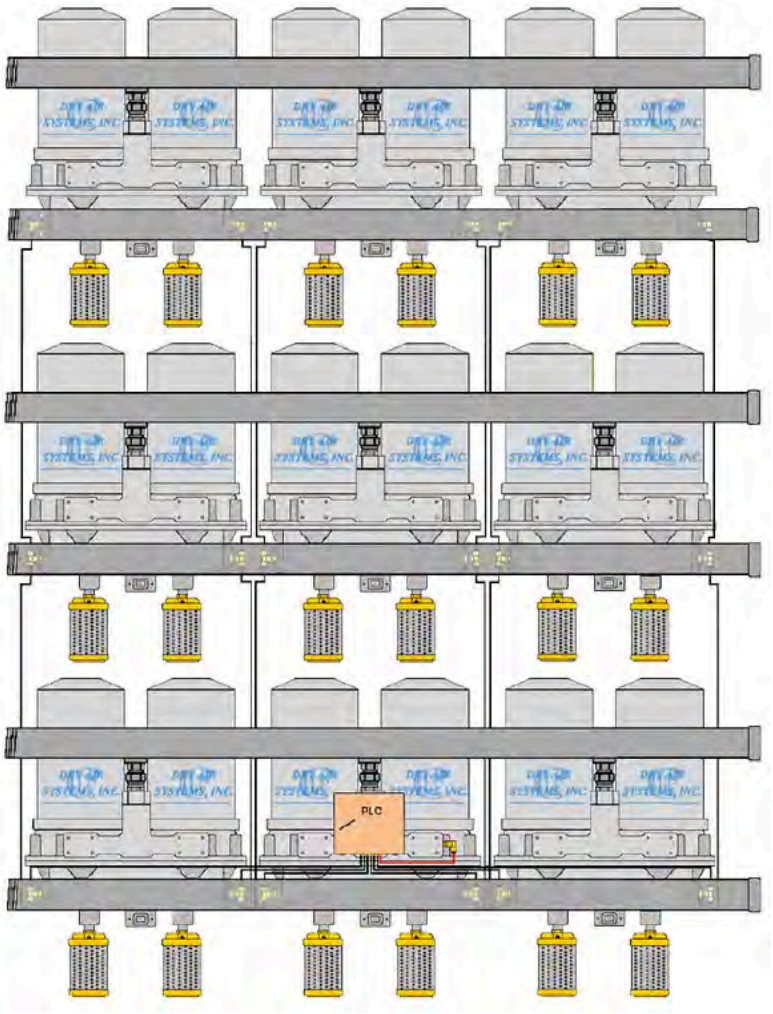
## Programmable Logic Control PLC models




| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP12C** | 400 | .3 | 53.00 | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

## Programmable Logic Control PLC models




| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP18C** | 600 | .3 | 80.00 | 32.50 | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

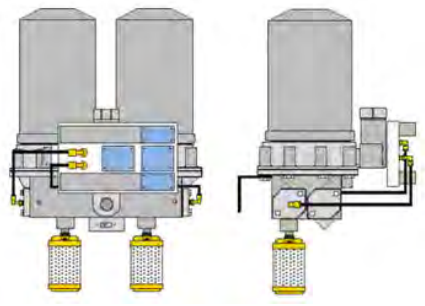
## Programmable Logic Control PLC models



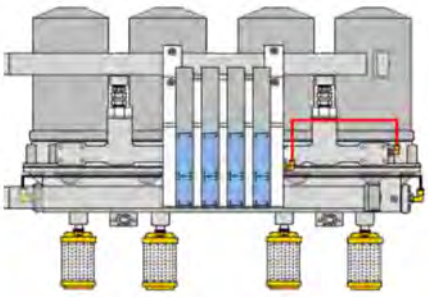

| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP24C** | 800 | .3 | 106.00" | 32.50" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

AIR DRYER SYSTEMS CONT'D

## Pneumatically Controlled PC models

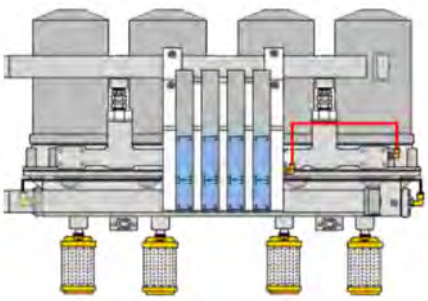


| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP2B-F-P** | 40 | .3 | 23.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |



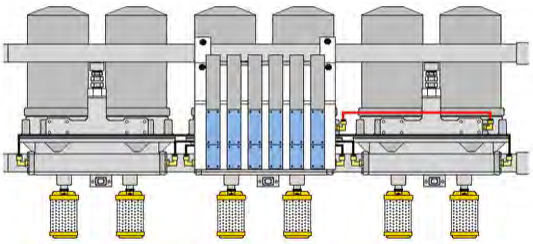
| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3B-F-P** | 60 | .3 | 23.00" | 30.00" | 10.75" |
| **JP3B-F-P** | 80 | .3 | 23.00" | 30.00" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

## Pneumatically Controlled (PC) models



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3B-F-P** | 60 | .3 | 23.00" | 30.00" | 10.75" |
| **JP3B-F-P** | 80 | .3 | 23.00" | 30.00" | 10.75" |

Mufflers Optional – H w/ mufflers
Allow at least an additional 2"
above desiccant cartridge for service removal



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3B-F-P** | 60 | .3 | 23.00" | 45.00" | 10.75" |
| **JP3B-F-P** | 80 | .3 | 23.00" | 45.00" | 10.75" |

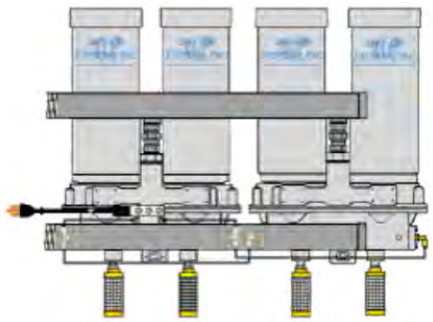
Mufflers Optional – H w/ mufflers
Allow at least an additional 2"
above desiccant cartridge for service removal

# AIR DRYER SYSTEMS w/ 8lb

## Micro Logic Timer (MLT) models

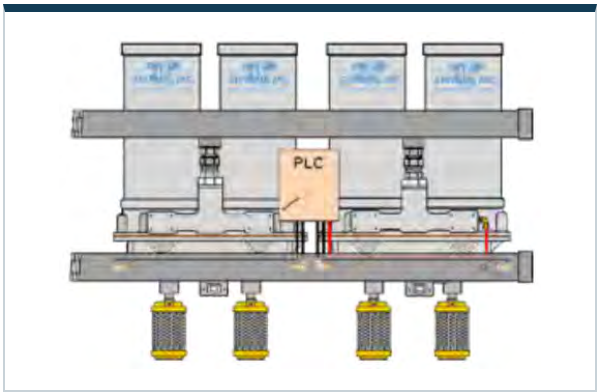


| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP2B-L** | 60 | .3 | 30.00" | 13.62" | 10.75" |
| **JP2B-L** | 80 | .3 | 30.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

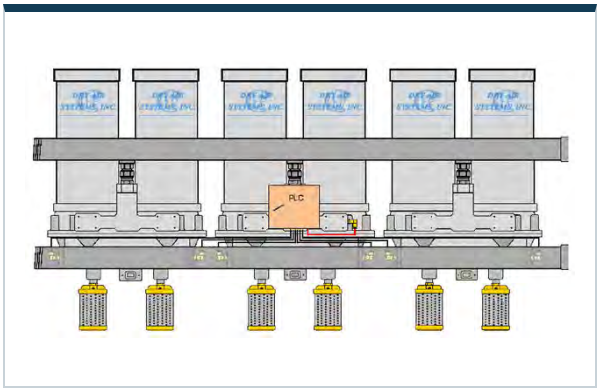


| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3C-L** | 100 | .3 | 30.00" | 30.00" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

## Programmable Logic Control PLC models

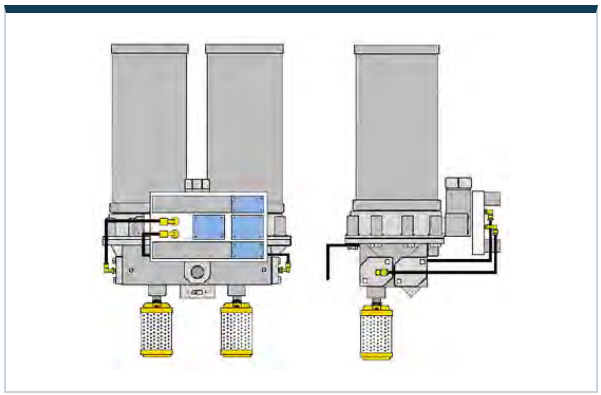



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS H | L | W |
|---|---|---|---|---|---|
| JP4C-L | 100 | .3 | 30.00" | 30.00" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

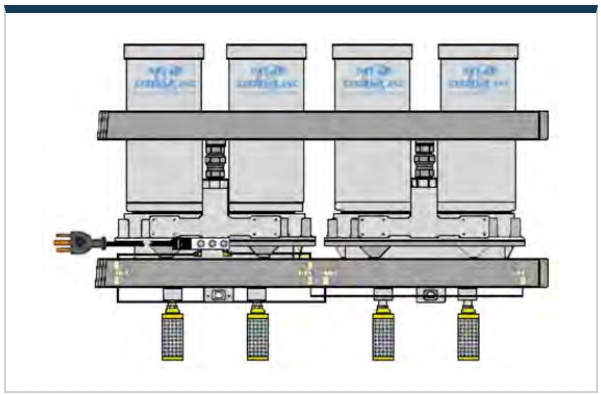



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS H | L | W |
|---|---|---|---|---|---|
| JP4C-L | 100 | .3 | 30.00" | 30.00" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

## Pneumatically Controlled PC models

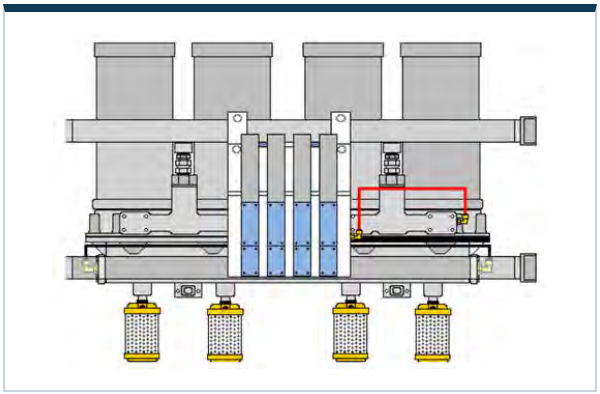


| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP2C-F-P-L** | 40 | .3 | 30.00" | 13.62" | 10.75" |
| **JP2C-F-P-L** | 60 | .3 | 30.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

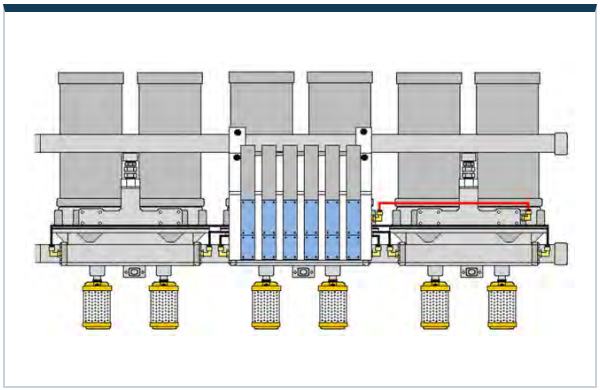


| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| **JP3C-F-P-L** | 100 | .3 | 30.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

## Pneumatically Controlled PC models cont'd



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| JP4C-F-P-L | 150 | .3 | 30.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |



| AIR-PAK DRYER SYSTEM | MAX CFM | MICRON FILTRATION | DIMENSIONS | | |
|---|---|---|---|---|---|
| | | | H | L | W |
| JP4C-F-P-L | 150 | .3 | 30.00" | 13.62" | 10.75" |
| Mufflers Optional – H w/ mufflers<br>Allow at least an additional 2"<br>above desiccant cartridge for service removal | | | | | |

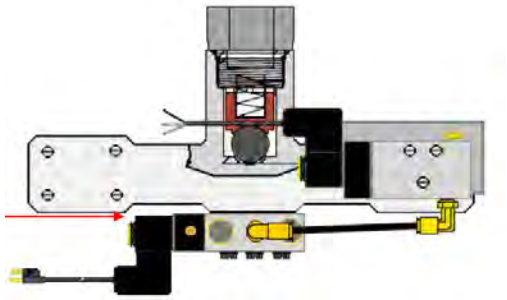
# ACCESSORIES

## Zero Loss Drain Valve

- #619775

## Regeneration Flow Cut-Off Kit

- #619926
- Reduces air compressor run times
- Designed for 7HP air compressors or less
- Regenerates only when compressor motor operating (pumping) a minimum (2) two minute (120 seconds) cycles



**MLT (Micro Logic Timer)**
**#619790 not included in kit**

**WARNING**

**Read, understand and follow safety precautions and instructions in this manual and in the labels attached to the dryer system. Failure to do so could result in serious injury, death and property damage.**

- Disconnect air line from outlet port of air dryer
- Disconnect two (2) ¼" air lines from air control valve located on back of control valve
- Remove MLT from air control valve and set aside for later installation
- Remove eight (8) bolts fastening manifold to adaptor castings
- Remove manifold assembly from adaptor castings and discard
- Lubricate new O-rings and install onto manifold bosses of new manifold/valve assembly
- Position manifold/valve assembly onto adaptor castings ensuring O-rings are properly positioned in bores

**REMINDER:** Make sure valves & springs remain in position in both bores of adaptor castings

- Reinstall eight (8) bolts and tighten to 45-65 in. lbs. torque
- Reinstall MLT, previously removed, onto control valve of new assembly
- Reconnect two (2) ¼" air lines previously removed to air control valve
- Connect open power lead to appropriate 120 Volt AC power source controlling compressor motor low pressure "On" and high pressure "Off" cycles
- Re-connect air line to dryer outlet port
- Check all connects for air leaks

# WARRANTY

**Warning: Proper selection of products listed for sale in this owner's manual is essential to minimize the risk air dryer or other product failure. Such failures can result in property damage or severe personal injury to operators of machinery, vehicles or to others. You must carefully evaluate the particular applications on or into which you intend to install the products. Products in this owner's manual require installation by an experienced professional technician or qualified maintenance professional.**

For the period of one (1) year, Seller's sole obligation and Buyer's sole and exclusive remedy for any defect Product(s) shall be Seller's reimbursement of the "Warranty Expense". In addition Seller's obligation for the Product(s) which are not in conformance with the Seller's warranty shall be further limited to those product(s) which are promptly returned to Seller after discovery of any alleged defect with Freight prepaid to the warehouse designated by the Seller's representative and which Product(s) are found by Seller (in the exercise of its sole and exclusive judgment made by. Seller experienced and highly skilled personnel) to have been defective in accordance with the warranty. Seller will in no event be liable for any consequential special or contingent damages or expenses arising directly or indirectly from any defects in its goods or from the use thereof, nor is any other person authorized to assume for the seller any such liability or any contrary representations or warranty on behalf of the Seller.

In no event shall the Seller be obligated under Seller's agreement or otherwise in any manner whatsoever for normal wear and tear of any product(s) which in the seller's sole and exclusive determination have been subjected to accident, abuse, misapplication, improper repair or alteration or maintenance, neglect, excessive operating conditions or for defects resulting from Buyer's specifications or designs, or otherwise caused by the Buyer, including without limitation defects resulting from Buyer's manufacture, distribution, sale or promotion of its own product.

Seller expressly disclaims any implied or expressed warranty of fitness for a particular purpose. It is understood that such products are warranted to be fit for their ordinary intended use.

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A Fluid Power Controls Company

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