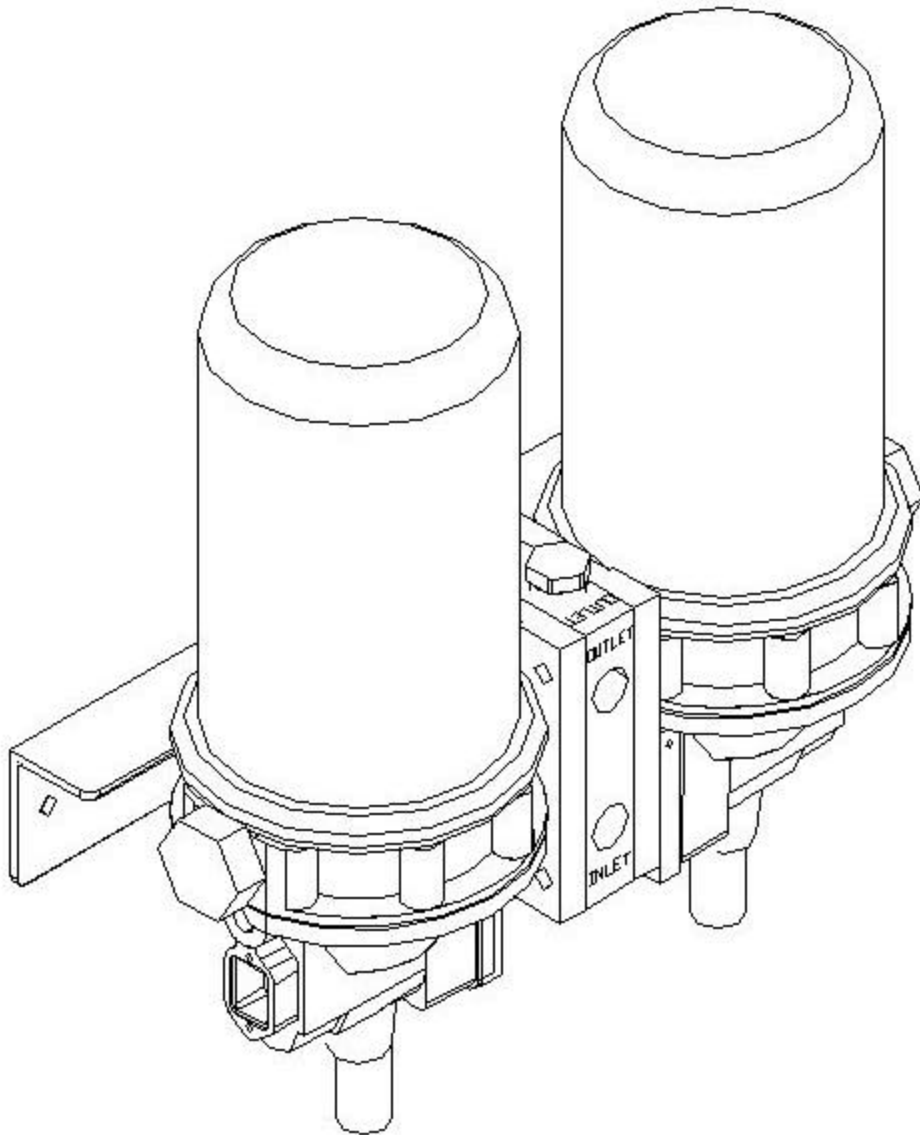


**DRY AIR SYSTEMS, INC.**

2655 Metro Boulevard  
Maryland Heights, Missouri 63043  
(314) 344-1114  
fax (314) 344-0677



**HD SERIES DRIERS**

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## WHY AN AIR DRYER

Compressor HP	Total Inlet Cu. Ft.	Gallons of Water
25	72,000	13.6
50	144,000	27.2
100	288,000	54.3
250	720,000	135.8
500	1,440,000	271.7
1000	2,880,000	543.4
2000	5,760,000	1,086.60

All air systems trap and contain water moisture and contaminants. The chart illustrates water accumulation during a 12-hour period. Moisture in compressed air systems unchecked harms or destroys delicate pneumatic controls. Water and contamination shortens their life expectancy, reduces reservoir capacity and affects compressor duty cycles.

Dry Air Systems offers air drying systems that improve overall system reliability and its related pneumatic controls and devices. The HD series of air dryers are designed for continuous desiccant regeneration with less than 7% of air required for regeneration. Operational cost related to the air drying systems is less than a 75-watt light bulb.

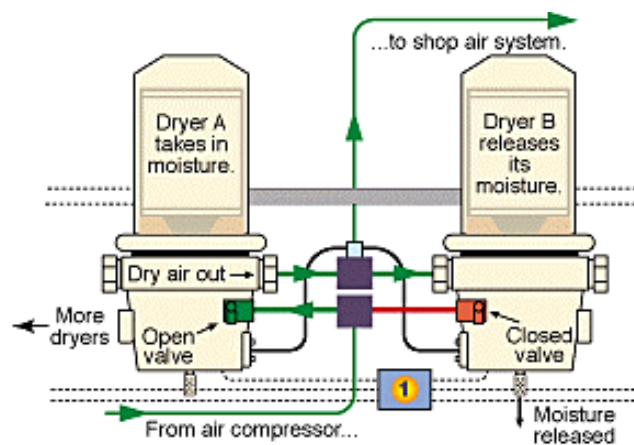
These drying systems offer designs with:

- Ease of installation
- Expansion capabilities
- Particulate filtration
- Pressure dew point of -40 Fahrenheit

## WHAT IS A DESICCANT AIR DRYER

### ***Desiccant Air Dryer General Description***

The MVP series of air dryers are models designed to mount vertically after the compressor air reservoir. HD air dryer systems receive warm compressed air that cools, dry and filter contaminants from compressed air before distribution to air systems. Their designs reduce the build up of dirt and moisture protecting complete air systems, pneumatic tools and spray paint booths.



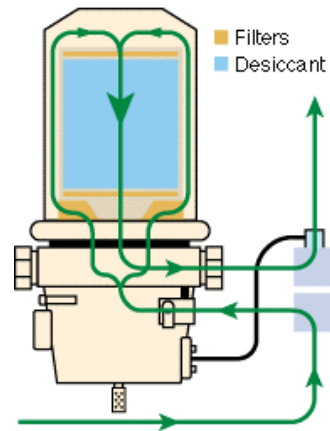
HD air systems adapt to air compressors from 3HP up to multiple air compressor systems. Each dryer within a specific system incorporates four pounds of desiccant. A precise continuous regeneration cycle is accomplished without disrupting airflow ensuring a constant cleansing of both the desiccant drying bed and internal filtration.

All HD air dryers are constructed of a lightweight aluminum and steel design housing a unique spin-off cartridge. Below the cartridge are four ports: 1) inlet, 2) outlet, 3) control and 4) purge port. Each port has a specific function. The inlet port receives contaminated air from the air compressor. Outlet port directs clean dry air to the air system with a dual function of controlling the regeneration flow rate. Control port receives an air signal from either a MLT (Micro Logic Timer) allowing for the expulsion of water and contaminants through the dryers purge port.

### Theory of Desiccant Operation

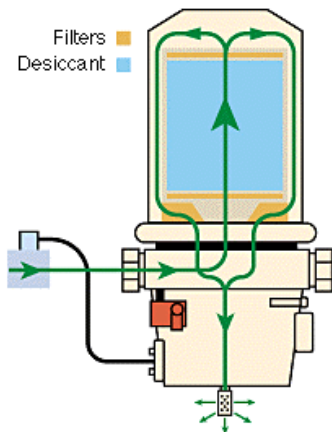
#### Charge Cycle

Compressed air enters the air dryer through the inlet port. As the warm air enters the dryer system the air expands; oil and water vapor condense, and accumulate in the sump. The air is directed into a desiccant cartridge passing through a series of internal filters and a cloth bag removing contaminants. Air vapor continues to condense as air travels to the desiccant bed that holds water under pressure. The clean dry air is then directed to the air system through the outlet port.



#### Regeneration Cycle

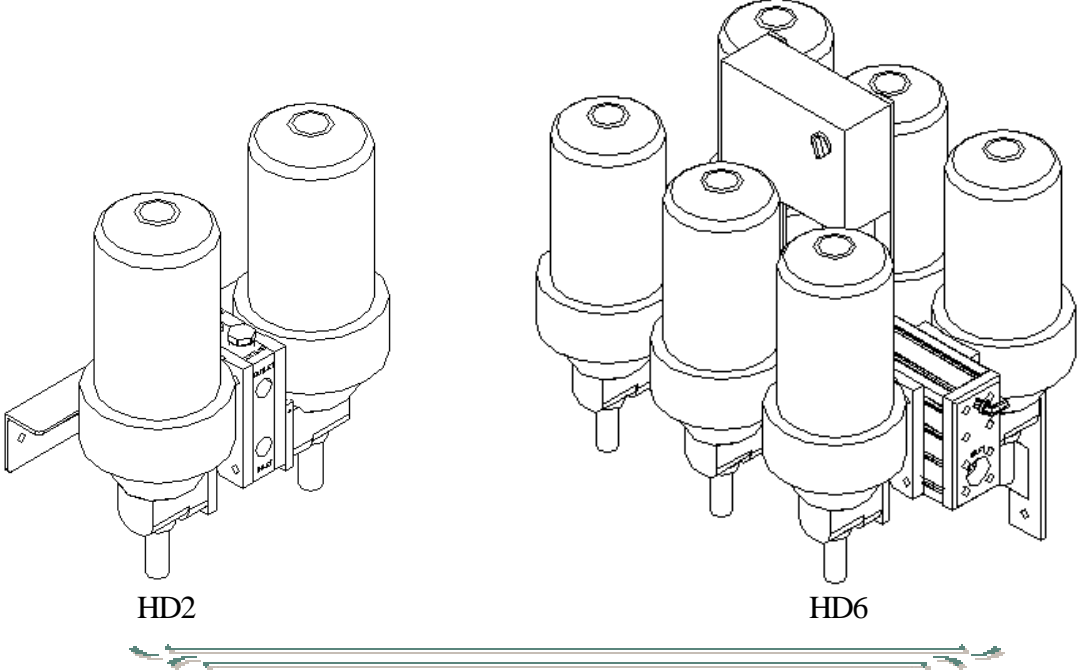
Dryers systematically regenerate when control signals are received from either the MLT by temporarily removing a single dryer



off line to begin the regeneration process. An air pressure signal received from the MLT opens the purge valve and closes the air dryer's inlet and regeneration valves. This action causes a sudden discharge of air through the exhaust port of the dryer. These valves react to air pressure when an air dryer purge port opens. With the inlet valve closed, the regeneration valve is in position to control a timed pressurized back flow of filtered dried air that reenters the desiccant cartridge. During the regeneration cycle, the desiccant bed is depressurized allowing the removal of accumulated moisture from desiccant bed, back flushing and cleaning filters expelling contaminants out the dryers purge port. This completes the regeneration cycle.

MLT's with their specified time intervals close the air dryer purge valve that reacts to the evacuation of air pressure through the exhaust (EXH) port-controlling device.

Dry Air Systems, Inc. offers air drying systems to meet the unique requirements from complete plant operation to single units for small or isolated application within an air system.



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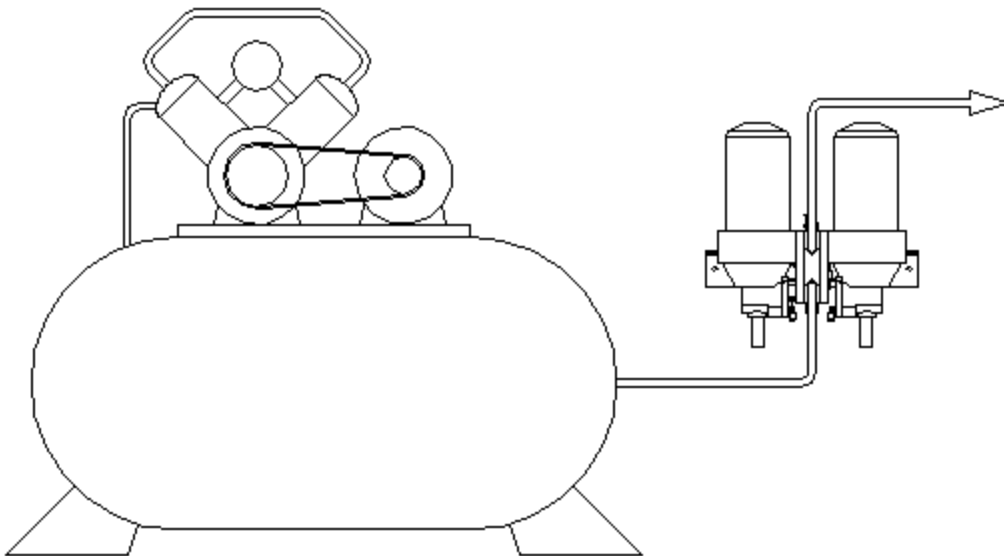
# INSTALLATION INSTRUCTIONS

## *HD2 (10 H.P compressors or less)*

1. Inspect air compressor lines and fittings for air leaks.
  - 1.1. Repair any air leaks. Replace any damaged lines or components
2. Drain all air system pressure
3. Locate mounting on wall and mark holes
  - 3.1. **Note:** Desiccant canisters may be removed for easier installation
  - 3.2. **Note:** Dryers are installed in the vertical position only (canisters up)
4. Mount air dryer system. Install mounting hardware as necessary
5. Connect air line from compressor reservoir to manifold inlet (bottom) of dryer system.
  - 5.1. **It is recommended to install a by-pass system for ease of servicing air dryer system**
  - 5.2. **Note:** 2 3/4" npt ports are available for both inlet and outlet. Factory installed plugs may be removed from top and bottom of manifold and be replaced onto front of manifold to facilitate better pipe/hose routing.
6. Connect air line from air dryer manifold (top) to air system
7. Plug MLT timer (6009X-010) into grounded and surge protected 110-volt receptacle
8. Restart air compressor and check for leaks

### **Installation Requirements**

Dryer system requires at least 80 psi to operate MLT valve  
Thread sealant must be used on all air connections  
Dryers are installed in a vertical position only (Canisters up)  
Hoses may be attached to exhaust ports to direct water drainage  
Dryers cycle every 4 minutes

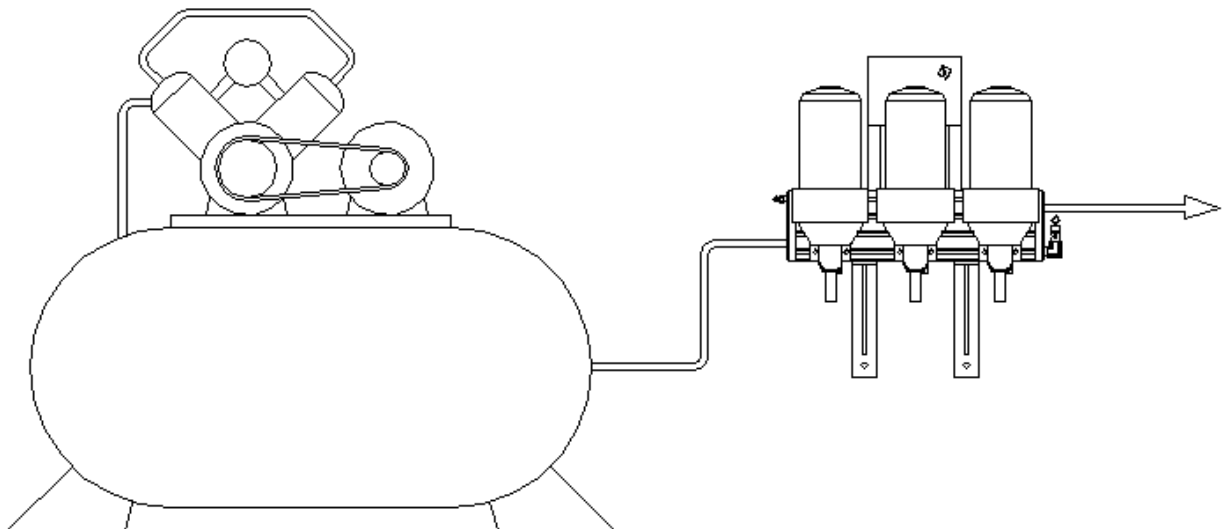


## HD3-HD?? (above 10 H.P compressor)

1. Inspect air compressor lines and fittings for air leaks.
  - 1.1. Repair any air leaks. Replace any damaged lines or components
2. Drain all air system pressure
3. Locate mounting on floor or wall and mark holes
  - 3.1. **Note:** Desiccant canisters may be removed for easier installation
  - 3.2. **Note:** Limited adjustment exists left to right by loosening 5/16 SHCS on drier manifold
  - 3.3. **Note:** Brackets are shipped in floor mount position but may be moved to bolt to bottom of manifold (as shown below) if wall mount is desirable
  - 3.4. **Note:** Dryers are installed in the vertical position only (canisters up)
4. Mount air dryer system. Install mounting hardware as necessary
5. Connect air line from compressor reservoir to manifold inlet (bottom)
  - 5.1. **It is recommended to install a by-pass system for ease of servicing air dryer system**
6. Connect air line from air dryer manifold outlet (top)
7. Hook up electrical power
  - 7.1. If unit is supplied with a standard control box, there will be a wall mount dc transformer which needs to be both plugged into the wall as well as into 5/16 dia female plug in bottom of control box
  - 7.2. If unit is shipped with an industrial power supply, a hole must be drilled into the control box and 120vac brought to L1 & L2 terminal points – use adequate protection from potential live electrical circuits!
8. Restart air compressor and check for leaks

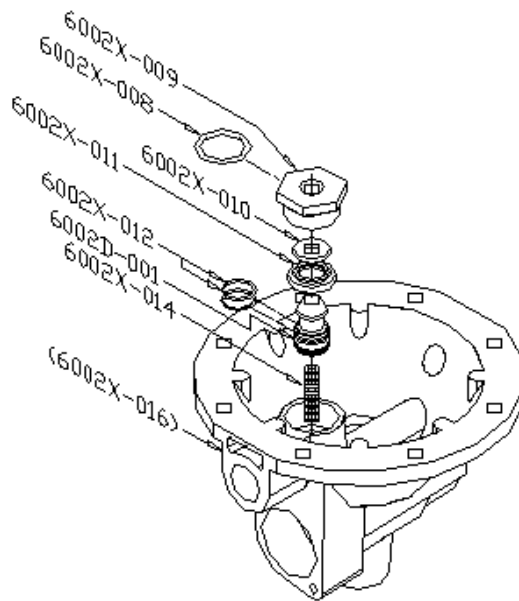
### Installation Requirements

Dryer system requires at least 80 psi to operate solenoid valves  
Thread sealant must be used on all air connections  
Dryers are installed in a vertical position only (Canisters up)  
Hoses may be attached to exhaust ports to direct water drainage  
Dryers cycle every 40 seconds



# REPLACEMENT SERVICE COMPONENTS PROCEDURE

## 6002K-002 Inlet Valve



### Installation Precautions

1. Stop compressor when working on air systems. Never connect or disconnect a hose or line containing air pressure. Never remove a component or a pipe plug unless you are certain all system air pressure has been exhausted.
2. Always wear safety glasses when working with air pressure. Never look directly into air dryer ports.
3. Never exceed recommended working air pressure.
4. Never attempt to disassemble an air dryer until you have read and understood all recommended procedures. Use only proper tools and observe all precautions pertaining to the use of those tools.

**CAUTION: AIR DRYERS EXHAUST AT HIGH PRESSURE.  
PROTECTIVE EYEWEAR SHOULD BE WORN WHILE SERVICING.**

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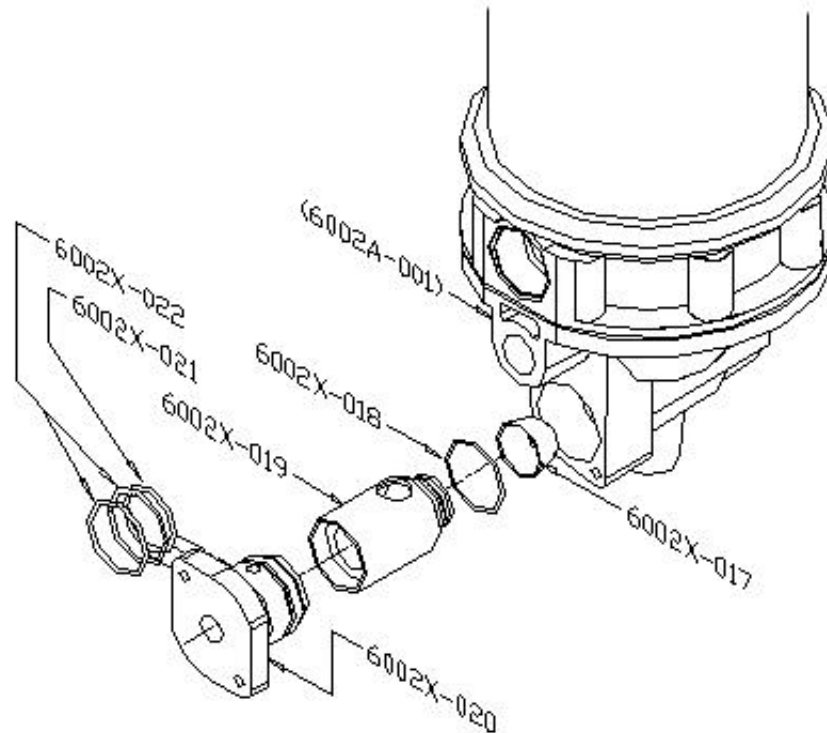
1. Exhaust/drain air system to zero PSI. If air dryer by-pass was installed, open/close valves as necessary and drain air dryer unit by removing signal line from dryer outlet manifold (1/4" line)
2. Disconnect purge valve (PV-1) 1/4" air line from dryer to be serviced.
3. Remove air dryer (6002A-001) from manifold by removing 4 5/16-18 SHCS.
4. Remove air dryer manifold mount plate (6003D-003) by removing 4 #10-32 SHCS.
5. Remove 8 bolts from bottom cap assembly, remove cap and discard gasket.
6. Remove inlet valve nut, valve stop, valve, spring and discard.
7. Clean cavity area thoroughly.
8. Generously coat (with 6002X-005 silicone grease only) the 2 (small) o-rings surfaces and install on piston. Carefully install valve and spring in cavity with tapered side up.



9. Place valve stop on top of valve with concave side down.
10. Lube large o-ring and place on nut. Install flat seal into nut.
11. Install nut and tighten to 50 ft. lb.
12. Place gasket on bottom cap. Locate bottom cap with inlet port directly below outlet port.
13. Re-assemble unit following steps (in reverse) 5 thru 1.



### **6002K-001 Purge Valve**



#### **Installation Precautions**

1. Stop compressor when working on air systems. Never connect or disconnect a hose or line containing air pressure. Never remove a component or a pipe plug unless you are certain all system air pressure has been exhausted.
2. Always wear safety glasses when working with air pressure. Never look directly into air dryer ports.
3. Never exceed recommended working air pressure.
4. Never attempt to disassemble an air dryer until you have read and understood all recommended procedures. Use only proper tools and observe all precautions pertaining to the use of those tools.

**CAUTION: AIR DRYERS EXHAUST AT HIGH PRESSURE.  
PROTECTIVE EYEWEAR SHOULD BE WORN WHILE SERVICING.**

1. Exhaust/drain air system to zero PSI. If air dryer by-pass was installed, open/close valves as necessary and drain air dryer unit by removing signal line from dryer outlet manifold (1/4" line)
2. Disconnect purge valve (PV-1) 1/4" air line from dryer to be serviced.
3. Remove air dryer (6002A-001) from manifold by removing 4 5/16-18 SHCS.
4. Remove air dryer manifold mount plate (6003D-003) by removing 4 #10-32 SHCS.
5. Remove 2 1/4-20 SHCS from adapter (6003D-002).
6. Remove adapter & purge valve operator /seal retainer (6002X-020).
7. Remove seal retainer, purge valve assembly, 4 O-rings and screen. Check to be sure all components are removed and discarded.
8. Clean purge valve cavity.

**NOTE:** Excessive accumulation of oil in the air dryer purge valve indicates compressor may require service. Disassemble entire air dryer and check for blockage within the valve cavities, safety valve and bottom cap cavity. Clean as necessary.

6. Remove all (3) old o-rings from center portion of bolt-on seal retainer. Apply a light coating of (6003X-005) grease on first two new o-rings (1.362 x 103). Install new o-rings on seal retainer. Apply a light coating of grease on the other new O-ring (1.174 x.103). Install on end of seal retainer

**NOTE:** When removing old o-rings be careful not to damage O-ring seats.

7. Apply a light coating of grease to the threads of seal 2 seal retainer bolts.
8. Install new filter screen in purge valve cavity (closed end first).
9. Apply a light coating of (6003X-005) grease to O-ring seat on new purge valve end (1/2 ball end) and install new O-ring (1.364 x.070).
10. Align valve assembly exhaust port with bottom cap exhaust port and install valve assembly.

**NOTE:** Be careful not to dislodge O-ring during valve installation.

11. Reassemble by following steps (in reverse) 6 thru 1.



## 6002K-003 Desiccant Canister

**CAUTION: DO NOT OVER TIGHTEN CARTRIDGE.  
HAND TIGHTEN UNTIL GASKET CONTACTS ADAPTOR  
PLATE AND TURN ADDITIONAL 1/2 TURN ONLY!**

### Installation Precautions

1. Stop compressor when working on air systems. Never connect or disconnect a hose or line containing air pressure. Never remove a component or a pipe plug unless you are certain all system air pressure has been exhausted.
2. Always wear safety glasses when working with air pressure. Never look directly into air dryer ports.
3. Never exceed recommended working air pressure.
4. Never attempt to disassemble an air dryer until you have read and understood all recommended procedures. Use only proper tools and observe all precautions pertaining to the use of those tools.

**CAUTION: AIR DRYERS EXHAUST AT HIGH PRESSURE.  
PROTECTIVE EYEWEAR SHOULD BE WORN WHILE SERVICING.**

---

### Service Instructions

1. Whenever servicing the air dryer, clean and inspect entire unit for any external damage.
2. Remove old cartridge (turn counter-clockwise).
3. Clean dirt/oil from top surface of adaptor plate and threaded stud
4. Remove old O-ring from threaded adaptor.

**NOTE:** Excessive accumulation of oil in the air dryer or air dryer cartridge indicates the compressor may require service. Disassemble entire unit and check for blockage within the valve cavities, safety valve and bottom cap cavity. Drain, clean and replace worn components as necessary.

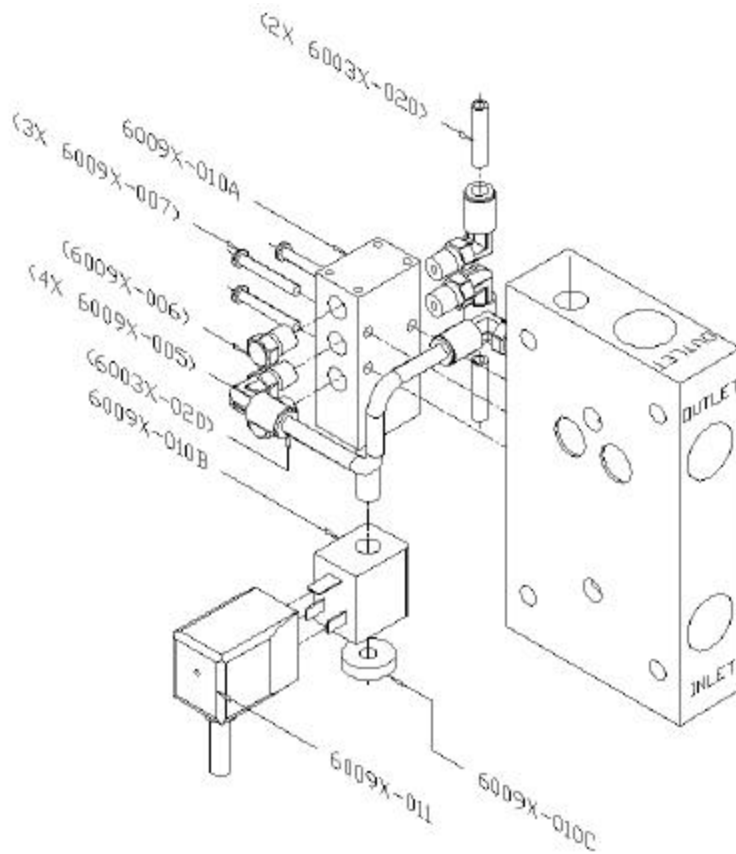
5. Lubricate new O-ring and install on threaded adaptor.
6. Lubricate the gasket on the new desiccant cartridge.
7. Thread new cartridge onto adaptor (turn clockwise)

**DO NOT CROSS THREAD**

**NOTE:** When gasket contacts adaptor plate, tighten 1/2 turn. **DO NOT OVER TIGHTEN** or cartridge could be extremely difficult to remove.



## 6009X-010 Control Valve (HD2 only)



### Installation Precautions

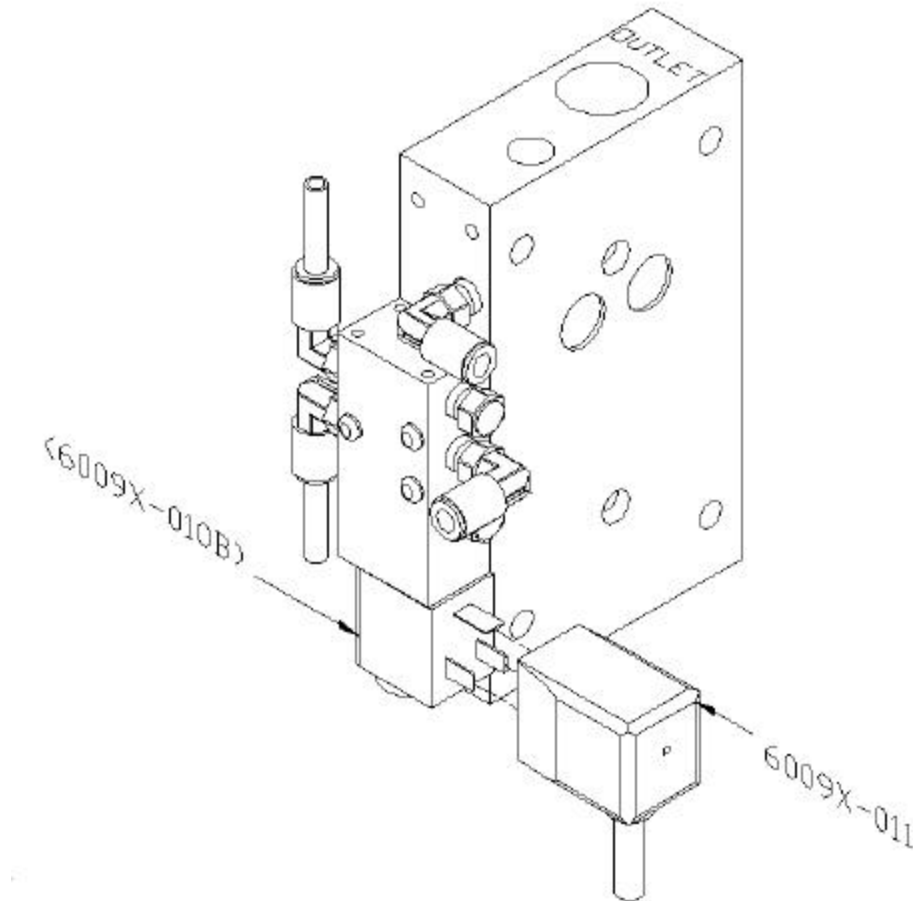
1. Stop compressor when working on air systems. Never connect or disconnect a hose or line containing air pressure. Never remove a component or a pipe plug unless you are certain all system air pressure has been exhausted.
2. Always wear safety glasses when working with air pressure. Never look directly into air dryer ports.
3. Never exceed recommended working air pressure.
4. Never attempt to disassemble an air dryer until you have read and understood all recommended procedures. Use only proper tools and observe all precautions pertaining to the use of those tools.

**CAUTION: AIR DRYERS EXHAUST AT HIGH PRESSURE.  
PROTECTIVE EYEWEAR SHOULD BE WORN WHILE SERVICING.**

1. Exhaust/drain air system to zero PSI. If air dryer by-pass was installed, open/close valves as necessary and drain air dryer unit by removing signal line from dryer outlet manifold (1/4" line).
2. Remove 1/4" air line from 3 locations at 6009X-010 control valve 6009X-005 tube fittings.
3. Remove 6009X-010C retaining nut from control valve and drop solenoid/timer from unit. Remove timer from solenoid with 1 screw.
4. Remove 6009X-007 #8-32 screws at 3 locations connecting control valve to HD2 manifold body and drop valve.

5. Remove fittings from control valve, verify serviceability of fittings and exhaust mufflers. Replace as necessary. It is recommended that (2) 6009X-006 exhaust mufflers be replaced with valve.
6. Install fittings and mufflers on valve and replace in reverse order.

### **6009X-011 Timer (HD2 only)**



1. Remove 6009X-010C retaining nut from control valve and drop solenoid/timer from unit. Remove timer from solenoid with 1 screw.
2. Replace timer and install in reverse order.

### **TESTING THE UNIT**

1. Check air tanks for accumulated moisture and drain as required.
2. Start air compressor and allow system pressure to build until cut out pressure.
3. Check all connections for air leaks.

NOTE: After air dryers exhausts, air will continue to bleed out of exhaust port until regeneration timed cycles is completed

4. NOTE: A soap solution works very well for locating leaks.

## **WARRANTY**

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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## ***DRAWINGS***

The following drawings are supplied with this manual:

6001A-001 thru -006

6002A-001, 002

6003A-001, 002

6005A-001

6007A-001, 002

6007E-001, 002

6007M-001

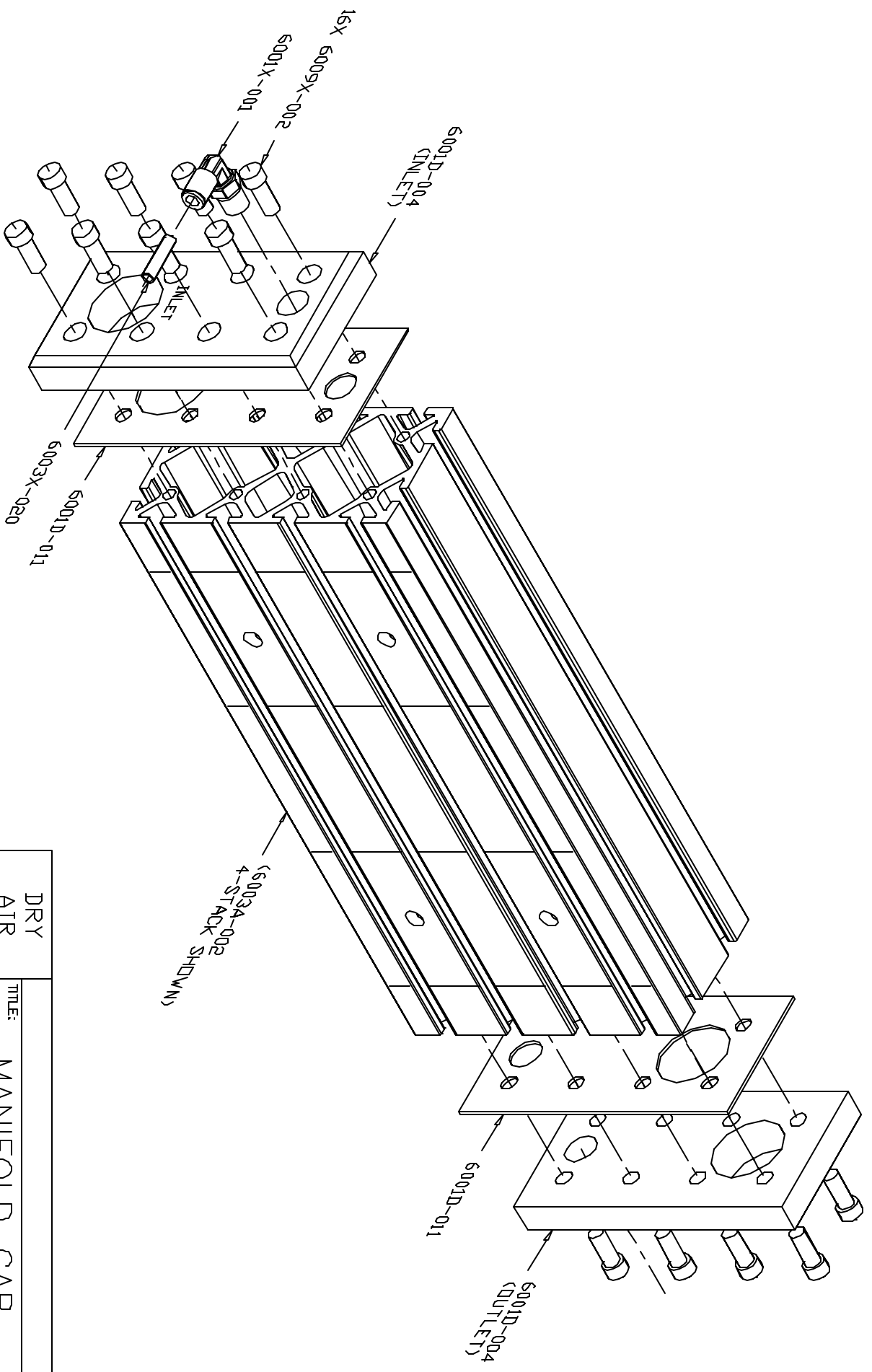
6009A-001, 002

6016A-001

XL76

Drawings can be beneficial when referencing maintenance procedures in this manual. System troubleshooting and replacement parts procurement can also be facilitated with the following drawings:

REV	DATE	DESCRIPTION

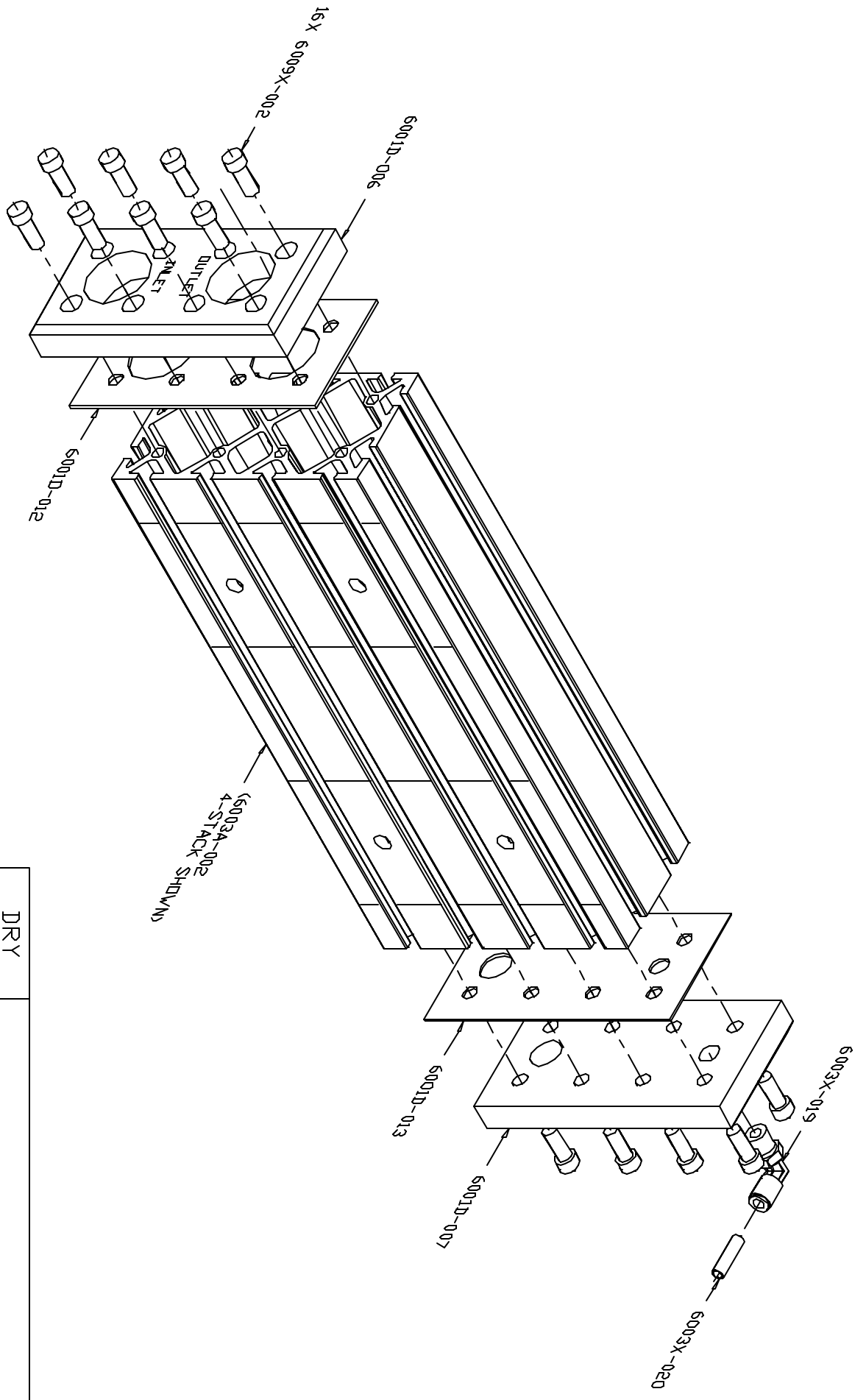


NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: MANIFOLD CAP ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #: 6001A	DASH #: 001
XXXX +/- .0050	ANGLES +/- .0DEG	SCALE: NONE	SHEET 001
EXCEPT AS NOTED		REV	-



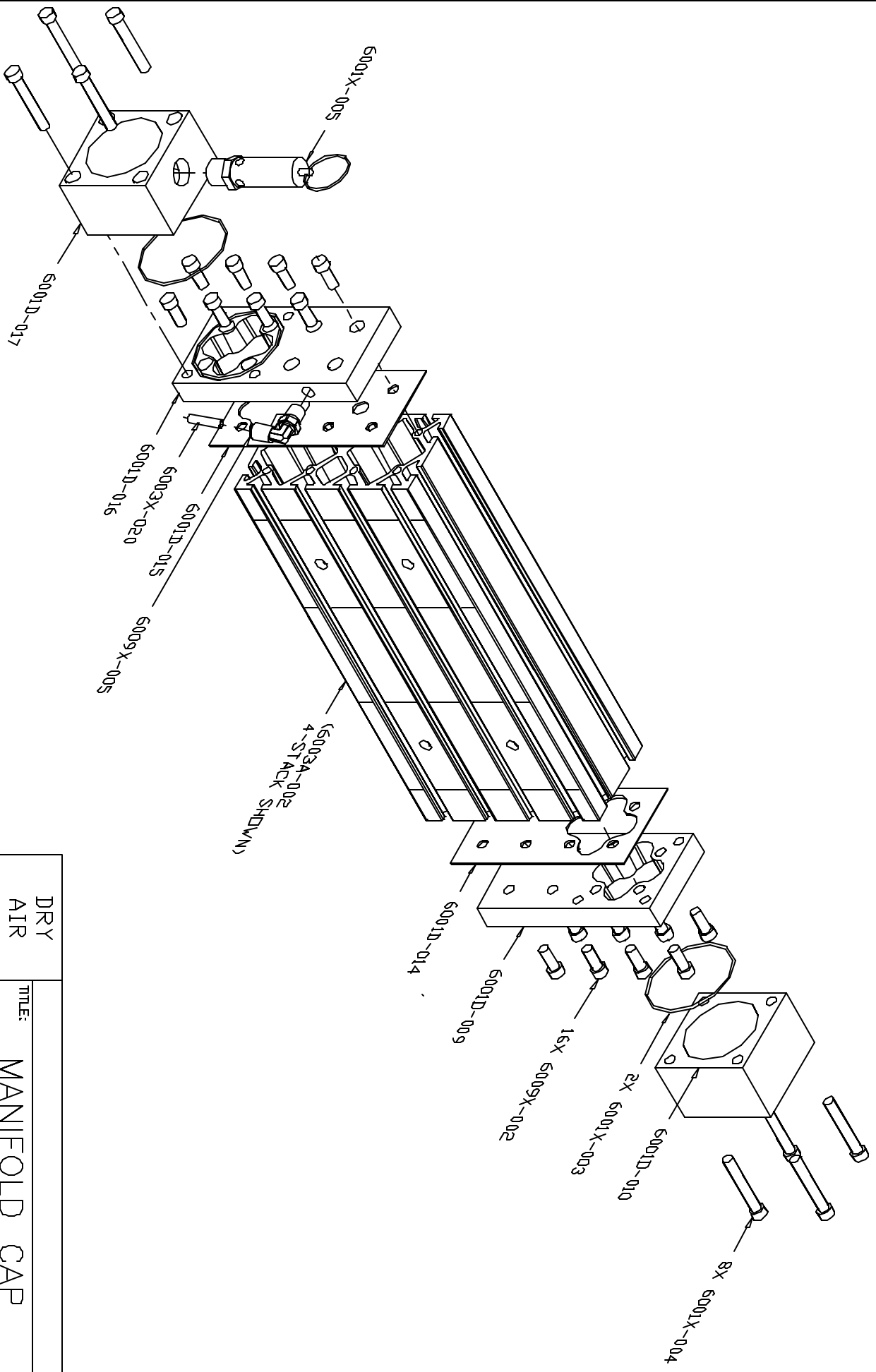
REV	DATE	DESCRIPTION



NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: MANIFOLD CAP ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #: 6001A	DASH #: 002
XXXX +/- .0050	ANGLES +/- .1DEG	SCALE: NONE	SHEET 002
EXCEPT AS NOTED		REV	-

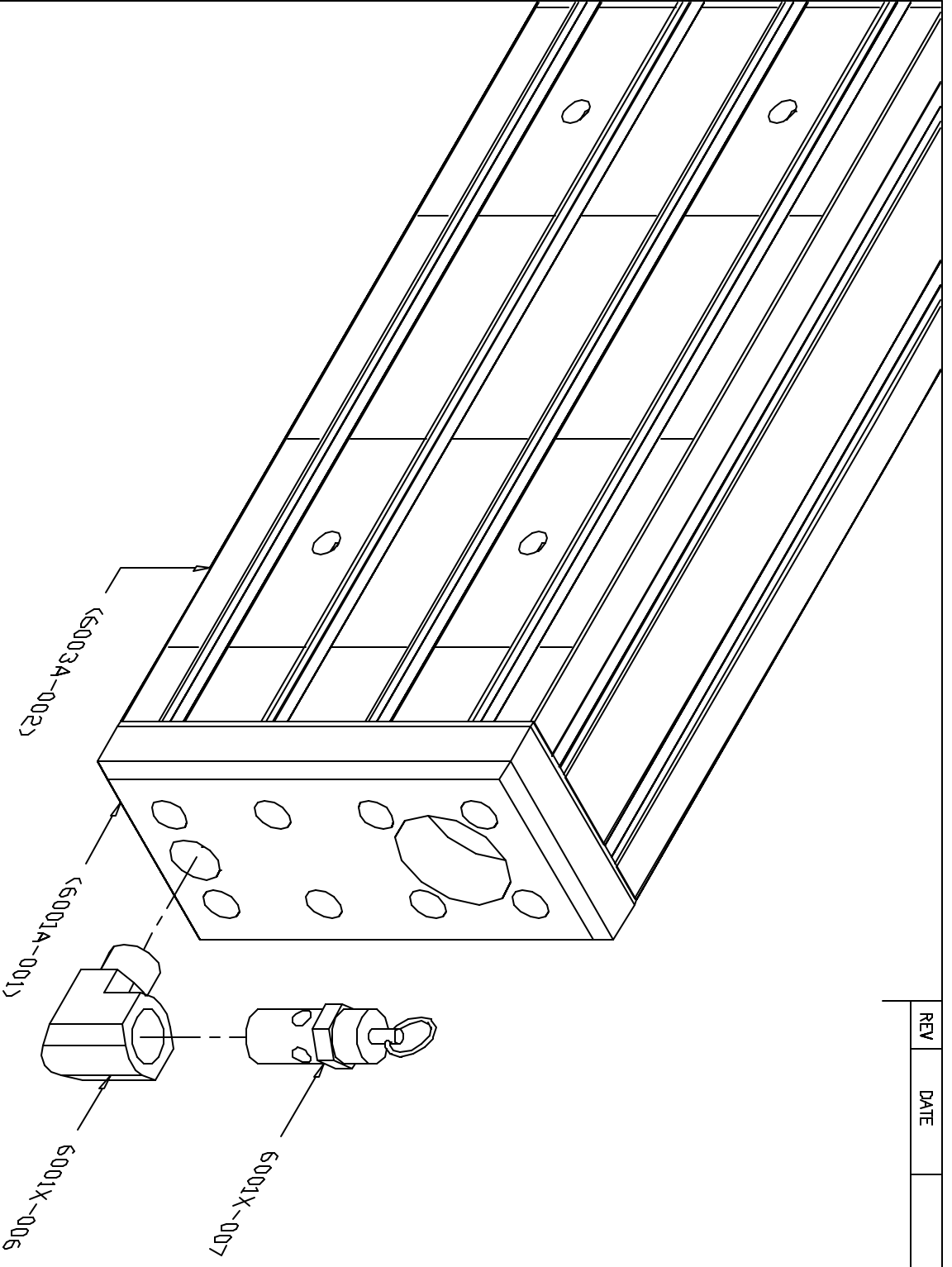
REV	DATE	DESCRIPTION



NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

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XX +/- .03	XXX +/- .010	SIZE DWG #: 6001A	DASH #: 003
XXXX +/- .0050	ANGLES +/- .0DEG	SCALE: NONE	SHEET 003
EXCEPT AS NOTED		REV: -	

REV	DATE	DESCRIPTION

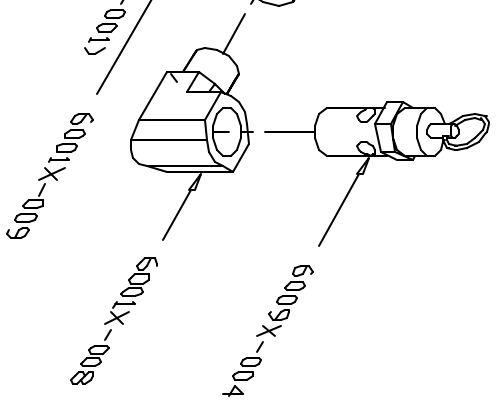
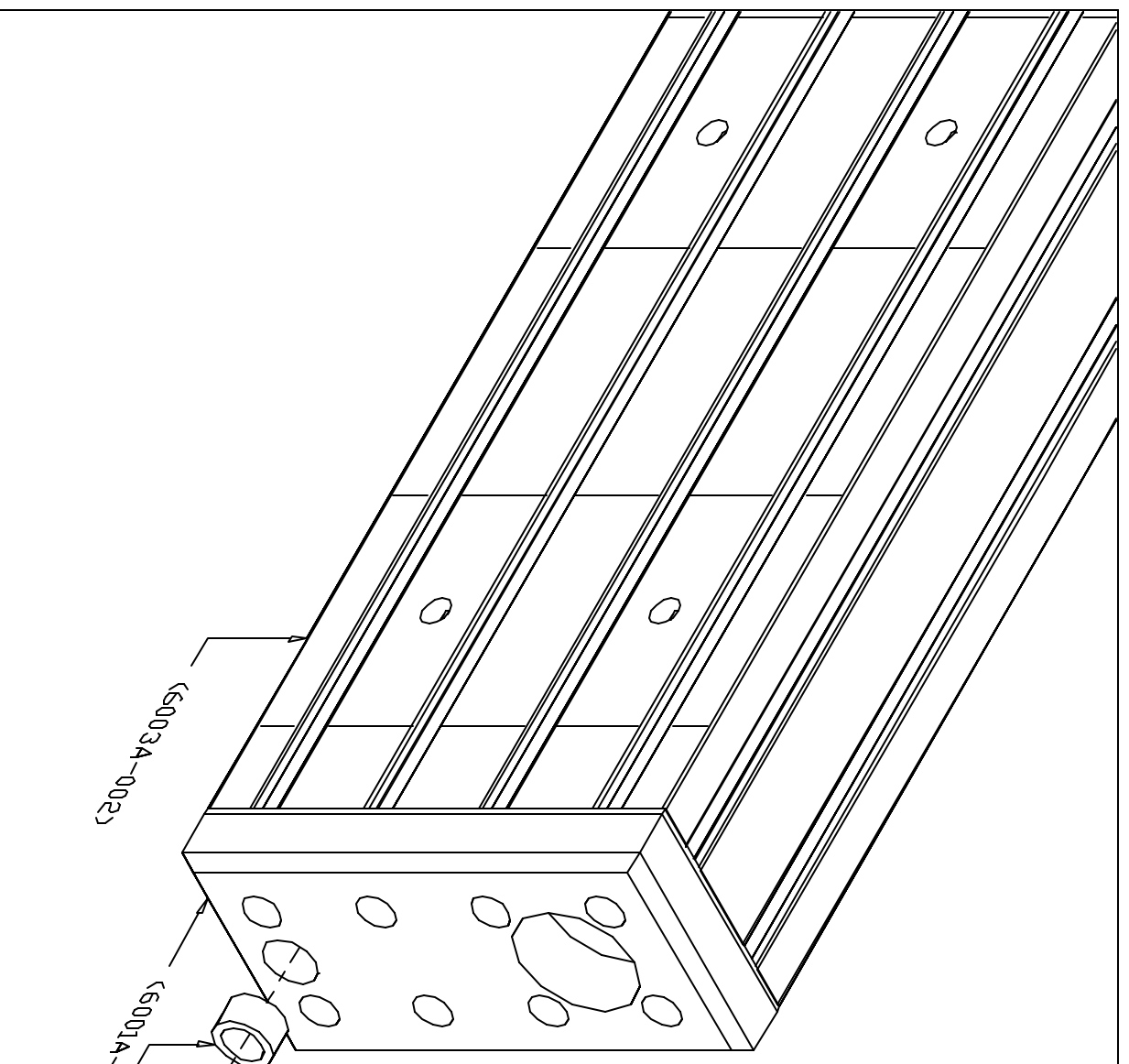


NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE:	
3/8" PRESSURE RELIEF ASSEMBLY		SIZE DWG #:	
6001A		DASH #:	
A		004	
SCALE: NONE		SHEET #:	
		004	

XX +/- .03  
 XXX +/- .010  
 .XXXX +/- .0050  
 ANGLES +/- .1DEG  
 EXCEPT AS NOTED

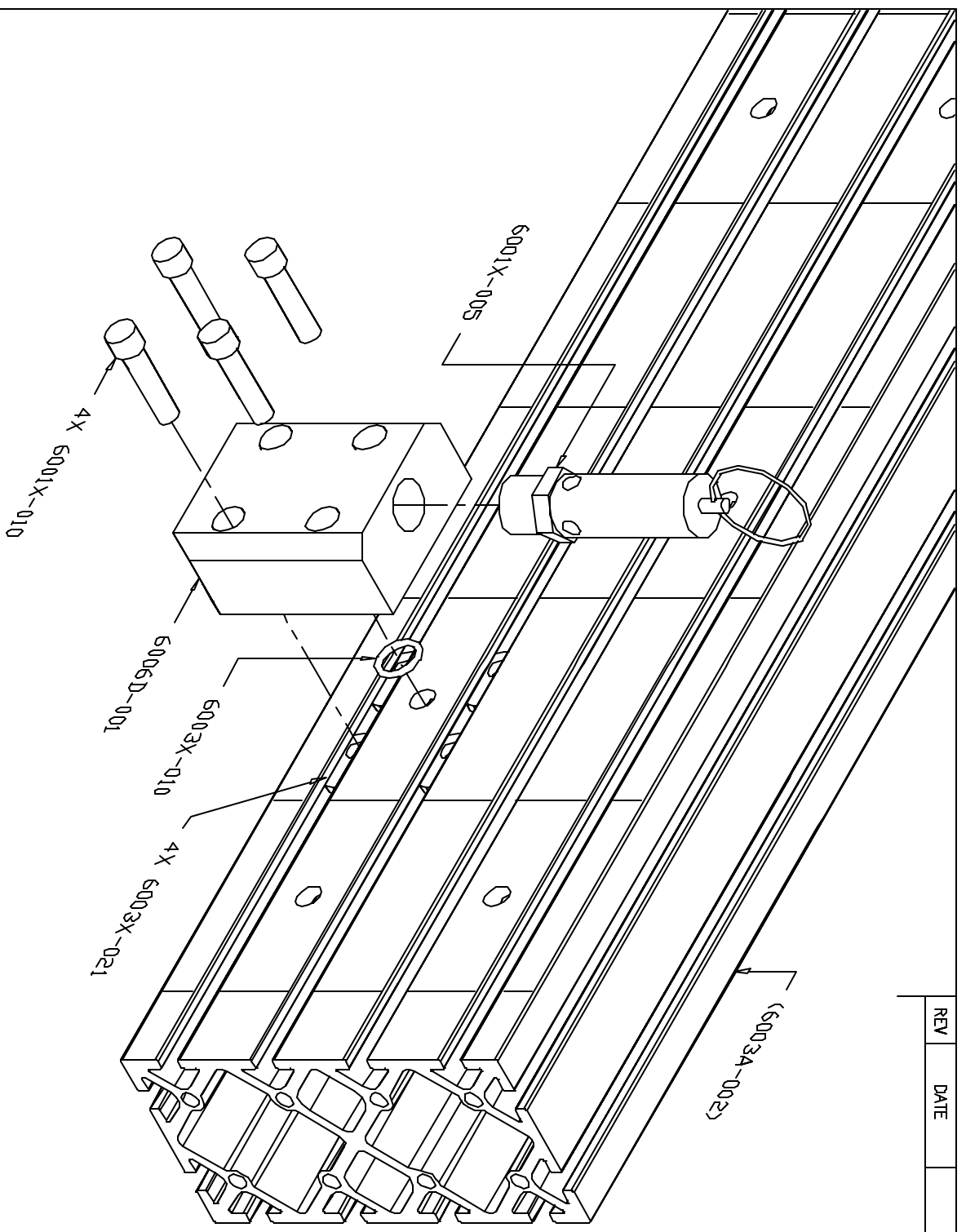
REV	DATE	DESCRIPTION



NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS	TITLE: 1/4" PRESSURE RELIEF ASSEMBLY
XX +/- .03 XXX +/- .010 XXXX +/- .0050 ANGLES +/- .1 DEG EXCEPT AS NOTED	SIZE DWG #: A 6001A DASH #: 005 REV SCALE: NONE SHEET 005

REV	DATE	DESCRIPTION

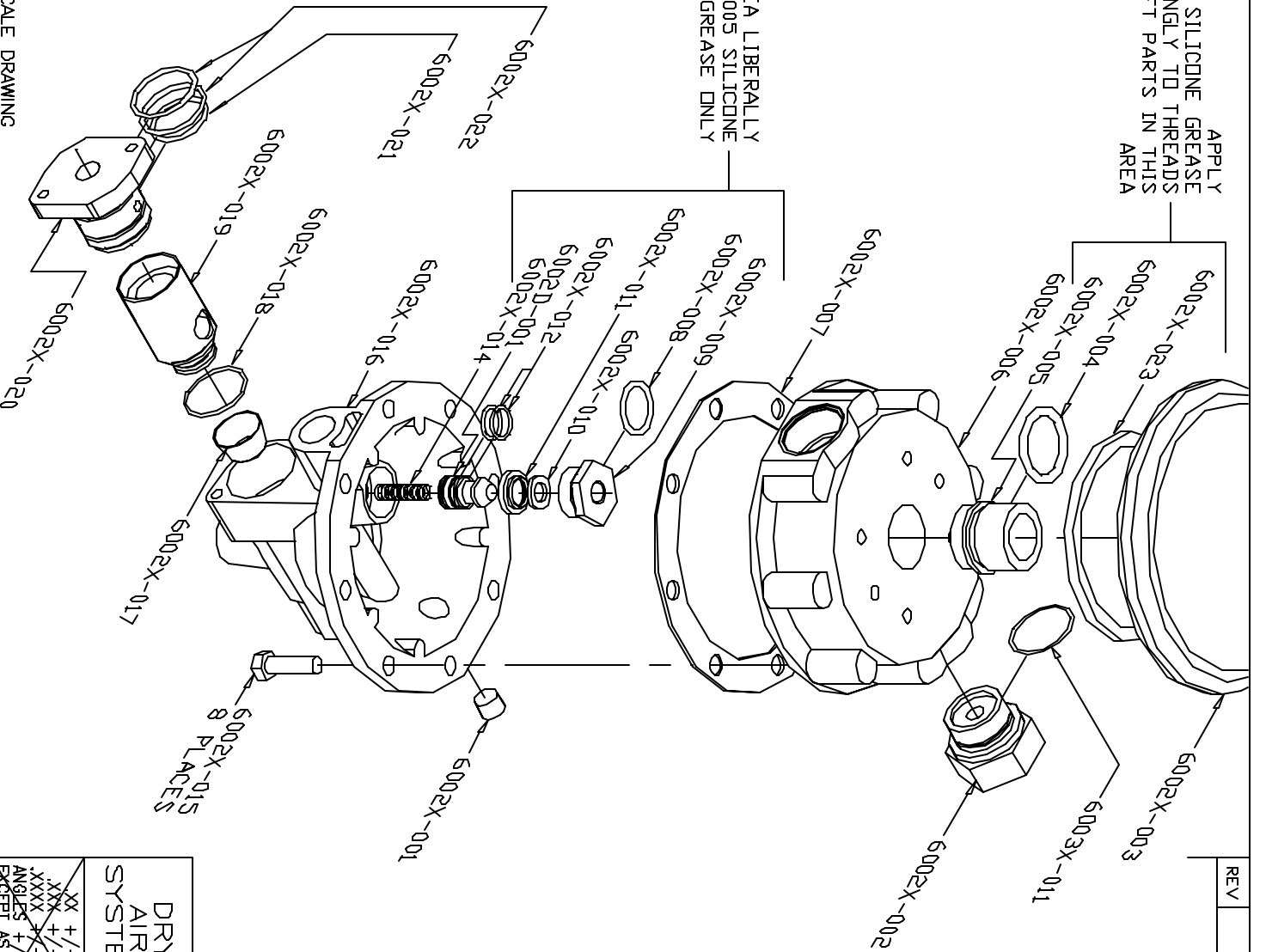


NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: 1/2" PRESSURE RELIEF ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #:	DASH #:
XXXX +/- .0050	ANGLES +/- .1DEG	A 6001A	006
EXCEPT AS NOTED		SCALE: NONE	SHEET 006

APPLY  
GREASE  
SPARINGLY TO THREADS  
AND SOFT PARTS IN THIS  
AREA

PACK THIS AREA LIBERALLY  
WITH 6002X-005 SILICONE  
GREASE ONLY



NOTE: DO NOT SCALE DRAWING

REV	DATE	DESCRIPTION

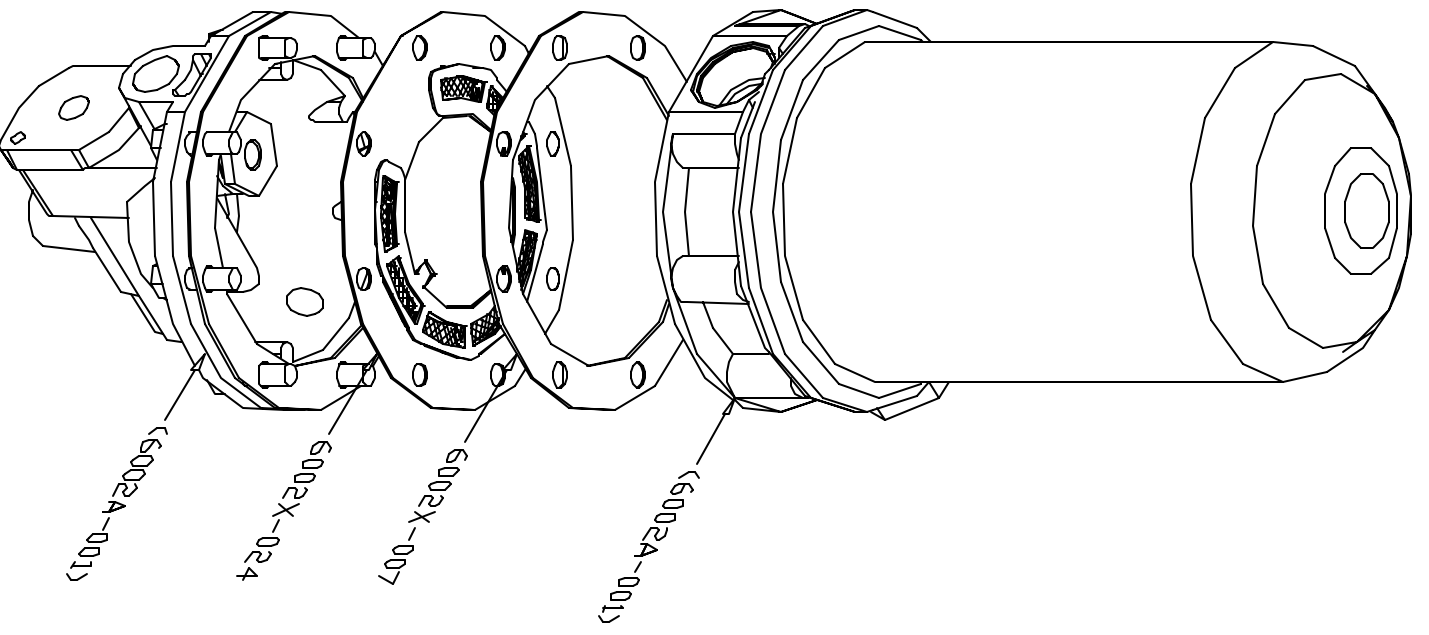
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TITLE: DRIER		SIZE DWG #: 6002A	DASH #: 001
SCALE: NONE		SHEET 001	REV -

XX +/- .02	XXX +/- .005	XXXX +/- .0025	ANGLES +/- .1 DEG
EXCEPT AS NOTED			

REV

DATE

DESCRIPTION



NOTE: DO NOT SCALE DRAWING

DRY  
AIR  
SYSTEMS

TITLE: OIL SEPARATOR

MATERIAL: n/a

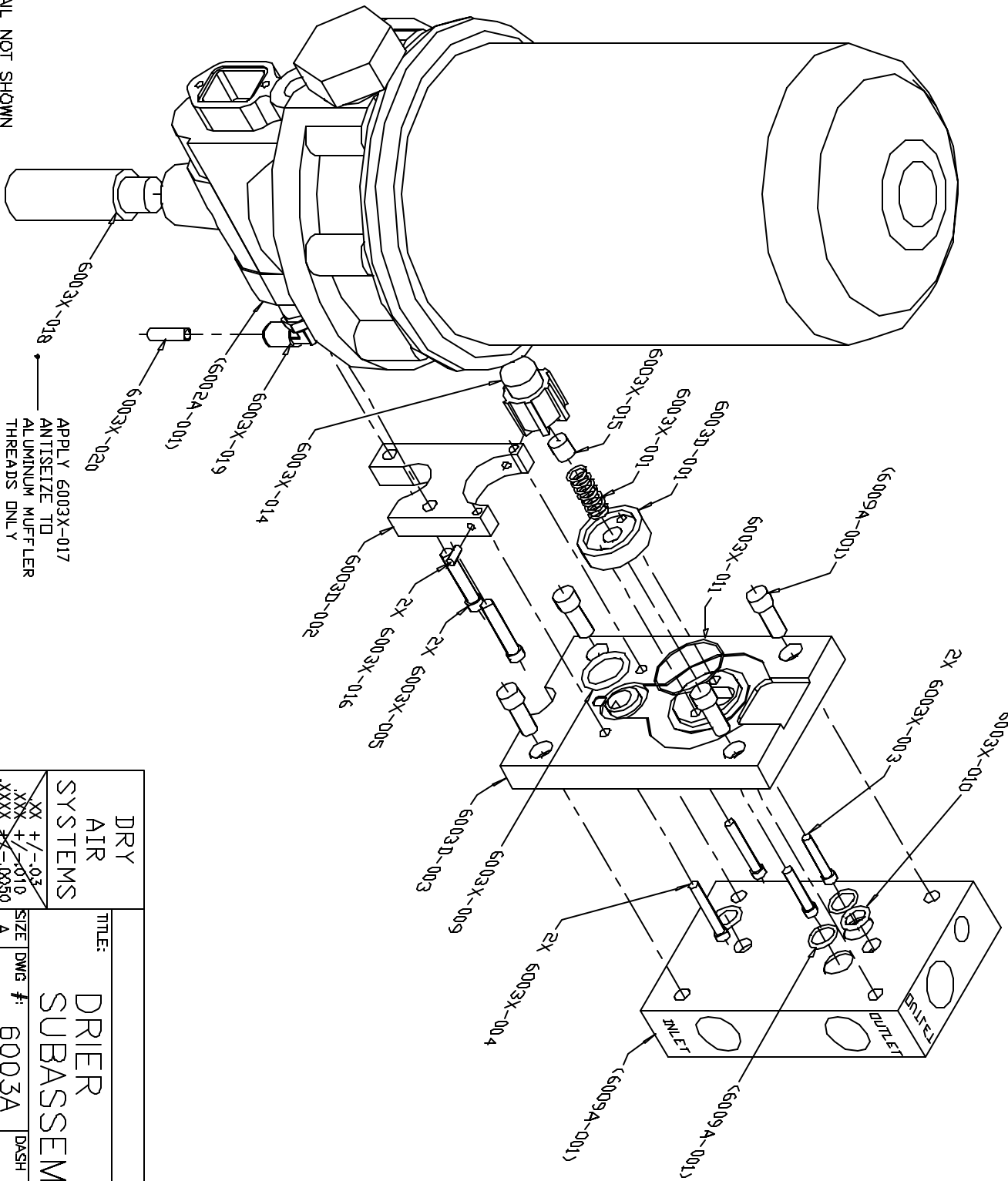
HEAT TREAT: n/a

~~XX +/- .02~~  
~~XXX +/- .005~~  
~~XXXX +/- .0025~~  
~~ANGLES +/- .1 DEG~~  
~~EXCEPT AS NOTED~~

SIZE	DWG #:	DASH #:	REV
A	6002A	002	-
SCALE:	NONE	SHEET	002

QTY 1+

REV	DATE	DESCRIPTION

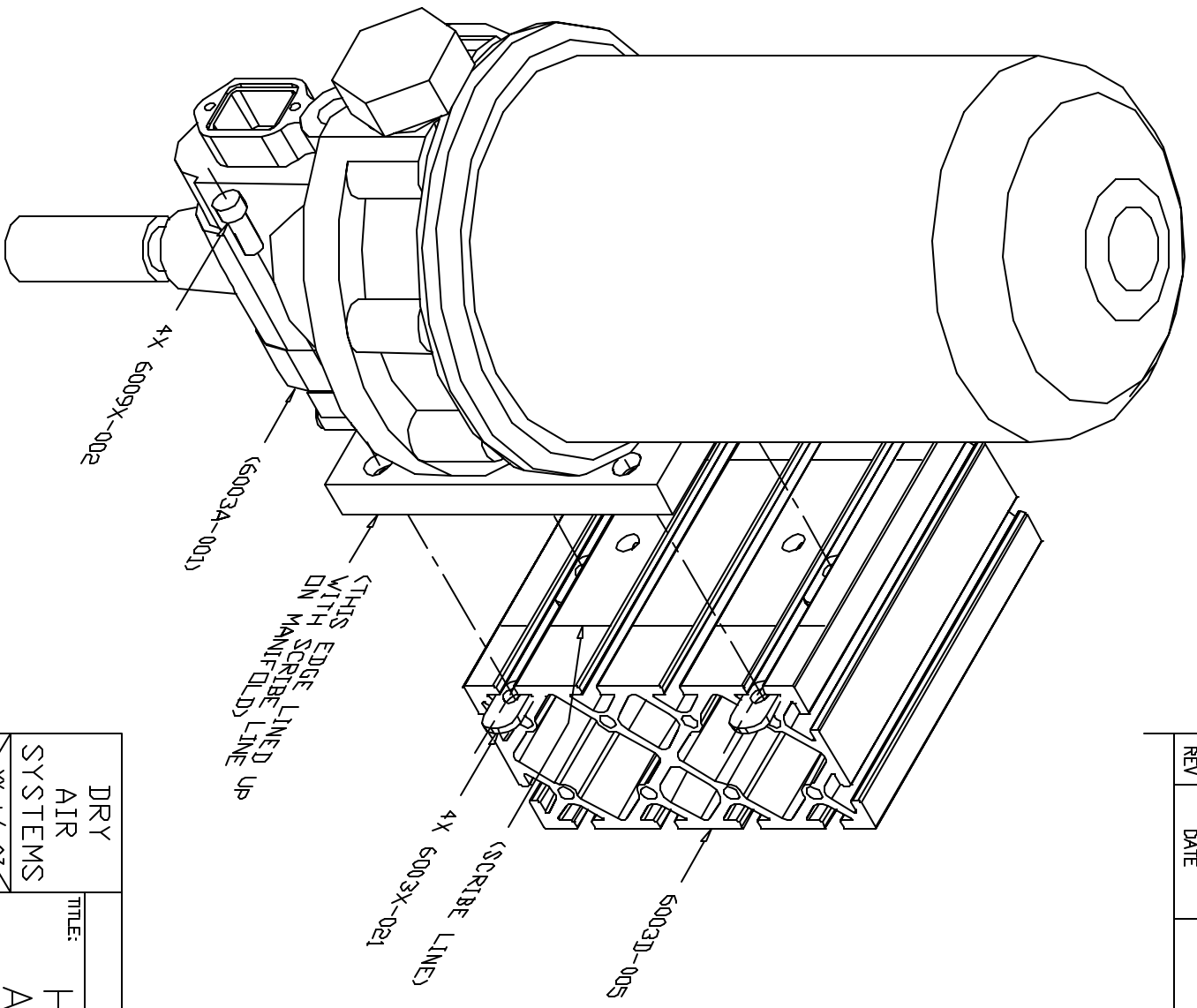


NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: DRIER SUBASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #: 6003A	DASH #: 001
XXXX +/- .0050	ANGLES +/- .1 DEG	SCALE: NONE	REV: -
EXCEPT AS NOTED		SHEET: 001	



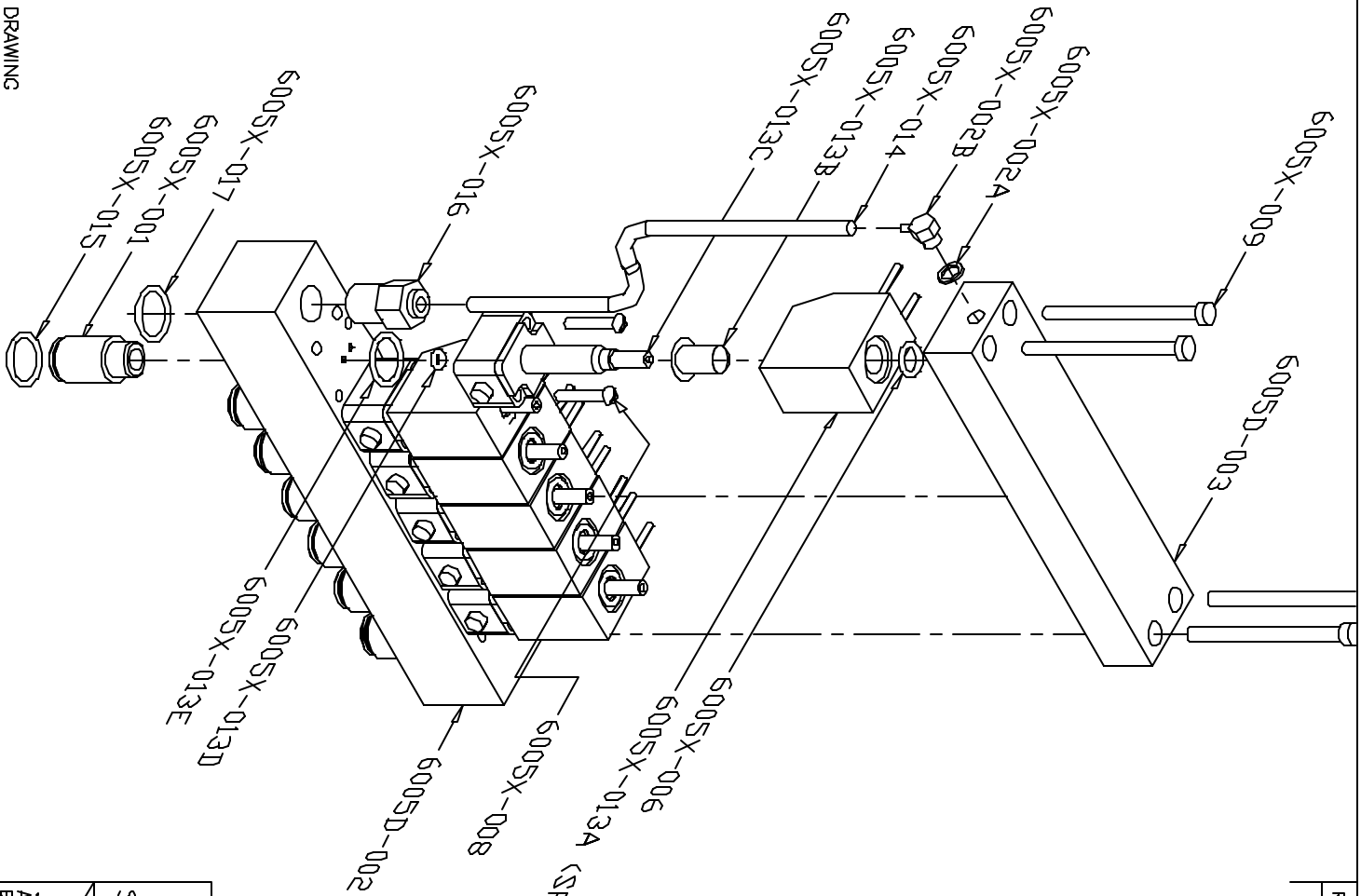
REV	DATE	DESCRIPTION



NOTE: SOME DETAIL NOT SHOWN  
 NOTE: MULTIPLY ITEM QUANTITIES BY # DRIERS, EXCEPT QTY 1 OF 6003D-005  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: HD3+ DRIER ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #:	DASH #:
XXXX +/- .0050	ANGLES +/- .1DEG	A	6003A 002
EXCEPT AS NOTED		SCALE: NONE	REV: -
		SHEET	002

QTY 1



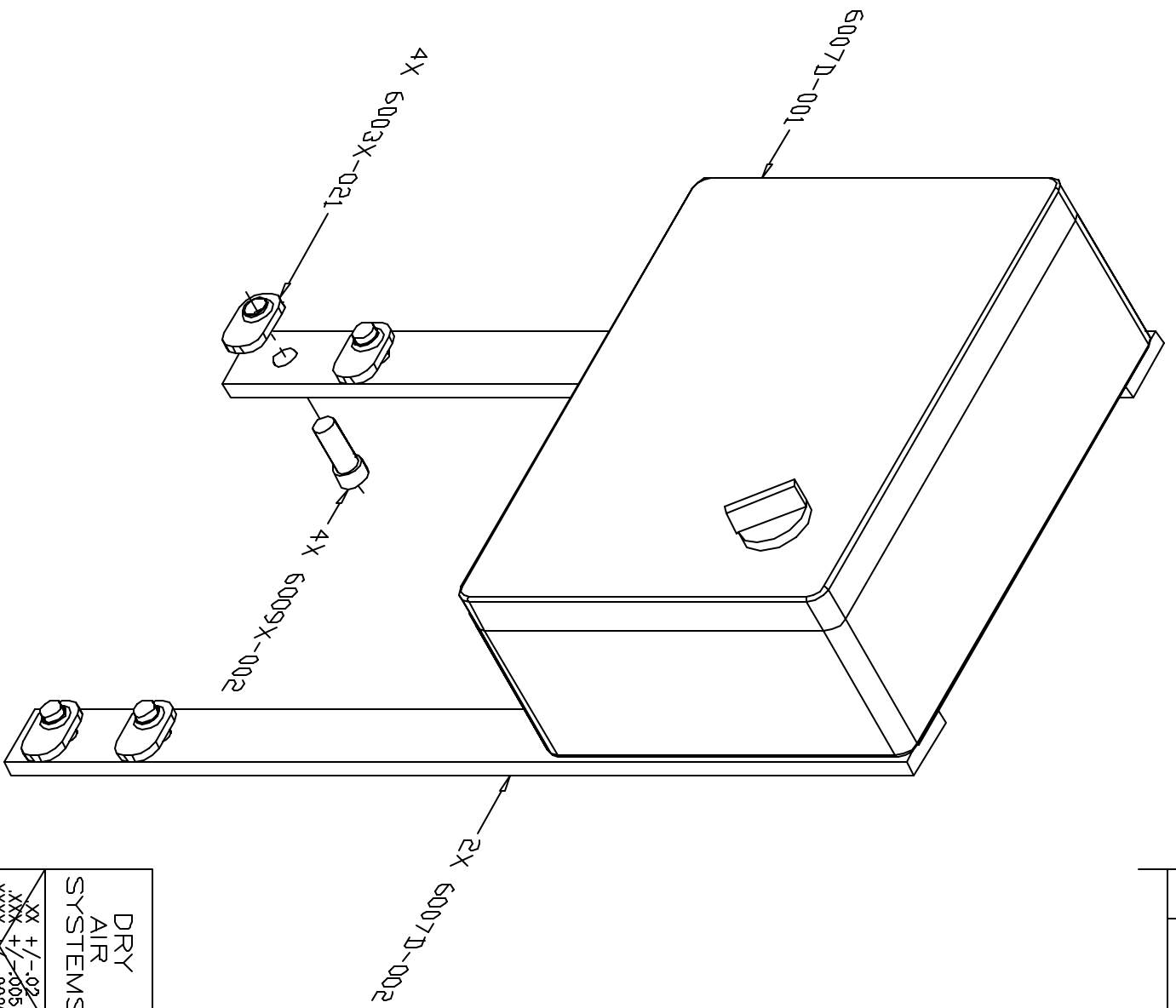
REV	DATE	DESCRIPTION

6005X-013A (SPECIFY VOLTAGE)

DRY AIR SYSTEMS XX +/- .02 XXX +/- .005 XXXX +/- .0025 ANGLES +/- 1 DEG EXCEPT AS NOTED		MATERIAL: no HEAT TREAT: no
TITLE: PILOT VALVE MANIFOLD		SIZE DWG #: 6005A DASH #: 001 REV: -
SCALE: NONE	SHEET 001	

NOTE: DO NOT SCALE DRAWING

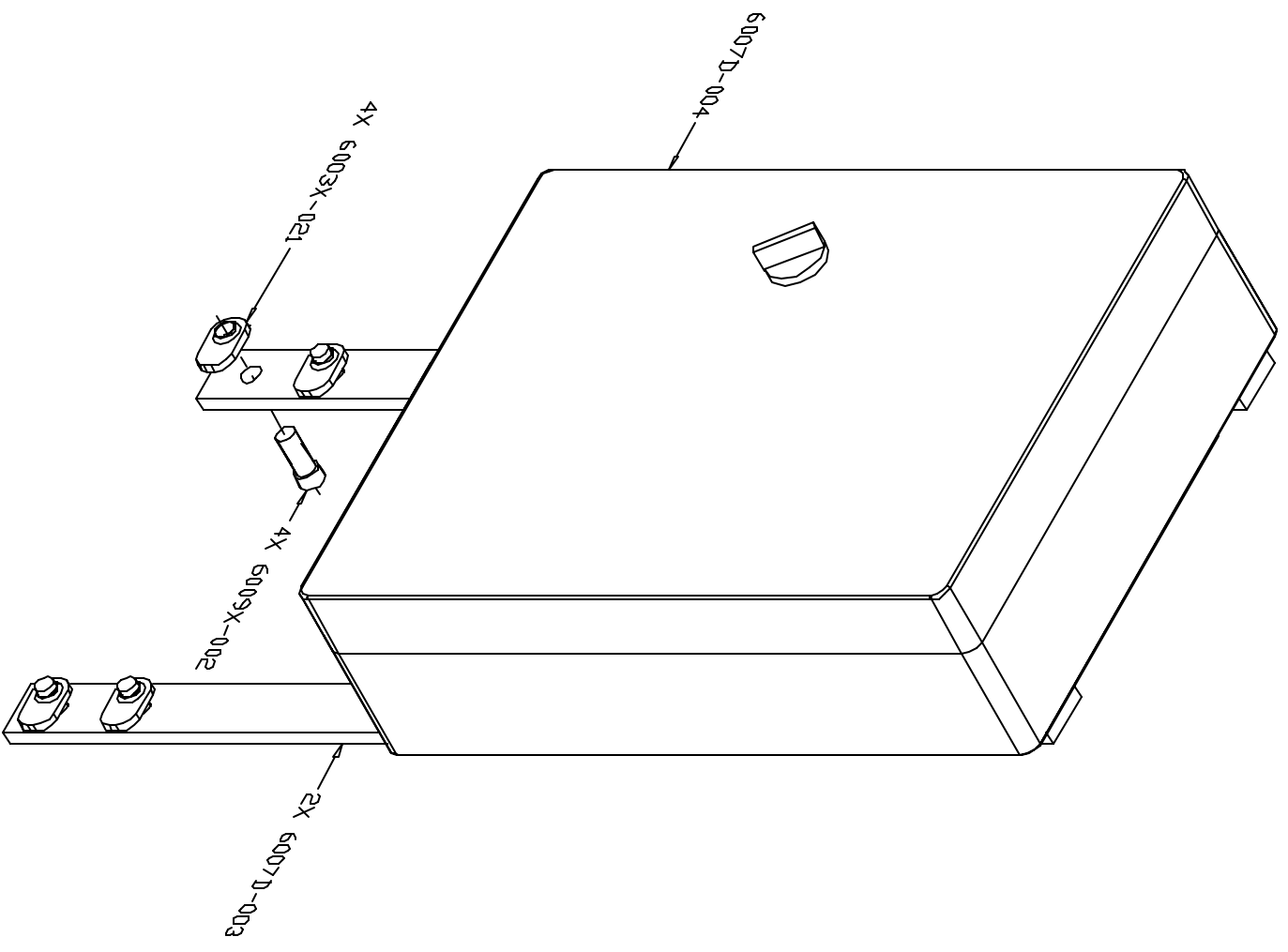
REV	DATE	DESCRIPTION



NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS XX +/- .02 XXX +/- .005 .XXXX +/- .0025 ANGLES +/- DEG EXCEPT AS NOTED		MATERIAL: C.R.S. HEAT TREAT: n/a	
TITLE: STANDARD CONTROL BOX			
SIZE	DWG #:	DASH #:	REV
A	6007A	001	-
SCALE:	NONE	SHEET	001

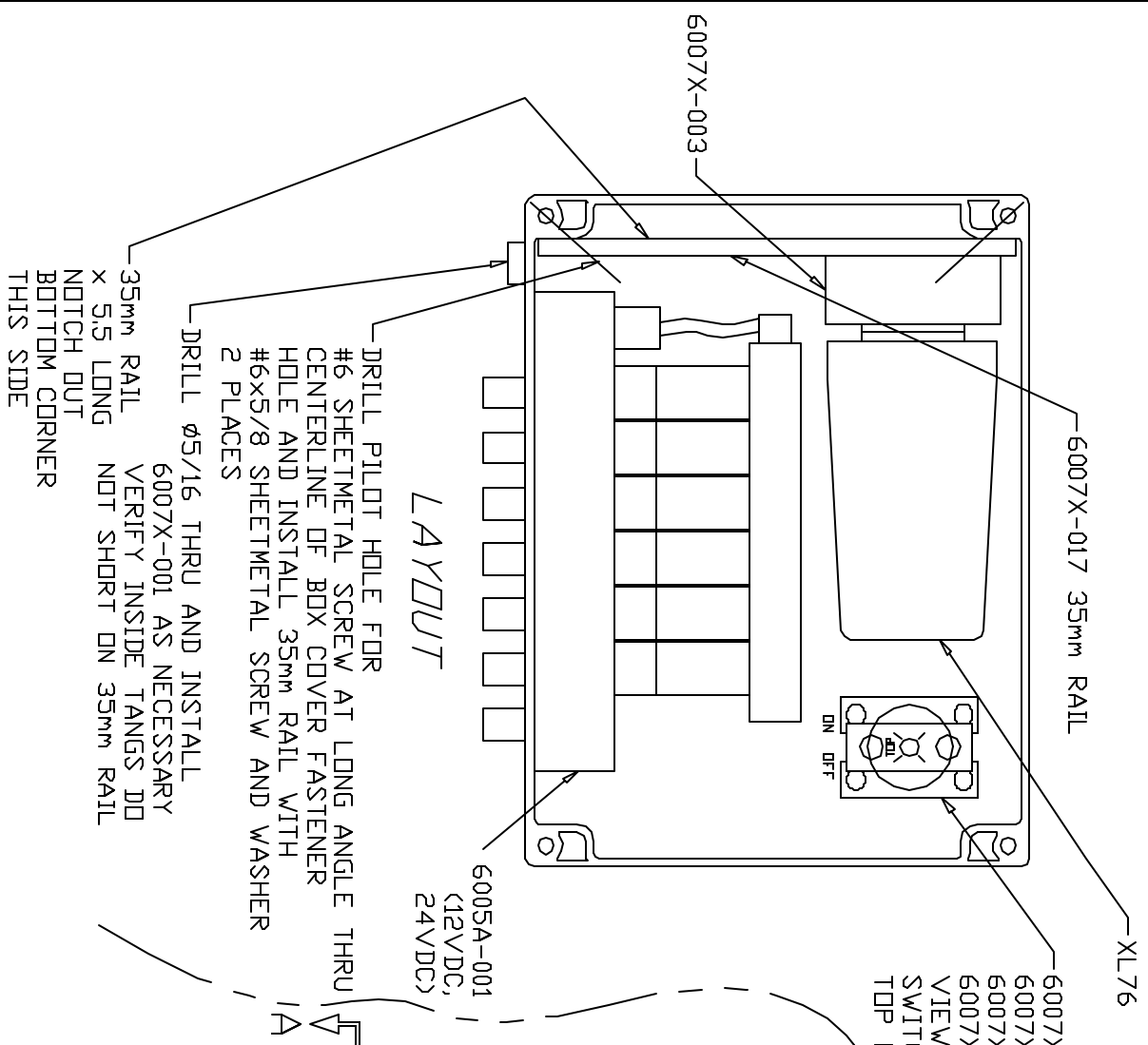
REV	DATE	DESCRIPTION



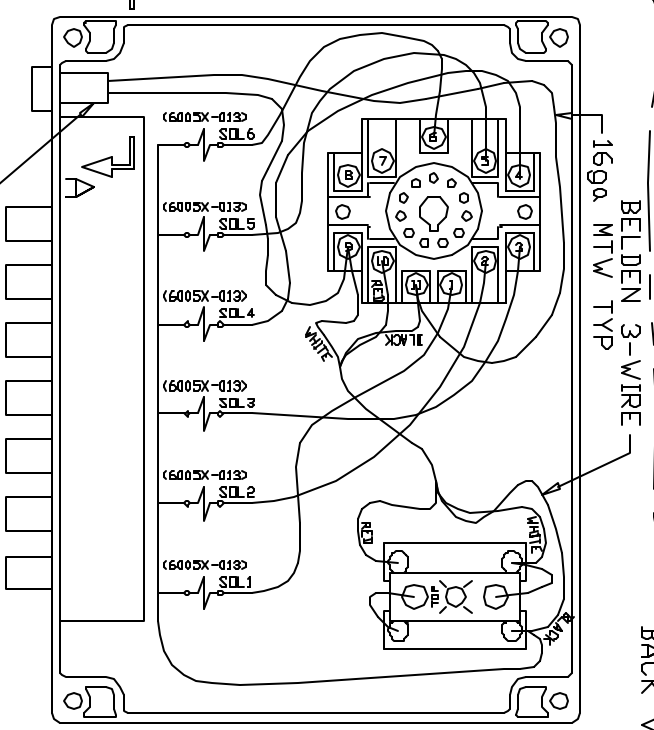
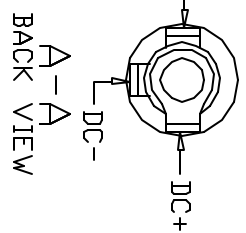
NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS XX +/- .02 XXX +/- .005 .XXXX +/- .0025 ANGLES +/- DEG EXCEPT AS NOTED		MATERIAL: n0 HEAT TREAT: n0	
TITLE: INDUSTRIAL CONTROL BOX		SIZE: A DWG #: 6007A DASH #: 002 REV: -	SCALE: NONE SHEET: 002

REV	DATE	DESCRIPTION
B	02/24/4	ADDED INFORMATION SUFFICIENT TO BUILD ELECTRICAL BOX



- 6007X-005 SWITCH
- 6007X-012 LEGEND PLATE
- 6007X-013 BULB (12VDC)
- 6007X-014 BULB (24VDC)
- VIEW LOOKING DOWN THRU BOX COVER SWITCH IS INSTALLED UPSIDE DOWN, NOTE TOP ON SWITCH IS UPSIDE DOWN



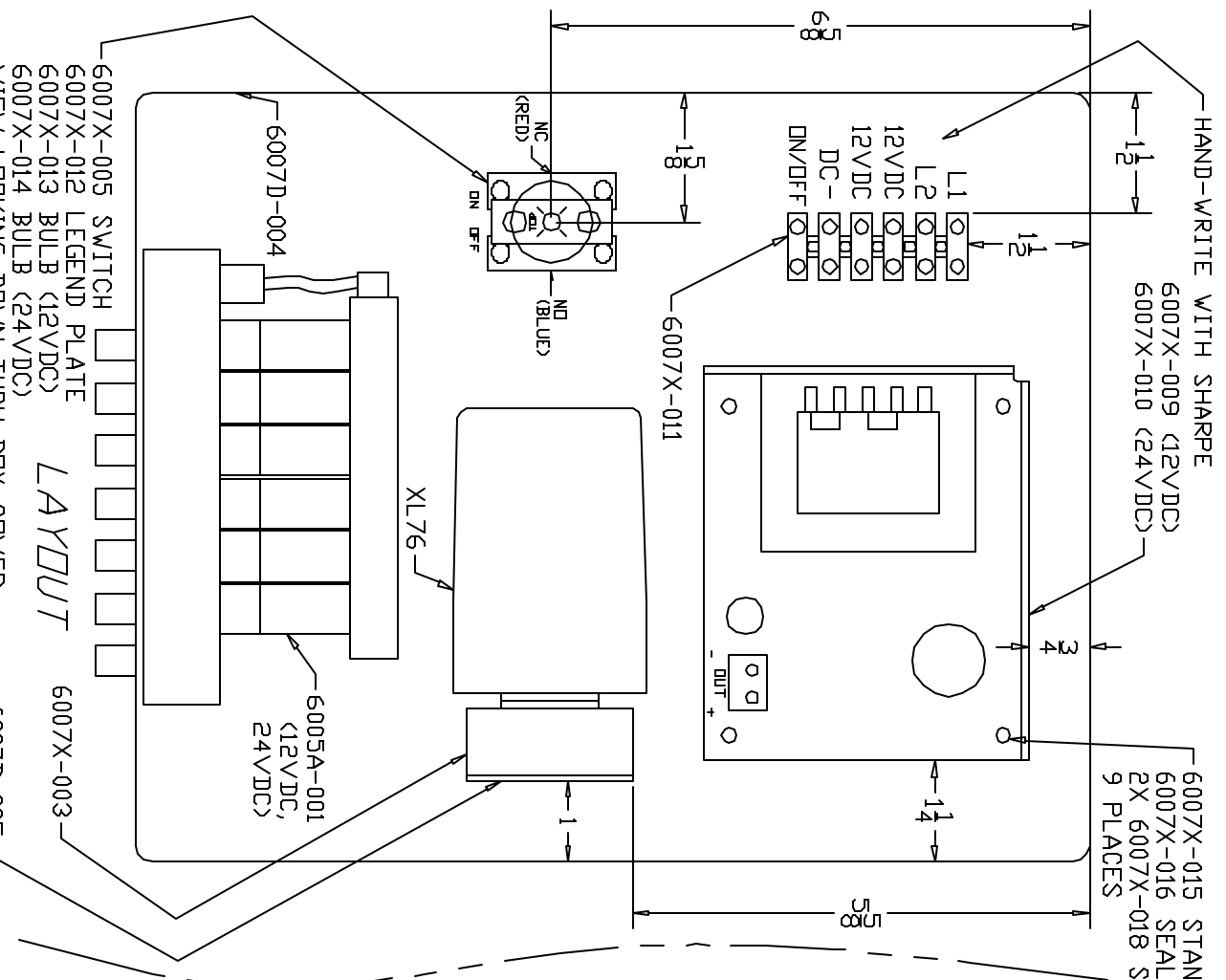
6007X-001, SOLDER ACCORDING TO A-A

ELECTRICAL

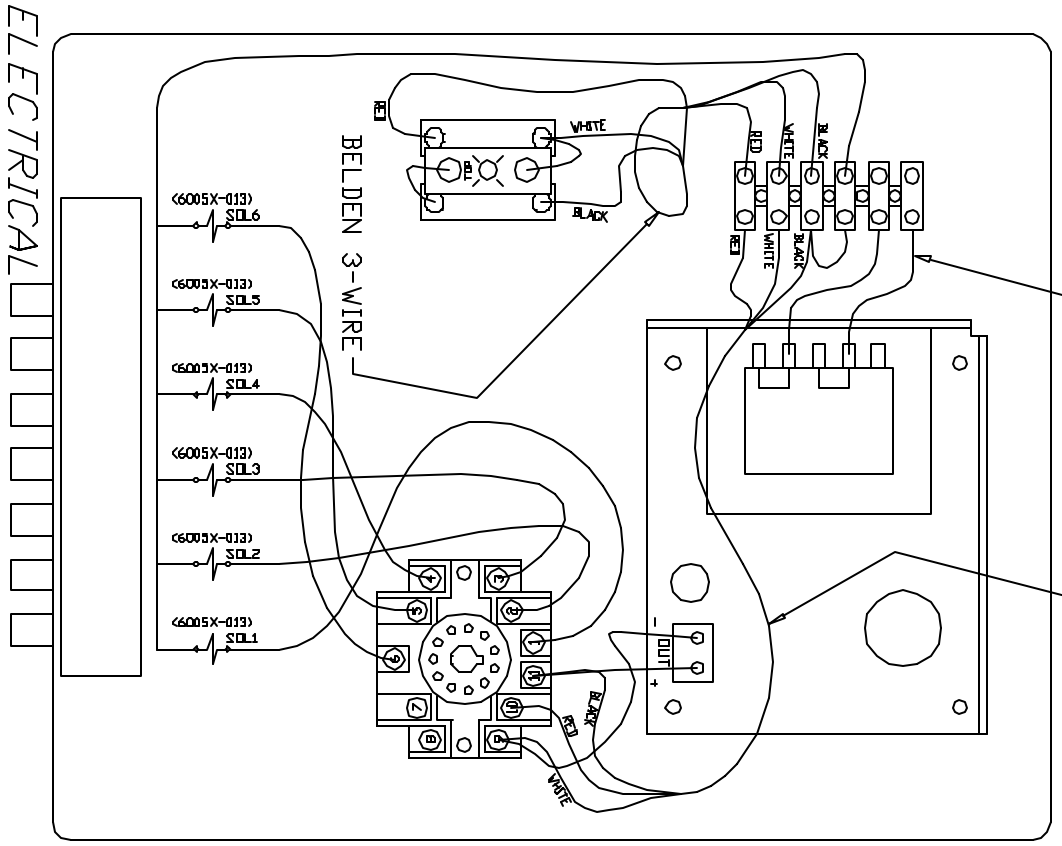
NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: INDUSTRIAL CONTROL BOX SCHEMATIC	
MATERIAL: n/a		SIZE DWG #: 6007E DASH #: 001	
XX +/- .02		SCALE: NONE	
XXX +/- .005		SHEET 001	
XXXX +/- .0025		REV B	
ANGLES +/- .1DEG			
EXCEPT AS NOTED			

REV	DATE	DESCRIPTION
A	02/24/4	ADDED INFORMATION SUFFICIENT TO BUILD ELECTRICAL BOX



6007X-005 SWITCH  
 6007X-012 LEGEND PLATE  
 6007X-013 BULB (12VDC)  
 6007X-014 BULB (24VDC)  
 VIEW LOOKING DOWN THRU BOX COVER  
 SWITCH IS INSTALLED UPSIDE DOWN, NOTE  
 TDP DN SWITCH IS UPSIDE DOWN



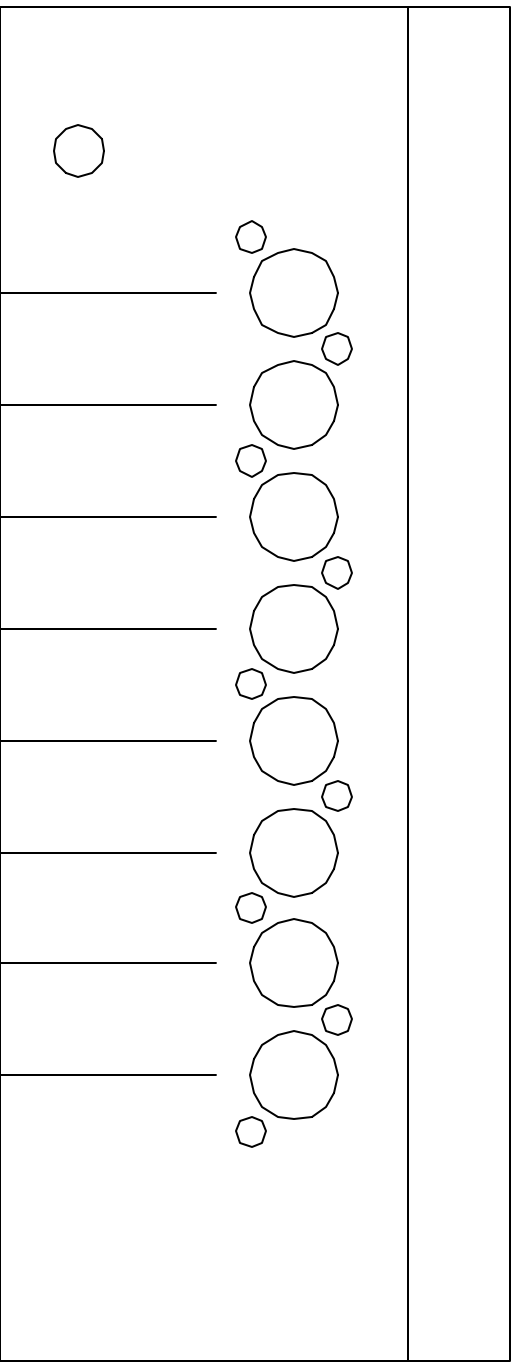
ELECTRICAL

NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: INDUSTRIAL CONTROL BOX SCHEMATIC	
MATERIAL: n/a		SIZE DWG #: 6007E DASH #: 002	
XX +/- .02	XXX +/- .005	SCALE: NONE	SHEET 002
XXXX +/- .0025	XXXX +/- .0025		REV A
ANGLES +/- .1 DEG			
EXCEPT AS NOTED			

QTY 1

REV DATE DESCRIPTION



3--STACK	E	3	-	-	-	2	1	S
4--STACK	H	4	3	-	-	2	1	P
5--STACK	U	5	4	-	-	3	2	L
6--STACK	T	6	5	4	3	2	1	Y

DRYER

MATERIAL: -

DRY AIR SYSTEMS

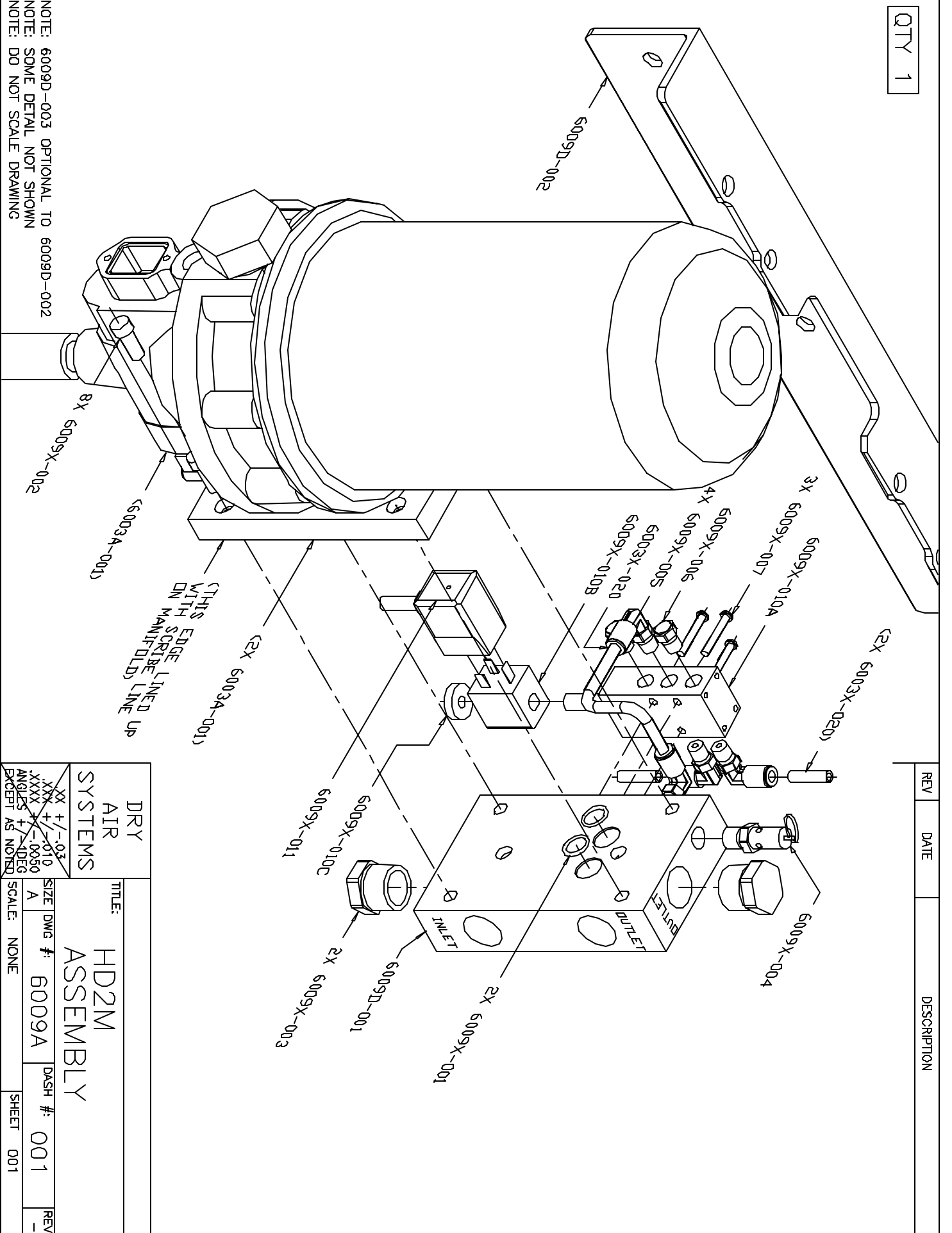
TITLE: CONTROL BOX - MISCELLANEOUS

XX +/- .03	SIZE	DWG #:	DASH #:	REV
XXX +/- .010	A	6007M	001	-
XXXX +/- .0050				
ANGLES +/- .1 DEG	SCALE:	NONE	SHEET	001
EXCEPT AS NOTED				

NOTE: DO NOT SCALE DRAWING

QTY 1

REV	DATE	DESCRIPTION



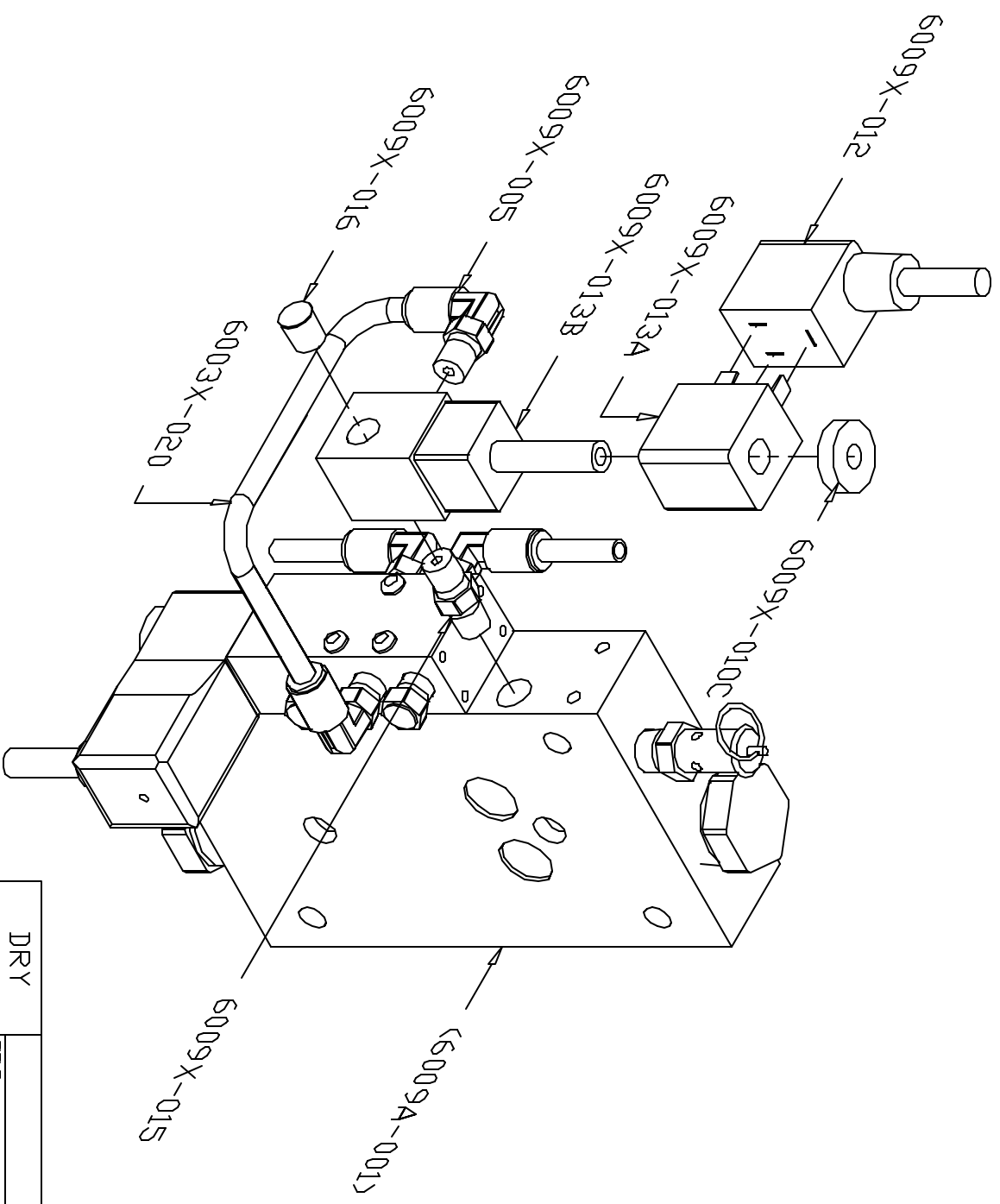
NOTE: 6009D-003 OPTIONAL TO 6009D-002  
 NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: HD2M ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #: 6009A	DASH #: 001
XXXX +/- .0050	ANGLES +/- .1DEG	SCALE: NONE	SHEET 001
EXCEPT AS NOTED		SCALE: NONE	SHEET 001



QTY 1

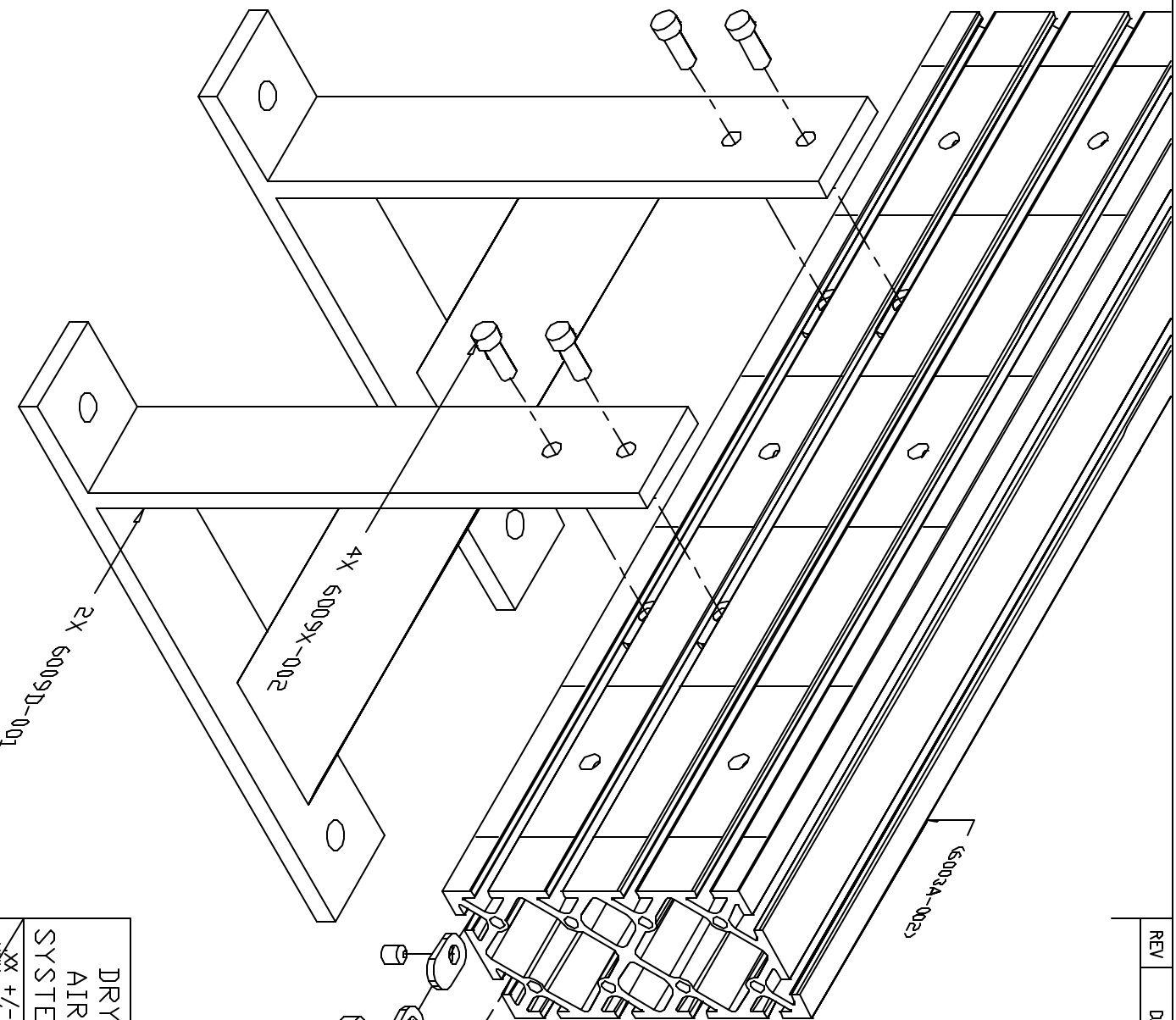
REV DATE DESCRIPTION



NOTE: SPECIFY PIGTAIL OR MALE RECEPTACLE ON 6009X-012  
 NOTE: NECESSARY TO SPECIFY VOLTAGE ON 6009X-013B  
 NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: HD2M-IDS ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE A	DWG #: 6009A
XXXX +/- .0050	ANGLES +/- .1DEG	SCALE: NONE	DASH #: 002
EXCEPT AS NOTED		SHEET 002	REV -

REV	DATE	DESCRIPTION



NOTE: SOME DETAIL NOT SHOWN  
 NOTE: DO NOT SCALE DRAWING

DRY AIR SYSTEMS		TITLE: DRIER MOUNT ASSEMBLY	
XX +/- .03	XXX +/- .010	SIZE DWG #: 6016A	DASH #: 001
XXXX +/- .0050	ANGLES +/- .1DEG	SCALE: NONE	REV: -
EXCEPT AS NOTED		SHEET	001

# XL76A

The XL76 valve sequencer will sequence up to 6 valves, holding each valve on for 45 seconds. A stop input provides a means of stopping operation and resetting the sequence. An internal set of jumpers sets the number of valves to be sequenced from 3 - 6.

## Power Supply Requirements

Maximum operating voltage: 24 VDC  
 Minimum operating voltage: 8 VDC  
 Maximum current draw : 400 ma

## Timing Sequence

Valve step time: 45 seconds

## Stop Input ratings

Maximum overload voltage: 250 VAC

## Valve drive output ratings

Maximum drive current: 250 ma per channel  
 Maximum pulse current: 400 ma per channel  
 Maximum valve control voltage: 24 VDC

Two methods to determine valve drive current :

Valve control voltage / Valve Coil Resistance = drive current

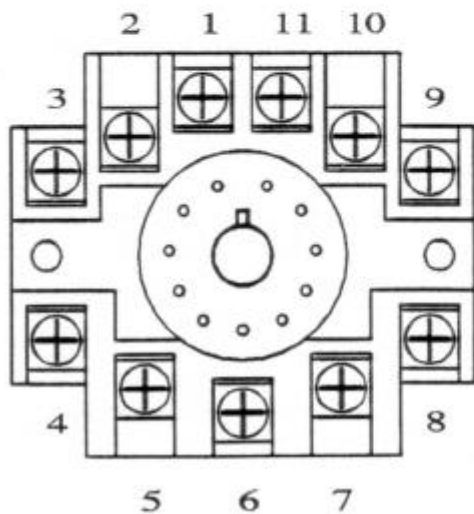
$$12\text{VDC} / 69 \text{ ohms} = 173 \text{ ma}$$

Solenoid rating in watts / Valve control voltage = drive current

$$2.2 \text{ watts} / 12\text{VDC} = 83 \text{ ma}$$

## XL76A Input Wiring:

- 1 Valve 1
- 2 Valve 2
- 3 Valve 3
- 4 Valve 4
- 5 Valve 5
- 6 Valve 6
- 7 Not Used
- 8 Not Used
- 9 System Ground
- 10 Stop Operation
- 11 +12 VDC



## Valve number Settings:

