



POLYURETHANE MACHINERY CORPORATION

Model AD-00 PMC Air Dryer Manual Ref. # MN-05005



REVISION 1.0

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Before installing the PMC Air Dryer and start-up, carefully read all the technical and safety documentation included in this manual. Pay special attention to the information in order to know and understand the operation and the conditions of use of the PMC Air Dryer. All of the information is aimed at improving user safety and avoiding possible breakdowns from the incorrect use of the PMC Air Dryer.



Air Dryer Service Manual

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WARRANTY

Polyurethane Machinery Corporation (hereinafter “PMC”) provides this **LIMITED WARRANTY** (hereinafter “Warranty”) to the original purchaser (hereinafter “Customer”) covering this equipment and the original PMC manufactured accessories delivered with the equipment (hereinafter “Product”) against defects in material or workmanship of the Product (hereinafter “Defect” or “Defective”) for a period of one (1) year from the date of first purchase as shown on the original PMC invoice (hereinafter “Warranty Period”).

If during the Warranty Period under normal use, the Product is suspected by Customer to be Defective in material or workmanship, it is Customer’s responsibility to contact PMC and return the Product to PMC as directed by PMC, freight prepaid. If PMC determines that the Product is Defective and that such Defect is covered by this Warranty, PMC will credit Customer for the reasonable freight charges incurred by Customer in returning the Defective Product to PMC, and PMC (or its authorized agent) will, at PMC’s option, repair or replace the Product, subject to the following:

Original Invoice: The original invoice must be kept as proof of the date of first sale and the Product serial number. The Warranty does not cover any Product if the Original Invoice appears to have been modified or altered, or when the serial number on the Product appears to have been altered or defaced.

Product Maintenance: It is the Customer’s responsibility to maintain the Product properly. See your maintenance schedule and owner’s manual for details. The Warranty does not cover an improperly maintained Product.

Non-PMC Components and Accessories: Non-PMC manufactured components and accessories that are used in the operation of the Product are not covered by this Warranty. Such components and accessories shall be subject to the warranty offered to the Customer, if any, by the original manufacturer of such component or accessory.

Other Warranty Exclusions: The Warranty does not cover any Product that PMC determines has been damaged or fails to operate properly due to misuse, negligence, abuse, carelessness, neglect, or accident. By way of example only, this includes:

- Normal wear and tear.
- Improper or unauthorized installation, repair, alteration, adjustment or modification of the Product.
- Use of heating devices, pumping equipment, dispensers, or other parts or accessories with the Product that have not been approved or manufactured by PMC.
- Failure to follow the operating instructions and recommendations provided by PMC.
- Cosmetic damage.
- Fire, flood, “acts of God,” or other contingencies beyond the control of PMC.



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THE WARRANTY DESCRIBED HEREIN IS THE EXCLUSIVE REMEDY FOR THE CUSTOMER AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES ARE HEREBY DISCLAIMED, TO THE FULLEST EXTENT PERMITTED BY LAW, PMC SHALL NOT BE RESPONSIBLE, WHETHER BASED IN CONTRACT, TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), WARRANTY OR ANY OTHER LEGAL OR EQUITABLE GROUNDS, FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, LOST PROFITS, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES, WHETHER TO PERSON OR PROPERTY, ARISING FROM OR RELATING TO THE PRODUCT, EVEN IF PMC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES.

Non-Warranty Service by PMC: If PMC determines that the suspected Defect of the Product is not covered by this Warranty, disposition of the Product will be made pursuant to the terms and conditions of PMC's written estimate on a time and materials basis.

Continuing Warranty for Products Repaired or Replaced under Warranty: Following the repair or replacement of a Product covered by this Warranty, such Product will continue to be subject to the original Warranty for the remainder of original Warranty Period or for three (3) months from the repair or replacement date, whichever is longer.

No Rights Implied: Nothing in the sale, lease or rental of any Product by PMC shall be construed to grant any right, interest or license in or under any patent, trademark, copyright, trade secret or other proprietary right or material owned by anyone; nor does PMC encourage the infringement of same.

Exclusive Warranty: This writing is the final, complete, and exclusive expression of the Warranty covering the Product. Any statements made by PMC, its employees or agents that differ from the terms of this Warranty shall have no effect. It is expressly understood that Customer's acceptance of this Warranty, by performance or otherwise, is upon and subject solely to the terms and conditions hereof, and any additional or different terms and conditions proposed or expressed by Customer or anyone, whether in writing or otherwise, are null and void unless specifically agreed to in writing by an Officer of PMC.



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SAFETY AND HANDLING

This chapter contains important information on the safety, handling and use of your PMC Air Dryer.



Before installing the PMC Air Dryer and start-up, carefully read all the technical and safety documentation included in this manual. Pay special attention to the information to know and understand the operation and the conditions of use of the PMC Air Dryer. All of the information is aimed at enhancing User Safety and avoiding possible breakdowns derived from the incorrect use of the PMC Air Dryer.

WARNING! presents information to alert of a situation that might cause serious injuries if the instructions are not followed.

CAUTION! presents information that indicates how to avoid damage to the Proportioner or how to avoid a situation that could cause minor injuries.

NOTE: is relevant information of a procedure being carried out.

Careful study of this manual will enable the operator to know the characteristics of the PMC Air Dryer and the operating procedures. By following the instructions and recommendations contained herein, you will reduce the potential risk of accidents in the installation, use or maintenance of the PMC Air Dryer; you will provide a better opportunity for incident-free operation for a longer time, greater output and the possibility of detecting and resolving problems fast and simply.

Keep this Operations Manual for future consultation of useful information at all times. If you lose this manual, ask for a new copy from your PMC Service Center, directly contact PMC or on line at our web site (www.polymac-usa.com).

To ensure proper and safe operation of this equipment it is necessary to understand and follow the instructions in this manual.

Certain safety precautions must be taken when the equipment discussed in this manual is operated or serviced. Severe bodily injury or damage to the equipment and property may result if the instructions and precautions listed throughout the manual are not followed.

There should be no assumption made that the safety measures and instructions contained in this manual are all inclusive, and that other safety measures may not be required for specific use or application.



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The following safety guidelines are applicable to the safe and efficient use of the PMC Air Dryer.



Warning: Do not remove the Metal Bowl Guard. Do not operate the unit without the Metal Bowl Guard installed to minimize the danger of flying fragments in the event of plastic bowl failure.

Warning: Certain compressor oils, chemicals, household cleaners, solvents, paints and fumes will attack the plastic bowl and cause bowl failure. Do not use the Air Dryer near these materials. When the bowl becomes dirty, replace it or wipe it with a clean dry cloth. Immediately replace any crazed or cracked, damaged or deteriorated plastic bowls.

Warning: The product is designed to be used only for compressed air. Do not use the PMC Air Dryer with any other Gas or Liquid.



Warning: To avoid damage caused by the impact of pressurized fluids, do not open any connection or perform maintenance work on components subject to pressure until the pressure has been completely eliminated.

Warning: To prevent bodily injury and potential container rupture, never pressurize a drum or container that will not withstand 7 PSI working pressure. The maximum outlet pressure allowable for the PMC Air Dryer is 3 PSI. Operation above this pressure may cause a rupture in the container and serious possible serious bodily injury.



Warning: Always use suitable protection when operating, maintaining or being present in the area where the equipment is functioning. This includes, but is not limited to, the use of protective goggles, gloves, shoes and safety clothing and breathing equipment.



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SPECIFICATIONS



Specifications:

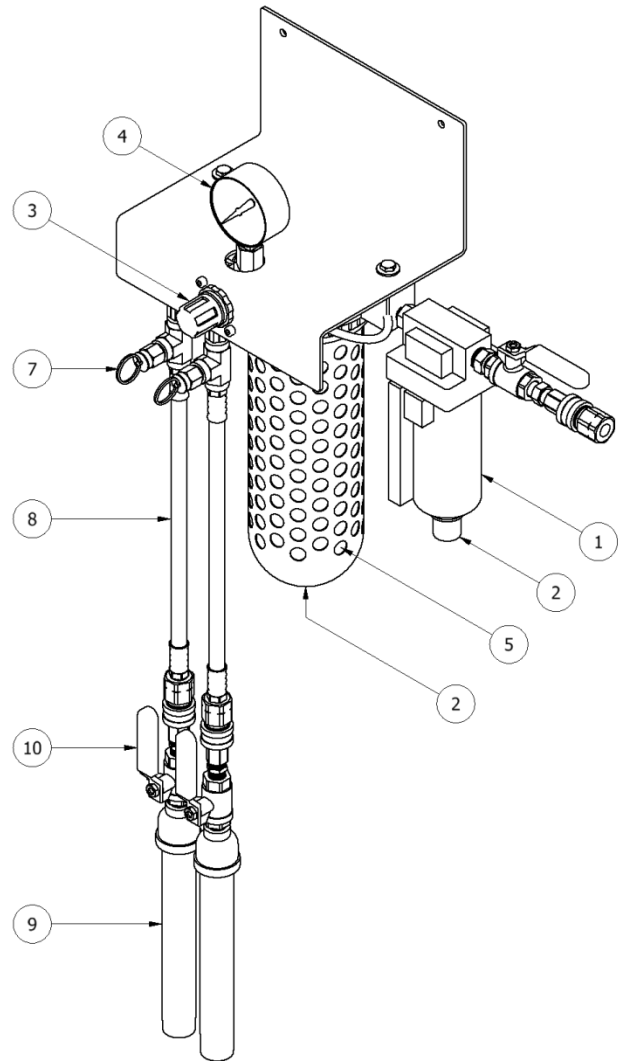
Maximum Inlet Pressure	150 PSI
Maximum Outlet Pressure	3 PSI
Maximum Air Temperature	125 Degrees F
Desiccant Capacity	1.6 lbs
Maximum Air Flow	10 CFM @ 100 PSI
Dew Point	-45 Degrees F
Drying Capacity	
@ 70 Degrees F Saturated Air	Approximately 300 Drum Sets
@ 100 Degrees F Saturated Air	Approximately 120 Drum Sets



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GENERAL DESCRIPTION

1. Coalescing Filter
2. Water Drain
3. Pressure Regulador
4. Pressure Gauge
5. Desiccant Bowl
6. Metal Bowl Guard
7. Pressure Relief Valve
8. Air Hose
9. Drum Adapter
10. Needle Valve





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OPERATING PROCEDURE

Set Up:

Install the main air shutoff valve and a main air line filter ahead of the PMC Air Dryer. The main air shut off valve will provide shutoff of the main air system for servicing of the PMC Air Dryer. The Air Line Filter will help to remove excess oil and moisture to extend the service life of the desiccant used in the desiccant dryer.

1. Mount the PMC Air Dryer in a suitable location. The mounting hole and hose length requirements are shown in the specification section.
2. Fill the Desiccant Bowl with the Desiccant provided.

Warning! Always reinstall the Metal Bowl Guard alter servicing for the protection of the operator.

3. Install the Drum Adapters.

Warning! There may be a noticeable escape of gas pressure when removing the vent cap of the resin drum at temperatures above approximately 60 degrees F because of the blowing agent contained in the resin material.

4. Determine that both needle valves are closed, and then connect the air hoses to their respective drum adapters.

IMPORTANT! To prevent cross-contamination of the chemical supply from fumes, do not interchange these hoses.

The PMC Air Dryer is now ready for operation.



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OPERATION

1. Set the regulator to the zero pressure position (full counter clockwise).
2. Open the Main Air Valve.

Warning! Always determine that the pressure regulator is off (full counter clockwise) before turning on the Main System Air to the PMC Air Dryer. Failure to do so could cause a pressure surge, which could damage the supply drum and cause injury to the operator.

3. Adjust the regulator clockwise until the needle on the Pressure Gauge begins to move. Stop the adjustment and allow the needle to stabilize. Continue with the adjustment until a stable pressure of 1 to 2 PSI is reached.
4. Open the needle valves. The pressure will drop to zero and then gradually build up to 1 to 2 PSI.

IMPORTANT! Pressure relief valves are installed on the PMC Air Dryer to prevent the supply drum pressure from exceeding allowable limits. Each valve is set to open at 4 +/- 1 PSI. When the pressure within the Supply Drum reaches 4 PSI, a plunger in the Relief Valve is tripped which opens the Valve Chamber to the pressure in the Drum. At this point the Cap pops off the Relief Valve, venting the Drum to atmosphere and exposing a red warning band. This will reduce the drum pressure to zero.

To reset the Relief Valve follow these steps:

- A) Turn off the Air Regulator (Full Counter Clockwise).
- B) Manually activate the Pressure Relief Valve to bleed off the excess pressure.

Generally, maintaining pressure of 1 to 2 PSI permits further build-up of pressure from external sources such as heat or blowing agent boiling off without endangering safety. However, it is imperative that the Pressure Gauge be constantly monitored to ensure that pressure build-up within the drums never exceeds the maximum allowable.



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SHUT DOWN

PROCEDURE:

1. Turn off the Needle Valve on each supply drum.
2. Close the Air Regulator (full counter clockwise).
3. Close the main Air Valve.

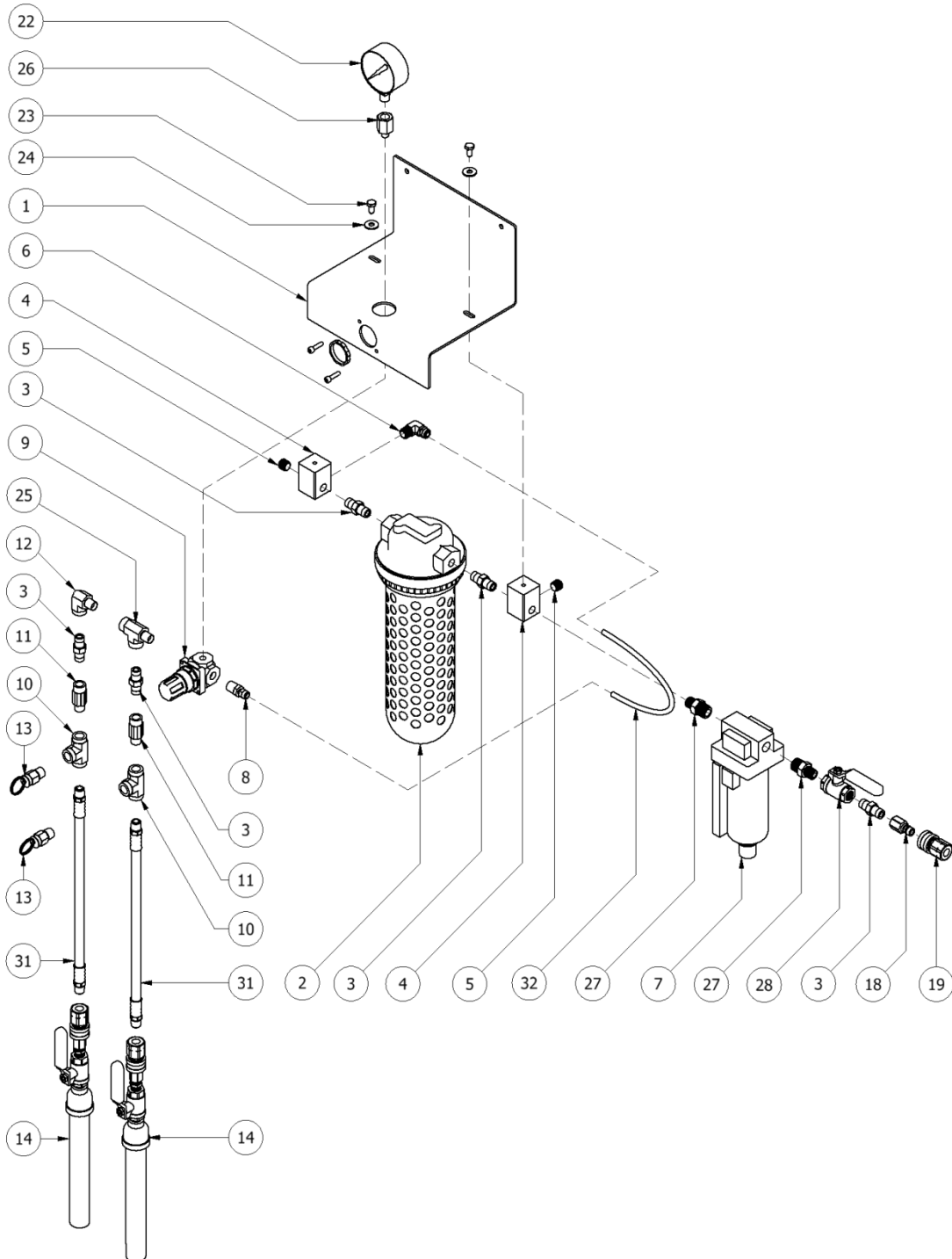
WARNING! Certain compressor oils and fumes will attack the plastic bowl and cause bowl failure. Do not use the PMC Air Dryer near these materials. When the bowl becomes dirty, replace it or wipe it with a clean, dry cloth. Re-install the metal bowl guard. Immediately replace any crazed or cracked, damaged or deteriorated plastic bowls.



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PARTS IDENTIFICATION

AIR DRYER (AD-00)





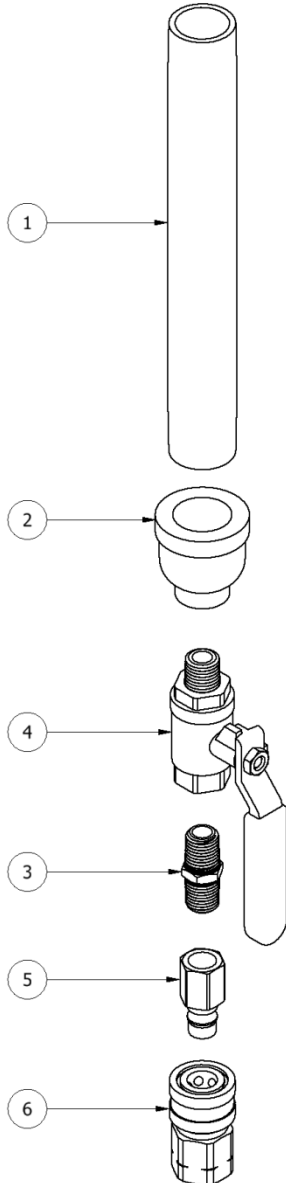
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AIR DRIER (AD-00)			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AD-02	AIR DRYER BRACKET
2	1	AD-03	DRYER W/ 1 QUART DESOCCANT
3	5	GP-00100-1	1/4 PIPE NIPPLE
4	2	AD-05	AIR DRYER MANIFOLD
5	2	HI-05036	1/4 PIPE PLUG
6	1	AD-09	1/4 NPT X 1/4 TUBE FITTING 90
7	1	AD-04	PRE-FILTER
8	1	AD-08	1/4 NPT X 1/8 TUBE FITTING
9	1	AD-06	PRESSURE REGULATOR
10	2	RM-PAR2203P4	PARKER BRASS TEE
11	2	AD-12	CHECK VALVE
12	1	HI-05030	1/4 NPT STREET ELBOW
13	2	AD-01	4 PSI RELIEF VALVE
14	2	AD-17	DRUM ADAPTER (PAGE
18	1	GU-04022	MALE QUICK DISCONNECT
19	1	GU-04021	FEMAL QUICK DISCONNECT
21	2	FLOOR STOCK	#10-32 X 3/4 SHCS
22	1	AD-07	0-15 PSI PRESSURE GUAGE
23	2	FLOOR STOCK	1/4-20 X 1/2 HEX CAP SCREW
24	2	FLOOR STOCK	1/4 PLAIN WASHER
25	1	GP-00100-3	MALE RUN TEE X FEMALE PIPE 1/4
26	1	HI-05101	1/4 NPTF X 1/8 NPTM REDUCER
27	2	RM-PAR216P64	PARKER BRASS NIPPLE
28	1	HI-05082	BALL VALVE
31	1	MA-00027A	AIR HOSE ASSEMBLY; 10'
32	1	AD-10	1/4 OD POLY TUBE



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DRUM ADAPTER (AD-17)



DRUM ADAPTER (AD-17)			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	AD-13	3/4 X 8 PIPE
2	1	AD-15	3/4 TO 1/4 F REDUCER
3	1	RM-PAR216P4	PARKER BRASS NIPPLE
4	1	PU-04000-82	BALL VALVE
5	1	GU-04022	MALE QUICK DISCONNECT
6	1	GU-04021	FEMAL QUICK DISCONNECT



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MANUAL REVISIONS

Revision	Date	Changes	Approved
1.0	20-Feb-15	Updated all illustrations and replacement parts	Vadams