MT050 SERIES DEHYDRATOR

USER MANUAL

Bulletin 237339

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General Information
Section 1

1.1 Introduction

This manual contains the information you need to install, operate and maintain your MT050 Series DryLine® dehydrator. Please take the time to read this manual before attempting to operate or service the unit.

1.2 Description

MT050 Series dehydrators provide dry air for pressurizing small (up to 20 cubic feet, or 560 liters, in volume) antenna and transmission line systems. The dehydrators produce -49ºF (-45ºC) dew point dry air at an output rate of 0.05 cubic feet (1.4 liters) per minute.

Each dehydrator consists of an electrically-driven air compressor, a membrane dryer assembly, an automatic transmission line pressure sensing system and a low-pressure alarm output housed in a rigid metal chassis. They are suitable for 19" rack mounting, wall mounting with an optional shelf or free-standing applications. Their front panels feature a pressure gauge, an indicating on/off switch, a resettable circuit breaker, and a run time meter. For easy serviceability, power connections, alarm output connections and all filter elements are accessible from the front of the unit.

The MT050 maintains transmission line pressures at 5.0 lb/in2 (34 kPa). It is intended for standard microwave antenna applications and any other transmission line pressurization requirement that supports a relatively high pressure limit.

All MT050 dehydrators have a single output. Use the DP-4A-001 distribution panel, described below, for additional output connections. Other distribution products, such as a MN6600, -M & -L Manifold or a MH-4B-001 Line Monitor may also be used to provide multiple outputs from a MT050 dehydrator.

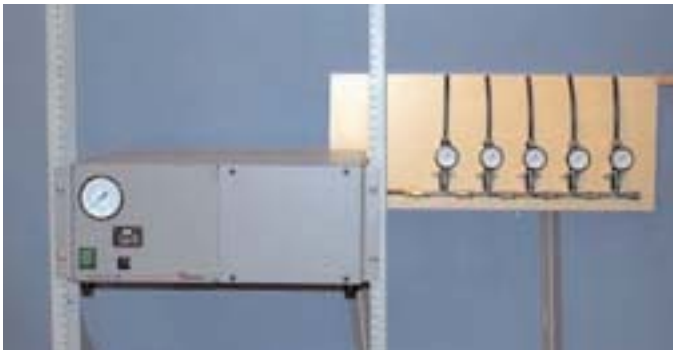
Type DP-4-001

The DP-4A-001 Four-Output Distribution Panel includes one 3/8" output compression fitting and one shut-off valve per output.

The unit mounts in a standard 19" equipment rack or to the top of the MT050 using supplied brackets. It comes complete with an installation kit to connect up to four individual transmission lines.

Types MN6600 Series

The MN6600-Series of Two Manifolds, include one 3/8" output compression fitting, one gauge and one shutoff valve per output. The unit mounts to the wall using holes supplied through the manifold block.



Each manifold comes complete with installation materials to connect two transmission lines.

Types MH-4B-001, MH-8B-001, MH-12B-001 and LM400 Series

MH-Series Four, Eight and Twelve Port Line Monitors, include one rear-panel 3/8" output compression fitting, one gauge, one flow meter and one shutoff valve per output.

The units mount on top of a dehydrator, in a 19" rack, to the wall or stand free on a table or shelf using supplied hardware. Each line monitor comes complete with installation materials to connect four, eight or twelve transmission lines.

Low Pressure Options

The MT050 output is factory set at 5 psi (35kPa). If a lower pressure is desired, a pressure regulator may be added directly to the dehydrator output.

AE01A-D1339-001 Adjustable Pressure Wall Mount Regulator is adjustable from 1 to 5 psi.

AE01A-D1339-002 Low Pressure Wall Mount Regulator adjustable from 0.1 to 2.0 psi.

1.3 Operation

MT050 Theory of operation.

The MT050 series of DryLine® dehydrators, while similar in moisture removal technology, operates differently than the rest of the DryLine® series of dehydrators. In order to provide a constant supply of dry air to small air volume systems, and to maintain an acceptable moisture level in the product air stream, a high-pressure reservoir tank is needed. This reservoir tank is connected to a pressure regulator and orifice to yield a fixed output pressure of 5.0 psi and a nominal flow rate of 0.05 CFM. In addition to supplying the output air, the reservoir tank also provides the dry air for the feedback loop. The feedback loop is necessary to maintain the dryness of the membrane cartridge.

During normal operation, the bleed air in the feedback loop will cause the pressure to drop in the internal reservoir tank, and the MT050 compressor will cycle automatically. These cycles will take place regardless of the system volume or condition of the transmission line the dehydrator is connected to. The rate of these cycles, however, will vary. During the purge cycle, the dehydrator will cycle approximately every 2 to 4 minutes while showing 0 psi on the pressure gauge and providing a constant 0.05 CFM of dry air.

When connected to a very tight system, or the output is capped, the dehydrator will cycle approximately every 60 to 90 minutes and maintain 5.0 psi system pressure while providing close to 0 CFM of dry air. A system that leaks will have a cycle time somewhere in between, depending on the severity of the leaks.

The pressure gauge will also reflect a pressure between 0 and 5.0 psi while the output flow is between 0.05 and 0 CFM. The pressure gauge senses pressure beyond the flow control orifice and will show the actual pressure in the waveguide.

During the initial pressurization of the transmission line, the dehydrator will cycle every 2 to 4 minutes with the system at 0 psi pressure. As the dehydrator pressurizes the system, the cycle times will increase until the dehydrator output is balanced with the system leak, at which point the cycle times will stabilize.

1.4 Alarm Options

This optional assembly is designed to provide the additional Excess Run, High Humidity and Power Fail alarms to Andrew Dehydrators. All alarms are Form C dry contacts and are factory set for continuity at alarm. An additional High Pressure alarm is also available as a separate option.

The external alarm monitoring system (not included) is connected to the terminal strip located behind the cover. A small slotted screwdriver is necessary to make the connections.

The connection to the alarm strip is as follows, and refer to Figure 1 for correct locations and colors of the wires on the terminal strip.

Alarm Definitions

Power Fail P.F. (optional):
Activates when power is removed from the dehydrator. This includes turning the power off at the switch.

High Humidity H.H.(optional):
Activates when system or dehydrator output humidity rise above 7.5% relative humidity. At initial installation, this alarm will continue to alarm until the system has been properly purged.

Excess Run X.R. (optional):
User settable run time to be set in accordance with the normal run time for the particular application. Selectable times are 10, 30, 120 and 240 minutes. See Figure 2 for location of JP3.

Low Pressure L.P. (standard):
If system pressure falls below 1.0 PSI, the low-pressure alarm sensor will activate an alarm contact. This alarm is an indication of a significant system leak or a dehydrator failure.

High Pressure H.P. (optional):
If system pressure rises above 8.0 PSI, the low-pressure alarm sensor will activate an alarm contact.

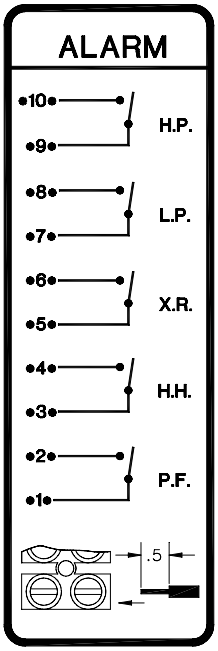


Figure 1

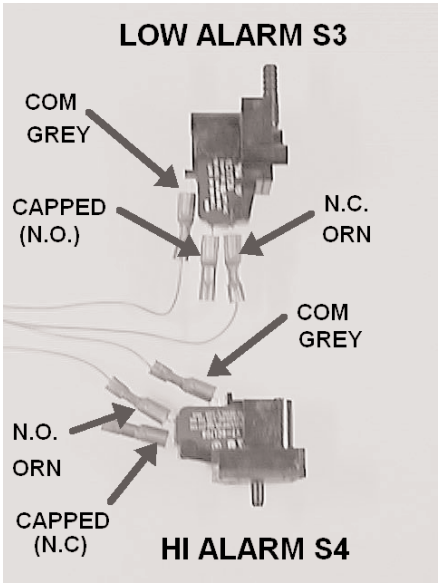
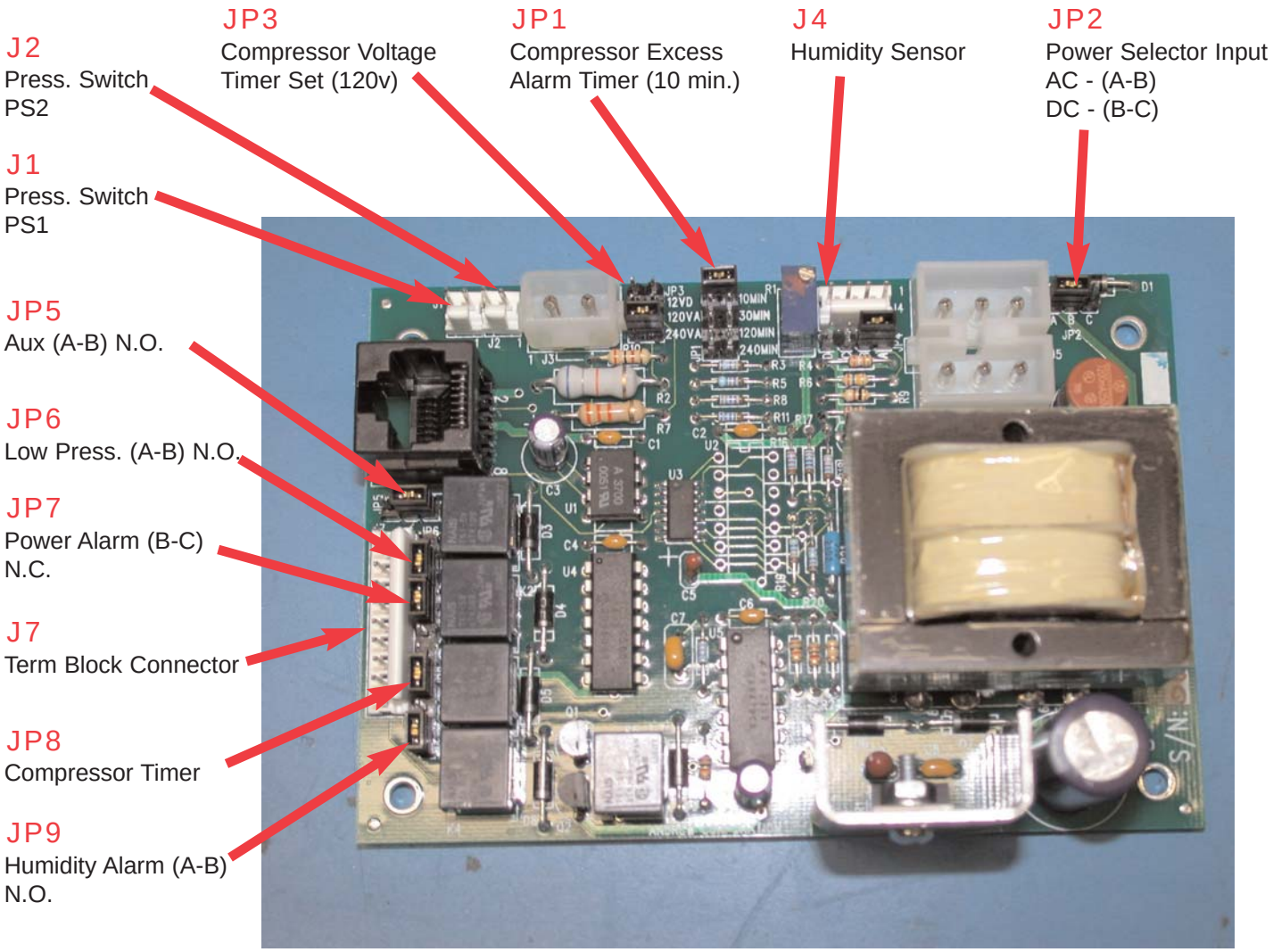


Figure 3

Pressure Alarm Contact Arrangement



Changing Alarm Outputs:

Term.	Function	Wire Color	NO Power	Normal	Alarm
1	Power Fail Com	Black	OFF	ON	OFF
2	Power Fail Alarm	Red			
3	Humidity Com	Green	OFF	OFF	ON
4	Humidity Alarm	Brown			
5	Excess Run Com	Blue	OFF	OFF	ON
6	Excess Run Alarm	White			
7	Low Press. Com.	Grey	ON	OFF	ON
8	Low Press. Alarm	Orange			
9	High Press. Com.	Yellow	OFF	OFF	ON
10	High Press. Alarm	Purple			

ON = Conducting as factory set
OFF = Non-conducting as factory set

Figure 2

1.5 Specifications

Output Pressure	
Constant	5.0 PSI
Output capacity	3.0 ft^3/m (80 liters/h) total, approx. 0.05 ft^3/m (1.5 liters/m)
Output Dew Point,	-49°F (-45°C) or better
Operating Temperature Range	+33° to +104° F (1° to +40° C)
Low Pressure Alarm	1.0 lb/in^2 (6.9 kPa)
Electrical Input	115 VAC, 50/60 Hz 230 VAC, 50/60 Hz 21-29 or 42-60 VDC
Output Connector	3/8" polytube, compression
Dimensions	19” Rack, 7” (177.8 mm) Tall by 14” Deep (229 mm)
Optional Alarms	
Power Fail Alarm	loss of input power
High Humidity Alarm Set Point	7.5% RH, factory set
Excess Run Alarm Set Point	10 minutes, factory set
High Pressure Alarm	8.0 lb/in^2 (55.2 kPa)
Sound Level	67dBA @ 1 meter

Installation
Section 2

2.1 Unpacking and Inspection

Open carton.

Remove the top piece of packing.

Carefully remove the installation accessories and manual and dehydrator. Check the dehydrator for shipping damage such as dents or loose parts.

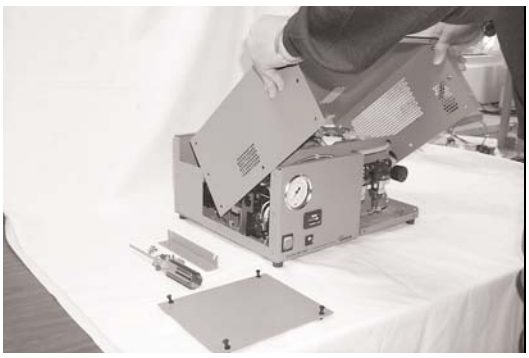
Check the inside of the dehydrator for damage.

A. Remove front cover by pulling forward on the four black snap-in fasteners.

B Then pull the cover forward and lift off the unit. Set the cover aside until inspection and installation are complete.

Remove the top cover. Check for loose wires hoses or components. If anything is loose, refer to the component schematic and wiring diagram for proper placement. If you find any damage or if you need assistance for reconnection of wires or hoses, contact Andrew Customer Service Department at 1-800-255-1479.

If everything looks correct, replace the top cover. Do not replace the dehydrator front panel at this time. It will be replaced after the dehydrator is mounted and electrical connections are complete.



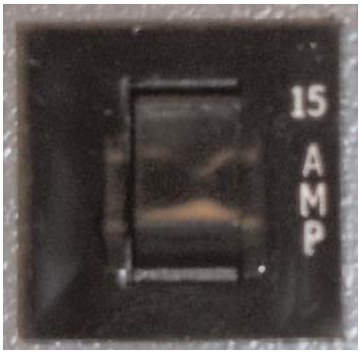
2.2 Controls and Displays

Familiarize yourself with the controls and displays prior to installing or testing the dehydrator.

Dehydrator Controls/Displays

Pressure Gauge - indicates dehydrator output pressure in psi and kPa.

ON/OFF Switch - controls compressor and sensors. Light indicates power switch is ON.



Circuit Breaker - white tab indicates a circuit overload. Push to reset.

Hour Meter - provides a visual indication of the number of hours of compressor operation and provides validation for the 3000 hour warranty.

2.3 Installing the Dehydrator

MT050 Series dehydrators are designed for low vibration and low noise and can safely be placed in an existing equipment rack or cabinet. They are also suitable for shelf mounting. Only minimal tools and hardware are required.

Allow at least 1-inch (25 mm) space on both sides of the chassis for air flow.

2.3.1 Rack/Cabinet Mounting

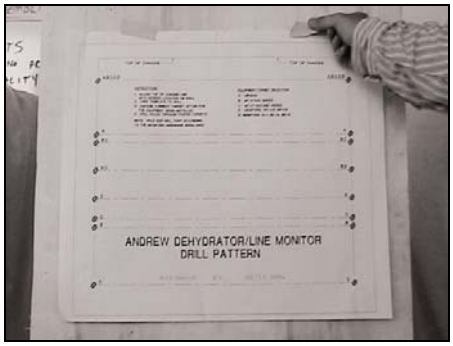
Movable brackets are included for mounting the dehydrator directly into a standard 19" (483 mm) equipment rack. Remove the rubber feet from the bottom of the dehydrator, if there is equipment directly below it in the equipment rack

Four #10-32 mounting screws are provided for attaching it to the rack.

Route electrical wiring and air line through the holes in the rear and/or side of the chassis.

2.3.2 Wall Mounting

An optional shelf is available for wall mounting. A paper mounting template is supplied with the shelf. Use it to mark mounting hole positions on a wall or plywood backer, as described below.



Masonry wall (concrete or cinder block), use concrete screws or screws with lead anchors or anchor bolts to attach the shelf or directly to the wall. Alternatively, install a plywood backer to the wall and mount the shelf to it.

2.3.3 Distribution Panel Mounting

The distribution panel mounts in a standard 19" equipment rack or directly to a dehydrator.

Rack mounting. Mount the panel directly above the dehydrator to simplify connections. Screws are provided in the cloth bag attached to the panel.

Mounting to dehydrator. Secure the distribution panel to the top of the dehydrator, using brackets and screws supplied in the cloth bag. Distribution panel should be flush with dehydrator face.

2.4 Power Connections

Confirm your dehydrator electrical input matches the available power.

115 VAC	230 VAC	24-60 VDC
MT050-81015	MT050-81026	MT050-81037
MT050-81315	MT050-81326	MT050-81337
	MT050-81526	

Turn the power switch OFF. Locate the rectangular IEC socket behind the front cover (refer to Section 2.1).

2.4.1 AC Power

AC units can be connected into a standard 15 Amp power receptacle of the proper voltage. Make sure the power circuit is properly grounded (see Section 2.4.3).

Verify the power switch is OFF. Locate the AC power cord that was supplied in the accessories bag. The cord plugs directly into the IEC socket. A strain-relief is supplied in the cloth bag. Install the strain relief first and then connect the power cord.

CAUTION: Proper electrical connection is required. It is suggested a licensed electrician be contracted to connect the AC wiring to the unit, if it is connected directly to the mains. Failure to properly connect the power wires could result in a dangerous electrical shock hazard.

For equipment distributed to the 115 VAC North American market, the AC power cord is terminated in a molded NEMA 5-15 plug. If the local AC required a different plug, cut off the mold plug and install an approved type.

For equipment distributed in the 220 VAC international market, the supplied AC power cord is HAR/VDE approved. It is not terminated with a plug, due to the large variety of plugs in use throughout the world. Install an approved plug at the end of the cord with stripped leads. The illustration shows two typical 220 VAC plugs (Continental and British) for reference, but they are not included with the cord.

2.4.2 Grounding Instructions

Ground the dehydrator to reduce the danger of electric shock.

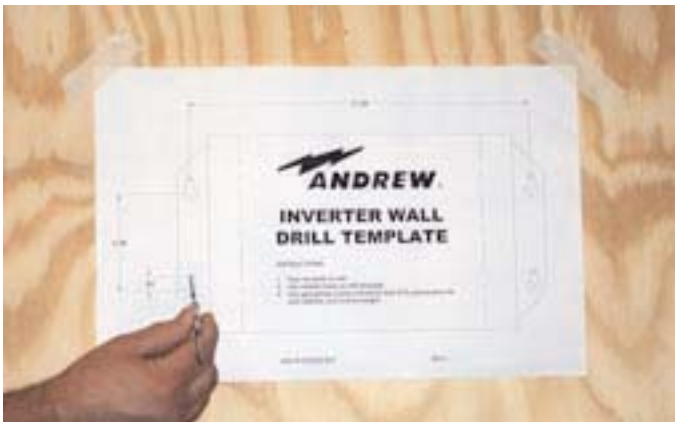
AC units must be properly installed to meet local electrical codes and ordinances.

AC powered units have a power ground stud located at the right front of the chassis, inside the front cover.

2.4.3 DC Power (optional)

2.4.4 Mounting:

The inverter is designed for mounting directly to a wall surface. Locate a wall surface in close proximity to the Andrew dehydrator suitable for supporting the inverter.



Use the inverter wall drill template to locate and drill the inverter mounting holes.

Install screws in anchors (do not tighten completely)

Mount the inverter to the wall using suitable wall anchors. Tighten screws.

2.4.5 Electrical Connections:

Caution: For safety reasons, external fusing must be provided for the DC supply.

The AC output is fused at the dehydrator by use of a panel mounted circuit breaker. Use DC supply cable capable of carrying 300 watts of power for the required distance. Ensure that ground is connected correctly. The ground contact (PE) must be connected at the DC input of the inverter, using the largest possible diameter.

Caution: Do not open the device! Some components inside carry high voltages!

DC Input Connector (Green, 3-pin):

1: PE (Earth Ground)
2: +VDC
3: -VDC
(left to right)

Assemble supply cable to connector included to connect DC power supply to the inverter.

Signal Connector (Green, 5-pin):

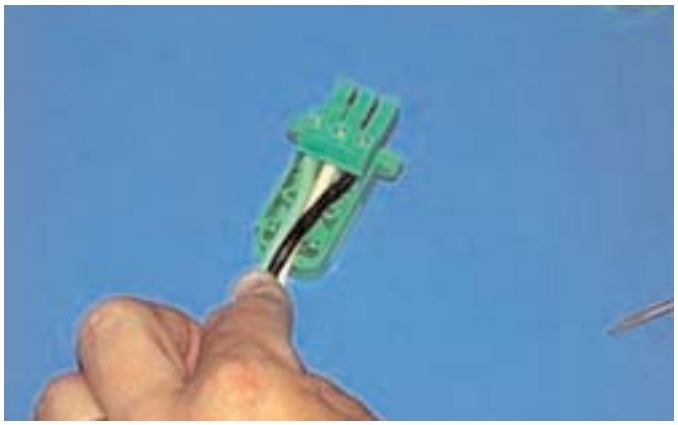
Not used

AC Output Connector (Black, IEC style):

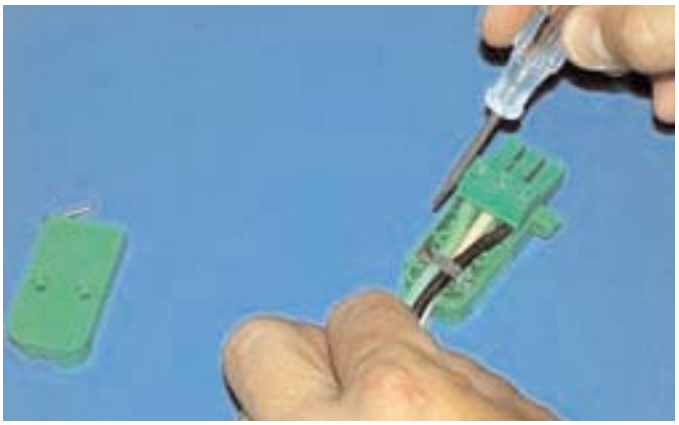
1: Line
2: PE (Earth Ground)
3: Line (floating output)
(left to right)

2.4.6 DC Connector Assembly:

Insert stripped wires from DC Supply Cable into proper positions on 3-pin connector and tighten each screw terminal.

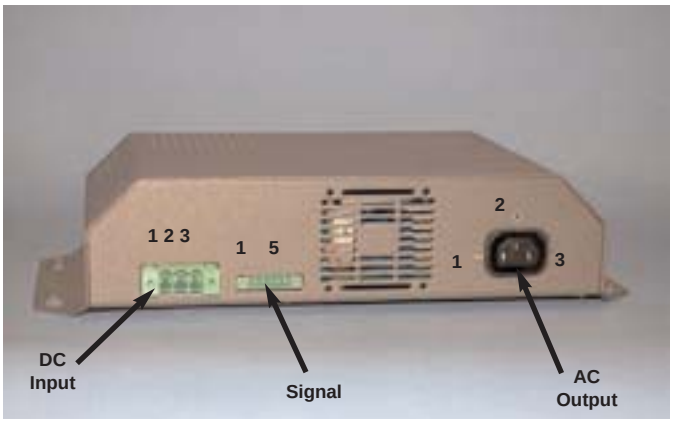


Slide 3-pin connector into bottom half of outer connector shell, routing wires through center of shell.



Attach strain relief to connector shell, clamping wire into proper position.

Assemble upper half of connector shell to complete the DC Supply Cable.



Use Power cable included to connect inverter to dehydrator.

Before switching on the inverter, make sure that the following conditions are met:

All External fusing is off.

The MAIN SWITCH is off.

Ensure proper polarity of all connections.

Ensure positive fastening of all connections.

Switch on the DC supply, then the AC unit.

2.4.7 Operation:

Press the push button (ON) on the front side of the inverter.

The inverter will start up, performing self tests.

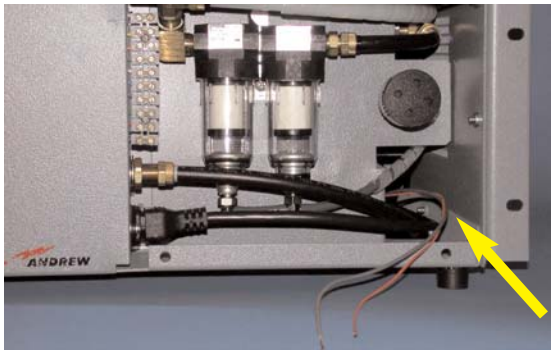
The green LED (OK) will indicate proper functioning (AC output carries voltage).

-OR-

The red LED (FAULT) will blink to indicate a malfunction To reset the inverter after a failure, press the button once to acknowledge, and once again to switch the inverter on.

2.5 Connecting the Low Pressure Alarm Output.

To connect the low pressure alarm, remove the front cover and locate the terminal block (TB1).



Route the wires from the alarm control into the chassis and up the the terminal block.

Tighten the screws on the terminal block and replace the front cover.

When a low pressure alarm condition exists dry contacts are activated at terminal block TB-1. An alarm condition exists when pressure falls below 1.0 lb/in^2 (6.9 kPa) for all MT050 models. The relay contacts are rated at 3 A (inductive), 30 VDC.

Optional alarms (if purchased) will also be located on this terminal block. The alarm connection label, located inside of the front cover, will provide terminal numbers for each additional alarm.

2.7 Connecting Dehydrator to the Transmission Line.

Caution: **Check the antenna and transmission line system pressure rating before connecting the dehydrator to the system. If the rating is below 5 lb/in2 (35 kPa), select a LOW pressure regulator such as AE01A-D1339-001 or AE01A-D1339-002 and connect in the line between the dehydrator and the transmission line.**

Insert one end of the 3/8" polytube feed line tubing into the compression fitting on the dehydrator inside wall, or one of the similar fittings on the DP-4A-001 Distribution Panel. Tighten securely with a 9/16" wrench. Be careful not to over tighten. Connect the other end of the polytube to the transmission line.

Note: If the transmission lines have not been purged, continue with section 2.8. Otherwise proceed to Section 3.

2.8 Purging the Transmission Line

Air in the transmission line system must be replaced with dry air to ensure satisfactory operation of the transmitted signal.

1. Determine the total system volume.
2. Divide the system volume by the flow rate of the dehydrator (3 CFH) to determine the number of hours needed for the purge cycle
3. Open the far end of the transmission line.
4. Operate the dehydrator for three purge cycle.

If it is not possible to open the far end of the transmission line:

1. Connect the dehydrator to the transmission line and pressurize the system.
2. Wait 45 minutes while the air absorbs moisture in the system, then disconnect the dehy-drator from the transmission line and allow the air to vent.
3. Repeat steps 1 and 2 three times to purge the system.

Maintenance
Section 3

3.0 Maintenance

The MT050 Dehydrator requires relatively little maintenance to ensure satisfactory operation over long periods of time. This section outlines the recommended annual preventive maintenance for the unit and the suggested overhaul for every 6000 hours of compressor operation.

3.1 Regular Maintenance

The MT050 Dehydrator will perform at an optimum if it is routinely checked for correct performance. This checking generally consists of an annual inspection of the condition of the air intake filter and an overhaul after every 6000 hours of compressor operation. Performance of these measures is sufficient to ensure continued reliable operation.

3.2 Preventive Maintenance

The annual maintenance of an MT050 consists of a preventative maintenance inspection of the dehydrator and cleaning (or replacement) of the foam air intake filter.

These tasks can easily be performed in the field with the unit connected to the transmission line system and with only the front access door removed for maintenance.

3.3 6000 Hour Overhaul

A Hour Meter is provided on the front of the MT050 to indicate the actual number of hours the compressor inside the dehydrator has run.

The dehydrator overhaul kit includes parts to overhaul the compressor and critical components in the dehydrator that often become worn over time.

These include replacement water filter elements with new o-rings, and a length of white nylon tubing.

A compressor overhaul kit is also part of the dehydrator overhaul kit.

This kit contains a new piston cup, along with new gaskets and screws.

IN CASE OF DIFFICULTY: If the dehydrator is not operating, refer to the sections on installing and troubleshooting the unit.

3.4 Annual Maintenance

Inspection includes checking for loose or damaged hoses, fittings and electrical connections. Remove the front door (located on the right side of the dehydrator and held in place by four black plastic captive catches) and check the following items

Check the water filter and coalescing filter elements

Verify that there is no water build-up in the two filter bowls located inside the front cover of the dehydrator. There may be some droplets of water vapor in the filter bowls (the lower portion of each bowl), but there should be no noticeable amount of liquid in either bowl.

If there is excessive water, refer to the troubleshooting section. Replacement of the filter elements in the water filter and coalescing filter is covered in the overhaul section of this manual.

Check the electrical connections.

Check the IEC socket to ensure that the AC power cord is securely plugged in. Check the screw-in alarm terminals to ensure that all wire connections are tight.

A loose or damaged connection may result in erratic operation and unnecessary downtime. Refer to the troubleshooting section if an electrical problem is encountered.

Check the ground wire

Check that an electrical safety ground is installed on the stud inside the front cover of the dehydrator. This connection point is located on the far right portion of the bottom of the dehydrator chassis. (It is intended to be customer installed in the field).

Check the Hour Meter

Check the Hour Meter on the front panel to determine the duty cycle of the dehydrator.

If the dehydrator has been running for more than 10-15% of its installed time, check the system for leaks. Also check the time on the meter to determine if it is time to perform the 6000-hour overhaul.

3.5 Parts Replacement and Dehydrator Overhaul

Andrew MT050 Dehydrators are designed to give may years of trouble-free service and require very minimal maintenance. The dehydrator contains, as a standard feature, a Hour Meter that records compressor run hours. To ensure continuous and reliable operation, the dehydrator must be overhauled every 6000 hours of compressor operation. The kit listed below, contains all of the necessary parts to perform this overhaul.

Maintenance Parts

1. Dehydrator Overhaul Kit 1 ea.
   AE01K-C0398-007
   Gast / Domnick Hunter

   AE01K-C0398-014
   Thomas / Domnick Hunter

   AE01K-C0398-016
   Gast / Parker
   (current production)

2. Compressor Air Intake Filter
   bag of 6, EFLTR-91101

Tools

The following tools are used in the maintenance and overhaul procedures.

A ballpoint pen, an adjustable open-end wrench, a socket wrench with a 7/16-inch (or 11mm) socket, a No. 2 Phillips screwdriver and a small flat-blade screwdriver.

Overhaul Procedure

When the MT050 compressor run time reaches 6000 hours (or a multiple of 6000 hours) it is time to replace certain items in the compressor and the air path of the dehydrator. These include the piston cups, piston seals and head gaskets of the compressor, the filter elements in the water and coalescing filters and the tube/grommet section connecting the compressor output to the water filter input.

Unit Shutdown and Removal

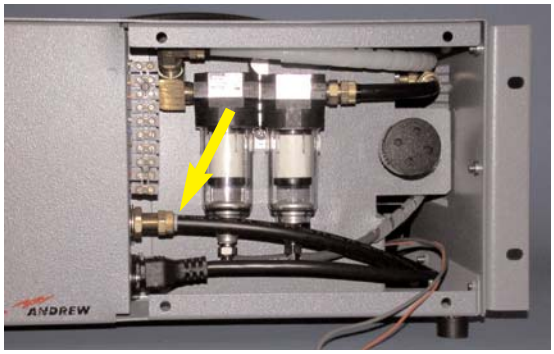
In order to perform an overhaul on the MT050, the unit must be turned off and removed from service. As this is being done the low pressure alarm may activate through a reporting alarm system. Personnel monitoring such an alarm should be notified in advance so that they are aware of the fact that service is being performed. It is also necessary to disconnect the dehydrator dry air output from the waveguide system during the overhaul. Use the shutoff valves provided in the distribution panel, manifold or line monitor to close off the waveguide inputs and preserve pressure during the maintenance operation.

If the single-line shutoff valve supplied with the dehydrator installation kit was installed, close this valve as well to further isolate the waveguide system.

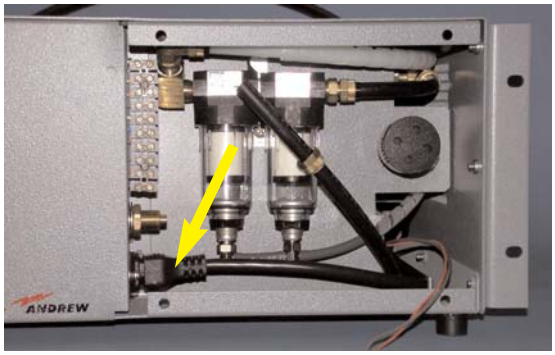
Once the notification and isolation steps have been performed, turn off the front panel switch on the MT050 and disconnect the dehydrator from the AC mains.

Remove the cover from the right front of the dehydrator to expose the maintenance access area.

Disconnect the alarm wiring, tagging the leads so that they may be correctly reconnected later.



Loosen the dry air output line connection from the dehydrator and leave it free to slide through the access channel on the right side of the chassis.



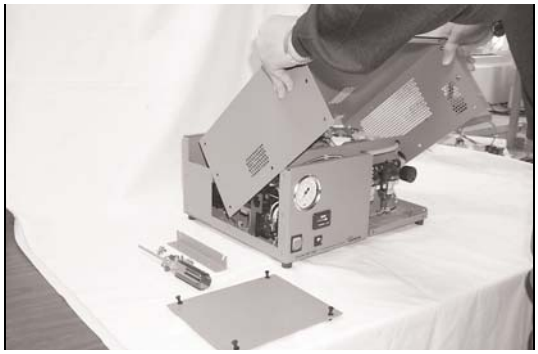
Finally, if the dehydrator is rack mounted, remove the screws holding the unit in place on the rack.

Cover Removal:

CAUTION: **Disconnect electrical power from the MT050 before removing the top cover. Hazardous AC voltages are exposed with the cover removed.**

Remove the rack mounting ear from the left side of the dehydrator cover. The rack mounting ear on the right side can be left on the cover with only the bottom screw removed.

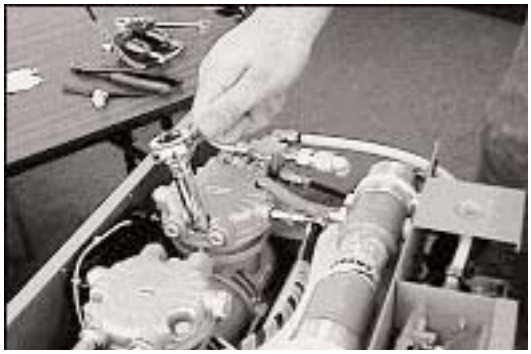
Next remove the remaining 13 machine-screw sets from the cover.



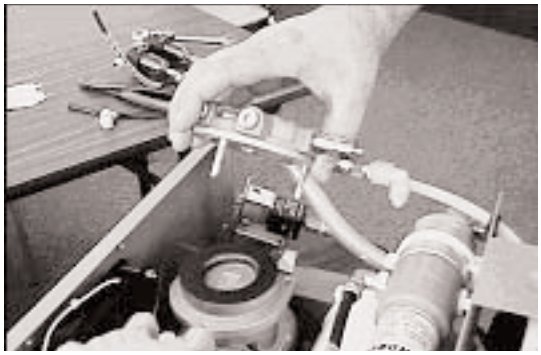
(There are four on each side and five on the top of the cover.)

Pull the cover straight forward from the lower chassis and it will be free to lift off.

3.6 Dehydrator Compressor Overhaul



Remove the three bolts securing the compressor pressure head.

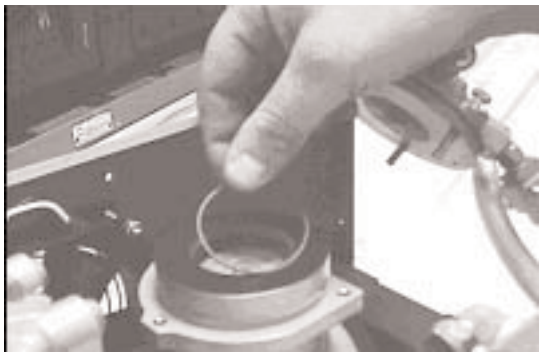


Remove the pressure head and valve plate.

Remove piston sleeve. Be careful not to damage any of the shims when removing the piston sleeve.

Remove the two screws securing the piston retainer plate and cup. Discard the old cup, retainer, screws and both gaskets.

Add all shims included in the kit (some kits may not have shims) to the original stack and replace the piston sleeve.



Install new gasket between cylinder and valve plate.

Install the new piston cup by aligning the holes with those in the piston and pushing it into the piston sleeve.

Install the new retainer inside piston cup and secure with new screws. Use a locking aid to secure the screws in the piston.

Install new gasket between valve plate and head.

Replace the valve plate and pressure head. Tighten bolts.

Repeat this procedure for the vacuum head. Use the original retainer plate.

Reconnect the dehydrator to AC Power source.

Turn the dehydrator on and verify the solenoid remains closed while the compressor is running and opens when the compressor shuts off.

Check the compressor head, filter bowl assembly and tubing connections for leaks.

Check compressor cycle time. Compressor should run for approximately 90 seconds after the initial cycle.

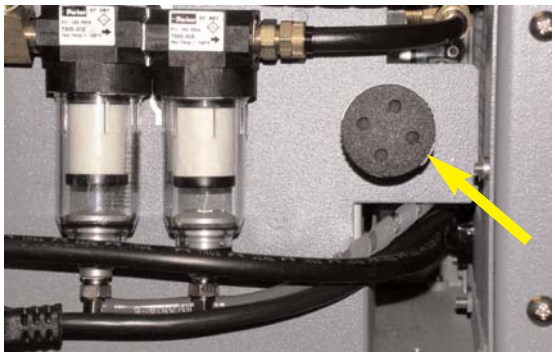
Allow dehydrator to run for a minimum of 1 hour before returning to service.

Replace the top and front covers and return the dehydrator to service.

3.7 Dehydrator Filter Element Replacement

Clean/replace the air intake filter

The air intake filter protects the compressor from contamination and dust. Periodic cleaning / replacement extends the life of the compressor.



The filter is made of open-cell foam material. It should be cleaned or replaced once a year (or more frequently, if the operating environment is very dusty.)

Pull off the filter cover and remove the foam element. (The cover is held in place by two tabs. Use a small screwdriver or a ballpoint pen to release them.)

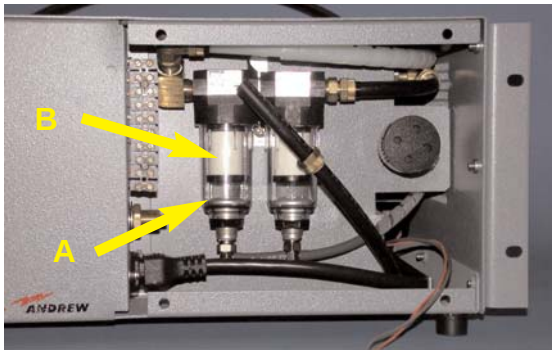
Wash the filter in running water, squeezing it between the fingers.

Squeeze and shake out any excess water and return the element to the filter housing.

(Caution: Do not apply oil or other chemicals to the filter element.)

Make sure the element is seated completely in the housing and then replace the cover. If a new element is used, discard the old element.

Coalescing filter element replacement



A Unscrew both plastic bowls from the filter bowl assembly. Leave tubing attached (bottom fittings swivel to allow bowl removal).

B Remove both filter elements by unscrewing the element. Install new elements by screwing the new element into the filter assembly. Refit the bowls to the filter assembles.

3.8 Service Restoration

RECOMMENDATION:

If the dehydrator overhaul process has taken more than a few hours, it is recommended that the unit be run for one hour into the room, to purge the membrane dryer and tank of any acquired moisture, before reconnecting to the transmission line system.

Reverse the steps followed initially to remount the dehydrator on its rack or shelf; to reconnect the dry air lines; to reconnect the power and alarm cabling; to turn the unit back on; and finally, to open the valves to the waveguide system so that the dehydrator is again providing dry air under pressure to the transmission line system.

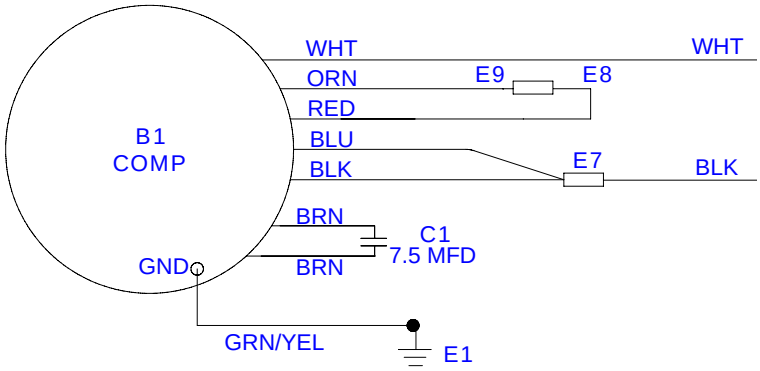
Troubleshooting
Section 4

If you experience difficulty with your dehydrator, use the troubleshooting procedures described below.

Caution: Electrical troubleshooting requires access to potentially dangerous voltages and should only be performed by a licensed electrician.

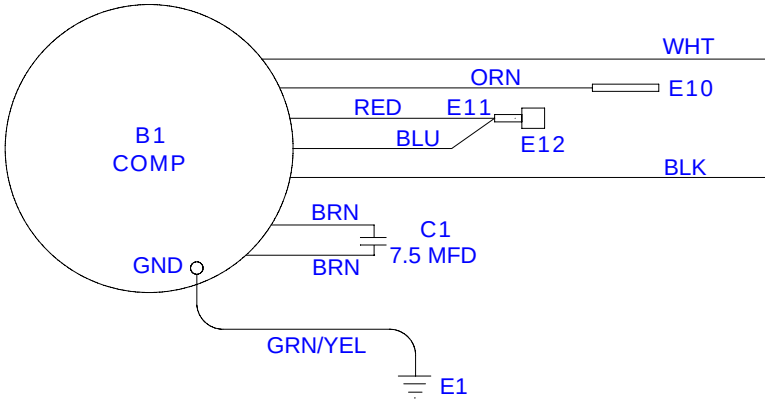
Problem/Condition	Solution
Dehydrator on/off switch does not light, unit does not run.	Check the breaker adjacent to the on/off switch. If the breaker is tripped, (white indicator exposed) then reset the breaker.
	If the on/off switch light still falls to light, make sure the unit is plugged in and power outlet is operating.
	If you still have no light, unplug the unit, remove the unit cover and check for loose connections. Refer to the wiring diagram for proper connections.
Dehydrator on/off switch does not light, unit runs.	Disconnect power, remove cover, check for loose connections per the wiring diagram. Replace cover and reconnect input power.
	If condition persists, replace on/off switch.
Low-pressure alarm activated.	Pressurize lines with the dehydrator, turn shut-off valve to the off position and observe pressure gauge. The pressure gauge should read approximately 5.0 psi and the alarm should clear. If alarm does not clear, remove cover and verify wiring to low pressure alarm switch.
	If the pressure does not stay constant after shutting off the valve, apply leak detector to isolate the leak in the dehydrator (exercise care when applying solution not to wet wiring or electronics).
	With dehydrator isolated from transmission line, observe pressure in transmission line. If pressure drops, use a leak detector solution to locate leaks in the transmission line. Repair leaks if possible.
	If the problem persists contact Andrew Customer Service.
Compressor does not turn.	Check the breaker adjacent to the on/off switch. If the breaker is tripped, (white indicator exposed) then reset the breaker.
	Check power switch to make sure that it is on and lighted.
	Check input power polarity and voltage per wiring diagram.
Circuit breaker tripped.	Check wiring connections per wiring diagram. If breaker trips again, replaces the breaker. If the replacement breaker trips contact Andrew Customer Service.
Filter bowls show excessive water.	Assure that the drain line tubing (exiting the bottom of the unit) is not clogged. When the compressor cycles off, air and moisture should flow out of the drain line.

Compressor Schematic Diagram



VAC./COMP. MOTOR
115 VAC CONNECTION DIAGRAM
CAPACITOR C1 INCLUDED WITH MOTOR

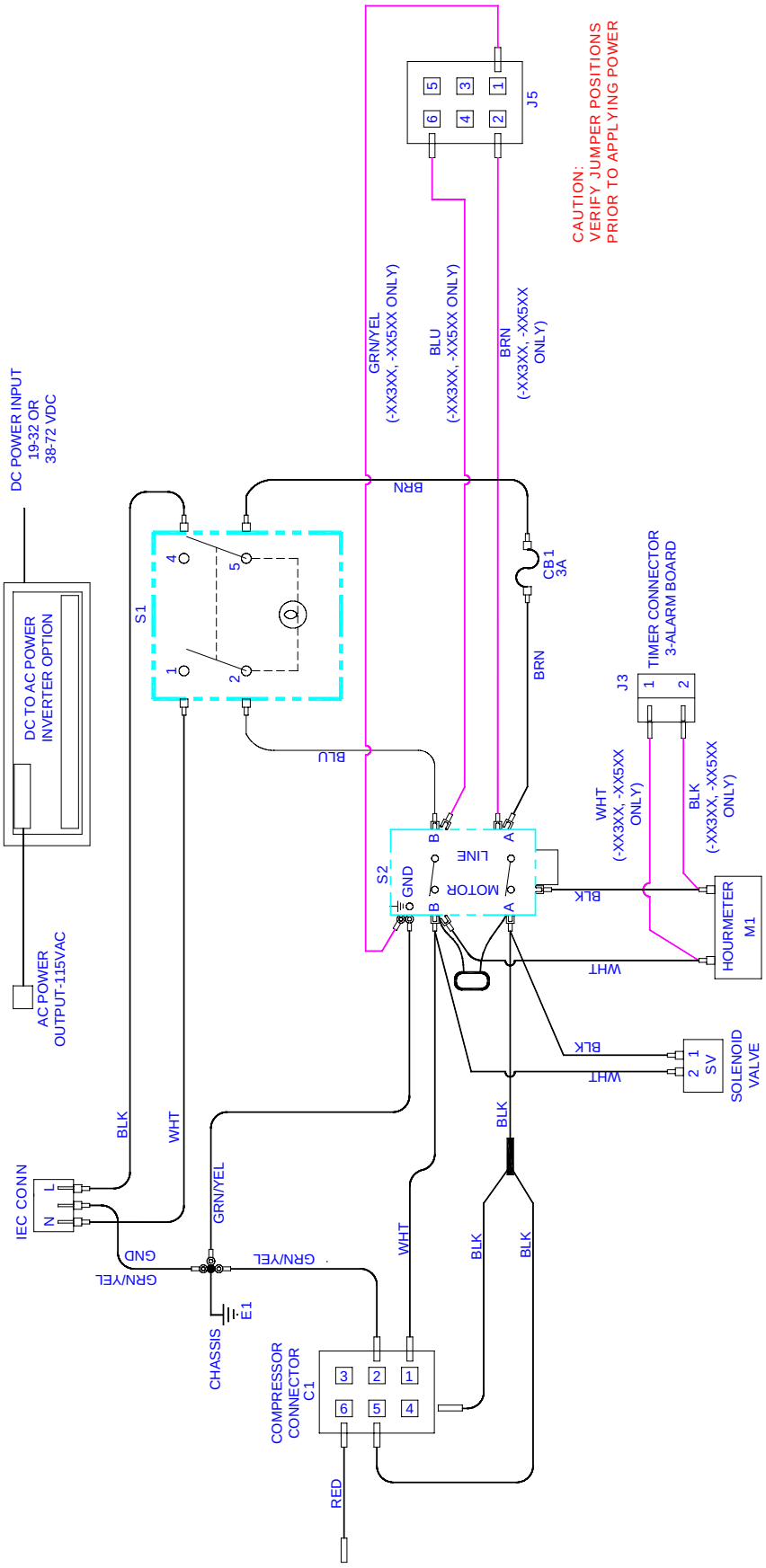
115 VAC
(-XXX1X, -XXX3X)



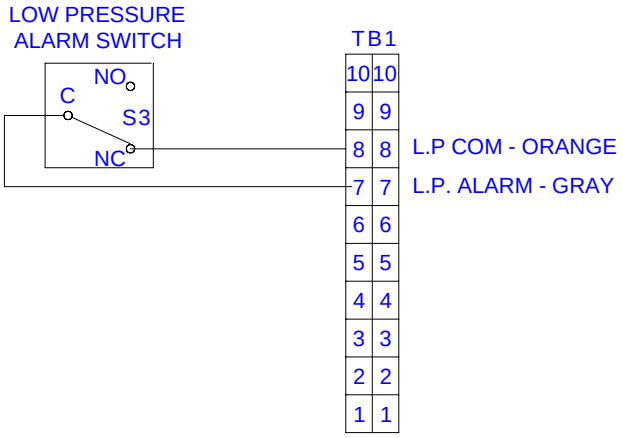
VAC./COMP. MOTOR
230 VAC CONNECTION DIAGRAM
CAPACITOR C1 INCLUDED WITH MOTOR

230 VAC
(-XXX26, -XXX9X)

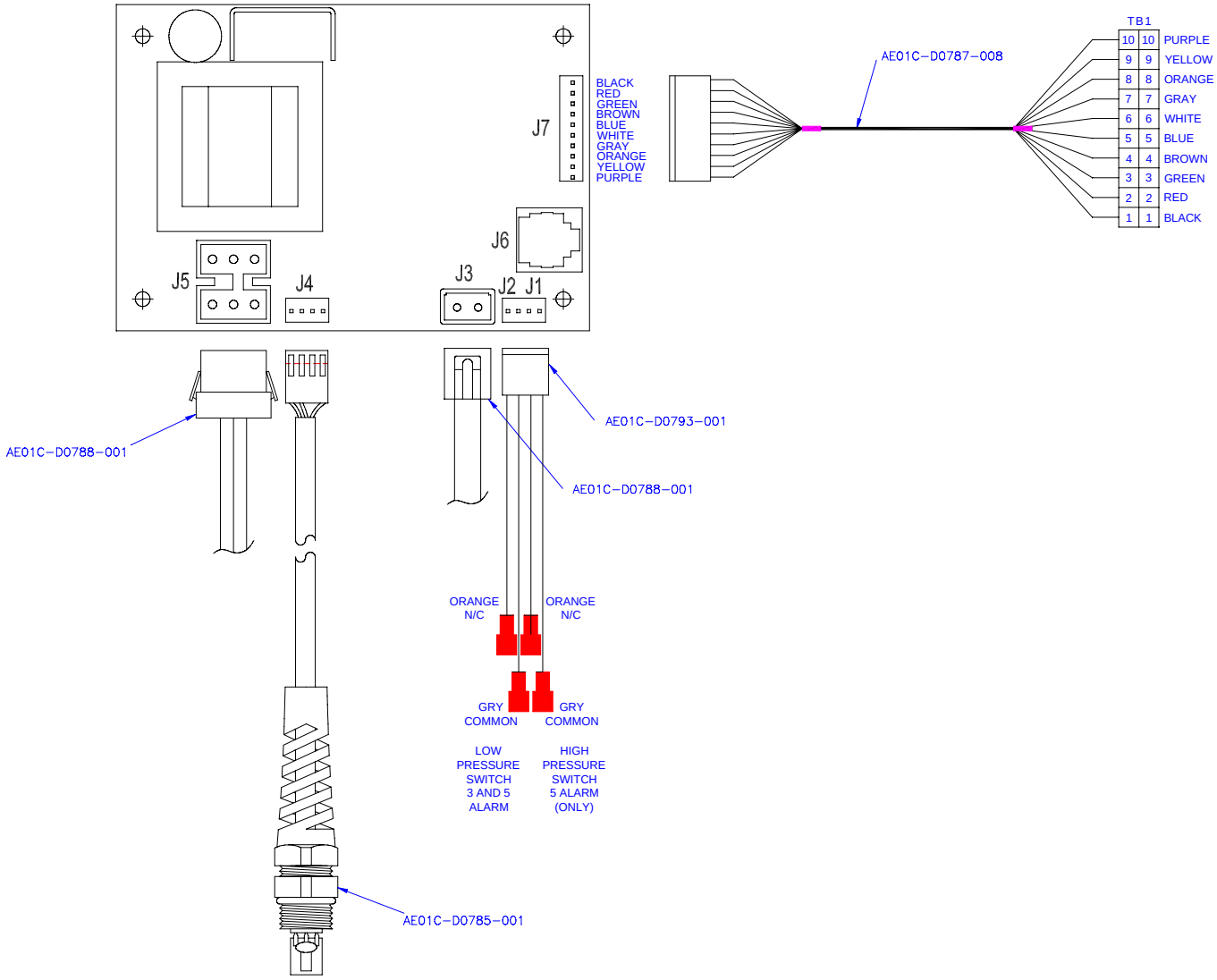
SCHEMATIC


CAUTION:
VERIFY JUMPER POSITIONS
PRIOR TO APPLYING POWER
J5
GRN/YEL
(-XX3XX, -XX5XX ONLY)
BLU
(-XX3XX, -XX5XX ONLY)
BRN
(-XX3XX, -XX5XX
ONLY)
DC POWER INPUT
19-32 OR
38-72 VDC
BRN
CB1
3A
S1
BRN
BLU
TIMER CONNECTOR
3-ALARM BOARD
J3
WHT
(-XX3XX, -XX5XX
ONLY)
BLK
(-XX3XX, -XX5XX
ONLY)
DC TO AC POWER
INVERTER OPTION
S2
LINE
MOTOR
GND
BLK
HOURMETER
M1
WHT
BLK
SV
WHT
SOLENOID
VALVE
AC POWER
OUTPUT-115VAC
BLK
WHT
IEC CONN
L
N
GRN/YEL
GND
GRN/YEL
GRN/YEL
WHT
BLK
BLK
CHASSIS
E1
COMPRESSOR
CONNECTOR
C1
RED

Alarm Cables



Standard Low Pressure Alarm



3 and 5 Alarm (option)

Replacement Parts
Section 5

The following is a list of the replacement parts for the MT050 series dehydrators:

Description	
Compressor	AE01J-A0713-001
Inlet Filter	EFLTR-20201
Pressure Gauge	AE01J-A0128-001
Valve, Over-Pressure	AE01J-A0174-007
Circuit Breaker	EBREK-10376
ON/OFF Switch (115V)	AE01J-A0129-005
ON/OFF Switch (230V)	AE01J-A0129-006
LP Alarm Switch	AE01J-A0734-010
Compressor Control Switch	AE01J-A0731-001
MT050-8XXXX	AE01J-A0127-004
3-Alarm Board	AE01J-B0845-101
RH Alarm Sensor Cable	AE01C-D0785-001
Front Door Fastener Kit	AE01K-D0818-020
Rubber Feet (bag of 4)	AE01K-D0818-040

Gast Compressor/Dominick Hunter Filter

Overhaul Kit	AE01K-C0398-007
Filter Element (1.0 micron)	EFLTA-91060
Filter Element (0.01 micron)	EFLTA-91050
Bowl Only	EFLTA-83000

(Filter bowl assy AE01J-A1978-050 can be used as a replacement for Dominick Hunter filter bowl assy.)

Gast Compressor/Parker Filter

Overhaul Kit	AE01K-C0398-016
Filter Element (1.0 micron)	AE01J-A1978-202
Filter Element (0.01 micron)	AE01J-A1978-201
Bowl Only	AE01J-A1978-101
Filter Bowl Assy	AE01J-A1978-050

Customer Service
Section 6

6.0 Introduction

Andrew provides in-warranty and out-of-warranty repairs as well as dehydrator and compressor overhauls from several Repair Centers. Coordination of these services is provided through the nearest Sales Office or Customer Service Center. The Center is also prepared to help you with the following:

- Technical Assistance
- Troubleshooting
- Repairs
- Loaner Units
- Spare Parts
- Installation Materials
- System Accessories.

6.1 In Case of Trouble

The first step you should take if trouble develops using a dehydrator is to read the operators manual and follow the trouble isolating procedures given in it.

If the steps in the manual do not identify and remedy the problem, then contact an Andrew Customer Service Center for 24-hour telephone assistance. Record the Model Number (e.g. MT050) and Serial Number from the product label, as you will be asked for these when you call. Two main locations are currently available to help:

in North America ---
1-800-255-1479

in Europe ---
+44 1592 782612

any Location (to USA)
(708) 349-3300

If you find it easier to describe your troubles by Fax, then the following numbers are also available:

in North America ---
1-800-349-5444 (Fax only)

in Europe ---
+44 1592 782380 (Fax only)

any Location (to USA)
(708) 349-5410 (Fax only)

6.2 Initial Steps by Andrew

When your call or fax communication is received, the Andrew staff will work with you to pinpoint the possible cause of trouble. If the pressurization equipment is suspect, they will:

* ask for your unit Model Number and Serial Number
* check the warranty status of the unit
* advise the availability of a loaner unit
* provide an estimate of the cost for inspection and repairs, if the unit is out-of-warranty
* fax a Return Goods Authorization Sheet to you.

6.3 Return Goods Instructions

After you have contacted Andrew and received a Return Goods Authorization Number (RGN), you will need to take the following steps to send the faulty unit to a Repair Center:

* make a copy of the Return Goods Authorization Sheet that was faxed to you
* write a brief description of the trouble you are encountering and attach this to the copy of the sheet
* pack the unit (with at least 4-inches of protective packaging on all sides)
* enclose the authorization sheet and trouble description within the box
* mark the outside of the box with the RGN
* return the box to the Repair Center address listed on the authorization sheet.

If you have saved the original packaging that came with the unit, use it to return the dehydrator for repair.

If a loaner unit (of the same type) was supplied by Andrew, use the loaner unit box to return the original dehydrator

6.4 Repair Center Process

The Andrew Dehydrator Repair Center will receive your unit and inspect it for any transport damage. The unit will then be analyzed for troubles using the description you have supplied and the specialized experience the Center staff have with dehydrators.

If the unit is in-warranty, repairs are made at no charge and the unit will be returned to you by the same mode of transport as it was received.

If the unit is in-warranty, but no problems are found, the unit will be thoroughly tested before being returned to you. A nominal inspection fee will be charged for this service.

If your unit is out-of-warranty, it will be inspected and you will be advised of the estimated cost of repairs, before the Center proceeds with any work. You may elect to scrap the unit or accept the estimated charge for repairs. If you elect to scrap the unit, you will be billed the nominal inspection fee. If you elect repairs, you will be billed for the inspection fee, parts consumed and labor necessary to do the repair.

6.5 Loaner Units

The Andrew dehydrator Repair Centers stock a limited number of "loaner" dehydrator units of both current and discontinued products. These units, while not new, are still in excellent working order.

Loaners are available on a first-come first-served basis. They are issued in conjunction with the original RGN and are invoiced at a nominal price. You will need to request a second RGN to return the loaner unit. A credit memo is issued by the Repair Center when a loaner is returned

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Andrew Corporation

Small and Medium Capacity Dehydrator and Line Monitor System Three Year Warranty

Seller warrants that any Andrew MT050, MT/XT 300, MR050, PMT200, ODPMT200 and 40525B series number Dehydrator and any Line Monitor System is transferred rightfully and with good title; that it is free from any lawful security interest or other lien or encumbrance unknown to Buyer; and that for a period of thirty-six (36) months from the date of shipment or 3000 hours of actual run time, whichever shall occur first, such equipment will be free from defects in material and workmanship which arise under proper and normal use and service. Buyer's exclusive remedy hereunder is limited to Seller's correction (either at its plant or at such other place as may be agreed upon between Seller and Buyer) of any such defects by repair or replacement (with either a new unit or a factory reconditioned unit) at no cost to the Buyer; provided that the cost of any transportation in connection with the return of the equipment for the purpose of repair or replacement shall be borne by Buyer. The provisions of this warranty shall be applicable with respect to any equipment which Seller repairs or replaces pursuant to it. Expressly excluded from the terms of this warranty are defects caused by: (i) faulty installation, (ii) lack of proper inspection or maintenance, (iii) and usage not in accordance with published ratings, specifications, or instructions. The provisions of this warranty shall be applicable with respect to any equipment Seller repairs or replaces pursuant to it.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, OTHER THAN AS SPECIFICALLY STATED ABOVE. EXPRESSLY EXCLUDED ARE ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE. THE FOREGOING SHALL CONSTITUTE ALL OF SELLER'S LIABILITY (EXCEPT AS TO PATENT INFRINGEMENT) WITH RESPECT TO THE EQUIPMENT. IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES, INSTALLATION COSTS, LOST REVENUE OR PROFITS, OR ANY OTHER COSTS OF ANY NATURE AS A RESULT OF THE USE OF EQUIPMENT MANUFACTURED BY THE SELLER, WHETHER USED IN ACCORDANCE WITH INSTRUCTIONS OR NOT. UNDER NO CIRCUMSTANCES SHALL SELLER'S LIABILITY TO BUYER EXCEED THE ACTUAL SALES PRICE OF THE EQUIPMENT PROVIDED HEREUNDER. No representative is authorized to assume for Seller any other liability in connection with the equipment.

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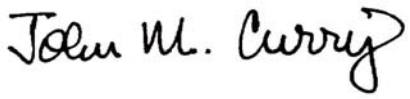
DECLARATION OF CONFORMITY

Application of Council Directives	73/23/EEC; 89/336/EEC
Standards to Which Conformity is Declared	EN60204-1; EN50082-1-1992
Manufacturer's Name	ANDREW CORPORATION
Manufacturer's Address	2601 TELECOM PARKWAY RICHARDSON, TEXAS 75082 USA
Authorized Agent	AAS - ANDREW LIMITED
Agent's Address	THE AVENUE LOCHGELLY, FIFE SCOTLAND, UNITED KINGDOM, KY5 9HG
Type of Equipment	DEHYDRATION
Model Number	MR050, MRS050, MT050, ODPMT200, PMT200

I the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standards.

Place: Richardson, Texas, USA



(Signature)

Date: February 25, 2002

John Curry
(Full Name)

Product Line Manager
(Position)

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