



# Refrigerated Air Dryers Instruction Sheet

ATD-7910, ATD-7911, ATD-7912, ATD-7913, ATD-7914 & ATD-7915

REFRIGERANT	MAX. INLET PRESSURE	MAX. INLET TEMPERATURE	MAX. INLET TEMPERATURE	MIN. INLET TEMPERATURE
R134A	250 psig	120° F	110° F	50° F

MODEL NUMBER	INLET/OUTLET SIZE
ATD-7910	3/8"
ATD-7911	1/2"
ATD-7912 through ATD-7915	3/4"

### AMBIENT CONDITIONS

- Indoor Installation is recommended. Dryers installed outdoors must be well protected from precipitation, dust, dirt, debris and animals.
- The unit should be installed in a well ventilated area. Ambient temperature must be in the temperature range of 50° F to 110° F.
- If the dryer must be installed in locations with 1) airborne particles or fines 2) an oily atmosphere conducive to the collection of dust and dirt particles in between the fins of the refrigerant condenser, install and maintain an ambient air filter.
- Position the dryer to allow free circulation of cooling air through the front and rear of the dryer.

### MOUNTING

- The dryer should be placed on a rigid, level surface.
- If mounted on a shelf or on any surface or structure above the floor level, the dryer should be bolted down.
- The dryer should be isolated from excessive vibration, which could be transmitted through the mounting surface or attachment piping.

### ELECTRICAL

- **For units 10 SCFM through 100 SCFM**, the unit should be connected to an appropriate grounded receptacle based upon its nominal voltage. Be sure the power cord is protected from possible damage after installation. For units 150 SCFM to 200 SCFM, you may need a qualified electrician to aid in the connection with its terminal block based upon its nominal voltage.
- The dryer should be connected to a fused disconnect, having a fuse size not to exceed the maximum fuse size indicated on the dryer data label.
- Power supplied to the dryer must conform to the electrical specifications listed on the dryer.
- On models 150 SCFM to 200 SCFM, they have a junction box with a 1/2 inch knockout. A conduit connector is provided. To connect to the terminals in the junction box, remove the aluminum access plate. The access plate is held in place with two screws. Thread the power cord through the conduit connector and, using the appropriate electrical schematics in this literature, connect to the terminals in the junction box. Replace the access plate.

### REFRIGERANT CIRCUIT

The refrigerant compressor compresses refrigerant vapor to a high pressure and temperature. The compressed vapor then flows through the condenser where it is cooled and forms a liquid. After this, it is filtered through the refrigerating filter-dryer where any traces of moisture and contaminants are removed. The expansion valve lowers the pressure which in turn lowers the temperature of the liquid refrigerant to its preset level. It remains at this pressure and vaporizes as it flows through the evaporator/refrigerant-to-air heat exchanger absorbing heat from the air being dried. The refrigerant then flows back to the compressor and the cycle repeats.

These dryers use R134a refrigerant. For units with a refrigerant suction pressure gauge, the refrigerant suction pressure is listed in the chart below for the appropriate model. If a lower pressure dew point is required, back off the adjustment screw on the automatic expansion valve for models 10-40 SCFM or reduce the hot gas bypass valve setting on models 50-200 SCFM, until gauge pressure reaches the desired psig (shown below).

MODEL NUMBER	GAUGE PRESSURE READING
ATD-7910 through ATD-7913	33 To 36 psig
ATD-7914 & ATD-7915	30 To 34 psig



IS-Refridge-S50

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## TROUBLESHOOTING GUIDE

### Shortage of refrigerant

Fix the leak and add a charge of refrigerant. Loss of refrigerant will cause improper functioning. A qualified refrigerant specialist should perform the necessary repairs, or factory should be contacted if the unit is under warranty.

### Refrigeration system is not functions

Check to be certain refrigerant compressor is running. It is possible for the fan to be operating but not the compressor. Compressor not running can be caused by several factors. A qualified refrigeration contractor should check refrigerant and electrical controls.

### Excessive pressure dew point.

Readjust expansion valve. The expansion valve operates like a pressure regulator. Loosen lock nut. Turning the adjustment screw on the expansion valve counterclockwise decreases refrigerant pressure and lowers refrigerant temperature. Adjust valve in ¼ turn increments to allow 15 minutes for pressure stabilization with air flowing. Caution: too low a setting can cause moisture in heat exchanger to freeze.

## HIGH PRESSURE DROP

### Excessive air flow

Check the Air flow. This dryer is designed for a specified air flow as as indicated. If air flow into the dryer exceeds specifications, the water removal capacity may be insufficient resulting in a liquid carry-over downstream. Check the flow of the air system.

### Freeze up

Readjust refrigeration controls. Frosting of the lines is an indication the controls are set too low. **MODELS ATD-7910 through ATD-7913** controls may be adjusted in the field by means of the expansion valve adjustment screw. **MODELS ATD-7914 & ATD-7915** controls may be adjusted in the field by means of the hot gas bypass valve. Loosen lock nut. Turn screw clockwise to increase refrigerant pressure setting which will increase refrigerant pressure setting which will increase refrigerant temperature. Turn screw in ¼ turn increments until frost disappears. Allow 15 mins between adjustments for pressure stabilization with air flowing.

## THE UNIT WILL NOT RUN OR CYCLES OFF AND ON.

### Line disconnect switch is open. Power on light will be off.

Close the start or disconnect switch. If the dryer is not operating check the disconnect switch or circuit breaker to be certain it is on.

### Fuse or breaker is open. Power on light will be off.

Replace fuse or reset the breaker. The fuse to the power line should be checked. Make sure the correct size fuse is used. See data tag label for correct fuse size.

Your ATD-7910, ATD-7911, ATD-7912, ATD-7913, ATD-7914 or ATD-7915 is warranted for a period of 60 months from the original purchase date.

For a period of five (5) years from your purchase date, ATD Tools Inc. will repair or replace (at its option) without charge, your ATD product if it was purchased new and the product has failed due to a defect in material or workmanship which you experienced during normal use of the product. This limited warranty is your exclusive remedy.

To access the benefits of this warranty, contact your supplier, or point of sale directly. You may be advised to return the product under warranty, freight prepaid, to your supplier for warranty determination.

If this ATD product is altered, abused, misused, modified, or undergoes service by an unauthorized technician, your warranty will be void. We are not responsible for damage to ornamental designs you place on this ATD product and such ornamentation should not cover any warnings or instructions or they may void the warranty. This warranty does not cover scratches, superficial dents, and other abrasions to the paint finish that occur under normal use. It also does not cover normal wear items such as but not limited to brushes, batteries, drill bits, drill chucks, pads or blades.

### Subject to the law in your state:

- (1) Your sole and exclusive remedy is repair or replacement of the defective product as described above.
- (2) ATD is not liable for any incidental damages, including but not limited to, lost profits and unforeseeable consequences.
- (3) The repair and replacement of this product under the express limited warranty described above is your exclusive remedy and is provided in lieu of all other warranties, expressed or implied. All other warranties, including implied warranties and warranties of merchantability or fitness for a particular purpose are disclaimed and, if disclaimer is prohibited, these warranties are limited to one year from your date of purchase of this product.

Some states' laws do not allow limited durations on certain implied warranties and some states' laws do not allow limitations on incidental or consequential damages. You should consult the law in your state to determine how your rights may vary.