



MOISTURE BOSS

This manual contains information that is important to your safety and preventing damage to your compressed air system.

Before Installing your Moisture Boss air dryer, carefully read this entire manual.

COMPRESSED AIR DRYER

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SAFETY

- Warning** indicates that a condition may exist which could cause harm to the operator
- Caution** indicates that a condition may exist which could damage the air system



WARNING

- Warning** Do not operate the Moisture Boss compressed air dryer above 200 psig. Do not introduce compressed air above 100° F.

A pressure relief valve should be installed in the compressed air system. An accessory kit is available (Van Air Systems part number 80-1554) that includes a relief valve, pressure gauge, and installation fittings.

Never remove, repair, or replace any parts on the Moisture Boss while the dryer is pressurized. Verify the dryer is depressurized before performing maintenance. Failure to follow this safety rule may result in serious injury.

Damage to the Moisture Boss can make it unsafe. Inspect the exterior regularly for dents, cracks, excessive corrosion, air leaks or signs of damage. If any damage is identified, take the dryer out of service immediately for repairs or replacement.

Do not tighten or remove the top fill port, bottom port, or tie rod nuts unless the dryer is verified to be at zero pressure.

CAUTION

- Caution** Do not operate the Moisture Boss using desiccants other than Van Air Systems DRY-O-LITE®.

Connect the dryer to a drop leg (see figure 1.0) to prevent liquid backflow.

Never drain the dryer to a non-vented container.

INTENDED USE

The Moisture Boss eliminates problems associated with contaminants in compressed air systems.

The Moisture Boss is intended for use in small compressed air systems, 10 horsepower and under; see chart 2.0 on page 5 – to protect paint spraying equipment, abrasive media blasters, plasma cutters and other air tools sensitive to contamination. The Moisture Boss removes water droplets, oil mists, water vapor and solid particulates.

DRY-O-LITE® is a Registered Trademark of Van Air Systems. It is manufactured exclusively by Van Air Systems.

INTRODUCTION

The Moisture Boss dries and filters compressed air using special desiccant tablets called DRY-O-LITE®. The dryer operates automatically. There are no moving parts, and no external source of power is required.

Wet air enters the lower side connection. Liquid water and solid particles are separated by gravity and fall to the bottom of the vessel where they can be drained away.

The compressed air moves upward through the desiccant tablets, which absorb water vapor. The air exits the dryer after passing through a three stage filter that captures remaining oil mists and particulates.

The DRY-O-LITE® tablets deliquesce (dissolve) while absorbing moisture. Tablets at the base are consumed first. The tablets in the top portion of the dryer serve as a reserve supply. When the reserve supply is depleted, the dryer must be refilled. Liquid drained from the dryer is a solution of water and desiccant. The dryer must be drained daily before and after each use.

INSTALLATION

1.0 LOCATION

Dryer performance depends on proper location in the air system. Air temperature and pressure are critical. Locate the dryer as far from the air compressor as practical to allow for maximum cooling; a minimum of 25 feet of piping is recommended. The air temperature into the dryer should

not exceed 100° F. Install a compressor after-cooler to achieve proper cooling if necessary.

Install the dryer upstream of the pressure reducing regulator

Attach the dryer to a drop leg. See figure 1.0 below. To prevent brine liquid backflow, the inlet pipe or hose must come from above the dryer as seen in Figure 1. Corrosion resistant materials are recommended.

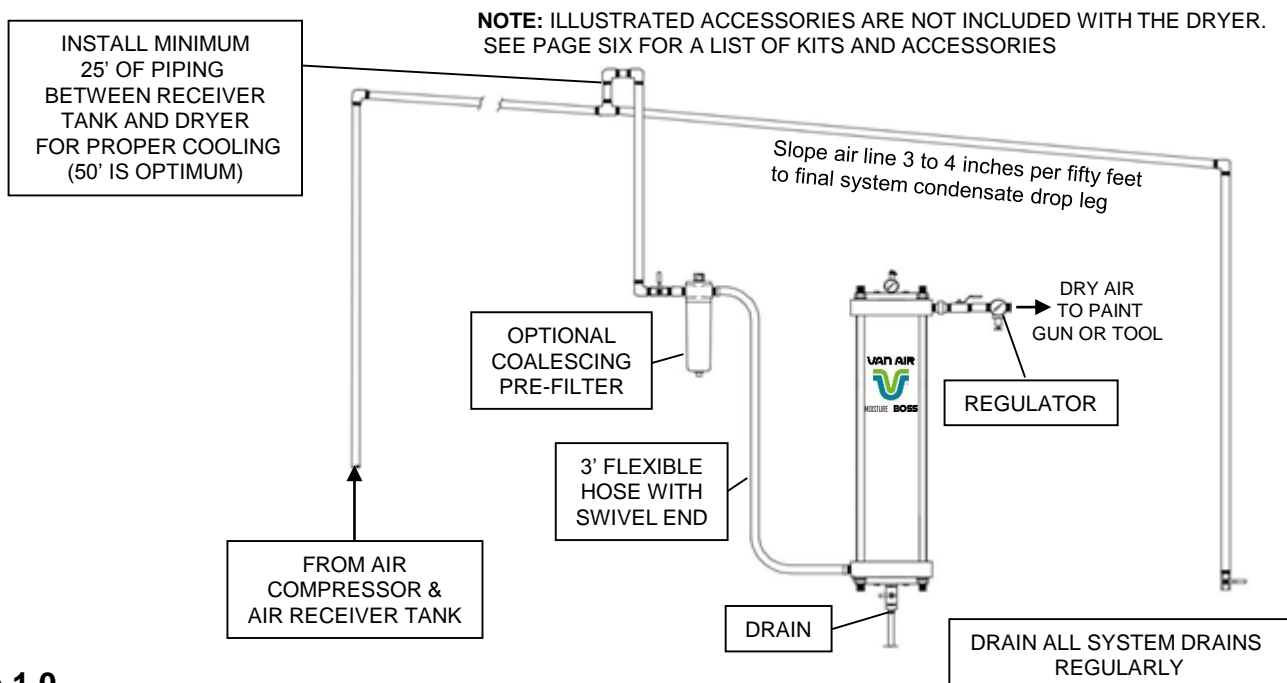


Figure 1.0

1.1 In the box:

The Moisture Boss ships with an initial fill of DRY-O-LITE[®] desiccant and internal after-filer pre-installed. A 1/4" NPT drain ball valve, a one foot long aluminum bracket, and bracket hardware [(2) 3/8" bolts and (4) flat washers] are included.

1.2 Installation Notes:

1. Attach the aluminum bracket to the Moisture Boss using the two 3/8" bolts and flat washers.
2. Attach the assembled dryer with bracket to the wall in a vertical position. Use anchors and fasteners that are suitable for the wall's construction type, capable of supporting 35 lbs.
3. Orient compressed air pipes and/or flexible hoses as shown in Figure 1. Be sure to take the drop leg for the dryer from the top of the overhead pipe. (Sold separately: installation kit part 80-1459. See page six.)

Attach inlet and outlet air lines using a brush-on thread sealant, such as Loctite[®] 565[™]. Do not use tape based thread sealants as galling and / or leaks can occur.

For air systems with steel or iron pipe or with heavy compressor lubricant carry-over, consider installing a coalescing (oil-removing) filter with corrosion resistant connection to the dryer inlet to prevent contamination of the desiccant and premature filter failure. This normally applies to systems with older reciprocating air compressors.

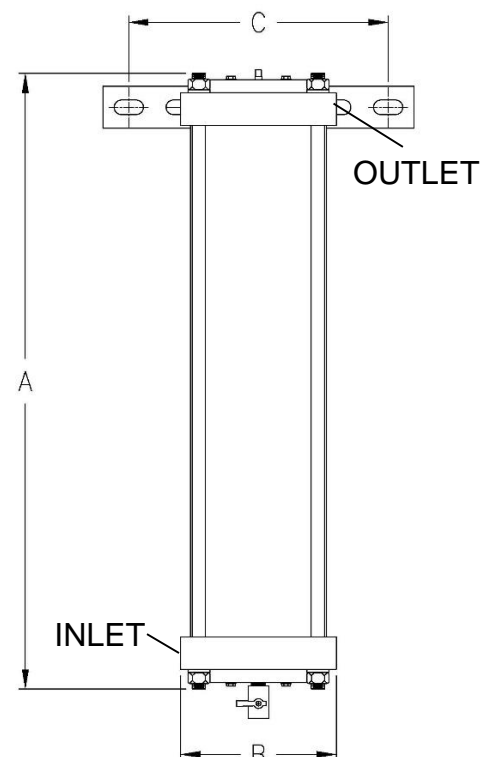
4. Attach the 1/4" ball valve drain to the drain port in the bottom head of the dryer. **Use thread sealant per above.**
5. Attach a flexible drain hose to the 1/4" ball valve using a 1/4" NPT male x 3/8" barb fitting. Route the hose to a vented container for collecting liquid. (Sold separately: installation kit part number 80-1459. See page six.)
6. Install the pressure reducing regulator after the dryer.
7. **Slowly** apply pressure to the dryer. Check for leaks in fittings and connections. Depressurize the system and repair leaks as necessary.
8. The Moisture Boss is now ready for operation.

Specifications

A - 24"
B - 6"
C - 10"

Weight with desiccant – 35 LBS

Inlet – 1/2" NPT
Outlet – 1/2" NPT
Drain – 1/4" NPT



2.0 Operation & Maintenance

1. Inspect the Moisture Boss for damage before each use. Repair or replace as necessary.
2. Add DRY-O-LITE® desiccant when the level visibly falls below the marker line. A wide mouth funnel is useful. See the illustration below. Fill to just below the blue top head level. Do not overfill. Read instructions below for removing the fill cap and filter element.

⚠ WARNING: Always fully depressurize the dryer before servicing by isolating dryer and opening the drain valve.



3. **Drain liquid** before and after each use. More frequent draining is recommended if it is hot / humid Or when air is consumed for continuous periods of several hours.

4. Do not exceed the flow rates shown in chart 2.0.

5. To remove the lid from the top head. Slowly loosen the bolts incrementally in a counter clockwise pattern using a 3/8, six point socket. Remove the bolts and set aside. The lid may stick to the gasket and require bumping with a wood dowel or soft mallet to remove. Remove the gasket.

6. Remove the filter element by lifting it straight out of unit. Remove the o-ring from the dryer if it is not attached to the filter element. Inspect the o-ring for tears and replace as necessary. See the illustrations below. Replace the outlet filter element in the top head every 3-4 months. Clear any desiccant dust or dirt from the top head filter section with compressed air and damp cloth.

Install a new filter element with the included o-ring. (**Tip:** the o-ring can be coated with soapy solution to aid installation.) Make sure the filter element is installed squarely and nearly flush with the top before re-installing the top gasket and lid assembly.

Clean the bottom of the lid with a damp cloth and replace the lid. Finger tighten the bolts. Finally tighten the bolts incrementally with the socket wrench in an X pattern. Torque each bolt to 12 foot lbs.



Chart 2.0

MAXIMUM FLOW (SCFM)	MINIMUM PRESSURE (PSIG)
20	90
25	105
30	125
35	150

Replacing desiccant that has become contaminated with compressor oil will return the Moisture Boss to like new performance. DRY-O-LITE® desiccant can be replaced by removing it through the bottom lid. The bottom lid and desiccant support can be removed and replaced in a similar fashion to the top lid and filter element. Note the bottom desiccant support can be cleaned in warm soapy water and does not require an o-ring. (see above).

PARTS AND ACCESSORY KITS

Part Number	Description
80-1549	Installation Kit , includes (2) ¼" NPT barbed drain hose fittings, (1) 3' x ¼" translucent drain hose, (2) drain hose clamps, (1) 3' x ½" inlet flex hose with male connections, one is swivel.
80-1548	Service Kit , includes (2) lid-to-head gaskets, (8) lid hex bolts, (1) inlet tablet support with o-ring, (1) ¼" replacement ball valve drain
80-1554	Accessory Kit , (1) ¼" 200 psig set pressure relief valve, (1) ¼" back mount pressure gauge, and (1) ¼" glv. tee and ¼" short nipple
80-1556	Filter elements , (4) replacement outlet filters with o-rings
33-0403	DRY-O-LITE® desiccant, 18 lb pail

WARRANTY

For a period of **one** year from date of original purchase, **Van Air Systems** will repair or replace, at its option, the Moisture Boss, or part thereof, which fails because of a material or manufacturing defect; provided that (1) the defect is not caused by the purchaser or its customer and (2) the product has not been damaged, altered, or defaced. This limited warranty shall be the sole and exclusive remedy of the purchaser, irrespective of whether the claims of purchaser are made in contract, tort, warranty, law, equity, or by statute. In the event that a court of competent jurisdiction determines that the exclusive remedy set forth above has failed of its essential purpose, such a failure shall entitle the purchaser to a return of the purchase price as full and final remedy.

Van Air Systems makes no express guarantees, warranties, or other representations as to its products, other than those appearing in its written form in its own trade literature or written proposals. **Van Air Systems expressly disclaims the implied warranties of merchantability, fitness for a particular purpose, and non-infringement in relation to any of its products. In no event shall Van Air Systems be liable to the purchaser of any product for consequential, incidental, or special damages irrespective of whether such damages are alleged to arise in tort, contract, law, equity, or by statute.** The above provisions relating to the exclusion of consequential, incidental, and special damages shall survive and remain in force notwithstanding a finding by a court of competent jurisdiction that the exclusive remedy provided below to a product purchaser has failed of its essential purpose.

Returned Goods Policy

A request for return authorization must be submitted to **Van Air Systems** Customer Service Department prior to the return of any product. The request for return authorization must include the product catalog number, quantity, and specific reason for the return. No product may be returned after 30 days from the original date of purchase, unless defective.

Where a return of any product is authorized, **Van Air Systems** will provide a return authorization number. The original box must be marked with the return authorization number or it will not be accepted. All product must be returned freight prepaid.

Credit may be issued to the original purchaser for authorized returns of salable, unused product in unopened boxes, subject to a 25% restocking fee.