

# Mini Air Screen Manual

Manufactured in the U.S.A.

## OWNER'S MANUAL

Serial Number \_\_\_\_\_



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## INTRODUCTION

Congratulations!

You have purchased one of the finest air screen machines on the market today. these cleaners are a culmination of cleaning principles over a century old in combination with all of today's technology.

From the base model to custom designed Air Screen Machines, any separation is possible, with the utmost precision and 0% damage to your crop.

We use tubular steel frames and either steel or wood shoes. All components are easily interchanged and all pulleys and bearings are standard and can be purchased locally.

Some applications of the Bench Mini Air Screen Machine are: seed plants, rice cleaning, cereal grains, pinto beans, peas, beet pulp, corn pellets, and all other applications where aspiration and sizing are needed.

In the following Set-up, Installation, and Maintenance we provide explanations, suggestions, and remedies to most circumstances. Should you have additional concerns, please contact us for assistance at Bench Industries, PO box 3167, Great Falls, MT 59403, 406.727.6514 or e-mail us at [brian@benchindustries.com](mailto:brian@benchindustries.com)

## SETTING UP THE MACHINE

All Bench Mini Air Screen Machines have been pre-run at the factory, but even so, once you have received your Bench Mini Air Screen Machine you should check for any loosened components due to shipping.

The standard Bench Mini Air Screen Machine, Model 2-2736-2A is a single shoe machine designed to be attached to a concrete floor or pad. If you have an unstable surface, a counterbalance may be required.

All bearings should be checked for grease and screen hold-downs should be checked for tension. Also set the in-feed in low position and air setting closed for start-up.

The fan is designed to mount remote usually mounting on the outside of the facility, or in case of mobile unit, can be mounted off the cleaner with framework. Make certain air controls are open and closed as indicated on side of machine shown in *Figure 4*.

## **START-UP**

Now that you are ready to operate your Bench air Screen Machine, for your ease, we recommend the following:

The intake hopper is designed to be fed with a spout or auger. If you gravity feed the machine for an overhead bin directly a hogsback must be installed in the field to prevent excess weight on the feeder pan. The fan rotation needs to be checked and make sure you have no restrictions in the air system.

Start the machine without any product and let it run for a least 25 minutes. this will allow you to check for noises of loose components and to examine your installation. Once you start product feeding into the machine start with a small amount and slowly increase your volume.

## **MAINTENANCE**

The bearings should be greased moderately with very small augments. All bolts and set-screws should be checked often when first running the machine.

If any excess noise occurs, your machine should be shut down and inspected for loosened parts or push-rods arms.

You should make sure the shoes are always shaking straight back and forth with no side-to-side movement present. Any side-to-side movement means loose push-rods or worn bearing and must be remedied immediately to prevent damage to your machine.

## SCREEN INSTALLATION

Open the access door at the intake end of the Bench Mini Air Screen Machine. The standard machine is equipped with two screen layers. Scalp, and Sift. There are two screen sections 27' x 36' which are placed above the ball racks. Each ball rack comes with 8 compartments for the rubber balls for screen cleaning. Each ball rack needs a minimum of 5 balls per compartment. Each deck holds 40 balls. The standard Bench Mini Air Screen Machine with 2 decks requires a total of 80 rubber balls.



*Figure 1*



*Figure 2*

The screen has a 1/2' lip that is to be positioned toward the discharge end to prevent any product leakage. Be certain the rails that support the ball and screen racks are free from debris. Now you can load your screen and ball racks. After installation the screens should evenly spaced, this is the proper installation. Place the blank against the screen and ball rack. Hold the blank tight against the screen and adjust the push bolts against the ball rack. As shown in **Figure 1**. close the door and latch; tighten the two hand knobs, as shown in **Figure 2**. If the door will not shut, check to see what the obstruction is and loosen thumb knobs and check blanks to see if they are in properly. After the door is closed properly, carefully snug up the thumb knobs as shown in **Figure 2**. If you hear a banging noise, STOP the machine immediately and adjust the ball rack and screen holders.



## PRODUCT IN-FEED

Product is metered into the Bench Mini Air Screen Machine by way of a vibrating pan. the volume control is mounted on the side and is easily controlled with a hand crank. if excess weight is put on the vibratory pan, cranking will become difficult and possibly damage the components. Should excess weight be a factor, a hogsback may need to be installed.



*Figure 3*

Variables of speed, shoe shakes, air volume and screen sizes will all determine the volume blowing through the machine and will impact your desired final result. Begin with a slow rate and increase until desired capacity with quality is achieved. Do not overload the screen decks or damage may occur.