

MATERIAL MOVER®
OPERATING INSTRUCTIONS

FOR MM400, MM450, MM460, MM800, MM850
and MM860 MODELS



GUARDAIR®

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INTRODUCTION



Meet the Material Mover!

The Guardair Material Mover® is a portable, in-line vacuum system powered by compressed air, designed to efficiently transfer dry materials from one location to another. With a 2½" diameter throat and a lightweight, ergonomic design, it is ideal for handling materials such as seed, grain, corn, beans, and plastic pellets.

This tool is especially useful for agricultural applications, including cleaning out equipment like combines and seeders or transferring materials into storage bins and silos. Its operation helps reduce material damage and minimize waste.

The Material Mover has no moving parts or motor, ensuring durability and low maintenance. It is available in two models:

4-Nozzle (83 cfm): Optimized for 100 cfm in-plant compressors.

8-Nozzle (165 cfm): Designed for use with 185 cfm tow-behind compressors.

Both models come in standard or static-conductive (anti-static) configurations to suit a variety of environments.

Physical Specifications

Vacuum

- Weight – 8.25 lbs
- Measurements – 20" L x 5" W x 71.25" H
- Materials
 - Vacuum head – Powder Coated Aluminum
 - Inner Barrel – Powder Coated Steel

Hose (Static Conductive)

- Weight – 6.8 lbs
- Measurements – 15' L x 2.5" ID
- Materials – Static Conductive PVC

Hose (Standard Clear)

- Weight – 12.8 lbs
- Measurements – 15' L x 2.5" ID
- Materials – Clear PVC

Wand (Static Conductive)

- Weight – 3 lbs
- Measurements – 5' L x 2.5" ID
- Materials – Aluminum

Wand (Standard Clear)

- Weight – 2.4 lbs
- Measurements – 5' L x 2.5" ID
- Material – Clear Polycarbonate

Cradle

- Weight – 10.5 lbs
- Measurements – 23.25" L x 20.375" W x 14" H
- Materials – PC Steel

Deflector

- Weight – 1.92 lbs
- Measurements – 11" L x 4.5" W x 4" H
- Materials – PC Steel

Operating Pressure

- 90 psig Design Operating Pressure
- 80-120 psig Operating Pressure Range

Performance at 90 psig

Vacuum	Air Usage (scfm)	Vacuum Rate, Corn (lbs/min)	Vacuum Rate, Wheat (lbs/min)
8 Nozzle	165	90	81
4 Nozzle	83	63	49

Use of 3/4" ID Airline with Universal Chicago Couplings Recommended

IMPORTANT

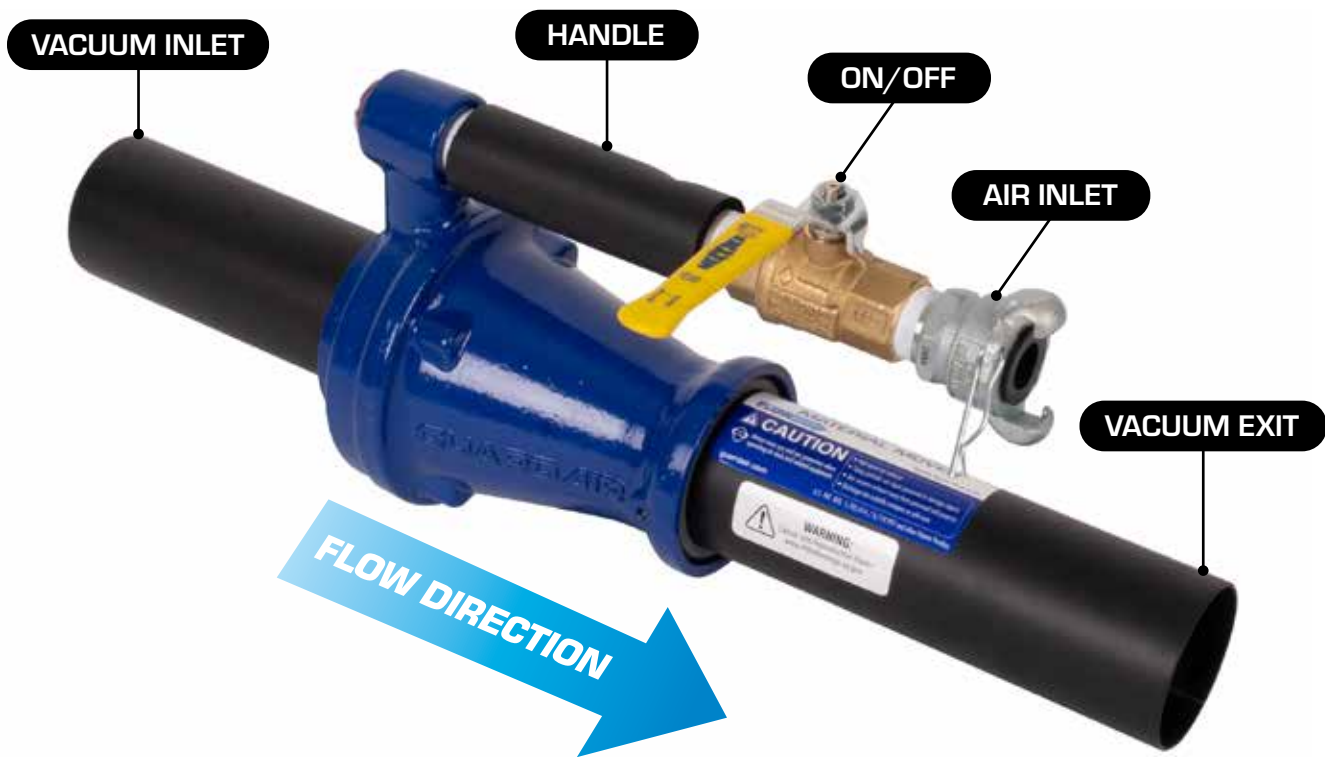
Always wear proper safety protection.



VACUUM ANATOMY

Vacuum

The Material Mover vacuum uses a venturi effect for transporting materials. High-speed Supersonic Nozzles are aligned to disperse air in the direction of the material being vacuumed without moving parts



Hose and Wand (Standard)

A clear hose and wand combination for general use. The clear materials allow the end user to monitor the vacuumed material as it travels through the system.

Hose and Wand (Static Conductive)

This hose and wand combination helps reduce static shocks during vacuuming. This is not intended to be used in hazardous locations.



Vacuum Cradle

The vacuum cradle is intended to be used for mounting the vacuum securely. The cradle can be staked to the ground, or hung on walls.



Vacuum Deflector

The vacuum deflector attaches to the exit of the vacuum to help safely direct vacuumed material. The deflector angle can be changed as needed.



INITIAL SETUP



1 Attach air hose to vacuum air inlet, use safety clip to secure connection. Ensure ball valve is in OFF position.



2 Attach vacuum hose to vacuum and wand and secure with hose clamp. The material mover is designed to be used with 2 1/2" vacuum hose.



3 Place vacuum into cradle, if applicable, or mount in secured position. If vacuum is not secured, debris may be directed in wrong direction when turned on.

OPERATION

Vacuum Use



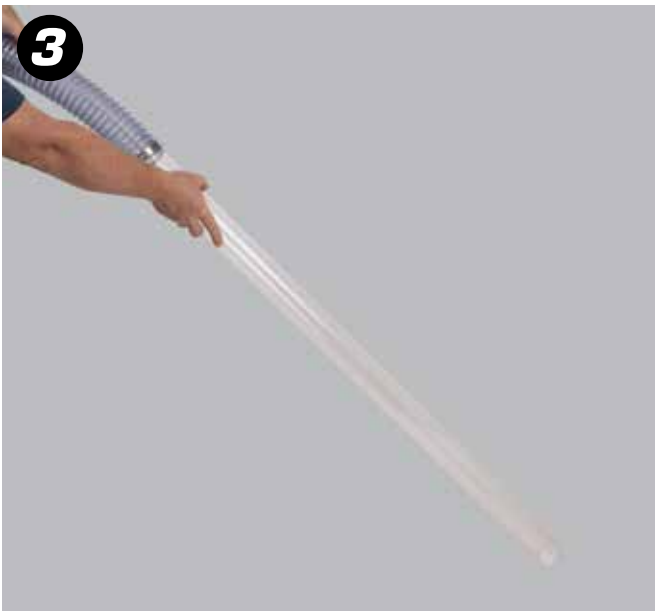
Turn on air by turning ball valve on.

Ball valve handle in direction of vacuum tube would indicate air ON direction. Vacuum power can be controlled with ball valve. Use the least amount of power necessary to complete job to save air and reduce damage to product being transported.



Aim exit end of vacuum into appropriate container or other safe direction

- A cradle can be purchased to help load onto a truck or keep the vacuum in place while suctioning debris. See cradle use.
- Without the use of the Guardair designed cradle, the vacuum may be able to spin away from intended exit direction. Ensure vacuum is held in place with appropriate methods.



Hold onto wand and place suction end of wand into material to be transported.

- It is important not to dead end the suction tube in the material being transported. The material mover works best when air is allowed to be entrained with the materials being sucked up.
- Too much material at one time can slow down the velocity of the debris and cause clogs or buildup on vacuum hose walls.

CAUTION

Debris exits vacuum at high rates of speed. Use included deflector or aim vacuum exit into appropriate container so that debris does not cause damage to surroundings.

Cradle and Deflector Use



A cradle is an accessory which can hold the vacuum securely while in use. The cradle can be secured to the ground with stakes, or hung off the side wall of a truck bed with specially designed feet.



The deflector can help direct material to a specific location. Loosen the handles on each side of the deflector, move to desired angle, and re-tighten handles.

OPERATION

Static Conductive Version

The material mover can be ordered with a static conductive vacuum hose and a lightweight aluminum wand. When the vacuum is used with certain materials, static charge can build up and create nuisance shocks. The static conductive hose and aluminum wand help dissipate these charges to reduce shocks.

Note: This vacuum is not rated for hazardous locations.



Handle Orientation

Handle can be reversed if space is limited and air hose would get in way of operation. Slide foam grip out of way and grab pipe handle with pipe wrench and remove. Remove plug from opposite side of handle and place into hole the handle was removed from. Wrap Teflon tape around handle and screw tightly into hole plug was removed from.



The Material Mover has no moving parts and generally has low maintenance requirements.

General



Clogs and Debris Build Up

Some soils and other debris can stick easily to the vacuum hose and vacuum tube ID. This can be amplified if the materials bog down too slowly when trying to vacuum up large amounts of material at once. The Material Mover should not be used on any slightly wet material, since that may cause it to clog.

Many clogs can be dislodged by placing a garden hose with water into vacuum while running. Fully dry vacuum after cleaning if water is used.

Stubborn blockage in hose can be broken up in the hose by tapping with a dead blow hammer.



Deflector Wear Plate

The wear plate on the deflector can be replaced if there is too much wear. Remove 4 bolts, replace plate and re-tighten.

ACCESSORIES AND SPARE PARTS

PART NUMBER	PRODUCT DESCRIPTION
MM400	Material Mover Vacuum Unit (4 Nozzle)
MM450	Material Mover Standard- Basic Kit (includes MM400, Vacuum Hose & Wand)
MM460	Material Mover Standard- Complete Kit (includes MM400, Vacuum Hose, wand, cradle & deflector)
MM800	Material Mover Vacuum Unit (8 Nozzle)
MM850	Material Mover Standard - Basic kit (includes MM800, vacuum hose & wand)
MM860	Material Mover Standard - Complete kit (includes MM800, vacuum hose, wand, cradle & deflector)
MM450NED	Material Mover Static Conductive- Basic Kit (includes MM400, Static Conductive Vacuum Hose & Wand)
MM460NED	Material Mover Static Conductive-Complete Kit (includes MM400, Static Conductive Vacuum Hose, wand, cradle & deflector)
MM850NED	Material Mover Static Conductive-Basic kit (includes MM800, vacuum hose & wand)
MM860NED	Material Mover Static Conductive- Complete kit (includes MM800, vacuum hose, wand, cradle & deflector)
MM245	2.5" ID X 15' Vacuum Hose W/ Hose Clamps -Static Conductive
MM160	Material Mover Cradle
MM161	Material Mover Cradle Repair Kit
MM162	Material Mover Deflector
MM163	Material Mover Deflector Repair Kit
MM164	Material Mover Inner Barrel
MM165	Material Mover V-Seals (2pk)
MM166	Material Mover Vacuum Repair Kit
MM240	Material Mover 2.5" ID x 15' Vacuum Wand - Static Conductive
AVH2515	2.5" ID X 15 Ft Vacuum Hose

To order or see the full line of Material Mover Accessories and Spare Parts, visit guardair.com or your local Guardair Distributor.

LIMITED WARRANTY – One Year Warranty Period

Guardair Corporation ("Guardair") warrants that, under normal use, our products are free from defects in materials or workmanship during the Limited Warranty Period. Starting from the date of purchase and during the Limited Warranty Period, Guardair will, at our sole discretion, repair or replace defective parts or products. This Limited Warranty extends only to products that are purchased either directly from Guardair Corporation or from an authorized Guardair Distributor. Furthermore, the Limited Warranty extends only to products which are used for their intended purpose. This Limited Warranty does not extend to any product which has been misused, or that has been damaged from accident or mistreatment, from the use of parts not supplied by Guardair, or from modification or servicing of the product by anyone other than Guardair or its authorized Distributor.

Guardair's sole obligation and the end-user purchaser's exclusive remedy under this Limited Warranty shall be limited to the repair or replacement, of product or components. In no event shall Guardair be responsible for special, consequential, or incidental damages arising out of a claim for defective product or failure of warranty. All labor and material costs of repair or replacement under this Limited Warranty shall be the responsibility of Guardair. Shipping costs to and from the end-user purchaser associated with repair or replacement under this Limited Warranty shall be the responsibility of Guardair during the Limited Warranty Period.

To obtain service under this Limited Warranty, the end-user purchaser must contact the Distributor from whom the product was purchased or contact Guardair directly. The end-user purchaser must provide a reasonable opportunity for inspection and investigation of the claim, prior to any repairs or alteration to the product. Until the claim is resolved, the end-user purchaser must discontinue use of the product if continued use creates or exacerbates problems associated with, or incidental to, the defect.

Proof of purchase will be verified by the end-user purchaser and applicability of the Limited Warranty will be determined by Guardair. Guardair at its sole discretion will determine whether to repair or replace defective parts or products. Written return authorization from Guardair must be obtained before any product can be returned. Any unauthorized repairs performed by parties other than Guardair or its authorized Distributors will void this Limited Warranty.

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