

XMax Compressed Air Vacuums

Operation and Maintenance Manual

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IMPORTANT:

Read and follow all instructions, warnings, and cautions before using this machine. These instructions are for your protection and convenience.

Inspection

Carefully unpack and inspect your machine for shipping damage. Each unit is tested and thoroughly inspected before shipment.



Special Warning

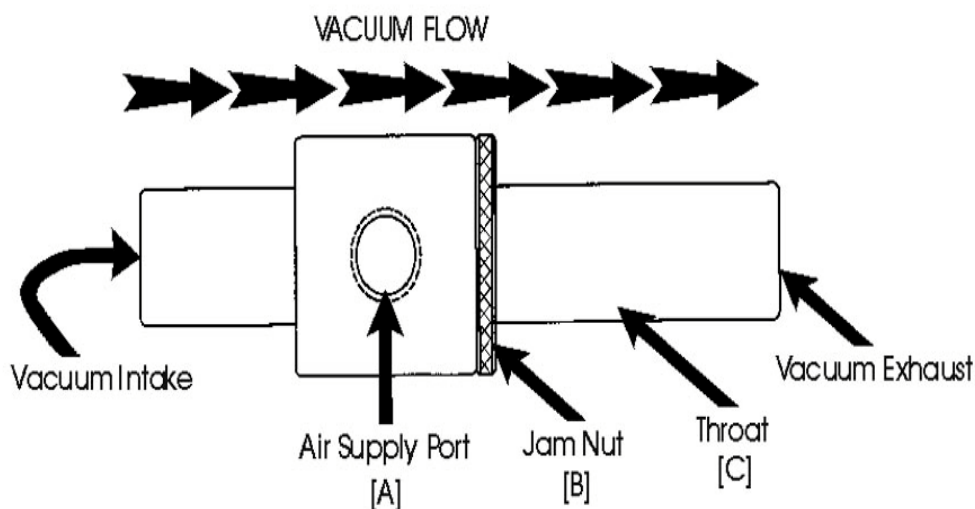
Air operated equipment can generate static electricity during use. Static dissipating arcing can be generated and occur if equipment and accessories are not grounded. Risk of explosion is possible if operated near explosive materials or vapors. Do not operate this equipment near flammable materials. It is highly recommended that you use a compressed air line with a braided metal ground wire. An optional retractable grounding reel mounted can be supplied from the factory. We also highly recommend that the vacuum only be used with static conductive suction hose and tools.

Safety Instructions

NEVER LEAVE VACUUM UNATTENDED WHEN CONNECTED TO AIR LINE!

When working on the internal components of the vacuum unit or during adjustments eye and hearing protection is strongly recommended!

- Air supply should never exceed 120 PSI.
- Unit must be supplied with the clean, dry air. Water separator must be used on compressed air line if water is present in your compressed air.
- Air supply valve must be OFF before connecting to compressed air line, then open valve slowly, making sure not to exceed the 120 PSI rated pressure.
- When cleaner is running, never allow fingers, hair, or loose clothing to come near intake, suction ports, or nozzle.
- Replace damaged or worn parts immediately with genuine original equipment parts to maintain safety and to protect your limited warranty.
- Not recommended for drums with walls and bottoms thinner than 16-gauge.



Air Pressure and CFM Volume Required

For maximum performance, operate within the requirements listed below:

Model No.	Maximum CFM Created	Suction (Max)	90 psi Air*	Supply
XM-100	166	180" H ₂ O	42 cfm	½" hose
XM-200	322	180" H ₂ O	90 cfm	¾" hose
XM-300	488	180" H ₂ O	130 cfm	1" hose

* WARNING: Do not exceed 120 PSI; maximum

NOTE: The air pressure requirements listed above are AT THE END of the supply hose, not at the compressor. If you do not have "good suction", almost certainly there is not enough compressed air.

Assembly Procedure for Models XM-100, XM-200, and XM-300

1. Check the condition of the main filter cartridge installed under the main XM drum lid. Check that it is installed tightly.
2. Place the XM Power lid drum lid on top of a heavy gauge 55 gallon drum.
3. Connect the vacuum equalization hose. This is a 3/8" hose, 5 ft long that runs from a bulkhead quick-connect on the side of the drum lid to the "bung" of the drum using the adapter provided.
4. Install the proper size air hose quick connect into the intake pipe using the chart listed above.
5. If the supply air from your system is normally higher than 100 psi, install a pressure regulator on the Px drum lid. Do NOT operate above 100 psi.
6. Connect the supply air hose (NOT included) ensuring that both the supply side valve and the control valve on the Px lid are OFF.
7. Connect the vacuum hose and tools
8. Open the supply line air valve (the plant piping side).
9. You are now ready to operate your new XMax vacuum cleaner

Operation

1. With the supply line OPEN, slowly open the control valve on the XM air intake.
2. Vacuum as you would with any vacuum cleaner. **DO NOT VACUUM ANY FLAMMABLE LIQUIDS WITH THIS MACHINE!**

Filter Cleaning Operation

3. The XMax series machines incorporate a built-in filter pulse system that works by pressing the button located on the side of the lid at the compressed air connection. You must press this button to clean the filter and it is required only when you feel the performance is falling off. Depressing the pulse button will cause a blast of compressed air to reverse through the filter cartridge and result in dislodging accumulated materials. Press the button and release quickly two or three times, about 5 seconds apart.

Holding the button down will not do anything. When done properly you will hear a rush of air pulse through the filter. It is recommended you turn the vacuum on ¼ to ½ way at the ball valve so dust isn't emitted from the vacuum.

Adjustment of Venturi(s) for Optimum Performance

Your Xmax should be field adjusted for optimum performance. When properly adjusted these units will vacuum sand from distances of 50 ft or greater! So don't despair if out of the box it feels a little weak as it is impossible to really preset them from the factory. Adjustment is very simple and requires no tools.

Follow the steps below for adjustment and we strongly recommend you wear eye and ear protection while doing this procedure. Photo of inside XM200 (Twin Jet) below



Silencer

Jam Nut

Venturi

1. The **first** thing be sure to **wear eye and ear protection while doing this procedure!**
2. Second be sure unit is sitting on a drum and that you have a good seal between the lid and drum. You will have no vacuum at all if the unit is not on a drum and if the lid gasket that sits on the drum is not there.
3. Check your compressed air supply. Follow the air pressure requirement chart above.
4. Remove lid assembly by removing “star knob” on top of the lid.
5. Check that connections of internal tubing to venturis are tight.
6. To perform venturi adjustment loosen the jam nut(s) as shown in photo above. If you have a 2 or 3 jet unit do this to all at the same time.
7. Turn the vacuum on by way of the ball valve where you connected your compressed air supply.
8. Now you will check the suction at the inlet and with very little effort you should be able to turn the venturi(s) down until they gently “bottom out” (the venturi is silver cylinder and will be in a vertical position). You should feel no suction from doing this.
9. Slowly adjust each venturi individually by turning the venturi the opposite direction. You will also need to feel the suction at the inlet and you will find the optimum setting for each one. Adjust a ¼ turn at a time to ensure you don’t over shoot the optimum setting.
10. Once you find the ideal position for each venturi turn the jam nut by hand until tight. **DO NOT USE A WRENCH ON THE JAM NUT OR VENTURI !!!**

Filter Specifications & Reorder No.

The chart below lists the cartridge filter re-order numbers

Model No.	60/40	Spunbond	HEPA (optional)
XM-100	XM-46	XM-49	XM-SH100
XM-200	XM-46	XM-49	XM-LH200
XM-300	XM-46	Not recommended	XM-SH200

Main Filters:

XM-46: 60/40 spunbond/cellulose filter with inner & outer cage, 250 pleats and 103.5 sq. ft. of media

XM-49: 100% spunbond polyester inner cage washable with 87 pleats and 36 sq. ft. of media (for damp or sticky materials)

HEPA Filter (optional- can be added in the field):

XM-SH100: 99.97% @ .3 micron HEPA filter, 14.5" OD x 10.5" ID x 6"H

XM-LH200: 99.97% @ .3 micron HEPA filter, 14.5" OD x 10.5" ID x 12"H

Troubleshooting

There are several reasons why the XMax may generate a vacuum that is **too low**. If you do not have “good suction”, use the check list below.

11. The **first** thing to check is your compressed air supply. Follow the air pressure requirement chart above.
12. Check for the integrity of ALL vacuum seals on the drum lid.
13. Check for plugged or blinded filter. Check that the pulse cleaning is effectively operating.
14. Check for worn, cracked, and holes in vacuum hoses.
15. Check venturi Adjustment. While the venturi's are pre-set you should check the adjustment if you feel the vacuum is not running at peak performance. The venturi's in your new XMAX are adjustable for optimum performance. See directions above on how to correctly adjust the venturi.

Vacuum Accessories

We have every type of vacuum hose and tool available so if you need something start at our website link below.

<https://www.controlledairdesign.com/products/hoses-tools>

Vacuum Equipment



Hopper Vac: forkliftable hopper for bulk materials for XMax and other vacuum



Durovac: The industry standard! Vacuum anything from 100's of feet away or use as a central vac.



Need more vacuum power? Powerlift Series: 15-100 HP with 1-2+ cubic yard storage.