

1.5 Cu. Ft, 3.5 Cu. Ft, 6.5 Cu. Ft, & 10 Cu. Ft Blast Machines



SUPERIOR PERFORMANCE And Quality In Blast Cleaning Equipment





Read Manual

Failure to read, understand & follow all safety and operation procedures in this manual can cause injury or death. Manuals that are lost, incomplete, or damaged, must be replaced immediately

Manual # MBM1612

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Important Notice

TO DISTRIBUTORS, PURCHASERS AND END USERS OF MOD-U-BLAST PRODUCTS

The information provided described and illustrated in this material is intended for experienced, knowledgeable users of abrasive blasting equipment and supplies(products).

The products described in this material may be combined as determined solely by the user in a variety of ways and purposes. However no representations are made as to intended use, performance standards, engineering suitability, safe practices or compliance with government regulations and laws that apply to these products, products of others, or a combination of various products chosen by the user or others. It is the responsibility of the users of these products, products of third parties, and a combination of various products, to exercise caution and familiarize themselves with all applicable laws, government regulations and safety requirements.

Nor are representations made or intended as to the useful life, maintenance cycles, efficiency or performance of the referenced products of any combination of products. This material must not be used for estimating purposes. Production rates, labour performance or surface finishes are the sole responsibility of the user based on the user's expertise, experience and knowledge of industry variables.

It is the responsibility of the user to insure that proper and comprehensive training of operators has been performed and all environmental and safety precautions observed.

Mod-U-Blast Inc. provides a variety of excellent products to the surface preparation industry, and we are confident that all proficient users, operators and contractors in this industry will continue to use our products in a safe and knowledgeable manner.

Before using this product, read all instructions, literature, labels, specifications and warnings sent with and affixed to the unit.

If operation of the unit is unclear after reading this manual, contact your supervisor for instructions. It is the responsibility of the employer to read the following instructions to users of this equipment. Periodic inspection at the work site should be made by supervisory personnel to ensure the blast machine is being properly used and maintained. A copy of this owner's manual must be kept with the blast machine and readily accessible to the blast machine operators at all times.



Important Warning

Read all instructions before using this equipment. For efficient and safe production, reference OSHA requirements.

Remember:

1. Safety equipment is required by OSHA. Use NIOSH approved air fed respirator (helmet) connected to an approved breathing air compressor. Air must be filtered and monitored for carbon monoxide (co2). Air source must be rated suitable as a supply of breathing air CLASS D. Wear protective clothing, safety shoes, leather gloves, ear and eye protection.

2. Start up Preparations:

Check helmet respirator, filters and lenses. Blast machine must be grounded to avoid shock. Inspect fittings and hoses for damage and wear. Safety clip quick couplings together Install whip checks on all connections for safety. Inspect & test remote controls. OSHA regulations require remote controls on all blast vessels.

NEVER USE A BLAST VESSEL WITHOUT A REMOTE CONTROL INSTALLED.

3. Caution:

Watch for silicosis or toxic dust hazard (from dust created when using silica sand as a blast media). DO NOT USE MEDIA CONTAINING FREE SILICA. Unless otherwise specified, working pressure of blast machine and related components must not exceed 125 p.s.i. or 150 p.s.i. depending on vessel rating. Keep blast nozzle controlled and aimed at the work. Do not weld on or repair your blast machine, This will void National Board Approval, CRN, ABSA, etc.

4. Keep your machine in good repair. Use Mod-U-Blast replacement parts and do not substitute or modify Mod-U-Blast supplied items.

The following steps should be completed prior to beginning the blasting operation.

4.1 Inspect the condition of the blast machine. Check the pop-up valve, pop-up valve seat gasket, inspection door components, remote control components, piping and (red) air "pusher line" fittings. Prior to operating the blast machine replace excessively worn or damaged parts and tighten all fitting connections.

4.2 Check the blast hose, nozzle holder and coupling for wear and damage. Replace if excessively worn or damaged.

4.3 Inspect all fittings for proper installation. Check the "pusher line" pipe coupling connections for a secure fit. DO NOT operate the blast machine if connections are loose.

4.4 Ground the blast machine.

Important Warning

4.5 Check the blast hose couplings and nozzle holder for coupling gasket (s) and nozzle holder washer. Replace if required. REGULATIONS REQUIRE that all blast hose couplings be secured together with safety clips or wire. It is strongly advised that safety cables or whipchecks are used on all air hose and blast hose connections.

4.6 Prior to putting abrasive in the machine, inspect and test the remote control system. To properly complete your equipment inspection, follow these steps...

4.7 Prior to putting abrasive in the machine, inspect and test the remote control system. To properly complete your equipment inspection, follow these steps... (Refer to remote control set-up)

4.8 Ties are provided to attach the safety switch (deadman) assembly to the blast hose. Adjust as necessary.

4.9 Attach the remote control hose or wire to the body switch. The fittings are matched to complete the connection.

4.10 It is recommended that the remote control hose or wire be tied to the blast hose approximately every five feet.

4.11 IN ORDER FOR THE REMOTE CONTROL SYSTEM TO PROPERLY OPERATE, DO NOT MODIFY OR SUBSTITUTE ANY FITTINGS ON THE REMOTE CONTROL HOSE OR WIRE, DEADMAN HANDLE, OR CONTROL VALVE.

4.12 In accordance with ASME paragraph UG-125, all pressure vessels shall be supplied with protection against over-pressurization. A side outlet tee is provided in the inlet piping assembly to accommodate the appropriate pressure relief valve.

4.13 OSHA requires protective safety equipment and clothing be used at all times FOR ALL PERSONNEL IN THE IMMEDIATE BLASTING AREA, including but not limited to

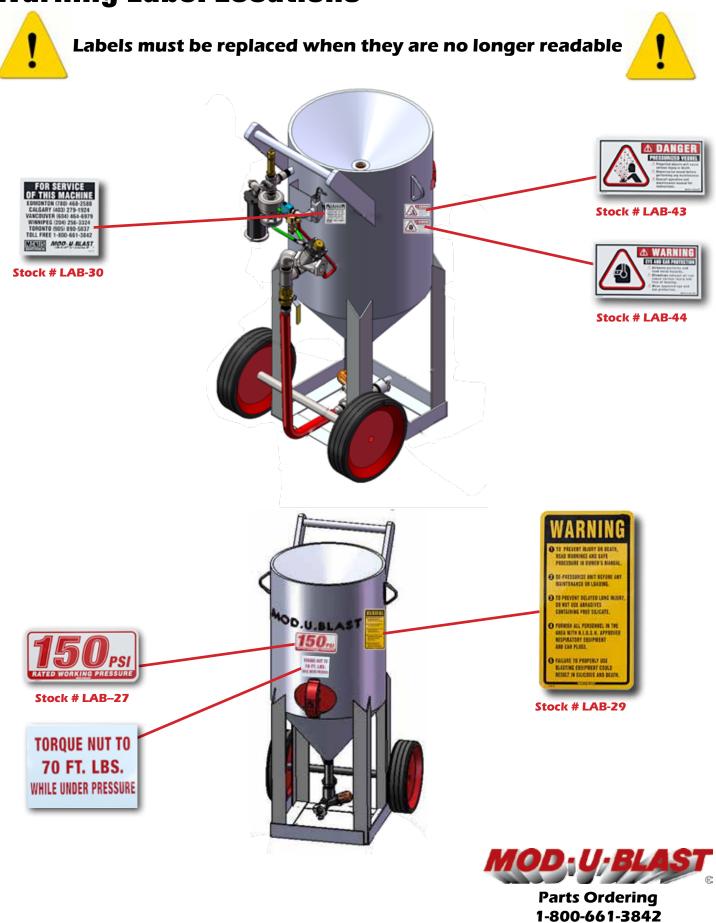
- Abrasive resistant suit, leather gloves, safety shoes, ear and eye protection.

- NIOSH approved air fed respirator (helmet) supplied by a source of breathing air that meets AT LEAST the requirements for Type 1 gaseous air described in the Compressed Gas Association Commodity Specification G-7.1 (Grade D or higher quality)as specified by law. Air must be filtered and monitored for carbon monoxide as required to assure clean, breathing air at all times.

ADHERE TO ALL NIOSH RECOMMENDATIONS, LIMITATIONS, AND REGULATIONS PERTAINING TO APPROVED RESPIRATOR USAGE, WITHIN HAZARDOUS SUBSTANCES CONCENTRATION PERMISSIBLE EXPOSURE LIMITS (PEL).



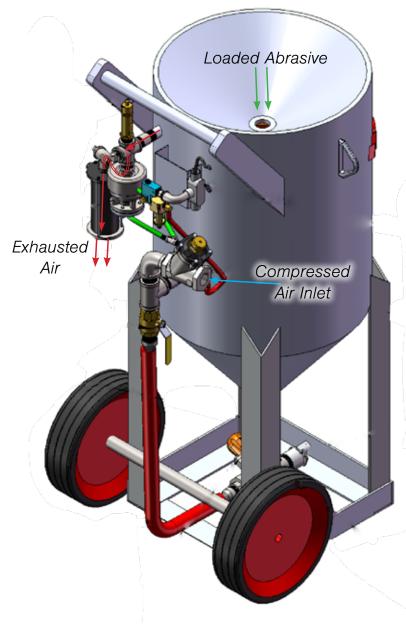
Warning Label Locations



How MBM-Series Systems Work Pressure release with Auto Air Valve / micro valve



Warning: This section of the manual is designed to give you a general understanding of how the Abrasive Blaster functions. ALL sections of this manual must be read and understood before operating the equipment.



ADDING ABRASIVE

Abrasive is added through the hole in the top of the blaster where the pop-up and seal are located. It flows down through the hole, around the pop-up, and down the bottom of the pressure vessel where it exits through the metering valve.

PRESSURIZATION

When a compressed air source (such as an air-compressor) is connected to the inlet of the Abrasive blaster and the inlet valve is opened, compressed air flows through the moisture separator (if equipped) and reaches the Auto Air Valve where it is stopped. When the control handle is activated, the Auto Air Valve opens while the dump valve closes and the air flows through into the pressure vessel causing the Pop-Up (located internally) to seal against its seat. The pressure vessel is now sealed and pressurized. Air will continue past the choke valve to the metering valve where it is mixed with abrasive . The mixture of compressed air will now exit the Abrasive Blaster through a blast hose and nozzle connected to the coupling on the metering valve and blasting begins.

DEPRESSURIZATION (Blow - Down)

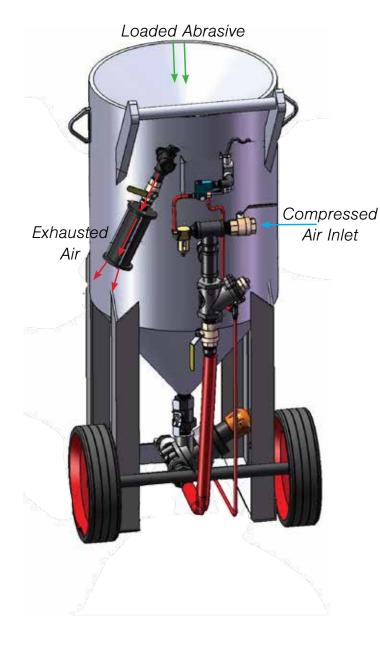
When the control handle is released in a pressure release system, the reverse effect takes place in the blast system. The Auto Air Valve closes stopping the air flow and the dump valve opens causing a quick release of compressed air.



How MBM-Series Systems Work Pressure Hold with APV T-Valve & APV II



Warning: This section of the manual is designed to give you a general understanding of how the Abrasive Blaster functions. ALL sections of this manual must be read and understood before operating the equipment.



ADDING ABRASIVE

Abrasive is added through the hole in the top of the blaster where the pop-up and seal are located. It flows down through the hole, around the pop-up, and down the bottom of the pressure vessel where it exits through the metering valve.

PRESSURIZATION

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Before pressurization can take place in a pressure hold system, the blow down valve must be closed. Then, when a compressed air source (such as an air-compressor) is connected to the inlet of the Abrasive blaster and the inlet valve is opened, compressed air flows and into the pressure vessel causing the Pop-Up (located internally) to seal against its seat allowing the pressure vessel to become pressurized. When the control handle is activated, the Auto Air Valve and Metering Valve open allowing compressed air and abrasive to flow and mix. The mixture of compressed air will now exit the Abrasive Blaster through a blast hose and nozzle connected to the coupling on the metering valve and blasting begins.

DEPRESSURIZATION (Blow - Down)

When the control handle is released in a pressure hold system, (MBM Blast Pots with T-Valves) the pressure vessel remains filled with compressed air. The compressed air remaining in the pressure vessel is released when the inlet valve is manually closed and the blow-down valve is manually opened.

How MBM-Series Systems Work Pressure Release with Combo Valve



Warning: This section of the manual is designed to give you a general understanding of how the Abrasive Blaster functions. ALL sections of this manual must be read and understood before operating the equipment.



ADDING ABRASIVE

Abrasive is added through the hole in the top of the blaster where the pop-up and seal are located. It flows down through the hole, around the pop-up, and down the bottom of the pressure vessel where it exits through the metering valve.

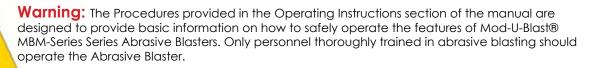
PRESSURIZATION

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When a compressed air source (such as an air-compressor) is connected to the inlet of the Abrasive blaster and the inlet valve is opened, compressed air flows through the moisture separator (if equipped) and reaches the Combination Valve where it is stopped. When the control handle is activated, the Combination valve pinches the Blow-down Hose and air flows through into the pressure vessel causing the Pop-Up (located internally) to seal against its seat. The pressure vessel is now sealed and pressurized. Air will continue past the choke valve to the metering valve where it is mixed with abrasive . The mixture of compressed air will now exit the Abrasive Blaster through a blast hose and nozzle connected to the coupling on the metering valve and blasting begins.

DEPRESSURIZATION (Blow - Down)

When the control handle is released in a pressure release system, (MBM Blast Pots with combo valves) the combination valve automatically closes stopping the flow of compressed air and releasing the Blow-down Hose. The compressed air remaining in the pressure vessel is released through the Blowdown Hose and blasting ends.



SETTING-UP THE BLASTER

INSPECT PRESSURE VESSEL

When you receive your Abrasive Blaster, remove the Handway Assembly and check for foreign items that may have fallen into the Abrasive Blaster. Remove any foreign materials and reinstall the Handway Assembly.



Danger: Never perform any maintenance or attempt to open the Abrasive Blaster in any way while it is pressurized. The violent release of compressed air and propelled objects will cause serious injury or death.

Re-Tighten Handway Assembly

After the Abrasive Blaster has been pressurized for the first time, tighten the nuts on the Handway Assembly. Tightening the nut on the Handway Assembly should also be done any time after the Handway has been removed for maintenance before and after the next pressurization. Follow the nut torque instructions on the label above the Handway.

PURGE AIR SUPPLY HOSE

Before connecting the Air Supply Hose to the Abrasive Blaster, purge the hose of any moisture or foreign debris. Standing water or moisture in the air line will cause degraded performance of the Abrasive Blaster. Air supplied to the Abrasive Blaster must be clean, dry and cool.

Attach Remote Control handles

Attach the Remote Handle to the Blast Hose near the Nozzle with hose clamps or heavy wire ties. Form a loop of Twinline/Control Cord that comes 6" away from the Blast Hose, runs 6" parallel to the Blast Hose, and comes 6" back to Blast Hose. Using duct tape, attach the Twinline/Control Cord to the Blast Hose where the loop ends by wrapping the tape around the Blast Hose twice and then around the Twinline/Control Cord. This creates a strain-relief attachment and is only necessary on the first connection near the Control Handle. Starting from the Nozzle end of the Blast Hose, attach the Twinline/Control Cord to the blast hose by wrapping duct tape around both every 3 feet



BEFORE YOU BLAST

PRE-BLAST CHECK

Before each use of the Abrasive Blaster, it must be checked to ensure it is in a safe condition to be used. Closely examine all components of the Abrasive Blaster for signs of excessive wear, worn out seals and hoses, or damaged components. If any component of the Abrasive Blaster is found to be damaged or worn, it must be replaced before blasting.



Warning: Never use an Abrasive Blaster if any components are damaged or worn. Damaged or worn parts must be replaced before use.

ADDING ABRASIVE

Before filling the Abrasive Blaster, make sure the inlet valve is closed and the pressure vessel is in a depressurized state. Abrasive is added by pouring it into the top of the Abrasive Blaster where the abrasive can flow through the opening and into the pressure vessel. Do not overfill the Abrasive Blaster. Do not allow foreign materials to enter the Abrasive Blaster.



Danger: Never reach into the opening while filling the Abrasive Blaster. The Pop-up valve can close causing severe injury.



Warning: Mod-U-Blast® Abrasive Blasters may not be used with abrasives containing silica. Never use abrasives containing silica.



Warning: Electrically conductive abrasives may not be used with Abrasive Blasters using Electric Remote Control Systems without changing to sealed strain relief connectors.



Warning: Never attempt to move or transport the Abrasive Blaster at more than 15mph when it contains Abrasive.

REMOTE CONTROL SYSTEM

Abrasive Blasters must use a Remote Control System (commonly known as a deadman) to start and stop abrasive blasting. Remote Control Systems can be electric or pneumatic

ELECTRIC: Connect the Remote Control to the Abrasive Blaster's female twist-lock connector associated with the outlet you want to blast with. Connect a 12 V DC power source (12V Battery or Optional 120 V AC to 12 V DC converter) to the Abrasive Blaster's male twist-lock connector.

PNEUMATIC: Connect the Remote Control twinline hose to the quick disconnect fittings associate with the outlet you want to blast with on the Abrasive Blaster. The twinline hose is supplied with different size fittings on each of the 2 lines to prevent them from being connected to the Abrasive Blaster incorrectly. Do not modify or reverse these fittings. It is not recommended that Pneumatic Remote Control Systems are used when the Blast Hose length will be longer than 100 feet.



Warning: Never operate the Abrasive Blaster without a remote control system.



Warning: Never reverse or modify pneumatic Remote Control twinline hose fittings.



Danger: Always use caution around electric sources to avoid electric shock. Do not operate electrical remote controlled Abrasive Blasters in wet or other hazardous environments.

CONNECTING HOSES

Before connecting hoses to the Abrasive Blaster, make sure the Inlet Valve is closed and the compressed air supply is shut off. Connect the hose coming from the compressed air supply to the inlet on the Abrasive Blaster and secure with safety clips. Connect the blast hose to the coupling on the Metering Valve at the base of the Abrasive Blaster and secure with safety clips or mechanics / safety wire when using Mod-U-Blast couplings.



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Warning: Always use safety devices like clips and whip-checks (safety cables) at hose connections.

BLASTING

Pressurizing the abrasive blaster

Before pressurizing the Abrasive Blaster make sure the following conditions occur:

- All "BEFORE YOU BLAST" procedures have been followed.
- The Blow-down Valve is closed. (Pressure hold Blasters with T-Valves only)
- The inlet valve is closed (blasters with T-Valves)
- The Remote Control Handles are released.
- All hose connections are secure and have a safety clip.
- The Abrasive Blaster is set up in a safe and level location.
- Only personnel who have been thoroughly trained and have read and understand the manual are in the vicinity of the Abrasive Blaster.



Danger: Never perform any maintenance or attempt to open the Abrasive Blaster in any way while it is pressurized. The violent release of compressed air and propelled objects will cause serious injury or death.



Danger: Never supply compressed air exceeding 150 PSI (10.3 BAR) to the Abrasive Blaster.



Warning: Blast Hose may kick back when Remote Control Handle is activated. Be prepared and brace yourself for kick back.



Warning: All those who will be in the area while blasting is to occur must be properly trained, read the manual, and be wearing safety equipment to protect from the hazards described by the WARNING and DAN-GER labels located on the Abrasive Blaster. If any labels are worn or missing, they must be replaced.

Using the Abrasive Blaster

After pressurizing the Abrasive Blaster, it is ready to begin blasting. Press the safety button or push down the safety flap and squeeze the Remote Control Handle to start the flow of abrasive and compressed air. Adjustments to the air/abrasive mixture can be made by turning the handle on the APV Series Metering Valves. There will be a delay between a change made at the Metering Valve and what comes out of the Nozzle Depending on the length of Blast Hose being used. Adjustments to the Metering Valve can only be made when Abrasive Blaster is not in operation.

To stop the flow of compressed air and abrasive, release the Remote Control Handle and blasting will stop after a short time. How long it takes for blasting to stop will depend on the length of Blast Hose being used.



Danger: Airborne particles produced by abrasive blasting can cause respiratory disease. All persons operating or located near the blasting site must wear approved NIOSH / OSHA approved breathing equipment. Never use abrasive containing silica.



Warning: Only personnel thoroughly trained in abrasive blasting should operate the Abrasive Blaster. This manual only provides basic information on how to safely operate the features of MOD-U-BLAST® MBM-Series Series Abrasive Blasters.



Warning: Never point the blast Nozzle at yourself, other people, or the Abrasive Blaster.



Warning: The Choke Valve must be completely open when blasting or damage to equipment will occur



BLASTING

Draining the moisture separator (IF EQUIPPED)

During blasting, the moisture Separator must be periodically drained. The best way to accomplish this is to leave the drain valve slightly open all the time so it constantly leaks air and forces moisture out.



Warning: The Abrasive Blaster must be supplied with clean, cool, dry compressed air in order to function properly.

Disconnecting air supply hose

After the Abrasive Blaster has been depressurized, and the Inlet Valve has been closed, the Compressed Air Supply Hose may still contain pressure which must be released before disconnecting the hose. To do this shut off the compressed air at its source, and open the Drain Valve and Blow-Down Valve on the Abrasive Blaster. Slowly open the inlet valve on the Abrasive Blaster. The compressed air stored in the Compressed Air Supply Hose Can now escape through the Drain Valve. When you no longer hear air escaping through the drain valve, squeeze the Compressed air in the Compressed Air Supply Hose it is ready to be disconnected.

Shutting down the Abrasive Blaster

When blasting is complete, the Abrasive Blaster will need to be shut down. On pressure release systems, releasing the remote control handle will automatically depressurize the abrasive blaster. On pressure hold systems, make sure the Remote Control Handles are released, then close the Inlet Valve. Slowly open the Blow-down Valve to allow the compressed air stored in the Abrasive Blaster to escape.



Warning: Never operate a Pressure Hold MBM series blaster without a muffler on the blow down valve. Without the muffler, the sudden release of compressed air can cause severe injury.



Danger: Never disconnect any compressed air supply hose without first performing the "DISCONNECTING AIR SUPPLY HOSE" procedure described above. Failure to do so can cause the hose to blow off violently injuring or killing nearby people.



Maintenance Instructions



Danger: Never perform any maintenance or attempt to open the Abrasive Blaster in any way while it is pressurized. The violent release of compressed air and propelled objects will cause serious injury or death.



WARNING: Maintenance procedures are to be performed by experienced qualified personnel only, Failure to perform maintenance procedures correctly at the intervals specified below can lead to performance problems and equipment failure, and will void the equipment warranty.

Maintenance Schedule:

| Procedure to be Performed M | aintenance Interval |
|---|----------------------------|
| 1) INSPECT PERSONAL PROTECTIVE EQUIPMENT (PPE) Including but not limited to; Respirators, Airline Filters, Carbon-Monoxide Monitors, Hearing Protection, Eye Protection, Foot Protection, Protective Clothing & Gloves. Inspect ALL Personal Protective Equipment (PPE) for proper fit, condition & operation as designed. Replace, repair, or be fitted as needed. | Every 8 Hours of Use |
| 2) INSPECT REMOTE CONTROL HANDLE(S) AND CONTROL HOSE/CORD Pneumatic Remote Control Systems: Inspect Control Handle for damage making sure the Safety Flap/Lever Lock/Button is in good working order and replace or repair as needed. Inspect twinline hoses and replace if leaks, areas that show abrasion, or soft spot are found. Electric Remote Control Systems: Inspect Control Handle for damage making sure the Safety Fla Lever Lock/Button is in good working order and replace or repair as needed. Inspect control cord and replace if damaged plug ends, areas that show abrasion, exposed wires, or cracks are found. | |
| 3.) INSPECT BLAST HOSE, COUPLINGS & GASKETS Inspect Blast Hose for leaks, abrasion & soft spots, and replace as needed. Inspect couplings for damage, leaks & wear, and replace as needed. Inspect coupling gaskets for leaks & wear as needed Always use safety clips & whip checks (safety cables) at Blast Hose connections. | Every 8 Hours of Use |
| 4.) INSPECT BLASTING NOZZLE Inspect the Blasting Nozzle for wear and proper bore diameter. Replace the Blasting Nozzle when the bore diameter has worn to 1/16" wider than its original diameter. Example: replace a #5 nozzle (5/16" bore) when the bore reaches 3/8". | Every 8 Hours of Use |
| 5.)INSPECT AIR HOSE, COUPLING & GASKETS Inspect Air Hose for leaks, abrasion & soft spots, and replace as needed. Inspect couplings for damag leaks & wear, and replace as needed. Inspect coupling gaskets for leaks & wear, and replace as needed Always use safety clips & whip checks (safety cables) At Air Hose connections. | |
| 6.) INSPECT & CLEAN BLOW-DOWN MUFFLER Remove the Blow-down muffler, turn it upside-down and tap on a hard surface to free trapped debris. I muffler is clogged and can't be cleaned out sufficiently, it must be replaced. | Every 40 Hours of Use f |
| 7.) INSPECT POP-UP AND POP-UP GASKETS Inspect the Pop-Up & Pop-Up Gasket for wear and replace as necessary | Every 200 Hours of Use |

Maintenance Instructions

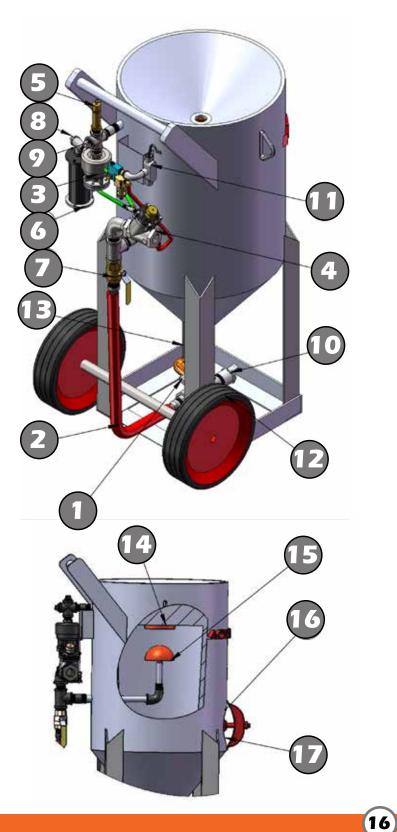
Maintenance Schedule Continued...

| Procedure to be Performed M | aintenance Interval |
|---|------------------------|
| | |
| 8.) Service Metering Valve(s) | Every 600 Hours of Use |
| Disassemble, clean & inspect the Metering Valve for proper and worn components. Replace any wo | n |
| components found. Lubricate APV & APVII valves with anti-seize before reassembling. | |
| 9.) Service Auto Air Valve(s) | Every 600 Hours of Use |
| Disassemble, clean & inspect for proper operation and worn components. Replace any worn compo | - |
| nents found. Lubricate with anti-seize before reassembling. | |
| 10.) SERVICE CONTROL VALVE(S) Disassemble, clean & inspect for proper operation and worn components. Replace any worn compo- nents found. Lubricate with anti-seize before reassembling. | Every 600 Hours of Use |
| | |



Pressure Vessel Parts List

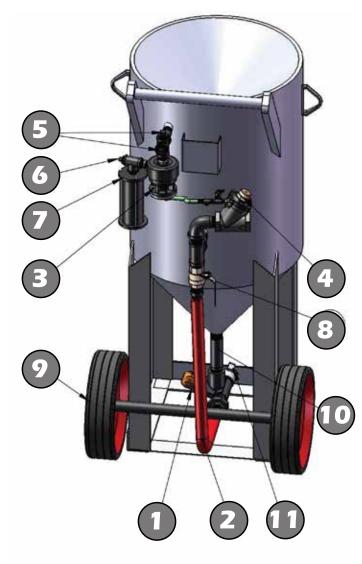
MBM - 1.5PRE-AV MBM - 3.5PRE-AV MBM - 6.5PRE-AV MBM - 10PRE-AV (Electric controls with M-Valve)



| ITEM # | STOCK # | DESCRIPTION |
|--------|----------------|--|
| 1 | EE2125-107 | 1-1/4" M VALVE W/ URE- THANE SLEEVE |
| 2 | 125-AIR | 1-1/4" AIR HOSE |
| 3 | 290375 | MUB DUMP VALVE |
| 4 | 281250 | AQUA VALVE 1-1/4" |
| 5 | 51810-150 | KINGSTON 118C x 1 x 150PI |
| 6 | 290340 | MUB SILENCER |
| 7 | 65-825 | 1-1/4" BRASS BALL VALVE |
| 8 | PL07 | 3/4" PLUG |
| 9 | PL10 | 1" PLUG |
| 10 | 60525 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60526 (BRASS) | " |
| | 60526 (STEEL) | " |
| | 60523 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60524 (BRASS) | " |
| | 60624 (STEEL) | " |
| | 60526L (BRASS) | 1-1/2" POLYLINED TANK COUPLER |
| | 60626L (STEEL) | |
| 11 | 24000-C | ELECTRIC CONTROLS ASSY |
| | 24020 | 12 V ELECTRIC SOLENOID |
| 12 | 290010-65 | WHEEL FOR 6.5 & 10 BLAST MACHINE |
| | 290010-35 | WHEEL FOR 3.5 BLAST MACHINE |
| 13 | 290187 | AV 1-1/4" X 6" NIPPLE |
| 14 | EE2100-011 | POP-UP GASKET / URE- THANE |
| 15 | EE2100-010 | POP-UP PLUNGER / URE- THANE |
| 16 | 22614 | INSPECTION DOOR 6" X 8" |
| 17 | 22617 | INSPECTION DOOR GASKET 6" X 8" |



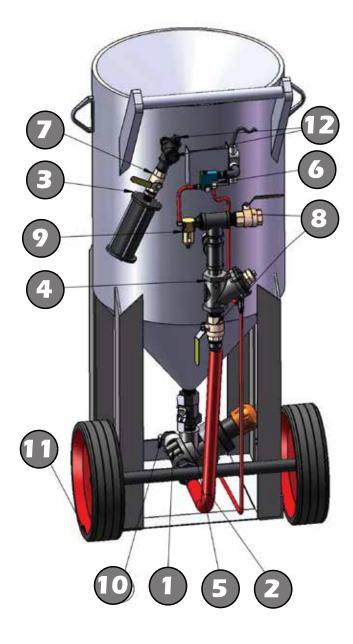
MBM - 1.5PR-AV MBM - 3.5PR-AV MBM - 6.5PR-AV MBM - 10PR-AV (Pneumatic controls with M-Valve)



| ITEM # | STOCK # | DESCRIPTION |
|--------|----------------|--|
| 1 | EE2125-107 | 1-1/4" M VALVE W/ URE- THANE SLEEVE |
| 2 | 125-AIR | 1-1/4" AIR HOSE |
| 3 | 290375 | MUB Dump Valve |
| 4 | 281250 | AQUA VALVE 1-1/4" |
| 5 | PL10 | 1" PLUG |
| 6 | PL07 | 3/4" PLUG |
| 7 | 290340 | MUB SILENCER |
| 8 | F293-J | CHECK VALVE 1-1/4" |
| 9 | 290010-65 | WHEEL FOR 6.5 BLAST MACHINE |
| | 290010-35 | WHEEL FOR 3.5 BLAST MACHINE |
| 10 | 290187 | AV 1-1/4" X 6" NIPPLE |
| 11 | 60525 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60526 (BRASS) | " |
| | 60526 (STEEL) | " |
| | 60523 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60524 (BRASS) | u |
| | 60624 (STEEL) | " |
| | 60526L (BRASS) | 1-1/2" POLYLINED TANK COUPLER |
| | 60626L (STEEL) | |



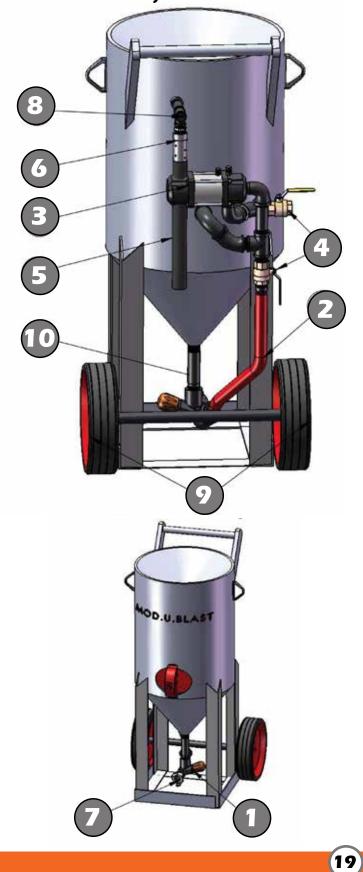
MBMTV - 3.5PRE MBMTV - 6.5PRE MBMTV - 10PRE (Electric controls with T-Valve)



| ITEM # | STOCK # | DESCRIPTION |
|--------|----------------|--|
| 1 | EE2149-108 | 1-1/2" VALVE W/ URETHANE SLEEVE |
| | EE2149-008 | 1-1/2" VALVE W/ TUNGSTEN CARBIDE SLEEVE |
| | EE2149-107 | 1-1/4" VALVE W/ URETHANE SLEEVE, COMPLETE |
| | EE2149-007 | 1-1/4" VALVE W/ TUNGSTEN CARBIDE SLEEVE |
| | EE2149-106 | 1" VALVE W/ URETHANE SLEEVE |
| | EE2149-006 | 1-1/4" VALVE W/ TUNGSTEN CARBIDE SLEEVE |
| 2 | 125-AIR | 1-1/4" AIR HOSE |
| 3 | 290340 | MUB SILENCER |
| 4 | 281250 | AQUA VALVE 1-1/4" |
| 5 | 22122-UB | UNION BALL VALVE |
| 6 | 24047 | ELECTRIC CONTROLS |
| 7 | 65-800 | BALL VALVE 1" BRASS |
| 8 | 65-825 | 1-1/4" BRASS BALL VALVE |
| 9 | 50-123 | 1/4" MINI FILTER |
| 10 | 60525 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60526 (BRASS) | " |
| | 60526 (STEEL) | " |
| | 60523 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60524 (BRASS) | " |
| | 60624 (STEEL) | ű |
| | 60526L (BRASS) | 1-1/2" POLYLINED TANK COUPLER |
| | 60626L (STEEL) | |
| 11 | 290010-65 | WHEEL FOR 6.5 & 10 BLAST MACHINE |
| | 290010-35 | WHEEL FOR 3.5 BLAST MACHINE |
| 12 | PL10 | 1" PLUG |
| | | |



MBMVC - 3.5PR MBMCV - 6.5PR MBMCV - 10PR (with Combo Valve)

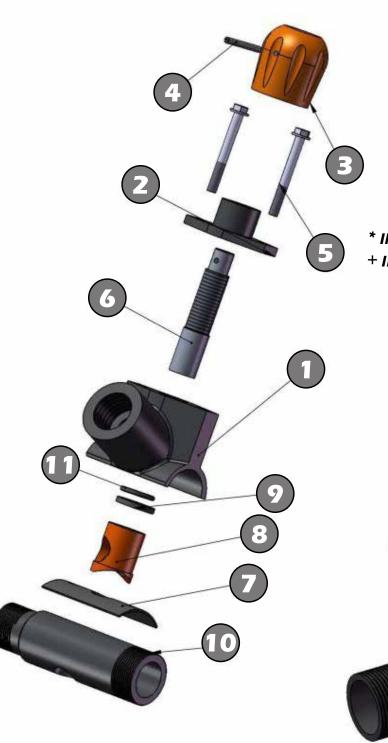


| ITEM # | STOCK # | DESCRIPTION |
|--------|----------------|--|
| 1 | EE2125-107 | 1-1/4" M VALVE W/ URE- THANE SLEEVE |
| 2 | 125-AIR | 1-1/4" AIR HOSE |
| 3 | EE22233-000 | C - VALVE |
| 4 | 65-825 | 1-1/4" BRASS BALL VALVE |
| 5 | SB075-2 | 3/4" BLAST HOSE |
| 6 | 60501 | NOZZLE HOLDER |
| 7 | 60525 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60526 (BRASS) | " |
| | 60526 (STEEL) | " |
| | 60523 (ALUM) | 1-1/2" NPT TANK COUPLER |
| | 60524 (BRASS) | " |
| | 60624 (STEEL) | ű |
| | 60526L (BRASS) | 1-1/2" POLYLINED TANK COUPLER |
| | 60626L (STEEL) | u |
| 8 | PL10 | 1" PLUG |
| 9 | 290010-65 | WHEEL FOR 6.5 BLAST MACHINE |
| | 290010-35 | WHEEL FOR 3.5 BLAST MACHINE |
| 10 | 290187 | AV 1-1/4" X 6" NIPPLE |



M-VALVE

Stock # EE2125-107



| ITEM # | STOCK # | DESCRIPTION |
|--------|---------------|-------------------------|
| 1 | EE2125-000-06 | BODY |
| 2 | EE2125-000-02 | САР |
| 3 | EE2125-000-01 | KNOB |
| 4 | EE2125-000-03 | ROLL PIN |
| 5 | EE7010-505-56 | BOLT WITH WASHER |
| 6* | EE2125-000-05 | PLUNGER |
| 7*+ | EE2125-000-09 | GASKET |
| 8*+ | EE2125-100-08 | SLEEVE URETHANE |
| 9*+ | EE2149-000-06 | PLUNGER SEAL |
| 10 | EE21250-0710 | PIPE NIPPLE |
| 11*+ | EE2149-000-18 | O-RING |
| 11 | 60525 (ALUM) | 1-1/2" NPT TANK COUPLER |

* INCLUDED IN REPAIR KIT - STK # EE2125-100-99 + INCLUDED IN SOFT KIT - STK # EE2125-100-98

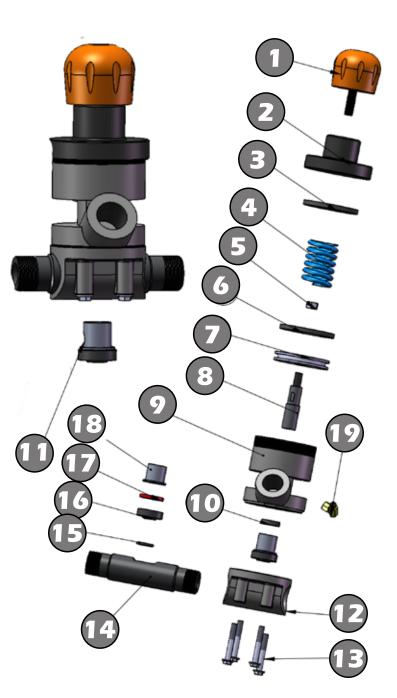


APV Valve

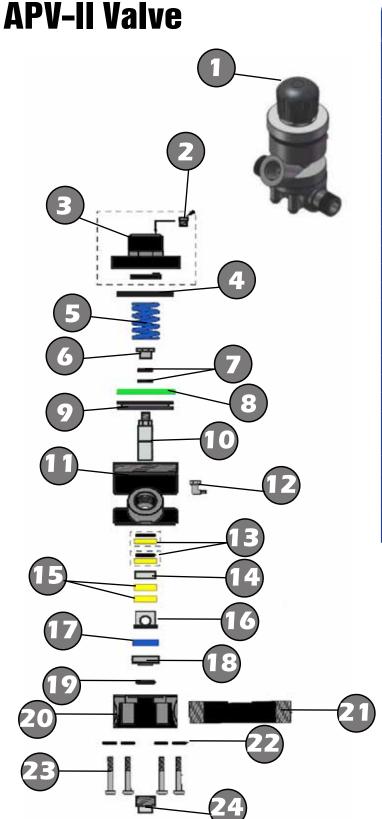
| ITEM # | # STOCK # | DESCRIPTION |
|--------|-----------------|--|
| | EE2149-108 | 1.1/2" VALVE WITH URETHANE SLEEVE, COMPLETE |
| | EE2149-008 | 1.1/2" VALVE WITH TUNG- |
| | | STEN CARBIDE SLEEVE, |
| | | COMPLETE |
| | EE2149-107 | 1.1/4" VALVE WITH URETHANE SLEEVE, COMPLETE |
| | EE2149-007 | 1.1/4" VALVE WITH TUNGSTEN CARBIDE SLEEVE, COMPLETE |
| | EE2149-106 | 1" VALVE WITH URETHANE SLEEVE, COMPLETE |
| | EE2149-006 | 1" VALVE WITH TUNGSTEN CARBIDE SLEEVE, COMPLETE |
| * | EE2149-100-99 | INCLUDED IN KIT FOR URE- THANE SLEEVE |
| + | EE2149-000-99 | INCLUDED IN KIT FOR TUNG- STEN CARBIDE SLEEVE |
| 1 | EE2149-000-01 | клов |
| 2 | EE2149-000-02KT | САР |
| 3 | EE2149-000-19 | BUMP RING |
| 4 | EE2149-000-03 | SPRING |
| 5 | EE2149-000-08 | NUT |
| 6*+^& | EE2149-000-04 | PISTON SEAL |
| 7 | EE2149-000-05 | PISTON |
| 8*+ | EE2149-000-07 | PLUNGER |
| 9 | EE2149-000-09 | CYLINDER |
| 10*+^ | EE2149-000-06 | PLUNGER SEAL |
| 11*& | EE2149-000-13 | URETHANE SLEEVE |
| 12 | EE2149-000-11 | BASE |
| 13 | | BOLT W/ WASHER |
| 14 | EE2149-006-15 | PIPE NIPPLE 1.1/2" (M) X 1" (F) X 8" |
| | EE2149-006-15 | PIPE NIPPLE 1-1/4"X8" |
| | EE2149-007-15 | PIPE NIPPLE 1-1/2"X8" |
| 15+^& | EE2149-000-18 | O RING |
| 16+^ | EE2149-000-14 | INSERT |
| 17+^& | EE2149-000-10 | SEAL |
| 18+ | EE2149-00-13 | TUNGSTEN CARBIDE SLEEVE |
| 19 | 2222-SW1 | 90 DEGREE SWIVEL 1/8" X 1/8" |

* INCLUDED IN URETHANE SLEEVE REPAIR KIT + INCLUDED IN TUNGSTEN SLEEVE REPAIR KIT ^ INCLUDED IN TUNGSTEN SOFT KIT & INCLUDED IN URETHANE SOFT KIT

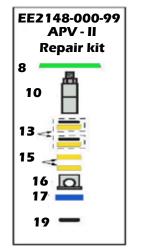
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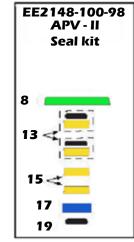






ITEM # STOCK # DESCRIPTION EE2149-000-01 KNOB 1 2 MUFFLER 86-200 3 EE2149-000-02KT CAP ASSEMBLY 4 EE2149-000-19 **BUMP RING** 5 EE2149-000-03 SPRING 6 PLUNGER STOP 7 NYLON WASHER PISTON SEAL 8*+ EE21490-0004 PISTON 9 EE2149-000-05 10+ EE2149-000-07 **TUNGSTEN PLUNGER** 11 EE2148-000-09 CYLINDER SWIVEL 12 22223-SW1 13*+ EE21490-0006 PLUNGER SEAL W/O O-RING 14 EE2149-000-17 STEEL BUSHING 15*+ EE21490-0006 PLUNGER SEAL W/O O-RING 16+ EE2149-000-13 TUNGSTEN SLEEVE URETHANE SEAT 17*+ EE2149-000-10 18+ EE2149-000-14 STEEL INSERT 19*+ EE2149-000-18 **O-RING** 20 EE2148-000-11 BASE **1" NIPPLE** 21 EE-2149-0615 EE-2149-0715 1-1/4" NIPPLE EE-2149-0815 1-1/2" NIPPLE 22&23 3/8" 3/8" X 2-3/4" FLAT WASHER / BOLT 24 PLUG **PL10** * INCLUDED IN APV-II SEAL KIT EE2148-100-98 + EE2148-000-99 **INCLUDED IN APV-II Repair** KIT



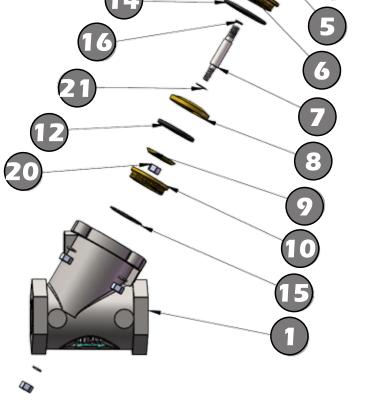




Auto Air Valve

Stock # 280750 (3/4"valve) 281000 (1"valve) 281250 (1-1/4"valve) 281500 (1-1/2"valve)

| ITEM # | PART I-1/4" & 1-1/2 | PART " 3/4" & 1" | DESCRIPTION |
|--------|-------------------------------|---------------------|---------------------------------|
| 1 | | | BODY |
| 2 | 281258 | 281007 | COVER |
| 3 | | | САР |
| 4+* | 281256 | 281006 | DIAPHRAGM |
| 5+ | | | WASHER FLAT W201069 |
| 6+ | | | BUSH INNER |
| 7+ | | | SHAFT |
| 8+ | | | SEAT HOLDER |
| 9+ | 281261 | | RETAINER |
| 10 | 281259 | | BUSH GUIDE |
| 11 | 22123 | | SPRING |
| 12+* | | | GASKET RUBBER |
| 13* | | | O-RING 29.87MM I.D. |
| 14+* | | | O-RING 44.12MM I.D. |
| 15+* | | | O-RING 34.65MM I.D. |
| 16+* | | | O-RING 9.19MM I.D |
| 17 | | | HEX BOLT 1/4" UNC |
| 18+* | | | NYLOC NUT 1/4" UNF |
| 19+* | | | WASHER FLAT 5/16" .5MM BRASS |
| 20+* | | | NYLOC NUT 1/4" UNF |
| 21+* | | | WASHER FLAT 1/4" DIA |
| | 281500 | | AUTO AIR VALVE 1-1/2" |
| | 281250 | | AUTO AIR VALVE 1-1/4" |
| | | 280750 | AUTO AIR VALVE 3/4" |
| | | 281000 | AUTO AIR VALVE 1" |



SEAL KIT:* STK # EE2123-006-99 (3/4" & 1") STK # EE212300-799 (1-1/4" & 1-1/2")

23

REPAIR KIT: + STK # 281003 (3/4" & 1") STK # 281253 (1-1/4" & 1-1/2")



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C-Valve Stock # EE2223-000

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| ITEM # | STOCK # | DESCRIPTION |
|--------|--------------|-----------------------------|
| 1 | EE2223-00001 | CAP W / PIN |
| 2 | EE2223-00007 | CYLINDER |
| 3 | EE2223-00003 | UPPER ROD GUIDE |
| 4* | EE2223-00004 | UPPER ROD SEAL |
| 5 | EE2223-00005 | SPRING |
| 6 | EE2223-00012 | SHAFT |
| 7 | EE2223-00002 | PINCH RAM |
| 8 | EE2015-300 | VENT |
| 9 | 22223-SW1 | SWIVEL FOR CYLINDER |
| 10* | EE2223-00008 | O RING FOR SHAFT |
| 11* | EE2223-00009 | SNAP RING |
| 12 | EE2223-00011 | PISTON |
| 13* | EE2223-00013 | PISTON SEAL |
| 14 | EE2223-00015 | LOWER ROD GUIDE |
| 15 | EE2223-00010 | LOWER ROD SEAL |
| 16* | EE2223-00016 | O RING |
| 17* | EE2019-503 | VALVE PLUG SUB ASS. |
| 18* | EE2223-00018 | HEX. NUT / PLUG |
| 19 | EE2223-00017 | BASE |
| 20 ?? | | |
| 21 | EE7050-507 | NUT WITH WASHER SUB ASS. |
| 22 | EE7050-507 | NUT WITH WASHER SUB |
| 23 | 22223-SW2 | SWIVEL FOR BASE |







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Dump Valve

Stock # 290375



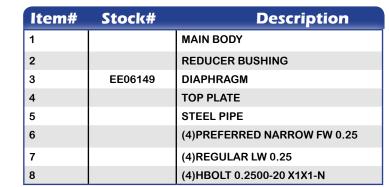
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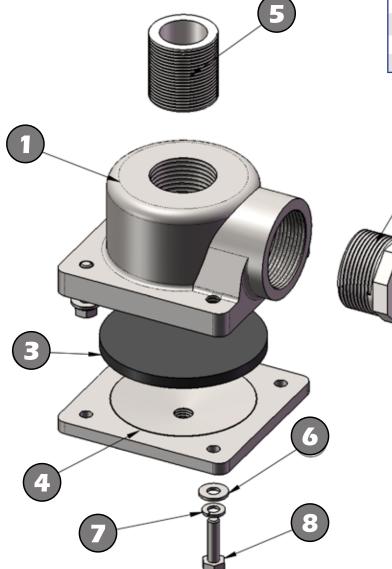
STK # 290380

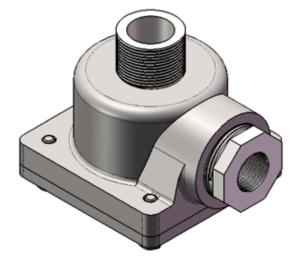


Dump valve

Stock # EE03371

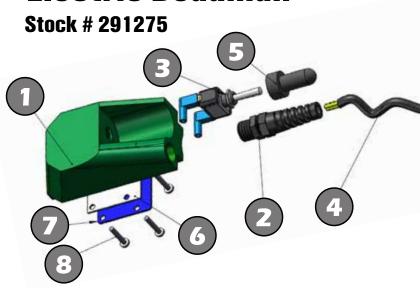








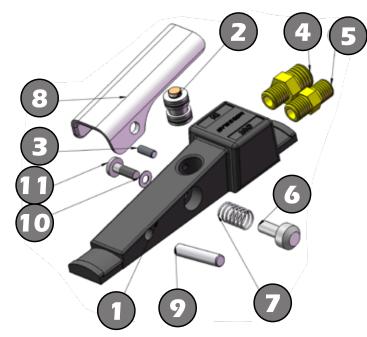
Electric Deadman



| ltem# | Stock# | Description |
|-------|--------|---|
| 1 | | Deadman Switch Housing |
| 2* | 291279 | Strain Relief Sub. ASSY |
| 3* | 291276 | Replaceable Toggle Switch Sub. ASSY |
| 4 | 24012 | Power Cord, Per Foot |
| 5* | 291277 | Switch Boot |
| 6* | | Access Plate Gasket |
| 7* | 291278 | Switch Access Plate with Warning Decal |
| 8* | | Screw |
| | 291282 | Repair Kit •Items with (*) are included in Repair Kit• |
| | 290277 | Ball & Chain |

Pneumatic Deadman

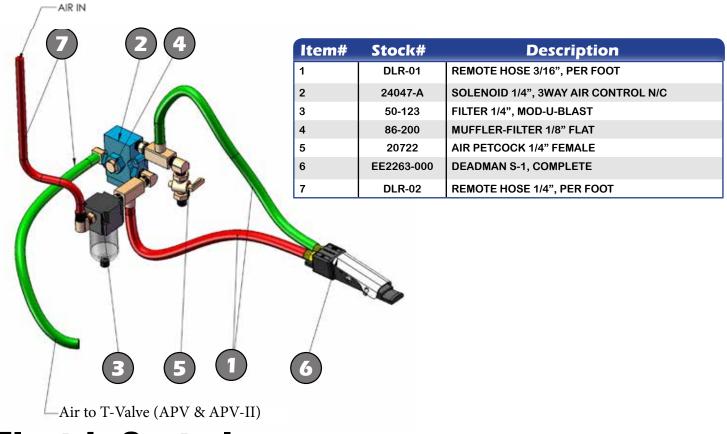
Stock # EE2263-000



| ltem# | Stock# | Description |
|-------|---------------|------------------|
| 1 | | BODY |
| 2* | | CARTRIDGE |
| 3* | | SET SCREW |
| 4 | | NIPPLE 1-4 |
| 5 | | NIPPLE |
| 6 | | BUTTON |
| 7* | | SPRING |
| 8 | | LEVER |
| 9 | | HINGE PIN |
| 10* | | WASHER |
| 11 | | SCREW FOR BUTTON |
| * | EE2263-000-99 | Repair Kit |



Pneumatic Controls - pressure hold system only



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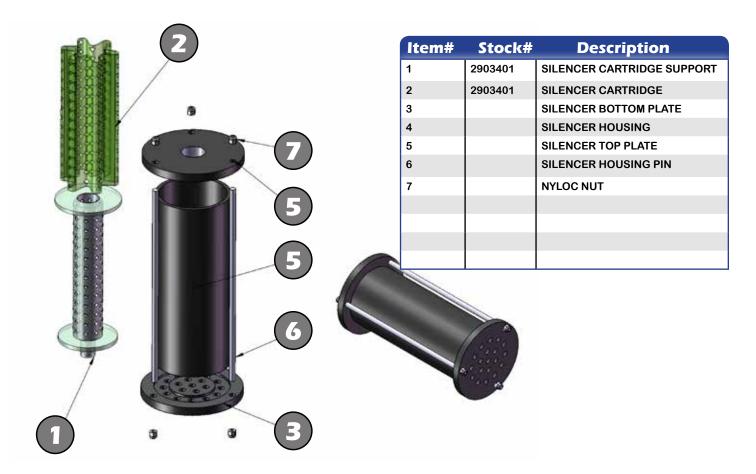
Electric Controls



| ltem# | Stock# | Description |
|-------|--------|-------------------------|
| 1 | 16360 | T50C ELECTRIC BOX |
| 2 | STEL03 | 3/8" ELBOW |
| 3 | CN05 | 1/2" CLOSE NIPPLE |
| 4 | 24012 | 2 WIRE REMOTE CORD |
| 5 | 24020 | 12 VOLT DC SOLENOID |
| 6 | 86-205 | 1/4" MUFFLER |
| 7 | CN02 | 1/4" CLOSE NIPPLE |
| 8 | 50-123 | 1/4" MINI FILTER |
| 9 | 41-235 | 1/4" BRASS STREET ELBOW |
| 10 | | MANUAL OVERRIDE |



Blow Down Silencer - Stock # 290340



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Blow Down Muffler - Stock # 290345



| ltem# | Stock# | Description |
|--|--------|---------------------------|
| 1 | 290345 | H.D. 1" muffler, complete |
| 2 | 290346 | Body |
| 3 | 290348 | Diffuser |
| *New muffler effective May 2015 on all blast pot assemblies* | | |



Lids & Screens



| ltem# | Stock# | Description |
|-------|----------|-------------|
| | 290041 | 12" Lid |
| | 290041-S | 12" Screen |
| 1 | 290044 | 18" LID |
| 2 | 290044-S | 18" Screen |
| | 290046 | 24" LID |
| | 290046-S | 24" SCREEN |

Trouble Shooting - Operational Related Issues



DANGER: Never attempt to open the Abrasive Blaster in any way while it is pressurized. Use extreme caution when performing troubleshooting procedures that involve pressurizing the Abrasive Blaster. Trouble shooting procedures are to be performed by experienced personnel only

| PROBLEM | CAUSE |
|--|---|
| Blast pot turns on accidentally or without warning | 1. Deadman Lever safety flap, or lock button damaged or missing |
| | 2. The pneumatic Deadman Lever is defective |
| | 3. The electric Deadman Lever is defective |
| | 4. The electric control cord is damaged, defective or worn out |
| | 5. The 'O' ring on the shaft of the auto air valve is defective or worn out |
| | |
| Blast pot will not turn off when | 1. The pneumatic Deadman Lever is damaged or defective |
| Deadman Lever is released | 2. The electric Deadman Lever is damaged or defective |
| | 3. The electric control cord is damaged or shorted at connectors |
| | 4. The solenoid valve is stuck open |
| | 5. The muffler on the solenoid is clogged not allowing it to exhaust |
| | |
| Blast pot media stops but Air | 1. Auto air valve seat is defective or worn out |
| blast won't shut off when Dead- man Lever is released | 2. Auto air valve disc is defective or worn out |
| | 3. The 'O' ring on the shaft of the auto air valve is defective or worn out |
| | 4. Auto air valve spring is damaged or defective |
| BLAST F | POTS WITH APV METERING VALES ONLY |
| Blast pot air blast stops but | 1. Urethane Seat in the APV is damaged, defective or worn |
| media keeps flowing when Dead- man Lever is released | 2. Urethane Sleeve in the APV is damaged, defective or worn |
| | 3. The plunger in the APV is damaged, defective or worn |
| | 4. Foreign material is stuck between the plunger and the seat in the APV |
| | 5. The APV spring is damaged, defective or worn out. |

Trouble Shooting - Performance Related Issues



DANGER: Never attempt to open the Abrasive Blaster in any way while it is pressurized. Use extreme caution when performing troubleshooting procedures that involve pressurizing the Abrasive Blaster. Trouble shooting procedures are to be performed by experienced personnel only

| PROBLEM | POSSIBLE CAUSE | REMEDY |
|----------------------------------|--|--|
| Vessel will not | Air supply is off | Start the compressor and open inlet valves to vessel |
| pressurize | Insufficient air supply | Low volume of air supply will cause the pop-up not to seal - check for air supply restriction |
| | Auto air valve leaking from top vent | The top diaphragm may be damaged, defective or worn out - replace dia- phragm |
| | Remote control is faulty | Check twin-line for leaks or wires for bad connections |
| | | |
| No air or media | Choke and/or media valves closed | Open the choke valve and adjust media |
| from nozzle | Clogged nozzle | Remove the nozzle from the coupler and clear the blockage from the nozzle |
| | Clogged blast hose | Remove the nozzle from the coupler and disconnect the blast hose from the tank coupling under the vessel. Dump the media from the hose. Check media valve for proper setting |
| | | |
| Air but no media | No media in vessel | Check for media in vessel and fill if necessary |
| flow from nozzle | Abrasive metering valve is closed | Open the valve and adjust for proper flow |
| | Damp media or object blocking flow at base of vessel | While trying to blast have someone quickly open and close the choke valve to help remove damp media. Remove the hand way cover clean out vessel and the metering valve. |
| | | |
| Media flow to | Abrasive metering valve open to far | Adjust metering valve for a smooth steady stream |
| heavy or throbbing when blasting | Choke valve is partially closed | Open choke valve completely |
| | | |
| Low pressure at nozzle | Nozzle worn out | Change nozzle |
| HOLLIO | Air Supply hose too small | Use proper supply hose as outlined in this manual |
| | Hole in the blast hose | Replace the blast hose |
| | Pop-Up is not sealing properly | Check pop-up and seal for smoothness. Any ridges or rough areas will cause the pop-up to leak |
| | Handway leaking | Replace handway gasket |
| | Choke Valve is partially closed | Open choke valve completely |
| | Abrasive metering valve open to far | Adjust metering valve for a smooth steady stream |
| | Clogged nozzle | Remove the nozzle from the coupler and clear the blockage from the nozzle |
| | | |
| Blaster will not | Control hoses leaking | Check control hoses & fittings for leaks |
| start | Nozzle plugged | Remove nozzle and check for obstruction |
| | Clogged air vent valve | Replace air valve vent |
| | Control handle damaged | Replace pneumatic or electric control handle |
| | Faulty electric solenoid | Replace faulty solenoid - it should make a clicking noise when activated |
| | Electric control cord damaged or shorted | Check for breaks in control cord and for good contact in all connectors |
| | Auto air valve diaphragm defective | Check diaphragm for holes and crack - replace if required |

Call Mod-U-Blast Service if problems persist. 780.425.5510 or visit www.manusservice.com

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Warranty

Mod-U-Blast abrasive blast pot equipment 5 year / 10 year limited warranty

5 YEAR LIMITED ABRASIVE BLAST POT WARRANTY. Manufacturer warrants the complete abrasive blast pot it manufactures to be free of defects in material and workmanship for a period of five (5) years from the date of invoice.

10 YEAR LIMITED PRESSURE VESSEL WARRANTY. Manufacturer warrants the abrasive blast pot pressure vessel it manufactures to be free of defects in material and workmanship for a period of ten (10) years from the date of invoice.

Limitation of warranties and remedies. This warranty is extended only to the buyer who purchases the abrasive blast pot directly from the manufacturer or its authorized distributor and is non-transferable. The purchaser's exclusive remedy arising from its purchase or use of the product shall be strictly limited to the repair or replacement of the products, at the discretion of the manufacturer, and all warranty claims or requests must be made in writing to the manufacturer within ten (10) days after failure of the product. All obligations or liabilities of manufacturer or seller for damages arising out of or in connection with the product and use or performance of the products, except as expressly provided herein, are fully disclaimed and excluded, and no seller or distributor has any authority to make any warranty or assume any liability on behalf of the manufacturer in connection with the sale of the product except as stated herein.

As a condition of the purchase, purchaser agrees that manufacturer and seller shall not, under any circumstances, be liable for any cost of freight, shipping or transportation, labor, special charges, normal maintenance services, lost operating time, loss of use, lost profits, loss of goodwill, consequential damages, punitive or exemplary damages, or other damages or loss. Other than as described herein, manufacturer and seller make no warranty of any kind, express or implied, with respect to the products, and specifically disclaim any warranty of merchantability, fitness for a particular purpose, or other warranty. Purchaser assumes all risk and liability resulting from the use of the products. Purchaser further agrees as a condition of the sale and the use of the product, that any damages or risk of loss other than as described herein above, shall be the exclusive responsibility of the purchaser and not the manufacturer or seller. Manufacturer and seller shall not be liable for any damages incurred by any person as a result of misuse, improper installation, improper application, improper operation of the products, normal wear and tear, alterations or modifications made to the product, or accident. The use of the replacement parts not provided or authorized by the manufacturer voids all warranties.

A completely filled out warranty must be returned to the manufacturer within sixty (60) days of purchase of the product or all warranties are void. Product must be maintained in accordance to the maintenance schedule provided in the product manual, failure to maintain the product in accordance with the maintenance schedule voids all warranties. This warranty does not cover factory installed or customer installed accessories.

Warranty claims. Warranty claims must be submitted to the manufacturer with ten (10) days after failure of the product. Contact information for warranty claims:

Mod-U-Blast service centre or call (780) 425-5510. 403 - 69 Avenue NW Edmonton, Alberta Canada T6P 0C2 PH: (780) 425-5510 FAX: (780) 425-5540

VISIT WWW.MANUSSERVICE.COM FOR ONLINE PRODUCT SUPPORT

