MOD-U-BLAST®

Soda - Blast Owner's Manual

1.5 Cu. Ft. & 3.5 Cu. Ft Soda Blasters

SODA-BLAST MACHINE

SUPERIOR PERFORMANCE

And Quality In Blast Cleaning Equipment

⚠ WARNING

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 # MSM2206

Ph: (780) 425-5510 **Fax: (780) 425-5540**

Table of Contents

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.

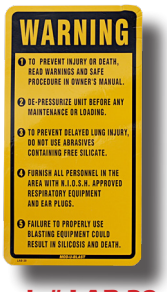
If operation of the unit is unclear after reading this manual, contact your supervisor for instructions. It is the responsibility of the employer to read the following instructions to users of this equipment. Periodic inspection at the work site should be made by supervisory personnel to ensure the blast 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.

Warning Label Locations

Labels must be replaced when they are no longer readable

-1.5 Cu. Ft Soda Blast Model:

Stock # LAB-30



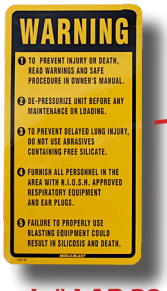
Stock # LAB-29

Serial Plate

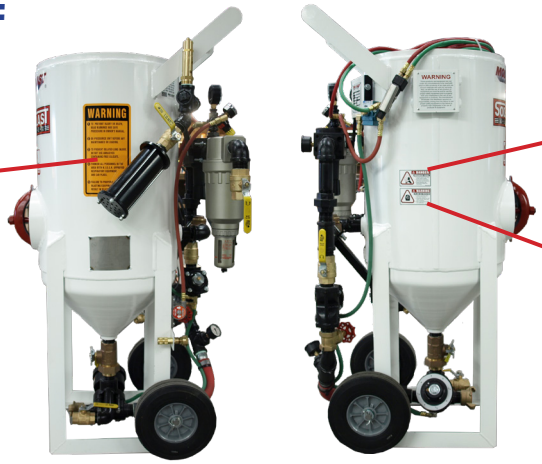
Stock # LAB-43

Stock # LAB–27

3.5 Cu. Ft Soda Blast Model:



Stock # LAB-29



Stock # LAB-43

Stock # LAB-44

Stock # LAB-30

Serial Plate

Stock # LAB–27

MOD-U-BLAST®

Parts Ordering
1-800-661-3842

How Soda-Blast Systems Work

Warning: This section of the manual is designed to give you a general understanding of how Soda 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 Soda Blaster where the Pop-up and its seat are located. When abrasive is added, it flows down through the opening, around the Pop-up, and down to the bottom of the pressure vessel where it will exit through the Multi-Port Fixed Orifice Sleeve in the Metering Valve when blasting is started.

PRESSURIZATION

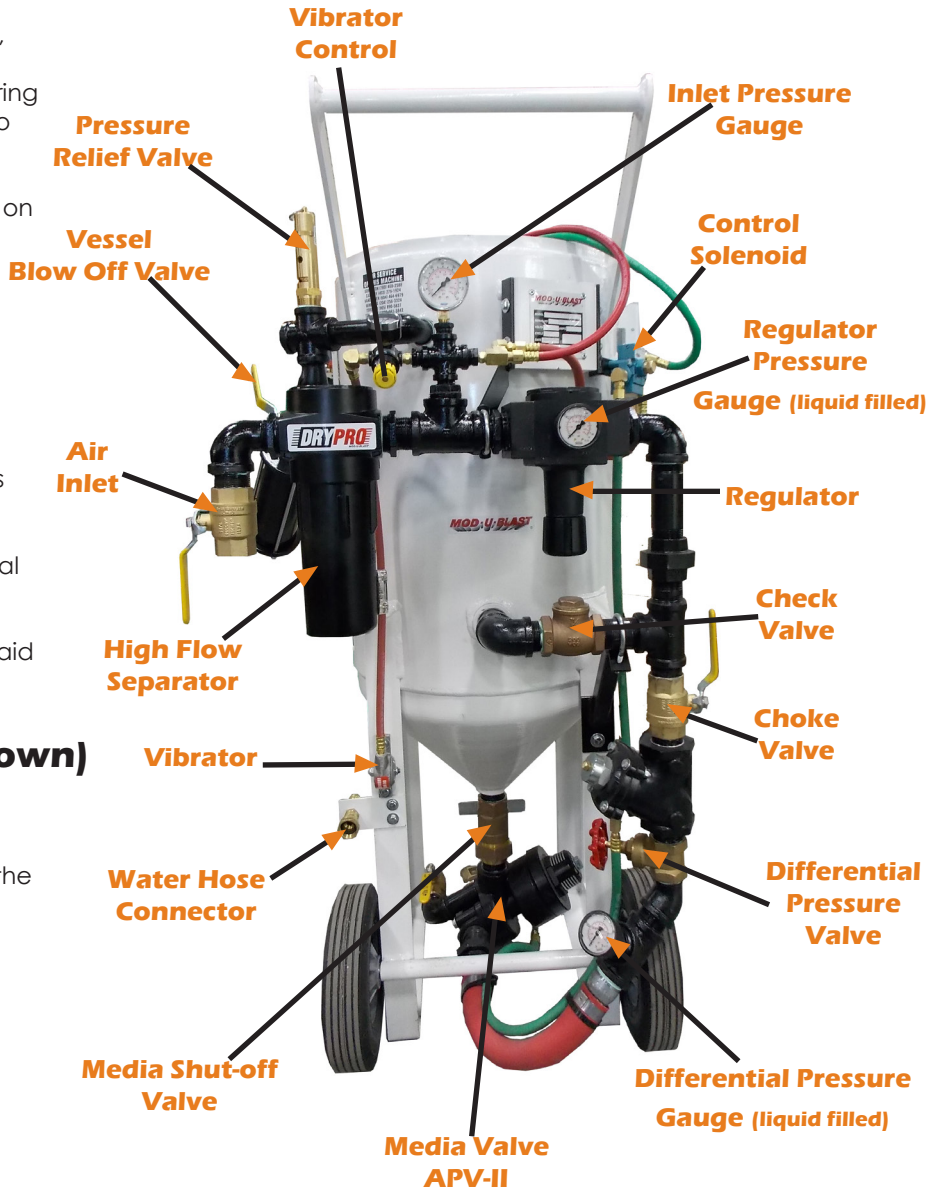
Before pressurization can take place in a Soda Storm" system, the Blow-down Valve must be closed. Then, when a compressed air source (such as an air-compressor) is connected to the inlet of the Soda Blaster and the Inlet Valve is opened, compressed air can flow through the Moisture Separator Filter and Pressure Regulator into the pressure vessel causing the Pop-up (located internally) to seal against its seat allowing the pressure vessel to become pressurized. To blast at pressures less than the minimum required inlet pressure of 90 PSI, the Pressure Regulator is used. When the control handle is activated, the Auto Air Valve and Metering Valve open allowing compressed air & abrasive to flow and mix. The mixture of compressed air and abrasive will now exit the Soda Blaster through a blast hose and nozzle connected to the coupling on the Metering Valve and blasting begins.

DIFFERENTIAL PRESSURE

When blasting using the Multi-Port Fixed Orifice Sleeve in the Metering Valve, differential pressure may be used to aid in the flow of abrasive. Differential pressure uses slightly higher pressure in the Pressure Vessel than in the Pusher Line to help "push" the abrasive through the small orifices in the Multi-Port Fixed Orifice Sleeve. Differential pressure is achieved by partially closing the Differential Pressure Gate Valve until the Differential Pressure Gauge is reading a slightly lower PSI than the Vessel Pressure Gauge. in addition to using differential pressure, the Vibrator may be used to aid in the flow of abrasive.

DEPRESSURIZATION (Blow - Down)

When the control handle is released in a pressure hold system, 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.



Successful Soda Blasting

Blasting with soda and soda-blasting machines is a different process than blasting with standard "sand" blasting media and equipment. The following steps outline the soda blasting process and will serve as a general guide to successful soda blasting.

1. **Supply the equipment with clean, cool & dry air at 90-150 PSI.**
Moisture in the air supply will cause the blasting media to clump causing blockages and costly downtime. It is highly recommended that an air dryer be used to ensure moisture does not enter the blasting equipment.

2. **Use a screen.**
Foreign materials (including pieces or the bag the soda is packaged in) will clog the metering valve resulting in costly down time. Always pour the blasting media through the included screen to prevent foreign materials from entering the equipment.

3. **Fully open the metering valve.**
When using the soda machine with a mutiport fixed orifice sleeve (equipped this way from the factory) it is important to blast with the metering valve completely open. (This is factory set)

4. **Set the regulator.**
While a supply of at least 80 PSI is recommended to operate the Soda Blaster, soda Blasting is usually performed at a lower pressure. Use the included regulator to lower the blasting pressure to the desired PSI using procedures described in the "Operating Procedures" section of the manual.

5. **Use the vibrator.**
The vibrator aids in the flow of soda through the abrasive timer. Open the Vibrator Activation Valve 1/4 to 1/2 tum to activate the vibrator.

6. **Set differential pressure.**
Differential pressure (slightly increased pressure in the pressure vessel) helps to "push" soda through the small orifices of the Muiti-Port Fixed Orifice sleeve in the metering valve. Differential pressure is achieved by partially closing the Differential Pressure Gate Valve until the Differential Pressure Gauge reads 2-4 PSI lower than the Vessel Pressure Gauge when Blasting. See the "Operating Procedures" section of the manual for more details.

7. **Check and adjust flow-rate using "Bag Test" method.**
Setting-up soda blasting equipment to achieve an optimal flow rate is essential for getting efficient productivity from the soda you have purchased. Operating soda blasting equipment that is set-up with a flow rate that is too high or too low will result in poor performance and an expensive waste of blasting soda. See the "Successful Soda Blasting - Achieving Optimal How Rates" section of the manual for details on checking and adjusting the flow rate.

8. **Use a water induction nozzle to reduce dust.**
By using a water induction nozzle such as the WIN System, the amount of air-born dust will be reduced when blasting with soda. (see the "Blasting Set-up" section of the manual WIN System information)

Successful Soda Blasting

ACHIEVING OPTIMAL FLOW RATES

Note: The following procedure assumes a typical soda blasting application in which the optimal flow rate is 3 lb/min at a blasting pressure of 60 PSI. Contact your soda supplier to obtain optimal flow rates and pressures for specific soda products and applications.

PERFORMING THE "BAG TEST"

1. Load the blaster with one 50 lb bag of soda.
2. Following all procedures and safety recommendations found in the Operating Procedures of this manual set the regulator to achieve a vessel pressure of 60 PSI, and open the vibrator activation valve 1/4 to 1/2 turn to start the vibrator.
3. Begin blasting and immediately have a second person adjust the differential pressure gate valve so the differential pressure gauge reads 24 PSI lower than the vessel pressure gauge achieving 2-4 PSI of differential pressure.
4. Continue to blast without stopping until the 50 lbs of soda have been completely exhausted and record the total blasting time taken to use all 50lbs. (We recommend the use of a Job Timer to aid in keeping track of blasting times).
5. Divide the 50 lbs of media by the time you recorded to get the final flow rate.
For Example:

$$\frac{\textbf{50 lbs}}{\textbf{16}^{2/3}\ \textbf{min}} = \textbf{3 lbs/min}$$

ADJUSTING THE FLOW RATE

Once you have determined your flow rate, you may find that it needs to be adjusted. To reduce the flow rate, reduce the differential pressure being used. To increase the flow rate, increase the differential pressure being used. We recommend staying within 2-4 PSI of differential pressure. If you find that your rate is still too high even when running only 2 PSI of differential pressure, you will need to switch to a smaller orifice in your metering valve. Conversely, if your rate is still too low even when running at 4 PSI of differential pressure, you will need to switch to a larger orifice in your metering valve. After making adjustments, repeat the bag test to calculate your new flow rate.

WHEN TO PERFORM THE "BAG TEST"

The flow rate should be recalculated and adjusted whenever the blaster is set up in a new location, a new abrasive is being used, the air supply has changed, or the blasting pressure has changed. In applications where the blaster will be used in a single location, it is recommended that the flow rate be recalculated at least once per week to ensure an efficient use of media.

Operating Instructions

Warning: The Procedures provided in the Operating Instructions section of the manual are designed to provide basic information on how to safely operate the features of Mod-U-Blast® Soda-Blast Series Soda Blasters. Only personnel thoroughly trained in abrasive blasting should operate the Soda Blaster.

SETTING-UP THE BLASTER

INSPECT PRESSURE VESSEL

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

Danger: Never perform any maintenance or attempt to open the Soda 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 Soda Blaster has been pressurized for the first time, tighten the nuts on the Manway Assembly. Tightening the nuts on the Manway Assembly should also be done any time after the Manway has been removed for maintenance before and after the next pressurization.

PURGE AIR SUPPLY HOSE

Before connecting the Air Supply Hose to the Soda Blaster, purge the hose of any moisture or foreign debris. Standing water or moisture in the air line will cause degraded performance of the Soda Blaster. Air supplied to the Soda 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" 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.

Diagram shown below:

Operating Instructions

BEFORE YOU BLAST

PRE-BLAST CHECK

Before each use of the Soda Blaster, it must be checked to ensure it is in a safe condition to be used. Closely examine all components of the Soda Blaster for signs of excessive wear, worn out seals and hoses, or damaged components. If any component of the Soda 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 Soda 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 Soda Blaster where the abrasive can flow through the opening and into the pressure vessel. Do not overfill the Soda Blaster. Do not allow foreign materials to enter the Soda Blaster.

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

Warning: Never fill the Soda Blaster with the inlet valve in the open position. Always close the inlet valve before filling.

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

Remote Control System

Soda 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 Soda Blaster's female twist-lock connector associated with the outlet you want to blast with. Connect a 12 VDC power source (12V Battery or Optional 120 VAC to 12 VDC converter) to the Soda 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 Soda Blaster. The twinline hose is supplied with different size fittings on each of the 2 lines to prevent them from being connected to the Soda 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 Soda 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 Soda Blasters in wet or other hazardous environments.

CONNECTING HOSES

Before connecting hoses to the Soda 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 Soda Blaster and secure with safety clips. Connect the blast hose to the coupling on the Metering Valve at the base of the Soda Blaster and secure with safety clips or mechanics / safety wire when using Mod-U-Blast couplings.

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

Operating Instructions

BLASTING

PRESSURIZING THE SODA BLASTER

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

- All "BEFORE YOU BLAST" procedures have been followed.
- The Inlet Valve is closed.
- The Blow-down Valve is closed.
- The Clean-out Ball Valve on the Metering Valve is closed.
- The Remote Control Handle is released.
- All hose connections are secure and have a safety clip.
- The Soda Blaster is set up in a safe and level location where all people in the vicinity of the Soda Blaster.
- Only personnel who have been thoroughly trained and have read and understand the manual are in the vicinity of the Soda Blaster.

Danger: Never supply compressed air exceeding 150 PSI (10.3 BAR) to the Soda Blaster. (125 PSI max when using nylon couplings)

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

USING THE SODA BLASTER

When using the Multi-Port Fixed Orifice sleeve and differential pressure:

With the blaster pressurized, it is ready to begin blasting and setting your regulated pressure and differential pressure.

Press safety button or push down safety flap and squeeze the Remote Control Handle to start the flow of abrasive and compressed air. Adjust the Pressure Regulator (it necessary) until the desired blasting pressure is shown on the Vessel Pressure Gauge. Check to make sure the Vessel Pressure Gauge and the Differential Pressure Gauge are showing the same pressure. If they are not, do not continue with blasting and see the "Troubleshooting" section of this manual. Close the Differential Pressure Gate Valve until the reading on the Differential Pressure Gauge is 2-4 PSI lower than the Vessel Pressure Gauge to achieve differential pressure to aid in the flow of abrasive through the Multi-Port Fixed Orifice Sleeve. For more information on achieving the optimal flow rate of soda see the "Successful Soda Blasting - Achieving Optimal Flow Rates" section of this manual.

Lastly, open the Vibrator Activation Valve 1/4 to 1/2 turn to start the vibrator and further aid in the flow of abrasive through the Multi-Port Fixed Orifice Sleeve. Opening the Vibrator Activation Valve more than what is necessary to get the vibrator to start working will not aid in the flow of abrasive and will result in excessive wear of the vibrator. 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 tor blasting to stop will depend on the length of Blast Hose being used.

Operating Instructions

BLASTING

Danger: Airborne particles produced by abrasive blasting can cause respiratory disease. All persons operating or located near to the blasting site must wear approved NIOSH/OSHA breathing equipment.

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

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

USING THE WATER INDUCTION NOZZLE

The WIN® Nozzle may be used to reduce the amount of dust created when blasting with soda. To use the WIN® Nozzle, close the valve on the hose connector and connect a standard garden hose. When blasting, open the valve on the hose connector until the desired amount of water is injected into the abrasive stream.

Warning: Check with the manufacturer of the abrasive you will be using for environmental and safety concerns. For example, soda can be detrimental to vegetation.

DRAINING THE MOISTURE SEPARATOR OR AIR MANIFOLD

During blasting, the moisture Separator/Air Manifold 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 Soda Blaster must be supplied with clean, cool, dry compressed air in order to function properly. The 1600 Moisture Separator (if equipped) may not be sufficient to achieve this depending on the quality of the air being supplied.

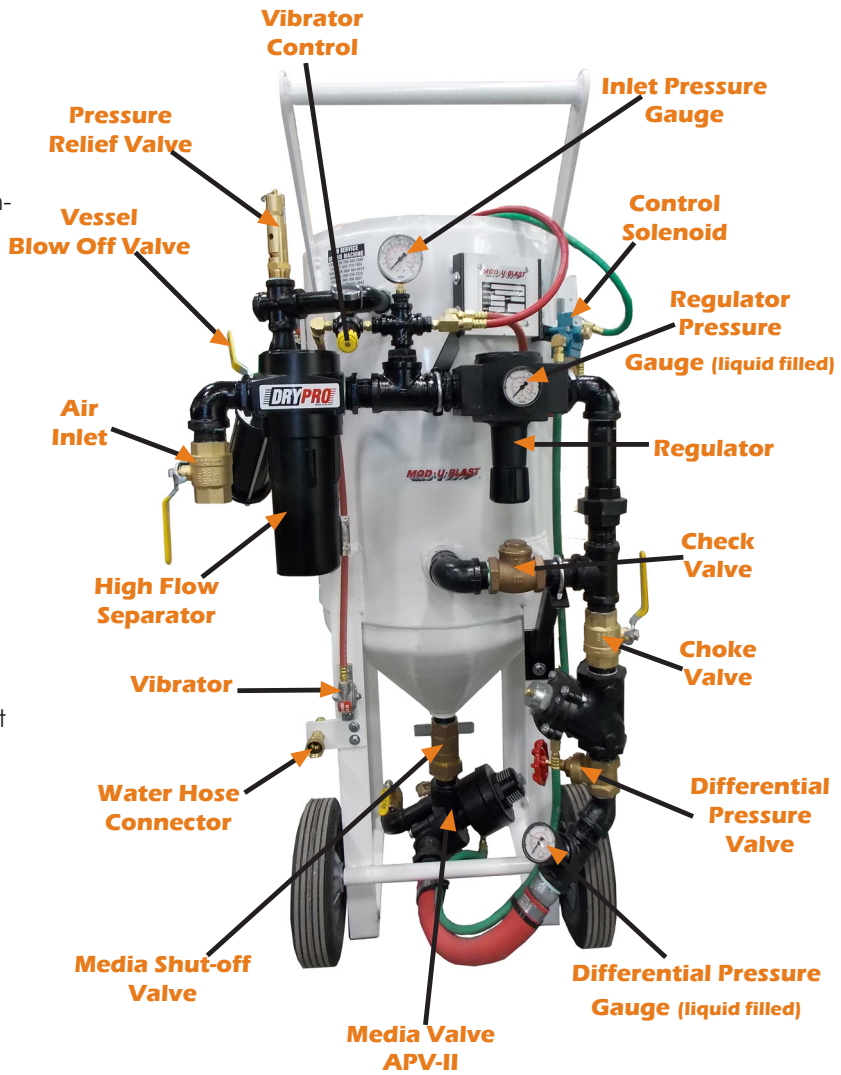
SHUTTING DOWN THE SODA BLASTER

When blasting is complete, the Soda Blaster will need to be shut down. 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 Soda Blaster to escape.

Warning: Never Operate a soda blast Soda Blaster without a muffler on the Blow-down valve.

DISCONNECTING AIR SUPPLY HOSE

After the Soda 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 Soda Blaster. Slowly open the inlet valve on the Soda 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.



Maintenance Instructions

Danger: Never perform any maintenance or attempt to open the Soda 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:

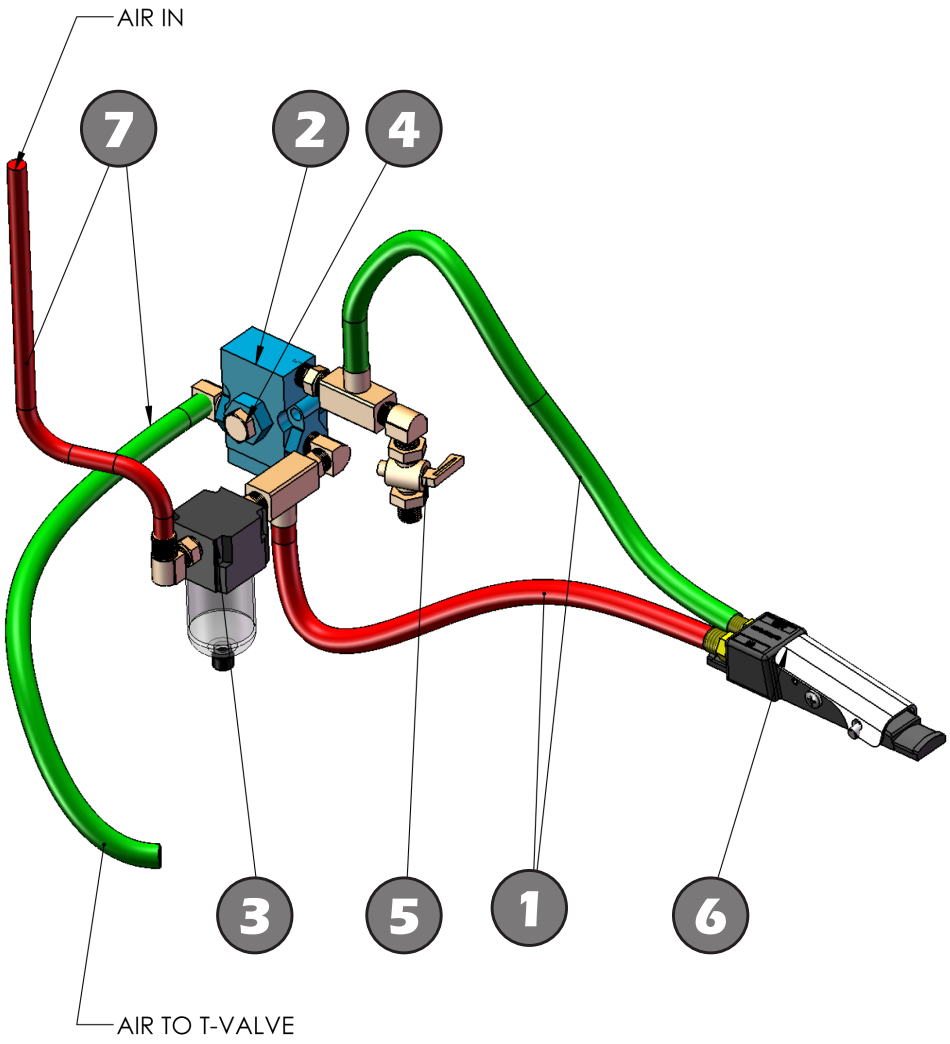
Procedure to be Performed	Maintenance Interval
1) Inspect Personal Protective Equipment (PPE) Including but not limited to; Respirators, Airline Filters, Carbon-Monoxide Monitors, Hearing Protection, Eye Protection, Foot Protection, Protective Clothing & Gloves. Inspect ALL Personal Protective Equipment (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 Flap/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.	Every 8 Hours of Use
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 damage, 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.	Every 8 Hours of Use
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. If muffler is clogged and can't be cleaned out sufficiently, it must be replaced.	Every 40 Hours of Use

Maintenance Instructions

Maintenance Schedule Continued...

Procedure to be Performed	Maintenance Interval
7.) Inspect Pop-Up & Pop-Up Gasket Inspect the Pop-Up & Pop-Up Gasket for wear and replace as necessary	Every 40 Hours of Use
8.) Service Metering Valve(s) Disassemble, clean & inspect the Metering Valve for proper and worn components. Replace any worn components found. Lubricate APV & APVII valves with anti-seize before reassembling.	Every 600 Hours of Use
9.) Service Auto Air Valve(s) Disassemble, clean & inspect for proper operation and worn components. Replace any worn components found. Lubricate with anti-seize before reassembling.	Every 600 Hours of Use
10.) Service Control Valve(s) Disassemble, clean & inspect for proper operation and worn components. Replace any worn components found. Lubricate with anti-seize before reassembling.	Every 600 Hours of Use

Pneumatic Controls

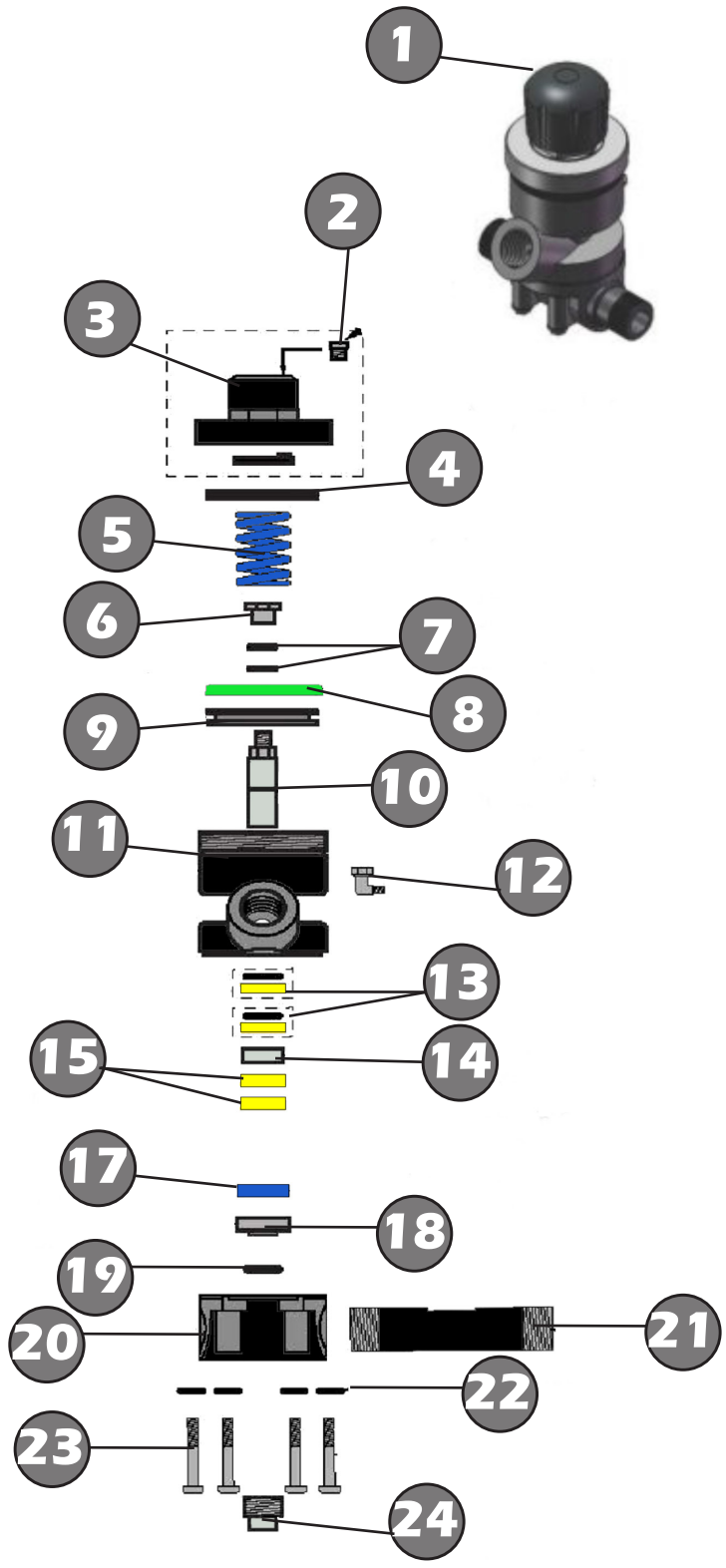


Item#	Stock#	Description
1	DLR-01	REMOTE HOSE 3/16", PER FOOT
2	24047-A	SOLENOID 1/4", 3WAY AIR CONTROL N/C
3	50-123	FILTER 1/4", MOD-U-BLAST
4	86-200	MUFFLER-FILTER 1/8" FLAT
5	20722	AIR PETCOCK 1/4" FEMALE
6	EE2263-000	DEADMAN S-1, COMPLETE
7	DLR-02	REMOTE HOSE 1/4", PER FOOT

MOD-U-BLAST®

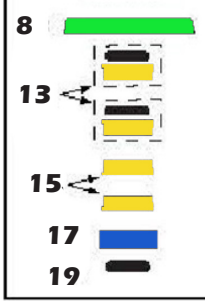
Parts Ordering
1-800-661-3842

APV-II Valve



ITEM #	STOCK #	DESCRIPTION
1	EE2149-000-01	KNOB (Not used on Soda Pots)
2	86-200	MUFFLER
3	EE2149-000-02KT	CAP ASSEMBLY
4	EE2149-000-19	BUMP RING
5	EE2149-000-03	SPRING
6		PLUNGER STOP
7		NYLON WASHER
8*	EE21490-0004	PISTON SEAL
9	EE2149-000-05	PISTON
10	EE2149-000-07	TUNGSTEN PLUNGER
11	EE2148-000-09	CYLINDER
12	22223-SW1	SWIVEL
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	EE2149-320-20	TUNGSTEN SLEEVE
17*	EE2149-000-10	URETHANE SEAT
18	EE2149-000-14	STEEL INSERT
19*	EE2149-000-18	O-RING
20	EE2148-000-11	BASE
21	EE-2149-0615 EE-2149-0715 EE-2149-0815	1" NIPPLE 1-1/4" NIPPLE 1-1/2" NIPPLE
22&23	3/8" 3/8" X 2-3/4"	FLAT WASHER / BOLT
24	PLUG	PL10
*	EE2148-100-98	INCLUDED IN APV-II SEAL KIT

EE2148-100-98
APV - II
Seal kit



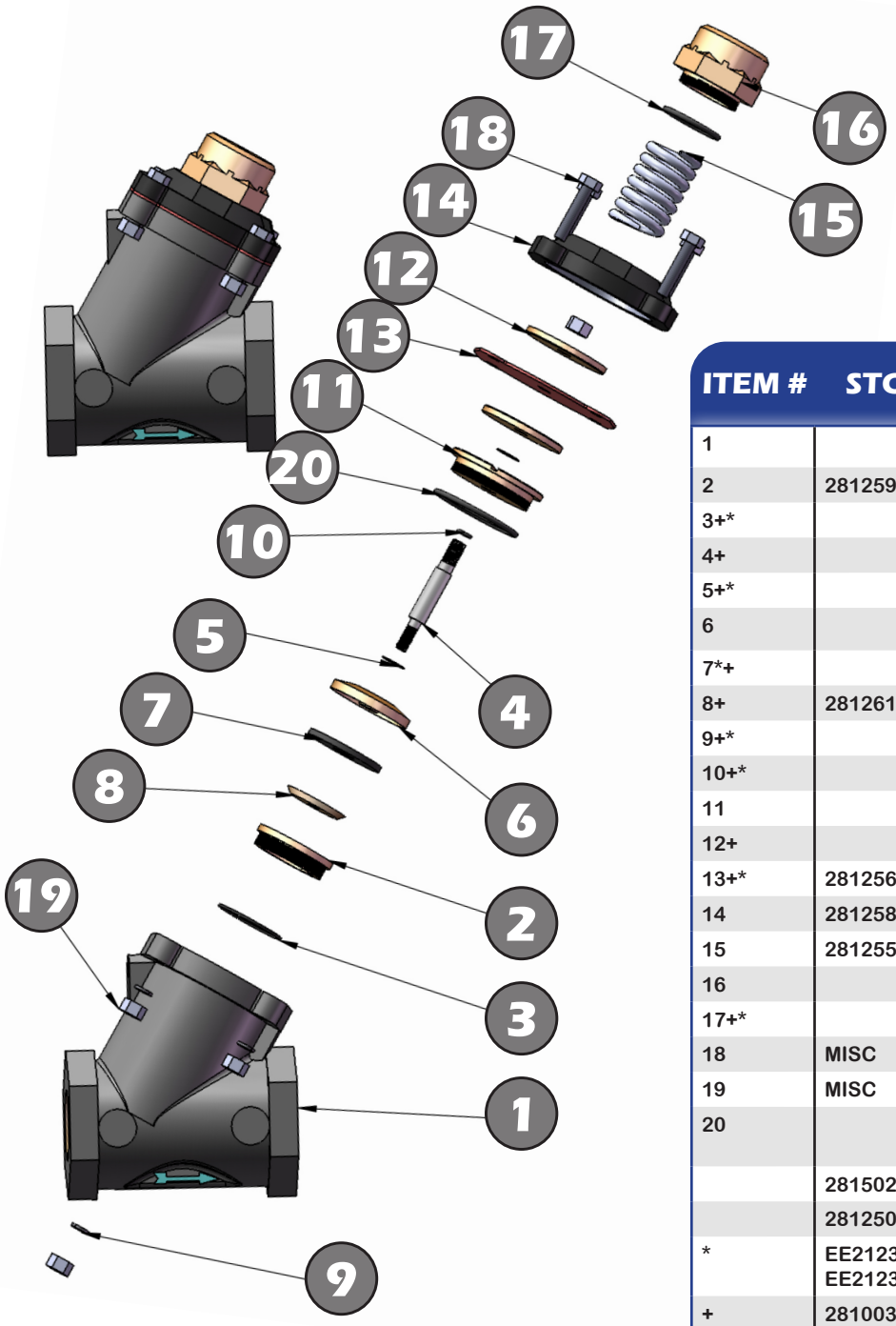
Media Flow Calibration Curves

Refer to page 21,22 for Media Flow Rate charts

MOD-U-BLAST®
Parts Ordering
1-800-661-3842

Auto Air Valve

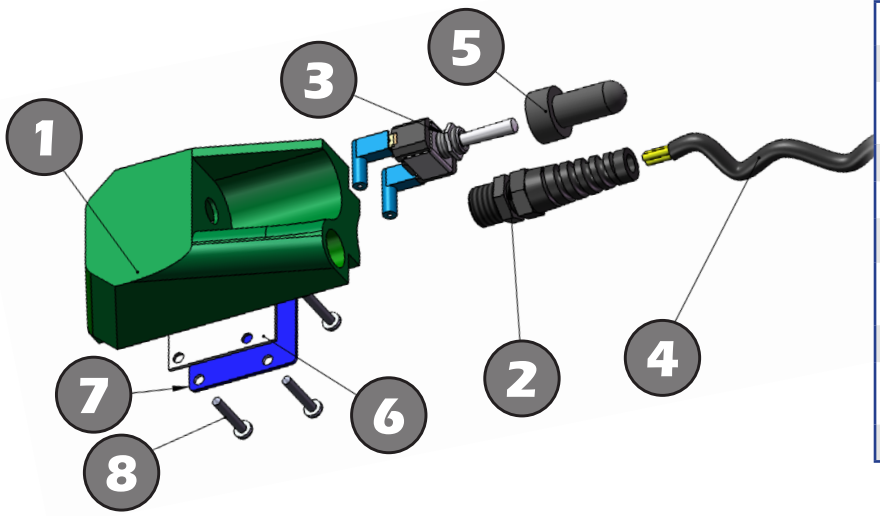
-Stock # 281000 (1"valve)
281250 (1-1/4"valve)
281500 (1-1/2"valve)



ITEM #	STOCK #	DESCRIPTION
1		BODY
2	281259	SEAT
3+*		O-RING / THICK
4+		SHAFT
5+*		WASHER/COPPER
6		DISC RETAINER
7*+		RUBBER DISC
8+	281261	DISC PLATE
9+*		LOCK WASHER 1/4"
10+*		O-RING FOR SHAFT
11		RETAINER BUSHING
12+		DIAPHRAGM PLATE
13+*	281256	DIAPHRAGM
14	281258	CAP
15	281255	SPRING
16		SPRING RETAINER
17+*		O-RING / THING
18	MISC	BOLT - 1/4"
19	MISC	NUT
20		O-RING FOR RETAINER BUSHING
	281502	AUTO AIR VALVE 1-1/2"
	281250	AUTO AIR VALVE 1-1/4"
*	EE2123-006-99 EE212300-799	SEAL KIT 3/4" & 1" SEAL KIT 1-1/4" 1-1/2"
+	281003 281253	REPAIR KIT 3/4" & 1" REPAIR KIT 1-1/4" 1-1/2"

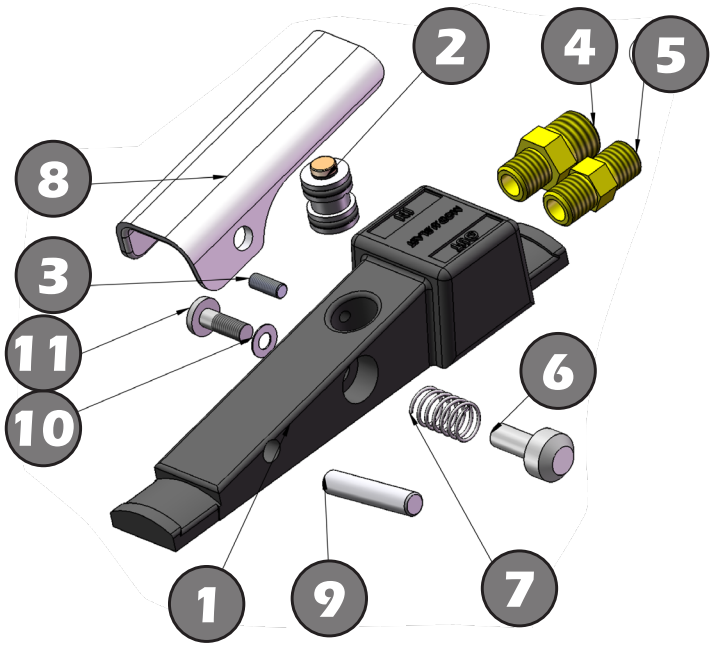
MOD-U-BLAST®
Parts Ordering
1-800-661-3842

Electric Deadman -Stock # 291275



Item#	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



Item#	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

MOD-U-BLAST®
Parts Ordering
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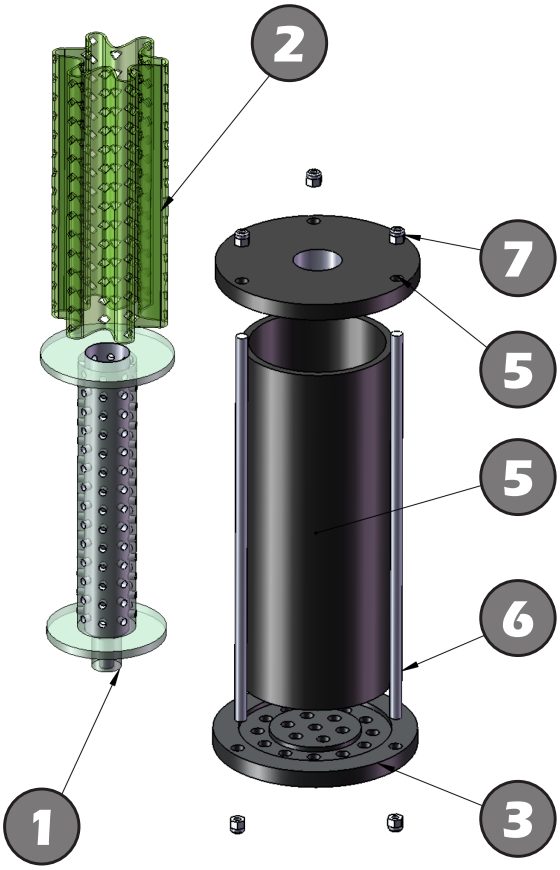
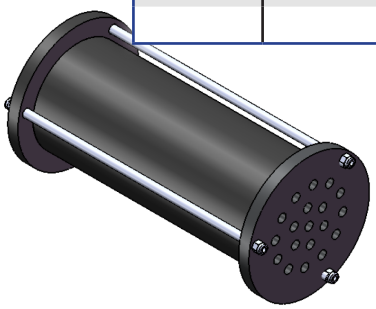
Blow Down Silencer - Stock # 290340





Item#	Stock#	Description
1	2903401	SILENCER CARTRIDGE SUPPORT
2	2903401	SILENCER CARTRIDGE
3		SILENCER BOTTOM PLATE
4		SILENCER HOUSING
5		SILENCER TOP PLATE
6		SILENCER HOUSING PIN
7		NYLOC NUT

Blow Down Muffler - Stock # 290345

Item#	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		

MOD-U-BLAST®
Parts Ordering
1-800-661-3842

Trouble Shooting - Operational Related Issues

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

BLAST MACHINE TURNS ON ACCIDENTALLY OR WITHOUT WARNING

Possible Clauses:
1. The safety flap, lever or lock button on the Control Handle is damaged or missing.
2. The Pneumatic Control Handle is damaged, defective or worn out (if equipped)
3. A bleeder type control handle has been installed.
4. The Electric Control Handle is damaged, defective or worn out (if equipped)
5. The Electric Control Cord is damaged, defective or worn out (if equipped)
6. O-ring on the shaft of the Auto Air Valve is damaged, defective or worn out (if equipped)

BLAST MACHINE IS SLOW TO TURN OFF OR WILL NOT TURN OFF WHEN CONTROL HANDLE IS RELEASED

Possible Clauses:
1. A bleeder type control handle has been installed.
2. The Pneumatic Control handle is damaged, defective or worn out (if equipped).
3. The Electric Control Handle is damaged, defective or worn out (if equipped)
4. The Electric Control Cord is damaged, defective or worn out (if equipped)
5. The Control Valve is stuck or in need of service due to lack of lubrication, or is damaged, defective or worn out.

VESSEL PRESSURE AND DIFFERENTIAL PRESSURE GAUGES DO NOT AGREE

(Vessel Pressure and Differential Pressure Gauges should agree when the Pressure Vessel is pressurized and blasting is taking place with the Differential Pressure Gate Valve completely open.)
Possible Causes:
1. The choke valve is closed. Never operate the Soda Blaster with the Choke Valve in any other position than completely open.
2.The Differential Pressure Gate Valve is partially closed. The Differential Pressure Gate Valve must be completely open when comparing gauges for matching values.
3. One of the gauges is damaged, defective or worn out and needs to be replaced. Depressurize the Soda Blaster and swap the Differential Pressure Gauge with the Vessel Pressure Gauge. If the reading discrepancy follows the gauge to its new location, install a new gauge and keep the existing gauge that agrees with the new one. If the readings stay the same at the same positions, then the gauges are working properly and the problem is not with the gauges.
4. The Auto Air Valve is not opening fully. Check for proper operation of the Auto Air Valve, and that its vent is not clogged. The Auto Air Valve will also not open completely if it is not receiving the sufficient signal air pressure.
5. There is an obstruction between the Choke Valve and the Metering Valve. Depressurize the Soda Blaster and disassemble the strong of components between the Choke Valve and Metering Valve. Remove the obstruction and reassemble the components.

Soda Blaster AIR BLAST STOPS BUT ABRASIVE KEEPS FLOWING WHEN CONTROL HANDLE IS RELEASED (SYSTEMS WITH APV SERIES METERING VALVES ONLY)

Possible Clauses:
1. The Urethane Seat (black) in the Metering Valve is damaged, defective, or worn out.
2. The Urethane Sleeve (black) in the Metering Valve is damaged, defective, or worn out.
3. The plunger (tungsten carbide) in the Metering Valve is damaged, defective, or worn out.
4. Foreign material is stuck between the Plunger and the Seat in the Metering Valve.
5. The Metering Valve Spring is damaged, defective, or worn out.

BLAST MACHINE ABRASIVE STOPS BUT AIR BLAST WILL NOT SHUT OFF WHEN CONTROL HANDLE IS RELEASED

Possible Clauses:
1. Auto Air Valve Seat is damaged, defective, or worn out.
2. Auto Air Valve Disc is damaged defective, or worn out.
3. O-ring on the Auto Air Valve Shaft is damaged defective or worn out.
4. Auto Air Valve Spring is damaged, defective, or worn out.

Trouble Shooting - Performance Related Issues

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

NO ABRASIVE FLOW WHEN BLASTING (AIR ONLY)

Possible Clauses:
1. The Soda Blaster is empty or has no Abrasive in it.
2. Abrasive cut-off function is engaged halting the flow of abrasive (if equipped)
3. The Metering Valve is closed or has not been adjusted properly. If the Metering Valve is an APV or APVII and you are concerned the valve is not opening, the following test can be performed:
4. There is an obstruction in the Metering Valve. To clear the obstruction perform the following procedure:

Turn the knob on the Metering Valve clockwise until it stops and then turn the knob counter-clockwise 9 full turns to open it completely. Depress the control handle and have a second qualified person close the choke valve for 2 seconds, and then open it again immediately. This will push minor obstructions such as a small amount of wet abrasive a piece of paper from a bag, or bridged paint chips through the Metering Valve and out the Nozzle. Readjust the Metering Valve back to the desired setting for blasting, and check to see if the obstruction has been cleared.

If the obstruction was not cleared by following the above procedure, slowly open the Clean-Out Ball Valve on the metering valve about a quarter of the way while the vessel is pressurized. Leave the Clean-out Ball Valve open for a couple seconds then close it completely. If successful, the obstruction, some abrasive & a jet of compressed air will be expelled from the open end of the Clean-out Ball Valve. Extra care should be taken to ensure the stream will not be directed at personnel or objects as they may be propelled at dangerous speeds.

WARNING: When the Clean-out Ball Valve is opened while the Soda Blaster is pressurized, abrasive, high-pressure air & nearby objects will be propelled from the open end of the valve. The area where this will occur must be free of personnel and structures/equipment or severe injury & damage may occur.

If trying to clear the obstruction with the Clean-Out Ball Valve fails, the Soda Blaster must be depressurized and the Metering Valve must be removed by separating the sanitary coupling that holds the Metering Valve to the Pressure Vessel. Be aware that when the obstruction is cleared, abrasive remaining in the Pressure Vessel will come pouring out. All Abrasive must be allowed to leave the Pressure Vessel before reattaching the Metering Valve.

If all the above procedures fail to clear the obstruction, there is a large obstruction that must be removed from inside the pressure Vessel. To do this, make sure the Soda Blaster is depressurized and remove the Handway Assembly. Scoop or vacuum out all the abrasive from inside the pressure vessel and remove the obstruction. Reinstall the Handway Assembly and Metering Valve and tighten them securely, then Refill the Soda Blaster. It is recommended that a screen be used to prevent foreign to enter the Soda Blaster.

5. The Soda Blaster has wet abrasive in it. The wet abrasive must be removed by depressurizing the Soda Blaster, removing the Handway Assembly, and scooping or vacuuming it out. DRY ABRASIVE MUST ALWAYS BE USED. CLEAN, COOL, DRY AIR MUST BE SUPPLIED TO THE Soda Blaster IN ORDER TO PREVENT THE ABRASIVE FROM GETTING WET

ABRASIVE STREAM IS TOO HEAVY OR THROBBING WHEN BLASTING

Possible Clauses:
1. Choke Valve is partially closed. Never run the Soda Blaster with the Choke Valve in any other position except fully open or damage to the Soda Blaster will occur.
2. The Metering Valve needs to be adjusted.
3. Differential pressure is in excess of the recommended 4 PSI maximum.

LOW PRESSURE AT THE NOZZLE

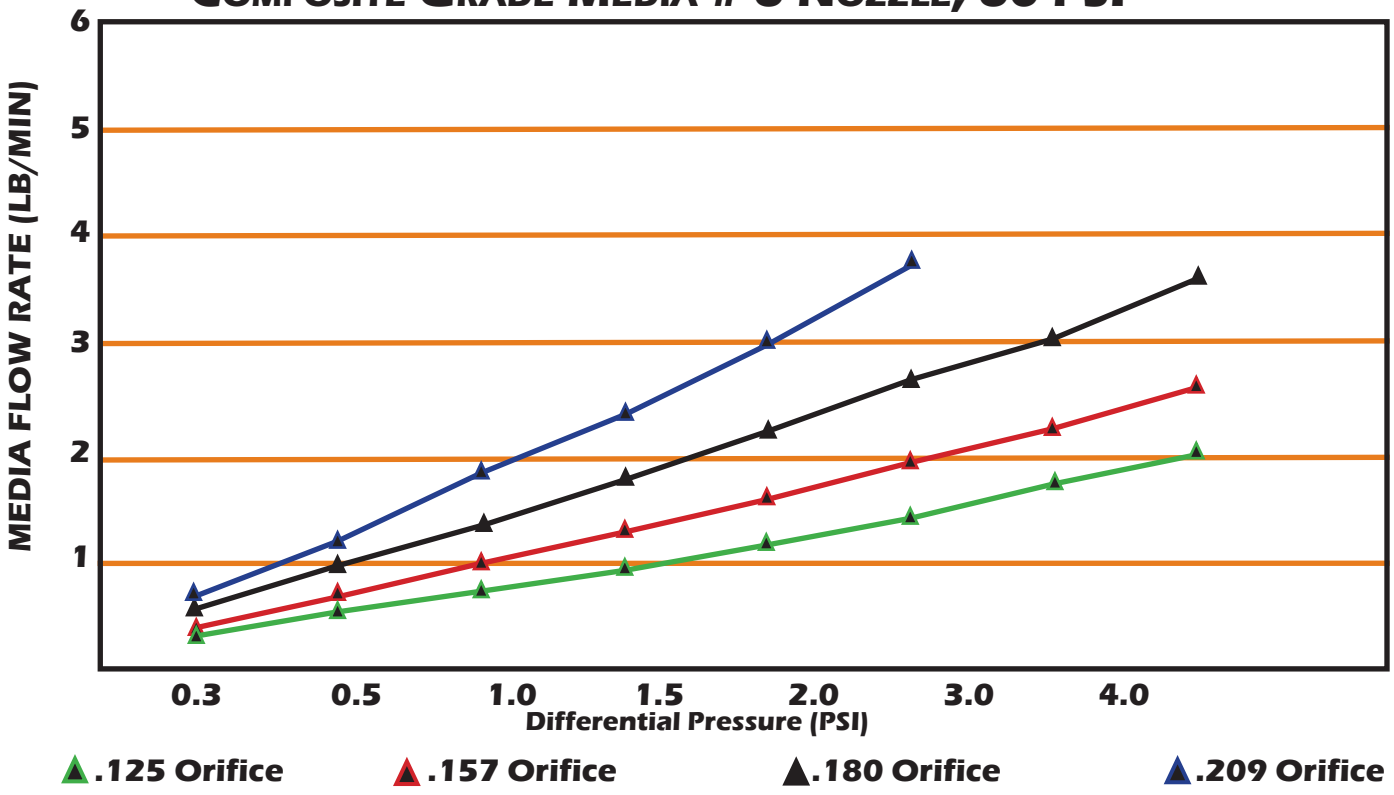
Possible Clauses:
1. Air compressor is the wrong size (too small) or the load button has not been pushed or turned on.
2. Nozzle is worn out and the compressor cannot keep up with the increased demand.
3. Air supply hose to the blast machine is too small.
4. There is a hole in the blast hose.
5.Pop-up is not sealing properly.
6. Handway assembly is leaking.
7. Dirty or clogged Auto Air Valve Vent.
8. Diaphragm in Auto Air Valve is damaged, defective, or worn out (if equipped)
9. Choke Valve is partially closed. Never run the Soda Blaster with the Choke Valve in any other position except fully open or damage to the Soda Blaster will occur.
10. Obstruction in Nozzle.
11. Regulator needs adjustment (if equipped)

Soda Blaster WILL NOT TURN ON OR IS SLOW TO TURN ON

Possible Clauses:
1. Air compressor is the wrong size (too small) or the load button has not been pushed or turned on.
2. Nozzle is worn out and the compressor cannot keep up with the increased demand.
3. Air supply hose to the blast machine is too small.
4. Control hoses and/or fittings are leaking.
5. 50 micron Moisture Separator/Filter is clogged
6. Obstruction in Nozzle.
7. Dirty or clogged Auto Air Valve Vent
8. The Pneumatic Control Handle is damaged, defective or worn out.
9. Control Valve stuck or in need of service due to lack of lubrication, or is damaged, defective or worn out (if equipped)
10. Diaphragm in Auto Air Valve is damaged, defective or worn out (if equipped). To test, put your thumb over the vent. If any air coming out with the control handle depressed, the diaphragm must be replaced.

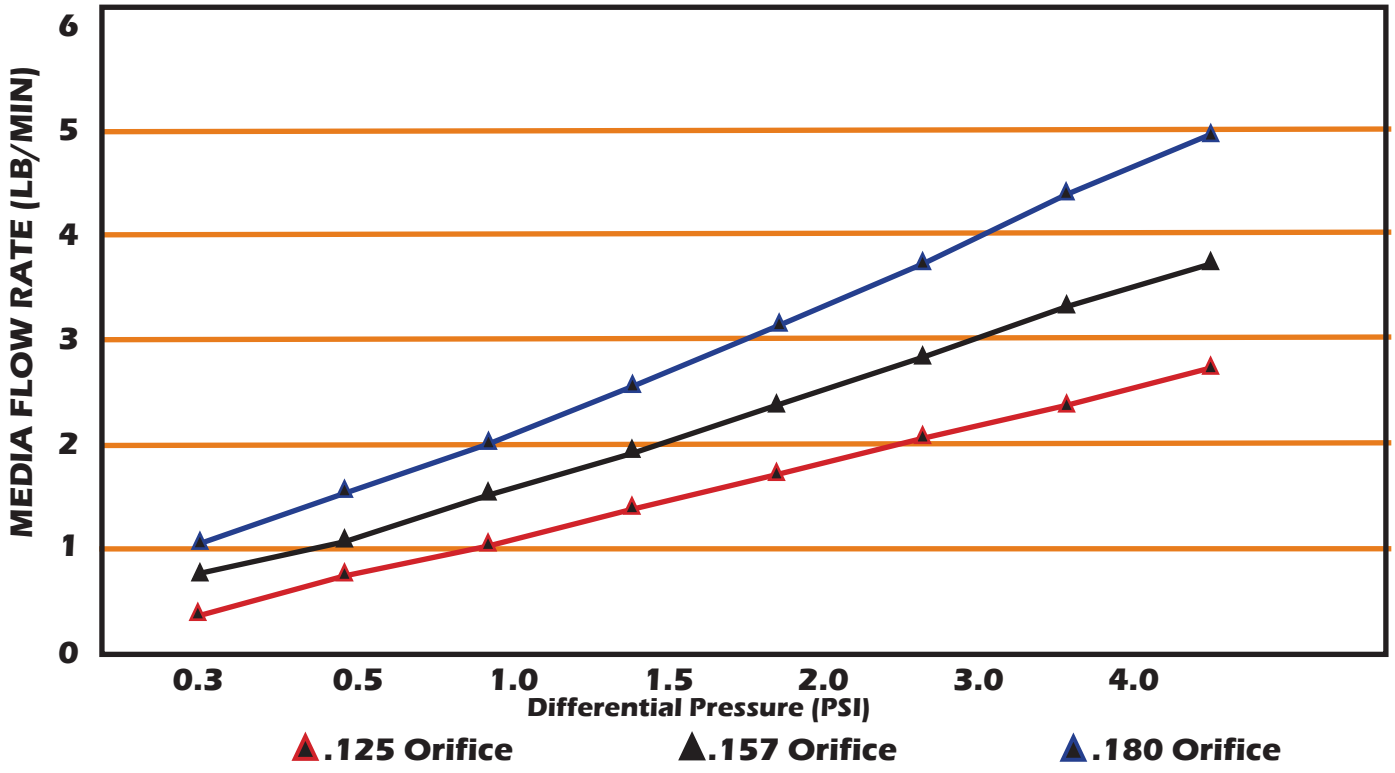
Media Flow Rate

Composite Grade Media # 6 Nozzle, 60 PSI

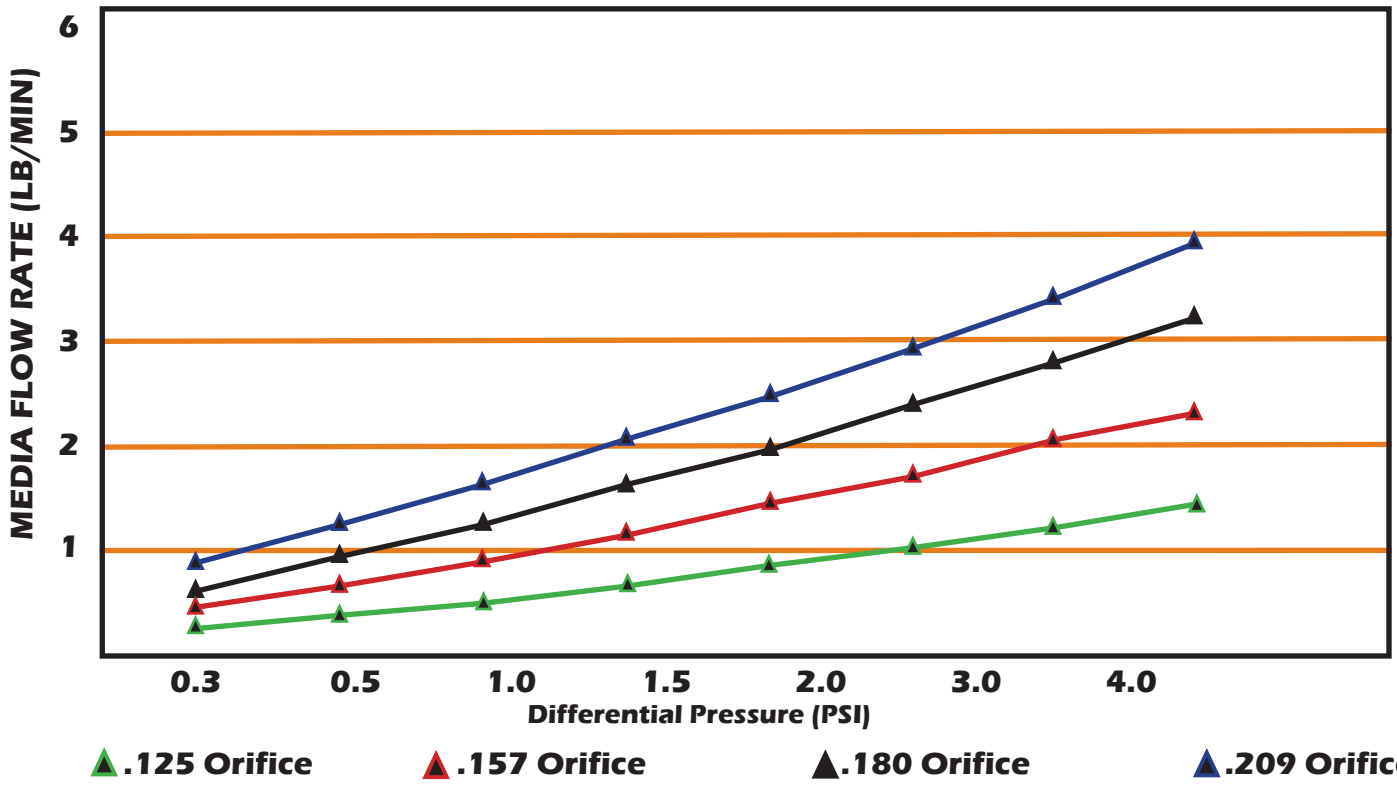


Figures are approximate

Maintanence Grade Media # 6 Nozzle, 60 PSI

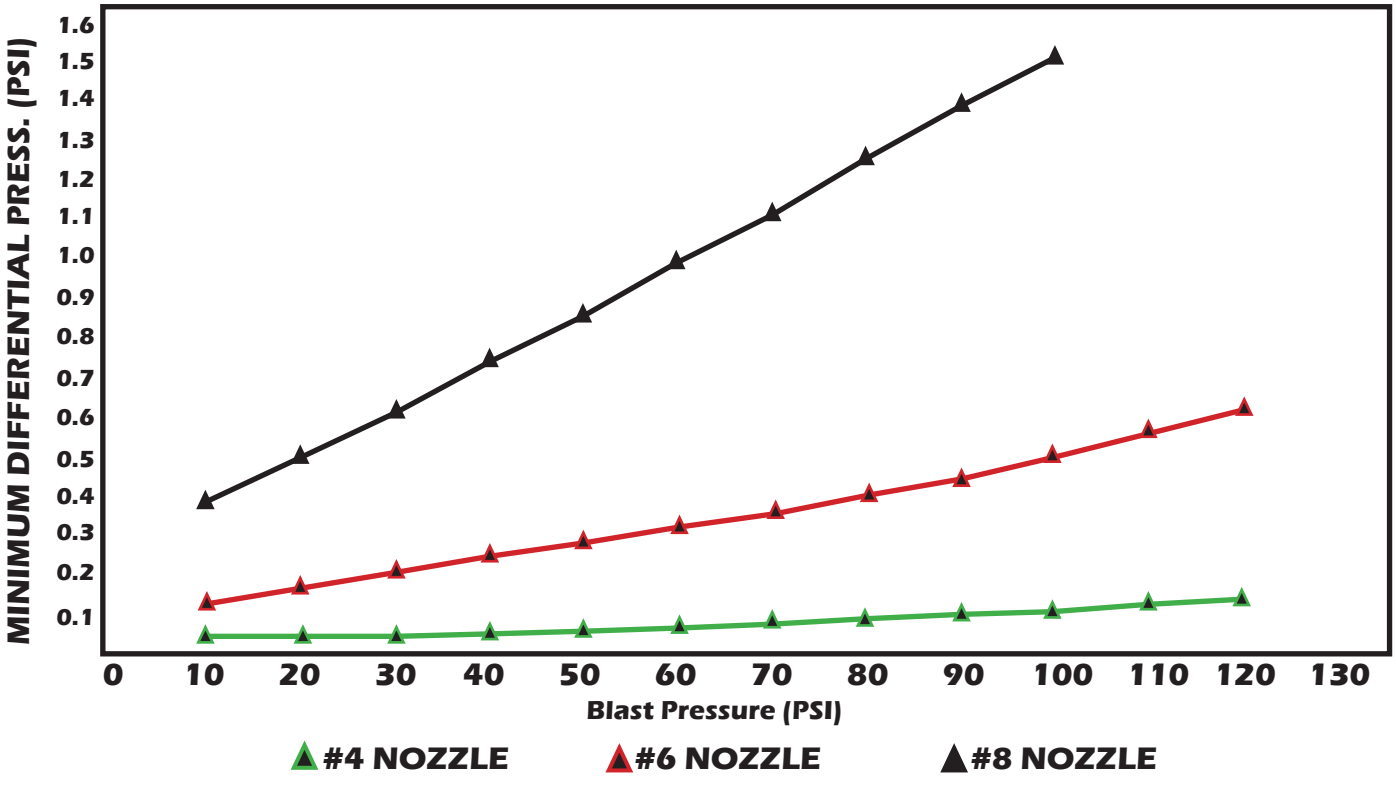


Maintenance XL Grade Media # 6 Nozzle, 60 PSI



Figures are approximate

Minimum Differential Pressure (Built in Pressure Loss)



Warranty

Mod-U-Blast equipment is covered by a one (1) year warranty against defects in material and workmanship starting from the purchase date. This covers mechanical components, air valves and plumbing, electrical components, air motors, vessels, machine body (normal wear).

This warranty does not apply to abnormal use of the equipment or parts. Parts subject to abrasive wear, such as nozzles, hoses, dust filters, windows and window protectors are not covered by the warranty.

Claims will be honored only if the warranty card is returned within a period of two months from the factory shipping date.

The card can be returned to your Mod-U-Blast salesperson or mailed to the address below.

In the event of failure of this equipment
please contact a Mod-U-Blast service centre
or call (780) 425-5510.

MOD-U-BLAST®

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