Operator's Manual

CRYSTALBLAST™

4828

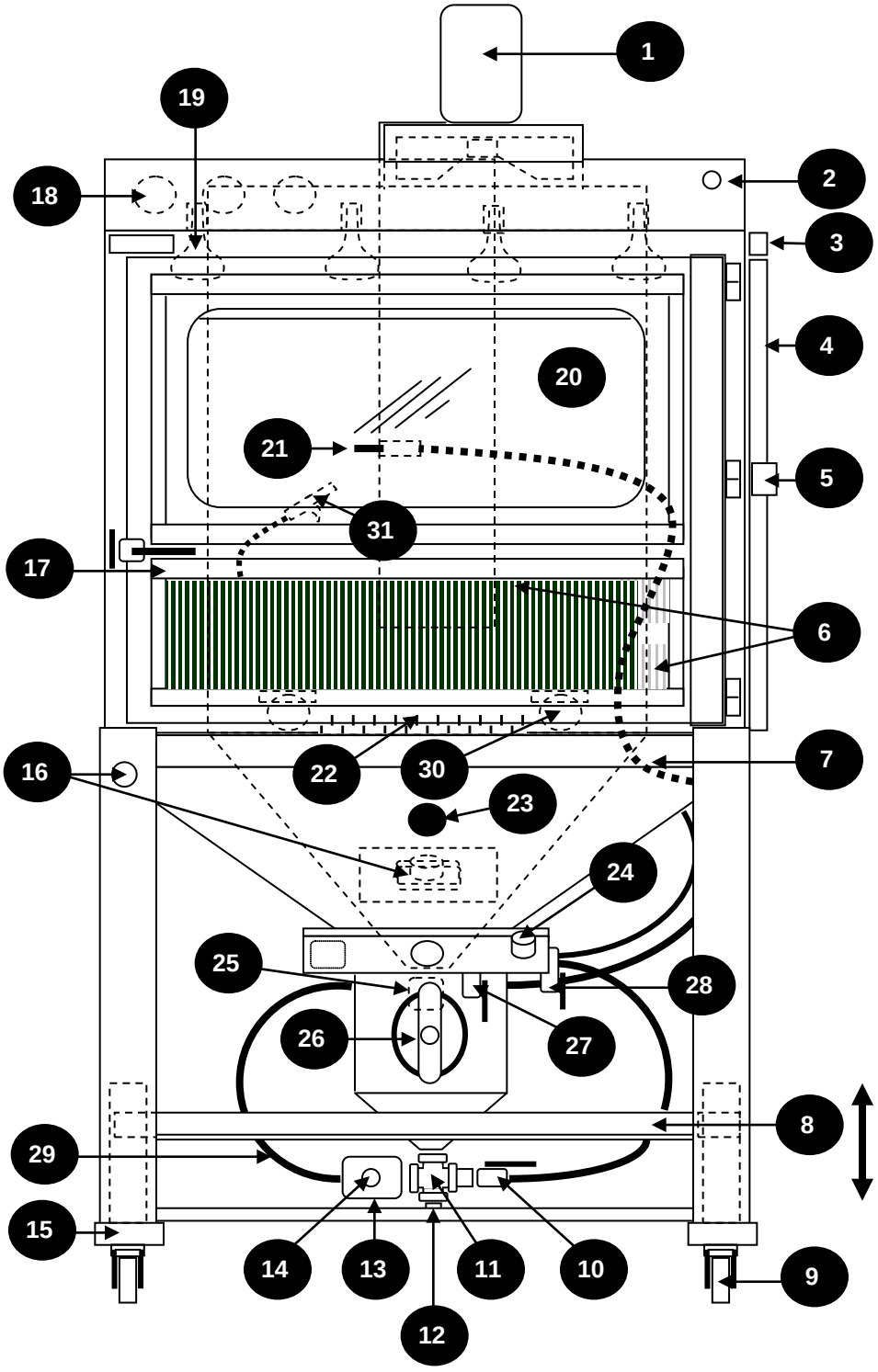
IKONICS IMAGING®

An **IKONICS** Company ISO 9001 Certified NASDAQ Listed: **IKNX**

Made in USA

Engineered, manufactured and supported in the USA by MediaBlast, Inc. and IKONICS Corporation.

OPERATION AND MAINTENANCE DIAGRAM



1. 700 cfm blower standard, 1200 cfm option
2. Machine ON-OFF switch
3. Safety door interlock switch
4. Optional right side access door
5. Door latch handle & strike
6. Horsehair brush with 2” wrist gap and slit rubber curtain
7. Abrasive whip hose, 3/8” OD
8. Adjustable foot pedal for sit-down operation
9. Lockable casters
10. Choke valve flow control
11. Mixing valve
12. Secondary pot drain
13. Low-wear abrasive ON-OFF valve
14. Micro filter
15. Stability skate caster pans
16. Operator pneumatic valve for vibrator pot loading
17. Removable brush & curtain holding bar
18. Window sweep inlet filter
19. 1of 4 spot lights
20. Safety glass view window with protector glass, insert & angled
21. Boron nozzle and holder, 1/8”
22. Composite bar work grates, non metallic
23. Pot loading actuator control handle
24. Air regulator and control panel
25. Dust collector drain cap
26. Standard 50 pound pot with clean-out port, 100 pound option
27. Dust collector cleaning cycle valve
28. 3-way pressure pot air control valve
29. Abrasive hose, 1/2” OD
30. Dust collector pneumatic cleaning vibrators
31. Blow-off gun

Machine options can affect the location of some machine controls

125 MAXIMUM INLET PRESSURE

IMPORTANT INFORMATION

NOTES

Welcome to the CrystalBlast Family! You have just purchased the CrystalBlast 4828 dual purpose sandcarving cabinet. This machine is designed, built, manufactured and assembled in the USA by Media Blast & Abrasive Inc. Established in 1977 and building fine abrasive blasting equipment for over 35 years.

This unit permits fine artistic panel carving using the large 440 square foot filter area for uniform airflow into and out of the cabinet. The unique design with adjustable height blast pedal and right side access door also allows higher machine duty cycle with standard sandcarving.

- Optional 1200 cfm blower available

The 4828 machine is very easy to operate and maintain. However, there are several important issues of which you should be aware:

- ❖ **ALWAYS USE CLEAN, DRY COMPRESSED AIR.** Moisture will cause abrasive to stick together preventing flow. Please review the compressed air requirements prior to operating this machine and install an ambient air dryer if hot air or moist air is entering the cabinet. Moisture can also affect the operation of any dry type dust collector, always consult a qualified air compressor technition for information on air dryers or coolers.

- Optional ambient dry available PN 100-03-173

- ❖ **THE STANDARD 3/32" i.d. NOZZLE REQUIRES 5.7 CFM OF COMPRESSED AIR @ 30 psi, the larger 1/8" i.d. nozzle requires 8.5 cfm @ 30 psi.** Make sure your air compressor exceeds this requirement by at least 75 to 100%. Premature compressor failure and or hot compressed air can be a secondary result of using a marginally sized air compressor. Operation of the optional 1/8" i.d. requires more compressed air. The 3/32" nozzle is recommended for operation using a 9-10 cfm compressor volume measured at a tank pressure of 90 psi. Always look at cfm volume at 90-100 psi not displacement at 0 psi.

- Optional Boron Carbide nozzles available 8-10 times usage
- A worn nozzle can double compressed air usage

- ❖ **NEVER BLAST ABOVE 50 PSI.** This machine is designed for operation at low pressures. Blasting at pressures in excess of 50 psi will lead to premature breakdown of the abrasive and premature failure of wear components (blast hose, blast nozzles, window protector etc.). The 4828 model includes the LONG WEAR Industrial Pinch Valve requiring only 10 psi more line pressure than the set blasting pressure for proper operation of the Pneumatic Pinch Valve.

- It is important for proper operation of the machine controls to maintain 90 psi or higher supply line pressure to the machine at all times

- ❖ **ALWAYS DEPRESSURIZE THE POT AT THE END OF THE DAY.** It is important to depressurize the pot prior to turning off the compressed air supply. The nozzle can begin to blast once the line pressure to the machine drops to regulator blasting pressure plus 10 psi.

- Remove all air and electrical during machine service and de-pressurize the pot assembly

- ❖ **REGULARLY CHECK THE BORE OF THE NOZZLE.** It is important to replace the nozzle after it has worn 1/32". Not only will the worn nozzle use more compressed air but the abrasive will impact the part more aggressively and increase the potential for damaging the masking material. As the volume of air and abrasive increases it will create additional wear on the blast hose. Always depressurize the pressure pot during any machine maintenance.

- A worn out nozzle with a marginal air compressor size can result in improper operation of the machine controls

- ❖ **A CLEAN DUST COLLECTOR WILL KEEP THE CABINET VISIBILITY CLEAR.** Cleaning the dust collector is key to maintaining optimum cabinet visibility. Follow the Manufacture's recommended practice for cleaning the dust collector, manual shipped with the machine. Empty the dust storage hopper on an established schedule based on machine usage, see instructions included with the machine.

- Normal cleaning cycle is once every 2 hours of operation, varies with nozzle size used

NOTES

❖ **USE MBA REPLACEMENT COMPONENTS.** Replacement of worn components with non MBA parts will void the machine warranty. The components used by Media Blast are of the highest quality and will provide the longest serviceable life.

- Many optional parts are available for extended machine operation

❖ **REVIEW THE TROUBLESHOOTING GUIDE AND FOLLOW THE INSTRUCTIONS PRIOR TO CALLING MBA FOR TROUBLESHOOTING ASSISTANCE.** Most problems associated with the machine can be identified by simply consulting the Troubleshooting Guide. However, if your problem cannot be found in the Troubleshooting Guide, please give us a call. Nearly all equipment malfunction issues can be resolved over the telephone.

❖ **NEVER USE POOR QUALITY ABRASIVE "SLAGS"….NEVER USE SILICA SAND IN ANY ABRASIVE BLASTING CABINET. SAND HAS A LOW HARDNESS AND CONTAINS FREE SILICA KNOWN TO BE A HEALTH HAZZARD.**

- Keeping the dust collector clean and operational is the responsibility of the user

PLEASE READ THROUGH THIS MANUAL BEFORE OPERATION

MAXIMUM MACHINE INLET PRESSURE 125 PSI
MINIMUM LINE PRESSURE 90 PSI

QUICK OPERATION GUIDE

The information that follows will be used to get your new CrystalBlast 4828 machine setup and running in the shortest period of time. Use this Guide for the initial machine set-up and operation. You may refer to this Guide at any time, for more detailed operational instructions refer to the Main Operator's Manual after this Quick Guide.

FIRST:

- Remove the machine from the shipping crate being careful to wear gloves and eye protection during this process.
- Do not remove the machine from the shipping pallet until the machine has been transported to installation location. This permits use of the shipping pallet for transport over uneven surfaces.
- Remove any lag bolts attaching the machine to the shipping pallet. This unit includes locking casters allowing the machine to be rolled to final location. You may use a forklift taking care to spread the forks to the outside lower leg braces using fork lifting channels when equipped. Steady the machine any time the machine is raised… Raise only enough to remove the shipping pallet. Due to the weight of the dust collector take care when moving the machinery. Smaller cabinet sizes require stability assistance when the machine is raised. Raising the machine lifts the dust collector stability leg off the ground.
- Lift the machine vertically allowing the shipping pallet to be removed, then quickly lower. Always place the machine as close to the installation area before removing from shipping pallet.
- Install the machine allowing adequate clearance for machine side access door load and unload. Never allow direct sunlight to reflect on the machine view window.

- Machine weight is over 500 pounds

- Machine can be equipped with optional high-velocity part inlet port on the left side of the cabinet

NOTES

After machine final placement follow the items listed below:

- Remove all items from inside the cabinet….this may include the manual, lights and any extra purchased spare parts.
- Attach any hoses removed for shipment, items will be tagged and marked for quick re-assembly.
- Remove the machine from the pallet by first removing any screws or nails holding the wooden crate to the skid. Remove all crating material but the wooden machine pallet.
- Remove any 3/8" lag-bolts used to attach the machine to the shipping pallet. Some machines are shipped with strapping over the pressure pot flange for stability. This strap is under extreme tension so use caution and wear safety glasses and gloves when removing these shipping straps.

- Light are packed inside the cabinet
- Armrest may be removed and packed inside the unit for reduce crate size and or possible shipping damage

- **THIS MACHINE WEIGHS 550 POUNDS SO USE EXTREME CAUTION WHEN LIFTING OFF THE SHIPPING PALLET**.

- The machine may be shipped with the optional armrest located inside the cabinet, you will need to install using the supplied fasteners. When the metal frame is securely fastened, press the padded rest into the armrest frame.
- Open the side access door and install the light bulbs at this time and make sure the inside slinger washer is installed on the bulb stem prior to installing the bulb.
- Attach the compressor air supply line to the machine at the Main Air Inlet Valve located on the pneumatic control panel #24. This machine has been shipped without air inlet fittings to allow the customer to maintain uniformity by installing matching fittings already in use at their facility. Match the air inlet fitting to the size of the Main Air Inlet Valve or use a plumbing reducer bushing if needed. Using coiled air hoses and or quick-connect fittings is not advised; this may cause compressed air flow problems that may affect proper machine operation.
- Release the power cord, 120 volt molded/grounded, and plug into any standard 120 volt 60Hz dedicated service outlet. The running amperage of this machine is 1500 watts or 14-15. Any dedicated available 120 volt service outlet will operate the machine when properly installed. The use of extension cords is not recommended however, if you have to use an extension cord make sure the cord amperage is adequate for the machine amperage rating. All extension cords have a printed maximum amperage rating listed on the cord. Never use extension cords rated at amperage less than 15 amps.
- Using the machine on-off switch (#2) located on the right side of the top window sweep housing, turn the dust collector blower and lighting switch to the on position.

- Install a master air shut-off valve

- If using the optional 1/8" blast nozzle **never** use quick disconnect fittings

- Dedicated service outlet only, 20 amp – 120 volt grounded

Make sure the air compressor is operating with a minimum line pressure of 90 psi at all times. In order for the air controls to operate correctly, you must supply adequate compressed air **"volume** and **pressure"**. The CrystalBlast 4828 machine requires 6 cfm for operation of the standard 3/32" blast nozzle and 8.5 cfm for operation of the optional 1/8" blast nozzle at a blasting pressure of 30 psi. This cfm rating is for 30 psi blasting pressure and does not account for a worn out nozzle. Compressed air minimum pressure is required for proper operation of the machine air controls. Always depressurized the pressure pot using the 3-way valve (#28) when not in use. Always drain the pressure pot with the machine dust collector running. Running the machine dust collector will prevent abrasive from escaping the cabinet.

- If a master air regulator has been installed on the machine supply line make sure the regulator is set at 100 psi

- If the line pressure drop below 90 psi the machine controls may not function properly

- Open the front or side access door and with the dust collector running, pour 35-40 pounds of abrasive onto the operator work grate and allow the abrasive to transfer into the pressure pot assembly. The dust collector will prevent dust from exiting the machine during this process. The abrasive will not fill the pressure pot because the pot plunger valve is closed at this time.
- Use the front operated Pot Plunger Assembly Handle to open the Pot Plunger to fill the pot assembly with abrasive. Pushing in on handle (#23) will open the pressure pot fill valve, if the handle will not push in the pot is pressurized….use the 3-way valve #28 to remove the compressed air from the pot assembly. Any

- 35 to 40 pounds when first charging the machine. Do not overcharge!
- Optional 100 pound pot capacity is available

time the pot is first pressurized, the nozzle will blast until the pot pressure exceeds the blasting pressure, this is normal. Sometimes when filling the pot with abrasive, the Pot Plunger may not seal properly the first few times, if this happens, open the 3-way valve (#28) and push in on the handle of the Pot Plunger Assembly (#23), pull back again on the Pot Plunger Assembly while opening the pot 3-way control valve #28. If you are unable to push in on the Pot Plunger Handle the pressure pot is pressurized. Make sure the pot compressed air has been removed has drained the pot.

- Adjust the air regulator using the adjusting knob #24 located at the top of the control panel #24. Normal blasting pressures range from 20-40 psi and it may become necessary to set the regulator again during the blasting process. The type and length of the air supply line used to connect the compressed air to the machine often creates a pressure drop during machine operation making a final regulator adjustment necessary. The resting or static pressure, when the blast is off, will be what is required for any blasting pressure based on machine set-up and installation materials.
- Stepping down on the Foot Pedal Valve will activate the blast. Releasing the Foot Pedal Valve will stop the blast.

NOTE:

The machine blast can be stopped at any time by de-pressurizing the pot using the 3-way valve #28. Closing this valve will again pressurize the pot assembly. Line pressure must be 10-20 psi higher than the blasting pressure at all times for proper operation of the controls. Never set the blasting pressure to line pressure.

ADJUSTING THE ABRASIVE FLOW

Adjusting the abrasive flow is simple. Locate the Abrasive Choke Valve (#10) on the right side of the abrasive ON-OFF valve #13. Always start with the valve completely open, you will see very little abrasive exiting the nozzle. Adjust as follows but never close this valve completely at any time.

- Set the Abrasive Choke Valve at 45 degrees and test for blast by pressing down on the Foot Pedal Valve. If very little abrasive is exiting the nozzle after 2-3 seconds, close the Abrasive Choke Valve a small amount by moving the handle about 1/4"-3/8" towards closed position. If the abrasive is pulsing and delivery is excessive, open the choke valve assembly in small amounts. Just before the nozzle is delivering the proper amount of abrasive the abrasive flow will pulse slightly. Close the Abrasive Choke Valve a bit more and the pulsing will disappear, the setting is now correct. This setting will remain correct unless you change the blasting pressure or abrasive mesh size.
- Always open the 3-way valve #28 and de-pressurize the pressure pot at the end of daily operation or any time the air compressor will be turned off. The pot valve is held closed using a spring actuator assembly #23. Always have the machine blower running to prevent abrasive from escaping the cabinet.

CLEANING THE DUST COLLECTOR

- The standard machine includes pneumatic filter cartridge cleaning vibrators. Because the dust collector is negative pressure it is necessary to turn the blasting cabinet off during the cleaning cycle. When the machine is off, locate the cleaning valve (#27) on the machine pneumatic control panel #24. Open the valve for 3 minutes and allow the dust collector vibrators to clean the filters.
- At the end of each day drain the dust collector hopper until you establish how much dust your operation generates during a normal days operation.
- Units equipped with timed cleaning cycle will automatically turn the pneumatic cleaning cycle on for three minutes when the machine is turned off. This allows the dust collector to clean the filter assemblies. When the machine is being used for extended time periods you must turn the machine off every two hours of machine operation to allow the cleaning cycle to function.

NOTES

- The 3-way valve is used to release the compressed air from the pressure pot
- The pot loading handle is used to open the pot valve after pot depressurization…this will fill the pressure pot with abrasive
- The foot pedal can be raised or lowered for standing or seated operation
- You can stop the machine blast at any time using the 3-way valve #28…opening this will remove the compressed air from the pot
- All CrystalBlast machines include a pre-set abrasive flow control metering assembly…the choke valve is used for fine turning abrasive flow
- Abrasive type, blasting pressure, part hardness, nozzle size and daily duty cycle all affect the cleaning cycle operation of the dust collector. It is suggested the dust collector be cleaned every two (2) hours of machine operation. This may vary.. it is the responsibility of the use to kept the dust collector cleaned, maintained and serviced for proper operation

MAIN MANUAL - GETTING STARTED

NOTES

UNIT PLACEMENT: Allow adequate clearance for loading and unloading the blast cabinet. MBA recommends 36" in front of the cabinet for the operator and 36"on the sides of the cabinet. The 4828 model includes one front operators door standard…optional added side access door and optional part loading vestibules are available. Always leave adequate room for installation and service of the rear mounted dust collector service access doors. If more room is required when servicing the dust collector the machine is equipped with casters allowing easy movement for service. Never place the unit where direct light can strike the operator view window. This will cause reflections on the view window and make it uncomfortable and difficult for the operator to view the work in progress.

- Even floors allow final placement of the machine using the machine casters

ADJUSTMENT OF THE FOOT VALVE ASSEMBLY: This unit includes the adjustable foot valve assembly for stand-up and sit-down machine operation. For glass panels the operator would normally be standing …raising the foot pedal allows seated operation when processing smaller parts at grate level.

- Use the adjustable foot valve for standing or seated operation.

ELECTRICAL REQUIREMENTS AND CONNECTION: Standard electrical service for most CrystalBlast sandcarving cabinets is 120V / single phase, 20 amp. service. MBA recommends that this cabinet be installed on a dedicated 20-amp breaker similar to any large single power-consuming appliance. Always check the machine serial number tag for any special voltage requirements that might have been added.

- Dedicated 120 volt single phase grounded 20 amp service is the standard configuration

125 MAXIMUM INLET PRESSURE

AIR REQUIREMENTS AND CONNECTION: The standard 3/32" i.d. nozzle requires 5.7 cfm @ 30 psi. The optional 1/8" i.d. nozzle requires 8.5 cfm @ 30 psi.
Note: cfm – volume of compressed air in cubic feet per minute, psi – pressure of air in pounds per square inch. Stopping the blast during machine operation by releasing the foot pedal will save on compressed air usage (e.g., blasting 50 seconds of every minute will decrease the compressed air requirements by 16%. Make sure that your air compressor exceeds this requirement by at least 75 to 100% (9-10 cfm for the 3/32" nozzle. Premature compressor failure can be a secondary result of using a marginally sized air compressor.

- Recommend two-stage air compressor…10-12 cfm rating at 90-100 psi for 3/32" nozzle and 17 – 20 cfm at 90-100 psi for 1/8" blast nozzle.

Note: MBA recommends a two-stage air compressor but any air compressor capable of 9-10 cfm or 17-20 cfm at 90-100 psi will be adequate for proper machine operation using the 3/32 or 1/8" nozzle…this assumes normal operation. When using a two-stage air compressor set the maximum line inlet pressure at no more than 125 psi and no less than 90 psi. This may require installation of a master compressor air regulator, if unclear call factory for more information.

- Worn nozzles can easily use double the air volume.
- Boron carbide is 6 to 8 times the life with only 3 times the cost..

It is very important that the compressed air be clean and dry. Wet compressed air will cause the abrasive to bond together and stop flowing to the blast nozzle. Under sizing the air compressor will create a situation that will not allow adequate time for the compressed air to cool in the air receiver tank. This warm compressed air can then enter the blast cabinet cool and create moisture problems. The resulting condensation will cause the abrasive to stick together. If wet compressed air is suspected, install an air dryer prior to the air entering the blast cabinet (MBA Ambient Air Dryer, P/N 100-03-173).
Note: As the blast nozzle wears, the air requirements for the system will increase. If the air compressor is not capable of handling the higher air volumes, the blast pressure will begin to decrease and loss of line pressure result, this will lead to poor machine performance.

The minimum air hose size must be at least 3/8" ID. Using smaller ID hose may affect proper machine control operation. Connect main air in to the machine control panel #24. It is not advised you use a quick disconnect on 1/8" nozzle size

SELECTING THE RIGHT ABRASIVE: There are three basic types of abrasives that can be effectively used for etching and carving on glass; brown aluminum oxide, white aluminum oxide and black silicon carbide. Each type has beneficial qualities:

- Silicon Carbide is most used type

NOTES

- ***Brown Aluminum Oxide*** – Some manufacturers recommend and sell this abrasive. This abrasive is more forgiving than silicon carbide because it is not as aggressive. It normally has more dust than silicon carbide and it cuts glass slower than silicon carbide. For industrial applications, it is the most commonly used abrasive for surface preparation for coatings. However, the productivity of aluminum oxide is significantly slower than silicon carbide and as the abrasive is used, the abrasive particles become more rounded which continues to reduce the effectiveness of the etch. Aluminum oxide is a good abrasive to use when sandcarving for the first time.
  - Less expensive and often used when first learning about sandcarving
- ***White Aluminum Oxide*** - White aluminum oxide differs from brown aluminum oxide because it has no iron content. This means that the abrasive will not leave an abrasive stain on the part that is blasted. Since the abrasive is screened to tighter specifications, it may be less dusty than brown aluminum oxide. Both white and brown aluminum oxides are more forgiving on the mask material. MBA recommends that aluminum oxide be used by beginners and less experienced operators.
  - Harder than brown aluminum oxide and softer than black silicon carbide
- ***Silicon Carbide*** - This abrasive is not recommended for beginning sandcarver. Silicon carbide is very aggressive and sharper than aluminum oxide and recommended for skilled Sandcarvers. The aggressiveness can be beneficial; carving and etching can be accomplished much faster with silicon carbide. In addition, silicon carbide never loses its sharp edge.

Qualities and recommendations aside, the choice for blasting abrasive is personal. Some people will prefer the white aluminum oxide, while others will prefer the brown aluminum oxide or the silicon carbide. The typical size ranges used are 120 and 180 mesh. The finer sizes (150 mesh is larger than 180 mesh) provide a smoother finish on the blasted surfaces. Note: The use of silica sand, garnet, slag, Starblast™, Blackbeauty™ or other non-recyclable abrasives in this machine will void the Crystalblast equipment warranty. Sand contains free silica known to cause Siliceous. All CrystalBlast units include a separator reclaimer used to keep the abrasive clean during recycle.

- Never use sand in any sandblasting cabinet

LOADING THE MACHINE WITH ABRASIVE: Turn on the power to the machine using switch #2. The abrasive of choice should be loaded through the cabinet door with the dust collector blower running. The 4828 with standard 50 pound pot assembly requires an initial charge of 30-40 pounds of abrasive. Note: Never add abrasive to the system unless the dust collector is running, this will lesson and control fine dust contained in the abrasive.

- Optional 100 pound capacity pot available

There is no need to pre-screen the abrasive. All CrystalBlast machines include a perforated scalper screen designed to remove all particles large enough to clog the nozzle. Additional abrasive can be added from time to time to maintain maximum levels in the system. Shorter blast intervals between pot reload is a good indication that more abrasive needs to be added to the system. (EXAMPLE: The 3/32" blast nozzle consumes approximately 1.1 pounds per minute of abrasive for an approximate total blast duration of 25-30 minutes with a full abrasive charge in the blast pot and a new nozzle ID size. If the total blast time to empty the pot falls to 15 minutes, add 10 pounds of abrasive to the system to bring the system up to a full charge.) **Note:** Some abrasive will remain inside the cabinet due to ledge stacking. This is normal; the addition of more abrasive will compensate for this stacking but it is not required. The information above does not take into account a worn out nozzle size passing more than the standard amount of abrasive. The 1/8" nozzle will have shorter pot blasting time.

FILLING THE BLAST POT: Loading the system with abrasive will also fill the blast pot but you must open the pot valve using the loading handle #23. With the pot de-pressurized the Pot Plunger will still be closed. Push in on the handle, #23, allowing the abrasive to drop into the pot assembly. To pressurize the pot for the first time or after filling the pot, pull back on the Pot Plunger Assembly Handle #23 located on the front center of the blast cabinet hopper and open the 3-way valve #28.. This will seat the pot valve and pressurize the pot assembly.

- Make sure to open the pot after first filling the machine to allow the abrasive to load into the pot assembly.

Note: The air compressor receiver tank must have a pressure of 80-90 psi prior to pressurizing the blast pot. The nozzle will blast during pot pressurization for 1-2 seconds, this is normal and when the pressure in the Pneumatic Pinch Valve exceeds the blasting pressure, the Pneumatic Pinch Valve will stop the blast nozzle.

ADJUSTING THE BLAST PRESSURE: The blast pressure is adjusted using the pressure regulator #24 located on the front of the control panel #24.. Rotating the pressure regulator adjustment knob clockwise will increase the blast pressure. Rotating the pressure regulator adjustment knob counter-clockwise will reduce the blast pressure. Typical blast pressures for etching and carving on glass are 20 – 40 psi with 30 psi suggested. Note: This machine should not be operated at pressures greater than 50 psi.

ADJUSTING THE ABRASIVE FLOW: The abrasive flow is adjusted using the Abrasive Choke Valve #10 on the control operation and maintenance diagram. The Abrasive Choke Valve is located on the right side of the pot abrasive mixing valve #11. When the Abrasive Choke Valve is completely open, you will see very little abrasive exiting the nozzle but this is a function of the nozzle size being used. Adjust as follows but, never close the Abrasive Choke Valve completely:

- Use the choke valve #10 to fine tune abrasive flow to the nozzle

You can start with the Abrasive Choke Valve completely open or set the Abrasive Choke Valve at 45 degrees and test the blast pattern by pressing down on the Foot Pedal Valve assembly #8. If very little abrasive is exiting the nozzle after 2-3 seconds, close the Abrasive Choke Valve a small amount by moving the handle about 1/4"-3/8" towards closed position. Just before the nozzle is delivering the proper amount of abrasive, the abrasive flow will pulse slightly. Close the Abrasive Choke Valve a bit more and the pulsing will disappear, the setting is now correct. This setting will stay correct unless you change the blasting pressure or abrasive mesh size.

- If no abrasive exits the nozzle make sure the abrasive was loaded into the pot assembly

Always depressurize the pressure pot at the end of daily operation or when the air compressor will be turned off. Remember to have the machine blower running to prevent abrasive escape.

WEARING GLOVES: The CrystalBlast 4828 sandcarving cabinet is equipped with velocity operator port in the front door assembly. It is recommended the operator wear gloves during machine operation.

OPERATOR STATION: The 4828 machine has a unique operation station equipped with changeable brushes and high velocity slit rubber curtain. The standard brushes produces a 2 inch wrist gap in the center of the port….this can be raised or lowered by changing the size of the brushes. The replaceable slit rubber curtain is used to seal the brush area not being used. This unique design is used to keep the unit clean.

- You can move the location of the open wrist opening by changing the brush sizes

READY TO BLAST: The unit is now ready for blasting. Turn on the electrical on-off control switch #2. Using the front operator port, front operator door or side access door place a piece of scrap glass in the machine to test the blast. Using a pair of gloves, place both arms in the work port and pick up the scrap glass for the test. Hold the nozzle/nozzle holder like a pencil about 3-4 inches from the part surface. Depress the Foot Pedal #8 and begin blasting the scrap part, always remember to start the blasting off of the part surface. **Note:** Never point the nozzle at the window. The abrasive will permanently frost the protector window.

Note: The MBA CrystalBlast 4828 system may provide different results than other blast systems. When the unit is first operated, use scrap glass to become familiar with the nozzle pattern and speed. Place masking material on the scrap glass to see how long the mask material will stand up to the blast. The experienced operator may find that the CrystalBlast 4828 system will be operated at lower blast pressures than previously experienced with other systems.

- CrystalBlast machine can require less blasting pressure than other units

FINISHING BLAST: At the end of the day, when the blasting is finished or when the air compressor is turned off and the blast pot must be depressurized. Open the 3-way pot control valve #28, this will remove the air from the pressure pot assembly. **Make sure the dust collector blower is running**.

CLEANING THE DUST COLLECTOR: The dust collector blower must be off to clean the dust collector filters. Standard cleaning cycle uses the manually operated valve, #27, to run the pneumatic vibrators used to clean the fitlers. Optional timed cleaning cycle is activated each time the machine is turn off.
The normal cleaning cycle time is 3 minute every 2 hours of machine operation. When first using the machine it is recommended looking at the filters in the dust collector assembly. At no time should the filters be caked with dust. Filter pleats should be visible at all times on some area of each filter.
Running the pneumatic vibrators with the dust collector door open will allow the user to view quickly the cleaning process, be prepaired to quicly close the door!

OPERATION OF THE OPTIONAL POT LOADING VIBRATOR: Media Blast offers an optional hopper vibrator used to help load fine abrasive into the pressure pot on larger cabinet sizes. This is offered as a manually operated assembly only. The operator is required to hold the valve open to prevent abrasive pot packing. With the pot valve open using loading handle #23, press and hold the manually operated valve #16 to help load abrasive into the pressure pot assemlby.

NOTES

- Always remove the air from the pot when not using the machine.
- Keeping the dust collector clean and serviced is the responsibility of the user.
- Used to help load fine and worn out abrasive into the pot assembly with larger cabinets.

PRESSURE BLAST CFM CONSUMPTION

CFM CONSUMPTION AT SPECIFIC PRESSURES

Nozzle Size		20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI
1/16”	0.062	2.00	2.50	3.10	3.70	4.20	4.80	5.40	5.90	6.50
3/32”	0.094	4.40	5.70	7.00	8.20	9.50	10.80	12.10	13.30	14.60
1/8” (#2)	0.125	7.90	8.38	10.29	12.20	14.02	15.93	17.76	19.67	21.80
3/16” (#3)	0.187	15.00	18.92	23.24	27.39	31.54	35.85	40.08	44.15	49.00
1/4" (#4)	0.250	26.00	33.62	41.17	48.64	56.11	63.66	71.13	78.68	85.00
5/16” (#5)	0.312	42.00	54.61	67.06	79.10	91.13	103.63	115.66	127.74	140.00
3/8” (#6)	0.375	58.00	75.61	92.96	109.56	126.16	143.59	160.19	176.79	194.00
7/16” (#7)	0.437	83.00	105.03	128.65	152.31	175.55	199.20	222.44	245.68	268.00
1/2" (#8)	0.500	105.00	143.46	164.34	195.05	224.93	254.81	284.69	314.57	346.00

MAINTENANCE:

CLEANING THE ABRASIVE SCALPER SCREEN: Lift up the machine work grate and remove the grates from the cabinet. You can use the vacuum dust collector to clean the debris off the scalper screen by removing the vacuum hose from the cabinet. Replace the operator work grates when finished.

- Use a shop-vacuum for easy clean-up

CLEANING THE DUST COLLECTOR FILTER: The dust collector filters should be cleaned every two hours of machine operation. Clean filters means a clean machine and clean machine work area so this operation is critical to the operation of any blasting cabinet.

- When first operating the machine look inside the dust collector to know the dust load vs. time used. This will help with all future operation.

REMOVING THE DUST FROM THE DUST COLLECTOR: Periodically the dust must be removed from the dust collector lower chamber. MBA recommends you remove daily when first using the machine. Attach any waste bag to the bottom of the dust collector storage hopper.

INSPECTING AND REPLACING THE BLAST NOZZLE: It is important to replace the nozzle after it has worn 1/32”. Not only will the worn nozzle use more

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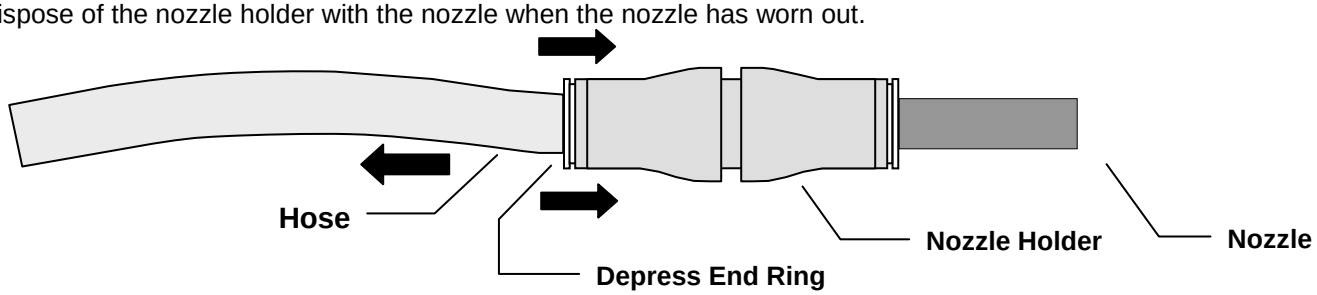
compressed air, but the abrasive will impact the part more aggressively. As the volume of air and abrasive increases, it will create additional wear on the blast hose too. The easiest way to know if your nozzle requires replacement is to keep a 3/32" or 1/8" drill bit nearby. If a drill bit 1/32" larger fits into the blast nozzle, then it is time to replace the nozzle. Replacement is not manditory but, a worn nozzle uses more compressed air and if the air compressor is margional, the machine controls will not operate properly unless 90 psi line pressure is maintained.

- A worn out nozzle can easily use double the compressed air.

Always depressurize the pressure pot during any machine maintenance; To replace the blast nozzle, hold the nozzle and nozzle holder #21 in your right or left hand. With the other hand use the thumb and forefinger, press the end ring of the nozzle holder toward the nozzle (see diagram below). As you are pressing, pull the abrasive blast hose the other direction using a twisting motion. The hose should release from the nozzle holder. You can tap the holder first to losen the abrasive but never hit the nozzle. Note: **Do not try to remove the nozzle from the nozzle holder.** The nozzle holder is designed to be an integral part of the nozzle. Removal and reinstallation of the nozzle in the nozzle holder may cause the nozzle to become a projectile. Injury may occur as a result. Dispose of the nozzle holder with the nozzle when the nozzle has worn out.



REPLACING THE BLAST HOSE: Always depressurize the pressure pot during any machine maintenance and turn of the machine compressed air supply; To replace the blast hose, hold the nozzle and nozzle holder in your hand and the blast hose in your other hand. With your right thumb and forefinger, press the end ring of the nozzle holder toward the nozzle (see diagram). As you are pressing, pull the abrasive blast hose the opposite direction. Remove the other end of the hose from the connector using the same process. Note: All hoses and tubing are removed using this same procedure.
Replace with new abrasive hose in reverse of above procedure.

- The larger outside abrasive hose will outlast the inside whip hose by about 4 to 1 ratio. This is special abrasive hose and the inside 3/8" whip is very easy to use.

REPLACING THE LIGHT BULBS: Replace the light bulbs by opening the cabinet door and unscrewing the spotlight making sure the bulb has cooled. Make sure to replace the cabinet heat resistant sealing washer. New washers are available as a spare part. These washers are a special material for usage on halogen spot lighting. Never use standard washers that may pose a possible fire hazard. Never touch a hot bulb and always wear safety gloves for hand protection and glasses for eye protection.

- Always use gloves to replace any light bulb and never touch a hot bulb.

REPLACING THE WINDOW PROTECTOR OR VIEW WINDOW: Remove the holding screws holding the steel window frame on top of the window. Next, **carefully** remove the safety window ….the protector is under the safety window and normally is removed at the same time the view window is removed. Clean both the new protector window and the safety view window. Place the protector window and the safety view window on top of the seal. Making sure to hold the window from sliding down re-install the window frame.

- Safety glass view window with single protector glass.

PN 109-20-302 **PN 109-20-301**

REPLACING THE BLAST SHUT-OFF VALVE SLEEVE:

1. Turn Off Machine Air & depressurize pot assembly.
2. It is advisable to drain existing abrasive from the blast pot prior to Pneumatic Pinch Valve removal and or service. Remove all abrasive using the pressure pot access port described in the machine maintenance manual, "Changing Abrasive".
3. Locate the Pneumatic Pinch Valve attached to the bottom of the pressure pot assembly. Removing the Pneumatic Pinch Valve from the machine is recommended for maintenance.
4. With a ½" wrench or socket, remove the 8 bolts holding the two end caps to the valve body. Remove both end caps.

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5. **Removing the Core, Part #109-20-302**
With end caps removed, remove damaged core and set aside.

Replacing Bladder Part #109-20-301
With core removed, use any flat screwdriver to carefully pry the damaged bladder from the valve body. Take care to not damage the valve body. Replace with the new bladder making sure the bladder is seated. Inspect core and replace with new core if old core appears worn. Install core in the center of the new bladder.
6. Replace End caps with the ½" bolts and lock washers making sure the contours of the end cap line up with the contours of the body.
7. Re-install the Pneumatic Pinch Valve on the machine and make sure no abrasive grains exist on the valve or pot nipple assembly.
8. Replace pressure pot access port, make sure the pot seal is located properly. You may now charge the machine with abrasive.
9. Turn the machine air back on.

DRAINING THE BLAST POT AND REPLACING WITH NEW ABRASIVE:

- Removing and replacing worn out abrasive will increase production and extend the life of the dust collector filters.

In general, as the abrasive breaks down, the dust will be carried to the dust collector. Small particles of abrasive will remain in the recyclable abrasive mix until it is too fine to be retained by the abrasive reclaim separator. This may or may not cause a noticeable difference in the blast productivity or etch finish. Oftentimes, it will not be noticeable because additional abrasive is added from time to time to make up for the abrasive that has been broken down. If a noticeable difference in the blast productivity or etch finish occurs, the abrasive may need to be replaced in the system. MBA recommends the following procedure for changing the abrasive:

1. Make sure that the lights and exhaust blower are running on the machine.
2. Depressurize the blast pot by closing the Main Air Inlet Valve and draining the pressure pot using the 3-way valve #28.
3. Push on the Pot Plunger Assembly Handle to make sure there is no pot pressure, if the plunger opens, the pot is empty.
4. Place a pan underneath the blast pot.
5. Remove the drain plug located on the Air/Abrasive Mixing Cross fitting #12 beneath the blast pot. The abrasive will begin draining into the pan.
6. Remove the composition bar work grate from the cabinet.
7. Using a wide putty knife, move all the abrasive from the hopper corners and the ledges to the perforated scalper screen, the abrasive will drain into the blast pot. Note: To ensure that no residual abrasive is left in the blast pot, the blast pot can be tapped with a rubber mallet to dislodge any trapped abrasive. To ensure nearly complete evacuation of abrasive, remove the pot cleanout port on the front of the blast pot and use a shop vacuum to clean any residual abrasive out of the blast pot.
8. Removal of the pot access port may be necessary if the nesting has occurred at the bottom of the pot assembly. Nesting is an accumulation of debris that can slow down the flow of abrasive to the nozzle.
9. Replace and tighten the plug in the Air/Abrasive Mixing Cross fitting.
10. Replace the cleanout port cover, if removed, make sure the gasket is seated correctly.
11. Install the port cover crab bracket and tighten.
12. Replace the expanded bar composition workgrates.
13. Add 30 to 35 pounds of new abrasive to the system. Note: If it is critical to remove all the abrasive, remove the access cover on the rear of the blast pot. To do this, remove the nut that holds the crab bracket in place. Once the nut and crab have been removed, the blast pot access cover can be manipulated out of the blast pot by turning 180 degrees. Use a shop vacuum to clean the rest of the abrasive out of the blast pot. When replacing the blast pot access cover, make sure that the rubber gasket and access cover are uniformly aligned across the access hole.

REPLACING THE POT SEAL OR THE POT PLUNGER:

This maintenance procedure will unlikely need to be performed for many years however, eventually the blast pot seal will wear out requiring replacement.

1. Turn the machine on.
2 Turn off the Main Air Inlet Valve and depressurize the blast pot using the 3-way valve #28
3 Place a pan under the blast pot to catch any abrasive that comes out of the blast pot.
4 Remove the work grates from the cabinet.
5 Locate the clevis attached to the vertical rod that is attached to the Pot Plunger. Remove the cotter pin from the clevis pin.
6 Pull the clevis pin to disconnect the assembly from the Pot Plunger rod/clevis.
7 Unthread the clevis from the rod; the Pot Plunger should drop down inside the blast pot.
8 Remove the pot port access cover by removing the nut that holds the crab bracket in place. Once the nut and crab have been removed, the blast pot access cover can be manipulated out of the blast pot by turning the cover back into the pot.
9 Unthread the pipe riser inside the pot that guides the Pot Plunger up and down, do not over tighten this nipple when replacing.
10 Remove the pipe riser and Pot Plunger at the same time.
11 Locate the donut shaped pot seal on the abrasive inlet to the blast pot.
12 Wedge a small screwdriver between the metal lip of the blast pot and the blast pot seal. Pry the blast pot seal out of the blast pot, note location of the seal bevel.
13 Install the new blast pot seal, make sure the bevel is located at the bottom.
14 Replace the Pot Plunger and pipe riser together as a single assembly. The parts must be assembled together before putting inside the blast pot and the pipe riser threaded into place. Install the Pot Plunger with care; make sure the clevis rod passes through the hole in the scalper screen. Use caution and make sure to install the polyethylene seal washer on the clevis rod.
15 Reinstall the access cover on the rear of the blast pot. When replacing the blast pot access cover, make sure that the rubber gasket and access cover are uniformly aligned across the access hole. Tighten the nut that holds the access cover in place.
16 Thread the clevis back onto the Pot Plunger rod and tighten.
17 Attach the assembly to the clevis with the clevis pin.
18 Reattach the cotter pin to the clevis pin.
19 Check the operation of the Pot Plunger Assembly by pushing and pulling the handle several times.
20 Re-pressurize and depressurize the blast pot several times. Be sure to pull slightly on the handle each time the pot is pressurized and push the handle to drop the Pot Plunger each time the pot is depressurized.
Reinstall the expanded metal workgrate.

ELECTROSTATIC SHOCK: Electrostatic shock is a common occurrence with abrasive blasting equipment. It is a condition that typically occurs in low humidity situations. Static electricity builds when two different materials are brushed or rubbed against each other. Many abrasives, under these conditions, will “adhere” to the sides of the cabinet. This is due to the buildup of static in the cabinet. Normally the balance of charges is possible when moisture is in the surrounding air allowing a constant equalizing of the different charges…dry atmospheric conditions may make this balancing impossible.

The most common item in abrasive blasting that will store static electricity is the blast cabinet. The cabinet acts as a condenser waiting to discharge to ground. Static electricity looks for a moist ground. Typically your body (consisting of nearly 90% water) becomes the best path for ground, therefore the harmless but annoying static shock.

Static electricity can also be caused by the installation of rubber mats used on the work surface or operator work area. The rubber does not allow the static electricity to discharge to the cabinet or ground but builds up in the part being processed causing irritating static discharge.

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- This unit includes a flexible pot valve used to seal the pot during low pressure blasting

PN 100-22 251

To alleviate the static shock, MBA recommends using an approved Static Electricity Grounding Kit (part number 100-22-251). The grounding kit consists of a grounding strap for the machine and a grounding strap for the operator. When the grounding strap for the operator is attached to the operator's wrist, the cabinet will be unable to act as a condenser; the static will be unable to build up and jump to the operator's body. The HailStorm Plastic Media Blasting Option includes the Static Electricity Grounding Kit. Refer to the Troubleshooting Index for other options. If using a rubber mat to protect the part being processed it may be necessary to supply a grounding clip from the part to the cabinet. Grounding the abrasive nozzle is also advisable to prevent static from building up in the blast nozzle.

CARTRIDGE FILTER REPLACEMENT: MBA recommends replacing the cartridge filter every 500-1,000 blast hours (filter may have to be replaced more frequently in regions experiencing high humidity).

WARNING NOTE:
Service of any dust collector requires maintenance personnel protection. This prevents exposure to high levels of dust concentrations. Use an approved breathing protection mask during filter replacement. Because the dust collector access door must remain open it is mandatory the compressed air controls are locked out. This prevents any operation of the machine controls.

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- Filter cartridge part number PN 100-08-010

Standard Dust Collector with Vertically Mounted Filters: With the access door of the dust collector open, the cartridge filter and filter mounting assembly can be observed. The filter mounting assembly consists of two threaded rods located outside the filter, a ball vibrator and filter bracket, and two filter retainer knobs. Replacement of the single rod hold bracket is the same as the two rod but does not use spacers to drop the filter.
The following steps outline the cartridge filter replacement:

1. Clean the dust collector cartridge filter (please refer to Cleaning the Dust Collector Cartridge Filter procedure).
2. Remove the dust from the dust collector (please refer to Removing the Dust from the Dust Collector Hopper procedure).
3. If the machine is on, turn it off and make sure the compressed air lockout is in place.
4. Insert one end of a lever bar (or short 2 x 4 lumber) under the filter vibrator and push down on the other end. This will reduce the tension on the filter retainer knobs.
5. Loosen the knobs and remove the spacers while applying steady pressure on the lever bar.
6. Allow the existing cartridge filter to drop, using the lever bar to control the descent.
7. Remove the cartridge from the dust collector housing by tilting the top of the cartridge through the access door followed by the cartridge bottom.
8. Replace the cartridge. Ensure that the center guide pin and sealing washer are located in the 1/2" assembly hole located on the bottom of the cartridge.
9. Hold the cartridge against the top seal. The new cartridge can easily be held in place while the ball vibrator and filter bracket is installed and filter retainer knobs tightened. *NOTE: The filter retainer knobs must be tight or dust and abrasive will escape through the blower exhaust. Thread the knobs snug plus one additional turn. (The knobs can be kept from loosening by threading a nylon tie strap around the knob and the filter bracket).*
10. 24-48 hours after installing the new cartridge, check cartridge to determine if it is still snug. Tighten the filter retainer knobs if the cartridge is loose.

TROUBLESHOOTING:

WILL NOT BLAST: COMPRESSED AIR (BUT NO ABRASIVE)	**BLAST NOZZLE IS PLUGGED:** *Remove the nozzle/nozzle holder from the blast hose. Use a small, stiff wire to dislodge the obstruction.* **BLAST POT IS EMPTY:** *Depressurize the blast pot using the Main Air Inlet Valve and Pot Plunger Assembly Handle, see procedure* **NO ABRASIVE IN THE CABINET:** *Add 30-35 pounds of abrasive to the system. Be sure that the dust collector is on when the cabinet is loaded with abrasive.* **ABRASIVE CHOKE VALVE IS NOT ADJUSTED CORRECTLY:** *Rotate Abrasive Choke Valve arm to approximately 45° and test for abrasive flow. Refer to the "Adjusting the Abrasive Flow" section of the manual for adjustment procedures if the flow is not quite correct.* **ABRASIVE IS DAMP***: Wet abrasive sticks together. Clean the abrasive out of the machine and replace with fresh abrasive. Determine cause of moisture and repair problem to prevent reoccurrence. Check the filter trap on the air regulator; drain if there is water in it. Install MBA Inline Ambient Air Dryer (P/N 100-03-173) to prevent reoccurrence.* **PRESSURE POT IS NOT PRESSURIZED:** Pull back on the pot loading valve handle and pressurize the pot using the 3-way valve.
WILL NOT BLAST: NO COMPRESSED AIR OR ABRASIVE	**CHECK REGULATOR:** *Is it turned off?* **COMPRESSED AIR IS TURNED OFF OR DISCONNECTED FROM BLAST CABINET:** *Make certain that the compressed air is connected to the blast cabinet and turned on.* **BLAST POT IS DEPRESSURIZED:** *Pressurize blast pot by rotating the Main Air Inlet Valve handle (Located on the right side of the air regulator) to the horizontal position.* **BLAST NOZZLE IS PLUGGED:** *Remove nozzle and use a small, stiff wire to dislodge the obstruction.* **ABRASIVE CHOKE VALVE COMPLETELY CLOSED:** *If the Abrasive Choke Valve is completely closed (Abrasive Choke Valve arm in the vertical position), then the abrasive hose is probably plugged with abrasive. Refer to abrasive hose unplugging procedure in the "Adjusting the Abrasive Flow" section of the manual.*

"V" BLAST PATTERN FROM NOZZLE	**SMALL PIECE OF DEBRIS LODGED IN NOZZLE:** *Remove the nozzle/nozzle holder from the blast hose. Use a small, stiff wire to dislodge the obstruction.*
BLAST WILL NOT STOP	**PNEUMATIC PINCH VALVE SLEEVE HAS A HOLE:** *Immediately decompress the blast pot. Turn off main supply of air to the blast cabinet. Refer to the "Replacement of the Pneumatic Pinch Valve Sleeve" section in the manual for repair procedure.* **BLAST NOZZLE IS WORN OUT:** *Air compressor cannot keep up with the air volume necessary to operate the larger blast orifice, so the compressor line pressure drops below 90 psi. Immediately decompress the blast pot. Replace nozzle.* **DEBRIS IN THE PNEUMATIC PINCH VALVE:** *Immediately decompress the blast pot. Remove the Pneumatic Pinch Valve from the machine. Remove both hex nut covers. Clean out the valve. Inspect the sleeve for holes. Reassemble and reinstall.* **BLAST POT WAS NOT DEPRESSURIZED AND COMPRESSOR WAS TURNED OFF:** *Depressurize blast pot.* **AIR COMPRESSOR DOES NOT CYCLE ON UNTIL PRESSURE DROPS BELOW 80 PSI:** *Replace air compressor or change control on compressor.* **AIR COMPRESSOR IS TOO SMALL:** *Air compressor does not generate enough volume of air to maintain a line pressure of 80 psi or more.*
ERRATIC ABRASIVE DELIVERY FROM NOZZLE	**NOZZLE IS WORN OUT:** *Replace nozzle.* **ABRASIVE FLOW VALVE IS NOT ADJUSTED CORRECTLY:** *Erratic abrasive delivery is usually caused by too rich abrasive flow. Rotate Abrasive Choke Valve arm in small increments towards a horizontal position. Refer to the "Adjusting the Abrasive Flow" section of the manual for adjustment procedures if the flow is not quite correct.* **ABRASIVE IS DAMP***: Wet abrasive sticks together. Clean the abrasive out of the machine and replace with fresh abrasive. Determine cause of moisture and repair problem to prevent reoccurrence. Install MBA Inline Ambient Air Dryer (P/N 100-03-173) to prevent reoccurrence.* **ABRASIVE IS WORN OUT:** *Replace the abrasive. Refer to the "Draining the Blast Pot and Replacing with New Abrasive" section of the manual for procedures in replacing the abrasive.*
LARGE SURGE OF ABRASIVE AT THE BEGINNING OF THE	**ABRASIVE FLOW ASSEMBLY IS WORN OUT:** *Replace the Air/Abrasive Mixing Cross located beneath the blast pot.*

WARRANTY

Media Blast & Abrasives, Inc., hereinafter known as “Seller”, warrants the equipment and products sold hereunder against defects in material and workmanship for a period of one year from the date of shipment to buyer.

Equipment, products or parts manufactured by others but furnished by seller will be repaired or replaced only to the extent of the original manufacturer’s warranty (except motors).

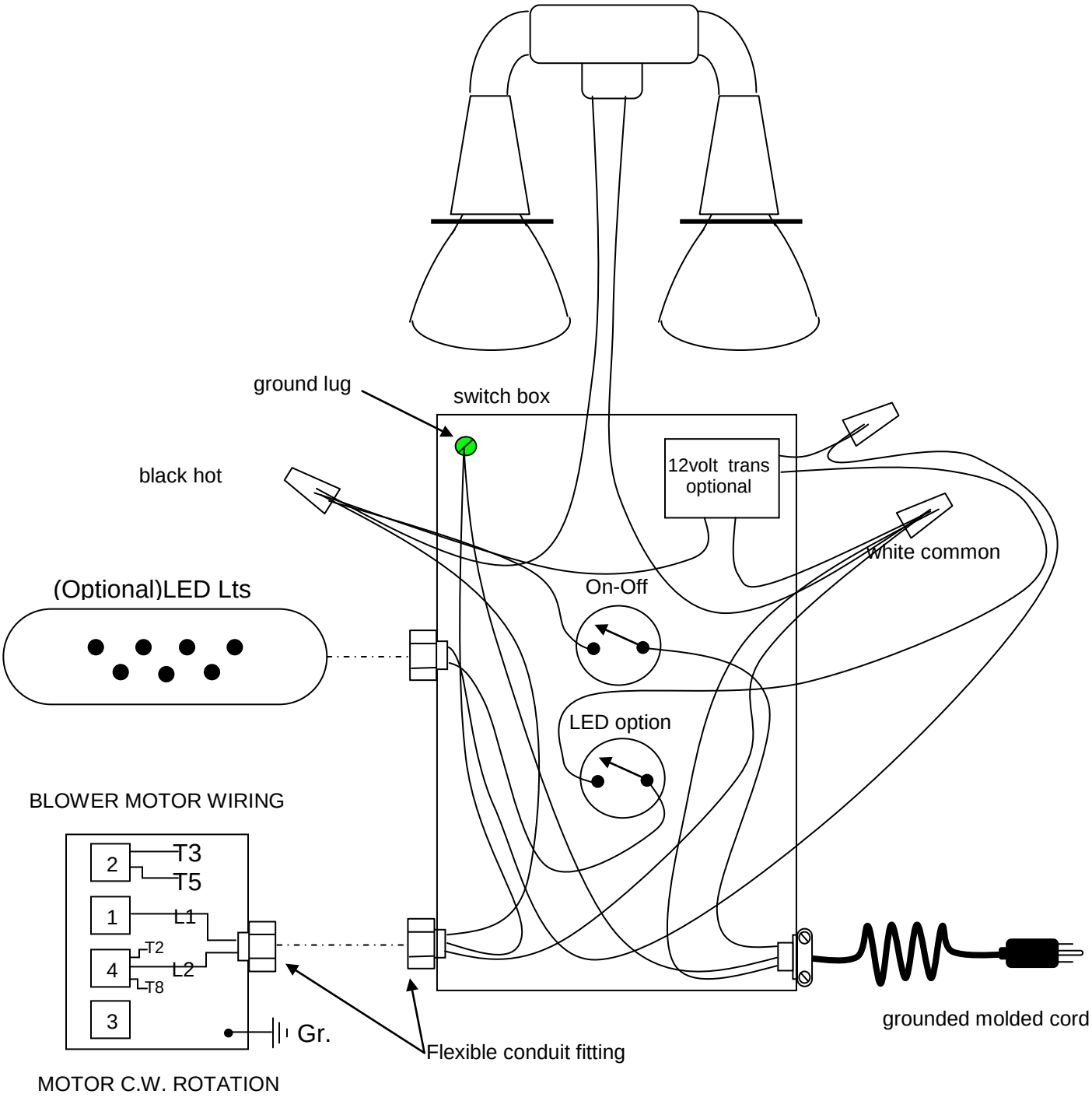
The following conditions apply to limitations:

1. High wear parts are not covered, these parts include windows, window protectors, nozzles, gun parts, abrasive hose and other parts exposed to excessive abrasive contact and wear.
2. Warranty does not apply to misuse of the machine to include improper abrasive type use and or abrasive mesh size used in the equipment. No Media Blast equipment is used with sand, sand will void the machine warranty and is known to be a health hazard.
3. The machine warranty is not transferable and only applies to the original buyer.
4. Replacement warranty parts will be sent at no charge to the buyer for warranty replacement. The cost of labor is not covered under the machine warranty unless preformed at the sellers facility.
5. A Returned Goods Authorization (RGA) form must be obtained before the product is returned to seller for warranty repair. Without an RGA number the product will not be accepted.
6. Seller’s entire liability, whether under warranty, contract, negligence, or otherwise, shall be limited to repair or replacement, F.O.B. Seller’s place of business, of the original equipment found to be defective within the warranty period.

MBA **Media Blast & Abrasive Inc.**

CRYSTALBLAST 4828

2 each 90 watt quartz spot lights std. 4 optional



120VAC

CRYSTALBLAST 4828 PARTS

This is a basic list of the most often used and ordered parts for the CrystalBlast 4828. Other parts can be purchase using the machine model number and serial number located on the main machine tag.
The parts are grouped according to the following categories:

- Cabinet Hardware Parts
- Dust Collector Parts
- Pressure Pot Parts

Quantity	Part Description	Part Number
Cabinet Hardware		
1 each	On-Off selector switch	100-09-610
2 each	Spot lights standard	100-09-052
2 each	Spot light sealing washer	100-11-120
1 each	Air inlet filter	100-06-606
1 each	**View window**	100-06-200
1 each	**Protector window**	100-06-201
1 each	Window bladder seal per foot	101-11-147
1 each	3/32” tungsten nozzle std.	109-19-092
1 each	3/32” boron nozzle optional	109-19-093
1 each	1/8” tungsten nozzle optional	109-19-125
1 each	**1/8” boron nozzle optional**	109-19-595
1 each	Abrasive separator H/E	100-01-016
1 each	Blow off gun	100-18-111
1 each	Window frame	100-06-202
1 each	**1/2" OD abrasive hose per foot**	109-15-500
1 each	**3/8” OD abrasive whip hose per foot**	109-15-375
2 each	Door handle	100-06-092
1 each	Door seal, 25’ Roll	100-11-030
2 each	Top and bottom 3” brush	100-11-607
1 each	Slit rubber curtain	100-11-608
1 each	Bolt on armrest	100-07-104
1 each	Drop in padded armrest	100-07-105
1 each	3-way valve 1/2"	109-26-002
1 set	Composition bar work grates	100-25-604
1 each	Pneumatic foot valve	100-26-086
1 each	Air regulator	100-03-080
1 each	Panel mount air gauge	100-13-075
2 each	Safety door interlock switch	100-22-085
Dust Collector		
1 each	1/2 HP blower motor std.	100-05-101
1 each	10” blower impeller std.	100-05-312
1 each	Silencer	109-06-100
2 each	**220 filter cartridge**	100-08-010
2 each	Filter cartridge vibrator	100-08-131
2 each	**Vibrator muffler**	100-08-132
1 each	Hopper cap	100-08-142
Pressure Pot		
1 each	Pot fill handle	109-21-010
1 each	Pot fill assembly complete	109-21-012
1 each	Pot fill return spring	109-21-011
1 each	Pot seal	104-21-176
1 each	Pot access cover seal	104-21-171
1 each	Long wear pinch valve	109-20-300
1 each	**Pinch valve bladder**	109-20-301
1 each	**Pinch valve core**	109-20-302
1 each	Pinch valve micro filter complete	109-20-105
1 each	**Pinch valve micro filter element**	109-20-106
1 each	Abrasive choke valve	100-26-098
1 each	Abrasive mixing cross	109-21-300
4 each	Machine casters, locking	100-18-641
1 each	Pot loading vibrator pulse valve	100-26-008
1 each	Pot loading vibrator	100-08-131

Bold item are advised as customer stocking items

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