



# USER'S MANUAL

## 0.5 / 1.0 - CPR SERIES BLASTERS



### **⚠ WARNING**

These products and equipment are not under any circumstances to be used with sand or silica products of any type and use of such materials will void any warranty. Also, as with the use of any product or equipment you must be sure to use the proper safety equipment and to properly train your employees in the use of any equipment or products. The manufacturer, wholesaler and distributor assume no responsibility arising from the failure to use proper safety equipment or the failure to properly train employees in the use of products and equipment.



### **⚠ WARNING**

#### **Read Manual**

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

Manual P/N: PB-MAC002



## ⚠ USING THIS MANUAL ⚠

Thank you for your purchase of a Pirate Brand® CPR Series Blaster. It is important to note that all Pirate Brand® blasting equipment is designed to be safe when used properly, however, misuse of any abrasive blasting equipment is dangerous and can result in the severe injury or death of the operator and others in the vicinity of the blasting equipment. In order to protect yourself and those around you, read and follow all sections of this manual & warning labels located on the blasting equipment.

### Definition Of Terms Used In This Manual

Abrasive: A granular material used for blasting the surface of an object. Also referred to as "Media."

Blow-down: The automatic or manual release of air from a pressurized vessel. Also referred to as "Depressurize."

Control Handle: A required device that allows the blaster to be remotely started and stopped.

Depressurize: The automatic or manual release of air from a pressurized vessel. Also known as "Blow-down".

Pressure Hold System: Any blasting system in which the Pressure Vessel remains pressurized when the control handle is released. Also known as a Manual Blow-down System.

Pressure Release System: Any blasting system in which the Pressure Vessel is automatically depressurized when the control handle is released. Also known as an Automatic Blow-down System.

Pressure Vessel: The enclosed area of the blaster in which abrasive is contained and filled with pressurized air when blasting.

Pressurize: To fill the pressure vessel with compressed air.

Properly Trained: A person who can be considered "properly trained" must have successfully completed a sandblasting training course that focuses on the safe operation of stationary or portable abrasive blasters in the 0.5 - 6.0 cu. ft. capacity range. They must also have read and understood this manual in its entirety.

Silica: A hazardous substance which is contained in many naturally occurring abrasives. Dust produced by blasting with abrasives containing silica can cause respiratory disease. Do not use abrasive containing silica under any circumstance, even when respiratory protective equipment is being used.

### Safety Symbols

The safety symbols shown below exist for the safety and protection of the operator and those in the vicinity of the Abrasive Blaster. The descriptions below explain how they are used in relation to the blasting equipment.



OR



OR



**WARNING:** This symbol calls attention to a potentially hazardous situation that could result in serious injury or death if the instructions associated with the symbol are not followed. The warning triangle will be displayed throughout the manual to denote instructions to which special attention should be paid.

**DANGER:** This symbol calls attention to a potentially hazardous situation that **WILL** result in serious injury or death if the instructions associated with the symbol are not followed. The warning triangle will be displayed throughout the manual to denote instructions to which special attention should be paid.



# WARNING

- All persons who will be operating or will be in the vicinity of the Abrasive Blaster during its operation must receive proper training on how to safely operate the equipment and be informed of the potential hazards involved. In addition to proper training, all persons who will be operating or will be in the vicinity of the Abrasive Blaster during its operation must read, understand and follow all procedures described in the user's manual. For replacement manuals, please contact your distributor or visit [www.pirate-brand.com](http://www.pirate-brand.com).
- Respiratory protection is mandatory for all persons operating or located in the vicinity of the Abrasive Blaster. Follow all OSHA and NIOSH requirements for breathing equipment and supplied air standards.
- Pressurized Vessels contain large amounts of stored energy and can cause severe injury or death if safety procedures are not followed. **Never** perform maintenance or attempt to open a Pressure Vessel for any reason while it is Pressurized. **Always** Depressurize and properly disconnect equipment from its air source before performing any maintenance. **Do not** modify, grind or weld on the pressure vessel for any reason. Doing so will void the ASME certification. **Do not** use damaged pressure vessels.
- The use of proper remote control systems (commonly referred to as Deadman controls) are required when using abrasive blasters. **Never** operate the Abrasive Blaster without remote controls.
- All persons who will be operating or will be in the vicinity of the Abrasive Blaster during its operation must protect themselves with the proper safety equipment and use of common sense. Safety equipment including but not limited to Hearing, Eye, Body and Lung protection are required. Abrasive blasters and the objects being blasted can be heavy and can lead to severe injury or death if they fall over. Always follow all safety requirements of OSHA and NIOSH.
- Use only Genuine Pirate Brand® replacement parts when performing maintenance on the Abrasive Blaster. **Do not** modify the equipment for any reason. Use of modified or non-Pirate Brand® parts can cause an unsafe situation and will void your warranty.
- **Never** use malfunctioning or damaged equipment. Before each use, inspect the Abrasive Blaster for proper function.
- Supply only cool, dry, compressed air that is free of debris to the Abrasive Blaster. Moisture or debris that reaches the remote control system can cause an unsafe situation. **Do not** supply compressed air to the blaster that exceeds 150 psi.
- **Do not** use abrasive blasters in areas that could be considered a hazardous location as described in the National Electric Code NFPA 70, Article 500. **Never** use the Abrasive Blaster in wet environments. **Always** connect electrically controlled abrasive blasters to a Ground Fault Circuit Interrupter (GFCI).



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Distributed By:



Contact Info:

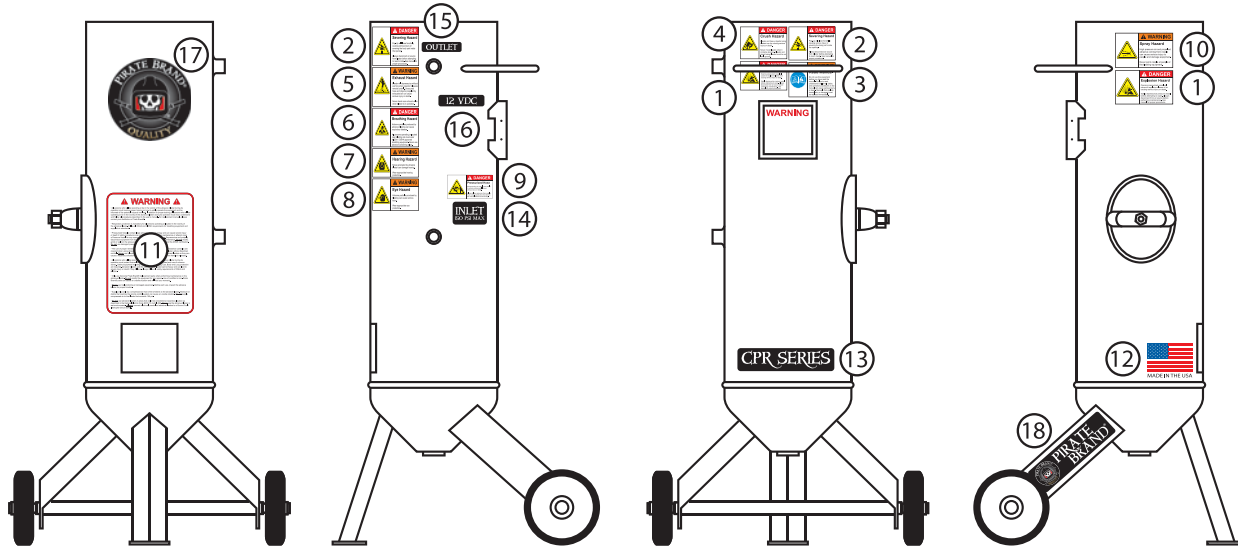
For manual updates visit the  
Pirate Brand® website at:

[WWW.PIRATE-BRAND.COM](http://WWW.PIRATE-BRAND.COM)



## ⚠️ WARNING LABEL LOCATIONS ⚠️

**⚠️ Labels must be replaced when they are no longer readable!**



### Replacement Label Pack P/N: PB-LPC002

- 1 - Explosion Hazard (X2)
- 2 - Severing Hazard (X2)
- 3 - Read Manual
- 4 - Crush Hazard
- 5 - Exhaust Hazard
- 6 - Breathing Hazard
- 7 - Hearing Hazard
- 8 - Eye Hazard
- 9 - Pressurized Hose
- 10 - Spray Hazard
- 11 - **WARNING** Label
- 12 - Made In USA
- 13 - CPR Series Label
- 14 - Inlet Label
- 15 - Outlet Label
- 16 - 12VDC Label
- 17 - Pirate Brand® Label (1.0 cu. ft. models only)
- 18 - Pirate Brand® Leg Label




### Instructions For Installing Replacement Label Pack

1. Completely remove old label and clean area thoroughly before applying new label.
2. Apply replacement labels in locations as described above or as close as possible if area is obstructed
3. 12 VDC Label (#16) is only to be used on electric remote controlled systems. **DO NOT** apply label to systems with pneumatic remote controls.



## ⚠ HOW CPR SYSTEMS WORK ⚠ (PRESSURE RELEASE)

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

### ADDING ABRASIVE

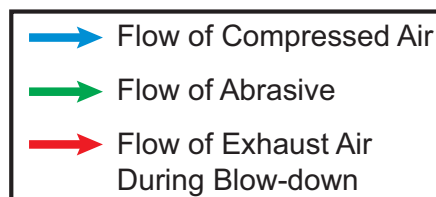
Abrasive is added through the hole in the top of the Abrasive Blaster where the Pop-up and its seat are located. When abrasive is added, it flows down through the hole, around the Pop-up, and down to the bottom of the pressure vessel where it will exit through the Metering Valve when blasting is started.

### PRESSURIZATION

When a compressed air source (such as an air-compressor) is connected to the inlet of the Abrasive Blaster and the Inlet Shut-Off Valve is opened, compressed air flows to the Inlet Valve where it is stopped. When the control handle is activated, the Inlet Valve opens and air flows into the Pressure Vessel causing the Pop-up (located internally) to seal against its seat. Simultaneously, the Diaphragm Valve closes sealing the Pressure Vessel allowing it to hold pressure. Air will also continue past the Choke Valve, through the Pusher Line, and finally to the "tee" under the Metering Valve where it is mixed with abrasive. The mixture of compressed air and abrasive will now exit the Abrasive Blaster through a blast hose and nozzle connected to the coupling under the Metering Valve and blasting begins. It is important to note that, some abrasive will collect at the base of the Metering Valve causing the blast hose to pulsate and spray abrasive erratically for a short time while pressure builds up in the pressure vessel. This is normal and will not damage the Abrasive Blaster.

### DEPRESSURIZATION (BLOW-DOWN)

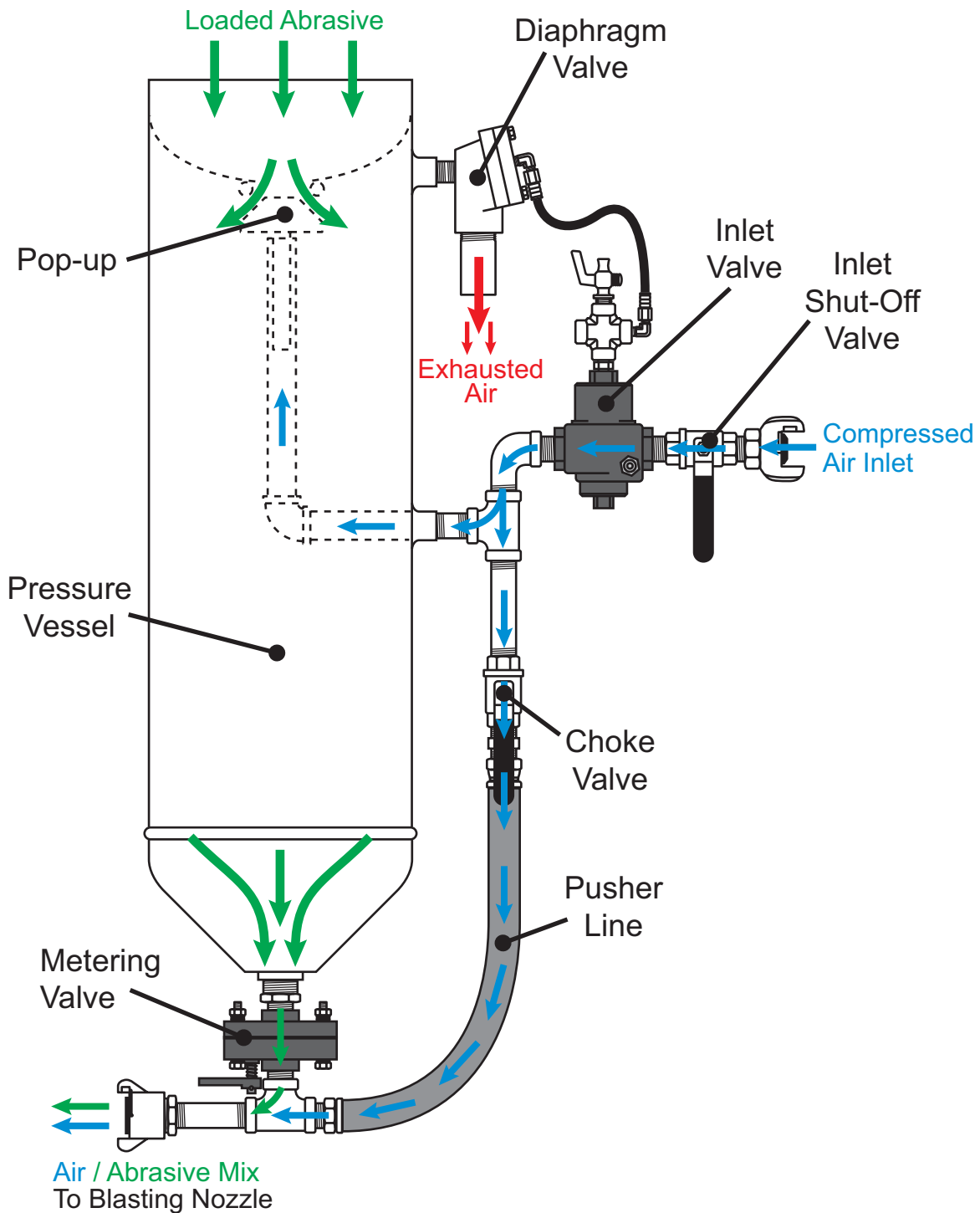
When the control handle is released in a pressure release (CPR) system, the Inlet Valve automatically closes stopping the flow of compressed air into the Pressure Vessel. Simultaneously, the Diaphragm Valve opens allowing the compressed air in the pressure vessel to exit the Abrasive Blaster through the Diaphragm Valve. When all the pressure in the Pressure Vessel is released, blasting stops.





# HOW CPR SYSTEMS WORK

(PRESSURE RELEASE)



*Some items moved or rotated for clarity.*



## OPERATING PROCEDURES



**WARNING:** The Procedures provided in the Operating Procedures section of the manual are designed to provide basic information on how to safely operate the features of Pirate Brand® CPR Series Abrasive Blasters. Only personnel thoroughly trained in abrasive blasting should operate the Abrasive Blaster.

## SETTING-UP THE BLASTER

### INSPECT PRESSURE VESSEL

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



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

### RE-TIGHTEN HANDWAY ASSEMBLY

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



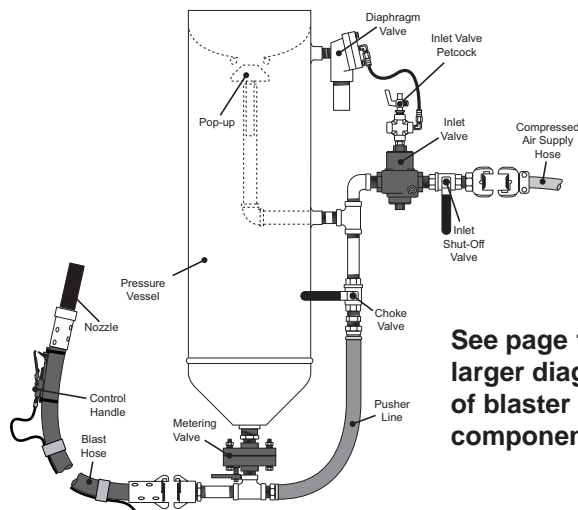
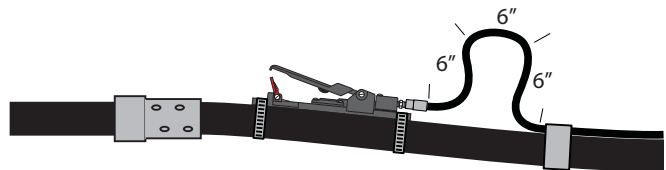
**DANGER:** Never perform any maintenance or attempt to open the Abrasive Blaster in any way while it is pressurized. The violent release of compressed air and propelled objects will cause serious injury or death.

### PURGE AIR SUPPLY HOSE

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

### ATTACH REMOTE CONTROL HANDLE

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



See page 11 for larger diagram of blaster components





# OPERATING PROCEDURES

## BEFORE YOU BLAST

### PRE-BLAST CHECK

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



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

### ADDING ABRASIVE

Before filling the Abrasive Blaster, make sure the Inlet Shut-Off Valve is closed, the Inlet Valve Petcock is open, and the pressure vessel is in a depressurized state. Abrasive is added by pouring it into the top of the Abrasive Blaster where it can flow around the Pop-up and into the pressure vessel. Do not overfill the Abrasive Blaster. Do not allow foreign materials to enter the Abrasive Blaster. It is recommended that a screen be used to prevent foreign objects from entering the Abrasive Blaster.



**DANGER:** Never reach into the Pop-up opening while filling the Abrasive Blaster. It can close without warning causing severe injury or death.



**WARNING:** Pirate Brand® Abrasive Blasters may not be used with abrasives containing silica. Never use abrasives containing silica.



**WARNING:** Never fill the abrasive blaster with the Inlet Shut-Off Valve in the open position. Always close the Inlet Shut-Off Valve before filling.



**WARNING:** Electrically conductive abrasives may not be used with abrasive blasters using Electric Remote Control Systems without changing to sealed strain relief connectors.



**WARNING:** Never attempt to move or transport the Abrasive Blaster when it contains Abrasive.

### REMOTE CONTROL SYSTEM

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

**Electric:** Connect the Remote Control Handle to the Abrasive Blaster's female twist-lock connector. Connect a 12 VDC power source (12V Battery or Optional 120 VAC to 12 VDC converter) to the Abrasive Blaster's male twist-lock connector.

**Pneumatic:** Connect the Remote Control twinline hose to the Abrasive Blaster using the supplied threaded fittings. It is not recommended that Pneumatic Remote Control Systems are used when the Blast Hose length will be longer than 100 feet.



**WARNING:** Never operate the Abrasive Blaster without a Remote Control System.



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

### CONNECTING HOSES

Before connecting hoses to the Abrasive Blaster, make sure the Inlet Shut-Off Valve is closed and the compressed air supply is shut off. Connect the hose coming from the compressed air supply to the inlet on the Abrasive Blaster and secure with safety clips. Connect the blast hose to the coupling by the Metering Valve at the base of the Abrasive Blaster and secure with safety clips .



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



## OPERATING PROCEDURES

### BLASTING

#### PRESSURIZING THE ABRASIVE BLASTER

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

- ☞ All "BEFORE YOU BLAST" procedures have been followed.
- ☞ The Inlet Shut-Off Valve is closed.
- ☞ The Inlet Valve Petcock is closed.
- ☞ The Remote Control Handle is released.
- ☞ All hose connections are secure and have a safety clip installed.
- ☞ The Abrasive Blaster is set up in a safe and level location where all people in the vicinity are aware of its presence.
- ☞ All necessary safety equipment is present and being worn by all people in the vicinity of the Abrasive Blaster.
- ☞ Only personnel who have been thoroughly trained and have read and understand the manual are in the vicinity of the Abrasive Blaster

When these conditions are met, turn on the compressed air source and open the Inlet Shut-Off Valve on the Abrasive Blaster. The Abrasive Blaster is now ready to begin blasting.



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



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



**WARNING:** The Blast Hose may kick back when Remote Control Handle is activated. Be prepared and brace yourself for kick back. Blast Hoses will normally kick back erratically for a short time when the Abrasive Blaster is started.



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

#### USING THE ABRASIVE BLASTER

After pressurizing the Abrasive Blaster, it is ready to begin blasting. Fold down safety flap lever lock and squeeze the Remote Control Handle to start the flow of abrasive and compressed air. Adjustments to the air/abrasive mixture can be made by swinging the handle on the Metering Valve. There will be a delay between a change made at the Metering Valve and what comes out of the Nozzle depending on the length of Blast Hose being used.

To stop the flow of compressed air and abrasive, release the Remote Control Handle and blasting will stop after a short time. How long it takes for blasting to stop will depend on the length of Blast Hose being used. The pressure vessel will automatically exhaust through the Diaphragm Valve causing a rush of compressed air that can propel any loose objects, debris or spilled abrasive at nearby personnel. For this reason, personnel must not be located near the Abrasive Blaster when blasting is taking place.



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



**DANGER:** Never stand near an Abrasive Blaster when it is in operation. The release of the Remote Control handle will cause a sudden release of compressed air from the Diaphragm Valve without warning. Only Adjust the Metering Valve after the Abrasive Blaster has completely depressurized.



**WARNING:** Only personnel thoroughly trained in abrasive blasting should operate the Abrasive Blaster. This manual only provides basic information on how to safely operate the features of Pirate Brand® CPR Series Abrasive Blasters.



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



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



## OPERATING PROCEDURES

### BLASTING

#### DRAINING THE MOISTURE SEPARATOR (if equipped)

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



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

#### SHUTTING DOWN THE ABRASIVE BLASTER

When blasting is complete, the Abrasive Blaster will need to be shut down. Make sure the Remote Control Handle is released then close the Inlet Shut-Off Valve and open the Inlet Valve Petcock.

#### DISCONNECTING AIR SUPPLY HOSE

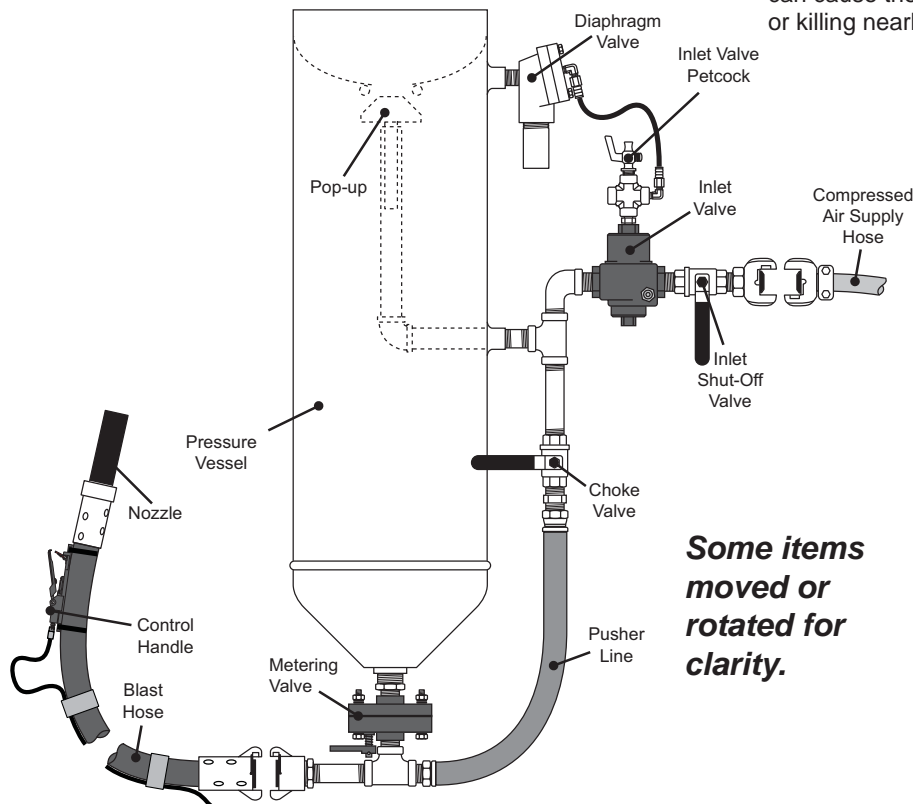
After the Abrasive Blaster has been depressurized and the Inlet Valve has been closed, the Compressed Air Supply Hose may still contain pressure which must be released before disconnecting the hose. To do this shut off the compressed air at its source, and open the Inlet Shut-Off Valve on the Abrasive Blaster.

Next, open the petcock at the top of the Inlet Valve. For systems with electric remote controls, you must be connected to a power source and hold down the Remote Control Handle to allow air to bleed out through the Inlet Valve Petcock.

When you no longer hear air escaping through the Inlet Valve petcock, squeeze the Compressed Air Supply Hose to confirm it is soft and does not contain compressed air. After confirming the absence of compressed air in the Compressed Air Supply Hose it is ready to be disconnected.



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



**Some items moved or rotated for clarity.**



## MAINTENANCE PROCEDURES



### Maintenance Schedule



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



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

Procedure to be Performed	Maintenance Interval
<b>1 Inspect Personal Protective Equipment (PPE)</b>  Including but not limited to: Respirators, Airline Filters, Carbon-Monoxide Monitors, Hearing Protection, Eye Protection, Foot Protection, Protective Clothing & Gloves.  Reference <a href="http://www.osha.gov">www.osha.gov</a> 29 CFR 1910.132 - General Requirements (PPE) 29 CFR 1910.133 - Eye (PPE) 29 CFR 1910.134 - Respiratory (PPE) 29 CFR 1910.136 - Feet (PPE) 29 CFR 1910.138 - Protective Clothing & Gloves (PPE) 26 CFR 1926.101 - Hearing (PPE)	Every 8 Hours Of Use
<b>2 Inspect Remote Control Handles and Control Hose/Cord</b>	Every 8 Hours Of Use
<b>3 Inspect Blast Hose, Couplings &amp; Gaskets</b>	Every 8 Hours Of Use
<b>4 Inspect Blasting Nozzle</b>	Every 8 Hours Of Use
<b>5 Inspect Air Hose, Couplings &amp; Gaskets</b>	Every 8 Hours Of Use
<b>6 Inspect &amp; Clean Blow-down Muffler (If Equipped)</b>	Every 40 Hours Of Use
<b>7 Lubricate Inlet Valve</b>	Every 40 Hours Of Use
<b>8 Inspect Pop-Up &amp; Pop-Up Gasket</b>	Every 200 Hours Of Use
<b>9 Service Inlet Valve</b>	Every 200 Hours Of Use
<b>10 Service Diaphragm Outlet Valve (If Equipped)</b>	Every 200 Hours Of Use
<b>11 Service Metering Valve</b>	Every 600 Hours Of Use
<b>12 Service Electric Control Valve (If Equipped)</b>	Every 600 Hours Of Use

Descriptions of maintenance procedures referenced in this table are located on the next page.



# MAINTENANCE PROCEDURES



## Procedure Details

### 1. Inspect Personal Protective Equipment (PPE)

Inspect ALL Personal Protective Equipment (PPE) for proper fit, condition & operation as designed. Replace, repair, or be fitted as needed.

### 2. Inspect Remote Control Handles and Control Hose/Cord

#### Pneumatic Remote Control Systems:

Inspect Control Handle for damage making sure the Safety Flap/Lever Lock is in good working order and replace or repair as needed. Inspect twinline hoses and replace if leaks, areas that show abrasion, or soft spots are found.

#### Electric Remote Control Systems:

Inspect Control Handle for damage making sure the Safety Flap/Lever Lock is in good working order and replace or repair as needed. Inspect control cord and replace if damaged plug ends, areas that show abrasion, exposed wires, or cracks are found.

### 3. Inspect Blast Hose, Couplings & Gaskets

Inspect Blast Hose for leaks, abrasion & soft spots, and replace as needed. Inspect couplings for damage, leaks & wear, and replace as needed. Inspect coupling gaskets for leaks & wear, and replace as needed. Always use safety clips & whip checks (safety cables) at Blast Hose connections.

### 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"

### 5. Inspect Air Hose, Couplings & 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.

### 6. Inspect & Clean Blow-down Muffler (If Equipped)

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.

### 7. Lubricate Inlet Valve

Add 2 drops of light machine oil through the Inlet Valve Petcock while open to lubricate the Inlet/Outlet Valve system.

### 8. Inspect Pop-Up & Pop-Up Gasket

Inspect the Pop-Up & Pop-Up Gasket for wear and replace as necessary.

### 9. Service Inlet Valve

Disassemble, clean & inspect for proper operation and worn components. Replace any worn components found. Lubricate the piston and cylinder with silicone grease before reassembling.

### 10. Service Diaphragm Outlet Valve

Disassemble, clean & inspect for proper operation and worn components. Replace any worn components found.

### 11. Service Metering Valve

Disassemble, clean & inspect the Metering Valve for proper operation and worn components. Replace any worn components found.

### 12. Service Electric Control Valve (If Equipped)

Disassemble, clean & inspect for proper operation and worn components. Replace any worn components found. Lubricate with silicone grease before reassembling.



## TROUBLESHOOTING



### Performance Related Issues



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

#### NO ABRASIVE FLOW WHEN BLASTING (AIR ONLY)

Possible Causes:

1. **The Abrasive Blaster is empty or has no Abrasive in it.**
2. **The Metering Valve is closed or has not been adjusted properly.**
3. **There is an obstruction in the Metering Valve.** To clear the obstruction, perform the following procedure:

Open the Metering Valve to its fully open position. 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 there is still an obstruction, depressurize the Abrasive Blaster. Completely remove the Metering Valve. The remaining abrasive in the pressure vessel should pour out in a steady stream. If you do not see a steady stream of abrasive, then there is a large obstruction such as a large piece of paper from a bag of abrasive.

If you have determined there is a large obstruction, then the obstruction must be removed from inside the Pressure Vessel. To do this, make sure the Abrasive 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 Abrasive Blaster.

**It is recommended that a screen be used to prevent foreign objects from entering the Abrasive Blaster and causing an obstruction.**

4. **The Abrasive Blaster has wet abrasive in it.** The wet abrasive must be removed by depressurizing the Abrasive 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 Abrasive Blaster in order to prevent the abrasive from getting wet. For Abrasive Blasters being used outside, it is recommended that a lid be used to keep water from entering the Abrasive Blaster.**

#### ABRASIVE STREAM IS TOO HEAVY OR THROBBLING WHEN BLASTING

Possible Causes:

Note: CPR Systems may throb temporarily when starting up if abrasive has collected in blast hose from previous use. This is normal and requires no action to correct.

1. **Choke Valve is partially closed.** Never run the Abrasive Blaster with the Choke Valve in any other position except fully open or damage to the Abrasive Blaster will occur.
2. **The Metering Valve needs to be adjusted.**

#### LOW PRESSURE AT THE NOZZLE

Possible Causes:

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. **Control hoses and/or fittings are leaking.**
6. **Pop-up is not sealing properly.**
7. **Handway Assembly is leaking.**
8. **Choke Valve is partially closed.** Never run the Abrasive Blaster with the Choke Valve in any other position except fully open or damage to the Abrasive Blaster will occur.
9. **Abrasive Metering Valve is open too far.**
10. **Obstruction in Nozzle.**
11. **Regulator needs adjustment (if equipped).**
12. **Inlet Valve/Diaphragm Valve is not opening/closing fully due to inadequate control pressure.**
13. **Inlet Valve is damaged, defective, worn out, or not lubricated properly causing it to not open fully.**
14. **Diaphragm Valve is damaged, defective, or worn out.**

#### ABRASIVE BLASTER WILL NOT TURN ON OR IS SLOW TO TURN ON

Possible Causes:

1. **Air compressor is the wrong size (too small) or the load button has not been pushed or turned on.**
2. **Inlet Valve Petcock is open.**
3. **Nozzle is worn out and the compressor cannot keep up with the increased demand.**
4. **Air supply hose to the blast machine is too small.**
5. **Inlet Valve is damaged, defective, worn out, or not lubricated properly causing it to not open fully.**
6. **Diaphragm Valve is damaged, defective, or worn out causing it to not close fully.**
7. **Control hoses and/or fittings are leaking.**
8. **Obstruction in Nozzle.**
9. **The Pneumatic Control Handle is damaged, defective or worn out (if equipped).**
10. **The Electric Control Handle is damaged, defective or worn out (if equipped).**
11. **Power Source (battery or AC-DC converter) is not providing sufficient power to open electric control valves (if equipped).**
12. **The Electric Control Cord is damaged, defective or worn out (if equipped).**
13. **The Electric Control Valve is damaged, defective or worn out (if equipped).**
14. **There is an obstruction in the 1/16" orifice (See Valve Parts Lists - PN 101-9450) (pneumatic controls only)**



# ☠ TROUBLESHOOTING ☠

## Operational Related Issues



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

### BLAST MACHINE TURNS ON ACCIDENTALLY OR WITHOUT WARNING

Possible Causes:

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. The 1/16" orifice (See Valve Parts Lists - PN 101-9450) fitting is missing from the Inlet Valve's outlet port (pneumatic controls only.)
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. The Electric Control 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 Causes:

1. The Inlet Valve is damaged, defective, worn out, or not lubricated properly causing it to not close fully.
2. The Diaphragm Valve is damaged, defective, or worn out causing it to not open fully.
3. The Pneumatic Control Handle is damaged, defective or worn out (if equipped).
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. The Electric Control Valve is damaged, defective or worn out (if equipped)
7. Blow-down Muffler (if equipped) is clogged slowing the release of air.





## ☠ WARRANTY ☠

### LIMITATION OF WARRANTIES AND REMEDIES.

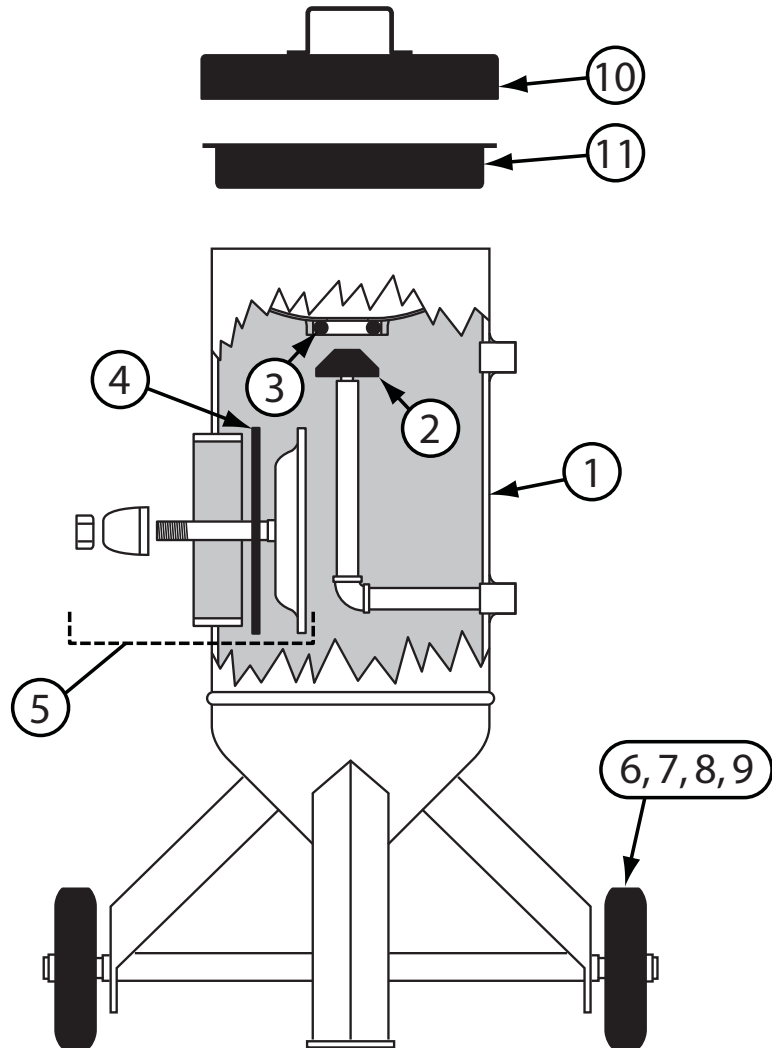
MANUFACTURER WARRANTS THE PRODUCTS IT MANUFACTURES TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF NINETY (90) DAYS FROM THE DATE OF INVOICE. THIS WARRANTY IS EXTENDED ONLY TO THE BUYER WHO PURCHASES THE PRODUCTS DIRECTLY FROM THE MANUFACTURER OR ITS AUTHORIZED DISTRIBUTORS. THE PURCHASER'S EXCLUSIVE REMEDY ARISING FROM ITS PURCHASE OR USE OF THE PRODUCTS SHALL BE STRICTLY LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCTS, AT THE DISCRETION OF THE MANUFACTURER, AND ALL WARRANTY CLAIMS OR REQUESTS MUST BE MADE IN WRITING TO THE MANUFACTURER WITHIN THIRTY (30) DAYS AFTER FAILURE OF THE PRODUCT. ALL OBLIGATIONS OR LIABILITIES OF MANUFACTURER OR SELLER FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE PRODUCTS AND USE OR PERFORMANCE OF THE PRODUCTS, EXCEPT AS EXPRESSLY PROVIDED HEREIN, ARE FULLY DISCLAIMED AND EXCLUDED, AND NO SELLER OR DISTRIBUTOR HAS ANY AUTHORITY TO MAKE ANY WARRANTY OR ASSUME ANY LIABILITY ON BEHALF OF THE MANUFACTURER IN CONNECTION WITH THE SALE OF THE PRODUCTS EXCEPT AS STATED HEREIN.

AS A CONDITION OF THE PURCHASE, PURCHASER AGREES THAT MANUFACTURER AND SELLER SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY COST OF FREIGHT, SHIPPING OR TRANSPORTATION, LABOR, SPECIAL CHARGES, NORMAL MAINTENANCE SERVICES, LOST OPERATING TIME, LOSS OF USE, LOST PROFITS, LOSS OF GOODWILL, CONSEQUENTIAL DAMAGES, PUNITIVE OR EXEMPLARY DAMAGES, OR OTHER DAMAGES OR LOSS. OTHER THAN AS DESCRIBED HEREIN, MANUFACTURER AND SELLER MAKE NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS, AND SPECIFICALLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHER WARRANTY. PURCHASER ASSUMES ALL RISK AND LIABILITY RESULTING FROM THE USE OF THE PRODUCTS. PURCHASER FURTHER AGREES AS A CONDITION OF THE SALE AND USE OF THE PRODUCTS, THAT ANY DAMAGES OR RISK OF LOSS OTHER THAN AS DESCRIBED HEREIN ABOVE, SHALL BE THE EXCLUSIVE RESPONSIBILITY OF THE PURCHASER AND NOT THE MANUFACTURER OR SELLER. MANUFACTURER AND SELLER SHALL NOT BE LIABLE FOR ANY DAMAGES INCURRED BY ANY PERSON AS A RESULT OF MISUSE, IMPROPER INSTALLATION, IMPROPER APPLICATION, IMPROPER OPERATION OF THE PRODUCTS, NORMAL WEAR AND TEAR, ALTERATIONS OR MODIFICATIONS MADE TO THE PRODUCTS, OR ACCIDENT. THE USE OF REPLACEMENT PARTS NOT PROVIDED OR AUTHORIZED BY THE MANUFACTURER VOIDS ALL WARRANTIES.





## ☠️ PRESSURE VESSEL PARTS LISTS ☠️

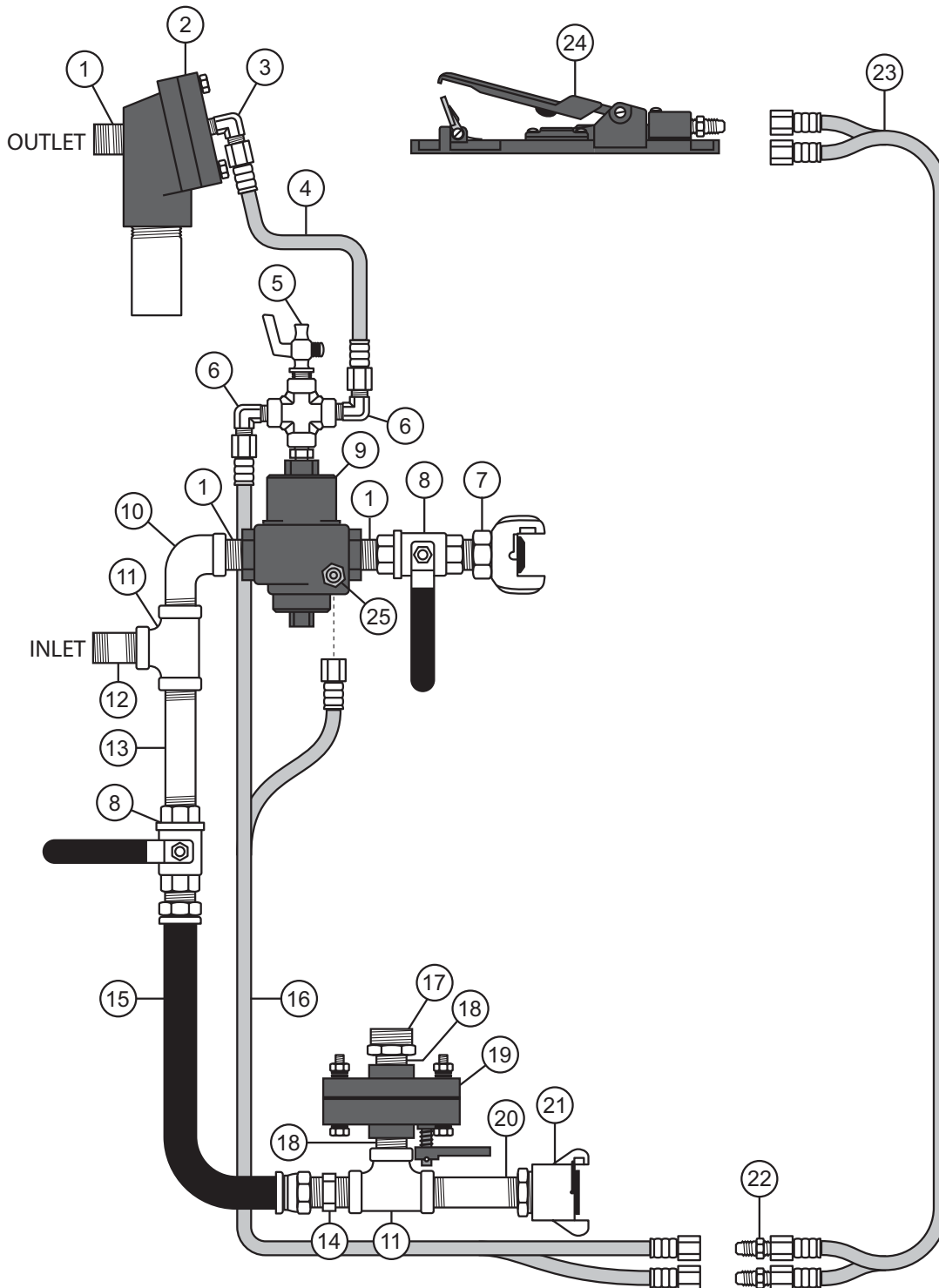


0.5 CU. FT.			1.0 CU. FT.		
1	110-280	VESSEL, PORTABLE, 0.5 CU. FT. (14 LITERS), 150 PSI (10.3 BAR), 6-3/4" CLEARANCE, 10" DIA, INCLUDES HANDWAY ASSEMBLY, WHEELS, POP-UP & POP-UP GASKET	1	110-420	VESSEL, PORTABLE, 1.0 CU. FT. (28 LITERS), 150 PSI (10.3 BAR), 6-3/4" CLEARANCE, 10" DIA, INCLUDES HANDWAY ASSEMBLY, WHEELS, POP-UP & POP-UP GASKET
2	101-2420	POP-UP VALVE, 1/2" MALE			
3	101-2450	POP-UP VALVE SEAT, 1-3/8" ID x 2-1/8" OD			
4	524-292	GASKET, HANDWAY, 4" x 6"			
5	888-7000-00011PB	HANDWAY CRAB ASSY 4" x 6"			
6	102-3260	WHEEL, 6"			
7	102-4040	AXLE, 10" DIA VESSELS			
8	103-8040	WASHER, 3/4" THRUST			
9	103-8050	RETAINING RING, 3/4"			
10	103-1070	LID, 10" DIA, W/HANDLE, POWDER COATED BLACK			
11	103-3620	SCREEN, LOW PROFILE, 10" (1/4" MESH), POWDER COATED BLACK			



# PIPE STRING PARTS LISTS

## CPR SERIES - 0.5/1.0 CU FT Pneumatic Controls





## ☠ PIPE STRING PARTS LISTS ☠

### CPR SERIES - 0.5/1.0 CU FT Pneumatic Controls

0.5 CU. FT.			1.0 CU. FT.		
1	888-3029-10499PB	NIPPLE, TBE, GALV, 1/2" x CLOSED			
2*	102-5120	VALVE, 1/2" DIAPHRAGM OUTLET			
3	102-8270	ELBOW, BRASS, 1/8" NPT			
4	200-018	HOSE, SINGLELINE CONTROL, ASSEMBLY, COUPLED, NOMINAL 3/16" ID x 18'			
5	101-9930	PETCOCK, 1/4" NPT			
6	102-5130	ELBOW, BRASS, 1/4" x 3/16"			
7	UM-050	AIR HOSE COUPLING, 2 LUG, 1/2" MALE NPT			
8	VB050	BALL VALVE, FULL PORT, 1/2" NPT			
9*	102-1640	VALVE, 1/2" INLET			
10	888-3006-104PB	ELBOW, STREET, 90°, GALV, 1/2"			
11	888-3011-104PB	TEE, GALV, 1/2"			
12	888-3028-10409PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x 2"			
13	888-3029-10414PB	NIPPLE, TBE, GALV, 1/2" x 4"			
14	125-0840	FITTING, 1/2" MNPT x 3/4" M-FLARE			
15	124-6210	PUSHER LINE (FLEX) REPLACEMENT, 3/4" x 11", OAL 13"	15	124-6220	PUSHER LINE (FLEX) REPLACEMENT 3/4," x 19", OAL 21"
16	200-003	HOSE, TWINLINE CONTROL, ASSEMBLY, 3' W/UNIONS			
17	888-3026-10604PB	BUSHING, GALV, 1" x 1/2"			
18	888-3028-10499PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x CLOSED			
19	101-2470	JR ABRASIVE METERING VALVE (1/2" NPT)			
20	888-3028-10413PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x 3"			
21	100-5580	THRD CPLG, NPT, ALUMINUM, 1/2", 150 PSI MAX			
22	101-9440	HOSE, UNION, 3/16"			
23	200-025	HOSE, TWINLINE CONTROL, ASSEMBLY, YEL/YEL W/BLACK STRIPE, NOMINAL 3/16" ID x 25', W/UNIONS			
	200-050	HOSE, TWINLINE CONTROL, ASSEMBLY, YEL/YEL W/BLACK STRIPE, NOMINAL 3/16" ID x 50', W/UNIONS			
24**	354-4289	PNEUMATIC CONTROL HANDLE (BLEEDER TYPE DEADMAN CONTROL HANDLE)			
25	101-9450	VALVE, INLET, ADAPTOR, 1/8" NPT W/1/16" ORIFICE			

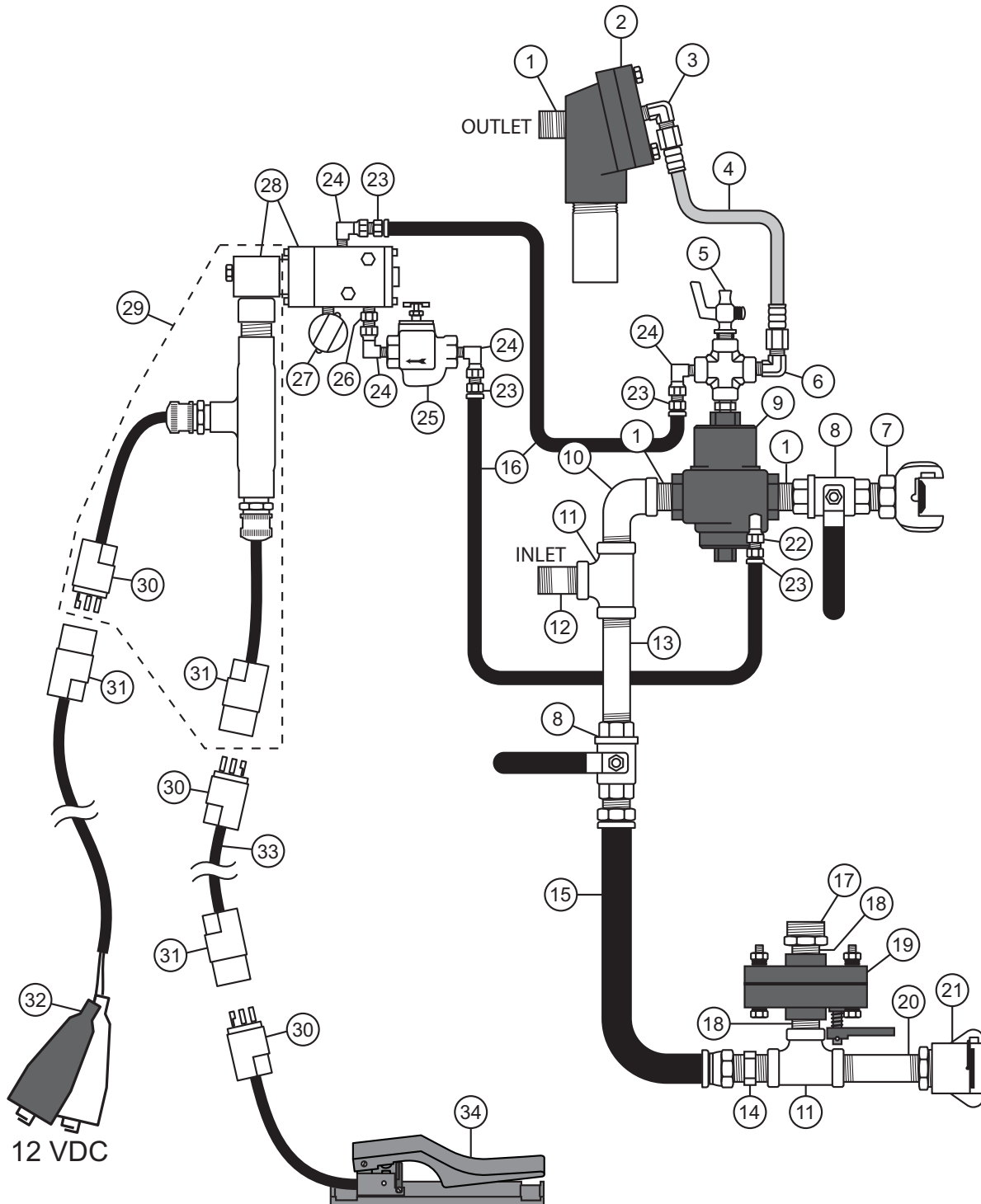
\* See "Valve Parts Lists" Section for detailed parts list.

\*\* See "Control Handle Parts Lists" Section for detailed parts list.



# PIPE STRING PARTS LISTS

## CPR SERIES - 0.5/1.0 CU FT Electric Controls





## PIPE STRING PARTS LISTS

### CPR SERIES - 0.5/1.0 CU FT Electric Controls

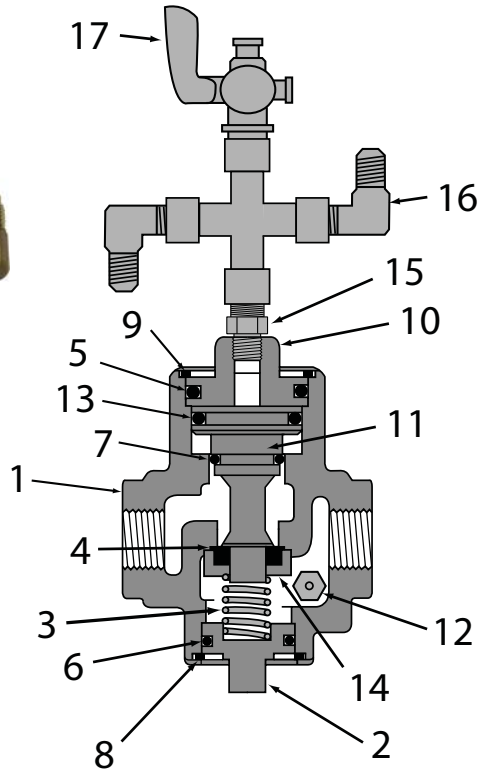
0.5 CU. FT.			1.0 CU. FT.		
1	888-3029-10499PB	NIPPLE, TBE, GALV, 1/2" x CLOSED			
2*	102-5120	VALVE, 1/2" DIAPHRAGM OUTLET			
3	102-8270	ELBOW, BRASS, 1/8" NPT			
4	200-018	HOSE, SINGLELINE CONTROL, ASSEMBLY, COUPLED, NOMINAL 3/16" ID x 18'			
5	101-9930	PETCOCK, 1/4" NPT			
6	102-5130	ELBOW, BRASS, 1/4" x 3/16"			
7	UM-050	AIR HOSE COUPLING, 2 LUG, 1/2" MALE NPT			
8	VB050	BALL VALVE, FULL PORT, 1/2" NPT			
9*	102-1640	VALVE, 1/2" INLET			
10	888-3006-104PB	ELBOW, STREET, 90°, GALV, 1/2"			
11	888-3011-104PB	TEE, GALV, 1/2"			
12	888-3028-10409PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x 2"			
13	888-3029-10414PB	NIPPLE, TBE, GALV, 1/2" x 4"			
14	125-0840	FITTING, 1/2" MNPT x 3/4" M-FLARE			
15	124-6210	PUSHER LINE (FLEX) REPLACEMENT, 3/4" x 11", OAL 13"	15	124-6220	PUSHER LINE (FLEX) REPLACEMENT 3/4," x 19", OAL 21"
16	888-4101-002	HOSE, PUSH-ON, 1/4"			
17	888-3026-10604PB	BUSHING, GALV, 1" x 1/2"			
18	888-3028-10499PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x CLOSED			
19	101-2470	JR ABRASIVE METERING VALVE (1/2" NPT)			
20	888-3028-10413PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1/2" x 3"			
21	100-5580	THRD CPLG, NPT, ALUMINUM, 1/2", 150 PSI MAX			
22	888-4203-50002PB	SWIVEL 90°, 1/8" MNPT x 1/4" F			
23	888-4200-30202PB	HOSE, PUSH-ON INSERT 1/4" x 1/4" NPT			
24	888-4203-50202PB	SWIVEL 90°, 1/4"MNPT x 1/4"F			
25	888-2301-90290PB	STRAINER, BRZ 1/4" 90 MICRON			
26	888-3031-30202PB	HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST			
27	888-3006-102PB	ELBOW, STREET, 90°, GALV, 1/4"			
	888-2013-402PB	DUST ELIMINATOR, 1/4" MNPT			
28	888-2229-100PB	VALVE, CONTROL, ELECTRIC, 12VDC (NORMALLY CLOSED)			
	888-2229-10099PB	VALVE, CONTROL, REPAIR KIT, ELECTRIC, HEAVY DUTY			
29	888-7112-000PB	JUNCTION TEE ASSEMBLY, SMALL & BULK BLASTERS 12VDC (1) OUTLET			
30	888-7109-301PB	ELECTRIC CONNECTOR, MALE, TWIST-LOCK, 3 PRONG			
31	888-7109-300PB	ELECTRIC CONNECTOR, FEMALE, TWIST-LOCK, 3 PRONG			
32	888-7072-012PB	POWER CORD, 25' 12VDC, 3-LUG			
33	888-7073-055PB	EXTN CORD W/CONNECTOR, 55', 3 PRONG, 2 WIRE			
34**	888-2263-40101PB	HANDLE, CONTROL, ELECTRIC #2 W/PLUG			
	888-2263-40102PB	HANDLE, CONTROL, ELECTRIC #2 W/SEALED CONNECTOR (REQUIRED WHEN USING STEEL ABRASIVES)			

\* See "Valve Parts Lists" Section for detailed parts list.

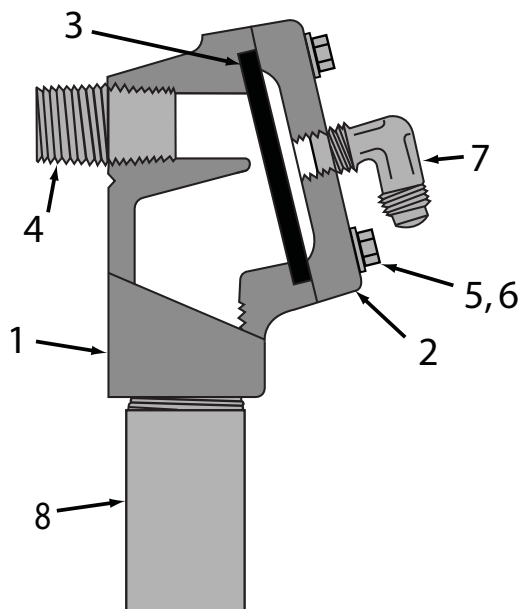
\*\* See "Control Handle Parts Lists" Section for detailed parts list.



# VALVE PARTS LISTS



1/2" Inlet Valve		
	102-1640	VALVE, 1/2" INLET
	107-8140	SERVICE KIT, 1/2" INLET VALVE, INCLUDES # 3, 4, 5, 6, 7, 8, 9, 13, & 14
7	102-1850	VALVE, INLET, 1/2" O-RING, 3/4" ID
12	101-9450	VALVE, INLET, ADAPTOR 1/8" NPT W/1/16" ORIFICE
15	888-3031-31200PB	NIPPLE, HEX, 1/4" MNPT x 1/8" MNPT
16	102-5130	ELBOW, BRASS, 1/4" x 3/16"
17	101-9930	PETCOCK, 1/4" NPT

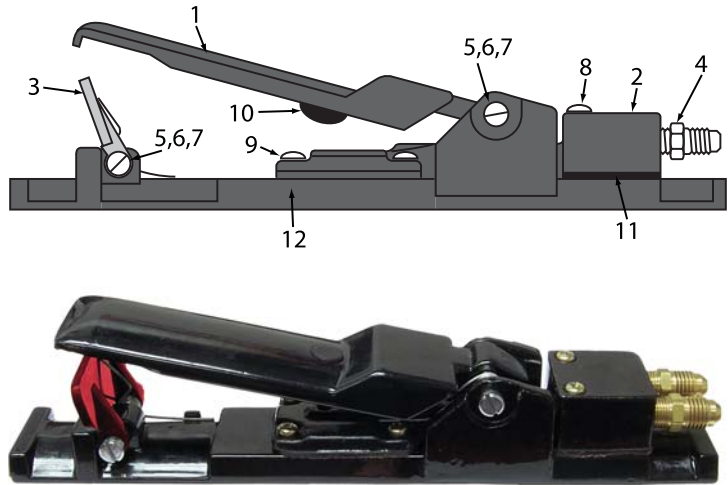


1/2" Diaphragm Valve		
	102-5120	VALVE, 1/2" DIAPHRAGM OUTLET
3	102-5110	DIAPHRAGM, 1/2" OUTLET VALVE
4	888-3029-10499PB	NIPPLE, TBE, GALV, 1/2" x CLOSED
7	102-8270	ELBOW, BRASS, 1/8" NPT



## CONTROL HANDLE PARTS LISTS

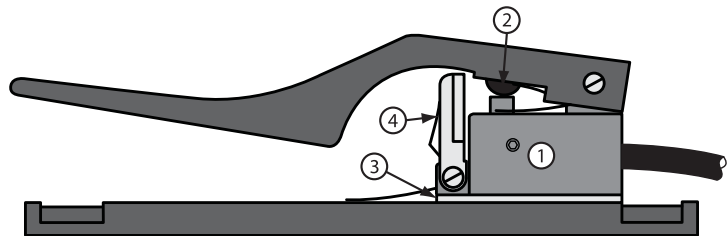
PNEUMATIC REMOTE CONTROL HANDLE	
	354-4289 PNEUMATIC CONTROL HANDLE
	354-4290 REPAIR KIT, PNEU SWITCH, INCLUDES #3, (2)#4, (2)#5, (2)#6, (2)#7, (2)#8, (4)#9, & #10
1	367-4291 HANDLE
2	367-4292 BODY
3	367-4293 SAFETY LEVER LOCK
4	460-0719 1/8" ADAPTOR
5	410-4294 TORSION SPRING
6	400-4295 SHOULDER SCREW
7	402-4296 LOCK NUT
8	400-4297 LONG PHILLIPS HEAD SCREW
9	400-4298 SHORT PHILLIPS HEAD SCREW
10	367-4299 RUBBER BUMPER
11	367-4300 GASKET, PNEUMATIC ADAPTOR
12	354-5428 BASE PLATE



BALL & STRAP PNEUMATIC REMOTE CONTROL HANDLE	
023602	BALL & STRAP PNEUMATIC CONTROL HANDLE W/ BALL & STRAP
PC3/16	DOUBLE EAR CLAMPS, PINCH-ON, FOR 3/16" ID TWINLINE HOSE (25 PACK)



ELECTRIC REMOTE CONTROL HANDLE #2	
	888-2263-401PB HANDLE, CONTROL, ELECTRIC #2
	888-2263-40101PB HANDLE, CONTROL, ELECTRIC #2 W/PLUG
	888-2263-40102PB HANDLE, CONTROL, ELECTRIC #2 W/SEALED CONNECTOR (REQUIRED WHEN USING STEEL ABRASIVES)
5	PB-31131 1/2" 3 PART SEALED CONTROL CORD CONNECTOR (REQUIRED WHEN USING STEEL ABRASIVES)
	888-2263-40199PB HANDLE, CONTROL, ELECTRIC #2, REPAIR KIT, INCLUDES #1, 2 & 3
4	888-2263-00108PB HANDLE, CONTROL, #2, SAFETY FLAP





## BLASTING SET-UP



AIR HOSE	
10-034RED-050-1	3/4" AIR HOSE ASSEMBLY, 50'
10-100RED-025-1	1" AIR HOSE ASSEMBLY, 25'
10-100RED-050-1	1" AIR HOSE ASSEMBLY, 50'
27WT-1	SAFETY CABLE, 1/2" - 1" HOSE TO EQUIP.
27WC-1	SAFETY CABLE, 1/2" - 1" HOSE TO HOSE.



### BLAST HOSE, TWINLINE & CONTROL CORD

Nozzles Not Included

10-050BLK-025-3AL	1/2" BLAST HOSE ASSEMBLY, 25', INCLUDES NOZZLE HOLDER
10-050BLK-050-3AL	1/2" BLAST HOSE ASSEMBLY, 50', INCLUDES NOZZLE HOLDER
10-050BLK-025-4AL	1/2" EXTENSION HOSE ASSEMBLY, 25'
10-050BLK-050-4AL	1/2" EXTENSION HOSE ASSEMBLY, 50'
10-034BLK-025-4AL	3/4" EXTENSION HOSE ASSEMBLY, 25'
10-034BLK-050-4AL	3/4" EXTENSION HOSE ASSEMBLY, 50'
200-025	HOSE, TWINLINE CONTROL, ASSEMBLY, YEL/YEL W/BLACK STRIP, NOMINAL 3/16" ID x 25', W/UNIONS
200-050	HOSE, TWINLINE CONTROL, ASSEMBLY, YEL/YEL W/BLACK STRIP, NOMINAL 3/16" ID x 50', W/UNIONS
888-7073-055PB	ELECTRICAL EXTENSION CORD W/CONNECTORS, 55', 3 PRONG, 2 WIRE
27WT-1	SAFETY CABLE, 1/2" - 1" HOSE TO EQUIP.
27WC-1	SAFETY CABLE, 1/2" - 1" HOSE TO HOSE.





## BLASTING SET-UP



### NOZZLES

#### STANDARD STRAIGHT BORE TUNGSTEN CARBIDE NOZZLES (3/4" THREADS)

1348-430	#3 TUNGSTEN CARBIDE NOZZLE
1348-780	#4 TUNGSTEN CARBIDE NOZZLE
1348-781	#5 TUNGSTEN CARBIDE NOZZLE

#### HIGH PERFORMANCE MEDIUM VENTURI TUNGSTEN CARBIDE NOZZLES (3/4" THREADS)

1348-614	#3 TUNGSTEN CARBIDE NOZZLE
1348-616	#4 TUNGSTEN CARBIDE NOZZLE
1348-617	#5 TUNGSTEN CARBIDE NOZZLE

#### LONG LIFE SHORT VENTURI BORON CARBIDE NOZZLES (3/4" THREAD)

1348-1133	#3 BORON CARBIDE NOZZLE
1348-1144	#4 BORON CARBIDE NOZZLE
1348-1155	#5 BORON CARBIDE NOZZLE



### BREATHING EQUIPMENT

#### HIGH PRESSURE (COMPRESSOR SUPPLIED)

407800	RPB® ASTRO™ RESPIRATOR, (NIOSH APPROVAL NO: TC-19C-417 TYPE CE)
407028	25' BREATHING AIR SUPPLY HOSE, 3/8"
407029	50' BREATHING AIR SUPPLY HOSE, 3/8"
407001	COOL TUBE W/BSP THREAD & BELT
407024	HOT TUBE W/BSP THREAD & BELT
407900	RPB® RADEX AIRLINE FILTER™ COMPLETE
407200	RADEX™ CO MONITOR (120V)
407201	RADEX™ CO MONITOR (12V)

#### LOW PRESSURE (AIR PUMP SUPPLIED)

407802	RPB® ASTRO™ RESPIRATOR, LOW PRESSURE, (NIOSH APPROVAL NO. TC-19C-423)
407035	50' BREATHING AIR SUPPLY HOSE, 1/2"
06-100	RPB® AMBIENT AIR PUMP, 3/4 HP



### AIR DRYER

888-1310-021PB	AIR DRYER ADPB-250 CFM @ 100 PSIG OR 359 CFM @ 150 PSIG
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### BLAST SUITS / GLOVES

122-9140	BLAST SUIT, LIGHTWEIGHT, MEDIUM
122-9150	BLAST SUIT, LIGHTWEIGHT, LARGE
122-9160	BLAST SUIT, LIGHTWEIGHT, XL
122-9170	BLAST SUIT, LIGHTWEIGHT, XXL
122-9180	BLAST SUIT, LIGHTWEIGHT, XXXL
407701	LUXURY DOUBLE PALMED LEATHER BLASTING/WELDING GLOVES



## AVAILABLE ACCESSORIES

### A LID AND SCREEN

LIDS ARE IMPORTANT FOR KEEPING MOISTURE FROM FALLING INTO THE ABRASIVE BLASTER IN OUTDOOR APPLICATIONS. MOISTURE IN THE ABRASIVE BLASTER CAN CAUSE OBSTRUCTIONS IN THE METERING VALVE LEADING TO COSTLY DOWN-TIME.

SCREENS ARE IMPORTANT FOR KEEPING FOREIGN OBJECTS FROM FALLING INTO THE ABRASIVE BLASTER. FOREIGN OBJECTS IN THE ABRASIVE BLASTER CAN CAUSE OBSTRUCTIONS IN THE METERING VALVE LEADING TO COSTLY DOWN-TIME.

103-1070	LID FOR 0.5 & 1.0 C-SERIES BLASTERS
103-3620	SCREEN FOR 0.5 & 1.0 C-SERIES BLASTERS

### B MOISTURE SEPARATOR

MOISTURE SEPARATORS REDUCE THE MOISTURE CONTENT OF THE SUPPLIED AIR TO THE BLASTER. MOISTURE IN THE AIR CAN LEAD TO CLOGS AND PREMATURE WEAR ON BLASTER COMPONENT.

101-2970-CI	MOISTURE SEPARATOR KIT FOR 0.5 & 1.0 C-SERIES BLASTERS
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### C REGULATOR KIT

ADDING A REGULATOR KIT TO YOUR ABRASIVE BLASTER WILL ALLOW YOU TO BLAST AT LOWER PRESSURES TO ACHIEVE CUSTOM FINISHES OR HELP CONTROL PROFILE.

101-9020-CI	1/2" REGULATOR KIT FOR 0.5 & 1.0 C-SERIES BLASTERS
508-102	REPAIR KIT FOR 1/2" REGULATORS

### D MUFFLER

ADD A MUFFLER TO THE BLOW-DOWN DIAPHRAGM VALVE TO REDUCE NOISE DURING DEPRESSURIZATION

888-2011-006PB	MUFFLER, BLOW-DOWN, 1" MNPT
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### E JOB TIMER

KEEP TRACK OF TIME SPENT ON A JOB AND TOTAL HOURS ON YOUR ABRASIVE BLASTER. KNOW YOUR COST, CONTROL YOUR COST & SET UP A PREVENTATIVE MAINTENANCE PROGRAM FOR YOUR BLAST EQUIPMENT. **FOR USE WITH C-SERIES ELECTRIC CONTROL SYSTEMS ONLY.**

PB-9805023P	DUAL TIMER CONTROL BOX W/ KEY RESET & MOUNTING BRACKET
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### F POWER SUPPLY

ADD A POWER SUPPLY TO RUN ANY 12VDC ELECTRIC BLASTER ON COMMON 120AC OUTLET POWER. POWERS UP TO 4 CONTROL VALVES AT ONE TIME.

PB-SMP3WP	POWER SUPPLY 120AC INPUT/12VDC @ 2.5 AMP OUTPUT
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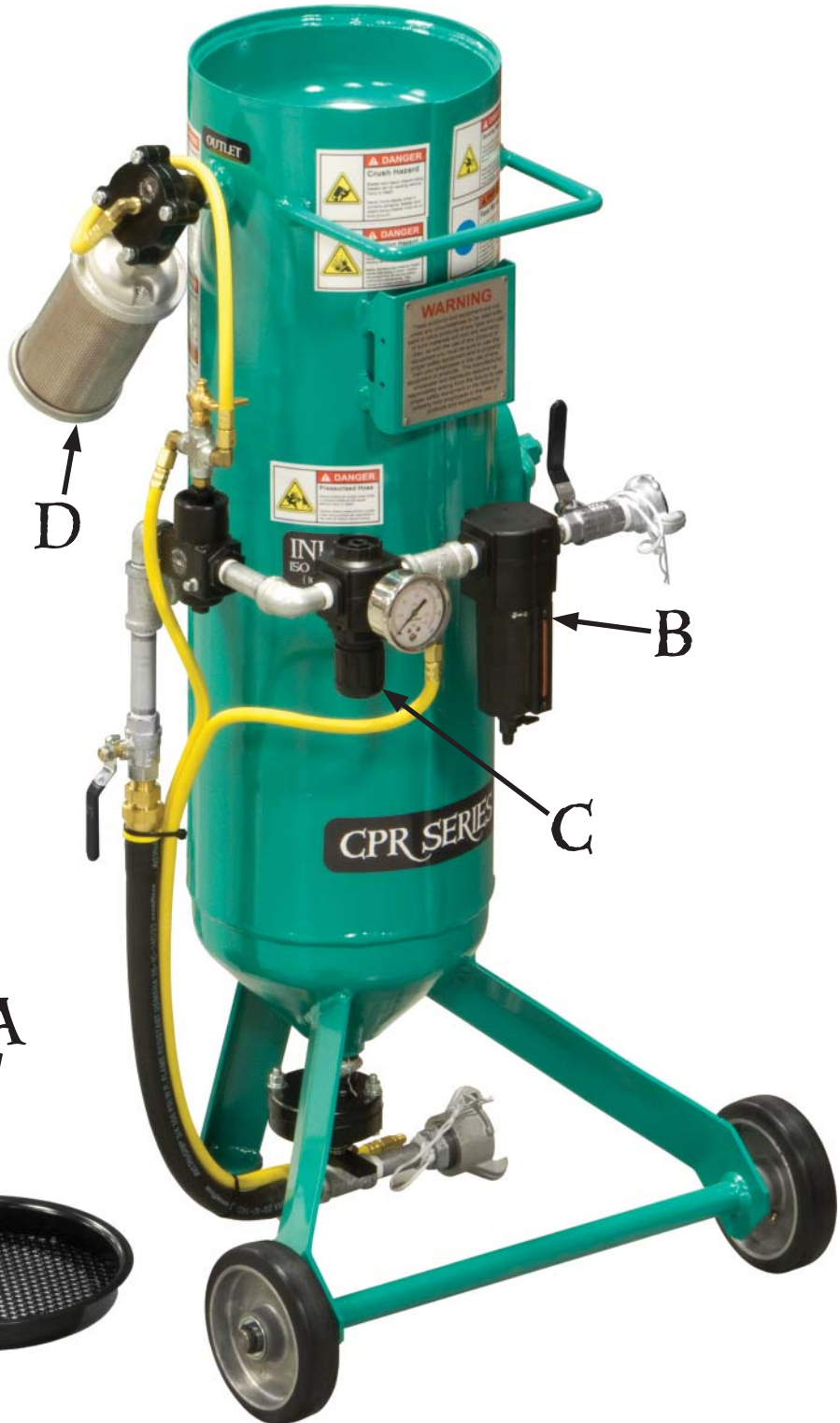
### G ELECTRIC CONV. KIT

CONVERT YOUR PNEUMATICALLY CONTROLLED C-SERIES ABRASIVE BLASTER TO ELECTRIC. ELECTRIC REMOTE CONTROLS ARE RECOMMENDED IF YOU RUN OVER 100 FEET OF BLAST HOSE OR WHEN BLASTING IN COLD WEATHER.

888-0005-410PB	PNEUMATIC TO ELECTRIC CONVERSION KIT FOR CPR SERIES ABRASIVE BLASTERS
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# AVAILABLE ACCESSORIES





## BLASTING CHARTS

### Nozzle Air, Power & Abrasive Requirements

NOZZLE # ORIFICE SIZE	NOZZLE AIR, POWER & ABRASIVE REQUIREMENTS		NOZZLE PRESSURE							
			50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI	125 PSI	140 PSI
			(3.45 BAR)	(4.14 BAR)	(4.83 BAR)	(5.52 BAR)	(6.21 BAR)	(6.89 BAR)	(8.62 BAR)	(9.65 BAR)
<b>#2</b> 1/8 inch (3.2 mm)	AIR	(cu ft/min)	12	13	15	18	19	21	26	
		(cu m/min)	0.34	.037	0.42	0.51	0.54	0.59	0.74	
	HORSEPOWER	(hp)	1.75	2	2.5	3	3.5	4	6	
		(kW)	1.30	1.49	1.86	2.24	2.61	2.98	4.47	
	ABRASIVE	(lb/hr)	70	80	90	100	110	120	135	
		(kg/hr)	32	36	41	45	50	54	61	
<b>#3</b> 3/16 inch (4.8 mm)	AIR	(cu ft/min)	25	30	35	40	43	45	60	
		(cu m/min)	0.71	0.85	0.99	1.13	1.22	1.27	1.70	
	HORSEPOWER	(hp)	5	8	9	9.5	10	10.5	16	
		(kW)	3.75	5.97	6.71	7.08	7.46	7.86	11.93	
	ABRASIVE	(lb/hr)	150	170	200	215	240	260	320	
		(kg/hr)	68	77	91	98	109	118	145	
<b>#4</b> 1/4 inch (6.35 mm)	AIR	(cu ft/min)	50	55	60	70	75	80	95	
		(cu m/min)	1.42	1.56	1.70	1.98	2.12	2.27	2.69	
	HORSEPOWER	(hp)	10	12	13	16	17	18	25	
		(kW)	7.46	8.95	9.69	11.93	12.68	13.42	18.64	
	ABRASIVE	(lb/hr)	270	300	350	400	450	500	675	
		(kg/hr)	122	136	159	181	204	227	306	
<b>#5</b> 5/16 inch (8 mm)	AIR	(cu ft/min)	80	90	100	115	125	140	190	230
		(cu m/min)	2.27	2.55	2.83	3.26	3.54	3.96	5.38	6.51
	HORSEPOWER	(hp)	17	20	25	27	28	30	36	60
		(kW)	12.68	14.91	18.64	20.13	20.88	22.37	26.85	44.85
	ABRASIVE	(lb/hr)	470	530	600	675	750	825	1000	1125
		(kg/hr)	213	240	272	306	340	374	454	510
<b>#6</b> 3/8 inch (9.5 mm)	AIR	(cu ft/min)	110	125	145	160	175	200	275	315
		(cu m/min)	3.12	3.54	4.11	4.53	4.96	5.66	7.79	8.91
	HORSEPOWER	(hp)	25	29	32	35	40	45	57	65
		(kW)	18.64	21.63	23.86	26.10	29.83	33.56	42.50	48.59
	ABRASIVE	(lb/hr)	675	775	875	975	1060	1100	1350	1840
		(kg/hr)	306	352	397	442	481	499	612	835
<b>#7</b> 7/16 inch (9.5 mm)	AIR	(cu ft/min)	150	170	200	215	240	255	315	405
		(cu m/min)	4.25	4.81	5.66	6.09	6.80	7.22	8.92	11.46
	HORSEPOWER	(hp)	35	40	45	50	55	60	70	90
		(kW)	26.10	29.83	33.56	37.28	41.01	44.74	52.20	67.28
	ABRASIVE	(lb/hr)	900	1000	1200	1300	1400	1510	1800	2540
		(kg/hr)	408	454	544	590	635	703	816	1152
<b>#8</b> 1/2 inch (12.7 mm)	AIR	(cu ft/min)	200	225	250	275	300	340	430	540
		(cu m/min)	5.66	6.37	7.08	7.79	8.50	9.63	12.18	15.28
	HORSEPOWER	(hp)	45	50	55	63	70	75	95	120
		(kW)	33.56	37.28	41.01	46.98	52.20	55.93	70.84	89.70
	ABRASIVE	(lb/hr)	1200	1350	1500	1700	1850	2025	2525	3240
		(kg/hr)	544	612	680	771	839	919	1145	1470
<b>#10</b> 5/8 inch (16 mm)	AIR	(cu ft/min)	300	350	400	450	500	550	700	880
		(cu m/min)	8.50	9.91	11.33	12.74	14.16	15.58	19.82	24.90
	HORSEPOWER	(hp)	70	80	90	100	110	120	150	190
		(kW)	52.20	59.66	67.11	74.57	82.03	89.48	111.85	142.02
	ABRASIVE	(lb/hr)	1900	2200	2400	2700	3000	3300	4000	5200
		(kg/hr)	862	998	1089	1225	1361	1497	1814	2359
<b>#12</b> 3/4 inch (19 mm)	AIR	(cu ft/min)	430	500	575	650	700	800	1100	1255
		(cu m/min)	12.18	14.16	16.28	18.41	19.82	22.66	31.15	35.52
	HORSEPOWER	(hp)	100	115	130	145	160	175	215	245
		(kW)	74.57	85.76	96.94	108.13	119.31	130.50	160.33	183.13
	ABRASIVE	(lb/hr)	2700	3100	3500	3900	4300	4700	5700	7375
		(kg/hr)	1225	1406	1588	1769	1950	2132	2586	3345

This table is to be used as reference only. Actual results may vary depending on specific abrasive medium used. This table is based on abrasive with a bulk density of 100 pounds per cubic foot.