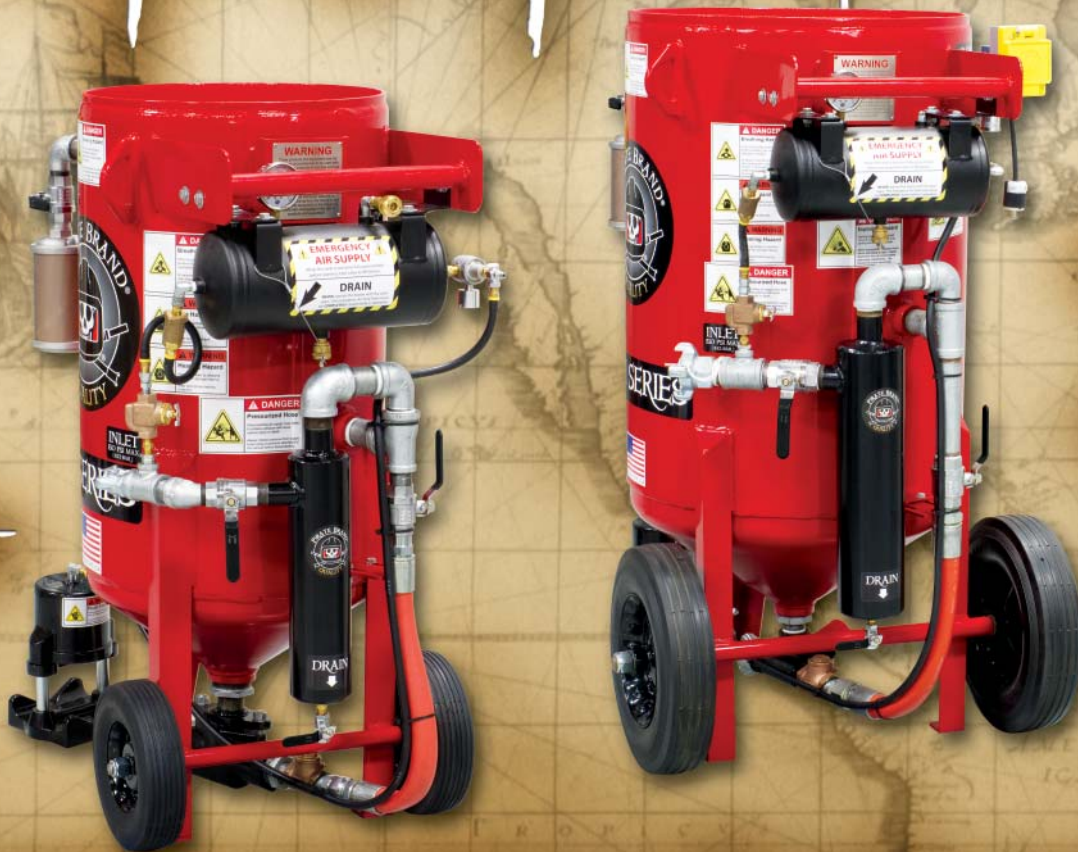




# USER'S MANUAL

## 3.5 & 6.5 CU FT - KPH 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-MAK001



## ⚠️ USING THIS MANUAL ⚠️

Thank you for your purchase of a Pirate Brand® KPH 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 1.5 - 20 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. **Never** use bleeder type control handles, such as Clemco® or A-BEC® style handles, with KPH series blasters as they can cause a hazardous situation where the blaster will not shut off when the handle is released.
- 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:

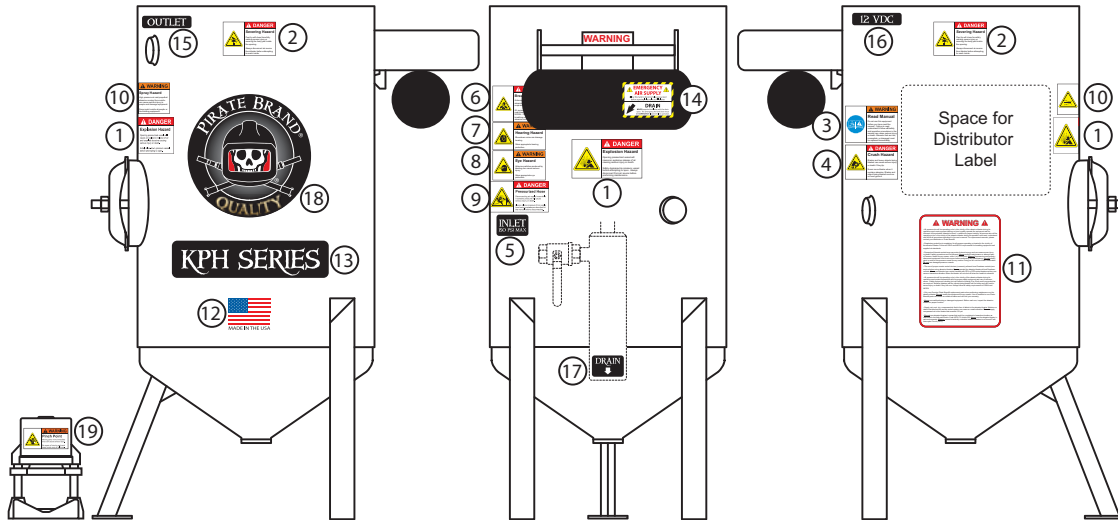
For manual updates visit the  
Pirate Brand® website at:

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





## WARNING LABEL LOCATIONS



- |                           |                      |                           |                          |
|---------------------------|----------------------|---------------------------|--------------------------|
| 1 - Explosion Hazard (X2) | 6 - Breathing Hazard | 11 - <b>WARNING</b> Label | 16 - 12VDC Label         |
| 2 - Severing Hazard (X2)  | 7 - Hearing Hazard   | 12 - Made In USA          | 17 - Drain Label         |
| 3 - Read Manual           | 8 - Eye Hazard       | 13 - Series Label         | 18 - Pirate Brand® Label |
| 4 - Crush Hazard          | 9 - Pressurized Hose | 14 - Emergency Air Tank   | 19 - Pinch Point         |
| 5 - Inlet Label           | 10 - Spray Hazard    | 15 - Outlet Label         |                          |



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

Replacement Label Pack P/N: PB-LPK001



### 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. Placement of "Inlet Label" and "Pressurized Hose" labels will vary based on which type of system. Place these labels as close to the inlet coupling as possible.
4. 12 VDC Label is only to be used on electric remote controlled systems. **DO NOT** apply label to systems with pneumatic remote controls.



## HOW KPH SYSTEMS WORK



### (K-Series Pressure Hold System)



**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.

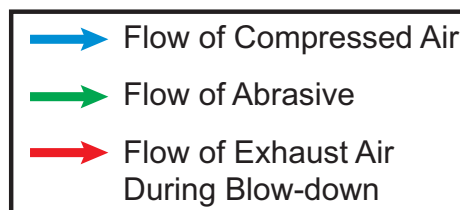
### PRESSURIZATION

Before pressurization can take place in a pressure hold system, the Blow-down (outlet) Valve must be closed. Then, when a compressed air source (such as an air-compressor) is connected to the inlet of the Abrasive Blaster and turned on, the Emergency Air Tank is pressurized and the Pinch Valve closes. The Emergency Air Tank is a safety feature that will store a reserve of compressed air that will be available to keep the pinch valve closed in the event of a compressor failure.

When the Inlet Valve is opened, compressed air can flow through the Moisture Separator and into the pressure vessel causing the Pop-up (located internally) to seal against its seat allowing the pressure vessel to become pressurized. When the control handle is activated, a control valve allows the Pinch Valve to open allowing compressed air & abrasive to flow and mix. The mixture of compressed air and abrasive will now exit the Abrasive Blaster through the blast hose and nozzle connected to the coupling on the Metering Valve and blasting begins.

### DEPRESSURIZATION (BLOW-DOWN)

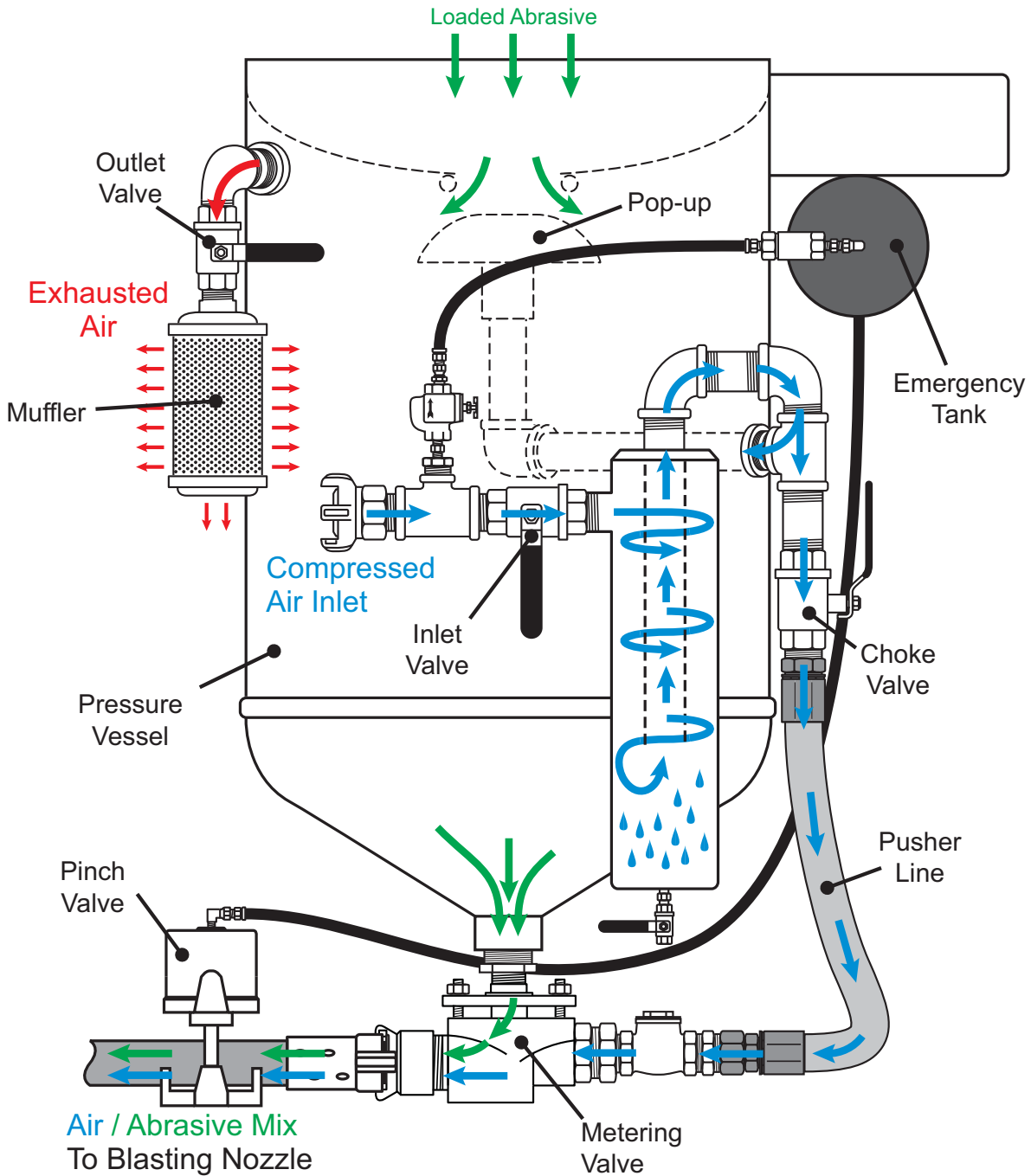
When the control handle is released in a pressure hold (KPH) system, the Pinch Valve closes and the pressure vessel remains filled with compressed air. The compressed air remaining in the pressure vessel is released when the inlet valve is manually closed and the blow-down (outlet) valve is manually opened.





# HOW KPH SYSTEMS WORK

(K-Series Pressure Hold System)





## 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® KPH 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. Remove any foreign materials and reinstall the Handway Assembly.



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

### RE-TIGHTEN HANDWAY ASSEMBLY

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



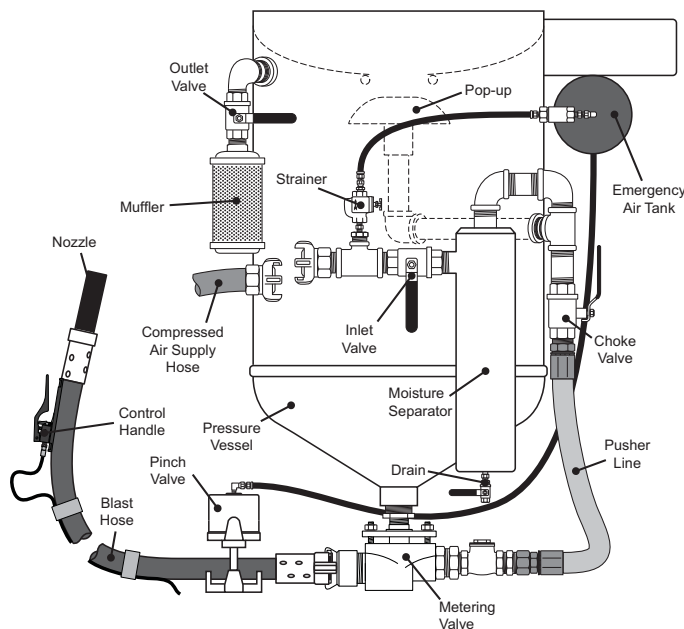
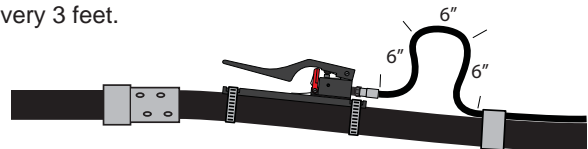
**DANGER:** Never perform any maintenance or attempt to open the Abrasive Blaster in any way while it is pressurized. The violent release of compressed air and propelled objects will cause serious injury or death.

### 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 HANDLES

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 Blast Hose twice and then around the Twinline/Control Cord. This creates a strain-relief attachment and is only necessary on the first connection near the Control Handle. Starting from the Nozzle end of the Blast Hose, attach the Twinline/Control Cord to the blast hose by wrapping duct tape around both every 3 feet.







# 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 valve is closed and the pressure vessel is in a depressurized state. Abrasive is added by pouring it into the top of the Abrasive Blaster where the abrasive can flow 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.



**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 valve in the open position. Always close the inlet 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 deadman) to start and stop abrasive blasting. Remote Control Systems can be electric or pneumatic.

**Electric:** Connect the Remote Control to the Abrasive Blaster's female twist-lock connector. 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 quick disconnect fittings. The twinline hose is supplied with different size fittings on each of the 2 lines to prevent them from being connected to the Abrasive Blaster incorrectly. Do not modify or reverse these fittings. It is not recommended that Pneumatic Remote Control Systems are used when the Blast Hose length will be longer than 100 feet.



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



**WARNING:** Never use bleeder type Remote Control Handles such as Clemco® or A-BEC® style handles with Pirate-Brand® KPH Series Equipment as they may cause the Abrasive Blaster to start without warning or to not stop the Abrasive Blaster when released.



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



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

### CONNECTING HOSES

Before connecting hoses to the Abrasive Blaster, make sure the Inlet Valve is closed and the compressed air supply is shut off. Connect the hose coming from the compressed air supply to the inlet on the Abrasive Blaster and secure with safety clips. Connect the blast hose to the coupling on the Metering Valve at the base of the Abrasive Blaster and secure with safety clips (Use mechanics/safety wire when using optional BIG-GUN™ full port couplings).



**WARNING:** Always use safety devices like clips and whip-checks (safety cables) at hose connections. Optional BIG-GUN™ full port couplings require the use of safety/mechanics wire for proper securing.



## 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 Valve is closed.
- ☞ The Blow-down Valve (Outlet Valve) is closed.
- ☞ The Remote Control Handle is released.
- ☞ All hose connections are secure and have a safety clip or safety/mechanics wire 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. Allow the Emergency Air Tank to become fully pressurized to at least 100 PSI (6.89 BAR) before continuing. Use the supplied pressure gauge on the emergency tank to check for pressurization. Open the Inlet 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.



**DANGER:** Never operate a KPH system if the Emergency Air Tank is not fully pressurized to at least 100 PSI. If the Emergency Air Tank is found to not be holding pressure, discontinue use of the blaster until repairs are made.



**WARNING:** Blast Hose may kick back when Remote Control Handle is activated. Be prepared and brace yourself for kick back. Blasters with MPV Metering Valves or #100 Metering Valves will normally kick back erratically for a short time when started.



**WARNING:** All those who will be in the area while blasting is to occur must be properly trained, read the manual, and be wearing safety equipment to protect from the hazards described by the WARNING and 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. Activate the Remote Control Handle to start the flow of abrasive and compressed air. Adjustments to the air/abrasive mixture can be made by turning the handle on MPV Series Metering Valves. For #100 Metering Valves, the flow of abrasive can be increased by loosening the nuts on the top of the valve, and decreased by tightening the nuts. The nuts must be tightened or loosened equally and if they are loosened too far, air will leak when pressurized.



**WARNING:** If the adjustment bolts are set too loose on the #100 Metering Valve, air and abrasive can escape at high velocity around the donut washer injuring nearby personnel.

There will be a delay between a change made at the Metering Valve and what comes out of the Nozzle depending on the length of Blast Hose being used. Adjustments to the Metering Valve should only be made when Abrasive Blaster is not in operation.

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



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



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

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. The included Moisture Separator on the abrasive blaster may not be sufficient to achieve this depending on the quality of the air being supplied.

#### SHUTTING DOWN THE ABRASIVE BLASTER

When blasting is complete, the Abrasive Blaster will need to be shut down. Make sure the Remote Control Handles are released, then close the Inlet Valve. Slowly open the Blow-down Valve to allow the compressed air stored in the Abrasive Blaster to escape.

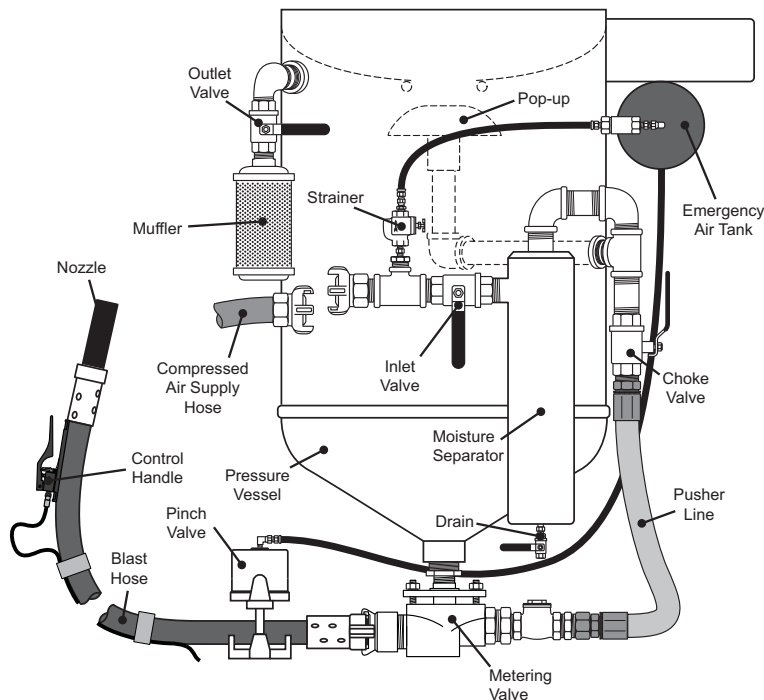
#### DISCONNECTING THE AIR SUPPLY HOSE

After the Abrasive Blaster has been depressurized, and the Inlet Valve has been closed, the Compressed Air Supply Hose may still contain pressure which must be released before disconnecting the hose. To do this shut off the compressed air at its source, and open the Drain Valve and Blow-Down Valve on the Abrasive Blaster. Slowly open the inlet valve on the Abrasive Blaster. The compressed air stored in the Compressed Air Supply Hose can now escape through the Drain Valve. When you no longer hear air escaping through the drain valve, squeeze the Compressed Air Supply Hose to confirm the absence of compressed air. After confirming the absence of compressed air in the Compressed Air Supply Hose it is ready to be disconnected. The Emergency Air Tank should still be pressurized at this point and is ready for its required daily maintenance inspection (see "MAINTENANCE PROCEDURES" section for details).

After performing the maintenance inspection, The Emergency Air Tank drain may now be opened to drain any collected moisture and depressurize the emergency air tank.



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





# MAINTENANCE 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 Handle 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 Emergency Air Tank for Bleed Down</b>	Every 8 Hours Of Use
<b>7 Inspect &amp; Clean Blow-down Muffler</b>	Every 40 Hours Of Use
<b>8 Inspect Pop-Up &amp; Pop-Up Gasket</b>	Every 200 Hours Of Use
<b>9 Service #400 Pinch Valve</b>	Every 200 Hours Of Use
<b>10 Inspect / Service Metering Valve</b>	Every 600 Hours Of Use
<b>11 Service Control Valve (Electric Models)</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 Handle and Control Hose/Cord

#### Pneumatic Remote Control Systems:

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

#### Electric Remote Control Systems:

Inspect Control Handle for damage making sure the switch and boot are in good working order and replace as needed. Inspect control cord and replace if damaged plug ends, areas that show abrasion, exposed wires, or cracks are found. Always use the ball & chain with the chain secured around the operators wrist. Replace the ball & chain assembly if lost or damaged.

### 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. BIG-GUN™ full port couplings require the use of safety/mechanics wire for proper securing.

**PAY SPECIAL ATTENTION TO THE SECTION OF BLAST HOSE WHICH COMES IN CONTACT WITH THE PINCH VALVE. WHEN THIS AREA BECOMES WORN, CRACKED OR SOFT, REMOVE THE COUPLING, TRIM THE BLAST HOSE BACK PAST THE WORN AREA AND REINSTALL THE COUPLING OR REPLACE ENTIRE BLAST HOSE.**

### 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 Emergency Air Tank For Bleed Down

After depressurizing the pressure vessel and disconnecting the air supply hose as described in the "OPERATING PROCEDURES" Section, watch the pressure gauge on the Emergency Air Tank. If the Emergency Air Tank system is working properly, the pressure contained in the tank will not drop. If it does, discontinue use of the blast equipment until the problem is corrected. Possible causes of bleed down are:

- A. The #400 Pinch Valve is leaking and need to be serviced.
- B. The Check Valve on the Emergency Air Tank is damaged, defective or worn out and needs to be replaced.
- C. The Pull Cord Drain Valve is damaged, defective or worn out and needs to be replaced.
- D. The air supply hose between the Emergency Air Tank and the #400 Pinch Valve (or control valve on electric models is leaking.

### 7. Inspect & Clean Blow-down Muffler

Remove the Blow-down muffler, turn it upside-down and tap on a hard surface to free trapped debris. If muffler is clogged and can't be cleaned out sufficiently, it must be replaced.

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

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

### 9. Service #400 Pinch Valve

Disassemble, clean & inspect the #400 Pinch Valve for proper operation and worn components. Replace any worn components and lubricate with silicone grease before reassembling.

### 10. Inspect / Service Metering Valve

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

### 11. Service Control Valve (Electric Models)

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 for MPV series & #100 Metering Valves, perform the following procedure:

**MPV Valve** - Turn the knob on the Metering Valve clockwise until it stops and then turn the knob counter-clockwise 9 full turns to open it completely.

**#100 Metering Valve** - Depressurize the abrasive blaster. Loosen (**but do not remove**) the adjustment bolts equally until they start to turn easily, then tighten them both 1 full turn. Repressurize the abrasive blaster.



**WARNING:** If the adjustment bolts are set too loose on the #100 Metering Valve, air and abrasive can escape at high velocity around the donut washer injuring nearby personnel.

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 through 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 you must depressurize the Abrasive Blaster, remove the pusher line, and remove the Metering Valve to check for a steady stream of abrasive. If the remaining abrasive in the pressure vessel does not flow freely out of the pressure vessel, there is a large obstruction. If abrasive flows, wait until the Abrasive Blaster is empty before reinstalling the Metering Valve.

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, then remove the Handway Assembly. Scoop or vacuum out all of 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.

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.**

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

Possible Causes:

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. **Handway Assembly is leaking.**
6. **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.
7. **Abrasive Metering Valve is open too far.**
8. **Obstruction in Nozzle.**
9. **Regulator needs adjustment (if equipped).**

#### 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. **Nozzle is worn out and the compressor cannot keep up with the increased demand.**
3. **Air supply hose to the blast machine is too small.**
4. **Control hoses and/or fittings are leaking.**
5. **90 micron strainer clogged.**
6. **Obstruction in Nozzle.**
7. **The Pneumatic Control Handle is damaged, defective or worn out (if equipped).**
8. **The Electric Control Handle is damaged, defective or worn out (if equipped).**
9. **The Electric Control Coil is defective (if equipped).**
10. **Power Source (battery or AC-DC converter) is not providing sufficient power to open electric control valves (if equipped).**
11. **The Electric Control Cord is damaged, defective or worn out (if equipped).**
12. **Control Valve stuck or in need of service due to lack of lubrication, or is damaged, defective or worn out (if equipped).**

#### SAFETY TANK WILL NOT FILL OR IS SLOW TO FILL

Possible Causes:

1. **90 micron strainer is clogged.**



## 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. A bleeder type control handle has been installed.



**WARNING:** Never use bleeder type Remote Control Handles such as Clemco® or A-BEC® style handles with Pirate-Brand® KPH Series Blasters as they may cause the Abrasive Blaster to start without warning or to not stop the Abrasive Blaster when released.

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. #400 Pinch Valve does not have the required 100 PSI minimum supplied to them from the emergency air tank (if equipped). Check the air lines to and from the emergency air tank for leaks. Check the 90 Micron Strainer for clogging and clean or replace if necessary.

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

Possible Causes:

1. A bleeder type control handle has been installed.

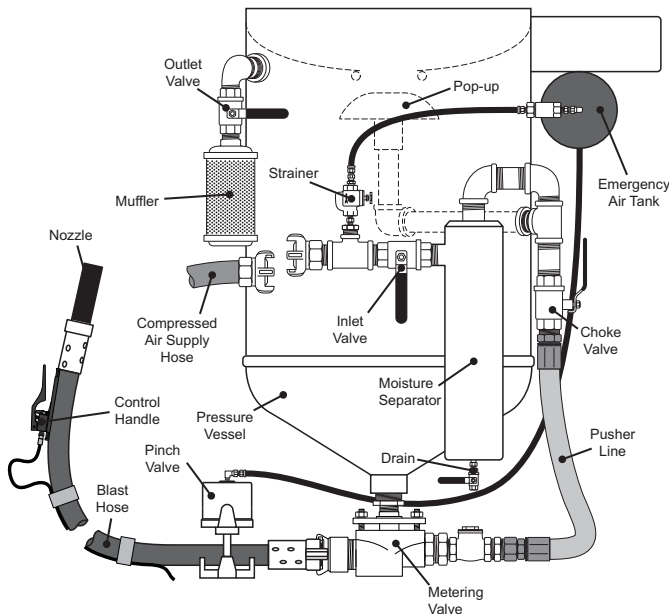


**WARNING:** Never use bleeder type Remote Control Handles such as Clemco® or A-BEC® style handles with Pirate-Brand® KPH Series Blasters as they may cause the Abrasive Blaster to start without warning or to not stop the Abrasive Blaster when released.

2. The Pneumatic Control Handle is damaged, defective or worn out (if equipped).
3. The Electric Control Handle is damaged, defective or worn out (if equipped).
4. The Electric Control Cord is damaged, defective or worn out (if equipped).
5. The Control Valve is stuck or in need of service due to lack of lubrication, or is damaged, defective or worn out.
6. #400 Pinch Valve is stuck or in need of service due to lack of lubrication, or is damaged, defective or worn out.
7. #400 Pinch Valve does not have the required 100 PSI minimum supplied to them from the emergency air tank. Check the air lines to and from the emergency air tank for leaks. Check the 90 Micron Strainer for clogging and clean or replace if necessary.

#### EMERGENCY AIR TANK DOES NOT HOLD PRESSURE

See "MAINTENANCE PROCEDURES" section for diagnosis and repair information.





## **WARRANTY**

### **PIRATE BRAND® ABRASIVE BLAST POT EQUIPMENT 5 YEAR / 10 YEAR LIMITED WARRANTY**

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

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

**LIMITATION OF WARRANTIES AND REMEDIES. THIS WARRANTY IS EXTENDED ONLY TO THE BUYER WHO PURCHASES THE ABRASIVE BLAST POT DIRECTLY FROM THE MANUFACTURER OR ITS AUTHORIZED DISTRIBUTORS AND IS NON-TRANSFERABLE. THE PURCHASER'S EXCLUSIVE REMEDY ARISING FROM ITS PURCHASE OR USE OF THE PRODUCT SHALL BE STRICTLY LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCTS, AT THE DISCRETION OF THE MANUFACTURER, AND ALL WARRANTY CLAIMS OR REQUESTS MUST BE MADE IN WRITING TO THE MANUFACTURER WITHIN TEN (10) DAYS AFTER FAILURE OF THE PRODUCT. ALL OBLIGATIONS OR LIABILITIES OF MANUFACTURER OR SELLER FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE PRODUCT AND USE OR PERFORMANCE OF THE PRODUCTS, EXCEPT AS EXPRESSLY PROVIDED HEREIN, ARE FULLY DISCLAIMED AND EXCLUDED, AND NO SELLER OR DISTRIBUTOR HAS ANY AUTHORITY TO MAKE ANY WARRANTY OR ASSUME ANY LIABILITY ON BEHALF OF THE MANUFACTURER IN CONNECTION WITH THE SALE OF THE PRODUCT EXCEPT AS STATED HEREIN.**

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

**A COMPLETELY FILLED OUT WARRANTY CARD MUST BE RETURNED TO THE MANUFACTURER WITHIN THIRTY (30) DAYS OF PURCHASE OF THE PRODUCT OR ALL WARRANTIES ARE VOID. PRODUCT MUST BE MAINTAINED IN ACCORDANCE TO THE MAINTENANCE SCHEDULE PROVIDED IN THE PRODUCT MANUAL, FAILURE TO MAINTAIN THE PRODUCT IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE VOIDS ALL WARRANTIES. THIS WARRANTY DOES NOT COVER FACTORY INSTALLED OR CUSTOMER INSTALLED ACCESSORIES.**

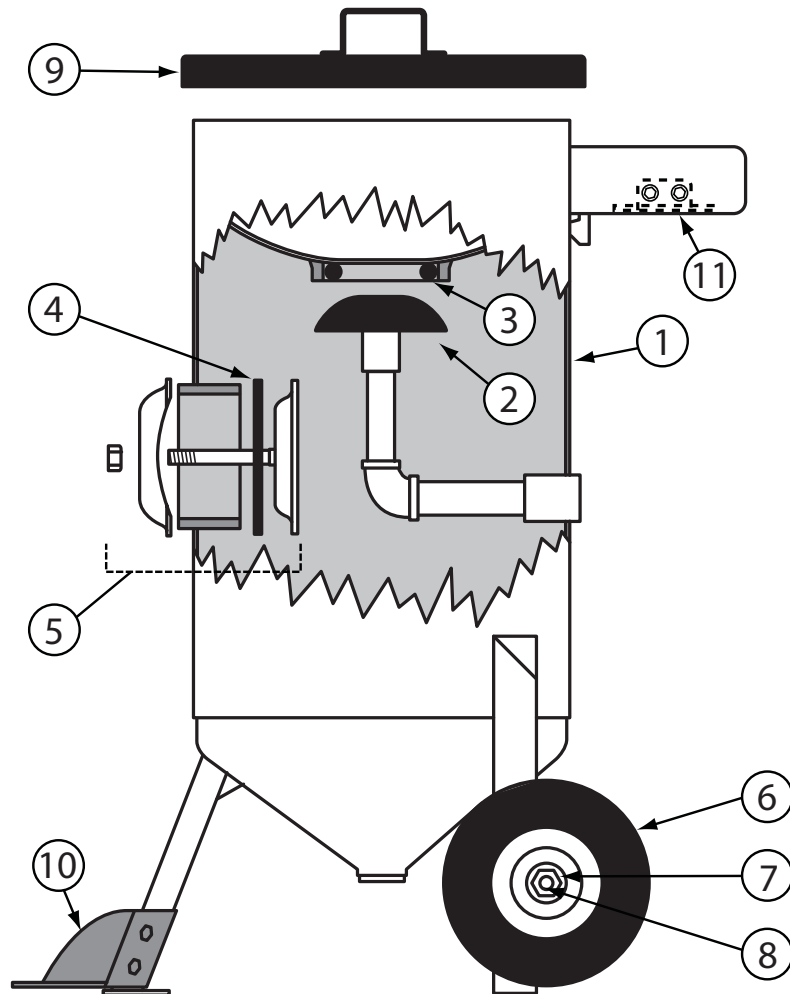
**WARRANTY CLAIMS.** Warranty claims must be submitted to the manufacturer within ten (10) days after failure of the product. Contact information for warranty claims:

Forecast Sales, Inc.  
2719 Tobey Dr.  
Indianapolis, IN 46219  
317-829-0147

Effective July 8, 2015



## ☠️ PRESSURE VESSEL PARTS LISTS ☠️

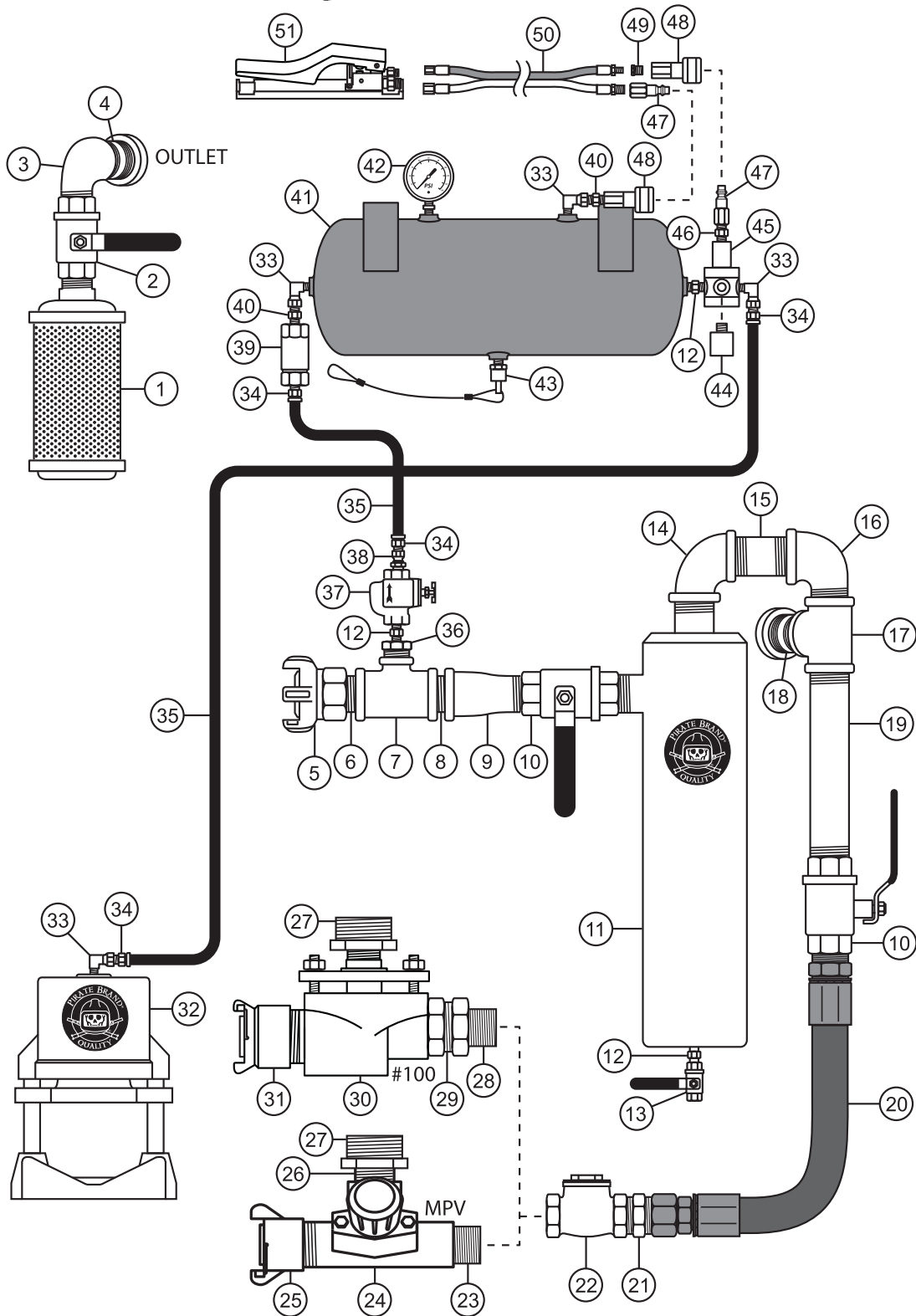


3.5 CU. FT.			6.5 CU. FT.		
1	300-350P	VESSEL, PORTABLE, 3.5 CU. FT. (100 LITERS), 150 PSI (10.3 BAR), 110° CONE BOTTOM, 7-1/2" CLEARANCE, 18" DIA, INCLUDES: HANDWAY ASSEMBLY, POP-UP, POP-UP GASKET, SCREEN & BAG BREAKER	1	600-650P	VESSEL, PORTABLE, 6.5 CU. FT. (185 LITERS), 150 PSI (10.3 BAR), 110° CONE BOTTOM, 7-1/2" CLEARANCE, 24" DIA, INCLUDES: HANDWAY ASSEMBLY, POP-UP, POP-UP GASKET, SCREEN & BAG BREAKER
1	300-350S	VESSEL, STATIONARY, 3.5 CU. FT. (100 LITERS), 150 PSI (10.3 BAR), 110° CONE BOTTOM, 7-1/2" CLEARANCE, 44" OAH, 18" DIA, INCLUDES: HANDWAY ASSEMBLY, POP-UP, POP-UP GASKET, SCREEN & BAG BREAKER	1	600-650S	VESSEL, STATIONARY, 6.5 CU. FT. (185 LITERS), 150 PSI (10.3 BAR), 110° CONE BOTTOM, 7-1/2" CLEARANCE, 51" OAH, 24" DIA, INCLUDES: HANDWAY ASSEMBLY, POP-UP, POP-UP GASKET, SCREEN & BAG BREAKER
2	525-072	PLUNGER, SEALING, COATED, 6"			
3	523-872	RING, "O", 6"			
4	888-7000-00106PB	GASKET, HANDWAY, 6" x 8"			
5	888-7000-00111PB	HANDWAY CRAB ASSY 6" x 8"			
6	888-7046-003PB	WHEEL & TIRE, 3.5 CU FT	6	120-4270	WHEEL & TIRE, 6.5 CU FT
7	888-7019-519PB	NUT, NYLOCK, 3/4" UNC	7	888-7019-527PB	NUT, NYLOCK, 1" UNC
8	888-7040-003PB	AXLE, 3/4" x 22"	8	888-7040-006PB	AXLE 1" x 33",
9	888-5010-030PB	LID, 18" DIA W/HANDLE, POWDER COATED	9	888-5010-060PB	LID, 24" DIA W/HANDLE, POWDER COATED
10	102M3286	BRACKET, MOUNTING FOR #400 PINCH VALVE (INCLUDES ALL MOUNTING HARDWARE)			
11	PB-662-10562	EMERGENCY AIR TANK MOUNTING BRACKET (INCLUDES 2 BRACKETS AND ALL MOUNTING HARDWARE)			



# PIPE STRING PARTS LISTS

## KPH SERIES - Pneumatic Controls







## PIPE STRING PARTS LISTS

### KPH SERIES - Pneumatic Controls

3.5 CU. FT.			6.5 CU. FT.		
1	888-2011-006PB	MUFFLER, BLOWDOWN, 1" MNPT			
2	VB100	BALL VALVE, FULL PORT, 1" NPT			
3	888-3006-106PB	ELBOW, STREET 90°, GALV, 1"			
4	888-3029-10611PB	NIPPLE, TBE, GALV, 1" x 3"			
5	UM-100	AIR HOSE COUPLING, 2 LUG, 1" MALE NPT	5	UF-125	AIR HOSE COUPLING, 4 LUG, 1-1/4" FEMALE NPT
6	NOT USED		6	888-3029-10799PB	NIPPLE, TBE, GALV, 1-1/4" x CLOSED
7	888-3011-10604PB	TEE, GALV, 1" x 1" x 1/2"	7	888-3011-10704PB	TEE, GALV, 1-1/4" x 1-1/4" x 1/2"
8	888-3029-10699PB	NIPPLE, TBE, GALV, 1" x CLOSED	8	888-3029-10799PB	NIPPLE, TBE, GALV, 1-1/4" x CLOSED
9	888-3008-106PB	ELBOW, STREET, 45°, GALV, 1"	9	NOT USED	
10	VB100	BALL VALVE, FULL PORT, 1" NPT	10	VB125	BALL VALVE, FULL PORT, 1-1/4" NPT
11	888-1200-006PB-P	MOISTURE TRAP 1" (1" M INLET x 1-1/4" M OUTLET, 150 CFM, POWDER COATED BLACK)	11	888-1200-007PB-P	MOISTURE TRAP 1-1/4" (1-1/4" M INLET x 1-1/4" M OUTLET, 150 CFM, POWDER COATED BLACK)
12	888-3031-31202PB	NIPPLE, HEX 1/4" MNPT x 1/4" MNPT			
13	VB025	BALL VALVE, FULL PORT, 1/4" NPT			
14	888-3000-107PB	ELBOW, GALV, 90°, 1-1/4"			
15	888-3029-10711PB	NIPPLE, TBE, GALV, 1-1/4" x 3"			
16	888-3006-107PB	ELBOW, STREET, 90°, GALV, 1-1/4"			
17	888-3013-10706PB	TEE, GALV, 1-1/4" x 1" x 1-1/4"	17	888-3011-107PB	TEE, GALV, 1-1/4"
18	888-3028-10711PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x 3"			
19	888-3029-10699PB	NIPPLE, TBE, GALV, 1" x CLOSED	19	888-3029-10718PB	NIPPLE, TBE, GALV, 1-1/4" x 8"
20	124-1670	PUSHER LINE KIT (FLEX) 1" x 20", OAL 24"	20	124-1680	PUSHER LINE KIT (FLEX) 1-1/4" x 20", OAL 24"
21	111-7200	FITTING, 1" MNPT x 1" M-FLARE	21	122-5290	FITTING, 1-1/4" MNPT x 1-1/4" M-FLARE
22	VC100	CHECK VALVE, SWING 1"	22	VC125	CHECK VALVE, SWING 1-1/4"
23	888-3028-10699PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1" x CLOSED	23	NOT USED	
24*	888-2125-106PB	MPV, 1", W/URETHANE SLEEVE	24*	888-2125-107PB	MPV, 1-1/4", W/URETHANE SLEEVE
25	SB-2-IR	THD QUICK COUPLING, IRON, 1-1/2"			
26	888-3028-10799PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x CLOSED			
27	888-3026-10907PB	BUSHING, GALV, 2" x 1-1/4"			
28	888-3028-10699PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1" x CLOSED	28	888-3028-10799PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x CLOSED
29	888-3026-10806PB	BUSHING, GALV, 1-1/2" x 1"	29	888-3026-10807PB	BUSHING, GALV, 1-1/2" x 1-1/4"
30*	1MV-C10	VALVE, #100 METERING, COMPLETE, 1-1/2" NPT INLET			
31	1MV-70	THRD CPLG, STD NPS, ALUMINUM, 2", (SB-5/P-32), 150 PSI MAX			
32*	1PV-C10	VALVE, #400 PINCH, COMPLETE			
33	888-4203-50202PB	SWIVEL 90°, 1/4" MNPT x 1/4" F			
34	888-4200-30202PB	HOSE, PUSH-ON INSERT 1/4" x 1/4" NPT			
35	888-4101-002PB	HOSE, AIR, INSTA-GRIP, BLACK, NOMINAL 1/4" ID, 300 PSI			
36	888-3026-10402PB	BUSHING, GALV, 1/2" x 1/4"			
37	888-2301-90290PB	STRAINER, BRZ 1/4" 90 MICRON			
38	888-4201-50202PB	STRAIGHT SWIVEL, 1/4" MNPT x 1/4" F			
39	888-2492-302PB	VALVE, 1/4", BALL CHECK			
40	888-3031-30202PB	HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST			
41	HT-60100	EMERGENCY AIR TANK			
42	888-2010-00901PB	GAUGE, PRESSURE, 0 - 160 PSI			
43	PB-03352	PULL CORD DRAIN VALVE			
44	888-2013-402PB	DUST ELIMINATOR, 1/4" MNPT			
45	103-9850	VALVE, DIAPHRAGM CONTROL			
46	888-3031-31200PB	NIPPLE, HEX, 1/4" MNPT x 1/8" MNPT			
47	888-4224-30002PB	PLUG, 1/4"			
48	888-4224-30102PB	BRASS SOCKET, 1/4"			
49	888-3026-50200PB	BUSHING, PLATED 1/4" x 1/8" NPT			
50	200-055	HOSE, TWINLINE CONTROL, ASSEMBLY, YEL/YEL W/BLACK STRIPE, NOMINAL 3/16" ID x 55'			
51**	888-2263-000PB	HANDLE, CONTROL, PNEUMATIC (DEADMAN CONTROL HANDLE)			
	888-2263-001PB	HANDLE, CONTROL, PNEUMATIC #2 (DEADMAN CONTROL HANDLE)			
	888-2263-002PB	HANDLE, CONTROL, PNEUMATIC #3 (DEADMAN CONTROL HANDLE)			

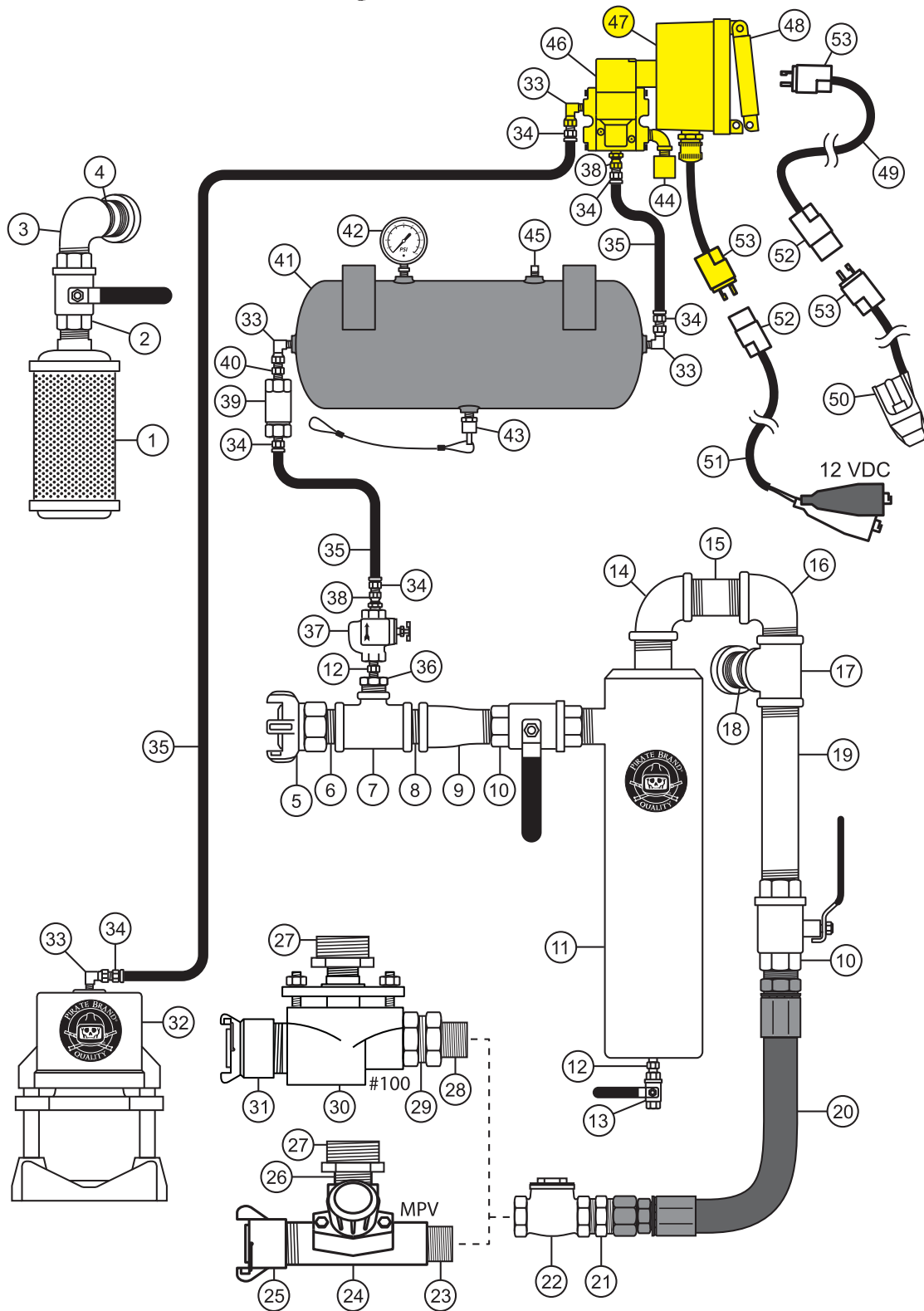
\* See "Valve Parts Lists" Section for detailed parts list.

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



# PIPE STRING PARTS LISTS

## KPH SERIES - Electric Controls





## PIPE STRING PARTS LISTS

### KPH SERIES - Electric Controls

3.5 CU. FT.			6.5 CU. FT.		
1	888-2011-006PB	MUFFLER, BLOWDOWN, 1" MNPT			
2	VB100	BALL VALVE, FULL PORT, 1" NPT			
3	888-3006-106PB	ELBOW, STREET 90°, GALV, 1"			
4	888-3029-10611PB	NIPPLE, TBE, GALV, 1" x 3"			
5	UM-100	AIR HOSE COUPLING, 2 LUG, 1" MALE NPT	5	UF-125	AIR HOSE COUPLING, 4 LUG, 1-1/4" FEMALE NPT
6		NOT USED	6	888-3029-10799PB	NIPPLE, TBE, GALV, 1-1/4" x CLOSED
7	888-3011-10604PB	TEE, GALV, 1" x 1" x 1/2"	7	888-3011-10704PB	TEE, GALV, 1-1/4" x 1-1/4" x 1/2"
8	888-3029-10699PB	NIPPLE, TBE, GALV, 1" x CLOSED	8	888-3029-10799PB	NIPPLE, TBE, GALV, 1-1/4" x CLOSED
9	888-3008-106PB	ELBOW, STREET, 45°, GALV, 1"	9		NOT USED
10	VB100	BALL VALVE, FULL PORT, 1" NPT	10	VB125	BALL VALVE, FULL PORT, 1-1/4" NPT
11	888-1200-006PB-P	MOISTURE TRAP 1" (1" M INLET x 1-1/4" M OUTLET, 150 CFM, POWDER COATED BLACK)	11	888-1200-007PB-P	MOISTURE TRAP 1-1/4" (1-1/4" M INLET x 1-1/4" M OUTLET, 150 CFM, POWDER COATED BLACK)
12	888-3031-31202PB	NIPPLE, HEX 1/4" MNPT x 1/4" MNPT			
13	VB025	BALL VALVE, FULL PORT, 1/4" NPT			
14	888-3000-107PB	ELBOW, GALV, 90°, 1-1/4"			
15	888-3029-10711PB	NIPPLE, TBE, GALV, 1-1/4" x 3"			
16	888-3006-107PB	ELBOW, STREET, 90°, GALV, 1-1/4"			
17	888-3013-10706PB	TEE, GALV, 1-1/4" x 1" x 1-1/4"	17	888-3011-107PB	TEE, GALV, 1-1/4"
18	888-3028-10711PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x 3"			
19	888-3029-10699PB	NIPPLE, TBE, GALV, 1" x CLOSED	19	888-3029-10718PB	NIPPLE, TBE, GALV, 1-1/4" x 8"
20	124-1670	PUSHER LINE KIT (FLEX) 1" x 20", OAL 24"	20	124-1680	PUSHER LINE KIT (FLEX) 1-1/4" x 20", OAL 24"
21	111-7200	FITTING, 1" MNPT x 1" M-FLARE	21	122-5290	FITTING, 1-1/4" MNPT x 1-1/4" M-FLARE
22	VC100	CHECK VALVE, SWING 1"	22	VC125	CHECK VALVE, SWING 1-1/4"
23	888-3028-10699PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1" x CLOSED	23		NOT USED
24*	888-2125-106PB	MPV, 1", W/URETHANE SLEEVE	24*	888-2125-107PB	MPV, 1-1/4", W/URETHANE SLEEVE
25	SB-2-IR	THD QUICK COUPLING, IRON, 1-1/2"			
26	888-3028-10799PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x CLOSED			
27	888-3026-10907PB	BUSHING, GALV, 2" x 1-1/4"			
28	888-3028-10699PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1" x CLOSED	28	888-3028-10799PB	NIPPLE, TBE, SCHEDULE 80, GALV, 1-1/4" x CLOSED
29	888-3026-10806PB	BUSHING, GALV, 1-1/2" x 1"	29	888-3026-10807PB	BUSHING, GALV, 1-1/2" x 1-1/4"
30*	1MV-C10	VALVE, #100 METERING, COMPLETE, 1-1/2" NPT INLET			
31	1MV-70	THRD CPLG, STD NPS, ALUMINUM, 2", (SB-5/P-32), 150 PSI MAX			
32*	1PV-C10	VALVE, #400 PINCH, COMPLETE			
33	888-4203-50202PB	SWIVEL 90°, 1/4" MNPT x 1/4" F			
34	888-4200-30202PB	HOSE, PUSH-ON INSERT 1/4" x 1/4" NPT			
35	888-4101-002PB	HOSE, AIR, INSTA-GRIP, BLACK, NOMINAL 1/4" ID, 300 PSI			
36	888-3026-10402PB	BUSHING, GALV, 1/2" x 1/4"			
37	888-2301-90290PB	STRAINER, BRZ 1/4" 90 MICRON			
38	888-4201-50202PB	STRAIGHT SWIVEL, 1/4" MNPT x 1/4" F			
39	888-2492-302PB	VALVE, 1/4", BALL CHECK			
40	888-3031-30202PB	HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST			
41	HT-60100	EMERGENCY AIR TANK			
42	888-2010-00901PB	GAUGE, PRESSURE, 0 - 160 PSI			
43	PB-03352	PULL CORD DRAIN VALVE			
44	888-2013-402PB	DUST ELIMINATOR, 1/4" MNPT			
	888-3006-102PB	ELBOW, STREET, 90°, GALV, 1/4"			
45	888-3014-102PB	PIPE PLUG, GALV, 1/4"			
	10-411	VALVE, CONTROL, 12 VDC			
	10-409	VALVE, CONTROL, END PLATE KIT			
46	10-407	COIL, CONTROL VALVE, 12 VDC			
	10-418	VALVE, CONTROL, REPAIR KIT			
47	40-101	K-SERIES ELECTRIC CONTROL ASSEMBLY, 12VDC W/ 2-LUG CONNECTORS			
48	88282995	WEATHERPROOF COVER WITH 2-LUG TWIST-LOCK FEMALE CONNECTOR			
49	888-7173-055PB	EXTN CORD W/CONNECTORS, 5S, 2 PRONG, 2 WIRE			
50	40-213	ELECTRIC SEALED REMOTE CONTROL SWITCH W/ BALL & CHAIN, 2 PRONG MALE CONNECTOR			
51	888-7172-012PB	POWER CORD, 25' 12VDC, 2-LUG			
52	10-352	FEMALE TWIST-LOCK CONNECTOR, 2 PRONG			
53	10-354	MALE TWIST-LOCK CONNECTOR, 2 PRONG			

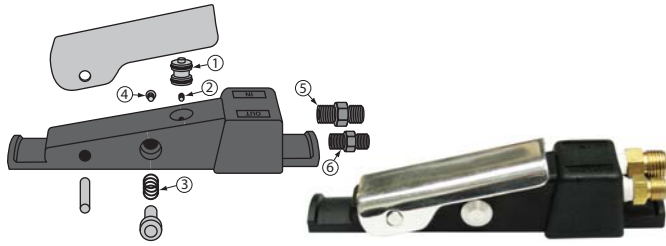
\* See "Valve Parts Lists" Section for detailed parts list.



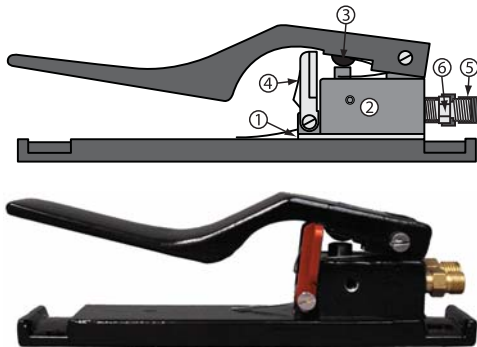
# 3.5 & 6.5 CU FT KPH SERIES BLASTERS - USER'S MANUAL



## CONTROL HANDLE PARTS LISTS



PNEUMATIC REMOTE CONTROL HANDLE (NOT FOR USE WITH STEEL ABRASIVES)	
	888-2263-000PB HANDLE, CONTROL, PNEUMATIC
	888-2263-00099PB HANDLE, CONTROL, PNEUMATIC, REPAIR KIT, INCLUDES # 1, 2, 3 & 4
5	888-3031-30202PB HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST
6	888-3031-30000PB HEX NIPPLE 1/8" NPT x 1/8" W/BALL ST



COMES STANDARD WITH PNEUMATIC KPH

PNEUMATIC REMOTE CONTROL HANDLE #2	
	888-2263-001PB HANDLE, CONTROL, PNEUMATIC #2
	888-2263-00199PB HANDLE, CONTROL, PNEUMATIC #2, REPAIR KIT, INCLUDES #1, 2 & 3
4	888-2263-00108PB HANDLE, CONTROL, PNEUMATIC #2, SAFETY FLAP
5	888-3031-30202PB HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST
6	888-3031-30000PB HEX NIPPLE 1/8" NPT x 1/8" W/BALL ST



PNEUMATIC REMOTE CONTROL HANDLE #3 (NOT FOR USE WITH STEEL ABRASIVES)	
	888-2263-002PB HANDLE, CONTROL, PNEUMATIC #3
	888-2263-00299PB HANDLE, CONTROL, PNEUMATIC #3, REPAIR KIT
	888-3031-30202PB HEX NIPPLE 1/4" NPT x 1/4" W/BALL ST
	888-3031-30000PB HEX NIPPLE 1/8" NPT x 1/8" W/BALL ST

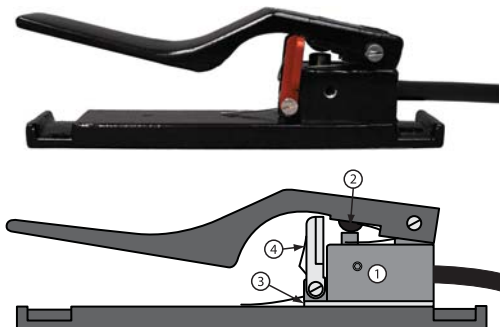


COMES STANDARD WITH ELECTRIC KPH

ELECTRIC SEALED REMOTE CONTROL SWITCH W/ BALL & CHAIN	
40-213	ELECTRIC SEALED REMOTE CONTROL SWITCH W/ BALL & CHAIN, 2 PRONG MALE CONNECTOR
40-216	BALL & CHAIN ONLY FOR ELECTRIC SEALED REMOTE CONTROL SWITCH
PB-31131	1/2" 3 PART SEALED CONTROL CORD CONNECTOR (REQUIRED WHEN USING STEEL ABRASIVES)



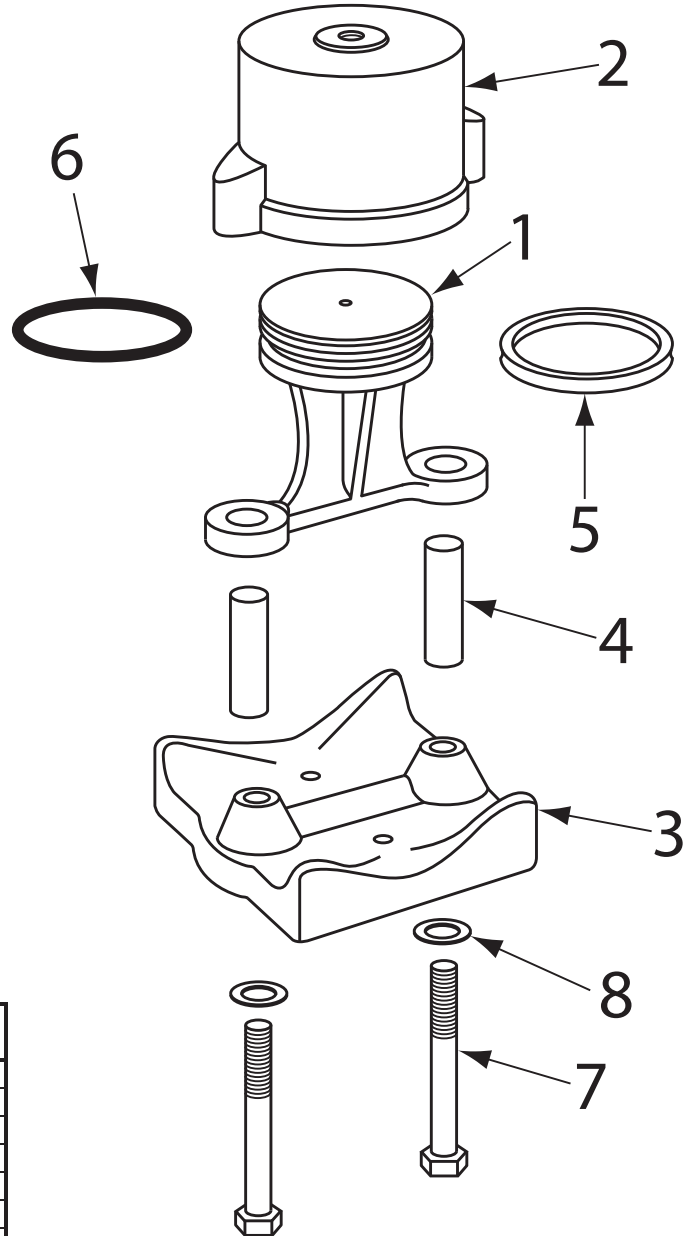
ELECTRIC REMOTE CONTROL HANDLE (NOT FOR USE WITH STEEL ABRASIVES)	
	888-2263-400PB HANDLE, CONTROL, ELECTRIC



ELECTRIC REMOTE CONTROL HANDLE #2	
	888-2263-401PB HANDLE, CONTROL, ELECTRIC #2
	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



# ☠ VALVE PARTS LISTS ☠

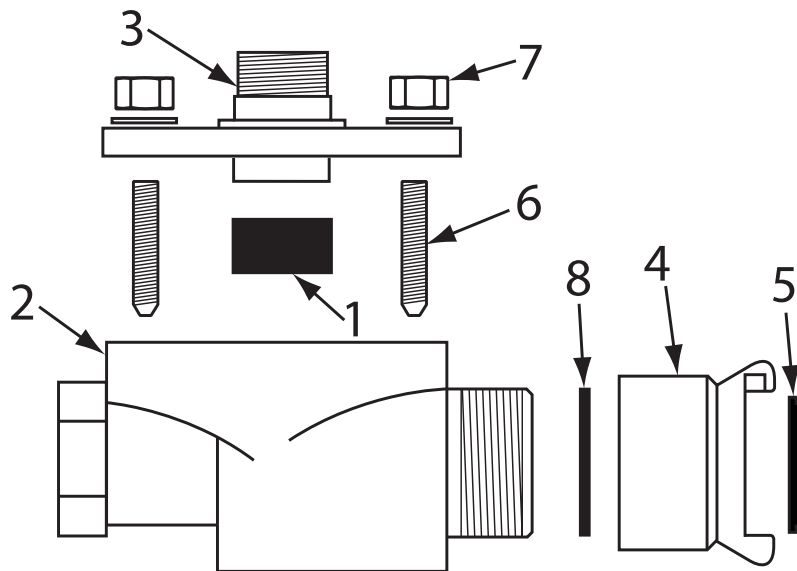


#400 Pinch Valve		
	1PV-C10	VALVE, #400 PINCH, COMPLETE
1	1P3-30	PISTON
2	1P3-40	CYLINDER
3	1P3-50	BASE
4	1P3-60	SPACER
5	1P3-70	"U" SCRAPER
6	1P3-80	O-RING
7	1P3-90	BOLT
8	1P4-00	WASHER





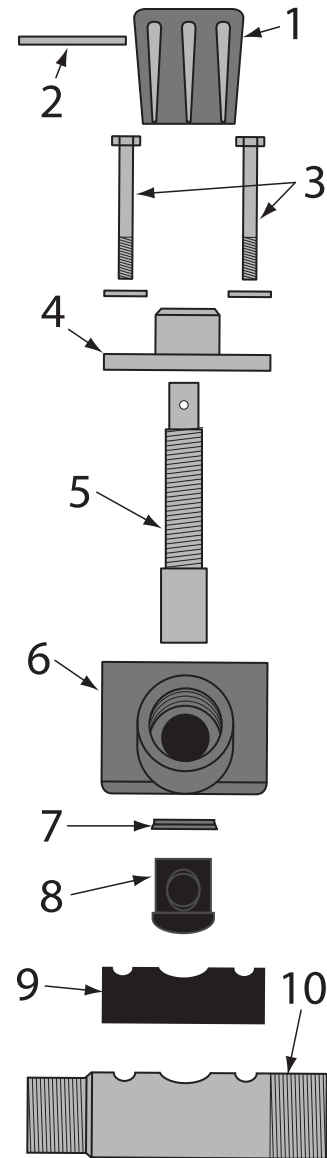
# ☠ VALVE PARTS LISTS ☠



#100 Metering Valve		
	1MV-C10	VALVE, #100 METERING, COMPLETE, 1-1/2" NPT INLET
1	1MV-40	DONUT WASHER
2	1MV-50	BASE, 1-1/2" INLET
3	1MV-60	TOP
4	1MV-70	THRUD CPLG, STD NPS, ALUMINUM, 2", (SB-5/P-32)
5	SBG-1	GASKET, STANDARD
6	1MV-90	1/2" STUD
7	1MV-100	1/2" NUT
8	1MV-110	WASHER



# ☠ VALVE PARTS LISTS ☠



## MPV (Manual Plunger Valve)

	888-2125-106PB	VALVE, MANUAL PLUNGER, 1", W/URETHANE SLEEVE
	888-2125-107PB	VALVE, MANUAL PLUNGER, 1-1/4", W/URETHANE SLEEVE
	888-2125-108PB	VALVE, MANUAL PLUNGER, 1-1/2", W/URETHANE SLEEVE
	888-2125-10099PB	VALVE, MANUAL PLUNGER, REPAIR KIT W/URETHANE SLEEVE, INCLUDES # 2, 5, 7, 8 & 9
	888-2125-10098PB	VALVE, MANUAL PLUNGER, SEAL KIT, W/URETHANE SLEEVE, INCLUDES 7, 8 & 9
1	888-2125-00001PB	VALVE, MANUAL PLUNGER, KNOB
2	888-2125-00004PB	VALVE, MANUAL PLUNGER, ROLL PIN
3	888-7010-50556PB	VALVE, MANUAL PLUNGER, BOLT W/WASHER
4	888-2125-00002PB	VALVE, MANUAL PLUNGER, CAP
5	888-2125-00005PB	VALVE, MANUAL PLUNGER, PLUNGER
6	888-2125-00006PB	VALVE, MANUAL PLUNGER, BODY
7	888-2148-00006PB	VALVE, PLUNGER SEAL
8	888-2125-10008PB	VALVE, MANUAL PLUNGER, SLEEVE, URETHANE
9	888-2125-00009PB	VALVE, MANUAL PLUNGER, GASKET
10	888-2125-00610PB	VALVE, MANUAL PLUNGER, PIPE NIPPLE 1" FEMALE x 1-1/2" MALE
	888-2125-00710PB	VALVE, MANUAL PLUNGER, PIPE NIPPLE 1-1/4" MALE x 1-1/2" MALE
	888-2125-00810PB	VALVE, MANUAL PLUNGER, PIPE NIPPLE 1-1/2" MALE x 1-1/2" MALE



# 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'
10-112RED-025-1	1-1/2" AIR HOSE ASSEMBLY, 25'
10-112RED-050-1	1-1/2" AIR HOSE ASSEMBLY, 50'
27WT-1	SAFETY CABLE, 1/2" - 1" HOSE TO EQUIP.
27WC-1	SAFETY CABLE, 1/2" - 1" HOSE TO HOSE.
27WT-2	SAFETY CABLE, 1-1/2" - 3" HOSE TO EQUIP.
27WC-2	SAFETY CABLE, 1-1/2" - 3" HOSE TO HOSE.

BLAST HOSE	
Nozzles Not Included	
10-034BLK-050-3AL	3/4" BLAST HOSE ASSEMBLY, 50', INCLUDES NOZZLE HOLDER
10-100BLK-050-3AL	1" BLAST HOSE ASSEMBLY, 50', INCLUDES NOZZLE HOLDER
10-114BLK-050-3AL	1-1/4" BLAST HOSE ASSEMBLY, 50', INCLUDES NOZZLE HOLDER
10-034BLK-050-4AL	3/4" EXTENSION HOSE ASSEMBLY, 50'
10-100BLK-050-4AL	1" EXTENSION HOSE ASSEMBLY, 50'
10-114BLK-050-4AL	1-1/4" EXTENSION HOSE ASSEMBLY, 50'
27WT-1	SAFETY CABLE, 1/2" - 1" HOSE TO EQUIP.
27WC-1	SAFETY CABLE, 1/2" - 1" HOSE TO HOSE.
27WT-15	SAFETY CABLE, 1-1/4" HOSE TO HOSE.
27WT-2	SAFETY CABLE, 1-1/4" - 3" HOSE TO EQUIP.



## BLASTING SET-UP



### NOZZLES

1" ENTRY NOZZLES FOR USE WITH 3/4" BLAST HOSE	
1201-1172	#3 TUNGSTEN CARBIDE NOZZLE
1201-1173	#4 TUNGSTEN CARBIDE NOZZLE
1" ENTRY NOZZLES FOR USE WITH 1" BLAST HOSE	
1201-1173	#4 TUNGSTEN CARBIDE NOZZLE
1201-1174	#5 TUNGSTEN CARBIDE NOZZLE
1201-1175	#6 TUNGSTEN CARBIDE NOZZLE
1-1/4" ENTRY NOZZLES FOR USE WITH 1-1/4" BLAST HOSE	
1348-555	#5 TUNGSTEN CARBIDE NOZZLE
1348-556	#6 TUNGSTEN CARBIDE NOZZLE
1348-557	#7 TUNGSTEN CARBIDE NOZZLE
1348-558	#8 TUNGSTEN CARBIDE NOZZLE



### AIR DRYERS

888-1310-021PB	AIR DRYER ADPB-250 CFM @ 100 PSIG OR 359 CFM @ 150 PSIG
888-1310-041PB	AIR DRYER ADPB-400 CFM @ 100 PSIG OR 574 CFM @ 150 PSIG
888-1310-071PB	AIR DRYER ADPB-750/950, 800 CFM @ 100 PSIG OR 1149 CFM @ 150 PSIG
888-1310-121PB	AIR DRYER ADPB-1200 CFM @ 100 PSIG OR 1723 CFM @ 150 PSIG
888-1310-161PB	AIR DRYER ADPB-1600 CFM @ 100 PSIG OR 2297 CFM @ 150 PSIG



### BREATHING EQUIPMENT

NV3-702-50-PFC	RPB NOVA 3™ RESPIRATOR PACKAGE
407000-PFC	NOVA 2000™ RESPIRATOR PACKAGE
407800-PFC	ASTRO™ RESPIRATOR PACKAGE
407001	COOL TUBE
407024	HOT TUBE
407200	RADEX™ CO MONITOR (120V)
407201	RADEX™ CO MONITOR (12V)

RESPIRATOR PACKAGES INCLUDE RESPIRATOR HELMET, 50' BREATHING AIR SUPPLY HOSE, AND RADEX™ AIRLINE FILTER.



### 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







## AVAILABLE ACCESSORIES

### A LIDS

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.

888-5010-030PB	LID FOR 3.5 KPH ABRASIVE BLASTERS
888-5010-060PB	LID FOR 6.5 KPH ABRASIVE BLASTERS

### B REGULATOR KITS

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

888-2003-006PB-CI	1" REGULATOR KIT (3.5 CU FT KPH)
888-2003-007PB-CI	1-1/4" REGULATOR KIT (6.5 CU FT KPH)

### C RELIEF VALVE KIT

ADDING THIS ASME RELIEF VALVE KIT TO YOUR BLASTER CAN PREVENT DANGEROUS OVERPRESSURIZATION. LOCAL CODES MAY REQUIRE A DIFFERENT VALVE

888-2470-00702PB	SMALL BLASTER RELIEF VALVE KIT
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### BIG-GUN™ BLAST HOSE & NOZZLES

High Performance Blasting



#### BIG-GUN™ HOSES

10-114BLK-050-3XAL	1-1/4" BLAST HOSE ASSEMBLY, BIG GUN FULL FLOW, W/ COUPLINGS (INCLUDES): (50') BLACK BLAST HOSE, (1) ALUMINUM FULL PORT QUICK COUPLER & (1) ALUMINUM NOZZLE HOLDER
10-114BLK-050-4XAL	1-1/4" BLAST HOSE EXTENSION ASSEMBLY, BIG GUN FULL FLOW W/ COUPLINGS (INCLUDES): (50') BLACK BLAST HOSE & (2) ALUMINUM FULL PORT QUICK COUPLERS

#### BIG-GUN™ NOZZLES

888-5001-305PB	#5 BIG GUN TUNGSTEN CARBIDE NOZZLE
888-5001-306PB	#6 BIG GUN TUNGSTEN CARBIDE NOZZLE
888-5001-307PB	#7 BIG GUN TUNGSTEN CARBIDE NOZZLE
888-5001-308PB	#8 BIG GUN TUNGSTEN CARBIDE NOZZLE
888-5001-310PB	#10 BIG GUN TUNGSTEN CARBIDE NOZZLE

#### COUPLINGS

FULL PORT COUPLINGS ARE REQUIRED TO CONNECT BIG-GUN BLAST HOSE TO YOUR KPH BLASTER	
SB-4X-AL	2" ALUMINUM FULL PORT QUICK COUPLING (USE WITH #100 METERING VALVE)
SB-3X-A;	1-1/2" ALUMINUM FULL PORT QUICK COUPLING (USE WITH MPV METERING VALVE)



### D UMBRELLA

FOR STATIONARY BLASTERS WHERE ABRASIVE IS BEING FED FROM AN OVERHEAD SYSTEM THE UMBRELLA WILL KEEP EXCESS WEIGHT OFF OF THE POP-UP ALLOWING IT TO FUNCTION PROPERLY. **REQUIRES REMOVAL OF THE BUILT-IN BAG BREAKER AND SCREEN.**

290-420	6" POP UP VALVE UMBRELLA
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### SCREENS

FOR BLASTERS EQUIPPED WITH AN ABRASIVE UMBRELLA, USE THESE SCREENS TO KEEP DEBRIS FROM ENTERING THE PRESSURE VESSEL. **ONLY USED WITH KPH SERIES BLASTERS WHERE THE BAG BREAKER HAS BEEN REMOVED TO ACCOMMODATE AN ABRASIVE UMBRELLA.**

888-5011-030PB	SCREEN FOR 3.5 KPH ABRASIVE BLASTERS
888-5011-060PB	SCREEN FOR 6.5 KPH ABRASIVE BLASTERS



### 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 KPH WITH PNEUMATIC CONTROLS ONLY)**

PB-9805023P-01	DUAL TIMER CONTROL BOX W/ KEY RESET & MOUNTING BRACKET
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### 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-K	POWER SUPPLY 120AC INPUT/12VDC @ 2.5 AMP OUTPUT - 2 LUG FOR KPH
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# NOTES

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# 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.*