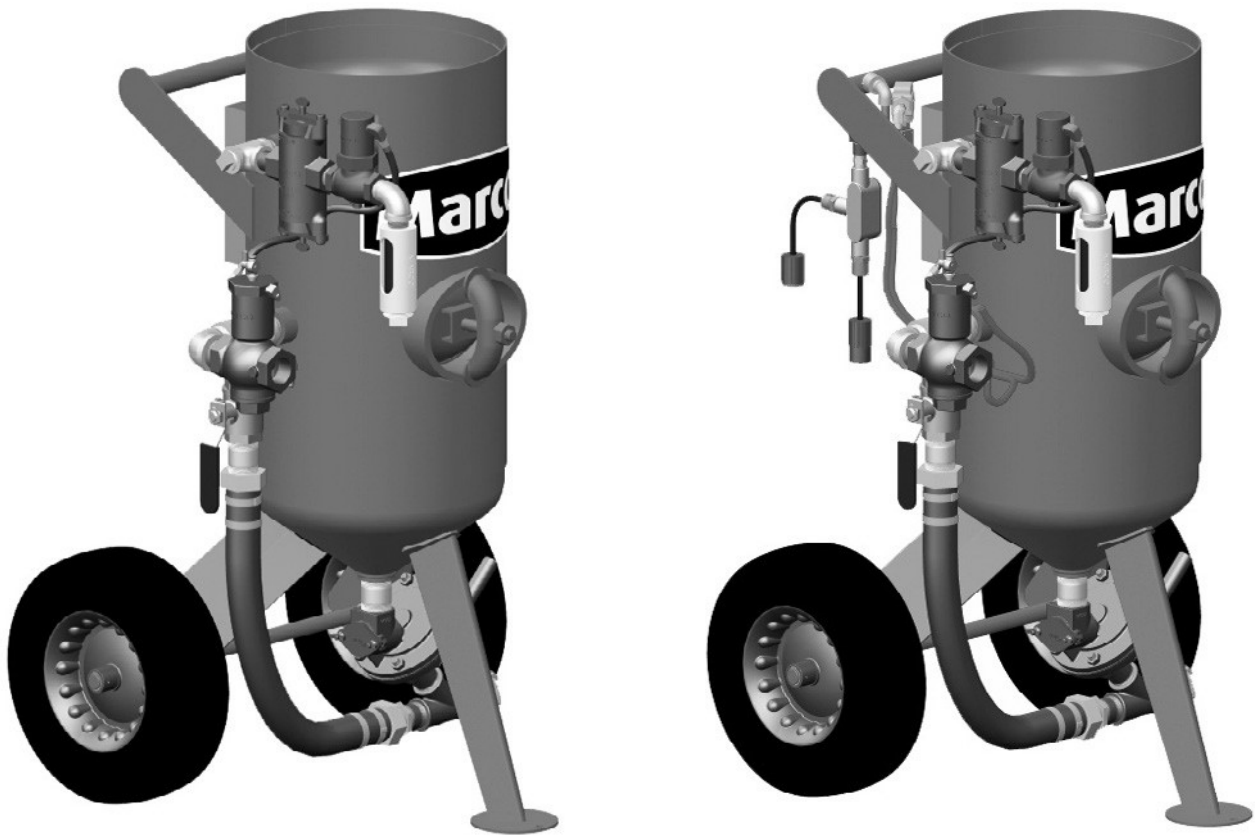


OPERATOR'S MANUAL

BLASTMASTER® 3.0 CU. FT. C-SERIES ABRASIVE BLASTING POT



**BUILT MARCO
TOUGH**
MARCO MANUFACTURED

⚠ WARNING

Before using this equipment, read, understand and follow all instructions in the Operator's Manuals provided with this equipment. If the user and/or assistants cannot read or understand the warnings and instructions, the employer of the user and/or assistants must provide adequate and necessary training to ensure proper operation and compliance with all safety procedures pertaining to this equipment. If Operator's Manuals have been lost, please visit www.marco.us, or contact Marco at 563.324.2519 for replacements. Failure to comply with the above warning could result in death or serious injury.

Marco®

Company Profile

Since 1944, Marco has developed a strong tradition of providing innovative and reliable products and services to the surface preparation and protective coatings industries. We are the world's premier provider of Abrasives, Blasting Equipment, Coating and Painting Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Through innovative designs and a total commitment to quality, Marco manufactures products that increase production rates, create a safer workplace, and reduce maintenance costs. Marco's industry experience, manufacturing capabilities, legendary customer service, product availability, logistics services, and technology leadership is your assurance that we deliver high quality products and services, providing the best value to you, our customer.

The Marco Difference

- **Industry Experience** – With Marco on your team, you have access to expertise which can only come from decades of industry leadership. We have organized our engineering department, production specialists, customer operations, and safety support into a “Center of Competence.” As a Marco customer, you have access to hundreds of years of cumulative experience related to your operations.
- **Manufacturing Excellence** – Marco is a U.S. based, ISO 9001:2008 certified manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Marco's engineers benchmark the industry to ensure that we design and manufacture superior products that set the “Gold Standard” for performance, safety, and quality.
- **Legendary Customer Service** – Marco's legendary customer service team is staffed by friendly, highly-trained individuals who are focused on providing the highest level of product support, order accuracy, and customer satisfaction.
- **Product Availability** – We stock over 10,000 SKU's and have over 45 shipping locations to serve North American and International markets for all major brands of blasting and painting equipment. As the largest provider of surface preparation and protective coatings equipment in the world, our inventory levels and product availability are unmatched.
- **Logistics Services** – Marco's in-house logistics team is dedicated to moving your shipment anywhere in the world. We move over 14,000 truckloads every year, allowing you to save on freight costs by leveraging our buying power. Lower your process costs with a single invoice, which includes product and freight.
- **Technology Leadership** – Our website provides: Operator's Manuals, Part Numbers and Schematics Guides, MSDS information, and Features, Advantages, and Benefits Guides, providing access to information 24/7. Our Extranet application allows you to receive quotes and place orders online. Our Intranet maintains a complete record of your purchase history to assist with ongoing support of your existing equipment and future purchasing decisions.

Vision Statement

Marco is the world's premier provider of Abrasives, Blasting Equipment, Coating and Painting Equipment, Engineered Systems, Rental Equipment, Safety Equipment, Service, and Repair.

Mission Statement

Marco provides strong leadership and innovation to the surface preparation and protective coatings industries. We dedicate our efforts to the continuous improvement of our products, services, processes, people, and most importantly, the quality of our customer's experience.

Quality Policy

Marco is committed to providing superior quality in the design, manufacturing, distribution, rental, service, and repair of our products. Our ISO 9001:2008 certification extends throughout all operations in all locations. Continuous improvement of our processes and supply chain Integration comprise the core of our business strategy for delivering exceptional quality and value in all Marco products and services.

Management Philosophy

We are a company dedicated to the success of every customer and associate. We discuss, debate, challenge, measure, and test our ideas. We will be boundless and limitless in our passion to improve. Through sound leadership and dedicated associates, we will ensure a long term, profitable future for Marco, our associates, customers, and suppliers.

TABLE OF CONTENTS

Company Profile	1	Troubleshooting	16
Definition of Terms	2	Assembly Part Numbers and Schematics	17
Hazard Identifications	3	Inspection Door Assembly	17
Air & Abrasive Consumption Chart	6	Pop-up Valve Assembly	18
Daily Pre-Operation Checklist	8	Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Pneumatic	19
Operating Instructions	9	Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Electric	21
Description	9	Pusher Line Assembly	23
Operational Requirements	9	Exhaust Muffler Assembly	24
Initial Setup	9	OPTIONAL ACCESSORIES	25
Operating Instructions	9	1-1/4" Junior Extractor Abrasive Blasting Pot Moisture Separator	25
Blast Hoses and Connections	11	Lid and Screen	26
Specifications	12	Limited Warranty	30
Maintenance	13	Disclaimer of Warranty	30
Remove & Install Inspection Door Assembly	13	Exclusive Remedy for Warranty Claims	30
Remove & Install Pop-up Valve	14	Limitation of Remedies	30
Maintenance Schedules Quick Reference Charts	15		

DEFINITION OF TERMS

DANGER

This is an example of danger. This indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION

This is an example of a caution. This indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It can also be used to alert against unsafe practices.

WARNING

This is an example of a warning. This indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

NOTICE

This is an example of a notice. This indicates policy or practice directly related to safety of personnel or protection of property.

HAZARD IDENTIFICATIONS

WARNING

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- ▶ OSHA sets exposure limits to protect workers from exposure to respirable crystalline silica, 29 CFR 1910.1053. Airborne dust could increase the exposure levels beyond permissible limits. Breathing dust containing silica could cause silicosis, a fatal lung disease. Breathing dust during abrasive blasting operations, post-blast cleaning operations, and/or servicing equipment within the abrasive blasting area may expose an individual to conditions that could cause asbestosis, lead poisoning and/or other serious or fatal diseases. Harmful dust containing toxic material from abrasives or surfaces being abrasive blasted can remain suspended in the air for long periods of time after abrasive blasting has ceased. A NIOSH-approved, well-maintained, respirator designed for the specific operation being performed must be used by anyone abrasive blasting, handling or using the abrasive, and anyone in the area of the dust.
- ▶ Contact NIOSH and OSHA offices to determine the proper respirator for your specific application. The air supplied to the respirator must be at least Grade D quality as described in Compressed Gas Association Commodity Specification G-7.1 and as specified by OSHA Regulation 1910.134. Ensure air filter and respirator system hoses are not connected to non-air sources or in-plant lines that may contain nitrogen, oxygen, acetylene or other non-breathable gases. Before removing respirator, use an air monitoring instrument to determine if the atmosphere is safe to breathe.
- ▶ You must comply with all OSHA, local, City, State, Province, Country and jurisdiction regulations, ordinances and standards, related to your particular work area and environment. Keep unprotected individuals out of the work area.
- ▶ Abrasive blasting operators must receive thorough training on the use of abrasive resistant attire which includes: supplied-air respirator, abrasive blasting suit, safety shoes, gloves, ear protection and eye protection. Protect the operator and bystanders by complying with NIOSH and OSHA Safety Standards.
- ▶ Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions.
- ▶ OSHA requires abrasive blasting nozzles be equipped with an operating valve, which shall be designed to be held open only by continuous hand pressure and shall close immediately upon release of hand pressure (i.e., a “deadman” control). The valve shall not be modified in any manner that would allow it to remain open without the application of continuous hand pressure by the operator. Failure to comply with the above warning could result in release of high speed abrasive and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)
- ▶ Point the abrasive blasting nozzle only at the surface being abrasive blasted. Never point the abrasive blasting nozzle or abrasive stream at yourself or others.
- ▶ Unless otherwise specified, maximum working pressure of abrasive blasting pots and related components must not exceed 150 psi. Exceeding maximum working pressure of 150 psi could cause the abrasive blasting pot and components to burst. Failure to comply with the above warning could result in death or serious injury.
- ▶ Never weld, grind or drill on the abrasive blasting pot (or any pressure vessel). Doing so will void ASME certification and manufacturer’s warranty. Welding, grinding or drilling on the abrasive blasting pot (or any pressure vessel) could weaken the vessel causing it to burst. Failure to comply with the above warning could result in death or serious injury. (ASME Pressure Vessel Code, Section VIII, Division 1)
- ▶ This equipment is not intended for use in any area that might be considered a hazardous location, as described in the National Electric Code NFPA 70, Article 500. Use of this equipment in a hazardous location could cause an explosion or electrocution.
- ▶ Never attempt to move an abrasive blasting pot containing abrasive. Never attempt to manually move abrasive blasting pots greater than 6.5 cubic foot capacity. Always use at least two capable people to manually move an abrasive blasting pot on flat, smooth surfaces. A mechanical lifting device must be used if an abrasive blasting pot is moved in any other manner.

HAZARD IDENTIFICATIONS

WARNING

Failure to comply with ANY WARNING listed below could result in death or serious injury.

- ▶ This product is not for use in wet environments. Always use a Ground Fault Interrupter Circuit (GFI) for all electrical power source connections. Use of this product in wet environments could create a shock or electrocution hazard.
- ▶ Frozen moisture could cause restrictions and obstructions in pneumatic control lines. Any restriction or obstruction in the pneumatic control lines could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air. In conditions where moisture may freeze in the control lines an antifreeze injection system approved for this application can be installed.
- ▶ Do not cut, obstruct, restrict or pinch pneumatic control lines. Doing so could prevent the proper activation and deactivation of the remote control system, resulting in the release of high speed abrasive and compressed air.
- ▶ Use of Marco remote control switches with other manufacturer's remote control systems could cause unintended activation of remote control systems resulting in the release of high speed abrasive and compressed air. Only Marco remote control switches should be used with Marco remote control systems.
- ▶ Always be certain to have secure footing when abrasive blasting. There is a recoil hazard when abrasive blasting starts that may cause user to fall and misdirect the abrasive stream at operator or bystander.
- ▶ Never use an abrasive blasting pot or attachments as a climbing device. The person could slip and fall. The abrasive blasting pot could become unstable and tip over.
- ▶ For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator's manuals, information, training, instructions and warnings, for the proper and intended use of all equipment.
- ▶ Flammable fumes, such as solvent and paint fumes in the work area can present an ignition or explosion hazard if allowed to collect in adequate concentrations. To reduce conditions that could result in a fire or an explosion, provide adequate ventilation, eliminate all ignition or spark sources, keep the work area free of debris, store solvents and solvent contaminated rags in approved containers, follow proper grounding procedures, do not plug/unplug power cord or turn on/off power switches when flammable fumes are present, keep a working fire extinguisher or provide another fire suppression system in the work area. Cease all operations and correct condition if a spark or ignition source is identified during operation.
- ▶ Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.
- ▶ Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts.
- ▶ Surfaces of heated supply tanks, drums and/or lines as well as the adjoining plumbing may become hot during normal use. Do not touch these heated surfaces without proper protection. Deactivate and allow sufficient time for all surfaces to cool before attempting any maintenance.
- ▶ High-pressure fluid from gun, hose leaks, or ruptured components can pierce skin and can cause a serious injury that may result in amputation. Do not point gun or spray tip at anyone or at any part of the body. Keep clear of any leaks or ruptures. Depressurize the entire system before attempting cleaning, inspecting, or servicing equipment.
- ▶ Exposure to toxic fluids or fumes may occur during the normal operation of this system. Before attempting to fill, use, or service this system, read SDS's to know the specific hazards of the fluids you are using. Always use proper Personal Protective Equipment when attempting to fill, use, or service this system.
- ▶ The use of this product for any purpose other than originally intended or altered from its original design is prohibited.
- ▶ Never hang objects from the abrasive blasting pot handle. Doing so may cause the abrasive blasting pot to become unstable and tip over.

HAZARD IDENTIFICATIONS

CAUTION

Failure to comply with ANY CAUTION listed below may result in minor or moderate injury.

- ▶ Static electricity can be generated by abrasive moving through the abrasive blasting hose causing a shock hazard. Prior to use, ground the abrasive blasting pot and abrasive blasting nozzle to dissipate static electricity.
- ▶ High decibel noise levels are generated during the abrasive blasting process which may cause loss of hearing. Ensure appropriate Personal Protective Equipment and hearing protection is in use.

NOTICE

Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

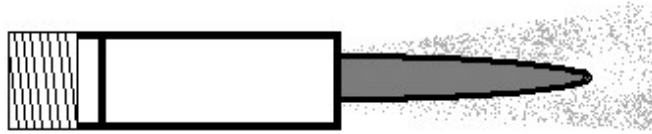
- ▶ See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- ▶ Always use abrasive that is dry and properly screened. This will reduce the potential for obstructions to enter the remote control system, abrasive metering valve and abrasive blasting nozzle.
- ▶ Moisture build-up occurs when air is compressed. Any moisture within the abrasive blasting system will cause abrasive to clump, clogging metering valves, hoses and nozzles. Install an appropriately sized moisture separator at the inlet of the abrasive blasting system. Leave the moisture separator petcock slightly open to allow for constant release of water. If insufficient volume of air exists and petcock is unable to be left open (at all times) petcock should be opened frequently to release water.
- ▶ To reduce abrasive intrusion in the air supply hose, depressurize the abrasive blasting pot before shutting off air supply from compressor.
- ▶ Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liner or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzles placed into service may not be returned. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.
- ▶ Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.
- ▶ Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16" or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16" larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.

AIR & ABRASIVE CONSUMPTION CHART

NOTICE

Failure to comply with ANY NOTICE listed below could pose a hazard to personnel or property.

- ▶ See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- ▶ When it comes to air & abrasive mixtures, more is not necessarily better. Optimum abrasive blasting efficiency takes place when a lean air & abrasive mixture is used. To correctly set the abrasive metering valve, begin with the valve fully closed and slowly increase the amount of abrasive entering the airstream. As you increase the abrasive flow, watch for a “blue flame” at the exit of the abrasive blasting nozzle. Faster cutting, reduced abrasive consumption and lower clean up costs, are benefits of the “blue flame”.
- ▶ Abrasive blasting at optimal pressure for the abrasive used is critical to productivity. Example: For an abrasive with an optimal abrasive blasting pressure of 100 psi at the abrasive blasting nozzle, one pound per square inch of pressure loss will reduce abrasive blasting efficiency by 1.5%. A 10 psi reduction in air pressure will cause a 15% loss of efficiency. Use a Needle Pressure Gauge to identify pressure drops in your system. Consult with your abrasive supplier for the requirements of your abrasive.



“Blue Flame”

NOTICE

Inspect abrasive blasting nozzle before placing into service. Damage to abrasive blasting nozzle liner or jacket may occur during shipping. If you receive a damaged abrasive blasting nozzle, contact your distributor immediately for replacement. Abrasive blasting nozzles placed into service may not be returned. Abrasive blasting nozzle liners are made of fragile materials and can be damaged by rough handling and striking against hard surfaces. Never use a damaged abrasive blasting nozzle.

Air & Abrasive Consumption Chart*

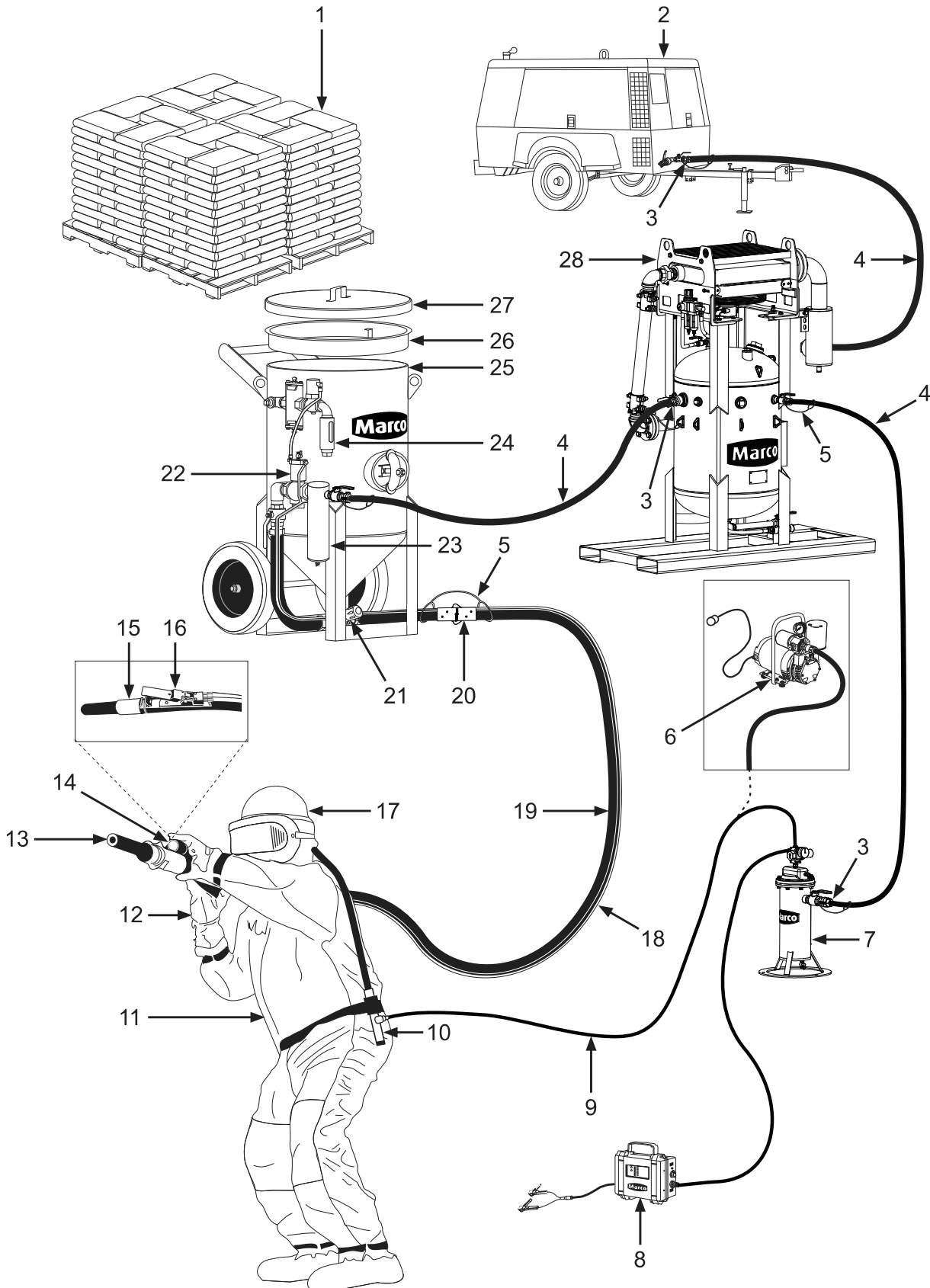
Nozzle Orifice	Pressure at the Nozzle (PSI)								Air (in cfm), Abrasive & Compressor Requirements
	50	60	70	80	90	100	125	140	
No. 2 (1/8")	11	13	15	17	18	20	25	28	Air (cfm)
	67	77	88	101	112	123	152	170	Abrasive (lbs/hr)
	2.5	3	3.5	4	4.5	5	5.5	6.2	Compressor Horsepower
No. 3 (3/16")	26	30	33	38	41	45	55	62	Air (cfm)
	150	171	196	216	238	264	319	357	Abrasive (lbs/hr)
	6	7	8	9	10	10	12	13	Compressor Horsepower
No. 4 (1/4")	47	54	61	68	74	81	98	110	Air (cfm)
	268	312	354	408	448	494	608	681	Abrasive (lbs/hr)
	11	12	14	16	17	18	22	25	Compressor Horsepower
No. 5 (5/16")	77	89	101	113	126	137	168	188	Air (cfm)
	468	534	604	672	740	812	982	1100	Abrasive (lbs/hr)
	18	20	23	26	28	31	37	41	Compressor Horsepower
No. 6 (3/8")	108	126	143	161	173	196	237	265	Air (cfm)
	668	764	864	960	1052	1152	1393	1560	Abrasive (lbs/hr)
	24	28	32	36	39	44	52	58	Compressor Horsepower
No. 7 (7/16")	147	170	194	217	240	254	314	352	Air (cfm)
	896	1032	1176	1312	1448	1584	1931	2163	Abrasive (lbs/hr)
	33	38	44	49	54	57	69	77	Compressor Horsepower
No. 8 (1/2")	195	224	252	280	309	338	409	458	Air (cfm)
	1160	1336	1512	1680	1856	2024	2459	2754	Abrasive (lbs/hr)
	44	50	56	63	69	75	90	101	Compressor Horsepower
No. 10 (5/8")	308	356	404	452	504	548	663	742	Air (cfm)
	1875	2140	2422	2690	2973	3250	3932	4405	Abrasive (lbs/hr)
	68.5	79.5	90	100.5	112	122	146	165	Compressor Horsepower
No. 12 (3/4")	432	504	572	644	692	784	948	1062	Air (cfm)
	2672	3056	3456	3840	4208	4608	5570	6238	Abrasive (lbs/hr)
	96	112	127	143	154	174.5	209	236	Compressor Horsepower

*Abrasive consumption is based on abrasive with a bulk density of 100 lbs per Cubic Foot

NOTICE

Replace abrasive blasting nozzle if liner or jacket is cracked or damaged. Replace abrasive blasting nozzle if original orifice size has worn 1/16" or more. Determine abrasive blasting nozzle wear by inserting a drill bit 1/16" larger than original size of abrasive blasting nozzle orifice. If the drill bit passes through abrasive blasting nozzle, replacement is needed.

"THE BIG PICTURE"



DAILY PRE-OPERATION CHECKLIST

Daily Pre-operation Checklist

- 1. Abrasive
- 2. Air Compressor
- 3. Air Hose Couplings & Gaskets
- 4. Air Hose
- 5. Safety Cable
- 6. Ambient Air Pump*
- 7. Breathing Air Filter
- 8. CO Monitor
- 9. Breathing Line
- 10. Climate Control Device
- 11. Abrasive Blasting Suit
- 12. Gloves
- 13. Abrasive Blasting Nozzle
- 14. Lighting System*
- 15. Abrasive Blasting Nozzle Holder
- 16. Remote Control Switch
- 17. Supplied-Air Respirator
- 18. Control Line
- 19. Abrasive Blasting Hose
- 20. Abrasive Blasting Hose Couplings & Gaskets
- 21. Abrasive Metering Valve
- 22. Remote Control System
- 23. Moisture Separator
- 24. Abrasive Blasting Pot Exhaust Muffler
- 25. Abrasive Blasting Pot
- 26. Abrasive Blasting Pot Screen
- 27. Abrasive Blasting Pot Lid
- 28. Aftercooler*

* *Optional or alternative device.
Ask your Marco Representative
for more details.*

Abrasive – Select the correct Abrasive (1) for the application. Review the SDS (*Safety Data Sheet*) to ensure the correct PPE (*Personal Protective Equipment*) and Environmental Controls have been selected and are in place.

Air Compressor – Select an Air Compressor (2) of adequate size to support all equipment requirements. Refer to “Air & Abrasive Consumption Chart” for Abrasive Blasting Nozzle (13) air consumption requirements. Before connecting Air Hose (4), sample the air being produced by the air compressor (2) to ensure it is free of petroleum contaminants.

Air Hose, and Air Hose Couplings & Gaskets – Select Air Hoses (4) of sufficient size to support all subsequent volumetric requirements and with a sufficient PSI (*pound per square inch*) rating. Inspect all Air Hoses (4), and Air Hose Couplings & Gaskets (3) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Hose, Abrasive Blasting Hose Couplings & Gaskets, and Abrasive Blasting Nozzle Holder – Select an Abrasive Blasting Hose (19) that has an inner diameter 3 to 4 times larger than your Abrasive Blasting Nozzle (13). Inspect Abrasive Blasting Hose (19), Abrasive Blasting Hose Couplings & Gaskets (20), and Abrasive Blasting Nozzle Holder (15) for damage or wear. Repair or replace damaged or worn components.

Safety Cables – Install a Safety Cable (5) at each Abrasive Blasting Hose (19), and Air Hose (4) connection points.

Aftercooler and Moisture Separator – Ensure Aftercooler (28) is positioned on stable ground. Keep petcock drain of Moisture Separator (23) slightly open during use. Drain both devices after each use.

Supplied-Air Respirator, Breathing Line, Breathing Air Filter, Climate Control Device, CO Monitor, Ambient Air Pump – You MUST consult the Operator’s Manual supplied with your Respiratory Equipment (6, 7, 8, 9, 10, 17) for ALL applicable instructions and warnings. Inspect all Respiratory Equipment components for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Suit and Gloves – Select an abrasive-resistant Abrasive Blasting Suit (11) that is slightly oversized to allow ease of movement and allows air to flow around your body. Select abrasive-resistant Gloves (12) with a tight fit and a long cuff that overlaps the sleeve of the Abrasive Blasting Suit (11).

Abrasive Metering Valve and Abrasive Blasting Pot – Confirm Abrasive Blasting Pot (25) is positioned on stable ground. Inspect Abrasive Blasting Pot (25) and Abrasive Metering Valve (21) for damage or wear. Repair or replace damaged or worn components.

Abrasive Blasting Pot Screen and Abrasive Blasting Pot Lid – Always use an Abrasive Blasting Pot Screen (26) when filling Abrasive Blasting Pot (25) with Abrasive (1) to prevent debris from entering the Abrasive Blasting Pot (25). Remove Abrasive Blasting Pot Lid (27) before operating the Abrasive Blasting Pot (25). Install Abrasive Blasting Pot Lid (27) after use to protect the Abrasive Blasting Pot’s (25) interior.

Remote Control System, Remote Control Switch, Control Line, – Inspect Remote Control System (22) and Control Line (18) for damage or wear. Repair or replace damaged or worn components. Ensure Control Line (18) fittings connected to the Remote Control System (22) are tight and free of leaks. Ensure Remote Control Switch (16) is functioning properly. Consult Remote Control Switch Operator’s Manual for applicable instructions.

Abrasive Blasting Pot Exhaust Muffler – Inspect Abrasive Blasting Pot Exhaust Muffler (24) at start and end of daily use. Replace element of Abrasive Blasting Pot Exhaust Muffler (24) per Operator’s Manual instructions.

Lighting System – Ensure the Lighting System (14) is connected to a proper power supply before use.

OPERATING INSTRUCTIONS

WARNING

W-594

Read, understand, and follow the Original Equipment Manufacturer operator's manuals, information, training, instructions, and warnings, for the proper and intended use of all equipment. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-505

Inspect all equipment for wear or damage before and after each use. Failure to use Original Equipment Manufacturer repair parts and failure to immediately replace worn or damaged components could void warranties and cause malfunctions. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-506

OSHA requires blast cleaning nozzles be equipped with an operating valve, which shall be designed to be held open only by continuous hand pressure and shall close immediately upon release of hand pressure (i.e., a "deadman" control). The valve shall not be modified in any manner that would allow it to remain open without the application of continuous hand pressure by the operator. Failure to comply with the above warning could result in release of high speed abrasive and compressed air resulting in death or serious injury. OSHA 29CFR 1910.244(b)

Description

The Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot is a pressure vessel used as part of an abrasive blasting system to deliver a mixture of abrasive and compressed air to a work surface. Marco blast pots are proudly engineered and manufactured in the USA and built in accordance with ASME guidelines. Each Marco blast pot is designed with added features to enhance work site safety. Blastmaster® Abrasive Blasting Pots are manufactured using higher quality materials that resist wear, reducing costly downtime and increasing production rates. Typical applications include blast rooms, blast yards, bridges, oil refineries, pipelines, railcar shops, storage tanks, and water towers. Common abrasives used include aluminum oxide, crushed glass, garnet, mineral abrasives, and slags.

Operational Requirements

- Proper air supply to provide a minimum of 50 psi to a maximum of 150 psi working pressure.

The following may cause safety hazards or reduced performance:

- Improper installation and/or maintenance of components.
- Failure to place Blast Pot on a secure, flat surface.
- Improper air supply pressure (maximum 150 psi).
- Incorrect lifting/transporting of Blast Pot or incorrect or worn lifting devices.

Initial Setup

- Place Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot on a secure level surface that can withstand the weight of a full Blast Pot. Be aware of possible erosion of surface and load shifting.
- Connect air supply hose from compressor to Inlet (6) of the Blast Pot. To provide best performance, an air supply hose with an inner diameter five to six times the size of blast nozzle orifice is recommended.
- Connect blast hose to Coupling (7) installed on Abrasive Metering Valve (8).

Operating Instructions

Operating Instructions are limited to the instructions found in the Original Equipment Manufacturer's Operator's Manuals. Please refer to all literature included with your Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot at time of delivery. If this literature is unavailable, please contact Marco for a replacement set before use.

Before use:

- Inspect entire system for air leaks or damage. Repair or replace damaged components.
- Ensure sufficient compressed air supply volume and/or pressure.
- Inspect Pop-Up Valve Seat (2) and Pop-Up Valve (3) for damage. Replace damaged components before use.
- Inspect Muffler Assembly (4) for wear and abrasive. Repair or replace as needed.
- Inspect remote control system components as instructed in the device's Operator's Manual.
- Inspect Pusher Line (9) for damage. Replace damaged components before use.
- Inspect Blast Pot (1) for damage. Do not use Blast Pot if damaged.

OPERATING INSTRUCTIONS

WARNING

Never weld, grind or drill on the abrasive blasting pot (or any pressure vessel). Doing so will void ASME certification and manufacturer's warranty. Welding, grinding or drilling on the abrasive blasting pot (or any pressure vessel) could weaken the vessel causing it to burst. Failure to comply with the above warning could result in death or serious injury. (ASME Pressure Vessel Code, Section VIII, Division 1)

WARNING

The use of this product for any purpose other than originally intended or altered from its original design is prohibited. Failure to comply with the above warning could result in death or serious injury.

CAUTION

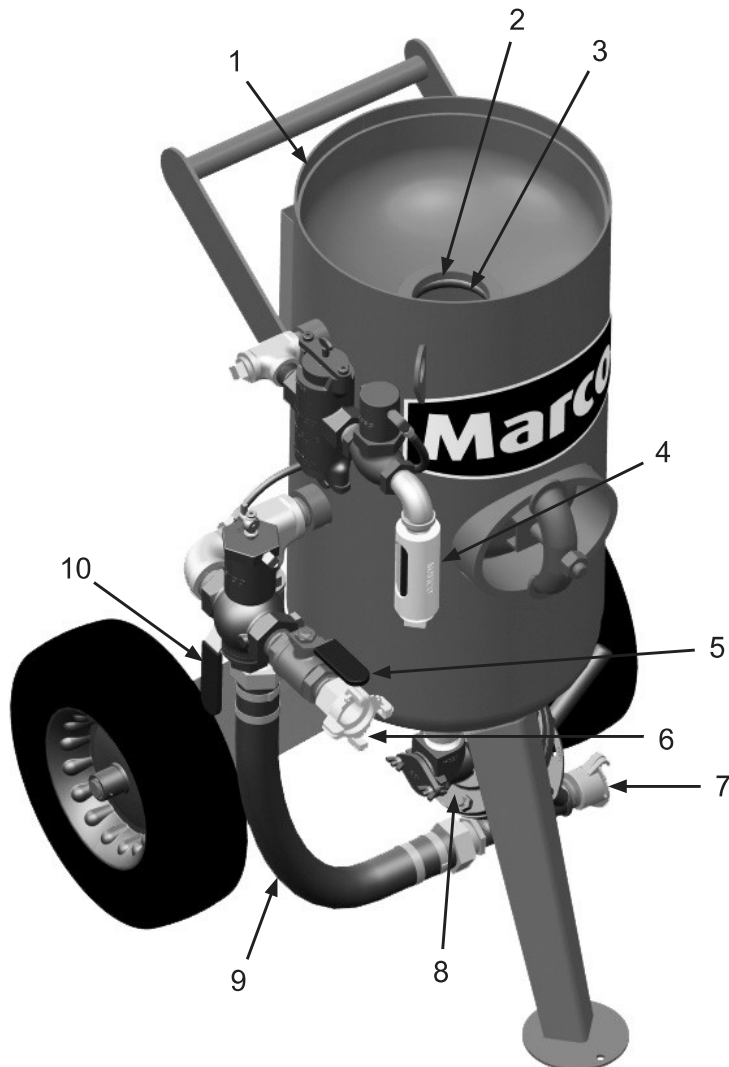
High decibel noise levels are generated during the abrasive blasting process which may cause loss of hearing. Ensure appropriate Personal Protective Equipment and hearing protection is in use. Failure to comply with the above caution may result in minor or moderate injury.

During use:

- Fill Blast Pot (1) through hole in top of Blast Pot. Do not overfill, the capacity of the Blast Pot is 3.0 cubic feet of abrasive.
- Open Ball Valves (5 and 10).
- To start/stop abrasive blasting, follow instructions in the remote control system Operator's Manual.
- Monitor remote control system components per Operator's Manual.

After use:

- Empty abrasive from Blast Pot when blasting is concluded for the day. To remove abrasive, place Metering Valve (8) in the FULL OPEN position. Close Ball Valve (10). Remove Blast Nozzle from nozzle holder on blast hose. Ensure blast hose is placed in a container suitable for catching the abrasive. Ensure Operator is prepared for strong recoil, the blast hose will provide strong recoil as the abrasive exits the blast hose. Activate remote control system per Operator's Manual. When Blast Pot is empty, only air will exit the blast hose. Deactivate the remote control system to depressurize the Blast Pot. Place Metering Valve (8) in the CLOSED position.
- Inspect Blast Pot components for damage. Replace damaged components before use.
- Cover Blast Pot when not in use to reduce debris and water intrusion.



OPERATING INSTRUCTIONS

Blast Hoses and Connections

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

CAUTION

C-515

Worn blast hose assemblies can fail while blasting. Check the full length of blast hose assembly for soft spots caused by wear. Replace blast hoses that show signs of excessive wear. Failure to comply with the above caution may result in minor or moderate injury.

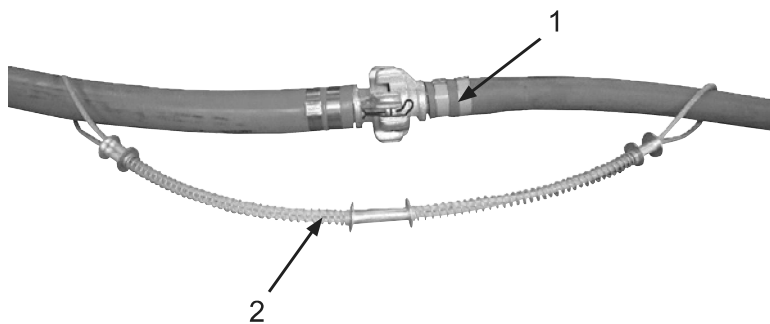
CAUTION

C-516

Leaks around couplings and nozzle holders indicate worn or loose fitting parts. They could disconnect while under pressure. Inspect all couplings and nozzles daily for worn or loose fitting parts. Inspect nozzle threads for wear. Failure to comply with the above caution may result in minor or moderate injury.

Blast hoses are a high wear component of the abrasive blast system. Sharp bends in the blast hose create high wear points resulting in soft spots that can fail while blasting. Check the full length of the blast hose assembly for soft spots caused by wear. Replace any blast hoses that have soft spots or show signs of wear.

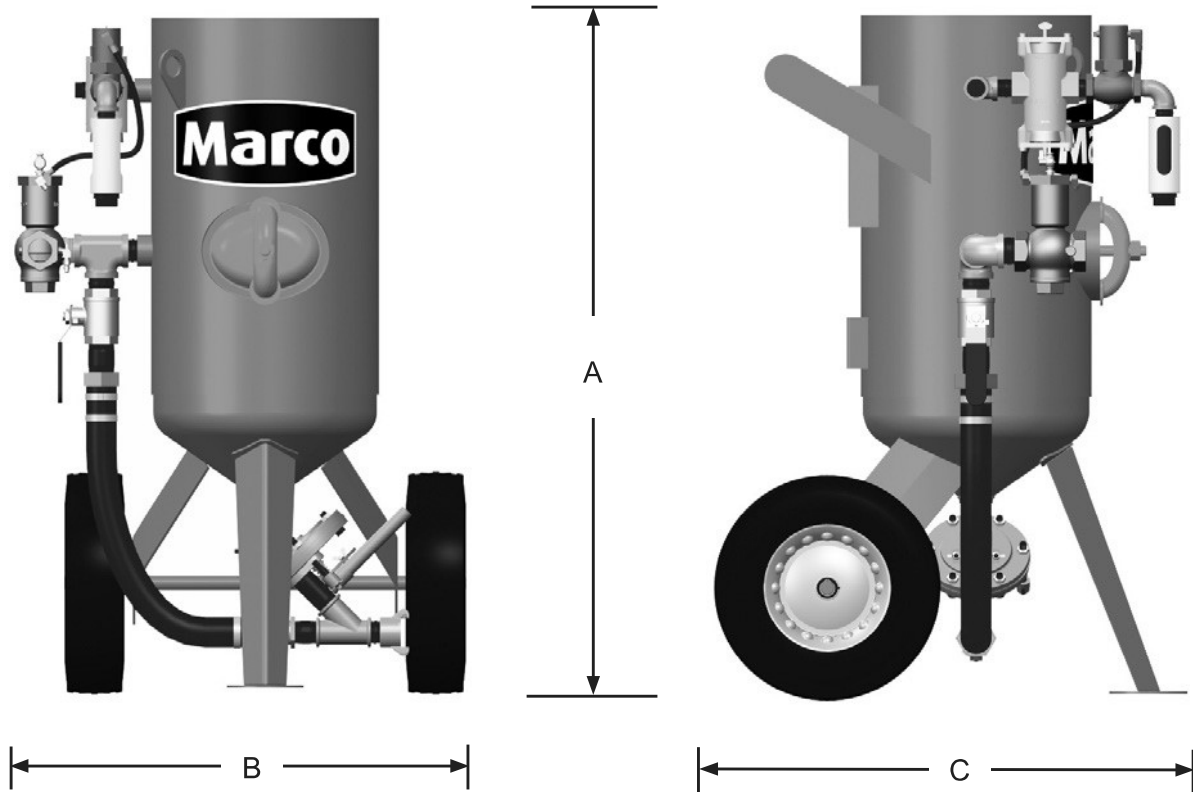
All air hose, blast hose, and threaded couplings have pin holes that align when connected. To protect against accidental hose disconnections, four Safety Pins (1) must be installed through these holes. As a secondary safety measure each hose connection should also include a Hose Whip Check (2) that will hold the hose if there is an accidental disconnection. Connect one loop to each side of connection and stretch out as shown below.



All air hose, blast hose, and threaded couplings have gaskets that seal the connection. To reduce loss of air pressure and/or premature abrasive wear replace these gaskets when visible wear or leaks are found.

Leaks around couplings and nozzle holders could indicate worn or loose fitting parts. They could disconnect while under pressure. Inspect all couplings and nozzles daily for worn or loose fitting parts. Check nozzle threads for wear.

SPECIFICATIONS



Empty Weight: 320 lbs

Overall Dimensions:

- A: 48"**
- B: 30"**
- C: 32"**

MAINTENANCE

Remove & Install Inspection Door Assembly

WARNING

W-562

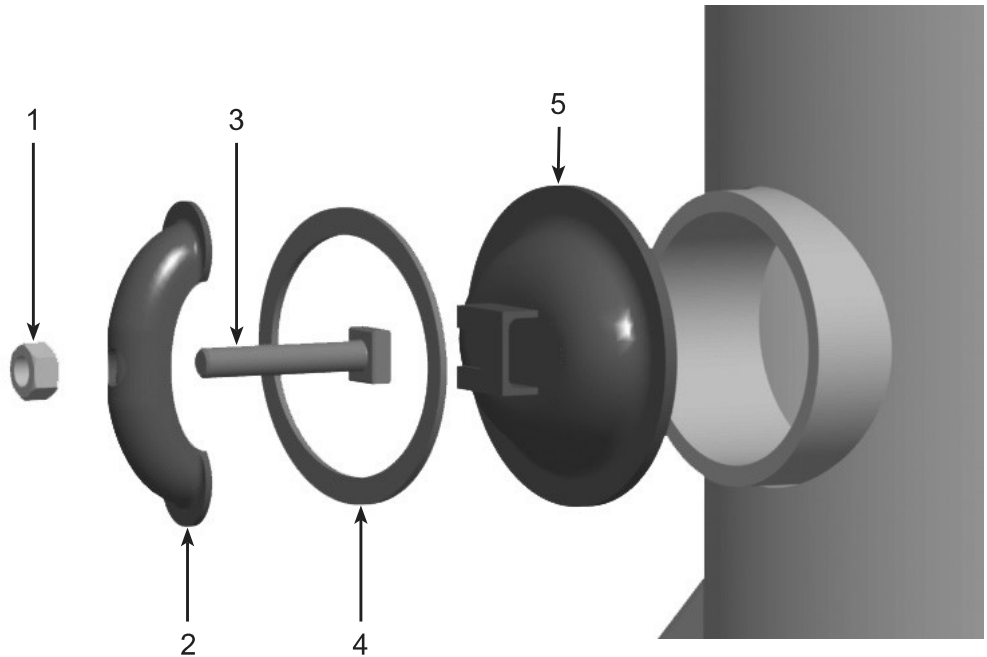
Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

CAUTION

C-504

Release of high speed abrasive and compressed air occurs during depressurization of the abrasive blasting pot. Ensure appropriate Personal Protective Equipment is in use. Failure to comply with the above caution may result in minor or moderate injury.

- 1) Depressurize the system.
- 2) Remove Nut (1) from Bolt (3).
- 3) Remove Yoke (2) from Bolt (3).
- 4) With Bolt (3) captured in slot in Door (5), grasp Bolt (3) and push on Door (5) towards the interior of Blast Pot to free the Door (5) and Gasket (4).
- 5) Remove Door (5) and Gasket (4) from Blast Pot interior.
- 6) Install parts in reverse order using the following special instructions:
 - Ensure that Yoke (2) is tight and an air-tight seal is produced.



MAINTENANCE

Remove & Install Pop-up Valve

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-563

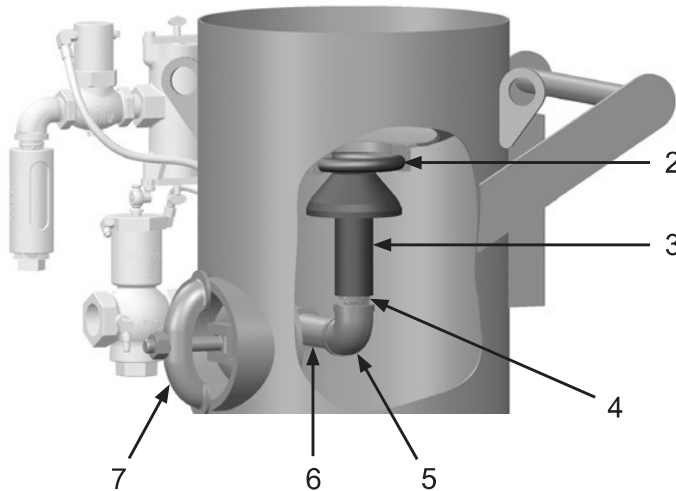
Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above warning could result in death or serious injury.

CAUTION

C-504

Release of high speed abrasive and compressed air occurs during depressurization of the abrasive blasting pot. Ensure appropriate Personal Protective Equipment is in use. Failure to comply with the above caution may result in minor or moderate injury.

- 1) Depressurize the system.
- 2) Remove Inspection Door Assembly (7). See Remove & Install Inspection Door Assembly.
- 3) Loosen Vertical Pipe Nipple (4) from Pipe Elbow (5). Remove Vertical Pipe Nipple and Pop-Up Valve (3) from the Blast Pot through inspection door opening.
- 4) Remove Pop-Up Valve (3) from Vertical Pipe Nipple (4).
- 5) From inside Blast Pot, with Pop-Up Valve (3) removed, pry Pop-Up Valve Seat (2) from recess in top of Blast Pot and remove through Fill Hole (1).
- 6) Remove Pipe Elbow (5) and Pipe Nipple (6). Inspect all components and replace if needed.
- 7) Install parts in reverse order using the following special instructions:
 - Tighten Vertical Pipe Nipple (4) 1/4 turn beyond hand tight.



MAINTENANCE

Maintenance Schedules Quick Reference Charts

BLAST POT MAINTENANCE SCHEDULE				
Perform inspections at the intervals specified. Repair or replace damaged parts as needed.				
Item	Maintenance Required	Daily	Weekly	Monthly
Blast Pot Exterior	Visually inspect exterior of blast pot for any damage (corrosion, dents, bulges, cracks etc.). Remove from service and contact Marco.	X		
Blast Pot External Piping & Pipe Fittings	Visually inspect external pipe & pipe fittings for damage (wear, cracks, air leaks etc.). Replace as needed.	X		
Pop-up Valve and Pop-up Valve Seat	Visually inspect sealing surfaces, alignment and gap between Pop-up valve seat and Pop-up valve. Repair or replace as needed.	X		
Exhaust Muffler	Visually inspect muffler components for wear and abrasive. Empty any abrasive. Repair or replace as needed.	X		
Inspection Door Assembly	Visually inspect condition of gasket and sealing surfaces. Ensure all components are tight. Replace as needed.		X	
Identification Tags and Decals	Visually inspect for presence and condition of all identification tags and decals. Replace as needed.		X	
Blast Pot Interior	Visually inspect interior surfaces of the blast pot for wear, corrosion, pitting, cracks, or other damage. Remove from service and contact Marco. Check internal piping for wear or damage. Replace as needed.			X
Blast Pot	Hydrostatic Test	Every 5 years unless otherwise directed by local, state, or jurisdictional requirements.		

TROUBLESHOOTING

WARNING

W-562

Always depressurize the entire system, disconnect all power sources and lockout/tagout all components before any maintenance or troubleshooting is attempted. Failure to comply with the above warning could cause electrical shock and inadvertent activation of equipment resulting in death or serious injury.

WARNING

W-511

For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator's manuals, information, training, instructions and warnings, for the proper and intended use of all equipment. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-563

Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above warning could result in death or serious injury.

If the Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot does not function properly, check the following:

SYMPTOM (Cause)

ACTION

Abrasive Blasting Pot will not pressurize

(Damaged components, Improper Air Supply, Remote Control System)

Refer to remote control system Operator's Manual.

Insufficient air supply. Ensure a minimum of 50 psi is supplied to Blast Pot and sufficient air volume to support blast nozzle.

Ensure internal piping is aligned with fill hole.

Ensure pop-up valve and pop-up valve seat are seating without air leaks. Replace damaged components.

Blast Pot will not depressurize or depressurizes slowly

(Damaged components)

Refer to remote control system Operator's Manual.

Inspect Blast Pot Exhaust Muffler for debris. Clean or replace Element.

No Air or Abrasive exits the Blast Nozzle

(Blockages, Wet Abrasive, Abrasive Metering Valve)

Depressurize Blast Pot. Inspect blast nozzle and abrasive blasting hose for blockage. Remove blockage or remove components from use.

Pressurize Blast Pot using the remote control system and open and close choke valve rapidly. If problem persists refer to abrasive metering valve Operator's Manual.

Intermittent abrasive flow

(Wet Abrasive, Abrasive Metering Valve, Blast Nozzle)

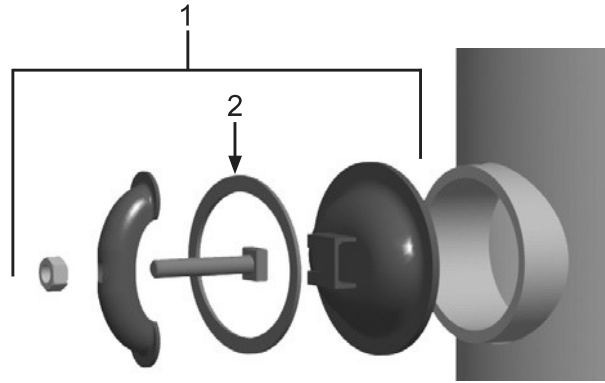
Damp or wet abrasive. Remove abrasive from Blast Pot by cleaning out the vessel. Ensure dry abrasive is used.

Install a moisture separator at the inlet of the Blast Pot. Increase the inner diameter of air supply hose.

Blast nozzle is worn or too large for compressor size. Replace blast nozzle.

ASSEMBLY PART NUMBERS AND SCHEMATICS

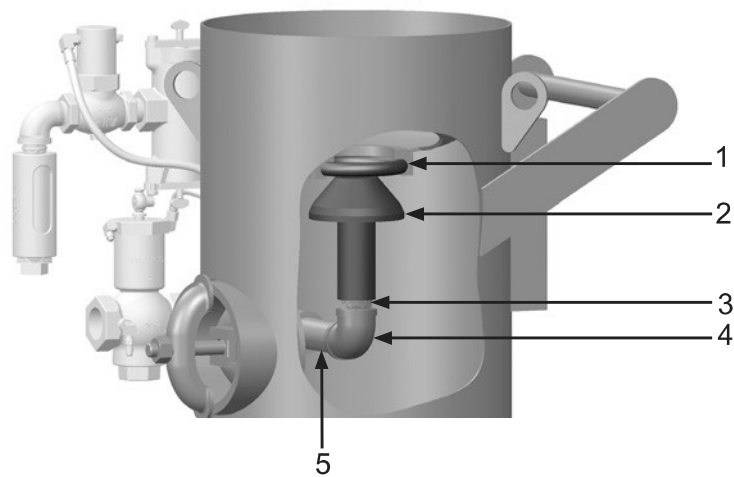
Figure 1: Inspection Door Assembly



Item #	Part #	Description
Fig. 1		
1	1006200	6" x 8" Inspection Door Assembly
2	1006201	Gasket

PART NUMBERS AND SCHEMATICS

Figure 2: Pop-up Valve Assembly



Item #	Part #	Description
Fig. 2		
1	1006050	Pop-Up Valve Seat
2	1006020	Pop-Up Valve – External Sleeve
3	1006206	1-1/4" NPT x 5" Toe Nipple
4	1006204	1-1/4" 90° Elbow
5	1011202	1-1/4" NPT x 6" Pipe Nipple

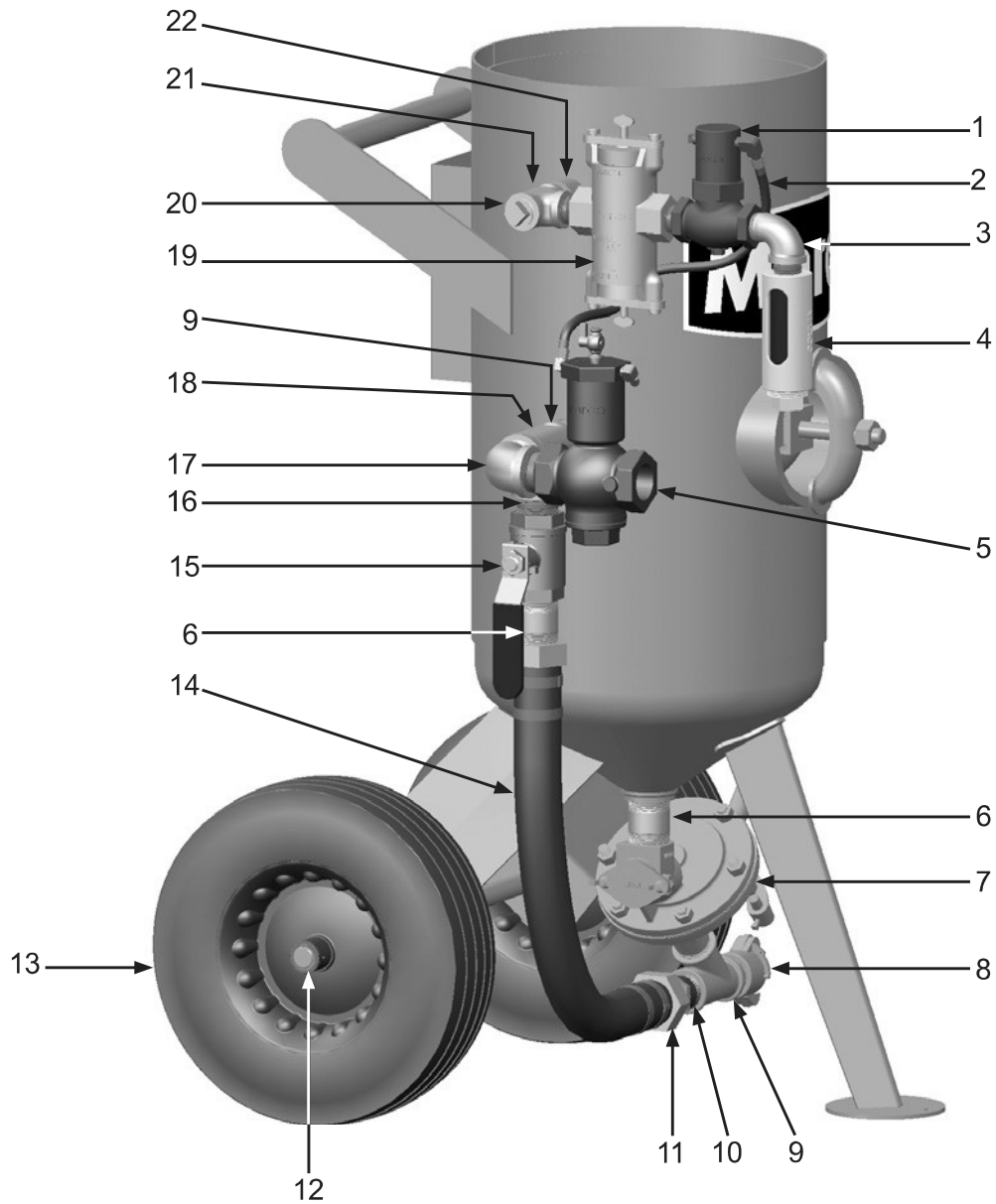
PART NUMBERS AND SCHEMATICS

Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Pneumatic

Item #	Part #	Description
Fig. 3		
1	1012050	1" Outlet Valve
2	10CL18	18" Control Line
3	1011801	1" Galvanized Street Elbow
4	1011100	Abrasive Blasting Pot Muffler (<i>See Fig. 6</i>)
5	1012200	1-1/2" Inlet Valve
6	1011203	1-1/2" x 3" Galvanized Nipple (<i>Two Required</i>)
7	1014000	Blastmaster® Regulator Abrasive Metering Valve
8	10SB1	1-1/4" Brass Tank Coupling
9	1011201	1-1/4" Galvanized Close Nipple (<i>Two Required</i>)
10	1011206	1-1/4" x 2-1/2" Galvanized Nipple
11	1011501	1-1/2" (M) x 1-1/4" (F) Galvanized Hex Bushing
12	1006205	1" Wheel Clip (<i>Four Required</i>)
13	1006064	16" Wheel (<i>Two Required</i>)
14	1006312	1-1/2" I.D. Pusher Line Assembly (<i>See Fig. 5</i>)
15	1011603	1-1/2" Full Port Ball Valve
16	1014015	1-1/2" Galvanized Close Nipple
17	1011839	1-1/2" 90° Galvanized Street Elbow
18	1011833	1-1/4" x 1-1/2" x 1-1/2" Galvanized Pipe Tee
19	1012000	1" Abrasive Trap
20	1011901	1" Galvanized Square Head Pipe Plug
21	1011816	1" Galvanized Pipe Tee
22	1012151	1" Galvanized Close Nipple
—	105M014	Features and Specifications Guide – Blastmaster® 125P Remote Control System
—	105M021	Features and Specifications Guide – Blastmaster® Regulator Abrasive Metering Valve
—	105M023	Features and Specifications Guide – Blastmaster® 150P Remote Control Switch
—	105M071	Features and Specifications Guide – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot
—	106M014	Part Numbers & Schematics Guide – Blastmaster® 125P Remote Control System
—	106M021	Part Numbers & Schematics Guide – Blastmaster® Regulator Abrasive Metering Valve
—	106M023	Part Numbers & Schematics Guide – Blastmaster® 150P Remote Control Switch
—	106M071	Part Numbers & Schematics Guide – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot
—	1090014	Operator's Manual – Blastmaster® 125P Remote Control System
—	1090021	Operator's Manual – Blastmaster® Regulator Abrasive Metering Valve
—	1090053	Operator's Manual – Blastmaster® 150P Remote Control Switch
—	1090071	Operator's Manual – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot

PART NUMBERS AND SCHEMATICS

Figure 3: Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Pneumatic



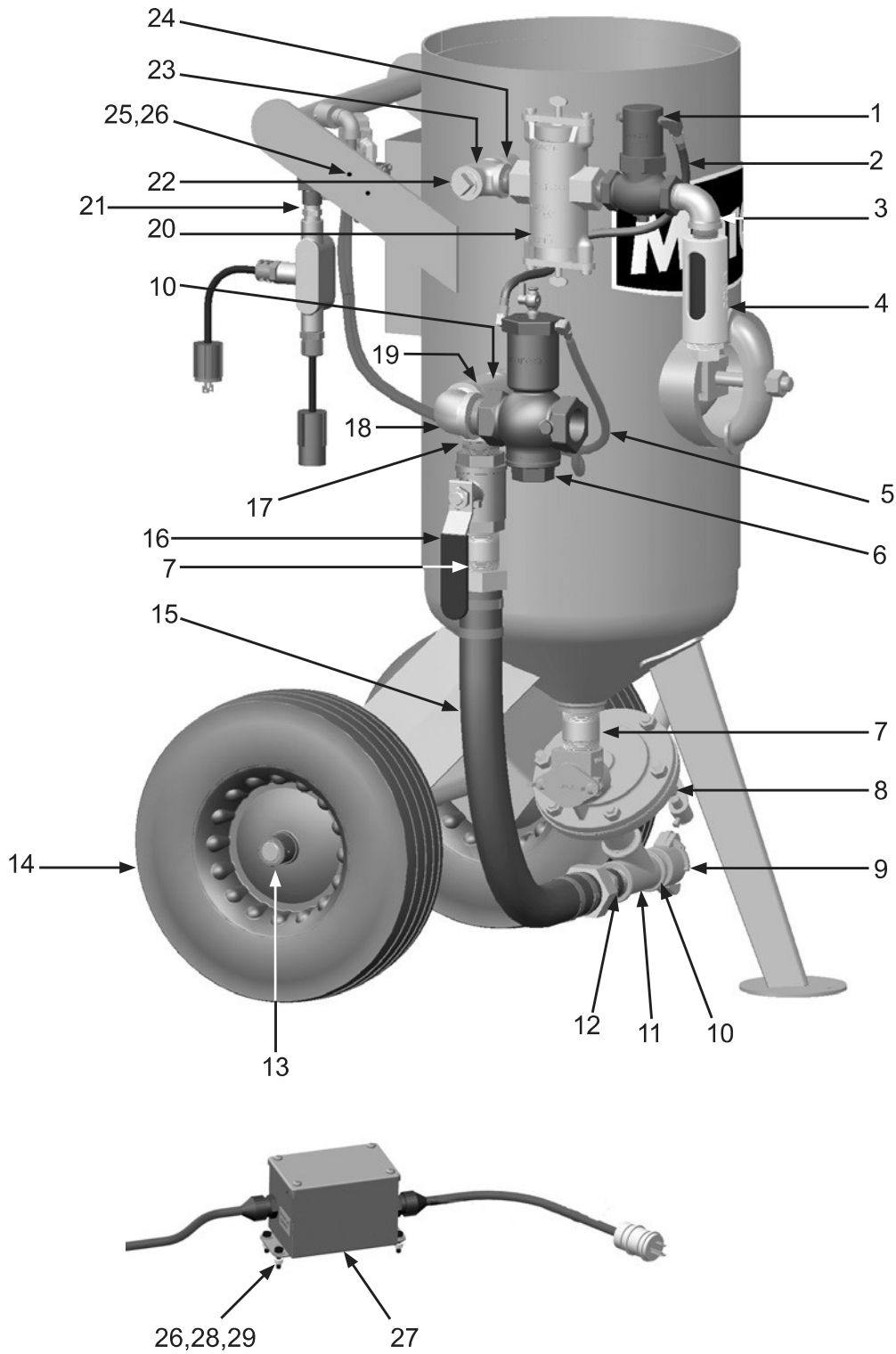
PART NUMBERS AND SCHEMATICS

Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Electric

Item #	Part #	Description	Item #	Part #	Description
Fig. 4			26	1012323	1/4-20 Zinc Lock Nut with Nylon Insert <i>(Two Required)</i>
1	1012050	1" Outlet Valve	27	1030020	Blastmaster® 120VAC-12VAC Converter <i>(Optional)</i>
2	10CL18	18" Control Line	28	1012154	1/4-20 x 1" Hex Bolt <i>(Four Required)</i>
3	1011801	1" Galvanized Street Elbow	29	1014017	1/4" Flat Washer <i>(Four Required)</i>
4	1011100	Abrasive Blasting Pot Muffler <i>(See Fig. 6)</i>	—	105M063	Features and Specifications Guide – Blastmaster® 151E Remote Control Switch
5	10TL5	5' Twinline	—	105M088	Features & Specifications Guide – Blastmaster® 125E Remote Control System
6	1012200	1-1/2" Inlet Valve	—	105M021	Features & Specifications Guide – Blastmaster® Regulator Abrasive Metering Valve
7	1011203	1-1/2" x 3" Galvanized Nipple <i>(Two Required)</i>	—	105M071	Features & Specifications Guide – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot
8	1014000	Blastmaster® Regulator Abrasive Metering Valve	—	106M063	Part Numbers & Schematics Guide – Blastmaster® 151E Remote Control Switch
9	10SB1	1-1/4" Brass Tank Coupling	—	106M088	Part Numbers & Schematics Guide – Blastmaster® 125E Remote Control System
10	1011201	1-1/4" Galvanized Close Nipple <i>(Two Required)</i>	—	106M021	Part Numbers & Schematics Guide – Blastmaster® Regulator Abrasive Metering Valve
11	1011206	1-1/4" x 2-1/2" Galvanized Nipple	—	106M071	Part Numbers & Schematics Guide – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot
12	1011501	1-1/2" (M) x 1-1/4" (F) Galvanized Hex Bushing	—	1090063	Operator's Manual – Blastmaster® 151E Remote Control Switch
13	1006205	1" Wheel Clip <i>(Four Required)</i>	—	1090088	Operator's Manual – Blastmaster® 125E Remote Control System
14	1006064	16" Wheel <i>(Two Required)</i>	—	1090021	Operator's Manual – Blastmaster® Regulator Abrasive Metering Valve
15	1006312	1-1/2" I.D. Pusher Line Assembly <i>(See Fig. 5)</i>	—	1090071	Operator's Manual – Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot
16	1011603	1-1/2" Full Port Ball Valve			
17	1014015	1-1/2" Galvanized Close Nipple			
18	1011839	1-1/2" 90° Galvanized Street Elbow			
19	1011833	1-1/4" x 1-1/2" x 1-1/2" Galvanized Pipe Tee			
20	1012000	1" Abrasive Trap			
21	1019001	12-Volt DC 190 Electric Control Assembly			
	1019002	12-Volt AC 190 Electric Control Assembly			
22	1011901	1" Galvanized Square Head Pipe Plug			
23	1011816	1" Galvanized Pipe Tee			
24	1012151	1" Galvanized Close Nipple			
25	1019044	1/4-20 x 1-3/4" Zinc Bolt <i>(Two Required)</i>			

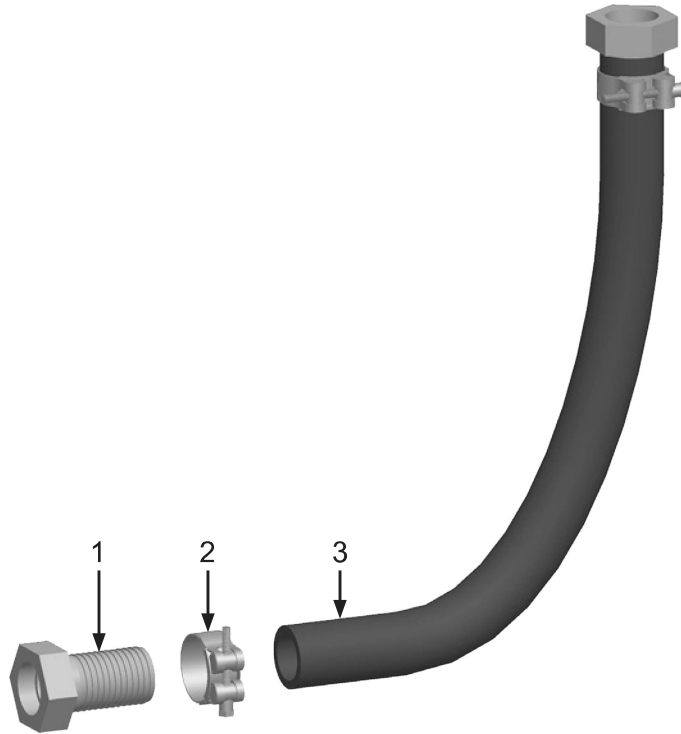
PART NUMBERS AND SCHEMATICS

Figure 4: Blastmaster® 3.0 Cu. Ft. C-Series Abrasive Blasting Pot — Electric



PART NUMBERS AND SCHEMATICS

Figure 5: Pusher Line Assembly



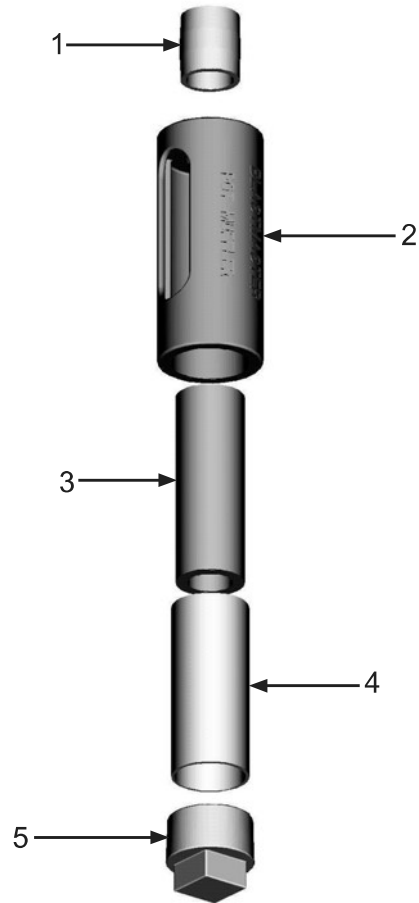
Item #	Part #	Description
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Fig. 5

—	1006312	1-1/2" I.D. Pusher Line Assembly <i>Includes Item #: 1, 2, and 3 (Quantity of Three Feet)</i>
1	10SFE4	1-1/2" Female Swivel Air Hose End <i>(Two Required)</i>
2	10103738	1-1/2" T-Bolt Hose Clamp <i>(Two Required)</i>
3	10AH112B	1-1/2" I.D. Air Hose
—	10SFE4G	Gasket for 10SFE4 Swivel Air Hose End <i>(Not Shown)</i>
—	1090059	Technical Data Sheet – Pusher Line Assemblies

PART NUMBERS AND SCHEMATICS

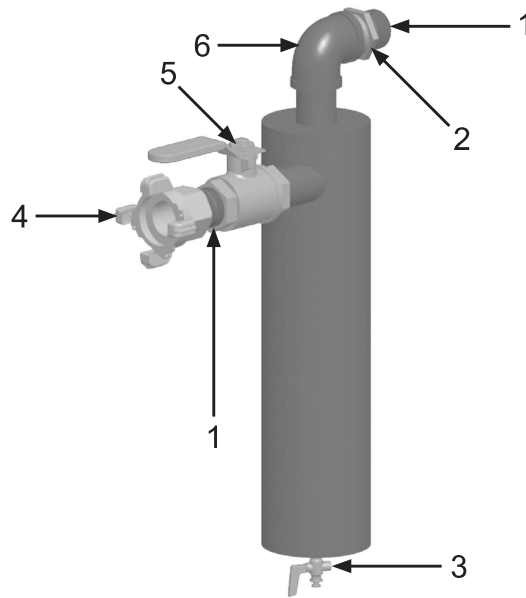
Figure 6: Exhaust Muffler Assembly



Item #	Part #	Description
Fig. 6		
—	1011100	Blastmaster® Abrasive Blasting Pot Muffler – Complete
1	1012151	1" Close Nipple
2	1011102	Body
3	1011103	Filter Element
4	1011104	Screen
5	1011101	1-1/2" Pipe Plug
—	1011105	Blastmaster® Abrasive Blasting Pot Muffler Service Kit <i>Includes Item #'s: 3 (Quantity of Three), 4, and 5</i>

OPTIONAL ACCESSORIES

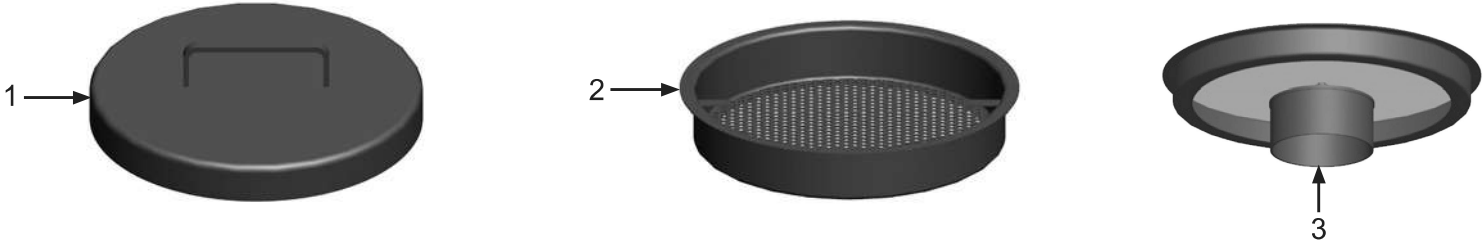
Figure 7: 1-1/4" Junior Extractor Abrasive Blasting Pot Moisture Separator



Item #	Part #	Description
Fig. 7		
—	10101314	1-1/4" Junior Extractor Abrasive Blasting Pot Moisture Separator
1	1011201	1-1/4" NPT Close Nipple (<i>Two Required</i>)
2	1011501	1-1/2" x 1-1/4" Bushing
3	1012101	1/4" NPT Brass Petcock
4	10ME3	4-lug Air Hose End - 1-1/4" NPT (F)
5	1011602	1-1/4" NPT Full Port Ball Valve
6	1006204	1-1/4" 90° Elbow

OPTIONAL ACCESSORIES

Figure 8: Lid and Screen



Item #	Part #	Description
1	1003101	16" Lid
2	1003102	16" Screen
3	10100732	Abrasive Umbrella (<i>Screen Not Included</i>)