

OPERATOR'S MANUAL

BLASTMASTER® 2.0 CU. FT. L-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.



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.

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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*

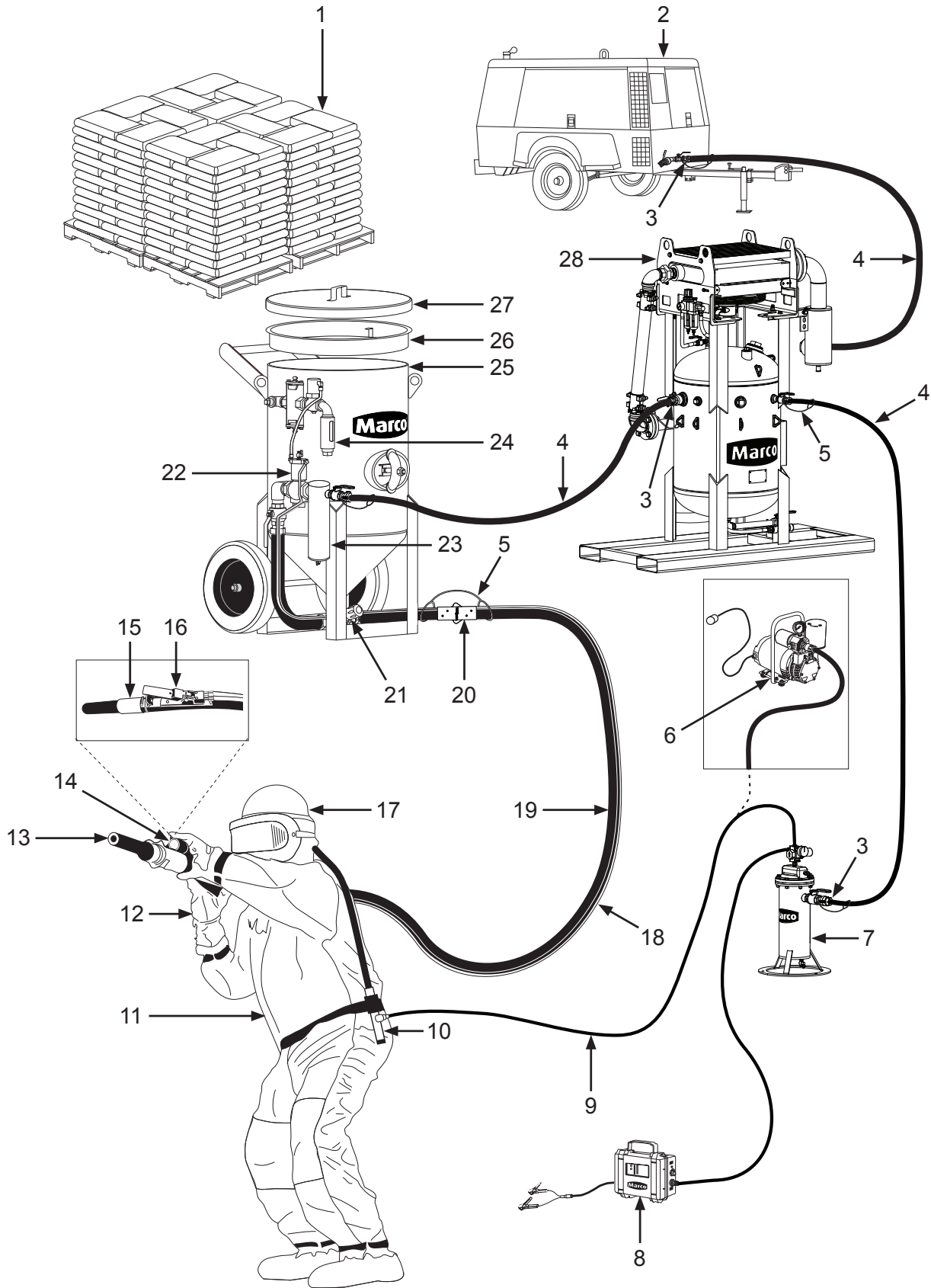
Nozzle Orifice	Pressure at the Nozzle (PSI)								Air (in cfm), Abrasive & Compressor Requirements
	50	60	70	80	90	100	125	140	
No. 2 (1/8")	11	13	15	17	18	20	25	28	Air (cfm)
	67	77	88	101	112	123	152	170	Abrasive (lbs/hr)
	2.5	3	3.5	4	4.5	5	5.5	6.2	Compressor Horsepower
No. 3 (3/16")	26	30	33	38	41	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

DANGER

D-507

Do not operate this equipment without the proper pressure relief device in place. Exceeding maximum working pressure could cause vessel or components to burst. Failure to comply with the above warning will result in death or serious injury. ASME STANDARD PTC25-2014.

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.

Description

The Blastmaster® 2.0 Cu. Ft. L-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, slags, and steel shot & grit.

Operational Requirements

- Proper air supply to provide a minimum of 30 psi to a maximum of 125 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 (minimum 30 psi, maximum 125 psi).
- Incorrect lifting/transporting of Blast Pot or incorrect or worn lifting devices.
- Use of abrasive too coarse for nozzle orifice.

Initial Setup

- Place Blastmaster® 2.0 Cu. Ft. L-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.
- Confirm Ball Valves (5,9) are closed.
- 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 Bantam Metering Valve (7).

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® 2.0 Cu. Ft. L-Series Abrasive Blasting Pot at time of delivery. If this literature is unavailable, please contact Marco for a replacement set before use.

Before use:

Note: Do not operate this equipment without a pressure relief device in place. It is the end users responsibility to provide.

- Inspect entire system for air leaks or damage. Repair or replace damaged components.
- Ensure sufficient compressed air supply volume and/or pressure.
- Inspect Blast Pot (1) for damage. Do not use Blast Pot if damaged.
- Set Petcock (10) handle to a closed (9 or 3 o'clock) position.
- Inspect Filler Plug O-ring (4) and Filler Plug (3) for damage. Replace damaged components before use.

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.

Before use: (cont.)

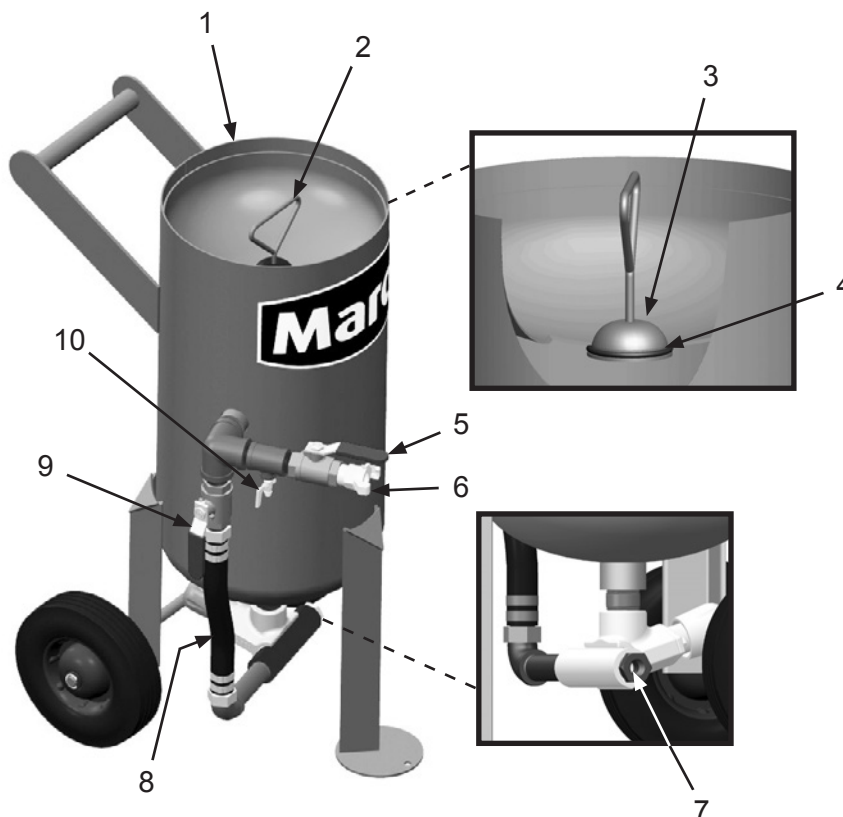
- Inspect Pusher Line (8) for damage. Replace damaged components before use.
- Inspect remote control valve components as instructed in the device's Operator's Manual.

During use:

- Fill Blast Pot (1) through hole in top of Blast Pot. Do not overfill, the capacity of the Blast Pot is 2.0 cubic feet of abrasive.
- Clear any remaining abrasive from around Filler Plug Opening, shake Filler Plug (3) to clear abrasive and pull up on Filler Plug Handle (2) to test sealing of Filler Plug O-ring (4).
- Pull Filler Plug Handle (2) up and hold securely in place. Open Ball Valve (5), wait for Blast Machine to fully pressurize.
- To start/stop abrasive blasting, see remote control valve Operator's Manual.
- Monitor remote control valve components per Operator's Manual.

After use:

- Empty abrasive from Blast Pot when blasting is concluded for the day. To remove abrasive, place Bantam Metering Valve (7) in the FULL OPEN position and close Ball Valve (9). 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 valve per Operator's Manual. When Blast Pot is empty, only air will exit the blast hose.
- Place Bantam Metering Valve (7) in the CLOSED position. See Operator's Manual.
- When air no longer exits Blast Pot, move Filler Plug handle (2) back and forth to release.
- 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.

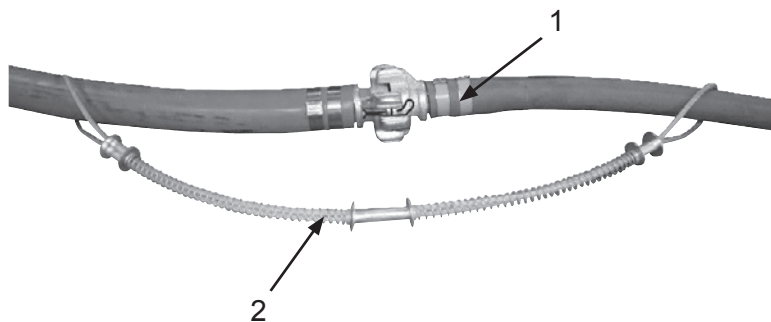
CAUTION

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. To protect against serious injury to personnel replace blast hoses with soft spots.

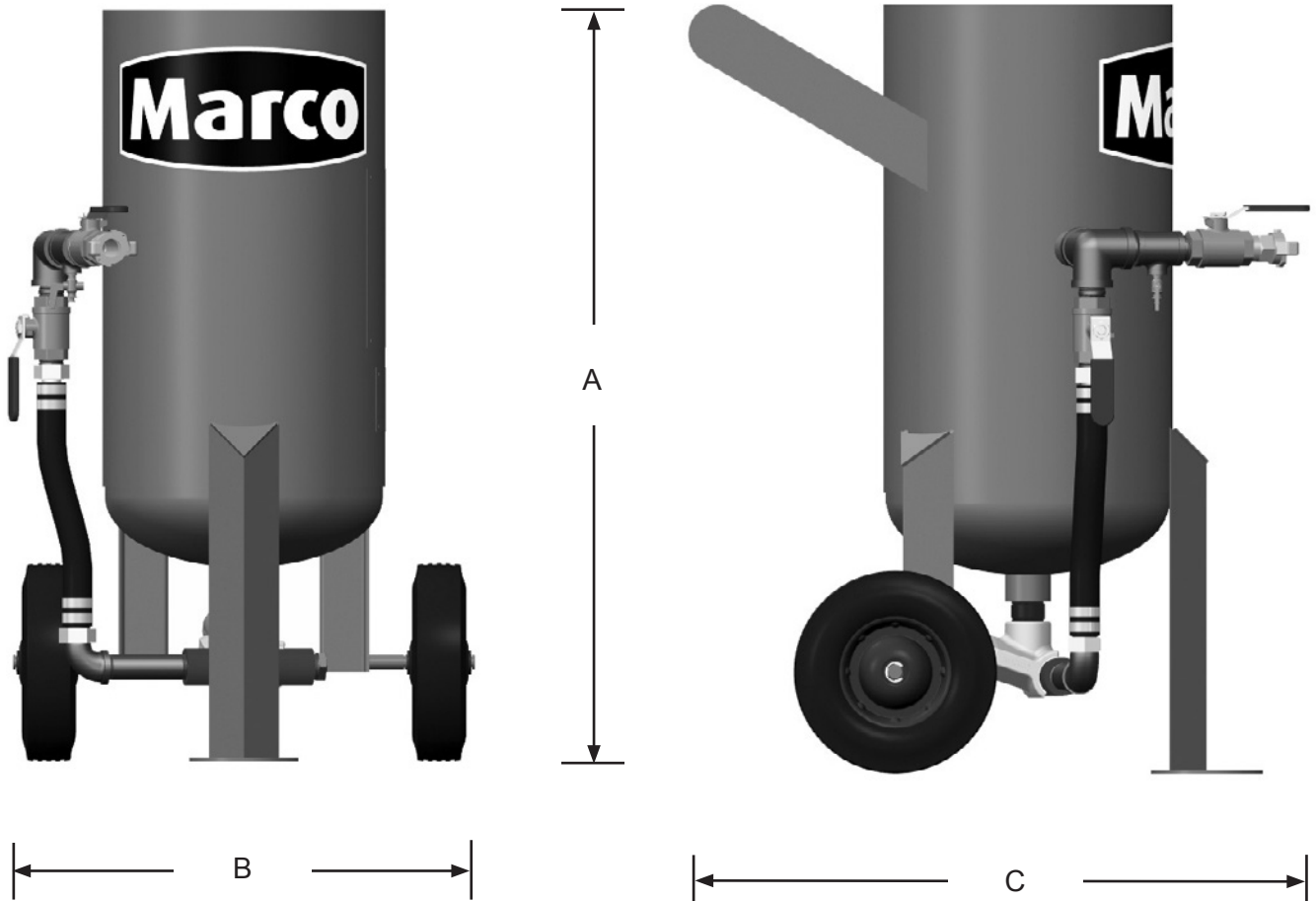
All air hose, blast hose, and threaded couplings have pin holes that align when connected. To protect against accidental hose disconnections, four Safety Pins (1) must be installed through these holes. As a secondary safety measure each hose connection should also include a Hose Whip Check (2) that will 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 leaks are found. Replace 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: 126 lbs

Overall Dimensions:

A: 38"
B: 24"
C: 29"

MAINTENANCE

Remove & Install Filter Plug O-ring

⚠ 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-605

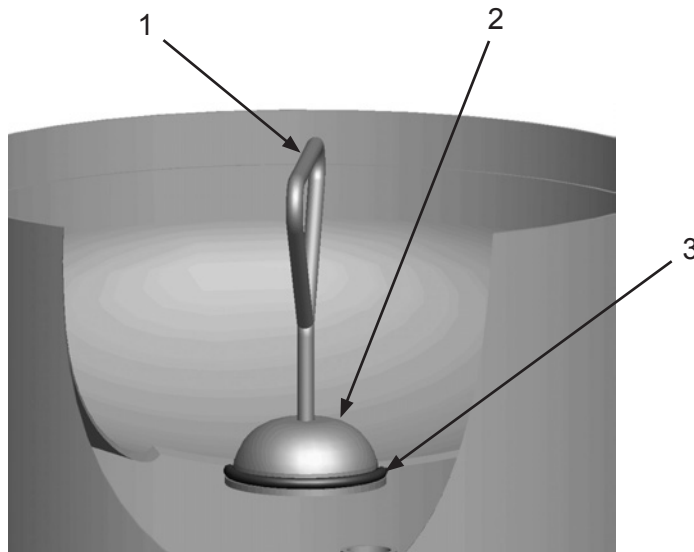
For proper operation, maintenance should be performed with the assistance of a qualified serviceman.

⚠ 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) Lift Filler Plug Handle (1) close to Filler Plug Opening, leaning assembly to one side for access to Filler Plug O-Ring (3).
- 2) Pull Filler Plug O-Ring (3) from recessed area on Filler Plug (2)
- 3) Pull Filler Plug O-Ring (3) over Filler Plug Handle (1) one side at a time.
- 4) Install parts in reverse order using the following special instructions:
 - Slip Filler Plug O-ring (3) over Filler Plug Handle (1) one side at a time, taking care to not over stretch or otherwise damage Filler Plug O-ring (3).
 - Lift Filler Plug (1) close to the opening, leaning to one side to access recessed area that receives the Filler Plug O-Ring (3).
 - Starting on exposed face, roll Filler Plug O-ring (3) into recessed area on Filler Plug (2), rotating Filler Plug Handle (1) until Filler Plug O-ring is completely seated.
 - Pull Filler Plug (2) in to place to test Filler Plug O-ring (3) seating.



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		
Filler Plug and Filler Plug O-Ring	Visually inspect sealing surfaces. Replace O-Ring as needed.	X		
Identification Decals	Visually inspect for presence and condition of all identification decals. 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-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.

NOTICE

N-501

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.

If the Blastmaster® 2.0 Cu. Ft. L-Series Abrasive Blasting Pot does not function properly, check the following:

SYMPTOM (Cause)

ACTION

Abrasive Blasting Pot will not pressurize

(Improper Air Supply, Damaged components)

Insufficient air supply. Ensure a minimum of 30 psi is supplied to Blast Pot and sufficient air volume to support Blast nozzle.

Filler Plug or Filler Plug O-ring damaged. Inspect Filler Plug and Filler Plug O-ring for wear or damage. Replace damaged Filler Plug O-ring. If Filler Plug is damaged remove blast machine from service.

Filler Plug not seated. Ensure Filler Plug is in proper position and a proper seal has been achieved.

External Piping is damaged or loose. Inspect external piping for damage. Confirm all fittings are tight and free from damage.

No Air or Abrasive exits the Blast Nozzle

(Blockages, Wet Abrasive, Abrasive Metering Valve, Improperly sized Abrasive)

With Blast Pot pressurized, close Choke Valve to "Purge" and clear minor obstruction in Bantam Metering Valve, Blast Hose or Nozzle.

Depressurize Blast Pot. Inspect Blast Nozzle, optional Blastmaster® 153 Remote Control Valve, and Blast Hose for obstruction. Never look directly down the exit port of the Blast Nozzle. Remove obstruction.

Damp or wet abrasive. Remove all abrasive from Blast Machine and Metering Valve. Ensure dry abrasive is used.

Slightly open Moisture Separator Petcock to allow collected moisture to escape while Blast Machine is in use.

See Ceramic Nozzles Chart for compatible abrasive and nozzle selection.

Refer to Bantam Metering Valve and/or Blastmaster® 153 Remote Control Valve Operator's Manual for proper instructions.

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.

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.

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.

NOTICE

N-508

Piping may loosen during transit. Ensure all internal and external piping is aligned and tightened before use. Ensure Pop-up Valve will seal properly with Pop-up Valve Seat at opening in top of abrasive blasting pot.

SYMPTOM (Cause)

Intermittent Abrasive Flow
(*Wet Abrasive, Abrasive Metering Valve, Blast Nozzle*)

ACTION

Insufficient air supply. Ensure a minimum of 30 psi is supplied to Blast Pot and sufficient air volume to support Blast nozzle.

Filler Plug or Filler Plug O-ring damaged. Inspect Filler Plug and Filler Plug O-ring for wear or damage. Replace damaged Filler Plug O-ring. If Filler Plug is damaged remove blast machine from service.

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

Slightly open Moisture Separator Petcock to allow collected moisture to escape while Blast Machine is in use.

See Figure 4 - Ceramic Nozzles Chart for compatible abrasive and nozzle selection.

Refer to Bantam Metering Valve and/or Blastmaster® 153 Remote Control Valve Operator's Manual for proper instructions.

Only Air exits the Blast Nozzle
(*Blockages, Wet Abrasive, Abrasive Metering Valve, Improperly sized Abrasive*)

With Blast Pot pressurized, close Choke Valve to "Purge" and clear minor obstruction in Bantam Metering Valve, Blast Hose or Nozzle.

Depressurize Blast Pot. Inspect Blast Nozzle, optional Blastmaster® 153 Remote Control Valve, and Blast Hose for obstruction. Never look directly down the exit port of the Blast Nozzle. Remove obstruction.

Damp or wet abrasive. Remove all abrasive from Blast Machine and Metering Valve. Ensure dry abrasive is used.

Slightly open Moisture Separator Petcock to allow collected moisture to escape while Blast Machine is in use.

See Ceramic Nozzles Chart for compatible abrasive and nozzle selection.

Refer to Bantam Metering Valve and/or Blastmaster® 153 Remote Control Valve Operator's Manual for proper instructions.

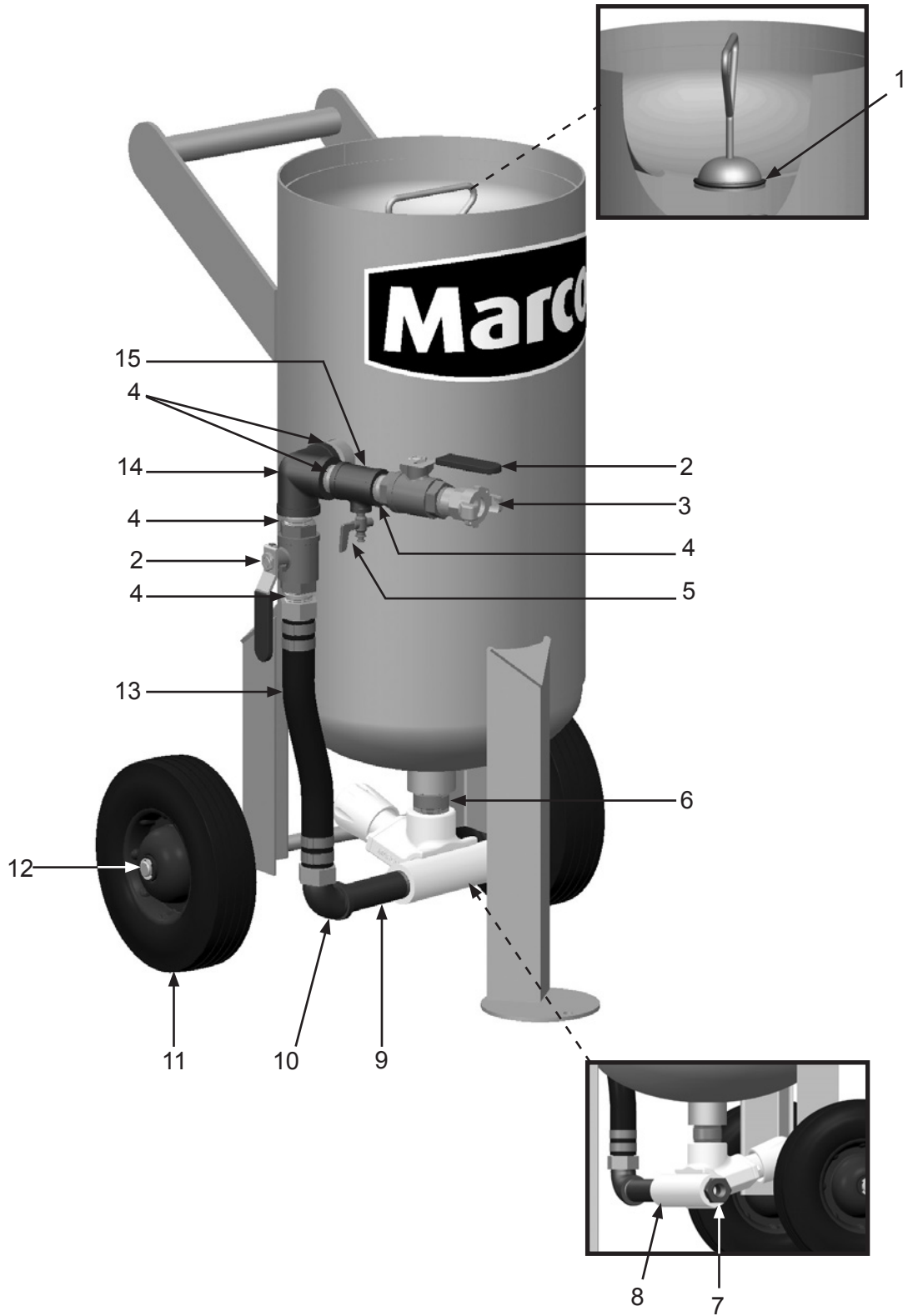
ASSEMBLY PART NUMBERS AND SCHEMATICS

Blastmaster® 2.0 Cu. Ft. L-Series Abrasive Blasting Pot — Pneumatic

Item #	Part #	Description
Fig. 1		
1	10L650R	Filler Plug O-Ring
2	1011601	1" Full Port Brass Ball Valve <i>(Two Required)</i>
3	10ME2	1" NPT (M) 2-Lug Coupling
4	1012151	1" NPT Close Nipple <i>(Five Required)</i>
5	1012101	1/4" NPT Petcock
6	1011813	1-1/4" NPT x 2" Pipe Nipple
7	1011812	1" NPT (M) x 1/2" (F) Bushing
8	1014103	Blastmaster® Bantam Abrasive Metering Valve
9	1011815	1" NPT x 5" Long Pipe Nipple
10	1011801	1" 90° Street Elbow
11	1006067	10 X 2.75 Solid Wheel <i>(Two Required)</i>
12	10101811	E-Clip <i>(Four Required)</i>
13	1006310	1" NPT Air Hose Pusher Line Assembly
14	1011808	1" NPT Pipe Elbow with Side-Out
15	1011814	1" x 1" x 1/4" NPT Pipe Tee
—	10L66EVD	Blastmaster® 153 Remote Control Valve
—	105M022	Features and Specifications Guide – Blastmaster® Bantam Abrasive Metering Valve
—	105M034	Features and Specifications Guide – Blastmaster® 153 Remote Control Valve
—	105M050	Features and Specifications Guide – Blastmaster® 2.0 cu. ft. L-Series Abrasive Blasting Pot
—	106M022	Part Numbers and Schematics Guide – Blastmaster® Bantam Abrasive Metering Valve
—	106M034	Part Numbers and Schematics Guide – Blastmaster® 153 Remote Control Valve
—	106M050	Part Numbers and Schematics Guide – Blastmaster® 2.0 cu. ft. L-Series Abrasive Blasting Pot
—	1090022	Operator's Manual – Blastmaster® Bantam Abrasive Metering Valve
—	1090034	Operator's Manual – Blastmaster® 153 Remote Control Valve
—	1090050	Operator's Manual – Blastmaster® 2.0 cu. ft. L-Series Abrasive Blasting Pot

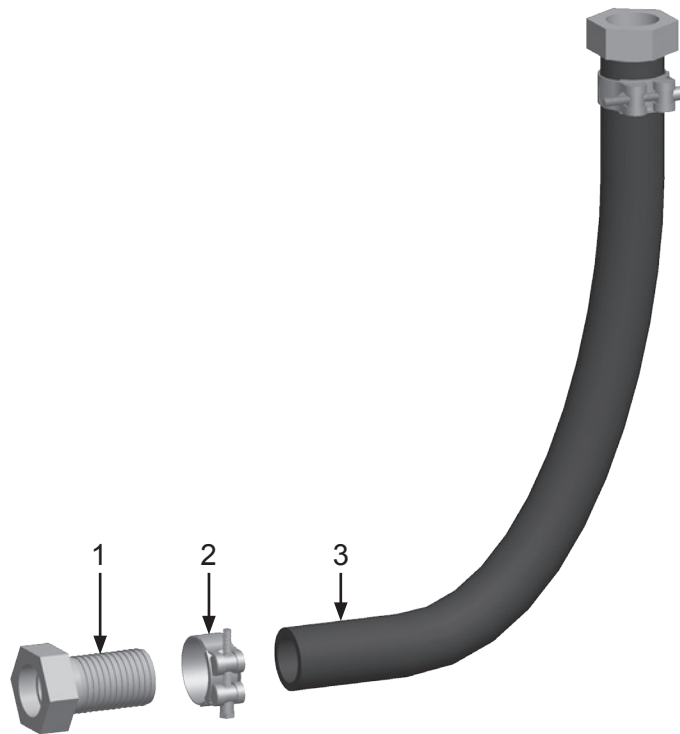
PART NUMBERS AND SCHEMATICS

Figure 1: Blastmaster® 2.0 Cu. Ft. L-Series Abrasive Blasting Pot — Pneumatic



PART NUMBERS AND SCHEMATICS

Figure 2: Pusher Line Assembly



Item #	Part #	Description
Fig. 2		
—	1006310	1" I.D. Pusher Line Assembly <i>Includes Item #: 1, 2, and 3 (Quantity of Three Feet)</i>
1	10SFE2	1" Female Swivel Air Hose End <i>(Two Required)</i>
2	10103736	1" T-Bolt Hose Clamp <i>(Two Required)</i>
3	10AH100B	1" I.D. Air Hose
—	10SFE4G	Gasket for 10SFE4 Swivel Air Hose End <i>(Not Shown)</i>
—	1090059	Technical Data Sheet — Pusher Line Assemblies

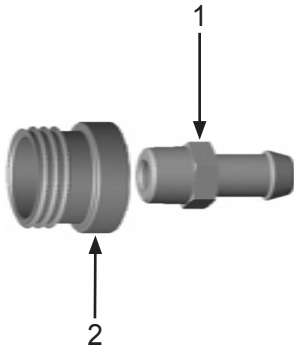
OPTIONAL ACCESSORIES

Figure 3: Lid and Screen



Item #	Part #	Description
Fig. 3		
1	1002101	14" Lid
2	1002102	14" Screen

Figure 4: Hose End Assemblies



Item #	Part #	Description
Fig. 4		
1	10L174	Hose End for 1/2" I.D. Abrasive Blasting Hose
2	10L66B	Nozzle Holder Base

OPTIONAL ACCESSORIES

Figure 5: Type I Ceramic Nozzles

TYPE I CERAMIC NOZZLES						
Part Numbers	Size	Orifice Size	Nozzle Entry	Overall Length	Abrasive Mesh Size	Abrasive Blasting Hose I.D.
10CN051	1	3/32"	5/8"	3-3/4"	100 Mesh or Finer	1/2"
10CN251	2	1/8"	5/8"	3-3/4"	60 Mesh or Finer	1/2"
10CN21251	2-1/2	5/32"	5/8"	3-3/4"	50 Mesh or Finer	1/2"
10CN351	3	3/16"	5/8"	3-3/4"	50 Mesh or Finer	3/4"
10CN451	4	1/4"	5/8"	3-3/4"	40 Mesh or Finer	3/4"
10CN551	5	5/16"	5/8"	3-3/4"	20 Mesh or Finer	1"
10CN651	6	3/8"	5/8"	3-3/4"	12 Mesh or Finer	1"

ADDITIONAL TECHNICAL DATA

The associations listed below offer information, materials and videos pertaining to abrasive blasting and safe operating practices.

- **American Society for Testing and Materials (ASTM)**
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Phone: (610) 832-9585
FAX: (610) 832-9555
www.astm.org
- **Occupational Safety & Health Administration (OSHA)**
United States
Department of Labor
200 Constitution Avenue
Washington, DC 20210
Phone: (800) 321-OSHA
(800) 321-6742
www.osha.gov
- **The National Board of Boiler & Pressure Vessel Inspectors**
1055 Crupper Avenue
Columbus, Ohio 4322
Phone: (614) 888-8320
FAX: (614) 888-0750
www.nationalboard.org
- **National Association of Corrosion Engineers (NACE)**
1440 South Creek Drive
Houston, TX 77084-4906
Phone: (281) 228-6200
FAX: (281) 228-6300
www.nace.org
- **The Society for Protective Coatings (SSPC)**
40-24th Street, 6th Floor
Pittsburgh, PA 15222-4656
Phone: (412) 281-2331
FAX: (412) 281-9992
www.sspc.org
- **American National Standards Institute (ANSI)**
1899 L Street, NW, 11th Floor
Washington, DC 20036
Phone: (202) 293-8020
FAX: (202) 293-9287
www.ansi.org

LIMITED WARRANTY

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GLOBAL HEADQUARTERS

- 3425 East Locust Street
Davenport, IA 52803

ph: 800.BLAST.IT (800.252.7848)

ph: 563.324.2519

fax: 563.324.6258

GULF STATES HEADQUARTERS

- 701 East Boulevard
Deer Park, TX 77536

ph: 800.BLAST.IT (800.252.7848)

ph: 281.930.0905

fax: 281.542.0736

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