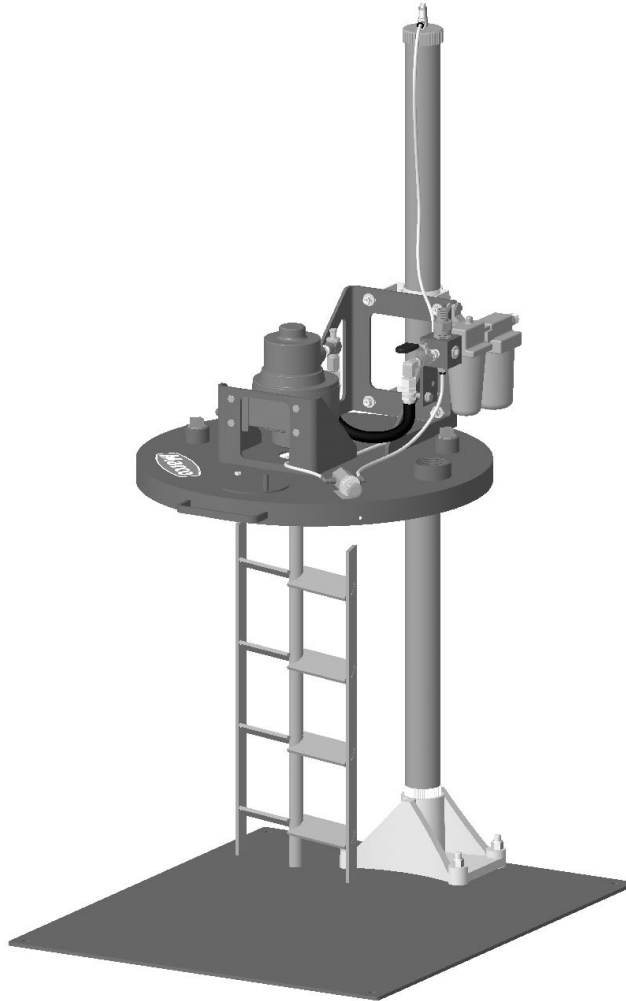


OPERATOR'S MANUAL

MARCO® ELEVATOR AGITATOR 55 GALLON (220 LITER) DRUM



⚠ 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.allredi-us.com, or contact Allredi at 563.324.2519 for replacements. Failure to comply with the above warning could result in death or serious injury.

ALLREDI™

Company Profile

Allredi was formed in the early 2020, when two of the largest distributors in the blasting, coating, safety, and environmental industry, APE Companies and Marco Group International, joined forces. While the qualities both companies are known for have not changed, a lot about our business is new. New abilities. New agilities. New ways to help you win. This calls for a new name, Allredi.

This name exemplifies what we have become. It is completely oriented to the needs of our customers. To your needs. It says that when you call us for anything – products, service, expert advice, anything – you can consider it done. Or even better, Allredi done.

We are your right-now supplier. From skills to SKUs, we deliver the goods fast. So you can be more agile every minute, every day. This is who we are. This is what our new name means. Go ahead and expect excellence, because we're bringing it.

Our Mission and Vision

To be the industry's preferred partner in surface preparation solutions through unrivaled technical expertise, customer experience, product availability, and tailored service offerings.

The Allredi Difference

- **Industry Experience** – With Allredi 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 an Allredi customer, you have access to hundreds of years of cumulative experience related to your operations.
- **Manufacturing Excellence** – Allredi is a U.S. based manufacturer of equipment for the Surface Preparation and Protective Coatings industries. Allredi'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** – Allredi'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, coating, environmental, and safety equipment. Allredi is your right-now supplier, so you can keep your projects moving. From our foundation of strong relationships, we have built a nationwide network that puts vast inventory and ready service close to our customers. We provide advanced expertise, and we deliver the goods fast – so you can easily access the products and services you need to me more agile every minute, every day.
- **Technology Leadership** – Our website provides: Operator's Manuals, Part Numbers and Schematics Guides, SDS information, and key product features and specifications, providing access to information 24/7.

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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 Allredi, 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.

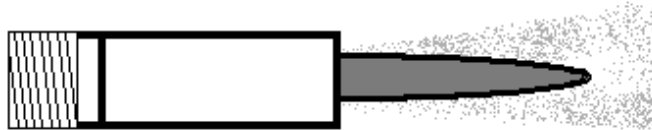
- ▶ See Air & Abrasive Consumption Chart for estimated abrasive consumption rates and required air flow (cubic feet per minute). Your system must meet these minimum requirements to ensure proper function and performance.
- ▶ Always use abrasive that is dry and properly screened. This will reduce the 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*

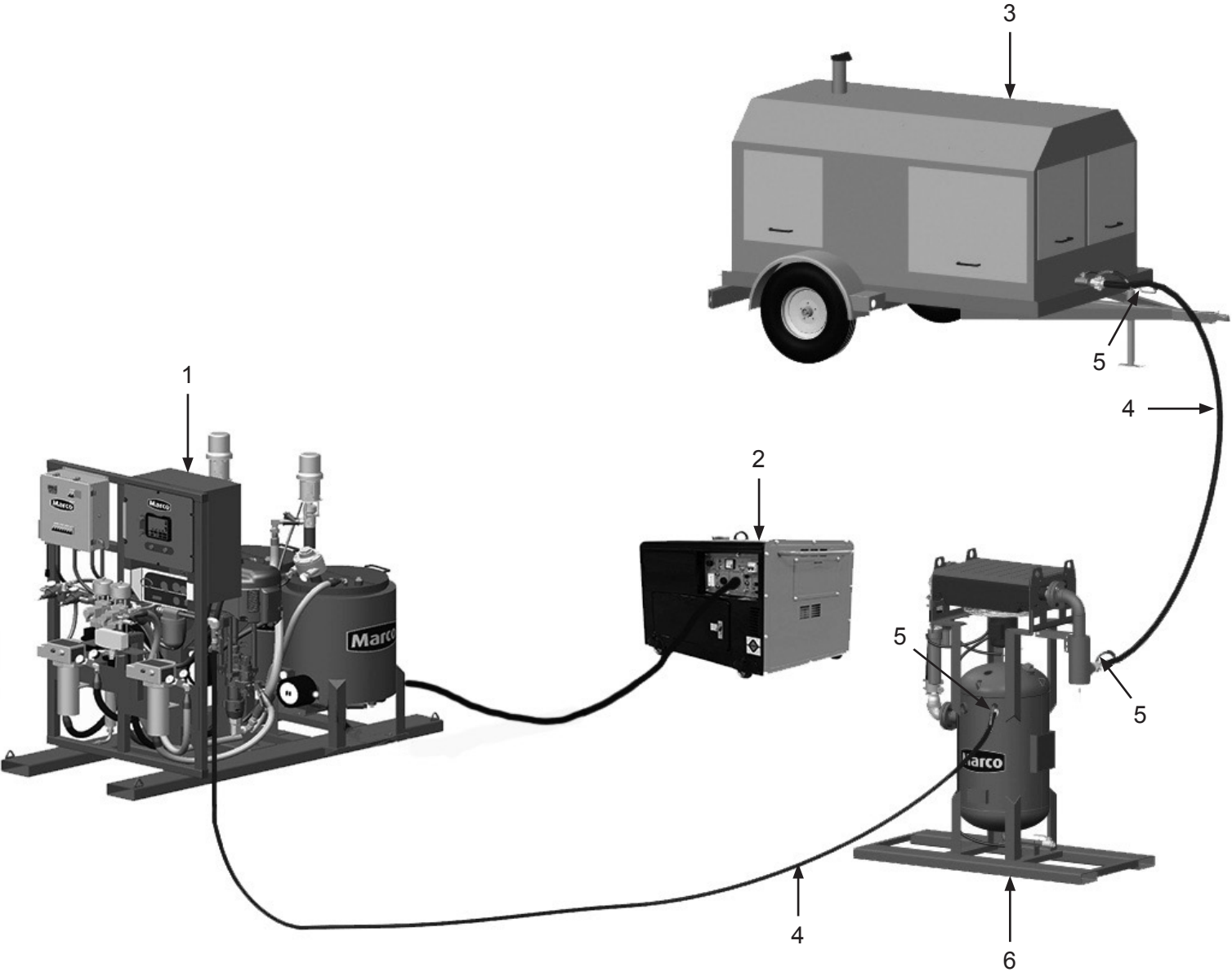
Nozzle Orifice	Pressure at the Nozzle (PSI)								Air (in cfm), Abrasive & Compressor Requirements
	50	60	70	80	90	100	125	140	
No. 2 (1/8")	11 67 2.5	13 77 3	15 88 3.5	17 101 4	18 112 4.5	20 123 5	25 152 5.5	28 170 6.2	Air (cfm) Abrasive (lbs/hr) Compressor Horsepower
No. 3 (3/16")	26 150 6	30 171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

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

Plural Component Sprayer – Position Plural Component Sprayer (1) as close to the containment area as possible.

- Inspect entire system for fluid leaks, air leaks or damage. Repair or replace damaged components.
 - Coatings Tanks.
 - In-Line Heaters.
 - Mix Manifold.
 - Dose Valves.
 - Hoses.
 - All visible electrical connections and wires.
 - All TSL locations, (throat seal liquid) in pump wet cups and dose valve cups.
 - All pump packing adjustments.
- Inspect condition of Filter (5). Replace as needed.
- Inspect Static Mixers for fluid leaks or damage.
- Check that air connection lock pins are secure.
- Check for loose fittings.
- Ensure all shields are in place.
- Check level in Resin Tank (A).
- Check level in Catalyst Tank (B).
- Ensure sufficient air supply volume and/or pressure (100–150 CFM @ 100–150 psi).
- Ensure all immersion heater covers and panel doors are closed on Hazardous Location units.

Electrical Power Source – Select power source based on electrical power requirements of entire system. Unit can be powered from a generator or fixed location power source, provided circuit is appropriately sized.

Air Compressor – Select an Air Compressor (3) of adequate size to support all equipment requirements. Before connecting Air Hose (4), sample the air being produced by the air compressor (3) 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 (7) for damage or wear. Repair or replace damaged or worn components.

Safety Cables – Install a Safety Cable (5) at each Air Hose (4) connection points.

Aftercooler and Moisture Separator – Ensure Aftercooler (6) is positioned on stable ground. Drain after each 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-595

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-561

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. Failure to comply with the above warning could result in death or serious injury.

Description

A drum agitation system is used to pre-condition coating components in a drum. The Marco® Elevator Agitator - 55 Gallon (220 Liter) Drum, manufactured by Allredi uses a pneumatic-driven agitation paddle to efficiently mix high viscosity coatings. The agitation system and controls are mounted on a heavy-duty drum cover. The drum cover is mounted to a pneumatic lifting device to raise and lower the assembly from a drum. Typical applications include: bridge, railcar, shipyards, storage tanks, and waste water. Common coatings include epoxy's, urethanes, and 100% solids.

Operational Requirements

- 120 CFM @ 50-150 psi regulated filtered air.
- A container having an inner diameter of 24 inches, and a minimum height of 34 inches, and a maximum height of 36 inches.

The following may cause safety hazards or reduced performance:

- Improper installation and/or maintenance of components.
- Use of a container with improper dimensions.
- Insufficient or excessive compressed air pressure and/or volume.

Initial Setup

- Place Elevator Agitator - 55 Gallon (220 Liter) Drum on a level surface capable of supporting the unit's weight (300 lbs. + weight of material). Properly anchor.
- Assemble Agitator (3). See Remove and Install Agitator.
- Properly ground the unit.
- Connect 120 CFM @ 50-150 PSI regulated filtered air to Air Inlet Manifold (1).
- Place a Coating Container of sufficient size (inner diameter of 24 inches, and a height of 34 to 36 inches), under raised lid assembly.
- Adjust Elevator speed as needed. See Adjust Elevator Speed.
- Adjust height of Lid Assembly (2). See Adjust Height of Lid Assembly.

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 Elevator Agitator - 55 Gallon (220 Liter) Drum at time of delivery. If this literature is unavailable, please contact Allredi 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.

Start Up:

- Activate agitator. See Activate/Deactivate Agitator.
- Adjust agitator speed as needed. See Adjust Agitator Speed.

OPERATING INSTRUCTIONS

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-520

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.

WARNING

W-566

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. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-574

Transporting, lifting, or moving this device must be in accordance with applicable OSHA standards and ASME B30 standards, as well as any applicable local, state, or federal requirements. For crane lifting, attach to Tie-down/Lifting Lugs only. For transporting device with fork pockets, use fork-lift truck with sufficient lifting capacity. When transporting, use Tie-down/Lifting Lugs only to secure the device. Failure to comply with the above warning could result in death or serious injury.

During use:

- Adjust agitator speed as needed. See Adjust Agitator Speed

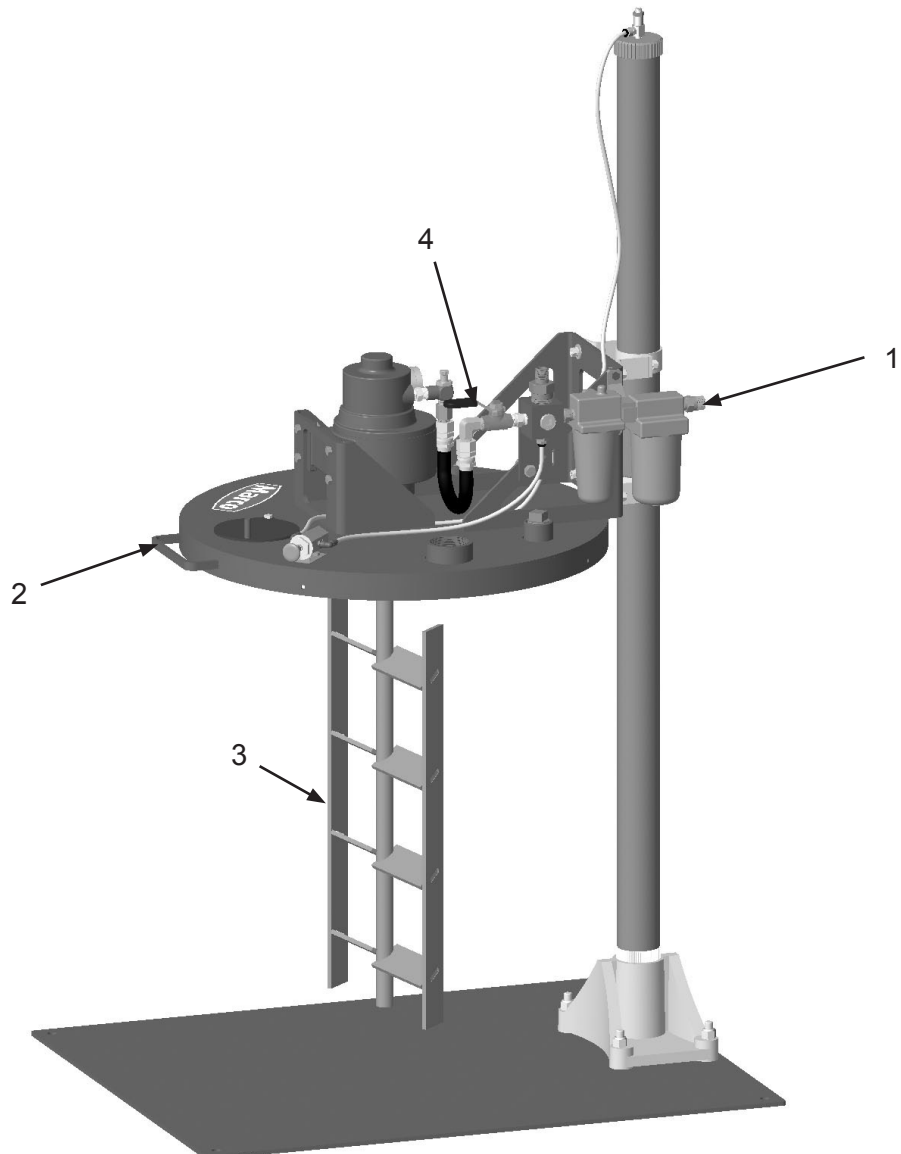
Shut down:

- Close Full Port Valve (4) to deactivate agitator.
- Shut down air supply and depressurize the entire system. See Depressurize System.

After use:

Note: When cleaning, always use a compatible cleaner.

- Clean Agitator (3) and Lid Assembly (2).



OPERATING INSTRUCTIONS

Raise/Lower Lid 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.

WARNING

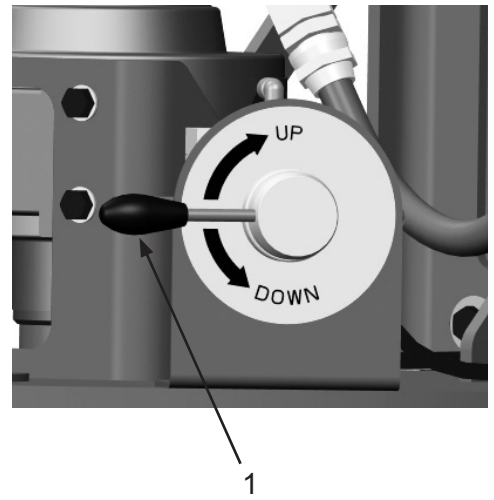
W-563

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.

Raise Lid Assembly for units built before January 2022

Note: Agitator Control Handle (1) is shown in "CLOSED" position.

- 1) Move Agitator Control Handle (1) to the "UP" position. Lid Assembly will travel upward to its highest point.
- 2) Adjust travel speed of Lid Assembly as needed. See Adjust Elevator Speed.

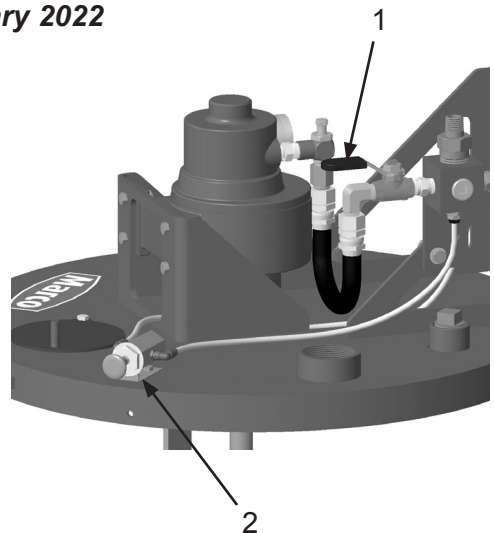


Lower Lid Assembly

- 1) Move Agitator Control Handle (1) to the "DOWN" position. Lid Assembly will travel downward until Lid Assembly components contact a surface.
- 2) Adjust travel speed of Lid Assembly as needed. See Adjust Elevator Speed.

Raise Lid Assembly for units built after January 2022

- 1) Ensure Ball Valve (1) is closed before raising.
- 2) Pull out on the Air Control Valve knob (2). Lid Assembly will travel upward to its highest point.
- 3) Adjust travel speed of Lid Assembly as needed. See Adjust Elevator Speed.



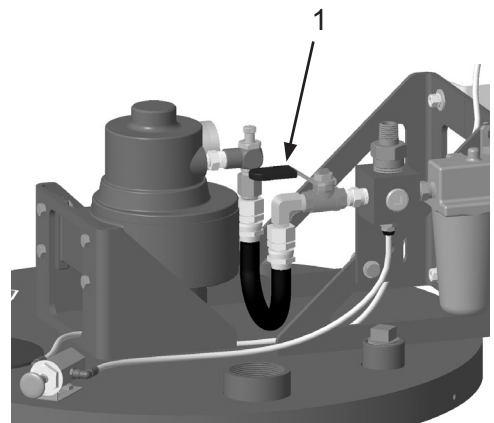
Lower Lid Assembly

- 1) Push in the Air Control Valve knob (1) Lid Assembly will travel downward until Lid Assembly components contact a surface.
- 2) Adjust travel speed of Lid Assembly as needed. See Adjust Elevator Speed.

Activate/Deactivate Agitator

Activate Agitator

- 1) Ensure Ball Valve (1) is closed.
- 2) Ensure proper coating container is correctly placed. See Adjust Height of Lid Assembly.
- 3) Ensure supply air to unit is connected, and supply air is of proper volume and pressure.
- 4) Open Ball Valve (1).
- 5) Adjust speed of agitator to sufficiently mix the coating. See Adjust Agitator Speed.



Deactivate Agitator

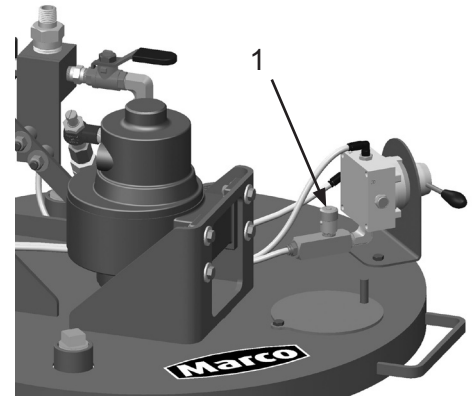
- 1) Close Ball Valve (1).

OPERATING INSTRUCTIONS

Adjust Elevator Speed

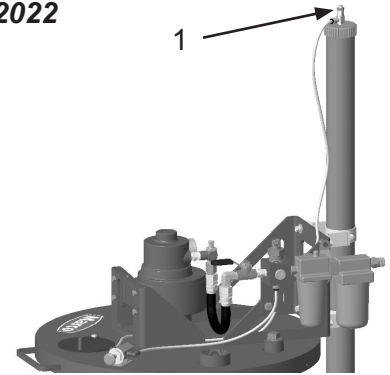
Adjust Elevator Speed *for units built before January 2022*

- 1) Turn Flow Control Valve (1), clockwise to decrease speed of elevator, and counterclockwise to increase speed of elevator.
- 2) Raise and lower Lid Assembly. See Raise and Lower Lid Assembly.
- 3) Repeat steps 1–2 until desired speed is attained.



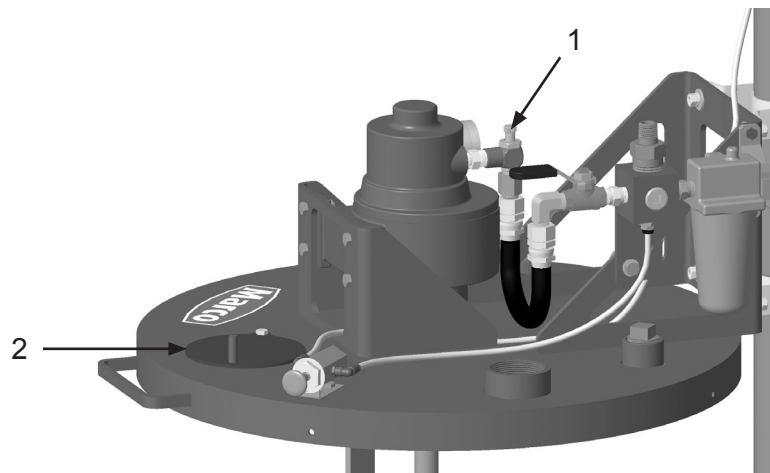
Adjust Elevator Speed *for units built after January 2022*

- 1) Loosen the hex nut of the restrictor valve (1) and turn the valve needle in to decrease speed of elevator, and out to increase speed of elevator.
- 2) Raise and lower Lid Assembly. See Raise and Lower Lid Assembly.
- 3) Repeat steps 1–2 until desired speed is attained.



Adjust Agitator Speed

- 1) Ensure coating container is in place. See Adjust Height of Lid Assembly.
- 2) Move Inspection Port Cover (2) to expose inspection port. Ensure agitator is fully submerged.
- 3) Activate agitator. See Activate and Deactivate Agitator.
- 4) Slowly rotate Air Adjusting Valve (1) counterclockwise, and using the inspection port, observe agitator for movement. Adjust speed of agitator to sufficiently mix the coating.



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.

OPERATING INSTRUCTIONS

Adjust Height of Lid Assembly for units built before January 2022

Compare images of support assembly if unsure of build date

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

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WARNING

W-563

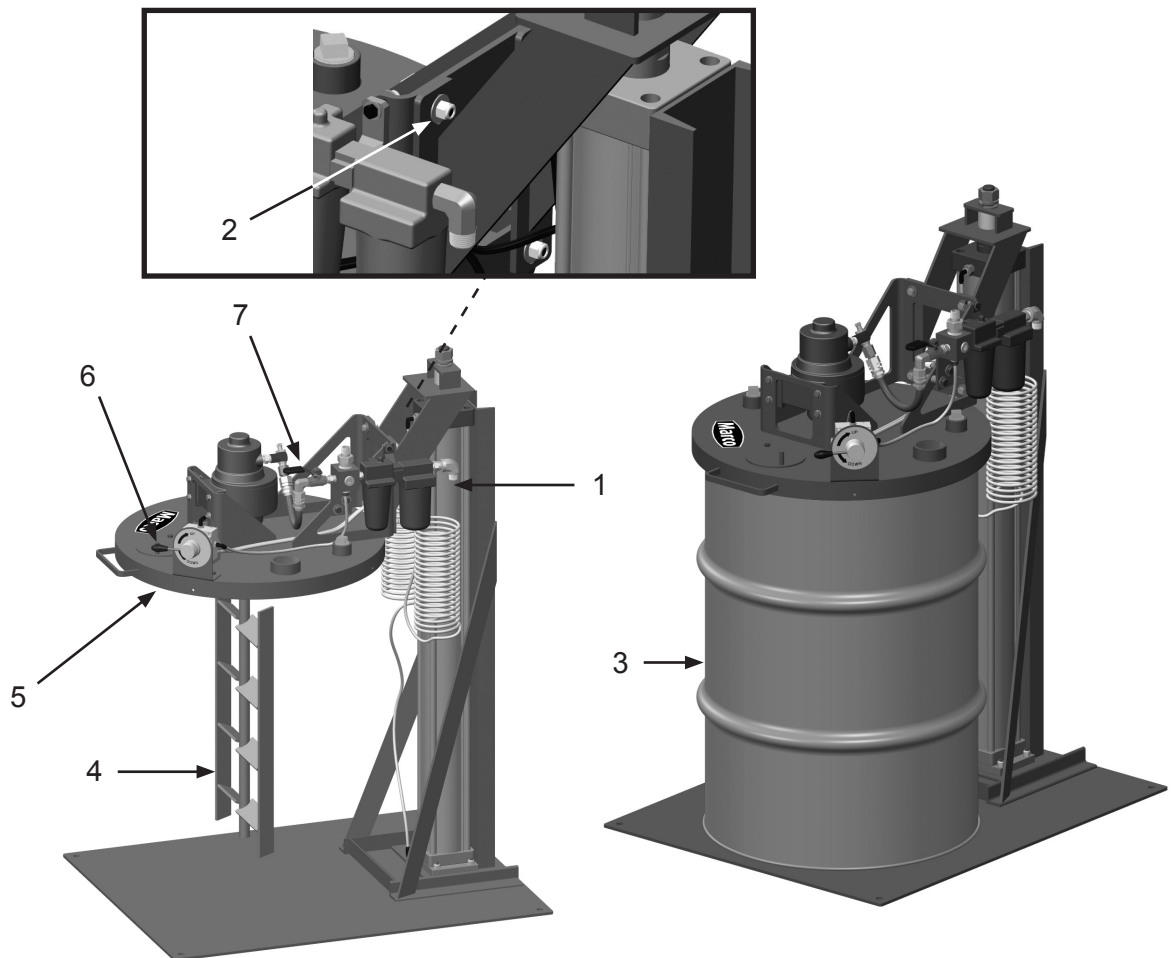
Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above warning could result in death or serious injury.

- 1) Ensure Agitator Ball Valve (7) is closed.
- 2) Connect air supply hose to Elbow (1).
- 3) Raise Lid Assembly (5). See Raise and Lower Lid Assembly.
- 4) Place an empty Coating Container (3) of sufficient size (inner diameter of 24 inches, and a height of 34 to 36 inches), under raised Lid Assembly (5). Slowly lower Lid Assembly until it comes to a stop. Turn Agitator Control Handle (6) to "CLOSED" position, and check for interference.

Note: After Lid Assembly contacts rim of Coating Container (3), ensure Agitator (4) is not in contact with the inner wall of the coating container. If Agitator is in contact with inner wall of Coating Container, adjust position of coating container or remove coating container from use, and select a coating container of sufficient size.

Note: If Lid Assembly does not contact rim of Coating Container, follow steps 4 through 7 or remove Coating Container from use, and select a Coating Container of sufficient size.

- 5) Disconnect air supply hose from Elbow (1).
- 6) Loosen four Nuts (2).
- 7) Lower Lid Assembly (5) to make contact with rim of Coating Container (3).
- 8) Tighten four Nuts (2).
- 9) Connect air supply hose to Elbow (1).
- 10) Activate Agitator (4). See Activate and Deactivate Agitator. Ensure Agitator does not make contact with walls of Coating Container (3).
- 11) Deactivate Agitator (4). See Activate and Deactivate Agitator.



OPERATING INSTRUCTIONS

Adjust Height of Lid Assembly for units built after January 2022

Compare images of support assembly if unsure of build date

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

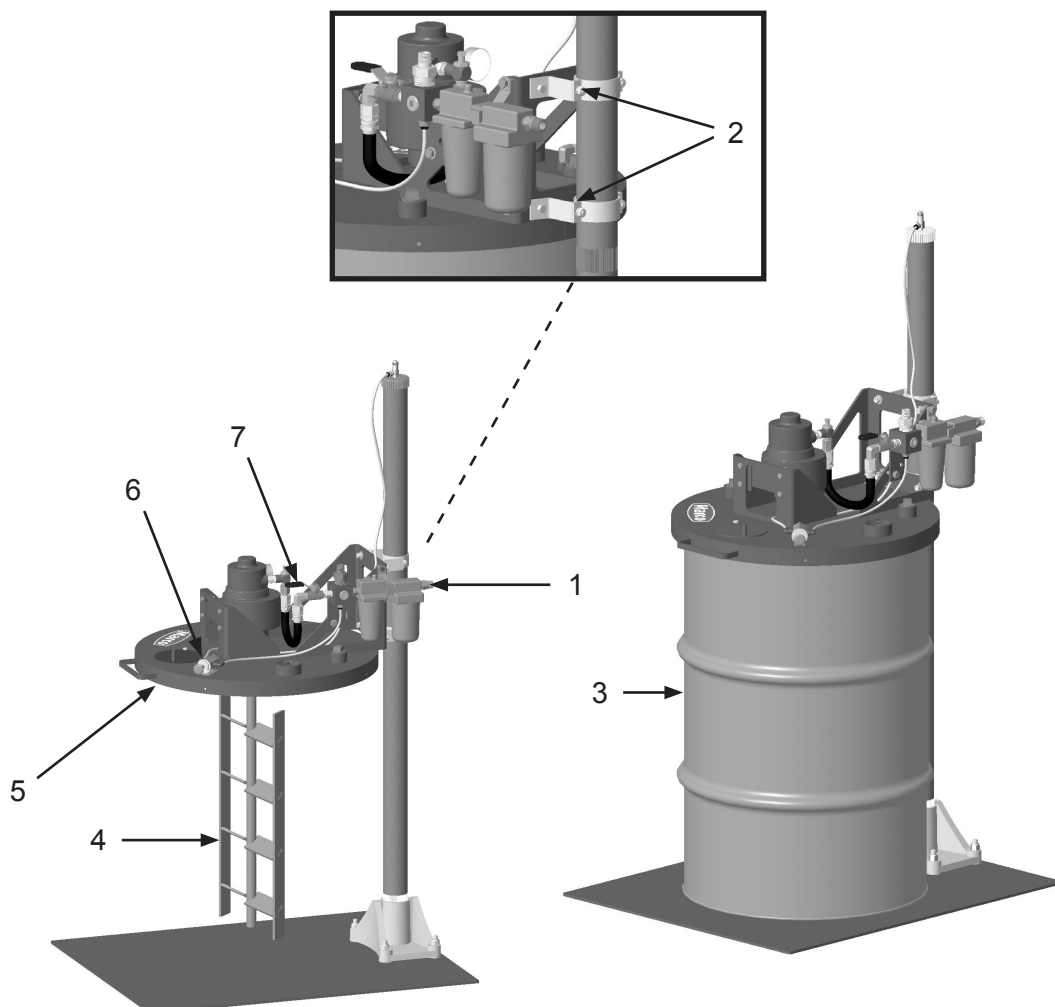
Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above warning could result in death or serious injury.

- 1) Ensure Agitator Ball Valve (7) is closed.
- 2) Connect air supply hose to fitting (1).
- 3) Raise Lid Assembly (5). See Raise and Lower Lid Assembly.
- 4) Place an empty Coating Container (3) of sufficient size (inner diameter of 24 inches, and a height of 34 to 36 inches), under raised Lid Assembly (5). Slowly lower Lid Assembly until it comes to a stop.

Note: After Lid Assembly contacts rim of Coating Container (3), ensure Agitator (4) is not in contact with the inner wall of the coating container. If Agitator is in contact with inner wall of Coating Container, adjust position of coating container or remove coating container from use, and select a coating container of sufficient size.

Note: If Lid Assembly does not contact rim of Coating Container, follow steps 4 through 7 or remove Coating Container from use, and select a Coating Container of sufficient size.

- 5) Disconnect air supply hose from fitting (1).
- 6) Loosen four Nuts (2).
- 7) Lower Lid Assembly (5) to make contact with rim of Coating Container (3).
- 8) Tighten four Nuts (2).
- 9) Connect air supply hose to fitting (1).
- 10) Activate Agitator (4). See Activate and Deactivate Agitator. Ensure Agitator does not make contact with walls of Coating Container (3).
- 11) Deactivate Agitator (4). See Activate and Deactivate Agitator.



OPERATING INSTRUCTIONS

Depressurize System

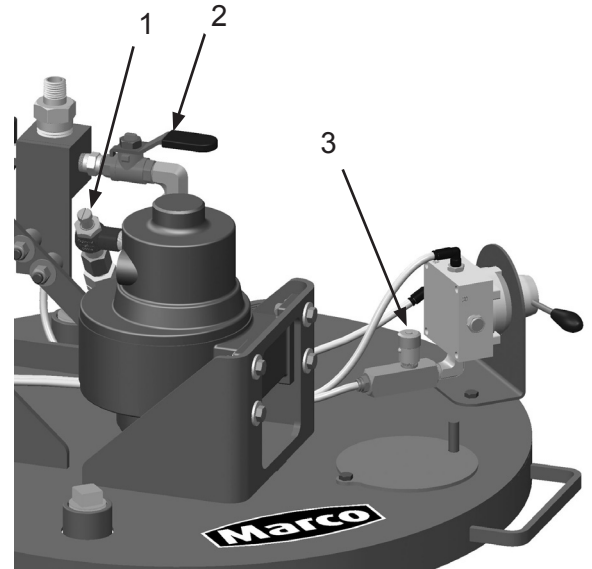
WARNING

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.

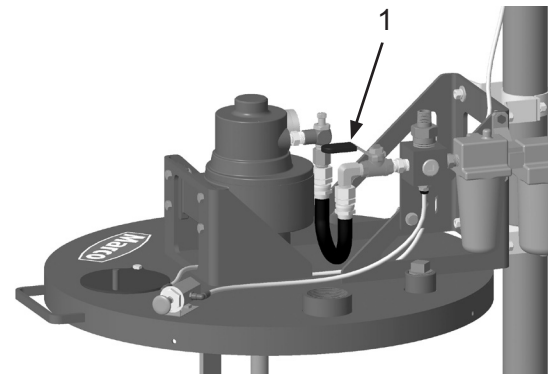
Depressurize System for units built before January 2022

- 1) Ensure Agitator Assembly is in lowered position.
- 2) Close Ball Valve (2).
- 3) Shut down air supply.
- 4) Rotate Needle Valve (1), counterclockwise to full open.
- 5) Rotate Flow Control Valve (3) counterclockwise to release pressure in cylinder.



Depressurize System for units built after January 2022

- 1) Ensure Agitator Ball Valve (1) is closed.
- 2) Ensure Agitator Assembly is in lowered position.
- 3) Shut down air supply.



MAINTENANCE

Remove & Install Agitator

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-561

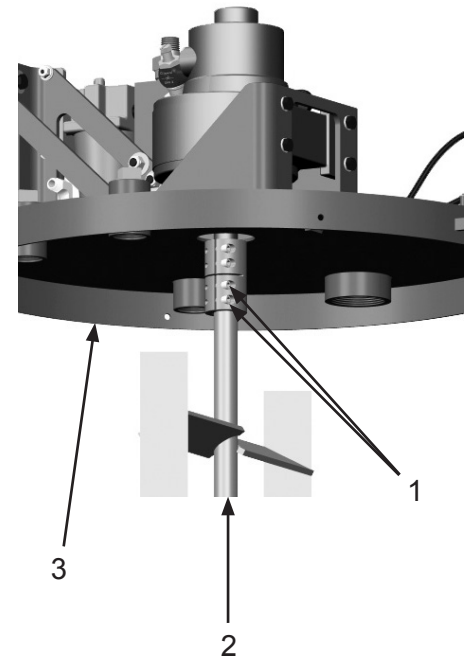
Flammable fumes, such as solvent and paint fumes in the work area can present an ignition or explosion hazard if allowed to collect in adequate concentrations. To reduce conditions that could result in a fire or an explosion, provide adequate ventilation, eliminate all ignition or spark sources, keep 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. Failure to comply with the above warning could result in death or serious injury.

WARNING

W-563

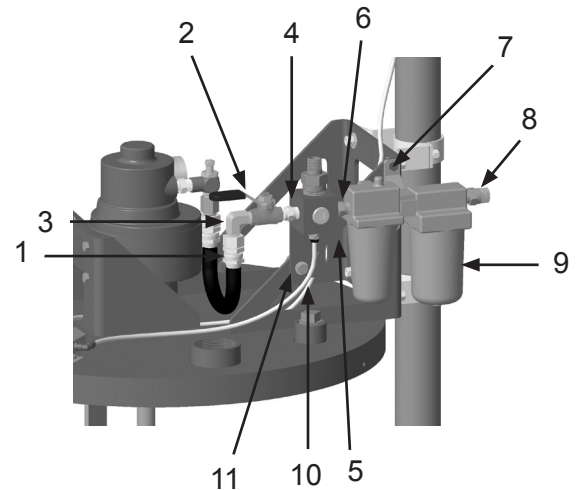
Moving parts can present an area where crushing, pinching, entanglement or amputation may occur. Do not place body parts or foreign objects in any area where there are moving parts. Failure to comply with the above warning could result in death or serious injury.

- 1) Ensure Agitator Ball Valve is closed.
- 2) Raise Lid Assembly (3). See Raise and Lower Lid Assembly
- 3) Remove coating container.
- 4) Lower and support Lid Assembly (3) using an appropriate device. Ensure the bottom of Agitator (2) is elevated approximately 4 inches from the ground.
- 5) Place an appropriate support beneath Agitator (2).
- 6) Depressurize the entire system.
- 7) Loosen two Set Screws (1), disengage device supporting Agitator (2), lower and remove Agitator.
- 8) Inspect all components for wear and damage. Replace components as needed.
- 9) Install parts in reverse order.
- 10) Adjust Height of Lid Assembly (3). See Adjust Height of Lid Assembly.



Remove & Install Filter/Lubricator Assembly

- 1) Shut down air supply and depressurize the entire system. Disconnect hose from fitting (8).
- 2) Disconnect Hoses (1,10).
- 3) Remove 90° Elbow (3), Full Port Ball Valve (2) and Hex Nipple (4).
- 4) Remove two Bolts, Nuts and four Washers (11). Remove Manifold (5).
- 5) Remove fitting (8) and Hex Nipple (6).
- 6) Remove Filter/Lubricator (9) by removing two Bolts, two Washers and two Nuts (7).
- 7) Install parts in reverse order using the following special instructions:
 - Use medium-strength thread-locker on all nuts and bolts.
 - Use PTFE Sealing Tape on union and fitting threads.
 - Fill Lubricator Tank with SAE 10 oil or air tool anti-freeze lubricant.



MAINTENANCE

Remove & Install Agitator Air Motor

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

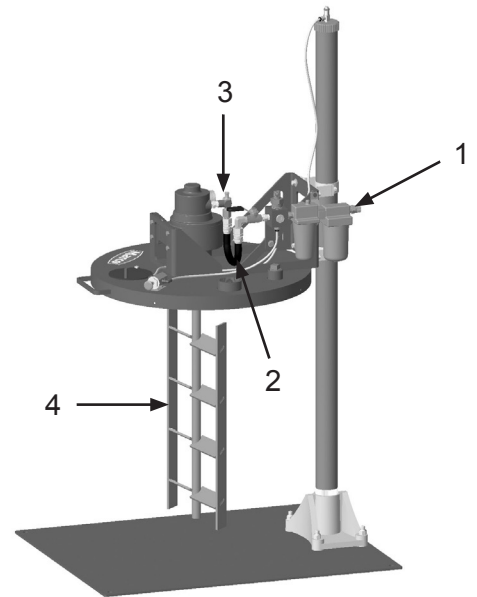
For equipment manufactured by entities other than Marco, you must consult the Original Equipment Manufacturer operator's manuals, information, training, instructions and warnings, for the proper and intended use of all equipment. Failure to comply with the above warning could result in death or serious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

WARNING

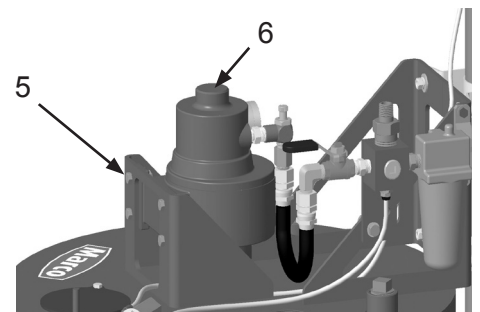
W-563

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.

- 1) Depressurize the entire system.
- 2) Disconnect air hose from fitting (1).
- 3) Disconnect Air Hose (2) from Air Adjusting Valve (3).
- 4) Remove Agitator (4). See Remove & Install Agitator.



- 5) Remove four Bolts, Nuts and Washers (5).
- 6) Remove Air Motor (6).
- 7) Inspect all components for wear and damage. See Original Equipment Manufacturer's Operator's Manual. Replace as needed.
- 8) Install parts in reverse order.



MAINTENANCE

Remove & Install Cylinder

▲ 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

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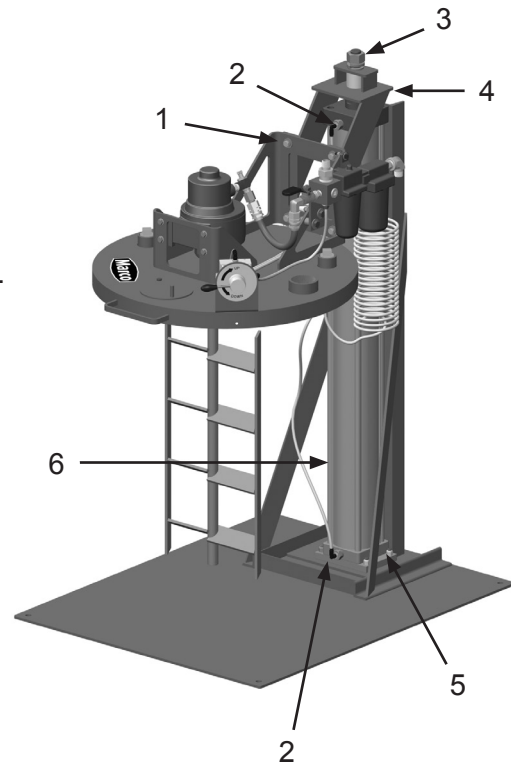
▲ WARNING

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.

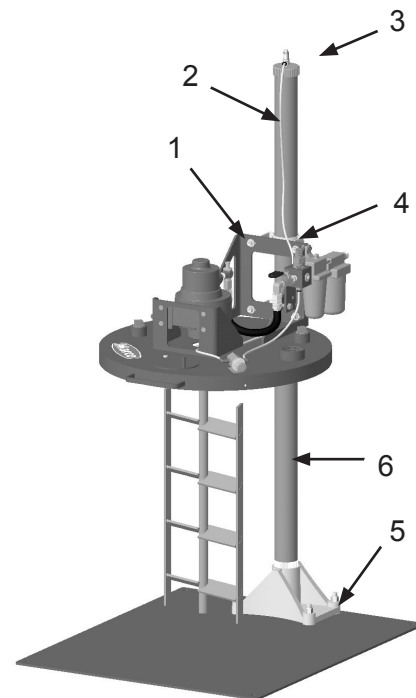
Remove & Install Cylinder *for units built before January 2022*

- 1) Place coating container under lid assembly for support.
- 2) Shut down air supply and depressurize the entire system.
- 3) Disconnect Hoses (2) from Cylinder (6), and route hoses away from cylinder.
- 4) Remove Nut, Lock Washer and Washer (3).
- 5) Remove four Bolts, Nuts and eight Washers (1). Remove Cylinder Bracket (4).
- 6) Support Cylinder (6) and remove four Nuts (5). Remove Cylinder.
- 7) Inspect Cylinder for damage. See Original Equipment Manufacturer's Operator's Manual. Replace components as needed.
- 8) Install parts in reverse order.



Remove & Install Cylinder *for units built after January 2022*

- 1) Place coating container under lid assembly for support.
- 2) Shut down air supply and depressurize the entire system.
- 3) Disconnect Hoses (2) from Cylinder (6), and route hoses away from cylinder.
- 4) Remove four Bolts, Nuts and eight Washers (1). Remove Cylinder Brackets (4).
- 5) Support Cylinder (6) and remove four Nuts (5). Remove Cylinder.
- 6) Inspect Cylinder for damage. See Original Equipment Manufacturer's Operator's Manual. Replace components as needed.
- 7) Install parts in reverse order.



MAINTENANCE

Remove & Install Cylinder Control 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

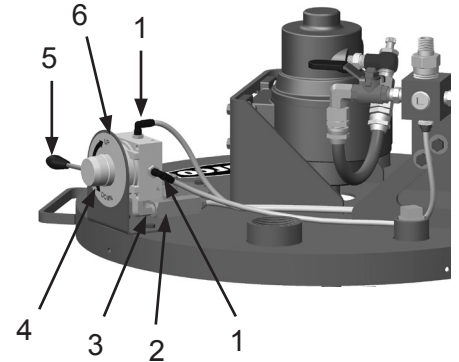
W-511
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WARNING

W-563
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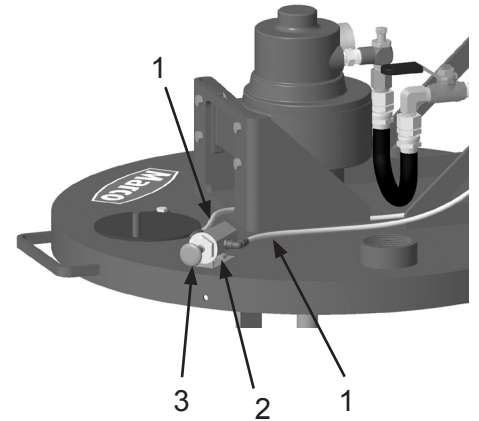
Remove & Install Cylinder Control Valve *for units built before January 2022*

- 1) Shut down air supply and depressurize the entire system.
- 2) Disconnect Air Hoses (1) from Cylinder Control Valve (6).
- 3) Remove Flow Control Valve (2) and Elbow (3) from Cylinder Control Valve (6).
- 4) Remove Handle (5) and Lock Nut (4).
- 5) Remove Cylinder Control Valve (6).
- 6) Install parts in reverse order using the following special instructions:
 - Use PTFE Sealing Tape on union and fitting threads.

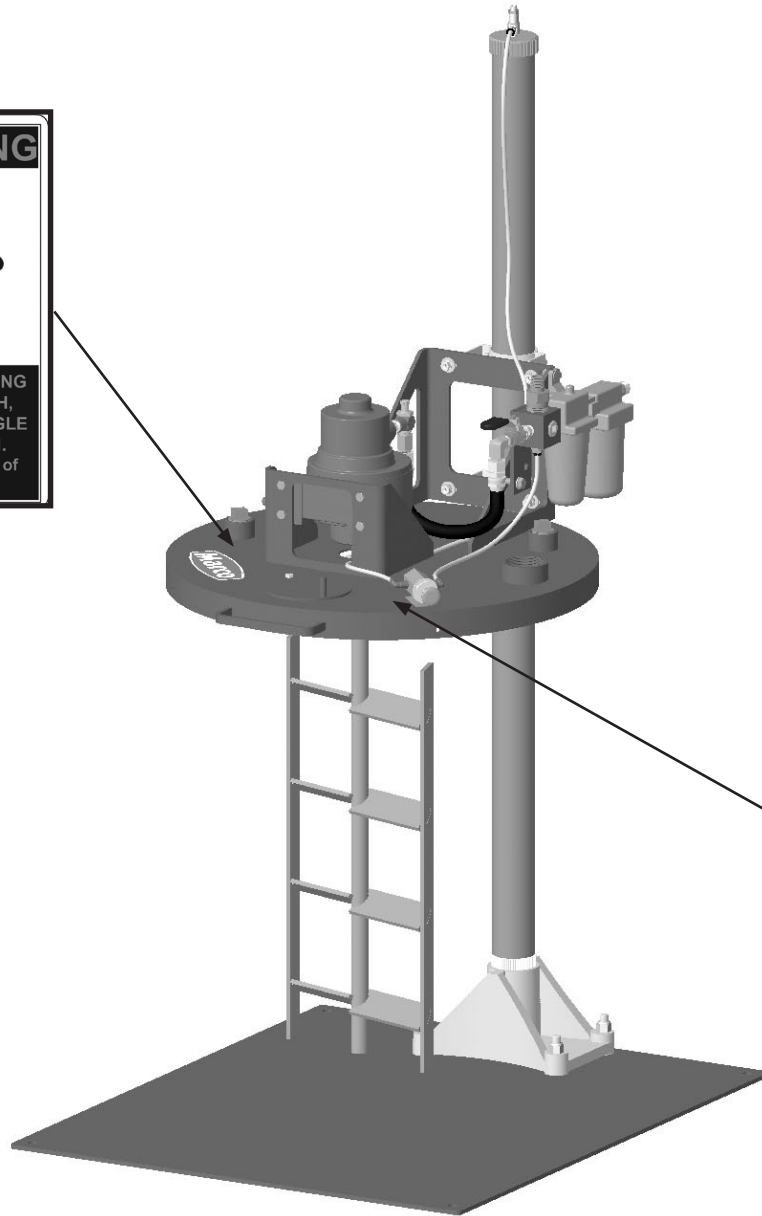


Remove & Install Air Control Valve *for units built after January 2022*

- 1) Shut down air supply and depressurize the entire system.
- 2) Disconnect Air Hoses (1) from Air Control Valve (3).
- 3) Remove two Bolts, Nuts and Washers (2) from Air Control Valve (3).
- 4) Install parts in reverse order using the following special instructions:
 - Use PTFE Sealing Tape on union and fitting threads.



HAZARD IDENTIFICATION DECALS



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-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.

If the Marco® Elevator Agitator - 55 Gallon (220 Liter) Drum does not function properly, check the following:

SYMPTOM (Cause)

ACTION

Lid Assembly does not raise or lower

(Improper alignment, Improper speed setting, Insufficient air supply pressure/volume, Damaged components)

Ensure Agitator is not contacting coating container. See Adjust Height of Lid Assembly.

Adjust raise/lower speed of Lid Assembly. See Adjust Elevator Speed.

Ensure Agitator Control Handle is in the "CLOSED" position. See Activate/Deactivate Agitator.

Ensure air supplied to Elevator is of sufficient pressure and/or volume. Increase air supply pressure and/or volume.

Ensure Lift Control Valve is in the proper position. See Raise/Lower Lid Assembly.

Refer to Elevator Original Equipment Manufacturer's Operator's Manual.

Lid Assembly raises/lowers too fast or too slow

(Improper alignment, Improper speed setting, Damaged components)

Ensure Agitator is not contacting coating container. Adjust height of lid assembly. See Adjust Height of Lid Assembly.

Adjust raise/lower speed of Lid Assembly. See Adjust Elevator Speed.

Inspect components for damage. Replace as needed.

Refer to Elevator Original Equipment Manufacturer's Operator's Manual.

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-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.

SYMPTOM (Cause)

Agitator does not rotate
(Improper alignment, Insufficient air supply pressure/ volume, Damaged components)

ACTION

Ensure Agitator is not contacting coating container. Adjust height of lid assembly. See Adjust Height of Lid Assembly.

Ensure Agitator Control Handle is in the "OPEN" position. See Activate/Deactivate Agitator.

Ensure air supplied to Agitator Air Motor is of sufficient pressure and/or volume. Increase air supply pressure and/or volume.

Ensure Air Motor Muffler is free of obstruction. Repair or replace Air Motor Muffler as needed.

Inspect Air Motor for damage. Refer to Original Equipment Manufacturer's Operator's Manual. Replace as needed.

Inspect Agitator for damage. Repair or replace as needed.

Rotation speed of Agitator is too slow or too fast

(Improper alignment, Insufficient/excessive air supply volume/air pressure, Improper lubrication, Damaged components)

Adjust speed of agitator. See Adjust Agitator Speed.

Ensure Agitator is not contacting coating container. Adjust height of lid assembly. See Adjust Height of Lid Assembly.

Ensure Lubricator for air motor is set properly. See Remove/Install Air Motor.

Ensure air supply to Air Motor is of appropriate pressure and/or volume. Increase or decrease air supply as needed. Refer to Original Equipment Manufacturer's Operator's Manual.

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

- **The Association for Materials Protection and Performance (AMPP)**

800 Trumbull Drive
Pittsburgh, PA 15205
Phone: (277) 281-7772

15835 Park Ten Place
Houston, TX 77084
Phone: (800) 797-6223

4501 Mission Bay Drive
Suite 2G
San Diego, CA 92109
Phone: (858) 768-0828
www.ampp.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

Seller warrants to the original purchaser that the Product covered by this Limited Warranty will remain free from defects in workmanship or material under normal commercial use and service for a period of one year from the date of shipment to the original Purchaser. This Warranty shall not apply to defects arising, in whole or in part, from any accident, negligence, alteration, misuse or abuse of the Product, operation of the Product which is not in accordance with applicable instructions or manuals or under conditions more severe than, or otherwise exceeding, those set forth in the written specifications for the Product, nor shall this Warranty extend to repairs or alterations of the Product and/or any maintenance part by persons other than Seller or Seller's authorized representatives. This warranty does not apply to accessory items. Further, this Warranty does not apply to damage or wear to the surface finish or appearance of the Product or normal wear and tear to the Product. This Warranty is limited to a purchaser who purchases the Product either directly from the Seller or from one of Seller's "Authorized Distributors". An Authorized Distributor is a Seller approved distributor that purchases the Product directly from the Seller for the sole purpose of re-selling the Product at retail, without any use or modifications whatsoever, to an end-purchaser. This warranty is specifically non-assignable and non-transferable.

DISCLAIMER OF WARRANTY

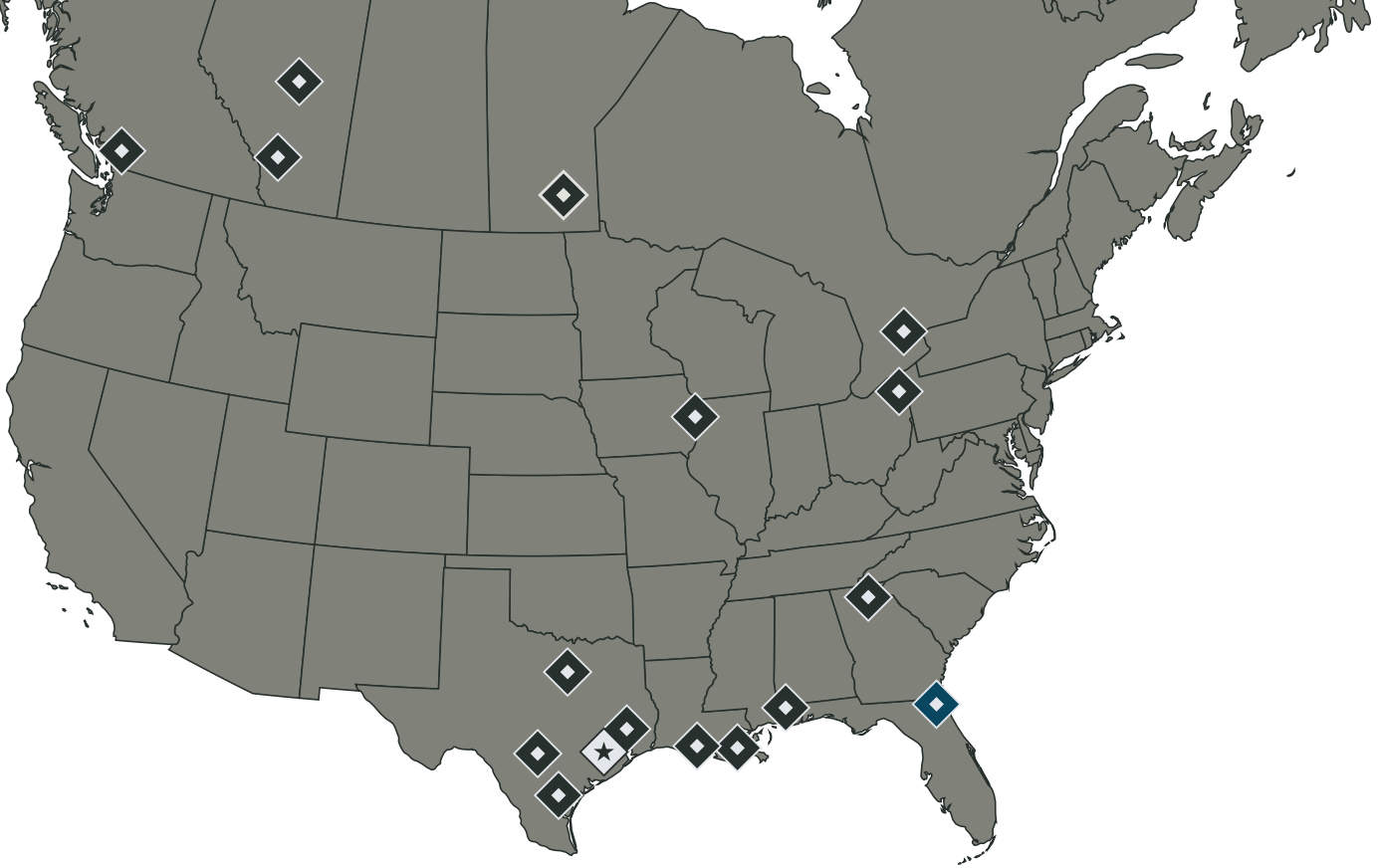
The foregoing Limited Warranty is exclusive and is in lieu of all other warranties, whether oral or written and whether express, implied, or statutory. SELLER HEREBY DISCLAIMS ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE AND ALL SUCH OTHER WARRANTIES ARE HEREBY EXCLUDED AND ARE INAPPLICABLE TO THE PRODUCT. Seller makes no warranties or representations of any kind concerning respirators, or equipment made by other manufacturers. Seller's agents and representatives are not authorized to offer any further warranties.

EXCLUSIVE REMEDY FOR WARRANTY CLAIMS

THE SOLE AND EXCLUSIVE REMEDY UNDER THE FOREGOING LIMITED WARRANTY, AND TO THE EXTENT PERMITTED BY LAW, ANY WARRANTY OR CONDITION IMPLIED BY LAW, COVERING THIS PRODUCT SHALL BE, AT THE SELLER'S OPTION, THE REPAIR OR REPLACEMENT, FREE OF CHARGE, F.O.B. POINT OF MANUFACTURE, OF ANY DEFECTIVE PART OR PARTS OF THE PRODUCT THAT WERE MANUFACTURED BY SELLER, AND WHICH ARE RETURNED TO SELLER AT SELLER'S PRINCIPAL PLACE OF BUSINESS, POSTAGE PREPAID BY THE PURCHASER. THIS SOLE AND EXCLUSIVE REMEDY IS CONDITIONED UPON PURCHASER'S PROMPT WRITTEN NOTICE TO SELLER AT SELLER'S PLACE OF BUSINESS THAT A DEFECT HAS BEEN DISCOVERED, TOGETHER WITH A REASONABLY DETAILED DESCRIPTION OF THE DEFECT IN THE PRODUCT, PROOF OF PURCHASE OF THE PRODUCT, AND THE MODEL AND IDENTIFICATION NUMBER OF THE PRODUCT WITHIN THIRTY (30) DAYS AFTER DISCOVERY OF THE DEFECT, OTHERWISE SUCH CLAIMS SHALL BE DEEMED WAIVED. NO ALLOWANCE WILL BE GRANTED FOR ANY REPAIRS OR ALTERATIONS MADE BY PURCHASER OR OTHERS WITHOUT SELLER'S PRIOR WRITTEN CONSENT. IF SUCH NOTICE IS TIMELY GIVEN, SELLER WILL HAVE THE OPTION TO EITHER MODIFY THE PRODUCT OR COMPONENT PART THEREOF TO CORRECT THE DEFECT, REPLACE THE PRODUCT OR PART WITH COMPLYING PRODUCTS OR PARTS, OR REFUND THE AMOUNT PAID FOR THE DEFECTIVE PRODUCT, ANY ONE OF WHICH WILL CONSTITUTE THE SOLE LIABILITY OF SELLER AND FULL SETTLEMENT OF ALL CLAIMS. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY OBLIGATION GREATER THAN THE ORIGINAL PURCHASE PRICE OF THE PRODUCT UNDER THIS WARRANTY. PURCHASER SHALL AFFORD SELLER PROMPT AND REASONABLE OPPORTUNITY TO INSPECT THE PRODUCT FOR WHICH A CLAIM IS MADE. THE SOLE PURPOSE OF THE FOREGOING STIPULATED EXCLUSIVE REMEDY SHALL BE TO REPAIR OR REPLACE DEFECTIVE PRODUCTS OR COMPONENTS THEREOF, OR TO REFUND PURCHASER THE PURCHASE PRICE THEREOF. THIS STIPULATED EXCLUSIVE REMEDY SHALL NOT BE DEEMED TO HAVE FAILED OF ITS ESSENTIAL PURPOSE SO LONG AS SELLER IS WILLING AND ABLE TO REPAIR OR REPLACE THE DEFECTIVE PARTS OR REFUND THE PURCHASE PRICE IN ACCORDANCE WITH THE TERMS HEREOF. PRODUCTS THAT HAVE BEEN REPAIRED OR REPLACED UNDER THIS WARRANTY DO NOT RECEIVE A NEW WARRANTY AND ARE ONLY COVERED BY THE REMAINING PORTION OF THE ORIGINAL WARRANTY.

LIMITATION OF REMEDIES

The foregoing stipulated exclusive remedy is in lieu of all other remedies for breach of contract, warranty, and/or tort or otherwise. Seller shall not be liable, either directly or indirectly, for any consequential, incidental or special losses or damages of Purchaser, including but not limited to the Purchaser's expenses for downtime or for making up downtime, damages for which the Purchaser may be liable to other persons and/or entities, damages to property, and injury to or death of any persons and/or any claims for incidental or consequential damages, including but not limited to loss of profits, regardless of whether Seller has been informed of the possibility of such damages. Seller neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale or use of any Products covered by the foregoing Warranty and Disclaimers, and there are no oral agreements relating to remedies which are collateral to or which affect this limitation.



ALLREDI THERE

Serving these industries: Bridge, Pipeline, Tank & Tower, Concrete Services, Rail, Shipyard & Marine, Pools & Fountains and Foundry

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Pasadena, TX (Headquarters)
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