MOD-U-BLAST®

POWERED BY ALLREDI™

ECONOMY (E) SERIES BLAST CABINETS

OPERATOR'S MANUAL



SUPERIOR PERFORMANCE

AND QUALITY IN BLAST CLEANING EQUIPMENT

WARNING

READ MANUAL

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

Manual #E-SERIES 2507

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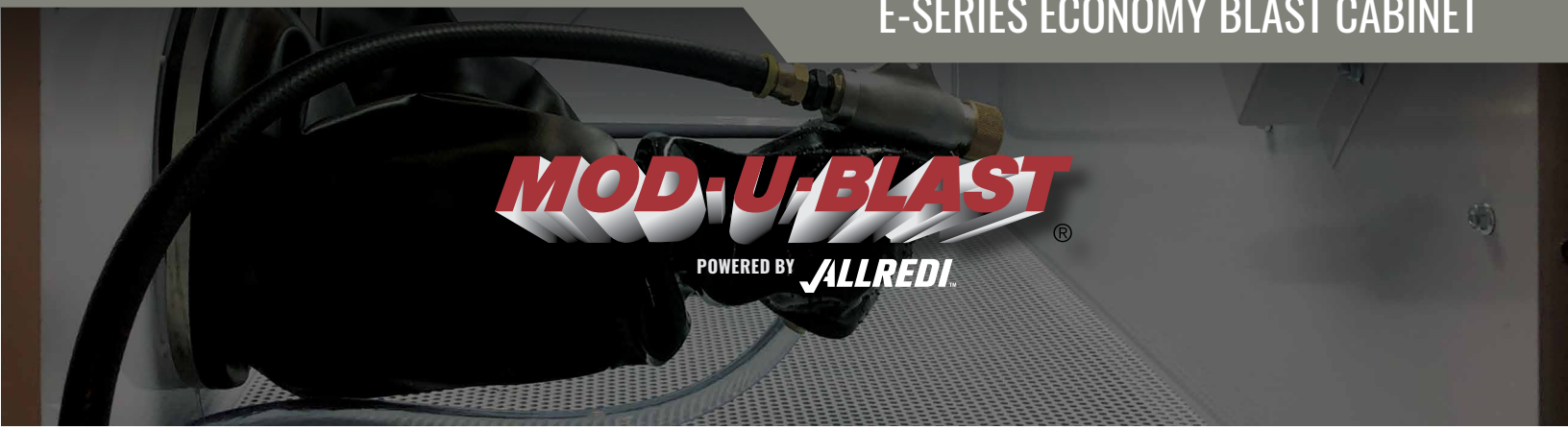
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IMPORTANT NOTICE

TO DISTRIBUTORS, PURCHASERS AND END USERS OF MOD-U-BLAST PRODUCTS
The information provided described and illustrated in this material is intended for experienced, knowledgeable users of abrasive blasting equipment and supplies (products).

The products described in this material may be combined as determined solely by the user in a variety of ways and purposes. However no representations are made as to intended use, performance standards, engineering suitability, safe practices or compliance with government regulations and laws that apply to these products, products of others, or a combination of various products chosen by the user or others. It is the responsibility of the users of these products, products of third parties, and a combination of various products, to exercise caution and familiarize themselves with all applicable laws, government regulations and safety requirements.

Nor are representations made or intended as to the useful life, maintenance cycles, efficiency or performance of the referenced products of any combination of products. This material must not be used for estimating purposes. Production rates, labour performance or surface finishes are the sole responsibility of the user based on the user's expertise, experience and knowledge of industry variables.

It is the responsibility of the user to insure that proper and comprehensive training of operators has been performed and all environmental and safety precautions observed.

Mod-U-Blast Inc. provides a variety of excellent products to the surface preparation industry, and we are confident that all proficient users, operators and contractors in this industry will continue to use our products in a safe and knowledgeable manner.

Before using this product, read all instructions, literature, labels, specifications and warnings sent with and affixed to the unit.

If operation of the unit is unclear after reading this manual, contact your supervisor for instructions. It is the responsibility of the employer to read the following instructions to users of this equipment. Periodic inspection at the work site should be made by supervisory personnel to ensure the blast machine is being properly used and maintained. A copy of this owner's manual must be kept with the blast machine and readily accessible to the blast machine operators at all times.

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WARNINGS



Over time, exposure to any dust could result in lung medical issues or death.



Never point the blast nozzle at the viewing window. Blow-off parts before opening the door. Keep doors closed until all dust has been exhausted after blasting.



Do not disconnect hoses while the system is under pressure, this could cause serious injury or death.



Use proper respirator and eye protection when servicing any component in this blast system.



When servicing the cabinet disconnect and lock out the electrical supply and disconnect the air line from the compressor.

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1. IMPORTANT SAFETY ITEMS

Read all instructions before using this equipment. For efficient and safe production reference the OSHA requirements.

1.1 E-Series Cabinet Manual

This manual contains important instructions for the safe operation of this cabinet and its related equipment. Before attempting to operate this E-Series cabinet and its components, all personnel intending on using this equipment must read the complete manual and familiarize themselves with the operation and parts.

1.2 Safety Considerations

- E-Series blast cabinets require high pressure air to operate.
- The blast cabinet must be grounded to avoid shock.
- Electric extension cords must be three wire grounded and rated for the amperage of the blaster. Check the cabinet serial tag for the rated amps.
- Dust from the blast cabinet is collected by an attached filter system and must not be allowed to become concentrated in areas where workers are exposed. This requires proper maintenance of the dust collection system.

1.3 Operator's Responsibilities Before Starting

- Inspect fittings and hoses for damage and wear. Repair any air leaks before operating.
- Check the gaskets on all doors.
- Only operate the blast cabinet with all the doors securely closed and with the dust collection system running.
- Clean the dust collector filters as needed and empty the dust collector hopper daily.

1.4 Cautions

- The Mod-U-Blast E-Series is to be used with appropriate media. Contact your representative for information.
- The compressed air to the pressure system needs to be dry.
- Working pressure of the blast cabinet and related components must not exceed 100 P.S.I.
- Keep the blast nozzle controlled and aimed at the work always.

1.5 Maintenance

- Disconnect the power and air supply from cabinet before servicing.
- Keep your machine in good repair. Use Mod-U-Blast parts only and do not substitute or modify.

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E-SERIES ASSEMBLY INSTRUCTIONS

1. Remove the crate top (for E4824-DC bend back the tabs holding the lid to the sides)
2. Remove all loose parts from on top of the cabinet body.
3. Separate the styrofoam box containing the foot pedal and the metering valve and remove all loose parts.
4. Remove cabinet body from the crate and stand it on its top with the light hole facing down.
5. Attach one leg to each of the 4 corners of the cabinet body (legs all have identical holes) using 6 bolts/nuts for each leg.
6. Remove the 2 angle brackets from the long cardboard box and install between the front and back leg on each side of the cabinet.
7. Attach the metering valve plate/hinge to the bottom of the cabinet using 3 bolts/nuts. Hold open to install the nuts inside. Once tightened do up the clasp so that the seal is tight. (Clasp is adjustable)
8. Remove the light assembly from inside the cabinet top and put aside.
9. Stand up the cabinet using 2 persons.
10. Place the foot pedal in the middle front of the cabinet.
11. Install the regulator/bracket on the front left leg - 2 bolts/nuts and tighten.
12. Set the long narrow glass piece on top of the cabinet so that it is centered on the rubber seal.
13. Place the light assembly on top of the narrow glass with the light switch facing the front and attach to the top of the cabinet.
14. Install viewing window with window protector facing inside the cabinet - DO NOT OVERTIGHTEN
15. Install the perforated floor material so that the corner notch is situated in the right front corner and have the hoses for the suction gun pass through the notched area.
16. Dust Collector - Attach the body of the dust collector to the rear panel (right side) aligning the pipe with the hole. Use 4 nuts/bolts to attach) Push the large ‘O’ Ring on the dust collector pipe so that it is tight to the outside of the back panel. Remove the inlet box that covers the dust collector pipe inside the cabinet and place a bead of silicon caulking around the pipe to seal it and then replace the inlet box.
17. Attach the left and right doors.
18. Attach the door catches and move out to full extent and tighten the bolts. Moving them in slightly will tighten the door seal.
19. Plug the dust collector into the female plug coming off the light. Then plug the male cord from the light into a 115 volt 60Hz supply. The On/Off switch controls the lights and dust collector fan.

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2. BASIC PRINCIPLES

2.1 Mod-U-Blast E-Series Suction Blast System Description

Our suction blast systems consists of these important components:

- Blast cabinet
- Suction Gun & Metering Valve
- Dust Collection

2.2 How The E-Series Suction Blast System Works

With the cabinet doors closed, the main air to the inlet on the cabinet is turned on and media is loaded in through the floor of the cabinet. Turn on the switch for the cabinet lights/dust collector fan. The E-Series blast cabinet is now ready to use. Press the foot pedal to start blasting. While blasting the object to be cleaned, the heavier used media falls through the perforated floor into the hopper and the finer dust is captured in the dust collector.

3. SET-UP REQUIREMENTS

3.1 Location

Before setting up your cabinet remember the following points:

- The Mod-U-Blast suction blast cabinet requires a compressed air supply. NOTE: The compressed air supply for this unit needs to be completely dry.
- The cabinet needs a power supply (see paragraph 3.4)
- This cabinet is designed to be used in a heated indoor location.
- Dust can escape from the cabinet while loading and unloading or while servicing the dust collector.

3.2 Compressed Air Requirements

- The compressed air supply should be sized according to the table (shown below.)

Pipe or Hose Length	VOLUME OF AIR IN CFM'S				
	25	30	35	40	50
25'	.75	.75	.75	.75	1
50'	.75	.75	.75	1	1
75'	.75	.75	1	1	1
100'	.75	.75	1	1	1
150'	.75	1	1	1	1

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3. SET-UP REQUIREMENTS CONT'D

3.3 Nozzle CFM Requirements at 80 psi

AIR JET	AIR JET SIZE	NOZZLE SIZE	CFM@80PSI
#3.5	3/32"	***	15
#4 (standard)	1/8"	1/4"	21
5	5/32"	5/16"	31.9
6	3/16"	3/8"	47
7	7/32"	7/16"	62
8	1/4"	1/2"	85.7

** Standard nozzle in E-Series cabinets. Nozzle CFM's listed above are with using a new nozzle - cfm numbers will increase as the nozzle becomes worn.

3.4 Electrical Requirements

- Electrical requirements for Mod-U-Blast E-Series cabinets use 115 Volts @ 60 Hz. The light switch will turn on the cabinet lights and the exhaust fan.

4. MEDIA

4.1 Glass Bead Ordering Information

STOCK NO.	SIZE	DESCRIPTION		MICRONS	PACKAGE
71003	#3	20 – 30 Mesh	Glass Bead	840-590	20 Kg.
71004	#4	30 – 40 Mesh	Glass Bead	590-420	20 Kg.
71005	#5	40 – 50 Mesh	Glass Bead	420-297	20 Kg.
71006	#6	50 – 70 Mesh	Glass Bead	297-210	20 Kg.
71007	#7	60 – 80 Mesh	Glass Bead	250-177	20 Kg.
71008	#8	70 – 100 Mesh	Glass Bead	210-149	20 Kg.
71010	#10	100 – 170 Mesh	Glass Bead	149-88	20 Kg.
71011	#11	120 – 200 Mesh	Glass Bead	125-74	20 Kg.
71013	#13	170 – 325 Mesh	Glass Bead	88-44	20 Kg.
71100	MGA	Glass Mix	Specialty	----------	20 Kg.
71100TON	MGA	Glass Mix	----------	----------	2000 lb.

Other Medias are available - please contact your Mod-U-Blast dealer for further information

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E-SERIES OPERATION

5.1 Loading the Media

1. With the exhaust fan off, to add the new media, open either door on the cabinet and pour the media through the floor screen into the bottom of the cabinet hopper (approx 1/4 of a bag)
2. Close the door on the cabinet.

5.2 Loading Parts to be Cleaned

1. Load parts through either door on the cabinet
2. Parts need to be free of grease, oil, or water.
3. Close the door (s).

5.3 Preparation for Blasting

1. Open the compressed air used to supply the cabinet.
2. Turn on the cabinet lights & exhaust fan.
3. Adjust the regulator to desired blast pressure. (pull knob down to unlock, adjust pressure and push up to lock).
4. The metering valve on the bottom of the cabinet hopper has been set at the factory for the most efficient blast stream. (Fast steady stream is preferred)

5.4 Blasting

1. Place hands into the gloves and grab the blast gun assembly firmly.
2. Depress the foot pedal for the blasting to start.
3. Hold the nozzle approximately 6” from the item to be cleaned. Point nozzle at a 45° angle towards the part and use smooth, even strokes for best results.

5.5 Finish Blasting

1. To finish blasting, release pressure from the foot pedal and blasting will stop quickly.
2. Use the blow gun inside the cabinet to blow off the part (s) that were just cleaned and allow the dust to clear before removing them from the cabinet.
3. Turn off the cabinet lights and exhaust fan.

5.6 After Blasting Dust Collector Cleaning

- Clean the filter by pushing in on the shaker on the side of the dust collector a few times and then empty the hopper.

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E-SERIES CABINET & DUST COLLECTOR MAINTENANCE

6.1 Maintenance Schedules

Daily Start-Up Procedure

- Check air pressure and adjust to desired setting
- Check & adjust media flow (if necessary)
- Correct any safety issues before blasting
- Report and / or fix any operational problems

Daily Maintenance

- Shake dust filters
- Empty dust collector
- Add required media (1/4 bag at a time)

Weekly Maintenance

- Inspect gloves
- Inspect nozzle for wear
- Check lights for proper operation
- Clean / Repair safety glass or protector
- Inspect clear media hose and air supply hoses for holes or weak spots.

Monthly Maintenance

- Inspect air & media hoses for leaks or loose fittings
- Check for quick shutdown of the following:
  - Foot pedal on cabinet

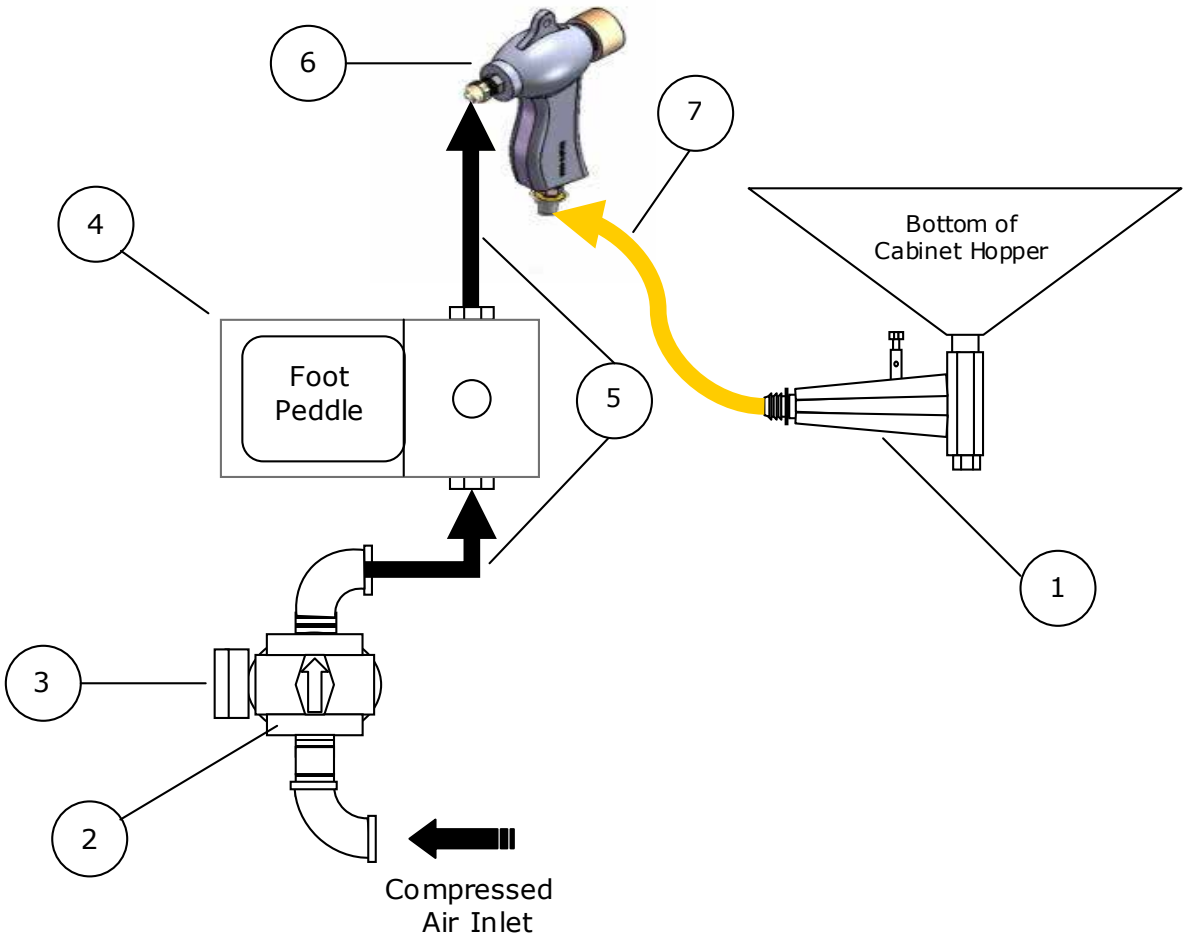
Six Month Maintenance

- Check dust filters for cleanliness
- Inspect door seals
- Check for leaks in dust hoses
- Check for leaks in the cabinet

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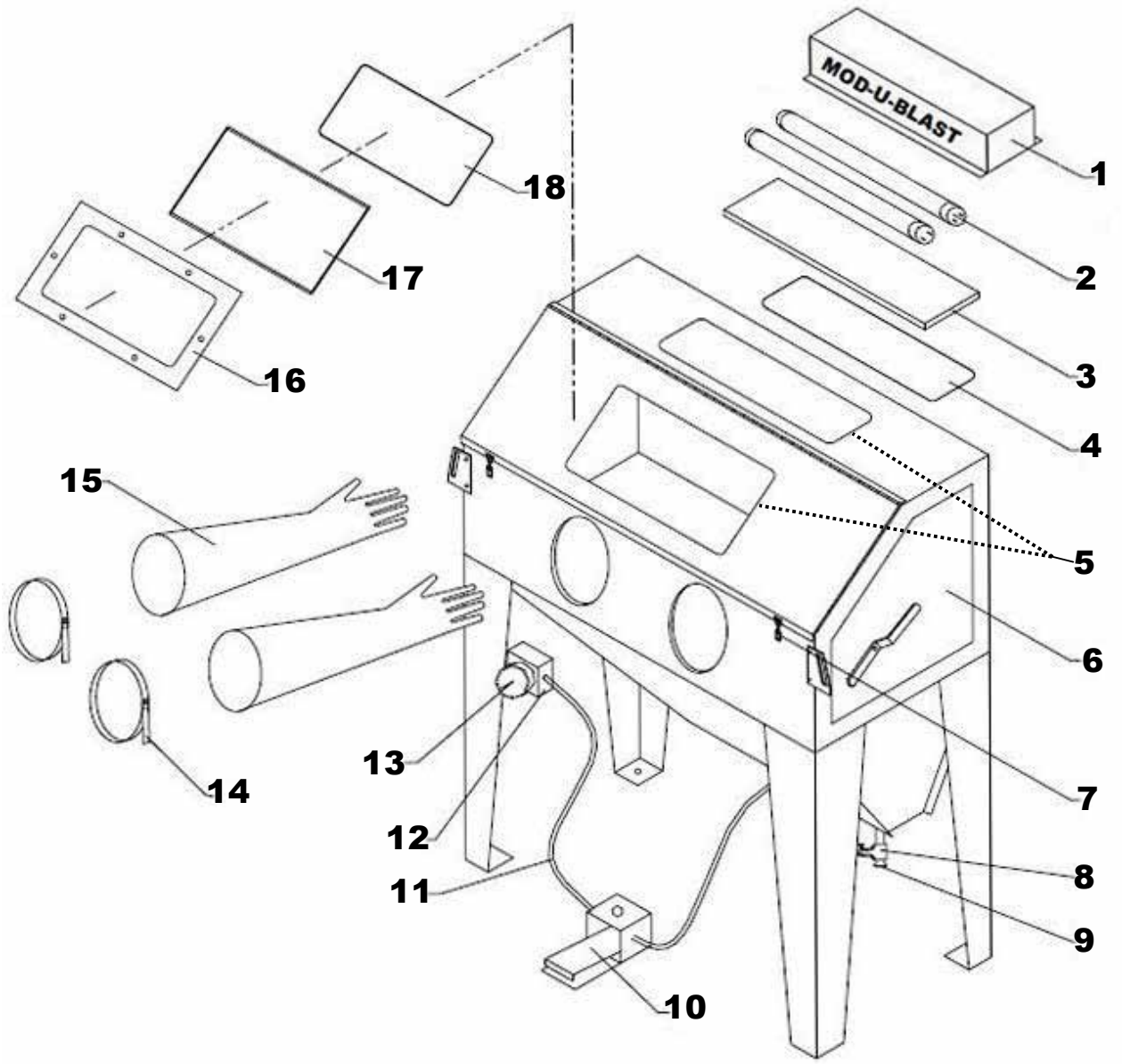
E-SERIES AIR & COMPONENTS SCHEMATIC



ITEM #	STOCK #	DESCRIPTION
1	16025	METERING VALVE
2	50-330	3/8” REGULATOR
3	55-415	1/4” PRESSURE GAUGE
4	16190-M	1/2” FOOT PEDDLE
5	12-PUSH	1/2” PUSH ON AIR HOSE
6	12301	#4 MUB SUCTION GUN
7	12-MED	1/2” CLEAR MEDIA HOSE

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E-SERIES PARTS LIST

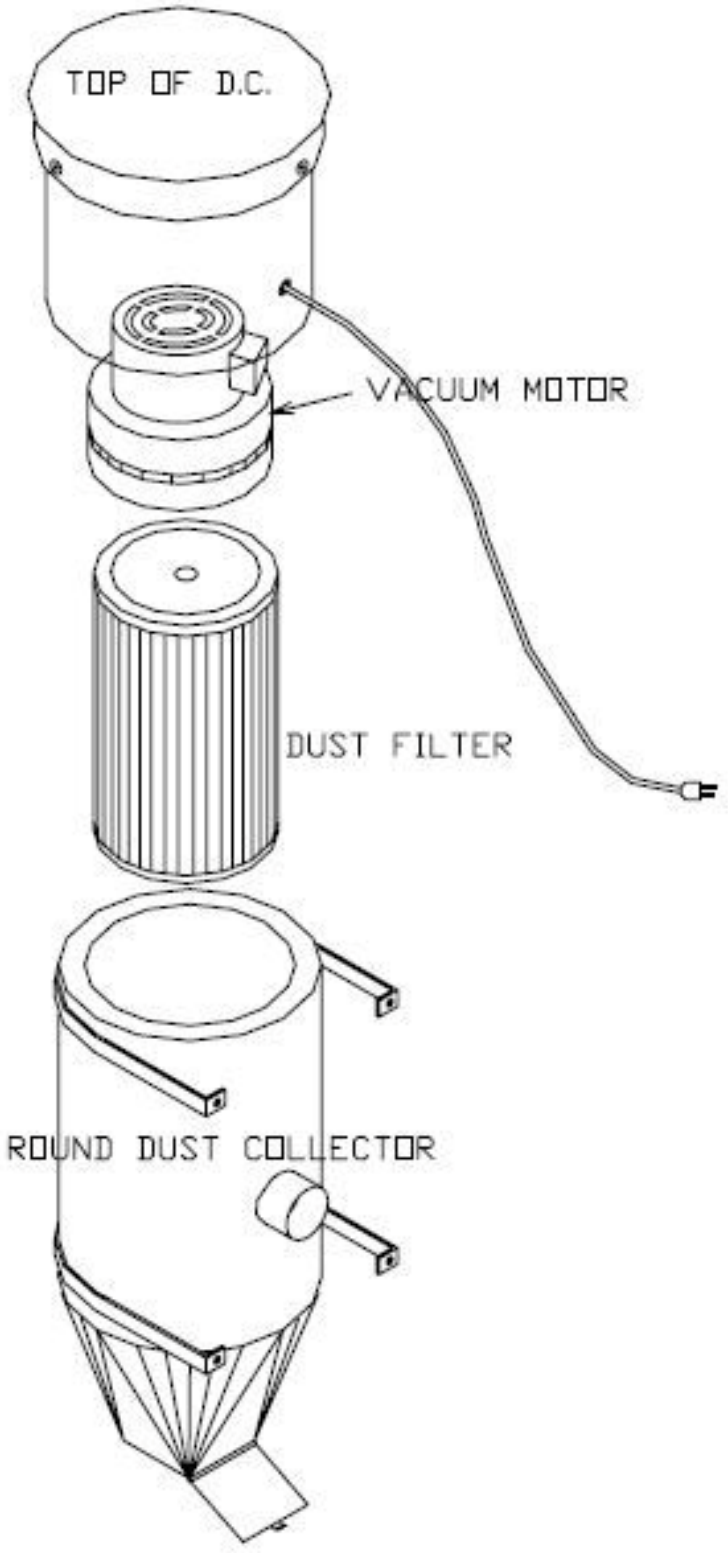


ITEM #	STOCK #	DESCRIPTION
1	16366	LAMP HOUSING
2	16367	LED TUBES (EA)
3	12215A	WINDOW FOR LAMP
4	43518S	SINGLE WINDOW PROTECTOR
5	16540	TRIM LOK WINDOW SEAL
6	12434	DOOR GASKET
7	Z-CATCH	FRONT DOOR LATCH
8	16025	METERING VALVE
9	12011	METERING VALVE PLUG
10	16190-M	1/2” FOOT PEDAL

ITEM #	STOCK #	DESCRIPTION
11	12-PUSH	1/2” PUSH ON AIR HOSE
	12-MED	1/2” CLEAR MEDIA HOSE (NOT SHOWN)
12	50-330	3/8” REGULATOR
13	55-415	1/4” PRESSURE GAUGE
14	12535	8” GLOVE CLAMP
15	15250	GLOVES PAIR
16	16053	WINDOW FRAME COVER
17	12216	SAFETY WINDOW
18	41117S	SINGLE WINDOW PROTECTOR

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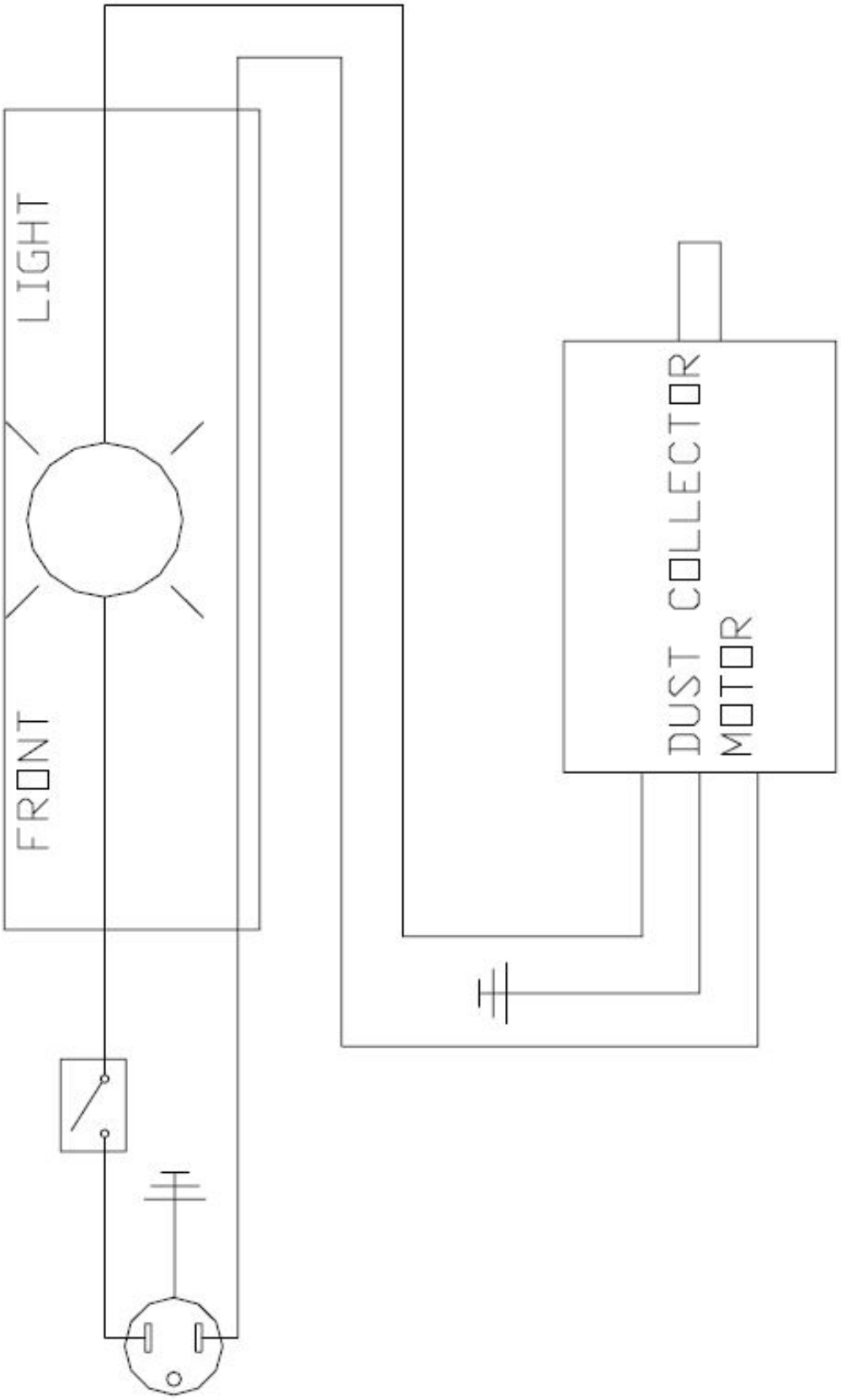
E-SERIES DUST COLLECTOR



STOCK #	DESCRIPTION
16550R-P	E-Series DUST COLLECTOR COMPLETE
16560	REPLACEMENT MOTOR FOR (16550R-P)
16565	E-Series D.C. REPLACEMENT FILTER

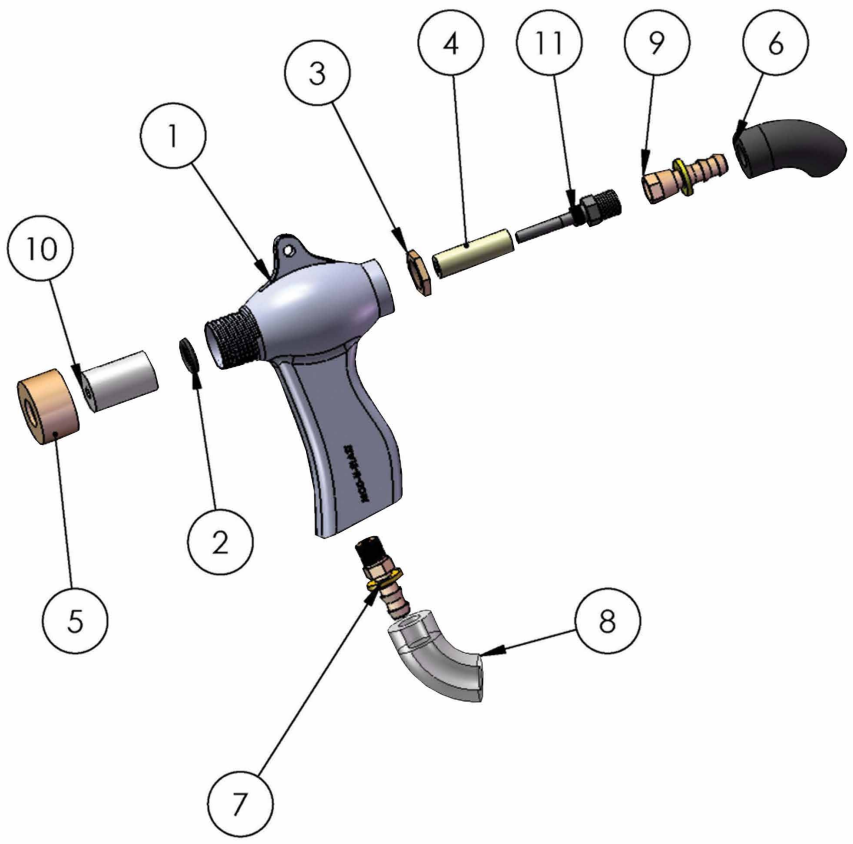
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E-SERIES ELECTRICAL SCHEMATIC



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E-SERIES SUCTION GUN



NO.	Part#	DESCRIPTION
1	11802	MUB Gun Body Only
2	12031	Nozzle O Ring
3	11913	Air Jet Hex Nut
4	11913	Air Jet Sleeve
5	11914	Nozzle Holder Brass Nut
6	12-PUSH	1/2" Air Hose
7	11724	3/8" Lock Barb Fitting Media Inlet
8	12-MED	1/2" Media Hose (Clear)
9	11723	3/8" Swivel Fitting Air Inlet
10	36664	#4 Ceramic Nozzle
-	36665	#5 Ceramic Nozzle
-	36666	#6 Ceramic Nozzle
-	34664	#4 Tungsten Nozzle
-	34665	#5 Tungsten Nozzle
-	34666	#6 Tungsten Nozzle
-	35934	#4 Boron Nozzle
-	35935	#5 Boron Nozzle
-	35936	#6 Boron Nozzle
11	12341	#3.5 Air Jet
-	12342	#4 Air Jet
-	12343	#5 Air Jet
-	12344	#6 Air Jet



COMPLETE GUN ASSEMBLIES

ITEM NO.	DESCRIPTION
12300	#3.5 Gun Assembly Ceramic
12301	#4 Gun Assembly Ceramic
12302	#5 Gun Assembly Ceramic
12303	#6 Gun Assembly Ceramic
12304	#7 Gun Assembly Ceramic
12301T	#4 Gun Assembly Tungsten Carbide
12302T	#5 Gun Assembly Tungsten Carbide
12303T	#6 Gun Assembly Tungsten Carbide
12302B	#5 Gun Assembly Boron Carbide
12303B	#6 Gun Assembly Boron Carbide

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E-SERIES CABINET TROUBLESHOOTING

Poor Visibility

- Dirty Filter. Clean filter and empty the dust collector.
- Using media that is too fine or worn out.
- Nozzle pressure too high causing media to breakdown prematurely.
- Dust collector fan not working.

Reduced Blast Cleaning Rate

- Low media level reducing media flow. Check and fill if to low.
- Reduced air pressure. Possible malfunctioning regulator, partially closed main air supply valve, leaking air line.
- Blockage in media line or suction gun. Blockage may occur from foreign particles from items being blasted.
- Incorrect metering valve or metering jet adjustment.
- Worn gun parts (nozzle or air jet) Check and replace if needed.
- Worn clear media hose. Check hose for leaks or soft spots. Replace worn or damaged hose.
- Moist media. Check for moisture in the metering valve. If moisture is evident, some form of moisture removal will need to be added to the main air supply to the cabinet.

No Media Or Air Coming Out Of The Nozzle When Foot Pedal Is Pressed

- Nozzle is plugged. Remove nozzle and clear obstruction.
- Foot pedal malfunction. Check foot pedal inlet and outlet lines for pressure.
- Regulator may be turned down or off. Check and adjust.
- Air compressor may be off or supply valve may be closed.

E-SERIES MAINTENANCE & OPERATIONAL TIPS

Blasting Gun

After 10 hours of blasting time the nozzle should be checked. If it shows uneven wear it should be turned 1/4 turn every 10 hours of use.

Caking of Media

Media caking is caused by moisture in the air supply or from oily and greasy parts. If this is not corrected the media will not flow evenly and will plug the metering valve and the gun. Check the air supply; if water is present install a good moisture trap. If oily or greasy parts are to be blasted then wash the parts with a degreaser and dry the parts.

Reverse Pressure

If media stops flowing occasionally, place GLOVED thumb over the nozzle (hold tight) and push the foot peddle down for 2 seconds. This will cause the system to back blast through the gun and up the media hose and will loosen and clogs in the nozzle.

Gun Air Pressure Drop

Set the air pressure to 80 psi on the air gauge at the regulator. Hold the gun - press the foot pedal and see if the gauge pressure drops significantly. If the pressure drops more than 5 psi this indicates a restriction in the air supply line to the cabinet. This could be that the supply line is too small, a reducer or quick coupler, a plugged filter or other piping that doesn't allow enough air through. Also if the cabinet is too far from the air compressor a pressure drop will occur. Air supply line should be 1/2" or larger with NO quick couplers. (see paragraph 3.2)

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UPGRADES & OPTIONS

Upgrade and options are also available to increase the production, efficiency and wear ability of Mod-U-Blast suction cabinets and are listed below:

- Safety Doors
- Manual Turntable

Call Your Mod-U-Blast Distributor to Find Out More

WARRANTY POLICY COVERAGE

Mod-U-Blast warrants all equipment listed in this manual that is manufactured by Mod-U-Blast to be free of defects in material and workmanship from the date of sale to the end-user. Not withstanding any special, extended or limited warranty published by Mod-U-Blast will, for a period of TWELVE (12) months from the date of sale, repair or replace any part of the equipment determined by Mod-U-Blast to be defective.

This warranty applies only when the equipment is installed, operated and maintained in accordance with Mod-U-Blast's written recommendations.

This warranty does not cover, and Mod-U-Blast will not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Mod-U-Blast component parts.

This warranty is conditional upon the prepaid return of the equipment or part claimed to be defective to an authorized Mod-U-Blast distributor for verification of the claimed defect. (Proof of purchase may be required) If found to be defective then the Mod-U-Blast distributor will repair or replace free of charge any defective part. The equipment will be returned to the original purchaser, transportation prepaid. If the inspection of the equipment does not disclose any defect in material workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Mod-U-Blast's obligation and buyer's remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach or warranty must be brought forward within one (1) year of the date of sale.

Items sold, but not manufactured by Mod-U-Blast are subject to the warranty, if any, of their manufacturer. Mod-U-Blast will provide the purchaser with reasonable assistance in making any claim for the breach of these warranties.

The following items are <u>not covered</u> under the Mod-U-Blast Warranty policy:

- Any component or body of this equipment determined by Mod-U-Blast to be normal wear and tear.
- Parts subject to abrasive wear such as, nozzles, hoses, gloves, windows, window protectors, cabinet flooring and dust filters.

Claims will be honored only if the warranty card is returned within a period of two months from the factory shipping date.

The card can be returned to your Mod-U-Blast salesperson or mailed to the address below.

ALLREDI BLAST & ABRASIVES
6602-45 Street, Leduc, AB Canada, T9E 7C9
PH: (780) 468-2588 • FAX: (780) 465-7317

In the event of failure of this equipment Please contact an Allredi/Mod-U-Blast service centre

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