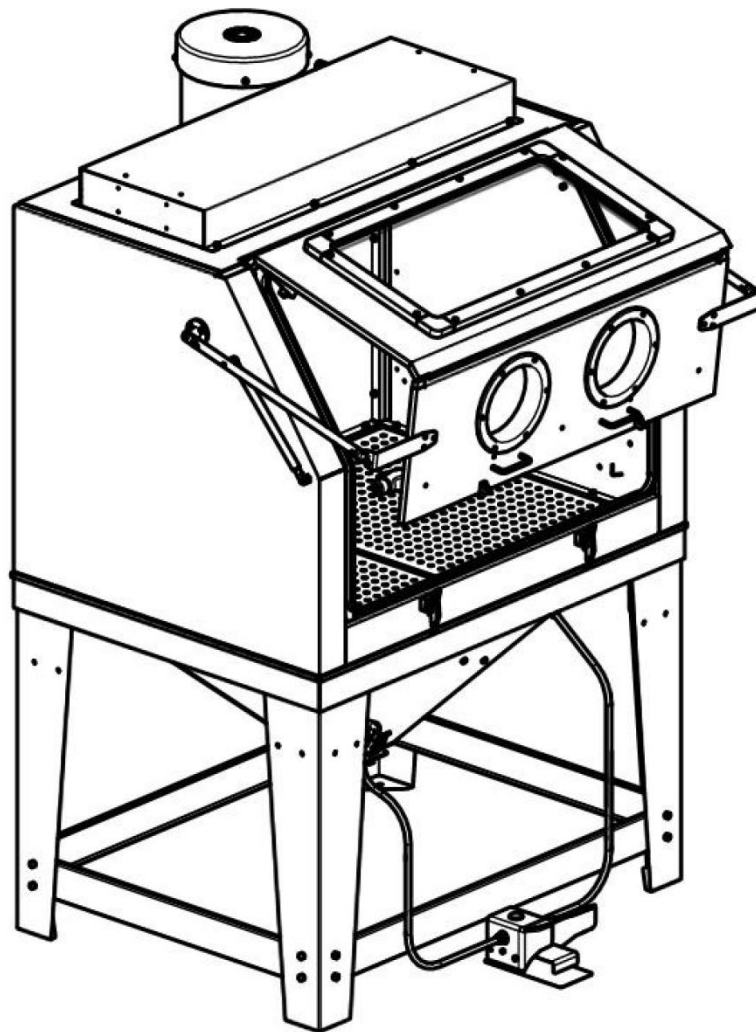


# 265 GALLON COMMERCIAL CABINET SANDBLASTER



## ⚠ WARNING



- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or questions on assembly?

Please call: 1-877-761-2819 or email: [cs@tmgindustrial.com](mailto:cs@tmgindustrial.com)



## **WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



## **WARNING!**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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# INTRODUCTION

## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual.**

If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at [www.tmgindustrial.com](http://www.tmgindustrial.com).

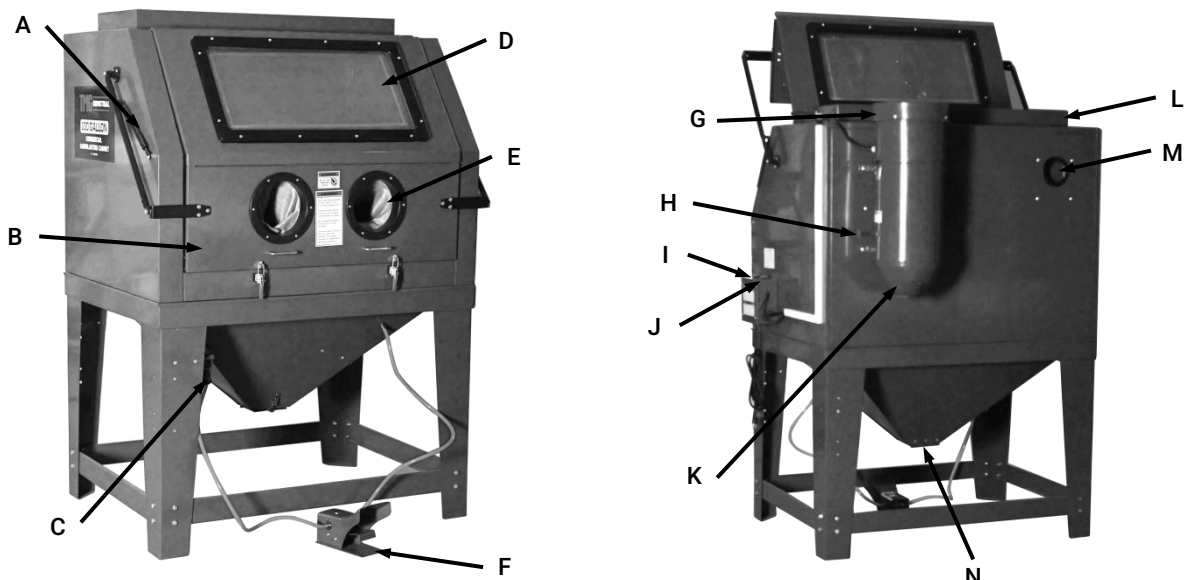
Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **purchase date** and **serial number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.

## Machine Description

This blast cabinet is designed for high-use media blasting operations, where airflow up to 35 CFM and air pressure up to 125 PSI can be used. Air pressure is fully adjustable with an air pressure regulator, and the media output can be adjusted with the media flow valve. Blasting operations through a hand-held blast gun are controlled by a foot valve, and most operations can be carried out with all types of blasting media.

An internal set of LED lights provide illumination during blasting operations, and a built-in dust collector maintains blasting environment visibility. The front of the cabinet is equipped with a large gas-assisted folding door for easy workpiece loading and unloading. Media can be quickly unloaded through the hopper dump port and reloaded through the loading door.

## Identification



- A. Gas-Assisted Door Support System
- B. Loading Door
- C. Air Regulator w/Gauge
- D. Viewing Window
- E. Blasting Gloves
- F. Foot Valve for Blast Gun Control
- G. Dust Collector

- H. Filter Cleaning Plunger
- I. Dust Collector ON/OFF Switch
- J. Light ON/OFF Switch
- K. Dust Collector Dump Port
- L. LED Light Assembly
- M. Fresh Air Intake Port
- N. Hopper Dump Port

# PRODUCTS SPECIFICATIONS

## Product Dimensions:

Weight.....352 lbs.  
Width (side-to-side) x Depth (front-to-back) x Height ..... 51-1/2 x 47 x 69-1/2 in.  
Footprint (Length x Width) .....24 x 47-1/2 in.

## Shipping Dimensions:

Type..... Wood Box  
Weight.....451 lbs.  
Length x Width x Height.....53 x 38 x 42 in.

## Electrical:

Power Requirement ..... 110V, Single-Phase, 60 Hz  
Full-Load Current Rating..... 10.5A  
Minimum Circuit Size ..... 15A  
Power Cord..... 14 AWG x 72 in  
LED light..... 3 x 18W LED, 36 in.

## Motors:

Horsepower..... 1-1/2 HP  
Phase..... Single-Phase  
Amps..... 10.5A

## Main Specifications:

### Operation Information

Suggested Operating Air Pressure Range..... 90 - 125 PSI  
Maximum Air Pressure.....125 PSI  
Recommended Air Supply..... 5 - 24 CFM  
Maximum Abrasive Capacity.....250 lbs.  
Suggested Abrasive Capacity .....55 lbs.  
Abrasive Type .....Dry Only  
Maximum Load Capacity.....132 lbs.  
Blast Compartment Door..... 37-1/2 in. Wide x 29-1/4 in. Tall

### Dust Collector Filter Information

Dimensions.....6-3/4" Dia. x 12" Tall  
Type.....Pleated  
Rating .....5 Microns

### Construction Information

Body ..... Welded Heavy-Duty Steel  
Paint Type/Finish..... Powder Coated

### Features:

Front-Loading Door, Natural Rubber/Vinyl Blast Gloves, Blast Gun Includes 4 Ceramic Tips, Perforated Steel Work Table, Powder Coated Inside and Out, 12-Gauge Steel Legs (16-Gauge Panels), Extra-Rugged, Heavy-Duty Foot Valve Assembly, Internal LED Lighting System

# SECTION 1: SAFETY

For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.



## DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



## WARNING

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



## CAUTION

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**NOTICE** - Alerts the user to useful information about proper operation of the machine to avoid machine damage.

## Safety Instructions for Machinery

**OWNER'S MANUAL.** Read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

**MENTAL ALERTNESS REQUIRED.** Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

### **ELECTRICAL EQUIPMENT INJURY RISKS.**

You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

**HAZARDOUS DUST.** Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

**HEARING PROTECTION.** Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

**REMOVE ADJUSTING TOOLS.** Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

**USE CORRECT TOOL FOR THE JOB.** Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

**AWKWARD POSITIONS.** Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

**CHILDREN & BYSTANDERS.** Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly BEFORE operating machine.

**FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

**NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

**UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine OFF and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

**MAINTAIN WITH CARE.** Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

**DAMAGED PARTS.** Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace BEFORE operating machine. For your own safety, DO NOT operate machine with damaged parts!

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

**EXPERIENCING DIFFICULTIES.** If at any time you experience difficulties performing the intended operation, stop using the machine!

## Additional Safety for Blast Cabinets

**PERSONAL PROTECTION EQUIPMENT.** Media blasting presents a real hazard of silicosis and other lung contamination injuries! These injuries are permanent and can get worse over time. If you use media blasting equipment without the proper hood, eye protection, and respirator, your lungs and eyes may become permanently damaged. Protect yourself correctly, and keep all unprotected bystanders away. For the latest types of protective equipment and acceptable respirator types, contact your local OSHA or NIOSH office.

**WORK AREA SAFETY.** To prevent accidental contamination of shop air, clean dust collector and filters often, and repair any suction hose leaks immediately.

**MAINTAINING MACHINE.** To prevent accidental contamination of shop air, check the blast cabinet for any leaks before use, and reseal immediately.

**AVOIDING ENTRAPMENT.** To prevent an entrapment hazard for animals or children, always close and latch the blast cabinet door when not in use.

**LEAVING THE AREA.** To prevent accidental blasting injury, disconnect air supply when leaving the blast cabinet.

**MAINTAINING COMPONENTS.** To prevent accidental contamination or blast injury, replace tips, hoses, lenses, and gloves when they become worn.

**SAFE MEDIA BLASTING.** Do not use system over the rated PSI or lines and seals may burst and cause injury.

**SAFE MAINTENANCE.** To prevent accidental blasting injury or shock, disconnect air supply and power before loading and unloading a workpiece, and before doing maintenance or changing blast tips.

**SAFE ENVIRONMENT.** To avoid media escaping from the cabinet, never use the blast cabinet if the dust collector is OFF or its filter is clogged. If you do, media will exit through the cabinet air intake and enter the shop work environment. Always close and latch the blast cabinet door shut before and after operation.



## WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.



## CAUTION

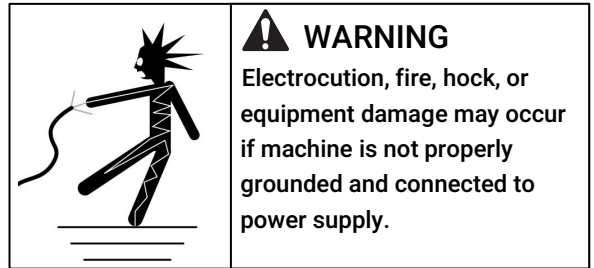
No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.



# SECTION 2: POWER SUPPLY

## Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

### Full-Load Current Rating at 110V..... 10.5 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result— especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid over- loading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

## Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

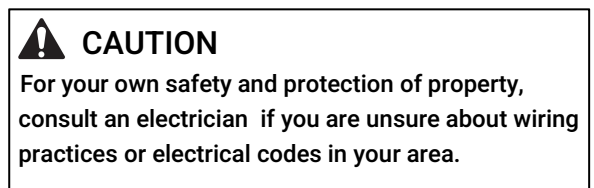
**Nominal Voltage** ..... 110V, 115V, 120V

**Cycle**..... 60 Hz

**Phase**..... Single-Phase

**Minimum Circuit Size** ..... 15 Amps

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)



**Note:** *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*

## Grounding & Plug Requirements

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. **DO NOT** modify the provided plug! Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

## Extension Cords

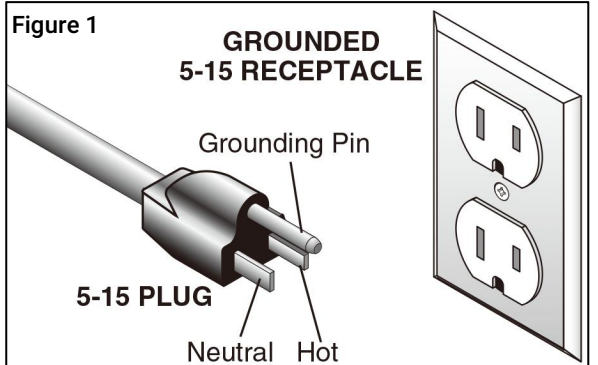
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

Minimum Gauge Size ..... 14 AWG  
Maximum Length (Shorter is Better).....50 ft.

**⚠ WARNING**  
Serious injury could occur if you connect machine to power before completing setup process. **DO NOT** connect to power until instructed later in this manual.



**⚠ CAUTION**


**SHOCK HAZARD!**  
Two-prong outlets do not meet the grounding Requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.

# SECTION 3: SETUP

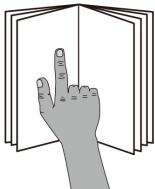
## Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
Safety Goggles.....	2
Leather Gloves .....	2-Pair
Wrench 17mm .....	1
Ratchet .....	1
Socket 10mm.....	1
An Assistant .....	1
Phillips Screwdriver #2 .....	1
Fast Drying Silicone Sealant.....	1



**WARNING**




This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



**WARNING**




Wear safety goggles during the entire setup process!



**WARNING**

**HEAVY LIFT!**



Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

## Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. If items are damaged, please call us immediately at (877) 761-2819.

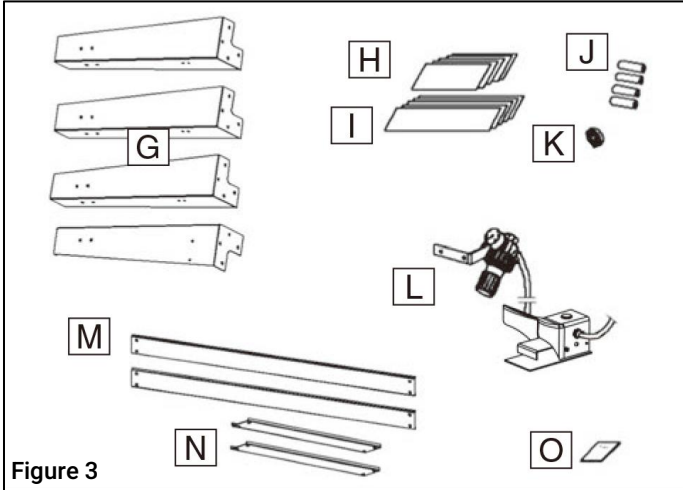
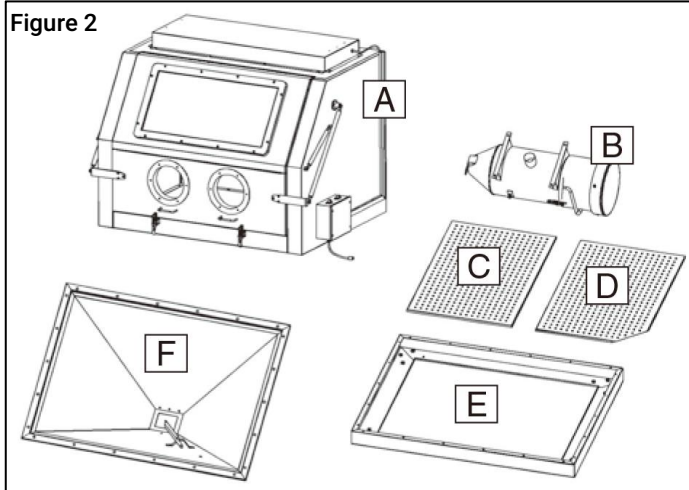
**IMPORTANT:** *Save all packaging materials until you are completely satisfied with the machine and have resolved any issues the shipping agent. You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.*

## Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Inventory (Figures 2-3)	Qty	Inventory (Figures 2-3)	Qty
A. Blast Cabinet Assembly.....	1	M. Leg Supports (43 3/4").....	2
B. Dust Collector.....	1	N. Leg Supports (32 1/4").....	2
C. Left Work Table.....	1	O. Bolt Bag.....	1
D. Right Work Table.....	1	–Hex Bolts M8-1.25 x 20 (Stand).....	32
E. Hopper Support.....	1	– Flat Washers 8mm (Stand).....	32
F. Hopper .....	1	– Lock Washers 8mm (Stand).....	32
G. Legs .....	4	– Hex Nuts M8-1.25 (Stand).....	16
H. Light Window Adhesive Film 35 1/2" x 10".....	5	–Phillips Head Screws M6-1 x 16(Hopper).....	22
I. Viewing Window Film 26" x 12" .....	5	– Flat Washers 6mm (Hopper).....	22
J. Blast Tip Set.....	1	–Cabinet Screws M6-1 x 12 (Regulator) .....	2
–Blast Tip 6mm ID.....	2	– Flange Nuts M6-1 (Regulator) .....	2
– Blast Tip 7mm ID.....	2	–Cabinet Screws M6-1 x 12(Dust Collector).....	4
K. Teflon Tape (Pipe Fittings) .....	1	– Flange Nuts M6-1 (Dust Collector).....	4
L. Regulator & Foot Valve w/Hoses.....	1		



**NOTICE**

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are preinstalled at the factory.

**Site Considerations**

**Weight Load**

Refer to the Machine Data Sheet for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest work-piece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

**Space Allocation**

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. See right for required space allocation.

	<p><b>CAUTION</b></p> <p>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</p>
--	--

**Physical Environment**

The physical environment where the machine is operated is important for safe operation and longevity of machine components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20%–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

**Electrical Installation**

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

**Lighting**

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

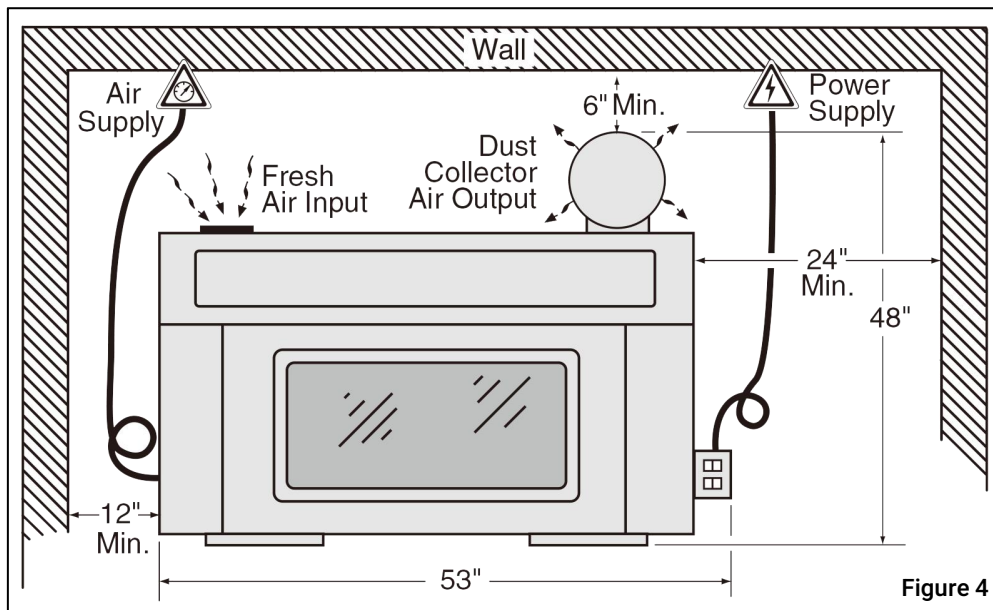


Figure 4

## Mounting

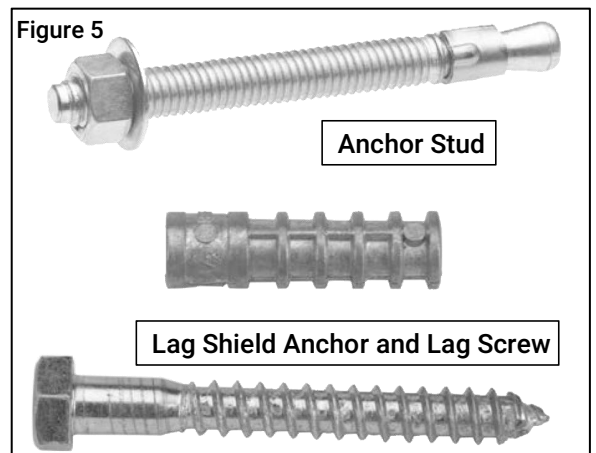
Although not required, we recommend that you mount your new machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included. Generally, you can either bolt your machine to the floor or mount it on machine mounts. Both options are described below. Whichever option you choose, we recommend leveling your machine with a precision level placed on the table surface.

### Bolting to Concrete Floors

Lag shield anchors with lag screw and anchor studs (see Figure 5) are two popular methods for anchoring an object to a concrete floor. We suggest you research the many options and methods for mounting your machine and choose the best that fits your specific application.

#### NOTICE

*Anchor studs are stronger and more permanent alternatives to lag shield anchors; however, they will stick out of the floor, which may cause a tripping hazard if you decide to move your machine.*



### Using Machine Mounts

Using machine mounts, shown in Figure 6, gives the advantage of fast leveling and vibration reduction. The large size of the foot pads distributes the weight of the machine to reduce strain on the floor.

#### NOTICE

*We strongly recommend securing your machine to the floor if it is hardwired to the power source. Consult with your electrician to ensure compliance with local codes.*



# Air System Setup

## Air Supply

The ability of this blast cabinet to accomplish its task is directly related to how well the air supply system is designed. For this blast cabinet to operate at its maximum potential for large blasting jobs, with the largest blast tip and widest spray pattern, the volume of compressed air feeding the regulator should be 35 CFM at 125 PSI. This requirement demands an industrial grade two-stage compressor that is designed for near continuous duty.

Refer to your compressor Owner's Manual and make sure that the compressor can handle the load of this industrial blast cabinet. Smaller compressors can be used, but the duration of the work shift and tip size installed must be reduced so a safe compressor duty cycle is maintained. Not allowing the compressor to cool will lead to compressor or motor failure. The smaller the compressor, the longer cool-down time that will be required between the work cycles. However, with that said, if a smaller diameter blast tip is used with a sharp type of media, less air pressure and a lower CFM can be sufficient for smaller projects.

If using smaller compressors, make sure to service the compressor more frequently, and verify that your compressor has the best cooling airflow possible.

When filling or servicing the blast cabinet, there is a risk of subjecting the compressor to airborne media or dust. Be sure to locate the blast cabinet away from the compressor operating environment. If even small amounts of media dust enter the compressor through the intake or during general service, the piston rings, valves, and bearings can be quickly destroyed.

If an air compressor is not available or the blast cabinet is to be used at a remote location, NEVER connect this blast cabinet to pressurized bottled gasses such as oxygen bottles used in welding operations. Line ruptures or explosions can occur, causing equipment damage, serious injury, or death.

## Air Plumbing

Usually, when installing a new supply line for a blast cabinet where the complete system does not exceed 125 feet, the inside diameter of the air line should be 3/4". For runs up to 300', a supply line with a 1" inside diameter is recommended. Be sure to make the supply line long enough to allow the compressed air to cool as much as possible, so the moisture vapors can condensate on the inner walls of the air line instead of accumulating in the blast cabinet or the media.

Install the air supply lines with a slight tilt back towards the compressor tank, so the moisture that accumulates from condensation will drain back into the compressor tank instead of puddling in the low areas of the air lines. Install one or more in-line water separators or an air dryer as close to the blast cabinet as possible where the air has had the most time to cool. Water separators typically work best on cool air rather than on hot air that comes right out of the compressor tank.

For an overview of the typical air system for this blast cabinet and its supply system, refer to the Pneumatic Diagram on Page 15.

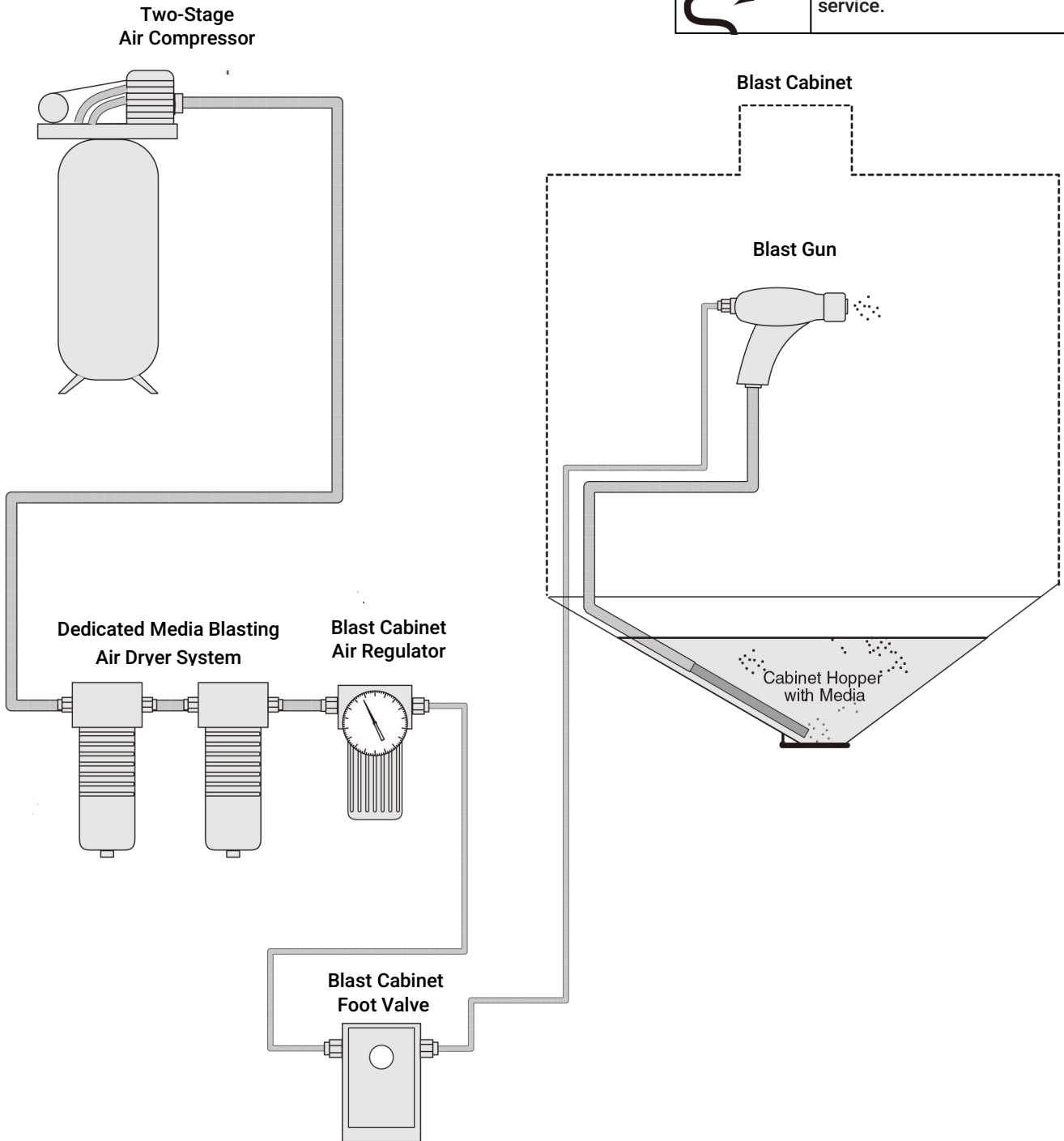
If using an existing air system, eliminate air supply restrictions and pressure drops that may occur at small quick-disconnect fittings, elbows, small supply piping, undersized water separators, kinked lines, or rust-filled piping.

Remove any in-line oilers that are installed directly in the blast cabinet air supply line, or the media and blast cabinet will become contaminated with oil and blasting operations will quickly come to a halt. Air supply lines for other machines that have in-line oilers need not be removed, providing that these lines only feed from the blast cabinet supply line.

Make sure to install an air supply quick-disconnect fitting or a shut-off valve that can be locked out to prevent the air pressure from accidentally being turned on. These items allow for the blast cabinet to be serviced safely or allow it to sit idle when not in use.

# Pneumatic Diagram

	<b>WARNING</b> Disconnect the air supply before adjustments, maintenance, or service.
--	--



## Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to Needed for Setup and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

### To assemble blast cabinet:

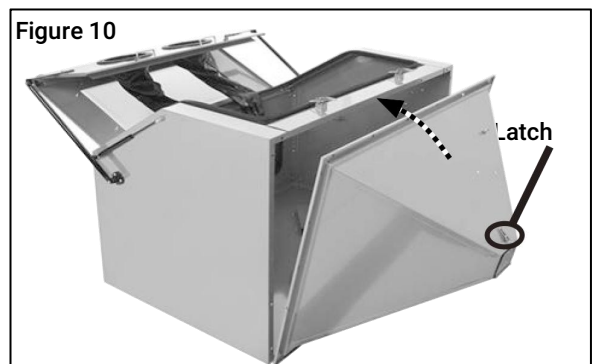
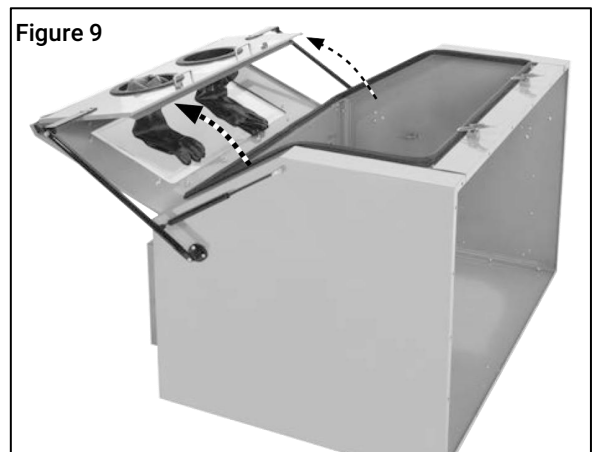
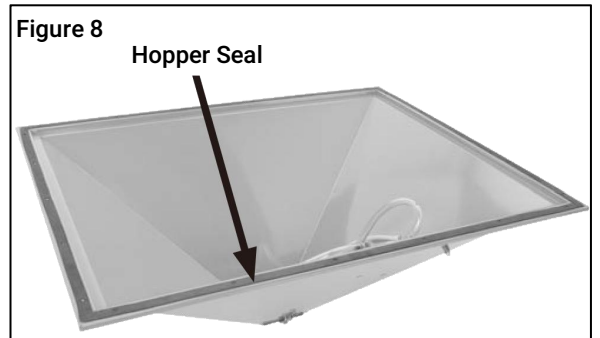
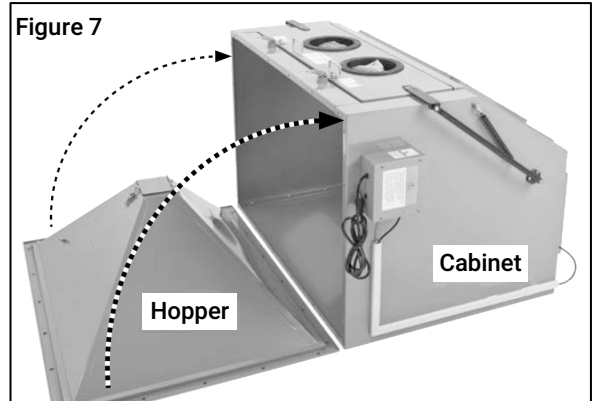
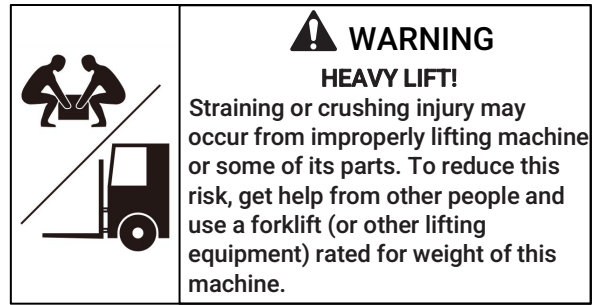
1. Disassemble crate and place sheet of cardboard on floor to protect cabinet.
2. Tilt cabinet off of hopper, as shown in Figure 7, and place cabinet on its back. Leave hopper in place on pallet.
3. Invert hopper to expose hopper seal, as shown in Figure 8.
4. Drill or punch out hopper mounting holes in hopper seal.

**Note:** *Pre-punching holes in hopper seal will allow fasteners to be started and installed without the tendency to cross thread.*

### CAUTION

In next step, remember that door is spring-loaded and handles must be held firmly before door is unlatched and opened. Otherwise, door may suddenly swing open and cause injury or damage.

5. With one hand, grasp cabinet door handle. With other hand, unlatch door and let it open slowly, as shown in Figure 9.
6. Make sure latch on hopper dump door faces forward, and position hopper next to bottom of cabinet, as shown in Figure 10.

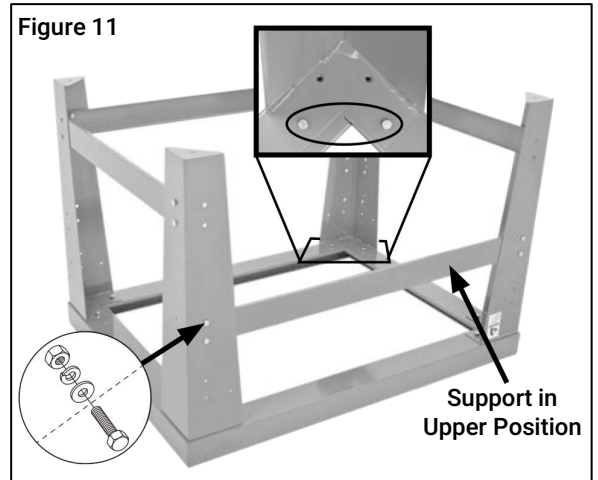




- Fasten (4) stand legs and cross braces to hopper support, as shown in Figure 11, using (24) M8-1.25 x 20 hex bolts, (24) 8mm flat washers, (24) 8mm lock washers, and (16) M8-1.25 nuts. When mounting legs, only use (2) holes shown in Figure 11.

**CAUTION**

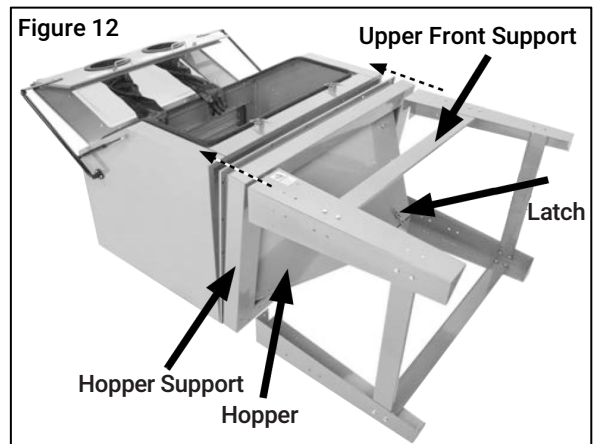
To eliminate pinch hazard, in next step, keep fingers clear of hopper support and blast cabinet mating surfaces. When items become aligned, they can slide together without warning, causing a severe pinch injury.



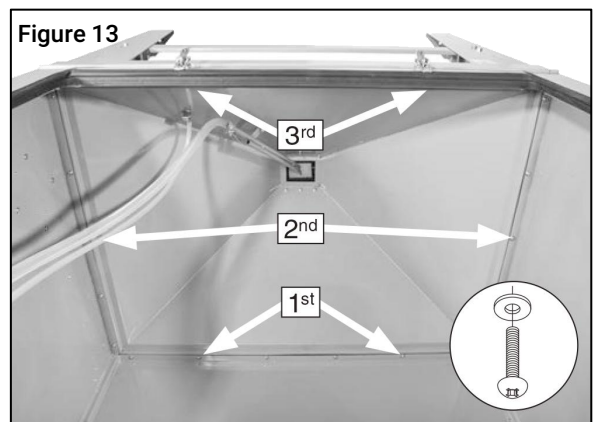
- Position hopper and hopper support against underside of blast cabinet, as shown in Figure 12.

**NOTICE**

*In next two steps, to avoid cross-threading screws caused by any foam gasket interference, carefully start screws by hand.*



- Starting at inside-bottom of blast cabinet, install (6) M6-1x16 Phillips head screws with 6mm flat washers in order shown in Figure 13 so all mounting holes line up.

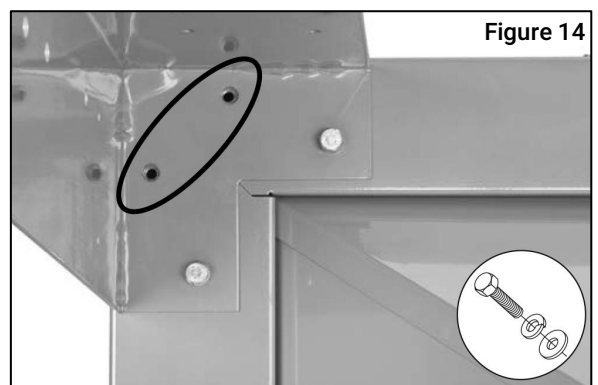


- Install remaining (16) M6-1 x 16 Phillips head screws with their flat washers.

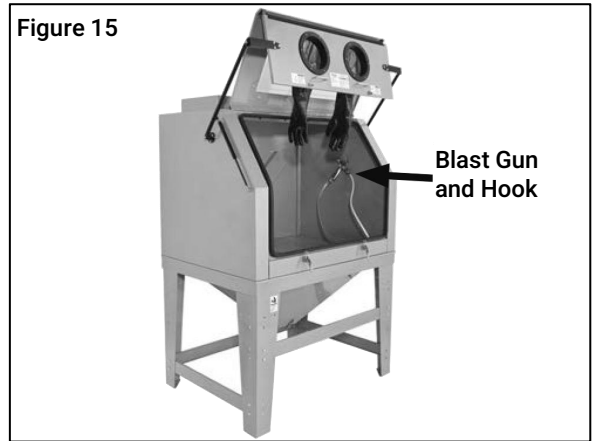
- Install remaining (8) M8-1.25 x 20 hex bolts, 8mm flat washers, and 8mm lock washers into holes in leg flanges shown in Figure 14.

- Close and latch door. With help of assistant, tilt blast cabinet upright onto its legs.

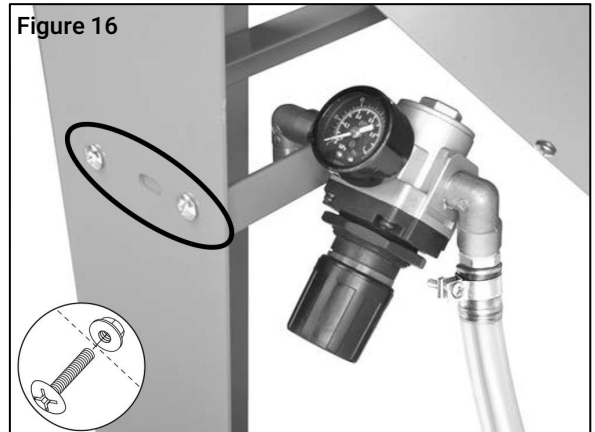
- Place work tables into cabinet, so work table with corner cut off is positioned at front-right corner of blast cabinet.



14. Route blast gun hoses past notch in right table, and hang blast gun on its hook on right side of cabinet wall, as shown in Figure 15.



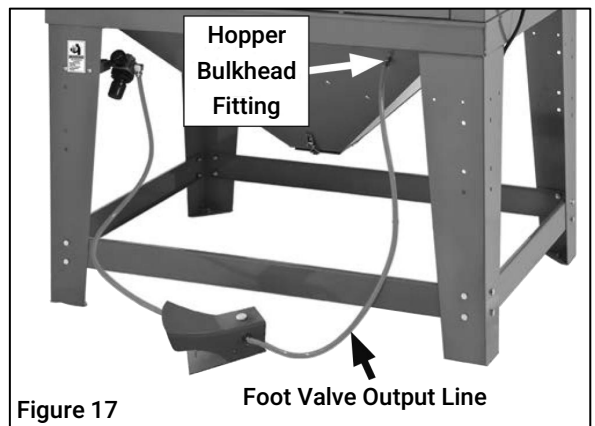
15. Fasten pressure gauge and regulator "L" bracket (see Figure 16) to left-front leg using (2) M6-1 x 12 cabinet screws and M6-1 flange nuts.



16. Connect foot valve output line to fitting located on front-right of hopper shown in Figure 17.

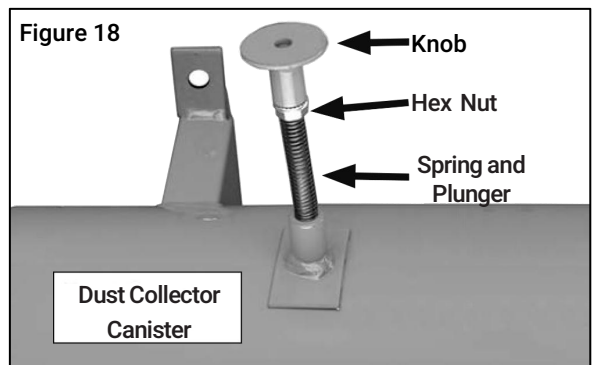
17. Position foot pedal (see Figure 17) between legs. Fasten it to floor, if desired.

18. Locate dust collector canister assembly and unlatch dust collector motor, lift dust collector out of canister, and set it aside.



19. Working from inside of canister, insert plunger through canister wall so it can be seen protruding from outside of canister (see Figure 18).

20. Place spring on plunger, thread hex nut and knob onto plunger, and tighten hex nut against knob, as shown in Figure 18.



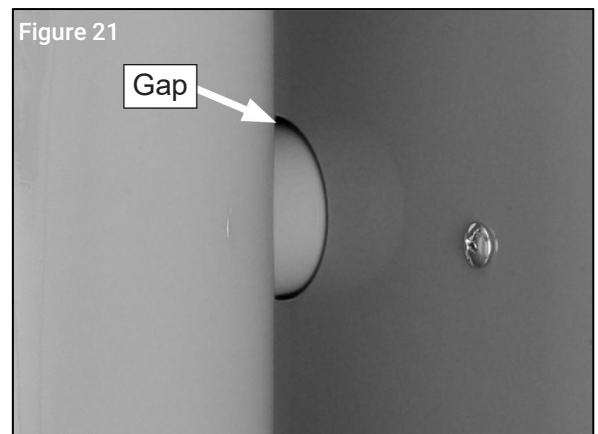
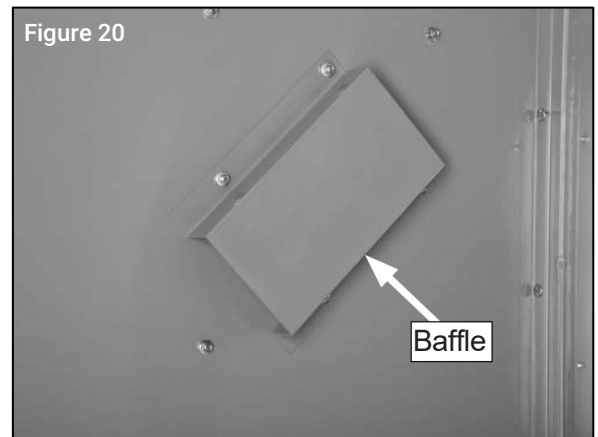
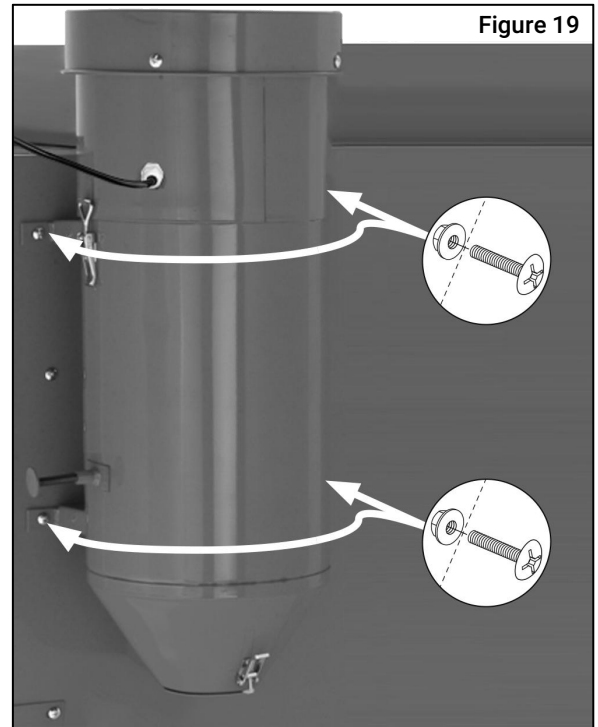
21. Using (4) M6-1 x 12 cabinet screws and M6-1 flange nuts, fasten dust collector to rear of cabinet so suction port protrudes through hole cut into back of cabinet (see Figure 19).

22. Remove inside-right baffle shown in Figure 20 from cabinet wall.

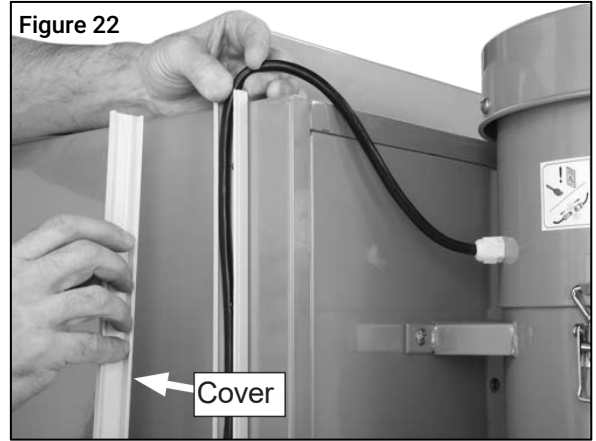
**Note:** Removing this baffle provides access to full circumference of dust collector suction pipe so sealant can be evenly applied without leaks. When dust collector is in operation, and gap shown in Figure 21 is sealed, good left-to-right cross cabinet airflow can be achieved for optimum visibility, especially when CFM drops off.

23. Using silicone (not supplied), seal gap shown in Figure 21 between suction port and hole in cabinet wall.

24. Re-install baffle in blast cabinet and dust collector in canister.



25. Install dust collector power cord in plastic raceway and snap cover in place, as shown in Figure 22.
26. Plug dust collector into power supply receptacle on rear of control box shown in Figure 23.
27. Pour desired amount of media into cabinet through front door. **DO NOT** overfill.
28. Allow silicone sealant to fully cure. Otherwise, when machine is turned ON and media blasting begins, seal may be broken, causing leakage.
29. Inspect all seals, hose clamps, glove clamps, and window seals for loose fittings, cracks or leaks. Correct as required.
30. Verify that plastic dust sheet is affixed to inside of cabinet viewing window and light window. If blasting operations begin with-out these dust sheets installed, media will permanently etch window glass and require replacement.



## Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem **BEFORE** operating the machine again. The Troubleshooting table in the **SERVICE** section of this manual can help.

The Test Run consists of verifying the following: 1) The lights and the dust collector motor power up and run correctly, 2) the ON/OFF switches work, and 3) the air regulator and system are functional.

### **WARNING**

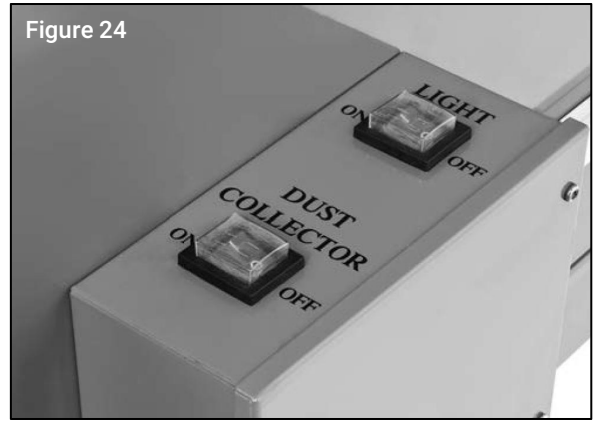
Serious injury or death can result from using this machine **BEFORE** understanding its controls and related safety information. **DO NOT** operate, or allow others to operate, machine until the information is understood.

### **WARNING**

**DO NOT** start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage

**To test run machine:**

1. Clear all setup tools away from machine.
2. Make sure that DUST COLLECTOR ON/OFF rocker switch is in OFF position, as shown in Figure 24.
3. Connect machine to power source.
4. Verify that dust collector and lights operate correctly by toggling LIGHT and DUST COLLECTOR switches to ON position.



- When operating correctly, dust collector runs smoothly with little or no vibration or rubbing noises, and all LED lights are brightly illuminated.
- Investigate and correct strange or unusual noises or vibrations before operating machine further. Always disconnect machine from power when investigating or correcting potential problems.

5. Toggle DUST COLLECTOR switch to OFF position.
6. Put on safety glasses and connect blast cabinet to air supply.
7. Adjust regulator knob to 125 PSI, as shown on gauge.

**NOTICE**

Whenever closing blast cabinet door, make sure that gloves are out of the way of door seal before door is latched shut. Otherwise gloves and door seal will be pinched and can be damaged.

8. Lower door and latch it shut.
9. Grasp blast gun and press foot pedal. Air should exit from tip of blast gun.

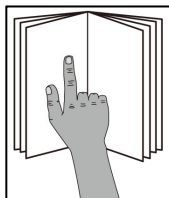
**Note:** *If, after this test, regulator gauge needle drops more than a few PSI when you press foot pedal, verify that air supply is not restricted. With proper air supply volume and pressure, blast gun media suction tube should draw 15–17 inches of mercury on manometer.*

10. Listen and watch for air leaks. Spray solution of warm water and dish soap on air lines, valves, and fittings. When leak is found, soap bubbles will form. Correct and reseal as required.
11. Adjust air pressure down to 60 PSI, and dis-connect air supply and power supply.

# SECTION 4: OPERATIONS

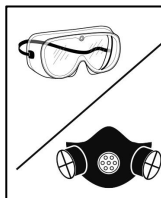
## ⚠ WARNING

Media blasting presents hazard of silicosis and other lung contamination injuries! These injuries are permanent and can get worse over time. If you use media blasting equipment without proper eye protection and respirator, eyes and lungs may become irreversibly contaminated. Only use blast cabinet if you are properly trained in how to use it, correctly protect yourself, and keep all unprotected bystanders away. For latest types of protective equipment and acceptable respirator types, contact local OSHA or NIOSH office.



## ⚠ WARNING

To reduce your risk of serious injury, read this entire manual BEFORE using machine.



## ⚠ WARNING

To reduce risk of eye injury or lung damage from dust, always wear safety goggles and a respirator when operating machine!

## NOTICE

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, TMG Industrial will not be held liable for accidents caused by lack of training.

## Preparation

## ⚠ WARNING

NEVER sand blast with door open, point gun at yourself or anyone else, or attempt to service any part of machine while it is connected to power or air supply. ALWAYS disconnect blast cabinet from power and air supply when not in use, or during maintenance or adjustments. Ignoring this warning may lead to severe injury.

### To prepare for a typical media blasting operation :

1. Conduct daily inspection of cabinet as listed in Maintenance on Page 27.
2. Select and install required blast tip, load media, and empty dust collector canister.
3. Empty air supply water separators, connect power and air to cabinet, and adjust regulator to required air pressure.
4. Remove water, oil, grease, and loose paint or scale from workpiece, then place workpiece into blast cabinet.
5. Put on safety goggles and respirator, and begin media blasting operation.

## Basic Operation

During blasting operations, make sure to keep the water separators drained. Keep in mind that, depending on the temperature and the amount of humidity in the ambient air, water separators may have to be drained once a day or multiple times during your blasting project.

For tips on basic blast cabinet use and how to prevent common problems with blasting operations, refer to Operation Tips on Page 24.

### To use blast cabinet:

1. Prepare cabinet and workpiece for blasting, as discussed in Preparation.
2. Put on safety goggles and respirator.
3. Select and load blasting media through front cabinet door. Refer to Page 25 for media types if needed.

## ⚠ WARNING

Avoid using media that contains free silica, as this is a leading source of silicosis that can lead to serious injury or death!

4. Install correct tip into blast gun, in position shown in Figure 25. Typically, 6mm tip is used, but refer to Blasting Media section on Page 27 to understand when to use larger-sized tips.
5. Use canister plunger to tap filter clean and make sure canister is empty.
6. Connect media blasting cabinet to power and air supply.
7. Pull down on regulator knob shown in Figure 26 to unlock it, and turn knob clockwise to increase air pressure for desired blasting operation. Push knob into lock setting.

**NOTICE**

When loading and unloading heavy or awkward workpiece, you should cover seal with thick cardboard, get lifting assistance, and never rest workpiece on lower door frame. Otherwise you can damage door seal, which will cause cabinet seal to leak.

8. Place workpiece into blast cabinet.

**NOTICE**

When closing blast cabinet door, move gloves out of the way of door seal before door is latched shut. Otherwise gloves and door seal can be pinched and damaged.

9. Lower door and latch it shut, as shown in Figure 27.

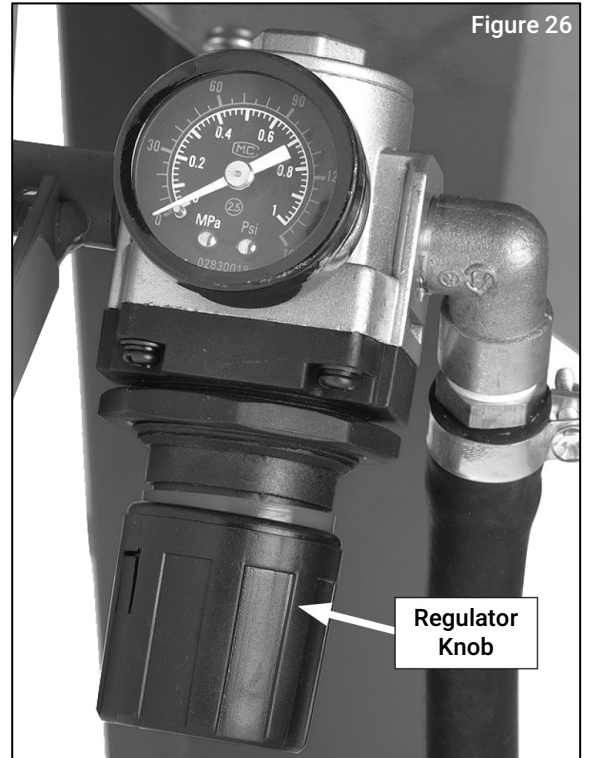
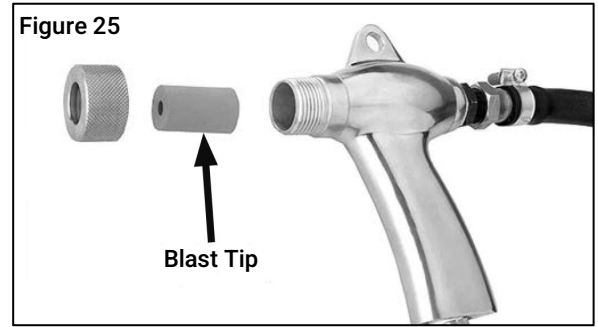
10. Toggle LIGHT and DUST COLLECTOR switches to ON position (see Figure 28).

11. Point blast gun tip at workpiece in direction where ricocheting spray of abrasive will not hit windows.

12. Slowly press foot pedal and move blast tip in slow, circular motion. Abrasive media will begin spraying from blast gun tip.

13. Every 20–30 minutes during blasting operations, use filter cleaning plunger (see Page 4) to knock off material that is caked onto outside of filter. Push plunger in until it stops, then let thumb slide off of button so spring slaps plunger back against insidewall of canister.

14. When blasting operation is complete, disconnect cabinet from power and air supply.



# Operation Tips

## Improving Productivity

Clean workpieces as much as possible by removing grease, oils, paint, rust, scale and other matter before beginning blasting operations (pressure washers can work well for this). Select the correct media for the task, and do not use air pressure settings that are too high for the media as it will cause media breakdown and dulling.

## Maintaining Visibility

Should poor visibility become a problem during blasting operations, do not wipe the windows clean with wet or dry rags. Doing so will scratch the protective plastic sheet, further reducing visibility. Instead, vacuum media away with a soft brush attachment, or use a soft paint brush to brush the dust off of the protective sheets.

## Protecting Window Glass

Always make sure to inspect and replace the protective sheets BEFORE the ricocheting media wears through and permanently etches the underlying glass. If using an aggressive media, this is especially true and you may have to double the sheets to protect from wear-through before the blasting project is finished.

## Extending Protective Film Life

For most media blasting operations, maintain a distance of six inches. Keep the spray at a 45°–60° degree angle to the workpiece, so the media will ricochet off it and not directly impact the light or viewing window. Doing this will help maintain workpiece visibility and make the protective window film and media last longer. Avoid pointing the gun at the workpiece with the tip perpendicular or 90° from the surface.

## Maintaining Workpiece Finish

Blast media will wear the blast gun tip causing an inconsistent abrasive pattern. A poor blast pattern will leave streaks or spots on the workpiece finish. To avoid this situation, rotate the media blasting tip 1/4-turn every 10 to 12 hours of use, and replace any tip that has worn larger than 1/16 " in diameter from original size.

## Media Amounts

Loading only enough media for the job at hand will help you prevent over-using or having to screen excess media. Use just enough media to cover the suction tube opening at the bottom of the hopper by 6" to 8". Experiment with using the least amount of media as possible. The result of using less media is that you will have less material to screen or discard and more fresh media for mixed projects. Store media in a dry place.

## Recycling Media

Screen used media with a series of wire mesh screens to refine it to one consistent size.

## Air Pressure Settings

Most operations are done with air pressure settings between 60–80 PSI. However, the optimum air pressure is derived from a trial-and-error process based on the factors discussed in the Blasting Media section. If required, refer to that section for help.

## Air Pressure Exceptions

When blasting thin materials made of aluminum, copper, brass, wood, or other delicate parts, select a fine or soft media and begin blasting at a low pressure, such as 45 PSI. Next, slowly increase the air pressure until you achieve the finish required. When using glass bead media, you may have to keep the operating pressure between 50– 80 PSI, or the media will shatter and breakdown prematurely. However, if using media like silicon carbide and aluminium oxide, you can keep pressures between 100– 125 PSI.

## Preventing & Clearing Clogs

During blasting operations the gun may periodically clog or become restricted with workpiece debris. If this occurs, cover the blast tip hole tightly, and press the foot valve. Air pressure will be diverted back through the suction circuit in the gun and piping, blowing out the clog. Blasting operations can be resumed afterwards; however, if clogging persists and the cause is other than workpiece debris, refer to Troubleshooting on Page 28 for further solutions.



# Blasting Media

Some of the common blasting media types are listed in this section with the MOH scale hardness value listed in parenthesis. All media have benefits and drawbacks, such as the quality of surface finish, media life, toxicity, and the precautions that must be taken to prevent environmental damage or personal injury to your respiratory system. However, all media presents a health risk. Never use media that contains free silica as this is linked to silicosis.

## Media Cost vs. Productivity

It is a common assumption that using low-cost media such as basic builder's sand or play sand, is an economical option for blasting. However, since sand is a "dull media," the velocity at which the media must strike the workpiece must be much higher than what is required for "sharp media."

Another requirement when using sand is that the hole in the blast tip must be larger in diameter to avoid clogging caused by the inconsistent grit size, and to prevent caking of other minerals and organic matter mixed in with the sand.

Given the conditions above, the compressor must deliver a high CFM of airflow maintained at a high air pressure, which can generate increased wear and can overheat smaller compressors. Compressors that operate for extended periods at maximum output have higher maintenance costs and a shorter life, not to mention the increased hazard of silicosis for the user and bystanders.

With correct research, excellent productivity can be achieved using sharp media with a smaller tip and less air pressure than with dull media at a higher pressure.

## Aluminum Oxide (8.5–9)

Aluminum oxide is commonly used for surface finishing. It has an angular shape, is extremely sharp, has extended blast times, and is highly recyclable.

## Silicon Carbide (9–9.5)

This blast media is considered to be the hardest available. The crystal structure is sharp and cutting is fast and aggressive. This media is often used to engrave and etch glass and stone. It has shorter blasting periods. Silicon carbide has no free silica and it can be recycled many times.

## Sand Media (6–7)

This media is easy to find and gives an average finish for many projects. Sand has a good recycling life and is economical. However, as discussed in Media Cost vs. Productivity, the weak cutting ability and high CFM requirements can lead to additional compressor maintenance. Also, if using sand that contains free silica, there is an increased health hazard for silicosis.

## Steel Media (8.9–6)

This aggressive media creates a rough finish that accepts paint well. It is durable and has a long life; however, it MUST be kept very dry to prevent rusting. The main types are as follows:

- Steel Grit (8–9): Compared to aluminum oxide, steel grit is softer and has a low habit of fracture, which leaves an excellent etched surface on rubber, paints, and other coatings. Steel grit comes in many grit sizes and hardness, and is a popular choice for aircraft applications.
- Steel Shot (6–7.5): Steel shot is widely used for stripping, cleaning, and general improvements of metal surfaces. It has a rounded-ball shape and comes in many grades, sizes, and hardness, and usually gives the surface a shiny or polished look. Steel shot peening is also used to de-stress machinery parts such as impeller fins, bearing parts, springs, and torsional components. Steel shot does not create high amounts of dust and it has a superior recycle rate.

## Slag Media (7–8, 6–7)

Slag media are by-products of various types of smelting and coal burning processes. Be aware that some slag media may contain unwanted by-products from these processes.

- Copper Slag (7–8): Copper slag is a by-product from the copper manufacturing process. It is very economical but non-reusable. It is considered a better alternative to sand and does not present a hazard for silicosis. Best suited for cleaning rust, mill scale, and paint from steel. Copper slag leaves a good surface to anchor and bond coatings and paints. The structure is blocky and sharp-edged.

- Coal Slag (6–7): This blast media is made from liquid coal slag that is collected from utility boilers. It then is hardened and crushed. The resulting media is sharp, angular, and fast-cutting with little dust. However, copper slag can release hazardous pollutants into the environment. Various grit sizes can be used from light blasting operations to heavy-duty rust, paint, and mill scale removal. The resulting finish is a good surface ready to anchor and bond coatings and paints.

### **Glass & Garnet Media (7.5–5.5)**

Glass media contains no free silica or heavy metals and is non-toxic and inert. It works well for soft metals and is a common choice when critical tolerances of machine parts must not be affected.

- Glass Beads (5.5): Just as the name indicates, this media is round in shape. Glass beads come in various grit sizes and hardness. It is manufactured from lead-free, soda lime-type glass. Unlike angular abrasives that cut, beads burnish and leave a bright finish that typically has no dimensional change. Glass beads can be recycled many times. Common applications are honing wood, blending surfaces, polishing, peening, finishing surfaces, removing scratches, and basic cleaning of most materials.
- Crushed Glass (5.5): This media is created from recycled bottles and other glass. It has a sharp cutting behavior and is often used to remove epoxy coatings, glues, polyurethanes, vinyls, elastomers, rubbers and tar. Crushed glass embeds less particles while blasting, which results in a very light and clean-looking finish.
- Garnet (6.5–7.5): Garnet is very effective at cleaning steel, works well on brick, stone, and stainless steel. It is very dense and hard, and is naturally occurring. The recyclability is good, and it is a common choice for use in blast cabinets, the oil and gas industry, and shipyards.

### **Plastic Bead Media (3–4)**

Plastic abrasives are available in a variety of types such as urea, melamine, and acrylic compositions. The beads are round and give reliable, consistent stripping results. Excellent for paints, varnishes, rusts, and oxidation from soft metals, plastics, and wood. The aerospace and automotive industry are chief consumers of this blast media.

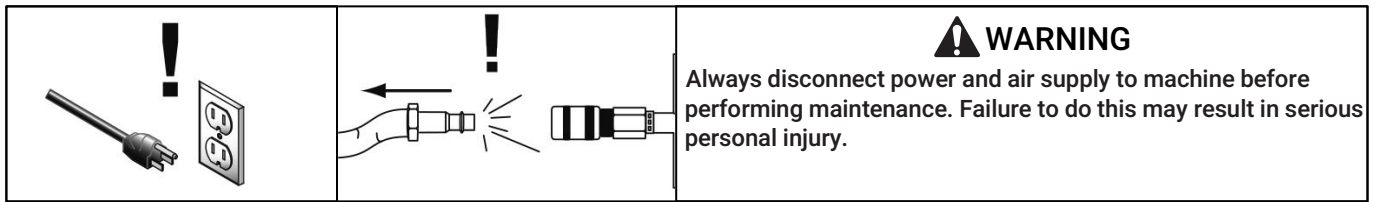
- Urea (3–4): Urea is the most commonly used plastic media. It is considered to be an environmentally-friendly choice because it is a much safer option than using chemical strippers. It is recyclable and is an excellent choice for stripping tough coatings when speed is a high priority and the surface is not critical.
- Melamine (3–4): A long-lasting, recyclable media, this abrasive is the most aggressive of the plastic beads. Due to its hardness, it can strip hard-to-remove coatings and be substituted for some of the other types of glass beads.
- Acrylic (3–4): This multipurpose blast media is one of the longest lasting types available, and is available in a wide range of grit sizes. It is often used for stripping sensitive surfaces or delicate parts that may consist of multiple types of compounds.

### **Soft Media (4.5–2.4)**

There are many types of "Soft" blast media, many of which are inert minerals and organic material. Some blast cabinets with dust collection systems require special filters or dust collectors for soft types of media where, the media becomes pulverized and turns to a cloudy dust that can cake onto filters quickly. When used with the Model G0714, the filter cleaning interval will have to be increased to maintain flow.

- Ground Walnut (4.5–5): This is a soft media produced from crushed or ground walnut shells. The structure is multi-faceted and angular with no free silica. Durability is excellent, making this media a good choice for blasting operations where the paint, varnish, or coating must be cleaned but not marred or removed. Great for cleaning hardwoods, jewelry, and electrical items. Using a larger grit under higher pressure settings, ground walnut shells can also be used to strip away paint and varnishes. Also works great for cleaning coke and other carbon deposits from engine parts.
- Pumice (6–7): This mineral is a natural volcanic ash that is inert and can be used for the most sensitive blasting operations where the painted or finished surface must be entirely unaffected by the removal of the foreign matter. The structure is honey-combed and block-shaped.
- Ground Corn Cob (4.5): An organic, soft-blasting grit that has an angular shape, and has excellent surface cleaning behavior similar to ground walnut and peanut shells. It is available in a selection of grit sizes, and is commonly used to strip light coatings, thin bark, and dirt off of wood without surface damage or grain blowout.
- Sodium Bicarbonate (2.4): Baking soda is inert, water-soluble, and has an excellent ability to remove and absorb dirt or contaminants from a surface. It will notpeen or cut the underlying workpiece. This important media can be used where small ports and bores must be cleaned without clogging the passages. After blasting operations, any remaining media can be removed with water.

# SECTION 5: MAINTENANCE



## Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

### Ongoing

To minimize your risk of injury and maintain proper machine operation, shutdown the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

- Loose mounting bolts.
- Leaks, cracks, abrasions, and wear in fittings, hoses, and cabinet seals.
- Incorrect air pressure for media.
- Dirty filter.
- Worn window protective films.
- Worn or damaged wires/cords.
- Any other unsafe condition.

### Daily Maintenance

- Drain water separators.
- Empty dust collector canister.
- Clean filter.
- Rotate blast tip to compensate for wear.

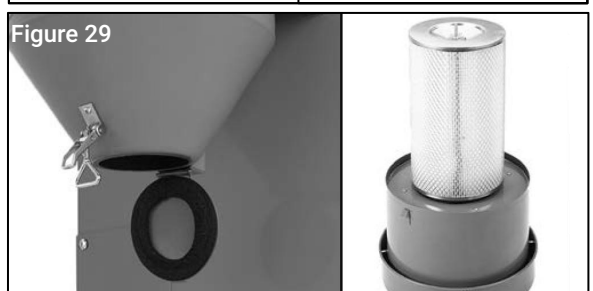
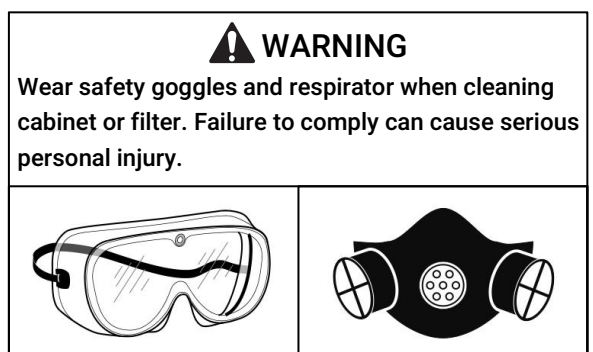
### Monthly Maintenance

- Use soapy water on fittings/hoses. Bubbles indicate leak.
- Clean/vacuum dust buildup from inside cabinet/off motor. Inspect for leaks or damage.
- Inspect suction lines carefully for spots that collapse or leak during operation.
- Inspect work gloves for holes or wear.
- Repaint bare metal portions of cabinet (with windows covered).

## Cleaning

Wipe down the exterior of the cabinet with a light solution of mild dish soap and water, then dry with a clean towel. To avoid scratching windows, never clean them with wet or dry rags. Instead, vacuum media away with a brush attachment, or gently brush the window with a soft paint brush.

Every five hours of use, empty the canister through the dump port shown in Figure 29. Typically this media is discarded as it has a high ratio of fine dust contaminants. For major cleaning, unlatch the top of the dust collector and remove the filter element. Inspect all sealing foam and replace as required. Clean the filter canister pleats by carefully blowing them from the inside out with compressed air. If the filter is clogged, or has holes or tears, replace the filter.



# SECTION 6: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at 1-877-761-2819.

## Troubleshooting

### Operation

Symptom	Possible Cause	Possible Solution
Intermittent, clogging, or no media spray at blast gun; or striping is occurring on workpiece.	<ol style="list-style-type: none"> <li>Suction tube has been clogged from contaminant.</li> <li>Incorrect or worn-out media.</li> <li>Worn or incorrect blast tip.</li> <li>Low airflow or pressure up to cabinet.</li> <li>Blasting system has incorrect airflow or pressure.</li> <li>Cabinet is overloaded with media.</li> <li>Blast gun is damaged or has bad seals.</li> <li>Foot valve or lines are at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Cover blast tip and press foot pedal to use air pressure to purge foot valve and suction system. Repeat step periodically during blasting operations.</li> <li>Verify that media chosen is correct material for blasting operation (Page 25). Make sure that media is not worn-out, saturated with debris, or contaminated with moisture, causing it to cake inside of lines. Screen or replace media as required.</li> <li>Disconnect machine from air and rotate blast tip 1/4 -turn to compensate for wear. Replace or install with correct blast tip.</li> <li>Troubleshoot air supply system and verify compressor, supply lines, moisture separators, and air dryers have correct airflow and are in good working order.</li> <li>Adjust air regulator on cabinet to maintain correct air pressure and flow, and verify no hose kinks or clogs exist.</li> <li>Remove media but leave just enough for blasting operation.</li> <li>Disassemble blast gun, clean and reseal.</li> <li>Clean and reseal foot valve, fittings, and lines.</li> </ol>
Dust collector won't start or circuit breaker trips.	<ol style="list-style-type: none"> <li>Damaged or loose power cord.</li> <li>ON/OFF switch at fault.</li> <li>Circuit breaker/fuse has tripped.</li> <li>Wiring at fault.</li> <li>Motor brushes at fault.</li> <li>Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Re-secure and test power cord. Replace as required.</li> <li>Test and replace open switch.</li> <li>Replace fuse on control box, reset power supply circuit breaker.</li> <li>Repair for open or shorted wiring connections.</li> <li>Replace motor brushes (Page 29).</li> <li>Test and replace motor as required.</li> </ol>
LED lights are dim or will not illuminate.	<ol style="list-style-type: none"> <li>LED light(s) at fault.</li> <li>ON/OFF switch at fault.</li> <li>Wiring at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Replace LED light(s).</li> <li>Test and replace open switch.</li> <li>Repair for open or shorted wiring connections.</li> </ol>
Poor visibility during blasting operations.	<ol style="list-style-type: none"> <li>Lighting is at fault.</li> <li>Protective sheet on windows are worn.</li> <li>Workpiece is excessively dirty.</li> <li>Media selected is too fine or soft for good visibility.</li> <li>No dust collection.</li> <li>Dust collector filter is worn out.</li> <li>Dust collector motor is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Replace one or more LED lights as required to establish correct illumination (Page 31). Dim surrounding shop lighting near blast cabinet, or eliminate exterior glare on viewing window with sun shroud.</li> <li>Replace protective sheets on viewing window and light window (Page 31).</li> <li>Prepare workpiece properly. Remove water, oil, grease, and excessive amounts of paint or scale that can be easily removed.</li> <li>Chose another media (Page 25) with lower potential for clouding.</li> <li>Clean dust collector filter (Page 27), empty canister, and turn on dust collector. Verify cabinet air intake is unblocked.</li> <li>Replace filter (below).</li> <li>Replace motor brushes (Page 29), or motor if required.</li> </ol>

# Filter Replacement



If, after a full filter cleaning, the cabinet still clouds up and general blasting visibility is poor, or if the dust collector has lost a considerable amount of CFM, the filter must be replaced.

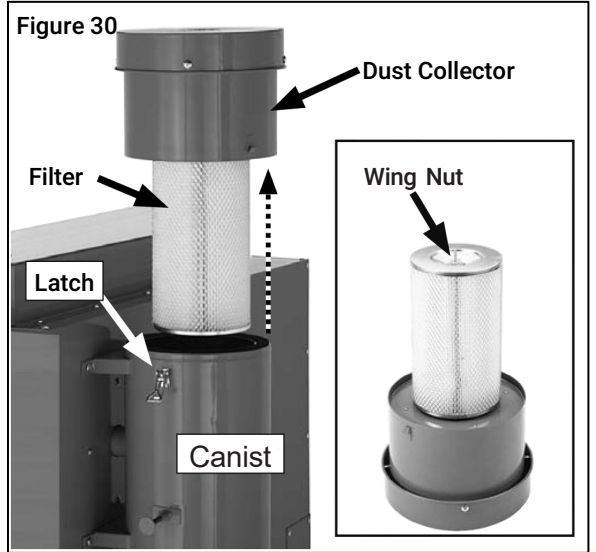
**To replace filter:**

1. DISCONNECT MACHINE FROM POWER!
2. Unlatch dust collector, lift entire motor and filter unit out of canister (see Figure 30), then place it on workbench upside down.
3. Spin wing nut off of retaining stud, and remove filter (see Figure 30).
4. Place new filter over retaining stud, then re- install wing nut and dust collector.

**⚠ WARNING**

Wear safety goggles and respirator when cleaning cabinet or filter. Failure to comply can cause serious personal injury.



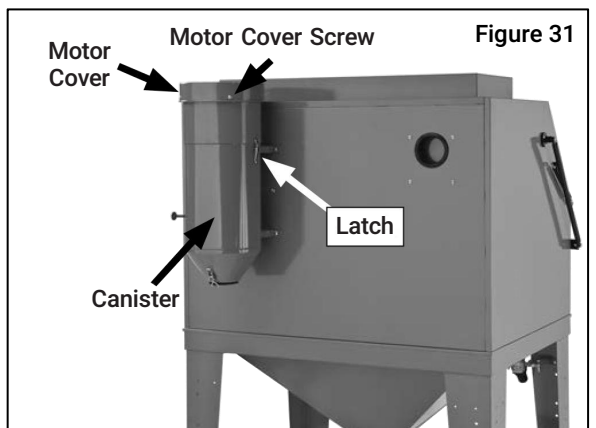
# Motor Brush Replacement

During the life of your blasting cabinet, you may find it necessary to replace the dust collector motor brushes. If the motor operates loudly, or the dust collector still has low suction after a new filter has been installed, the motor brushes likely have reached the end of their usable life and need to be replaced.

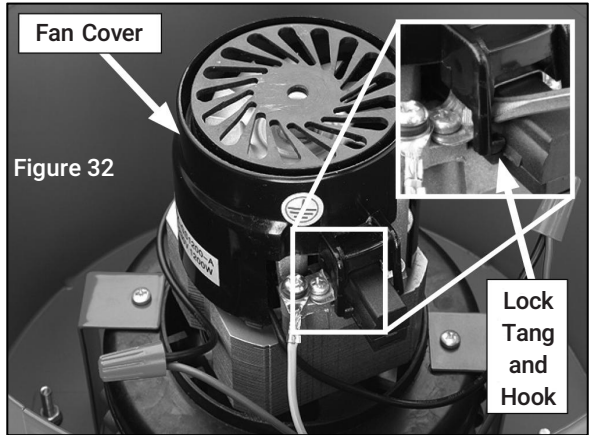
Items Needed	Qty
Phillips Screwdriver #2 .....	1
Standard Screwdriver #2 .....	1
Acetone and Cotton Rag.....	1
Crocus Cloth (From Local Auto Parts Store).....	1
Carbon Brush Set (P0714101-11).....	1

**To replace brushes :**

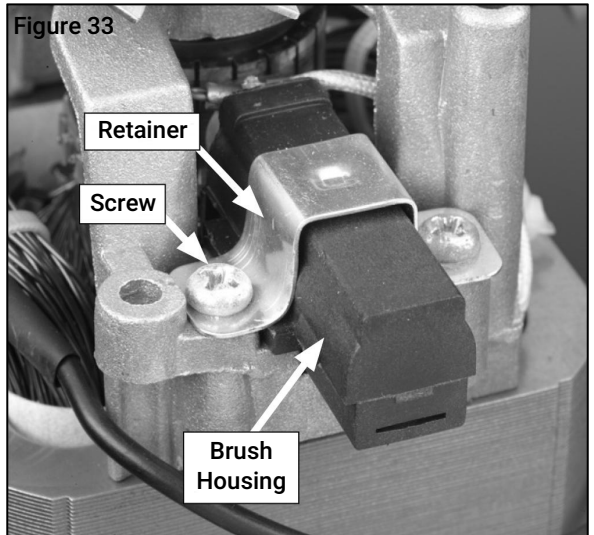
1. DISCONNECT MACHINE FROM POWER!
2. Unlatch dust collector, lift entire motor and filter unit out of canister, and place it on a work- bench for ease of service (see Figure 31).
3. Remove motor cover shown in Figure 31. It is attached with (4) screws.



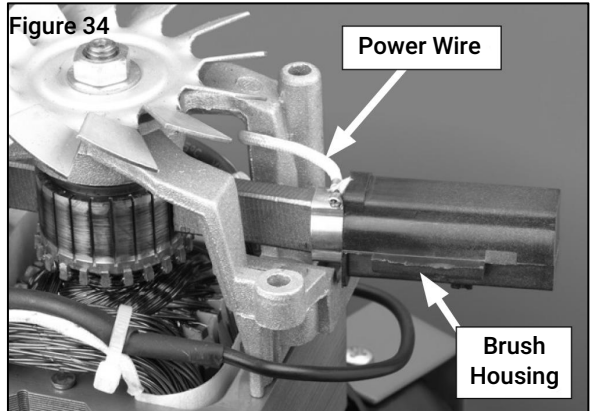
4. While pulling fan cover upwards, use standard screwdriver to carefully pry out cover lock tangs just enough to clear hooks (see Figure 32), then remove cover from motor.



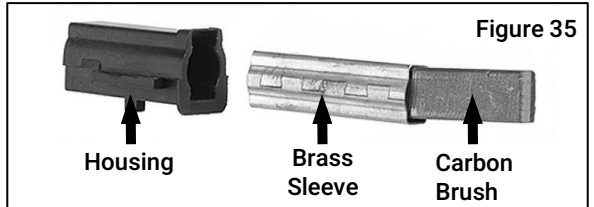
5. Remove (2) screws that secure each brush housing and remove retainers (see Figure 33).



6. Lift each brush housing out of its seat and unplug power wire (see Figure 34).



7. Slide brush assembly apart, clean housings and brass sleeves with acetone, and allow parts to dry (see Figure 35).



8. Re-assemble housings with brass sleeves and new carbon brushes.

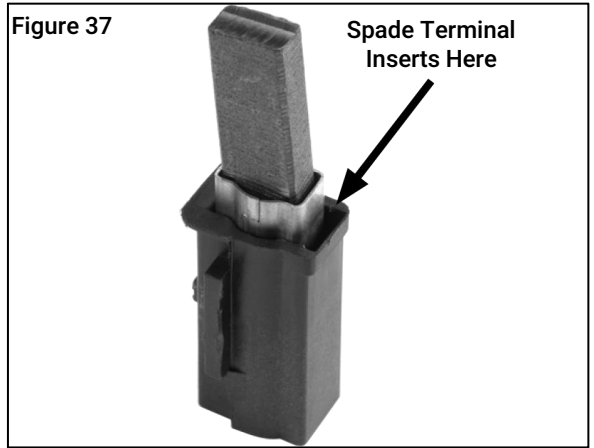
9. Inspect commutator surface for carbon tracking (see Figure 36).

- If brushes have worn deep grooves in commutator, we recommend replacing motor. Typically, labor involved with returning commutator on lathe then under-cutting insulator segments far exceeds price of new motor.
- If commutator only has minor wear and black-colored carbon tracking (see Figure 36), use fine crocus cloth to polish surface where brushes ride. DO NOT use emery cloth or sandpaper to clean commutator, or you could make it "out-of-round," which will cause new brushes to arc, overheat, and wear out quickly.



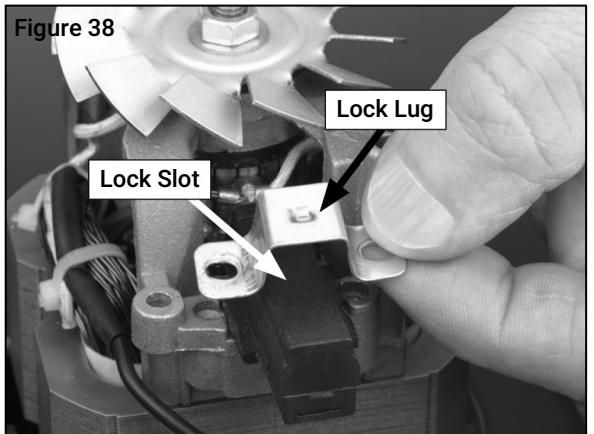
10. Finish cleaning process by using acetone and cotton rag to wipe off any oils or contaminants from commutator.

11. Insert power wire spade terminal into brush assembly between brass sleeve and housing (see Figure 37).

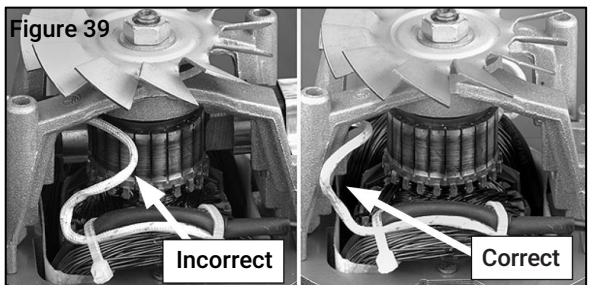


12. Place brush housing into brush seat on motor, and place retainer over brush housing so lock lug drops into lock slot in brush housing (see Figure38).

13. Install and tighten brush housing retaining screws.



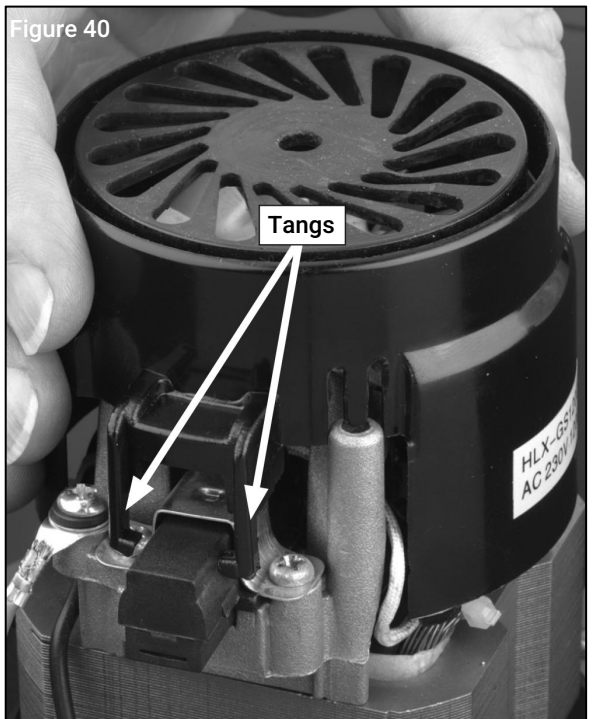
14. When brush housings are installed, make sure to route brush power wires well away from commutator, as shown in Figure 39, or commutator will wear into wire, causing electrical short.



15. Place fan cover back onto motor so tangs lock onto brush housings, as shown in Figure 40.

16. Install motor cover and insert dust collector assembly into canister, then latch dust collector in place.

17. Test dust collector operation as outlined in Test Run on Page 20.



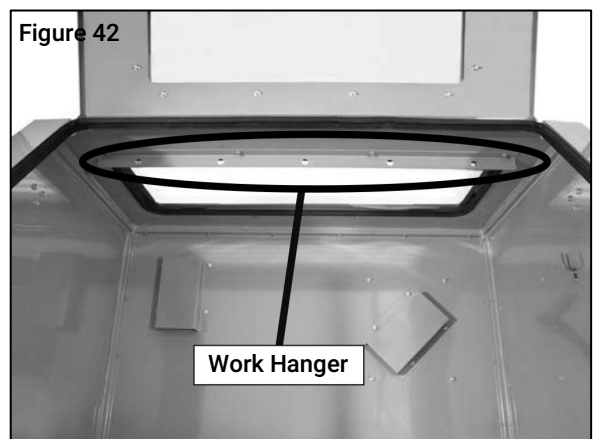
# LED Replacement

The three LED lights are accessed through the outside top of the cabinet (not from the inside of the cabinet).

Items Needed	Qty
LED Light Assembly (Part # P0714011V2-1).....	1
Phillips Head Screwdriver #2 .....	1
Small Step Ladder .....	1
Safety Goggles .....	1
Leather Gloves .....	1
Soft Cotton Rags.....	3
Mineral Spirits .....	1 Pt
Solution of Warm Water and Dish Soap .....	1 Qt
Assistant .....	1

### To replace LED lights:

1. DISCONNECT MACHINE FROM POWER!
2. Remove raceway covers by sliding them off of their tracks, then lift power cord out of raceways, as shown in Figure 41.
3. Open blast cabinet door.
4. Have assistant hold work hanger shown in Figure 42 to avoid possibility of it falling when (4) front cover screws are removed in next step.
5. Loosen (but do not remove) (4) work hanger screws shown in Figure 46, then remove remaining (8) LED cover screws.
6. Put on leather gloves and safety goggles.
7. Lift LED cover, as shown in Figure 43, and carefully pull it toward you so cover slides out from under (4) screws. Make sure not to break sheet of glass that is resting on rubber cabinet seal under LED cover.





8. With help of assistant, place LED housing on top of cabinet, facing upwards, as shown in Figure 44.



9. Lift sheet of glass off cabinet, and set it on workbench for cleaning.

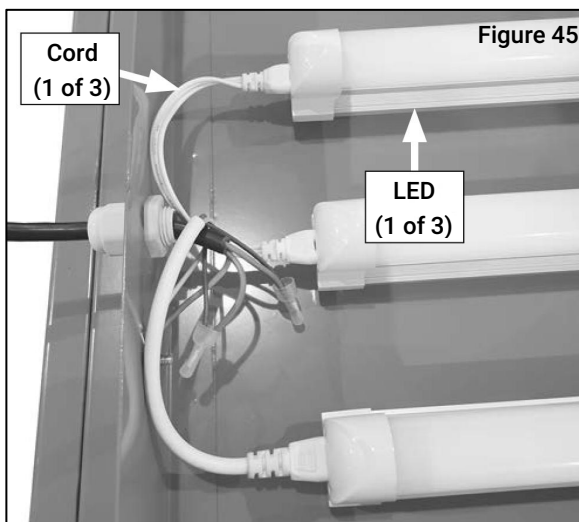
10. Disconnect any cords attached to LED you want to replace, and remove LED (see Figure 45).

Note: LED's are held in place by spring clamps.

11. Install new LED and connect to cord(s) disconnected in Step 10.

12. Connect machine to power and toggle LIGHT switch to ON position to test new lights.

- If all lights light quickly without much flickering or lag, lights are fully functional.
- If any lights struggle for more than five seconds, are dim, or do not light, check cord/wire connections.



Note: Refer to wiring diagram on Page 35 if you are unsure about wiring connections.

13. DISCONNECT MACHINE FROM POWER!

14. Inspect window seal and its surface for evidence of dust streaking between glass and seal, and cabinet and seal.

Make sure that seal is free of any physical damage. Replace or reseal accordingly, but never use glue, caulking, or silicone of any kind between window and its seal, as this will permanently fasten glass to cabinet. Seal is established by means of vacuum created by dust collector.

15. Peel off old adhesive window protection film from glass window.

16. Using paintbrush with solution of warm water and dish soap, rinse all dust and abrasives off of window. Do not rub glass with rag or abrasives will scratch surface.

17. Use mineral spirits to break down any adhesive residue leftover from protective film.

18. Clean window with glass cleaner and soft cotton rag.

19. When window is fully dry, affix new protective film.

20. Re-assemble cabinet in reverse order, making sure to install glass window so protective film is toward inside of blast cabinet.

# SECTION 7: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this section carefully. If there are differences between your machine and what is shown in this section, call Technical Support at 1-877-761-2819 for assistance BEFORE making any changes to the wiring on your machine.

## WARNING

### Wiring Safety Instructions

**SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

**MODIFICATIONS.** Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved after-market parts.

**WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.
















**CIRCUIT REQUIREMENTS.** You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

**WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

**MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

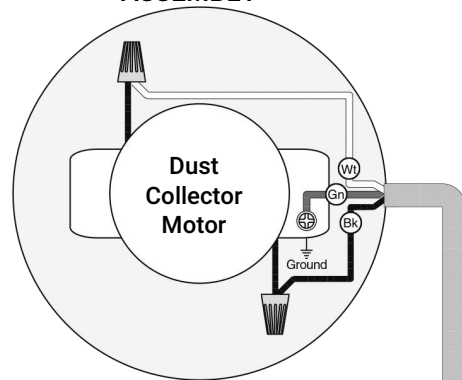
**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at 1-877-761-2819.

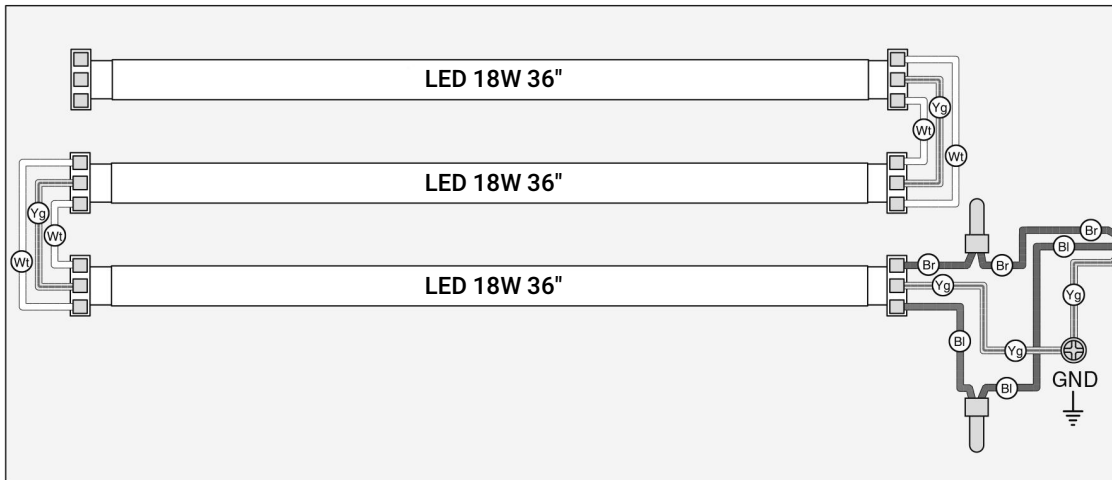
<b>NOTICE</b>		<b>COLOR KEY</b>			
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at <a href="http://www.tmgindustrial.com">www.tmgindustrial.com</a> .	BLACK 	BLUE 	YELLOW 	LIGHT BLUE 	
	WHITE 	BROWN 	YELLOW GREEN 	BLUE WHITE 	
	GREEN 	GRAY 	PURPLE 	TURQUOISE 	
	RED 	ORANGE 	PINK 		

# Wiring Diagram

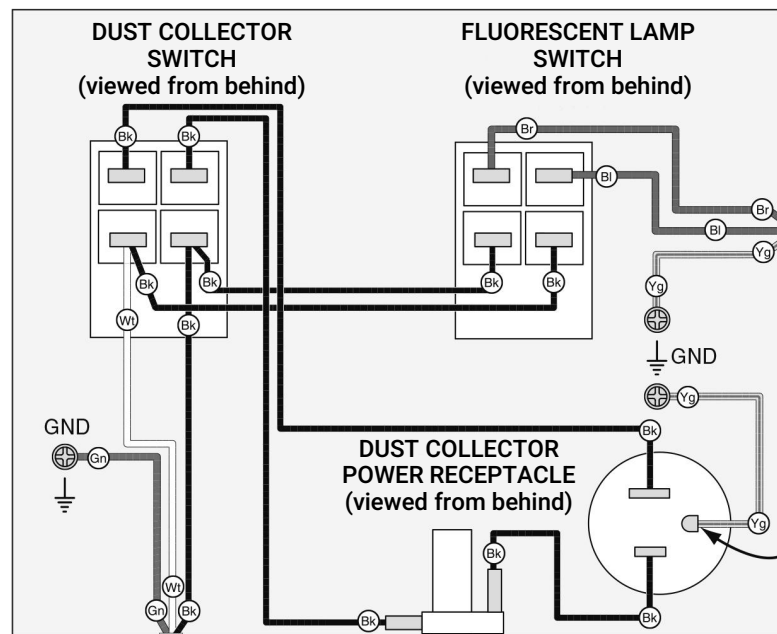
## DUST COLLECTOR ASSEMBLY



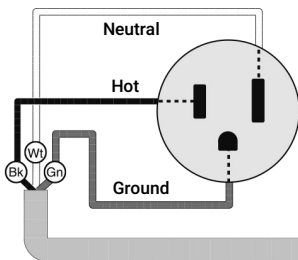
## LED LIGHT ASSEMBLY



## SWITCH BOX ASSEMBLY



  
**110 VAC**  
**5-15 Plug**  
 (As Recommended)

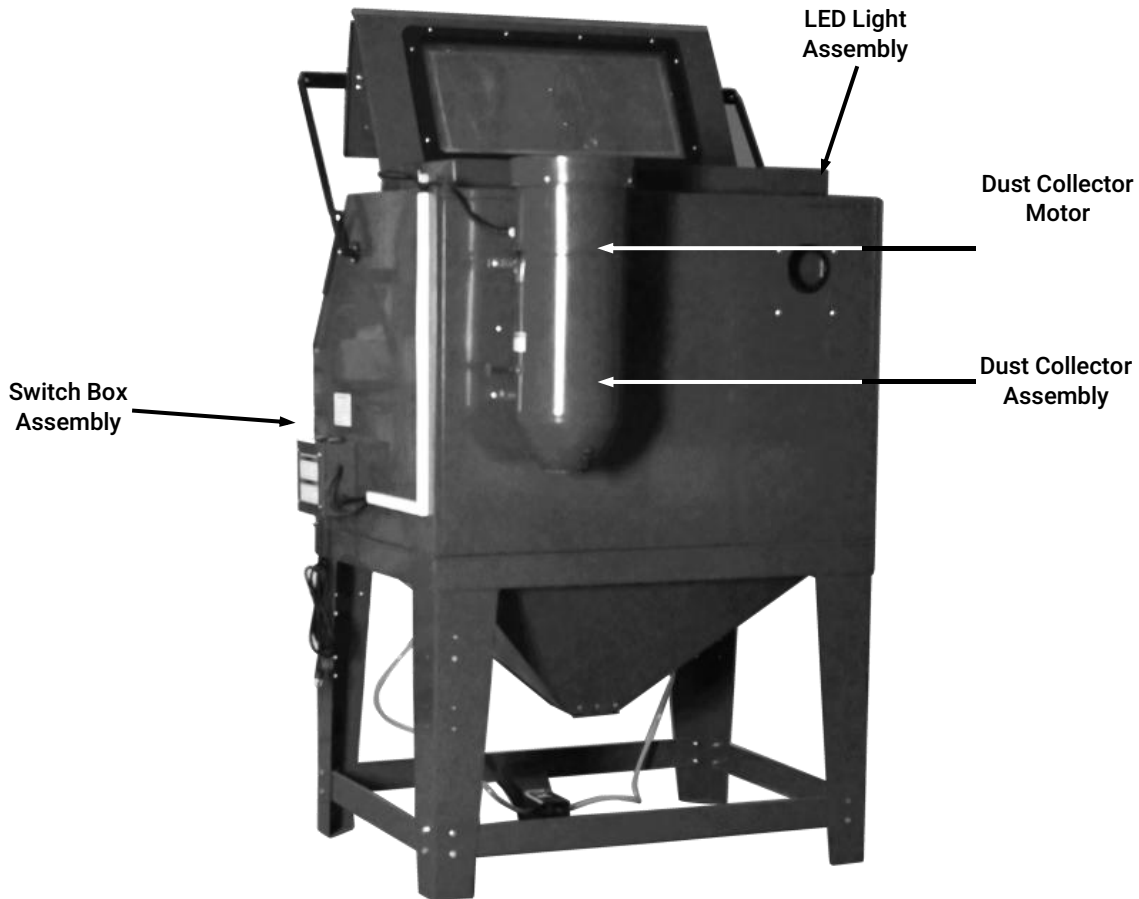


Main Power Cord

Slow-Blow Fuse 15A

DUST COLLECTOR POWER CORD w/PLUG

## Wiring Components



## SECTION 8: SAFETY LABELS

### ⚠ DANGER

WATCH YOUR  
HANDS AND  
FINGERS



TMG-MACH-4066

### ⚠ WARNING!

Secure door before operating machine. Failure to do so could result in serious injury.

Always wear approved eye or face and ear protection when operating the cabinet.

Do not operate the Blasting System at over 125 PSI (8.6 BAR).

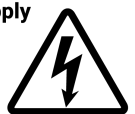
Do not use media containing free silica. Disconnect machine from air supply and electrical outlets before performing maintenance.

TMG-MACH-4064



### ⚠ WARNING!

Disconnect electrical power supply before opening the enclosure, operation is permitted only if the enclosure is fully closed.



### ⚠ CAUTION!

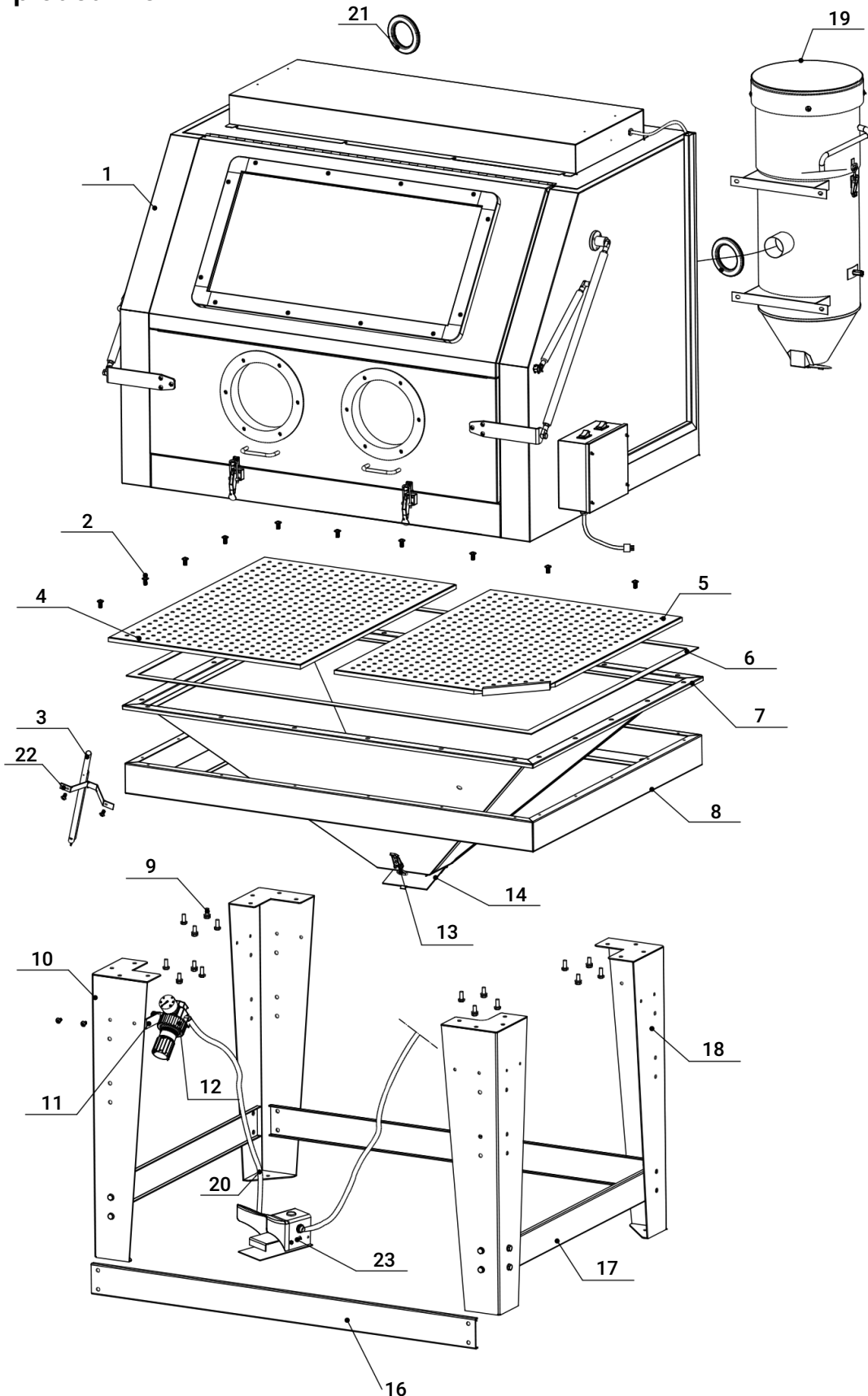
To provide continued protection against risk of electric shock, fire, and explosion, connect to properly grounded outlets only.

TMG-MACH-4065

# SECTION 9: EXPLODED VIEW & PARTS LIST

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call 1-877-761-2819 or visit [www.tmgindustrial.com/parts](http://www.tmgindustrial.com/parts) to check for availability.

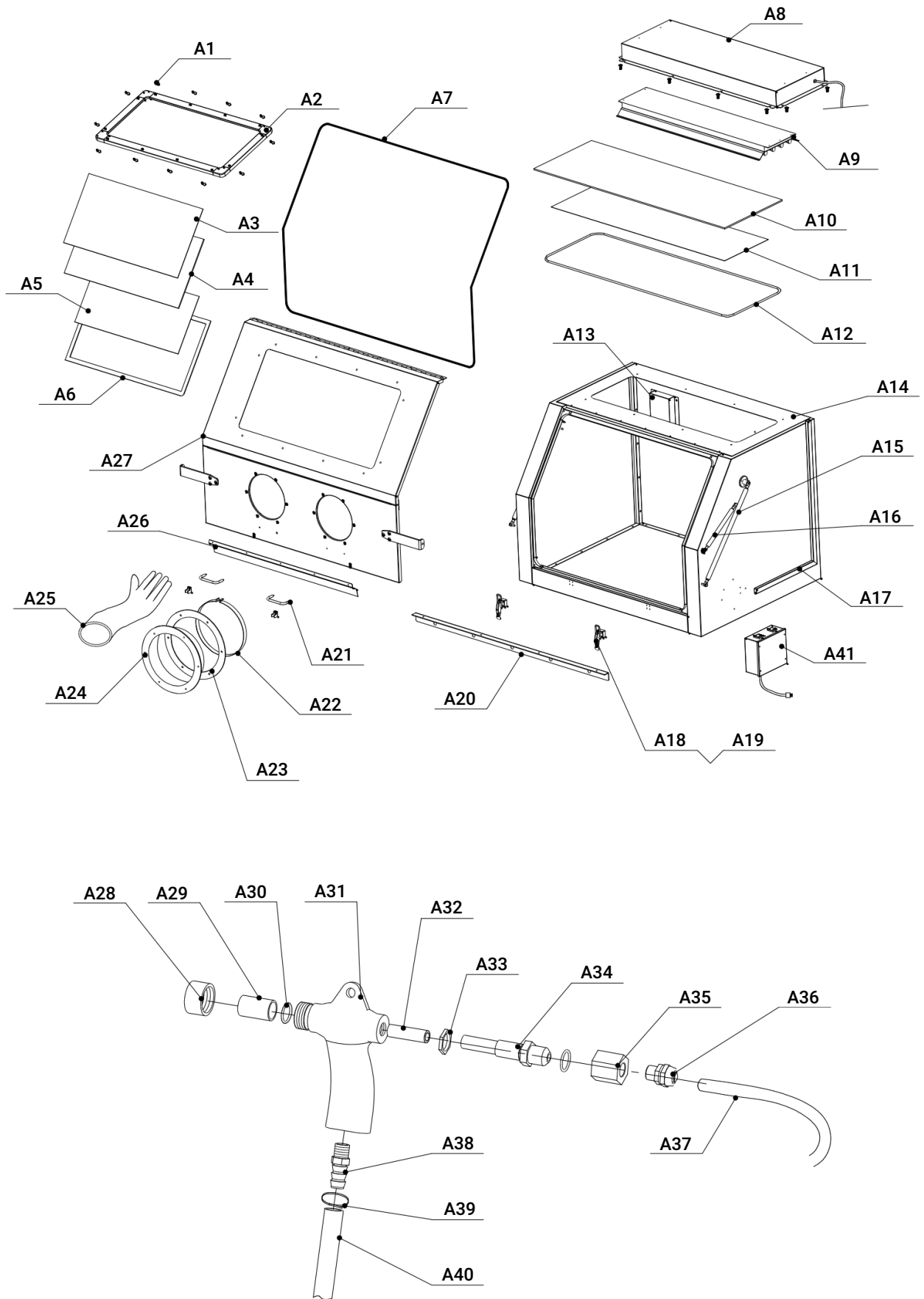
## Master Exploded View



## Master Parts List

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
1	Upper cabinet	1	13	Assembled latches	3
2	Round head cross screws M6x16 (matched washers)	22	14	Welded cover board for falling sand	1
3	Suction sand hose	1	15	Pneumatic device of foot pedal	1
4	Left grid	1	16	Leg reinforces 1	2
5	Right grid	1	17	Leg reinforces 2	2
6	Sealing tape	1	18	Legs A	3
7	Big funnel	1	19	Dust collector	1
8	Bracket	1	20	Air hose	1
9	Bolts M8x20	32	21	Vent cover	1
10	Leg B	1	22	Suction sand hose clamp with screw	1
11	Permanent seat of pneumatic device	1	23	Foot switch	1
12	Pressure regulating valve with gauge	1			

# Blast Cabinet Exploded View



## Blast Cabinet Parts List

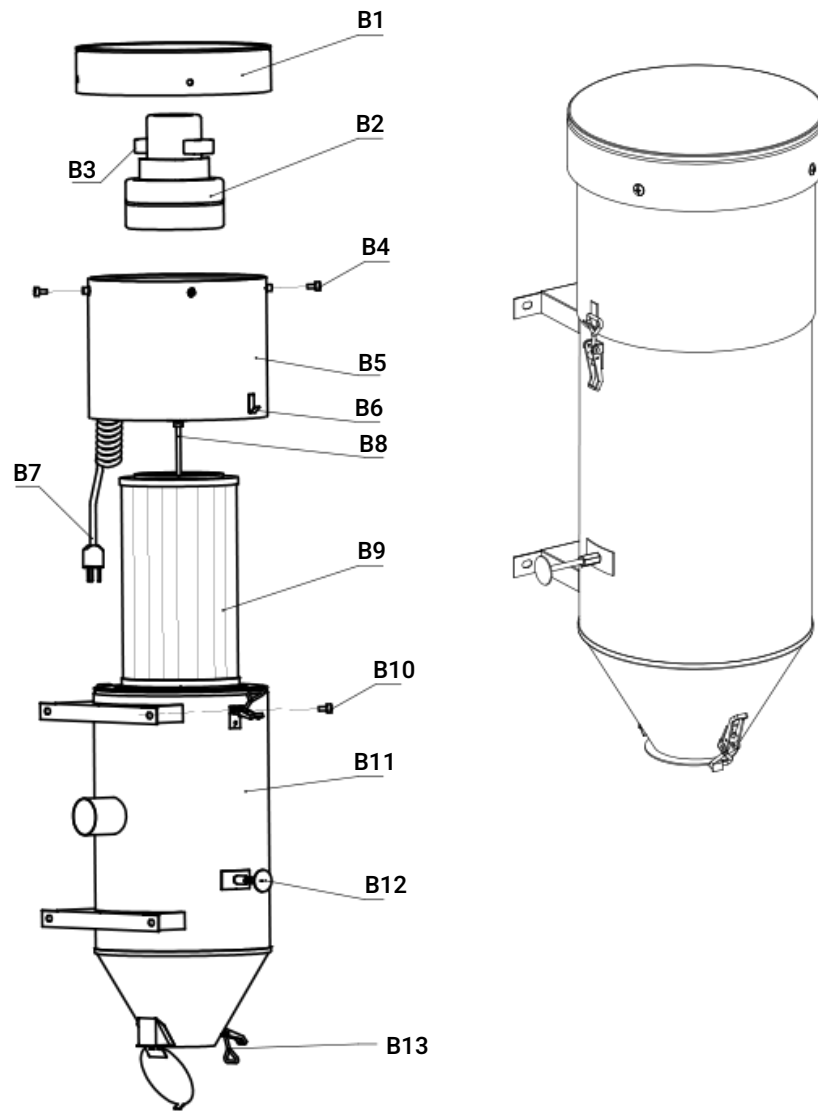
PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
A1	Round head screws M6*32	12	A22	Glove clamp	2
A2	Front window frame	1	A23	Inner glove ring	2
A3	Outer front window	1	A24	Outer glove ring	2
A4	Inner front window	1	A25	Glove set left and right	1
A5	Front window replacement film	1	A26	Hanger bracket	1
A6	Front window seal	1	A27	Front door	1
A7	Front door seal	1	A28	Nozzle cap	1
A8	Light cover	1	A29	Blast nozzle	1
A9	LED light assembly	1	A30	O-ring	1
A10	Light window	1	A31	Blast gun body	1
A11	Light window protect film	1	A32	Sleeve	1
A12	Light window seal	1	A33	Lock collar	1
A13	Vent cover	2	A34	Hose connector 1/4"	1
A14	Blast cabinet	1	A35	Quick connector 12-G 1/4"	1
A15	Front door support	2	A36	Adapter	1
A16	Gas spring	2	A37	Air hose ø8 (ID)	1
A17	Cord raceway	1	A38	Hose connector 3/8"	2
A18	Latch	2	A39	Hose clamp	1
A19	Latch bracket	2	A40	Sand hose ø1/2"	1
A20	Work hanger	1	A41	Electrical box assembly	1
A21	Front door handle	2			

## Dust Collector Assembly Parts List

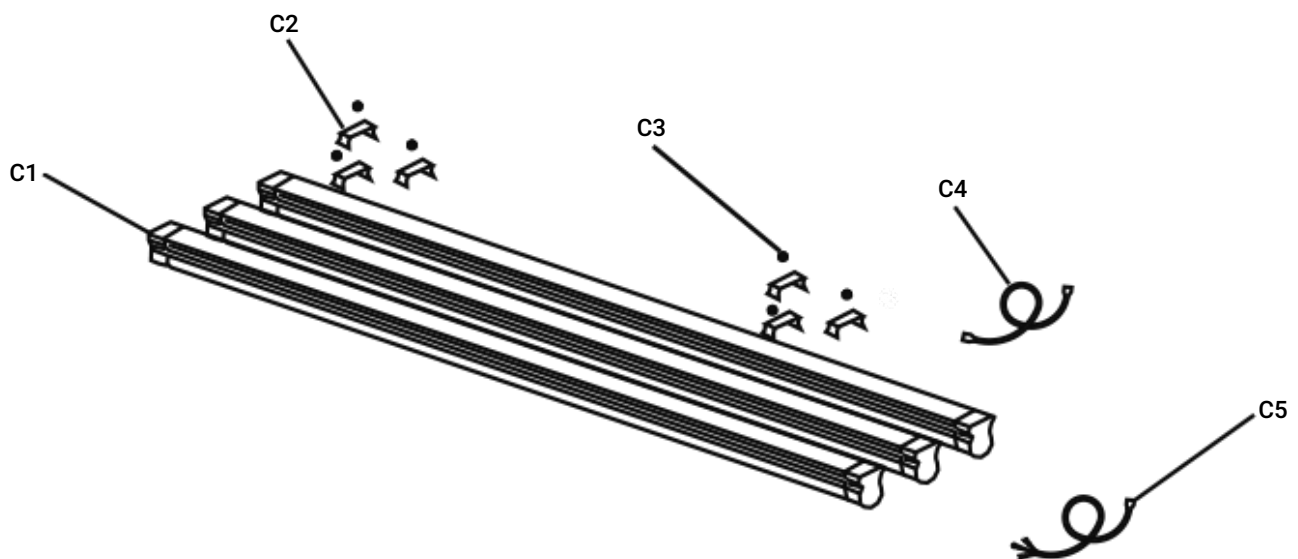
PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
B1	Motor cover	1	B8	Equal length double stud M6x310	1
B2	Motor 1.5HP 110V 1-Ph	1	B9	Cartridge filter 5 micron	1
B3	Carbon brush set 1-pair	1	B10	Round head screws M6*12	4
B4	Phlp screw M6x12	4	B11	Canister	1
B5	Filter housing	1	B12	Canister plunger assembly	1
B6	Housing latch assembly	2	B13	Door w/hinge & latch assy	1
B7	Power cord 14AWG 3C 4' 5-15	1			



## Dust Collector Assembly Exploded View



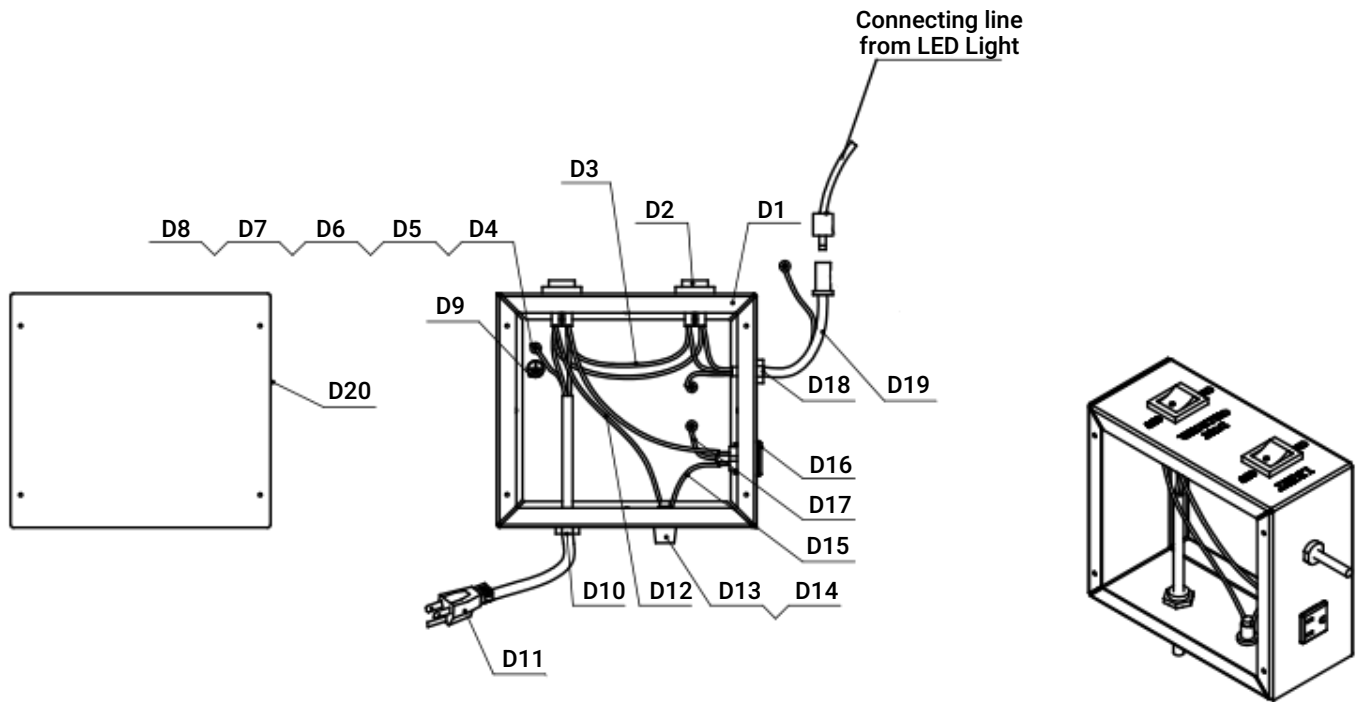
## LED Light Assembly Exploded View



## LED Light Assembly Parts List

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
C1	LED Light 18W 36"	3	C4	LED 3-pin cable	1
C2	Light bracket	6	C5	Main LED cord 20G 3W 8"	1
C3	Rivet 4 x 10mm blind	6			

## Electrical Box Assembly Exploded View



## Electrical Box Assembly Parts List

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
D1	Switch box	1	D11	Power cord 14AWG 3C 7'	1
D2	ON/OFF switch	2	D12	Heat shrink tube $\varnothing 3 \times 10$	2
D3	Electric connecting line 8"	4	D13	Fuse 15A $\varnothing 5 \times 20$ mm	1
D4	PHILLIPS pan head screw M4x8	4	D14	Fuse holder assembly	1
D5	Nut M4	4	D15	Electric connecting line 16AWG 4"	1
D6	Plain washer $\varnothing 4$	4	D16	Electrical receptacle 3-15	1
D7	Spring washer $\varnothing 4$	4	D17	Ground lead 16AWG 4"	1
D8	Grooved metal washer $\varnothing 4$	4	D18	Wire clip 6N-4	1
D9	Earthing mark	1	D19	Light cord 18AWG 3C 6'	1
D10	Wire clip 6N3-4	1	D20	Switch box cover	1