

# **Installation Instructions for 81500**

## **Vertical Sandblast Cabinet**

### **125 PSI**

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures.

Keep this manual and the receipt in a safe and dry place for future reference.

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please contact JEGS immediately.

#### **WARNING!**

Read this material before using this product. Failure to do so can result in serious injury. **SAVE THIS MANUAL. IMPORTANT SAFETY INSTRUCTIONS**

#### **INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS**

**WARNING** — When using tools, basic precautions should always be followed, including the following.

#### **General**

To reduce the risks of electric shock, fire, and injury to persons, read all the instructions before using tool.

#### **Work Area**

1. Keep the work area clean and well lit. Cluttered benches and dark areas increase the risks of electric shock, fire, and injury to persons.
2. Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. The tool is able to create sparks resulting in the ignition of the dust or fumes.
3. Keep bystanders, children, and visitors away while operating the tool. Distractions could result in the loss of control of the tool.

#### **Personal Safety**

- 1 **Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating the tool increases the risk of injury to persons.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair increases the risk of injury to persons as a result of being caught in moving parts.
3. **Avoid unintentional starting. Be sure the trigger is released before connecting to the air supply.** Do not connect the tool to the air supply with the switch on.
4. **Remove adjusting keys and wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool increases the risk of personal injury
5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
6. **Use safety equipment.** A dust mask, non-skid safety shoes and a hard hat must be used for the applicable conditions.
7. **Always wear eye protection.** Wear ANSI-approved safety goggles.
8. **Always wear hearing protection when using the tool.** Prolonged exposure to high intensity noise is able to cause hearing loss.

#### **Tool Use and Care**

1. **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against the body is unstable and is able to lead to loss of control.
- 2 **Do not force the tool.** Use the correct tool for the application. The correct tool will do the job better and safer at the rate for which the tool is designed.
3. **Do not use the tool if the switch does not turn the tool on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- 4 **Disconnect the tool from the air source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool unintentionally. Turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle and/or turn the switch to its off position before leaving the work area.



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5. **Store the tool when it is idle out of reach of children and other untrained persons.** A tool is dangerous in the hands of untrained users.
6. **Maintain the tool with care.**
7. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. There is a risk of bursting if the tool is damaged
8. **Use only accessories that are identified by the manufacturer for the specific tool model.** Use of an accessory not intended for use with the specific tool model, increases the risk of injury to persons.

### **Assembly Precautions**

1. Assemble only according to these instructions. Improper assembly can create hazards.
2. Wear ANSI-approved safety goggles and heavy-duty work gloves during assembly.
3. Keep assembly area clean and well lit.
4. Keep bystanders out of the area during assembly.
5. Do not assemble when tired or the influence of drugs or medication.

### **Silicosis and Aluminum Oxide Warnings**

**WARNING!** Abrasive blasting with sand containing crystalline silica can cause serious or fatal respiratory disease. Exposure to crystalline silica may cause silicosis (a serious lung disease); cancer and death. Exposure to aluminum oxide (a dust generated from material removing processes) can result in eye, skin and breathing irritation. Always use a NIOSH (National Institute for Occupational Safety and Health) approved respirator and safety goggles. Avoid skin exposure. Proper ventilation in the work area is required. Read and understand the 10 recommended measures below to reduce crystalline silica exposures in the workplace and prevent silicosis and silicosis related deaths.

#### **NIOSH recommends the following measures to reduce crystalline silica exposures in the workplace and prevent silicosis and silicosis-related deaths:**

1. Prohibit silica sand (or other substances containing more than 1% crystalline silica) as an abrasive blasting material and substitute less hazardous materials.
2. Conduct air monitoring to measure worker exposures.
3. Use containment methods such as blast-cleaning machines and cabinets to control hazard and protect adjacent workers from exposure.
4. Practice good personal hygiene to avoid unnecessary exposure to silica dust.
5. Wear washable or disposable protective clothes at the work site. Shower and change into clean clothes before leaving the work site to prevent contamination of cars, homes and other work areas.
6. Use respiratory protection when source controls cannot keep silica exposures below the NIOSH REL.
7. Provide medical examinations for all workers who may be exposed to crystalline silica.
8. Post signs to warn workers about the hazard and to inform them about required protective equipment.
9. Provide workers with training that includes information about health effects, work practices and protective equipment for crystalline silica.
10. Report all cases of silicosis to State health departments and to OSHA or the Mine Safety and Health Administration (MSHA).

### **Vibration Precautions**

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders, To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers increasing the risk of vibration-related injury.
3. Use tools with the lowest vibration when there is a choice.
4. Include vibration free periods each day of work.
5. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
6. To reduce vibration, maintain tool as explained in this manual. If abnormal vibration occurs, stop immediately.

**SAVE THESE INSTRUCTIONS!**



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## Functional Description

### Specifications

<b>Average Air Consumption</b>	9.5 CFM @ 90 PSI
<b>Maximum Working Pressure</b>	125 PSI
<b>Air Inlet</b>	1/4"-18 NPT
<b>Abrasive Capacity</b>	40 lb.
<b>Dust Port</b>	2-1/2" OD
<b>Viewing Window</b>	22-1/2" W x 10-1/2" H
<b>Working Area</b>	33-1/8" W x 22" D x 21-1/2" Rear H x 14-1/2" Front H
<b>Overall Dimensions</b>	38" W x 23" D x 54-3/8" Rear H x 46-5/8" Front H
<b>Included Nozzles</b>	0.18", 0.19", 0.22" & 0.27"

### Initial Tool Set Up / Assembly

Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

### Cabinet

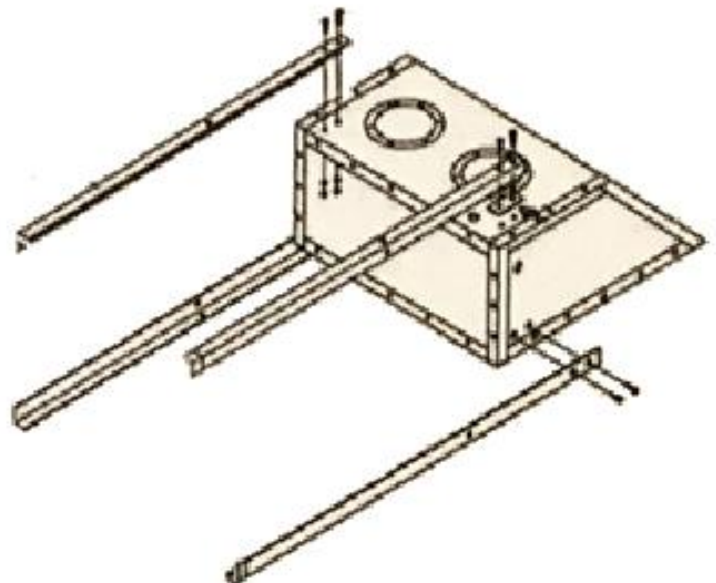
**Note:** Use a punch or nail to make holes in the Foam Gasket for bolt installation.

**Note:** Leave all connections loose until all bolts are in place. **Use the Flange Bolts and nuts to secure the sections in place.**

1. Attach Front Cabinet Plate and the Back Cabinet Plate to the Left Cabinet Plate overlapping the Front and Back flanges over the Left Cabinet Plate.
2. Attach the Small Lower Right Cabinet Plate to the inside of the Front and Back Cabinet Plates.
3. Attach the two V shaped Brackets to the inner Right corners at the top.
4. Attach the Door/Hinge to the right of the Back Cabinet Plate.
5. Attach the LED Light to the Back Cabinet Panel.
5. Attach the Top Plate and secure.
6. After all panels are in place fully tighten all connections.

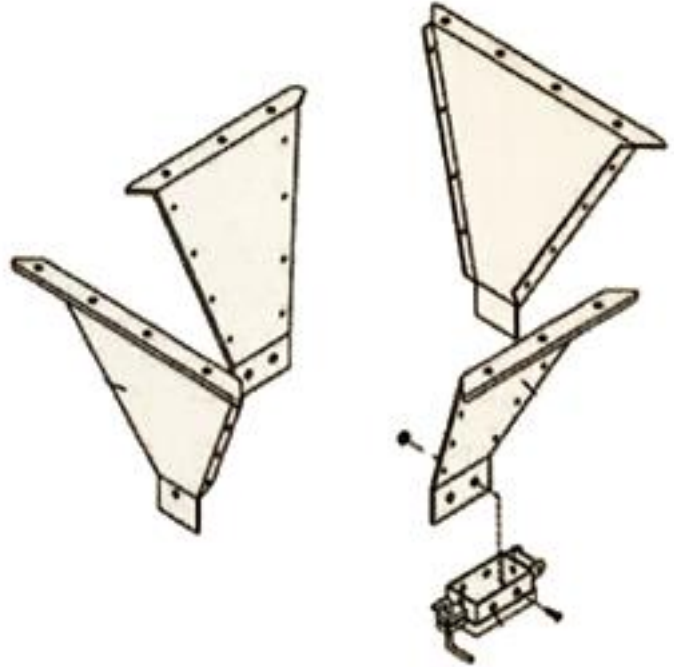
### Legs

Align the holes of the Legs and Cabinet holes as shown, and secure in place with the Flange Bolts and nuts.



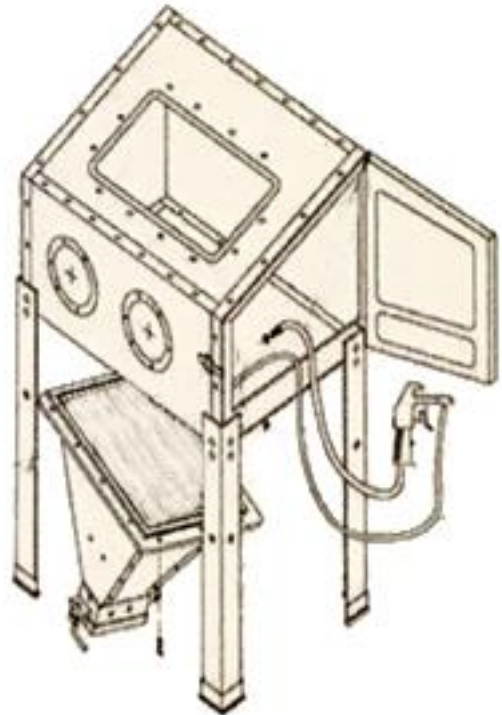
## **Funnel**

1. Place the Funnel Left and Right Plates on the inside flanges of the Funnel Front and Rear Plates and secure in place with the Flange Bolts and nuts.
2. Slide the Funnel Cover over the bottom of the assembly and secure in place with the Bolt and Nut.
3. Attach the Abrasive Suction Pipe to the inside of the Front Funnel Panel.



## **Connecting the Funnel, Hose and Cabinet**

1. Attach the assembled Funnel to the bottom of the Cabinet with Flange Bolts and Nuts.
2. Attach the Hose Inlet Fitting to the outside lower right front side of the Cabinet.
3. Place the Net inside.
4. Clamp the Abrasive Gun Air Inlet Hose to the inside Abrasive Suction Pipe and the Hose Inlet Fitting.



### Lower Shelf

1. Install the Lower Shelf with the Flange Bolts and nuts.

**Note:** This air tool may be shipped with a protective plug covering the air inlet. Remove this plug before set up.

### Air Supply

**WARNING! To prevent serious injury from explosion:**

Use only clean, dry, regulated, compressed air to power this tool. Do not use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for his tool.

For best results, we recommend a good 5 HP air compressor. A small nozzle/air jet combo is for use with a 3 HP air compressor.

1. Incorporate a filter, regulator with pressure gauge, dryer, in-line shutoff valve, and quick coupler for best service. **An in-line shutoff ball valve is an important safety device because it controls the air supply even if the air hose is ruptured. The shutoff valve should be a ball valve because it can be closed quickly.**

**Note:** An oiler system should not be used with this tool. The oil will mix with the material being propelled, causing tool to clog.

2. Attach an air hose to the compressor's air outlet. Connect the air hose to the air inlet of the tool. Other components, such as a coupler plug and quick coupler, will make operation more efficient, but are not required.

**WARNING! TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:**

**Do not install a female quick coupler on the tool.** Such a coupler contains an air valve that will allow the air tool to retain pressure and operate accidentally after the air supply is disconnected.

**Note:** Air flow, and therefore tool performance, can be hindered by undersized air supply components. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.

3. Turn the tool's throttle or switch to the off position.

4. Close the in-line shutoff valve between the compressor and the tool.

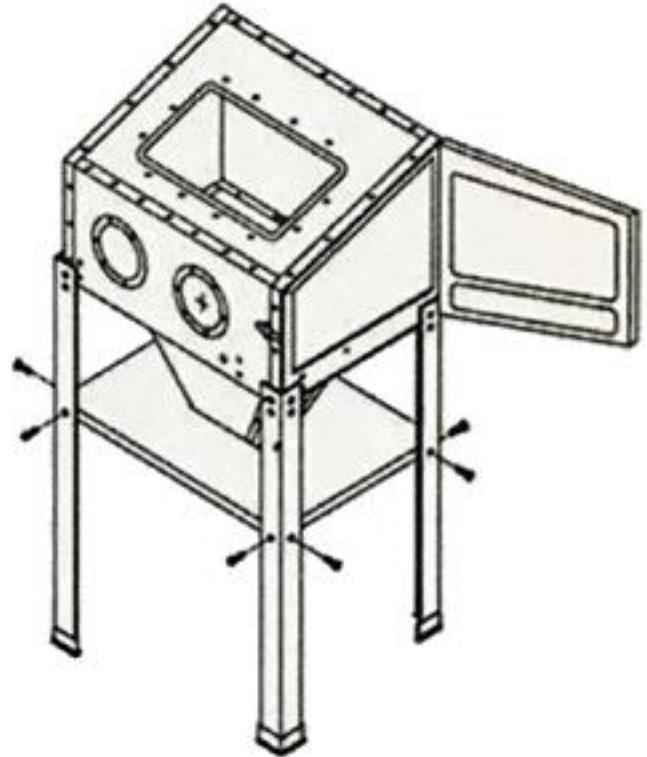
5. Turn on the air compressor according to the manufacturer's directions and allow it to build up pressure until it cycles off.

6. Adjust the air compressors output regulator so that the air output is enough to properly power the tool, but the output will not exceed the tool's maximum air pressure at any time. Adjust the pressure gradually, while checking the air output gauge to set the right pressure range.

7. Inspect the air connections for leaks. Repair any leaks found

8. If the tool will not be used at this time, turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle and/or turn the switch to its off position to prevent accidental operation.

**Note:** Residual air pressure should not be present after the tool is disconnected from the air supply. However, it is a good safety measure to attempt to discharge the tool in a safe fashion after disconnecting to ensure that the tool is disconnected and not powered.



### **Operating Instructions**

Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Inspect tool before use, looking for damaged, loose, and missing parts. If any problems are found, do not use tool until repaired.

### **Tool Set Up**

**WARNING!** TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and release the trigger before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY:

Do not adjust or tamper with any control or component in a way not specifically explained within this manual. Improper adjustment can result in tool failure or other serious hazards.

1. If not using a dust collection system, check that the Dust Port Cover is in place over the Dust Port opening on the left side of the Cabinet

2. Fill the bottom of the Cabinet with no more than 40 pounds of fine abrasive material. Fill the funnel area about 1/2 full. To prevent clogging, do not overfill. The included nozzles are not designed for use with steel shot.

**WARNING!** Do not use sand or abrasives that contain crystalline silica. Abrasive blasting with sand containing crystalline silica can cause serious or fatal respiratory disease.

### **Work Piece and Work Area Set Up**

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.

2. Route the air hose along a safe route to reach the work area without creating a tripping hazard or exposing the air hose to possible damage. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.

### **General Operating Instructions**

1. Connect the air compressor hose to the Hose Inlet Fitting. Your shop air hose enters the front opening of the cabinet and is connected to the air inlet of Power Gun. Bottom handle of gun has 1/4" pipe threads which will fit most air hose. Cabinet pickup tube leads to clear siphon hose which connects to gun head assembly.

2. Plug in and turn on the Cabinet light.

3. Pour glass beads or other abrasive into cabinet hopper through the side loading door. Do not over fill (1/2 full below work area screen is best). **Note:** use a fine grade abrasive to prevent clogging. Place the parts to be blasted in the center of the Cabinet.

4. Close the door and secure the latch.

5. Turn on the vacuum of the dust collection system (sold separately).

**Note:** When using a vacuum dust collector, clean the filter (sold separately) periodically to maintain adequate suction and effectiveness of the vacuum.

6. Set the compressor's air pressure between 90 and 125 PSI.

7. Place your hands into the Gloves inside the Cabinet. Make sure your fingers are in the proper positions and that you can easily move your hands and grip objects.

8. Hold the workpiece in one hand, positioning your fingers so that the glove is not in the way of the area you will be blasting. While working, reposition your grip as needed to ensure that all areas of the workpiece will be contacted with the blast material. Rust, paint and scale are quickly removed, leaving the original metal clean and intact. Abrasive drops to the bottom of cabinet for continual recycling each time power gun is activated. Abrasive can be re-used until it eventually breaks down or becomes dusty.



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**Note:** To discard worn abrasive simply place empty box under spring loaded trap door. Add remove abrasive and resume blasting.

Your shop vac connects to vacuum ferrule when necessary to remove the dust created in blasting. When using a shop vacuum, be sure to install a paper filter over the standard filter. Otherwise, abrasive could work its way into the vacuum motor, causing bearing failure.

9. Grip the Abrasive Gun with the other hand and point the nozzle at the bottom of the Cabinet.

10. Squeeze the trigger.

11. Check that the abrasive media is flowing through the suction hose with no leaks. Release the trigger and correct any leaks if needed. Otherwise begin blasting the workpiece.

**WARNING!** Do not aim the nozzle at your fingers or the Blast Gloves. If Gloves are punctured or you feel air blowing in the Glove, replace the immediately. Do not use a damaged or punctured Glove.

12. If the tool requires more force to accomplish the task, verify that the tool receives sufficient, unobstructed airflow (CFM) and increase the pressure (PSI) output of the regulator up to the maximum air pressure rating of this tool.

**CAUTION! TO PREVENT INJURY FROM TOOL OR ACCESSORY FAILURE: Do not exceed the tool's maximum air pressure rating.** If the tool still does not have sufficient force at maximum pressure and sufficient airflow, then a larger tool may be required

13. When finished, or to check the progress of your blasting:

- a. Release the trigger, lay the workpiece on the floor of the Cabinet and remove your hands from the gloves.
- b. Turn off the compressor and dust collection system (if equipped). Wait for the air inside the Cabinet to clear.
- c. Open the Cabinet door and remove the workpiece. If the workpiece needs more blasting, resume from step 4 of these operating instructions.

14. To prevent accidents, release the trigger, detach the air supply, then squeeze and release the trigger once more to safely discharge any residual air pressure in the tool. Empty the Funnel of blast media (see User Maintenance Instructions section). Clean external surfaces of the tool with a clean, dry cloth. Then store the tool indoors out of children's reach.

### User Maintenance Instructions

**Procedures not specifically explained in this manual must be performed only by a qualified technician.**

#### **WARNING!**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:**

Turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and release the trigger before performing any inspection, maintenance, or cleaning procedures.

**TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:**

Do not use damaged equipment. If abnormal noise, vibration, or leaking air occurs, have the problem corrected before further use.

### Cleaning, Maintenance, and, Lubrication

**Note:** These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the air-operated tool.

**1. Daily – Air Supply Maintenance:** Every day maintain the air supply according to the component manufactures' instructions. Drain the moisture filter regularly. Performing routine air supply maintenance will allow the tool to operate more safely and will also reduce wear on the tool.

2. After use, empty the Cabinet Funnel of blast media: **CAUTION!** Wear ANSI-approved Safety Goggles and NIOSH-approved dust mask/ respirator when emptying the abrasive media.

- a. Place a container (sold separately), which is large enough to hold all the blast media, under the mouth of the Funnel.
- b. Turn the handle on the Funnel Mouth to open the Funnel and allow all the abrasive media to flow into the container.
- c. Close the Funnel Mouth



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## Troubleshooting

Problem	Possible Causes	Likely Solutions
Decreased output	<ol style="list-style-type: none"> <li>1. Not enough air pressure and/ or air flow.</li> <li>2. Obstructed trigger.</li> <li>3. Blocked air inlet screen (if equipped).</li> <li>4. Air leaking from loose housing.</li> <li>5. Mechanism contaminated.</li> <li>6. Abrasive media level too low</li> <li>7. Lubrication being used</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for loose connections and make sure that air supply is providing enough air flow (CFM) at required pressure (PSI) to the tool's air inlet. <b>Do not exceed maximum air pressure.</b></li> <li>2. Clean around trigger to ensure free movement.</li> <li>3. Clean air inlet screen of buildup</li> <li>4. Make sure housing is properly assembled and tight.</li> <li>5. Have qualified technician clean and lubricate mechanism. Install in-line filter in air supply as stated in Setup: Air Supply.</li> <li>6. Add more abrasive media to the Funnel.</li> <li>7. An oiler system should not be used with this tool. The oil will mix with the material being propelled, causing tool to clog</li> </ol>
Housing heats during use	Worn parts.	Have qualified technician inspect internal mechanism and replace parts as needed.
Severe air leakage (Slight air leakage is normal, especially on older tools.)	<ol style="list-style-type: none"> <li>1. Cross-threaded housing components.</li> <li>2. Loose housing.</li> <li>3. Damaged valve or housing</li> <li>4. Dirty, worn or damaged valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for incorrect alignment and uneven gaps. If cross-threaded, disassemble and replace damaged parts before use.</li> <li>2. Tighten housing assembly. If housing cannot tighten properly internal parts may be misaligned</li> <li>3. Replace damaged components.</li> <li>4. Clean or replace valve assembly</li> </ol>
Abrasive media not effective.	Abrasive media has become worn down from use.	Replace abrasive media
Abrasive media does not fire from Abrasive Gun	<ol style="list-style-type: none"> <li>1. Lubrication being used</li> <li>2. Abrasive media size is too large for Nozzle.</li> <li>3. Abrasive media too moist and is sticking together</li> </ol>	<ol style="list-style-type: none"> <li>1. An oiler system should not be used with this tool. The oil will mix with the material being propelled, causing tool to clog.</li> <li>2. Replace Nozzle with a nozzle large enough to handle abrasive media size or use finer media.</li> <li>3. Replace media with dry, fresh media. Incorporate an air drier on the air supply.</li> </ol>
Light inside Cabinet does not work	<ol style="list-style-type: none"> <li>1. Bulb is burned out.</li> <li>2. Power cord is not plugged in.</li> <li>3. Switch is off</li> <li>4. Outlet is non-functioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace light</li> <li>2. Check that the power cord is properly plugged into an outlet.</li> <li>3. Turn the Light Power Switch on.</li> <li>4 Have electrical outlet serviced by a qualified electrician.</li> </ol>

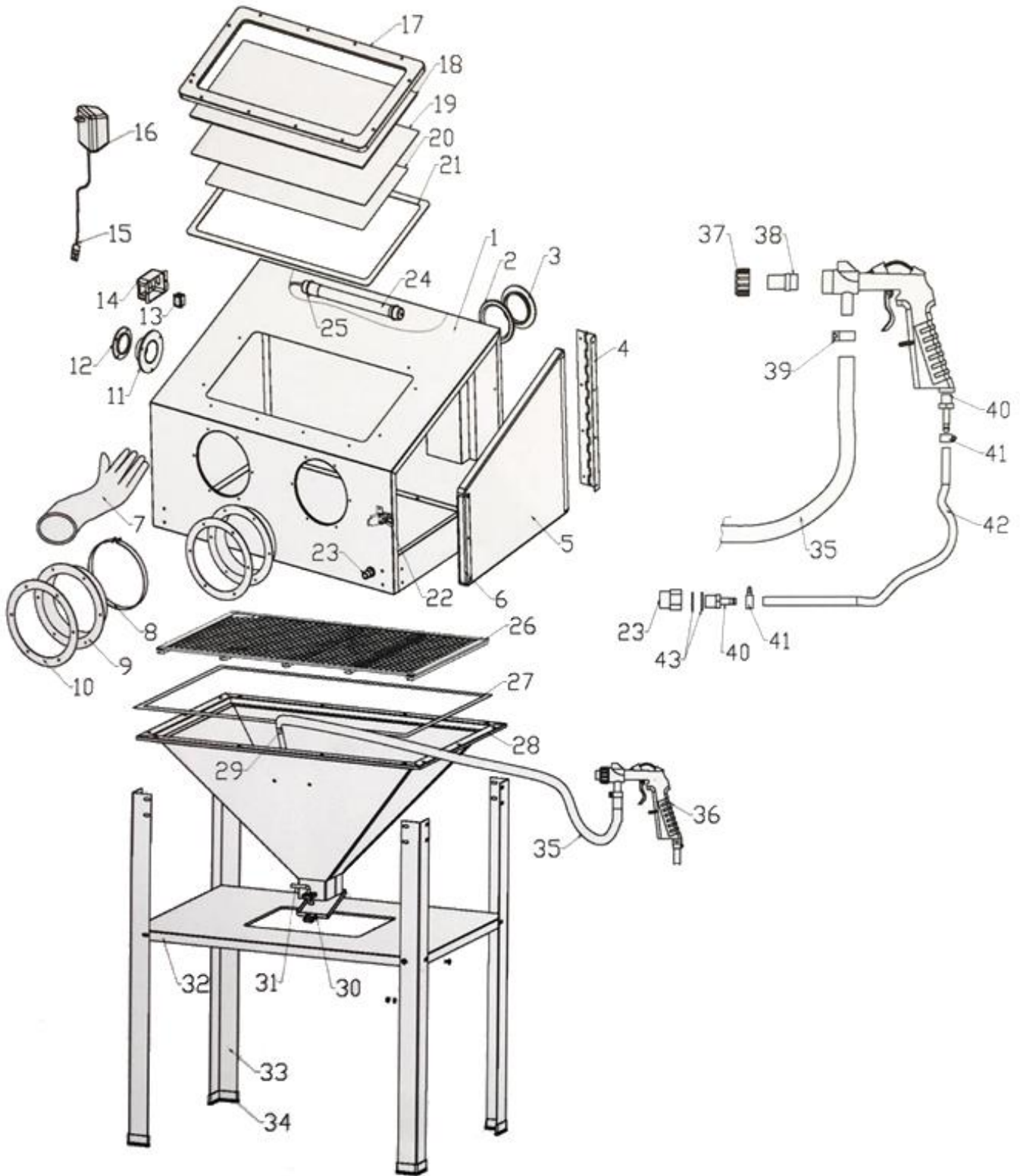
**\*WARNING! Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect air supply before service.**



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**Parts Diagram**



## Parts List

Part	Description	Qty.	Part	Description	Qty.
1	Cabinet	1	23	Air adapter nut	1
2	Guard ring of intake vent	1	24	Light low voltage	1
3	Cover behind intake vent	1	25	Light clamp	2
4	Hinge	1	26	Steel screen	1
5	Plastic door	1	27	Sealant cotton	1
6	Metal liner	1	28	Cabinet funnel	1
7	Gloves, pair	1	29	Abrasive suction pipe	1
8	Clamp for glove	2	30	Abrasive removal cover	1
9	Mounting ring glove	2	31	Cover lock	1
10	Rubber insert	2	32	Shelf	1
11	Suction flange	1	33	Legs	4
12	Cover of suction flange	1	34	Feet	4
13	Switch	1	35	Abrasive intake hose	1
14	Switch box low voltage	1	36	Abrasive gun	1
15	Plug low voltage	1	37	Nozzle adapter nut	1
16	Adaptor	1	38	Nozzle	4
17	Plastic frame	1	39	Clamp( d) 20)	1
18	Plexiglas	1	40	Air hose adapter	2
19	Glass	1	41	Clamp( 10- (b 13)	2
20	Protection film	1	42	Air hose	1
21	Sealant cotton	1	43	Flat washer	2
22	Knob	1			



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