

## Technical Notes

### AIR-658

Alpha® AIR-658 is a high performance, pneumatic polishing tool designed for continuous production use. It has a centrally water-fed distribution system that provides the best finishes possible. For years, Alpha Professional Tools® produced model number AIR-558, which was known for its high quality and durable construction. After reviewing the design and application of this tool, we ergonomically designed the AIR-658, as its successor, with many new features. Fabricators love its compact design and low weight. They also know that it is very durable under some of the most adverse conditions that a tool is required to operate in. Shop workers easily use this tool with little or no fatigue. With a speed of 3,500 RPM and convenient size, this polisher is the ideal polishing tool for the professional shop worker. Alpha® AIR-658 is a lightweight tool that accepts 3", 4" or 5" discs. It is a "plug and play" tool, which includes the side handle, pneumatic lubrication oil, and the hoses for air, water and exhaust along with the appropriate fittings. With sealed bearings to increase life and a rear exhaust system, Alpha® AIR-658 is designed to last a long time. Requirements for this tool are a cast iron 2 stage compressor, a large reservoir, 5 HP for each tool. Air consumption is 15 CFM and required air pressure is 85-95 PSI. With a weight of only 2.64 lbs, Alpha® AIR-658 is the best addition to any stone shop.

#### Sections:

- How to Use
- Frequently Asked Questions (FAQs)
- Helpful Hints
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Part No.	Description
AIR-658	Air Polisher
AIR-008	Lubrication Oil for Pneumatic Tools (8oz.)

Specifications:	Equipment Included:
Air Consumption.....15CFM (420 L/ Min)	• Air Lead Hose - 10' (3m)
Air Pressure..... 87 PSI (0.6Mpa (6 bar))	• Water Hose - 10' (3m)
Max. Speed (no load).....3,500 RPM	• Silencer/Exhaust Muffler
Weight.....2.64lbs/1.2kg	• Side Handle (reversible)
Spindle.....5/8"-11	• Lubrication Oil (1oz / 30cc sample bottle)
Air Inlet.....1/4" BSPP	• Faucet/Garden Hose Adapter
Water Inlet.....1/8" BSPP	• Wrench (22mm)

### How to Use

#### Preparation:

1. Install and test air compressor and airline in your shop.
2. Select appropriate couplings and connect the lead hose from the polisher to the airline from the compressor.
3. Install and test the waterline in your shop.
4. Bring a garden hose to the polishing area and connect to the hose bib fitting on the end of the black water hose.
5. Attach water hose and air supply hose to the polisher.
6. Slide the blue exhaust hose to the yellow end case of polisher, then tighten the stainless steel clamp to secure .
7. Attach the rubber splash guard to the polisher and cut to the desired shape and size (or leave it off all together) .
8. Test all machine functions before use.

#### How to Use:

1. Select the desired accessories for the application to be performed.
2. Attach the accessory onto the 5/8"-11 spindle of the polisher .
3. Connect water supply hose to a standard garden hose.
4. Open the water control valve to the desired volume.
5. Open the air supply valve gradually to the maximum level to perform the application.
6. Close the air supply valve to stop the polisher.
7. Close the water control valve.

Refer to the polishing tools owner's manual for the proper usage of this tool .

## Frequently Asked Questions (FAQs)

### What applications are the Alpha® AIR-658 recommended for?

The Alpha® AIR-658 is recommended for wet polishing, wet core drilling, profiling and grinding.

### What is the warranty for this Alpha® AIR-658?

Alpha Professional Tools® warrants the AIR-658 against defects in material and workmanship for a period of 90 days from the date of original retail. Upon purchase, customers are asked to send in the registration cards; however, Alpha® still requires a proof of purchase for warranty repairs. Warranty repair is limited to the repair or replacement of parts without charge of problems caused by defects in material and/or workmanship. The warranty does not apply to tool accessories. The warranty for repairs is 30 days on parts and labor.

### Does the Alpha® AIR-658 have a maintenance program?

Alpha Professional Tools® does not offer a formal maintenance program; however, we offer Maintenance Cards with recommended tasks for keeping the tool in peak operating condition.

Alpha® recommends periodic replacement of the Silencer when dirty to keep your tool running in good working order. Failure to change the silencer will cause the tool to lose power if the silencer is clogged. Removing the silencer or running with a blown-out silencer will cause the tool to exceed the recommended revolutions and OSHA standards set for the tool. This action will cause premature failure of the tool, which could void the warranty. If an unusual noise is heard or detected during the operation of the AIR-658, it is recommended that the tool be sent into our service department for preventative maintenance.

### How can I get the parts list and schematic for the Alpha® AIR-658?

There are several ways to obtain information such as this from Alpha Professional Tools®. Information is available on our website at [www.alpha-tools.com](http://www.alpha-tools.com) or by contacting our customer service or tool repair departments at 800-648-7229.

### What shall I do if my Alpha® AIR-658 breaks down and I need to complete the job immediately?

This largely depends upon the time frame involved. The first step would be to check and replace the carbon brushes. Alpha Professional Tools® has two warranty service centers and can turn your tool repair around in a 3-5 day period. Please contact Alpha® for information or send tool to your nearest regional repair center. For warranty repairs please include a copy of the sales receipt.

Please visit our website for the nearest repair center - <http://www.alpha-tools.com/Contact.aspx>.

For additional information or alternative solutions, please contact our tool repair department.

### Can I use motor oil to lubricate the Alpha® AIR-658? How about WD40?

No. You can not use motor oil for lubrication. The Alpha® AIR-658 requires special lightweight pneumatic oil for maintenance. These types of lubricants can cause the vanes to stick in the rotor or prematurely clog the silencer. We recommend Alpha® Lubrication Oil for Pneumatic Tools (part no. AIR-008).

### How much horsepower should my compressor have to operate one air polisher?

The airflow needs to run at 16CFM in order to run one air polisher. Therefore you will need a minimum of 5HP per tool to efficiently operate the AIR-658. A 5HP two-stage compressor is highly recommended as the minimum requirement for one AIR-658. If a second polisher is added or planned for future growth, the air flow requirement increases 16CFM per tool and the horsepower increases 5HP per tool.

### Can I use an automatic oil feeder in the air supply line?

No. You should not use an automatic oil feeder. The AIR-658 does not require much oil so a few drops a day at the end of operations should be enough for maintenance. Too much lubrication will cause the silencer/muffler to clog, which may seize the AIR-658. Alpha recommends inserting 2 -3 drops of Pneumatic Oil in the air line and running the AIR-658 for about 1minute on a daily basis at the end of your work shift.

### Can I use my AIR-658 as a wet cutting tool with a diamond blade?

No. The AIR-658 has only 3,500RPM at no load. This is not enough RPM for diamond blade cutting applications. It is also unsafe to use as a cutting tool. Do not attempt to cut with the AIR-658.

### Can I use my AIR-658 for dry polishing applications?

Yes. The AIR-658 can be used for dry polishing applications. Use only dry polishing abrasives such as PVA Quick Change, Sandpaper or other dry polishing pads that can be used under 4000RPM.

### What is the RPM of the Alpha® AIR-658?

The Alpha® AIR-658 has a no load RPM of 3,400. The RPM of a pneumatic tool will drop to the optimum polishing speed of 2,000 to 2,500RPM under load.

**What is the largest diameter accessory that the AIR-658 will accept?**

The AIR-658 will accept accessories up to 5". Do not attempt to use accessories larger than 5" for safety reasons. In addition, large accessories require more torque than the AIR-658 can provide. Operating the AIR-658 under these conditions will result in overheating failure due to operator abuse.

**Can I use the AIR-658 for drilling applications such as faucet holes?**

Yes. The AIR-658 can be used with Alpha® Core Bits to drill faucet mounting holes. We recommend that you use the provided C-Handle attachment and a template.

**How many gallons of water does the Alpha® AIR-658 use per minute?**

The AIR-658 has a throughput of 0.5 gallons of water per minute if the needle valve is fully opened.

**What size air nipples are recommended for use on the AIR-658?**

The thread on the end case for the air on the AIR-658 is metric or 1/4" BSPP; this is a parallel pipe thread that seals on the flat seat of the fitting.

## Helpful Hints

- Drain compressed air and water daily from air holding tank at the end of work shift to avoid any problems with rust.
- Avoid dragging the air polisher on top of the surface of the stone. Aluminum body may leave an aluminum mark on the surface.
- Inspect the silencer on a daily basis and if needed, replace it.  
Silencer (Part No.658-52) should be replaced if clogged or worn.  
If you encounter any other technical problem or concerns related to this tool, please call the Alpha® tool repair department at 800-648-7229.
- The C-Shape handle attached to the polisher is highly recommended for more stability of the polisher during certain applications such as surface polishing, core drilling and profiling.
- Use only Alpha® lubrication oil for pneumatic tools (Part No. AIR-008).

## Reference

For more product information, visit us on the web at [www.alpha-tools.com](http://www.alpha-tools.com).