



# RANDOM ORBITAL POLISHER INSTRUCTION MANUAL

## 3 in (76 mm) 11,000 RPM

### Important Safety Information

Please read, understand and follow all safety information contained in these instructions prior to the use of this tool. Retain these instructions for future reference.

### Intended Use

This pneumatic tool is intended for use in industrial locations, and used only by skilled, trained professionals in accordance with the instructions in this manual. This pneumatic tool is designed to be used with the disc pad and appropriate 3M foam buffing pads and with appropriate buffing or polishing compounds or appropriate 3M abrasive discs for sanding/buffing metals, wood, stone, plastics and other materials. It should only be used for such sanding/buffing applications and within marked capacity and ratings. Only accessories specifically recommended by 3M should be used with this tool. Use in any other manner or with other accessories could lead to unsafe operating conditions.

Do not operate tool in water or in an excessively wet application.

Do not use disc pads that have a Max RPM less than the tool Max RPM rating.

### Explanation of Signal Word Consequences

	<b>WARNING:</b>	Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury and/or property damage.
	<b>CAUTION:</b>	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and/or property damage.

Read the Material Safety Data Sheets (MSDS) before using any materials.

Contact the suppliers of the workpiece materials and abrasive materials for copies of the MSDS if one is not readily available.

**WARNING**

Exposure to **DUST** generated from workpiece and/or abrasive materials can result in lung damage and/or other physical injury.

Use dust capture or local exhaust as stated in the MSDS. Wear government-approved respiratory protection and eye and skin protection.

Failure to follow this warning can result in serious lung damage and/or physical injury.



### WARNING

To reduce the risks associated with impact from abrasive product, disc pad, or tool breakup, sharp edges, hazardous pressure, rupture, vibration and noise:

- Read, understand and follow the safety information contained in these instructions prior to the use of this tool. Retain these instructions for future reference.
- Only personnel who are properly trained should be allowed to service this tool.
- Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.
- Operators and other personnel must always wear protection for eyes, ears, and respiratory protection when in the work area or while operating this product. Follow your employer's safety policy for PPE's and/or ANSI Z87.1 or local/national standards for eyewear and other personal protective equipment requirements.
- Wear protective apparel, taking into consideration the type of work being done.
- Never exceed marked maximum input pressure (90psi / .62Mpa / 6.2Bars).
- Proper eye protection must be worn at all times.
- Tool shall not be operated in the presence of bystanders.
- If you notice any abnormal noise or vibration when operating the tool, immediately discontinue its use and inspect for worn or damaged components. Correct or replace the suspect component. If abnormal noise or vibration still exists, return the tool to 3M for repair or replacement. Refer to warranty instructions.
- Never operate this tool without all safety features in place and in proper working order.
- Never over-ride or disable the safety features of the start-stop control such that it is in the on position.
- Make sure the tool is disconnected from its air source before servicing, inspecting, maintaining, cleaning, and before changing abrasive product.
- Prior to use, inspect abrasive product and accessories for possible damage. If damaged, replace with new abrasive product and accessories available from 3M.
- Only use accessories supplied or recommended by 3M.
- Never allow this tool to be used by children or other untrained people.
- Do not leave an unattended tool connected to air source.

**To reduce the risks associated with vibration:**

- If any physical hand/wrist discomfort is experienced, work should be stopped promptly to seek medical attention. Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

**To reduce the risks associated with loud noise:**

- Always wear hearing protection while operating this tool. Follow your employer's safety policy or local/national standards for personal protective equipment requirements.

**To reduce the risks associated with fire or explosion:**

- Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. The abrasives are able to create sparks when working material, resulting in the ignition of the flammable dust or fumes.

**To reduce the risks associated with hazardous dust ingestion or eye/skin exposure:**

- Use appropriate respiratory and skin protection, or local exhaust as stated in the MSDS of the material being worked on.

**To reduce the risks associated with hazardous voltage:**

- Do not allow this tool to come into contact with electrical power sources as the tool is not insulated against electrical shock.



**To reduce the risks associated with skin abrasion, burns, cuts, or entrapment:**

- Keep hands, hair, and clothing away from the rotating part of the tool.
- Wear suitable protective gloves while operating tool.
- Do not touch the rotating parts during operation for any reason.
- Do not force tool or use excessive force when using tool.

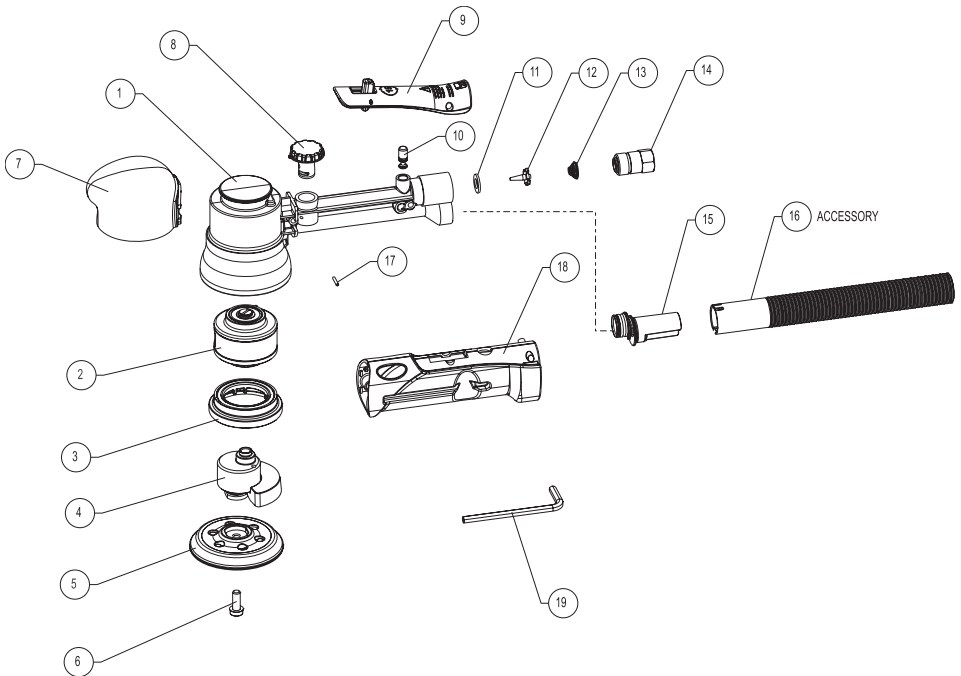
**To reduce the risks associated with whipping or hazardous pressure-rupture:**

- Ensure supply hose is oil resistant and is properly rated for required working pressure.
- Do not use tools with loose or damaged air hoses or fittings.
- Be aware that incorrectly installed hoses and fittings might unexpectedly come loose at any time and create a whipping/impact hazard.

**To reduce the risks associated with fly off of abrasive product or parts:**

- Use care in attaching buff pad and disc pad; following the instructions to ensure that they are securely attached to the tool before use.
- Never free spin the tool or otherwise allow it to be started unintentionally.
- Never point this product in the direction of yourself or another person, or start tool unintentionally.
- Never over-tighten accessory fasteners.

Parts Page



## Parts List

ITEM	DESCRIPTION	QTY
1	Motor Body	1
2	Pneumatic Motor Assembly	1
3	Locking Ring	1
4	Eccentric Set	1
5	Pad 75 mm	1
6	Disc Pad Bolt	1
7	Rubber Cover	1
8	Speed Regulation Knob	1
9	On/Off lever with Safety Lock	1
10	On/Off Spindle	1
11	Valve Gasket	1
12	Pneumatic Valve	1
13	Valve Spring	1
14	Inlet Air fitting	1
15	Silencer	1
16	Exhaust Conveyor	OPT
17	Pin UNI ISO 8734	1
18	Side Covers	1
19	Hex Wrench	1

**NOTE:** In anticipated applications, tool components are not intended to be replaced.

# Product Configuration/Specifications: 11,000 RPM Random Orbital Polisher

Model Number	Pad Size mm (in.)	Replacement Disc Pad Part Number	Spindle Thread	Product Net Wt kg (lb)	Length mm (in.)	*Noise Level dBA Pressure (Power)	**Vibration Level m/s <sup>2</sup> (ft/s <sup>2</sup> )	**Uncertainty K m/s <sup>2</sup>
28363	76 (3)	07652	5/16 in.-24 T	0.81 (1.79)	132 (5.20)	77 (82)	8.85 (29.0)	1.5

\* Declared noise levels; measurements carried out in accordance with standard EN ISO 11203:1997 and EN ISO 3744:1997.

\*\* Declared vibration levels in accordance with EN12096; measurements carried out in accordance with standard EN ISO 8662-8:1997.

**IMPORTANT NOTE:** The noise and vibration values stated in the table are from laboratory testing in conformity with stated codes and standards and are not sufficient risk evaluation for all exposure scenarios. The actual exposure values and amount of risk or harm experienced to an individual is unique to each situation and depends upon the surrounding environment, the way in which the individual works, the particular material being worked, work station design, as well as upon the exposure time and the physical condition of the user. 3M™ cannot be held responsible for the consequences of using declared values instead of actual exposure values for any individual risk assessment.

## Operating / Maintenance Instructions

### PRIOR TO THE OPERATION

The tool is intended to be operated as a hand held tool. It is always recommended that while using the tool, operators stand on a solid floor, in a secure position with a firm grip and footing. Be aware that the tool can develop a torque reaction. See the section "SAFETY PRECAUTIONS".

Use a clean lubricated air supply that will give a measured air pressure at the tool of 6.2 bar (90 psig) when the tool is running with the lever fully depressed. It is recommended to use an approved 10 mm (3/8 in) x 8 m (25 ft) maximum length airline. Connect the tool to the air supply as shown in Figure 1. Do not connect the tool to the airline system without an easily accessible air shut off valve. It is strongly recommended that an air filter, regulator and lubricator (FRL) be used as shown in Figure 1 as this will supply clean, lubricated air at the correct pressure to the tool. In any case appropriate air pressure regulators shall be used at all times while operating this tool where the supply pressure exceeds the marked maximum of the tool. Details of such equipment can be obtained for your tool distributor. If such equipment is not used, the tool should be manually lubricated. To manually lubricate the tool, disconnect the airline and put 2 to 3 drops of suitable pneumatic motor lubricating oil such as 3M™ Air Tool Lubricant PN 20451, Fuji Kosan FK-20, Mobil ALMO 525 into the hose end (inlet) of the tool. Reconnect tool to the air supply and run tool slowly for a few seconds to allow air to circulate the oil. If the tool is used frequently, lubricate it on a daily basis or lubricate it if the tool starts to slow or lose power. It is recommended that the air pressure at the tool be 6.2 bar (90 psig) while the tool is running so the maximum RPM is not exceeded. The tool can be run at lower pressures but should never be run higher than 6.2 bar (90 psig). If run at lower pressure the performance of the tool is reduced.

Recommended Airline Size - Minimum		Recommended Maximum Hose Length		Air Pressure	
10 mm	3/8 in	8 meters	25 feet	Maximum Working Pressure	6.2 bar 90 psig
				Recommended Minimum	NA NA

## Safety Precautions

1. Read all instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules.
2. The tool RPM should be checked on a regular basis to ensure proper operating speed.
3. Make sure the tool is disconnected from the air supply. Select a suitable buff pad and secure it to the disc pad. Be careful to center the buff pad on the disc pad.
4. Always wear required safety equipment when using this tool.
5. When sanding/buffing always start the tool on the workpiece. This will prevent gouging due to excess speed of the buff pad. Stop air flow to the tool as it is removed from the workpiece.
6. Always remove the air supply to the polisher before fitting, adjusting or removing the buff pad or disc pad.
7. Always adopt a firm footing and grip and be aware of torque reaction developed by the polisher.
8. Use only 3M approved spare parts.
9. Always ensure the material being sanded is firmly fixed to avoid movement.
10. Check hose and fittings regularly for wear. Do not carry the tool by its hose; always be careful to prevent the tool from being started when carrying the tool with the air supply connected.
11. Dust can be highly combustible.
12. If tool is serviced or rebuilt check to ensure that the maximum tool RPM is not exceeded and that there is no excessive tool vibration.
13. Do not exceed maximum recommended air pressure. Use safety equipment as recommended.
14. Prior to installing any sanding or polishing accessory, always check that its marked maximum operating speed is equal or higher than the rated speed of this tool.
15. The tool is not electrically insulated. Do not use where there is a possibility of contact with live electricity, gas pipes, and/or water pipes.
16. This tool is not protected against hazards inherent in grinding and cutting operations, and no such accessories should ever be attached.
17. Take care to avoid entanglement with the moving parts of the tool with clothing, ties, hair, cleaning rags or loose hanging objects. If entangled, stop air supply immediately to avoid contact with moving tool parts.
18. Keep hands clear of the spinning pad during use.
19. If the tool appears to malfunction, remove from use immediately and arrange for service and repair.
20. Immediately release the start handle in the event of any disruption of pressure; do not attempt to re-start until the disruption has been corrected.
21. When tool is not in use, store in a clean, dry environment free of debris.
22. Recycle or dispose of tool according to Local, State, and Federal regulations.

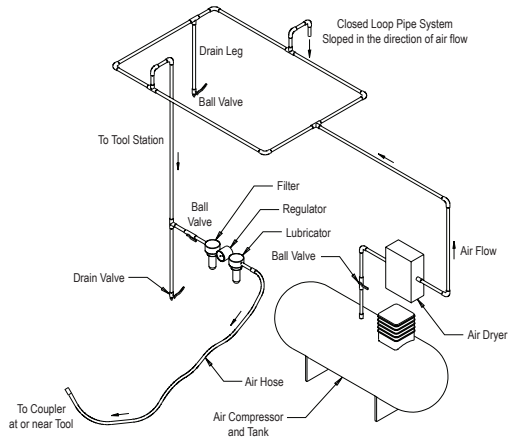


Figure 1

## Removing and Mounting Disc and Buffing Pad to Random Orbital Polisher

### Buff pad

1. Disconnect air line from polisher.
2. Peel the old buff pad from the disc pad, by lifting an edge and pulling firmly upward.
3. Inspect the Hook material on the disc pad for damage or debris clogging the hooks. Clean any debris or buffing compound from the disc pad surface.
4. Attach a new buff pad to the disc pad, being careful to center it as well as possible.
5. Apply hand pressure to engage the hooks and loops to firmly seat the buff pad.

### Disc pad

1. Disconnect air line from polisher.
2. Remove the hex wrench from the handle and use it to loosen the disc pad bolt.
3. After the old disc pad has been removed from the polisher, inspect the threaded hold in the spindle to ensure that the threads are free of debris and undamaged.
4. Secure the new disc pad by tightening the disc pad bolt using the hex wrench.
5. Replace the hex wrench into the handle seat.

## WARNING!

An inadequately tightened disc pad bolt could cause the threaded spindle to break causing damage to the tool and work piece and possible injury to the operator or bystanders.

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