



## Disc Sander - INSTRUCTIONS MANUAL

**2 in (50 mm) 12,000 MAX RPM 0.33 HP, 2 in (50 mm) 20,000 MAX RPM 0.33 HP,  
2 in (50 mm) 12,000 MAX RPM 0.5 HP, 2 in (50 mm) 20,000 MAX RPM 0.5 HP,  
3 in (76 mm) 15,000 MAX RPM 1 HP**

### 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 sander adaptor, disc pad, and appropriate abrasive for sanding metals, wood, stone, plastics and other materials. It should only be used within its 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.

Tools shall be inspected periodically to verify that ratings, markings, and labels are legible. Contact 3M Company to obtain replacement labels.

#### Summary of device labels containing safety information

Marking	Description
	<b>⚠ WARNING:</b> READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING TOOL.
	<b>⚠ WARNING:</b> ALWAYS WEAR APPROVED EYE PROTECTION
	<b>⚠ WARNING:</b> ALWAYS WEAR APPROVED HEARING PROTECTION
	<b>⚠ WARNING:</b> AVOID PROLONGED EXPOSURE TO VIBRATION
	Direction of Rotation
Prolonged vibration may cause injury	Vibration Safety Note
20,000 r/min, 15,000 r/min, 12,000 r/min	Maximum Rotational Speed
90 PSIG / 6.2 BAR MAX	Maximum Air Pressure
Use accessories rated at tool speed or higher	Accessories Speed Warning Note

### Explanation of Signal Word Consequences

**⚠ WARNING:** Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury and/or property damage.

**⚠ CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and/or property damage.

**Read the Safety Data Sheets (SDS) before using any materials.**



Contact the suppliers of the workpiece materials and abrasive materials for copies of the SDS 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 SDS. 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.



Original Instructions

## 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 tool 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 product, 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, disc pad, and other accessories for possible damage. If damaged, replace with new abrasive product and accessories available from 3M.
- Only use abrasive disc pads and other accessories supplied by 3M.
- Use only with mounting hardware recommended by 3M; check with 3M for mounting hardware requirements.
- Always ensure that shaft diameters match internal diameters of the collet inserts.
- Maximum operating speed of abrasive products or accessories must be reduced whenever the exposed length of shaft (overhang) is longer than corresponding 3M approved products.
- Always ensure that a minimum of 10mm shaft gripping length is observed.
- Never install and use router bits or cutting-off wheels in a die grinder tool (which is unguarded).
- Use only with abrasive products not requiring guards according to local, state and federal regulations.
- Never allow this tool to be used by children or other untrained people.
- Do not leave an unattended tool connected to air source.
- Air under pressure can cause severe injury.
- Never direct air at yourself or anyone else.

### **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.
- Hold the tool with a light but safe grip, knowing that the grip must be sufficient to counter reaction forces but that a tight grip will increase the amount of vibration transferred to the operator.

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

- Always wear protection for eyes, ears, and respiratory protection 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.
- Ensure the muffler material is in place.
- Dampen work pieces to reduce noise and prevent ringing.

### **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.
- Refer to MSDS of material being worked as to potential for creating fire or explosion hazard.

### **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.
- Direct exhaust so as to minimize disturbance of existing dust in a dust-filled environment.

### **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.

## CAUTION

### **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:**

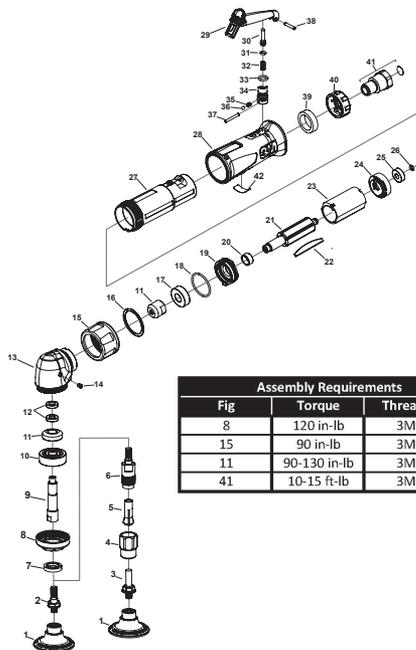
- Ensure supply hose is oil resistant and is properly rated for required working pressure.
- Do not use tools with loose or damaged air hoses or fittings.
- Be aware that incorrectly installed hoses and fittings might unexpectedly come loose at any time and create a whipping/impact hazard.
- Whenever universal twist couplings (claw couplings) are used, lock-pins shall be installed and whip check safety cables shall be used to safeguard against possible hose-to-tool and hose-to-hose connection failure.

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

- Use care in attaching abrasive product, disc pad, and mounting hardware; following the instructions to ensure that they are securely attached to the tool before use or free-spinning.
- 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 FOR PN 28341 & 28342, 20,000 MAX RPM and PN 28328 & 28343, 12,000 MAX RPM, 2 in, 0.33 HP Disc Sander (Series C)

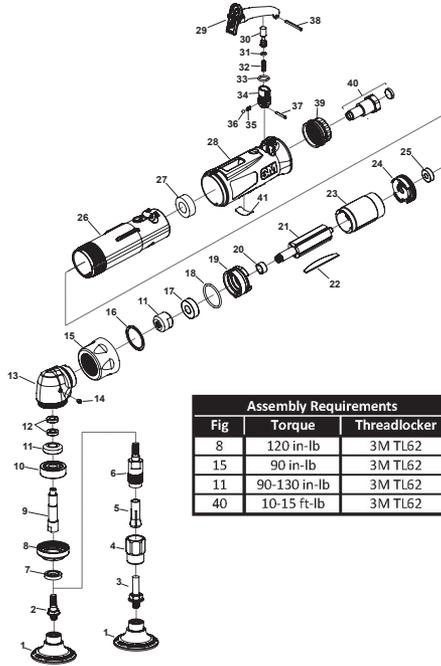


Assembly Requirements		
Fig	Torque	Threadlocker
8	120 in-lb	3M TL62
15	90 in-lb	3M TL62
11	90-130 in-lb	3M TL62
41	10-15 ft-lb	3M TL62

<b>Fig.</b>	<b>3M PN</b>	<b>Description</b>	<b>Fig.</b>	<b>3M PN</b>	<b>Description</b>
1	45096	Roloc™ Pad (2")	24	30414	Rear Endplate
2	06582	Roloc™ Adapter	25	06612	Ball Bearing
3	45102	Roloc™ Shank (1/4")	26	30403	O-Ring
4	06516	Collet Nut	27	30409	Housing
5	06528	Collet (1/4") - std w/28341 & 28328	28	87120	3M™ Jacket (0.3 HP)
	06529	Collet (1/8") - available separately	29	28841	3M™ Lever Assembly (0.3 HP)
	06530	Collet (3/16") - available separately	30	30406	Valve Pin
	06540	Collet (3 mm) - available separately	31	30405	O-Ring
	06541	Collet (6 mm) - std w/28342 & 28343	32	06614	Spring
6	06583	Collet Body	33	30401	O-Ring
7	87133	Grease Seal Kit	34	30407	Regulator
8	87112	Bearing Retainer	35	06613	Spring
9	87119	Output Shaft	36	06622	Steel Ball
10	87122	Lower Spindle Bearing (1.25 x 0.375 x 0.375)	37	30394	Regulator Pin
			38	30395	Pin
11	87135	12KRPM Gear Set	39	30410	Muffler Material
	87134	20KRPM Gear Set	40	30382	Exhaust Deflector
12	55114	Upper Spindle Bearing Set (0.500 x 0.25 x 0.125)	41	30398	Inlet Bushing
13	87111	Angle Head	42	87126	Safety Sticker
14	06523	Grease Fitting (1/8")	Not Shown	87125	Wrench (3/8 x 11/16)
15	87114	Clamp Nut	Not Shown	06586	Wrench (7/16 x 11/16)
16	06619	Retaining Ring	Not Shown	28828	3M™ Air Tool Lubricant, 1 oz - available separately
17	06611	Ball Bearing	Not Shown	20451	3M™ Air Tool Lubricant, 4 oz - available separately
18	87131	O-Ring	Not Shown	20466	3M™ Air Tool Lubricant, Quart - available separately
19	87115	Front Endplate (0.3 HP)	Not Shown	20467	3M™ Air Tool Lubricant, Gallon - available separately
20	87116	Motor Spacer (0.3 HP)			
21	30417	Rotor			
22	87136	Vane Set (0.3 HP)			
23	30415	Cylinder			

## Parts Page

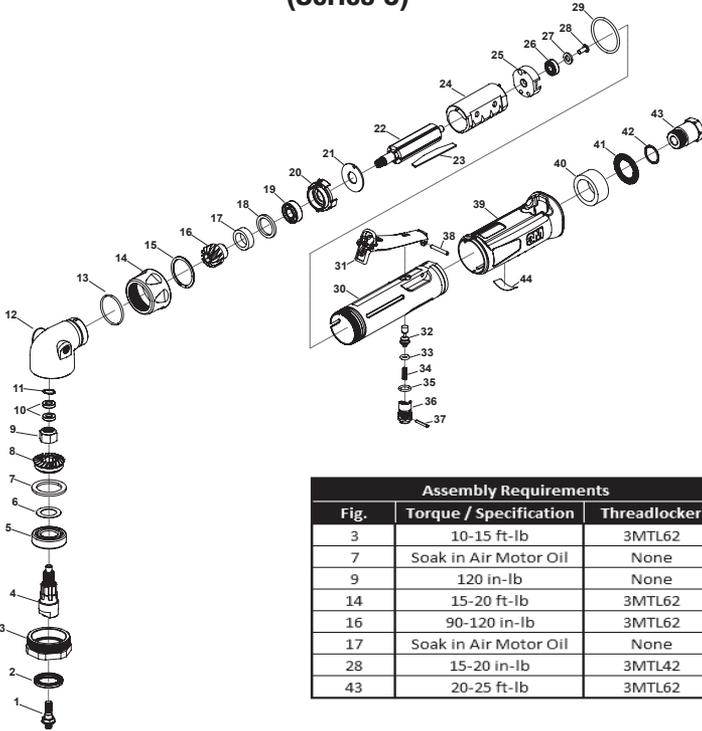
# PARTS LIST FOR PN 20231 & 25124, 20,000 MAX RPM and PN 28329 & 28344, 12,000 MAX RPM, 2 in, 0.5 HP Disc Sander (Series C)



Assembly Requirements		
Fig	Torque	Threadlocker
8	120 in-lb	3M TL62
15	90 in-lb	3M TL62
11	90-130 in-lb	3M TL62
40	10-15 ft-lb	3M TL62

Fig.	3M PN	Description	Fig.	3M PN	Description
1	45096	Roloc™ Pad (2")	23	06631	Cylinder
2	06582	Roloc™ Adapter	24	06630	Rear End Plate
3	45102	Roloc™ Shank (1/4")	25	06612	Ball Bearing
4	06516	Collet Nut	26	87123	Housing Dual Slot
5	06528	Collet (1/4") - std w/28341 & 28328	27	06632	Muffler Material
	06529	Collet (1/8") - available separately	28	87121	Collet (1/8") - available separately
	06530	Collet (3/16") - available separately	29	28842	Lever Assembly (0.5 HP)
	06540	Collet (3 mm) - available separately	30	06626	Valve Stem
	06541	Collet (6 mm) - std w/28342 & 28343	31	30400	O-Ring
6	06583	Collet Body	32	06614	Spring
7	87133	Grease Seal Kit	33	06620	O-Ring
8	87112	Bearing Retainer	34	06627	Air Regulator
9	87119	Output Shaft	35	06613	Spring
10	87122	Lower Spindle Bearing (1.25 x 0.375 x 0.375)	36	06622	Steel Ball
11	87135	12KRPM Gear Set	37	06616	Pin
	87134	20KRPM Gear Set	38	87132	Roll Pin (3/32 x 1)
12	55114	Upper Spindle Bearing Set (0.500 x 0.25 x 0.125)	39	06628	Exhaust Deflector
13	87111	Angle Head	40	06618	Inlet Bushing
14	06523	Grease Fitting (1/8")	41	87126	Safety Sticker
15	06636	Clamp Nut	Not Shown	87125	Wrench (3/8 x 11/16)
16	06619	Retaining Ring	Not Shown	06586	Wrench (7/16 x 11/16)
17	06611	Ball Bearing	Not Shown	28828	3M™ Air Tool Lubricant, 1 oz - available separately
18	06621	O-Ring	Not Shown	20451	3M™ Air Tool Lubricant, 4 oz - available separately
19	87117	Front End Plate (0.5 HP)	Not Shown	20466	3M™ Air Tool Lubricant, Quart - available separately
20	87118	Motor Spacer (0.5 HP)	Not Shown	20467	3M™ Air Tool Lubricant, Gallon - available separately
21	87130	Rotor			
22	87137	Vane Set (0.5 HP)			

# PARTS LIST FOR PN 20232 & 25125, 15,000 MAX RPM 3 in, 1 HP Disc Sander (Series C)



Assembly Requirements		
Fig.	Torque / Specification	Threadlocker
3	10-15 ft-lb	3MTL62
7	Soak in Air Motor Oil	None
9	120 in-lb	None
14	15-20 ft-lb	3MTL62
16	90-120 in-lb	3MTL62
17	Soak in Air Motor Oil	None
28	15-20 in-lb	3MTL42
43	20-25 ft-lb	3MTL62

Fig.	3M PN	Description	Qty.	Fig.	3M PN	Description	Qty.
1	06582	Roloc Adaptor	1	27	06567	Washer (.251 x .468 x .063)	1
2	87431	Grease Seal (21 x 29 x 4)	1	28	06568	Screw #8-32 x 3/8	1
3	87420	Bearing Retainer	1	29	06609	O-Ring (1.38 x .094")	1
4	87436	Output Shaft	1	30	28977	Steel Housing 1 HP	1
5	30367	Ball Bearing (17 x 35 x 10)	1	31	06642	Lever Assembly	1
6	06648	Gear Spacer	1	32	28980	Trigger Valve	1
7	87419	Felt Washer (Output)	1	33	28983	O-Ring	1
8	87427	Gear	1	34	06614	Spring	1
9	87417	7/16"-20 Nylon Nut	1	35	06620	O-Ring (.364 x .070")	1
10	55144	Ball Bearing .500 x .25 x .125	2	36	06627	Air Regulator	1
11	87426	Wave Disc Spring (.494 x .377 x .009)	1	37	06616	Pin	1
12	87418	Angle Head	1	38	87402	Roll Pin	1
13	55079	O-Ring (1.19 x .063")	1	39	28978	Housing Cover 1 HP	1
14	87423	Clamp Nut	1	40	29006	Muffler	1
15	87424	Spiral Retaining Ring	1	41	28982	Diffuser Screen	1
16	87428	Pinion	1	42	29007	O-Ring	1
17	87429	Felt Washer (Input)	1	43	28991	3/8" NPT Bushing	1
18	06652	Angle Head Spacer	1	44	87126	Label	1
19	06510	Ball Bearing (3/8 x 7/8 x 9/32)	1	Not Shown	06586	Wrench, 7/16 x 11/16	2
20	28992	Front End Plate	1	Not Shown	06583	Collet Body	1
21	29004	Font Wear Plate	1	Not Shown	06529	1/8" Collet	OPT
22	06562	Rotor (5 Slot)	1	Not Shown	06530	3/16" Collet	OPT
23	28979	Vane Kevlar 1 HP (Set of 5)	1	Not Shown	06528	1/4" Collet	1
24	06563	Cylinder	1	Not Shown	06540	3 mm Collet	OPT
25	28981	Rear Endplate	1	Not Shown	06541	6 mm Collet	OPT
26	06508	Ball Bearing (1/4 x 5/8 x .1961)	1	Not Shown	06516	Collet Nut	1

## Product Configuration / Specifications

Model Number	Collet	Pad Type	Pad Part	Maximum Rotational Speed (RPM)	Power (hp)	Product Net Wt kg (lb)	Height 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> (ft/s <sup>2</sup> )	Series Designation
28341 28342	1/4 in 6 mm	2 in Roloc Hard	45096	20,000	0.33	0.65 (1.43) 0.65 (1.43)	63.5 (2.5) 63.5 (2.5)	82.4 (94.0) 82.4 (94.0)	2.22 (7.28) 2.22 (7.28)	0.2 (0.66) 0.2 (0.66)	C
28328 28343	1/4 in 6 mm	2 in Roloc Hard	45096	12,000	0.33	0.65 (1.43) 0.65 (1.43)	63.5 (2.5) 63.5 (2.5)	82.9 (94.5) 82.9 (94.5)	2.95 (9.68) 2.95 (9.68)	0.18 (0.59) 0.18 (0.59)	C
28329 28344	1/4 in 6 mm	2 in Roloc Hard	45096	12,000	0.5	0.76 (1.68) 0.76 (1.68)	69.9 (2.75) 69.9 (2.75)	88.2 (99.8) 88.2 (99.8)	1.04 (3.41) 1.04 (3.41)	0.08 (.26) 0.08 (.26)	C
20231 25124	1/4 in 6 mm	2 in Roloc Hard	45096	20,000	0.5	0.76 (1.68) 0.76 (1.68)	69.9 (2.75) 69.9 (2.75)	90.2 (101.8) 90.2 (101.8)	2.6 (8.53) 2.6 (8.53)	0.08 (.26) 0.08 (.26)	C
20232 25125	1/4 in 6 mm	3 in Roloc Hard	45091	15,000	1	1.38 (3.05) 1.38 (3.05)	88.9 (3.5) 88.9 (3.5)	84.4 (96.0) 84.4 (96.0)	2.57 (8.43) 2.57 (8.43)	0.27 (0.89) 0.27 (0.89)	C

\* Declared noise levels; measurements carried out in accordance with standard EN ISO 15744.

# Declared vibration levels in accordance with ISO 20643 and 28927.

**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 sander 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 (or equivalent 10 centistoke oil) into the air 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 meter	25 feet	Maximum Working Pressure	6.2 bar	90 psig
				Recommended Minimum	N/A	N/A

For Series C disc sanders, the angle head and gears have been designed to last the life of the tool without periodic maintenance. When rebuilding or repairing the tool, lubricate angle head with Castrol Longtime PD 00 grease or equivalent lithium thickener, NCGI Grade 00 grease, 1 tsp approximate quantity.

## 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. Attach the 3M™ Roloc™ Disc Pad to the sander adaptor using the wrenches supplied with the tool. Select a suitable abrasive and secure it to the disc pad.
4. Always wear required safety equipment when using this tool.
5. When sanding always start the tool just prior to contacting the work piece. Stop air flow to the tool as it is removed from the work piece.
6. Always remove the air supply to the sander before fitting, adjusting or removing the abrasive or disc pad.
7. Always adopt a firm footing and grip and be aware of torque reaction developed by the sander.
8. Use only 3M approved spare parts.
9. Always ensure the material being worked 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 it's 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, which require a guard, and no such grinding and cutting products 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 restart until the disruption has been corrected.
21. Do not allow the tool to free spin without taking precautions to protect any persons or objects from debris from rupturing abrasive & mounting hardware.
22. When tool is not in use, store in a clean dry environment free of debris.
23. Recycle or dispose of tool according to Local, State, and Federal regulations.
24. Operators and maintenance personnel should be able to handle the bulk, weight and power of the tool.
25. For overhead work, wear a safety helmet.
26. Be aware that the tool will continue to run after the release of the start handle.
27. When using disc sander, the operator should adopt a comfortable posture whilst maintaining a secure footing and avoiding awkward or off-balance postures. The operator should change posture during extended tasks; this can help avoid discomfort and fatigue.
28. Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by the tool and also of the trip hazards associated with air lines.
29. Proceed with care in unfamiliar surroundings. There can be hidden hazards such as electricity lines or gas pipes.
30. There is a risk of electrostatic discharge if used on plastic and other non-conductive materials.

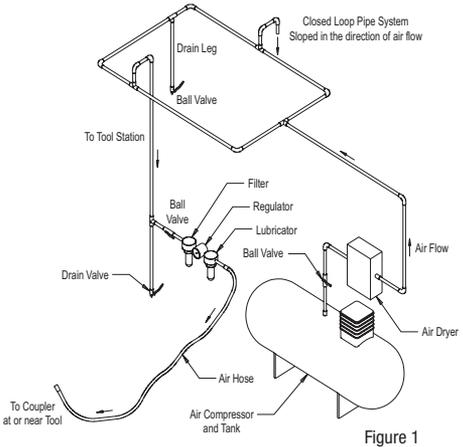


Figure 1

## 3M™ Roloc™ Disc Pads

3M™ Roloc™ Disc Pads are mated for use on the 3M Sander. Constructed from premium, industrial-quality materials and their durability and precise construction are the ideal complement to the performance of the 3M Sander. See Product Configuration/Specifications table for the correct replacement pad for a particular model.

See 3M ASD Accessory catalog 61-5002-8098-9 and 61-5002-8097-1 for additional Accessories.

## Removing the sander adaptor and installing the collet chuck

1. Disconnect air line from tool.
2. Using the wrenches supplied with the tool, secure the output shaft with one of the wrenches. Loosen the sander adaptor with the other wrench.
3. Thread the collet chuck supplied with the tool into the threaded hole vacated by the sander adaptor.
4. Tighten the base of the collet chuck with the two wrenches.
5. Loosen the collar of the chuck to allow the appropriate shank to be inserted (¼ in. collet insert is used for ¼ in. shanks, 6 mm collet insert is used for 6 mm shanks).
6. Insert shank completely into the collet and tighten with the two wrenches. Never tighten collet chuck without a shank. An inadequately inserted shank could bend or break causing damage to the tool and work piece and possible injury to the operator or bystanders.

Note: During the above steps, ensure that all hardware and abrasive products are mounted concentrically on the supporting accessory

**Warranty and Limited Remedy:** 3M warrants this tool against defects in workmanship and materials under normal operating conditions for one (1) year from the date of purchase. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property. User must operate the tool in accordance with all applicable operating instructions, safety precautions, and other procedures stated in the operating manual to be entitled to warranty coverage. 3M shall have no obligation to repair or replace any tool or part that fails due to normal wear, inadequate or improper maintenance, inadequate cleaning, non-lubrication, improper operating environment, improper utilities, operator error or misuse, alteration or modification, mishandling, lack of reasonable care, or due to any accidental

cause. If a tool or any part thereof is defective within this warranty period, your exclusive remedy and 3M's sole obligation will be, at 3M's option, to repair or replace the tool or refund the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

**Submitting a Warranty Claim:** Contact you dealer when submitting a warranty claim in accordance with the restrictions listed above. Please note that all warranty claims are subject to manufacturer's approval. Be sure to keep you sales receipt in a safe place. This must be submitted when filing a warranty claim, within 1 year from the date of purchase. For additional assistance call 1-800-362-3550 (choose option 3, then option 5).

**Product Repair after Warranty Has Expired:** Repair of 3M Abrasive Power tools that are not under warranty is available through 3M or a 3M Authorized Tool Repair Representative. Contact your 3M Abrasive Power Tool Distributor for details, or call 1-800-362-3550.

**For 3M Product Information Call:**  
800-3M HELPS (800-364-3577) toll free  
651-737-6501 direct dial

## EC Declaration of Conformity



**Manufacturers Name:** **3M**, Abrasive Systems Division  
**Manufacturers Address:** 3M Center, Building 223-6N-02  
St Paul, MN USA 55144

**Does hereby declare that the machinery described below complies with those applicable essential health and safety requirements of the Machinery Directive 2006/42/EC; together with all amendments to date.**

**Descriptions:** 3M™ Right Angle Sander, 12,000 RPM, 1 HP, 5/8-11 Threaded Ext. Shaft  
3M™ Right Angle Sander, 12,000 RPM, 1 HP, 5/8-11 Threaded Std. Shaft  
3M™ Disc Sander, 12,000 or 20,000 RPM, 0.33 HP, 2 inch  
3M™ Disc Sander, 12,000 or 20,000 RPM, 0.5 HP, 2 inch  
3M™ Disc Sander, 15,000 RPM, 1 HP, 3 inch

**Model Numbers:** 28408, 28622, 20231, 20232, 25124, 25125, 28341, 28328, 28329, 28342, 28343, and 28344

**Serial Number Range DTYDDDS - Z####, where:**  
DT = Manufacturing Location Code  
Y = Last Digit of Year of Production  
DDD = Sequential Day of the Year of Production  
S = The Shift During Which the Product was Produced  
Z = Series Designation  
#### = Four Sequential Numbers Starting Over at 0001 when 9999 is Reached

**The following standards have either been referred to, or complied with, in full or in part as relevant:**

EN ISO 12100:2010	Safety of machinery. General principles for design. Risk assessment and risk reduction
EN ISO 11148-8:2011	Hand-held non-electric power tools -- Safety requirements -- Part 8: Sanders and polishers
EN ISO 28927-3:2009	Hand-held portable power tools. Test methods for evaluation of vibration emission. Part 3. Polishers and rotary, orbital and random orbital sanders
EN ISO 15744:2008	Hand-held non-electric power tools. Noise measurement code. Engineering method (grade 2)

**Full Name of responsible person.**

Betty Z. Mei *Betty Z. Mei* **Position:** Technical Director  
**Signature:** *Betty Z. Mei* **Date:** 03/01/2017  
St. Paul, Minnesota, USA

**Full Name and address of individual responsible to compile technical file within the Community:**

Ms. Anne Keese - Senior Engineer Product Stewart, R&D Service, 3M Deutschland GmbH, Carl-Schurz-Strasse 1, D-41453 Neuss, Germany