



INSTALLATION MANUAL FOR GRINDER SHIELDS

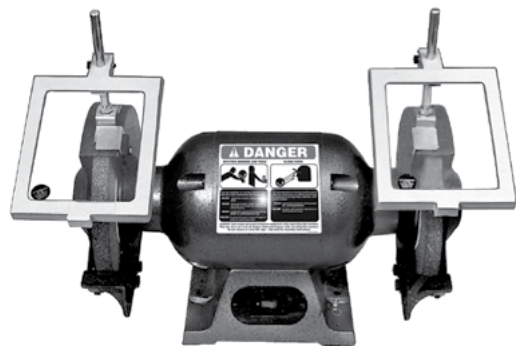


Grinder Shields

- GWG250
- GWG251

Vacuum Pedestal

- GWG270



Standard-Mount Grinder Shields

- GWG201
- GWG202
- GWG203

These shields are designed for machines that require protection from chips (swarf) and coolant generated at the point of operation.

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Manual No. KSL246

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SECTION 1 — IN GENERAL

“**⚠ DANGER**” Danger is used to indicate the presence of a hazard which **WILL** cause **SEVERE** personal injury if the warning is ignored.



THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY, AND CAREFULLY READ THE MESSAGE THAT FOLLOWS.

Efficient and safe machine operation depends on the development, implementation and enforcement of a safety program. This program requires, among other things, the proper selection of point-of-operation guards and safety devices for each particular job or operation, a thorough safety training program for all machine personnel, that includes instruction on the proper operation of the machine, the point-of-operation guards and safety devices on the machine, and a regularly scheduled inspection and maintenance program.

Rules and procedures covering each aspect of your safety program should be developed and published both in an operator's safety manual, as well as in prominent places throughout the plant and on each machine. Some rules or instructions which must be conveyed to your personnel and incorporated into your program include:

⚠ DANGER Never place your hands or any part of your body in this machine.

⚠ DANGER Never operate this machine without proper eye, face and body protection.



Never operate this machine unless you are fully trained, instructed, and have read the instruction manual.



Never operate this machine if it is not working properly—stop operating and advise your supervisor immediately.



Never tamper with, rewire or bypass any control or component on this machine.

A company's safety program must involve everyone in the company, from top management to operators, since only as a group can any operational problems be identified and resolved. It is everyone's responsibility to implement and communicate the information and material contained in catalogs and instruction manuals to all persons involved in machine operation. If a language barrier or insufficient education would prevent a person from



For maintenance and inspection always refer to the OEM's (Original Equipment Manufacturer's) maintenance manual

SECTION 1 — IN GENERAL

Protector Series Shields

Safety References

OSHA'S ACT AND FEDERAL REGULATIONS

Since the enclosed equipment can never overcome a mechanical deficiency, defect or malfunction in the machine itself, OSHA (Occupational Safety and Health Administration) has established certain safety regulations that the employers (users) must comply with so that the machines used in their plants, factories or facilities are thoroughly inspected and are in first-class operating condition before any of the enclosed equipment is installed.

1. An Act – Public Law 91 - 596, 91st Congress, S. 2193, December 29, 1970

Duties:

Sec. 5. (a) Each employer —

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

2. OSHA's Code of Federal Regulations, Subpart O, that an employer (user) must comply with include:

Section 1910.211 Definitions

Section 1910.212 (a) General Requirements for all Machines

Section 1910.217 Mechanical Power Presses

Section 1910.219 (b)(1) Mechanical Power-Transmission Apparatus (Flywheel and Gear Covers)

3. OSHA's 29 Code of Federal Regulations, Subpart J 1910.147 The Control of Hazardous Energy (Lockout / Tagout)

4. OSHA's Publications

a. "General Industry Safety and Health Regulations Part 1910," Code of Federal Regulations, Subpart O

b. "Concepts and Techniques of Machine Safeguarding," OSHA 3067, Revised 1992

These publications can be acquired by contacting:

US Department of Labor

Occupational Safety and Health Administration

Washington, DC 20210

ANSI SAFETY STANDARDS FOR MACHINES

The most complete safety standards for machine tools are published in the ANSI (American National Standards Institute) B11 series.

Applicable Standard

B11.9 Grinding Machines

B11.19 Performance Requirements For Risk Reduction Measures: Safeguarding And Other Means Of Reducing Risk

NFPA 79 Electrical Standard for Industrial Machinery

These standards can be purchased by contacting:

American National Standards Institute, Inc.

11 West 42nd Street

New York, New York 10036

(212) 642-4900

OR

AMT-The Association of Manufacturing Technology

7901 Westpark Drive

McLean, Virginia 22102-4269

(703) 827-5211

NATIONAL SAFETY COUNCIL SAFETY MANUALS & DATA SHEETS

Other good references for safety on machine tools are the National Safety Council's Safety Manuals and Data Sheets. These manuals and data sheets are written by various committees including the Power Press, Forging and Fabricating Executive Committee. The following publications are available for all types of machines:

APPLICABLE MANUAL

Power Press Safety Manual - 4th Edition

Safeguarding Concept Illustrations - 6th Edition

Forging Safety Manual

DATA SHEETS

Bench and Pedestal Grinding Wheel Operations 12304-0705

Boring Mills, Horizontal Metal 12304-0269

Boring Mills, Vertical 12304-0347

Coated Abrasives 12304-0452

Cold Shearing Billets and Bars in the Forging Industry 12304-0739

Degreasing (Liquid), Small Metal Parts 12304-0537

Dies, Setup and Removal of Forging Hammer 12304-0716

Drill Presses, Metalworking 12304-0335

Drills, Portable Reamer 12304-0497

Drop Hammers, Steam 12304-0720

Electrical Controls for Mechanical Power Presses 12304-0624

SECTION 1 — IN GENERAL

Protector Series Shields

..... Safeguarding, Concepts of 12304-0710
Power Press Point-of-Operation Safeguarding:
.....Two-Hand Control and Two-Hand Tripping
..... Devices 12304-0714
Power Press Point-of-Operation Safeguarding:
.....Type A and B Movable Barrier Devices 12304-0712
Power Press Point-of-Operation Safeguarding:
.....Point-of-Operation Guards 12304-0715
Power Press Point-of-Operation Safeguarding:
.....Presence Sensing Devices 12304-0711
Power Press Point-of-Operation Safeguarding:
..... Pullbacks and Restraint Devices 12304-0713
Power Presses (Mechanical), Inspection and Maintenance of .
12304-0603
Power Presses (Mechanical), Removing Pieceparts from Dies in
.....12304-0534
Power Press, Setting Up and Removing Dies 12304-0211
Press Brakes 12304-0419
Robots 12304-0717
Saws, Metal (Cold Working) 12304-0584
Shapers, Metal 12304-0216
Shears, Alligator 12304-0213
Shears, Squaring, Metal 12304-0328
Upsetters, 12304-0721

These manuals and data sheets can be purchased by contacting:

National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
(708) 295-1121

For additional safety information and assistance in devising,

Warranty

9. Limited Warranties.

9.1. (i) Subject to Section 8.1(ii) below, Rockford Systems makes to Customer the following sole and exclusive warranties with respect to Goods:

(a) with respect to Goods that are manufactured based on Customer specifications, at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems pursuant to such specifications conform to such specifications set forth in the applicable Order Documentation; and

(b) at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems are free from defects in material and workmanship.

(c) Rockford Systems's warranty is for a period of 1 year, and begins from date of shipment from Rockford Systems to the original purchaser.

This warranty does not include accessories, parts or equipment sold hereunder that are manufactured by someone other than Rockford Systems.

(ii) Every claim by Customer against Rockford Systems for breach of warranty with respect to the Goods shall be deemed waived by Customer unless written notice thereof is received by Rockford Systems within fifteen (15) days after discovery.

9.2. If Rockford Systems breaches either of the warranties set forth in Section 8.1(i) above, and written notice thereof is received by Rockford Systems from Customer within the applicable time period specified in Section 8.1(ii) above, Customer's sole and exclusive remedy and Rockford Systems's only obligation shall be, as Rockford Systems in its sole and exclusive judgment shall determine, the replacement of the nonconforming Goods, or an adjustment to the purchase price for the nonconforming Goods or the repair of the nonconforming Goods. All transportation charges related to replacement or repair of Goods shipped to Rockford Systems's plant or facility (or other place at Rockford Systems's direction) shall be prepaid by Customer. Rockford Systems shall be responsible for reasonable transportation charges back to Customer for Goods that have been replaced or repaired by Rockford Systems. Any replacement Goods or repaired Goods shall be subject to these Terms and Conditions.

9.3. THE EXPRESS WARRANTIES SET FORTH HEREIN ARE THE ONLY WARRANTIES APPLICABLE TO THE SALE OF GOODS BY ROCKFORD SYSTEMS TO CUSTOMER PURSUANT TO THE AGREEMENT, AND THEY EXCLUDE ALL OTHER EXPRESS, ORAL OR WRITTEN WARRANTIES, AS WELL AS ANY WARRANTIES IMPLIED BY LAW WITH RESPECT TO THE GOODS, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PURPOSE, NOTWITHSTANDING ANY DISCLOSURE TO ROCKFORD SYSTEMS OF THE INTENDED USE OF THE GOODS.

9.4. Rockford Systems's warranties under Section 8.1(i) are void if repairs or modifications of the Goods are made by anyone other than Rockford Systems. Without limitation of the foregoing, Rockford Systems assumes no responsibility for and shall have no obligations to Customer because defects in any materials furnished by, or any faulty workmanship provided by, any party other than Rockford Systems.

9.5. Rockford Systems reserves the right to improve its products through changes in design or material without being obligated to incorporate such changes into products of prior manufacture. Customer cannot rely on any such changes as proof of insufficiency or inadequacy of prior designs of the Goods or material contained in the Goods.

9.6. If Customer grants to an end user of the Goods (or any other customer of Customer) any warranty that is greater in scope or time than the warranty and claims period stated herein, Rockford Systems shall not be liable beyond the scope of the limited warranty, the claim period, the damages and the remedies provided for under this Section.

9.7. Solely to the extent transferable, Rockford Systems assigns and transfers to Customer the original manufacturer's warranty on Goods sold hereunder that are not manufactured by Rockford Systems.

SECTION 1—IN GENERAL

Grinder Shield Installation Manual

Introduction

This grinder shield is designed for grinder wheels up to eight (8) inches in diameter.

The shield consists of a cast aluminum frame measuring 6" H X 6³/₈" W with a thick replaceable polycarbonate shield. A steel pivot connects the frame to the curved adjustable mounting base.

Photo 1.1



Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the shield mounting location on the wheel guard of the grinder.
3. Spot, drill, and tap a hole in the grinder guard. Bolt the shield to the grinder guard.
4. Repeat steps 2 and 3 for the second shield.
5. Adjust each shield to the proper position using the wing nut.

Replacement Parts

Part No. GWW000 Polycarbonate window

SECTION 2—STANDARD MOUNT

Introduction

These grinder shields are available in various sizes.

The frame is constructed of aluminum or reinforced fiber nylon. Each shield is furnished with a threaded support rod. The transparent shield is polycarbonate which minimizes scratches and provides durability.

Photo 2.1



Installation

1. Remove all packing material from the shield and its mounting assembly.
2. Select the shield mounting location on the wheel guard of the grinder.
3. Spot, drill, and tap a hole in the grinder guard. Fasten the threaded support rod to the grinder guard using the washers provided.
4. Repeat steps 2 and 3 for the second shield.
5. Adjust each shield to the proper position.

REPLACEMENT PARTS

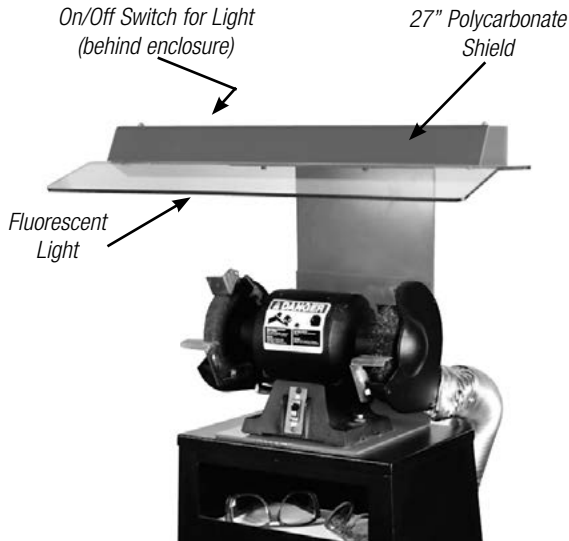
Part No.	Polycarbonate Window For:
GWW001	GWG201
GWW002	GWG202
GWW003	GWG203

(Continued on next page.)

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Due to the wide variety of pedestal and bench grinders on the market today, it is necessary for the user to drill mounting holes in the base of the grinder shield. Do not alter or modify the grinder in any way.

Photo 3.1



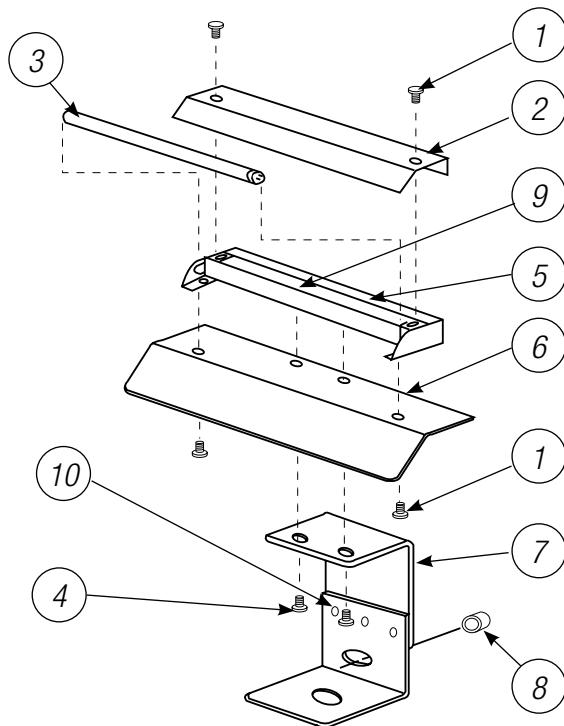
Installation

1. Place your grinder in the desired position on the base of the U-Frame (Item No. 7).
2. Using a marker or punch, transfer the bolt pattern from the grinder to the base of the U-frame. Remove the grinder from the base.
3. Drill four holes in the base. The grinder mounts directly to the U-frame.
4. Place the grommet (Item No. 8) in the hole to be used for the power supply to the grinder; install the grinder and base securely to the bench or pedestal.
5. Remove the lamp cover (Item No. 2) and fluorescent light (Item No. 3). Install two washers and screws (Item No. 4) as shown in the assembly drawing. Reinstall the fluorescent light and lamp cover. Plug the unit into a properly grounded 115-V power supply.
6. Remove all protective paper from the shield (Item No. 6) after installation.

Replacement Parts

Part No. GWG273 Polycarbonate Shield Only

Figure 3.1
Grinder Shield Diagram



PARTS LIST

Item No.	Description
1	Pan Head Machine Screw (4)
2	Lamp Cover
3	Fluorescent Light
4	Socket Head Cap Screw (2) w/Star Washer
5	Lamp Enclosure
6	Shield
7	U-Frame (Two-Piece)
8	Grommet
9	Electrical Enclosure
10	Flat Head Machine Screw w/Nut (3)
Items Not Shown in Drawing	
11	Lamp Holer (2)
12	Starter Base
13	Starter
14	Ballast
15	On/Off Switch
16	Power Cord

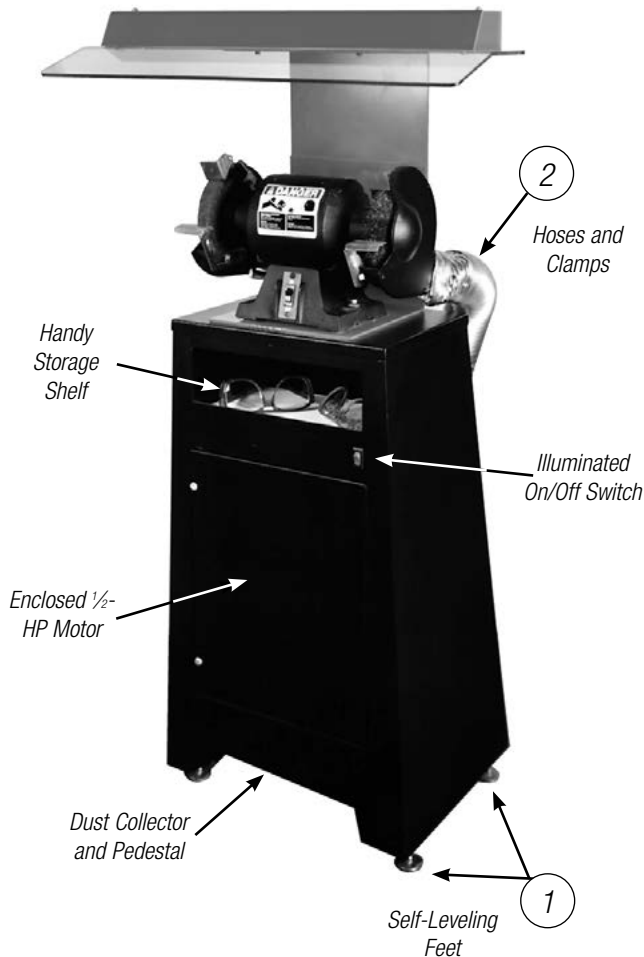
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SECTION 3—PEDESTAL/BENCH

Grinder Shield Installation Manual

Vacuum Pedestal

This vacuum pedestal has a ½-HP, 115-volt, single-phase sealed-bearing motor and a 1210 CFM rated suction unit. If bolting this unit directly to the floor, go to step 3.



NOTE: Grinder usage varies from facility to facility; therefore, we suggest that periodic inspections of the filter element be performed. The filter should be replaced as required and only with the filter listed on page 5.

Installation

1. Lay the pedestal on its side. Screw the four adjustable feet (Item 1) in the threaded holes provided in the base.
2. Stand the unit back on its feet. Rough level the unit so that all four feet are touching the floor.
3. If a grinder shield is to be installed, follow steps 2-6 on page 3.
4. Place the grinder in position on top of the pedestal and shield, if furnished. Using a marker or punch, transfer the bolt pattern from the grinder to the top of the pedestal. Remove the grinder (and shield) from the pedestal.
5. Drill four clearance holes through the top at the locations marked. The hole size is determined by the bolt size to be used.
6. Return the grinder (and shield) to the top of the pedestal and securely bolt it in position.
7. Connect the flexible ducts (Item 2) from the discharge ports of the grinder to the intake ports of the dust collector. Fasten them securely with the four furnished hose clamps.

Do not extend the flexible duct any more than the required minimum to reach from the grinder discharge to the dust collector intake. The first 1" to 1½" of the duct must be extended to its maximum and carefully slid over the intake port.

8. Slide the filter element (Item 3) in position on the filter support rails. The filter will extend slightly in front of the door jam. This is normal and creates a seal when the door is closed.
9. Install the filter with the coarse (white) side up. After the filter is install, close the door securely with sufficient force to compress the door gasket. Inspect the filter periodically and replace when necessary.
10. Move the assembled unit to the desired location. Complete the leveling with all four feet in contact with the floor and tighten the lock nuts. Plug the unit into a properly grounded 115-volt power supply.

Never operate the unit with the discharge guard (Item 4) or the blower guard (Item 5) removed. See page 5.

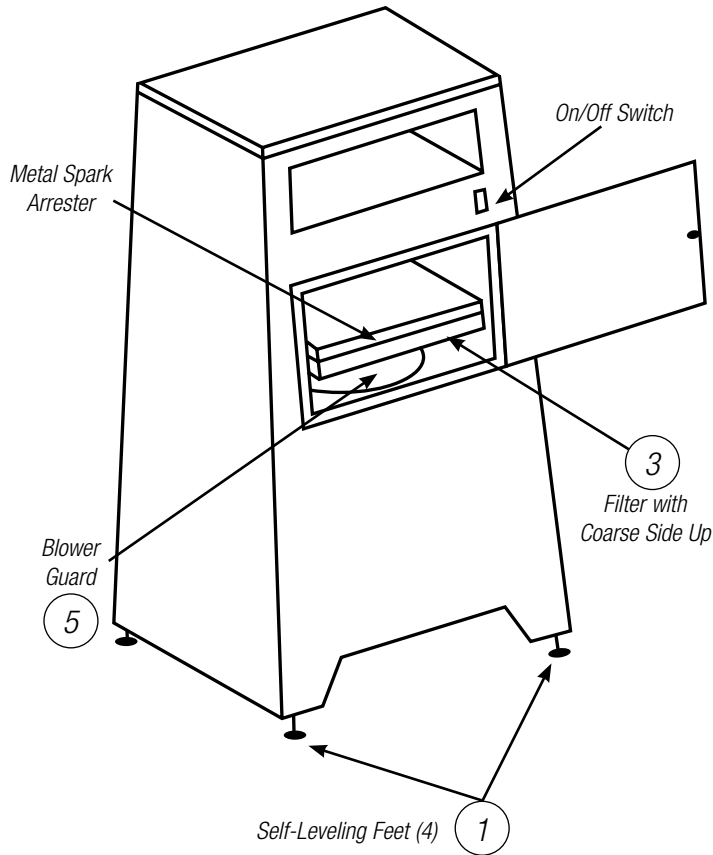
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SECTION 3—PEDESTAL/BENCH

Grinder Shield Installation Manual

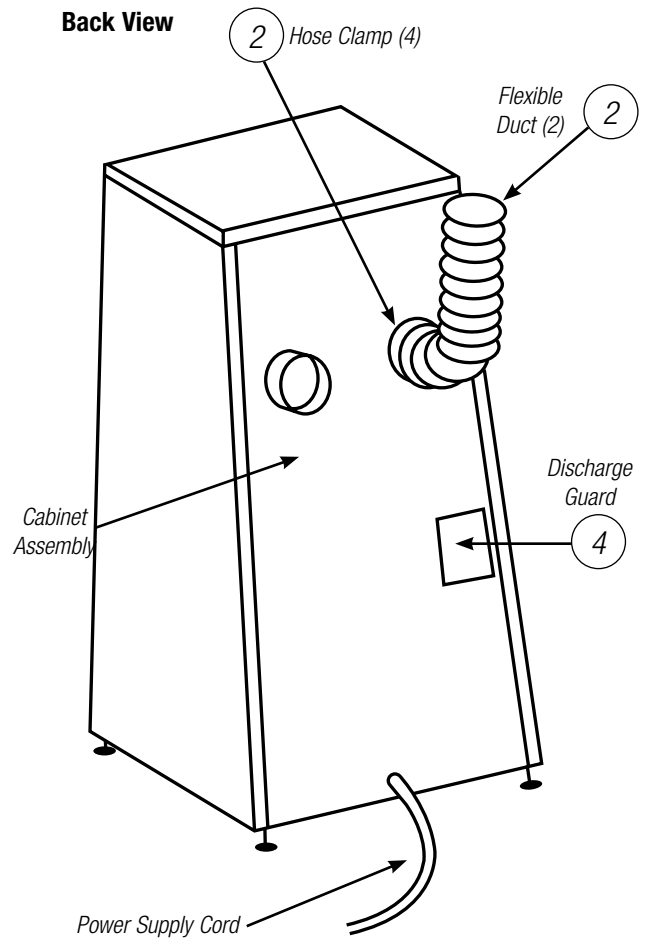
Front View



REPLACEMENT PARTS

Part No.	Description
GWG271	Replacement Filters (1 Case of 6)
GWG272	Hose Kit

Back View



(Continued on next page.)

SECTION 4—OTHER CONSIDERATIONS

Grinder Shield Installation Manual

Using the Shield

The shield is intended to deflect objects such as chips (swarf) and coolant. For protection, position the shield between the point of operation and the operator. Make sure the shield will not be hit by normal movements of the grinder, workpieces, etc. Be sure the tool rest is always within $\frac{1}{8}$ " of the grinding wheel and the protective tongue guard is always within $\frac{1}{4}$ " of the grinding wheel.

Note: Always make sure the shield is installed and maintained in first-class condition to meet the applicable OSHA (Occupational Safety and Health Administration) or ANSI (American National Standards Institute) standards.

Maintenance of the Polycarbonate

These shields are made of polycarbonate which was selected for its strength and durability under impact. Although it will scratch if mistreated, it can be kept clear with the following appropriate care.

1. Remove coolant, chips, or debris periodically.
2. Using a clean sponge or soft clean cloth, wash with mild soap or detergent and lukewarm water.
3. Rinse well with clean water.
4. Hairline scratches or minor abrasions can be removed or minimized using a mild car polish such as paste wax. A wax coating also makes cleaning easier.

Do Not rub or wipe with dirty shop towels or scrape with a blade.

Do Not use gasoline, benzine, acetone, or carbon tetrachloride on the shield.

Do Not use cleaners or powders that contain abrasives, or "dry rub" abrasive dust to remove coolant, lubricant, and chips.

When many shields are used in a plant, spare shields can be kept on hand and exchanged periodically. The shields can be removed from the machines, carefully washed, and exchanged at a later date.



When operating any turning machine (grinder), the operator must be properly trained and must wear proper personal protective equipment such as safety glasses with side shields, safety clothing, and safety shoes. The operator must not wear loose clothing, must not have unrestrained long hair, and must not wear jewelry.

SECTION 4—OTHER CONSIDERATIONS

Grinder Shield Installation Manual

Warranty

9. Limited Warranties.

9.1. (i) Subject to Section 8.1(ii) below, Rockford Systems makes to Customer the following sole and exclusive warranties with respect to Goods:

(a) with respect to Goods that are manufactured based on Customer specifications, at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems pursuant to such specifications conform to such specifications set forth in the applicable Order Documentation; and

(b) at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems are free from defects in material and workmanship.

(c) Rockford Systems's warranty is for a period of 1 year, and begins from date of shipment from Rockford Systems to the original purchaser.

This warranty does not include accessories, parts or equipment sold hereunder that are manufactured by someone other than Rockford Systems.

(ii) Every claim by Customer against Rockford Systems for breach of warranty with respect to the Goods shall be deemed waived by Customer unless written notice thereof is received by Rockford Systems within fifteen (15) days after discovery.

9.2. If Rockford Systems breaches either of the warranties set forth in Section 8.1(i) above, and written notice thereof is received by Rockford Systems from Customer within the applicable time period specified in Section 8.1(ii) above, Customer's sole and exclusive remedy and Rockford Systems's only obligation shall be, as Rockford Systems in its sole and exclusive judgment shall determine, the replacement of the nonconforming Goods, or an adjustment to the purchase price for the nonconforming Goods or the repair of the nonconforming Goods. All transportation charges related to replacement or repair of Goods shipped to Rockford Systems's plant or facility (or other place at Rockford Systems's direction) shall be prepaid by Customer. Rockford Systems shall be responsible for reasonable transportation charges back to Customer for Goods that have been replaced or repaired by Rockford Systems. Any replacement Goods or repaired Goods shall be subject to these Terms and Conditions.

9.3. THE EXPRESS WARRANTIES SET FORTH HEREIN ARE THE ONLY WARRANTIES APPLICABLE TO THE SALE OF GOODS BY ROCKFORD SYSTEMS TO CUSTOMER PURSUANT TO THE AGREEMENT, AND THEY EXCLUDE ALL OTHER EXPRESS, ORAL OR WRITTEN WARRANTIES, AS WELL AS ANY WARRANTIES IMPLIED BY LAW WITH RESPECT TO THE GOODS, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PURPOSE, NOTWITHSTANDING ANY DISCLOSURE TO

ROCKFORD SYSTEMS OF THE INTENDED USE OF THE GOODS.

9.4. Rockford Systems's warranties under Section 8.1(i) are void if repairs or modifications of the Goods are made by anyone other than Rockford Systems. Without limitation of the foregoing, Rockford Systems assumes no responsibility for and shall have no obligations to Customer because defects in any materials furnished by, or any faulty workmanship provided by, any party other than Rockford Systems.

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