

Grizzly *Industrial, Inc.*®

ROTARY MINI GRINDER WITH FLEX SHAFT

MODEL H6155

INSTRUCTION MANUAL



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#EW6394 PRINTED IN CHINA

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

DANGER

Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment.

WARNING

Safety Instructions For Power Tools

- KEEP ALL SAFETY DEVICES IN PLACE** and in working order.
- REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
- KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
- KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept at a safe distance from work area.
- MAKE WORK SHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
- DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
- USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.

WARNING

Safety Instructions For Power Tools

- 9. USE PROPER EXTENSION CORD** for the tool. Make sure your extension cord is in good condition. Conductor size should be in accordance with the chart below. The amperage rating should be listed on the motor or tool nameplate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Your extension cord must also contain a ground wire and plug pin. Always repair or replace extension cords if they become damaged.

Minimum Gauge for Extension Cords

AMP RATING	LENGTH		
	25ft	50ft	100ft
0-6	18	16	16
7-10	18	16	14
11-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No

- 10. WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- 11. ALWAYS USE SAFETY GLASSES.** Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 12. SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
- 13. DON'T OVERREACH.** Keep proper footing and balance at all times.
- 14. MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 15. DISCONNECT TOOLS** before servicing and changing accessories, such as blades, bits, cutters, and the like.
- 16. REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in off position before plugging in.
- 17. USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury.
- 18. CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

WARNING

Additional Safety Instructions For Rotary Mini Grinders

1. **READ THIS MANUAL.** This manual contains proper operating instructions for this machine.
2. **DO NOT** jam the grinder against the workpiece. Firmly grasp the grinder and ease it against the workpiece using light pressure.
3. **DO NOT** wear loose clothing while operating this machine. Roll up or button sleeves at the cuff.
4. **DO NOT** place hands near, or in contact with, mini grinder during operation.
5. **GRIP THE WORKPIECE FIRMLY.**
6. **NEVER** leave the machine running unattended.
7. **REPLACE** grinding disks or sanding sleeves when worn.
8. **NEVER** work on more than one item at a time.
9. **ALWAYS** disconnect the machine from the power source before changing grinding disks, sanding sleeves, or tool bits
10. **ALWAYS** test run the machine before starting any work.
11. **DO NOT** use the flex shaft with a tight bend. This may cause binding and damage the inner spindle.
12. **CLAMP THE WORKPIECE.** DO NOT hold the workpiece with one hand and operate the mini grinder with the other.

WARNING



Operating this mini grinder can propel objects into the air, causing immediate eye damage. To protect yourself, always wear American National Standards Institute (ANSI) approved safety glasses or goggles when operating this equipment.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment or poor work results.

INTRODUCTION

Foreword

We are proud to offer the Grizzly Model H6155 Rotary Mini Grinder with Flexible Tool Shaft. This model is part of a growing Grizzly family of fine power tools. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The Model H6155 features an 8,000–35,000 RPM variable speed with an assortment of buffs, sanding disks and drums, grinding stones, and drill bits. All of the accessory tools fit in the 1/8" collet in the mini grinder, or in the flexible shaft. Also included is a tool post, a router base, and a flashlight base.

It is our pleasure to provide this manual with the Model H6155. It was written to encourage safety considerations and guide you through general operating procedures and maintenance. This manual represents our effort to produce the best documentation possible.

The specifications, details, and photographs in this manual represent the Model H6155 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

Contact Info


If you have any comments regarding this manual, please write to us at the following address:

Grizzly Industrial, Inc.
C/O Technical Documentation
P.O. Box 2069
Bellingham, WA 98227-2069

Most importantly, we stand behind our tools. If you have any service questions or parts requests, please call or write us at the location listed below.

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E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>



WARNING

Read the manual before operation. Become familiar with this machine, its safety instructions, and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

INVENTORY

The set up and operation instructions will be easier to understand if you are familiar with the components of the Model H6155 Rotary Mini Grinder. Match up the feature list below with the letters in **Figure 1** to identify the feature locations.



Figure 1. Model H6155 features and controls.

A.	Tool Case
B.	Telescoping Tool Holder
C.	Clamp Base
D.	42" Flexible Shaft
E.	Rotary Mini Grinder

F.	Tool Assortment
G.	Flashlight Base
H.	Router Base
I.	Sanding Drum/Disk Assortment

OPERATIONS

Installing Bits

The Model H6155 uses bits and cutters with a 1/8" diameter shaft. See the Grizzly catalog or website for a complete listing of available bits and accessories.

WARNING

DO NOT use bits or cutters with a cutting surface larger than 1". The bit could break apart under the stresses of high speed use causing serious personal injury.

To install a bit:

1. **Unplug the tool from the power source!**
2. Depress the collet lock shown in **Figure 2** and loosen the collet nut. The collet lock will engage during rotation, preventing further rotation of the collet nut. *DO NOT completely remove the collet nut from the shaft.*

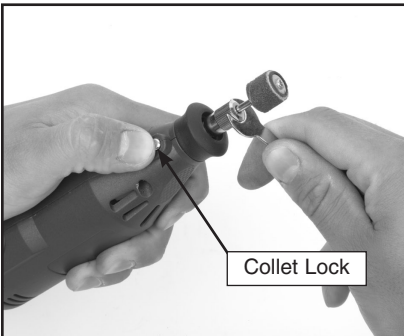


Figure 2. Collet lock

3. Insert the end of a bit into the collet. At least 1/2" of the bit shaft should be mounted into the end of the collet.
4. Rotate the collet nut while depressing the collet lock to secure the bit. *Only tighten 1/3 of a turn with the collet wrench.*

WARNING

Failure to wear safety glasses while operating the grinder could cause serious personal eye injury.

Using The Grinder

The Model H6155 is best suited for high RPM, low torque applications. Most operations performed with the grinder will perform best at higher RPM settings; however, slower RPM settings are ideal when working with plastics that melt easily.

Always test the bit and RPM combination on a scrap piece of material similar to the workpiece. Trial and error is the best way to determine the ideal setup.

To use the grinder:

1. Grasp the grinder with a secure grip.
2. Turn the power switch to the *ON* "O" position.
3. Adjust the speed lever to change the RPM.
4. Firmly grasp the grinder and ease it against the workpiece using light pressure.

High RPM Uses

High RPM's are best for general carving, cutting, routing, and grinding. The grinder removes material quicker at higher RPM's.

Low RPM Uses

Low RPM's are best for grinding and cutting materials that have low melting points. Plastics in particular often melt from the heat generated by high speed bits. Low RPM's are also best for polishing and buffing with the felt accessories included.

WARNING

Use low RPM settings when working with plastics or other materials with low melting points. Melted plastics can liquefy, be thrown into the air, and stick to the operator, causing serious personal injury.

Installing the Flex Shaft

The flex shaft allows the user to get into tight spaces and is easier to control; more like a pencil. DO NOT operate the flex shaft with sharp bends.

To install the flex shaft:

1. **Unplug the tool from power!**
2. Loosen the collet nut, and remove the collet shield as shown in **Figure 3**.

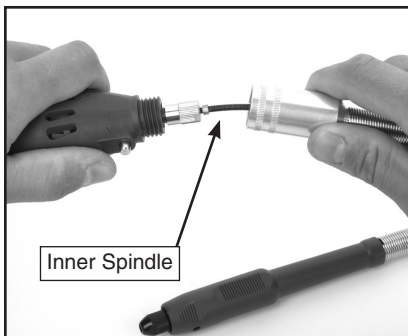


Figure 3. Flex shaft components.

Model H6155 Rotary Mini Grinder

3. Slide the inner spindle (**Figure 3**) partially out of the flex shaft.
4. Insert the inner spindle into the collet and tighten.
5. Slide the flex shaft up the inner spindle and thread it onto the mini grinder in place of the collet shield.
6. Insert a tool bit into the collet of the flex shaft.
7. Insert the shaft of a tool bit into the hole shown in **Figure 4** and tighten the collet. Note: *Hold the flex shaft firmly when starting the rotary mini grinder.*

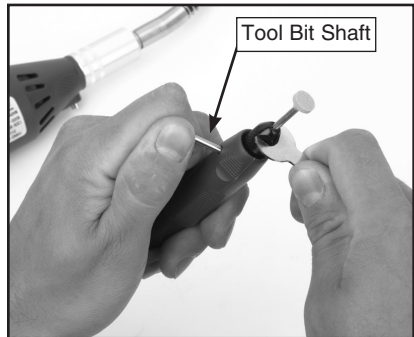


Figure 4. Tightening the flex shaft collet.

Installing the Flashlight Base

The flashlight base will give you the extra light that you need in low light situations.

To install the flashlight base:

1. **Unplug the tool from power!**
2. Remove the collet shield.
3. Screw the flashlight base onto the mini grinder in place of the collet shield.
4. Turn the flashlight base *ON/OFF* with the small switch on the face of the flashlight base.

Installing the Router Base

The router base transforms the mini grinder into a mini router. It can be used with Grizzly's mini router bits to round over corners or apply profiles to the edges of your workpiece. It can also be used with the included tool bits to mill grooves, or drill holes to consistent depths.

To install the flashlight base:

1. **Unplug the tool from power!**
2. Remove the collet shield.
3. Install the desired tool bit.
4. Screw the router base onto the mini grinder in place of the collet shield.
5. Adjust the height of the router base by loosening the screw shown in **Figure 5**, and sliding the router base to the desired height. Tighten the screw in the side of the router base.

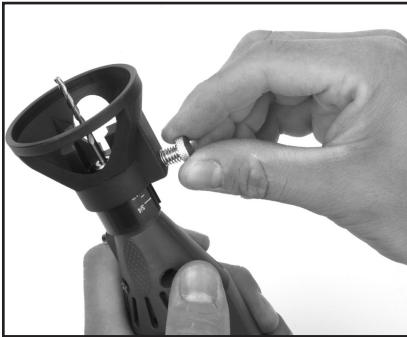


Figure 5. Router base.

Using the Tool Holder

Use the tool holder to hold the mini grinder when using the flex shaft.

To use the tool holder:

1. Slide the threaded base of the tool holder into the hole in the clamp base.
2. Thread the nut onto the base of the tool holder, then rotate the tool holder until it is firmly attached to the clamp base.
3. Clamp the base to a table or other sturdy object. Make sure the base cannot rotate loose.
4. Extend the tool holder by rotating the shaft to loosen the joints, and then extending each section.
5. Rotate the shaft in the opposite direction to tighten it at the right height.
6. Fold out the hanger on the mini grinder and hang it from the hook.

MAINTENANCE

Daily Maintenance

These items should be done after each use.

1. Wipe the motor housing, flex shaft, and tool bits with a dry cloth or blow off dust and debris with compressed air.
2. Check for damage to bits, cords, or the housing.

Lubrication

The flex shaft needs to be lubricated with a light lithium lubricant or machine oil after 25-30 hours of use.

1. Remove the inner spindle
2. Wipe a thin film of lubricant on the inner spindle. Note: *Too much lubricant can become messy and possibly get on your workpiece. Do not use automotive grease because it is too thick.*
3. Re-install the inner spindle into the flex shaft.

Carbon Brush Replacement

Carbon brush life is 500–2000 hours, depending on the type of use. Always replace both brushes at the same time.

To replace the carbon brushes:

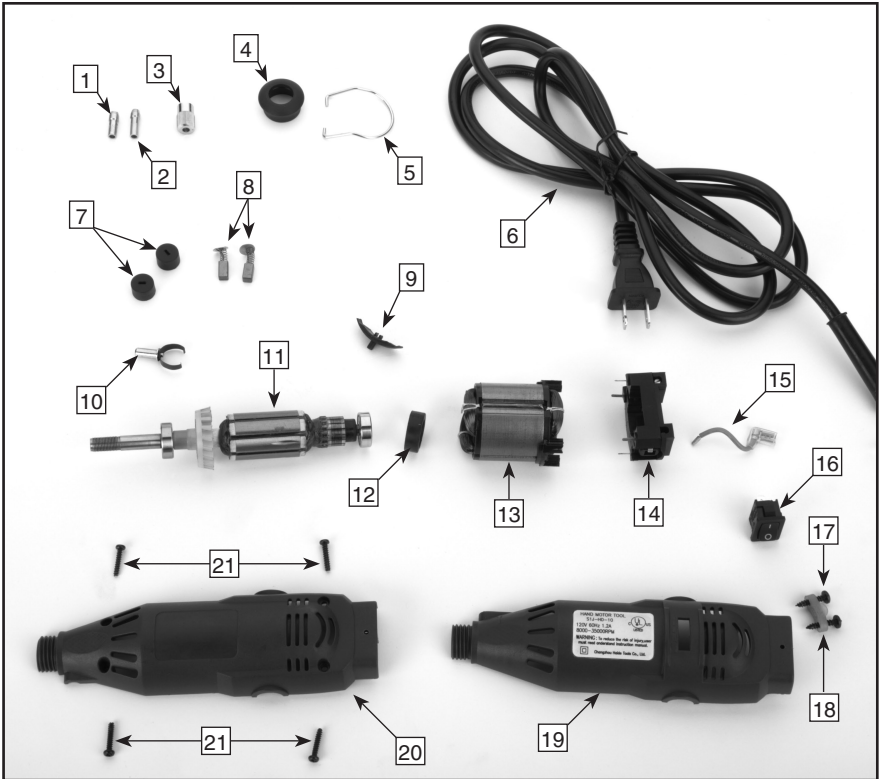
1. Use a small screwdriver to remove the caps shown in **Figure 6** from the sides of the motor housing. Be careful when removing the caps, as the brushes may spring out. Gently remove the brush using the tip of the screwdriver if it does not spring out.



Figure 6. Brush installation.

2. Examine the brush surface for pitting or cracking. If the brush is damaged or is less than an $\frac{1}{8}$ " long, replace with a replacement brush from Grizzly Industrial, Inc.
3. If the brush is not broken and is dirty, gently rub with a pencil eraser until all of the dirt has been removed. Remove all eraser dust so it will not interfere with the machine.
4. Install the brushes and cap. Run the mini grinder for 5 minutes to seat the brushes before using it on a workpiece.

H6155 Rotary Mini Grinder Parts Breakdown



REF	PART #	DESCRIPTION
1	PH6155001	1/8" COLLET
2	PH6155002	3/32" COLLET
3	PH6155003	COLLET NUT
4	PH6155004	COLLET SHIELD
5	PH6155005	HANGER
7	PH6155007	BRUSH CAP
8	PH6155008	CARBON BRUSH
9	PH6155009	VARIABLE SPEED LEVER
10	PH6155010	COLLET LOCK
11	PH6155011	ARMATURE

REF	PART #	DESCRIPTION
12	PH6155012	RUBBER CAP
13	PH6155013	WINDING
14	PH6155014	ELECT CONNECTOR
15	PH6155015	CONNECTING WIRE
16	PH6155016	ON/OFF SWITCH
17	PHTEK4	TAP SCREW 10-24 X 3/8"
18	PH6155018	STRAIN RELIEF
19	PH6155019	TOP HOUSING
20	PH6155020	BOTTOM HOUSING
21	PHTEK3	TAP SCREW #5 X 1/2"



REF	PART #	DESCRIPTION
22	PH6155022	FLEX SHAFT
23	PH6155023	INNER SPINDLE
24	PH6155024	SANDING ASSORTMENT BAG
25	PH6155025	TOOL BIT ASSORTMENT BAG
26	PH6155026	CLAMP BASE
27	PH6155027	TELESCOPING TOOL HOLDER
28	PH6155028	TOOL BAG
29	PH6155029	FLASHLIGHT BASE
30	PH6155030	ROUTER BASE
31	PH6155031	FLEX SHAFT COLLET NUT
32	PH6155032	FLEX SHAFT COLLET
33	PH6155033	ROTARY MINI GRINDER

WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Authorization Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Grizzly Industrial, Inc.
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E-Mail:
techsupport@grizzly.com

Web Site: <http://www.grizzly.com>

Thank you again for your business and continued support. We hope to serve you again soon!

WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone Number _____ E-Mail _____ Serial # _____

Model # _____ Serial# _____ Order # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. Of course, all information is strictly confidential.

- How did you learn about us?
 Advertisement Friend
 Catalog Card Deck
 World Wide Web
 Other _____
- What is your annual household income?
 \$20,000-\$29,999 \$60,000-\$69,999
 \$30,000-\$39,999 \$70,000-\$79,999
 \$40,000-\$49,999 \$80,000-\$89,999
 \$50,000-\$59,999 \$90,000 +
- What is your age group?
 20-29 50-59
 30-39 60-69
 40-49 70 +
- How long have you been a woodworker?
 0 - 2 Years 8 - 20 Years
 2 - 8 Years 20+ Years
- How would you rank your woodworking skills?
 Simple Advanced
 Intermediate Master Craftsman
- What stationary woodworking tools do you own?
Check all that apply.
 Air Compressor Panel Saw
 Band Saw Planer
 Drill Press Power Feeder
 Drum Sander Radial Arm Saw
 Dust Collector Shaper
 Spindle Sander Jointer
 Table Saw Lathe
 Mortiser Wide Belt Sander
 Horiz.Boring Machine
 Vacuum Veneer Press
 Other _____
- How many of your woodworking machines are Grizzly? _____
- Which benchtop tools do you own? Check all that apply.
 1"x42" Belt Sander 6" - 8" Grinder
 5" - 8" Drill Press Mini Lathe
 8" Table Saw 8" - 10" Bandsaw
 Scroll Saw Disc/Belt Sander
 Spindle/Belt Sander Mini Jointer
 10"-12"Thickness Planer
 Other _____
- How many of the machines checked above are Grizzly? _____
- Which portable/hand held power tools do you own? Check all that apply.
 Belt Sander Orbital Sander
 Biscuit Joiner Palm Sander
 Circular Saw Portable Planer
 Detail Sander Saber Saw
 Drill/Driver Reciprocating Saw
 Miter Saw Router
 Other _____
- What machines/supplies would you like Grizzly Industrial to carry?

- What new accessories would you like Grizzly Industrial to carry?

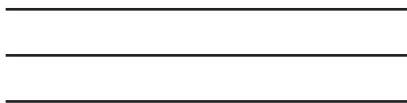
- What other companies do you purchase your tools and supplies from?

- Do you think your purchase represents good value?
 Yes No
- Would you recommend Grizzly to a friend?
 Yes No
- Would you allow us to use your name as a reference for Grizzly customers in your area? **Note: We never use names more than three times.**
 Yes No
- Comments: _____

Send a Grizzly Catalog to a friend:

Name _____
Street _____
City _____ State _____ Zip _____

FOLD ALONG DOTTED LINE



Place
Stamp
Here



GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069



TAPE ALONG EDGES--PLEASE DO NOT STAPLE