

CHICAGO

Electric Power Tools

VIBRATORY TUMBLER

Model 93252

ASSEMBLY AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.
Revised Manual 09j

Specifications

Construction:	Steel Base Cover Polyurethane drum and Lid Polypropelyne Base	Features:	Steel Coil Mounted Drum All Plastic Drum Components Rubber Mounted Feet
Power Requirement:	120 VAC / 60 Hz 0.6 Amp start up, 0.4 Amp running	Power Cord:	5'4", 18AWGX3C Three Prong with Ground
Dimensions:	7-3/4" Diameter opening Drum with 5 LB. Capacity 12-1/2" H x 9-3/4" W	Net Weight:	9.30 LBS. Empty

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.
4. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt whether the outlet is properly grounded.** If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
5. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
6. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
7. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
8. **Do not abuse the Power Cord. Never use the Power Cord to carry the tool or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.

REV 05i

9. **When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”.** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

Personal Safety

10. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
11. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
12. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Plugging in power tools with the Power Switch on, invites accidents.
13. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
14. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.
15. **Use safety equipment. Always wear eye protection.** Dust mask, nonskid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

16. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
17. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.
18. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
20. **Maintain tools with care. Keep cutting tools maintained and clean.** Properly maintained tools are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools “Do not use” until repaired.
21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool’s operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

Service

23. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
24. **When servicing a tool, use only identical replacement parts.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

Specific Safety Rules

1. **Maintain labels and nameplates on the tool.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. **Always wear ANSI approved safety impact eye goggles, full face shield and heavy work gloves when using the tool.** Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.
3. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.
4. **Make sure to read and understand all instructions and safety precautions as outlined in the manufacturer's manual.**
5. **Only use this tumbler on a solid level surface.**
6. **Always keep the power extension cord away from moving parts on the tool.**
7. **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the tool.
8. **Do not force the tool.** This tool will do the work better and safer at the speed and capacity for which it was designed.
9. **Never lay the tool down until the motor has come to a complete stop.** The tool may create unforeseen risk while the motor cycles down.
10. **Never leave the tool unattended when it is plugged into an electrical outlet.** Turn off the tool, and unplug it from its electrical outlet before leaving.
11. **Always unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.**
12. **WARNING!** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contain 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 and cement or 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. (*California Health & Safety Code 25249.5, et seq.*)
13. **WARNING!** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

GROUNDING

⚠ WARNING! Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

GROUNDED TOOLS: TOOLS WITH THREE PRONG PLUGS

1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See Figure A.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal. **(See Figure A.)**
3. Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration. **(See Figure A.)**

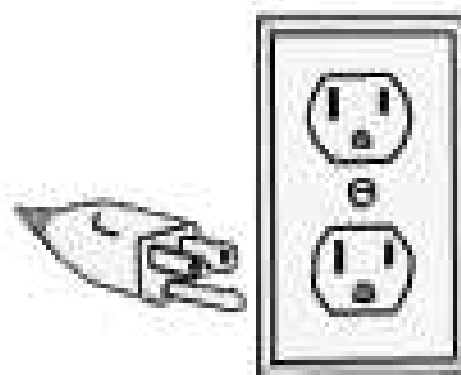


Figure A

DOUBLE INSULATED TOOLS: TOOLS WITH TWO PRONG PLUGS

4. Tools marked “Double Insulated” do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. **(See Figure B.)**
5. Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration. **(See Figure B.)**

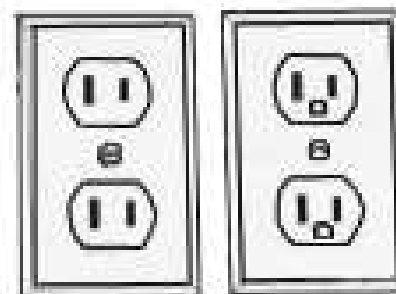


Figure B




EXTENSION CORDS

1. **Grounded** tools require a three wire extension cord. **Double Insulated** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. **(See Figure C, below.)**
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Figure C.)**
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. **(See Figure C.)**
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. **(See Figure C.)**
6. If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.
7. Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Figure C

Recommended Minimum Wire Gauge for 120 Volt Extension Cords*					
Nameplate Amperes (At Full Load)	Extension Cord Length				
	25 Feet	50 Feet	75 Feet	100 Feet	150 Feet
0 - 2.0	18	18	18	18	16
2.1 - 3.4	18	18	18	16	14
3.5 - 5.0	18	18	16	14	12
6.1 - 7.0	18	16	14	12	12
7.1 - 12.0	16	14	12	10	X
12.1 - 16.0	14	12	10	X	X
16.1 - 20.0	12	10	X	X	X

SYMBOLOLOGY

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
V ~	Volts Alternating Current
A	Amperes
no load xxxx per min.	No Load Revolutions per Minute

Unpacking

When unpacking, check to make sure that the product is intact and undamaged.

If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.

Operation

This polisher is for use with dry polishing materials (media). Do not use wet or water based media in this tumbler.

This tumbler is ideal for many finishing applications including:

- * Removing rust or other surface imperfections from hardware.
- * Removing burrs from machined or stamped hardware or other small parts.
- * Polishing small or hard to reach small parts.
- * Remove grease or other contaminants from various metal parts.

NOTE: Your tumbler can be used with a variety of media, such as plastic beads, ground corn cobs, walnut shells, etc. Many of these are available from Harbor Freight Tools.

CAUTION: Ceramic media will cause excessive wear on the tumbler bowl. Do not use ceramic or other very hard media in this tumbler.



Inside the tumbler bowl

1. Fill the Bowl about 2/3 full with polishing media. Add metal parts as needed up to a maximum of 5 LBS. of material (including media). Do not overfill. Maximum capacity will vary with the size of the items being polished. Overfilling will cause the polishing process to go much slower. If the tumbler is running too slowly, simply remove some items and restart. Caution: Not having enough media in Bowl could damage parts.
2. Place the cover on the tumbler bowl, being sure to get the gasket correctly in place. Add the Washer and Wing Nut to the top and hand tighten firmly.
3. Press the Power Switch to the "ON" position (|).

For degreasing, use ground corncob, walnut shell or plastic media. Tumble for 30 minutes to 1 hour.

To remove rust, use commercially available treated plastic media. Depending on the condition of the materials, you will have to tumble for 2 - 6 hours.

To polish, tumble in walnut hull or corncob media. Do not add water. You may add a small amount of commercial metal polish.

CAUTION: Tumbling often creates dust which may be harmful to your health. Wait for at least 1 hour after tumbling is complete and the tumbler turned OFF before opening the tumbler. This will allow the dust to settle.

CAUTION: Never tumble with the top off, as hazardous dust may be created, and the media or work materials may be ejected from the tumbler.

4. When the tumbling job is completed move the power switch to the OFF position before opening the tumbler.

Maintenance

1. When using, always be sure the gasket seals are in good condition and in place. If they become damaged, replace them.
2. The rubber feet at the bottom of the Bowl may become worn after extensive use. Inspect them periodically, and if worn, replace them.
3. Protect the motor from water or moisture. Store in a dry location when not in use.
4. This tumbler is not intended for polishing stones. For polishing stones, you need a lapidary tumbler which uses water mixed media. Lapidary tumblers are available from Harbor Freight Tools.

Some Notes on Media

The media used in standard tumblers is generally not suitable for vibratory machines. The media that is run wet is not suitable for this tumbler. Vibratory tumblers often use dry media that is too light to be effective in standard tumblers. Appropriate media for this vibratory tumbler is available from Harbor Freight Tools.

Steel and ceramic media, generally used in tumbling, may also be used in heavy duty vibratory machines. However, this tumbler is not designed to work with these heavy duty media, which will wear out the bowl prematurely.

There is a wide variety of media to be used in vibratory finishing, you are encouraged to experiment. You'd be surprised to find how many shops are using outlandish media like erasers, wood pegs, bone and other odd media (and getting good results).

Some Recommended Media Types

Here is a chart of recommended media for this vibratory tumbler. Plastic beads are usually used with a powdered abrasive added. Walnut shells and corn cob may be used alone, or with added abrasive. Polishing materials include Rouge, Ruby Powder and Linde A.

Media Type	Abrasive	Application	Density
Plastic Beads	Fine Silicate	Light cut-down of metal, surface prep for polishing	62 Lbs. per cu. foot
Plastic Beads	Medium Silicate	Medium cut-down of metal, deburring	56 Lbs. per cu. foot
Plastic Beads	Coarse Aluminum Oxide	Heavy cut-down of metal, deburring	62 Lbs. per cu. foot
Walnut Shell	Rouge	Polishing, oxide removal	45 Lbs. per cu. foot
Walnut Shell	None added	Polishing, final polish	45 Lbs. per cu. foot
Corn Cob	None added	Polishing, final polish	29 Lbs. per cu. foot
Red Rouge	1st step polisher	Powdered Polishing Additive	N/A
Ruby Powder	Medium polisher	Powdered Polishing Additive	N/A
Linde A	Finish polisher	Powdered Polishing Additive	N/A

Parts List

PART NO.	DESCRIPTION	QTY			
			23	Tumbler Lid	1
1	Plastic Base	1	24	Base Cover	1
2	Rubber Band	1	25	Wing Nut M6	1
3	Suspension base	1	26	Fender Washer Ø6	3
4	center shaft M6	1	27	Rubber Seal	2
5	Nut M4	7	28	Power Switch	1
6	Spring Washer Ø4	15	29	Power Cord & Plug	1
7	Fender Washer Ø4	8	30	Capacitor	1
8	Bolt M4x20	4	31	Connector	1
9	Bolt M6x35	4	32	Bolt M4x5	1
10	Rubber Mount	8	33	Rubber Feet	3
11	Flat Washer Ø6	14	34	Screw M4x16	3
12	Nut M6	9	35	Rubber Seal	1
13a	Pad	4	36	Tooth Washer Ø6	1
14	Flast Washer Ø4	11	37	Lock Nut M6	1
15a	Brace	4	38	Sleeve	1
16a	Motor	1	39	Bolt M4x35	4
17	Steel Coil	4	40	Bolt M4x25	4
18a	Block	1	41	Bolt M4x10	4
19	Set Screw M5x12	1	42	Bolt M4x10	3
20	Lock Nut M6	1	43	Ring	1
21	Big Rubber Spacer	1	44	Mesh	1
22	Tumbler Bowl	1	45	Spring Washer Ø6	1

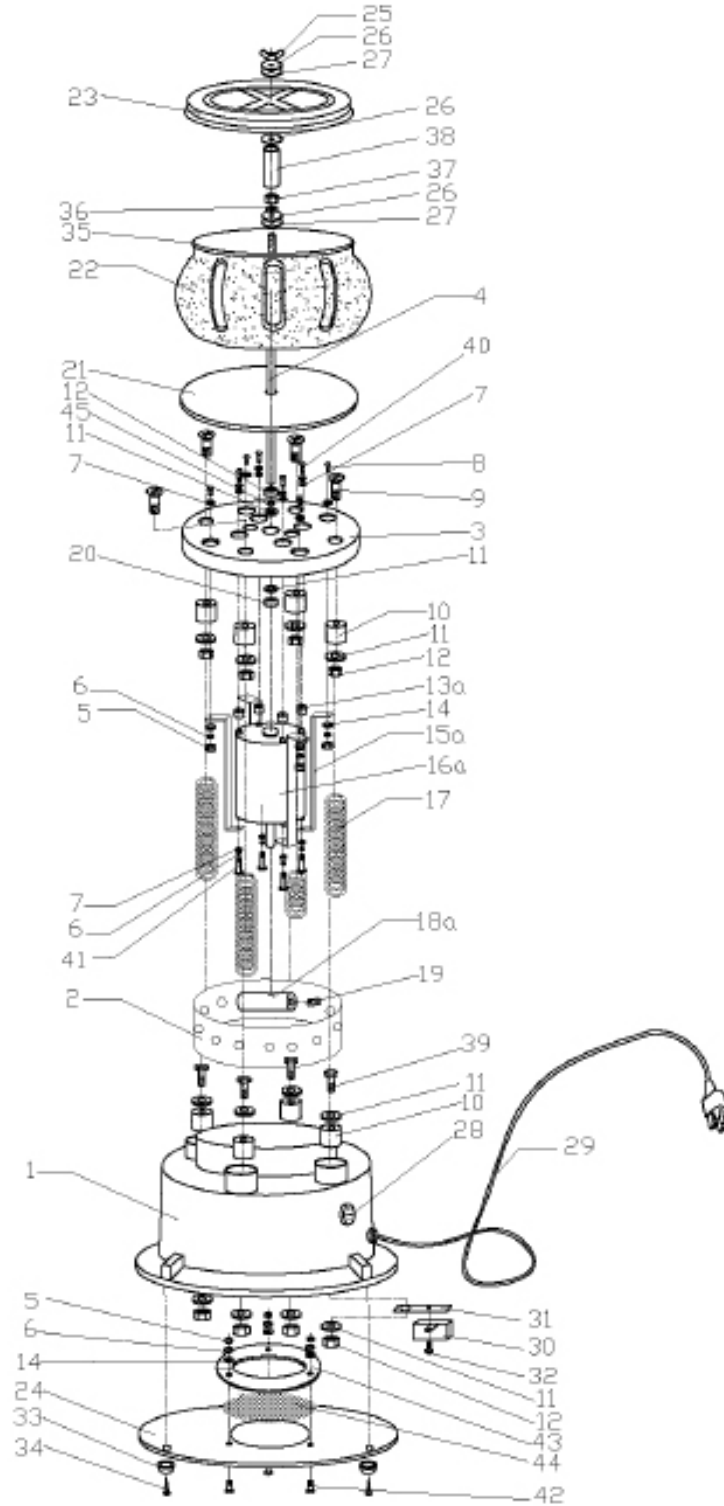
PLEASE READ THE FOLLOWING CAREFULLY

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NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

REV 06i, REV 07c

Assembly Drawing



LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. 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 product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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