

CHICAGO
Electric Power Tools

VACUUM / BLOWER

WET AND DRY-2.2 GAL.

Model 90981

OPERATING INSTRUCTIONS



3491 Mission Oaks Blvd., Camarillo, CA 93011

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For technical questions and replacement parts, please call 1-800-444-3353

Specification

ITEM	DESCRIPTION
Electrical Requirements	120V / 60 Hz 1.5 Peak Horsepower Double Insulated, Fan Cooled Motor
Holding Capacity	2.2 Gallons
Flex Hose Dimensions	1-5/8" diameter X 56-3/4" Long
Overall Dimensions	11-1/4"W X 14-1/4"L X 14-3/4"H
Weight	7.0 Lbs.

Warning: For Indoor Use Only

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 this product, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this product!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Keep children away.** Do not allow children to use this product. The Vacuum/Blower is not a toy.
3. **Store idle equipment.** When not in use, keep this product in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **Do not use this product if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
6. **Maintain this product with care.** Keep tools clean and dry for better performance.

7. **Do not overreach.** Keep proper footing and balance at all times.
8. **Always use protection.** Wear ANSI approved safety impact eye glasses when using this product. ANSI approved safety impact eye glasses are available from Harbor Freight Tools.
9. **When necessary, use hearing and breathing protection.** Wear ANSI approved hearing protectors when using the Vacuum/Blower for extended time periods or using it in a noisy work area. For dusty operations, wear an ANSI approved dust mask. ANSI approved hearing protectors and ANSI approved dust masks are available from Harbor Freight Tools.
10. **Industrial Applications must follow OSHA requirements.**
11. **Stay Alert. Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.**
12. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for damaged parts and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
13. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
14. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the tool without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool.
15. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.
16. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **DO NOT SUBMERGE THE MOTOR HOUSING (3) IN WATER OR OTHER LIQUIDS.**
2. **Guard against Electric Shock.** Always prevent body contact with grounded surfaces such as pipes, radiators, ranges, refrigerators, etcetera. Do not handle any part of the Vacuum/Blower with wet hands when the unit is plugged in to its electrical supply source. To comply with the National Electric Code (NFPA70), and to provide additional protection from the risk of electrical shock, this Vacuum/Blower should only be connected to a receptacle that is protected by a Ground Fault Circuit Interrupter (GFCI).
3. **Reduce the Risk of fire and/or explosion.** Sparks inside the Motor assembly can ignite flammable vapors, liquids, and dust. **Do not use the Vacuum/Blower in the presence of any flammable, combustible, or explosive substances.**
4. **Avoid hazardous vapors and dusts.** Never use the Vacuum/Blower in the presence of toxic materials.
5. **Do not use the Vacuum/Blower as a sprayer. Do not use to groom animals.**
6. **Do not vacuum any material that is burning or smoking**, such as hot ashes, lit cigarettes, etcetera. Avoid vacuuming ashes all together.
7. **Warning:** People with pacemakers should consult with their physician(s) before using this product. Operation of equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.
8. **Warning:** This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm).
(*California Health & Safety Code 25249.5 et seq.*)

Unpacking

When unpacking, check to make sure the following parts (shown on page 7) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.

Operation

Note: For additional references to the parts listed below, refer to the Parts List and Assembly Diagram on pages 7 and 8 of the manual.

To Vacuum Dry Materials:

1. Note: A dry bag (19) is necessary when vacuuming dry material. If the Bag is wet when vacuuming dry material, the Bag will clog quickly and become difficult to clean. If the Bag is wet, **dry the Bag** before performing dry vacuuming. **See Figures A, B, and Assy. Diagram.**
2. To remove the Motor Housing (3) in order to empty the Container (20), or clean or replace the Bag (19), pull outward on the latches located on each side of the Container. **See Assy. Diagram and Figure C.**
3. When vacuuming, make sure the Bag (19) is in the proper position to avoid leaks an/or damage to the Vacuum/Blower. Check to make sure the Bag completely covers the Ball Basket (17) and that the Rubber Band (18) is as close to the Worm Cover (13) as possible. Any leaks will allow the vacuumed material to be blown out of the blower port and back into the surrounding environment. **See Figures A, B, and Assy. Diagram.**
4. To use the vacuum, insert the Hose (21) into the Vacuum Port. If necessary, you may place the Hose Attachment (22) over the end of the Hose. **See Figures A, B, and Assy. Diagram.**
5. To turn on the Vacuum/Blower, plug the Power Cord (4) into a 110V-120V, 3-prong, electrical outlet. Then, turn the Switch (1) to its "ON" position. **See Figures A, B, and Assy. Diagram.**

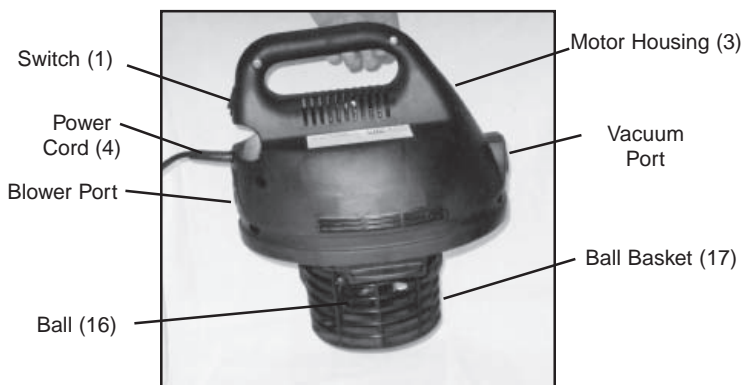
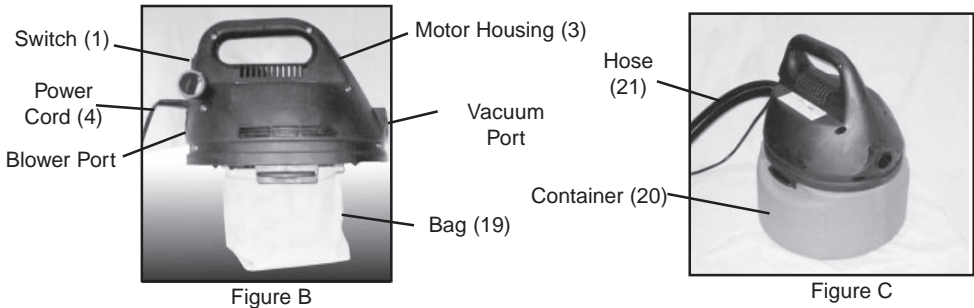


Figure A

6. Note: When vacuuming very fine dust, or a large amount of dry material, it may be necessary to empty the Container (20) and replace Bag (19) at more frequent intervals. To do so, remove the Motor Housing (3) from the Container (20). Empty all debris from the Container. Remove the Rubber Band (18) and Bag from the Ball Basket (17). Clean the Bag. Then, replace the Bag, Rubber Band, and Motor Housing. **See Figures A, B, and Assy. Diagram.**
7. When finished vacuuming, make sure to turn the Switch (1) to its "OFF" position and unplug the Power Cord (4) from the electrical outlet.

To Vacuum Liquids:

1. For Vacuuming liquids it is necessary to remove the Rubber Band (18) and Bag (19). To do so, remove the Motor Housing (3) from the Container (20). Empty all debris from the Container. Remove the Rubber Band (18) and Bag from the Ball Basket (17). **See Figures A, B, and Assy. Diagram.**
2. The Vacuum/Blower is equipped with a Ball (16) which will automatically rise to cut off the air flow when the liquid in the Container (20) reaches the full level. When this occurs, make sure your hands and feet are dry, turn "OFF" the Vacuum/Blower at Switch (1), unplug the Power Cord (4), and empty the Container. **See Figure B and C.**

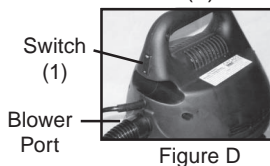


Note: When the Ball shuts off the airflow, the suction increases and the sound of the Motor becomes higher in pitch due to increased Motor speed. **TO AVOID DAMAGE TO THE VACUUM/BLOWER, DO NOT RUN THE MOTOR WITH THE BALL IN THE RAISED POSITION. See Figure A, and Assy. Diagram.**

3. When finished vacuuming, make sure to turn the Switch (1) to its "OFF" position and unplug the Power Cord (4) from the electrical outlet.

To Use The Blower

1. NOTE: The Vacuum/Blower has the capability to blow sawdust, dirt, sand, leaves, and other debris out of work areas, garages, patios, driveways, etcetera. **ALWAYS** wear ANSI approved safety equipment (safety impact glasses, dust mask, hearing protection) when using the Blower. **NEVER** point the Hose (21) in the direction of another person or animal when using the Blower. **See Figures A, B, C, and Assy. Diagram.** Note: Make certain that the vacuum is clean so that there will be no dust ejected when the blower is activated.
2. Locate the Blower Port on the Vacuum/Blower, and insert one end of the Hose (21) into the Port. **See Figures A, B, C, D, and Assy. Diagram.**
3. Turn the Switch (1) to its "ON" position to operate the Blower.
4. When finished using the Blower, make sure to turn the Switch (1) to its "OFF" position and unplug the Power Cord (4) from the electrical outlet.



INSPECTION, MAINTENANCE, AND CLEANING

1. CAUTION: Always disconnect the Vacuum/Blower from its electrical supply source before performing and inspection, maintenance, or cleaning.
2. Before each use, inspect the general condition of the Vacuum/Blower. Check for broken parts, damaged power cord, and any other condition that may affect its safe operation. If a problem with the Vacuum/Blower occurs, immediately discontinue using the tool and have the problem corrected before further use. Do not use damaged equipment.
3. Before each use, remove the Motor Housing (3) from the Container (20). Empty all debris/liquid from the Container. Check to make sure the Bag (19) is clean. If necessary, remove the Rubber Band (18) and Bag from the Ball Basket (17). Clean the Bag. Then, replace the Bag, Rubber Band, and Motor Housing.
4. Do not use solvents to clean the Vacuum/Blower, as damage to the tool may occur. To clean, use a damp cloth. If necessary, a mild detergent may be used. Then, completely dry.
5. When storing, keep the Vacuum/Blower in a box or covered with a cloth cover.

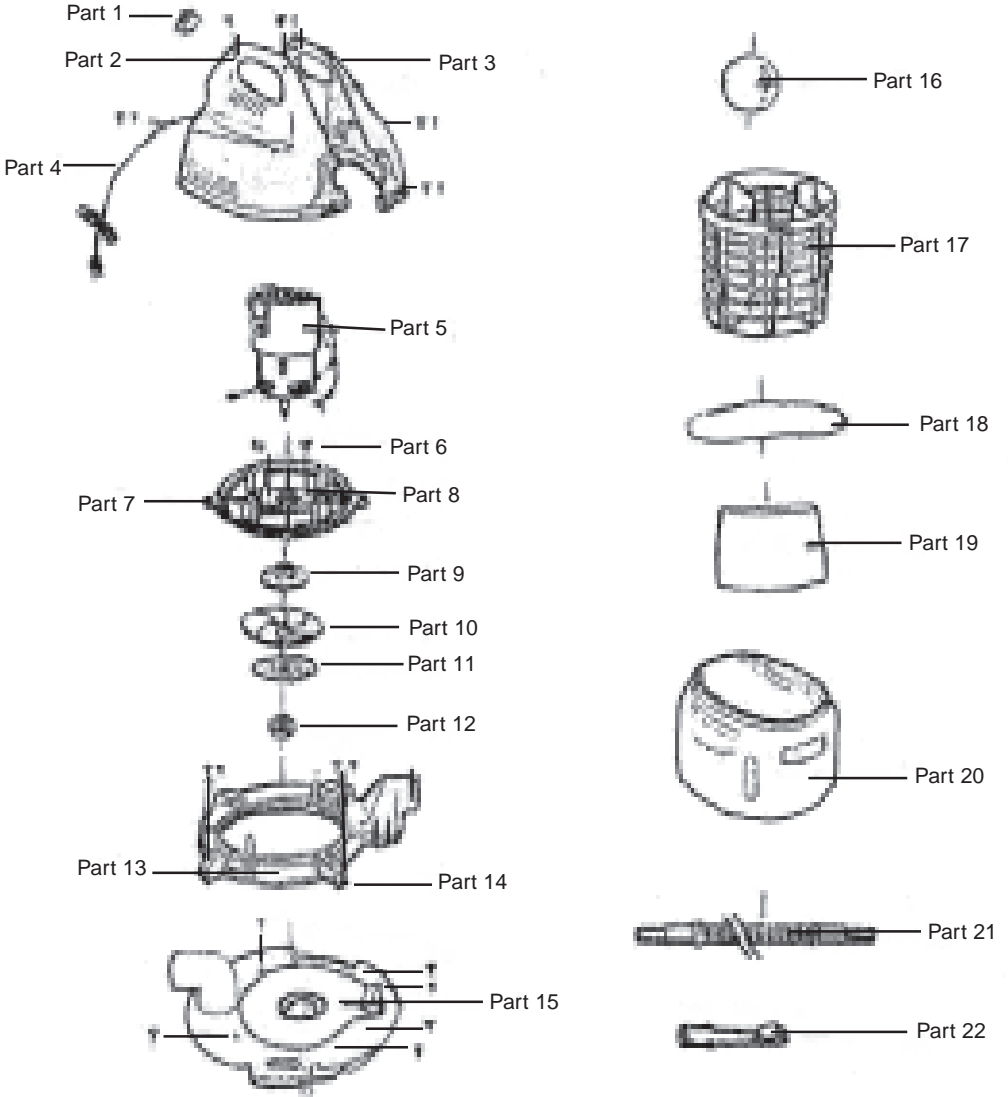
PARTS LIST

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY
1	Switch	1	12	Screw Cap	1
2	Screw (5 x 18)	7	13	Worm Cover 8mm	1
3	Motor Housing	1	14	Screw (4 X 18)	6
4	Power Cord	1	15	Stator	1
5	Motor	1	16	Ball	1
6	Screw (3 x 8)	4	17	Ball Basket	1
7	Screw (4 x 16)	2	18	Rubber Band	1
8	Motor Fixer	1	19	Bag	1
9	Bushing	1	20	Container	1
10	Impeller	1	21	Hose	1
11	Washer	1	22	Hose Attachment	1

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

ASSEMBLY DRAWING



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

REV 03/04

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