

Pittsburgh[®]

TUBING ROLLER

Model 99736

ASSEMBLY, OPERATING AND MAINTENANCE INSTRUCTIONS



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**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 13c

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INSTRUCTIONS

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE


NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

READ ALL INSTRUCTIONS

Personal Safety

1. Dress Properly - Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves and substantial footwear is recommended when working outdoors. Wear protective hair covering to contain long hair.
2.  Wear ANSI-approved safety goggles and heavy-duty work gloves. Use face or dust mask if operation is dusty.
3. Do not Overreach - Keep proper footing and balance at all times.
4. Stay Alert - Watch what you are doing. Use common sense. Do not operate Tool when you are tired.
5. **Keep hands and feet away from bending area.**

Tubing Roller Use and Care

- 1. Keep Children Away - All visitors should be kept at a distance from work area.**
2. When servicing use only identical replacement parts.
3. Use Right Tool - Do not use tool for any job except that for which it is intended.
4. Do not Force Tool - It will do the job better and with less likelihood of injury at the rate for which it was designed.
5. Store Idle Tools Indoors - When not in use, Tools should be stored indoors in dry, and high or locked-up place - out of reach of children.
6. Maintain Tool With Care - Keep tool maintained to reduce the risk of injury. Follow instructions for lubricating and changing accessories. Keep handles dry, clean, and free from oil and grease.
7. 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 condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by a qualified technician unless indicated elsewhere in this manual.
8. Never attempt to bend any tube which is pressurized or contains wire or any other objects inside.

9. Do not attempt to bend tubes that are larger than 2" in diameter.
10. Do not use fire or flame during bending.
11. Do not attempt to bend wood or plastic rods or tubes. Brittle materials such as these can break without warning, causing injury or damage.



SAVE THESE INSTRUCTIONS

SPECIFICATIONS

Materials Application	Steel, Copper and Aluminum Tubing *
Rollers Included	1" , 1-1/2", 2" O.D. Tubing
* For fabricating exhaust systems and roll bars.	

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SET UP INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INSTRUCTIONS** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Assembly

1. Mount the Turning Wheel (2) onto the Axle (3). Secure the Wheel in place using two Screws (1). Be sure Wheel and Axle turn freely, then tighten screws securely.
2. This tool may be bench mounted, if desired. To bench mount, choose an appropriate work bench for mounting. The workbench must be solid, level and strong enough to support the weight of the tool, the work material, and pressure applied to the tool during bending. Use the U-Shaped Base (8) as a template to mark the bench top. Drill two holes for mounting bolts (not included), being careful not to drill into any hidden electric or other utility lines. Mount the Base using bolts (not included), tighten securely.
3. Before use, the correct size Rollers must be installed. Pull the "R" Pins (22) from the Shafts (4 and 23), Remove the Washers (5) and pull the Shafts out of the Rollers (12 and 20) and Bushings (10).
4. Select the correct Rollers to match the diameter tubing you will be

bending. If your tubing does not match the exact size of the available Rollers, use the Roller size just larger in diameter than the tubing material.

5. Install the Rollers by inserting the Shafts (4 and 23), being sure the Washers (5) and Bushings (10) are in place. Refer to the Assembly Diagram at the end of this manual for correct assembly. Fix the Shafts in place using the "R" Pins (22). Note: Make sure to attach one Bearing (11) to each side of Rollers(12).

Functions

1. This tool is intended to bend mild steel, copper and aluminum tubing. It can be used for bending exhaust pipe, water pipe and electrical conduit. Do not bend plastic or PVC pipe with this tool.

Available Accessories/ Attachments



Use of any accessory or attachment other than those listed below may increase the risk of serious injury.

1. This Tool includes three sets of Rollers: small, medium and large.

Tubing Diameter	Minimum Radius
1"	5"
1-1/2"	7-1/2"
2"	10"

2. The minimum practical bend radius for any tube varies with the diameter and wall thickness of the tube. Extra heavy tubes can be bent to a smaller radius than thinner

wall tubes of the same diameter. In general, tubes of standard wall thickness should not be bent to a radius less than 5 to 6 times the nominal tube diameter.

3. Attempting to make a bend of too small radius will result in the tube flattening, folding or rupturing.

OPERATING INSTRUCTIONS



Read the ENTIRE IMPORTANT SAFETY INSTRUCTIONS section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

1. Before operating the Tubing Roller, put on ANSI-approved safety goggles and heavy duty work gloves.
2. Keep hands away from the Rollers (12 and 20) during operation. Severe pinch and crushing hazard exists at these areas during operation.
3. Using a Hex Wrench (not included) turn the Adjustment Screw (15) counterclockwise to raise the Middle Roller (20). Raise it enough that the work material can be inserted between either of the Rollers (12) and the Middle Roller (20).
4. Using a piece of test material, turn the Adjustment Screw (15) clockwise to lower the Middle Roller (20) slightly. Turn the Turning Wheel (2) slightly to roll the tubing between the Rollers. You will begin to bend the tubing.
5. Continue to alternately lower the Adjustment Screw (15) and turn the Wheel (2) to move the workpiece

through the device until the desired bend radius is achieved.

6. Remove the piece of test material and insert the work material between the Middle Roller (20) and either of the Rollers (12). Turn the Wheel (2) to roll the tubing through the Rollers, bending it as desired.
7. To remove the work material, you can reverse direction on the Wheel (2) or loosen the Adjustment Screw (15).
8. Simple or complex bends can be made by careful use of this basic but effective bending tool. For example, if an "S" curve is needed, make the first half of the bend, then rotate the tubing and continue the bend to make the second half of the "S".

Changing the Rollers

NOTE: Please refer to the Assembly diagram at the back of this manual for correct installation of Rollers.

1. You must change rollers to suit tubing of different diameters. Select the roller size that is closest to the size tubing you will bend.
2. To remove rollers, remove one "R" Pin (22) from the end of each of the Black Shafts (4) and the Middle Shaft (23). Slide the Shafts out, retaining the Washers (5) and Bushings (10).
3. Re-install the Black Shafts (4) and the Middle Shaft (23) with the selected Rollers, Washers (5) and Bushings (10) in place.
4. Re-install the "R" Pins (22).

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING

**TO PREVENT
SERIOUS INJURY**

FROM TOOL FAILURE:

**Do not use damaged equipment.
If abnormal noise or binding occurs,
have the problem corrected before
further use.**

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the Tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts and any other condition that may affect its safe operation.
2. **AFTER USE**, clean external surfaces of the Tool with clean, moist cloth.
3. Occasionally coat bare metal components with a light coating of oil to prevent corrosion.
4. Store this tool in a dry location away from moisture or corrosive materials.

PARTS LIST

Part	Description	QTY
1	Screw M6 x 25	2
2	Turning Wheel	1
3	Axle	1
4	Shaft (Black)	2
5	Washer	6
6	Screw M8 x 25	8
7	Side Plate	2
8	U-Shaped Base	1
9	Lock Nut m8	8
10	Bushing	4
11	Bearing	6
12a	Roller 1"	2
12b	Roller 1-1/2"	2
12c	Roller 2"	2

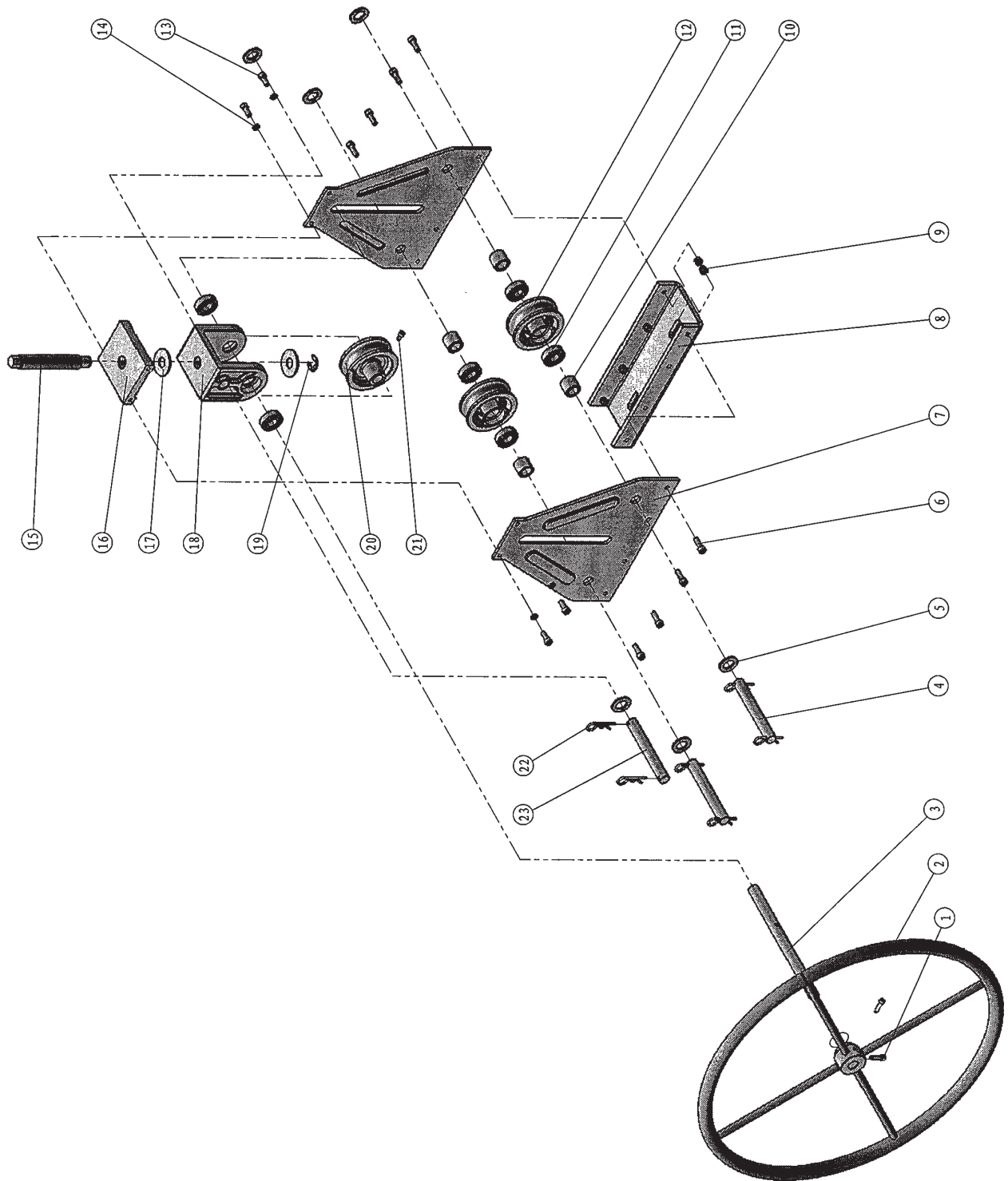
Part	Description	QTY
13	Screw m8 x 20	4
14	Lock Washer	4
15	Adjustment Screw	1
16	Top Block	1
17	Flat Washer	2
18	"U" Bracket	1
19	Snap Ring	1
20a	Middle Roller	1
20b	Middle Roller	1
20c	Middle Roller	1
21	Screw M 6 x 12	3
22	"R" Pins	6
23	Shaft	1

Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

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

ASSEMBLY DIAGRAM



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 this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, 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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PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR 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.