



# Operating Instructions and Parts Manual Manual Pinch Roll Bender

Model MPR-10HV



**JET**  
427 New Sanford Road  
LaVergne, Tennessee 37086  
Ph.: 800-274-6848  
[www.jettools.com](http://www.jettools.com)

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## 1.0 IMPORTANT SAFETY INSTRUCTIONS

### WARNING – To reduce risk of injury:

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace warning labels if they become obscured or removed.
4. This manual pinch roll bender is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a pinch roll bender, do not use it until proper training and knowledge have been obtained.
5. Do not use this machine for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear ANSI Z87.1 approved safety glasses or face shield while using this machine. (Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.)
7. Wear ear protectors (plugs or muffs) if noise exceeds safe levels.
8. Before operating the machine, remove tie, rings, watches, other jewelry, and roll sleeves up past the elbows. Do not wear loose clothing. Confine long hair.
9. Keep the floor around the machine clean and free of scrap material, oil and grease.
10. Keep machine guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately upon completion of maintenance.
11. Check damaged parts. Before further use of the machine, 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
12. Use the right tool. Do not force a tool or attachment to do a job that it was not designed to do.
13. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
14. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
15. Keep visitors a safe distance from the work area. Keep children away.
16. Make your workshop child proof with padlocks, master switches or by removing starter keys.
17. Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or allow clothing to get caught, pulling you into the machine.
18. Use recommended accessories; improper accessories may be hazardous.
19. Do not operate this machine while under the influence of drugs, alcohol or any medication.
20. Keep tools sharp and clean for safe and best performance.
21. Deburr any sharp metal edges of the workpiece before placing it into the machine.
22. Keep hands away from pinch roll area during operation.
23. Avoid holding material during the bending process.
24. Do not attempt to feed material beyond the maximum capacity of machine. See Table 1.
25. Provide for adequate space surrounding work area and non-glare, overhead lighting.
26. Don't use in dangerous or corrosive environment. Don't use tools in damp or wet locations, or expose them to rain.
27. Do not stand on the machine. Serious injury could occur if the machine tips over.
28. Use only JET factory authorized replacement parts and accessories; otherwise, the warranty and guarantee are null and void.

**⚠ WARNING:** This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

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

- lead from lead based paint
- crystalline silica from bricks, cement and other masonry products
- arsenic and chromium from chemically treated lumber

Your risk of exposure 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 dust masks that are specifically designed to filter out microscopic particles. For more information go to <http://www.p65warnings.ca.gov/> and <http://www.p65warnings.ca.gov/wood>.

**Familiarize yourself with the following safety notices used in this manual:**

**⚠ CAUTION** This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

**⚠ WARNING** This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

## SAVE THESE INSTRUCTIONS

### 2.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for the JET Model MPR-10HV Manual Pinch Roll Bender. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: [www.jettools.com](http://www.jettools.com).

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

**⚠ WARNING** Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

**Register your product online -** <http://www.jettools.com/us/en/service-and-support/warranty/registration/>

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### 4.0 Specifications for Pinch Roll Bender

Model number .....	<b>MPR-10HV</b>
<u>Stock numbers:</u>	
Bender with stand assembly .....	754430K
Bender only.....	754430B
Stand assembly only.....	754430S
<u>Capacities:</u>	
Standard roll profiles and capacities.....	(see sect. 11.0, Table 1)
<u>Main materials:</u>	
Head .....	cast steel
Head rear cover .....	sheet metal
Stand .....	sheet metal / plate steel
Rolls.....	hardened steel, 58 HRC
Gears .....	cast
<u>Dimensions:</u>	
Roll shaft diameter.....	30 mm (1.18 in.)
Top roll diameter.....	98 mm (3.86 in.)
Bottom roll diameter.....	118.1 mm (4.65 in.)
Shipping dimensions (LxWxH):	
Bender .....	50 x 48 x 70 cm (19-5/8 x 18-7/8 x 27-1/2 in.)
Stand .....	60 x 34 x 86 cm (23-5/8 x 13-3/8 x 33-7/8 in.)
Overall dimensions (LxWxH) .....	147 x 58 x 55 cm (57-7/8 x 22-53/64 x 21-21/32 in.)
<u>Weights (approximate):</u>	
Bender (Net/Shipping) .....	137 / 158 kg (302 / 348 lb)
Stand (Net/Shipping) .....	31 / 33 kg (68.3 / 73 lb)

*L=length; W=width; H=height*

*The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.*

## 4.1 Machine dimensions

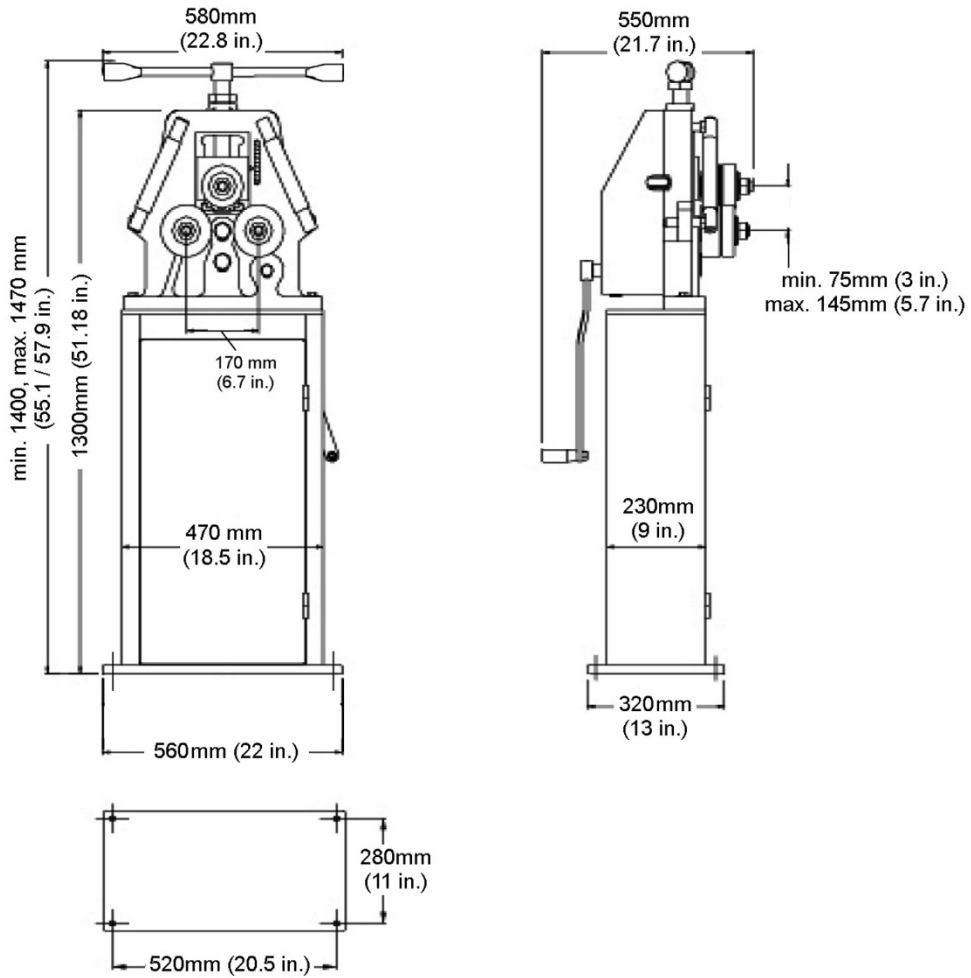


Figure 4-1: machine dimensions

**⚠WARNING** Read and understand the entire contents of this manual before attempting set-up or operation! Failure to comply may cause serious injury.

## 5.0 Setup and assembly

Open shipping container(s) and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the machine is assembled and running properly.

Compare the contents of your container with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

### 5.1 Shipping contents

- 1 Pinch Roll Bender
- 1 Stand
- 2 Hex cap screws, M12x45
- 2 Flat washers, M12
- 2 Open end wrenches, 32-34; 22-24
- 3 Tube rollers
- 13 Spacers
- 1 Operating Instructions and Parts Manual
- 1 Warranty Card

### 5.2 Positioning and cleanup

1. Remove any fasteners holding machine to pallet, and use forklift or hoist with straps to carefully move bender into position atop stand. Place straps around handle, as shown in Figure 5-1. **Lifting equipment must be properly rated for weight of machine.**
2. Secure bender to stand with the provided screws and washers.

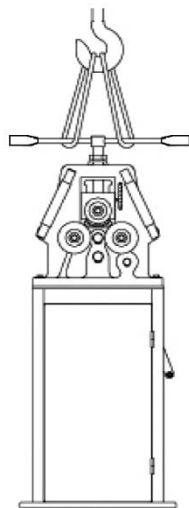


Figure 5-1

3. Position machine so there is enough room on all sides for general maintenance and feeding of materials. Anchor machine to a stable floor, preferably concrete, using lag screws or other appropriate fasteners through the holes in stand. Level the machine; use shims if needed.
4. The crank handle has been mounted in reverse position for shipping purposes. Loosen set screw and install handle in operating position.
5. Exposed metal surfaces have been given a protective coating. Remove this with a soft cloth and a cleaner-degreaser. Do not use gasoline, paint thinner, acetone, etc., as these may damage painted and plastic surfaces. Do not use an abrasive pad, as it may scratch polished surfaces.

## 6.0 Adjustments

### 6.1 Guide rollers

The two guide rollers at the sides prevent the workpiece from twisting as it moves through the bending rolls. Adjust these as needed, top and bottom, by turning the bolts with a wrench. See Figure 6-1.

Note: To achieve a circular profile, guide rollers must be parallel to machine surface. Otherwise a spiral profile will occur.

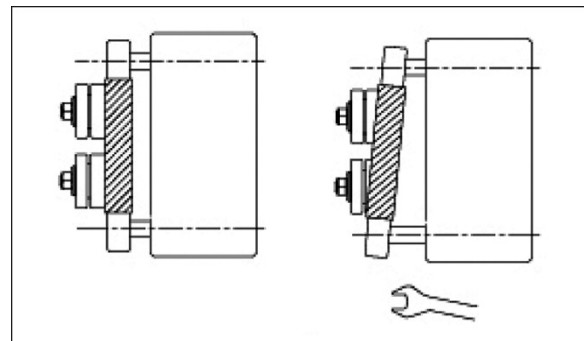


Figure 6-1

### 6.2 Pinch rolls

The Pinch Roll Bender is pre-installed with one upper roll and two lower roll sets. Thirteen spacers are provided for achieving different roll configurations.

Pinch roll configuration can be adjusted to accommodate different material forms and thickness. Remove hex nut from end of shaft (counterclockwise to loosen), and arrange rolls for desired operation. Use provided spacers as needed.

See sect. 10.0 for material profiles that can be accomplished with the provided rolls.

## 7.0 Operation

Deburr material to provide a smooth surface, and wipe off any oil on the material. Do not apply excessive pressure to material; use multiple passes to achieve desired bend.

For very long materials, use a stock roller stand or similar device to keep workpiece parallel to ground and thus facilitate bending.

1. Install rolls to match desired procedure.
2. Adjust guide rollers as needed. See sect. 6.1.
3. Loosen hex nut at bottom of handle.
4. Place material on bottom rolls, and turn handle to move upper roll until it contacts material (Figure 7-1). Material should be parallel to ground and contact all three roll sets.
5. Apply pressure on material with the upper roll. Do not apply excessive pressure.
6. Turn operating handle at back of machine.
7. Move material back and forth through the rolls. Gradually lower upper roll after each pass until desired bend is achieved.

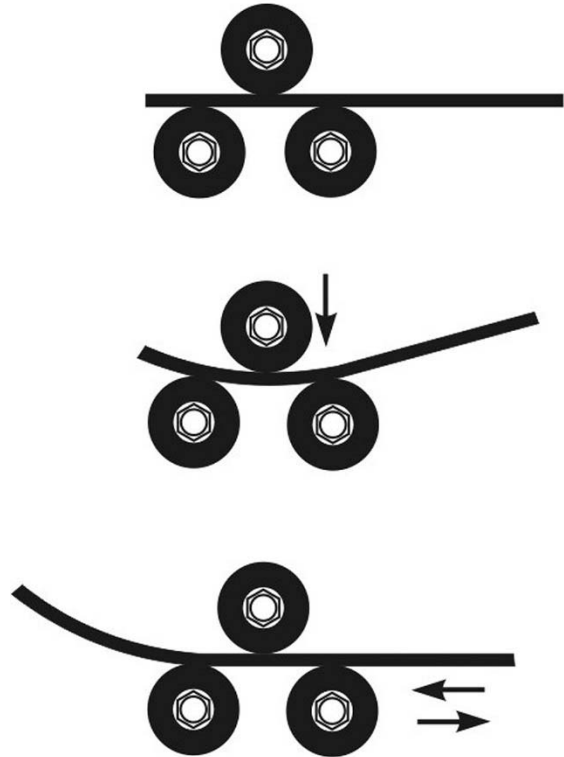


Figure 7-1

## 8.0 User-maintenance

Keep the rolls clean, and free of oil and grease residue to prevent slippage of material.

Apply oil to the 5 fittings (A, Figure 8-1) once a month, to lubricate bearings.

Apply a multi-purpose grease to handle screw and all gears (B) once a month.

### 8.1 Additional servicing

Any additional servicing should be performed by authorized service personnel.

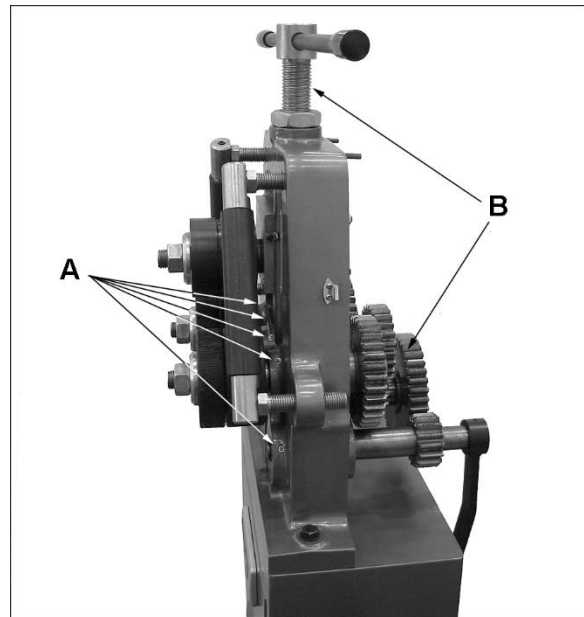


Figure 8-1: lubrication points.

## 9.0 Standard roll dimensions

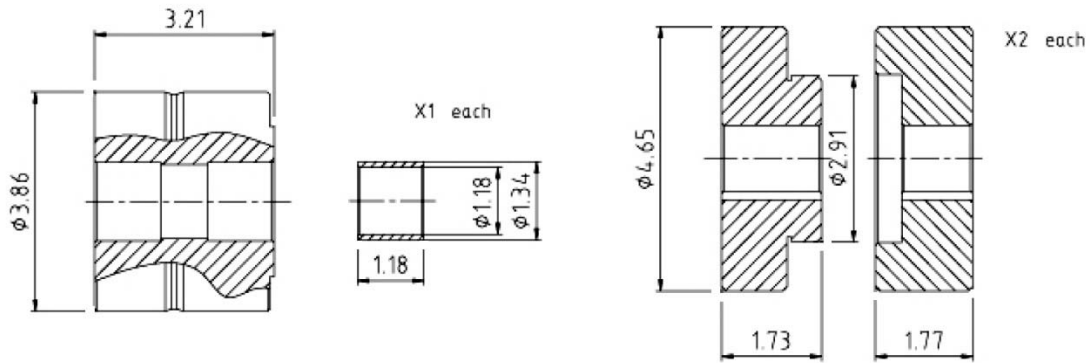


Figure 9-1

## 10.0 Standard roll profiles and capacities

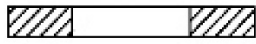






No.	Profile type	Tolerance range (in.)	Minimum (in.)
1	 Flat (hard)	0.78 x 0.19	7.5
		1.181 x 0.39	19.685
2	 Flat (easy)	0.78 x 0.19	6.25
		1.96 x 0.39	15.748
3	 Square Tube, solid	0.39	6.28
		0.78	19.685
4	 T-leg, out	1.181 x 1.181 x 0.157	15.748
		1.37 x 1.37 x 0.177	23.622
5	 T-leg, in	1.181 x 1.181 x 0.157	15.748
		1.37 x 1.37 x 0.177	23.622
6	 U-channel, in	1.181 x 1.181 x 0.177	19.685
		1.574 x 0.787 x 0.196	27.559
7	 U-channel, out	1.181 x 0.181 x 0.177	19.685
		1.574 x 0.787 x 0.196	27.559

Table 1



# 11.0 Roll configurations

Examples of material shapes that can be worked using rolls in varied configurations.

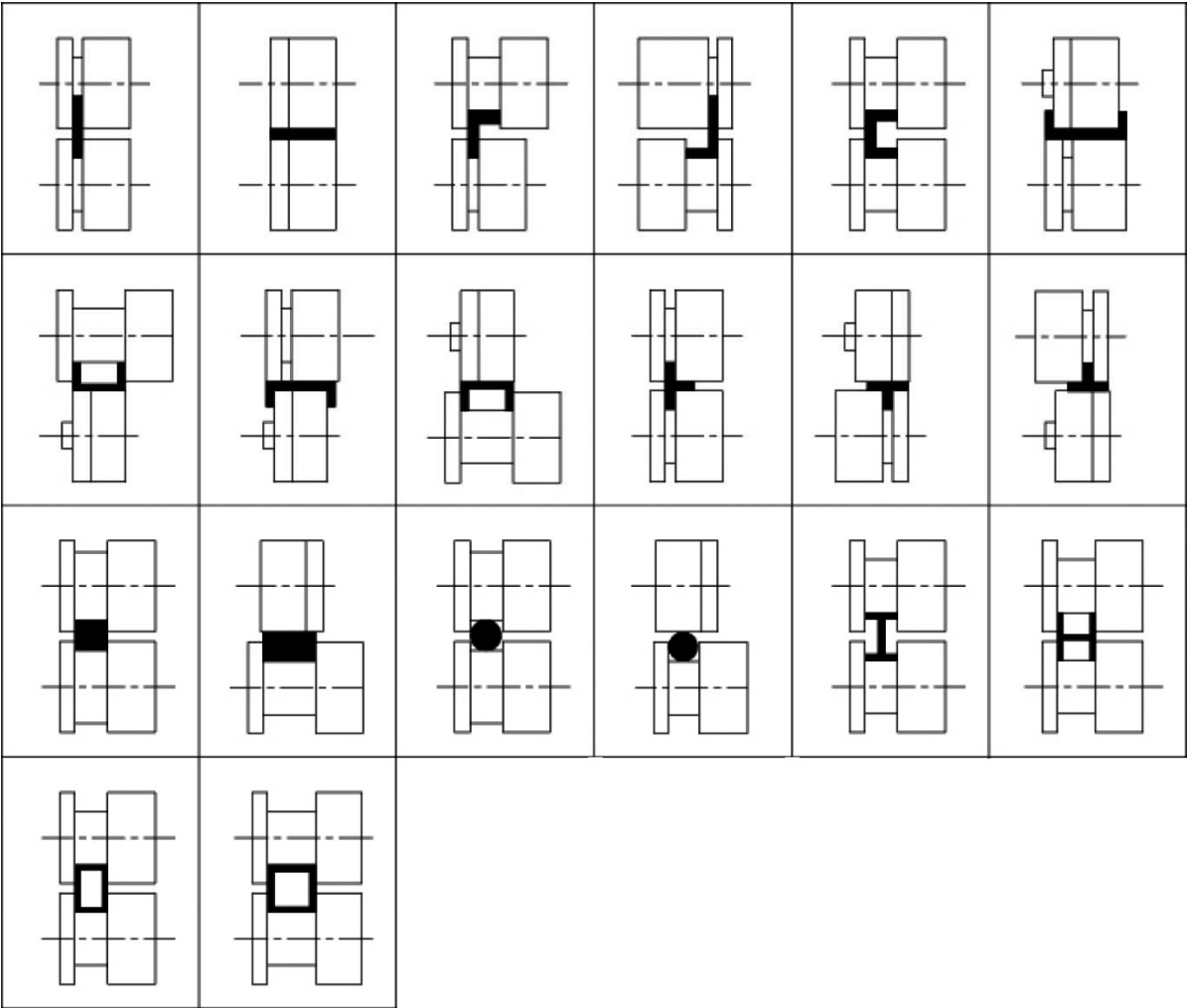


Figure 12-1

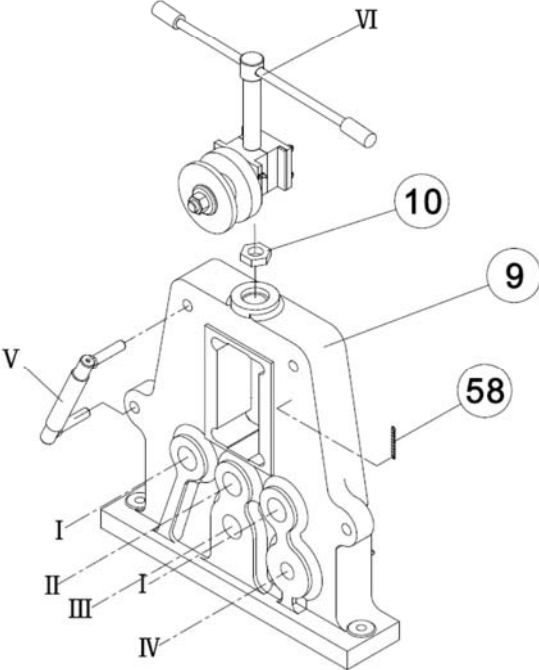
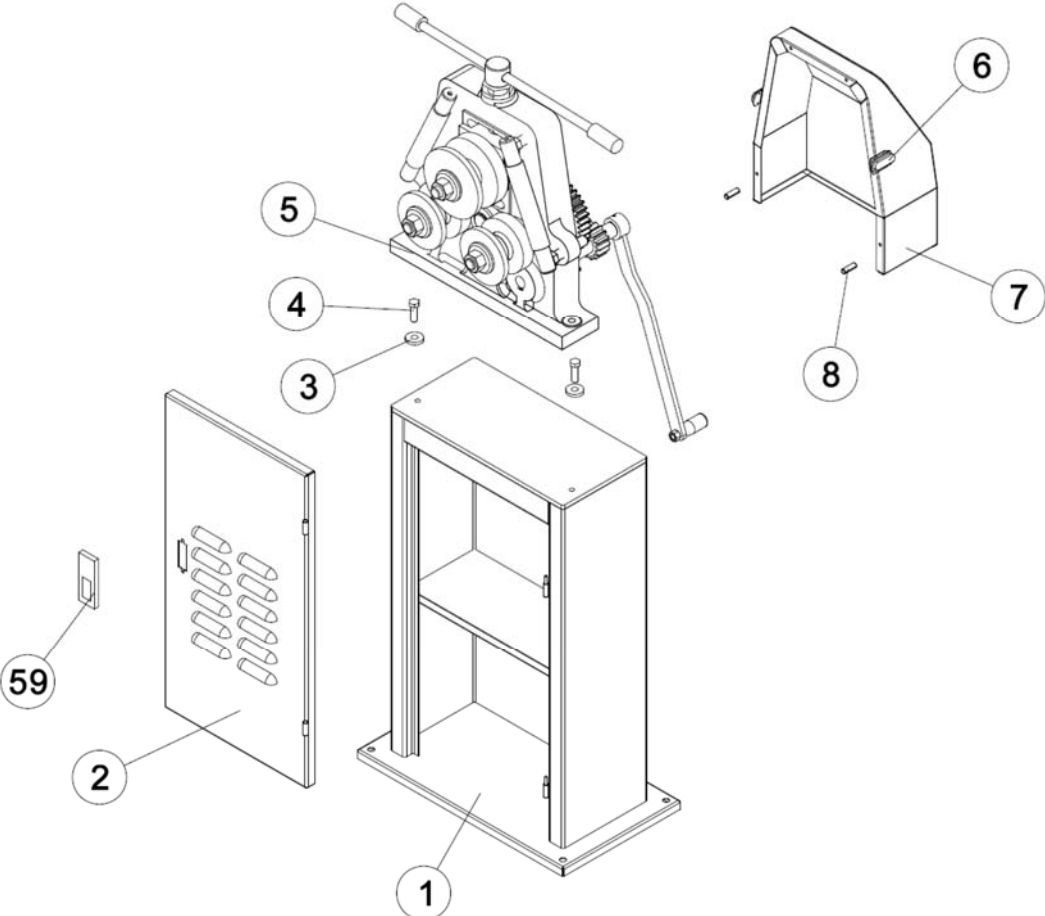
# 12.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

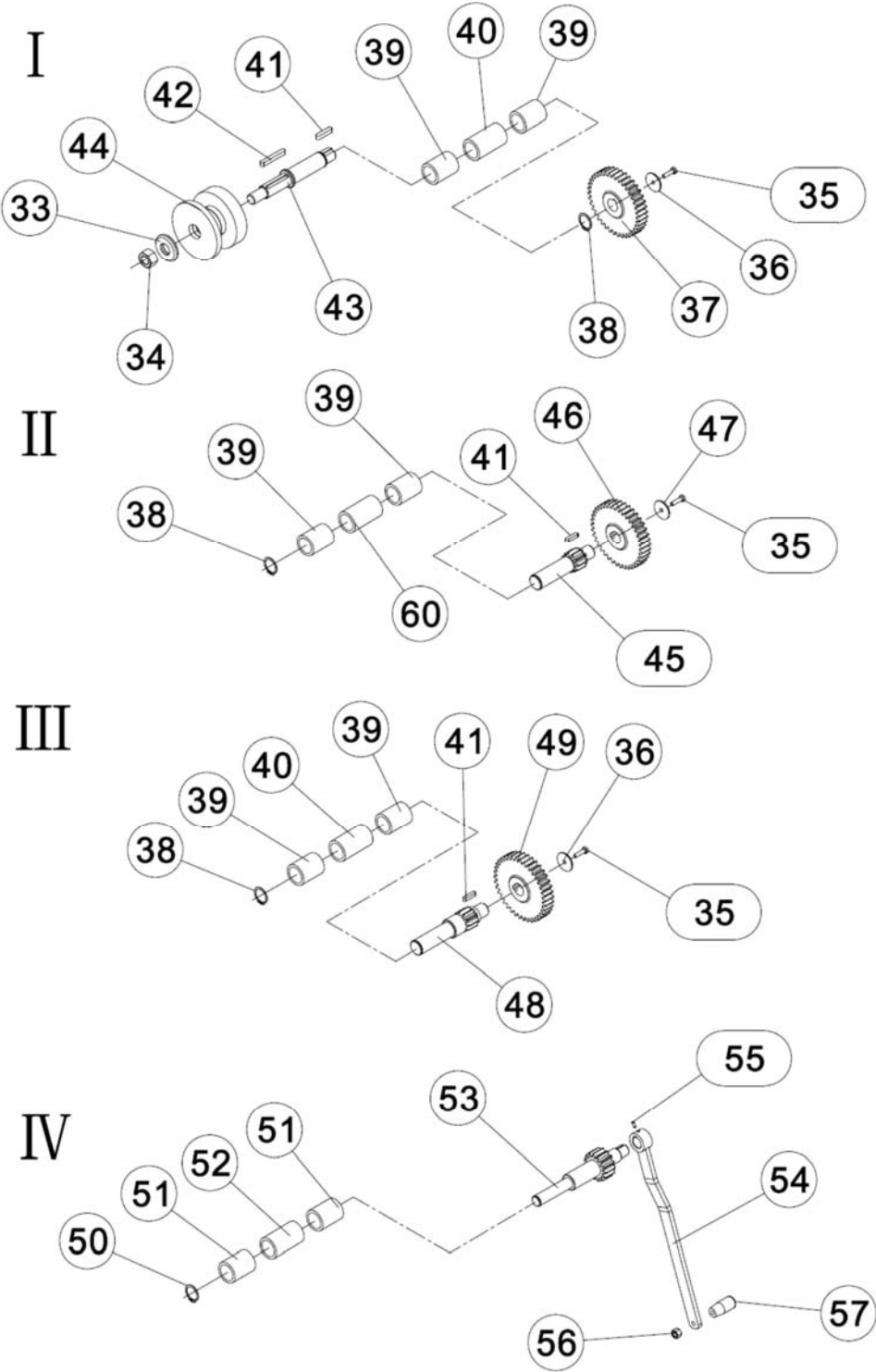
Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET.

Some parts are shown for reference only, and may not be available individually.

12.1.1 MPR-10HV Manual Pinch Roll Bender – Exploded View 1

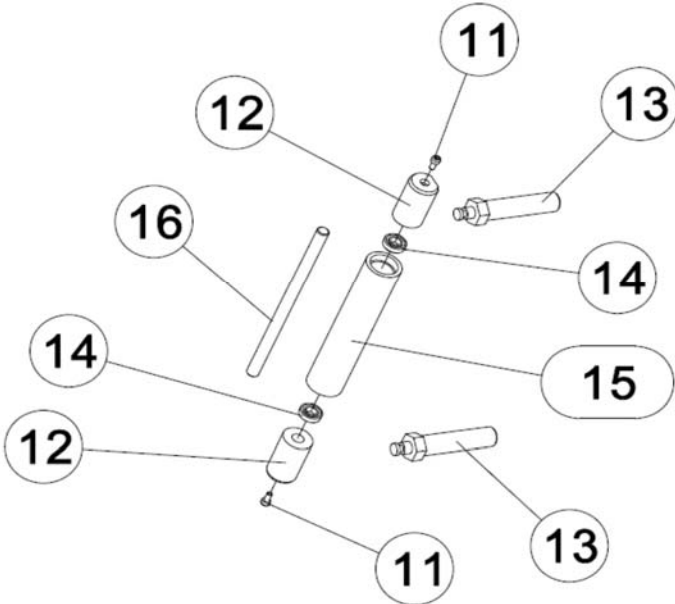


12.1.2 MPR-10HV Manual Pinch Roll Bender – Exploded View 2

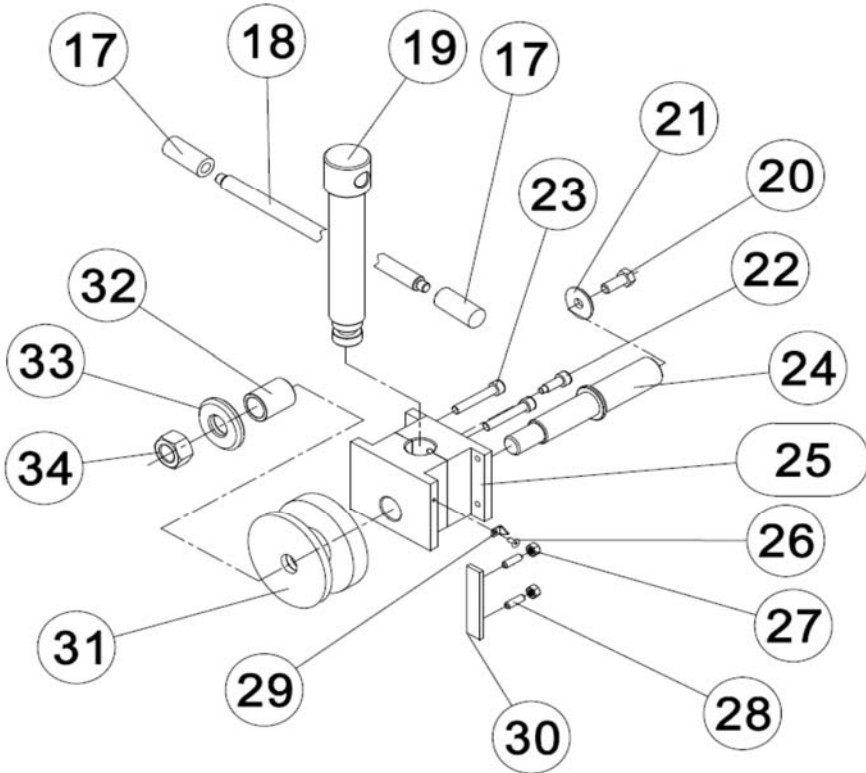


12.1.3 MPR-10HV Manual Pinch Roll Bender – Exploded View 3

V



VI



## 12.1.4 MPR-10HV Manual Pinch Roll Bender – Parts List

Index No.	Part No.	Description	Size	Qty
1	MPR10HV-01	Stand Assembly		1
2	MPR10HV-02	Door		1
3	TS-2360121	Flat Washer	12 mm	2
4	TS-2211451	Hex Cap Screw	M12x45	2
5	MPR10HV-05	Complete Upper Body Assembly		1
6	MPR10HV-06	Latch		1
7	MPR10HV-07	Back Guard		2
8	F012087	Roll Pin	6x35 mm	4
9	MPR10HV-09	Body		1
10	MPR10HV-10	Hex Nut	M36	1
11	TS-1502021	Socket Head Cap Screw	M5x10	4
12	MPR10HV-12	Side Guide Joint		4
13	MPR10HV-13	Side Guide Bolt		4
14	BB-6201ZZ	Bearing	6201-ZZ	4
15	MPR10HV-15	Guide Roller		2
16	MPR10HV-16	Side Guide Shaft		2
17	MPR10HV-17	Handle Grip		2
18	MPR10HV-18	Handle		1
19	MPR10HV-19	Handle Shaft		1
20	TS-1492021	Hex Cap Screw	M12x30	1
21	TS-2360121	Flat Washer	12 mm	1
22	MPR10HV-22	Bolt		1
23	TS-1491101	Hex Cap Screw	M10x60	4
24	MPR10HV-24	Top Roll Shaft		1
25	MPR10HV-25	Sliding Block		1
26	TS-1533032	Machine Screw, Pan Head, Phillips	M5x10	1
27	TS-1540061	Hex Nut	M8	4
28	MPR10HV-28	Stud	M8x30	4
29	MPR10HV-29	Pointer		1
30	MPR10HV-30	Slide Plate		2
31	MPR10HV-31	Upper Roll		1
32	MPR10HV-32	Bearing Bushing		2
33	MPR10HV-33	Washer		3
34	TS-2311241	Hex Nut	M24	3
35	TS-1490051	Hex Cap Screw	M8x30	4
36	MPR10HV-36	Washer		3
37	MPR10HV-37	Main Gear		2
38	F006054	External Retaining Ring	35 mm	4
39	MPR10HV-39	Graphite Bearing (1)		8
40	MPR10HV-40	Graphite Bearing (2)		2
41	7015-323	Key	8x30 mm	4
42	MPR10HV-42	Key	8x63 mm	2
43	MPR10HV-43	Shaft		1
44	MPR10HV-44	Lower Roll		2
45	MPR10HV-45	Middle Gear Shaft		1
46	MPR10HV-46	Middle Gear		1
47	MPR10HV-47	Flat Washer		1
48	MPR10HV-48	Lower Gear Shaft		1
49	MPR10HV-49	Lower Gear		1
50	F006050	External Retaining Ring	25 mm	1
51	MPR10HV-51	Graphite Bearing (1)		1
52	MPR10HV-52	Graphite Bearing (2)		1
53	MPR10HV-53	Crank Handle Shaft		1
54	MPR10HV-54	Crank Handle		1
55	TS-1523041	Socket Set Screw	M6x12	1
56	TS-2311061	Hex Nut	M6	1
57	MPR10HV-57	Handle		1
58	MPR10HV-58	Scale		1
59	MPR10HV-59	Door Latch		1
60	MPR10HV-60	Graphite Bearing (3)		2

Index No.	Part No.	Description	Size	Qty
.....	MRP10HV-62-2.....	Spacer (not shown).....	Ø58 x ø4.7 mm.....	1
.....	MRP10HV-62-1.....	Spacer (not shown).....	Ø58 x ø5.7 mm.....	2
.....	MRP10HV-62-4.....	Spacer (not shown).....	Ø58 x ø12 mm.....	6
.....	MRP10HV-62-3.....	Spacer (not shown).....	Ø58 x ø20 mm.....	4
.....	JET-165.....	JET Logo (not shown).....	165x68mm.....	1
.....	LM000244.....	ID/Warning Label, MPR-10HV (not shown).....	.....	1

## 13.0 Warranty and Service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

### Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

### Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

### What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

### Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

### How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

### More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

### How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

### Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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### Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.



427 New Sanford Road  
LaVergne, Tennessee 37086  
Phone: 800-274-6848  
[www.jettools.com](http://www.jettools.com)