

Spinnit® EBM-2.1 Two Inch Bench Model

USER'S MANUAL



Serial Number: _____

Date of Purchase: _____

Dealer: _____

Address: _____

Telephone Number: _____

Before operating this equipment, please read these instructions completely and keep these operating instructions for future reference.

Lassco  **Wizer**

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Introduction

Introduction

- Thank you for your purchase of the Spinnit® EBM-2.1 Paper Drill. Lassco-Wizer has been designing and manufacturing proven performance equipment for the graphic arts, office, screen printing, sign, awards and engraving industries for over 60 years.
- We ask that you take a moment to fill in the serial number and other information on the front cover of this manual. Please keep this manual as a reference for future use.
- For parts and service please contact the Lassco-Wizer Dealer from whom you purchased the machine. If you require assistance in locating a Lassco-Wizer Dealer nearest you, please contact our customer service department at 585-436-1934. Please have the model of your machine and the serial number when you call.
- If you wish to write to us please contact us at:

Lassco-Wizer
485 Hague Street
Rochester, NY 14606

Shipping Damage Inspection

- Remove the machine from the carton and inspect for any shipping damage. If any damage is present, report the damage to the carrier immediately. Failure to do so may void any warranties.

Safety Information

Safety Instructions

- All operators must read and understand the Users Manual and all other safety instructions before using this equipment. If after reading the manual you are still uncertain about use, please contact a Service Technician for assistance. If you need contact information for a Service Technician nearest you please call 585-436-1934. Failure to fully understand the safety instructions can result in personal injury.
- This machine is designed for one person operation. Never operate the machine with more than one person.
- Safety of this equipment is the responsibility of the users.
- Keep hands, hair, and loose clothing away from the drills.
- Please read and follow all warning labels on your machine.
- Always turn the machine off and wait for the drills to stop spinning before installing or removing drill bits. Keep hands away from drills when operating. **PLEASE NOTE THAT THE DRILL BITS MAY BE HOT AFTER USE. PROCEED WITH CAUTION WHEN CHANGING THE DRILL BITS.**
- **ONLY A SERVICING TECHNICIAN IS TO SERVICE THIS MACHINE.**

Warning Labels

- The following labels appear on your EBM-2.1 paper drill. Make sure all operators understand and follow the safety instructions.



Please read and make sure that all operators understand the operators manual and all other safety instructions before using this equipment.



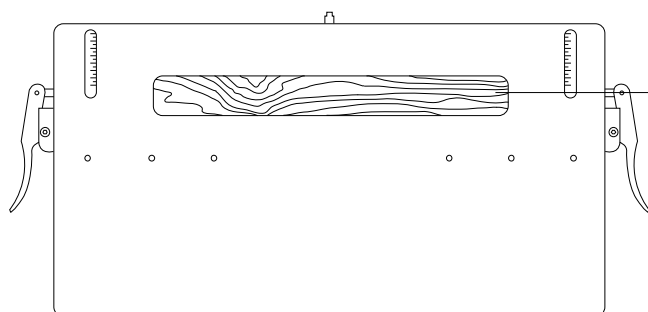
Keep hair, jewelry, loose clothing and any other items that could become entangled pulled back away from the machine when drilling.

Setting Up Your Machine

Loose Materials Inventory

■ Remove and inspect the following items:

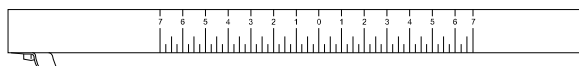
EZ-114A: Table Assembly (1)



EBM2-1034: Drill Strip (1)
(This item comes installed on the table as shown)



EZ-115A: Backgauge (1)



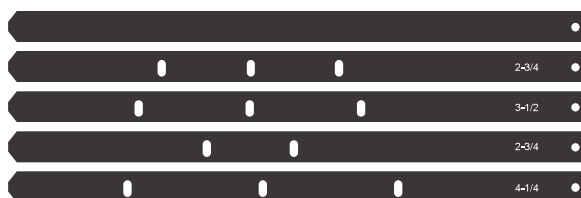
50-35: 5/16"-18
Elastic Stop Nut (1)



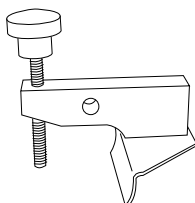
EBM-76:
Black Fiber Washer (1)



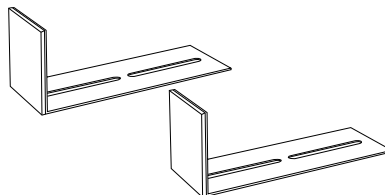
EZ-1016 Pattern Bars (set of 5)



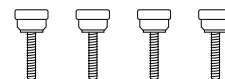
EZ-1028: Clamp Bracket (1) &
FM7-7005: 1/4" Knob (1)



FM4-4006: Paper Side Stops (2)



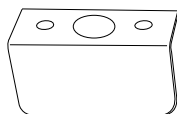
FM4-4007: Side Stop Screws (4)



EBM2-1048: Chip Bag (1)



EZ-1014: Table Stop (2)



One of these items comes installed

10-32 Elastic Stop Nuts (2)



1/4" Lock Washers (2)



Hollow Drill Bit (1)

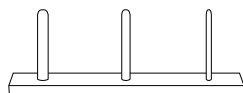


This item comes installed

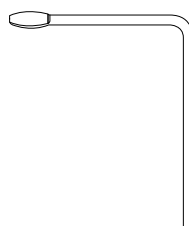
Spin-Eze:
Drill Bit Lubricant (1)



CC-2: Chip Clearer (1)



EBM-32:
Chuck Release Key (1)



HEX-18:
Hex Wrench 1/8" (1)



HEX-332:
Hex Wrench 3/32" (1)

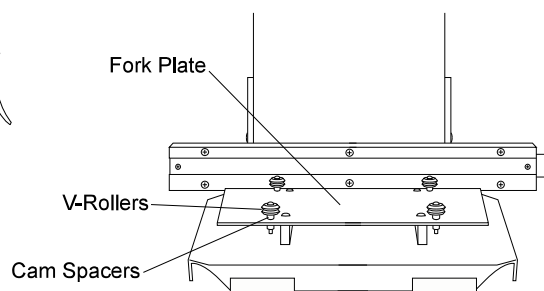
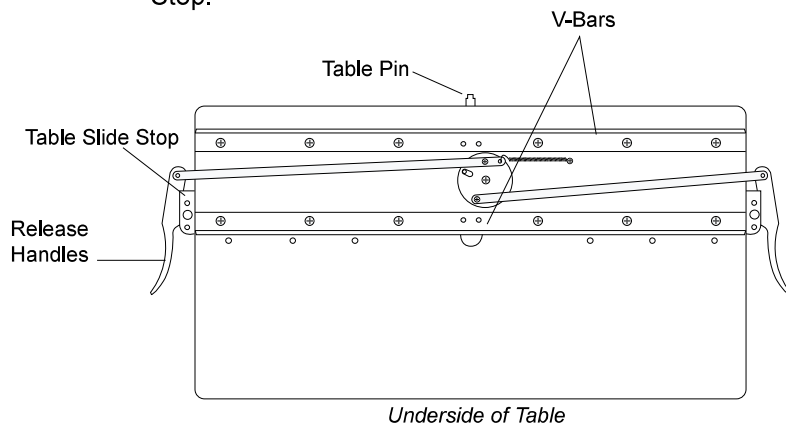


Setting Up Your Machine

Table Assembly Installation

Step #1 ■ Grasping the Table and depressing the Release Handles to unlock the Table Pin, slide the V-Bars located on the underside of the Table into the V-Rollers on the Base of the machine as shown.

Note: Please note that one of the Table Stops (EZ-1014) comes installed. Make sure when installing the Table onto the Base you are sliding it from right to left (while facing the machine) to avoid obstruction from the pre-installed Table Stop.



Note: Please note that, although they are factory set, you may have to adjust the cams on the V-Rollers if the Table is too tight or too loose after installation. If so, remove the Table. With an open-end wrench and holding the screw head in place with a screwdriver, adjust the cam spacers under the V-Rollers. If the Table is too tight, adjust the V-Rollers out towards the edge of the Fork Plate (EZ-1000). If the Table is too loose, adjust the V-Rollers in toward the center of the Fork Plate.

Step #2 ■ Attach the second Table Stop (EZ-1014) to the underside of the table using two 1/4" lock washers and two 10-32 Elastic Stop Nuts as shown. Tighten with a wrench until secure.



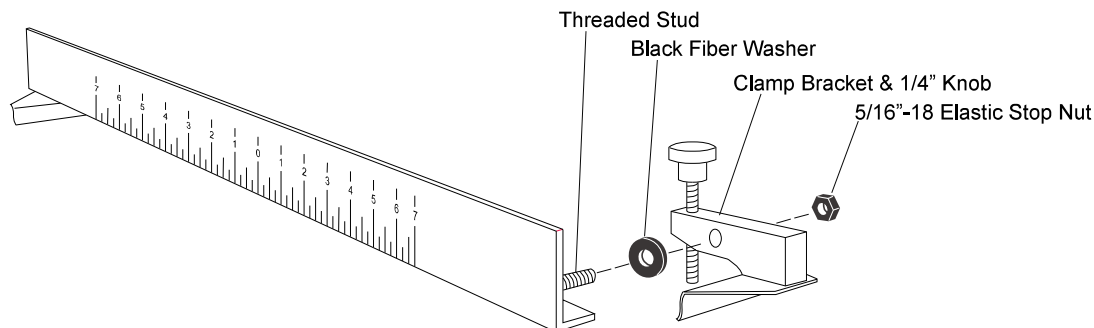
1/4" Lock Washers

10-32 Elastic Stop Nuts

Setting Up Your Machine

Backgauge Assembly

- Step #3** ■ Assemble the Backgauge by placing the Black Fiber Washer (EBM-76) over the Threaded Stud. Place the Clamp Bracket (EZ-1028) on the Threaded Stud with the knob end toward the center of the assembly. Tighten the Elastic Stop Nut on the Threaded Stud with a wrench until it is snug, allowing the Clamp Bracket to move with slight resistance.



- Step #4** ■ Attach the Backgauge to the Table by hooking the left end over the Side Iron (FM4-4003) on the side as shown in the accompanying picture. Align both ends of the Backgauge using the Table Scales (3S-14) so that it is squared correctly. When it is positioned as desired tighten down the Clamp Bracket Knob as shown.

Note: Do not position the Backgauge too close to the hollow drill bit so that it touches. This can cause serious damage to the hollow drill bit causing it to break or shatter. The Backgauge must be at least 1/8" from the circumference of the hollow drill bit.



Paper Side Stops

- Step #5** ■ Attach the Paper Side Stops (FM4-4006) using two Side Stop Screws (FM4-4007) each. Position the Paper Side Stop as desired and tighten down with light pressure.



Setting Up Your Machine

Chip Bag

- Step #6** ■ Attach the chip bag as shown by stretching the open end over the top hook of the chip chute. Continue fitting it around the entire edge of the chip chute making sure it is snug.

Note: Be sure to empty the chip bag regularly as needed. Failure to empty the chip bag can result in clogging of the chip chute.



Pattern Bars

- Step #7** ■ Your EBM-2.1 comes with five pattern bars included. Four common patterns and one blank pattern as shown.

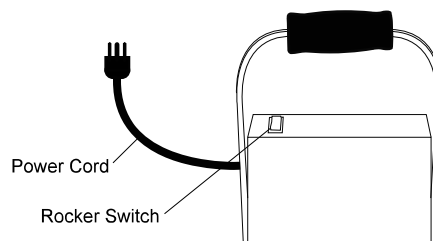


- Insert a Pattern Bar by loosening the Pattern Bar Stop (EZ-1022) and inserting the desired pattern into the slot on the Pattern Bar Guide as shown in the diagram. Insert the angled end into the slot as far as it will go so that the slot at the end of the Pattern Bar lines up with the Pattern Bar Stop. When you have the pattern correctly inserted, tighten down the Pattern Bar Stop through the slot on the Pattern Bar locking it in place.



Electrical Start Up

- Step #8** ■ Making sure nothing is interfering with the drill bit, plug the cord set into a grounded 115V outlet. To turn the machine on, press the Rocker Switch on the upper left hand side of the shroud.



- Your Spinnit Paper Drill is now ready for use. With proper operation and maintenance, it will give you trouble free operation for years.

Operating Instructions

Drill bit Removal and Installation

- Step #1** ■ Remove the hole guard which is attached to the chuck. This is done by grasping the bent end and sliding the guard off.



- Step #2** ■ Using the Chuck Release Key (EBM-32), insert the tapered end facing down into the chuck hole. With a clockwise motion turn the Chuck Release Key 45 degrees. The drill bit will slide out of the chuck. It is recommended that you hold onto the drill bit so that it does not drop out of the chuck damaging the tip.



- Note:** Please note that drill bits may be hot after drilling. Please wait to change drill bits until they have cooled down.

- Step #3** ■ To install a drill bit, grasp the drill bit, and being careful to keep it straight, press it up into the chuck.



- Step #4** ■ Seat the drill bit by using a stack of scrap paper or a phone book. Set the scrap on the table as shown and pull lightly down on the handle to raise the table toward the drill bit. Put light pressure on the hollow drill bit seating it firmly in place. Remove the scrap paper and turn the machine on to check the concentricity of the bit. If the bit is not concentric, remove it and repeat steps 3 and 4 until it is concentric. When the drill bit is correctly installed replace the hole guard back onto the chuck to protect debris from clogging the chuck.



Operating Instructions

Leveling The Drill Bits

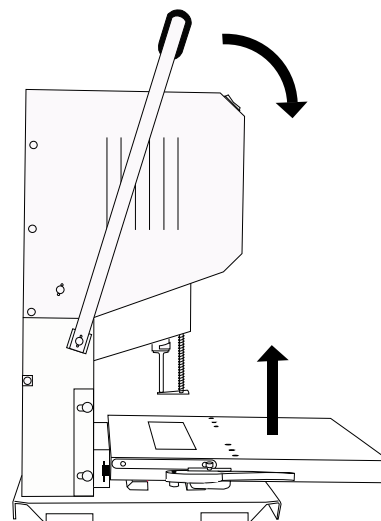
- Step #6:** ■ To level the drill bits to the Table, first loosen the Leveling Knob on the right hand side of the machine as shown. Pull down on the Handle to raise the Table until the hollow drill bit is just touching the Drill Strip (EBM2-1034). Hold the Handle in place and tighten down the Leveling Knob until it hits the Handle Bracket. This will stop the Handle from being pulled down too far. It is important to always reset the Level with each use. This will make sure you don't drill into the Drill Strip, dulling the hollow drill bit.

Note: We recommend using a piece of card stock on the Table when leveling the drill bits to avoid drilling into the drill strip. This will lengthen the life of your drill bits and keep them sharper.



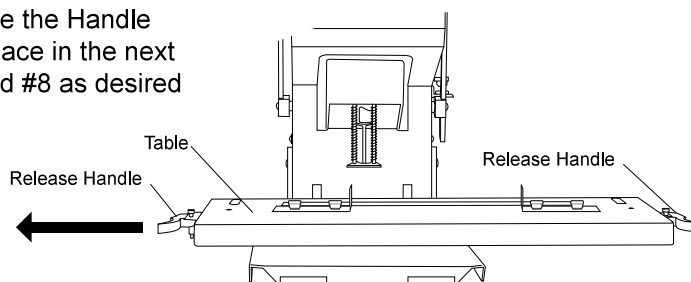
Drilling

- Step #7:** ■ When you are ready to drill, set the product to be drilled on the table and make sure it is secure using the Paper Side Stops. Turn the machine on and holding the product firmly in place with one hand, pull down on the Handle raising the Table up to meet the drill bit. Using one consistent smooth stroke, put pressure on the Handle so that the Table rises fully allowing the drill bit to drill through the product. It is important you maintain a consistent speed through the entire stack. It is also important you do not go too slow or too fast. If you drill too slow you can burn the paper leaving undesired marks. If you drill too fast, the drill bits will act more like a punch and they will break or plug.



Traversing the EZ-Glide Table

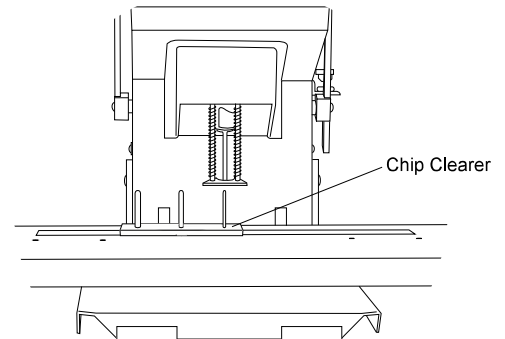
- Step #8:** ■ To move the Table to the next desired hole on the pattern bar, press in on either of the Release Handles (EZ-1010) located on both ends of the table. Pressing in the Release Handle releases the Table Pin allowing the table to traverse. Release the Handle and slide the Table until it locks into place in the next desired position. Repeat Steps #7 and #8 as desired until complete.



Operating Instructions

Clearing the Chips

- Step #8:** ■ It is important to clear the chips from the drill bit when you are finished drilling so that the chips won't clog the drill bit. Make sure to turn the power off on the machine. Place the Chip Clearer (CC-2) below the hollow drill bit using one of the three prongs that best fits the drill bit size you are drilling with. Making sure it is properly aligned with the drill bit, pull down on the handle with very slight pressure allowing the Chip Clearer to push the remaining chips up through the drill bit and into the Chip Chute.



Note: The CC-2 Chip Clearer was designed for use on drill bits 3/16" in diameter and higher.

Note: Make sure that if you remove the drill bit to clear the chips you should never force the chips down through the tip of the drill bit. Chips should always be cleared in the same direction as when drilling.

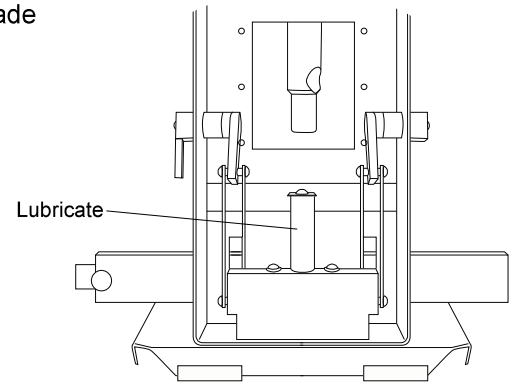
Tips On Drilling

- **Use a sharp bit at all times...**Using a drill bit sharpener (Lassco-Wlzer MS-1 recommended), sharpen your drill bits regularly. Apply light pressure when sharpening. Too much pressure may cause flaring of the tip. (Once a drill bit has a flared tip, it becomes defective.)
- **Sharpening Stone...**Use to debur the outside cutting edge of the drill bits for better performance.
- **Lubricate drill bits occasionally...**use Drill-Ease or Spin-Eze. While the drill is running, simply touch the Drill-Ease stick to the drill bit or brush on the Spin-Eze. Drill through scrap to remove any excess. This will allow for a smoother cut.
- **Drill Strips...**When drilling, a drill bit must stop slightly above the drill strip. Replace worn out drill strips regularly to ensure proper drilling.

Maintenance

Every 6 Months

- Remove back panel and lubricate the lift pin with a good grade of light machine oil.



Note: Refer to your *Trouble Shooting Guide* for problem solving

CAUTION: KEEP FINGERS FROM BETWEEN LIFT COMPONENTS.

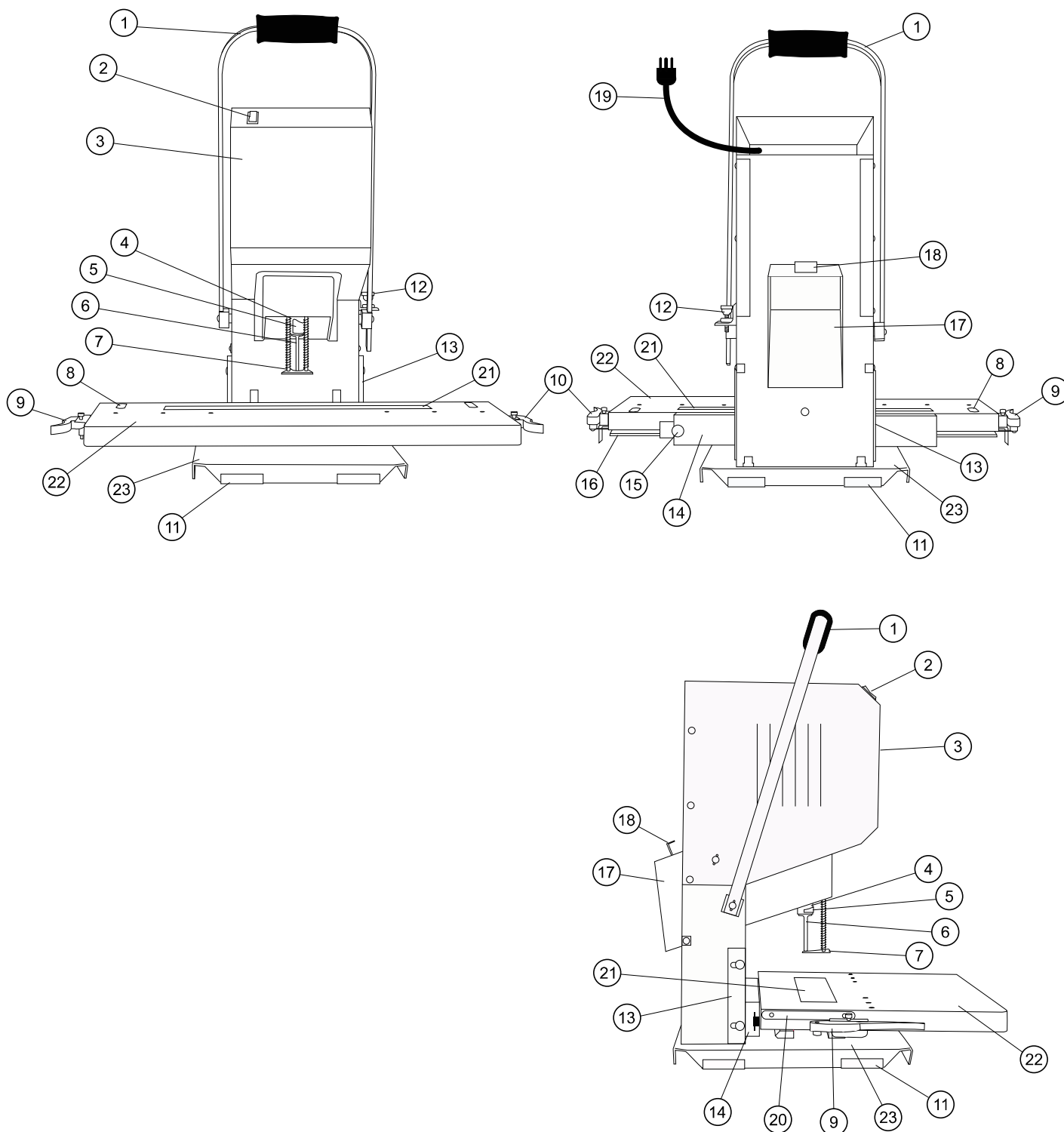
OBSERVE ALL SAFETY PRECAUTIONS DURING THE PREVENTATIVE MAINTENANCE OF THIS MACHINE.

Trouble Shooting Guide

Problem	Cause	Correction
Drill bit not concentric.	Foreign material in chuck or in drill plug.	Inspect and clean.
	Drill bit is bent.	Replace drill bit.
	Drill bit not seated in chuck properly.	Reinsert drill bit correctly.
	Chuck is not tight to spindle.	Tighten set screw.
Drill bit not drilling.	Drill bit plugged.	Remove and clear chips. Check for other foreign matter.
	Drill bit dull.	Sharpen drill bit.
	Note: In extreme conditions, the drill chuck and/or chip chute may be plugged. Remove the drill bit, loosen the chip chute, pull down, and clean. See <i>Operating Instructions</i>	
Table lift system lifts unevenly or is noisy.	Ball bushings in lift system dry or worn.	Lubricate or replace.
	Lift pin damaged.	Replace lift pin.
Machine vibrates, wobbles, resonates, etc.	Drive motor loose.	Tighten.
	Machine is sitting on uneven surface.	Reposition drill to obtain concentricity
	Drill bits are out of concentricity.	Reinstall drill bits to obtain concentricity.
Drill bit drills into drill strip/drill bits not drilling through bottom sheet of paper.	Drill bit was not adjusted to card stock/card stock not used.	Adjust per <i>Operating Instructions</i> .
	Operator not allowing full travel of table.	Drill per <i>Operating Instructions</i> through full drilling cycle.
Table is too tight or too loose when sliding.	V-Rollers under table out of adjustment.	With an open-end wrench, and holding screw head in place with a screwdriver, adjust cam spacers under the V-Rollers located on the Fork Plate. See <i>Setting Up Your Machine</i> .
Table pivots front and back.	Table guides are out of adjustment.	Loosen the two screws holding the table guides located on the sides of the upright and readjust.

Parts Diagrams

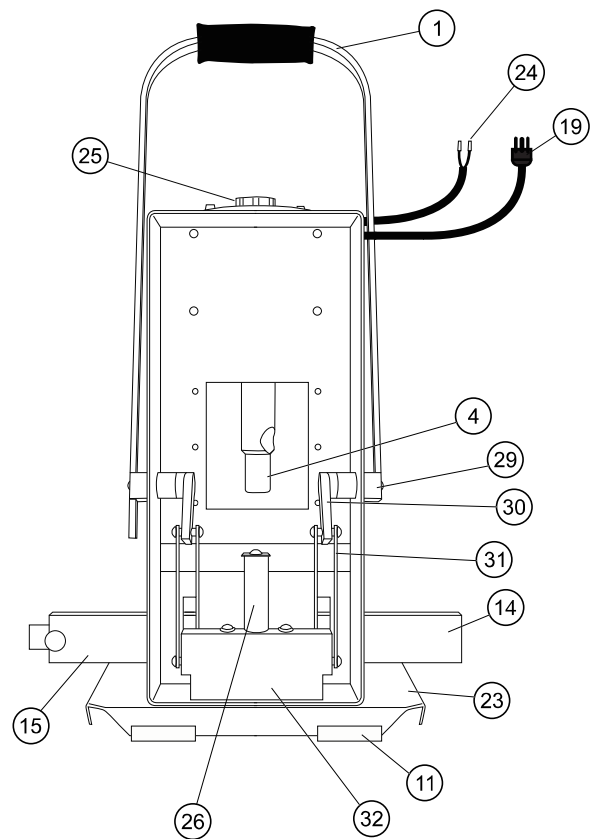
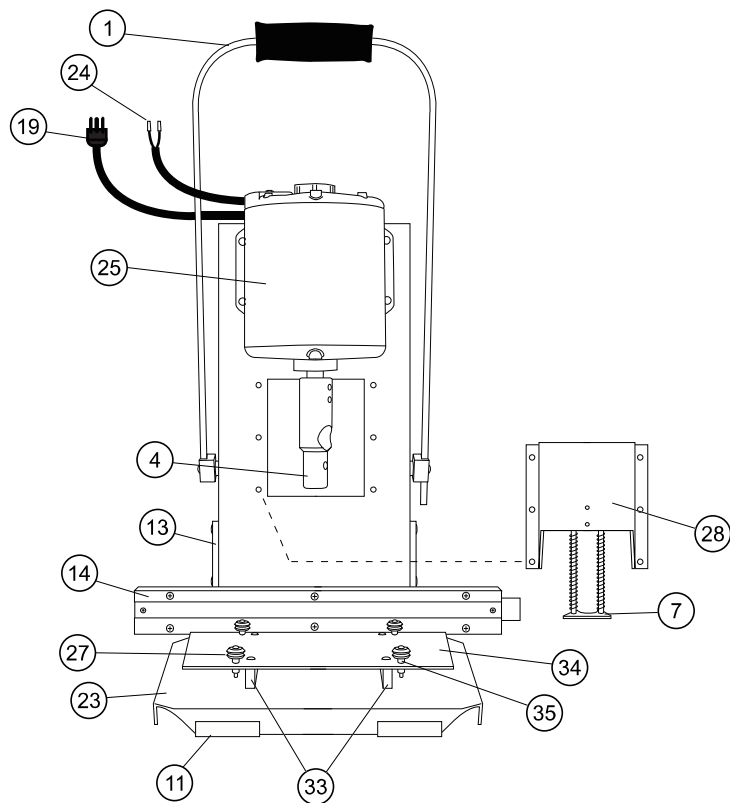
Front, Back, and Side View



See Parts List on Page 15

Parts Diagrams

Interior Front and Back



See Parts List on Page 15

Parts Diagrams

Parts List

- ① EZ-108A: Handle Assembly
- ② FM5-5006: Rocker Switch (On/Off)
- ③ EZ-117A: Shroud Assembly
- ④ FM5-5003: Chuck
- ⑤ FM5-5011: Chuck Release Guard
- ⑥ Hollow Drill Bit
- ⑦ EBM2-0111A: Pressure Foot Assembly
- ⑧ 3S-14: Table Scale
- ⑨ EZ-1010L: Table Release Handle (Left)
- ⑩ EZ-1010R: Table Release Handle (Right)
- ⑪ EBM-44A: Channel Guard
- ⑫ FM4-4007: Paper Side Stop Knob (Table Height Adjustment Knob)
- ⑬ EZ-1034: Table Guide
- ⑭ EZ-107A: Pattern Bar Housing Assembly
- ⑮ EZ-1022: Pattern Bar Stop
- ⑯ EZ-1004: V-Rail
- ⑰ EBM2-110A: Chip Chute Assembly
- ⑱ EBM2-1047: Chip Bag Bracket
- ⑲ FM5-5008: Power Cord
- ⑳ FM4-4003: Side Iron
- ㉑ EBM2-1034: Drill Strip
- ㉒ EZ-1033: Table
- ㉓ EZ-1025: Base
- ㉔ Wire Harness
- ㉕ FM5-5002: 1/4 HP Motor
- ㉖ EBM2-1000: Lift Pin
- ㉗ EZ-1001: V-Roller
- ㉘ EBM2-111A: Housing Assembly
- ㉙ EBM2-1019: Pivot Hub
- ㉚ EBM2-103A: Pivot Arm Set Assembly
- ㉛ EZ-1026: Lift Bars
- ㉜ EZ-1023: Lift Pin Housing
- ㉝ EZ-1024: Fork
- ㉞ EZ-1000: Fork Plate
- ㉟ EZ-1003C: Cam Spacer



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