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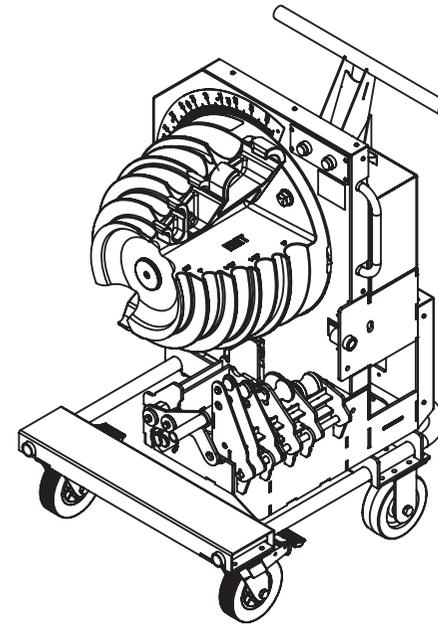
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05/19 (BML-2000)



**OPERATING and MAINTENANCE
INSTRUCTIONS
BENDMAX[™]
Compact Power Bender
(BML-2000)**



**READ AND UNDERSTAND ALL THE
INSTRUCTIONS AND SAFETY INFORMATION IN
THIS MANUAL BEFORE OPERATING OR
SERVICING THIS TOOL**



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DESCRIPTION

The Southwire BENDMAX™ Compact Power Bender is intended to bend 3/4" to 2" conduit and pipe. This bender has the capability to accommodate the following types of conduit and pipe:

- Galvanized Electrical Metallic Tubing
- Galvanized Intermediate Metallic Conduit
- Galvanized Rigid Conduit

SAFETY

Safety is essential in the use and maintenance of Southwire Tools and Equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all the safety information provided.

WARNING - Read and understand all instructions and safety information in this manual before operating or servicing this tool.

PURPOSE OF THIS MANUAL

This manual is intended to familiarize all personnel with the safe operation of the Southwire BENDMAX™ Compact Power Bender. Keep this manual available to all personnel. Replacement manuals are available at no charge at www.southwiretools.com.

All specifications are nominal and may change as design improvements occur. Southwire Company, LLC shall not be liable for damages resulting from misapplication or misuse of its products.

IMPORTANT SAFETY INFORMATION

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.



DANGER - Immediate hazards which, if not avoided, WILL result in severe injury or death.



WARNING - Hazards which, if not avoided, COULD result in severe injury or death.



CAUTION - Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.

WARNING: Electric Shock Hazard



- Inspect the power cord before use. Repair or replace the cord if damaged.
- Connect the power cord to a 120 volt, 20 amp receptacle on a ground fault protected circuit only. Refer to “Grounding Instructions”.
- Do not modify the power cord or plug.
- Disconnect the unit from power before servicing.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

IMPORTANT SAFETY INFORMATION



WARNING

- Read and understand all instructions and safety information in this manual before operating or servicing this tool.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

WARNING



- Do not use in dangerous environment. Do not use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
- Do not immerse the pendant switch in water or any other liquid.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

DANGER



- Do not use this tool in a hazardous environment. Hazards include flammable liquids, gases, or other materials. Using this tool in a hazardous environment can result in a fire or explosion.

FAILURE TO OBSERVE THESE WARNINGS WILL RESULT IN SEVERE INJURY OR DEATH.

IMPORTANT SAFETY INFORMATION

⚠ WARNING



- Always use safety glasses. Everyday glasses only have impact resistant lenses; they are NOT safety glasses. When using in dusty environment, use face or dust mask.

FAILURE TO WEAR EYE PROTECTION COULD RESULT IN SERIOUS EYE INJURY FROM FLYING DEBRIS.

⚠ WARNING

- For continued protection against risk or fire and electric shock, replace ONLY with same manufacturer, type, and rating of fuse. Refer to the “ Maintenance” section of this manual.

FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ WARNING

- Reduce the risk of unintentional starting. Make sure switch is in off position before plugging in.
- Never leave tool running unattended. Turn power off. Do not leave tool until it comes to a complete stop.
- Disconnect tools before servicing and when changing accessories such as shoes, rollers, and the like. Accidental start-up could result in serious injury.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

IMPORTANT SAFETY INFORMATION

⚠ WARNING



- Keep guards in place and in working order.
- Remove any tools from bender before operating. Form habit of checking to see that all tools are removed from bender before turning it on.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ WARNING

- Never stand on tool. Serious injury could occur if the tool is tipped.
- Do not overreach. Keep proper footing and balance at all times.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ WARNING: Pinch Points



- Keep hands away from bending shoe, rollers, and conduit when bender is in use.
- Support conduit when unloading. Conduit can become loose and fall if not properly supported.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

IMPORTANT SAFETY INFORMATION

⚠ WARNING: Extension Cords



- Use only three-wire, 12 AWG extension cords that have three-prong grounding-type plugs and three-hole receptacles that accept the tool's plug.
- Do not use extension cords that are longer than 30m(100").
- Repair or replace damaged extension cords.

FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ CAUTION

- Select the appropriate shoe groove and support roller for the type and size of conduit before bending.
- Do not bend conduit over 96 degrees. Overbending could result in the other shoe hook colliding with the conduit.

FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ WARNING

- Adjust fork spacing to match fork tubes on bender. Ensure front wheel brakes are engaged before inserting forks into fork tubes.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ CAUTION

- Inspect the bender before use. Replace worn, damaged, or missing parts with Southwire replacement parts. A damaged or improperly assembled component could break and strike nearby personnel.

IMPORTANT SAFETY INFORMATION

- Maintain tools with care. Keep tool clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 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 conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

FAILURE TO OBSERVE THESE PRECAUTIONS MAY RESULT IN INJURY OR PROPERTY DAMAGE.

⚠ CAUTION

- Conduit moves rapidly as it is bent. The path of the conduit must be clear of obstructions. Be sure clearance is adequate before starting the bend.
- Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- Do not force rollers or alter tool. It will do the job better and safer at the rate for which it was designed.
- Use the right tool. Do not force tool or attachment to do a job for which it was not designed.
- Use this tool for the manufacturer's intended purpose only. Use other than that which is instructed in this manual can result in injury or property damage.

FAILURE TO OBSERVE THESE PRECAUTIONS MAY RESULT IN INJURY OR PROPERTY DAMAGE.

GROUNDING INSTRUCTIONS

⚠ WARNING: Electric Shock Hazard

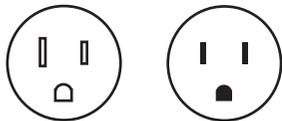


- Do not modify the plug provided with the tool.
- Connect this tool to a grounded receptacle on a 20 amp ground fault protected circuit.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

This tool must be grounded. In the event of a malfunction or breakdown, an electrical ground provides a path of least resistance for the electric current. This path of least resistance is intended to reduce the risk of electric shock.

This tool's electric cord has a grounding conductor and a grounding plug as shown. Do not modify the plug. Connect the plug to a corresponding receptacle that is properly installed and grounded in accordance with all national and local codes and ordinances. Do not use an adapter.

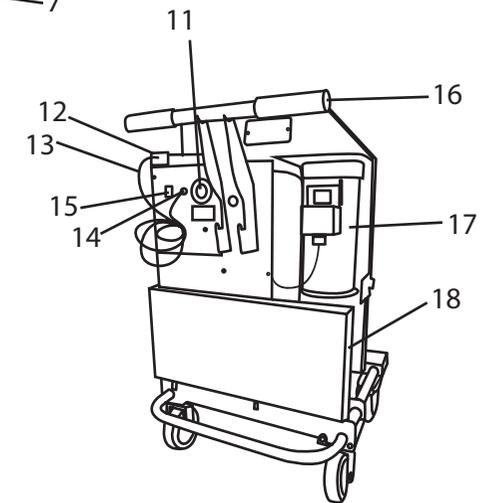
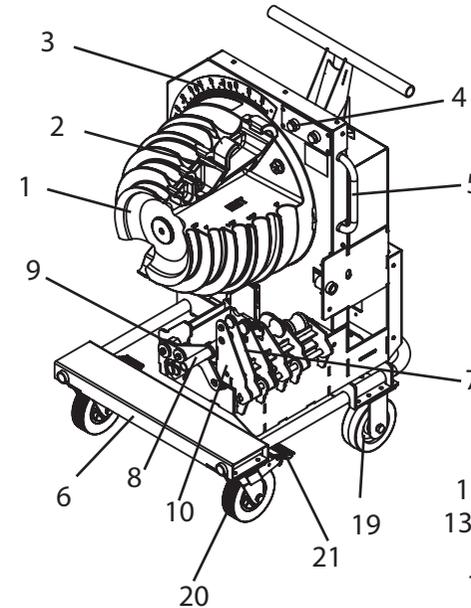


Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

IDENTIFICATION

BML-2000 IDENTIFICATION-FRONT

BML-2000 IDENTIFICATION-BACK



BML-2000 IDENTIFICATION

- | | |
|--|--------------------------|
| 1. 3/4"-2" EMT,IMC/GRC bending shoe | 11. Power receptacle |
| 2. Bending hooks (EMT- Gray) (IMC/GRC Black) | 12. Hand pendant |
| 3. Analog protractor | 13. Bender control cable |
| 4. Manual bender buttons | 14. 15 Amp fuse |
| 5. Bender support handle | 15. Power switch |
| 6. Fork rings | 16. Push cart handle |
| 7. Squeeze adjustment lever | 17. Motor |
| 8. Roller assembly lock handle | 18. Gearbox |
| 9. 1-1/2" -2" EMT/IMC roller | 19. Fixed caster |
| 10. Fixed rigid rollers | 20. Swivel caster |
| | 21. Caster brake |

FEATURES

- Single shoe bending of 3/4" to 2" Galvanized EMT, Galvanized IMC and Galvanized Rigid Conduit.
- Four sturdy casters for easy transportability.
- Squeeze adjustment allows for variations in conduit.
- Front locking casters to securely keep bender in place during use.
- Hand pendant and front button controls for multiple bending applications.

TRANSPORTING OF BENDER

Refer to the "Identification" section of this manual.

To transport the BENDMAX™ Compact Bender on the ground

1. Unlock caster brakes (21) and use push cart handle (16) to maneuver bender to desired location.
2. Lock caster brakes (21) by pushing down with foot once transport is complete.

To transport the BENDMAX™ Compact Bender by Forklift

1. Ensure Caster Brakes (21) are locked by pressing down with foot.
2. Insert the forks into the fork tubes (6) at bottom of bender.
3. Lift bender level and move to desired location.

WARNING

- Adjust fork spacing to match fork rings on bender. Ensure front wheel brakes are engaged before inserting forks into fork rings.
- Ensure forks go under front and back support bars and through fork rings to prevent bender from moving once lifted by forklift.

FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE INJURY OR DEATH.

SET UP

WARNING



- Always use safety glasses. Everyday glasses only have impact resistant lenses; they are NOT safety glasses. When using in dusty environment, use face or dust mask.

FAILURE TO WEAR EYE PROTECTION COULD RESULT IN SERIOUS EYE INJURY FROM FLYING DEBRIS.

Refer to the "Identification" section of this manual.

1. Position the bender so there is room to load conduit and engage the front Caster Brakes (21).
2. Plug approved 12 AWG extension cord into the Power Receptacle (11) from grounded 20-amp outlet.

WARNING: Extension Cords



- Use only three-wire, 12 AWG extension cords that have three-prong grounding-type plugs and three-hole receptacles that accept the tool's plug.
- Do not use extension cords that are longer than 30m (100").
- Repair or replace damaged extension cords.

FAILURE TO OBSERVE THIS WARNING COULD RESULT IN SEVERE INJURY OR DEATH.

3. Plug the Pendant Control Cable (13) into housing under Power Switch (15). Bender will operate by either Hand Pendant (12) or manually pressing the Manual Bending Buttons (4).

OPERATION

⚠ DANGER



- Do not use this tool in a hazardous environment. Hazards include flammable liquids, gases, or other materials. Using this tool in a hazardous environment can result in a fire or explosion.

FAILURE TO OBSERVE THESE WARNINGS WILL RESULT IN SEVERE INJURY OR DEATH.

⚠ WARNING: Pinch Points



- Keep hands away from bending shoe, rollers, and conduit when bender is in use.
- Support conduit when unloading. Conduit can become loose and fall if not properly supported.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ DANGER: Electric Shock Hazard



- Inspect the power cord before use. Repair or replace the cord if damaged.
- Connect the power cord to a 120 volt, 20 amp receptacle on a ground fault protected circuit only. Refer to “Grounding Instructions”.
- Do not modify the power cord or plug.
- Disconnect the unit from power before servicing.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

OPERATION

SQUEEZE ADJUSTMENT

Refer to the “Identification” section of this manual

1. When bending 1-1/2", or 2" Galvanized EMT or Galvanized IMC, the amount of squeeze applied to the conduit can be adjusted to compensate for conduit variations. The squeeze is adjustable by pulling pin and rotating the Squeeze Adjustment Lever (7) to increase or decrease the amount of tension needed to properly seat the conduit as shown in (Fig 11).
2. Counterclockwise turns of the lever will decrease pressure applied to conduit while clockwise turns of the lever will increase pressure to the conduit.

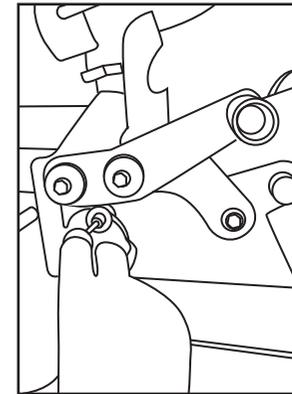


Fig 11

NOTE: Use position of the pull pin to index squeeze setting. Do not use handle position as the reference point.

NOTE: Test bend should be performed to ensure proper squeeze is set. Minor adjustments may be required.

BENDING

NOTE: Fixed Rigid Rollers (10) should be in the up (engaged) position during all bends regardless of type or size of conduit being bent.

Refer to the “Identification” section of this manual

1. Turn bender “ON” by pressing the green Power Switch (15).

BENDING

2. Use the Manual Bender Buttons (4) on front of bender or the Hand Pendant (12) to orient the shoe so that the hooks of the conduit type to be bent are at the 7 o'clock (approximately -5°) position on the analog protractor.
3. Ensure proper orientation of the Bending Shoe (1) by positioning the Gray hooks at the 7 o'clock position for EMT conduit or the Black hooks at the 7 o'clock position for IMC and GRC conduit.
4. Load the conduit into the appropriate sized Fixed Rigid Roller (10) and groove (Fig 12) so that the bending mark is aligned with the front edge of the hook as shown in (Fig 13).
5. Bending the conduit.
 - A. While bending $\frac{3}{4}$ " through 2" Galvanized EMT, Galvanized IMC, or Galvanized Rigid Conduit ensure the Fixed Rigid Rollers (10) are in the upright position, as shown in (Fig 14 and 15). Fixed Rigid Rollers (10) should only be "DOWN" position to help in unloading of the conduit after a bend has been completed. Return Fixed Rigid Rollers (10) to the "UP" position once conduit has been removed in preparation for next bend.
 - B. When bending 1-1/2" and 2" Galvanized EMT or Galvanized IMC conduit, use the 1-1/2"-2" EMT/IMC Roller (9) by turning the assembly to reflect "E" for EMT or "I" for IMC. Roller Assembly Lock Handle (8) may have to be pulled to the left to allow roller assembly to be rotated (Fig 16). Once properly selected, raise the rollers from the retracted position to the upright (engaged) position by rotating the Roller Assembly Lock Handle (8) counter clockwise to lock and secure conduit in place, as shown in (Fig 17). Slight pressure to handle may be required at the start of the bend. Handle should lock into place once bending shoe starts to rotate.

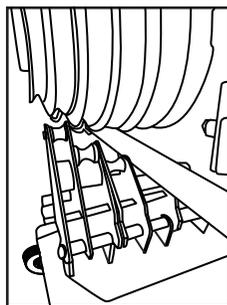


Fig 12

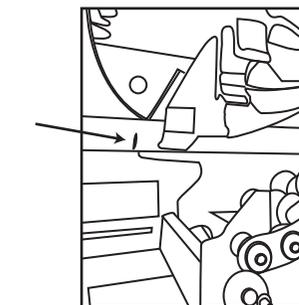


Fig 13

15

BENDING

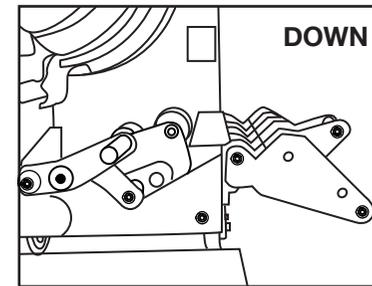


Fig 14

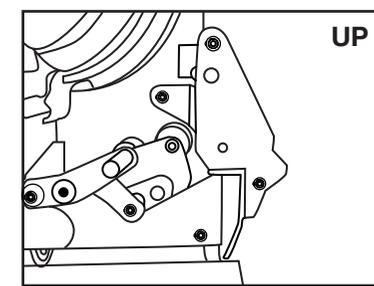
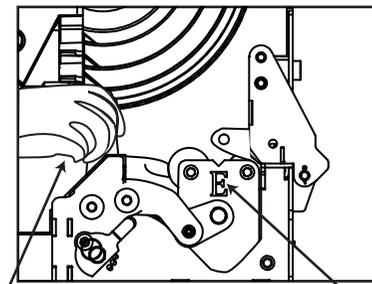


Fig 15



Pull handle to left

Fig 16

Rotate to "E" to "I"

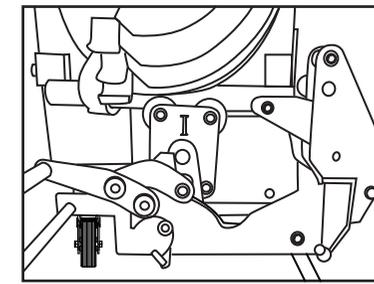


Fig 17

DEDUCT CALCULATIONS

DEDUCT		
Conduit	EMT	RIGID/IMC
3/4"	8-3/4"	8-3/4"
1"	10-5/8"	10-7/8"
1-1/4"	12-13/16"	12-5/16"
1-1/2"	15-1/8"	14-7/8"
2"	16-3/8"	16-3/8"

Note: Test bends should be performed to ensure proper conduit squeeze is set. Minor adjustments may be required. To adjust the conduit squeeze pressure, refer to section labeled "SQUEEZE ADJUSTMENT".

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SPECIFICATIONS

ADDITIONAL ITEMS

- A. Personal protective equipment
- B. Portable band saw or another conduit cutting device
- C. Appropriate reamer or filing tool
- D. Tape measure
- E. Black marker
- F. Magnetic level (Southwire MCB Level)
- G. Galvanized EMT, Galvanized IMC or Galvanized Rigid Conduit

SPECIFICATIONS

- Model# BML2000
- Stock# 64-60-12-01
- Name- BENDMAX™ Compact Power Bender
- Length- 38"
- Width- 30"
- Height- 50"
- Weight- 516 lb. (234kg)

TROUBLESHOOTING

	PROBLEM	CAUSE	DIAGNOSIS	CURE
1	Bender will not operate	Power source	Check for voltage at power source	If power is on, go to (#3)
2	No power at bender	Defective extension power cord	Ohm extension cord for broken wire	Replace extension cord
3	Power to bender will not operate	Power switch in the off position	Check power switch is lite green when in the "ON" position	Replace switch
		Fuse blown	Inspect 15 amp fuse	Replace fuse
		Motor defective	Check for power at motor	Replace motor
4	Motor runs but will not bend	Chain from transfer shaft broken	Remove cover and visually check for broken parts	Replace broken parts
		Defective gear box	Motor running but no output through gear box	Replace gear box
		Chain from jack shaft to shoe sprocket broken	Remove cover and visually check for broken parts	Replace broken parts
		Key between motor and gearbox missing	Remove motor from gearbox	Replace key
5	Bender operates in only one direction	Defective Bend/Return switch	Ohm switch for open contact or shorted contacts	Replace pendant
		Defective pendant cord	Ohm for broken wire	Replace pendant cord

WARRANTY ON SOUTHWIRE CONTRACTOR EQUIPMENT

What Does This Warranty Cover?

Five-Year Limited Warranty on Contractor Equipment

Under Southwire's Contractor Equipment 5-Year Limited Warranty, Southwire Company, LLC warrants that all Southwire Contractor Equipment will be free from manufacturer defects for a period of five (5) years from the date of the original end user's purchase. However, electrical components and consumable parts such as ropes, blades, dies, draw studs, grips, are excluded from this 5-Year Limited Warranty and are subject to the One -Year warranty terms. Under this 5-Year Limited Warranty, the following are also excluded and Southwire Company, LLC will have no liability for any of the following: normal wear and tear resulting from product use and damage arising out of misuse, abuse, modification, and improper product maintenance. This warranty also does not cover Southwire Contractor Equipment products that have been modified by any party other than Southwire Company, LLC or its authorized third party designee. This 5-Year Limited Warranty is not transferrable to or enforceable by any person other than the product's original end user.

One-Year Limited Warranty on Electrical Components and Consumable Parts (with 5-Year warranty)

Under Southwire's 1-Year Limited Warranty, Southwire Company, LLC warrants that all electrical components and consumable parts such as ropes, blades, dies, draw studs, grips will be free from manufacturer defects for a period of one-year from the date of the original end user's purchase. Under this 1-Year Limited Warranty, Southwire Company, LLC will have no liability for any of the following: normal wear and tear resulting from product use and damage arising out of misuse, abuse, modification, and improper product maintenance. This warranty also does not cover Southwire electrical components and consumable parts that have been modified by any party other than Southwire Company, LLC or its authorized third party designee. This 1-Year Limited Warranty is not transferrable to or enforceable by any person other than the product's original end user.

Exclusion of Incidental, Consequential, Indirect, Special and Punitive Damages

SOUTHWIRE MAKES NO WARRANTY THAT SOUTHWIRE CONTRACTOR EQUIPMENT PRODUCTS WILL BE MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. SOUTHWIRE MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, OTHER THAN THE RELEVANT WARRANTY SPECIFICALLY SET FORTH IN THIS WARRANTY SECTION. SOUTHWIRE WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES FOR ANY BREACH OF THIS LIMITED LIFETIME WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Warranty Claim Information/How Do You Get Service?

For all warranty, customer service, and product return authorizations and inquiries, please contact Southwire's Tools & Assembled Products at:

Southwire Tools & Assembled Products
840 Old Bremen Road
Carrollton, GA, 30117
Phone Number: 1.855.SW.Tools

1. All warranty claims must be approved by Southwire's Tools & Assembled Products Warranty Department prior to return of product. If Southwire determines that a product is defective, Southwire will, at its option, repair or replace defective products or defective product components, free of charge.
2. Upon approval, Southwire will issue a Product Return Authorization Form which will include instructions on how and where to return the product. **The product serial number and the original date of delivery must be set forth on the Product Return Authorization Form.**
3. Southwire will cover standard freight charges (Ground Courier Rate) incurred in connection with products that Southwire ultimately determines to be defective.
4. All defective components and defective products that Southwire replaces under these Warranties will become Southwire's property and will be retained by Southwire.

Repair Your Product When it is Out of Warranty

Southwire is happy to provide information about where a purchaser can send a product for repair at consumers' own expense, please contact 1.855.SW.tools or visit www.southwiretools.com/tools/home.do for more information about servicing for Southwire Products.