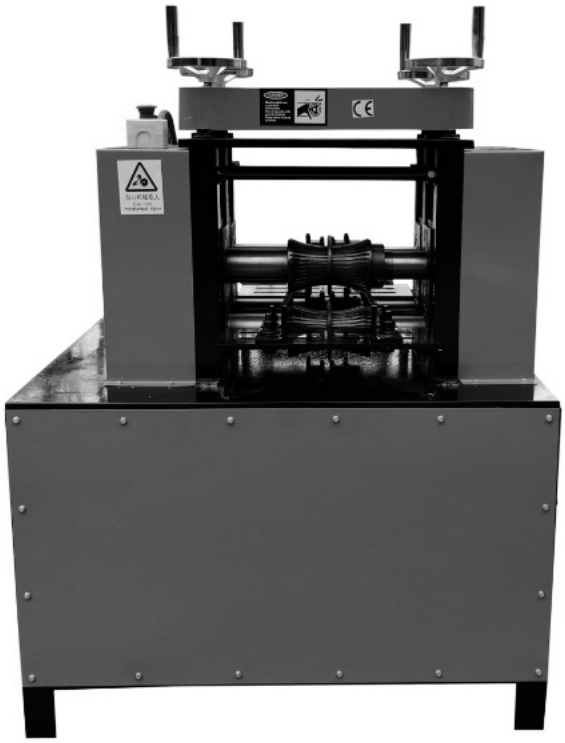
Volume

1.0

OPERATIONAL MANUAL

MODEL: **MODEL WS700** BLUEROCK ® TOOLS EXTRA LARGE WIRE STRIPPING MACHINE



by BLUEROCK ® Tools

UNPACKING THE ITEM

Caution: This machine is packed together with items that may be sharp, oily and overly heavy objects. Remove the machine from the packaging in a safe manner. Check to ensure all accessories are included with the item while unpacking. If any parts are found to be missing, contact the retailer as soon as possible. Do not throw away the packaging until the item is out of the guarantee period. Dispose of the packaging in an environmentally responsible manner. Recycle if possible. Keep all plastic bags away from children due to risk of suffocation.

WEEE - Waste Electrical & Electronic Equipment. Note this machine should be disposed of as electrical & electronic waste.

8032 S 194th St
Kent, WA 98032 USA
Phone 206.604.8363 • Fax 425.572.5167
www.bluerocktools.com

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Chapter 1

Safety

DO NOT USE THIS MACHINE UNLESS YOU HAVE READ THE OPERATING INSTRUCTIONS

Safety glasses must be worn at all times in work areas.

Long and loose hair must be contained.

Appropriate footwear must be worn.

Close fitting/protective clothing must be worn.

Gloves, rings and jewelry must not be worn as wire could catch on the item and bring hands towards the machine.

Hearing protection should be worn when using this machine.

PRE-OPERATIONAL SAFETY CHECKS

- Examine the power cord, extension lead, plugs and power outlet for damage.
- Ensure the safety guards are secure and correctly fitted.
- Secure and support the machine using clamps, bench vices, bolts, etc.

OPERATIONAL SAFETY CHECKS

- ONLY to be operated by qualified personal who have read instructions.
  - NOTE: Failure to read and follow instructions could result in electrical shock, fire, property damage and/or serious injury!
- DO ensure all non-essential people are clear of the immediate work area.
- DO keep body parts, clothing & power cords clear of turning/cutting pieces. Stay alert and use common since when using this tool.
- DO allow machine to reach operating speed before inserting a wire.
- DO keep fingers and hands & power cords clear of cutting/rolling channels.
- DO NOT make adjustments to machine while the machine is running.

- **DO NOT make machine adjustments while the machine is running.**
- **DO NOT wear loose clothing or gloves as death or dismemberment can occur. When feeding wire/cable, gloves can snag on scrap wire and bring hand towards machine.**
- **DO NOT touch moving parts while the machine is running.**
- **DO NOT put cable/wire longer than 1 meter into machine.**
- **DO NOT switch off the machine when it is under load, except in an emergency.**
- **DO NOT remove or modify grounding plug. Only to be used on a properly grounded circuit.**
- **DO NOT leave the machine running when not in use.**
- **DO NOT operate machine outside of machine specifications.**
- **DO NOT touch moving parts while the machine is running as death or dismemberment could occur.**
- **DO NOT remove machine metals panels while machine is connected to a power source. Only to be removed for service by qualified personal and put back on the machine after service is complete.**
- **DO NOT allow children or untrained personal to operate machine.**
- **DO NOT use this machine in the rain, if peeling wet cable/wire, keep the blades dry, oil the machine often, test the blades and machine for oxidation.**
- **DO NOT operate in the presence of explosive materials as power tools create sparks which may ignite dust or fumes.**
- **DO NOT operate this machine on the same work surface where welding is being performed. This could result in severe damage to the machine or personal injury to the user.**
- **DO NOT operate this machine on a lower voltage as it may result in the motor being at a reduced power level and limit the motor life.**

  - **NOTE: Use of long small gauge power extension cords can result in decreased voltage. As local voltages can vary, it may be a good idea to test the voltage at the end of the extension cord to ensure proper voltage requirements are met. You might also consult an electrician to make sure the length of cord matches up with the proper wire gauge for this size motor. Make sure to use outdoor cords when operating outdoors.**

Chapter

2

Specifications

ELECTRICAL DATA	
Voltage	230V, 60Hz
Phase	3 Phase
Motor Size	7.5KW, 25A
O/P	Yes
Reverse Function	Yes
Power Input	Must be connected by a qualified electrician

MECHANICAL DATA	
Blades	2 Blades - Cuts Top & Bottom of Wire
Cutting Speed	80 Feet Per/Minute
Wire Cutting Range	1-1/4"– 7" (30mm-180mm) OD - Round Wire
Wire Stripping Depth	1" Depth(25mm)
Drive System	Transfer Case, Chain, Gear/Sprocket System

SHIPPING DATA	
Shipping Weight	1521 LBS (690KG)
Machine Weight	1410 LBS (640KG)
Shipping Dimensions	41"x37"x57" (1050mmx950mmx1450mm) LxWxH
Machine Dimensions	39"x35"x51" (1000mmx900mmx1300mm) LxWxH

Chapter

3

Operations

Note

THOROUGHLY READ THROUGH THE ENTIRE MANUAL BEFORE OPERATING THIS MACHINE!

PURPOSE

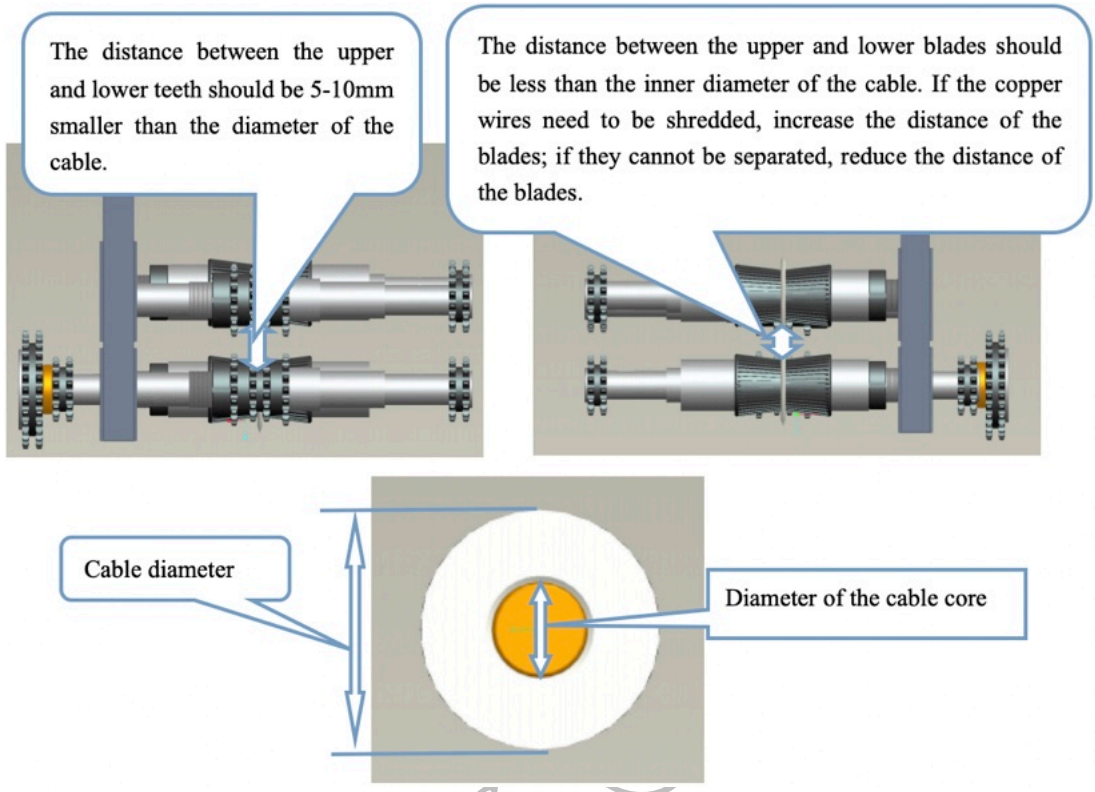
- **The purpose of the WS700 is to remove outer and inner jackets from large wires and cables in order to separate the inner copper or aluminum. These types of machines are widely used in the recycling industry to extract copper and aluminum for recycling.**
- **The WS700 has the ability to cut the top and bottom of wires.**
  - **Note: These wire jackets can also to be recycled by many recyclers so inquire with your local scrap buyers.**

INSTALLATION

- **Operate the machine in a dry place.**
- **Set up in a manner so the user has access to both the front wire inlets and the back wire outputs.**
- **Make certain the machine is firmly secure and stable so it will not tip or fall.**

OPERATIONAL PRINCIPLES

- **This machine pulls wire into the machine across an assembly into the cutting channel.**
- **The main cutting blade shafts and main rolling shafts run inversely to create a mechanism that pulls the wire into front of the machine. See diagram below for details.**



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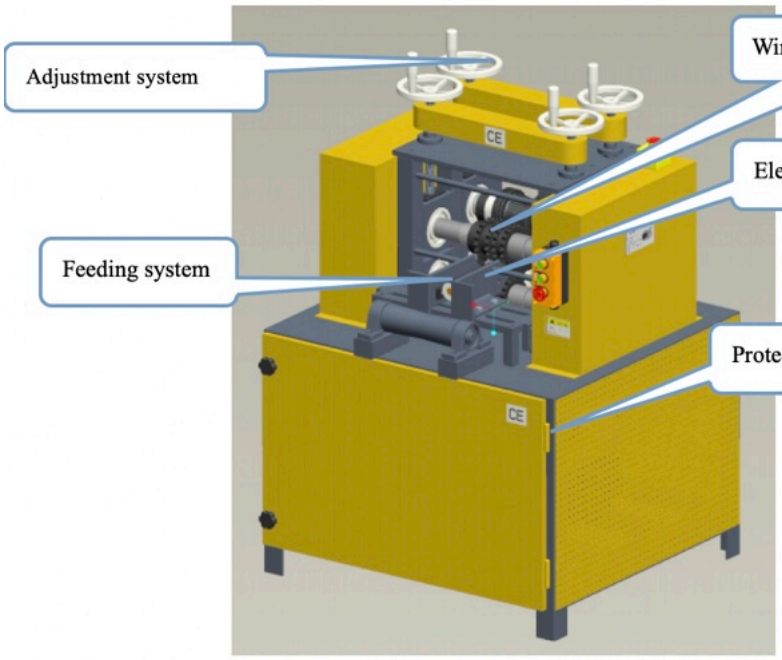
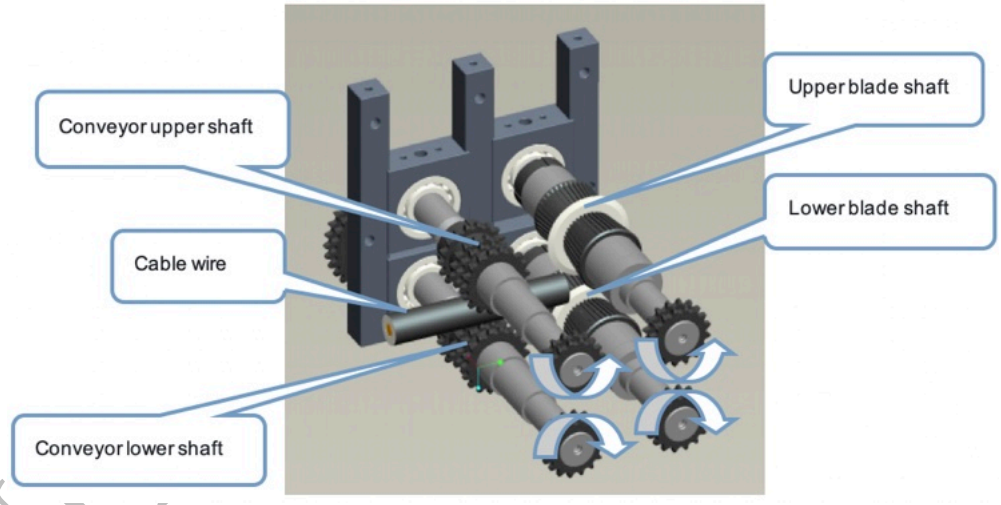
MACHINE COMPONENTS

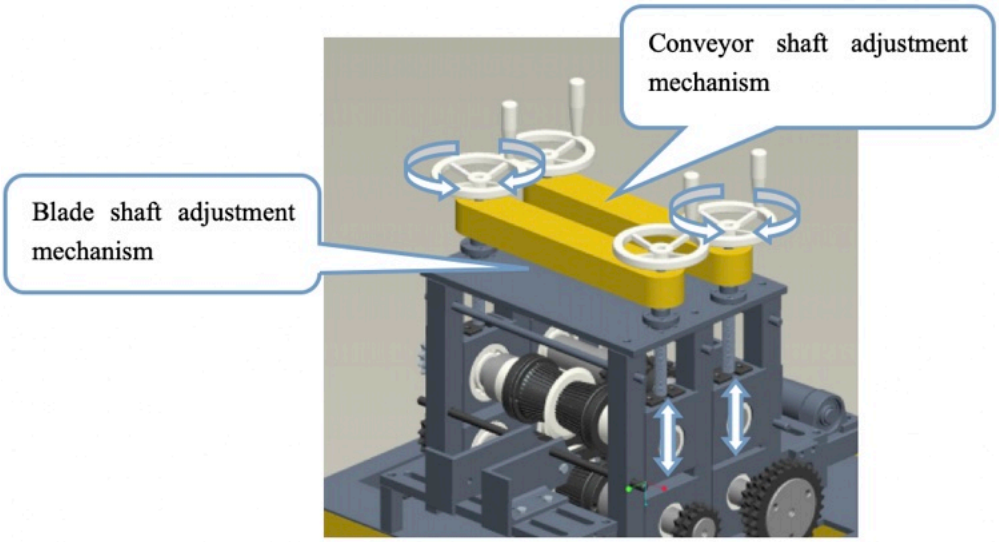
- **The main components of the WS700 are the central cutting and rolling assemblies. These are driven by a system of chains, gears, sprockets and motor. The safety guards are situated on top of the assembly as well as in front where the wire guide is situated. There are also safety guards on top of the main drive gear as well as on the sides of the assembly bearing housings on the left and right of the machine.**
- **The motor drives the transmission sprocket group to achieve the reverse operation of the two upper shafts and the two lower shafts, so as to ensure that the cable can be conveyed when passing through the middle of the conveyor upper and lower shafts. Then, the plastic wire jacket is cut through the upper and lower blades to separate and recycling of the inner metal and outer plastic of the cable.**
- **The machine consists of the following components pictured below:**





- **The safety components must not be removed except by a qualified technician. Power must be disconnected prior to any service.**

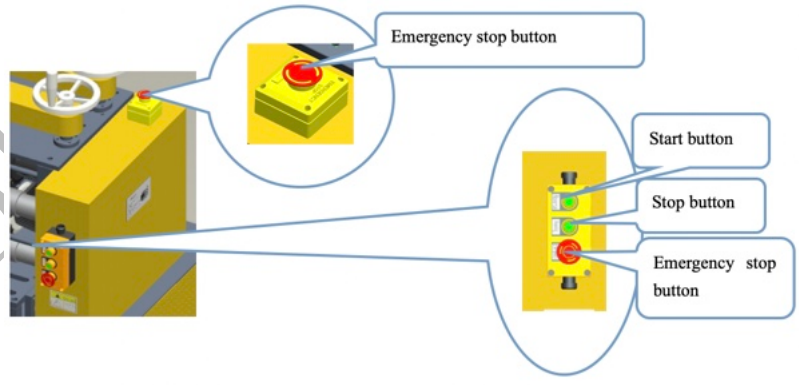
➢ **This machine has one primary adjusting point. The main way is though the upper wheel handles. These wheels are used to cut deeper or shallower into the wire jackets. If you are not able to put a piece of wire in a channel it may be necessary to adjust the wheels.**



- **Electrical Enclosure: Be warned there is an electrical shock hazard when dealing with anything in this enclosure. DO NOT OPEN the electrical enclosure if the machine is plugged into external power.**

RUNNING WIRE

- **Do all pre-operational and operational safety checks from Chapter 1.**
- **After securing the machine, plug the machine into power source.**
- **Have your wires ready to process, by separating them by type and cutting them into 3-4' lengths.**
  - **This is primarily for safety, but also to protect the motor from strain on the motor created by pulling heavy wires into the machine.**
- **Go through the on/off functions to make sure they are operating correctly. Start the machine by pressing the green "on" switch. Stop the machine by pressing the red "off" switch.**



  - **NOTE: if you need the machine to stop quickly in an emergency, press the red Emergency "stop" button.**

- Select a wire to strip.
- Adjust the wheels to the approximate size of the wire.
- Turn on the machine with the green button.
  - EXTREME CAUTION: MAKE SURE YOU ARE MINDFULL OF THE CUTTER ROLLER. IF YOU ARE NOT PAYING ATTENTION SERIOUS INJURY, DEATH OR DISMEMBERMENT COULD OCCUR!
    - REMEMBER THE SAFETY RULES BELOW!


Safety glasses must be worn at all times in work areas.


Long and loose hair must be contained.


Appropriate footwear must be worn.

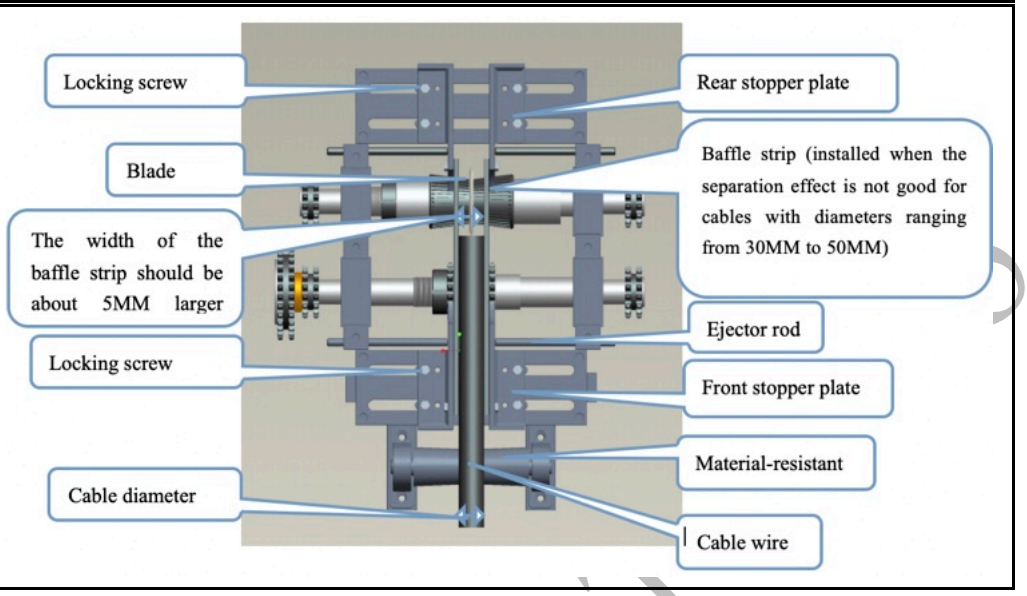

Close fitting/protective clothing must be worn.


Gloves, rings and jewelry must not be worn as wire could catch on the item and bring hands towards the machine.


Hearing protection should be worn when using this machine.

CAUTION: A safe distance should always be kept from the machine's blades and pulling sprocket during operation.

- Run the wire through.
  - If the wire did not cut through the complete jacket, adjust the cutters/roller and try again.
- Separate the wire from the jacket
  - On smaller wire this will be done by pulling the wire out of the jacket.
  - For larger wires with thicker jackets, if you are not able to pull the wire out of the jacket, you may need to run the wire through again cutting into the opposite side of the wire jacket.
- Ensure the cable remains stable during processing and does not swing side to side, allowing the blade to cut through the center for effective separation and recycling.
- Baffle Installation
  - If cables with diameters between 30 mm and 50 mm do not strip effectively, install the baffle strips. MAKE SURE THE POWER IS DISCONNECTED BEFORE INSTALATION. During installation, make sure the blade is centered between the two baffles. Place the cable in the rear feeding port between the baffles and confirm that the blade's cutting edge aligns with the center of the cable and maintains close contact with the baffles, as shown in the figure.
  - After making adjustments, secure the baffles at both the front and rear feeding ports using the ejector rod, and tighten all fixing bolts. The top screw on the baffle allows for fine adjustment of the feeding port gap. If the blade is not cutting the cable at its center, use the top screw to fine-tune the position of the rear feeding port baffle until proper alignment is achieved.


Locking screw
Blade
The width of the baffle strip should be about 5MM larger
Locking screw
Cable diameter
Rear stopper plate
Baffle strip (installed when the separation effect is not good for cables with diameters ranging from 30MM to 50MM)
Ejector rod
Front stopper plate
Material-resistant
Cable wire

Chapter 4

Troubleshooting

Problem	Solution
Wires get jammed in the machine	There are a few possible fixes for this: 1) Loosen the top hand cranks to allow more room for the wire. 2) The jacket on the wire you are trying to run is too thick. This machine will not strip some wires where the jacket is too thick or the materials are too dense, such as some underground plastics.
The machine is not cutting through the entire jacket	Increase the tension on the top hand cranks. It is also possible that either you are cutting wire that has too thick of a wire jacket or too dense a jacket. These jackets may not be able to cut with this machine.
Wire will not fit in the channel to start cutting.	The wire could be too big. If it's within the wire range, you can try letting some tension off the hand cranks. The upper wire size is 7" OD.
The wire will not start	The wire type may be too small. The lower limit in wire sizes for this machine is 1-1/4" OD.
There is no power to the machine	Check your circuit breaker on your wall power. Check the circuit breaker in the machine's enclosure. Check the overload has not tripped in the enclosure. Check that the power supply is connected. Inspect all wiring for damage or poor connections. Verify that the motor is functioning properly. Check that the switch is not damaged.
When stripping the wire, the cable escapes from the blade.	1) Adjust the gap between the feed inlet's material limiting plate and the cable so the cable does not move side to side during processing. The cable should be centered and symmetrical relative to the blade. 2) For cables with diameters between 25 mm and 50 mm, use baffle strips to prevent deviation. 3) After adjusting the feed inlet width and center position, tighten all bolts and secure the limit bolts to ensure the baffle does not shift during operation.
The cable cannot be stripped	1) If the cable is not being stripped properly, observe whether the upper and lower cutting lines are off-center. If so, adjust the feed inlet baffle until the cable center aligns with the blade. 2) If the cutting depth is insufficient, note that the machine can strip a maximum insulation thickness of approximately 28 mm. Do not exceed this limit. 3) If slipping occurs, reduce the gap between the conveying shafts. Make adjustments gradually—do not reduce the gap too much at once, as this may damage the machine. Adjust incrementally and test after each change. 4) If the gap between the blade shafts is too large and the blade does not cut the surface, adjust the blade shaft mechanism to reduce the gap. The correct gap should match the diameter of the wire core.

Chapter 5

Maintenance

➢ **Inspect electrical cords and electrical connections.**
➢ **Keep machine clean and free of debris.**
➢ **Grease internal gears with red grease or Molybdenum grease as needed.**
➢ **Spray antirust oil on chains and blade shaft as needed.**
➢ **Inspect blades occasionally to ensure they are sharp for optimal cutting.**