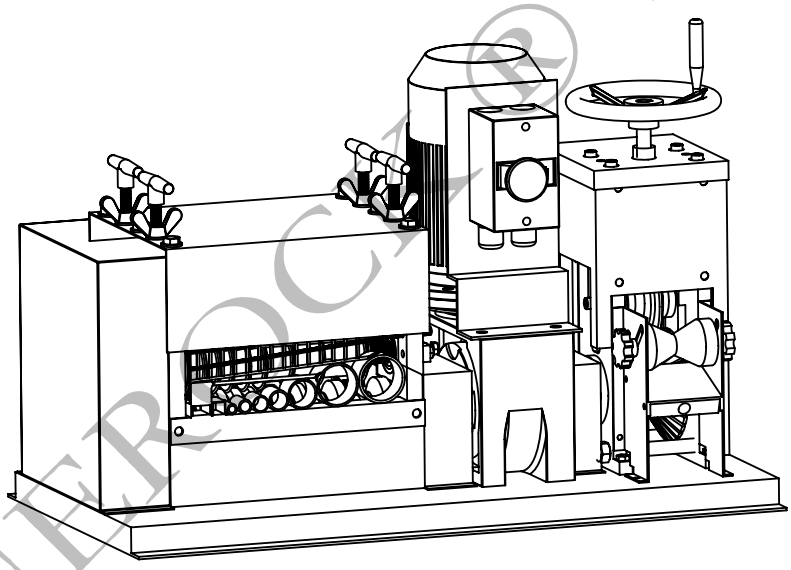
Volume

1.1

OPERATIONAL MANUAL

MODEL: **WS-260** BLUEROCK ® TOOLS 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.

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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, sockets and power outlet for damage.
➢ Ensure the safety guards are secure and correctly fitted.
➢ Secure and support the work piece 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 side-bolt centering 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 this could also 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	120V, 60Hz
Current	12.5 Amps
Motor Size	1.5 KW, 2HP
Motor Starter	120V TECO HUPB-18K Magnetic Starter
O/P	24 Amp Overload Protection (Set at 22A)
Power Connection	US Standard 3 Prong Type B Plug

MECHANICAL DATA ON LEFT MULTI-BLADE SIDE	
Blades	13 Blades – 9 Channels – cuts top/bottom of wires
Cutting Assembly	Double Cutting And Roller Channel
Cutting Speed	75 Feet Per/Minute
Wire Cutting Range	18 AWG – 1.5" OD Wire (Certain Square/Round Multicore Type Wires)
Drive System	Transfer Case And Gear System

MECHANICAL DATA ON RIGHT SINGLE-BLADE SIDE	
Blades on Right	1 Blade – 1 Channel – cuts top of wires
Cutting Assembly	Single Cutting And Roller Channel
Cutting Speed	75 Feet Per/Minute
Wire Cutting Range	12 AWG – 2.25" OD Round Wire
Drive System	Transfer Case And Gear System

SHIPPING DATA	
Shipping Weight	260 Pounds
Shipping Carton	32" x 26" x 18"

Chapter

3

Operations

Note

THOROUGHLY READ THROUGH THE ENTIRE MANUAL BEFORE OPERATING THIS MACHINE!

PURPOSE

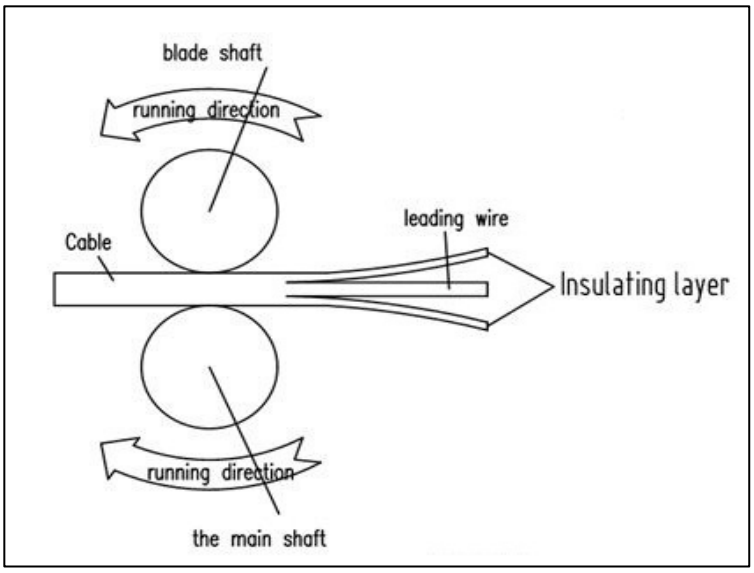
- **The purpose of the WS-260 is to remove outer and inner jackets from wires and cables in order to separate the inner copper or aluminum. These types of machines are widely used in the recycling industry to extract copper and aluminum for recycling.**
- **The WS-260 has the ability to cut the top and bottom of larger wires, and the tops of smaller wires.**
  - **Note: These wire jackets can also to be recycled by many recyclers so inquire with your local scrap buyers.**

INSTALLATION

- **Install the machine in a dry place.**
- **Bolt down or secure in some manner so as to be able to have access to both the front wire inlets and the back wire outputs.**
- **Make certain the machine is firmly secure so it will not tip or fall.**

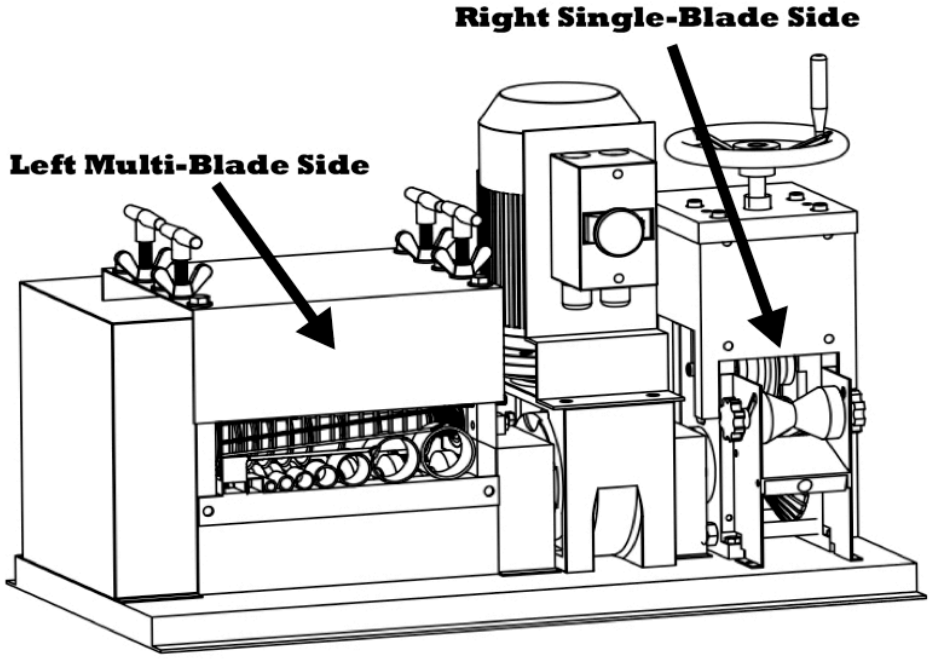
OPERATIONAL PRINCIPLES

- **This machine pulls wire into the machine across an assembly of a set of four cutting channel and rolling channels.**
- **The main cutting blade shafts and main rolling shafts run inversely to create a mechanism that pulls the wire into front of the machine.**



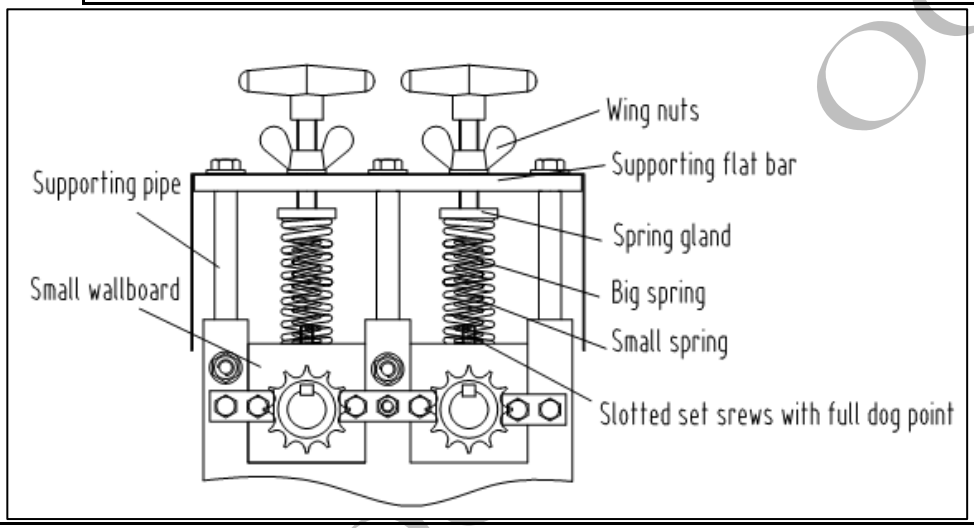
MACHINE COMPONENTS

- **The main components of the WS-260 are the central cutting and rolling assemblies on the left multi-blade side and the single channel rolling wheel and large blade on the right side. These are both driven by a transfer case, a gearing system and a motor. The safety guards are situated on top of both assemblies 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. All of these components are situated on a steel tray.**
  - **The safety components must be not be removed except by a qualified technician. Power must be disconnected prior to any service.**

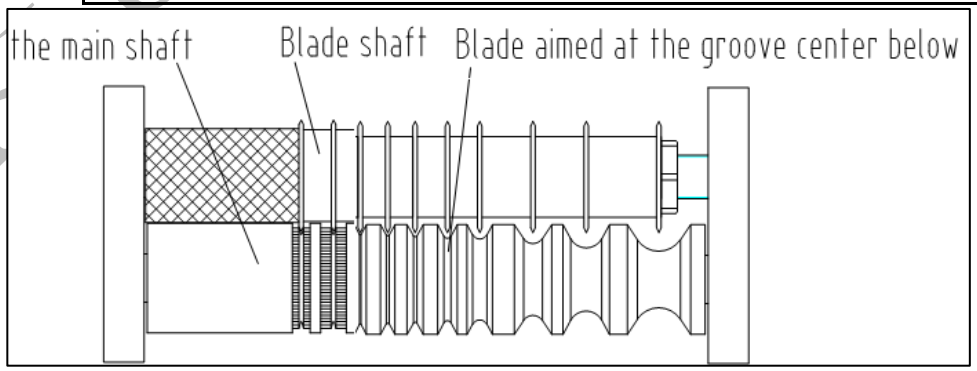


LEFT MULTI-BLADE COMPONENTS

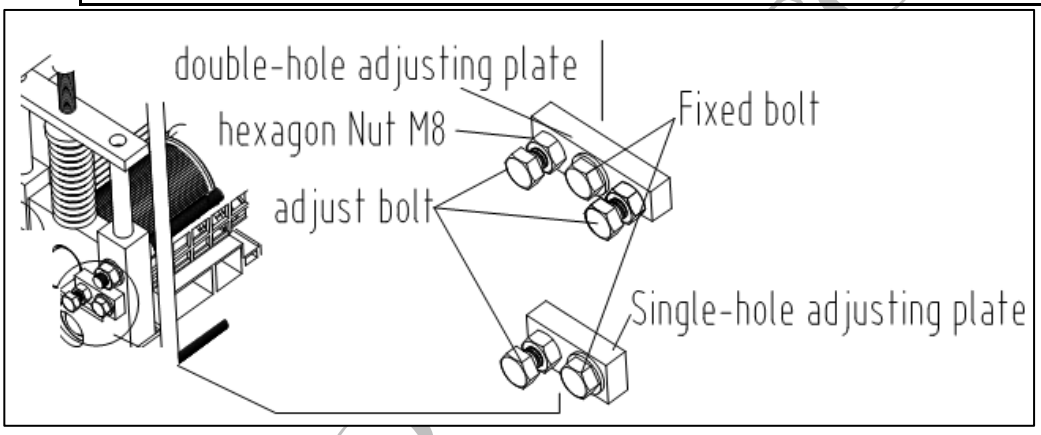
- **This side has two primary adjusting points. The main way is though the four T-bolts. These are the black bolts on the top of the machine that have a locking wing nut. These T-bolts are used to tighten or loosen the springs that control the upper cutting assembly. Essentially these are used to cut deeper or shallower into wire jackets. If you are not able to put a piece of wire in a channel (and have already tried to run it through larger channels), it may be necessary to loosen the T-bolt.**
  - **It is not uncommon for users to over-tighten these T-bolts thinking they need more spring tension, when in reality they just needed to strip down a cutting channel.**
  - **Generally if you're cutting in the right channel a full turn of the T-bolt (either tighter or looser) is all that is needed.**



- **The secondary adjusting point on this machine is the side centering bolts. These are the bolts with lock nuts on them located on the side of both bearing housings that adjust the top cutting assembly from right to left.**
  - **It is generally not recommended to adjust these bolts unless the smallest channel cutting blades are not centered in the cutting channel. To access this, the user will look down the smallest left channels and visually gauge if the blades are centered. If these centering bolts have too much play in them, the entire cutting channel can move too much from right to left during running wire.**



- **If the blades are not centered or have too much play, they can be adjusted. You really only need the entire cutter assembly (from bearing housing on right to bearing housing on left) to have about 1/16" of play. Essentially, you just need enough room for the centering bolts to allow the entire assembly to raise when a piece of wire goes through the channel and pushes up the entire cutter assembly. It is generally recommended to set the centering bolts by unscrewing the centering bolts on both sides of the assembly a few turns. Then looking down the left (small wire) cutting channels, tap the housing right or left to get the blades in the center of the channel. Screw the bolts in evenly from both sides (right and left bolts). Be careful here not to move the entire assembly. When they are tight against the housings, take another look down the left channel guides making sure the cutters are still in the center of the channel groove. If they are not, readjust. Next loosen the centering bolts by about ½ a turn on both the right and left side. This leaves just enough of an air gap to allow the cutting assembly to raise, but not travel too much from right to left. Next tighten the lock nuts. Make sure not to tighten or loosen the centering bolt on this step by using another wrench to ensure it doesn't spin.**



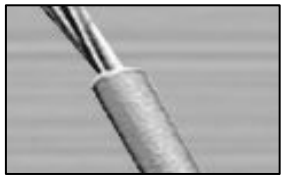
PROCESSING WIRE THROUGH THE LEFT MULTI-BLADE SIDE

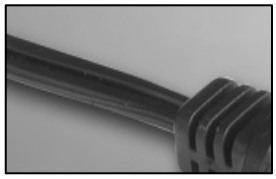
- **There is a wire guide in front of the main shaft and blade shaft where the cables will be manually inserted. See wire input guide diagram below for a general understanding of what wires can go in certain cutting channels.**
- **The wire input guide will be used as a general starting point for processing wire. Before processing, it is recommended to collect similar wire types to assist in wire processing efficiency.**
- **Selecting the correct input to run the wire through can take some time and experience. The general rule is to start in a much larger wire guides than the wire in question, run the wire, check the wire. If not cut, step down to a smaller input guide and try it again. It is a general misconception that the user should put a wire in the hole that is the exact same size of the wire. This is rarely the case. After a while the user will know from experience which guide is right for certain wire types.**

WIRE TYPE GUIDE ON LEFT MULTI-BLADE SIDE

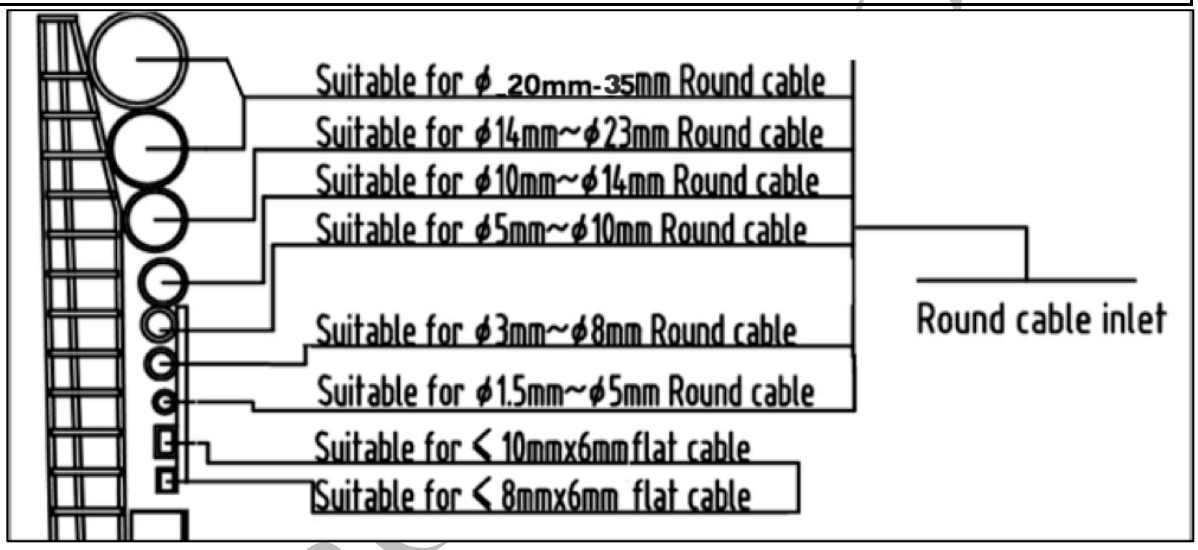
- **Sheathed flat cable: ≤ 0.55" (14mm) x 0.31" (8mm) WxH**
- **Twisted flat cable: ≤ 0.31" (8mm) x 0.23" (6mm) WxH**
- **Single-core cable: Dia. Φ0.07" (2mm) ~ Φ1.5" (35mm)**

Round cable **Sheathed flat cable** **Twisted flat cable** **Single-core cable**



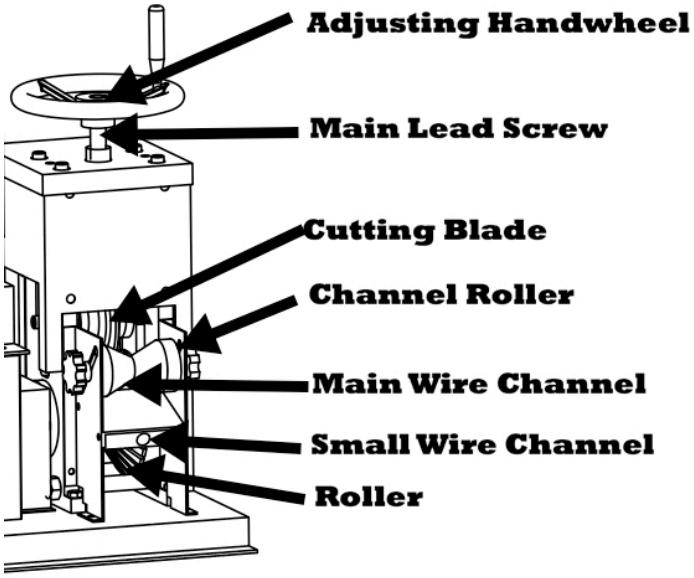



WIRE GUIDE DIAGRAM ON LEFT MULTIBLADE SIDE

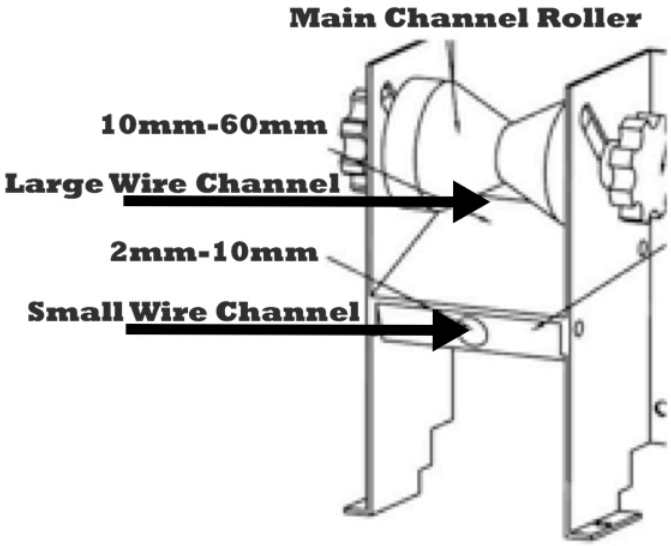


RIGHT SINGLE-BLADE COMPONENTS

- **This side has one primary adjusting point. This is the large round wheel handle on the top of the lead screw. Turning the wheel clockwise will lower the main cutting blade. Turning the wheel counter-clockwise will raise the cutting blade.**
- **Under the cutting blade is the main channel roller. This roller is driven by the motor and transfer case. As the roller rotates, it will act as the pulling force to bring wires into the cutting channel making contact with the blade.**
  - **WARNING: DO NOT take off machine guards or channel roller. These are here to protect the user from getting to close to the rolling and cutting blades which could cause serious injury, death or dismemberment.**



- Under the main channel roller in the main large wire channel where wire 10mm-60mm can be fed through.
  - NOTE: DO NOT remove the main channel roller. Feed wire underneath this roller (not over the top).
- There is a small wire channel located under the large wire channel (see figure below). This channel can be used for wire 2mm-10mm.



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 torque 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.**
- **Turn the machine on.**
- **Select a wire to strip.**
- **Decide on which guide is the correct guide input if using the left multi-blade side or adjust the handwheel (up/down) if running larger wire through the right single-blade side.**
  - **If using the single-blade side, ensure the blade is higher than the wire running through. It's always better to lower the blade on the next pass rather than the blade cutting too deep into the wire or jamming up which can overload the machine.**
- **Run the wire through.**
  - **FOR THE LEFT SIDE; If the wire did not cut through the complete jacket, run it through again through a smaller channel. If there are no smaller channels, tighten the T-bolt half/full turn closest to the channel you're attempting to use.**
  - **FOR THE RIGHT SINGLE-BLADE SIDE; If the wire did not cut, lower the cutting blade slightly and try again.**
- **Turn machine off.**
- **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.**

Chapter 4

Troubleshooting

Problem	Solution
Wires get jammed in the machine	Left multi-blade side; 1) Loosen the top hand cranks to take pressure off springs to allow more room for the springs to depress. 2) Check to make sure you are running the wire through the right channel. This takes some time to figure out. Be patient when clearing the machine. Try the step down method. Start in a larger hole than you think. Work your way down to a smaller hole until ideal cut is made. 3) Only use the 1st two channels for running Romex®. They have the Rectangular Guides. 4) 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. Right single-blade side; 5) Adjust the blade up.
For smaller wire, the cut in the wire jacket is not in the center of the wire	Left multi-blade side; 1) The side adjustments could be out of alignment on the cutter rollers. The cutter rollers on the top of the cutting assembly can adjust right to left. The cutting blades should be centered in the middle of every roller. You can look down the middle of every roller from front and back of the machine to see if the cutters are in the center. If they are not, you can adjust the top cutter and rollers by adjusting the side bolts (with the lock nut) to slightly shift the cutter/roller. Make sure you do not tighten the bolts too much so the top cutter/roller assembly cannot raise and lower as wire passes through. Think of these bolts as side stops only, just to keep the assembly inline, so leave about 1mm gap in-between bolt and cutter/rollers. Right single-blade side; 2) Adjust the blade right or left.
The machine is excessively loud and makes grinding noise	These machines are generally on the noisier side as they use gear drive system. You can however check the side adjustments as they could be out of alignment on the cutter rollers. The cutter rollers on the top of the cutting assembly can adjust right to left. The cutting blades should be centered in the middle of every roller. You can look down the middle of every roller from front and back of the machine to see if the cutters are in the center. If they are not, you can adjust the top cutter and rollers by adjusting the side bolts (with the lock nut) to slightly shift the cutter/roller. Make sure you do not tighten the bolts too much so the top cutter/roller assembly cannot raise and lower as wire passes through. Think of these bolts as side stops only, just to keep the assembly inline, so leave about 1mm gap in between bolt and cutter/rollers.
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.

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 spindle and blade shaft as needed.
➢ Inspect blades occasionally to ensure they are sharp for optimal cutting.

Changing Blades on Left Multi-Blade Side

1. Remove upper cutter/roller tensioners and the springs below them.
2. Use 11/16” socket to remove top bolts, and the spacers below them.
3. Take the top guard off.
4. Take the cutter assembly out.
5. Use adjustable large puller to pull bearing housing off the cutter assembly.

6. Use puller to pull bearing from cutter assembly. Make sure to mark the bearings position on the steel rod to assure the correct position upon reassembly.

7. **Unscrew spanner nut clockwise. If you do not have a spanner nut wrench, it is possible to use a pair of vice grips.**

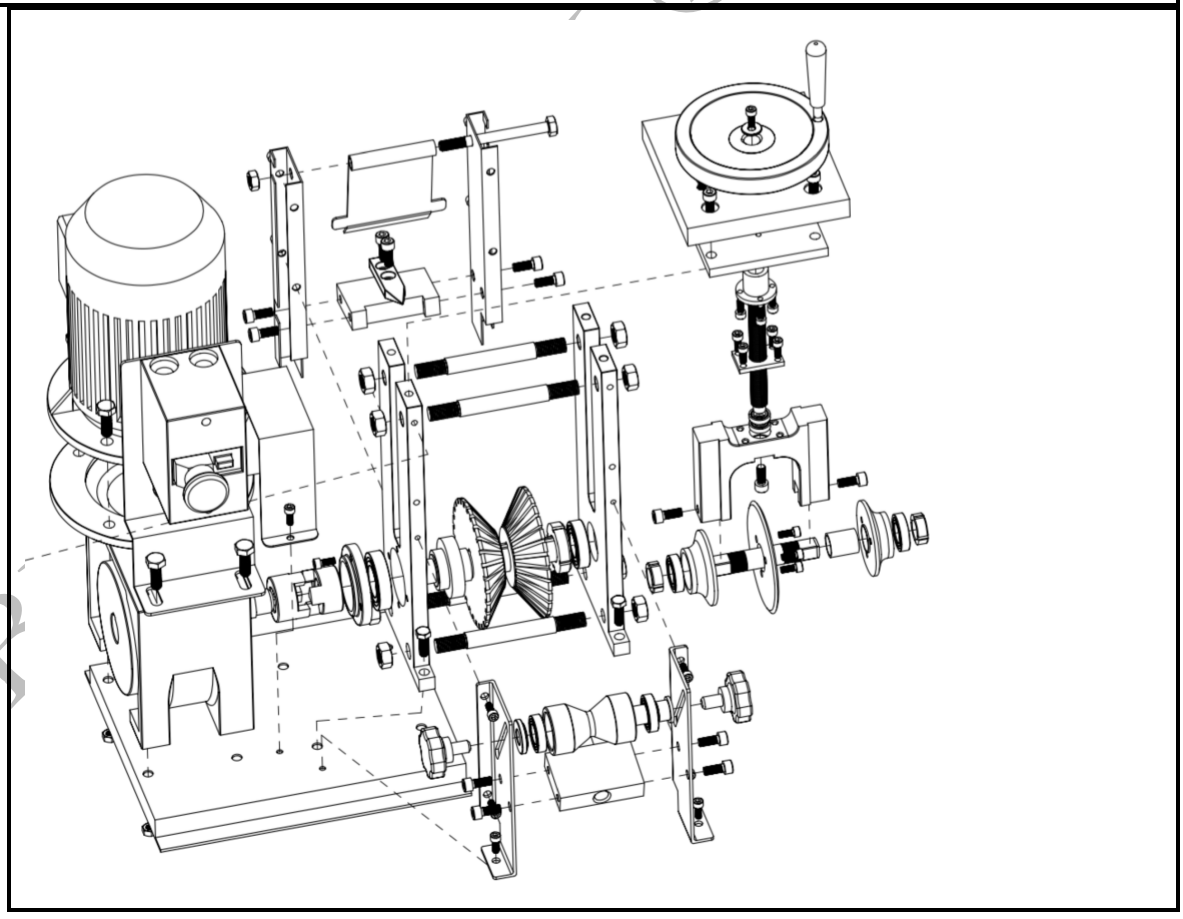
8. **MAKE SURE YOU MARK THE SPACERS 1 THROUGH 5 (OR 1 THROUGH 9 FOR THE TOP ASSEMBLY), SO THAT THEY GO BACK ON IN THE SAME ORDER THAT YOU TOOK THEM OFF.**

9. **Blades are ready to come off and be replaced.**

10. When re-assembling put the bearing back into the bearing housing before attaching the housing to the cutter/roller.
11. Follow all other steps in reverse order to reassemble.

Changing Blades on Right Single-Blade Side

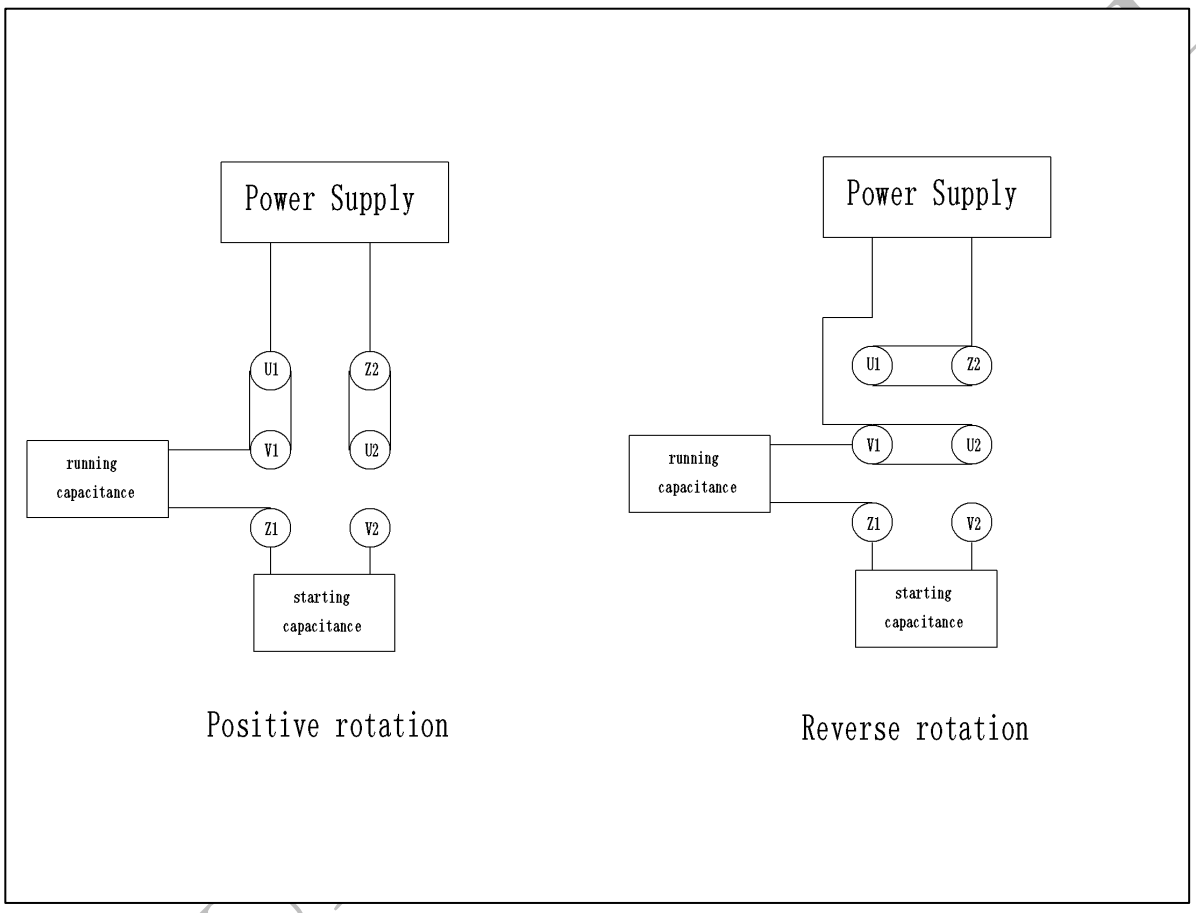
1. Take the top guard off.
2. Deconstruct assembly housing.



3. Take the cutter assembly out.
4. Unbolt the blade from the assembly.
5. Bolt in new blade and reconstruct assembly.
6. Put all back together. Ensure the blade is centered properly. You can adjust the centering using the spanner nuts on the sides of the blade assembly.

Chapter 6

Motor Schematic



Parts List

#	Spec.	Qty	Material	Description	#	Spec.	Qty	Material	Description
1	1.5kw-4 B5	1		**Motor**	47	W260-0032	1	A3	**Inlet for thinner cables**
2	NMRW075-15/B	1		**Gear reducer**	48	W260-0033	1	45#	**Lock nut of rolling shaft**
3	RB-6-4-1	1		**Switch**	49	W260-0034	1	A3 T=3	**Inlet bracket (left)**
4	W260-0001	1	A3	**Switch mounting plate**	50	W260-0035	2		**Plastic handle bolt M10X25**
5	GB/T5781-2000	2	A3	**Hex bolt M10X20**	51	60/32	1		**Deep grove ball bearing**
6	W260-0002	1	A3 T=1.5	**Shield**	52	W260-0036	1	45#	**Bearing Cover**
7	GB/T70.1-1985	4	A3	**Hex socket bolt M6X15**	53	W260-0037	1		**Coupling**

8	GB/T5781-2000	4	A3	**Hex nut M10X30**	54	W260-0038	1	45#	**Coupling shaft**
9	W260-0003	1	A3 T=1.5	**Coupling shield**	55	W260-0039	1	A3 T=1.5	**Left shield**
10	W260-0004	1	A3 T=1.5	**Mounting panel of shovel**	56	W260-0040	1	A3 T=1.5	**Top shield**
11	W260-0005	1	A3 T=1.5	**Cover**	57	GB/T5780-2000	4		**Hex nut M10X110**
12	W260-0006	1	A3 T=1.5	**Mounting panel of shovel**	58	GB/T95-1985	8		**Flat washer**
13	GB/T70.1-1985	10	A3	**Hex socket bolts M6X15**	59	W260-0041	4		**T shape handle M12**
14	GB/T5780-2000	1	A3	**Hex bolt M10X110**	60	GB/T62-1988	4		**Wing nut M 12**
15	GB/T41-2000	7	A3	**Hex nut**	61	W260-0042	2	A3	**Iron plate**
16	W260-0007	1	A3	**Shovel fixed panel**	62	W260-0043	4	HT200	**Pressure cap**
17	GB/T70.1-2000	10	A3	**Hex socket bolt M8X20**	63	W260-0044	4	65Mn	**Thick spring**
18	W260-0008	1	A	**Shovel**	64	W260-0045	4	65Mn	**Thin spring**
19	W260-0009	1		**Wheel**	65	W260-0046	4	HT200	**Small siding panel**
20	W260-0010	1		**Handle**	66	W260-0047	4		**Gear sets**
21	W260-0011	1	A3 T=1.5	**Top shield**	67	08A	4		**Single row chain wheel - 12-tooth**
22	W260-0012	1	A3	**Cover plate**	68	W260-0048	1	A3 T=1.5	**Coupling shield**
23	W260-0013	1	45#	**Pilot nut**	69	W260-0049	13	65Mn	**Blade**
24	W260-0014	1	45#	**Lifting screw**	70	W260-0050	11		**Blade spacer**
25	W260-0015	1	A3	**Bearing cover**	71	GB/T812-1988	2		**4-slot round nut M27x1.5**
26	61801	2		**Deep groove ball bearing**	72	6205	8		**Deep grove ball bearing**
27	W260-0016	1		**Blade adapter**	73	W260-0051	1		**Blade shaft**
28	W260-0017	2	45#	**Locking nut of blade**	74	W260-0052	1	A3 T=3	**Base**
29	61904	2		**Deep groove ball bearing**	75	GB/T5781-2000	4	A3	**Hex bolt M8X20**
30	W260-0018	1	45#	**Blade fixing set (right)**	76	W260-0053	1		**Feed inlet**
31	W260-0019	1		**Bearing fasten tube**	77	W260-0054	1	A3 T=1.5	**Bezel fixed panel**
32	W260-0020	1	#	**Blade shaft**	78	W260-0055	2	HT200	**Siding panel**
33	W260-0021	1	Gr12M0V	**Blade**	79	W260-0056	5		**Tie rod M10**
34	W260-0022	2	45#	**Blade fixing set (left)**	80	GB/T6170-2000	*20*		**Hex nut M10**
35	W260-0023	4	A3	**Tie rod**	81	W260-0057	1	451	**Main shaft**
36	W260-0024	1	45#	**Side panel - right**	82	W260-0058	1	45#	**Front lower blade shaft**
37	6005	1		**Deep groove ball bearing**	83	W260-0059	2		**08A Chain**
38	GB/T812-1988	1	A3	**4 slot round nut M27X1.5**	84	W260-0060	2	45#	**Fixed plate for gear shaft**
39	W260-0025	1	45#	**Main shaft**	85	W260-0061	1	A3	**Fixed plate for gear shaft**
40	W260-0026	2	45#	**Conveyor roller**	86	GB/T6170-2000	4		**Hex nut M16**
41	W260-0027	1	45#	**Spacer**	87	W260-0062	1		**Shovel sets**
42	W260-0028	1	45#	**Side panel -left**	88	W260-0063	4	A3	**2 holes adjusting plate**
43	W260-0029	1	A3 T=3	**Inlet bracket(right)**	89	W260-0064	2	A3	**3 holes adjusting plate**
44	W260-0030	1	45#	**Shaft of feed roller**	90	GB/T5781-2000	14		**Hex bolt M8**
45	61904	2		**Deep grove ball bearing**	91	W260-0065	1	45#	**Front upper shaft**
46	W260-0031	1	45#	**Feed roller**					

Breakdown View