

Pipe(TUBE) CUTTER Of Best Technology

-Cutter Manual

( - 500)



SAFETY PRECAUTIONS

Thanks for choosing the S-Cutter.

Make sure that you carefully read and fully understand the Manual to use the device correctly and keep yourself and your properties safe.



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SAFETY PRECAUTIONS



- 01 **Keep workplace clean and well-lit at all times.**
An untidy or dark workplace may cause accidents.
- 02 **Consider your work environment.**
Do not let it wet.
Do not use in humid place.
Install bright lighting in the work place.
Do not use the machine near the flammable liquids or gases.
- 03 **Keep yourself safe from electric shock.**
Do not touch the grounded parts(i.e. Water pipes, heaters, ranges, refrigerators).
Ensure the grounding wire is properly connected to the ground and use it.
- 04 **Keep out any unauthorized persons.**
Do not let the outsiders contact with tool or extension cord.
Do not let visitors access to the work area.
- 05 **Keep the product safe.**
Cut off the power when the tool is not in use, and keep it where it is not accessible to outsiders.
- 06 **Do NOT operate at overload.**
More efficient and safe operations are enabled within a permitted power range.
- 07 **Always use the proper tools.**
Use the standard parts and components provided by the head office.
Do not use the tool for purposes other than their intended use or in places away from the working range.
- 08 **Dress properly.**
Do not wear loose clothing or jewelry.
You may be hurt by the moving parts of the tool.
It is recommended to wear non-slip footwear for outdoor work.
- 09 **Be sure to wear safety glasses and protective gloves.**
Wearing safety gear such as goggles and gloves can reduce the risk of bodily injury.
Scattering chips can do serious damage to the eyes or cause a burn.



- 10 Do NOT abuse the cord.**

Do not drag the product by pulling the electric cord.
Do not unplug the cable by pulling the cord itself.
Keep the cord safe from heat, oil and sharp edges.
- 11 Secure the workpiece.**

Secure the workpiece by using a lock.
- 12 Pay attention to your work.**

Please note the fall and cut piping pinch.
- 13 Manage the product carefully.**

Keep the product clean and efficient for safe operation.
Manage with the proper lubricant, apply a corrosion inhibitor to prevent corrosion when not in use for a long time.
When replacing the management regulations and tools, comply with the instructions.
Check plugs and wires regularly and contact experts to repair the damage.
Check connection cables regularly and replace damaged parts.
Keep the control board dry and avoid getting oil or grease.
- 14 Remove from power source.**

When not in use, checked or replaced, turn off the switch.
- 15 Please check before operation.**

Make sure that the tool(blade) has been tightened, blade direction and the direction of rotation.
Make sure that the piping is tightened.
Make sure the piping direction of rotation(Check reverse rotation switch Forward(CW)).
Make sure that the cutting, chamfered speed and rotational speed.
- 16 Be careful of operating the machine accidentally.**

Do not carry when the power is connected.
When turning on, make sure that the operation switch is off.
- 17 Electrical cable for connection outdoors.**

Use the authorized extension poser cord with a qualifying mark.
Do not connect the currently used cable to other equipment.
Have a separate circuit breaker.

18 Be cautious all the time.

Observe work process and process accordingly.

Do not use this product if the concentration is blurred,

Do not operate by force the cutting speed and rotational speed.

19 Make sure that there is no damage on the product.

Check the safety device and examine thoroughly that the mildly damaged parts now function normally before resuming the use of the tool.

Check if the Product got stuck, or the parts are damaged.

The complete operation of the tool is not guaranteed unless all parts are normally assembled, and all requirements are met.

Unless otherwise stated in the Manual, the damaged safety device or parts are repaired or replaced at the customer service center.

20 Caution!

For your safety, use the parts and tools indicated on the manual or recommended by the manufacturer.

Use of other parts or additional tools that are not recommended on the manual and catalog may occur accidents.

21 Repair request to the experts

For your safety, use the tools and accessories specified in the Manual or recommended by the distributor. The use of other tools and accessories not mentioned in the Manual or catalogue may result in bodily injury.



Must-Follow Rules



➔ The instructions in this user manual contains information that is important to the safe use of this product.
 Not following these instructions can cause death, serious injury, and massive property damage.

➔ For safety, the instructions are divided into 'WARNING' and 'CAUTION' depending on degree of risk, and the details are as follows:

Symbol		Description
	WARNING	※ There is a high possibility of serious injury or death when the instructions are violated.
	CAUTION	※ There is a possibility of serious injury or death when the instructions are violated. ※ There is a possibility of device failure or degradation when the instructions are violated.

➔ Precautions were recorded to prevent an accident that might easily occur while using or handling the Product and execute operations safely.
 The safety warnings and cautions cannot cover all conditions or situations that can take place during operation. Therefore, remain focused during operation or storing. Read and fully understand the Manual to prevent an accident.

➔ **Special safety precautions**
 'WARNING' or 'CAUTION' mark makes a user stay alert because there is a possibility of hazards under particular conditions.



WARNING

- **Make sure the power is connected to the ground.**
Leakage current due to electric shock may occur if the product is not connected to the grounding.
- **Do not pour water or cutting fluid.**
Due to water or other liquids on the electric motor, electric shock, or death may occur. Use cutting fluid until tools are slightly wet.
- **Do not use tools in wet conditions or rain.**
Serious injury or death may occur by electric shock.
- **Avoid fingers, hands or clothes to touch the blade while operating.**
When fingers, hands, or other body parts stuck in the machine, it may occur serious injury.
- **Avoid fingers, hands or other body parts to touch where pipe and roller meet while operating.**
When fingers, hands, or other body parts stuck in the machine, it may occur serious injury.
- **Before supplying power to the product, be sure to turn off the operation switch.**
Plugging in with the switch on may cause sudden rotation and occur serious injury.
- **Do not let any part of body to touch the compression device of product.**
Serious injury may result.
- **Make sure to wear safety equipment.**
Chips generated during the operation may scatter and cause serious eye injury.



CAUTION

- **Be sure to apply our supplied product and cutting blades only for their intended uses.**
Use only products certified for their quality (state-certified or higher-quality) in the event there is difficulty in procuring our products and accessories.
If violated, performance degradation and serious injury may occur.
- **Do not leave the product rotated.**
workers may result in bodily injury.
- **Place cutting chips safely.**
When cutting chips meet flammable substances, it may cause fire and burns.
- **Wear gloves and long-sleeved clothes to wear.**
Scattering chips can cause burns.
- **Use Extension cord as short as possible.**
If too long or too thin, it may cause overload.
- **Operation before commissioning.**
Check the machine before use for safety.



Instruction Before Use



1. Check the electric leakage breaker

Make sure the system is powered on the circuit breaker is installed.

Check if an electric leakage breaker (ELB) with rated capacity is installed in all electric units.

Make sure that the ground wire is connected to the powered system.

2. Extension power cord

If an electrical outlet is not nearby, use an extension power cord.

Choose a proper one in terms of length and thickness, considering the flow of electricity. If it is too long or thin, voltage increases, causing overload.

Use a short power cord as much as possible.

※ Specification of the extension cord has to be at least $2.5\text{mm}^2 \times 3C$ (250V-16A).



If an electric power cord is damaged, it must be repaired or replaced with a new one immediately.

3. Check the power

Check the power supply stated on the nameplate and use the proper power source.

4. Check the switch is off



Unaware that the switch is turned on, the number of accidents due to a sudden rotation of the plug is inserted in the power being.

- 500

Necessary for stainless pipe work!

The world's first pipe-rotation cutting method applied equipment

Equipment capacity : 3/8 - 20inch (Pipe O.D 16mm - 510mm)





How to Use S-500

How to use S-500

Instructions Before Use

Please read about how to use manual provided by the headquarter or suppliers.

Users must be educated before use.

Make sure to remove the power exchanges when cutting or beveling.

Be sure to use consumables(such as cutting and beveling blades) for this equipment that are provided by use.

Make sure to connect the grounding, and confirm the voltage.

Make sure to wear protective equipment such as protective glasses before work.

Beware of burns when using beveling tools which is extremely hot after operation.

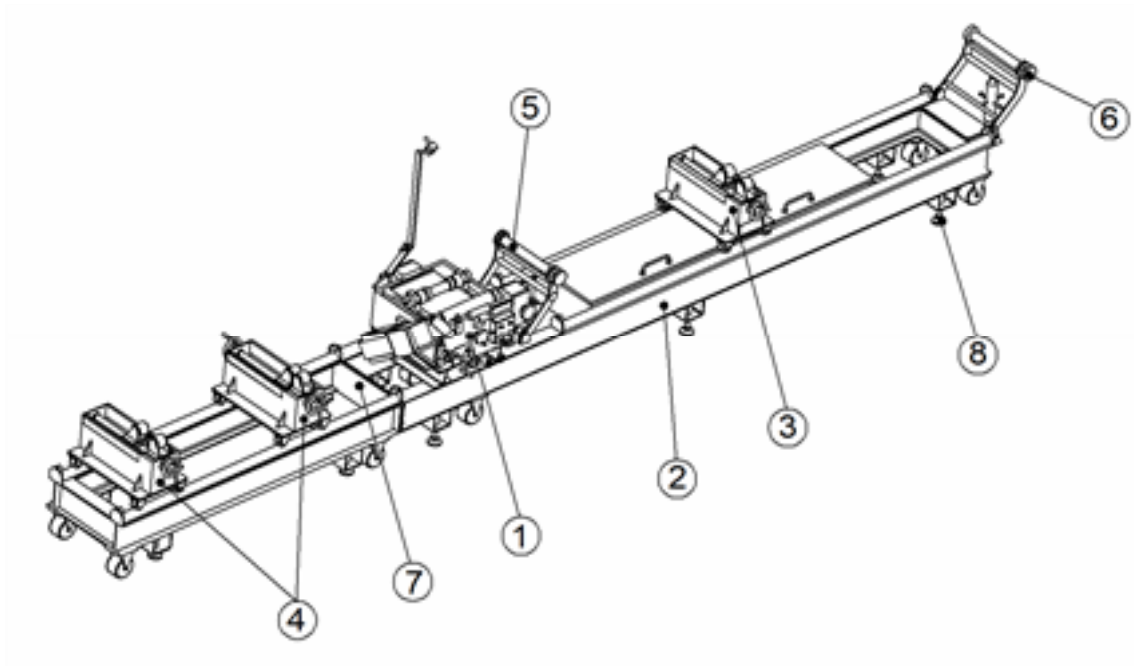
Beware of burns by gearbox in case of prolonged use.

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01. Name of the parts and controls
02. Installation of the equipment Table
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07. Vise clamp (3/8 - 2inch)
08. Cutting / beveling adjustment
09. Rotating adjustment
10. Emergency STOP / RESET switch
11. Maintenance and inspection
12. Product specifications

1. Name of the parts and controls

- Name of the parts

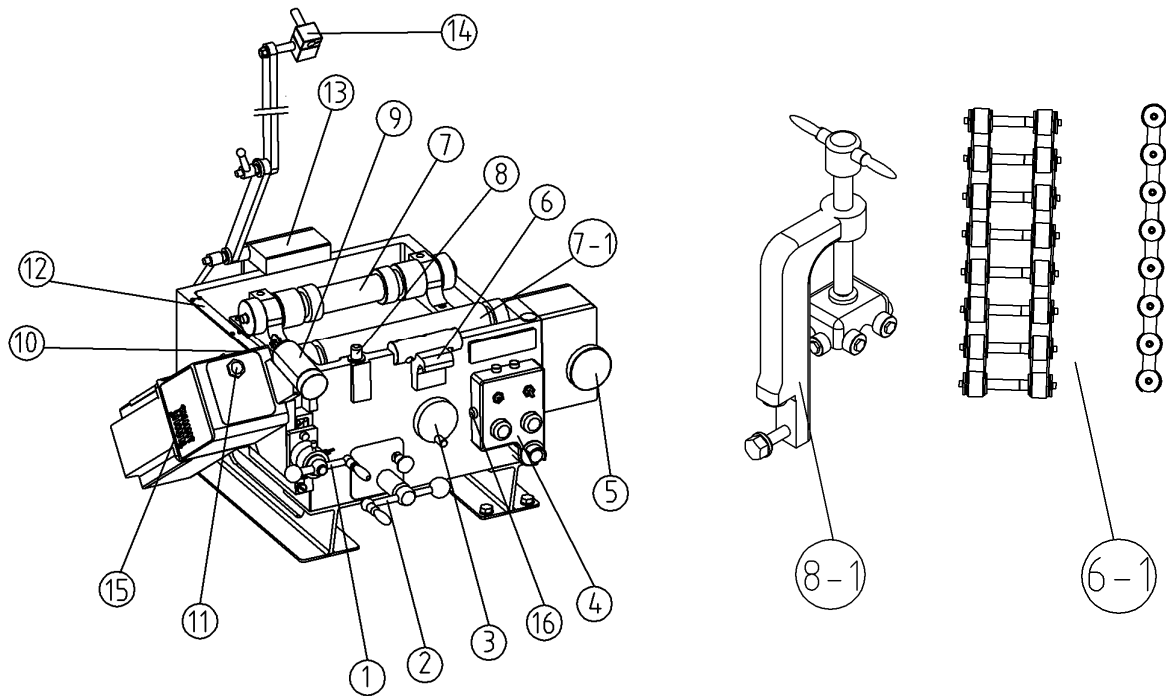


NO	Component	Description
1	S-500	Pipe cutting and beveling machine
2	S-500_PR	Machine table and pipe rail
3	S-500_PS	Pipe rotating support device(fixed type)
4	S-500_PS	Pipe rotating support device(adjustable type)
5	S-500_PL	Pipe transfer and lift device(basic type)
6	S-500_PL	Pipe transfer and lift device(assembly type)
7	Split plate	Rail disassembly(when moving)
8	Leveling foot	Horizontal alignment



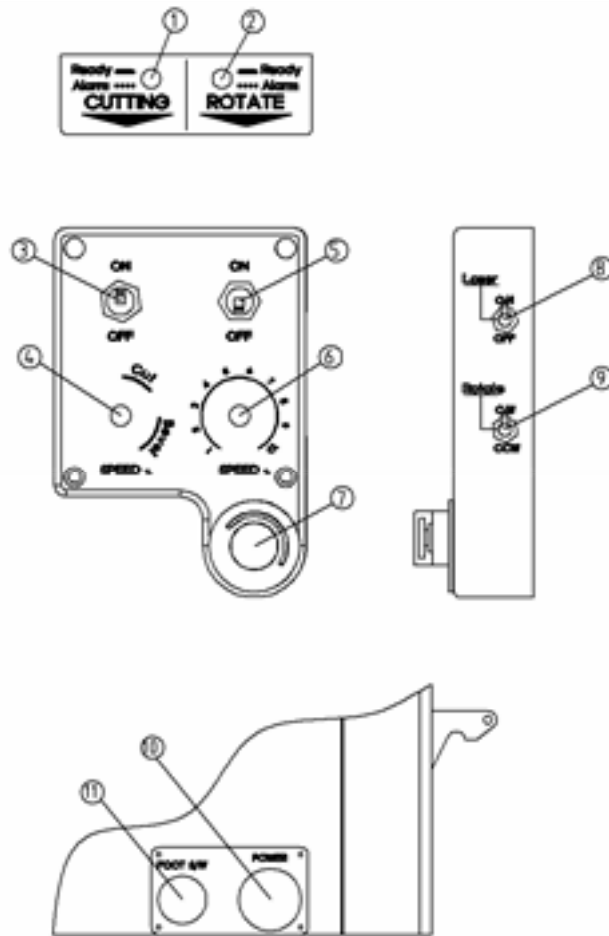
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● Name of the function parts



NO	Name	Description
1	Cutting handle	Cutting blade in/out
2	Chain handle	Chain fixing handle
3	Diameter adjustable handle	Roller location decision according to the pipe specifications
4	Control panel	Machine control
5	Rotating handle	Pipe rotating handle
6	Chain ring	Front chain locking device
6-1	Chain clamp	Use when large diameter work(2-20inch)
7	Spacing roller	Pipe rotating support roller
7-1	Drive roller	Pipe rotating drive roller
8	Vise pin	Use when small diameter work(3/8-2inch)
8-1	Vise clamp	Use when small diameter work
9	Anti-jamming device	Anti-jamming device for cutting blade
10	Cutting & beveling blade	Cutting & Beveling blade
11	Oil supplements	Oil supplements
12	Diameter ruler	Roller spacing standard ruler by the diameter
13	Chain jack	Chain tightening device
14	Laser	Chain location decision for alignment
15	Cooling fan	Cutting box cooling
16	Fuse holder	5∅-20mm, 250V-15A

● Name of the controls



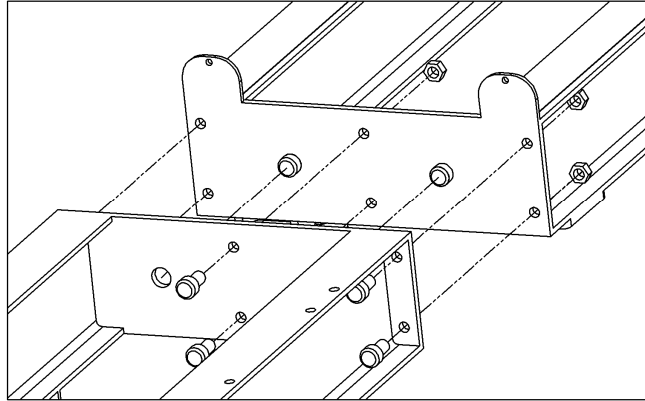
NO	Name	Description
1	Cutting & beveling lamp	Cutting preparation lamp
2	Rotating lamp	Feed preparation lamp
3	Cutting & beveling switch	Cutting & beveling ON/OFF
4	Cutting speed controller	Cutting speed adjustment
5	Rotating switch	Feed ON/OFF
6	Rotating speed controller	Feed speed adjustment
7	Emergency stop button	Emergency stop and turning off the alarm
8	Laser Switch	Laser ON/OFF
9	Rotating switch	CW/CCW adjustment of pipe rotation
10	Power	Power supply connector
11	Foothold switch	Foothold switch connector



2. Installation of the equipment table

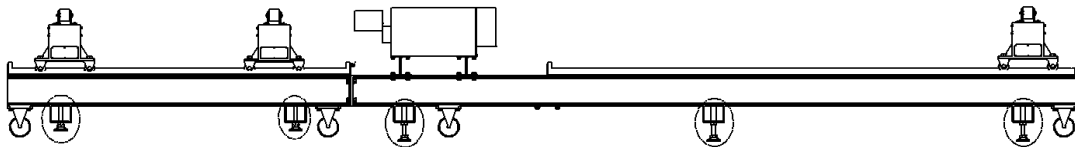
2-1. Rail Assembly

- Connect alignment pins on the assembly rail to the holes on the other rail, and fix with bolts(6 pieces).



2-2. Check the horizontality of the rails

- Place rails vertically by using height-adjustable rulers on each part.

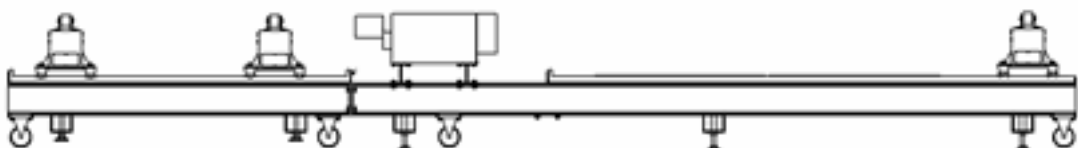


2-3. S-500_PS installation

- Place 1 piece of S-500_PS(fixed type) on the right side of equipment and connect the machine and pipe.
- Place 2 pieces of S-500_PS(adjustable type) on the left side and connect the pipe flexibly.

2 pieces of S-500_PS(adjustable type)

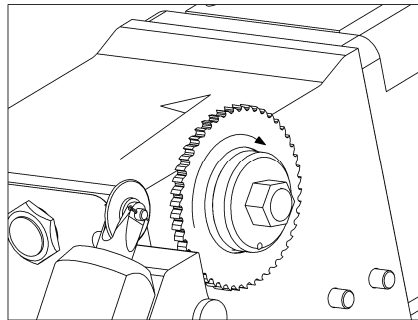
1 piece of S-500_PS(fixed type)



3. Mounting of the cutting and beveling blade

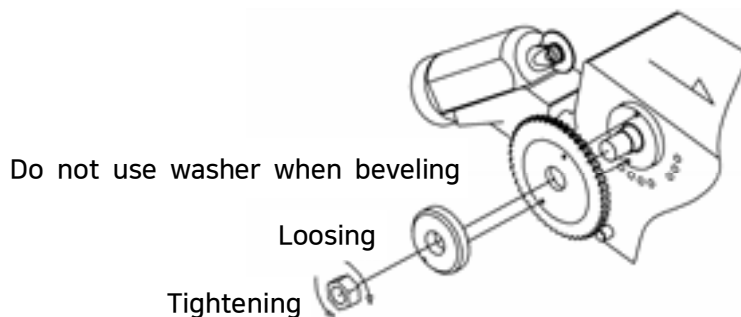
3-1. Check the rotating direction of the cutting blade

- Check the accordance of direction with the arrow on gearbox and cutting blade.



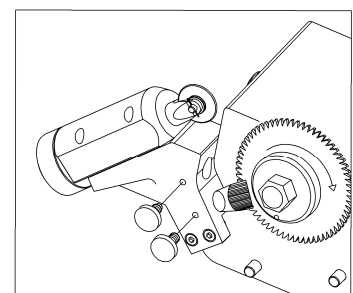
3-2. Mounting the cutting and beveling blade

- When cutting, meet the axis with the hole on cutter blade, fix with the pin on washer and tighten the appointed nut(M14 left screw) by using a wrench(22mm) and turning left.
- When beveling, set the beveling blade on the axis and use the dedicated nut(M14 left screw).
 - Do not use cutting washer



3-3. Fixing brush

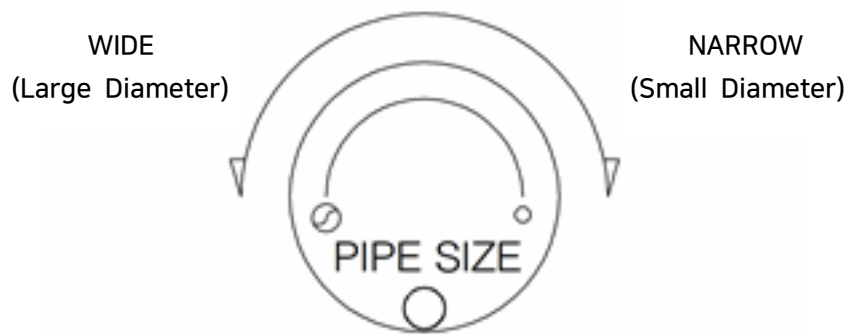
- Fix the stainless steel brush by attaching on cutting blade (extended the saw blade's lifespan).





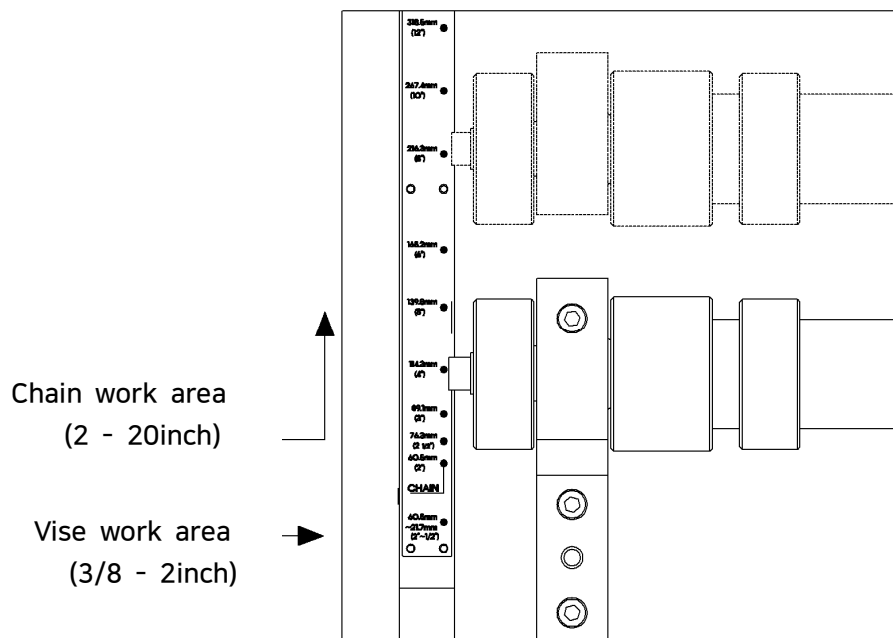
4. Roller gap adjustment according to the pipe specifications

4-1. Gap adjustment with PIPE SIZE handle



4-2. Position the center of the bolt head of the adjustable roller(support roller) on the diameter ruler according to the pipe size to be worked

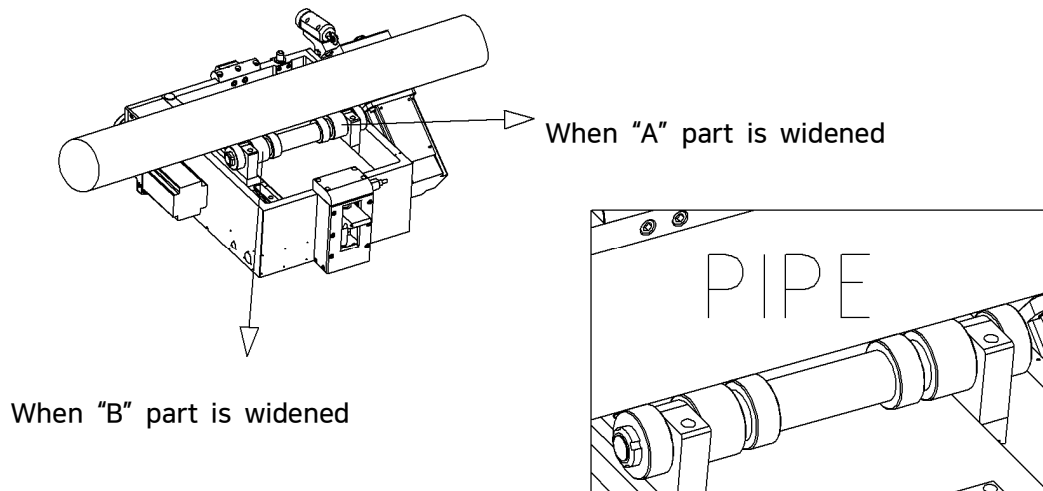
- Clamping the tubes with chain when working on large diameter pipe(2 - 20inch).
- Work with vise when working on small diameter pipe(3/8 - 2inch).



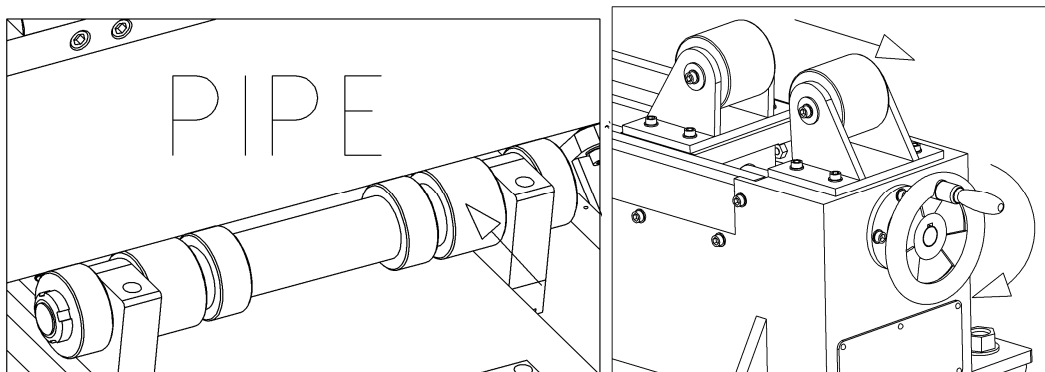
5. Pipe setting

5-1. The horizontal alignment of the pipe and equipment

- Place the support roller according to the size of the pipe to be cut, and adjust the level of the pipe and machine horizontally by modulating S-500_PS(fixed type).



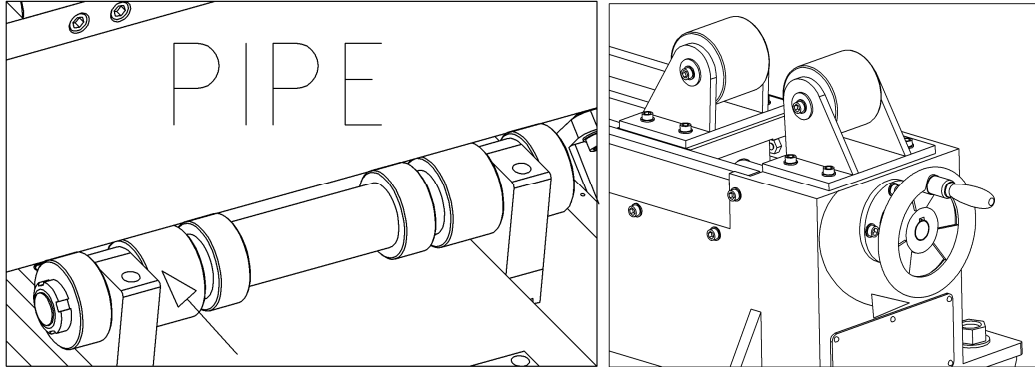
- In case of 'A' : Turn S-500_PS(fixed type) handle clockwise to fix the gap of "A" part





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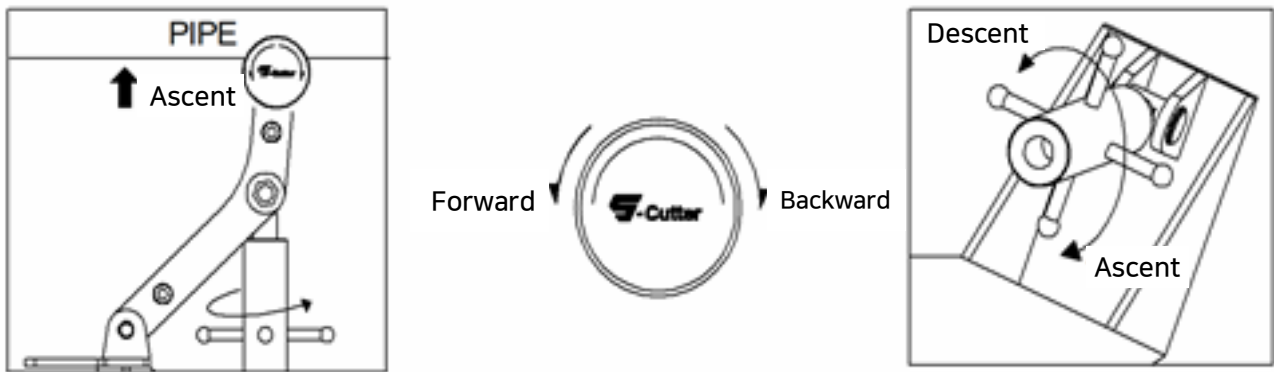
- In case of 'B' : Turn S-500_PS(fixed type) handle counter-clockwise to fix the gap of "B" part



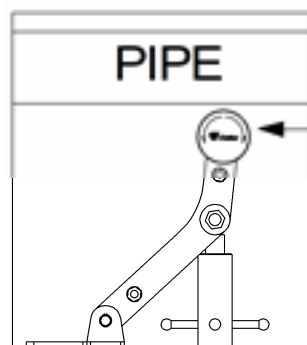
※ Note) Do not place the pipe horizontally with a level aligner. Check the gap between the rear roller of equipment(after decided the scale) and the pipe with the eyes!

5-2. Adjusting the cutting position

- Align the cutting position by raising the feeder and place it back.



※ Note) After using the feeder, the location of the transfer roller should be returned.

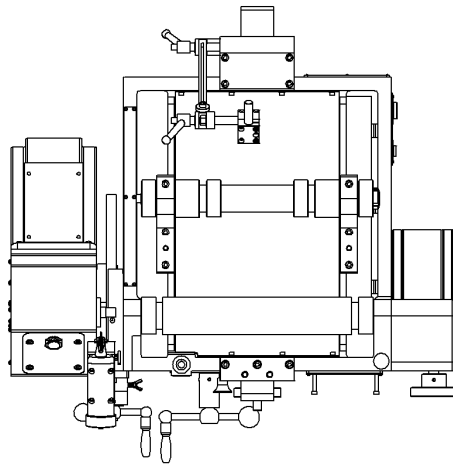
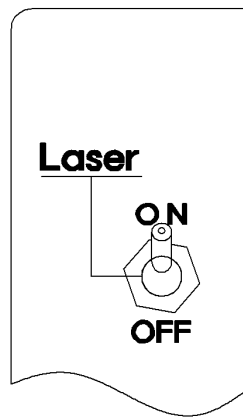


After use,
check the separation between
pipe and roller

6. Chain clamping(2 - 20inch)

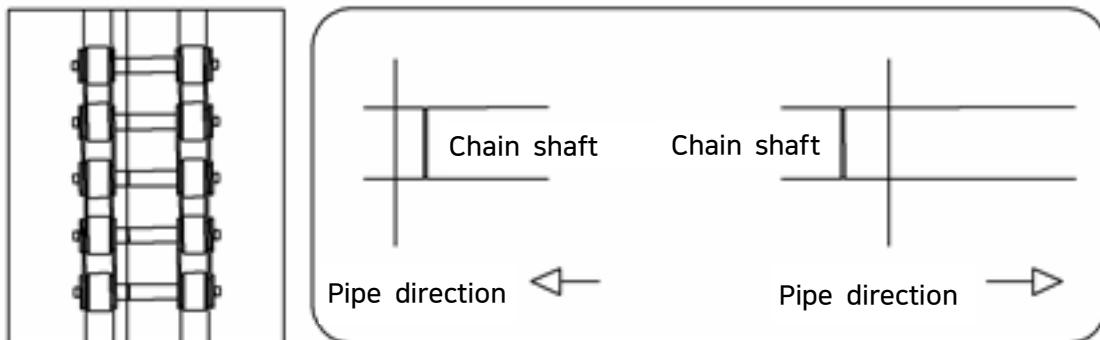
6-1. Laser switch ON/OFF

- Turn Laser S/W ON and make sure that the laser comes vertically.



6-2. Accordance of chain and laser beam

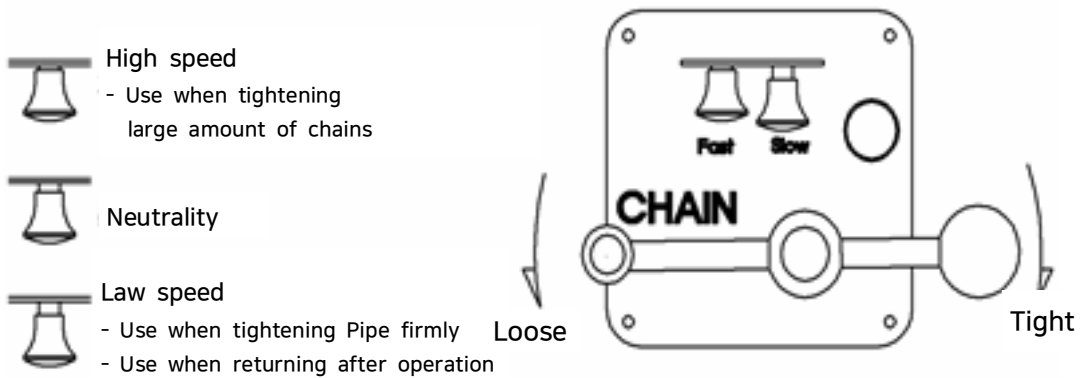
- Match the groove on the chain axis with laser beam.





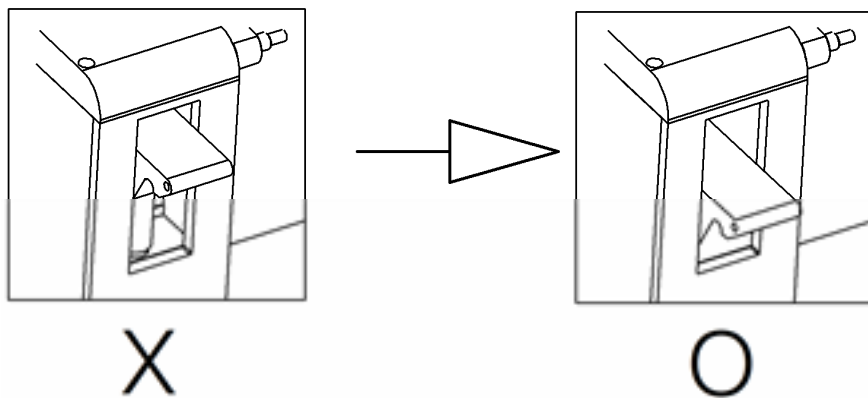
6-3. Chain clamping(2 - 20inch)

- Use when fixing the pipe or disconnecting in a fixed status.



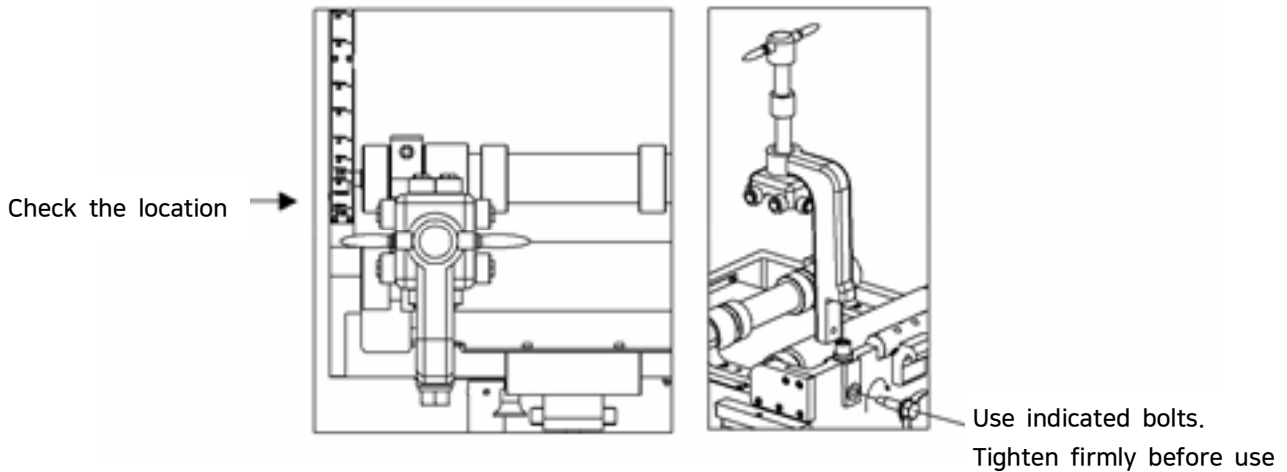
- When tightening the chain, place the rear hook on the top.

※ Note) If the location of the jack fixing hook is not appropriate, it may not be possible to clamp the pipe or break the jack fixing hook



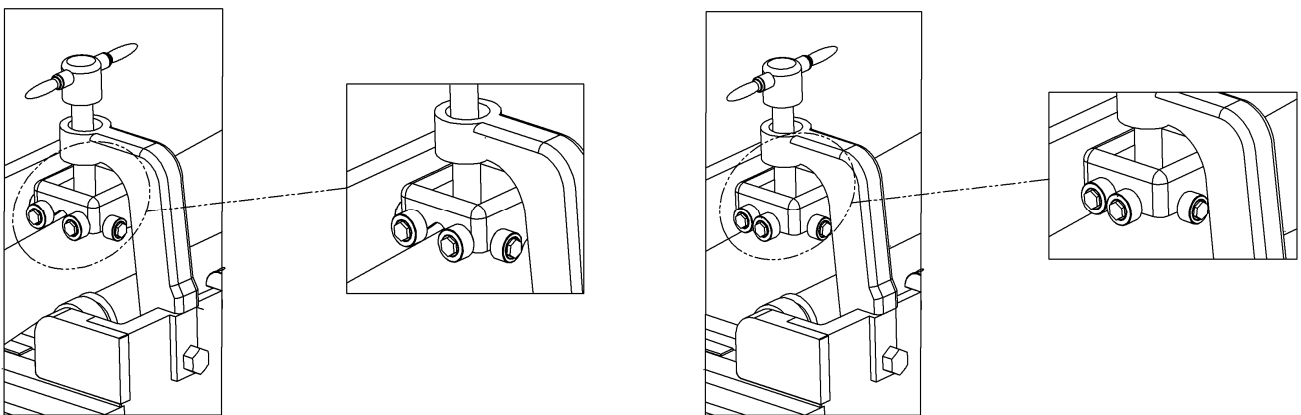
7. Vise clamping(3/8 - 2inch)

- Fix the equipment roller on the place of vise(3/8 - 2inch).
- Connect vise bottom holes to the alignment pins on the front part with supplied bolts(use 22mm wrench).



※ Note) Please make sure that the bolt is tightened firmly for prevention any injury

- Use 3/8 - 1inch in a narrow spot.
- Use 1 1/4 - 2inch in a wide spot.



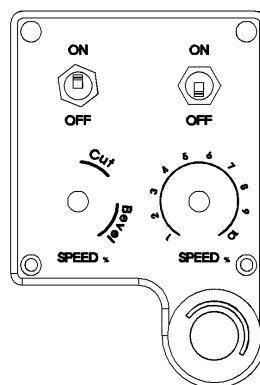
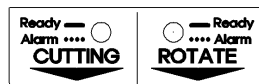
- After the small diameter work, remove the vise in reverse order of installation when working on large diameter(Chain).



8. Cutting / bevelling adjustment

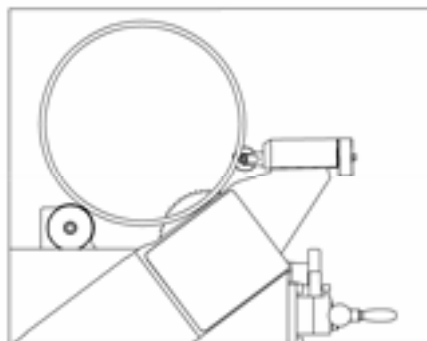
8-1. Cutting switch ON/OFF

- When the switch is on, cutting blade rotates.
- Cutting speed adjustment volume should be placed on "Cut" area.
- Beveling speed adjustment volume should be placed on "Bevel" area.



8-2. Cutting handle operation

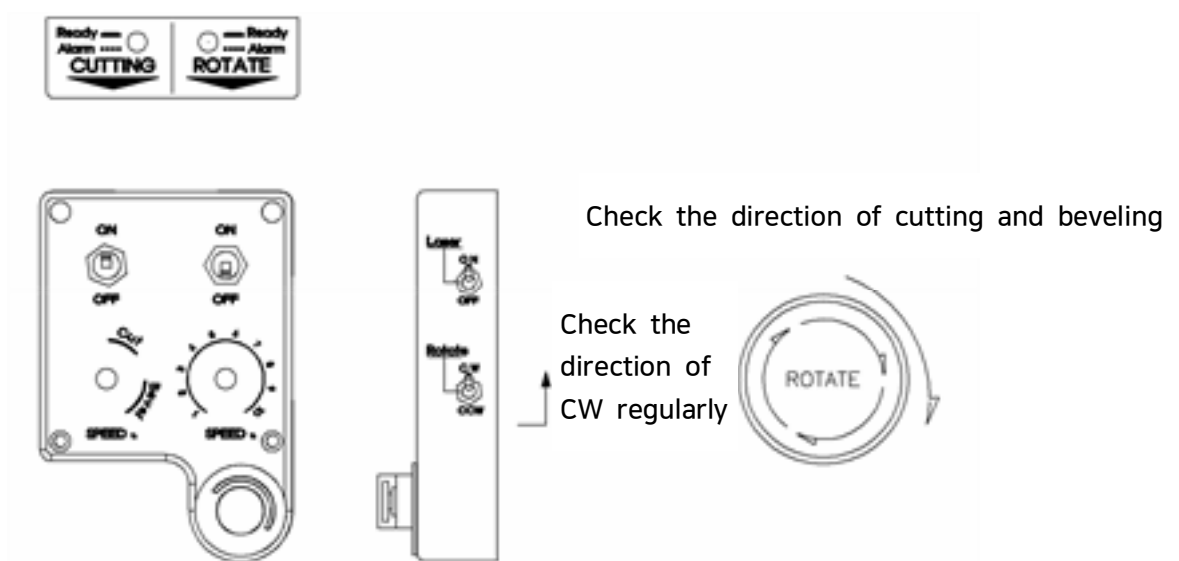
- Cutting : Penetrate into the pipe by rotating the handle to the direction of "Cut"(clockwise).
- Beveling : Rotate the handle to the direction of "Cut"(clockwise) and adjust beveling amount.
- After the work, turn the cutting tool to the direction of "Open"(counter-clockwise) to return.



9. Rotating adjustment

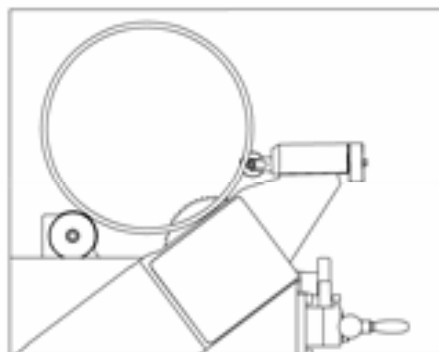
9-1. ROTATE switch ON/OFF

- When the switch is on, the pipe rotates by the roller.
- When working on large diameter or thick pipe, make the speed slow down and make the speed up when working on small diameter.
- When beveling, the speed can be up to 1.5 - 2 times more than the cutting speed.
- When cutting or beveling, the direction of rotation must be CW.



9-2. Use of anti-jamming device

- When the pipe to be cut is 6inch or more, it may be deformed and force the side of blade.
- Measures : Use anti-jamming device in cutting grooves by force.
If severe, use '-' driver additionally and make the groove wider.
(Use other tool to keep the groove wide so that it won't be narrowed down)





10. Emergency STOP / RESET switch

- When an alarm occurs due to electric shock and overload(ready lamp light on).
Reset by pressing the emergency STOP switch(reset and stop function).
※ Off : Turn the button clockwise to return.

11. Maintenance and inspection

- When maintaining or inspecting, please remove the power plug.
 - A. Inspection of the screw device for each part.
 - Regularly check that the device on each part where the screw is loosened.
 - If screws are loose, make it tighten firmly. It is very dangerous to leave them loose.
 - B. Check the vise for fixing the pipe.
 - As it is important to fix the pipe, please check regularly and apply suitable lubricants(WD-40).
 - When working with vise with a problem, serious injury occurred, and the lifespan of the machine may be shortened.
 - C. Check the handling of the major operation part
 - Supply grease oil regularly on the side of rotation gearbox and main gearbox.
 - Inside gears of rotation gearbox can wear out and must be replaced regularly.
 - Check and supply indicated(synthetic gasoline engine oil) in the upper surface of cutting gearbox.
 - Replace the indicated oil once every 750hours / every 3months regularly.
 - The amount of oil is 40ml($\pm 3\%$) and if it is too much or less, it may be shorten the lifespan of machine.
 - Inside gears of cutting gearbox can wear out and must be replaced regularly.
 - Check for unusual noise before use.
 - Check the machine for leakage before using it.
 - Do not use grease. (Debris may be stuck and caused damage)

D. Inspection for operation screws

- Do not apply grease on operation screws. (Debris may be stuck and cause damage.)
- Please apply lubricant (WD-40), moderately.

E. Work place and storing after work

- Store after applying lubricant(WD-40) on the metal parts.
- It is recommended that workplace would be indoor where it is not humid and has no temperature difference between daytime and nighttime.
- Keep in a dry place after the operation, to prevent access to the children and outsiders.
- Do not use a vinyl cloth during long-term storage and use a well-ventilated cloth.

F. Alarm transmission and fuse inspection

- When alarming due to overload and electric shock during operation
 - When the LED lamp at the front of the control panel is blinking, reset the Emergency Stop S/W.
- When the LED lamp at the front of the control panel is off or cutting tool is not rotating.
 - Replace the fuse(5 ϕ -20mm, 250V-15A) which is attached at the side of electrical box.

G. When the product does not operate properly

- It is very dangerous for consumers to find or repair the fault area so please contact nearest A/S center or agencies.



12. Product specifications

● Machine specifications

Item		Unit	Specification
Cutting capacity	Minimum O.D	mm (inch)	16 (3/8)
	Maximum O.D	mm (inch)	510 (20)
	Minimum Thickness ^{note 1)}	mm	0.8
	Maximum Thickness (recommended)	mm	10 (8)
Beveling capacity	Minimum O.D	mm (inch)	16 (3/8)
	Maximum O.D	mm (inch)	510 (20)
	Minimum Thickness ^{note 1)}	mm	-
	Maximum Thickness (recommended)	mm	10 (8)
	Beveling angle	°	30/32/35/37.5/40/45
Machine Specifications	Size (DXLXH)	mm	413×460×325
	Weight	kg	92

- Note 1) 1/2 inch is the standard of the minimum cutting thickness.
- The design and specifications of the product are from June 2017.
- This may be subject to change without further notice to improve the product.
- When using our products, please read the operation manual and precautions with regard to safety marked on the machine.

● Motor specifications

Item	Unit	Cutting motor	Rotating motor
Rated Output	W	1500	400
Rated Voltage	V	AC 200 - 220V / 50 - 60Hz	
Rated Current	A	5.7	1.85
Operating environment	-	0 - 40°C / 20 - 80%RH	

● Standard accessories


- S-500_VC : Vise clamp(small diameter pipe support(3/8 - 2 inch))
- S-500_CC : Chain clamp(large diameter pipe support(2 - 20 inch))
- S-500_PS : Pipe support device
- S-500_PR : Pipe rail device
- S-500_PL : Pipe lift device

Quality Warranty



It guarantees as below.

1. This product have passed the thorough quality inspection of DCSENG CO.,LTD.
2. When the product is damaged in a normal operation, the product will be repaired free of charge for one year in the purchasing place or service center in accordance with the contents of this certificate.
3. But, the return delivery fee will be charged. Malfunction of the product after the warranty period completed or occurred by customer's carelessness, can be repaired or replaced at a minimum cost.
4. However, malfunction due to change of use, abnormal wear, using parts from other companies, or repair in other A/S center may not be covered by the warranty certificate.
5. Repair cost will be charged in these cases;
 - Damage caused by the negligence of the user
 - Failure caused by not following precautions outlined in this product
 - Failure due to unreasonable repair and renovation.
6. The warranty certificate must be accompanies when repairing.
7. This certificate is not reissued.

Product Name	 -Cutter	Warranty Period	1 year from purchase date
Model No.	S-500	Purchase Date	20 / / /
Serial No.		Date of Manufacture	20 / / /
Customer Address		Name	
		Tel.	
Dealer Address (Shop Name)		Name	

※ Fill out the blank when selling products.

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PIPE(TUBE) CUTTER Of Best Technology



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