



Model: AST-150
Right-handed use

User Manual & Warranty

Thank you for purchasing this product. Read this User's Manual before using this product, and make sure to use the product correctly.

Misuse may result in malfunction or unexpected accidents or hazards.

Save These Instructions.



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Warranty

Safety Precautions Important Safeguards

▼ Items shown here are categorized as △Warning or △Caution.

■ The following classifications indicate what could happen if you ignore indications and use incorrectly.

! Warning Contents which are liable to lead to death or serious injury.

Contents which are liable to lead to light injury or damage to household possessions.

■ The rules you are asked to follow are classified as follows.

Caution mark
Exercise caution

Prohibited mark Things you must not do

Instruction mark Things you must do

Waring

The unit is not water-proof. Water seeping in carries the risk of electric shock.

Do not pour or get water on the unit.
This will lead to short or electric shock.

During use and while the blades are spinning, never touch the blades. This could lead to injuries or lost fingers. Do not touch the blades when the power cord is plugged in, even if they are not moving.

Do not use near flammable or combustible gasses or liquids, etc. This may lead to ignition and fire.

Do not allow children to use or leave where young children can reach. This may lead to injury.

Do not leave the rotating blades near substances that could get caught in in the blades such as towels or nylon bags. This may lead to injury.

Do not leave the unit with the blades rotating. This could lead to injuries or lost fingers. It may also lead to towels, etc. getting caught in the blades.

Use the outlet only for this appliance (3.15 A or more). Overloaded outlets may cause overheating or fire.

Wipe away any dirt on the plug. Grime may cause fire.

Be sure to ground the grounding terminal properly to prevent electric shock.

Only a certified repairman should perform any dismantling, repairs or modifications. Fire or abnormal operation may result in injury.

Always unplug the appliance from the outlet for repair.

Please only replace parts with the designated replacement parts. Improper replacement may lead to overheating fire electric shock.

Maintenance and replacement of parts should be done with the power button turned to "Off" and the power cord unplugged.

Do not touch the power plug with wet hands. This may result in burn or shock.



! Caution



Please confirm that there are no twists or cuts in the flexile wire. Please also cease use immediately if anything abnormal happens such as the unit getting hot during use.

Avoid applying pressure strong enough to significantly slow the blades' rotation speed. This may cause the flexible wire to twist, leading to accidents.

Please avoid using with the wire part bent at an extreme angle as much as possible. This will lead to damage.

Do not drop the unit or subject it to strong impacts.

When assembling the parts, please handle them carefully. Please do not force them on.



Please do not use on unstable places or near fire. This could lead to injury, deformed fire.

Please do not use for uses other than removing fish scales. Improper use could lead to electric shock short ignition.

Grasp plug to remove the cord from the receptacle outlet. Failure to do so may result in cord damage, electric shock, short or fire.

Do not use an unstable outlet or a damaged cord or plug. Failure to do so may result in electric shock, short or fire.

Do not place heavy objects on the power cord, apply excessive force, deform or bundle it.

Damaging the power cord may cause electric shock or fire.

When performing maintenance please do not wipe with benzine or thinner.

Please do not place things on top of the unit.



Please use a commercially available cord stopper, etc. to prevent the power cord from getting in the way when working.

Keep the work area bright, and clear away unneeded things before installation work.

When carrying the unit, please grip the base of the machine unit and the handle firmly.

When not using, please unplug the power cord and store in a dry place after maintenance.

In the rare case that the unit stops working correctly during use, please restart it. If it still fails to work correctly after restarting, please immediately cease use.

Specifications

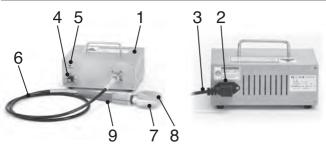
Product name	Electric fish scale remover AST-150
Model	AST-150
Power	100 – 240V 50/60Hz
Main unit dimensions	200 × 110 × 150mm
Main unit weight	2.2kg(Handle section weight: 480g)
Rotation speed	$0 \sim 4,500$ rpm (rotates to the right)
Flexible shaft length	1.5m
Maximum power consumption	130W
Electrical cord length	1.5m

^{*}This product is for right-handed use.

It can be used in supermarkets, fresh fish retailers, fish processing plants, etc.

^{*}AST-150 is an electric fish scale remover which can be used to remove scales from a variety of fish.

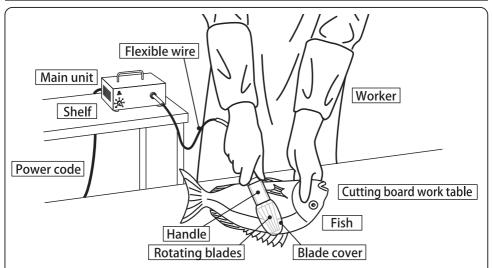
Parts name



- 1 Main unit
- 2 Power socket
- 3 Power cord
- 4 Rotation speed knob
- 5 Electric power lamp
- 6 Flexible wire
- 7 Rotating blades
- 8 Blade cover
- 9 Handle

Set contents ... In addition to the above, set comes with a user manual and a rotating blade attachment tool

Installation location



- 1. Please check that there are not towels, plastic bags, or other things that could easily get caught in the blades nearby. If a knife or other sharp object hits the blades, this while damage the blades and may also cause the object to fly due to the rotation of the blades. This can lead to injury or damage, so please install and use in a safe place with no other objects in the way of work.
- 2. Please install the unit in a well-ventilated place where it is not exposed to water. Please also do not place things around the unit to avoid heat buildup in the unit.
- **The unit is not water-proof. If water gets on the unit it may cause a short electric shock.
- 3. Please install the unit in a safe place where it will not be dropped from desktops during work, etc. The unit may be pulled due to the movement of the flexible wire during operation. Do not install it somewhere where it is liable to fall.
- 4. Please adjust the installation location so that the flexible wire does not rub against the floor or wall.

%Please use in the following environment. Temperature: 5 \sim 35°C Humidity: 40 \sim 85%

Operating Instructions

Attach the flexible wire to the unit.

Before attaching be sure to check that the wire doesn't have any twists or bends. If you use it bent, this may lead to even further bending and damage due to the rotation force.

Plug the tip of the flexible wire into the installation hole on the unit, and turn the metal fitting on the outside. Continue to turn it until it is tight and fixed.



Decide on an installation location. (→Please see page 4 "Installation Location") Plug the power cord into an outlet.

Turn the speed knob in the ON direction to slowly rotate the blades. When doing so, check that there are no abnormalities, etc. in the operation.

Points to inspect before working

Check that the rotating blades and blade cover are soundly attached to the handle

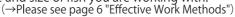
Check that the flexible wire and power cord are soundly attached to the unit and there are no scratches or abrasions

Check that the blades rotate smoothly and that there are no abnormalities such as unusually strong vibration or noise Check that the blades are soundly attached to the flexible wire



Adjust the rotation speed, lightly touch the rotating blades onto fish scales, and move it right to left to remove the scales.

Basic operation: Lightly touch the rotating blades onto the fish scales and move it left to right. Use the weight of the handle and press lightly to remove scales easily. Please adjust the rotation speed and adjust the positions of the blade and fish while working to find a speed that removes scales well for the type and size of fish you are working with.





quidelines

Rotation speed Large fish ••• Sea bream, Yellowtail, Young yellowtail, flounder, etc.: 5-6 gradations Small fish · · · Rockfish, Scorpionfish, and other fish with small scales: 3-4 gradations

Caution when using

Please avoid using in places where the unit will be exposed to water. This will lead to electric shock and fire.

Cuffs and hems of clothing as well as string and long hair pose a risk of getting caught in the blades. Tie or bundle these up to prevent them from getting caught.

Applying extreme pressure to the rotating blades may bend the wire leading to damage or accidents.

Please avoid using in a way that significantly slows the blades' rotation speed.

Strong pressure causing the flexible wire to bend is dangerous. If bending occurs and the wire develops a permanent bend it will lead to damage. ** Please do not use a flexible wire which has been bent due to pressure during work even once.

If the flexible wire has become even a little bendable or more easily conductive of heat, the part must be replaced.

Please avoid using with the flexible wire bent at an extreme angle as much as possible. Depending on the bend radius, frictional heat may become more easily generated.

When the unit or flexible wire become hot after long periods of continuous operation, please stop working for 10-15 minutes before restarting.

Please avoid sudden startup, stopping, and large load fluctuation.





Caution against over-bending



Twisting is dangerous



Operating Instructions

How to Use Effectively

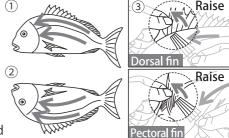
- •Press the rotating blades lightly against the scales and move left and right. If scales are difficult to remove, adjust the angle of the blades or the direction of the fish, adjust the rotation speed, etc. to make the scales easier to remove.
- •Even without pressing the blades forcefully, you can use the weight of the handle to lightly press them and remove the scales cleanly.

Effective Work Method

Overall

- 1. Hold the fish head in your hand to keep it still. Work on the broad space from the tail to the head using the entire blades.
- 2. Turn it over as in the figure, remove the fins on the other side in the same way.
- 3. Fin parts (dorsal fin, pectoral fin, etc.)

Use the tips of the rotating blades to remove scales in small spaces. For parts with fins, hold the fin in your hand such that it is not in the way of the rotating blades, then push the tip under, etc. to remove the scales.



You can remove the scales by moving the handle right to left.

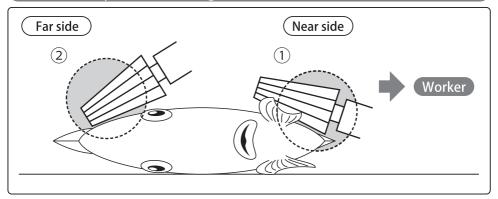
Head part

Hold the head in your hand to keep it still, then move the tip of the blades finely to remove the scales.

When removing scales in small spaces, take caution to ensure t hat your fingers do not get caught in the blades.



Effective way to use rotating blades



- 1. For scales which are on the front side (the worker side), use the rotating blades down toward the base of the blades.
- 2. For scales which are on the inside (the side away from the worker), use the tip part of the rotating blades.
- ☆You can remove scales in narrow places with fins by using the tip of the rotating blades.

Safety features

A motor safeguard is installed on the main unit. When an abnormal load occurs such as a foreign object getting caught in the rotating blades, the motor will automatically turn off. If it stops, please turn the rotation speed knob to OFF, then resume use by restarting it.

When the motor stops, the load is large.

The flexible wire will bend leading to damage, so please avoid causing the motor to stop due to overload during normal work.

You can avoid automatic shut-down by adjusting the force applied by the handle against the fish or the rotation speed of the rotating blades.

How to maintain

- •Use a sponge soaked in detergent to wash the rotating blades and handle well, then rinse them. After washing, please detach the rotating blades and blade cover from the flexible wire, wipe them well with a dry cloth, allow them to dry and sore them in a sanitary place.

 (→Please see "How to remove the blade edges" below)
- * Washing with something rough like a wire brush can cause scratches and lead to rust, etc., so please avoid this.
- •To avoid damage and rust to the flexible wire, please be sure to remove all moisture with a dry cloth and let it dry. When storing, have the rotating blades attachment part hanging downward and store in a way that prevents moisture from getting inside.
 - * The rotating part of the flexible wire is structured to prevent water from getting in, but please avoid getting it wet with the blades removed or storing in a damp place.
 - * The side of the flexible wire that attaches to the unit is not water-proof. Please wipe with a soft damp cloth etc. and make sure that absolutely no water gets inside.
- •Store out of direct sunlight and out of the reach of childre
- •Please store in a dry place with low humidity.
- * When washing the blade edges please wear gloves and take care to avoid injury.

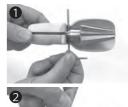
Attachment method

How to remove

- 1. Insert the attached rotating blade removal rod into the hole on the end of the flexible wire and fix the rotation axis.
- 2. Rotate the rotating blades and remove them from the rotation axis.
 - When removing the blade edges, wear gloves in order to preventinjury to your fingers, etc.
 - If the blade edges are stuck and hard to remove, please use pliers, etc. to remove them.
 - * The blade edges are sharp objects. Please be sure never to touch them with your bare hands.
- 3. Stick something like a flathead screw driver into the gap of the blade cover to widen and loosen the gap in order to remove the blade cover from the handle.

Attachment method

- •Attach the blade cover onto the handle.
- •Fix the rotation axis using the rotating blade removal rod, and attach the rotating blades.
- •Keep turning the rotating blades until they no longer turn to fix them in place.







Warranty

Warranty period months

· AST-150 Model No.

Manufacturing No. :

(Serial No.)

Name

Address:

TFI:

Store of purchase

Date of purchase

*Fill in the required information and keep is a safe place.

- 1. We guarantee quality only for use under armal conditions during the warranty period. If your product has a malfunction or defect, we will repain it at no charge using our prescribed methods. Bring the product along with the warranty to the store where you purchased the product.
- 2. In the following cases, we will charge a fee for repair on during the warranty period.
 - (1) If no warranty is shown
 - (2) If the required information is not filled as or is rewritten
 - (3) If the malfunction was caused by misuse
 - (4) If the malfunction was caused by impact during ship nent or movement by the customer
- (5) Malfunction and damage caused by nature, position, abnormal voltage, or other outside factor 3. If it is determined that the customer independ all yaltered or repaired the product, it will not be accepted for repair during the warranty period
- 4. Repairs and replacements of supplies (He Wires TFT strips) that are consumed or deteriorate will incur a charge even during the warranty period.
- 5. The company will not be liable for direct or indirect damage caused by malfunction or use of the product.
- 6. Expenses for sending or bringing a product for repair are the responsibility of the customer.
- 7. Keep the warranty in a safe place. Warranties will not be reissued.

Electric fish scale remover AST-150



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