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Made in China  
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## Instruction Manual

## Mini Rotator

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ACR -100

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Thank you for your purchase.





Thank you for purchasing our company products.  
To use this product in a safer and better condition, please read this instruction manual and use it correctly.  
After reading this instruction manual, please store it in a place where it can be seen by users. Also, when transferring or renting the product, please attach this instruction manual to a prominent place on the main unit of the product so that a new user will know how to use it safely and correctly.

AS ONE CORPORATION




## Safety Precautions

In this instruction manual, in order to ensure the safe and correct use of the product and to prevent accidents and damage, information regarding matters requiring special attention for safety is defined by the following warning labels according to the degree of importance and risk.

### Indications and Meanings

	<b>DANGER</b>	Incorrect handling may imminently result in serious injury or death.
	<b>WARNING</b>	Incorrect handling may result in death or serious injury.
	<b>CAUTION</b>	Incorrect handling may result in injury or property damage only.
	<b>ATTENTION</b>	Matters requiring attentions to ensure safety

### Graphic Symbols of Safety Assurance

	△This symbol indicates caution (including danger and warning). The specific contents of attention are shown in sentences or pictures in or near the symbol. The left symbol shows 'Shock Caution.'
	This symbol indicates that it is forbidden. The specific prohibited contents are shown in sentences or pictures in or near the symbol. The left symbol shows "Do not disassemble".
	This symbol indicates mandatory. The specific contents of the mandatory are shown in sentences or pictures in or near the symbol. The left symbol shows "Unplug".

## Precautions for Installation

Please follow the following rules for safe use.

### DANGER



- Do not use in an explosive or flammable atmosphere, since it may cause a fire.
- When installing, be sure to use an outlet that matches the rated power supply voltage, frequency, and capacity.
- Do not use branch sockets or power strips, since it may cause a fire and an electric shock accident.
- This product is for research use. (Limited for research use)
- Do not use it for any other purpose (it may cause an unexpected accident.)

### ATTENTION



- This product is designed for indoor use.
- Do not use it outdoors or in places exposed to water.
- Install in a place where the ambient temperature is within 4 to 60 ° C.
- Do not install it in unusually humid environments.
- This product is a precision instrument.
- Avoid using it in a place with vibration.

## Precautions for Operation

Please follow the following rules for safe use.

### DANGER



Mandatory

- Be careful not to spill the solution into the main unit when stirring. Check that the tube's cap is tightened properly before use.

### WARNING



Prohibited Matters

- Do not attempt to disassemble, modify, or repair the equipment. There is a risk of electric shock. Any disassembly, modification or repair by a user will not be covered by the warranty. Contact your dealer if you need any repair.
- Do not use this product to stir corrosive, flammable or toxic samples. Do not clean the main unit with corrosive or flammable chemicals.

### CAUTION



Mandatory

- Insert the tube properly so that it does not come off during stirring.

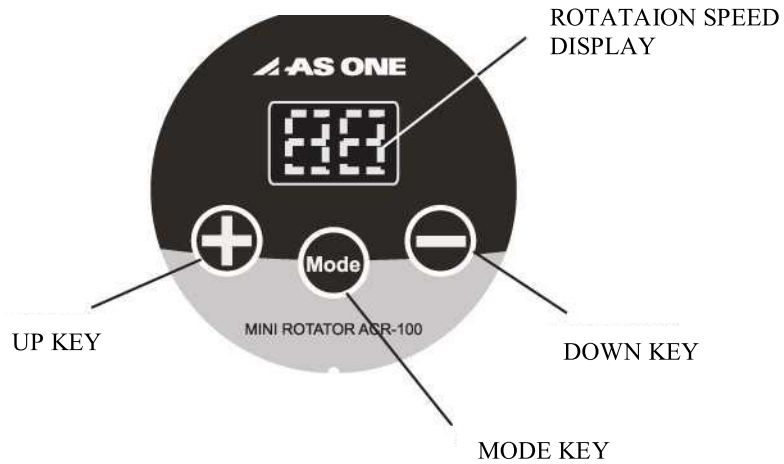
## Product Specifications

### •Specifications

Rotation speed adjustment range	10 ~ 40 rpm
Rotation speed setting unit	1 rpm
Operating environment temperature	4 ~ 60 °C
External dimensions	258 x 148 x 196 mm
Motor	Stepping Motor 6W
Weight	1.2 kg
Power supply	100 VAC -240 V 50/60 Hz
Accessories	10 ml/15 ml Tube Holder x 1 Set (2 Pieces) 5 ml/7 ml Tube Holder x 1 Set (2 Pieces) 1.5 ml/2 ml Tube Holder x 1 Set (2 Pieces) 0.5 ml/0.8 ml Tube Holder x 1 Set (2 Pieces) 50 ml Tube Holder x 1 piece Rotational Prop A x 1 piece Rotational Prop B x 1 piece O-ring x 10 pieces AC Adapter x 1 piece

## Operation Panel

### •Operation Panel

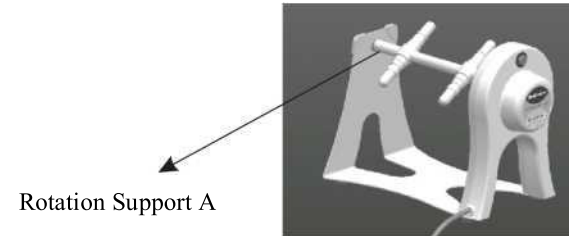


### •product structure

NO.		Quantity	Notes
1	Main Unit	1	
2	Instruction Manual	1	
3	10 ml/15 ml Tube Holder	2	For Rotating Strut A
4	5 ml/7 ml Tube Holder	2	
5	1.5 ml/2 ml Tube Holder	2	
6	0.5 ml/0.8 ml Tube Holder	2	
7	Rotational Support A	1	
8	50 ml Tube Holder	1	For Rotating Strut B
9	Rotational Support B		
10	AC Adapter	1	
11	O Ring	10	

## Mounting method

1. Hold the main unit firmly and insert one end of the rotating support A into the hole of the support, and insert the other end into the hole of the other support in the same way.



2. Mount the fixing ring on the rotating support A and set various tube holders. 50 ml Rotating prop B can be attached to the tube holder. (Can be used as a single holder without attaching the rotating support B.)



3. Set the tube in the tube holder.



1. Insert the tube properly so that it does not come out or loosen.
2. Insert the tube evenly. Improper balance may cause noise or malfunction due to overload.



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## How to Use

### •Rotation method

1. Place the main unit on a horizontal place and connect the power cable securely.
2. Install the rotating support and tube holder, and set the tubes.
3. Turn on the power switch.
4. Pressing Mode key can switch between Continuous Rotation and Shaking Mode.  
(In "Shaking mode", the number of rotations is displayed on the number of rotations display. In "Continuous rotation mode", the set number of rotations is displayed on the number of rotations display.)
5. In "Continuous rotation mode", the rotation speed can be set using the UP/DOWN keys.  
(Rotation speed cannot be set in "Shaking mode".)
6. Turn off the power switch after use.

\*The "Shaking Mode" combines small vibrations with partial rotation. Use a mode that is more suitable for the characteristics of the sample.

## Maintenance

To ensure the safe use of our products,  
Please take the following precautions when performing maintenance.

- Be sure to unplug the power cord before maintenance.
- Be sure to use a soft cloth for maintenance.  
When using chemicals, use non-corrosive liquids.  
(pH < 8)
- Do not wet the entire device.
- Please make sure to dry the item before use.
- Be careful not to let any harmful substances adhere to the product before maintenance.

## Troubleshooting

### •Troubleshooting

If any abnormality is found in the product, immediately discontinue use and check the following items.  
If there is no improvement, please contact your dealer.

Symptoms	Cause	measures
No Rotation/Incorrect Rotation	The power is off.	<ul style="list-style-type: none"> <li>•Check the power cable connection.</li> <li>•Make sure that the power switch is on.</li> </ul>
	Rotation strut mounting failure.	<ul style="list-style-type: none"> <li>•Is the rotating support attached to the body properly? You got a lead? Please check it.</li> </ul>