

**Model: AM200/300S-P/H**

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# **Laboratory Electric Mixers**

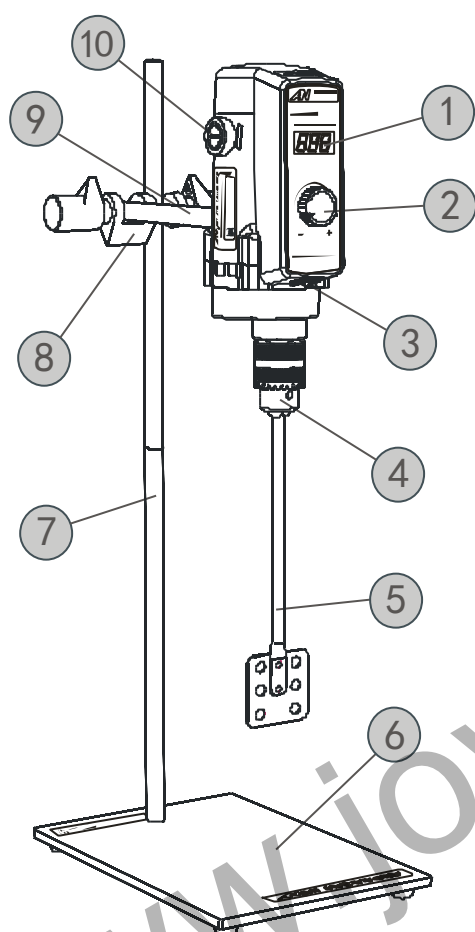
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**User's Manual**

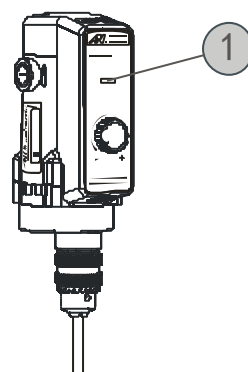
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Model:AM □□□S-H



Model:AM □□□S-P

1. Speed monitor  
(P-type) Lamps
2. Speed control knob
3. Power switch
4. Go chuck
5. Stirrer bar
6. Base
7. Supporting stand
8. Supporting and fixing frame
9. Beam
10. Brush holder

## Packing list:

order	item	number	order	item	number
1	Mixer	1	6	Condensation clips	1
2	Base	1	7	Stirrer bar	1
3	Supporting stand	2	8	Go chuck wrench	1
4	Beam	1	9	Brusher(Spare)	1
5	Supporting and fixing frame		10	Operation manual	1

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## Model AM200S-H/P    AM300S-H/P

Thank you for using our products of JF electronic laboratory mixers. To make the best use of our products, please read the manual carefully before using it and keep the instruction manual for further reference.

### 1. Product overview

AM series lab mixer uses a compact series of micro - motor drive, it is suitable for the mixture of the low, medium and high viscosity liquid in the lab. It consists of driven motor, controller and the moment institutions and other components. Mixer uses high quality engineering plastics for the body, running stability. The output uses variable speed force to multiply the output torque. The Speed Controller, with all cruising speed control technology and IC speed detection technology, can compensate the speed change that caused by the load change and power supply voltage fluctuations immediately and effective. Features with soft start, automatic overload protection, the reactive power compensation of whole constant etc. The “H” type of this series can display the speed intuitively with its digital display, to facilitate the acquisition of experimental data.



- Please pay special attention to the warning signal



- To avoid personal injury, please pay special attention to the warning signal

### 2. Technical parameters

Model:	AM200S-H/P	AM300S-H/P
Rated voltage:	230±10 % VAC	
Rated frequency:	50/60 Hz	
Input power:	340W;	510 W;
Output power:	200W;	300 W;
Rated torque:	1.45 N • m	1.96 N • m;
Work mode:	100 %	
Speed control:	Yes	
Speed range:	50~1800 rpm	
Speed display:	digital display×100 rpm	
Stir bar clamp range:	2~13 mm	
Stir bar standard configuration:	-fan impellers	
Mixing capacity (H <sub>2</sub> O) :	50~60000 ml;	50~85000 ml;
Size of the mixer (T×B×H) :	320×220×760 mm	
Permissible ambient temperature:	Lower than 40 °C	
Permissible relative humidity:	Less than 90 %	

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## 3. Installation

3-1. Put the Base (6) on the platform, connect two supporting stand (7) by screwing them together before fixing it into the Mounting hole in the base. Set in the Supporting and fixing frame (8) on the upper end of the supporting stand, and turn the handle to fasten them.

3-2. Connect the short Beam (9) to the dispersing host electric motor through the Mounting bolt hole at the back of the motor, then insert the Beam into the Supporting and fixing frame, and turn the handle on it to fasten the motor on the supporting stand. The host motor can be adjusted on the Supporting and fixing frame freely.

3-3. Open the Rotary chuck (4) and fix the stirring rod using the special tools enclosed (5).

3-4. The machine is due to application of different experiments, is otherwise a standard blades mixing great. But in order to meet the experimental application Demand, the company provides various types of swizzle sticks to purchase.



- To ensure the running safety of the product, fix the key points of connections firmly and inspect it regularly.
- Before testing or operating the product, please read the Use and Maintenance carefully.
- Operate the product on the Base and NO hand operation.



- The product can't be put into use in a flammable and explosive environment.
- Ensure a good grounding for the Input power supply socket. It's strictly prohibited to connect the grounding with telephone lines, metal pipes or lightening arresters.
- It's prohibited to start the machine when the blade is out of the the agitating medium.
- Before entering the power of this machine, please carefully check if the power switch on the speed(3) controller is turned off, speed control knob(2) is in the starting position. Avoid the Power Input of emulsified host suddenly started, personal injury caused by operator and laboratory equipment, laboratory material and other damage.
- To ensure safety, you should wear a protective cap to prevent your hair from being caught up in the stirring rod chuck when checking closely.

## 4. Use and maintenance

4-1. The machine uses single phase three wire system, so the power socket should be a triple one (220V, 10A) .

4-2. A testing run is necessary before use and the Stirring Rod (3) should NOT be installed when testing. If you want to test high speed stirring, the stirring rod used must be of higher requirements of the straightness and rigid.

4-3. After the input power supply, turn on the power switch, speed or power supply led(1) on the monitor, and then slowly rotating speed control knob in the clockwise direction, mixing host running the speed gradually enhanced(Numerical increase of speed on the monitor).Instead, run the speed decreased gradually(Numerical reduced speed on the monitor).

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4-4. Operation of H - speed digital display with thousands through rate, speed in 100rpm. In the mixing process in stirred, due to fluctuation of input power, to participate in media properties of materials change and mixing of the fluid inertia after creating and other reasons, the running speed was changing, and numerical display of speed fluctuation ; otherwise, Speed Detection or digital display system for a failed state.

4-5. After work, rotate the speed dial to the START position, switch off and pull the plug out. Clean the stirring rod for the next use.

4-6. After using the product for some time or after a long stop, a maintenance inspection is needed before reusing it. To ensure electrical safety, use a Megger to measure insulation resistance.

4-7. The mixer brush is a wearing part, so a regular inspection is needed. When inspecting, switch off the electricity, pull the plug out, unscrew the brush cap (10) to pull the brush out. If the brush is less than 6 mm, replace it with a new brush of the original specification. Make sure the new brush should be able to move freely in the tube because a stuck brush may cause electric sparks or a motor failure.

4-8. If a motor failure happens, check whether the power is on, the plug is loosened, or whether the brush is in good contact. If these faults are eliminated and the motor failure remains, contact AN after-sale service. No mounting or dismounting the product for any person without operation certificate of such machine to avoid any accident.



## Precautions:

- Place the product in dry and clean places. The ambient temperature should be no more than 40°C , and avoid the falling into of foreign bodies.
- When operating the product in wet conditions, you need a electric leakage protection.
- Fierce fluctuation of voltage may cause an instable speed, so use a regulated power supply device.
- Avoid using the machine in severely corrosive environment. If you have to, protective measures are needed.
- If the agitating medium is volatile and flammable, be cautious that the electric sparks may cause explosion or fires.

## 5. After-sale service

5-1. JF company will be responsible for warranty within six months after the purchase of this machine due to quality issues. For improper use of the user or the artificial damage, we do not assume any liability and related maintenance costs.

5-2. The product guarantee is necessary .for warranty.

5-3. The warranty does not cover accidental injury and damage caused by human factors, which include the unauthorized disassembling of the internal structure of the machine or parts.

5-4. The repair costs borne by the users themselves if the product is beyond the warranty period.

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## 6. Application of reference for Stirring rod in mixing experiment operation

6-1. Three-Blade propeller type: The use of medium or high speed. The standard stirring rod can cause the mixed media to move upside down with less Shear stress.

6-2. Four-Blade propeller type: The use of medium or high speed. It can cause the mixed media to move upside down with local Shear stress.

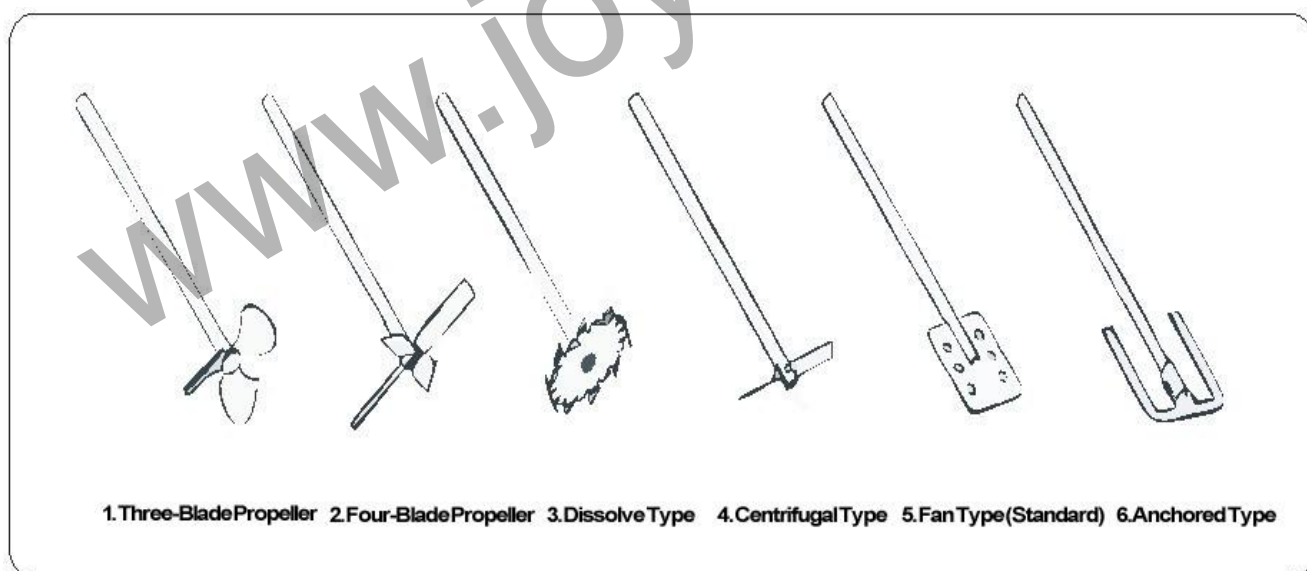
6-3. Dissolve type: The use of medium or high speed. It can cause Radial flow in both Upper and lower strata of the mixed media. The strong turbulence and high Shear stress produced can help to shatter the particles in liquid.

6-4. Centrifugal type: The use of medium or high speed. The two blades can expand with the increase of the speed, which can be suitable for narrow-mouth container. The mixing effect is similar to Four-blade type.

6-5. Fan type (Standard Configuration): The use of low to medium speed. It can cause tangential flow with less turbulence, which is suitable for tender mixing.

6-6. Anchored type: The use of low speed. It can cause tangential flow and High shear rate on the edge avoid deposition of the mixing media on the wall of container. It's suitable for high viscosity fluid such as polymer reaction and scattering of minerals in liquid.

## Structure diagram of the stirring rod



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## WARRANTY FORM

No.

Dear Customer:

Thank you for choosing JF product. We promise to offer you maintenance service freely if it's due to quality defects. For the sake of your benefit, we need your cooperation by doing as follows:

1. Please keep the Warranty Card properly after purchasing the unit and read the Operation Instruction carefully.
2. Please show the warranty Card and invoice (or by fax) while delivering the unit for maintenance. If you fail to show the warranty card, maintenance of the unit will be charged even if it's during the Warranty period.
3. If the unit required to be delivered for maintenance by post, the postage shall be born by you.

NO free-charge maintenance is provided for the following situations while maintenance service is still warranted:

1. The unit is damaged due to dismantlement, installation or repairing done by the customer himself or herself.
2. The unit is damaged due to improper installation, usage and maintenance by the customer violating requirements in the Operation Instruction.
3. For units expiring the Warranty period, we still provide the customer with quality service, however, a certain amount of service fee will be charged as per relevant regulations.



### Registration of information

Device Name: \_\_\_\_\_ Date of purchase: \_\_\_\_\_

Device model: \_\_\_\_\_ The warranty period: \_\_\_\_\_

Sales unit name	
Unit address	
Telephone number	
Maintenance unit name	
Unit address	
Telephone number	

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