

Model: AM1000

High Power Brushless Mixer



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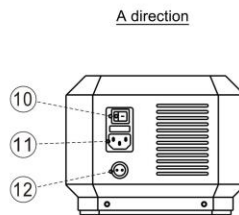
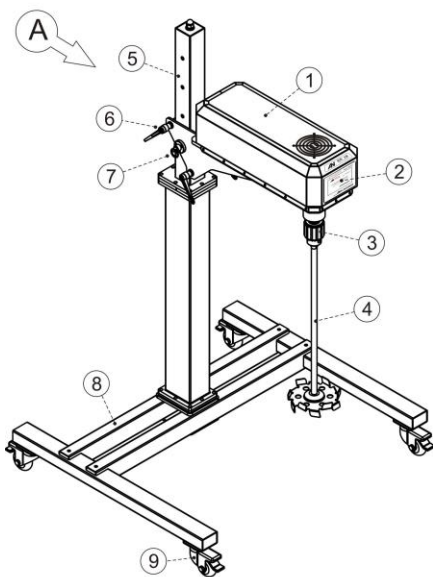
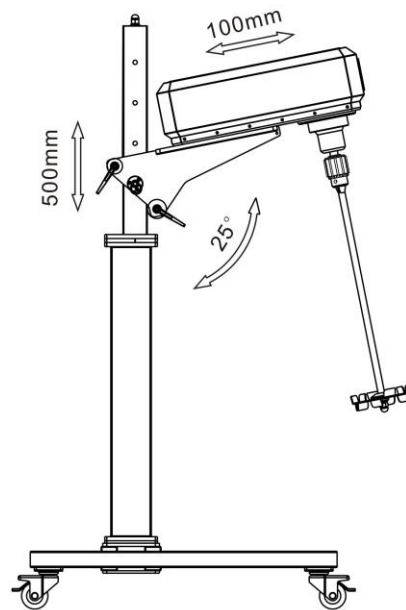
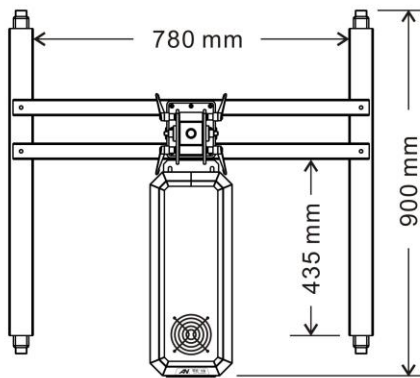
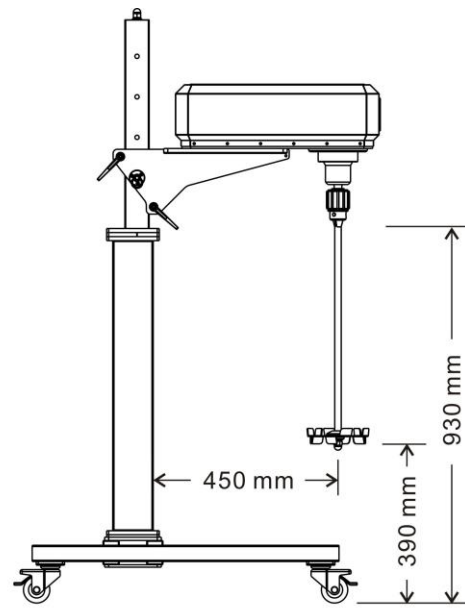
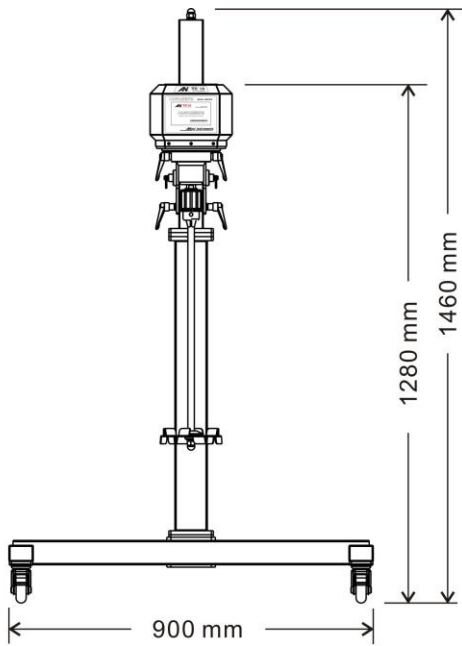
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- 1. drive host
- 2. operational control display
- 3. stir rod chuck
- 4. dissolved type agitator
- 5. lifting column
- 6. fasten lock handle
- 7. position pin pull ring
- 8. machine base
- 9. moving wheel
- 10. switch
- 11. power input socket
- 12. power outlet

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Thank you for using the "AN Instruments" liquid medium mixing laboratory equipment. In order to serve this product better for you, before using this product, please read the instruction manual in detail and save it for future reference.

1. Product description

The AM 1000 high-power brushless mixer is driven by a brushless DC motor and is suitable for mixing low-to-medium, high-viscosity liquids in the laboratory. The machine has low speed operation, super torque output, low noise, and no maintenance. The stirring speed is controlled by the microprocessor. It can instantly and effectively compensate the speed change caused by the load change and power supply voltage fluctuation, and the constant speed is reliable. Built-in automatic overload protection device to ensure the safety of continuous high-load continuous operation for a long time; touch control makes experiment operation easier. The stirring speed is adjusted steplessly to meet the stirring speed at any time in the experiment. The digital display shows the changing trend of setting and actual output stirring speed and speed increase and decrease to ensure the intuitive collection of experimental data. Running timing control ensures that the time of the experiment is effectively controlled. The stable stirring speed of the machine is suitable for stirring high viscosity media and slurry.



- Please pay special attention to the warnings with this symbol.



- To avoid personal injury, please pay special attention to the contents of this manual with this symbol.

2. Technical Parameters

Rated voltage	AC 220 V	Speed dynamic detection function	Yes
Rated frequency	50\60 Hz	Speed trend curve function	
Input power	2200 W	Speed memory function	
Output power	1500 W	Overload protection	
Drive type	Brushless DC Motor	Stir bar fixing method	Quick type rotary chuck
Rated torque	716.2 N.cm	Rotary clamp head range	Φ3~16 mm
Peak torque	2148.5 N.cm	Stirrer configuration	Dissolving paddle
Work mode	S1 (Continuous)	Processing capacity (H ₂ O)	200 L

Operation status display	LCD	Treatment viscosity	100000 mPa.s
Operation control method	Touch screen control mode	Allowable ambient temperature	Not more than 40 °C
Speed adjustment range	50~2000 rpm	Allowable relative humidity	Not more than 80 %
Speed control type	Stepless	Protection level	IP 40
Timing control range	1~6000 min	Machine size	905×900×1460 mm
Column lifting stroke	50 cm	Weight	52 kg

3. Device installation

3-1. Move the machine from the inside of the packing box smoothly to the ground, and then pull up the four moving caster (9) stopper plates on the base to lift the stopper and move the machine to the desired working position. Then place the four casters on the stop plate.

3-2. This machine can adjust the position of the drive unit (1) forward and backward and up and down according to the needs of stirring and mixing. If the height of the container exceeds the vertical lift stroke, the height of the drive unit can be manually adjusted. If you need to change the angle when stirring and mixing (bias stirring), you can manually adjust the angle of the drive host. In order to ensure safety, the drive unit has a certain weight, and the adjustment work should be performed by multiple people.

3-2-1 . Adjust the drive host height: Rotate the four fastening and locking handles (6) counterclockwise to loosen, then hold the drive unit firmly and firmly, pull the positioning ring's pull ring (7) to the drive main body to remove from the positioning hole and move on the column (5). , Then move the drive unit to the position of the required positioning hole and insert the positioning pin into the positioning hole. Rotate the four locking handles clockwise to tighten. If the handle encounters an obstacle, pull the handle bar straight out to adjust the angle.

3-2-2. Adjust the drive host angle: Rotate the four locking handles counterclockwise to loosen, and then steer the mixing end of the drive unit up to the desired angle. In order to ensure reliable angle adjustment, a wooden block can be placed between the pillar wall and the fastening bolts of the drive unit to stop. Turn the four tightening lock handles clockwise to tighten them.

3-3. Use a special wrench attached to open the stir bar holder (3) and install the paddle (4).

3-4. Due to the different applications of this machine, only the standard stir bar is provided for any reason. In order to meet the needs of experimental applications, the company offers various types of stirring rods to buy.

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- In order to ensure the safety of the machine, please firmly fix the key connection points and check them frequently to prevent loosening. Please read "Usage and Maintenance" carefully before entering the power supply debugging equipment.



- This machine is prohibited to use in flammable and explosive environments .
- The power input socket to this unit must be well grounded. It is forbidden to lead the grounding wire to the telephone line, metal water pipe, gas pipe and lightning arrester wire.
- The machine drive has a certain weight. Many people must cooperate with the operation when manually adjusting the height and angle.
- Before the machine is used, it is necessary to conduct a drive host operation test. Do not install stirring paddles during the test.
- This machine is prohibited to start the stirring and mixing operation without the stirring blade's paddle being placed in the stirring medium.
- To ensure safety, the operator should wear a protective cap to prevent the hair from being caught in the chuck of the stirring bar that the machine is rotating when the experiment requires close observation.

4. Use and maintenance

4-1. This machine adopts single-phase three-wire system, the required power socket is 220V, 10A three-hole socket. Before use, check whether the plugs on the power input socket (11) and the output socket (12) are firmly connected.

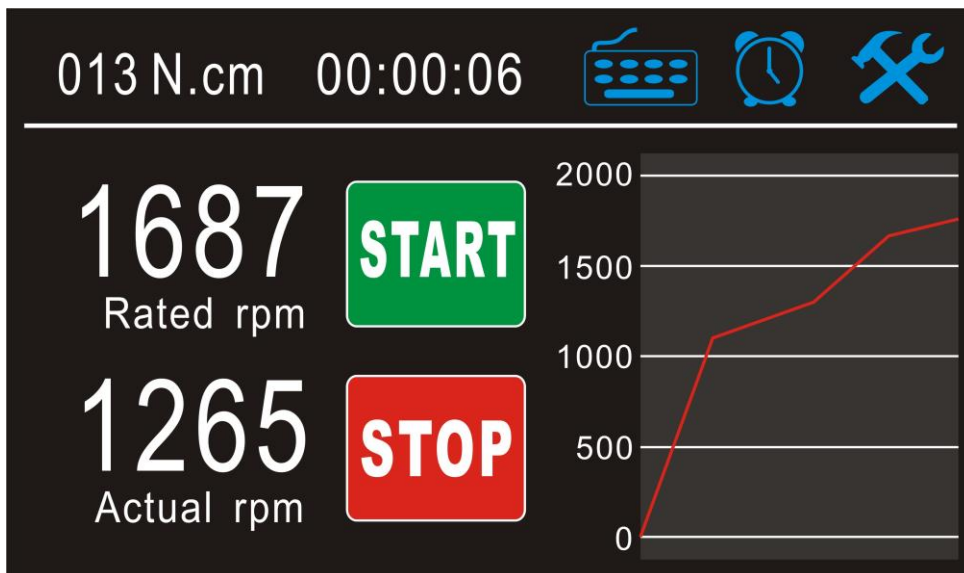
4-2. Before the machine is used, it is necessary to conduct a mixing host operation test. Please do not install a stirring bar during the test. If the experiment requires high-speed stirring, the mixing rod used must have a high degree of straightness and rigidity.

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4-3. The machine input power, turn on the power switch (10), operation control LCD touch screen display: (Pic 1)

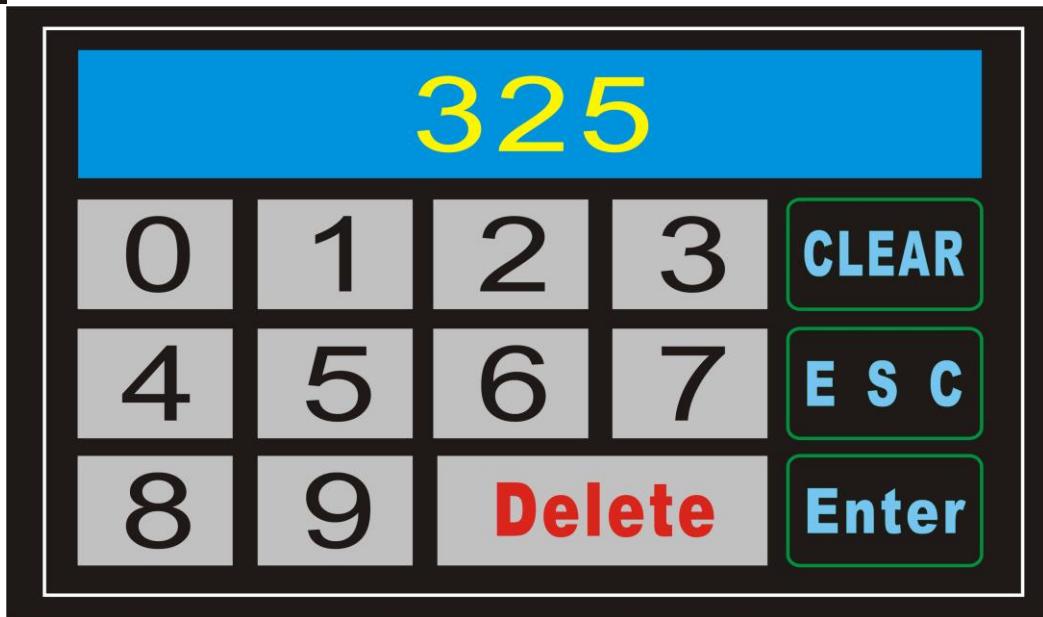


4-4. The machine is ready to start. Operation control LCD touch screen display: (Pic 2)




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4-5. The machine's running speed control: In the ready state, touch the "Rated rpm" digital zone "0" or  the keyboard to set the logo, run the control LCD touch screen display:




Touch the numeric keys to input the running speed value of the device, and press "Enter". Return to the previous menu (Pic 2). Touch "START" and the device starts running. Actual rpm Dynamic change of the value of the "0" digit field (actual output speed value). Touch "STOP" and the device will pause. The increase/decrease trend curve of the running speed of the equipment is only displayed during operation.

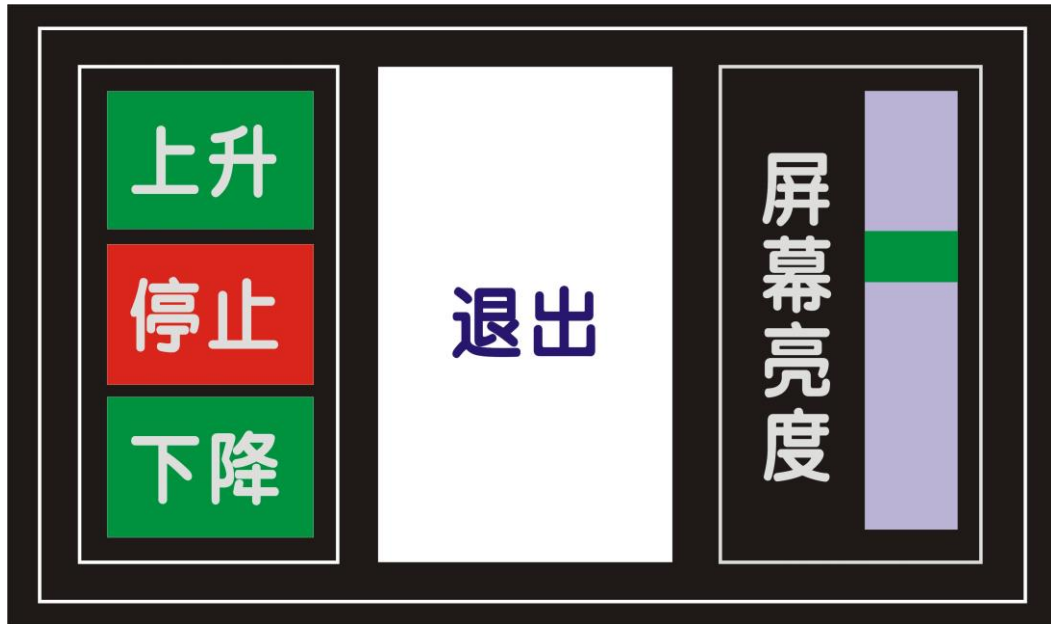
4-6. The machine's timing operation mode control: In the ready state, touch  time setting logo, running control LCD touch screen display: (Pic 4)



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Touch the numeric keys to input the device timing running control time 6-digit value (for example, 122530, 12 hours 25 minutes and 30 seconds; minutes and seconds maximum 59, hour maximum 99), touch "Enter" to confirm. Return to the previous menu (Pic 2). Touch "START", the device timing control operation."00: 00: 00" The countdown area shows the remaining time of the device's operation.

4-7. Column lifting and screen brightness control: In the ready state  touch time setting logo, running control LCD touch screen display: (Pic 5)



Touch "up or down" , the column drive moves up or down. Touch "Stop" , the column stops rising and falling. Touch " Screen brightness" slider, move up, the screen brightness increases. The slider moves down and the screen brightness decreases. Touch "Exit" to return to the previous menu (Pic 2).

4-8. The machine has a running speed memory function. After a pause in the equipment operating state, restart the speed to maintain the original setting and continue running.

4-9. After the machine is running, please turn off the power switch and pull out the AC220V power plug. Clean the stir bar in time for the next use.

4-10. The machine must be regularly maintained. If you need to stop for a long time, please put it in a ventilated and dry place to prevent the electronic components from getting wet. If it is used again, it should allow the main engine to idle for a while at a slow speed, causing the moisture on the electronic components to diverge.

4-11. If the machine does not operate or displays a warning when it is running, remove the stirring rod first. Then check if the power socket has power, if the connector is loose and the contact is good.

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After the above failures are eliminated, the operation cannot be started normally. Please contact AN Company after-sales service department directly. Do not disassemble or overhaul personnel who are not familiar with the performance of the machine to avoid accidents.



Precautions:

- **The machine should be placed in a clean and dry place. Keep it clean and prevent moisture. The ambient temperature does not exceed 40°C. Strictly prevent all kinds of foreign objects from splashing into the motor.**
- **When the machine is used in a humid environment, use a leakage protection device to ensure the operator's personal safety.**
- **If the machine is used in a power grid with intense voltage fluctuations, it will cause the speed to run out of control. Please use a power supply voltage regulator.**
- **When the machine is used in a strong corrosive environment, please pay attention to necessary protective measures in order to prevent damage to the mechanical and electrical properties of the equipment.**

•If the machine is used for experiments in the presence of volatile flammable media, it must have effective measures to strictly prevent the emission of flammable gases in order to avoid flammable and explosive gases, sparks deflagration, and fire accidents.

5. After-sales service

5-1. Within one year from the date of purchase, AN Company will be responsible for the warranty due to the quality of the product itself.

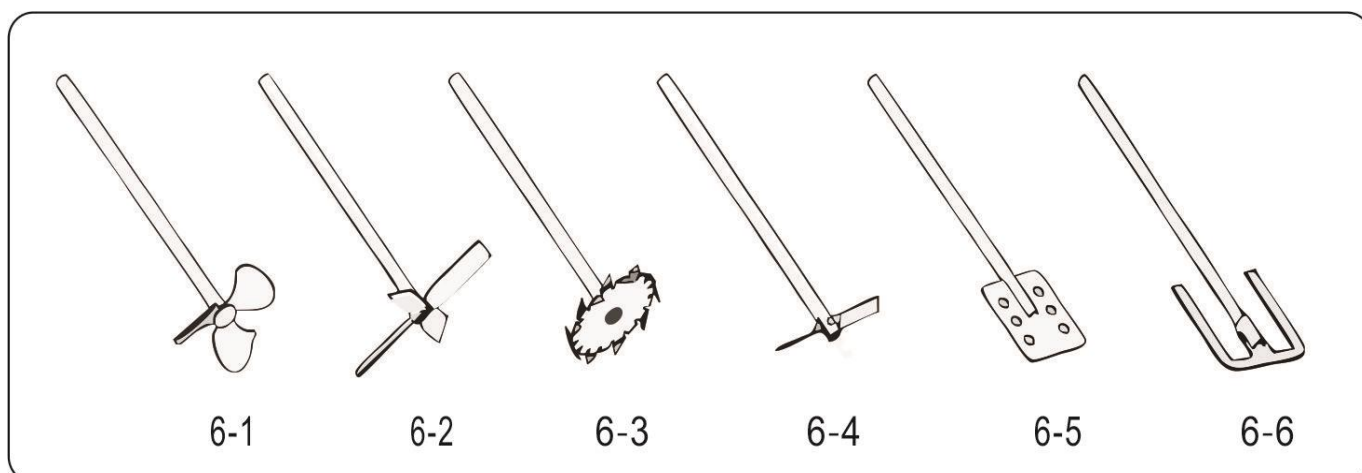
5-2. In case of improper use by the user or human damage, AN Company will not assume any responsibility and related maintenance costs.

5-3. The machine's warranty must have a warranty.

5-4. If the internal structure of the machine has been dismantled or dismantled by itself, the part that the company specified in the specification as being prohibited from dismantling shall be regarded as man-made damage.

5-5. This machine has exceeded the warranty period. The resulting maintenance costs are borne by the user.

6. Stir bar application reference in stir experimental operation:



6-1. Three-bladed propeller type: Used in high speeds. The mixed medium flows axially from top to bottom and the shear force is small.

6-2. Four-bladed propeller: Used in high speeds. The mixed medium flows axially from top to bottom, producing a local shear force.

6-3. Dissolution type: Used in high speeds. The mixed medium produces radial flow from both above and below, forming a strong turbulent flow and high shear force, which can grind particles in the liquid.

6-4. Centrifugal: Used in high speeds. The double blades are suitable for use in narrow mouth containers and open with increasing speed. The stirring effect is similar to a four-bladed propeller type.

6-5. Fan type: Used at low speeds. Small tangential flow turbulence and good heat exchange performance. Used in applications where soft stirring media is required.

6-6. Anchor: Use at low speed. Tangential flow occurs with high shear rates at the edges.

Mixed media is not easily deposited on the container wall. Applied to polymer reactions and the dispersion of minerals in liquids. It is an ideal stirring element for medium and high viscosity fluids.

WARRANTY

No. _____

Dear Customer:

Thank you for choosing AN products.

If there is a fault caused by a product quality problem within the warranty period after the purchase, AN Company will provide you with free maintenance service. I hope you can help to do the following:

1. Carefully store the warranty card after purchase and carefully read the instructions.
2. Please present the warranty card and invoice (can also be faxed) during the warranty period. If the warranty cannot be presented, it will be charged even during the warranty period.
3. If the warranty is mailed, the postage must be borne by you.

The following conditions are not covered by the warranty, but maintenance services are still guaranteed:

1. Machine damage caused by user's own disassembly or repair.
2. The user has not damaged the machine due to installation, use and maintenance according to the instruction manual.
3. Quality maintenance services will still be provided for products that exceed the warranty period, but corresponding service fees will be charged as required.

Information registration



Device name: High power brushless mixer Purchase date: _____

Device model: AM1000 Warranty period: one year

Sales company name	
Company address	
Telephone	
Maintenance company name	
Company address	
Telephone	