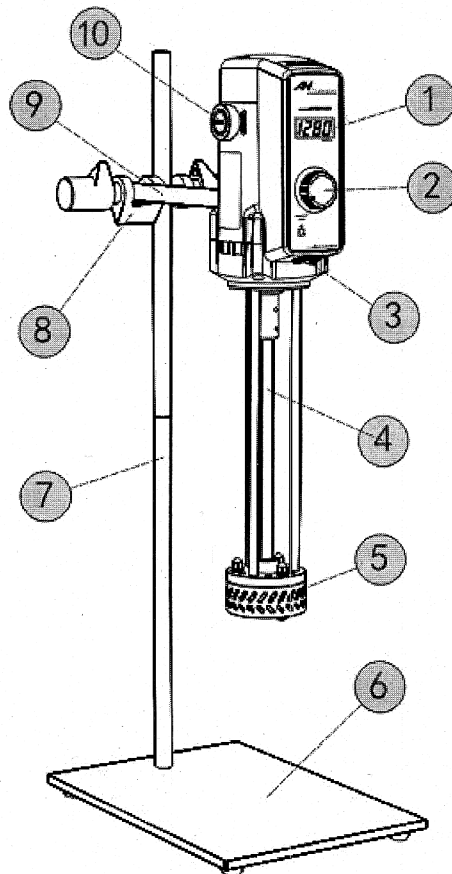
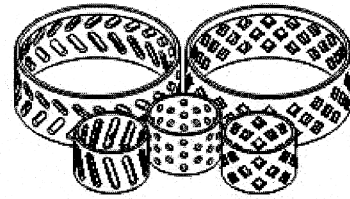


Model: AE70



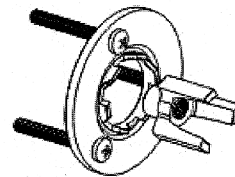
- 1.Tachometer 2.Speed control knob 3.Power switch
4.Transmission shaft 5.Stirring head 6.Engine base
7.Supporting post 8.Supporting structure
9. Supporting stull 10.Electric brush carrier



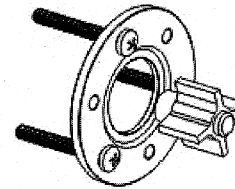
Standard configuration stator

Outer stator: inclined hole, square hole

Inner stator: inclined hole, square hole, circular hole



Toothed plate and rotor can apply
to mash or fiber etc



Flat plate and rotor can apply
to homogeneous emulsion

Packing list:

No.	Name	QTY	No.	Name	QTY
1	Emulsifying machine	1	9	Internal hexagonal wrench	1
2	Base	1	10	outer stator	1
3	Supporting post	1	11	inner stator	2
4	Supporting stull	1	12	Flat plate and	1
5	Supporting bracket	1	13	Emulsion stator	1
6	supporting post wrench	1	14	Electric brush(spare part)	1
7	M5Wrench	1	15	Operation manual	1
8	Product certificate	1			

Model: AE70

Thank you for using our products of AN 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.

AE70 high shear homogeneous dispersing machine is powered by micro motors of compact-structured Series excitation type, so it can be widely used in laboratories or testing workshop for the mixing of low, moderate or high viscosity liquids and it can also be used to disperse homogeneous particle material and to break fiber material in a liquid medium. The product consists of high-speed motor, dispersed homogeneous stirring head and speed control. The driving machine is made of high-quality engineering plastic and die-cast aluminum to ensure its stable operation. The Stirring head is made of stainless steel and can be of wide experimental application. Speed variation controlled by a microprocessor operating speed can compensate for load changes effective immediately and supply voltage fluctuations caused by constant speed and reliable; Built-in soft-start, automatic overload protection, full security protection experiment long load continuous operation; Stepless speed to meet the experiment at any time to amend the stirring speed. The digital display of speed is convenient for experimental data collection; the timing control function ensures the timeliness and effectiveness of experiment.



·Please pay special attention to the warning signal



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

2. Technical parameters

Model:		AE70
Rated voltage:	ACV	220 ±10 %
Rated frequency:	Hz	50 / 60
Input power:	W	950
Output power:	W	570
Rated torque:	N·cm	3.92
Work mode:		S1(Continuous)
Operation control mode:		modular control knob
Speed adjustment range	rpm	1000 ~ 14000
Speed control mode:	step	stepless
Timing control range	min	1 ~ 1000
Speed digital display		LED
Speed dynamic detection:		Yes
Speed memory function:		Yes
Overload protection function:		Yes
Mixing head material:	#	stainless steel 316
Mixing head diameter	mm	Ø70
Mixing head maximum torque	N.cm	38.5
Rotor maximum linear velocity	m/s	22

Model: AE70

Standard inside and outside stator: inner stator:		inner stator: square, circular and inclined hole; outer stator: square, inclined
Standard plate and rotor:		toothed bottom plate and rotor; flat plate and rotor
Handling capacity (H ₂ O)	ml	500 ~ 40000
Maximum handling viscosity	mpa.s	8000
Allowable ambient temperature:	°C	≤ 40 °C
Allowable relative humidity:	%	≤ 80
Overall dimension	mm	715*290*160
Overall weight	kg	9.2

Note:

- ① Motor speed is in proportion to torque; larger torque with higher speed.
- ② Handling capacity and effectiveness is related to the shape of experimental container.

3. Installation

3-1. Put the Base(6) on the platform, and fix a longer supporting post(7) into the Mounting hole in the base. Set in the Supporting structure (8) on the upper end of the supporting post, and turn the handle to fasten them.

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

3-3. When installing the stirring head, follow the steps in Use and Maintenance 4-12.



- To ensure the operating safety of the product, fix the key points of connections firmly and inspect them 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 mixer is powered by series motor ; it has rated torque at rated speed, and the two are in direct proportion. The higher the speed, the greater the torque; vice versa.
- If a slow speed is needed, you shall do it after starting the mixer and adjust the speed as required in the process of 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 prohibite to connect the grounding with telephone lines, metal pipes or lightening arresters.
- Never start the machine before placing the shear emulsifying head (5) in liquid medium. Make sure the end of the working head(feed port) should be kept enough distance away from the bottom of the container.
- To ensure security, the operator should wear protective cap in case their hair is caught up in the drive shaft(4).

Model: AE70

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. To avoid damage to the machine, it's strictly prohibited to operate the machine when the stirring head is out of the agitating medium.

4-3. Power Input : Turn on the power switch. [0000] will appear on the digital indicator, meaning the unit is ready for work.

4-4. How to set running speed: dial the speed control knob to enter the pre-set state. The running speed can be pre-set to the desired experimental operation of the stirring speed, and you can also adjust the speed during the run accordingly.

4-5. How to start the machine: press the speed control knob to start . If the speed is NOT pre-set, the machine will operate at the initial default speed.

4-6. How to Pause / Restart: When the machine is running you can press the Speed Control Knob to pause it. Press the knob again to RESTART the machine at the previous speed (speed memory function).

4-7. Timer control:.. Press the Speed Control Knob and hold it for 3 seconds, the digital display shows as "SET" ; it's ready for you to set the RUN timing . Set the operating time by rotating the speed control knob as you desire, and then again press the speed control knob to confirm it and to exit the timer setting and to be ready for setting the speed value. Rotate the Speed Control Knob to set the DESIRED speed. When the timing and speeding set is ready you can press the speed control knob to run the machine in the timing control state. Then during the run, the display alternately displays running speed and the countdown in the timing control state.

4-8. Mode control: If the input power is interrupted or the power switch is turned off accidentally, the unit enters the pre-set initial state when you restart the machine, to ensure the safety of experimental manipulations.

4-9. Operational failure: When your operation can not be executed as instructed, "Err1" will appear on the digital display , indicating that the unit is in alarm status.

4-10. After the operation is completed, power off the machine and unplug it. Promptly clean each part of the stirring head for the next use next.

4-11. This product is equipped with toothed plate and rotor, as well as flat plate, rotor and stator. Please choose proper plate, rotor and stator to satisfy the actual experimental requirements.

4-11-1. Toothed plated and rotor apply to mash and fibering medium.

4-11-2. Flat plated and rotor apply to homogeneous and emulsifying medium.

4-11-3. For hybrid emulsion of low viscosity liquid medium, choose round hole inner stator. And for crushing dissolution of small particle material, choose the same.

4-11-4. For hybrid emulsion of moderate viscosity liquid medium, choose square hole inner stator. And for crushing dissolution of moderate particle material, choose the same.

4-11-5. For hybrid emulsion of high viscosity liquid medium, choose inclined hole inner stator. And for crushing dissolution of big particle material, choose the same.

4-11-6. For medium with good fluidity, choose square hole outer stator.

Model: AE70

4-12. Steps to exchange rotors and stators:

First screw off the three nuts ④ with the M5 wrench enclosed, then remove the toothed or flat plate⑨, and remove outer stator⑧ and inner stator⑧ from the engine base⑤. Insert socket head wrench① into the mounting hole of the coupling②, screw off the rotor⑥. Install the chosen rotor, inner and outer stators and plate, fasten the three nuts evenly, And rotate the transmission shaft③ with your finger. Avoid being periodic loose or tight.

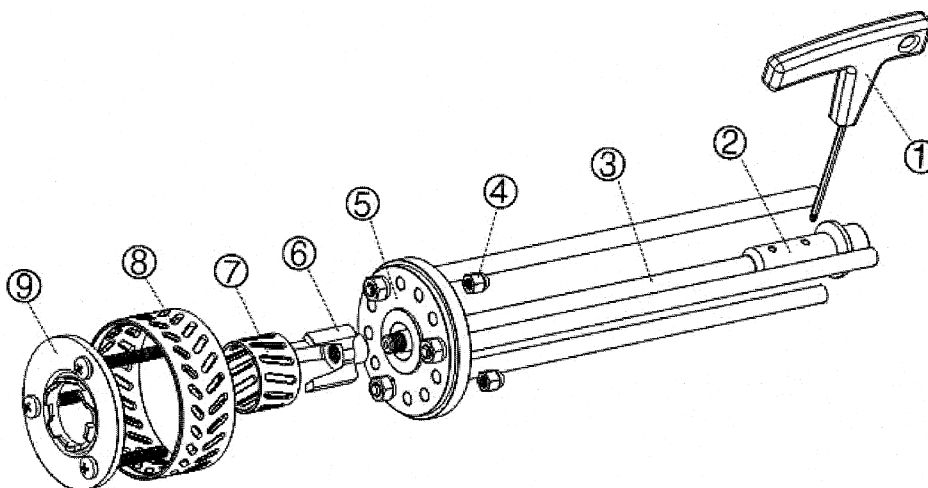
4-13. After using the product for some time or after a long stop, a maintenance inspection is needed before reusing it. To ensure electrical safety, use a Megger to measure insulation resistance.

4-14. 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 long, 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.

Diagram for exchanging plates, rotor and inner, outer stators.



Avoid injuring your fingers by the cutting edge when dismounting or mounting the rotor.



4-15. 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.

Model: AE70

- 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. Take strict precautions in advance.

5. After-sale service

5-1. AN company will be responsible for warranty within six months after the purchase of this machine due to quality issues.

5-2. For improper use of the user or the artificial damage, we do not assume any liability and related maintenance costs.

5-3. The product guarantee is necessary .for warranty.

5-4. 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.

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

6. Principle of shearing emulsification

In the experimental device, a high-speed motor drives a stirring head of shearing emulsification, which consists of fine matched rotors and stators. The high speed of rotation of the rotor produces high frequent, strong circumferential tangential and angular velocity, inhaling the material from the bottom of the rotor and throwing it out of the stator bore with great centrifugal force. Under the comprehensive effect like hydrodynamic shear, friction, centrifugal extrusion, flow collision, the material is well dispersed and homogenized, 1000 times more efficient than ordinary mixing.

The device can be applied to different areas like dispersing of tissue in biotechnology, sample preparation in medicine, cosmetic industry, paint industry, petro-chemical processing. It can also be applied to any liquid material experiment like liquid and liquid phase, Liquid and solid phase. The experimental medium can achieve a fine and delicate mixing status by squeezing, strongly impacting and cracking, and liquid layers can be avoided during the operating. Thus, the machine can be used widely in the shearing and homogenizing process of manufacturing dairies, drinks, cosmetics and medicines.

Different stirring head stators are designed for different experimental requirements. They can be widely used achieve different purposes: Smashing, homogenizing, emulsification, polymerization, suspension, dissolution and agitation.

Model: AE70

WARRANTY FORM

No.

Paste product trace bar code here

Dear Customer:

Thank you for choosing AN 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 product needs maintenance by post, the postage shall be born by you.

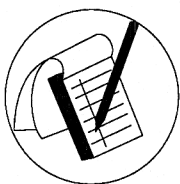
NO free-charge maintenance is provided for the following situations while maintenance service is still warranted:

1. The product is damaged due to dismantlement, installation or repairing done by the customer.

2. The product is damaged due to dismantlement, installation or repairing done by the customer. maintenance by the customer violating requirements in the Operation Manual.

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 by rule.

Registration information

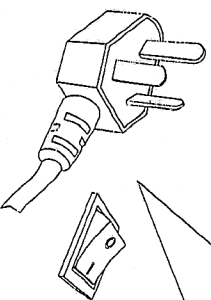


Device Name: Lab High Shear Emulsifying Machine Purchase date: _____

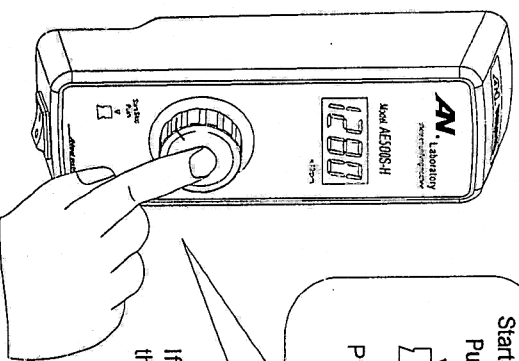
Device model: AE70 Warranty period: one year

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

How to use the integrated control knob:



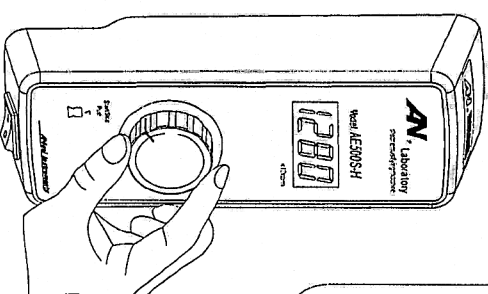
Plug in and Switch on:
The machine is ready for work;
The rotating display and indicating light is on.



Start/Stop Press the button once:
Push Press to start the machine;
 Press again to stop the machine.

Press the button as long as 3 seconds:
To set the operating time.

If the machine is restarted after a pause,
the machine will operate at the pre-set rotating speed.



Speed up/Slow down **Turn the knob:**
Turn left or right To speed up;
 Or to slow down.
Turn the knob in the timing setting mode;
To set operating time.

The operating speed:
You can pre-set the rotating speed in standby state;
Or adjust the speed when operating.

