

# STALWART

## SMT-30K

### Handheld Homogenizer

#### Manual

Version 1.0



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## 1. Introduction

The handheld homogenizer MT-30K is based on fixed rotor / high speed relative motion rotor to shear and break the sample. The dispersing head can be taken apart for easy cleaning.

This instrument is for laboratory use only. It is applied in various territories such as chemical, cosmetic, medicine, pigment, etc. as well as university and medical laboratory.

Choose suitable dispersing head for different sample capacity.

## 2. Safety Warnings and Guidelines

- ▲ When using the instrument, basic safe security can reduce possibility of fire, electric shock and other hurt to another person.
- ▲ Use this instrument in suitable scope only.
- ▲ Make sure the voltage, frequency match the instrument.
- ▲ Never use the instrument in dangerous area. Never use the instrument in dangerous way.
- ▲ Never dip the instrument in liquid.
- ▲ Use the instrument in ventilated environment.
- ▲ Never tear down the instrument. Only qualified technician can repair the instrument.
- ▲ The instrument can work continuously. Basically, several minutes continuously working can achieve good dispersing effect. Long time continuously working only make the medium raise temperature.

▲ Make sure the instrument operating with liquid, otherwise the gasket of the dispersing head will be broken.

▲ Clean the dispersing head whenever finish using the instrument. Shut down the power before doing cleaning.

▲ Do not touch any part of the dispersing head when it works.

▲ Do not use defective instrument or broken instrument. Any problem of the instrument, contact with seller for help.

▲ Make sure shut down the power before exchange the dispersing head.

▲ Only use the matched dispersing head of the homogenizer.

▲ Make sure use holding clamp to hold the glass container to avoid being injured in case container broken.

▲ Set suitable speed to avoid liquid splashing.

▲ Do not cover the air hole for heat dissipation of the motor .

▲ Make sure the dispersing head not touch the container bottom.

## 3. Opening Check

Check the instrument and appendix with the packing list when you first open the instrument packing case. If you find there is anything wrong with the instrument and the appendix, contact with the seller.

No.	Description	Quantity
1	Main Device	1
2	Warranty Card	1
4	Operation Manual	1
5	Accessories	Based on order

## 4. Operations

▲ The voltage should match the instrument.

▲ Make sure shut down the power before exchange the dispersing head.

- ▲ Assemble the dispersing head , fix it to the instrument.
- ▲ Hold the instrument, release the fastener to disassemble the dispersing head.
- ▲ Do not power on the instrument without dispersing head to avoid instrument broken.
- ▲ The correct depth the dispersing head insert the sample is around 2/3 depth, the top of the dispersing head is 1/3 distance to the container bottom.
- ▲ To achieve the best dispersing effect, choose the suitable speed for the dispersing purpose.

### 5. Dispersing Head Installation



1. Hold the instrument, clockwise rotate the dispersing head to take out the head.



2. Press the fastener, at the same time, rotate to loose the grip chuck.



3. Take out the axle to finish disassembling the dispersing head.



4. Choose matched grip chuck, insert it to the instrument.



5. Push the fastener, rotate to tighten the grip chuck .



6. Hold the instrument, anticlockwise rotate to fix the dispersing head.



Notice: Make sure the PTFE gasket is put at correct way and position. When operate the instrument, make sure the dispersing head in the liquid to keep PTFE gasket cool. The dispersing head is core for operation, please take care of it.

### 6. Cleaning

- ▲ After operation, take apart the instrument to clean the dispersing head.
- ▲ The dispersing head can be cleaned by suitable solvent to dissolve the residues. Protect the PTFE gasket not be damaged in any possibility.
- ▲ Disassemble the dispersing head before cleaning.
- ▲ Correct clean will extend the instrument using life.

### 7. Sterilization

- ▲ chemical sterilization: The solvent (such as methanal, phenol, ethanol, etc.) for sterilization can dissolve the residues in most cases. After sterilization, wash it by sterile water.
- ▲ moist heat sterilization: @120C, one atmosphere, to steam the dispersing head around 20 minutes.
- ▲ high temperature steam sterilization: Steam the dispersing head at high temperature between 160C and 190C.

### 8. Corrosion

Stainless steel is not a fully anti-corrosive material, and certain chemical reagents may corrode it. Corrosive chemical reagents can only contact stainless steel briefly, and ensure that they cannot remain on the surface of the disper head. It should be cleaned properly after each use and the chemical should be cleaned.

### 9. Speed Adjusting

The +/- speed control button is located on the top of the main unit. Turn on the power switch of the main unit for trial operation under the condition that the dispersion head is firmly installed. It can be adjusted according to the speed displayed on the digital display. The digital display 08-35 corresponds to 8000-35000rpm. When emergency stop is needed, just turn off the power switch on the host.

### 10. Motor maintenance

The motor no need special maintenance. In case the carbon brush need to be exchanged, please contact with the seller. Do shut down the power before exchanging parts.

### 11. Parameters

Type	SMT-30K
Power Supply	220V, 50HZ
Power (Input / Output)	160/110W
Rotor Line Speed	6.3-14m/sec
Net Weight	0.7kg
Noise	72dB (A)
Speed Control Range	8K-35Krpm (digital display)
Environment Temp.	5° C ~ 40° C
Dimension	46mm x 55mm x 230mm

### 12. H-type Stand (optional accessory)

The homogenizer / disperser is a hand-held product, but it can also be used with an H-shaped bracket. It is more comfortable and convenient to use the bracket. The bracket can also be used for daily storage of the product.

