Flask shaker

6313-FS1752

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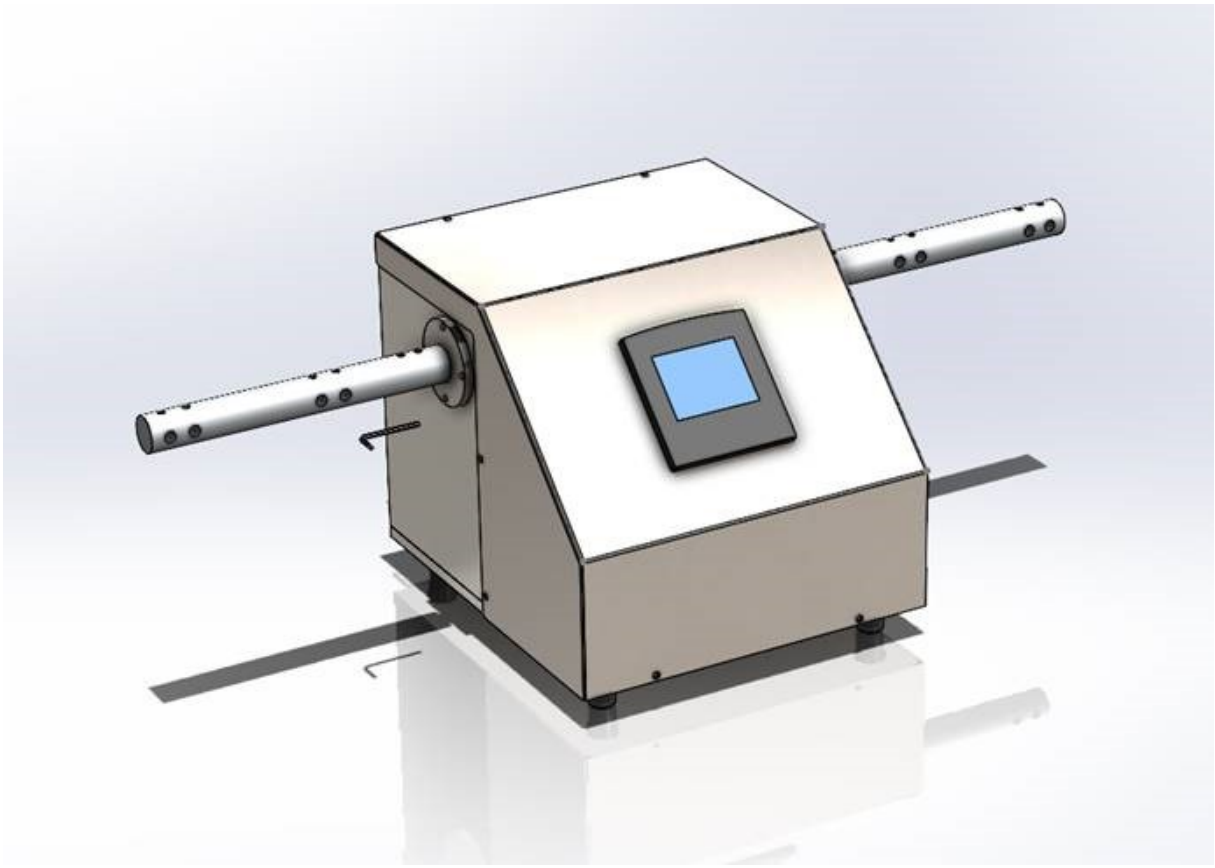
1 GENERAL INFORMATION

1.1 Purpose of Use

The FS-1750 Flask shaker is especially designed for the bitterness test. The unit is powered by electric power and requires no additional utilities.

1.2 General Description

The unit is made of a solid steel base frame to ensure stability. On this base frame all parts are mounted. The control of the unit is made by a small plc with built in touch screen user interface.



2 SAFETY

2.1 Health and Safety Risks

Consider the following safety and health risks when working with this unit:

- Beware of the movement of the axle. Although the movements are small it can hurt you.
- When glass parts (test tubes) are mounted to the shaker there is a risk for breakage.

2.2 Safety Procedures

2.2.1 Personal protective equipment

safety glasses and safety clothing when operating the unit and when performing maintenance.

2.2.2 Preparations for safe use

Make sure that operations like placing, adjusting or moving the unit are only performed by qualified personnel, e.g. personnel with appropriate qualifications and familiar with the contents of this manual. Furthermore, ensure that the unit is installed in accordance with this manual, as depicted in chapter 4.

2.2.3 Safety during inspection and maintenance

Ensure that maintenance and repair work only take place when the unit is not working and the electric power is switched off by removing the main power cord.

3 TRANSPORT AND STORAGE

3.1 Transport

Make sure the unit is securely anchored during transport and all loose parts are fixated to the machine or separately packed to prevent damage. The unit must be suitably packed, depending on the type of transport (e.g. land, sea or air).

3.2 Storage

The following requirements should be followed when the unit is stored or not used for a period of one (1) month or longer:

- The storage's environmental conditions comply with chapter 4.1
- Make sure the unit is clean and dry and no dust or moisture can come in contact with the unit
- Oil white steel parts lightly to prevent corrosion

4 INSTALLATION

4.1 Environmental Conditions

For proper operation of the unit the following ambient conditions must be adhered to:

- Ambient temperature +10 to +35°C
- Humidity 30 to 70% rH

Furthermore, the unit should not be exposed to outdoor environmental conditions.

4.2 Prerequisites

Area classification	Non-hazardous (explosive) or hazardous area
Electric power	230V AC single phase 50Hz
Surface	Flat and firm surface on which the unit will be placed.

4.3 Installation

Before commencing with the installation ensure that the electric power is switched ‘‘off’’.

Installation of the unit is simple, just place it on its designated location and connect the mains lead to the 230V power outlet. Switch the main switch on the back of the unit to ‘‘ON’’. The unit is now ready for operation.

5 OPERATING INSTRUCTIONS

Before using the unit, make sure that all safety precautions have been met and the installation has been successfully completed. The following operating sequence applies for operation of the unit:

1. Install the tube clamps on the clamp holders.
2. Fix the tubes with the test sample in the clamps.
3. Turn the main switch on the backside to the 'ON' position
4. Touch the "start-up screen" to move on to the "set screen".
5. Set the speed by pushing the screen button "SPEED".
6. Set the stir time by pushing the screen button "TIME", format is hours-minutes-seconds.
7. Push the screen button "START", The screen changes to the "run screen" and the motor starts running for the set time.
8. The stirring can be stopped by pushing the screen button "STOP".
9. When the shaker stops the screen goes back to the "set screen".

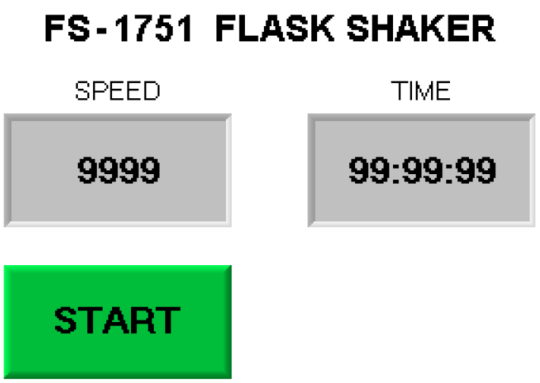


Figure 1: set screen.

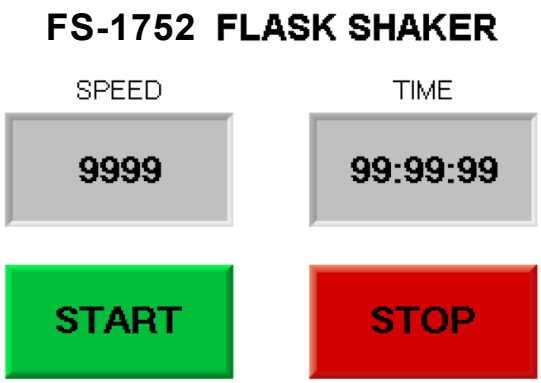


Figure 2: run screen.

Figure 3: start-up screen.

Figure 4: data input screen.

6 MAINTENANCE AND SPARE PARTS

6.1 Maintenance

Several checks need to be done on a regular basis to guarantee proper operation of the system. In case of issues please contact Airofiller.

Item to check	**Interval**
Check tightness of the clamp holder	Every day / before start of use
Clean display screen with towel	1 week

6.2 Spare parts

The unit is designed with minimal wear and tear parts; however, some parts might wear over-time. In case of issues please contact Airofiller for a spare parts request.

7 WARANTY

The warranty period is twelve (12) months from delivery date, any damage to the unit or parts thereof within this period caused by material, manufacturing or construction errors will be solved as soon as possible by Airofiller.

The warranty is directly void if:

- The damage is caused by its users, due to improper maintenance or modifications of the unit.
- The unit is not assembled or disassembled by qualified personnel familiar with the contents of this manual.
- The damage occurred because of lack of maintenance.
- Replacement parts are used which were not supplied by Airofiller.
- The damage occurred after dropping the unit, or parts thereof.