USER MANUAL

OVERHEAD STIRRER 20 AND 40 LITERS

RSLAB-13 – 20 liters, LED display, code 50686031
RSLAB-13 – 40 liters, LED display, code 50686051
RSLAB-13PRO – 20 liters, LCD display, code 50686030
RSLAB-13 PRO – 40 liters, LCD display, code50686050

CONTENTS

Welcome to the stirrers RSLAB-13 and RSLAB-13PRO user manual. Users should read this manual carefully, follow the instructions and procedures, and beware of all the cautions when using this instrument.
When help needed, you can always contact the service department of manufacturer or your supplier for technical support. Please provide the customer care representative with the following information: Serial number, description of problem, methods and procedures adopted to resolve the problems and your contact information.

These RSLAB stirrers are warranted to be free from defects in materials and workmanship under normal use and service for a period of 12 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.
For claims under the warranty please contact your local dealer. You may also send the instrument direct to our works, enclosing the invoice copy and giving reasons for the claim.

1- Safety Instructions

Warning!
Read the operating instructions carefully before use the instrument.
Ensure that only trained staff work with the instrument.

Protective ground contact!
Make sure that socket is earthed (protective ground contact) before use.

When work, wear the personal guard to avoid the risk from splashing and evaporation of liquids and release of toxic or combustible gases.

Use the instrument following the safety instructions and profession safety rule to avoid any accident.

Users are not allowed to touch moving parts of the instrument to avoid accidents.

Set up the instrument in a spacious area on a stable, clean, non-slip, dry and fireproof surface, do not operate the instrument in explosive atmospheres, with hazardous substances or under water.

If the instrument does not run smoothly, please decrease the motor speed.

Firmly secure the accessories to avoid damage risk.

Preparation of samples may lead to dangerous flammable. Only process samples that will not react dangerous.

Use the standard accessories listed in the “accessories” section, and follow the instructions to use accessories to ensure safety. Please switch off the power before assembly of the accessories, confirm the instrument and accessories are intact before switch on each time.

Keep away from high magnetic field.

Do not cover the instrument during running. Prevent the collision and extrusion to instrument and accessories.

The voltage started on the nameplate must correspond to the mains voltage.

The instrument may only be opened by qualified and trained technician only.

2- Proper use

The instrument is designed for mixing sticky substance in schools, laboratories or factories. It can be installed on a variety of impeller, for different viscosity of the medium. This instrument is not suitable for using residential areas or other areas that may cause danger to the user or instrument as mentioned in chapter 1.
Do not use the accessories recommended by the manufacturer, or failure to use the instructions, may be caused unsafe situation.

3- Inspection

Unpack the equipment carefully and check for any damages which may have arisen during transport. If it happens, please contact manufacturer for technical support.

If there is any apparent damage to the system, please do not plug it into the power line

The RSLAB-13 and RSLAB-13PRO includes the following items:

Main unit	1 unit
Power cable	1 unit
User manual	1 unit
Key of drill chuck	1 unit

4- System assembly

Install stand: The stand must be assembled according to the following instructions. Adjust the height of the main unit, and the distance from the main unit to the support holder by rotating the locking device. Anti-drop protector can be adjusted up or down, ensure the locking position is suitable for fixing the main unit, and then attach the main unit to the stand

Install stirring impeller: Plug the stirring impeller into the drill chuck, and adjust the depth of stirring impeller into

vessel. Rotate the drill chuck with your fingers to fix the stirring impeller and then clockwise tighten evenly the drill chuck using chuck key.

Note : Overhead stirrer is a high-speed running device. The system are required to lock securely the corresponding components in each step of the assembly to avoid any movement of the main unit or stirring impeller witch would be caused harm or damage to peripheral instrument and personnel.
The stand is a support device for overhead stirrer. The corresponding components are required to be locked securely to avoid any movement witch would be caused harm or damage.
When install main unit and anti-drop protector, take care of your fingers to avoid harm.

5- Trial run

RSLAB-13:
Ensure the required operating voltage and power supply voltage matched.
Ensure the socket must be earthed reliably
Counter-clockwise rotate the speed control button to the end before switch on instrument.
Connect the power cable, ensure the power in
Clockwise rotate the speed control button to t
Counter-clockwise rotate the speed control bu

RSLAB-13PRO:
Ensure the required operating voltage and pov
Ensure the socket must be earthed reliably
Connect the power cable, ensure the power o
Rotate the stirring button and set stirring spee
Press stirring button and start stirring.
Press again the stirring button and stop stirrin

If these operations above are normal, the inst
damaged during transportation, please contac

Note : Do not touch components of high-speed running instrument during operation to avoid damage and harm.

6- Function

a. Control

<u>RSLAB-13:</u>

Items	Default settings
Speed control button (Speed)	Set stirring speed, press the button to star/stop stirring function
LED display	LED display speed value warning code
Overload protection light (Overload)	LED light shows red when starts overload protection. When the torque reaches limited value, overload protection function will be started. At the same time overload protection light flashes, while the system stops running.
Power switch light (Power)	LED light shows green when switch on
Drill chuck	Can be held stirring impellers
Push-through agitator shaft	If needed, shaft can push-through agitator
Power switch (I/O)	Switch on or off the instrument

RSLAB-13PRO:

Items	Description
Speed control button (Speed)	Set stirring speed, press the button to start/stop stirring function
Mode switch (Mode)	Shift speed and torque display. LCD displays the current speed value at initial running. LCD displays the current torque value when press the mode knob
LCD display	LCD displays the real working state and all setting values
Speed/torque light (RPM / Torque)	Different colors of LED lights show the value for speed or torque that LCD screen currently displays. Yellow LED light shows that LCD screen currently display speed. Green LED light shows that LCD screen currently displays torque
Power switch/ Overload protection light(Power / Overload)	LED light shows green when switch on, LED light shows red when starts overload protection. When the torque reaches limited value, overload protection function will be started. At the same time overload protection light flashes, while the system stops running
Drill chuck	Can be held stirring impellers
Push-through agitator shaft	If needed, shaft can push-through agitator
Power switch (I/O)	Switch ON or OFF the instrument

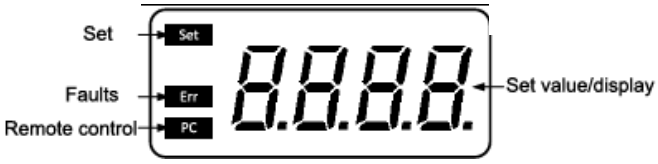
b. Display

RSLAB-13:

LED displays speed value under normal conditions
LED displays warning code under abnormal conditions

Place the overhead stirrer in safe and stable surface and connect power cable.
Switch on instrument.
Clockwise rotate the speed control button to the target speed value, and start stirring function.
Counter-clockwise rotate the speed control button to stop stirring function.

RSLAB-13PRO :



Set (Set): Display when set target speed value.
Remote control (PC): Display when using external probe.
Faults (Err): Display in case of error happening.
Set value/display: when Set display, this area shows setting value. When Set disappears, this area shows running value.

Place the overhead stirrer in safe and stable surface and connect power cable.
Switch on instrument.
The instrument begins self-checking.
When initialization is over, displays “set”, at the same time the area of value setting/display flashes that indicate can be set speed value.
Rotate speed control button to set stirring speed.
LCD display no longer flashes when press speed button, “set” disappear, the stirring function start.
Press speed button again, LCD display flashes, “set” display, the stirring function close.

7- Overload protection

The stirrers RESLAB-13 and RSLAB-13PRO work continuous, the motor current is electronically limited to achieve security stall and overload protection. When the torque reaches limited value, overload protection will be started. At the same time overload protection light flashes.
Starts overload protection:

- When the setting speed value does not match the current medium viscosity, starts overload protection.
- When the motor output shaft is stuck, motor protection stars.

Refer to chapter 8 for the problems and solutions.

8- Faults

RSLAB-13:
Instrument cannot be powered ON when star stirring function.

- Check whether the power cable is connected.

Stirring functions suddenly stop.

- Overload protection light changed to red, display area shows “Er 03”, indicate the current failure is “overload protection”. When the setting speed value does not match medium viscosity that caused overload protection, should be first switching OFF the instrument. Switch ON the instrument after lowered setting speed value. If overhead protection continues starting, then repeat the process and gradually reduce the speed.
- Overload protection light changed to red, display area shows “Er 04”, indicate the current failure is “motor protection”. When the motor output shaft is stuck caused motor protection, should be first switching OFF the instrument, remove the block material, and then switch ON the instrument to start stirring function.

If these faults are not resolved, please contact manufacturer/supplier.

RSLAB-13PRO:

Instrument cannot be powered ON when star stirring function.

- Check whether the power cable is connected.

Speed cannot reach set point.

- The setting speed value does not match the current medium viscosity, please reduce speed then re-start.

Stirring functions suddenly stop.

- Overload protection light changed to red, display area shows “Er 03”, indicate the current failure is “overload protection”. When the setting speed value does not match medium viscosity that caused overload protection, should be first pressing speed control button to stop stirring function. Restart stirring after lowered setting speed value. If overhead protection continues starting, then repeat the process and gradually reduce the speed.
- Overload protection light changed to red, display area shows “Er 04”, indicate the current failure is “motor protection”. When the motor output shaft is stuck caused motor protection, should be first pressing speed control button to stop stirring function, remove the block material, and then re-set original setting speed value to start stirring function.

If these faults are not resolved, please contact manufacturer/supplier.

9- Maintenance and Cleaning

Proper maintenance can keep instruments working in a good state and lengthen its lifetime.
Do not spray cleanser into the instrument when cleaning.
Do not remove the power line when cleaning.
Only use recommended cleansers:

- Dyes: isopropyl alcohol
- Construction materials: water containing tenside / Isopropyl alcohol
- Cosmetics: water containing tenside / Isopropyl alcohol
- Foodstuffs: water containing tenside
- Fuels: water containing tenside

Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method does no destroy the instrument. Wear proper protective gloves during cleaning of the instrument.
Keep the device clean and prevent liquid splashing into the device to affect its life time.

Electrical instruments may not be placed in the cleansing agent for the purpose of cleaning.
If you require maintenance service, must be cleaned the instrument in advance to avoid pollution of hazardous substances, and to send back into original packing.

If the instrument will not use for a long time, please switch off and place in a dry, clean, room temperature and stable location.

10- Associated standards and regulations

Construction in accordance with the following safety standards:
EN61010-1
UL3101-1
CAN/CSA C22.2 (1010-1)
EN61010-2-10

Construction in accordance with the following EMC standards:
EN61326-1

11- Technical data

	RSLAB-13		RSLAB-13PRO	
Max. stirring quantity (H_2O)	20 L	40 L	20 L	40 L
Motor ratting input	60 W	120 W	60 W	120 W
Motor ratting output	50 W	100 W	50 W	100 W
Voltage	100-240 VAC			
Frequency	50/60 Hz			
Power	70 W	130 W	70 W	130 W
Speed range	50-2200 rpm		50-2200 rpm	
Speed display accuracy	-		+/- 3 rpm	
Screen display	LED		LCD	
Speed display accuracy	+/- 1 rpm			
Max. torque	40 Ncm	60 Ncm	40 Ncm	60 Ncm
Max. viscosity	10000 mPas	50000 mPas	10000 mPas	50000 mPas
Overload protection	LED light flash, auto stop			
Motor protection	LED light flash, auto stop			
Chuck range diameter	0.5-13 mm			
Stand	14x220 mm			
Dimension (W x H x D)	83x220x186 mm			
Weight	2.6 Kg	2.8 Kg	2.6 Kg	2.8 Kg
Protection class acc. to DIN/EN 60529	IP 21			
Temperature	5-40 ºC			
Permission relative humidity	80 %			
Output RS232	No		Yes	

12- Accessories

	Complete universal stand	
90686050	Stand packing 1 (200 x 315 mm): plate base, support holder (780 mm) and fixing device	
90686051	Crossed stirrer, stainless steel 316L, 40x5cm	
90686052	Straight stirrer, stainless steel 316L, 40x6cm	

90686053	Blade stirrer, stainless steel 316L, 40x6.8cm	
90686054	Centrifugal stirrer, stainless steel, 316L, 40x9cm	
90686055	Crossed stirrer, PTFE coated, 35x6.5cm	
90686056	Straight stirrer, PTFE coated, PTFE, 35x7cm	
90686057	Blade stirrer, PTFE coated, 35x6.8cm	
90686058	Centrifugal stirrer, PTFE coated,, 35x8.5cm