

Cooling System

YR440

Instruction Manual

Thank you very much for purchasing our Cooling System YR440.

Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation. After reading these documents, be sure to store them securely together with the "Warranty" at a hand place for future reference.



1.

Warning: Before operating the unit, be sure to read carefully and fully understand important warnings in the operating instructions.

1. Important Illustration

The information, data, points for attention and adjustments in the manual have reflected the latest technological level of us grasped in the field after investigations.

We do not have obligations of updating the manual for you in time, with the development of technology, and we do not offer latest version copies and latest versions of the manual to the users.

We do not have the responsibilities if the illustrations, drawings, and technological requirements in the manual are in contradiction to the laws of the country the user is domiciled. Particularly, our company do not have the responsibilities for the damages or destructions of the machine for applying with the illustrations in the manual (on other aspects).

The illustrations, drawings and technological requirements in the manual do not stand for the guaranty from the company on the characteristics of the product. Only the items specified in the contract are legally effective.

Kalstein France is entitled with the rights of altering the technological characteristics and processing technics, without the obligations of notification in advance. Thus, in this way we can improve ourselves and make the progress on our technology.

This manual is protected by property rights. The property rights of the manual are reserved by Kalstein France. Printing, duplication, micrography or copy of other electronic documents or other media concerning partial or entire texts and photos of the manual must be approved by Kalstein France in written form in advance.

Please refer to the nameplate on the back of the instrument for the serial number and manufacturing date of the instrument.

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3. Safety Regulations of Instrument

3.1 Safety Mechanism

△ Make sure if the grounding wire of the 3-line power is securely connected or not before starting the machine, which must comply with the GB9706.1-1995 standard, please must be very cautious, for the edge is very sharp, serious injury will be caused by wrong operations, it's prohibited from touching the falling blade with hand under any circumstances!

- An independent power shall be supplied for the machine, so that the power cable shall not be touched.

- The operation of the machine shall be performed in a place far away from the electromagnetic interferences.

- *The machine should be placed steadily, without any vibration when operation.*

- *Refrigeration should be done once starting up.*

Attention: *don't work under blasting fan once starting up, or result is terrible.*

△ You mustn't change fuse with another one unless u shut off the power, and fuse is the same specifications and model (you can refer to technical norms).

Transport

- Keep the machine upwards on transportation
- Please shut off the power before cleaning, and do not use detergent like acetone or benzene, any detergent must not flow into the instrument.
- Please comply strictly with safety regulations from manufacturers or laboratories.

Maintenance

- The instrument could only be repaired by the technicians authorized by our company.

4. Main technical parameters

- Type of electric safety
- Minimum temperature of cryo-table: $\cong -20^{\circ}\text{C}$
- Maximum area of cryo-table: 32 x 30mm
- Work voltage 220v $\pm 10\%$ v 50hz ± 1 hz
- Power $\cong 1500$ va
- Fuse: f10a/ac250v
- Dimension: 345x500x360mm (lxwxh)
- Weight: 24.0kg

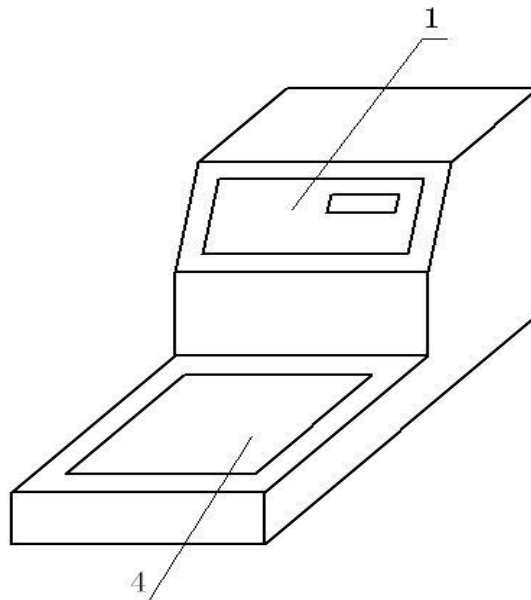
5 Brief

5.1 YR440 Model Cooling System is the regular instruments used to embed pathological tissues. It is used to cool and embed the tissues of human body or the zoological and botanical tissues after dehydration and paraffin soaked. The advanced controlling-microprocessor and the new temperature sensing system have been applied to this machine. With novelty in form, precise in structure, this machine can be combined with any other embedding system.

This machine is advanced both abroad and at home. It is the practical and necessary instrument for pathological study and teaching for hospitals, medical schools, scientific research institutes and food quarantine and inspection organizations.

- The odd controlling-microprocessor from American ATMEL Corporation has been used to make it easy to set up temperature and the shining tube has been used to display the temperature so that we can clearly know that it is in the working state.
- The temperature survey integration block from American DALLAS Corporation has been used to make it precise in temperature survey and credible in performance.
- . The lowest temperature of the Cooling platform can be - 20°C minimum, and the delay protection has been provided with.

6 Sketch of the instrument



1、 display screen

4、 cryo-table (sketch of YR440)



7 Box opening and instrument mounting

- Check whether the machine was damaged. If yes, please contact with your shipping agent if any damage is found.
- Firstly open package carton, then take out operation manual and accessories.
- Carry the instrument (together with protection cover), you are recommended to use original packages as the instrument need to be transported safely
- Taking out protection cover, place the instrument on level lab table.

△ The instrument must not be put in the place which is explosive and poisonous

- The machine should be mounted near to the grounding socket to connect the power line anytime

8 Startup

△ Start the machine. Get through the power supply by connecting the power line of AC220V with the power socket on the rear panel, and press down the switch, the power has gotten through when the green light of the switch indicator is bright

9 Usage and Steps of Operation

- Start the machine, then connect AC220V power line to back power socket, then press the switch button, as it shows green light, it can work then.
- For easier use, it can get in the groove, without pre-setting temperature according to user's normal setting number.

10 Caution in Usage

- After getting the machine, please open the package to examine the outer appearance, check the appurtenances, and read the instruction carefully before starting and using the machine.

- In order to ensure the security of people and the equipment, the three-line power source is needed, and make sure that the grounding works well. Non-grounding power is prohibited to this machine.

- In order to lengthen the service life of the Cooling compressor, the successive working time should be within 4 hours. And a more-than-five-minute gap is needed for restarting the machine after the power absence.

- The instrument must not be put in the place which is explosive and poisonous
- Once it starts to work, do not touch the cooling section, to avoid making your fingers cold injury.



- Switch off it before change with another fuse, then pull out power plug, and the fuse must be the same model and same spec.
- Please shut off the power before cleaning, and do not use detergent like acetone or benzene, any detergent must not flow into the instrument.
- Keep cleaning the machine every day and keep it dry and clean.
- Pull out the plug and cover the dust helmet.

11 Maintenance

● Under the condition of following the instructed operating regulations, we guarantee to keep our promise of free maintenance service within one year from the sales day. To those which have surpassed the period, we will also supply maintenance service according to the stipulations.

11.1 Problems and elimination

Problems	Causes	Elimination
It does not work as it is switched on	Power source cannot be connected well	Connect the power source and re-try it
Same as above	Switch button is not pressed	Switch on the button and it shows green light
Same as above	Fuse is not connected yet	Check whether fuse is broken or change with another one.
No refrigeration	Compressor is broken	Call the technician to repair it
Temperature cannot be lowered down	The fan generator cannot work	Call the technician to repair it

11.2 Cleaning

- Clean it before turning off the power, then pull out the plug.
- Use soft household detergent or soap lye to keep it clean
- Do not use detergent like acetone or benzene, any detergent must not flow into the instrument.
- Any liquid must not flow into the machine
- Keep it clean, after one-day's work

12 Transport and Storage

- This machine should be stored in the clean and airy indoor places with the relative humidity under 80% and be kept far from the caustic gas.
- Manage in care, avoid wetting, and place upward.

13 Appendix

●Product Alteration

Kalstein France reserves the rights of altering the technological parameters of the product without notifying in advance, because the instruments needed to face to the alteration and improvement for technological progress.

●Warranty Period

Kalstein France guarantees that all instruments manufactured by the company have been strictly and comprehensively checked on quality to guarantee the compliance with the technological standard.

The warranty conditions will be up to the Kalstein sales agent responsible to you.

The warranty period is only valid for normal usage according to the specified conditions for the instrument and the circumstances of following the various regulations specified in the operational instruction manual.

Warranty terms are not applicable for the damages caused by misuse or improper operations of instrument and our company is not responsible for the above-mentioned damages either.

●Discard and Disposal

The discarded instrument or parts of instrument shall be disposed according to the existing relevant and effective laws and regulations.

We are pleased to offer you an environment-friendly disposal plan when you need to dispose the discarded Cooling Plate.

●User's Service Information

Please contact the sales representative of Kalstein or the sales agent once sold the instrument to you if you need any service or parts during the warranty period. Please inform the instrument model, serial number, and supply time. Kalstein France does not accept any rejection of goods without any formal permission for rejection of goods.

Please pay attention to the following items if you will deliver the instrument back to Kalstein:

a. The instrument or parts shall be disinfected or radioactive elimination treatment before sending back if viruses or radioactive substances have been in touch with the instrument or the parts. Our user's service technician will be assigned to check this out clearly.

b. If you are sure that the instrument or parts are free from any radioactive or dangerous viruses, please get the suggestions on the possible methods for disinfection and radioactive elimination from your Kalstein representative. The instrument or parts will be directly sent back to the customer under the customer's expenses, if possible, infection dangers are still existed on the instrument or parts upon the arrival of the Kalstein representative.

Please tell us the following information if you need technical services:

Model and serial number.

The place where the instrument is located and the contact person.

Reasons for service request.



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