



青岛创梦仪器有限公司

Qingdao Chuangmeng Instrument Co., Ltd.



滚子加热炉

Portable Roller Oven

Model: 1500

使用手册
Instruction Manual

版本.1.0

Ver. 1.0

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请你仔细阅读《使用手册》，正确掌握本产品的安装和使用方法。阅读后请将本《使用手册》妥善保管，以备今后进行检修和维护时使用。

Please read the Instruction Manual carefully, for correctly grasping the installation and using method of this product. Please keep properly this Instruction Manual after reading, for the usage during troubleshooting and maintenance in the future.

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一、概述

便携式滚子加热炉配以进口精密控制器，采用最新的微机智能控制技术，直接设定，数字显示，并可进行偏差指示。该机运转平稳、噪音小、精度高、工作范围大、自动化程度高、操作简单、坚固耐用、维修保养方便。

二、型号及规格

型号	名称	配置
1500	便携式滚子加热炉	陈化釜

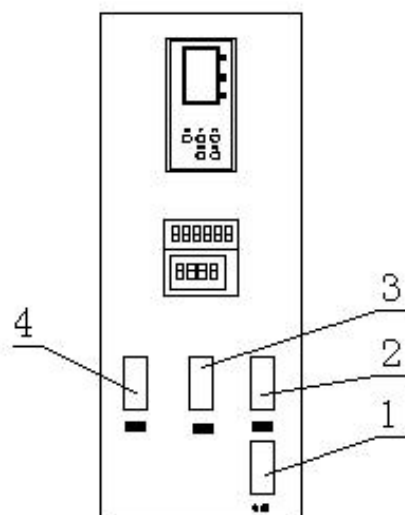
三、仪器的主要技术参数

名称	技术参数
电 源	220V \pm 10% 50/60Hz
输入功率	700W
加热功率	500W
温度范围	50~180 $^{\circ}$ C
滚子转速	50 \pm 5r/min
工作面积	300 \times 260 \times 220mm
外形尺寸	530 \times 340 \times 480mm

四、仪器的结构与工作原理

（一）组成

- 1、箱体：采用钢架结构、硅酸铝保温层、不锈钢外壳，坚固耐用。
- 2、滚筒：采用优质金属材料滚筒和框架，重量轻、转动平稳。
- 3、加热控制：采用PID智能控制。可设定试验时间，自动报警。
- 4、动力系统：由减速电机输出，由链轮带动三根滚子转动。传动平稳可靠。



电器控制面版示意图

序号	名称	序号	名称
1	电源开关	3	加热开关
2	计时开关	4	电机开关

(二) 工作原理

其工作原理和性能完全根据美国 API 标准设计。模拟钻井液在井下环行空间内缓慢循环的速度，研究其加热滚动中的特性。

五、仪器的操作

1、确认电压相符，电源可靠接地。

2、接通电源，打开电源开关。温控器显示窗上方显示当前加热炉内温度，下方为设置温度。启动电机开关，电机带动炉内滚筒转动，可进行样品的搅拌。使电机空转数分钟，声音、转速正常。准备工作结束，即可进行正常工作。

3、温度设定：打开加热键，窗口上方显示滚子炉内实际温度。按动温控器的“∧、∨”键，设定窗口下方所需的控制温度。滚子炉最高工作温度为 180℃。当温度接近设定温度时，系统进入自动恒温控制状态。

警告：设置键“<<PF”“○”“□”非本厂技术人员严禁触碰。

4、定时设定：打开计时器下方盖子，按动键“+”或“-”设置定时时间（“H”为小时、“M”为分钟、“S”为秒），启动定时开关，到达设置时间机器自动停止运行，并响起音乐报警。

六、仪器的维护与保养

- 1、移动、维修或保养仪器时。要轻拿、轻放，以免造成部件变形影响精度和使用。
- 2、每次使用完毕后，应及时清理滚子炉内腔，放置干燥环境内。
- 3、定期给链轮、链条加润滑油。

七、故障的判定与排除

故障	原因	维修方法
接通电源，电机转动，滚筒不转动	①链轮与轴连接的紧定螺钉松动 ②链条与链轮脱开	①将所有链轮与轴连接的紧定螺钉拧紧 ②将脱开的链条重新按装于链轮上
接通电源，系统无电	①电源插头接触不良 ②熔断丝烧断	①检查电源插头是否牢固 ②更换熔断丝

八、一年备件（选购）

编号	名称	单位	数量	备注
1	链轮	个	3	
2	链轮	个	10	
3	石墨轴承	个	20	
4	保险丝	个	30	

I . Introduction

Equipped with import precision controller, the portable roller heating furnace adopts the latest microcomputer intelligent control technology, with which the operation parameters can be set directly and shown in digital. It can also gives out a deviation indication. The machine runs smoothly with small noise. It also has the advantages of high precision, wide working range and high degree of automation, as well as simple operation, durable and convenient maintenance.

II .Models and Specifications

Model	Name	Configuration
1510	Portable Roller Oven	Aging cell

III. Technical parameters of the instrument

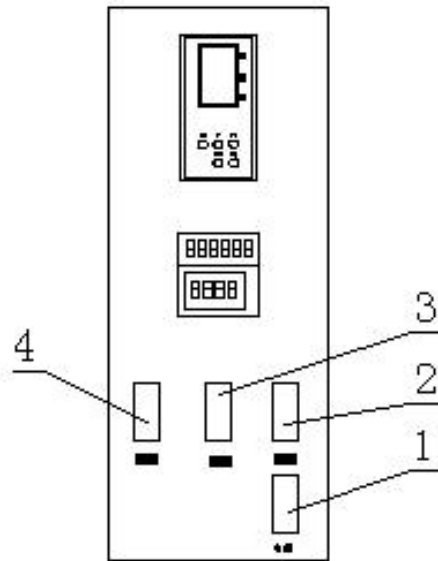
Name	Technical Parameters
Power Supply	220V±10% 50/60Hz
Input Power	700W
Heating Power	500W
Temperature Range	50~180°C
Roller Speed	92±5r/min
Working Area	300×260×220mm
External Dimensions	530×340×480mm

III. Structure and Working Principle of the Instrument

A. Components

- 1 .Chamber: the chamber consists of steel frame structure, aluminium silicate insulating layer and stainless steel case, which is strong and durable.
- 2 .Roller: With high quality metal roller and frame, the roller has light quality and rotates smoothly.
- 3 .Heating control: PID intelligent control has been adopted, which can set the testing time and give an alarm automatically.
- 4 .Power system: The power is output by a gear motor, of which the three rollers are driven by the

chain wheel. It provides a stable and reliable transmission.



Sketch Map of the Control Panel

No.	Name	No	Name
1	Power Switch	3	Heating Switch
2	Time Switch	4	Motor Switch

B.Working Principal

Its working principle and performance are designed according to the API standard. It simulates the slow circulation speed of drilling fluid in the underground annular space and studies the features of drilling fluid in heating rotation.

V.Operation of the Instrument

- 1 .Ensure the voltage is suitable and the power supply grounds reliably.
- 2 .Turn on the power supply and turn on the power switch. The temperature control display window shows the current temperature in the heating furnace above, and the setting temperature below. Start the motor switch, the motor drives the drum in the furnace to rotate, and the sample can be stirred. Make the motor idle for several minutes, sound and speed are normal. When the preparatory work is finished, the normal work can be carried out.
- 3 . Temperature setting: Open the heating key and display the actual temperature in the roller above the window. Press the “^、v” and keys of the dynamic temperature controller to set the required control temperature below the window. The highest working temperature of roller is 180 C. When the

temperature is close to the set temperature, the system enters the automatic constant temperature control state.

Warning: Apart from the technicians, nobody is allowed to touch the button “<<PF”“⊙”“□”.

4 . Timing settings: Open the cover under the timer, press the key "+" or "-" to set the timing time ("H" for hours, "M" for minutes, "S" for seconds), start the timing switch, arrive at the setting time machine automatically stop running, and sound the music alarm.

VI.Maintenance of the Instrument

- 1 .Be careful when moving or maintaining the instrument, so as to avoid component deformation, affect the accuracy and use.
- 2 .Endocoele of the roller furnace shall be cleaned timely after use, place it in the dry environment.
- 3 .Lubricate the chain wheel and the chain regularly.

VII.Trouble-shooting

Fault	Reason	Maintenance Method
The electrical machinery rolls while the roller doesn't rotate after powering on.	1.The set screw connecting the chain wheel and the axis loosens. 2.The chain disconnects with the chain wheel.	1.Screw up all the set screws connecting the chain wheel and the axis 2.Arrange the disconnected chain on the chain wheel again.
The power has been on, which the system has no electricity	1.The power plug doesn't connect well. 2.The fuse has burned out.	1.Check if the power plug has been connected firmly. 2.Change a fuse.

VIII. One-year Spare Parts

No.	Name	Unit	Quantity	Remark
1	Chain Wheel	--	3	
2	Sprocket	--	10	
3	Graphite Bearing	--	20	
4	Fuse	--	30	

青岛创梦仪器有限公司 装箱单

Qingdao Chuangmeng Instrument Co., Ltd. Packing list

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Production address: No. 3 Xinghai Road, Liuting Street, Chengyang District, Qingdao

主机型号：

Model of the main motor:

出厂编号：

Manufacturing No:

序号	编号	名称及规格	单位	数量	备注
1		主机	台	1	
2		电源线	根	1	
3		使用手册	份	1	
4		合格证	份	1	