



电子防潮柜 / 氮气柜系列

使用说明书

北京乐普纳科技有限公司
Beijing leopard Technology Co., Ltd.

全国客服热线：010-84797463

网址：www.bjlpn.com

感谢您购买乐普纳仪器，在您启用电子防潮柜前，请详细阅读使用说明书，相信它会让您的电子防潮柜发挥最大的功用。阅读完本说明书后，请将其妥善保管，以便随时阅读。

产品说明 (Product Manual)

- 数码显示箱内温度湿度，红色为温度，绿色为湿度。其中温度湿度显示为箱内的实际情况，主机排湿期间温度会比环境温度高 1~3 度。

In the digital cabinet, the red digital LED means temperature, the green digital LED means humidity. The temperature will be high 1-3 degrees than the environment temperature during the humidity elimination produce.

- HSA 表示中湿度电子防潮箱，HSB 表示低湿度电子防潮箱，HSC 表示超低湿电子防潮箱，HSD 表示氮气柜。
HSA shows middle humidity dry cabinet. HSB shows low humidity dry cabinet. HSC shows ultra-low humidity dry cabinet. HSD shows nitrogen gas cabinet.
- 机型编号后面加 F 表示为防静电烤漆机型。
Additional "F" shows anti-ESD coating type.
- 如型号变动增加，恕另不通知。
If we design a new style, please understand that we will not notice.

安装调试方法 (Installation Proceeding)

1. 防潮箱须放置在水平坚固的表面
Place the dry-cabinet on a level and strong surface. Turn the adjuster to be balance.
2. 放置好箱体内搁板，高度可根据存放物品调至适合，搁板扣如图放入。
The height of the shelf is adjustable for the convenient of storage, and the shelf clasp should be put as the following figure.
3. 防潮箱背面留一定空间，距离墙或其它物品必须 5CM 以上。
Leave a space of at least 5cm behind the unit for ventilation.
4. 请不要放在气流方向，如空调出风口处、高温地方。
Please don't set cabinet at areas where there is direct air flow, such as in front of air conditioner or hot area.
5. 请不要放在阳光直射地方。
Please don't place the cabinet in direct sunlight.
6. 请不要放在烟雾、水汽的地方。
Please don't place cabinet at area where there is smoky or steam.
7. 按电源插头上的数字顺序串联好所有电源线，然后插上电源（220V/50HZ）。
Connect the signal cable in series as the number attached on the plug, then switch on the power supply(220V/50Hz).
8. 湿度可设定产品可调接 UP 与 DOWN 按钮，将湿度调至需要值。
The humidity can be set by the up and down button when you need.
9. 超低湿全自动机种无须设定湿度，微电脑控制全自动工作。
Ultra-low humidity type(full automatic type) do not need to set and the micro-computer can control it automatically.
10. 第一次通电及长时间没使用后再次使用，请空箱运行 12 小时以上，并确认湿度下降到较低水平。
When electrifying at first time or using again after leaving unused for a long time, please run more 12 hours with empty container, and affirm that humidity has moved down to lower level.

11. 湿度设定后,本产品对设定值有记忆功能,即使断电也无须再设定.

The product has the memory function, after setting the humidity, even if cut off the power, we do not set it again.

12. 请不要存放湿气含量较重的物品,这样会导致箱内湿度无法在短期内到达设定湿度,如纸箱等纸质物品、湿气较大的木制品等

Please do not store the material, such as fibreboard boxes, paper or wood etc., which contains high moisture. It will cause the humidity can't reach the setting humidity in a short time.

13. 请不要频繁开关门,尽量控制开关门的次数。

Please do not open the windows frequently and try to control the open times.

14. 请不要放在温度较高的地方

Please do not place the dry cabinet at the high temperature location.

各部件示意图 Parts Drawing



数码显示板示意图 Digital Display



◆ 对于可设定产品,按‘UP’和‘DOWN’键进行湿度设定。

The humidity can be set by ‘UP’ and ‘DOWN’ button for adjustable type.

◆ 红色代表温度,显示的是箱内实际温度,本产品温度不可调。

Red shows temperature of inside cabinet and the temperature can't be adjusted.

◆ 绿色代表相对湿度,显示的是箱内实际湿度。

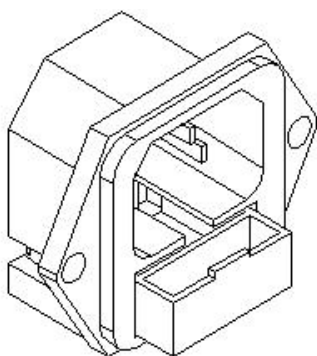
Green shows the relative humidity of inside cabinet.

搁板扣安装示意图 Shelf Clasp Fixing Figure



- 本搁板扣为高承重支撑，请按示意图正确放置。箱内搁板条上每隔一定数量的搁板扣孔有个小圆孔，方便将同一搁板的搁板扣对齐放置在同一水平面上。
The shelf clasp has high intension bearing, please place it as the drawing. The shelf slat has many small circle holes which are arranged at equidistance, these small circle hole can help us to arrange the shelf on the level surface for conveniently.

保险丝更换示意图 Fuse Changing Figure



更换保险丝(change the fuse)

- 该部件在箱体背面主机上，如图拔出，外部为备用保险丝，里面为工作保险丝。
This part locates on back of the de-humidity device, pulling out and changing the fuse as the figure. The inside fuse is working fuse and the out fuse is spare fuse.

使用事项(Using Notices)

1. 每次开门时间尽可能短，推荐控制在 1 分钟之内。
Every time of opening the door should be as short as possible, you'd better control it in 1 minute.
2. 请尽量不要断电，以免影响使用。
Please try not to switch off the power, so as to avoid impairing its use.
3. 当物体放入防潮箱内时，由于物体本身所含湿气，防潮箱内湿度将会上升，也许要花 1 至 2 天湿度才会下降，对于含有包装纸或布类物件，湿度下降时间要更长一些。
When parts are placed inside the cabinet for storage, the humidity will rise due to the moisture contained in the parts, and it maybe take about 1 to 2 days for de-humidity, if the parts that contain a lot of paper or cloth, the humidity drop down to normal status for more than 2 days.
4. 湿度设定后,本产品对设定值有记忆功能,即使断电也无须再设定。
The product has the memory function, after setting the humidity, even if cut off the power, we do not set it again.
5. 湿度显示值误差 $\pm 3\%RH$,采用进口传感器,湿度显示误差为 ± 1 度左右。 The error of humidity display value is $\pm 3\%RH$ and the temperature display error is about $\pm 1^{\circ}C$. The humidity sensor is imported sensor.
6. 不要遮盖背部除湿机芯散热孔。
Do not cover the de-humidity device's exhaust vent located on the back of cabinet.
7. 如果停电 24 小时以上,箱内存放物品建议转移。
If the power has been cut off more than 24 hours, we suggest you changing the parts kept in the cabinet.
8. 配防静电台垫的请连接好线。
Please connect the electric line if you select the preventing static electricity pad.
9. 除湿期间，外部叶片门打开，除湿机芯表面温度略高，这是正常的，请不要误认为是除湿机芯故障。
During de-humidity period, the outer shutter will be open, and the surface temperature of de-humidity device will be rise several degrees, and the area around the de-humidity device will get warm, however this is normal and there is nothing wrong with the dry cabinet.
10. 请使用 220V/50HZ 电源。
Please use 220V/50HZ power supply.
11. 湿度不下降时请让防潮箱停电并重新启动运行 12 小时以上,箱内湿度下降则正常。
If the humidity dose not drop down, please switch off the power and restart it again more than 12 hours, if the humidity has drop down, the dry cabinet is running well.

氮气柜使用说明(N₂ Cabinet Manual)



- 电源 220V/50Hz
Using 220V/50Hz power supply.
- 在流量计进口插上氮气管，进口压力控制在 0.4Mpa 以内，流量 0~25 升每分钟可调。
Plugging into the N₂ pipe at the inlet of flow-meter and the inlet pressure should be controlled within 0.4Mpa. The rate of flux can be adjusted within 0~25L/M.
- 设定所需要的湿度值，在日常使用中，每次开门存取物时，先关闭流量计，关门后再打开流量计，调到合适的流量，节省氮气以达到最佳的使用效果。
Setting the needed humidity during the running period, and you'd better shut off the flow-meter before open the door, then open up the flow-meter again after close the door and adjust the flux for saving N₂.
- 当湿度低于设定值 3 个点时，电磁阀会在半分钟内自动将氮气切断，此时流量计的浮球会在最低部，如果发现依旧会有流量，请检查箱体内存气管与接头是否漏气。
When the humidity is 3 points lower than setting humidity, the electromagnetic valve will shut off the N₂ automatically in a half minute. The float ball will be on the bottom at this time. If you find the float ball won't be on the bottom, please check whether there exists gas leakage at the connectors.
- 当湿度高于设定值 3 个点时，电磁阀会打开，氮气会冲入箱体内，此时浮球会浮起。

When the humidity is 3 points more than setting humidity , the electromagnetic valve will power on automatically, then the float ball will rise up and the cabinet will be full of N₂ .

- 湿度高于与低于判断的时间间隔在半分钟左右。

The automatic active time of electromagnetic valve is about a half minute.

- 氮气的洁净度要求，尽量不要含有油及固体颗粒，以防电磁阀损坏。

The N₂ should be clean and do not contain a lot of impurity such as the oil or granulated solid to protect the electromagnetic valve.

- 如果发现控制不了，请停电半分钟后再重新启动设置下控制湿度。

If you find the cabinet running wrong, please power off firstly. Then power on again after a half minute and adjust the setting humidity once again.

- 流量不要调太大，一般在 10~20L/M. 比较合适。

The suitable flow rate is about 10-20L/M.

规格及型号(Specification and Model)

产品型号	控制范围	除湿容积	外形尺寸 W*D*H (mm)	备注
QLFA98D	20%~60%RH	98	450*400*688	可设定
QLFB98D	10%~20%RH			可设定
QLFC98D	1%~10% RH			全自动
QLFA160D	20%~60%RH	160	448*450*1010	可设定
QLFB160D	10%~20%RH			可设定
QLFC160D	1%~10% RH			全自动
QLFA240D	20%~60%RH	240	598*400*1250	可设定
QLFB240D	10%~20%RH			可设定
QLFC240D	1%~10% RH			全自动
QLFA320D	20%~60%RH	320	900*450*1010	可设定
QLFB320D	10%~20%RH			可设定
QLFC320D	1%~10% RH			全自动
QLFA435D	20%~60%RH	435	900*600*1010	可设定
QLFB435D	10%~20%RH			可设定
QLFC435D	1%~10% RH			全自动
QLFA540D	20%~60%RH	540	598*710*1485	可设定
QLFB540D	10%~20%RH			可设定
QLFC540D	1%~10% RH			全自动
QLFA718D	20%~60%RH	718	598*710*1910	可设定
QLFB718D	10%~20%RH			可设定
QLFC718D	1%~10% RH			全自动
QLFA870D	20%~60%RH	870	900*600*1900	可设定
QLFB870D	10%~20%RH			可设定
QLFC870D	1%~10% RH			全自动
QLFA1436AD	20%~60%RH	1436	1200*710*1910	可设定
QLFB1436AD	10%~20%RH			可设定
QLFC1436AD	1%~10% RH			全自动
QLFA1436BD	20%~60%RH	1436	1200*710*1910	可设定
QLFB1436BD	10%~20%RH			可设定
QLFC1436BD	1%~10% RH			全自动
QLFD98D	1%~60% RH	98	450*400*688	可设定
QLFD160D	1%~60% RH	160	448*450*1010	可设定
QLFD240D	1%~60% RH	240	598*400*1250	可设定
QLFD320D	1%~60% RH	320	900*450*1010	可设定
QLFD435D	1%~60% RH	435	900*600*1010	可设定
QLFD540D	1%~60% RH	540	598*710*1485	可设定
QLFD718D	1%~60% RH	718	598*710*1910	可设定
QLFD870D	1%~60% RH	870	900*600*1900	可设定
QLFD1436AD	1%~60% RH	1436	1200*710*1910	可设定
QLFD1436BD	1%~60% RH	1436	1200*710*1910	可设定

维修前请确认 Please affirm the following items before maintenance

1. 插头是否正确？电源切断了吗？保险丝是否完好？
Is the plug in properly? Has the power supply been cut off? Has the fuse broken?
2. 湿度设定是否正确？
Is the initialization humidity correct?
3. 第一次使用或长时间没使用时，是否空箱运行 12 小时以上？
When operating cabinet for the first time or having a long time no using, did you switch on and leave it for at least 8 hours with the door shut?
4. 是否存放了大量水气较大的材料？如大量的纸等。
If you store material with a high water content at first, such as a of paper in the cabinet, it may take several days for the humidity to drop.
5. 依上述条款检查后，便可确认主机故障，请联系检修。
If after checking the above items the de-humidity device fails to operate, please contact us.

适用范围 Application Scope

- 适用范围及贮物参考（applications and reference humidity of storing items）

相对湿度 Relative Humidity	保管适湿范例 Suitable storage of items
60% - 50%	书、古董、纸币、古书、传真纸、复印纸 Paintings, antiques, paper money, old books, Fax paper, copy paper
50% - 40%	照相机、摄像机、镜头、显微镜、放大镜、望远镜、磁带、磁（光）碟、记录带、菲林、正负底片、乐器、邮票、毛皮、中药材、茶叶、咖啡、香烟等 Camera, video cameras, lenses, microscopes, endoscopes, binoculars, magnetic tape, disks, records, film, negatives, positive film, musical instrument, stamps, furs, medicinal materials, tea, coffee, cigarette etc.
40% - 20%	精密五金模具、测量仪器、电子零件、主机板、金属粉末、半导体、制药原材料等 Precision dies, measurement instruments, all electronic parts, pc boards, metallic powders, semiconductors, medical supplies etc.
20% 或以下	试样、标准量具、种子、花粉、球根等 Sample, standard measuring tool, seeds, pollen, seedlings etc.
10%~20%	电子元器件、IC、BGA 等
10% 或以下	对湿度特别敏感的物料，如要求较高的 IC、BGA 等