HT-GBJ200 干冰机
HT-GBJ200 Dry Ice Pelletizing Machine

操作说明书
User Manual

HENTO

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Catalogue

一、概 述
Overview

干冰特性：CO_2 固体俗称为干冰。它具有-78.5℃低温，吸热升华变为气态，无毒无味无残留，有抑制细菌繁殖作用。它替代水冰做冷源时，在高档水果、食品（如巧克力、高档月饼、冰激凌）、海产品冷藏以及运输保鲜上运用，远比水冰效果好；其次，干冰在被热水急剧加热时，能产生浓而洁白的云雾效果，在舞台演出、婚庆过程中起着重要作用；另外，将干冰制成 3mm 颗粒后还有一个更重要的用途，就是用干冰喷射清洗物体表面污垢，把颗粒干冰倒入干冰清洗机中，利用压缩空气将干冰颗粒从喷嘴高速喷射出来，打向污垢表面，将物体表面清洗干净，而干冰则挥发跑掉，没有残留污染。

我公司生产的干冰机就能产出满足上述需求用的干冰。该系列机型是我司自己的专利技术。

Dry ice characteristics: CO2 solids are commonly known as dry ice. It has a low temperature of -78.5 ° C, and the endothermic sublimation becomes gaseous, non-toxic, tasteless and no residue, and inhibits the proliferation of bacteria. When it is used as a cold source instead of water ice, it is used in high-grade fruits, foods (such as chocolate, high-grade moon cakes, ice cream), seafood refrigerating and transportation preservation, which is far better than water ice. Secondly, when the dry ice is heated rapidly by hot water. It can produce a thick and white cloud effect, which plays an important role in the stage performance and wedding process. In addition, there is a more important use after making dry ice into 3mm granules, which is to clean the surface dirt of the object with dry ice blasting. The dry ice is poured into a dry ice washing machine, and the dry ice particles are sprayed from the nozzle at a high speed by using compressed air, and the surface of the object is cleaned, and the surface of the object is cleaned, while the dry ice is volatilized and runs away without residual pollution.

The dry ice machines produced by our company can produce dry ice that meets the above requirements. This series of models is our own patented technology.

二、主要技术参数（**HT-GBJ200**）
Technical Parameters (HT-GBJ200)

1、干冰产量：180-200Kg/h（随液体 CO_2 压力不同略有变化）
2、干冰得率：40％（100kg 二氧化碳产 40kg 干冰）
3、干冰形状尺寸：Φ3mm（干冰清洗机用）
Φ16mm（冷藏用）
4、使用介质：低温液体二氧化碳（水分含量＜60ppm）。
5、介质压力：＜2.3Mpa
6、电机功率：7.5kw　三相 220V　60Hz
7、机器重量：680Kg
8、外形尺寸：长宽高 1100x950x1410mm

1, Dry ice production: 180-200Kg/h (slightly changed with liquid CO2 pressure)
2, dry ice yield: 40% (100kg carbon dioxide production 40kg dry ice)
3, dry ice shape size: Φ3mm (for dry ice cleaning machine)
Φ16mm (for refrigeration)
4, Use medium: low temperature liquid carbon dioxide (moisture content <60ppm)
5, medium pressure: <2.3Mpa
6, motor power: 7.5kw three-phase 220V 60Hz
7, machine weight: 680Kg
8, Dimensions: length, width and height 1100x950x1410mm

三、机器组成及工作原理
Equipment Composition and Working Principle

1、HT-GBJ200 型干冰机为卧式单缸机头型，以液压作为动力挤压干冰成型。主要由：机箱、液压系统、干冰发生器、供液管路阀门、挤压成型装置和模具、人机界面以及 PLC 控制系统组成。

机箱：是整个机器的载体，它是提供其他部件有机结合的基础。材质为 304 不锈钢。

液压系统：提供油缸执行的动力以及动作顺序。

干冰发生器及供液管路阀门：液体二氧化碳经过该装置后转变成干冰雪。

挤压成型装置和模具：将干冰雪通过模具挤压成颗粒。

人机界面（触摸屏）及 PLC 控制系统：使得生产干冰的各相关动作在中央处理器（CPU）程序控制下实现准确和合理的运动。

2、工作原理：液体二氧化碳经过电磁阀进入干冰发生器，产出雪状干冰，然后通过液压系统的作用，使得油缸出力将干冰压实并挤出成形。整个动作都是在中央处理器（CPU）控制下自动完成，操作简单、方便。

1, The HT-GBJ200 dry ice machine is a horizontal single-cylinder head type, which is hydraulically driven to squeeze dry ice. Mainly consists of: chassis, hydraulic system, dry ice generator, liquid supply pipeline valve, extrusion molding device and mold, man-machine interface and PLC control system.

Chassis: It is the carrier of the entire machine, it is the basis for providing an organic combination of other components. Made of 304 stainless steel.

Hydraulic system: Provides the power and sequence of actions performed by the cylinder.

Dry ice generator and liquid supply line valve: Liquid carbon dioxide passes through the device and turns into dry ice and snow.

Extrusion device and mold: Dry ice and snow are extruded into pellets through a die.

Man-machine interface (touch screen) and PLC control system: Enables accurate and reasonable movement of all relevant actions for producing dry ice under the control of a central processing unit (CPU) program.

2, Working principle: Liquid carbon dioxide enters the dry ice generator through the solenoid valve to produce snow-like dry ice, and then through the action of the hydraulic system, the cylinder

output compacts and extrudes the dry ice. The whole action is automatically completed under the control of the central processing unit (CPU), and the operation is simple and convenient.

四、安装试机规范
Installation Regulations

（一）安装步骤 Installation steps

1、该机为一体化机型，用户只需接上三相五线制电源（220V, 60HZ）,容量大于10KVA；用不锈钢金属软管将干冰机和贮槽的出液管路连接上；设备对基础没有严格要求，只需在厚 150～250mm 的硬质水泥地面摆放平稳后即可完成安装。

The machine is an integrated machine. The user only needs to connect the three-phase five-wire power supply (220V, 60HZ), the capacity is greater than 10KVA; connect the dry ice machine and the outlet pipe of the storage tank with stainless steel metal hose; The equipment does not have strict requirements on the foundation. It only needs to be placed on a hard concrete floor with a thickness of 150-250mm to complete the installation.

2、检查油箱油标尺液位，加油量 140 升左右，油位应不低于油标中部。为抗磨液压油，（不得购买散装液压油！）冬季牌号：L-HM46 夏季牌号：L-HM68

Check the oil level of the fuel tank, the fuel quantity is about 140 liters, and the oil level should not be lower than the middle of the oil standard. It is anti-wear hydraulic oil, (Do not buy bulk hydraulic oil!) Winter grade: L-HM46 Summer grade: L-HM68 for reference.

3、干冰生产时将有 CO_2 气体从回气口排出，用户应将其用管道引出室外放空，且室外应通风。设备所在的室内应通风，在房间墙下部设通风口（因二氧化碳气体密度比空气大，它会流向地处。）便于气体排出室外。如有条件可对排出气体进行压缩后再液化回收，或用膜压机压缩充入钢瓶中再销售气体。

When dry ice is produced, CO2 gas will be discharged from the exhaust port. The user should take it out of the pipeline and vent it outside, and the outdoor should be ventilated. The room where the equipment is located should be ventilated too, and a vent should be provided at the lower part of the room wall (because the density of carbon dioxide gas is larger than that of air, it will flow to the ground.) It is convenient for gas to be discharged outside. If necessary, the exhaust gas can be compressed and then liquefied, or compressed by a membrane press into a cylinder and then sold.

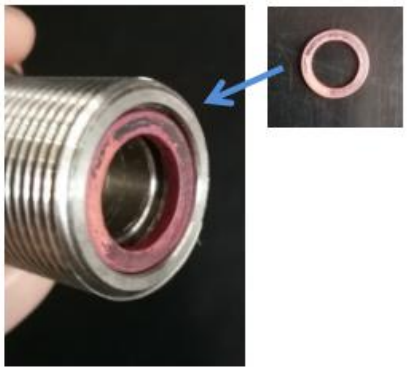
4、将三相五线 220V 电源与机器上的进电源连接可靠。机器留出五根电缆线：标有“A”“B”“C”接相线，“N”接零线，标有“⏚ ”接用户地。电源采用空气开关接入，保证接触可靠，以免损坏设备电器元件。

Connect the three-phase five-wire 220V power supply to the incoming power supply on the machine reliably. The machine leaves five cable lines: “A”, “B” and “C” are connected to the phase line, “N” is connected to the zero line, and “⏚” is connected to the user's ground. The power supply is connected by an air switch to ensure reliable contact, so as not to damage the electrical components of the equipment.

5、将机壳后面的“原料进口”与低温 CO_2 贮槽上“供液阀”管路，用不锈钢金属软管

相连，在供液管道上装置过滤器、放空阀。注意金属软管连接机器前须放入紫铜垫圈。所有管路应采用氩弧焊接，须去净毛刺、将杂质和水份处理干净，不得有潮湿现象。试车前还必须用干燥气体对管路进行吹扫，然后再并入机器内部管路。贮槽与干冰机连接管路越短越好，管路需要做保冷包裹，保温层厚度 30-50mm。

Connect the “CO2 inlet” on the back of the machine to the “liquid supply valve” pipe on the low-temperature CO2 storage tank by a stainless steel metal hose subassembly (which installed a filter and a vent valve), please remember to **put a washer copper to the machine connection end.**



All pipelines shall be welded by argon arc, which shall be cleaned of burrs, cleaned of impurities and moisture, and shall not be wet. The pipeline must also be purged with dry gas before commissioning and then incorporated into the internal piping of the machine.

The connection pipeline between the storage tank and the dry ice machine is as short as possible, and the pipeline needs to be wrapped in cold insulation, and the thickness of the insulation layer is 30-50 mm.

（二）开机运行步骤：Operation Steps

1、打开电源开关，在触摸屏上按一下油泵“关”，油泵立即起动，随即再按一下油泵“开”，电机立即停转，此时观察电机风扇，判明电机转向（从电机风扇方向看入，主轴应顺时针转动），如果转向不对，只需将“A”“B”“C”中的两根线对调就行了。

Turn on the power switch, press the oil pump “off” on the touch screen, the oil pump will start immediately, then press the oil pump “on” again, the motor will stop immediately. Observe the motor fan at this time and determine the motor steering (see the direction from the motor fan). The spindle should rotate clockwise. If the steering is not correct, just reverse the two lines in "A", "B" and "C".

2、选择所需模具：有两种模具（Φ3 和Φ16）。用内六角扳手拧下干冰模具法兰上 12 颗螺钉，装上所需模具即可，模具的出冰孔是有方向的，锥孔大端装入机内。

Select the required mold: There are two kinds of standard molds (Φ3 and Φ16). Use an Allen key to unscrew the 12 screws on the flange of the dry ice mold and install the required mold. The ice outlet of the mold has a direction, and the large end of the cone is loaded into the machine.

3、合上电源空气开关：合上前检查红色“急停”按钮应处于弹出状态，合上电源空气开关后控制屏开启，屏上显示公司界面,点击“中文”或“English”进入该机的三个可操作界面（界面图样参手册附图），按动提示就可翻到所需界面。按照界面提示就可实现：

a: 油泵“关”“开”、“手动模式”、“自动运行”、“自动停止中（自动运行中）”。（按左上角的 SIDA，可返回公司界面。）

b: 手动“油缸前进”“油缸后退”“加料”

c: 加料时间设定和排气时间以及油缸运行超时设定

其中 b 界面的“油缸后退”“油缸前进”和“加料”功能只有当 a 界面处于“手动模式”时才能有效；而 c 界面的“进料时间”和“排气时间”功能只在“自动”时才能有效；

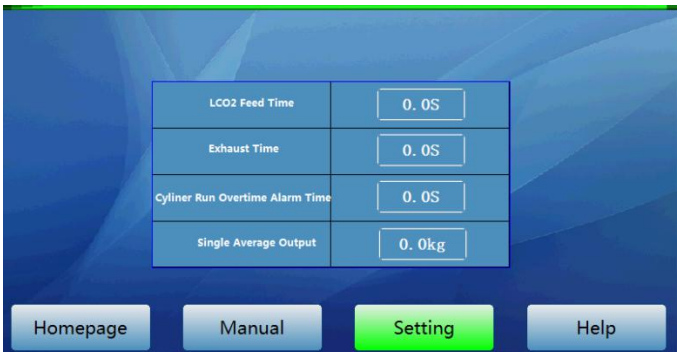
Operation interface: Check the red “Emergency stop” button should be in the pop-up state before closing. When the power air switch is on, the control screen will open. The company welcome interface displays on the screen. Click “Chinese” or “English” to enter the The three operational interfaces of the machine (the interface display refer to attached pictures), you can flip to the desired interface by pressing the prompt. Follow the interface prompts to achieve:

a: Main interface: The oil pump is “off”, “on”, “manual mode”, “auto mode”, “auto stop (auto run)”. (if press LOGO “SIDA” on the left top, can return to company welcome interface)

b: Manual interface: “cylinder forward” “cylinder backward” “LCO2 feed”

c: Setting interface: CO2 feeding time setting and exhaust time and cylinder running overtime setting

The “cylinder back”, “cylinder forward” and “LCO2 feed” functions of the b interface can only be effective when the a interface is in the “manual mode”; the “CO2 feed time” and “exhaust time” functions of the c interface can only be effective when the a interface is in the “auto mode”;



4、空运行：在不打开液体二氧化碳阀门的情况下，在 a 界面启动油泵、按下“手动”；转入 b 界面点动“油缸后退”“油缸前进”“加料”，按住就执行相应动作，松开就不执行动作，当前进到油缸底部时，前进到位指示灯亮，说明油缸活塞已到达右端位置了，

此时松手即停止该指令；当后退到顶时后退到位指示灯亮，即可松手。手动运行正常了，就转入 c 界面，检查所输入的加料时间和排气时间是否合适，设置好各个时间，再返回 a 界面，按下“自动运行”、“自动起动”机器就进入自动空运行状态，若各缸动作正常就可进行下一步的正式运行。

Empty operation: in the case of not opening the liquid carbon dioxide valve, start the oil pump in the a interface, press "manual mode"; turn into the b interface, click "cylinder backward", "cylinder forward" "LCO2 feed", press and hold to perform the corresponding action, the action will not be executed if released. When cylinder reaching the end, the cylinder forward position indicator light is on, indicating that the cylinder piston has reached the right end position. At this time, the command can be released; when cylinder backward to end, the cylinder backward position indicator light is on, the command can be released too . When the manual operation is normal, transfer to the c interface, check whether CO2 feeding time and exhaust time are appropriate, set each time, then return to the a interface, press the "auto mode", automatic start machine to enter the automatic empty operation, if the cylinders operate normally, the official operation can be performed.

5、拧开 CO_2 贮槽上“供液阀”，应较快速度的开完。

Open the “liquid supply valve” on the LCO2 storage tank at a fast speed.

6、开机预冷：在 a 界面启动油泵、按下“手动”；转入 b 界面按住“油缸后退”必须使活塞提到顶，然后按住“加料”让二氧化碳原料进入干冰机发生器型腔，按住“加料”钮前，先用压杆将圆档板盖住干冰头模具孔，再按住“加料”约 8～12 秒，此时会有气体从“回气口”排出，而干冰雪花则留在型腔内了，该步也叫“预冷”，干冰雪花产出后封住模具孔，此时取下干冰头圆挡板，按住“油缸前进”压实并挤出干冰，压到底后松手又按住“油缸后退”到顶，随即又按住“加料”,此次放雪花时间就不能太长，大约 5-10 秒左右，松手再按住“油缸前进”压出干冰， 如模具出口已能产出成形干冰了，预冷告结束，可以转入自动运行。

Start pre-cooling: start the oil pump in the a interface, press "manual mode"; transfer to the b interface and press "cylinder backward" must make the piston to the end (indicator light is on), use steel lever to cover the round dry ice dam-board to the dry ice outlet hole,

and then press and hold "LCO2 feed" for about 8~12 seconds, to let the raw material into the dry ice machine generator cavity. At this time, gas will be discharged from the “exhaust port”, and dry ice will be generated. The dry ice snowflake is left and cool the cavity. This is called “pre-cooling”.

After the dry ice snowflake is produced, remove the round dry ice dam-board, press the

“cylinder forward” to compact and squeeze out the dry ice. After cylinder reaching to end, press and hold the "cylinder backward" to ensure cylinder reaching to the end/top, then press and hold the "LCO2 feed" shorter time (about 5-10 seconds) this time, then release and press the "cylinder forward" to squeeze out the dry ice again. If the dry ice outlet can produce good-shape dry ice, the pre-cooling is finished and can perform automatic operation.

7、当以上预冷完成后，即转入自动运行生产冰。此时可在设置界面内修改“加料”时间和“排气”时间。时间更改方法：触摸时间框立即弹出数字，输入所需数后点“确认”完成，如果输错了就按“清除”重输。

“加料时间”一般设在 5—10 秒，目地是保持每次能挤出 0.8-1.0 公斤左右的干冰。挤出干冰少就增加点时间，反之就减少进料时间。“排气时间”一般设在 2 秒，如果气还没排完就已开始下压动作了，那么就需将“排气时间”延长些，以免产生挤干冰时的爆喷现象，进料太多也会产生挤干冰时的爆喷现象，是不允许发生的！

如产冰时 CO_2 压力下降过快，打开贮槽增压阀门增压。增压目的是让 CO_2 液体供应充足些，保证产冰量。增压阀开启后一定要不时注意压力不得超过贮槽工作压力，高了就应关闭增压阀，太高还应打开气体出口阀门排放气体以减压。

干冰机 CO2 工作压力 1.6MPa~2.3Mpa.

When the pre-cooling is completed, please perform automatic operation to produce dry ice. The “CO2 Feed” time and “Exhaust” time can be modified in the setting interface. Time change method: Touch the time, then pop up the number immediately. After entering the required number, click “Confirm” to complete. If the input is wrong, press “Clear” to re-enter.

The "CO2 Feed” time is generally at 5-10 seconds, and the purpose is to keep dry ice output 0.8-1.0 kg per time. If dry ice output is low then please increase the time, or high output then reduce time. Too much feed will produce bursting phenomenon when squeezing dry ice, it is not allowed to happen!

The “exhaust time” is usually set at 2 seconds. If the gas has not been exhausted, the cylinder has been started. Then the “exhaust time” should be extended to avoid the explosion when the dry ice is squeezed.

If the CO2 pressure drops too fast when dry ice is produced, please open the CO2 tank booster valve to pressurize. The purpose of supercharging is to make the supply of CO2 liquid sufficient to ensure the amount of dry ice produced. After the booster valve is opened, it must be noted that the pressure should not exceed the working pressure of the tank. If it is high, the booster valve should be closed. If it is too high, the gas outlet valve of tank should be opened to decompress the gas.

The CO2 working pressure of dry ice machine allows 1.6MPa~2.3Mpa.

（三）停机步骤 Shutdown steps

1、关闭 CO_2“供液阀”，然后打开放空阀排尽机器管道内液体。

Close the CO2 “liquid supply valve”, then open the vent valve to drain the residual liquid in the machine pipe after stopping machine for half an hour

2、如不放空管道液体，也可继续自动运行 3～5 分钟，直到干冰机上二氧化碳压力显示为零。然后按下“自动运行中”转为“自动运行停止中”

If the pipeline liquid is not emptied, the machine can continue to run automatically for 3~5

minutes until the CO2 pressure on the dry ice machine shows zero. Then press "auto run" to "auto stop"

3、在 a 界面按下“手动”，再转入 b 界面按住“后退”直到油缸后退到位灯亮，再按一下“加料”，释放二氧化碳表上残余压力。

Press “Manual mode” in the a interface, then transfer to the b interface and press “Cylinder backward” until the cylinder forward position indicator light is on, then press “ LCO2 feed” to release the residual pressure on the CO2 table.

4、按下油泵“开”键即转入油泵“停”。

Press the “on” button of the oil pump to switch to the oil pump “off”.

5、关掉空气开关电源。

Turn off the air switch power supply.

6、擦干机头水分，盖住模具孔。防止空气进入产生冷凝水。

Dry the moisture of the machine dry ice outlet and cover the mold hole. Prevent air forming condensate.

五、注意事项
Remarks and Notes

1、如运行时干冰机头处产生大量液体和烟雾喷出或挤压干冰时产生喷爆，应立即按下“自动运行中”键使机器处于手动运行状态，并迅速关闭贮槽供液阀，然后打开管路上的放空阀泄压。这种现象的发生多为进料电磁阀损坏无法关闭原料，造成一直喷料所致，更换进料电磁阀体总成即可；另外贮槽在灌液时不能开机运行，否者也会造成供液状态变化，使得进料变多，缸体无法容纳，产生喷爆，喷爆的产生及有可能损坏进料阀！进料电磁阀寿命 120-150 万次左右，应注意更换，如有固体颗粒进入随时会有损坏的可能。

2、CO_2 气体对人体有窒息作用，设备周围应通风良好

3、干冰温度很低，不要直接接触身体各部位，防止冻伤，不得口偿或咽下干冰。

4、因干冰升华后体积将膨胀 600 倍以上，如果密封存放则有爆炸可能，所以生产出的干冰不能放入密闭的容器。干冰的保存应使用专用的干冰储藏箱，或用一般泡沫箱替代，以防干冰快速汽化。

5、关机前必须卸掉管路压力。

6、液体 CO_2 水份含量应小于 60ppm。

7、干冰机产量随 CO_2 液体温度和压力不同有相应变化。

8、液压泵油压建议调整到 14-18MPa，不得过高。

9、液压油应清洁、无杂质、水份以及液压油标准中不允许的成份，这点十分重要。

10、停机后，应将出冰口挡板装上，并将机器出冰口的冷凝水擦净。

1, If a large amount of liquid and smoke is generated at the head of the dry ice machine during

operation or when the dry ice is squeezed, and the explosion is started. Please Immediately press the “auto run” button to enable the machine in manual operation and quickly close the tank liquid supply valve, then open the vent valve on the pipeline to relieve pressure.

The occurrence of this phenomenon is mostly caused by the failure of the CO2 feed (solenoid valve can’t close), resulting in the continuous spraying, and can replace the solenoid valve body assembly to solve it; in addition, the storage tank can not be turned on during the filling, otherwise it will also cause the change of the liquid supply state to make more feed, the cylinder can not be accommodated, so the explosion occurs, and the explosion will damage solenoid valve!

The CO2 feed solenoid valve has a service life of about 1.2 to 1.5 million times. It should be replaced after service time. If there is solid particles entering, there is a possibility of damage solenoid valve at any time.

2, CO2 gas has a suffocating effect on the human body, and the equipment should be well ventilated.

3, dry ice temperature is very low, do not directly touch dry ice by any parts of the body to prevent frostbite, not to test or swallow dry ice.

4. The volume will expand more than 600 times after the sublimation of dry ice. If it is sealed, it may explode, so the dry ice produced cannot be placed in a closed container. Dry ice should be stored in a dedicated dry ice storage box or replaced with a general foam box to prevent rapid evaporation.

5, The pipeline pressure must be removed before shutting down.

6, The liquid CO2 moisture content should be less than 60ppm.

7, The output of dry ice machine has a corresponding change with the temperature and pressure of CO2 liquid.

8, The hydraulic pressure of the hydraulic pump is recommended to be adjusted to 14-18MPa, which should not be too high.

9, It is very important that the hydraulic oil should be clean, free of impurities, moisture and components not allowed in the hydraulic oil standard.

10, After the machine is stopped, the dry ice dam-board should be installed and the condensed water from the machine outlet should be wiped clean.

六、常见故障及解决办法
Common Problems and Solutions

1、如果干冰机不能进原料，有可能是原料电磁阀线圈没通上电或线圈断路或电压太低，检查线路或更换电磁阀线圈。

2、如运行时报警铃声响起，但无喷爆现象，只需解除自动运行，然后按报警提示检查。一般是油缸位置检测开关损坏、油箱上的两只压力继电器调定值发生变化也会报警，如果是误报只需解除报警重新运行即可。

3、如果油缸前进或后退已到位了，但油压表一直处于高压不卸，可能是油缸上的位置传感器损坏或位置传感器连线没接触好，修复或更换即可。位置传感器检测到活塞位置时，绿灯变为红色，如活塞并未到达上部或下部底部，但位置灯变红色，表明该位置开关已损坏，应更换。

4、该机有完善的故障监测和报警系统，报警后按“帮助”页面，会提示故障原因，多为油缸位置检测开关故障。

1, If the raw material cannot enter dry ice machine, it may be that the raw material solenoid valve coil is not powered or the coil is open or the voltage is too low, check the line or replace the solenoid valve coil.

2, If the alarm sounds when machine running, but there is no explosion, just cancel the automatic operation, and then press the alarm prompt to check. Generally, the reason is, the position detection switch of the cylinder is damaged, or the setting valve of two pressure relays on the fuel tank change and the alarm will be alarmed. If it is a false alarm, just cancel the alarm and restart the operation.

3, If the cylinder is forward or backward to end , but the oil pressure gauge is always at high pressure, the position sensor on the cylinder is damaged or the position sensor connection is not good, please repair or replace it. When the position sensor detects the position of the piston, the green light turns red. If the piston does not reach the end part, but the position light turns red, it indicates that the position switch is damaged and should be replaced.

4, the machine has a complete fault monitoring and alarm system, press the "Help" page after the alarm, will prompt the reason of the failure, mostly it is the cylinder position detection switch failure.

七、日常维护
Daily Maintenance

1、 该机日常只需检查液压箱油位是否正常，油位不得低于油镜中部位置，首次使用 100 小时就应全部放出检查油质，如无异常，再将其过滤后加入机内继续使用。

2 、每 1500 小时必须更换液压油。建议选用 L-HM46（冬季）或 L-HM68（夏季）抗磨液压油（不得购买散装液压油！）。

3、干冰发生器部位不能擅自拆卸，否则会使机器发生严重损坏！

4、干冰发生器主缸内活塞上的“活塞环”磨损小于缸径 0.5mm 时，必须更换，否则会严重损坏发生器，造成不可修复的危险。

5、干冰发生器主缸内活塞上有一颗压紧活塞的螺钉，应经常检查，不得松动！拧紧方法为：取下干冰模具，起动油泵，将活塞移到出冰口，用套筒扳手套在螺钉六角上，此时把油缸右端位置传感器插头取下，按下“前进”不松开（油压顶住活塞），迅速冲击式扳紧活塞螺钉；拧松换活塞环也是同样方法。

6、定期检查电器螺钉是否松动，将其拧紧。

7、CO2 进液口过滤器定期检查清洗，过滤器堵塞后，加料时 CO2 压力表指针会下降很多，此时必须清洗或更换过滤片，以免影响供液效果。

1, The machine only needs to check whether the oil level of the hydraulic tank is normal. The oil level should not be lower than the middle position of the oil gauge. All oils should be released for inspection after operation 100 hours at the first time. If there is no abnormality, filter it and add it to the machine to use again.

2, Hydraulic oil must be replaced every 1500 hours. Suggest to use L-HM46 (winter) or L-HM68 (summer) anti-wear hydraulic oil (do not buy bulk hydraulic oil!).

3, The dry ice generator can not be disassembled without authorization, otherwise the machine will be seriously damaged!

4, When the “Piston ring” on the piston in the main cylinder of the dry ice generator is 0.5mm less than cylinder diameter, it must be replaced, otherwise the generator will be seriously damaged,

resulting in irreparable danger.

5, The inner piston of the dry ice generator has a screw for pressing piston tight. It should be checked monthly and should not be loose! The tightening method is as follows: remove the dry ice mold, remove the front end position sensor plug of the cylinder, start the oil pump for “Manual mode”, press and hold “Cylinder forward” to move the piston to front end, use a socket wrench on the screw hex, and quickly tighten it in a clockwise direction, meanwhile there must be another worker helps to press and hold “Cylinder forward” all the time (so the oil pressure is against the piston); if the socket wrench is screwed in counterclockwise direction, the piston can be removed. Please remember insert the cylinder front end position sensor plug back after work.

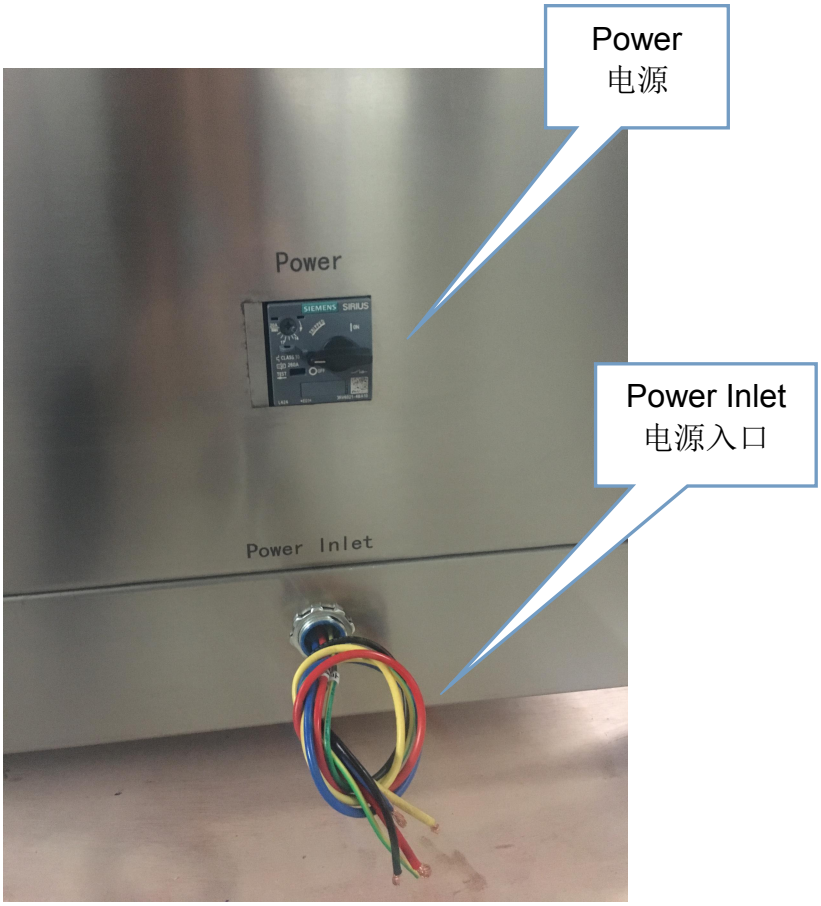
6, Regularly check if the electrical screws are loose and tighten them.

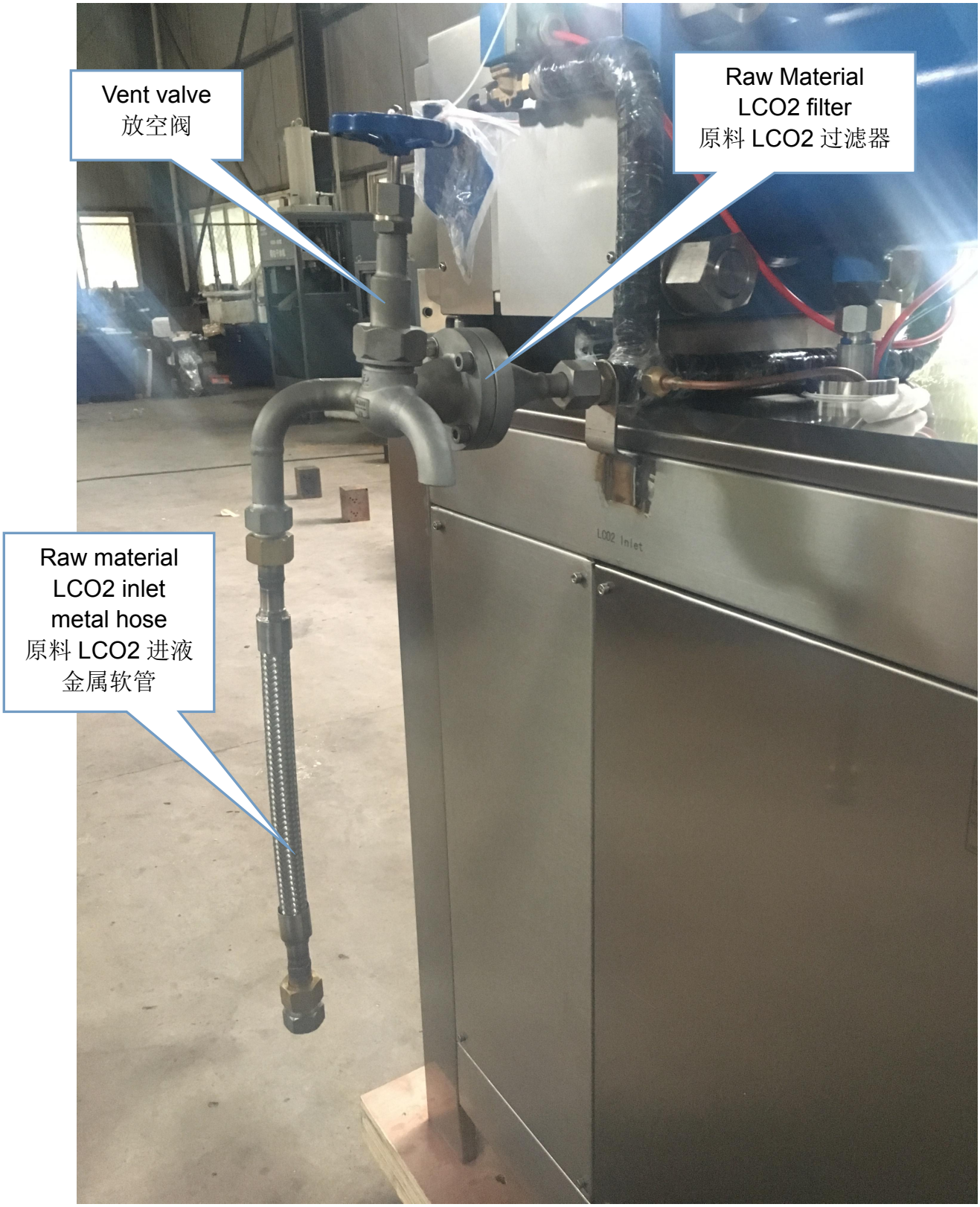
7, The CO2 inlet port filter should be regularly inspected and cleaned. After the filter is blocked, the CO2 pressure gauge pointer will drop a lot when feeding. At this time, the filter must be cleaned or replaced to avoid affecting the liquid supply effect.

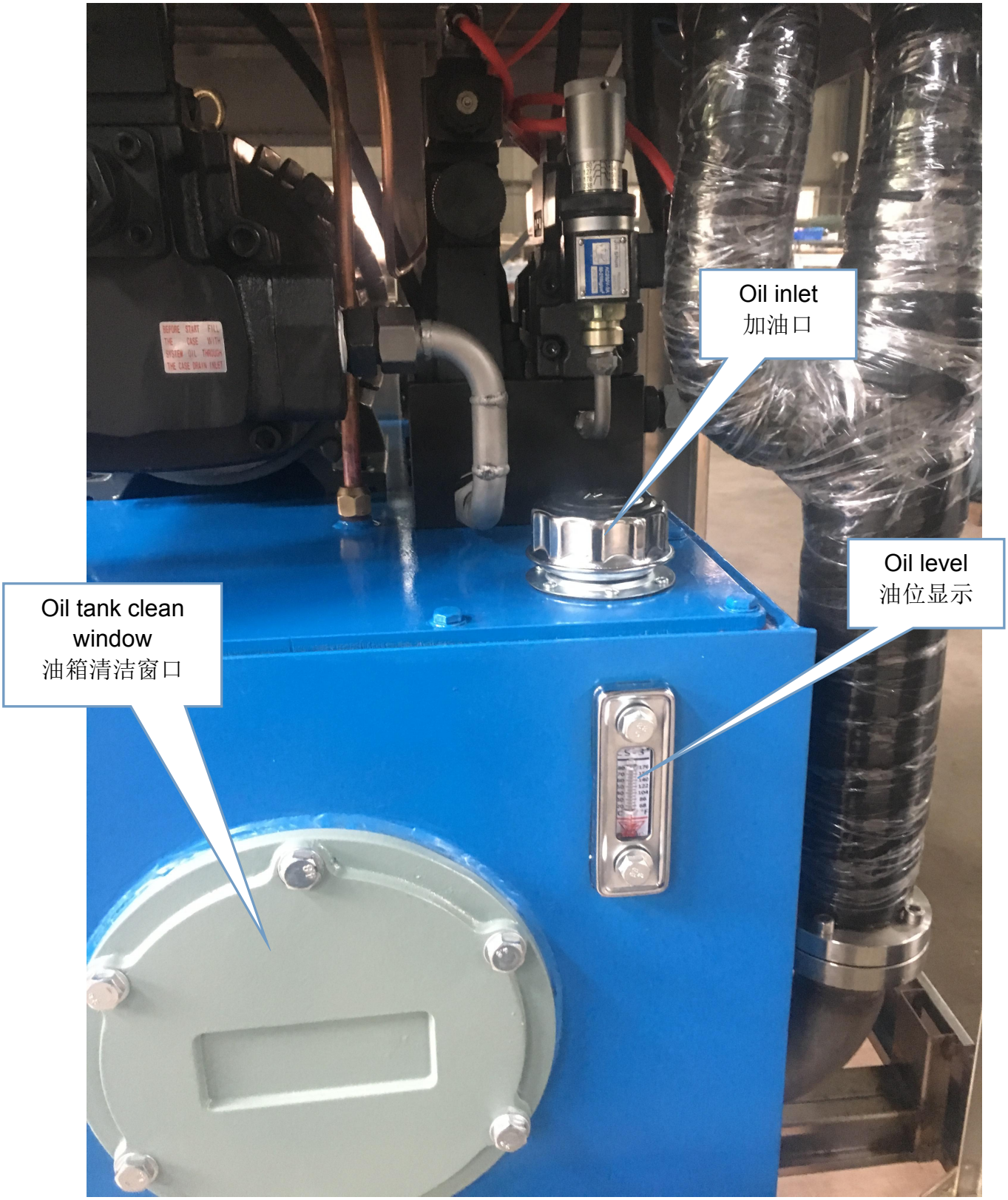
用户按说明书不能解决的问题，请及时与我公司联系，我公司会在最短时间派专业人员前往处理。

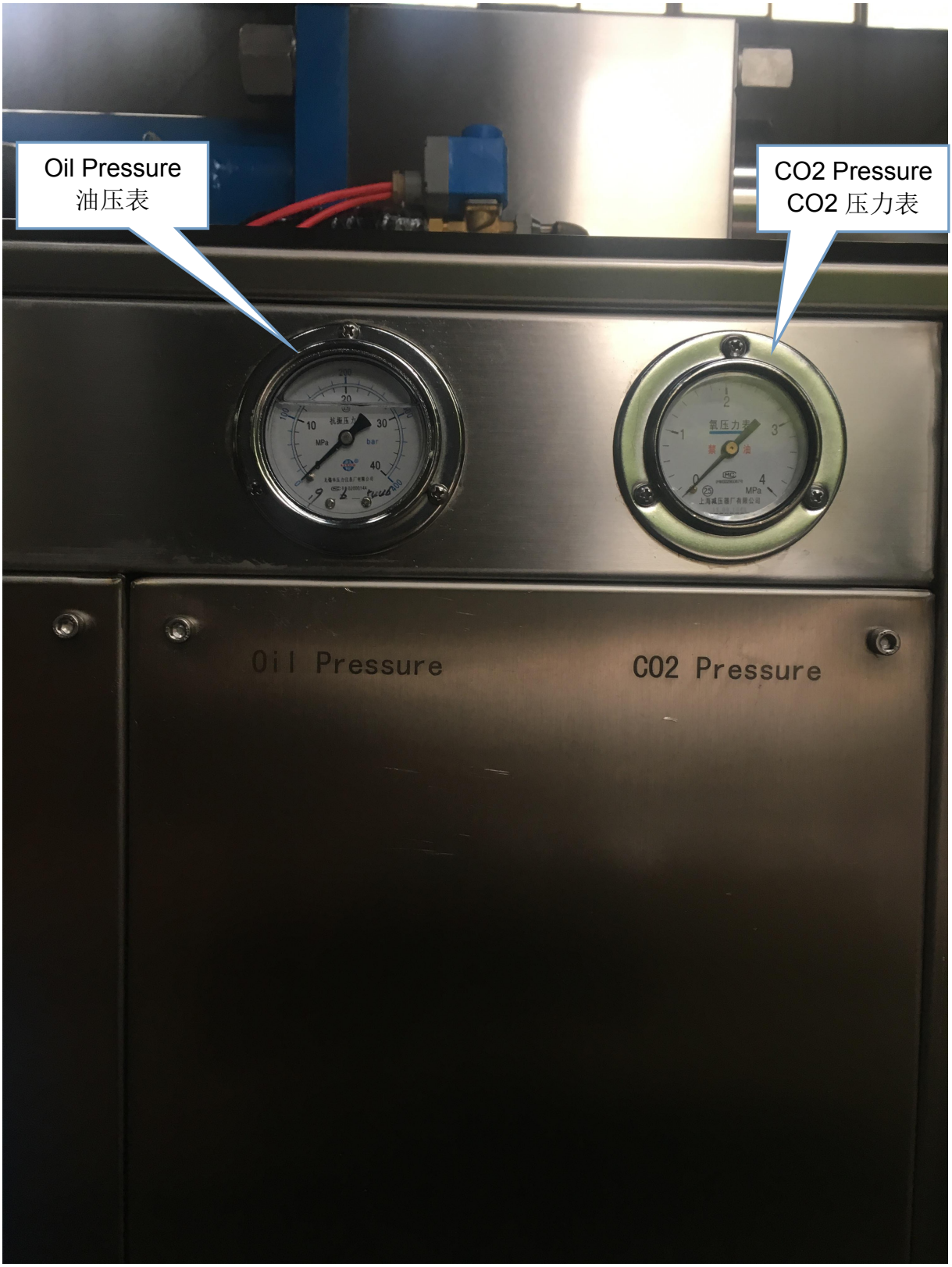
If the user can't solve the problem according to the instructions, please contact our company in time. Our company will send professionals to handle or answer in the shortest time.

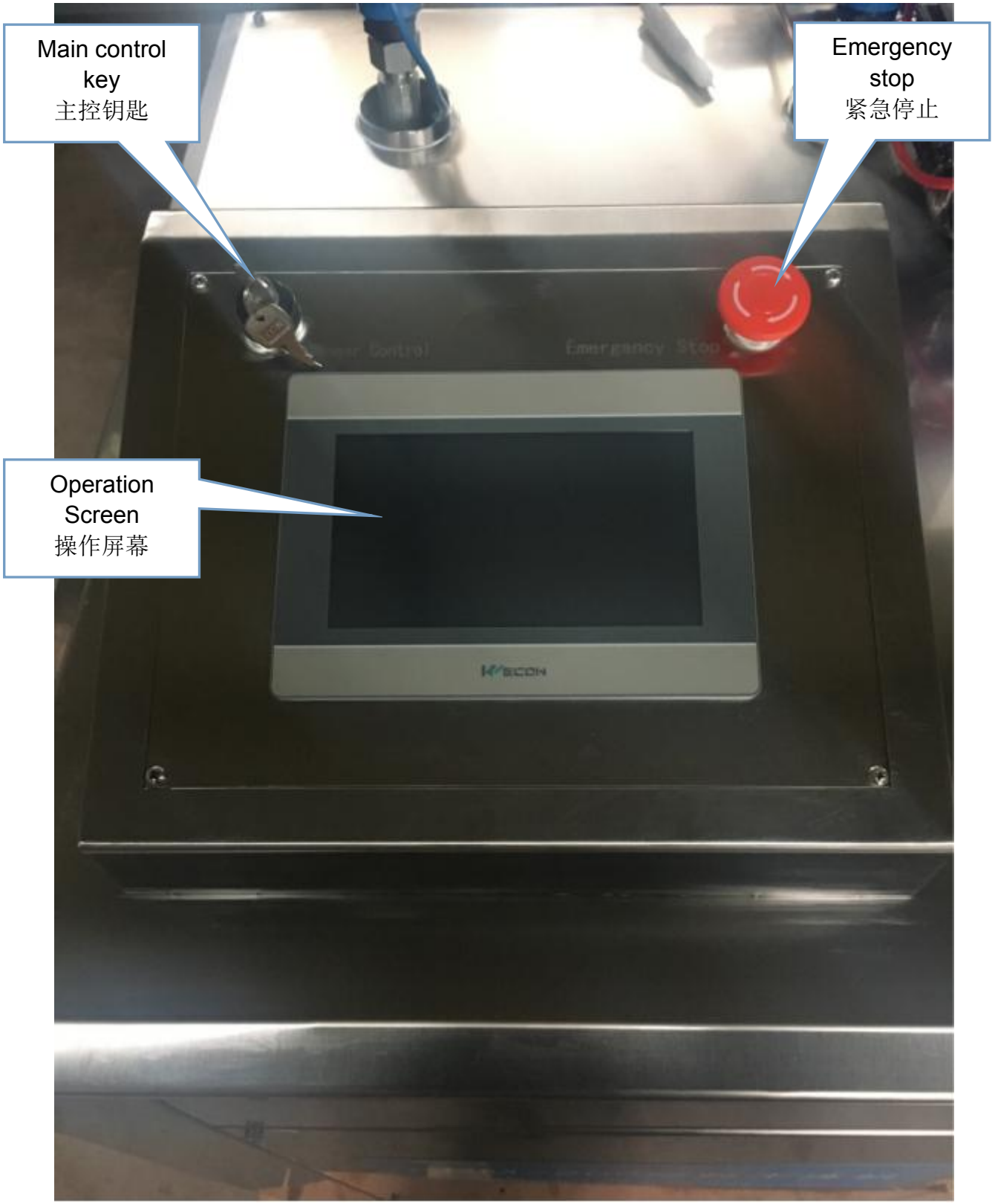
八、附图
Attached Photos



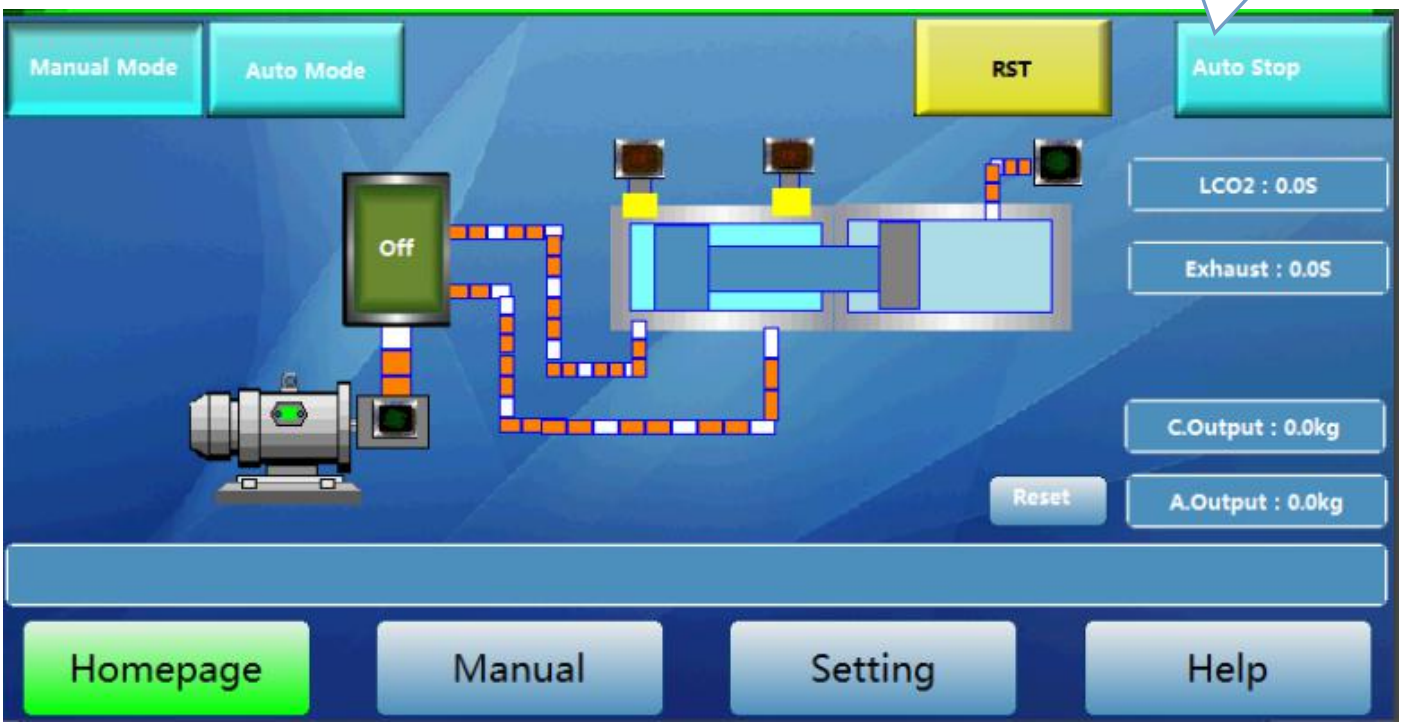

Vent valve
放空阀
Raw Material
LCO2 filter
原料 LCO2 过滤器
Raw material
LCO2 inlet
metal hose
原料 LCO2 进液
金属软管
LCO2 Inlet


Oil inlet
加油口
Oil level
油位显示
Oil tank clean window
油箱清洁窗口


Oil Pressure
油压表
CO2 Pressure
CO2 压力表
Oil Pressure
CO2 Pressure

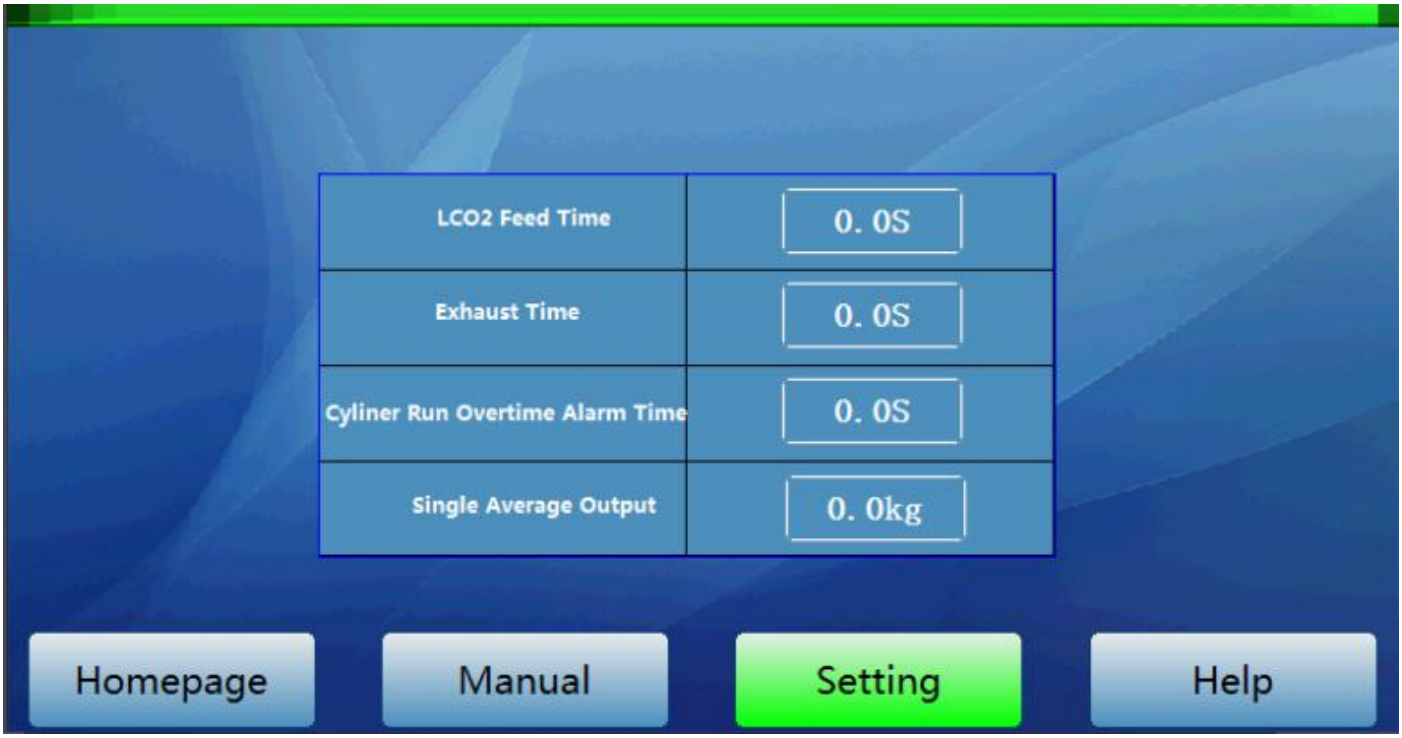

Main control key
主控钥匙
Emergency stop
紧急停止
Operation Screen
操作屏幕

Interface a
页面 a

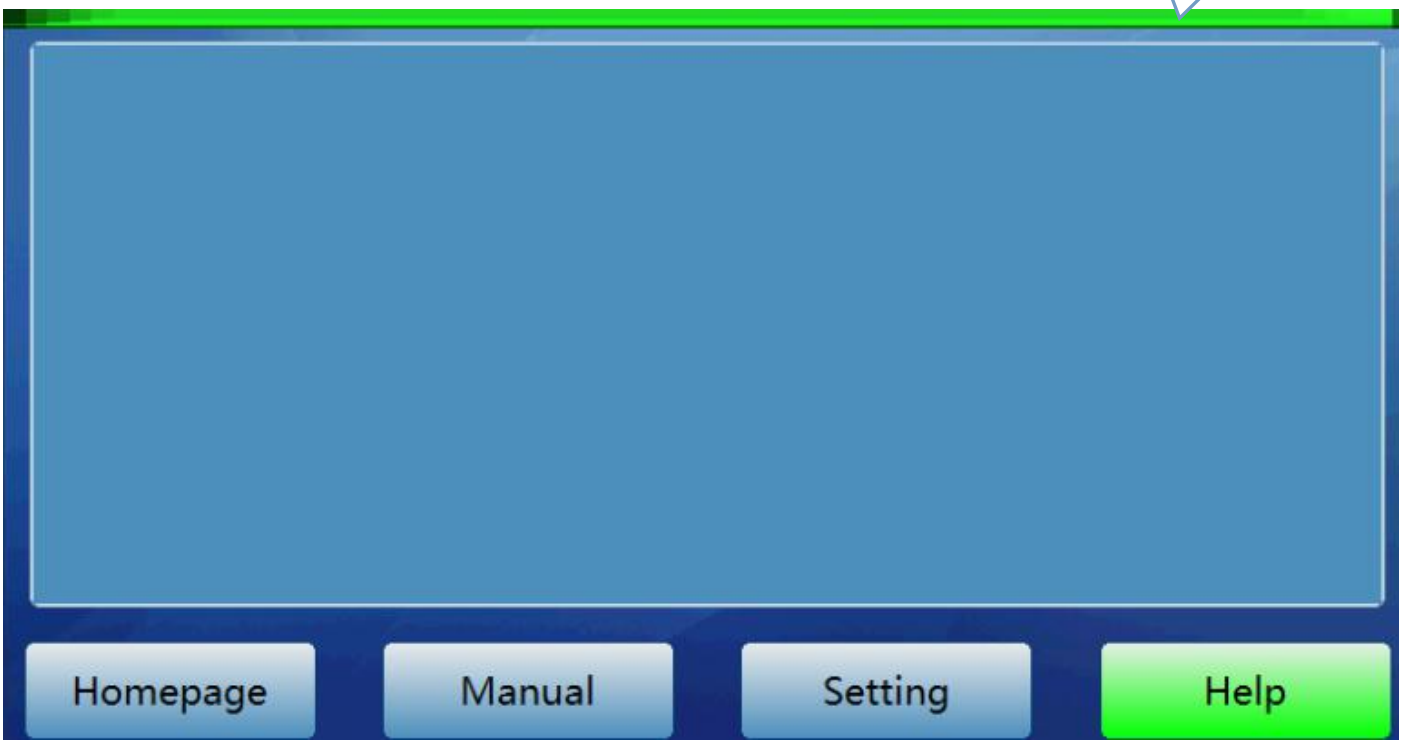


Interface b
页面 b

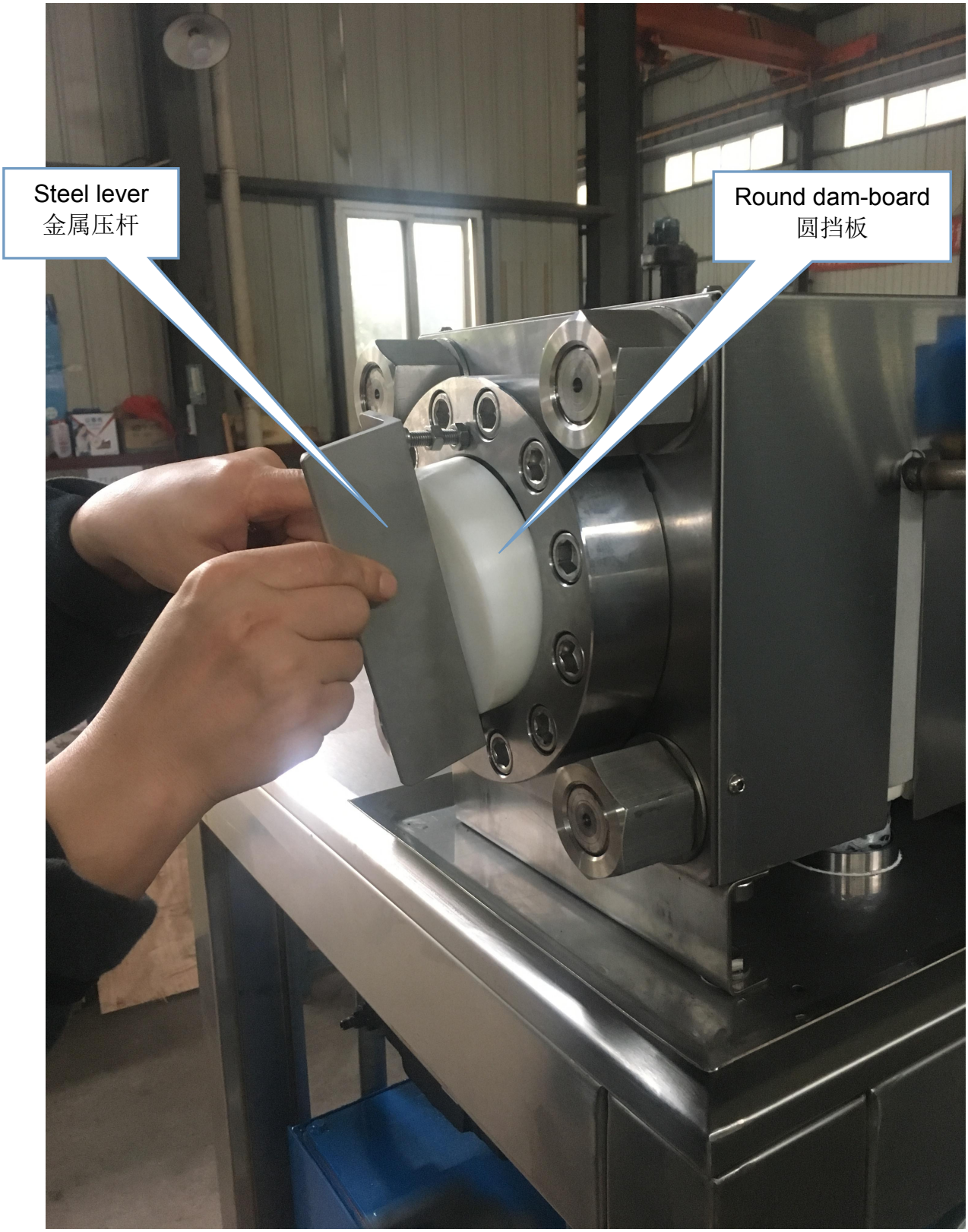
Interface c
页面 c

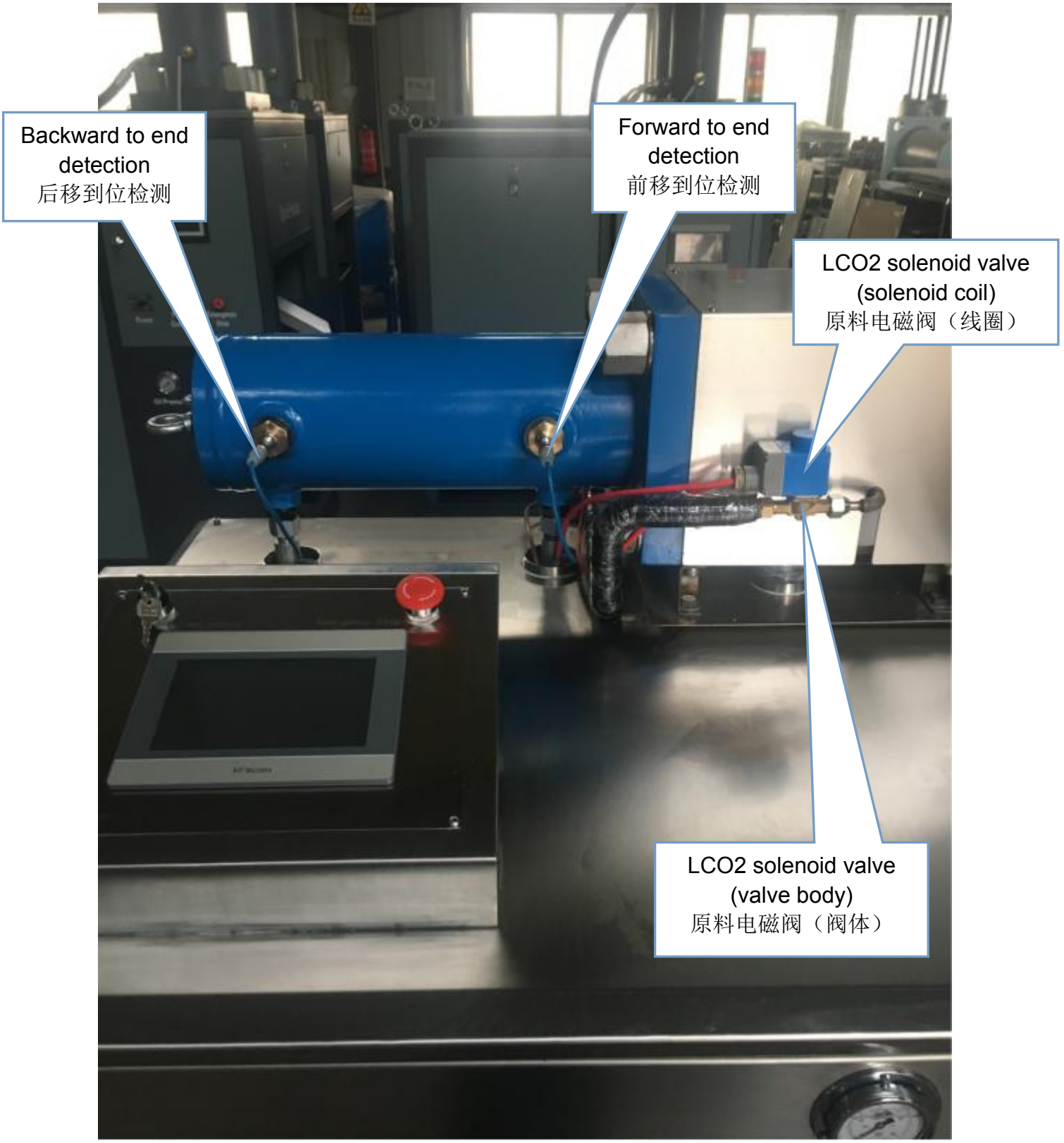


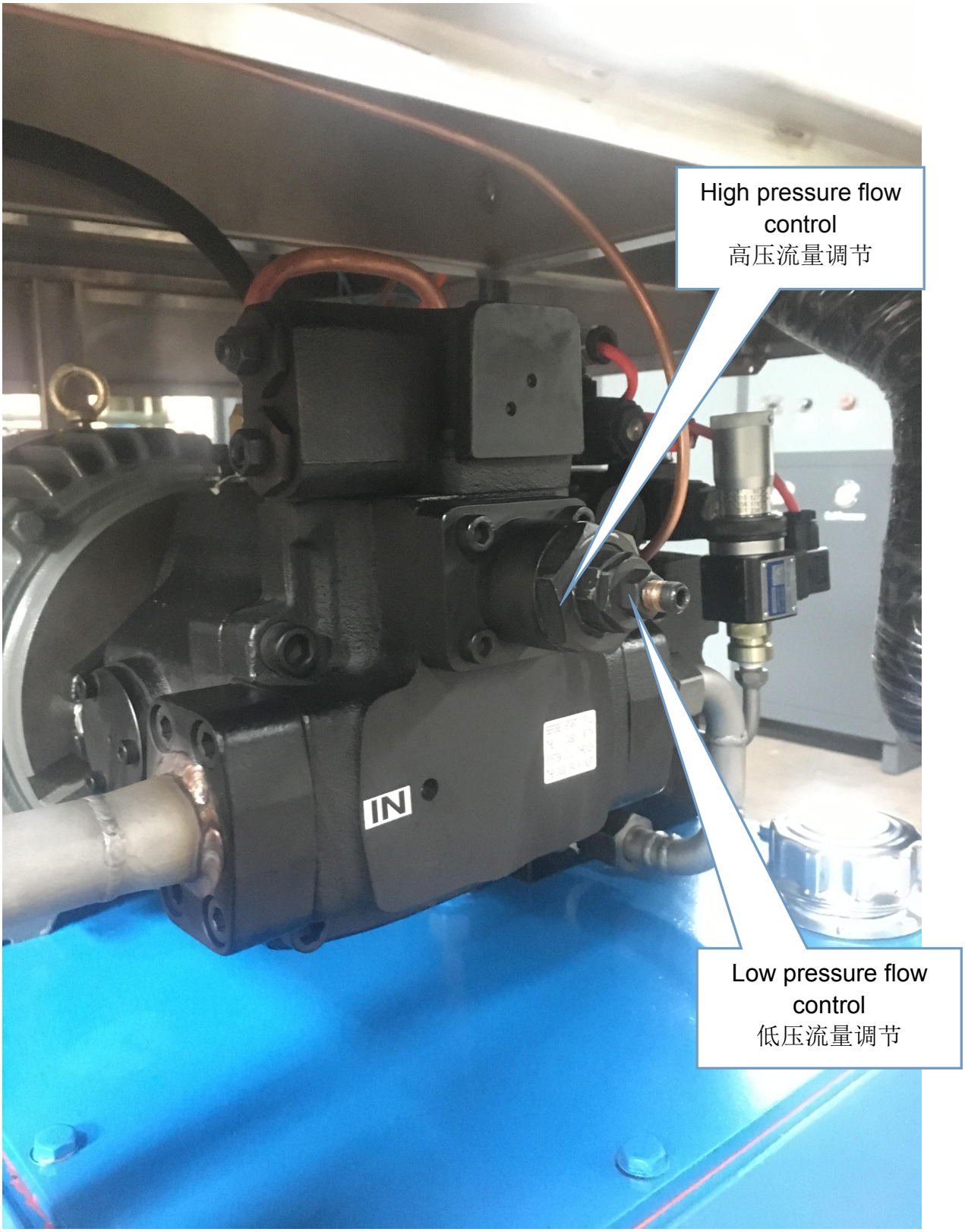
Help interface
帮助页面

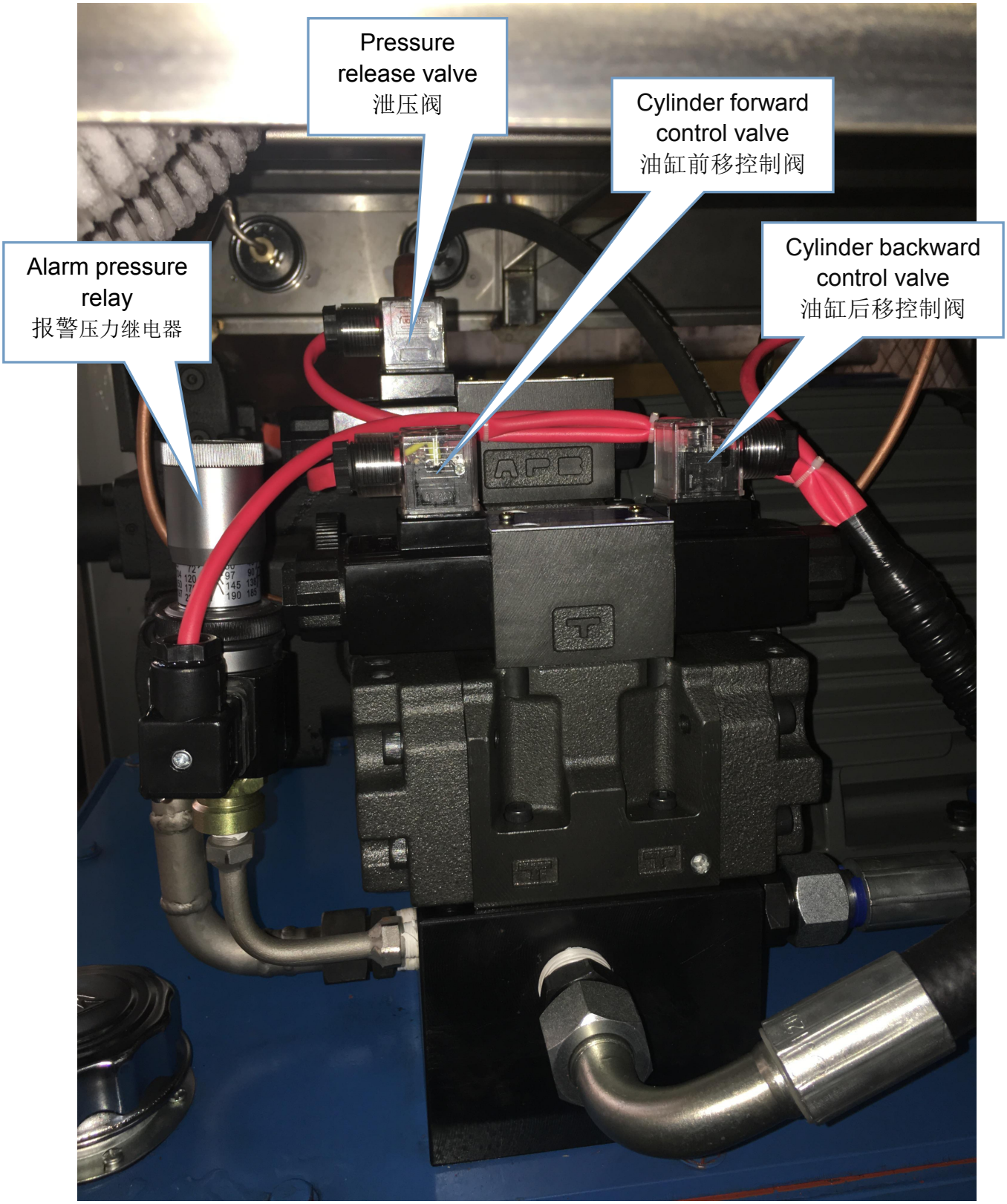


报警内容
[3]:Cylinder Backward Overpressure, please go to manual page to press "cylinder forward", then press "RST"
[4]:Cylinder Forward Overtime
[5]:Cylinder Position Detector Switch Fault
[6]:Cylinder Backward Overtime


Steel lever
金属压杆
Round dam-board
圆挡板


Backward to end detection
后移到位检测
Forward to end detection
前移到位检测
LCO2 solenoid valve (solenoid coil)
原料电磁阀（线圈）
LCO2 solenoid valve (valve body)
原料电磁阀（阀体）


High pressure flow control
高压流量调节
IN
Low pressure flow control
低压流量调节


Pressure release valve
泄压阀
Cylinder forward control valve
油缸前移控制阀
Alarm pressure relay
报警压力继电器
Cylinder backward control valve
油缸后移控制阀

Thanks For Choosing The Model HT-GBJ200 Dry Ice Pelleting Machine!! @@