

螺杆空压机 screw compressor

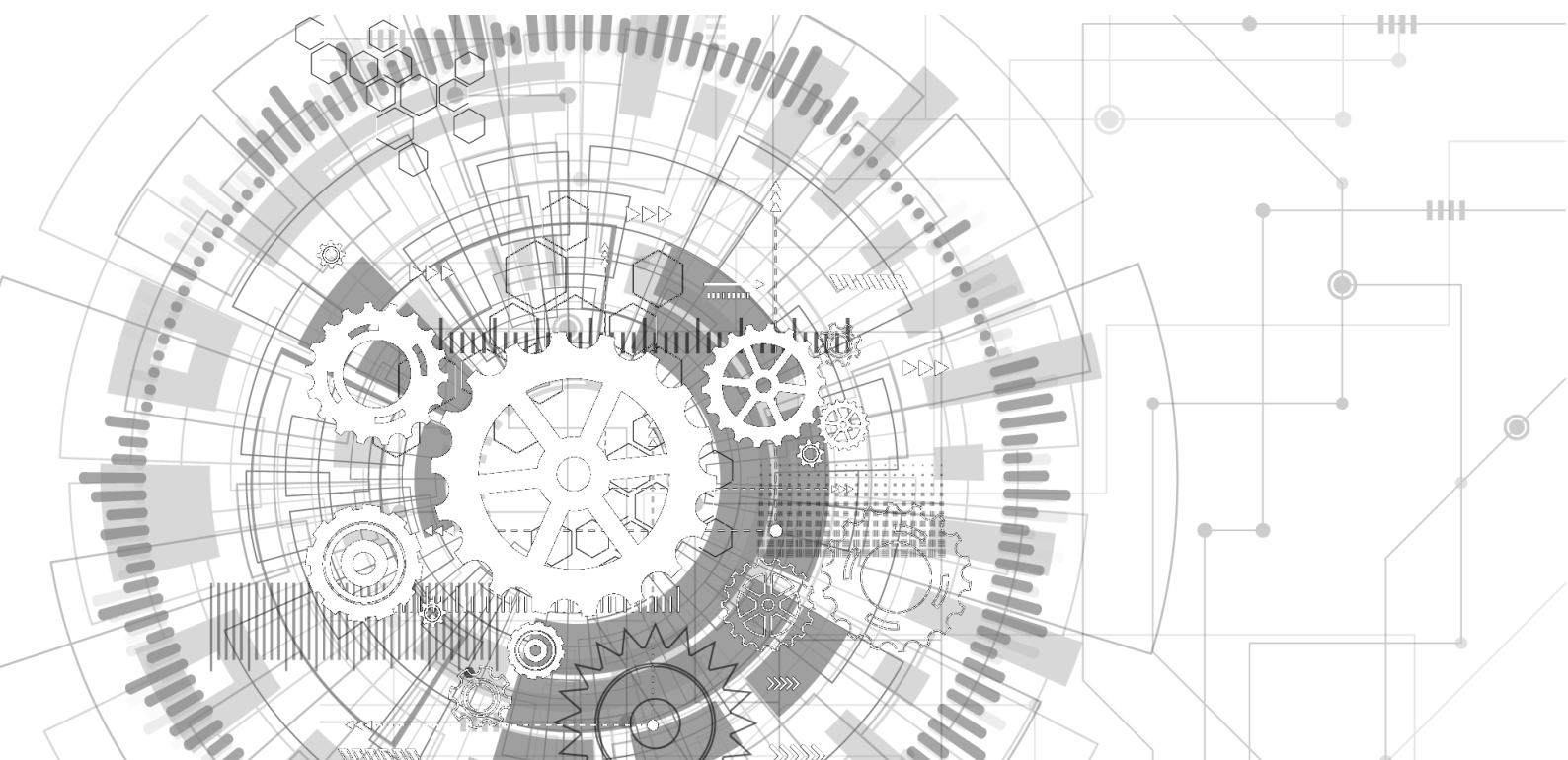
More info here:

<https://cncu.co.za/Miscellaneous/Rotary%20Screw%20Air%20Compressor/>

激光专用空压机用户手册

User manual of special laser air compressor

产品使用说明手册



开机前请认真阅读该手册！！

Please read this manual before starting the machine

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1. 压缩机产品说明 Compressor product description

1. 螺杆压缩机有关说明 Description of screw compressor

螺杆压缩机相比其他类型的压缩机可靠性更高，零部件少，没有易损件，因而它运转可靠，寿命长，相比往复式空压机噪音更小压力传输更加稳定，运行效益高，使用场景丰富

Compared with other types of compressors, screw compressor has higher reliability, fewer parts and no wearing parts, so it operates reliably and has a long life. Compared with reciprocating air compressor, the noise is less, the pressure transmission is more stable, the operation efficiency is high, and the use scene is rich

2. 使用范围 Scope of use

本系列机器和机组是根据已成熟的技术和公认的安全规则生产的。然而若出现以下情况，则仍可能对使用者或第三方的生命和肢体造成威胁，或对机器和其他物质财产带来损害：

This series of machines and units are manufactured according to mature technology and accepted safety rules. However, there may still be a threat to the life and limb of users or third parties, or damage to machinery and other material property, if the following conditions occur

- 使用范围不正确 The scope of use is incorrect
- 由不合格人员操作 Operated by unqualified personnel
- 不合理地修改或改变机器 Unreasonably modify or alter the machine
- 不遵守安全规则 Not following safety rules

因此，任何有权对机器进行操作、维护或修理的人员必须阅读并遵守安全规程。需要时，可以要求签字对此进行确认。

Therefore, anyone authorized to operate, maintain or repair the machine must read and follow the safety procedures. If necessary, a signature can be requested to confirm this.

此外，还必须遵守：

In addition, it is necessary to observe:

- 有关事故防范规则 Relevant accident prevention rules
- 公认的安全法规 Recognized safety regulations
- 国家法规 National laws and regulations

本系列机器和机组必须在完善的技术条件下使用，必须根据操作手册规定的使用范围和指南进行使用，使用人员必须有安全意识，能充分认识操作机器中存在的危险。若发生任何功能性故障，尤其是影响安全的故障，都必须及时修理（或请别人修理）！

在使用范围内应遵守使用手册指南进行操作以及保养！

This series of machines and units must be used under perfect technical conditions, and must be used in accordance with the scope of use and guidelines stipulated in the operation manual. Users must have safety awareness and be fully aware of the risks in operation of the machine. If any functional failure occurs, especially if it affects safety, it must be repaired (or repaired) in time!

Within the scope of use, operation and maintenance should be carried out in accordance with the instructions in the user manual!

3. 保养 Maintenance

本机必须精心维护，以使螺杆压缩机或压缩机组能满足各种不同要求。因此必须坚持按规定的保养期限对机器仔细进行维护保养，在工作环境恶劣的情况下尤其应这样做。

The unit must be carefully maintained so that the screw compressor or compressor unit can meet various requirements. Therefore, it is necessary to insist on careful maintenance of the machine according to the stipulated maintenance period, especially in the case of bad working environment.

4. 服务 service

出现故障或需要备件时，请与特约本公司压缩机商家联系。设备如出现损坏，应及时与我公司售后联系，我公司维修人员提供迅速良好的维修服务。

In case of failure or need spare parts, please contact our compressor supplier. If there is any damage to the equipment, please contact with our company in time, and our company's maintenance personnel will provide quick and good maintenance service.

5. 担保 Guarantee

在操作本机之前，必须确切了解机器及有关说明。

Be sure to understand the machine and its instructions before operating the machine.

如果本机的使用与适用的范围不符，或使用目的超出本说明中提及的范围，本公司将无法负责操作的安全性。

If the use of the unit is not in accordance with the applicable scope, or the purpose of use is beyond the scope mentioned in this instruction, we will not be responsible for the safety of the operation.

如遇下列情况，我公司将不接受担保索赔：

We will not accept any warranty claim if:

1. 操作失误 error
2. 维护不当 Improper maintenance
3. 错用辅料 Wrong with accessories
4. 不使用本公司的原配件 Do not use our company's original accessories
5. 修改或改动本设备 Modify or alter the equipment

本公司不会因上述说明而扩大一般条款的担保及赔偿条件。

The company does not extend the general terms of guarantee and indemnity as a result of the above statement. 任何未经许可就随意改动压缩机或压缩机组，或安装未被生产厂家认可的部件，生产厂家将不接受索赔或担保要求。

Any unauthorized modification of the compressor or compressor station, or installation of parts not approved by the manufacturer, the manufacturer will not accept claims or warranties.

6. 技术更改 Technical changes

技术开发过程中，我们保留修改部件而不另行通知的权利。

During technical development, we reserve the right to modify parts without prior notice.

如有任何疑问请及时联系我司相关人员 If you have any questions, please contact us

7. 更换配件明细 Replace the accessories

常用备件名称	技术规格	详情
空滤	3~5um 精度	
油滤	(20bar 耐压)玻纤油滤	HM962 (20bar)
油分	激光切割空压机专用，专门定制，加厚加大油分， 空压机排气端含油量低于 1ppm	HM130170-200 (折叠加缠绕)
过滤器芯	C, T, A, X, F 五级过滤	
空压机专用油	68 号合成油	抗乳化，防锈高压机专用

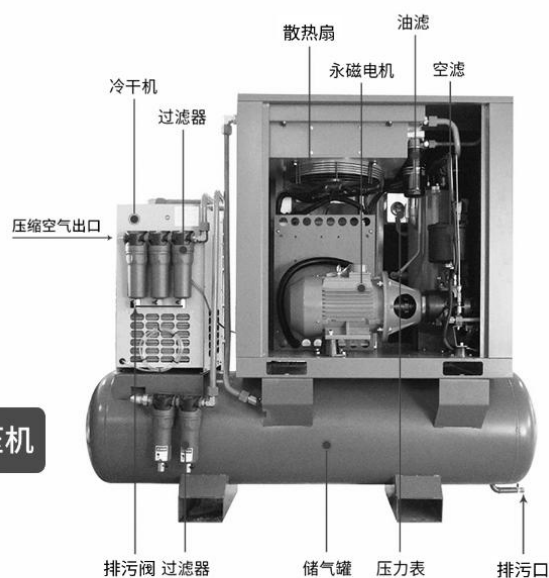
激光专用空压机与普通空压机有很多不同的地方，我们在售后服务过程中遇到很多客户保养后出现有水有油的情况，主要是客户使用配件不当造成，出现问题后，管路激光头全部要清理，耽误生产，希望贵司使用正品配件，按时保养机器，这样他将为贵司创造更大的价值，省去不必要的麻烦。

Laser special air compressor with ordinary air compressor has a lot of different places, we met a lot of customers in the process of after-sales service maintenance with water after oil, is mainly customer improper use accessories, appear problem, after all line laser to clean up, hold up production, hope your company use authentic accessories, maintenance machine on time, so that he will create more value for your company, Save unnecessary trouble.

1. 空压机结构部件介绍 Air compressor structure parts introduction

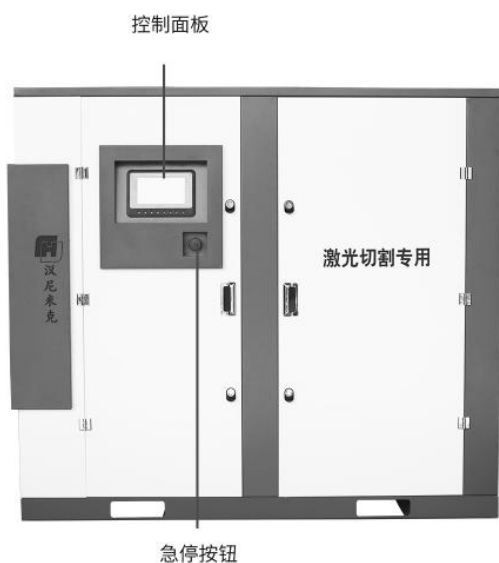


三代正面图

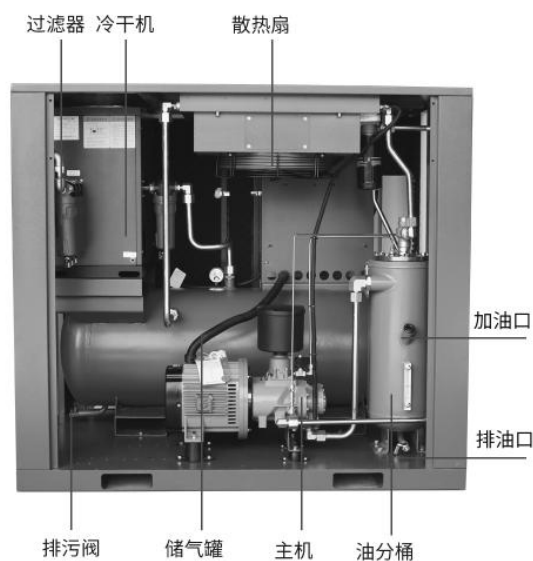


三代空压机

三代反面图



四代正面图



四代空压机

四代反面图

2. 安装指导 Installation guide

1. 现场安装环境要求

Onsite installation environment requirements

1. 设备现场保证良好通风。

Ensure good ventilation on site.

2. 设备周围保证空气清洁、无酸碱及其他腐蚀性气体进入设备。

Ensure that the air around the equipment is clean and no acid, alkali and other corrosive gases enter the equipment.

3. 检查一切防护装置和安全附件是否处于完好状态。润滑油面是否符合标准。

Check that all protective devices and safety accessories are in good condition. Whether the lubricating oil surface meets the standard.

4. 设备安装后，四周预留足够空间保证设备的日常检修与维护保养。

After the equipment is installed, enough space should be reserved around the equipment to ensure daily overhaul and maintenance.

5. 为节省不必要的管线损耗，设备尽量安装在用气设备周围合适环境位置。

In order to save unnecessary pipeline loss, the equipment should be installed in a suitable environment around the gas equipment.

2. 安装指导-空压机材料准备 Installation Guide - Prepare materials for air compressor

1. 电源线：15KW 电源线采用国标 3*6+1*4（单位平方毫米）电源线，22KW 电源线采用国标 3*10+1*4（单位平方毫米）电源线，进线电源开关选择 63A 三极开关（电源线客户准备）。

Power cable: the 15KW power cable adopts the NATIONAL standard 3*6+1*4 (unit square mm) power cable, and the 22KW power cable adopts the National standard 3*10+1*4 (unit square mm) power cable. The incoming power switch is a 63A three-pole switch (power cable prepared by the customer).

2. 激光切割机气源输出在空压机最后一支过滤器出口处，丝口为 6 分或 1 寸，标配 10/12 气源快插出口与快插之间增加球阀控制气源。

Laser cutting machine air source output in the air compressor last filter outlet, wire mouth is 6 minutes or 1 inch, standard 10/12 air source quick plug outlet and fast plug between the ball valve control air source.

3. 精密过滤器下端排污，预留 6 分或 8 分快插接口，将下端相互连接为一个出口，出口固定在设备处避免排气时污水飞溅。

For sewage discharge at the lower end of the precision filter, a 6-minute or 8-minute fast insertion port is reserved, and the lower end is connected to each other as an outlet. The outlet is fixed at the device to avoid sewage splashing during exhaust.

3. 开机调试-开机试车 Boot commissioning - boot test

1. 接上电源线及零线、接地线，测量主电压是否正确（380V），三相电压是否平衡。根据机器的功率和电压，提供合适的电源且电源电压波动不超过±5%，三相不平衡性小于 3%（如果电压不平衡需自配稳压器，以便于空压机的运行）。

注意事项：电源相序不符时，机器的控制面板会提示警告，同时不得开机。需将电源断开，将三相电源线任意两项更改线序即可。

Connect the power line, neutral line and ground line to measure whether the main voltage is correct (380V) and the three-phase voltage is balanced. According to the power and voltage of the machine, the appropriate power supply is provided and the voltage fluctuation of the power supply is not more than 5%, and the three-phase

imbalance is less than 3% (if the electrical voltage imbalance needs to be equipped with a regulator, so as to facilitate the operation of the air compressor).

Note: when the power phase sequence is inconsistent, the control panel of the machine will prompt a warning, and the machine shall not be started. To disconnect the power supply, change the sequence of any two items of the three-phase power cable.

2. 开机前先打开机器后面面板，手动转动主机是否顺滑，有无卡机现象。无问题开机试车，并观察油分桶内油位是否在标示线内。

Before starting the machine, open the back panel of the machine, and manually turn the host to see whether it is smooth or not. If there is no problem, start the test and observe whether the oil level in the oil sub barrel is within the marked line.

3. 机器正常运行后，通过设备显示屏观察设备运作情况，并检查有无报警信息。如有异常声音、震动、泄露等情况立即停车，并对机器进行检修。

After the machine runs normally, observe the operation of the equipment through the display screen, and check whether there is alarm information. In case of abnormal sound, vibration and leakage, stop the machine immediately and repair it.

4. 保养检查-开机顺序 Maintenance check - startup sequence

1、先开冷冻式干燥机，再开空压机。

Turn on the freeze dryer first, then the air compressor.

2、关机时先关空压机，再关冷冻式干燥机，防止未除水的压缩空气污染激光头。

Turn on the freeze dryer first, then the air compressor.

5. 日常开机前检查 Daily check before startup

1、断电情况下打开四周门板，检查机器内部是否有大量灰尘，防尘网是否灰尘多（建议一周检查吹扫一次），用气枪吹扫干净机内的灰尘，然后关好门。

In case of power failure, open the door panels around the machine, check whether there is a lot of dust inside the machine, whether the dust filter is too dusty (it is recommended to check and purge once a week), clean the dust inside the machine with an air gun, and then close the door.

2、检查供电电源及电源线有无脱落松动或表皮是否损伤，确认无误方可送电开机。

Check whether the power supply and power cable are loose or whether the skin is damaged. Then power on the device.

3、开机前检查所有机箱门板是否关闭好，周边连接设备是否在预备使用状态。

Before starting the machine, check whether all the chassis door panels are closed properly and whether the peripheral connected devices are in the state of ready use.

4、检查液晶显示屏上是否有报警信息，若有应根据信息反馈处理完后方可送电开机。

Check whether there is alarm information on the LCD screen. If there is alarm information, it can be powered on after processing according to the information feedback.

5、根据机器工作环境情况，定期清理更换三滤（油滤、空滤、油气分离器）和空压机油。

According to the working environment of the machine, clean and replace the three filters (oil filter, air filter, oil and gas separator) and air compressor oil regularly.

1. 保养检查-日常保养（每日或每次运转前：执行开机检查事项）

Maintenance inspection - Daily maintenance (daily or before each operation: perform boot inspection items)

1、运行 500 小时清洁散热器，空气滤芯及前置过滤网取下清洁，用低压压缩空气由内向外吹扫干净。

After 500 hours of operation, clean the radiator, remove the air filter element and the front filter, and clean it from inside out with low-pressure compressed air.

2、每天打开设备储气罐排污阀，防控内部水分。

Open the drain valve of the equipment air storage tank every day to prevent and control internal moisture.

3、定期手动检查空压机、冷干机、精密过滤器排污阀是否正常动作，定期对精密过滤器进行排污（建议每天一次）。

Periodically manually check whether the air compressor, cold dryer, and precision filter drain valve work properly, and periodically discharge the precision filter (once a day is recommended).

4、新机运行 500 小时左右第一次更换机油，在机器停机状态且内部无压力情况下将油分桶排油口打开将机油排出。在上部加油口加注新油（螺杆空压机专用），油位加注在标记线内。

When the new machine runs for about 500 hours, the oil should be replaced for the first time. Under the condition of machine shutdown and no internal pressure, the oil barrel outlet should be opened to discharge the oil. Fill the upper refueling port with new oil (special for screw air compressor), and fill the oil level in the marked line.

5、新机运行 500 小时左右第一次更换机油过滤器，在机器停机状态且内部无压力情况下拆下机油过滤器，更换新的机油过滤器。

Replace the oil filter for the first time when the new machine runs for about 500 hours. Remove the oil filter and replace the new oil filter when the machine is shut down and there is no internal pressure.

6、新机首次保养完成后，再次运行 2000 小时左右需进行再次保养，机器内部有保养时间预置，到期后显示器会预警提示，预警提醒后需要做的保养内容为（空气过滤器一个、机油过滤器一个、油气分离器一个、润滑油机油一桶）。

After the first maintenance of the new machine is completed, it needs to be maintained again for about 2000 hours. There is a preset maintenance time inside the machine, and the display will give a warning after the expiration. The maintenance content that needs to be done after the warning reminder is (an air filter, an oil filter, an oil separator and a barrel of lubricating oil).

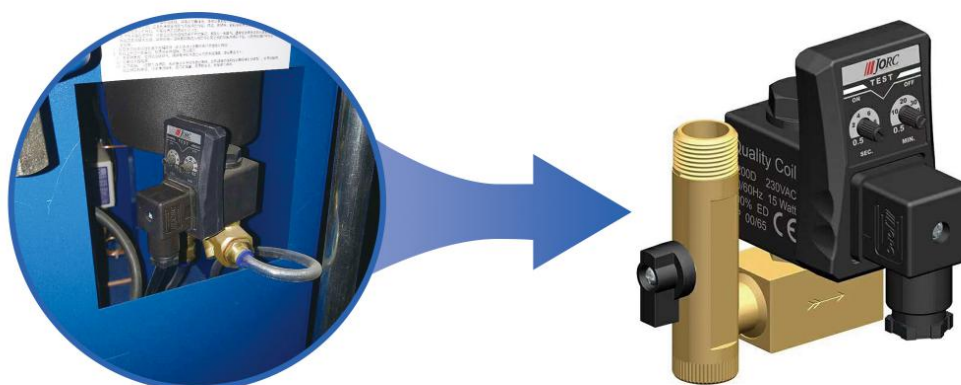
1. 通用电子排水阀的操作 General electronic drain valve operation

1、排水阀两个按钮，MEC 控制排水时长 0.5-10 秒钟（建议 1-2 秒钟），MIN 控制每次排水的间隔时间 0.5-45 分钟（建议 2-5 分钟）

Drainage valve two buttons, MEC control drainage time 0.5-10 seconds (1-2 seconds is recommended), MIN control each drainage interval 0.5-45 minutes (2-5 minutes is recommended)

2、时间可根据实际工况进行调节

The time can be adjusted according to the actual working condition



通用型电子排水阀



电源指示灯
Power indicator

点动排气
Manual exhaust

右边调节每两次排气的间隔
Adjust the interval of every two exhausts on the right

左边调节每次空气排放的时间
Adjust the time of each air discharge on the left

根据空气的湿度，调节排气时间长短与间隔，
空气潮湿排气时间加长排气间隔变短，
空气干燥可稍微延长间隔时间。

Adjust the length and interval of exhaust according to the humidity of the air,
When the air is humid, the exhaust time becomes longer and the exhaust interval becomes shorter.
Air drying can slightly extend the interval.

空气潮湿 Humid air	空气干燥 Air dry	
间隔最低 Minimum interval	间隔 2 Interval 2	右 right
时长 2-4 Duration 2-4	时长 2-3 Duration 2-3	左 Left

2. 保养检查保养计划表 Maintenance check maintenance schedule

检查部位	检查内容	检查周期					备注
		每天	每周	每月 /500h	半年	一年 /2000h	
螺杆机专用油	检查油标水平	◆					液位应在标线以内
	补充			◆			
	更换			◆		◆	新机运行500小时更换，以后每2000小时更换
	清洗或更换					◆	
油过滤器	检查和清洗			◆		◆	
空气滤芯	清洗和更换		◆	◆	◆	◆	
进气阀	检查和清洗				◆	◆	情况正常周期可延长
过滤器	排水	◆				◆	每2000小时更换芯
储气罐	排污阀	◆					
空压机排油口	排油		◆	◆			检查油分桶有无积水，有就排出
油气冷却器	清理		◆	◆			清理冷却器表面油污

3. 保养处理 Maintenance treatment

1. 报警处理 Alarm processing

控制器检测保养时间到只报警不停机，显示屏显示相应故障名称故障灯闪烁，蜂鸣器鸣叫，预警后200小时内未进行保养会自动停机

When the controller detects and maintains the time, it only alarms and does not stop the machine. The display screen shows the corresponding fault name, the fault light flashes and the buzzer buzzes. The machine will stop automatically if the maintenance is not carried out within 200 hours after the warning

2. 保养后调节完参数后长按复位键复位故障，回到主界面，显示恢复正常。

After adjusting the parameters after maintenance, long press the reset button to reset the fault, return to the main interface, and display normal.

	预警故障名称	处理方法	故障原因
1	空气过滤器超期使用	更换空滤器，将空滤器使用时间置零	使用时间超过设定允许使用时间
2	油气分离器超期使用	更换分离器，将油气分离器使用时间置零	使用时间超过设定允许使用时间
3	油过滤器超期使用	更换油过滤器，将油过滤器使用时间置零	使用时间超过设定允许使用时间
4	润滑油超期使用	更换润滑油，将润滑油使用时间置零	使用时间超过设定允许使用时间
5	排气温度高（预警）	清理冷却器，检查冷却风扇	冷却器脏堵，缺油，冷却风扇损坏

2.空压机保养所需配件及工具

1.配件需要，高压空压机专用润滑油，油滤，空滤，油分。

2.工具需要，油滤扳手，10号内六角扳手，19号扳手，41号扳手（可用管钳），活口扳手，废油桶，手套。

3.保养顺序

1.首先停机关闭电闸，如遇停机之前正常使用的，稍等片刻等油温降低再进行操作。

2.排空气体，检查压力表归零，即可开始操作。

3.打开活动门板，找到油气分离筒，在油气分离桶的下方有排油口，在排油口球阀内部装有一个堵丝，用10号内六角扳手拆掉后排放废油，当油无法排出时关闭阀门，打开电闸，以点动方式运行机器一次（运行4-8秒按急停键停止），关闭电闸，看其油气分离桶上的压力表归零再次打开阀门放掉其余费油，新油在保养最后倒入。

4.拆卸油滤，观看油滤表面箭头，确认拆卸方向进行拆卸（油滤有正丝和反丝），如无油滤扳手可用管钳，拆卸时油滤会溢出一部分油，可用抹布垫一下，新油滤安装时倒入油滤内部一部分新油，再进行安装拧紧即可。

5.更换空滤，空滤的位置可看下方机器内部图，拧开空滤上部顶盖，拿出旧空滤换上新的空滤即可。

6.更换油分，拆掉油气分离桶上方顶杆的三根管路（拆卸时确保储气罐没有压力），拆掉管路后拆卸上方黄色法兰顶盖上的螺丝，松掉螺丝后垂直向上抽出法兰，拿出油分用刀片吧油分粘在上面的东西刮掉，刮掉法兰顶盖内部的锈迹，确保安装油分的表面光滑，放入新的油分摆正位置安装顶盖，安装时以对角方式上紧螺丝，接上管路。

7.关上放油口的阀门，打开放油口上方的加油口进行加油，观察油位计，当油加到上方红线的位置时停止加油，拧上加油口（注意加油口螺丝上的密封垫）。

8.运行机器，以电动方式启动（以保证油正常循环机头内部有油），观察油位线的位置，当油位低于下红线位置时，停止机器等待压力放空确保压力归零，拆卸加油口，再次吧油位加到上红线位置，安装加油口，正常运行。

9.当保养完毕后，清理门板上的空气防尘棉，可用压缩空气进行吹扫。

10.运行半小时到1小时后检查一次，确保无误。

2. Accessories and tools required for air compressor maintenance

1. Accessories need, special lubricating oil for high pressure air compressor, oil filter, air filter, oil.

2. Tools required: oil filter wrench, No. 10 hex socket wrench, No. 19 wrench, No. 41 wrench (available with pipe pliers), adjustable wrench, waste oil drum, gloves.

3. Maintenance sequence

1. First shut down and close the switch. If it is normally used before shutting down, wait for a while and wait for the oil temperature to decrease before operating.

2. Empty the air, check that the pressure gauge is zero, and then start the operation.

3. Open the door plank, finding oil and gas separation cylinder, oil discharge mouth, at the bottom of the barrel of oil and gas separation inside the oil discharge port ball valves equipped with a plug wire, inner hexagon spanner pull down with 10 after discharge the waste oil, close the valve when oil cannot eduction, open the switch, to point the way to run a machine (running four to eight seconds press stop stop), close the switch, When the pressure gauge on the oil and gas separation barrel returns to zero, open the valve again to release the remaining waste oil, and pour the new oil at the end of maintenance.

4. Remove the oil filter, watch the arrow on the surface of the oil filter, confirm the disassembly direction for disassembly (the oil filter has positive wire and reverse wire), if there is no oil filter wrench can be used, the oil filter will overflow part of the oil when disassembly, you can pad it with a rag, pour a part of the new oil inside the oil filter when the new oil filter is installed, and then tighten the installation.

5. Replace the air filter. The position of the air filter can be seen from the internal diagram of the machine below.

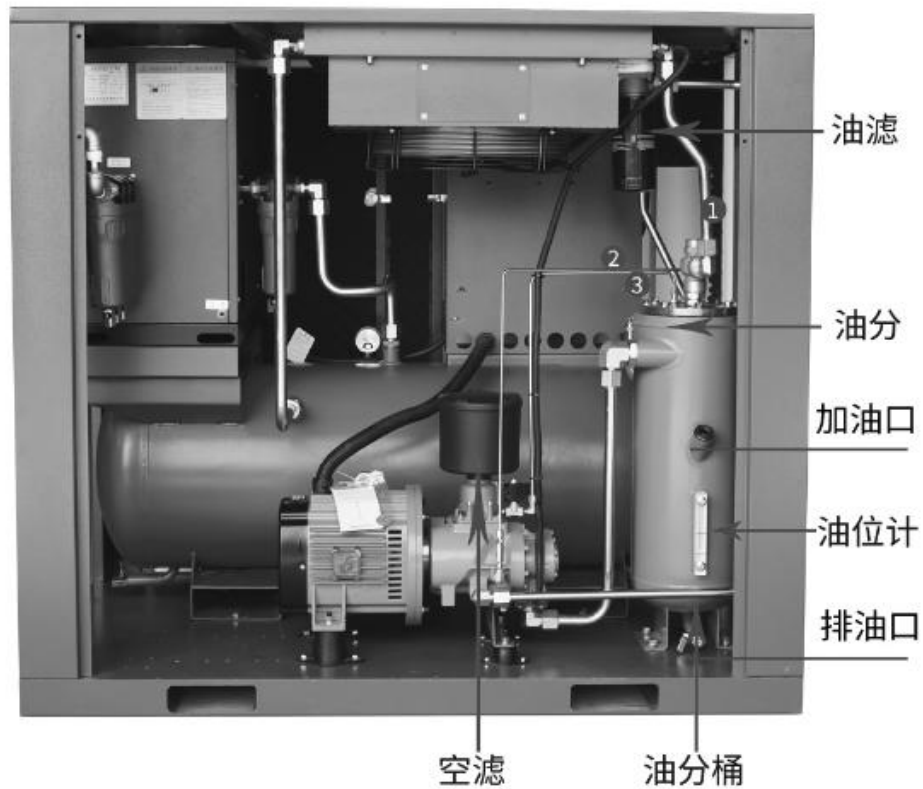
6. Replace oil, tear down three pipe of the oil and gas separation barrel on your rod (removed to ensure the gasholder without pressure), disconnect the line after the removal of yellow flange on the roof above the screw, the screw loose flange, vertical pull out after out oil use blade oil glue scrape in the above things, scrape off the flange head internal rust, ensure the installation of oil surface is smooth, Put the new oil into the position of the installation of the top cover, installation in a diagonal way to tighten the screw, connected to the pipeline.

7. Close the valve of the drain port, open the refueling port above the oil port for refueling, observe the oil level gauge, stop refueling when the oil reaches the position of the red line above, and tighten the refueling port (pay attention to the sealing pad on the screw of the refueling port).

8. Run the machine, start it in electric mode (to ensure the normal circulation of oil there is oil inside the head), observe the position of the oil level line, when the oil level is lower than the lower red line, stop the machine, wait for pressure emptying to ensure that the pressure returns to zero, remove the refueling port, add the oil level to the upper red line again, install the refueling port, and run normally.

9. When the maintenance is completed, clean the air dustproof cotton on the door panel, which can be blown with compressed air.

10. After running for half an hour to an hour, check once to ensure no error.



11. 如遇到无法及时解决的问题请及时联系售后人员!!!

If you encounter problems that cannot be solved in time, please contact after-sales staff in time!!

1. 故障处理以及检查 Troubleshooting and inspection

2、停机报警 Outage alarm

控制器检测到以下故障时报警并停机，显示屏显示相应故障名称，故障灯常亮，蜂鸣器鸣叫并自动生成“故障记录”。

When the controller detects the following faults, it alarms and shuts down. The screen displays the corresponding fault name, the fault light is steady on, the buzzer beeps and automatically generates "fault record".

故障排除后长按复位键复位故障，切换到主界面，显示恢复正常。

After the fault is rectified, hold down the reset button to reset the fault and switch to the main interface.

序号	停机故障名称	处理方法	故障原因
1	排气压力高	参照空压机说明书	检测到压力超过最高压力
2	排气温度高	参照空压机说明书	检测到温度超过最高温度
3	主机过载	参照空压机说明书检查排除后重新启动观察	电机电流超过额定电流且持续一定时间
4	风机过载	参照空压机说明书检查排除后重新启动观察	电机电流超过额定电流且持续一定时间
5	主机不平衡	检查三相电压，电源开关及接触器	AB相电流检测值相差过大
6	相序错误	电源进线任意两项调换	电源进线ABC三相接线顺序错误
7	缺相	检查三相电压、电源开关及接触器	相间有电流为零
8	温度传感器故障	更换传感器；检查传感器接线	温度传感器短路，开路或接线松动
9	温度跳动大	更换传感器；检查传感器接线	温度传感器信号线是否与屏蔽层短路或接线松动
10	压力传感器故障	压力传感器是否短路，或开路	更换传感器
11	运行时间超期	咨询厂家	相序问题
12	电压过高或过低	检查电源电压或咨询厂家	电源电压过高或过低

2. 故障排除 troubleshooting

1.出现故障时应及时停机，初步检查，如遇无法解决的问及时联系相关售后人员，结合初步检查配合售后人员及时排除故障。

When the fault occurs, the machine should be stopped in time, and the initial inspection should be carried out. If the problem cannot be solved, the relevant after-sales personnel should be contacted in time, and the initial inspection should be combined with the after-sales personnel to solve the problem in time.

故障现象	原因	措施
机头轴封漏油	轴封质量问题或安装不当	更换轴封
不能启动	电源不通；电压过低；供电电线截面和长度不适合；保险丝熔断；电源相位错位；压力传感器失效；电机故障；压缩机故障	检查电源；检查电源电压和电机功率；更换合适电线检查电路；确认无误后更换保险丝；调换电源相位；更换压力传感器；检修或更换主机
排气湿度过高导致机器停转	大量润滑油泄露；环境温度高；冷却器脏；润滑油失效；（冬季）油路堵塞；温度传感器失效	补充润滑油；加强机房通风；清洗冷却器；更换润滑油；检查油路并维修更换温度传感器
排气含油过多	加油过多 回油管安装不到位 油分过期一直未更换 过滤器过期未更换	排放多余的油 排查重新安装 更换油分 更换过滤器芯
排气含水过多	冷干机缺氟 冷干机故障 电排堵塞	冲氟 全面检查更换维修 更换或者维修
排气压力达不到额定压力	用气量过大；吸气阀故障；压力传感器故障；管路泄露；空气滤清器堵塞	检查检修部件
润滑油过早变质	使用不合要求的润滑油；环境温度过高；润滑油含水；未充分排净旧的润滑油	更换专用润滑油；改善环境；加强通风；及时排水清洗更换
声音和震动异常	电机轴承磨损或损坏；压缩机轴承磨损或损坏；皮带打滑或损坏；紧固件松动；两皮带轮不在同一平面	检修或更换；检修或更换调整松紧；重新上进进行调整
电机温度过高导致停机	电机不正常电压过低；压缩机转动故障使用不合要求润滑油；电线接头松动；排气压力过高	检修或更换检查并调整电压；检修或更换专用润滑油；重新上进并调整到预设压力
安全阀喷气	排气压力高；安全阀故障；压力传感器故障	调整到预设压力；检修或更换安全阀；检修或更换压力传感器

1. 一体机冷干机不启动

- ①检查冷干机是否正确通入电源。
- ②检查零线是否缺失。
- ③检查开关是否失灵。
- ④检查高低压保护器是否跳保护。
- ⑤检查蒸发压力表压力是否正常。
- ⑥检查压缩机是否震动，如有发热震动检查启动电容是否有问题。

1. The all-in-one cold drying machine does not start

- ①Check whether the cold and dry machine is correctly connected to the power supply.
- ② Check whether the zero line is missing.
- ③ Check whether the switch fails.
- ④ Check whether the high and low pressure protector is jump protection.
- ⑤ Check whether the pressure of evaporation pressure gauge is normal.
- ⑥ Check whether the compressor vibration, such as heat vibration check whether there is a problem with the starting capacitor.

2、故障现象:机组排气温度高(超过 100 °C)

- ①机组冷却剂液位太低(应该从油窥镜中能看到，但不要超过一半)；
 - ②油冷却器脏；油过滤器芯堵塞；温控阀故障(元件坏)；
 - ③风扇电机故障：触发风机交流接触器，检查风机是否旋转
 - ④温度传感器故障：当机器运行时，观察显示器温度是否有数字跨度很大乱跳的情况
 - ⑤排风管道不畅通或排风阻力(背压)大，散热出风口处有遮挡物
 - ⑥环境温度超过所规定的范围(38°C或 46°C)；
 - ⑦如遇到更换变频器换线导致高温，检查电机按主机提示方向是否正转
- 解决办法
- ①更换冷却液以及油滤
 - ②用高压空气吹扫散热器以及机箱内部门板过滤网
 - ③如遇风扇到 95 度以上或者显示器显示风机启动时风机没有按时启动，及时联系售后人员

2, fault phenomenon: unit exhaust temperature is high (more than 100 °C)

1. the coolant level of the unit is too low (it should be visible from the oil speculum, but not more than half);
- 2.Oil cooler dirty; Oil filter core blocked; Temperature control valve failure (bad components);
- 3.Fan motor fault: trigger the ac contactor of the fan to check whether the fan is rotating
4. Temperature sensor fault: when the machine is running, observe whether the display temperature has a large digital jump
- 5.The exhaust pipe is not smooth or the exhaust resistance (back pressure) is large, and the heat dissipation air outlet has shelter
6. Ambient temperature exceeds the specified range (38°C or 46°C);
7. In case of high temperature caused by cable replacement of frequency converter, check whether the motor is running in a positive direction as prompted by the host

The solution

1. Replace coolant and oil filter

2. Purge the radiator and the internal door panel filter with high-pressure air

3. In case the fan reaches 95 degrees or the monitor shows that the fan does not start on time, contact the after-sales personnel in time

3、故障现象:机组油耗大或压缩空气含油量大

①冷却剂量太多，正确的位置应在机组加载时观察，此时油位应不高于一半；

②回油管堵塞；

③回油管的安装(与油分离芯底部的距离)不符合要求；

④机组运行时排气压力太低；油分离芯破裂；

⑤分离筒体内部隔板损坏；机组有漏油现象；

⑥冷却剂变质乳化或超期使用。

⑦使用的油分芯不符合设备压力密度不够

解决办法

①打开排油阀，检查排出来的油是否含水是否乳化，如含水量较大应及时更换。

②更换油分芯以及过滤芯

③疏通回油管

3, fault phenomenon: the unit fuel consumption or compressed air oil content is large

1. Too much cooling dose, the correct position should be observed during unit loading, at this time the oil level should not be higher than half;

2. return tubing blockage;

3. the installation of the return pipe (distance from the bottom of the oil separation core) does not meet the requirements;

4. the exhaust pressure of the unit is too low during operation; Oil separation core rupture;

5. The internal partition of the separation cylinder is damaged; The unit has oil leakage phenomenon;

6. The coolant is emulsified or used over time.

7. The oil core used does not conform to the equipment pressure density is not enough

The solution

1. Open the oil discharge valve, check whether the discharged oil contains water or is emulsified, such as large water content should be replaced in time.

2. Replace the oil core and filter element

3. Dredge the return pipe

4、故障现象:机组压力低

①进气阀故障，导致无法正常进气

②空滤过脏，导致进气不畅通

③管道阀门问题，有漏气或者阀门未关闭导致气压异常

④有吸干机，或者其他有排期机组

⑤空压机选型问题

⑥机头问题，螺杆间隙增大，或者轴承损坏

解决办法

①运行时拿下空滤检查进气口是否打开，如正常打开检查后面是否有漏气

②出现打气缓慢，尝试拿下空滤滤芯，看是否正常打压

③出现进气口不开，检查电磁阀电压，检查保险

④调节进气阀泄压螺丝，看是否因气缸憋气导致进气阀不开

4, fault phenomenon: low pressure unit

1.The intake valve is faulty, resulting in the failure of normal air intake

2.Air filter dirty, resulting in air intake is not smooth

3. Pipe valve problems, leakage or valve is not closed to lead to abnormal pressure

4. There are suction drying machines, or other scheduled units

5.The type selection problem of air compressor

6. The head problem, screw clearance increase, or bearing damage

The solution

1.When running, take down the air filter to check whether the air inlet is open, such as normal open check whether there is air leakage behind

2. When air pumping is slow, try to take down the air filter element to see if it is normal to suppress

3. If the air inlet does not open, check the voltage of the solenoid valve and check the insurance

4.Adjust the pressure relief screw of the inlet valve to see whether the inlet valve does not open because of cylinder suffocation

1. 空压机安装流程

空压机安装流程图

Installation flow chart of air compressor



空压机+吸干机安装流程图

Installation flow chart of air compressor + adsorption dryer



一体式空压机+吸干机+储气罐安装流程图

Installation flow chart of integrated air compressor + adsorption dryer + air storage tank



● C级过滤器：初级除尘
Class C filter: primary dust removal

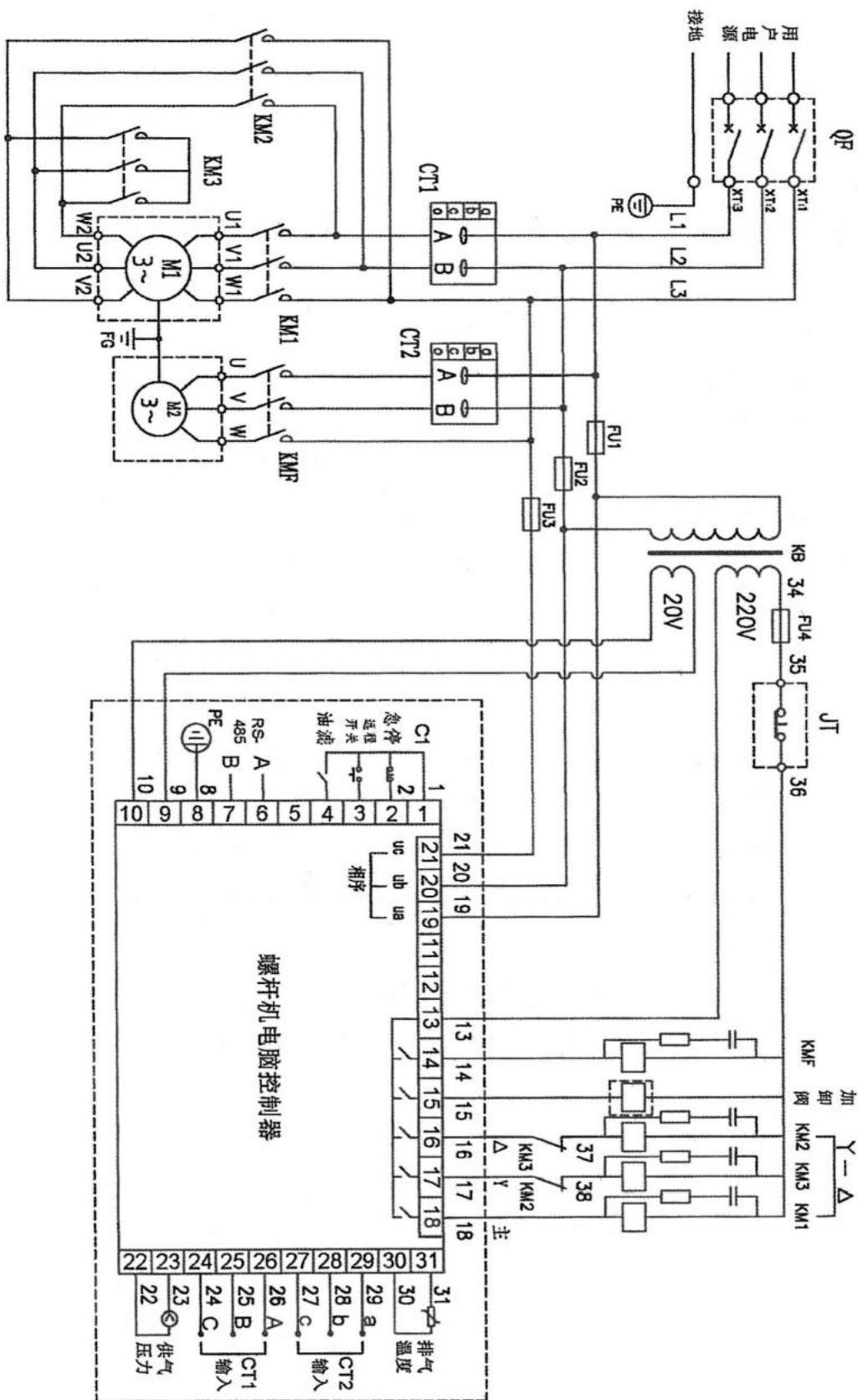
● T级过滤器：精密除尘
Class T filter: precision dust removal

● A级过滤器：活性炭
A filter: activated carbon

● X级过滤器：活性炭
Class X filter: activated carbon

● F级过滤器：超级除尘
Class F filter: Super dust removal

1. 空压机电气控制图



2 空压机管路连接流程图

