

**SCREW AIR COMPRESSOR
OPERATION & MAINTENANCE MANUAL**

PLEASE STUDY THIS MANUAL CAREFULLY BEFORE USE

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1.0 Products

Screw-type air compressor structure of a unique design, a compact, stylish appearance, high efficiency, small energy consumption, low noise characteristics and long life, is a smart environment-friendly products. Is widely applied in metallurgy, machinery, chemicals, and mining, and electric power industries of the ideal gas source equipment.

It has:

- The third generation of advanced rotor
- Concise intake control system
- Efficient centrifugal separator oil and gas, gas oil content is extremely small, tube and core of long life
- Efficient, Low Noise Suction fan of the full use of export dynamic pressure increased effect of heat transfer (air-cooled)
- Automatic water-cooling system for large air compressor to provide more efficient heat transfer capacity (water-cooled)
- Packaging materials so that the noise to the minimum level of noise attenuation
- Fault diagnosis system, the control panel is easy to operate
- Removable door, equipment maintenance, service convenient
- Micro-electronic processing so that temperature, pressure and other parameters are closely monitored
- Show-controlled instrument used (standard) and PLC-controlled liquid crystal display (intelligent), two forms of electrical control, have a variety of monitoring protection
- No one realized fully automatic operation, intelligence operations, and remote control and linkage control

The operation manual is to help users get the best results, must be read carefully before operating. On the proper use and maintenance plan, will extend the service life and reduce air compressor failure.

※ Note: All the relevant information, services and spare parts directly with the customer service department or its authorized agents mechanical linkages.

2.0 Security

2.1 General

Air compressor designed to take fully into account the safety of operators, but operators must ultimately be responsible for their own safety. Below the security measures only as a guidance, is aimed at the use of air compressor in the process

of harm reduction.

Not operate under unsafe conditions for air compressor. In maintenance, air compressor should be marked temporarily unable to work and cut off power supply,

This will prevent the misuse of others caused injuries.

2.2 Personal Protective Equipment

Work long hours in the air compressor next to the operators must wear ear protectors.

2.3 Pressure

- 1, the removal of the oil filter, air compressor should be in a state of downtime, and no pressure (to be down five minutes before the removal of the oil filter).
- 2, in the open any pipe, valves, Mentou, joints, as well as related parts, should eliminate internal pressure.
- 3, the Ministry of technology has not been agreed, not to alter the pressure settings.
- 4, not to damage or removal of safety valve.
- 5, under any circumstances, do not direct the flow of the body or cooling the air.
- 6, under any circumstances, not to compressed air directly in front of their own any part of the body.

2.4 Fire, explosion-proof

- 1, should immediately clean flying out of lubricants and other flammable and explosive materials.
- 2, flammable and explosive items must be away from the air compressor, air compressor next to the smoking ban.
- 3, cables and connectors to maintain clean, bonded and Terminals.
- 4, to ensure good air compressor operation, the use of special lubricants and spare parts.
- 5, air compressor should be in a good ventilation or hot-air row of the installation work. (Otherwise, hot air temperature will rise)

2.5 Mobile and the protection of rotating machinery

- 1, the release of the clothing and any part of the body are not close to fans and other rotating parts.
- 2, in the maintenance of air compressors, power must be shut down to prevent accidental launch.
- 3, in the absence of protection of the gate, not to start machines.

2.6 Dangerous surface

Avoid physical and thermal fluid, heat and the exhaust pipe of contact with the surface, to avoid scalding.

2.7 Hazardous Substances

- 1, do not breathe the air out from the air compressor.
- 2, compressed air is not directly at anyone.

2.8 Lifting and transport

- 1, the air compressor when the application-oriented hoisting rope, twisting to prevent bad air compressor. After lifting to check whether the welds and bolts loose.
- 2, if the trailer is flat handling, should ensure that the trailers have enough flat-panel power to drag the air compressor.
- 3, if the forklift is used to handling, should also ensure that the forklift has sufficient power, according to the specific situation to the local requirements.

2.9 Personnel in the prevention of machines shut down within

If the air compressor within the very large space (to accommodate), in the air compressor to work outside the marked, and must cut off power and placed obvious signs.

2.10 Operation

- 1, air compressor acoustic enclosures optimize the structural design of the cooling air flow (under normal circumstances, the door was opened, should not boot).
- 2, open-air compressor can not work unless the provision of specialized equipment to maintain the open.
- 3, if the air compressor leakage, please do not start up, should contact customer service.

✱ Tip: When the air compressor running time should be installed first acoustic home

3.0 General description

Screw the screw air compressor rotor is manufactured in accordance with international standards, the use of asymmetric linear design, to ensure that the use of all energy consumption and the smallest gain the maximum amount of compressed air.

Air compressor is modular in design, screw rotor, oil and gas separation extinguishers, coolers, are installed in a motor, within the framework of acoustic enclosures through the noise of rubber materials.

3.1 Principle of operation

Screw air compressor is the main components of screw head, the separation of oil and gas cylinder. Screw suction filter through the nose and suction inlet control valve, oil also inject compressed room, a cooling of the nose, while the screw and the bearings lubricated by compressed air pressure that is generated.

Compressed gas mixture of oil and gas production, oil and gas emissions to the separation barrel. Centrifugal force in the machinery and the role of gravity, the majority of the oil from the oil and gas separated from the gas mixture. Residual fuel-air after the separation of oil and gas no longer be separated from the core.

Separated from the core oil and gas separation of the oil filter, clean the oil return to the work of screw head cavity.

When the oil is separated, compressed air into the minimum pressure valve after coolers,

air cooled to the temperature higher than the 7 ~ 10 °C discharged.

Minimum pressure valve to maintain the normal operation at the start and oil pressure on Circulating the required minimum.

3.2 Control System

Control system is aimed at controlling the intake valve open, to ensure the normal flow of air. The system includes an intake valve, a Detroit, two electromagnetic valve.

- 1, the start: When you launch air compressor, by the spring of the intake valve is closed to the role. So empty air compressor in the case started, only a small amount of air through air controllers for one-way valve be inhaled, the establishment of cavity pressure to ensure that the oil cycle.

- 2, to load: When the air compressor to load up and running (running) state, is a vacuum within the compressor, air filters, pressure, pressure to both the intake valve piston operation, intake valve open. With the air into the intake valve to open all, the pressure increased.

- 3, a full load: When oil and gas from the cylinder pressure reached 40 KPa, the minimum pressure valve opened, compressed air outflow. (As long as the system pressure than the pressure setting, intake valve has been opened)

- 4, unloading: when the pressure pipeline to set up pressure, the pressure switch to the electromagnetic valve off, compressors and air filter of the Inner Mongolia Autonomous Region have no pressure. Spring on the role of intake valve will be closed. Exhaust electromagnetic valve action, separation of oil and gas cylinder to reduce the pressure on so that the screw head lower back pressure. Unloading when a small amount of air into to maintain a certain pressure to ensure that the oil pressure of work so that the rotor, the bearings lubricated. When the pipeline pressure dropped to set the load pressure, the air compressor return to the loading state.

Electromagnetic valve power, the intake valve open, the pressure increased. Based on the needs of compressed air, repeat cycle of the process.

- 5, stands: When the air compressor downtime, all of the electromagnetic valve off, the intake valve closed, the pressure through the barrel of electromagnetic exhaust pressure relief valve.

3.3 Jin temperature

Air compressor design operating temperature for 5 °C to 50 °C, measuring point is the air entry points.

3.3.1 Condensation - Cool

In the relatively high humidity, and lower operating temperature than when condensed water easily gathered in the oil. Wen Kongfa air compressor with a temperature set at 70 °C (This is the steam necessary for the evaporation temperature), when the oil temperature, oil temperature higher than that before the oil cooler.

In the ambient temperature below 5 °C areas, use of the machine, under the requirements of oil and gas separation extinguishers installed heater (please contact the Department of Technology).

3.3.2 Overheating – High Temperature

When the ambient temperature at 50 °C or more, or the installation of a boiler room, use the machine, inhaled air must be introduced from the outside.

Air compressor maximum operating temperature is 105 °C, must be based on manual to find the reasons for the failure, or contact customer service.

3.3.3 Discharge temperature

Temperature temperature of the exhaust air compressor set point in the exhaust port. According to the exhaust temperature is the ambient temperature, the cooler the cleanliness, air filter and the cleanliness of the oil filter change in the cleanliness. Normal operating temperature of 70 °C to be between 90 °C.

In the cold start-up, quickly exhaust temperature rose to 85 °C, Wen Kongfa fully open (Wen Kongfa action began at 70 °C). When the oil temperature back to 70 °C, when Wen Kongfa will bypass part of the oil to prevent oil temperature is too low. Wen Kongfa is to control the oil cooler to regulate the oil discharge temperature.

4.0 Technical Specifications

4.1 Electrical characteristics

Intelligent Unit optional SCK PLC, and its main features are:

- 1, SCK is the latest award-winning, solid and compact plastic casing, easy wiring, control and, with the former mask to protect components.
- 2, through the mounting holes or DIN rails can be installed vertically or horizontally in the cabinet, the terminal row as a fixed wiring accessories (optional).
- 3, data security in the internal EEPROM storage users of the original procedures and scheduled, and in a longer time period (typically 190 hours), all intermediate data can maintain a super-capacitors.
- 4, Profibus DP network control and the use of near-unanimous far, the maximum transfer rate of up to 12 Mbit/s.

4.2 Of lubricants

Screw Compressors for oil has the following characteristics:

- foaming low and difficult to volatile
- role of strong anti-emulsifying
- high antioxidant
- campaign viscosity (40 °C) mm² / s 28-35
- has a good anti-wear lubricity, anti-foam and water separation
- condensate temperature -20 °C, to prevent the curing performance, lower power consumption
- flash point temperature of 200 °C, to prevent the formation of carbon deposition performance, lower power consumption

- high stability, can significantly prolong life, reduce maintenance cycle and Huanyouzhouqi, good adaptability
- Screw air compressor for oil, screw machine is based on the principle of special and exclusive distribution of air compressor oil, in order to ensure the normal use of air compressor, screw air compressor selected for oil.
- ✦ Note: clients for the use of other brands of oil caused the problem, the company does not undertake any responsibility.

4.2.1 bearing motor oil

Bearing the air compressor motor oil recommended Shell Alvania RL 3 fats.

Note: do not lead to the correct installation of durability failure

5.0 installation requirements and start-up check

Before installing the air compressor, double-check whether the transport of the damage caused. If it is found that significantly damaged, immediately contact customer service.

5.1 location request

- 1, air compressor should be placed in a clean, no dust in the air and non-poisonous gas, flammable, explosive gases and well-ventilated occasions, and to facilitate maintenance work.
- 2, open-air compressor can not be used, unless the compressor is installed with the open-air options, all the air compressor must be installed in the indoor (or increase shelf covered).
- 3, poor outdoor environment, dust, should be in the room air into the rough validity of the outlet installed filters to reduce indoor dust content.
- 4, the temperature must be greater than the 5 °C, lubricants to ensure the normal cycle.
- 5, the surrounding air compressor must have a certain space, one meter away from the wall for good, so that operators of day-to-day operation, maintenance and overhaul.
- 6, air compressor must be placed at the level of hard ground, not bolt fixed.

✦ Tip: Do not install air compressor in the vicinity of the hot air. From the exhaust pipe from the hot air, the cycle can not be inhaled. (The air compressor in a ventilated places)

5.2 cooling requirements

- 1, to prevent the emission of hot air re-inhalation
- 2, the smallest air resistance
- 3, to reduce suction vacuum
- 4, the same room to install multiple air compressor, please contact customer service

5, poorly ventilated rooms, the need to install ventilation and exhaust pipe

6, machine outdoor installation, the machines must be installed at the top of Yupeng, or other open-air installation of devices

7, to consider each of the suction machine outlet from the other machines will not exhaust the suction mouth

8, plate-fin heat exchanger emission of air can not be promptly dispersed, it will affect the temperature of the surrounding air compressor, the proposed use of exhaust pipe (no exhaust pipe and tube planes, which can not be greater than the pressure drop of 30 Pa, and Pai Wind pressure can not be in the air compressor).

※ Note: taking into account the cooling effect, to a well-ventilated rooms (if not enough cooling capacity, will lead the indoor temperature rise, leading to overheated air compressor). Paying particular attention to the cooler is to prevent the emission of air being inhaled. The installation of new machinery and start-up, please contact customer service.

5.3 pair of water-cooling unit, cooling water quality requirements

1, total hardness CaCo₃ used to be that less than 100 PPM (100 mg/l)

2, PH value of between 6 to 8

3, suspension of not more than 50 PPM (50 mg/l)

※ Tip: Cooling water temperature is designed to 32 °C, water quality must be consistent with the general industrial water to avoid the use of groundwater, if the poor water quality and cleaning agents to regularly remove fouling. The following winter at the freezing point, stands a long time, cooling water must be clean emissions.

5.4 Pipeline system connecting the air requirements

1, piping, require exhaust pipe with a diameter of at least diameter of the exhaust pipe of the compressor, all pipes and fittings should be able to withstand the rated pressure, appropriate allocation of the gas flow requirements so that the pipeline pressure drop no more than set pressure air compressor 5%, in line to minimize the use of the elbow and drag coefficient of components, longer pipeline, the best choice of the design value than the diameter.

2, to avoid condensation of water in the pipeline along the pipeline flow to the work machine or pneumatic components, should be set up in front of their water and gas separation plant and sewage installations. Road charge of piping, the pipe must have one or two degrees of tilt, for the benefit of the condensate pipeline from the cold water.

3, the exit of the compressor, a one-way valve should be installed and the closing valves, then there should be pressure on the sampling population, with maintenance of the cut-off valve, in order to access the hose, with maintenance work.

4, due to a compressor base Earthquake pads, no fixed the support of all the external piping must have its own independent support. Pipeline installation to be considered downtime, will not return to the condensed water into the air compressor. (Pipeline connecting the air compressor air compressor shall not exceed the Export I)

5, supporting the use of compressors and dryers, the ideal piping system is in between the compressor and the installation of a dryer cylinders, this could be caused by gas compressor cooling and isolated part of condensed water. After cylinders at the same time, low temperature and Hanshui Fen less compressed air transport into the dryer, you can reduce the load dryer, saving energy consumption.

6, the ideal trial for the allocation and use of gas around the entire plant, this can have access to any location in both the compressed air, and in the appropriate configuration around the main line on the valve, so as to help cut maintenance purposes.

5.5 electrical installation requirements and electrical inspection

1, all the wires have been in the air compressor factory testing, access the external air compressor wires must use qualified manufacturers of wires, according to compressors necessary for the importation of power, the correct choice of the power cord specifications. When the power cable lines long, the line losses to be considered at this time should be bold diameter to meet the air compressor up and running.

2, the displacement compressor should be considered a separate power supply system, so as not to affect the commencement of the compressor other devices work properly.

3, air compressor in the power supply voltage to be confirmed with the compressor rated voltage line.

4, compressors must do a good job in a reliable grounding line, to prevent leakage and dangerous.

✳ Tip: the machine started on the panel marked electrical schematics.

5.5.1 Power

Standard requirements:

380V, 3 phase, 50 Hz grounding

Special requirements in order when

✦ Note: air compressor its own transformer, do not need the center line.

5.5.2 Motor to

In testing motor to the former, familiar with the manual of Chapter 6.

Electric power and the right to access, to ensure that the right motor. Air compressor with a motor to prevent reversal of the special device (if the three-phase phase sequence wrong, the electrical automatic shutdown to protect the motor).

Specific methods are as follows: Access to power, release the emergency shutdown button, the machine self-inspection; on the start button, the electrical operating normally, the three-phase progressive correct.

Motor automatic shutdown of the sequence is wrong, and the two pairs of input current exchange (and not to replace the starter motor coil and the coil, these coils are factory optimization of the use of motor performance and configuration, can not be changed). The electrical wiring of electrical work must have a certificate from the staff to complete.

5.6 mechanical testing

5.6.1 screw head of the inspection

1, from two different directions manually rotating the screw head pulley or coupling, the screw head has not been confirmed locked.

2, down more than 12 months when the air compressor or storage after a period of time must be open intake valve, through the inlet valve control by adding a half litre of oil. From two different directions manually rotating the screw head pulley or coupling to ensure that all oil into the screw head.

3, then again into the trachea, to ensure the mouth sealed.

5.6.2 oil-inspection

Open the side door, we can see that oil and gas from the oil-barrel, oil must not be lower than under the standard oil, in the same operation. (efueling by the highest oil-mouth restrictions)

By adding the oil provision to ensure that the lid Gaijin efueling mouth, the right ring can be sealed.

5.6.3 Transmission System inspection (belt or patch-coupling)

1, belt checks

Check all the belts are in bed, by adjusting the screw head of the adjustment bolt to adjust the tightness of the belt. (Normal adjustment method, see 8.7)

2, patch-coupling of inspection

Check whether the patch in the coupling bolts fastening the state.

5.6.4 inspection system in all the valves

The deadline for check valve is open.

✦ Note: Please refer to Chapter 6 of the correct procedures for start-up

6.0 Operation

The following procedure is the first launch air compressor, air compressor, or stop using more than two months on the operational procedures.

6.1 preparations for the pre-boot

Equipped with advanced air compressor from stopping delay functions, which together with the air compressor assembly, would serve to protect the electrical, screw nose relay, to optimize system performance.

1, the start delayed

This function is to avoid blackouts or after the emergency shutdown of the motor consecutive start. During this time, the air compressor could not be activated to ensure that the system to reduce the pressure to prevent a back-pressure compressor in the case started.

In this period of time by the start button, the system will automatically record the signal, such as delay time that the air compressor will be automatically activated.

2, stands Delay

This is a soft-shutdown feature, which allows air compressor unloading stands. The shutdown button, air compressor unloading, running for a pre-set time after the shutdown. (This will help to reduce the pressure on oil and gas separation cylinder) This delay in the stop for a period of time according to boot button to stop automatically delay the end of this time, as long as the system pressure to load and

offload and normal air compressor.

6.2 initial start-up procedures

- 1, please read the manual in front of the section;
- 2, all the preparation and start-up inspection should be strictly in accordance with Chapter 5 of the standard to implement;
- 3, check whether the export of cut-off valve open (open the valve once the deadline, show that the pressure is the pressure);
- 4, connected to power, power indicator light, the compressor started delayed, ban immediately launched air compressor;
- 5, the start button (to ensure that the right - see 5.4.2), the air compressor is the delayed implementation of the normal start, once the pre-set the start-up time that the air compressor that is automatically activated. (In the delay time, the stop button down)
- 6, observe the operation of the control panel on the temperature and pressure systems, the proper operation of air compressor (see 3.1);
- 7, when the pressure to set up after the pressure switch moves, air compressor running, but running on empty state;
- 8, through the air compressor to load, unload cycles and gas field, the operation must pay attention to pressure, temperature fluctuations and the current situation;
- 9, to ensure the smooth operation of machinery, no accidents vibration;

✱ Tip: the vibration machine accidents, stands contact customer service.

6.2.1 peacetime startup procedures

- 1, check the oil-is correct, the oil in the oil must be the subject of the middle;
 - 2, the condensed water discharge cylinders;
 - 3, the deadline for confirmation valve open;
 - 4, the start button: (air compressor is not automatically activated in the running lights flashing, that delay in the launch air compressor)
- ✦ Note: in the stands within 60 seconds, do not start machinery, oil and gas must be completely separated barrel pressure release (to prevent a back-pressure compressor in the case started).

6.2.2 shutdown procedures

As long as the shutdown button, air compressor started delay stands, and then prepare for the indicators lights flashing. After a period of time, the air compressor to automatically stop.

If the air compressor has been in operation stands by full stands after the stop button.

✦ Note: air compressor in the state by plane may be downtime, may also be activated at some point, even if the motor did not turn down that should not be read by the light of whether or not lit.

✱ Tip: emergency shutdown button, generally used only for the state of emergency.

6.3 functional control

6.3.1 Standard

Standard air compressor of monitoring devices in the air compressor before the panel at the top. The control panel of the state machinery such as the following shows, there are three in the control panel digital display and a pressure gauge. Digital display shows a screw head exhaust ports of temperature, pressure gauges instructions minimum pressure control valve after the pressure.

Control board in a standard feature:

- emergency shutdown button (out of control when the hard stands)
- launch button
- shutdown button (delay soft shutdown feature)
- hours of service
- temperature figures show that oil and gas monitors
- before the filter pressure gauge
- exhaust pressure gauge

Advanced monitoring board in the additional functions:

- power instructions
- operation instructions
- igh-temperature oil and gas instructions
- main electrical overload instructions
- uninstall instructions
- air filter by blocking instructions
- core oil and gas from the cylinder block instructions
- oil filter by blocking instructions
- Fans have contained instructions
- water directives

6.3.2 on the use of intelligent operation

Please refer to Help Control System

6.4 pressure control switch

The initial design of the factory table:

Normal operating pressure (KPa)	Normal operating pressure (KPa)	Cut Pressure (KPa)	Pressure to cut (KPa)	Adjustable pressure to cut (KPa)	Adjustable pressure to cut (KPa)
700	60	650	710	650	720
800	70	730	800	730	800
1000	80	920	1000	870	950

Air compressor to increase the pressure on exports, the corresponding motor will increase the pressure, the air compressor to raise the pressure on exports, he must contact customer service

✦ Note: without the technology sector agreed that the unauthorized export pressure to change the air compressor caused the problem, not liable

6.5 high-temperature shutdown

Air compressor equipped with high-temperature protection device

6.5.1 screw head of the high-temperature protection

Air compressor equipped with digital monitoring display devices, if the temperature reaches rotor export 105 °C (This is the factory settings, can not be changed), air compressor downtime

When the high-temperature alarm, they should even take measures to identify reasons for troubleshooting.

High-temperature shutdown after launch air compressor, must be re-confirmed (and other machines after cooling), the boot is now before the shutdown button.

✱ Tip: If fault can not be ruled out, this may be due to an internal temperature is also very high, in this case, air compressor must be cooled down.

6.6 motor overload protection

Air compressor motors are equipped with temperature overload protection device, when the motor temperature too much time, temperature overload protection for movements to air compressor downtime. When this happens, the starter for the internal protection devices must be reconfirmed. Cut off power supplies, electronic control box open, click on the reset button on the device, find a place to solve problems.

✱ Note: Please other electrical contact with local suppliers

6.7 Wen Kongfa

When the air compressor from the cold at the start of the emissions, the temperature will quickly rise around 82 °C, Wen Kongfa all open at this time, if the load relatively small, oil temperature will be maintained at around 70 °C. Wen Kongfa goalkeeper bypass without oil cooler to prevent the oil temperature is too low. When the load increased, oil temperature will rise, then Wen Kongfa will be part of the oil through the oil coolers, air compressor to maintain the ideal temperature to work

✦ Note: correct settings will not damage air compressor, the company irresponsible

7.0 Options

Below the option to order requests targeted under the Factories

7.1 Lord, by way of Control

When the air compressor tandem with work, need a master / preparation of control, the main air compressor to provide the main gas source. Not enough to supply the main air compressor, air compressor by the work of preparing the main air compressor in a set time conversion (one day or a week)

When more than one series of air compressor when the exhaust pipe must be careful layout. Incorrect pipe layout will air compressor in the condensed water gathered in charge of road, empty or flow back to prepare for the state of the air compressor. Overall air compressor Export mouth with the location of the high-mouth

※ Tip: Do not set to host two air compressors at the same time or by machine, to be located mainly by way of

7.2 show that the oil filter pressure

With the oil filter before the pressure switch, the factory pre-set value is 100 KPa, to achieve this setting, that the oil filter needs cleaning

7.3 air filter pressure show

Air filter pressure monitors equipped with pressure before the switch, the factory pre-set value is 5 KPa, when the air filter more than the set pressure value or use of time, the need for its services

7.4 cylinder pressure from oil and gas show

Separation of oil and gas cylinder equipped with pressure switch monitors, the factory setting is 100 KPa, when the separation of oil and gas cylinder pressure over the set value or use of time, the need for its services

7.5 remote control device to stop and start

Commitment air compressor equipped with remote control devices, the air compressor to provide a safe, low-speed, remote control operation. On the system to provide a live / remote control selection switch, an AC adapter 220/24 provide 24 V power to control the start / stop device.

In the control panel installed on another load timers, loading it with the control solenoid valve connected, by recording load control electromagnetic valve time to record the work of the air compressor load time.

By comparing the time to load timer and the air compressor air compressor running time calculated the average loading rate.

8.0 maintenance

8.1 General

Compressors are suitable only the maintenance, air compressor will have the best working conditions. Proper maintenance can increase the life expectancy of the machines, saving the time of the failure downtime.

Air compressor to provide a variety of maintenance options, regular maintenance of a long period of use and trouble-free period, please contact customer service, to arrange these services.

※ If the air compressor installed in a clean, low temperature environment, the appropriate services period can be extended.

Please contact customer service, in accordance with your environment to develop the correct use of the service cycle

8.2 day-to-day operation

Prior to the commencement of: Pai tube to separate the oil and gas condensate, oil outflow until a date, and check the oil-whether in the right position.

✦ Note: in the stands five minutes before they can open the oil row ball valve.

Post: To observe the control panel displayed on the pressure, temperature checks, inspection machines within the overall situation, the cooler surface, bolts, such as whether there is a leak.

8.2.1 maintenance programme

Check the machines operating temperature, pressure. (Per day)

Records of the air compressor running current, voltage, temperature and pressure.
(Per day)

Cleaning machines (must be in the stands time). (Weekly)

Washing blowing air filter. (Weekly)

Oil-check. (Monthly)

Check pulley (coupling) of the bolt (to be shutdown time). (Monthly)

Winds washing cooler. (Monthly)

✱ Note: If any unusual please contact customer service.

8.2.2 running 500 hours (for the first time maintenance)

Check oil quality, if qualified people can filter clean after use, even if it failed
Huanyou

Replace the oil filter core

Replacing air filters Core

The replacement of oil and gas separation core,

Check back to filter pipeline

Pulley inspection of the plane or patch-coupling of coaxial

✦ Note: air filters and the environment-related, if excessive environmental pollution,
the replacement of the period should be shortened.

8.2.3 every 3,000 hours

Replace the oil filter core

Replacing air filters Core

The replacement of oil and gas separation core,

Replacement of compressors for oil

Check and adjust the plane of the pulley or the coaxial coupling

Inspection and cleaning filter back to tubing

Check air control valve

8.2.4 every 6,000 hours

Every 3,000 hours to complete all the checks would also like to complete the following
inspections:

Minimum check pressure control valve

Check Wen Kongfa

Check whether the tight electrical terminal

Check the main bolts, nuts and fittings are tight

Check safety devices

8.3 maintenance guide

Air compressor in operation or under pressure, not to conduct any air compressor
maintenance and repair. First down, and so after the release of internal pressure
for maintenance.

After the safeguarding and maintenance, should be fully re-check whether the device

had been intact, all fasteners and sealed components are installed in place.

8.3.1 air filter maintenance methods

- 1, open the cover;
- 2, gently come up with a filter;
- 3, check the air filter (if not on the replacement);
- 4, removing left on the bottom covered with dust;
- 5, the replacement of the new filter, installed;
- 6, cover cover.

8.3.2 oil filter maintenance methods

- 1, with band clamp screw under the old filter;
- 2, clean surface;
- 3, the new filter seal the surface coating layer of thin oil film;
- 4, with their hands to bear the new filter, until the gasket seals;
- 5, the start-up check after the leakage.

8.3.3 barrel of oil and gas separation of the core maintenance methods

Screw-load of maintenance methods with 8.3.2;

Built-in steps are as follows:

- 1, open the machine and the service side door Dingmen;
- 2, with the minimum of pressure release valve connecting the head;
- 3, release of oil and gas from the pipeline with a tube, remember to ensure proper installation;
- 4, the release of oil and gas separation barrel on the fastening bolts;
- 5, gently pick up the plate, to clean tubing;
- 6, with cylinder-core oil and gas separation;
- 7, the replacement of the new oil and gas separation cylinder core and pads.
- 8, according to the steps to install the contrary, the attention back to check the length of tubing. (Please refer to return to the pipeline maintenance)
- 9, the use of torque wrenches, tightening a bolt each.
- 10, re-oil separation cylinder cover fastening bolts, when the machines after the start-up fever to operating temperature.

8.3.4 inlet valve control and maintenance of the way

Intake valve body from the main control valve, valves, pistons, cylinders, springs, seals and other components, the side with control block and control electromagnetic valve, combined with on-off regulation, by Dutch, muffler, the buck And stands emptying, and other functions. Could be reduced when a small part of the gas valve through the keyhole Fangdiao to balance the inlet valve control of the inhaled air holes so that the separation tank to maintain the pressure in the 0.2 ~ 0.3 Mpa, to maintain the normal cycle of lubricants. Intake valve control of the action whether or not to open closed flexibility, the reliability of the compressor is very important. Therefore, the air control valve should be maintained in order to maintain good working condition. Maintenance, spare parts should be removed, check the surface friction and wear, in particular, should pay attention to check rubber seals the surface, if damaged or

cracks, the new pieces will be replaced in the re-installation, all parts should be clean, metal Part of the friction surface should be painted with oil.

8.3.5 minimum pressure control valve maintenance methods

- 1, under screw cap, carefully valve within the elastic;
- 2, scored lid;
- 3, inspection of laps, if the damage to the replacement;
- 4, check ring, if the damage to the replacement;
- 5, with high-temperature lubricant oils and fats, according to demolition when the opposite direction, these re-install it.

✦ Note: in the assembly to ensure that, under the premise of the smallest pressure to open the control valve.

8.3.6 lubricants replacement method

- 1, stands;
- 2, tubing connected to row, open the valve, the oil will be discharged to the collection of waste oil barrel;
- 3, Pai oil valve closed, open 注油 covered and re-inject new oil, until oil to the oil-standard middle;
- 4, covered with a 注油, attention to O-ring is in the right position;
- 5, the start-up, run some time after the inspection of oil if the oil-low, coupled with some appropriate oil.

✦ Note: When machine operators or high temperature dust, oil change intervals to be reduced accordingly.

8.3.7 oil -

Oil-highest: 30 minutes downtime air compressor, oil Plane middle of the oil standard.
A minimum of oil: the machine running when the inspection plane in the oil under the oil between the standard position.

8.3.8 belt ease the adjustment method

- 1, stands;
- 2, out of side door;
- 3, the head of the fixed release bolt (to maintain 3 / 4 laps of the tight)
- 4, rotating adjustment bolt and adjust the belt to the right belt ease (center under the pressure of about three kilograms, the deformation of less than 5 mm);
- 5, fixed bolts fastening the nose;
- 6, the top gate installed

8.3.9 belt replacement method

And the replacement of the belt belt ease the adjustment is the same, only adjustments to the first belt-sufficient, and then replaced the belt, then 2 to ease the adjustment.

✦ Note: the replacement of the new belt, in the boot five minutes after the first adjustment, and then a few 0 minutes later revised. (This is conducive to the prevention of new belt-the first stretch)

8.3.10 pulley Correction

When the motor or nose been moved or re-installation, the pulley need to re-calibration of the parallel.

Pulley will not speed up the parallel of the belt wear and shorten the life of belt and pulley. Air compressor used automatic correction system, so as long as the guarantee of a pulley in the same plane. First head of the pulley fixed in the right position, then adjust the motor on the belt at the same level surface.

8.3.11 patch in the coupling

When the motor or nose been moved or re-installed, the patch must be re-coupling of. Its parallel, the line of control must be in the 0.05 mm range.

8.3.12 motor maintenance methods

Each motor bearings and lubricants to 1500 hours (with shell ALvania RL3 If not specified) to do the following:

- 1, with a clean cloth vigorous clean grease
- 2, removal of pulley (coupling), the operation of the electrical load in the motor running when the new increases such as oil, until the original oils are discharged from the hole row (row bearing hole in the cavity), with wipers Vigorous clean, to prevent excessive fat (too much oil on bearings harmful).

✦ Note: for lubricants should be very careful not to touch the motor nose.

8.4 Troubleshooting table

Occurrence	Possible reasons	EXCLUSION
------------	------------------	-----------

Not start (Electrical failure)	1, fuses Shaoduan 2, overload relays Action 3, low voltage 4, host fault 5, phase sequence relay action	1, electrical maintenance inspection 2, electrical maintenance inspection 3, electrical maintenance inspection 4, please contact Service 5, electrical maintenance inspection
--------------------------------------	--	---

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<p>High-temperature exhaust, air compressor automatically Trip</p>	<ol style="list-style-type: none"> 1, lack of lubricants 2, cooling water shortage 3, cooling water temperature 4, high-temperature environment 5, plug oil cooler 6, lubricants incorrect specifications 7, plate-fin heat exchanger dirty 8, oil filter plug 9, cooling fan failure 10 . temperature sensor fault 	<ol style="list-style-type: none"> 1, inspection of oil, if oil shortage, refueling shutdown 2, checks incoming and outgoing flow of water pipes 3, check water temperature 4, increase ventilation and reduce temperature to improve the environment 5, import and export inspection temperature, the normal temperature of 5 ~ 8 °C less than 5 °C may gambling Cypriot oil cooler, removed a pharmaceutical cleansing. 6, the replacement for oil 7, a low-pressure air clean 8, replacement 9, replacement of maintenance 10 . replacement
<p>High in the air in the oil, lubricants add a short cycle, air-oil-smoking car</p>	<ol style="list-style-type: none"> 1, high-oil 2, to plug the pipeline routes 3, back to the oil core of 0-ring broken 4, the exhaust pressure is too low 5, separated from the oil-damaged, failure 6, to maintain the pressure valve spring fatigue 	<ol style="list-style-type: none"> 1, inspection of oil and appropriate to add or discharge 2, demolition clean 3, the replacement of 0-ring 4, adjust the pressure 5, replacement 6, the replacement of the new spring
<p>The whole operation can not be contained</p>	<ol style="list-style-type: none"> 1, electromagnetic valve failure 2, the intake valve adverse action 3, maintaining pressure valve adverse action 4, circuit board failure 	<ol style="list-style-type: none"> 1, replacing 2, after the demolition of cleaning add Lubricants, check whether the unobstructed line of control 3, after the demolition of checks and check valve-the valve seat wear, such as replacement of worn 4, replacement
<p>Can not be empty, the air pressure remained car table or work pressure continued to rise, the safety valve action</p>	<ol style="list-style-type: none"> 1, the intake valve adverse action 2, crash-solenoid valve failure or crash-line plug 3, circuit board failure 	<ol style="list-style-type: none"> 1, after the demolition of cleaning and Lubricants 2, maintenance and, if necessary, replacement 3, replacement

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To reduce emissions	<ol style="list-style-type: none"> 1, the inlet filter plug 2, the intake valve adverse action 3, separated from the oil-plug 4, diarrhea-solenoid valve or pipe leakage 	<ol style="list-style-type: none"> 1, Cleaning or replacement 2, after the demolition of cleaning add Lubricants 3, replacement 4, maintenance and, if necessary, replacement
Empty and frequent car	<ol style="list-style-type: none"> 1, pipeline leak 2, the pressure is too small 3, unstable air consumption 	<ol style="list-style-type: none"> 1, check leakage location and locking 2, re-setting 3, Storage capacity increase
Parking at the fuel-air piping out from the air	<ol style="list-style-type: none"> 1, the intake valve closing lax or death card 2, re-car parking bays 3, the pressure valve to maintain oil spill 4, the relief valve of relief 	<ol style="list-style-type: none"> 1, maintenance and, if necessary, replacement 2, the reasons for inspection 3, maintenance and, if necessary, replacement 4, maintenance and, if necessary, replacement

Intelligent Control System Help

Use of



Before use, carefully read the manual.



Only professional and technical personnel to allow installation of MAM-KY.



Machinery installation must give full consideration to the installation location to ensure good heat and reduce electromagnetic interference.



The implementation of wiring, press, strong, weak separate wiring cabling rules to reduce electromagnetic interference.



Relay output control of the exchanges and contacts, etc. must be emotional load to surge absorbers.



Xinhua prior to double-check on the input / output wiring.



The body of the grounding terminal correct grounding (third grounding), the product can improve the ability of anti-noise.



Motor rated current (jump-current) set by the motor nameplate rated current \times electrical overload multiples / 1.2 times

Features:

- LCD display in Chinese and English

- with the electrical short circuit, stall, the lack of, overload, an imbalance of all-round protection
- has since stopped the motor control, operational control
- air compressor for the protection of anti-reverse
- the multi-point temperature detection and control and protection
- adjusted automatically load balance control pressure
- highly integrated, high-reliability, cost-effective
- remote / machine next to select control
- linkage / independent choice of running
- RS-485 communication

一、Basic Operation

1、Press Note

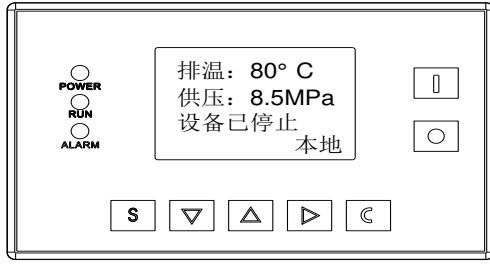


Figure 1

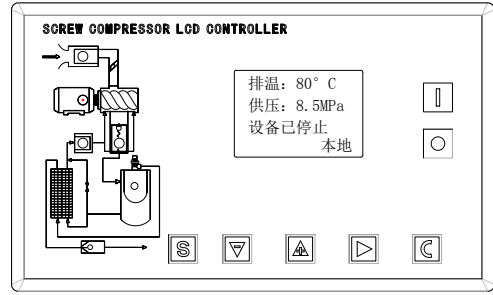
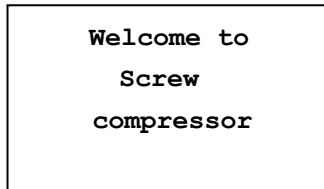


Figure 2

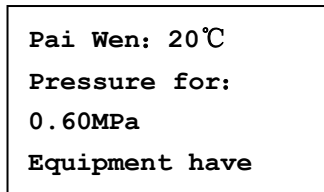
- |——Start button: Click key to starting motor running
- Downtime key: click here to stop the motor running
- S——Settings button: Edit the data, this button to confirm the importation of data storage
- ▲——On the shift key: modify data, this bond up to revise the number of in the menu choices as a selection key.
- ▼——Down Key: modify data, click here over the next several amendments to the in the menu choices as a selection key.
- ▶——Shift key / button to confirm: modify data, such as shift keys key in determining the menu choices as a key.
- C——Back key / reset button: the menu to return to operation as a key to its menu; failure stands, this reset button.

2, display and operation of state

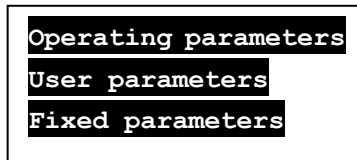
After the power-generating units interface shown below:



Five seconds after the main interface shows the following:

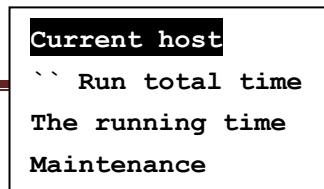


By "▼" to use the following menu to select the interface:



a, operating parameters Show

By "▲" or "▼" mobile black scroll to "operating parameters" menu, press Enter "u" after the pop-up menu next level:



And then "u" pop-up

Current (A)
R: 56.1
S: 56.2
T: 56.0

If a menu for the final, the interface will not be black scroll bars, according to the back key to "C" to return to their superiors or the main menu interface. If in a particular interface stop operating, a few seconds after the automatic return to the main interface.

Use "▲", "▼" mobile key, Enter "S" button and return to "C" in accordance with the above method can be fully observed that the running time, this time for running and maintaining parameters, historical failures, pre-date, on-site operation, such as failure Parameters and return to the higher level menu.

b, the user parameters

1), parameter modification method

= = running the state and the shutdown delayed the process of users can not modify parameters and manufacturers parameters = =

With the aforementioned view of the operating parameters can be user to view and edit parameters such as pressure to amend the ceiling, methods of operation are as follows: By "▲" or "▼" mobile " pop-up black scroll to the "user parameter", then click identify key "

Pressure, temperature presets
Commitment delay Preferences
Step-by-Preferences
Linkage preset parameters

" pop-up Then identify key "

Maximum pressure
0.8MPa
Lower pressure
0.6MPa

" to see the If we do not continue to identify key " " pop-up following the user interface asked user parameters. Then identify key " to enter your password:

Password

Note: The user's password, the user can modify parameters, manufacturers fixed

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for the password

This pop-up interface, flashing a bit, at this time "▲" and "▼" button into over and over and under the " " button to move into a shift of Laws, according to the current bond-Laws, " final "S" to confirm Enter. Pop-up interface:

Loading pressure 0.8MPa *
Unloading pressure 0.6MPa
Fans start temperature 80°C
Fans stopped at 70 °C

The top right corner with "*" tips, said

Has entered a state of the user settings.

"▲" or "▼" back to a rolling movement " " to identify key variable. Rolling of the "maximum pressure" on of the black, " ", at this time flashing a bit, "▲" and "▼" button the confirmation button " " button to move into a into over and over and under the current bond-Laws, " shift Laws in and be the "S" confirmed that the flashing of disappearing. "▲" or " " key variable to determine keys, "▼" back to a rolling movement of the black, " users can continue to modify other parameters. If not modify other parameters, according to "C" button to go back to their superiors menu or the main menu. Use the same method can modify other users parameters.

2) the user parameters and functions

1 menu	2 menu	Initial	Function of the
	Maximum pressure	*, **MPa	Unloading of pressure
Pressure, temperature presets	Lower pressure	*, **MPa	Loading pressure values
temperature presets	Fan Kai temperature	***°C	Fans launch control
	Fans stop temperature	***°C	Control of fan shutdown
Commitment delay Preferences	Host delay	0008 seconds	Protection of motor controllers when asked this time to avoid impact of current motor launch, this time must be greater than-angle delay loading delay +
	Fan Delay	0006 seconds	Protection of motor controllers when asked this time to avoid impact of current motor launch

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	Star Kok delay	0006 seconds	Star Kok buck start time delay
	Loading delay	0002 seconds	Star Kok buck started after the completion of loading time delay
	No-load delay	0020 seconds	Empty continuous operation, more than this time automatic parking
	Shutdown delayed	0010 seconds	Stands, empty after the delay this time to stop
	Delayed start	0100 seconds	Stands, empty stands to be delayed for too long this time to re-start
	Stand-delay	0000 seconds	Additional features
	Delay open water	0002 seconds	Automatic control drainage, drainage consecutive time
	Water Commissioner Delayed	0010 seconds	Automatic control drainage, drainage interval
	Commitment means	Machine next to	Make long-range, long-range aircraft and adjacent keys can start and stop switching equipment
Step-by-Preferences	Loading	Automatic	Set manual states, loading / unloading operations can only keys
	Means of communication	Ban	Set during Prohibition, communication does not work
	Communications code	0255	Address
	Linkage state	Host	Across-linked operation as a "host" or "slave" Host control from the machine
Linkage preset parameters	Linkage Commitment	Order	
	Rotation time	9999 Hours	

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	Linkage of a few	0000	
	The press restrictions	*, **MPa	
	The pressure limit	*, **MPa	
	Linkage delay	0000 seconds	
	Oil Filter	0000 Hours	Replace the oil filter can use the time cleared
Reduction and maintenance of parameters	Oil precision	0000 Hours	Precision replacement oil separator cleared the use of time
	Air Filter	0000 Hours	Replacement of air filters use the time cleared
	Lubricants	0000 Hours	Replacement of the time cleared the use of lubricants
	Grease	0000 Hours	ease time cleared the use of replacement
	Oil Filter	9999 Hours	Set to "0", the warning time for the oil filter does not work
	Oil precision	9999 Hours	Set to "0", the oil separator sophisticated early-warning time does not work
The largest use of Time Preferences	Air Filter	9999 Hours	Set to "0", the warning time for air filter does not work
	Lubricants	9999 Hours	Set to "0", lubricants time warning does not work
	Grease	9999 Hours	Set to "0", the warning time for grease does not work
Choice of Chinese and English		Chinese	As "English", the English interface change operation
Modify user		****	Users can modify user passwords

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passwords			
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3), manufacturers parameters

Manufacturers parameters and the difference is that the user parameters manufacturers parameters can not see, when changes can only be amended by manufacturers password, to amend methods of operation and user parameters to amend the same way. The main function of the following table:

Parameters of the	Initial set	Function of
Current host	Motor overload to allow the greatest value / 1.2	After the launch delay, when the electrical current is greater than the value set at 1.2 times more than four times the following, according to a set of jump-delay
Current fan	Motor overload to allow the greatest value / 1.2	Ibid.
Temperature warning	105°C	When the exhaust temperature is higher than the actual temperature this setting, prompted warning
Shutdown temperature	110°C	When the exhaust temperature is higher than the actual temperature settings, alarm shutdown
Stands the pressure	1.00MPa	When the gas pressure higher than the actual pressure this setting, the police stands
High pressure limit	0.80MPa	User parameters, high-pressure limit set value of this setting can only \leq
Load time	**** Hours	Manufacturers may amend the run-time load
Running time	**** Hours	Manufacturers may amend the run total time
Historical fault reset	****	Enter password history of failure after the removal of the entire history of failure
Of the current imbalance	0006	When (the largest of the current phase current minimum /) $\geq [1 + (\text{settings} / 10)]$, the imbalance between the protection of action stands. Set ≥ 15 , the imbalance

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		between the protection of non-functional
Open-phase protection	0005	Lack of time to set ≥ 20 seconds left, the lack of non-functional. Such as the imbalance protection work, protection will be uneven movements.
Frequency Selection	50Hz	Select current frequency, 50 Hz, 60Hz optional
Overload restart delayed	0000 Minutes	Such as electrical overload shutdown, in order to avoid frequent motor launch, whether or brown-out reset to go through this delay can boot
Pre-date	*****	Equipment manufacturers enter the factory date
Factory #	*****	Equipment manufacturers enter the factory No.

二、the functional and technical parameters

- 1, Switch: 9 Road switch input, 10 Road Relay switch output;
- 2, Analog: Second Road Pt100 temperature input, 2 Road 4 ~ 20 mA transmission input, two sets of three-phase current input (matching CT);
- 3, phase sequence input voltage: three-phase 380 V;
- 4, controller of the power: 20 V, 50Hz, 40VA;
- 5, shows range
 - a), oil temperature: $-20 \sim 150$ °C; accuracy: ± 1 °C.
 - b), the temperature: $-20 \sim 150$ °C; accuracy: ± 1 °C.
 - c), running time: 0 to 999,999 hours.
 - d), current display range: 0 ~ 999.9 A.
 - e), pressure: 0 ~ 1.60 MPa. Accuracy; 0.01 Mpa.
- 6, phase sequence protection: protection detects when the wrong phase, the movement time ≤ 2 s;
- 7, the electrical protection: the controller of the main motor and fan motors are all more than five basic protection
 - ①, stall protection: After the start, when the current work to set the current four to eight times, the movement time ≤ 0.2 s;
 - ②, short-circuit protection: as long as the current test to eight times more than the current set, the movement time ≤ 0.2 s;
 - ③, lack of protection: When any one of the lack of power, the movement time ≤ 2 s;
 - ④, uneven protection: any difference between two-and current 60 to 75 percent, the movement time ≤ 5 s;
 - ⑤, set against a time limit of protection (for the second time units), the table

below. Multiples = I really / I set

When the electrical current running set greater than or equal to the current 3.0 times to 1.2 times at the press table a set of multiples of action and time delay action

I really / I set up	≥ 1.2	≥ 1.3	≥ 1.5	≥ 1.6	≥ 2.0	≥ 3.0
Time parameters						
Action time	60	48	24	8	5	1

Text display Connection:

Display panel of five Terminals and a cable show that D-shaped head, were used to show connection, Rs-485 communications, 24 V power input.

Controller Connection:

Display panel with communications between the controller and cable connections. 23,24,25 for the phase sequence input terminals; 7,9 for the discharge temperature input terminals; CT1 mainly electrical transformer; CT2 for the fan motor transformer. Relay output for the 32 public-COM1; 27 master control; control astrocytes 28 contacts; control angular contact 29; 30 short electromagnetic valve; control fan 31; 34-valve control dumping of 37 operating instructions for the failure 38 Instructions; 39 warning instructions; 40 to COM2. 42 for the simulation to (the land), 43,44 for AC20V power.

Note: wiring, the electromagnetic coil to be Surge absorption, can be broken for the expansion.

Third, control theory

(A), an independent control

(1), near-automatic control (Commitment: machine next; loading: Automatic)

①, according to "ON" button starter: (Y-Δ starter)

Controller, three seconds after the self-inspection, according to "ON" button can not start. After the self-inspection by "ON" button host began starter. Starting the process for the host: KM3 in power, KM2, a Y-shaped state of delay time to start (Y-Δ conversion time), KM3 lost power (KM1, KM3 interlocking), KM1 in the electric motor Δ-operation, starting the end. Starting process, all electromagnetic valve has been stolen, and achieve empty starter.

②, automatic operation control:

Δ state motor to start after the delay after a period of time, loading the electromagnetic valve in the electricity, air compressor started loading, tank pressure began to increase. When the pressure increased over the high limit set pressure (the pressure of unloading), electromagnetic valve missing, loading, unloading, put a solenoid valve, air compressor running empty. If the required time (empty time), and reduce the pressure on the lower limit set by the pressure (the pressure load value), electromagnetic valve and a load electricity, dumping release valve lost electricity, the normal compressed air compressor, Increase the pressure cylinders. If the empty time, the tank fell to a low pressure does not limit the pressure, the controller will automatically stop the electrical work, and automatically stands empty for too long. Only when the pressure dropped to a low pressure limit, the

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electrical start-up process by automatically start running, so reciprocating cycle.

③, under the automatic manually loading / unloading

In automatic mode, unloading equipment in the state, click the "M" loading, unloading if the pressure higher than the pressure to move the load solenoid valve after the return to the unloaded state if the pressure of pressure below the unloading, loading a solenoid valve -- Until the gas supply pressure than the pressure after unloading to return to the unloaded state. Loading equipment in the state, click the "M" uninstal, if the pressure higher than the load pressure, load solenoid valve missing, less than the pressure until the gas supply to return to the load after load pressure on the state if the pressure below the load Pressure, then uninstal does not work.

④, normal shutdown:

The "OFF" button, load solenoid valve missing, and dumping in the electric-solenoid valve, delay for a period of time (shutdown delay), the electrical contact with stolen electricity, host and fan motor stopped running, re-starting after the end of delay Electromagnetic valve-dumping lost power. Only the "ON" button to re-start.

⑤, frequent anti-Starting Control

The "OFF" stands, stands empty for too long, so that the electrical fault shutdown to stop when the motor can not start immediately, the need for some extension , The controller in various stands under the window of time remaining Dao Jishi show that the time delay (for example, 90 seconds), the only time delay to zero starting motor.

(2), remote control (Commitment: Remote; loading: Automatic)

Remote control and basically the same as near-automatic control, unlike the equipment can start and stop remote control switch to complete.

(3), near-manual control (Commitment: machine next; loading: manual)

Commitment control and automatic control, only start after the end of equipment, in the unloading operation. The "M" key loading, unloading when the gas pressure is greater than the pressure, automatic unloading equipment, if not button "M" loading, unloading equipment has been running until the empty stands. During the uninstal process, according to "M" button to load in the loading process, according to "M" button to uninstal.

(4), remote manual control (Commitment: Remote; loading: manual)

Remote control and manual control of near-manual, the only equipment Commitment by remote control switch

(B), network control

(1), when the controller communications network is set to "computer" can be realized when the computer networking control

(2), when the controller communications is set to "linkage" can be realized between the controller and controller networking control, but only for the host machine # 1.

(C), air temperature control

When the temperature is higher than the exhaust fan starting temperature, the fan motor running when the temperature is less than the exhaust fan shutdown temperature, the fan motor stopped running.

(D), automatic drainage

This has Controller drainage function of timing, by setting the duration of the

drainage and drainage regular intervals.

(E), and the emergency shutdown fault shutdown

When the unit in operation in the process of electrical malfunction or failure of the exhaust heat, and other motor controllers to immediately stop operating, troubleshooting to be lifted after the state of failure to re-starting motor. In case of emergency, press the emergency shutdown button to cut off contact with controllers and power supply.

4, early warning and tips

(1), text display tips

①, air filter warning instructions

a, with early warning signal detection switch

Controllers detected through the air filter pressure switch moves in the text display prompts "air filter blockage."

b, set up early-warning time for the use of air filters

Time to use air filters, text display prompts "the use of air filters to time."

②, oil filter warning instructions

c, with early warning signal detection switch

Controllers detected through the oil filter pressure switch moves in the text display prompts "oil filter blockage."

b, oil filters use the time to set up early warning

Time to use air filters, text display prompts "time to use the oil filter."

③, oil-warning instructions

a, with early warning signal detection switch

Controllers detected through the oil-pressure switch moves in the text display prompts "oil for obstruction."

b, set oil-time early warning

Time to use air filters, text display prompts "oil for the use of the time."

④, lubricants warning instructions

Time to use lubricants, text display prompts "the use of lubricants to time"

⑤, grease warning instructions

Grease time that the text display prompts "Grease time to use"

(2), to master

Directed projects	Meaning and function	Signal lights state
Power	Controller power	PWR lights
Run	Controller operation	RUN lights
Fault	Failure to detect and downtime	ERR lights flashing
Enter Switch	Terminations of 20 to 12 input switching of Action	IN00 ~ 08 corresponding indicator light. However, if the importation of
Output Switch	27,28,29,30,31,35,36,37,38,39 terminal, the output switch of action	T00 ~ 09 corresponding indicator light
Data Storage	Set of data and time	Flashing a PWR

5 、 security protection

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①, the protection of the motor

MAM-KY12S air compressor controller on a short-circuit the electrical, stall, overload, lack of, the imbalance protection.

Electrical Fault	Failure show	Cause why
Short circuit	Failure at the scene showed that "host or fan short-circuit"	A short circuit or a set rated current error
Stall	Failure at the scene showed that "host or fan stall"	Load is too large, bearing wear, other mechanical failure
Overload	Failure at the scene showed that "host or fan overload"	Load is too large, bearing wear, other mechanical failure
Lack of	Failure at the scene showed that "host or of the lack of fan *"	Power, access, lack of motor
Uneven	Failure at the scene showed that "host or fan current imbalance"	Contactors connection is bad, the electrical internal open-loop

②, exhaust over-temperature protection

Exhaust temperature higher than the limit set high temperature controller alarm shutdown, the scene breakdown shows that "Pai high temperatures."

③, air compressor-reversal protection

When access to the air compressor phase sequence with the three-phase power controller different settings, the scene shows that failure "of the sequence wrong," can not start motor controllers. At this point only the exchange of any two-phase power lines and motors to see you.

④, pressure for overpressure protection

Exhaust pressure higher than the limit set by the high pressure controller alarm shutdown, the scene breakdown shows that "high-pressure exhaust."

⑤, sensor failure protection

When the pressure sensor or temperature sensors break, the controller warning stands. Failure at the scene showed that "*** sensor malfunction."

⑥, linked the protection of

Host operation, the exhaust air temperature has started to temperature, but the fan is not running controller alarm shutdown, the scene breakdown shows that "fan is not running."

6, the handling of common fault

As the external device controller downtime caused by the fault at the scene for failure or history of failure identified cause of the malfunction, excluding external fault. Specific methods are as follows:

By "▼" or "▼" mobile black scroll to "operating parameters" menu, press Enter " " under a pop-up menu:

Current host Total running time The running time Maintenance
--

Has been the "▼" button pop-up

Maintenance parameters Factory # At fault
--

By "→" key cause of the malfunction such as pop-up is as follows:

Temperature sensor malfunction 170°C

At this point the main check whether the disconnection temperature sensors, sensors, such as whether the damage.

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7, and common reasons for failure:

Fault	Cause why	Approach
High-temperature exhaust	Thermal non-performing, low oil	Check the ventilation, such as lubricants volume
Temperature sensor malfunction	Disconnection, PT100 bad, and so on	Check lines and PT100
Ultra-high pressure	Actual ultra-high pressure sensor is not accurate	Inspection machines pressure and pressure sensors
Pressure sensor malfunction	Sensor lines disconnected, bad sensors, sensor-to -	Check wiring and pressure transmitter
Dry	Bad water pressure switch	Check water pressure switch
Lack of	Lack of power, such as contact with contacts bad	Check the power, contacts with
Overload	Low voltage, plug the pipeline, bearing wear, other mechanical failure, the wrong data set	Inspection data set, check voltage, bearings, piping and other mechanical failure
Uneven	Power imbalances, contact with contacts bad, the electrical and other internal open-loop	Check the power, contacts, motor
Stall	Low voltage, plug the pipeline, bearing wear, other mechanical failure, the wrong data set	Low voltage, plug the pipeline, bearing wear, other mechanical failure, the wrong data set
Short circuit	Wiring error, the wrong data set, such as	Check lines, the data set
Phase sequence wrong	Anti-phase sequence to, break phase	Check lines
Fan is not	Fan bad, bad-contact, no	Check lines and

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running	control output	
Start the process of host overload, stall, and other electrical fault	Host start-up time is less than set time-delay angle	Re-setting start-up time than host-load delay angle delay +
Regular contact with the main action	Exigency stop button loosening	Check wiring

