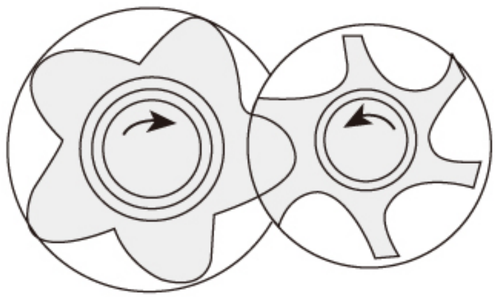
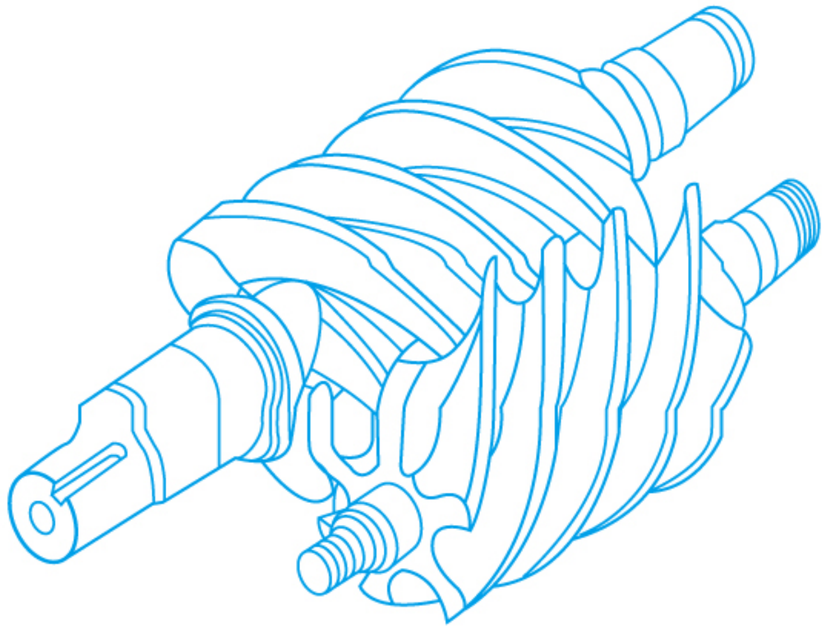
Screw Air Compressor

Operation Manual





Announce

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FOREWORD

FOREWOR

Thanks for your choice of our screw air compressor. The Components of those original imported inlet、parts and other accessories are all from German ROTORCOMP VERDICHTER GmbH. Advanced technology、excellent process ensure our products good quality & reliable. In order to make sure the machine working under safety、dependable and durable, please read this manual carefully before operating. Any questions, please don’ t hesitate to contact our service department and you will get the prompt technology support and excellent after-sale service in time.

REMARK

1.Without any special instruction, all the pressure mentioned in this manual all are meter pressure.
2.When you contact us for maintenance or service, please indicate machine model, pressure difference, which are all marked on the nameplate and maintenance card.
3.We keep the right to modify this machine due to we will always study and improve the machine. The contents are subject to update on the products specification or spare parts improvement without further notice.
4.We are not responsible for the fault that comes from the damage because of customers wrong operation.

REQUIREMENT

1.This manual is only for the final user.
2.Without authorization, please don’ t copy or transfer any content of this manual to the third party. If you find any mistake or miss in this manual, we highly appreciate that you contact us.

Safety Points

1.The compressor must be operated by appointed person. The Operator should read this manual carefully and fully before operation and obey all the operation process and safety points.
2.The new compressor debugging should be done by our appointed or admissive person
3.When jointing, remove all the around flammable articles don’ t make the sparkle drop into the machine to avoid some parts of the machined burned.
4.The electrical wire for the compressor must be equipped with airbreak switch、fuse and other safety equipment. The grounding wire must be set for machine reliable、safe running. If necessary, the lightning conductor should be set.
5.When the machine is working at the first time or when the electrical wire exchange, please pay the attention on the machine turning direction on the right side or not, to avoid the inlet reversal and burn.
6.The compressor must be working under the specified pressure listed on the nameplate; otherwise it will result machine over loading or burned.
7.The compressed air or electricity are dangerous, when you inspect or maintain the compressor, please make sure the electricity is off and the compressor has released the inside air completely. Don’ t face directly any vent of the compressor or pneumatic equipments. When inspect, electricity is off, close the electricity box, and put the MAINTENANCE mark and SWITCH FORBIDDEN mark on the box.
8.Maintenance is forbidden before compressor working off and cooling to avoid scald.
9.When the compressor is broken-down or any unsafe factor exists, don’ t startup the machine by force. Shut off the power supply and make the obvious mark.
10.When startup, make sure nobody in the machine and close the door. When inspect, make sure nobody in the machine and tools not touch any running parts. Maintenance staff should be informed when starts the machine.
11.Do not use any inflammable、highly volatile clearing agent for machine spare parts clearing. Non-corrosive safety clearing agent is recommended.
12.Have to inspect safety valves、stop protection system termly and make sure these parts workable. One year one time is recommended.
13.Fire extinguishers must have near the machine.

I.Take Delivery

1.When you receive the compressor, to check and make sure the quantity、model、specification and attached files same with the data on the packing list.

2.Inspect the machine damaged or not during transportation with your eyes.

3.Any mistake find, please contact your supplier immediately.

II.Installation

Mark: Make proper location plan before installation to make sure compressor working normally, easy maintenance, high efficiency and high quality air in the future.

1.Where to Instal

A suitable site for compressor is very necessary, which make sure that you can maintenance and inspect the compressor easily.

1-1. Installation should be done inside, the lighting and shinning should be fine for easy operation and maintenance.

1-2. The surrounding temperature must be lower than 40℃. Higher temperature, lower compressor working efficiency will result less output air volume. Another point, the surrounding temperature must be over than 5℃ and higher than solidifying point between water and lube.

1-3. The air relative humidity must be low、non-dust、clear air and good aeration.

1-4. If the factory surrounding is not good and dusted, should install vent-pipe and the head part of the pipe should be set at some good air site to make sure the incoming air good quality. Or put an extra filtrating equipment to support the spare parts service life.

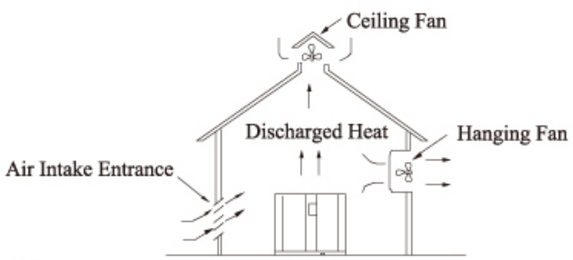
1-5. Leave some certain space around compressor for the spare parts movement when inspection or maintenance. The distance between compressor and walls or top must be over than one meter.

1-6. Install crown block for easy maintenance.

1-7. Compressor is easy glowing so the workshop must be very ventilated. It is necessary to consider the incoming wind direction when install the exhaust equipment. The incoming wind volume must be over than the wind volume for compressor fan recycling and cooling. The entrance space of the cooling air must be enough. Also can put an air draft on the exit of ventilator on top of the compressor, then can take out the heated air discharged by compressor to make sure the temperature between 5-40℃.

When install the air-exhaust pipe, leave some space for the installation of canvas active connector for easy maintenance (it is for enough space to remove covering board and other spare parts on the compressor when clear the cooler.)

Air Exhaust Example



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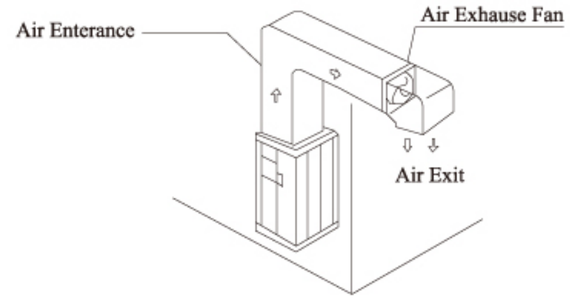


2.Base

2-1. In case the air compressor is installed upstairs, you are required for shockproof treatment to avoid the vibration transmission and sympathetic vibration.

2-2. The machine must be installed on smooth ground to avoid any vibration caused by gradient.

3.Pipe

3-1. The main pipe must be gradient at 1° ~2° . The lowest part must be equipped with auto-drain valve to transpire clotted water.

3-2. The pipe pressure drop is not over than 5% of the compressor specified pressure. If the distance is long, it is better to choose the bigger diameter pipe to reduce the pressure drop.

3-3. The branch pipe must be connected from the top of the main pipe to avoid water on the pipe dropping into the machine.

3-4. When pipe diameter changes must use the reducer. Otherwise, it will produce tortuous flow at the connector and lose of pressure. At the same time, pipe life span will be shortened due to the air shock.

3-5. After install the compressor, it is better to equip with an air reservoir, drier etc. The reasonable processing is compressor + air reservoir + drier. The air reservoir not only can filtrate most of the water but also can reduce the temperature of the discharged air and other functions, which will reduce the burthen when hypothermal air with little moisture go into the drier. If the system still needs big volume air, the air reservoir will reduce the burthen. This will prolong the compressor electricity life span.

3-6. It is possible to use fewer elbows and other kind of valve to reduce the loss of pressure.

3-7. It is necessary to put the main pipe around the workshop. Then, wherever the branch pipe is, can get compressed air from two directions. Although some pipe increases its air volume, will not result pressure drop obviously.

3-8. Drier、filter and other equipment maintenance necessary and where the pipes are must equip with bypass pipe and valve.

4.Air Cooling System

4-1. The ventilated condition is important to air-cooling compressor. Don' t put the compressor near those machines with high temperature or some where with bad ventilated conditions otherwise the machine is easy to work off due to the exhaust with high temperature. If the compressor is installed in a close system, must equip with load & exhaust equipment for better air recycle.

4-2. It is necessary to clear the radiator in the air-cooling compressor often to keep its high efficiency.

III.Electricity Safety Points

1. Choose the proper electricity wire according to the compressor power. Don' t use too small wire, it is very dangerous and leads to burn.
2. A set of exclusive power supply system for compressor is necessary and don' t parallel connection with other different electric power. Under parallel connection, it is easy to result compressor overloading due to oversize voltage drop or three phase alternating current imbalance, then protector works off and affects other electricity equipments. Pay great attention on big power compressor.
3. Choose the proper air break switch with reference to compressor power to protect system' s electric switch and to make sure its safety.
4. To make sure the power voltage is same with the engine' s power voltage.
5. To be safety against creepage, electromotor or grounding wire is must be set. The grounding wire can' t be connected with air duct directly.
6. Electromotor operating current can' t be over 8% of the rated current; if the three phase alternating current is imbalance, the difference between the lowest current and highest current should not be more than 5%; if the power suppler has voltage drop which should not lower than 5% of the rated voltage.

I. Advanced Double Screw Air Compressor

Our screw air compressor composes reciprocating double shafts and is also called as double screw air compressor. The subject of the screw compressor and most of the major spare parts are all produced by the professional screw compressor manufacturer of ROTORCOMP, the branch of BAUER GROUP who is leading in the high-pressure and special compressor industry with vast experience over 50 years. This air compressor has incomparable technology performance.

a) Excellent safety operation. Double screw air compress has few spare parts and wearing parts, so the subject of the screw is always in safety operation and long life span.

b) Simple operation and maintenance. Our screw compressor has advanced auto control performance and operator can work easily without difficult learning. In case nobody is in but the screw compressor still can run safely.

c) Excellent dynamical balancing performance. Double screw air compressor has no unbalance inertial force since its own unit construction principle. The compressor is steady under run up situation. So, compressed air station can be brought into action without special preparation and it is small, light and convenient.

d) Excellent efficiency. Because screw compressor has the special performance of forced air transmission, the airflow rate is not effected by exhaust pressure, so the compressor has excellent efficiency even long term running.

e) Low noise and low liberation. Compressor has excellent performance of low noise and low libration since its advanced insulation and absorb measures.

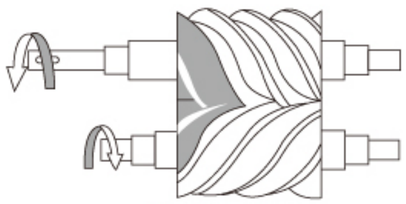
II.Screw Air Compressor Working Principle

Compressor three complete cycle processes are inspiration、compression and exhaust. Following with the turn of rotor, each couple of jogged tooth finishes its same cycle. In brief, we would like to introduce a couple of gear full working process.

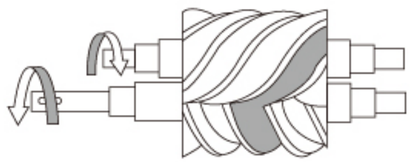
a) Air intake. When the rotor starts turning, there is some space left due to tooth moving and the space is enlarging step by step with some vacuum produced. The teeth space is only connecting with inlet port and the air goes into under the function of pressure difference. In the following turning, male rotor always breaks away from the female rotor and the space is enlarging constantly connected with inlet port. When the space reaches its max. , space will stop extending along with rotor turning. The teeth space breaks away from inlet port; the air is closed between teeth. The air intake finishes.

b) Compression. Along with rotor turning, teeth space will reduce since the joggle. The closed air volume will also reduce that leads to the increase of pressure. Air compression finishes.

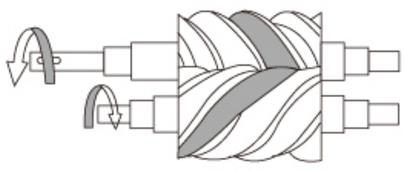
c) Exhaust. Along with shrink of teeth space, air is discharged from the vent until the complete joggle. So, the air in the teeth space was discharged completely through vent and the teeth space will be no more. Exhaust finishes.



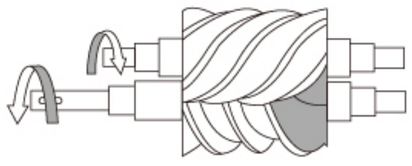
Inspiration Process



Compression Process



Compression Process

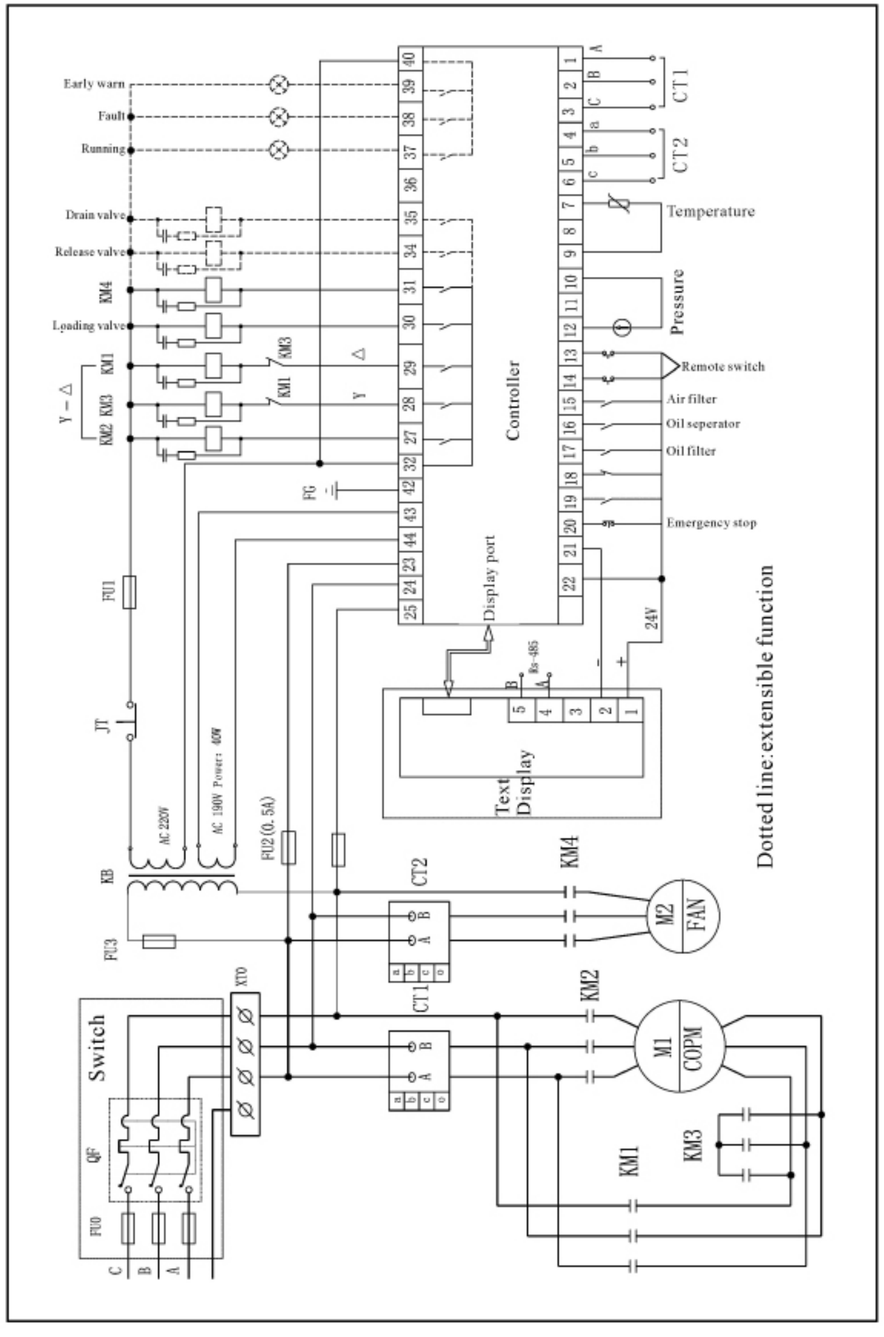


Exhaust Process

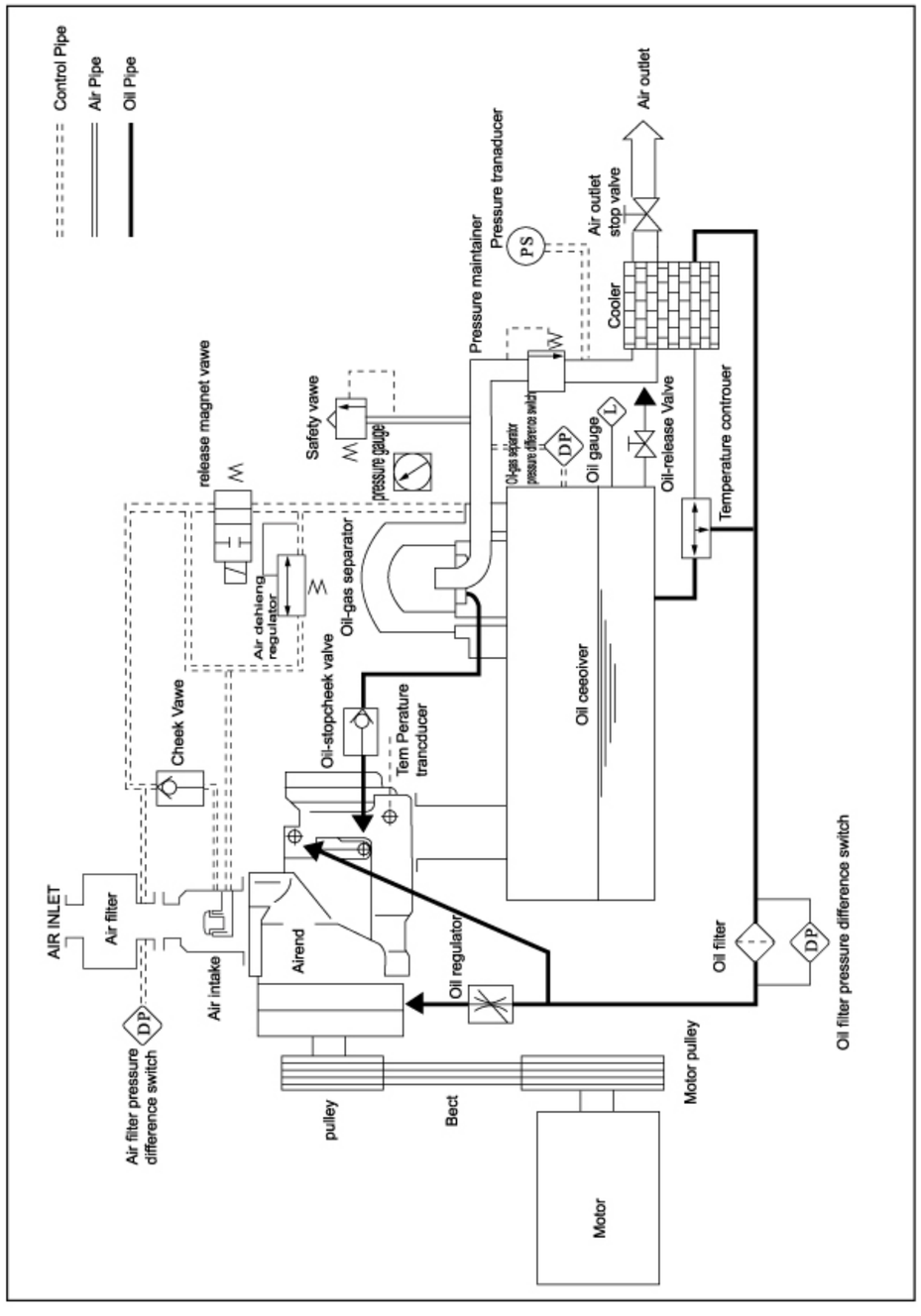
Screw Air Compressor Technical Specification

Model		10HP	15HP	20HP	30HP	40HP	50HP	60HP	75HP	100HP	125HP	150HP	175HP	200HP	250HP	300HP	350HP	400HP
Cooling type		Air Cooling																
Exhaust Volume/ Exhaust m³/min/Mpa(G)		1.2/0.7	1.8/0.7	2.0/0.7	3.6/0.7	4.9/0.7	6.1/0.7	7.2/0.7	10.3/0.7	13.0/0.7	16.0/0.7	20.3/0.7	23.5/0.7	26.5/0.7	32.0/0.7	38.0/0.7	43.8/0.7	52.0/0.7
		1.1/0.8	1.6/0.8	1.8/0.8	3.4/0.8	4.6/0.8	5.8/0.8	7.0/0.8	9.6/0.8	12.3/0.8	15.2/0.8	18.8/0.8	22.1/0.8	24.0/0.8	29.0/0.8	34.3/0.8	41.4/0.8	48.5/0.8
		0.9/1.0	1.4/1.0	1.6/1.0	3.0/1.0	4.0/1.0	5.1/1.0	6.8/1.0	8.5/1.0	10.9/1.0	13.6/1.0	16.0/1.0	18.7/1.0	22.3/1.0	26.0/1.0	30.2/1.0	37.8/1.0	44.5/1.0
		0.7/1.2	1.2/1.2	1.4/1.2	2.6/1.2	3.6/1.2	4.6/1.2	6.0/1.2	7.6/1.2	9.8/1.2	12.3/1.2	13.0/1.2	16.0/1.2	19.0/1.2	22.0/1.2	26.0/1.2	33.0/1.2	42.5/1.2
Air Exhaust Temperature		Surrounding Temperature+15℃ below																
Lube Volume (L)		12	16	16	22	26	26	26	54	54	60	90	90	110	110	125	125	150
Oil Content in Gas		＜3～5ppm																
Noise		70-72±2dB(A)							72-78±3dB(A)		75-80dB(A)			80-85dB(A)				
Transmission Type		Air Exhaust Pressure+0.1Mpa																
Electromotor	Power (KW)	7.5	11	15	22	30	37	45	55	75	90	110	132	160	185	220	250	300
	Rotate Speed(rpm)	2890	2920		2940		2980				1440	2980						
	Voltage/ Frequency	380V-50HZ																
	Insulation Grade	F Grade																
Size	Length	650	830		1150	1270			1700		2100	2650		2900	2900	3800		4050
	Width	870	1000		950	1070			1400		1600	1600		1750	1750	2200		2250
	Height	1200	1290		1400	1500			1650		2000	1800		2050	2100	2200		2350
N.W		290	410	420	580	770	780	790	1440	1540	2480	2570	2770	3700	4500	5560	5670	7900

10HP-60HP Screw Air Compressor Control Circuit Diagram

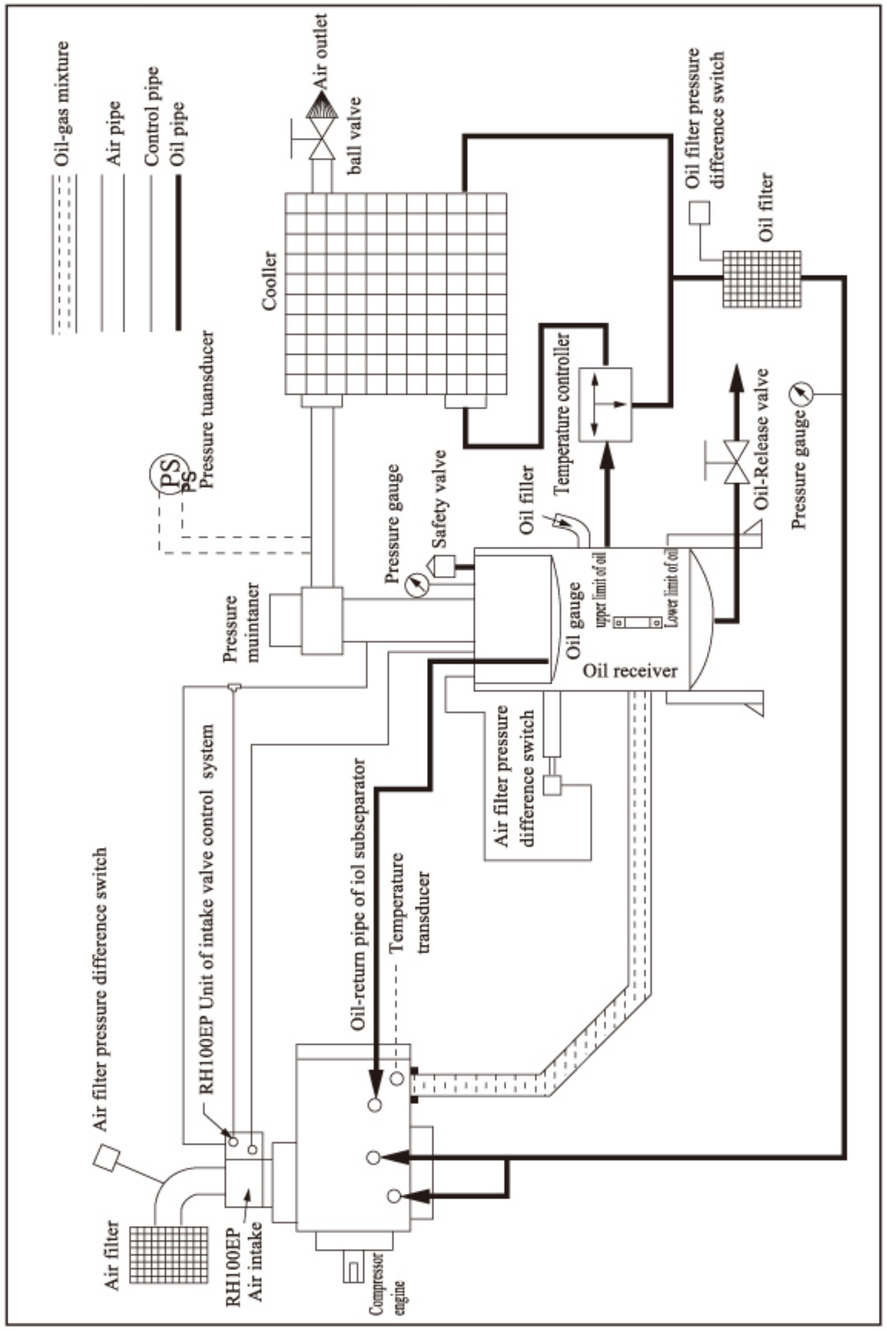


10HP-60HP System Schematic Diagram

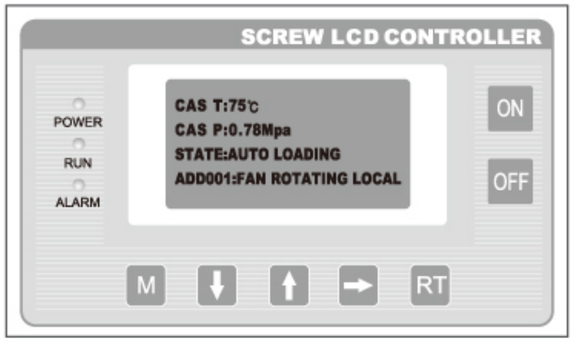


Fifth Chapter Control Circuit Diagram

75HP-400HP System Schematic Diagram



Sixth Chapter Control Panel Operation Instruction



Performance specification of the control board

The controlling of the control board adopts the control method of one way temperature and the other pressure, an advanced control method of digital treatment attached outside by liquid crystal display screen and a few operating keys in implementation of human-computer interface.

The controller is provided with the gang function between the local machine and multiple machines and the net control managed and detected by the computer.

1.Basic performance:

(1)Operation display

a.The following interface is normally displayed after being charged

Welcome to use the screw air-compressors!

After switching on the main interface is displayed:

The temperature of exhausting: ℃
The pressure of gas supply: 0.01MPa
The operating state: Preparation has stopped
0 Second Beside the machine

b. Instruction of the keys:

ON-Start key: when the emergency shut-down is on the "ON" position, start the electric motor by pressing this key;

OFF- Stop key: the electric motor will stop a few seconds after pressing this key;

M-Set key: after the data having been revised, press this key to confirm the data memory input;

↑ - Up key: when revising data, press this key upward to revise the digit, in the menu it is used as selecting key;

↓ - Down key: when revising the data, press this key downward to revise the digit, in the menu it is used as a selecting key;

→ - Shift / confirm key: when revising data, it is a shift key; in the menu it is a confirm key;

RT Return / reset key: In operating menu it is used as return key returning to the last item of the menu; during the fault and shut-down press this key for reset;

c. Acousto-optical breakdown alarm:

Once a breakdown happens, relevant instructions to the breakdown and ordering the machine into a certain state will be shown on the liquid screen and the acousto-optical alarms to give users clarified instructions;

d. Emergency shut-down: In emergency, press the emergency key, the machine enters stoppage and stand-by state.

Sixth Chapter Control Panel Operation Instruction

2. Menu operation:

In the stand-by state press "↓" to enter the menu selecting interface

Operating parameter ——— press "↓ ↑" for rolling selection, press "→" for confirmation
Calendar
Users parameter
Manufacturers parameter

a.Operating parameter:

Electric current of the main air blower
Cumulative time of operating
Time of the current operation
Maintenance parameter
The above said items are the different functions in the submenu of operating parameter.

b.Calendar display:

Operating time
xxxx year xx month xx date
Week day xxxxxx
xx hour xx minute xx second

c.In the users parameter it displays

Preset of pressure and temperature;
Preset of start, stop and delay
Preset of operation mode
Preset of gang parameter
The above said items are the users parameter. To alter internal parameter you need the password;

d.Manufacturers parameter:

It is for users reference only. They can not be altered without the password

3. Breakdown alarming:

(1) "Three filtrations" maintenance alarming:

a. When it is set at the external differential pressure control, after switching the relevant alarming takes place but the machine is still on. After maintenance press "RT" for reset, the breakdown is cleared.

b. When it is set at the time control, the external differential pressure control does not work, only the internal timer works produce alarming at certain accumulation. After maintenance, press "RT" for reset. The breakdown is cleared.

(2) Severe breakdown alarming: (Once the severe breakdown is detected the machine stops immediately automatically and giving alarms)

a. The fault of phase order and breakage of phase will produce a protective alarming and stoppage.
b. The abnormal of the electric motor in the main air blower will cause alarming and stoppage;
c. The excessively high de-air temperature will give early warning and then alarming and stoppage;
d. The excessively high de-pressure will produce alarming and cause stoppage.

The above said items will cause alarming and stoppage. Please don't start the machine until the breakage is cleared.

Seventh Chapter Operation

I.New Machine Test

1-1. Get through power and grounding wire to test that the voltage is correct and the three-phase voltage is balance or not.
1-2. Loose the fixed transmission bolts on the quakeproof support on the pedestal.
Attention: When move the machine, have to retighten the fixed transmission bolts to avoid sloping and shake.
1-3. Check the oil level is between the two red lines of oil inspection mirror or not.
1-4. In case you test the machine after long delivery, you have to add 0.5litre lube and rotate the air compressor many times by hand to avoid burning in the air compressor because of less of lube. Don't let anything fall into the air compressor to avoid damage.
Attention: Don't get through power at this moment.
1-5. Make the compressor control panel with power.
Attention: If the voltage is not accordant, the electricity light will be on.
1-6. Turning Test: Press "ON" button, compressor turns, then press "urgent stop" button immediately and check the turning direction. Please reference to the arrowhead on the compressor for correct turning direction. If the turning direction is fault, exchange any two of electricity wire R、S、T. Cooling fan also should be turned.
1-7. Startup: Repress "ON" to run compressor.
Attention: The machine is full automatism, near 8seconds later after normal startup and the inlet valve starts running.
1-8. Check the display meter and indicator lights normal or not, if there is any unusual sound、shake、leakage, press "URGENT STOP" button for inspection.
1-9. Stop: Press "OFF" button, compressor stops running automatically.
Attention: After press "OFF" button, release valve will unload and time relay will start working. Engine stops after around 15seconds.

II. Daily Inspection Before Running

Strongly recommend to daily inspect the compressor normal or not before startup.
2-1. Oil tank leak: Partly open the water-release between oil gas tank and water segregator, discharge coagulate water produced on stopping. Close it until there is lube streaming out.
Attention: Before opening of water-release valve, please make sure there is no pressure in the oil gas tank.
2-2. Preparation of around equipment: Get through power and open the compressor exit valve, compressed air drier starts running.

Seventh Chapter Operation

III、Running Attentions:

3-1. Any unusual voice or vibration happened when running, stops the machine immediately.

3-2. There is pressure both in pipeline and container, do not loose the pipe or the embolism and not open any unnecessary valve.

3-3. Observe the oil level during the operation. The oil level should be between the red line of the gauge. If the oil lever is below the down nether red line, you have to stop running and then add lube.

3-4. There would be coagulate water in the oil tank, rear cooler and water segregator, so you have to discharge daily at certain time or install an auto water-release valve otherwise the water will be brought into machine.

3-5. To Make record of voltage、current、air pressure、exhaust temperature、oil level and other running data for future inspection reference.

IV、Notice When Long Term Running Stop

When the machine comes into disuse for a long term, please deal with it with the following measure especially for heavy humidity season or regions.

4-1. Come into disuse over one month:

---Wrap the electric equipments such as control panel with plastic colloidal cloth or oilpaper to avoid the humidity.

---Release water completely in the oil cooler and rear cooler.

---Any problem should be solved in time for better future using.

4-2. Come into disuse over two month:

---Except the above process, pay attention to the following two points:

---Seal all the entrances to avoid the humidity and dust.

---Before machine stops using, update the lube and run 30minutes. On the next day, discharge all the coagulate water in the oil tank and oil cooler.

4-3. Process for machine restarting:

---Unwrap the plastic colloidal cloth or oilpaper.

---Check ground insulation of electromotor whose valve should be over 1 MΩ.

---Following the steps of operation for new machine to restart the machine.

Eighth Chapter Maintenance & Inspection

Reference to the manual regulations for correct operation and maintenance. Please use the original spare parts for maintenance. Our company will not responsible for any damage or broken due to not using original spare parts or specified lube. Any problems, please contact your supplier.

I .Lube Specification & Maintenance

1.Lube Specification

Lube definitively effects screw air compressor performance. If the lube is different or operation is not correct, the compressor will be broken badly. So, the lube must be: aging resistant、not dissolve with water、not foamy and non corrodible.

SCREW AIR COMPRESSOR SPECIFIED LUBE

SPECIFICATION	SPECIFIED LUBE
40℃ viscosity (mm2/sec)	46
100℃ viscosity (mm2/sec)	5.0–6.0
Viscosity index	95
Flashing Point (℃) (≥)	210
Pour Point (℃) (≥)	−9
Acid Value mgKOH/g	≤0.1–0.5

2.What Effect Lube Changing Time

①Bad ventilation, surrounding temperature is too high.

②Heavy humidity surrounding or rain season.

③Much dust.

Avoid using lube exceeding their working life. Replace the lube frequently, otherwise the lube will be decomposed, resulting temperature increase and burning the air compressor.

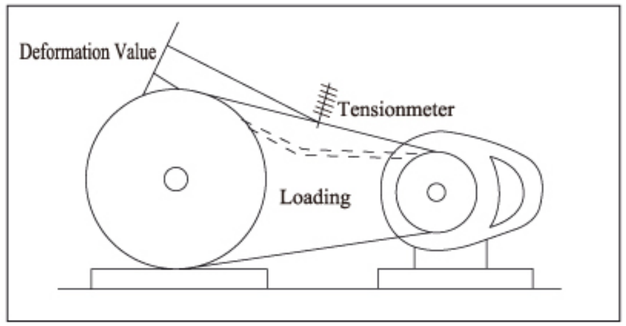
After two years of running, the compressor should be cleared completely with lube. Though after exchange lube, compressor should run 6-8hrs then exchange new lube immediately to clear all the rest of organic parts. It will last compressor service life.

Strongly recommend not mixing the specified lube with other kind of lube, otherwise the machine will be damaged badly.

II. Adjust

1.Belt Adjust

For the new machine, check the belt after 30hrs running every time. If the belt becomes flexible, adjust it immediately. For the future adjust, one time after 1500hrs running.



ITEM NO.	Primary Adjust Loading (Kg)	Readjust Loading After 30hrs Running (kg)	Deformation Value
10HP	3	2.5	8
15HP			
20HP			7
30HP			
40HP			
50HP			6

1-1. As figure shows, putting the loading on the belt then to measure the deformation value by tensionmeter. If the deformation value exceeds the standard value, adjust the belt tension.

1-2. Relax the four fixed screws in the engine cabinet partly when there is tension, push the engine with beside adjusting screws, then tighten the fixed screws after measure tension.

1-3. When exchange the belts, all the belts mush be exchanged not only one, otherwise the tension will be not balanced.

1-4. When adjust or exchange, don' t drop the lube on the belt to avoid skid.

2.Pressure Adjust

2-1. There are two adjusting screws in the pressure switch; one is pressure-adjusting screw for empty machine pressure adjusting. Counter-clockwise is to increase empty machine pressure.

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3.Volume Adjusting (Inverse Proportion Valve)

Volume adjusting system is to adjust compressor exhaust volume assorting with exhaust volume and runs efficiently with very little electricity.

If the pressure switch sets 7kg/cm²G empty, 5kg/cm² G loaded, inverse proportion volume adjusting valve sets the pressure at 6.5-6.8kg/ cm²G i.e. 6.5kg/ cm²G, compressor starts adjusting volume and reduces the air output volume. Counter-clockwise direction will decrease the set pressure value.

4.Safety Valve Adjust

Safety valve output pressure value is normally higher 0.1Mpa. After loosen the upper fixed screws, counter-clockwise direction will decrease set pressure.

Warning: Safety valve has been set before ex-factory; unprofessional person should not adjust optionally.

III. Wearing Parts Exchange

1.Air Filter

When compressor running 1000hrs or air filter maintenance indicator is in red, take out the air filter and clear it. Normally exchange the air filter after 3000hrs running except bad surrounding with less running time.

2.Propositive Filtration Net

Clear it before 2 weeks except bad surrounding with less time.

3.Oil Cleaner

The primary exchange is after compressor running 500hrs, running 3000hrs for future exchange.

4.Oil Separator

To exchange the oil separator when its indicator is on or oil pressure is higher then air pressure. Normally, the exchange time is between 3000-4000hrs except bad surrounding with less time.

Oil Separator Exchange Process:

a. 10HP ~ 50HP Model

①.When compressor stops, air exit closes, vent valve opens, and make sure the system has no pressure.

②.Exchange the oil separator with new one.

b. 75HP & More Advanced Model

①.When compressor stops, air exit closes, vent valve opens, and make sure system has no pressure.

②.Take apart the pipe, which are above oil tank and between pressure support valve exit and rear cooler.

③.Take apart oil return tube.

④.Take apart the fixed screws in the oil tank cover and remove the oil tank cover.

⑤.Take off oil separator and exchange new one.

⑥.Following the opposite processing to install the oil tank.

Attention: When exchange the oil separator, don' t drop others into oil tank to effect air compressor running.

5.Lube

The primary oil exchange is compressor running around 1000hrs, 2000hrs for future exchange (70-90℃) except bad surrounding and high exhaust temperature with less time.

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IV. Maintenance & Fault Obviate

1. Daily Maintenance

1-1. Everyday or before running: daily inspection (reference to the previous section).

1-2. Running 500hrs:

Exchange the filter core for new machine.

Take out and clear the air filter core and the propositive filter net; dry them with low-pressure compressed air from inside to outside.

1-3. Running 1000hrs:

Inspect the inlet valve、tie rod and movement position and fill oil.

Clear air filter core.

Inspect air filter core or exchange it.

First time exchange oil for new machine running 1000hrs.

Air cooling radiator.

1-4. Running 2000hrs or 6 Months:

Inspect different position pipe.

Inspect oil inspection mirror and clear it when necessary.

Exchange lube and clear greasy stain.

1-5. Running 3000hrs or 1 Year

Clear inlet valve, exchange O style ring and fill lube.

Inspect release valve.

Inspect oil separator jam or not.

Inspect pressure support valve.

1-5. Exchange air filter core、oil filter core.

Fill lube for engine.

Inspect the function of starter.

Inspect all kind of pressure difference protect switches working normal or not.

1-6. Running 20000hrs or 4 Years.

Inspect or exchange axletrees and oil seal; adjust the gap.

Measure the value of engine insulation, which should be over 1MΩ.

Ninth Fault Obviate List

ITEM	FAULT	PRESUMABLE CAUSES	SOLUTION
I	Can't start (electric trouble light is on)	1. Fuse burned.	1. Check by electric exchange with specified model.
		2. Relay protection over loading.	2. Check by electric repairman.
		3. Connection flexible or poor contact.	3. Check and fix.
		4. Low voltage.	4. (Long distance but small diameter) Use the lines with bigger diameter; shorten the distance between machine and electricity.
		5. Engine fault	5. Check by electric repairman.
		6. Machine fault	6. Contact service dept.
		7. Opposite protection relay fault	7. Check electricity line and all connections.
		8. Startup button incapable of movement	8. Control panel has problem and contact service dept.
II	Running with high current, compressor stops automatically (electric trouble light is on)	1. Low voltage	1. (Long distance but small diameter) Use the lines with bigger diameter; shorten the distance between machine and electricity.
		2. Exhaust pressure too high	2. Inspect the pressure meter, if exceed the specified pressure value, adjust the adjust switch and rated value.
		3. Electricity connections not good	3. Examine and repair.
		4. Lube specification incorrect.	4. Check the lube model and exchange.
		5. Belt transmission unstuck.	5. Inspect and adjust.
		6. Oil separator jam (high lube pressure)	6. Contact service dept.
		7. Compressor body fault	7. Repair and adjust.
		8. Electricity voltage too low, three-phase voltage not balanceable	
III	Running current lower	1. Air waste too much (pressure running under specified value.)	1. Check wastage; increase compressor pressure if necessary.
		2. Air filter jam	2. Clear or exchange
		3. Inlet valve bad movement	

Ninth Fault Obviate List

ITEM	FAULT	PRESUMABLE CAUSES	SOLUTION
IV	Exhaust temperature off normal	1.Heat control valve fault 2.Lube is not enough 3.Oil cooler jam 4.Lube specification is incorrect 5.Plate - fin heat exchanger not clear 6.Oil filter jam 7.Cooling fan fault 8.Intelligent adjustor or thermocouple fault	1.Exchange heat control valve 2.Check oil level, if the oil is not enough, stop machine and fill. 3.Take apart it and clear with solvent 4.Please use our company specified engine oil. 5.Clear with low pressure and dry air 6.Exchange with our company specified articles. 7.Check by electric repair man 8.Contact service dept.
V	Lube wastage too much	1.Oil level too high 2.Oil-return tube jam 3.Oil-return core tube O style ring broken 4.Oil separator broken, unworkable 5.Pressure support valve spring wear out 6.Incorrect oil	1.Check oil level and release reasonably 2.Contact our company. 3.Exchange our company specified articles 4.Use our company specified articles. 5.Exchange our company specified articles 6.Use our company specified machine oil.
VI	Off normal empty/load machine	1.Pressure switch fault 2.Pressure support valve incapable of movement 3.Control pipe leakage 4.Release electromagnetism valve fault 5.PC circuit panel fault or electric wire fault	1.Exchange pressure switch 2.Exchange our company specified articles 3.Check the leakage position and lock 4.Examine & repair, exchange with our specified articles 5.Contact our company
VII	Compressor exhaust volume not enough	1.Exhaust filter jam 2.Inlet valve incapable of movement 3.Oil separator jam 4.Release electromagnetism valve fault	1.Clear or exchange our company specified articles 2.Take apart and clear; fill lube or exchange 3.Exchange with our company specified articles 4.Examine and repair or exchange if necessary

Ninth Fault Obviate List

ITEM	FAULT	PRESUMABLE CAUSES	SOLUTION
Ⅷ	Empty/load machine frequently	1.Pipe leakage 2.Pressure switch pressure difference too small 3.Air wastage not steady	1.Check the leakage position and lock 2.Reset 3.Increase the volume of air receiver
IX	Filter smoking when stop	1.Inlet valve closed partly or logy 2.Pressure support valve leakage 3.Release valve without release	1.Maintain or contact our company if necessary 2.Maintain or contact our company if necessary 3.Maintain or contact our company if necessary
X	Compressor with off normal sounds	1.Some other articles in drop into compressor 2.Axletree attrited	1.Repair 2.Exchange
XI	Other off normal sounds and V style belt off normal sounds	1.Air compressor install improperly 2.Bolts or nuts relaxed 3.V style belt related	1.Fill with cement and install flatly 2.Lock firmly 3.Adjust
XII	Oversize vibration	1.Install improperly 2.Bolts or nuts relaxed	1.Fill with cement and install flatly 2.Lock firmly

Warning: When open and maintenance the machine, make sure the power is off, no pressure in the machine, cooling 10munutes, then begin maintenance.

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Month / Time / Item											
Oil Tank Level											
Air Cleanser Green/Red											
Oil Filter △P Indicator											
Oil Separator △P Indicator											
Running Current											
Running Voltage											
Exhaust Pressure											
Exhaust Temperature											
Lube Pressure											
Running Time											
Recorder											
Remark											

Note: ①. 1-4, in the blanks, normal items mark "✓" ; off normal items mark "×" (have to reject)
②. 5-10 mark with characters.
③. The form is allowed to copy.

Maintenance Agreement

The maintenance agreement content is following:

1.From the date of purchasing, the rotor gear end guarantee period is two years; within one year, manufacturer will repair any quality faults freely; after warranty, manufacturer will still be responsible for the repair for life.

2.User does the daily maintenance in term of manual. For the exchange of lube、air filter core、oil gas separator core、oil filter core, user must use manufacturer specified articles (the cost will be on user side.)

3.If user maintain the machine but has not been in term of previous 2nd clause, manufacturer will not be responsible for free repair for any mechanical faults within warranty

4.User must use the screw air compressor under the conditions and surrounding specified in the manual strictly. Strongly recommend not to disobey the specified installation、operation and maintenance terms in the manual. otherwise manufacturer will not be responsible for free repair since fault operation.