

Preface

This instruction manual applies only to the single pump of the vacuum pump, and not to the composite technology of the vacuum pump unit. However, the single pump on the vacuum pump unit still applies to this instruction manual. Our company was founded in 1934, the birthplace of the first vacuum pump in China. Providing users with high-quality products and striving to offer you lifelong after-sales service is our consistent philosophy. Lifelong service includes helping you understand the working principles of vacuum pumps, correct installation methods, maintenance procedures, equipment operation training, and providing vacuum technology solutions to eliminate any troubles caused by unfamiliarity with vacuum pumps and vacuum technology. Therefore, please read this instruction manual carefully. While maintaining product quality, our company also focuses on technological innovation, and several products have obtained national patents for their structure and appearance. Due to the timing of the preparation of this manual, there may be discrepancies between some product appearances and structures and those described in this manual. We will make amendments in future editions. Thank you for your understanding.

I. Structural Principles and Scope of Application

1. Structural Principles

This series of vacuum pumps is a dual-stage vacuum pump consisting of two single-stage vacuum chambers connected in series. The two single-stage chambers are divided into a high-level vacuum chamber and a low-level vacuum chamber, with high-level vanes installed in the high-level chamber and low-level vanes in the low-level chamber.

This series of vacuum pumps is connected to the pump body via a V-belt driven by a motor. These vacuum pumps feature a compact structure, small size, light weight, low vibration, low noise, easy start-up, and high pumping vacuum.

The middle wall of this series of vacuum pumps has a positive eccentric structure (with the 2X-30A/2X-70A models having a side eccentric structure). When the rotor rotates, the centrifugal force

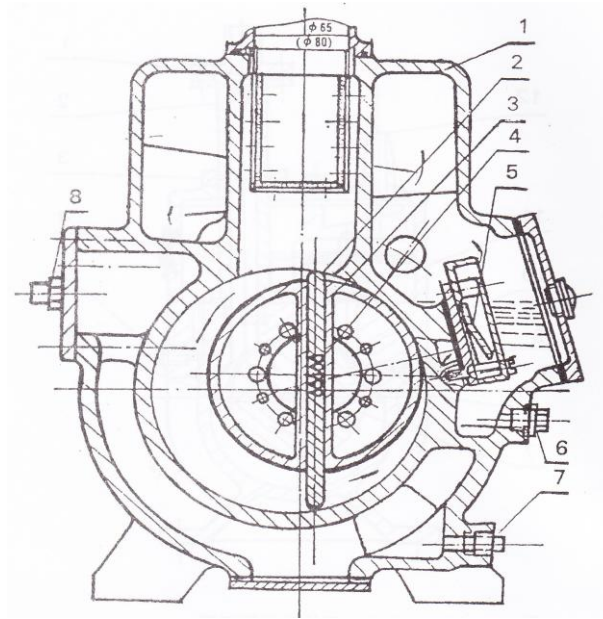
drives the vanes, which, under the action of spring force, adhere closely to the inner wall of the vacuum chamber. This causes the volume of the intake chamber to periodically expand, sucking in air, while the volume of the exhaust chamber periodically contracts, compressing the gas. The compressed gas and oil push open the exhaust valve, thereby achieving vacuum. When the inlet pressure is high, both stages can simultaneously exhaust; when the inlet pressure is low, the gas is transferred from the high-level chamber to the low-level chamber and then expelled outside the pump.

This series of vacuum pumps is designed with a gas ballast valve (except for the 2X-4C model). When the gas ballast valve adjustment cap is turned counterclockwise to open, a certain amount of air is introduced into the exhaust chamber. This lowers the partial pressure of the steam during exhaust, and when the steam's partial pressure is lower than the saturated vapor pressure at the pump temperature, the steam can be expelled along with the introduced air. This prevents the moisture in the exhaust gas from mixing with the pump oil, thereby extending the pump oil's service life. However, when the gas ballast valve is open, the ultimate pressure will decrease, and the pump temperature will rise. When the gas ballast valve adjustment cap is closed, the intake chamber is sealed, preventing backflow of pump oil and air, making it easy to start the pump, preventing damage to the pump components, and extending the pump's trouble-free operation time.

Note: To prevent or reduce pump oil from backflowing into the pump chamber, install a vacuum check valve at the pump inlet and a vacuum charging valve between the vacuum check valve and the pump body. When shutting down the pump, first close the vacuum check valve and then open the vacuum charging valve. If it is not necessary to maintain the system vacuum when stopping work, only a vacuum charging valve can be installed.

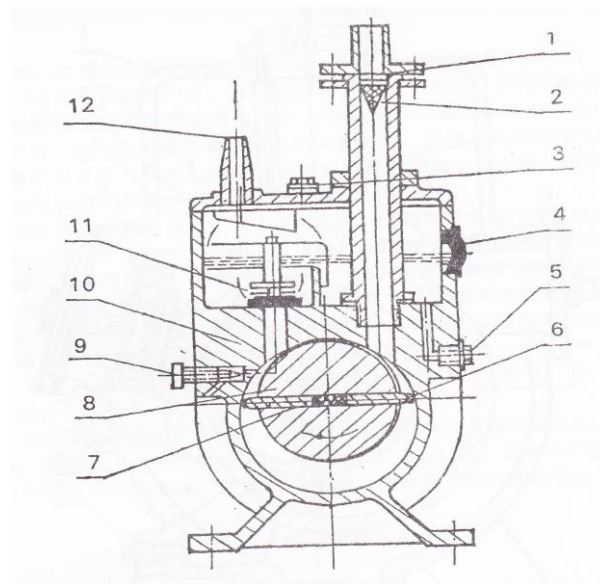
Note: When installing, try to make your intake pipe higher than the pump's intake port, maintaining a height difference.

See the structural principle diagrams for models 2X-30A/70A, 2X-4C/8/15, and SZX2270.



Structural Principle Diagram for 2X-30A/70A

1. Stator 2. Vane 3. Rotor 4. Vane Spring 5. Exhaust Valve Plate
6. Oil Drain Plug 7. Water Drain Plug 8. Water Nozzle



Structural Principle Diagram for 2X-4C/8/15 and SZX2270

1. Inlet 2. Filter Screen 3. Oil Filler Plug 4. Oil Indicator 5. Oil Drain Plug
6. Vane 7. Spring 8. Rotor 9. Gas Ballast Valve 10. Stator
11. Exhaust Valve 12. Exhaust Port

2. Scope of application

Can be used alone or as a backing pump for maintaining pumps and titanium pumps. Suitable for use in the manufacture of electronic vacuum devices, vacuum flask manufacturing, vacuum welding, vacuum packaging, vacuum forming, vacuum suction, precision instruments, and other equipment. It can also be used as a fore pump for booster pumps, diffusion pumps, and molecular pumps in vacuum systems, capable of removing a certain amount of condensable gases.

It is not suitable for use in environments with dust, corrosive substances, excessive oxygen content, flammable or explosive gases, or toxic gases. The 2X/SHX series should not be used as a compression pump or a transport pump.

II. Main Technical Performance and Specifications

Two-stage / Single-stage Rotary Vane Vacuum Pump

型号	2X-4C	2X-8	2X-15	2X-30A	2X-70A	SZX2270
Pumping Rate 50HZ/60HZ (L/s)	4	8	15	30	70	80
Ultimate Pressure (Gas Ballast Open) (Pa)	/	≤6×10 ⁻¹		≤1.33		
Ultimate Pressure (Gas Ballast Closed) (Pa)	≤6×10 ⁻²					
Ultimate Full Pressure (Gas Ballast Closed) (Pa)	≤1					
Motor Power (kw)	0.55	1.1	2.2	3	5.5	
Motor Speed (r/min)	450	320	320	450	420	470
Oil Temperature Rise (°C)	≤40					
Oil Consumption (L)	1.0	2.0	2.8	2.0	4.2	5. 5
Net Weight / Gross Weight (kg)	55/58	83(single pump)	174/178	200/204	381/386	350/355
Maximum Operating Pressure for Long-term Use (Pa)	3000	3000	3000	3000	3000	
Cooling Water Flow Rate (L/min)	/	/	/	≥1	≥2	
Maximum Allowable Water Vapor Pressure (Pa)	/	/	/	/	/	
Maximum Water Vapor Removal Rate (kg/h)	/	/	/	/	/	

Note: Recommended oil grade: 100# vacuum pump oil.

III. Installation Instructions

1. After unpacking, please check the contents of the box according to the "Packing List" and check the appearance of the pump to avoid possible damage during the transportation.
2. Please be sure to remove the protective packaging at the inlet and exhaust ports during installation.
3. The pump should be installed in a dry, ventilated, and clean location, maintaining a space of at least 300mm between the pump and walls or other objects. From shipment to usage, the pump should be stored in a designated place (dry, clean, vibration-free room). If the storage period exceeds four years or the pump is stored in an undesignated place for more than two years, the bearings need to be cleaned (to prevent lubrication oil from drying out and becoming ineffective) and lubricated before use.
4. The pump and motor should be installed horizontally on a foundation. The pump feet have mounting bolt holes and should be fixed with foundation bolts. After tightening the foundation bolts, recheck the level of the pump and motor to avoid tilting caused by uneven ground. Note: After rechecking the level, manually turn the belt to check if the pump rotates smoothly.
5. All connecting pipelines must be free of leaks and cleaned beforehand to ensure no foreign matter such as iron filings, rust, welding slag, or dust is present. It is recommended to install a fine mesh filter in the intake pipeline.
6. The diameter of the pipeline connecting the evacuated container should be greater than or equal to the diameter of the pump's intake port. Minimize the installation distance and the number of elbows in the pipeline. After installation, check for leaks. If using a rubber hose, select one that is sulfur-free.
7. The diameter of the pipeline connected to the pump's exhaust port should be equal to or greater than the diameter of the pump's intake port. Otherwise, the exhaust pressure will increase, causing leaks at the pump's sealing parts.
8. For belt-driven pumps, ensure that the large and small pulleys are in the same vertical plane and that the tension of the V-belt is appropriate.
9. When the pump operates in dusty conditions: To prevent damage from dust, particles, or chemically active gases, it is recommended to install a suitable pre-treatment device at the pump's intake port.
10. When the pump operates in conditions with a large amount of steam: Unless there is a cryogenic device in front, this is not suitable for such conditions.
11. When pumping corrosive gases: Unless a cryogenic device is used to remove the moisture from the gas first, then the corrosive gas can be pumped out.

12. When pumping gases with high temperatures ($\geq 50^{\circ}\text{C}$): You must cool the gases at the pump's intake port.

13. The pump should not be used in conditions where the gases contain a large amount of liquid.

14. When the inlet pressure of the pump exceeds 3000Pa, the operating time should not exceed 3 minutes.

During frequent startups, the interval should be at least 15 minutes, and each operating time should not be less than 15 minutes. Long-term pumping of high-pressure gases will result in a large amount of oil mist being discharged, or even oil spraying out. You can connect a pipeline to the exhaust port to divert the oil mist away from the work area or install a suitable oil mist filter.

15. If you want the pump to have a device that improves oil backflow prevention and allows the pump port to remain in a vacuum state for a short time after shutdown, making the next startup easier, it is recommended to install an electric or manual vacuum shut-off valve and a vacuum charging valve at the pump's intake port.

16. If you install the pump inside a cabinet, ensure that there are air intake channels for the cooling fans of the pump and motor, and an exhaust channel for the pump's exhaust outlet.

17. Some series of pumps do not come with oil in the pump chamber for ease of transportation. After installation, add vacuum pump oil through the oil filler port, ensuring the oil level is above 1/2 of the oil window.

18. Installation Inspection After installation, all pipelines, especially the suction side pipelines, must be thoroughly cleaned to prevent welding slag, water rust, iron rust, etc., from entering the pump. After installation or repair, check to ensure:

- The complete unit (pump head and motor) is installed and adjusted correctly.
- The drive elements are adjusted correctly according to their nature, with no axial stress after installation (e.g., the pre-tension of belt drives, the radial and axial stress of couplings).
- All fastening bolts and connecting elements are securely combined.
- The protection for rotating parts is correct (e.g., coupling guard).

Note: Excessive oil levels can cause oil spraying, while low oil levels can result in abnormal exhaust noise. If abnormal exhaust noise occurs, add oil to 5mm above the centerline of the oil indicator. Install the power cable and switch according to the motor nameplate and the markings on the junction box, ensuring the motor's rotation direction is clockwise when viewed from the motor fan end.

19. Preparations Before Test Run This applies only to empty or dry pumps (i.e., during initial startup, after repairs, or after a long shutdown during operation). Initial technical state: All evacuated gas and working

fluid pipelines should be correctly connected, all valves and gate valves should be closed, and there should be no gate valves or check valves on the exhaust side.

20. Startup

It is recommended to follow these steps for startup:

- Check that all bolts on the flanges, joints, and valves of the pipeline are tightened.
- Open the suction pipe valve, if installed.
- Open the valve on the exhaust pipeline, if installed.
- Check the operating condition at the start.
- After startup, read the pressure status value and record it.
- When the pump starts, check the temperature of parts until it reaches a stable state and record it.

21. Shutdown

- 1) Turn off the motor, close the sealed liquid valve, and close the intake pipe valve.
- 2) Immediately close the exhaust pipe valve after stopping, if installed.

Note: During freezing seasons, drain the liquid from the pump body, separator, and all pipelines.

22. After connecting the power, the motor's rotation direction should be clockwise when viewed from the motor fan end. If the rotation is reversed, swap any two of the three power lines.

23. Safety Protection:

Warning: Rotating parts, such as couplings, free shaft ends, and V-belt drives, must be protected to prevent contact. In facilities with explosion hazards, drive elements and their contact protection must be specially designed to eliminate sparks and static electricity.

Note: The temperature near the bearing parts can exceed 70°C. Therefore, avoid contact with these parts. Temperature-sensitive components, such as electrical elements, should not come into contact with these parts or should be protected accordingly.

IV. Instructions for Use

1. Check the oil level of the pump daily before starting up to ensure it is at the center line of the oil gauge. Fluctuation of the oil level after startup is normal.
2. Check the pump oil daily before starting up, and observe the color of the pump oil. If it turns black or white (emulsified), immediately replace the vacuum pump oil. The method for replacing the oil is: unscrew the oil drain plug, drain the pump oil into a prepared container, tighten the oil drain plug, then unscrew the

oil filler plug, and add new vacuum pump oil up to the center line of the oil gauge. It is recommended to filter the oil when adding it to avoid debris entering the pump and clogging the oil passages.

3. Monthly, check the couplings, bolts, gaskets, belts, etc., for looseness or damage (depending on the pump model).

4. Every six months, check if the oil seals are damaged.

5. Annually, check for bearing wear.

6. After 10,000 hours of operation, inspect all friction surfaces of the vacuum pump: for rotary vane pumps, check the inner wall of the pump chamber, the wear of the rotary vanes, and the exhaust valve condition. If wear or damage is found, perform timely repairs or replacements and clean the entire pump.

7. When the pump operates within a vacuum system, refer to the safety warnings in Clause 10 for startup and shutdown procedures.

8. If the pump's intake port has an installed solenoid valve or vacuum shut-off valve and vacuum charging valve, the solenoid valve or vacuum shut-off valve should start and stop simultaneously with the pump.

9. After 30 minutes of operation, the ultimate vacuum parameters of the pump can be found in the corresponding section of Chapter 2 "Main Technical Performance and Specifications."

10. When the ambient temperature is high, the oil temperature inside the pump chamber will also rise, causing the viscosity of the vacuum pump oil to decrease and the saturation gas to increase. This will lower the ultimate pressure. It is recommended to enhance ventilation and heat dissipation for the pump or use higher-grade vacuum pump oil.

- For ambient temperatures above 10°C, use 100# vacuum pump oil.
- For ambient temperatures between -5°C and 10°C, use 68# vacuum pump oil.
- For ambient temperatures between -10°C and -5°C, use vacuum silicone oil.
- For ambient temperatures below -10°C, do not use.

11. When the relative humidity is high or the evacuated gas contains a small amount of condensable gas, open the gas ballast valve, and after 30-40 minutes of operation, close the gas ballast valve.

12. In severe winter, after stopping the pump, drain the cooling water from the pump water jacket to prevent it from freezing and bursting the water jacket.

13. During operation, frequently check the temperature of the cooling water, as it is the best method to detect early problems. The temperature difference between the inlet and outlet water should generally be within 5°C, and the maximum outlet water temperature should not exceed 45°C under normal circumstances.

14. During winter, the pump should run idle for more than 15 minutes before startup, and for other seasons, it should run idle for more than 5 minutes.

V. Maintenance

1. Oil Change

Replace the vacuum pump oil after the new pump has operated for 100-200 hours.

Subsequently, replace the vacuum pump oil every 3000-5000 hours of operation.

Recommended oil brand: "Shangzhen" special oil.

If the vacuum pump oil does not appear black or white (emulsified), replace the oil every 6 months.

Method for Changing Oil: Run the pump for 30 minutes to thin the vacuum pump oil, then stop the pump and drain the oil from the drain hole. Open the intake port.

Note: Do not use cleaning fluid to rinse; do not mix in diesel, gasoline, or other oils with high saturated vapor pressures to avoid reducing the ultimate pressure.

2. Safety Precautions for Pump and Pipeline System Maintenance

Ensure that the maintenance will not adversely affect the system.

Ensure the motor is turned off and cannot start accidentally.

Ensure there is no pressure in the corresponding pipeline system and that protective measures are in place.

Ensure that the medium being pumped or supplied does not pose any danger when the pipeline system is opened.

3. Regular Inspections

Regular and careful maintenance and inspections are crucial to quickly identify and correct potential faults, thereby avoiding further harm.

Due to varying working conditions, only general inspection and maintenance cycles can be suggested. These cycles must be adjusted based on the specific installation site, considering the severity of working conditions, frequency of equipment startup, and load.

The tension of the belt should be checked. An initial adjustment should be made after 8 hours of operation, followed by periodic adjustments.

Under normal operating conditions, it is recommended to inspect the pump monthly, checking the following items:

No significant contamination in the medium or working fluid being pumped (see Cleaning).

Technical data meets requirements (power and temperature, etc.).

No noticeable leaks.

The pump operates smoothly, with normal bearing noise.

No foreign objects in valves, filters, and strainers; remove them if found and determine the next inspection cycle.

When the cleaning cycle of the exhaust chamber, strainer, and filter is not very short, maintenance under specified operating conditions can coincide with the addition or replacement of lubricating oil.

In addition to the above inspections, check the following during the inspection:

Rotor components maintain the allowed clearance.

All fastening bolts are not loose.

Note: The rotor blades can be removed, but the rotor is an integrated assembly and cannot be disassembled.

4. Cleaning

It is recommended to periodically flush and remove accumulated debris in the pump, such as by briefly opening the valve on the exhaust pipeline or briefly opening the purge plug.

The pump's interior can be inspected by opening the inspection hole cover on the pump cover.

All strainers and filters installed in the pipeline must be periodically cleaned or replaced.

Note: Disassembly and reassembly work should be performed by experienced technicians.

When disassembling the pump for maintenance or cleaning, be careful with the disassembly steps to avoid damaging pump components. Before disassembly, mark the assembly positions of components to reduce the possibility of incorrect reassembly and shorten the running-in time. Avoid using excessive force or heavy hammering. Do not damage or lose any disassembled components.

Assembly Steps:

Note: Before assembly, all friction surfaces should be coated with clean vacuum pump oil. The O-rings should be embedded in the grooves.

1) Insert the high-stage rotor blade into the high-stage rotor slot, install the high-stage rotor assembly into the stator, and attach the high-stage end cover. It is recommended to vertically align the pump with the end face of the pump body as a reference during assembly.

2) Insert the low-stage rotor blade into the low-stage rotor slot, install the low-stage rotor assembly into the stator, and attach the low-stage end cover.

Note: Before inserting into the stator, manually push the rotor blade to ensure it slides smoothly without jamming in the rotor slot.

- 3) Attach the coupling and manually rotate it; there should be no obstruction or significant variations in weight.
- 4) Install the return valve impeller and other return valve components, ensuring that the flat face of the return valve head aligns with the oil nozzle hole. Manually block and rotate the rotor, ensuring the oil hole opens and closes, with the maximum opening height of the valve head being 0.8-1.2mm.
- 5) Install the exhaust valve, oil baffle, and other components.
- 6) Mount the pump assembly and motor on the base and tighten the fixing screws.
- 7) Insert the intake nozzle and gas ballast valve, and secure them with screws.
- 8) Install the belt (for belt series vacuum pumps).

VI. Causes of Faults and Troubleshooting Methods

Fault	Reason	Method of exclusion
Insufficient pumping speed	1. Inadequate pipeline conductance 2. Overflow valve leaking (for vacuum pumps with an overflow valve series)	1. Increase the pipeline diameter 2. Clean the overflow valve
Ultimate vacuum does not meet technical requirements	1. Pipeline/system leakage 2. Pump leakage 3. Overflow valve leakage 4. Oil seal wear 5. Vacuum pump oil is contaminated or of the wrong type 6. Inlet filter is clogged 7. Oil pipe leakage 8. Rotary vane is stuck or damaged 9. O-ring rubber aging 10. Oil hole blockage	1. Inspect and eliminate system leaks, clean pipelines and valves 2. Perform leak detection on the pump 3. Clean the overflow valve 4. Replace the oil seal 5. Replace or filter the vacuum pump oil, open the gas ballast for purification 6. Clean the inlet filter 7. Replace or reassemble the oil pipe 8. Replace the rotary vane 9. Replace the O-ring 10. Loosen the oil nozzle clamp, pull out the oil inlet nozzle, and clear the oil hole
Motor overload	1. Inlet pressure too high 2. Rotor end face contacts pump chamber end face on one side 3. Overflow valve stuck, causing excessive outlet pressure	1. Adjust and control the inlet pressure 2. Adjust the rotor end face clearance 3. Clean the overflow valve
Pump outer wall overheating	1. Inlet pressure too high 2. Poor cooling 3. Gearbox lubrication level too high 4. Insufficient pump oil 5. Rotor contacting pump chamber end face	1. Adjust and control the inlet pressure 2. Ensure proper cooling or increase the cooling water flow 3. Adjust the oil level, generally to near the centerline of the oil

Fault	Reason	Method of exclusion
	6. Poor lubrication of bearings or oil seals 7. Pump oil degraded or deteriorated	window 4. Add pump oil to near the centerline of the oil window 5. Disassemble for inspection and repair 6. Adjust the oil level 7. Replace the oil
Abnormal sound, loud noise	1. Inlet pressure too high 2. Bearing wear 3. Rotary vane wear	1. Adjust and control the inlet pressure 2. Replace the bearings 3. Replace the rotary vanes
Significant exhaust noise	1. Oil level too low, unable to seal the exhaust valve 2. Leakage in external piping connected to the pump outlet, container, and test instrument piping, with gas being discharged from the exhaust port	1. Add oil to the pump 2. Identify and eliminate leaks
Early severe wear of bearings and gears	1. Lubricating oil contaminated 2. Insufficient lubricating oil	1. Replace the lubricating oil 2. Add lubricating oil
Pump cannot start	1. Insufficient voltage 2. Pump or motor jammed 3. Ambient temperature too low, causing high viscosity of vacuum pump oil	1. Measure the voltage 2. Separate the pump and motor, manually rotate the pump for testing 3. Heat the pump oil
Pump jammed	1. Pump lacks lubricating oil 2. Rotary vane fractured 3. Motor running in the wrong direction for an extended period 4. Bearings lacking lubricating oil for an extended period	1. Add lubricating oil 2. Replace the rotary vane 3. Check and correct the motor direction 4. Inspect, replace bearings, and add oil

VII. List of Wearing Parts

Model	Bearings	Oil Seal	O-ring Seal	Other
2X-4C	/	25×40×10	30×3.1/38×1.9/ 5×3.1/120×4/40.9×35.	V-belt “o”900
2X-8	2207	PD30×50×10	7×3/30×3.1/178×5.7.	V-belt A-1219/1400
2X-15				
2X-30A	208E	PD40×62×12. PD35×60×12	20×2.4/30×3.1/ 200×212×6.	V-belt B-1400
2X-70A	211E	PD50×70×12. PD55×75×12	250×5.7/30×3.1/ 28×3.1/20×2.4.	V-belt B-1800 or A-1524
SZX-2270	6211	PD95×70×10. PD52×75×8	307×7/9×2.65/122X3.65	V-belt SPA315X4

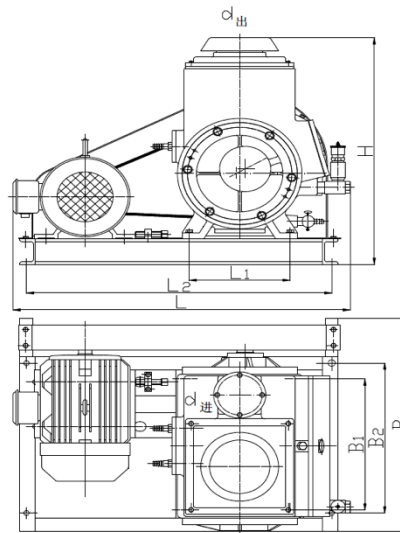
Note: The contents of this wearing parts list are not equivalent to the necessary accessories for random packaging.

VIII. Appearance and Installation Location and Dimensions

Unit: mm

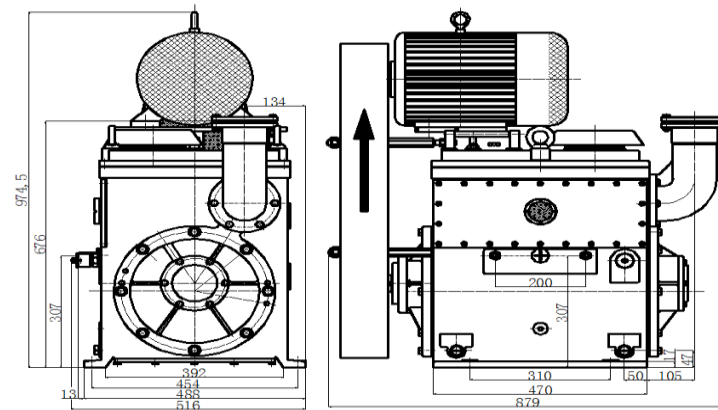
Model	Overall Length (L)	Overall Width (B)	Overall Height (H)	Pump Foot Hole				Pump Installation Hole with Base				Inlet Port (d_in)	Outlet Port (d_out)
				Hole Distance L1	Hole Distance B1	Hole Diameter d1	#of Holes n1	Hole Distance L2	Hole Distance B2	Hole Diameter d2	#of Holes n2		
2X-4C	490	314	410	150	123	10	4	462	215	10	4	KF25	KF16
2X-8	790	430	540	168	196	12		736	260	14		38	50
2X-15	790	530	540	260	196				356				
2X-30A	780	500	560	240	240	15		730	340	16		65	60
2X-70A	910	660	750	280	380			848	470	20		80	96

2X Series Vacuum Pump Outline Diagram (Outline for Reference Only)



2X系列旋片真空泵

SZX-2270 Vacuum Pump Outline Diagram (Outline for Reference Only)



VIII. Packing List

Model	Vacuum Pump (Motor Included)	Manual	V-belt Model/Quantity	Vacuum Pump Oil (No.100#) /Quantity
2X-4C	1(1)	1	O-900/2	1L/1
2X-8	1(1)	1	Z-1219/2	1.7L/1
2X-15	1(1)	1	Z-1400/2	2.1L/1; 0.7L/1
2X-30A	1(1)	1	A-1350/2	2.1L/1
2X-70A	1(1)	1	A-1524/3	2.1L/2
SZX-2270	1(1)	1	V-belt SPA1800/4	2.1L/2



Product Quality and Warranty

Dear Respected User:

Hello!

In order to safeguard your legitimate rights and interests, repay your concern and love for the "Shangzhen" brand, and to better provide you with after-sales service, our company will comply with the relevant provisions of the "Product Quality Law" of the People's Republic of China. With this warranty and valid invoices, we will provide you with high-quality after-sales service. Our company promises the following:

The warranty period for the whole machine is one year, including three months for the rubber parts. The warranty period is calculated from the date of issuance of the invoice. During the warranty period, repairs are mainly performed.

After our company receives your repair information, we will arrive within 24 hours in cities located in Zhejiang Province and within 72 hours in other provinces and cities, except for special reasons such as weather and natural disasters. For users outside China, our arrival time will be discussed accordingly.

One of the following scenarios does not fall within the scope of our warranty, but the company can provide paid services:

- 1、 The product does not meet the factory technical specifications due to your use;
- 2、 Due to your production process, corrosive gases such as dust, ammonia, acid, etc. enter the pump chamber;
- 3、 Without the consent of the company, you disassemble it yourself, resulting in the product not meeting the factory technical specifications;
- 4、 No sales or valid invoice;
- 5、 The product model and machine number filled in the three-guarantee warranty are inconsistent with the product sent for repair;
- 6、 Exceeding the warranty period.

SHANGHAI VACUUM PUMP WORKS CO., LTD

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Warranty

Product Name		Product Number		Quantity	
Product Number		Invoice Date		Date of Manufacture	

Purchase Unit Name		Certificate Number		Invoice Number	
Quality Issues					
Your Usage Conditions					

Unit (signature):_____Unit address:_____

Postal code:_____Telephone:_____

Contact person:_____Contact mobile phone:_____

To facilitate our door-to-door service for you, please fill in the walking route in detail:

Repair date:_____Year_____Month_____Day

Information Feedback Form



Dear Respected User:

Hello!

Thank you for using our company's products. In order to provide you with after-sales service in a more timely and effective manner, please fill out the "Information Feedback Form" after receiving the goods and mail, fax or email it to our company. Appreciate!

Company Name				Postal Code	
Company Address				Contact Person	
E-mail		Telephone		Fax	
Product Model	Product Number	Certificate Number	Purchase Date	Quantity	Supplier Name
Remark					

SHANGHAI VACUUM PUMP WORKS CO., LTD

Address: NO.3516, Waiqingsong Road, Qingpu District, Shanghai, China

Postal Code: 201709

Tel: 021-59745974-8108

Fax: 4006251818-9978

Complaints hotline: 021-59745974-8123

Email: shzkbc@shzkbc.com