

德国技术 Germany Technology



东方久信集团



真空泵  
vacuum pump



ISO 9001:2008

上海久信机电设备制造有限公司

Shanghai Joysun Machinery & Electric Equipment Manufacture Co.,Ltd.





PRODUCTS INTRODUCTION 《

公司简介

上海久信机电设备制造有限公司位于上海浦东新区张江高科技产业东区，属上海市高新技术企业，主要产品包括：油润滑X型单级旋片真空泵、罗茨真空泵、螺杆真空泵、真空系统工程及真空泵配件等。真空泵技术从德国引进并经消化改进，关键零部件选用国际知名品牌，整体性能已达国际水平。公司年销售额已达数千万，客户主要分布在中国、墨西哥、中东、东南亚、非洲、南美以及俄罗斯等。公司生产设备齐全，检测手段先进。真空泵的性能稳定，操作简单，性价比高以及售后服务及时周到等广受市场好评。

Located in East Area of Zhangjiang High-tech Industrial Garden Pudong District, Shanghai, Shanghai Joysun Machinery & Electric Equipment Manufacturing Co., Ltd is a member of high-tech enterprises in Shanghai, Company main products include X series single stage rotary vane vacuum pump with oil lubrication, roots vacuum pump, screw vacuum pump, vacuum system project and vacuum pump parts, etc. The company adopted advanced Germany vacuum pump technology, and improved much during production. Joysun vacuum pump adopts famous brand for key parts, and its operation effect has achieved international level. The company sales volume has reached tens of millions annually. The main clients are from domestic mainland, South-east Asia, Middle East, Russia, South Africa, Mexico and Africa, etc. The company has complete equipments for production, and adopts advanced methods for production testing. With its high quality, steady production, easy operation, excellent and in-time after-sales service, Joysun vacuum pump gets nice feedback from customers from different fields.



# JOYSUN



上海久信



下造



上海久信机电设备制造有限公司

SHANGHAI JOYSUN MACHINERY & ELECTRIC EQUIPMENT MANUFACTURE CO.LTD

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我司为扩大销售服务范围，更加快速直接地为客户提供解决方案，在深圳市、广州市、重庆市建立了分公司。同时为开拓国际市场，参与国际竞争，推动技术革新，在迪拜设立了迪拜分公司。

To expand our company's scope of sales and services, to provide solutions more quickly and directly to our customers, we establish branch in Shenzhen City, Guangzhou City, Chongqing City. At the same time, to explore the international market, participate in international competition, promoting technological innovation, we establish a Dubai branch in Dubai.



## 绿色能源效率 Green energy efficiency

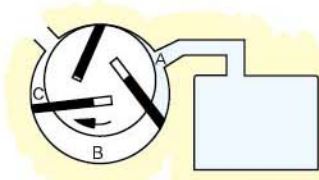
环境保护与节约成本的双重艺术

Double art of environmental protection and cost saving

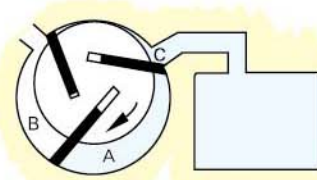
随着社会的发展进步，绿色能效已经成为我们的重中之重，上海久信机电设备制造有限公司生产的真空泵所配置的WEG电机从普通能效升级到高级能效，同样也是我司的一个跨越式的进步。我司追求产品的绿色环保与技术的革新，同样注重效率、灵活性和创新等各方面。我们正以使用有效的资源，较少能耗运行以及较少污染排放为宗旨生产真空泵，帮助您改善工作环境的同时并节约成本。

With the development of social progress, green energy efficiency has become our top priority; Shanghai Joysun Machinery & Electric Equipment Manufacture Co., Ltd has changed the WEG motors of vacuum pumps from the general energy efficiency to advanced energy efficiency, it is a leap of progress of our company. Our company attaches great importance to the pursuit of green environmental protection as well as the technology, efficiency, flexibility and innovation. We product the vacuum pumps with effective resources, less energy consumption and less pollution emissions. At the same time, We help you improve your cost and working environment and so on.

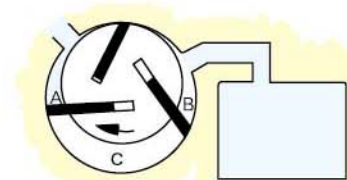
## ● 油润滑X型单级旋片真空泵/X series single-rotary vane vacuum pump with oil lubrication



吸入过程 /Sucking Stage



压缩过程 /Compressing Stage



排出过程 /Exhausting Stage

## ◎ 真空原理/Principle of Vacuum

在带有吸气阀(Sucking valve)和排气阀(Exhausting valve)的圆形泵体(定子)内,装有一个偏心转子和在转子槽中靠离心力运动的三片叶片,这些叶片将泵分隔成三部分,它们的容积随着转子的转动,周期性地变化,完成气体的抽吸、压缩、排出过程,从而使抽吸口处的气体被抽吸,形成真空。

Inside the round pump body with sucking and exhausting valves, there installed a centrifugal rotor and a rotor trough with three vanes driven by centrifugal power. The vanes separate the pump inner space into three parts and the respective volume changes periodically while the rotor turns. The sucking, compressing and exhausting stages eliminate the air at the inlet and achieve the state of vacuum.

## ◎ 优异的性能/Good characteristic

1. 极限真空度高,可小于0.5毫巴
2. 抽速高
3. 工作噪音低,可小于67分贝
4. 水蒸汽抽除能力强

High utmost vacuum rate, it can be less than 0.5mbar  
High deflating speed  
Low noise while working, lower than 67db  
Strong capacity in deflating the vapor

5. 环保,泵内装有油雾消除器,能除去排出气体中的99.999%的油
6. 结构紧凑,设计科学合理,轻便,易于安装在工业系统中

Protecting environment; an oil fog clearer is set in the vacuum pump, and no oil fog in the exhaust air  
Compact structure, scientific and reasonable design, and it is easy to install in the industry system

## ◎ 应用范围/Application Range

### 包装、粘贴

- 各种食品、金属件及电子元件的真空或惰性气体包装
- 照片、广告纸的粘贴

### 吊运、输送,吸持、装卸:

- 玻璃板的吊运
- 木板、塑料板的吸持
- 非磁性件的装卸
- 造纸和印刷工业中,纸和纸板的装卸,输送
- 粉状材料的输送

### 干燥、除气、浸渍:

- 电子元器件的干燥、浸渍
- 铸模、涂料、真空炉的除气

### 其他:

- 实验室装置
- 医疗装置
- 氟利昂的回收
- 真空热处理

### Packaging, Sticking

- Packaging used by vacuum or inert gases for varied foods, metal items and electronic elements.
- Sticking for photographs and advertisement sheets.

### Lifting, Transportation, Sticking, Loading/Unloading

- Lifting of glass plate
- Sticking of board, plastic plank
- Loading/Unloading of non-magnetism item
- Loading/Unloading and transportation of paper sheets and paper boards in paper making and printing industry
- Transportation of powder materials

### Drying, Air-eliminating, Dipping

- Dipping and drying of electronic elements
- Air-eliminating of moulds, dopes and vacuum furnace

### Others:

- Laboratory Devices
- Medical Treatment Devices
- Freon Recycling
- Vacuum Heat Treatment



◎ X-10/20/21/25单级旋片真空泵技术参数

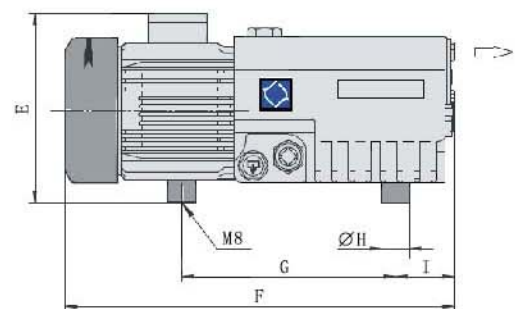
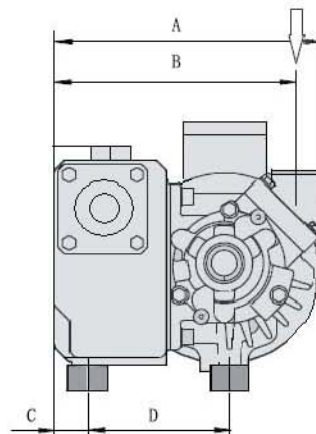
X-10/20/21/25 Technical parameter for single-stage rotary vane vacuum pump

项目ITEMS	型号MODEL	单位Units	X-10	X-20	X-21	X-25
额定抽速/Rated Speed		m <sup>3</sup> /h	10	20	21	25
极限压力/Utmost Pressure		mbar	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5
噪音/Noise		dB(A)	61	62	62	62
工作温度/Work temperature		℃	81	82	82	82
用电量/Oil consumption		L	0.5	0.5	0.5	0.5
水蒸气允许压力/Vapor permitted pressure		mbar	40	40	40	40
水蒸气抽除率/Suction rate of vapour		kg/h	0.15	0.3	0.3	0.4
进气口螺纹/Whorl of inlet		inch	Rp <sup>3</sup> / <sub>4</sub> "	Rp <sup>3</sup> / <sub>4</sub> "	Rp <sup>3</sup> / <sub>4</sub> "	Rp <sup>3</sup> / <sub>4</sub> "
电机额定功率/Motor rated power		kW	0.37	0.75	0.75	0.9
电机额定转速/Motor rated rotating speed		rpm	1440	2880	2880	2880
整机重量/Total weight		kg	17	17	18	19

★正常情况下改变技术规格参数，恕不另行通知  
We won't notice the changes of our technical specifications under normal circumstances.

◎ X-10/20/21/25单级旋片真空泵

X-10/20/21/25 Single-stage rotary vane vacuum pump



◎ 安装及外形尺寸/Mounting and overall dimensions

尺寸Dimensions	A	B	C	D	E	F	G	H	I
X-10三相/X-21三相	232	213	26	130	220	480	226	30	117
X-10单相/X-20三相	232	213	26	130	220	465	210	30	117
X-21单相	232	213	26	130	220	473	215	30	117
X-25单相	232	213	26	130	220	473	224	30	117
X-25三相	232	213	26	130	220	480	235	30	117

◎ X-40/63/100单级旋片真空泵  
X-40/63/100 Single-stage rotary vane vacuum pump



◎ X-40/63/100单级旋片真空泵技术参数  
X-40/63/100 Technical parameter for single-stage rotary vane vacuum pump

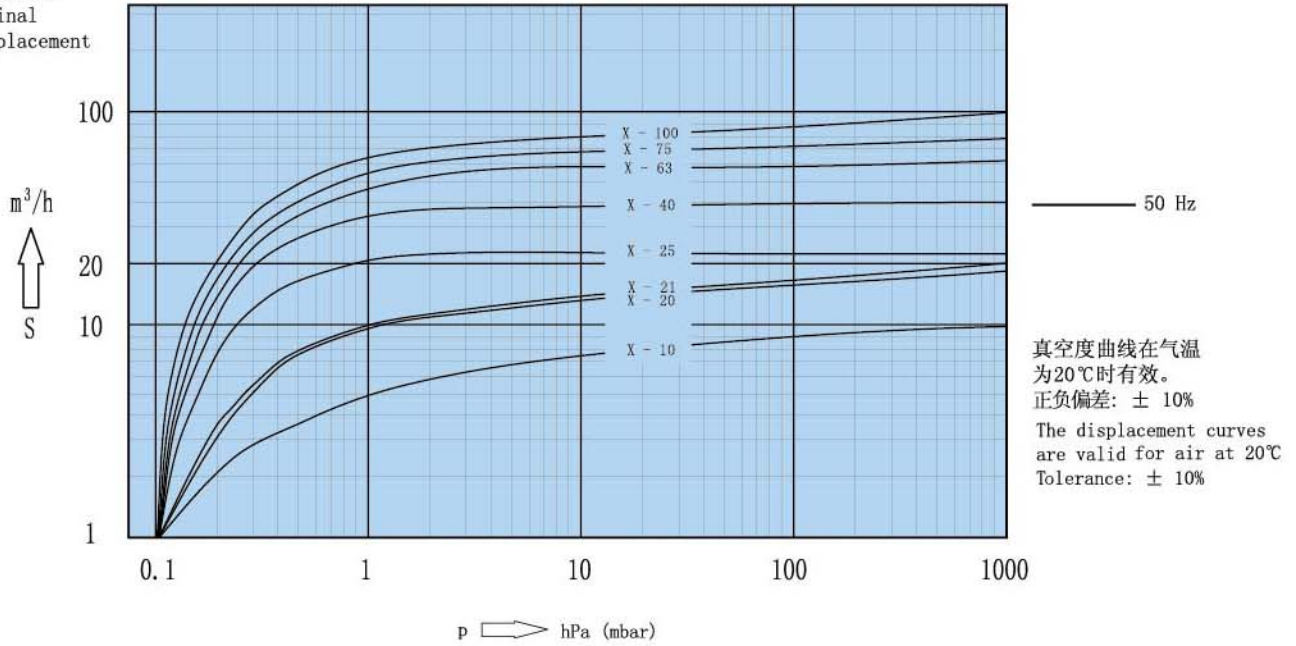
项目ITEMS	型号MODEL	单位Units	X-40	X-63	X-75	X-100
额定抽速/Rated Speed		m <sup>3</sup> /h	40	63	75	100
极限压力/Utmost Pressure		mbar	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5
噪音/Noise		dB(A)	64	65	65	66
工作温度/Work temperature		°C	83	84	84	85
用油量/oil consumption		L	1.5	2	2	2
水蒸气允许压力/Vapor permitted pressure		mbar	40	40	40	40
水蒸气抽除率/Suction rate of vapour		kg/h	0.6	1	1.2	1.6
进气口螺纹/Whorl of inlet		inch	Rp1¼"	Rp1¼"	Rp1¼"	Rp1¼"
排气口螺纹/Whorl of outlet		inch	Rp1¼"	Rp1¼"	Rp1¼"	Rp1¼"
电机额定功率/Motor rated power		kW	1.1	1.5	1.5	2.2
电机额定转速/Motor rated rotating speed		rpm	1440	1440	1440	1440
整机重量/Total weight		kg	48	58	60	72
外形尺寸/Vacuum pump size		cm	65 × 30 × 28	65 × 43 × 29.5	67 × 43 × 29.5	72 × 43 × 29.5

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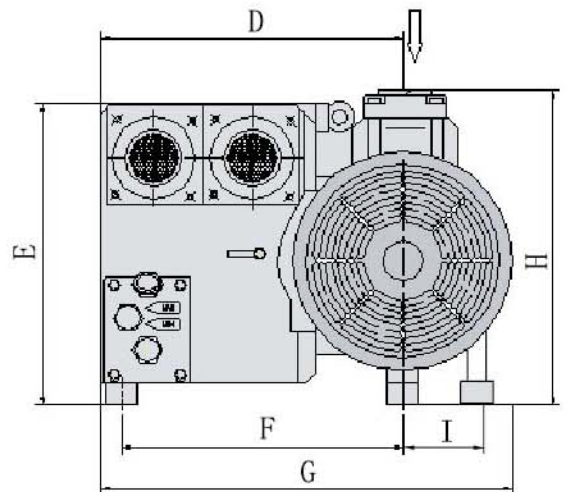
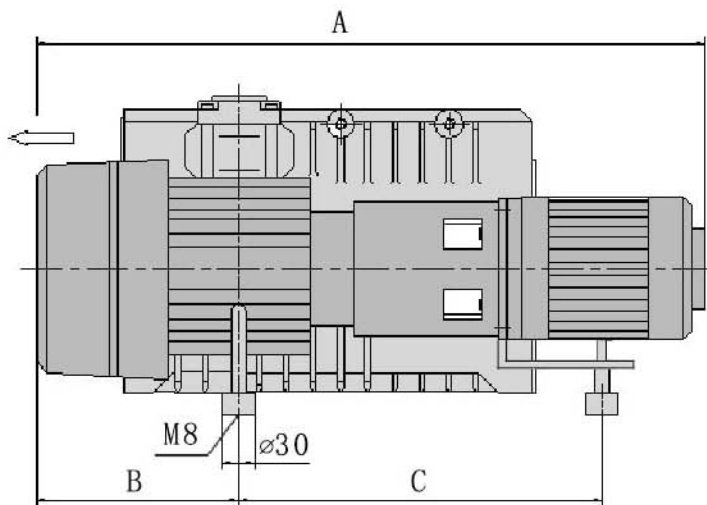
◎ 真空度曲线/Vacuum curve

标准排量  
Nominal  
displacement



◎ 安装尺寸/Mounting Dimensions

尺寸 Dimensions	A	B	C	D	E	F	G	H	I
X-40	650	150	290	195	270	185	300	280	55
X-63	650	150	265	295	285	278	430	295	-
X-75	670	160	280	295	285	278	430	295	-
X-100	720	180	295	295	285	278	430	295	-



◎ X-160/202/250/302单级旋片真空泵  
X-160/202/250/302 Single-stage rotary vane vacuum pump



◎ X-160/202/250/302单级旋片真空泵技术参数  
X-160/202/250/302 Technical parameter for single-stage rotary vane vacuum pump

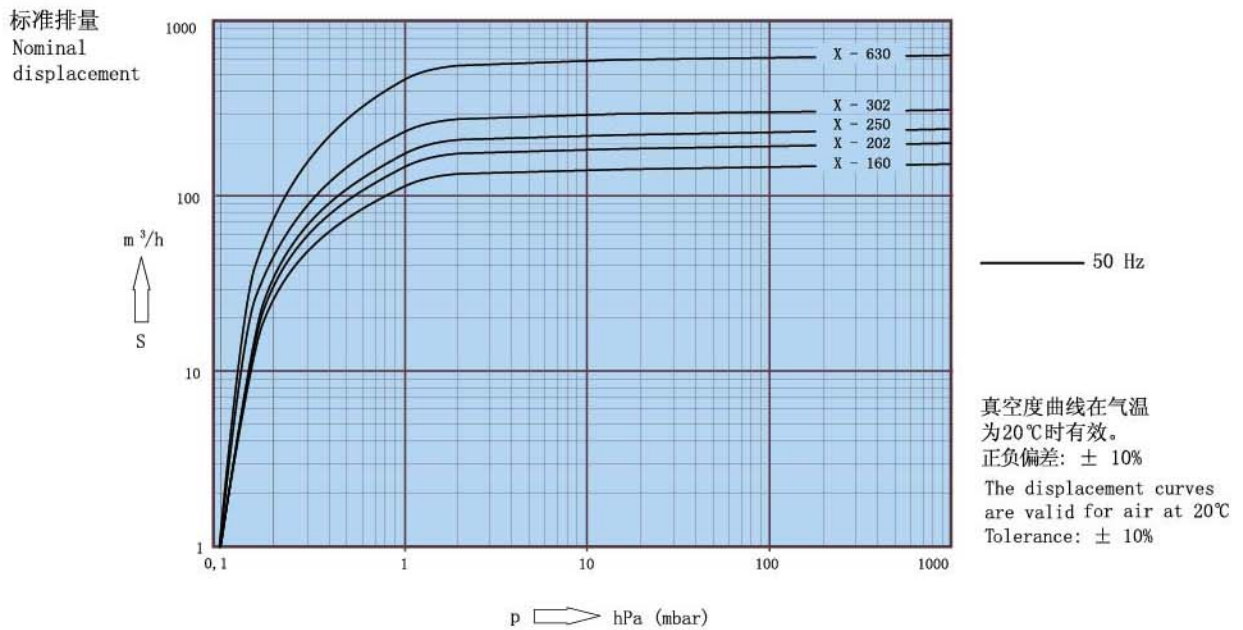
项目ITEMS	型号MODEL	单位Units	X-160	X-202	X-250	X-302
额定抽速/Rated Speed		m <sup>3</sup> /h	160	200	250	300
极限压力/Utmost Pressure		mbar	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5
噪音/Noise		dB(A)	71	73	73	75
工作温度/Work temperature		℃	65	72	81	83
用油量/Oil consumption		L	5	5	8	8
水蒸气允许压力/Vapor permitted pressure		mbar	40	40	40	40
水蒸气抽除率/Suction rate of vapour		kg/h	2.5	4	4.5	5
进气口螺纹/Whorl of inlet		inch	Rp2"	Rp2"	Rp2"	Rp2"
排气口螺纹/Whorl of outlet		inch	Rp2"	Rp2"	Rp2"	Rp2"
电机额定功率/Motor rated power		kW	4	4.8	5.5	7.5
电机额定转速/Motor rated rotating speed		rpm	1440	1440	1440	1440
整机重量/Total weight		kg	157	157	195	211
外形尺寸/Vacuum pump size		cm	85.5×49.5×43.5	85.5×49.5×43.5	98×56×44	101×56×44

\* 正常情况下改变技术规格参数，恕不另行通知

We won't notice the changes of our technical specifications under normal circumstances.

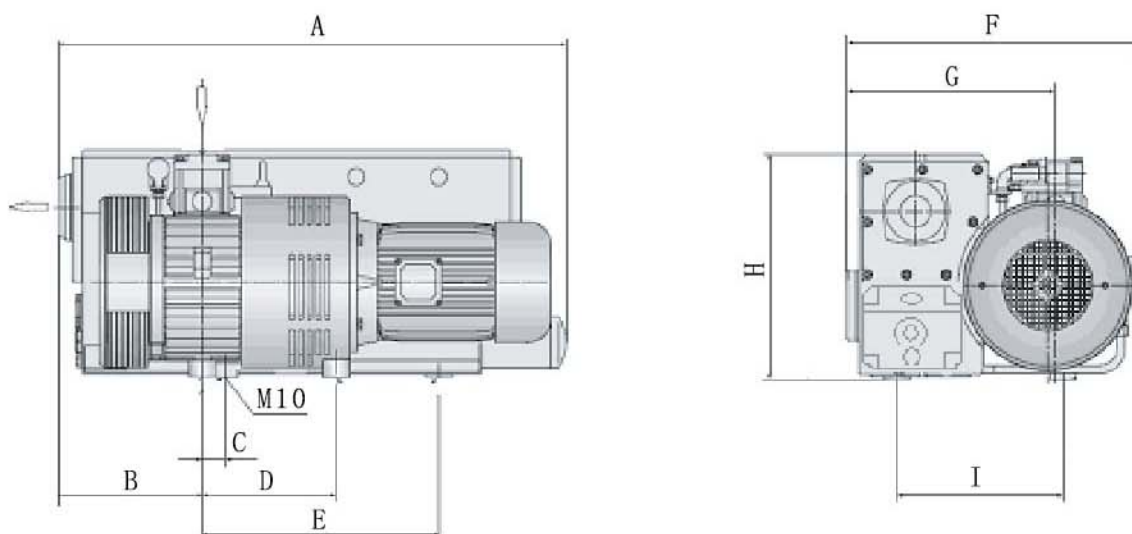


◎ 真空度曲线/Vacuum curve

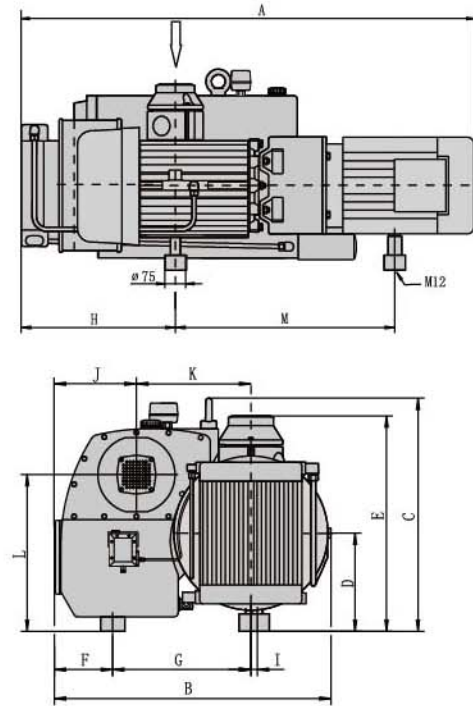


◎ 安装尺寸/Mounting Dimensions

尺寸 Dimensions	A	B	C	D	E	F	G	H	I
X-160	855	225	40	240	430	495	345	435	310
X-202	855	225	40	240	430	495	345	435	310
X-250	980	260	-	300	390	560	385	440	355
X-302	1010	260	-	300	390	560	385	440	355



◎ X-630单级旋片真空泵  
X-630 Single-stage rotary vane vacuum pump



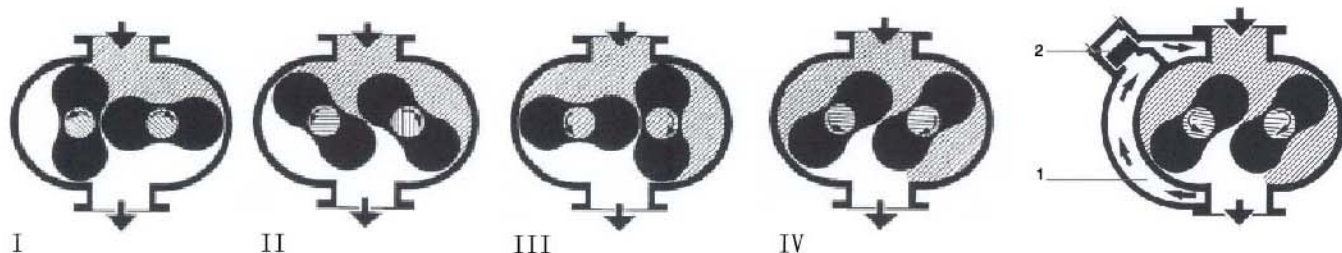
◎ X-630单级旋片真空泵技术参数  
X-630 Technical parameter for single-stage rotary vane vacuum pump

项目ITEMS	单位Units	X-630	尺寸Dimensions	mm
额定抽速/Rated Speed	m <sup>3</sup> /h	630	A	1780
极限压力/Utmost Pressure	mbar	0.1-0.5	B	880
噪音/Noise	dB(A)	80	C	730
工作温度/Work temperature	℃	88	D	306
用油量/Oil consumption	L	25	E	671
水蒸气允许压力/Vapor permitted pressure	mbar	40	F	182
水蒸气抽除率/Suction rate of vapour	kg/h	7.5	G	430
进气口螺纹/Whorl of inlet	inch	Rp3"	H	557
排气口螺纹/Whorl of outlet	inch	Rp3"	I	21
电机额定功率/Motor rated power	kW	18.5	J	256
电机额定转速/Motor rated rotating speed	rpm	1000	K	356
整机重量/Total weight	kg	550	L	488
外形尺寸/Vacuum pump size	cm	178×88×73	M	850

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● JRP型罗茨真空泵/JRP Roots vacuum pump



工作原理图/Working principle diagram

◎ 工作原理/Pumping Principal

JRP系列罗茨真空泵（以下简称真空泵）是利用两个8字形转子相互垂直安装在一对平行轴上，由传动比为1:1的一对齿轮作反向同步旋转，在转子之间、转子与泵腔内壁之间保持一定的间隙，进行高速运转，从而完成吸气和排气的过程，达到抽除系统内气体的目的。

Pumping operation of JRP series Roots vacuum pump (short for vacuum pump) effected through two '8' shaped rotors in pumping chamber rotating in opposite directions. With drive ratio of 1:1, two rotors constantly seal against themselves without touching each other and the chamber. The gaps between the movable parts are narrow enough to seal against the exhaust side and intake side in viscous flow and molecular flow, so that to achieve the purpose of pumping the gas in the chamber.

泵腔内转子处于位置 I 和 II 时，进气口侧内体积增加。当转子进一步旋转到位置 III 时，一部分容积从进气口侧被封离出来。在位置 IV 时，这个容积开放到排气口侧流入。当转子进一步转动时，气体通过排气口排出。转子每转动一圈完成两次以上的过程。

罗茨泵进气口和排气口之间的压差是受到限制的。JRP系列罗茨泵在进排气口间设置了一旁通阀（2），当进排气口的压差达到一定值时，旁通阀就自动打开，排气口处的部分气体通过旁通阀和反流通道（1）反流到进气口，这就大大降低了高压差下罗茨泵和前级泵的运行负荷。同时，因为打开的旁通阀的具有泄流作用，可以确保JRP系列真空泵和前级泵可以同时起动的而不会使罗茨泵和前级泵过载。

由于罗茨泵不能单独工作，必须与前级真空泵（如旋片泵、滑阀泵、水环泵等）组成罗茨泵机组使用，若欲获得更高的真空度，可采用二台罗茨泵串联组成三级罗茨泵机组。

When the rotors locate at I and II in the chamber, the volume of air inlet will increase. When the rotors locate at III in the chamber, part of air volume will be blocked out from the air inlet. When the rotors locate at IV, this volume will open to vent. When the rotor rotates further, air will discharge through the air outlet. Rotors will rotate more than two courses once every rotates.

The pressure difference between the inlet side and outlet side of roots pump are limited. JRP series roots pump adopts a bypass valve (2). When the value of pressure difference reaches to a certain figure, the bypass valve opens automatically. Some air volume from the outlet side flows to the reverse direction of inlet side through the bypass valve and reverse passage (1), which reduce the operational load of roots pump and front-stage pump greatly in the condition of high pressure difference. Meanwhile, due to the function of unloading when bypass valve opens, it makes sure JRP series vacuum pump and front-stage pump start at same time to avoid the overload for both of them.

The roots pump has to be worked as pump unit together with front-stage pump (such as rotating vane pump, slide valve pump and liquid ring pump). If it is required to reach to higher vacuum degree, two sets of roots pumps can be connected to work as a three stage roots pump unit.

## ◎ 产品特点/Good Characteristic

1. 转子与泵腔、转子与转子之间无摩擦，不需润滑油，故泵腔内无油，避免了油对真空系统的污染。
2. 结构紧凑体积小，可以水平或垂直安装。
3. 具有良好的动平衡性，运转平稳，振动小，噪声低。

1. There is zero friction between rotors, also between rotor and pump chamber, so there is no need of lubricating oil. Consequently, our pump can avoid the oil pollution on vacuum system.
2. Compact structure, and easy to install horizontally or vertically.
3. Good dynamic balance, stable running, small vibration and low noise.

4. 可抽除可凝性气体。
5. 启动快，能在短时间内达到极限压力。
6. 功率小，运转维护费用低。
7. 罗茨泵带有旁通阀，起到自动过载保护作用，故运行安全可靠。

4. Can pump off the non- condensable gas.
5. Quick startup and can achieve the utmost pressure in a short time.
6. Small power and low operation maintenance costs.
7. The bypass valve on roots pump can enjoy the automatic overload protection effect, so that the operation will be safe and reliable.

## ◎ 应用范围/Application Range

由于罗茨真空泵在较低入口压强下仍具有较高的抽速，特别适用于低入口压力下需要大抽速的真空系统中作为主泵或前级泵使用，并广泛应用于食品、化工、医药、轻纺等行业的生产过程中。例如：

- 真空冶炼
- 真空镀膜
- 真空热处理
- 真空浸渍
- 真空除尘
- 真空冷冻
- 真空蒸馏
- 真空浓缩
- 真空蒸发
- 真空干燥

Since roots vacuum pump can maintain large pumping speed in the lower intake pressure, so it can be used as the main pump or pore pump especially suitable for the vacuum system which has low inlet pressure but requires large pumping speed. It is widely used in the production process of food, chemical, pharmaceutical, textile and other industries. Such as:

- Vacuum Smelting
- Vacuum Coating
- Vacuum heat treatment
- Vacuum impregnation
- Vacuum freezing
- Vacuum distillation
- Vacuum concentration
- Vacuum evaporation
- Vacuum drying



© JRP型罗茨真空泵/JRP Roots vacuum pump



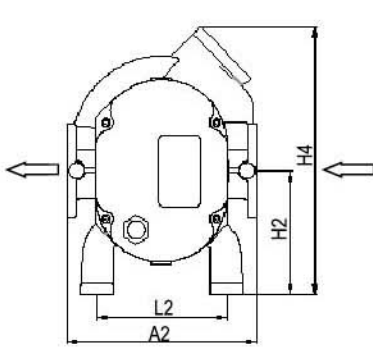
© JRP型真空泵技术参数/ Technical parameter for JRP vacuum pump

项目ITEMS	型号MODEL	单位Units	JRP-150	JRP-250	JRP-500	JRP-1000	JRP-2000
抽气速率/Pumping rate		m <sup>3</sup> /h	153	253	505	1000	2050
极限分压力/Ultimate pressure		Pa	0.05				
极限全压力/Extreme full pressure		Pa	0.5				
最大允许压差/Max. Differential pressure		Pa	8000				
进出气口口径/In and out of caliber		mm	70	70	70	100	150
零流量最大压缩比/Max. Of zero flow compression rate		max	≥35	≥35	≥40	≥40	≥50
噪音/Noise		dB(A)	63	63	63	68	75
用油量/Oil consumption		L	1.5	1.5	3	5	7
电机功率/Motor power		kW	1.1	1.1	2.2	4	7.5
电机同步转速/Motor synchronous speed		r/min	3000				
冷却方式/Cooling model			自然风冷natural air cooling				
重量/Weight		kg	90	100	155	233	465
推荐前级泵型号/ Recommend backing pump models			X-63, 2X-8	X-100, 2X-15	X-160, 2X-30	X-302, 2X-70	X-630, 两台2X-70

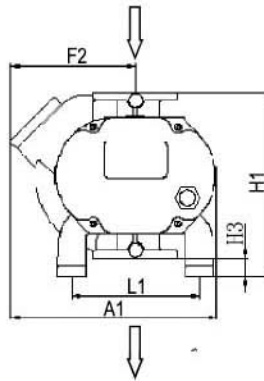
\*注：上表所示的极限压力、抽气速率是在工厂的调试条件下所获得的，选用不同的前级真空泵时，该参数会随之变化。

Note: As shown in the table above the ultimate pressure and pumping rate are gained under the condition of debugging. The parameters can be changed when using different backing pumps.

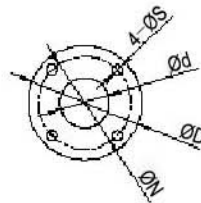
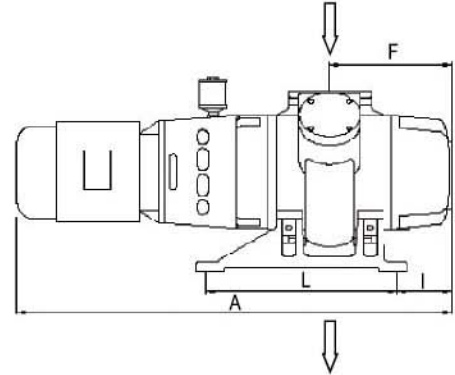
◎ 外形尺寸  
Installation dimension



立式安装/Vertical installation



卧式安装/Horizontal installation

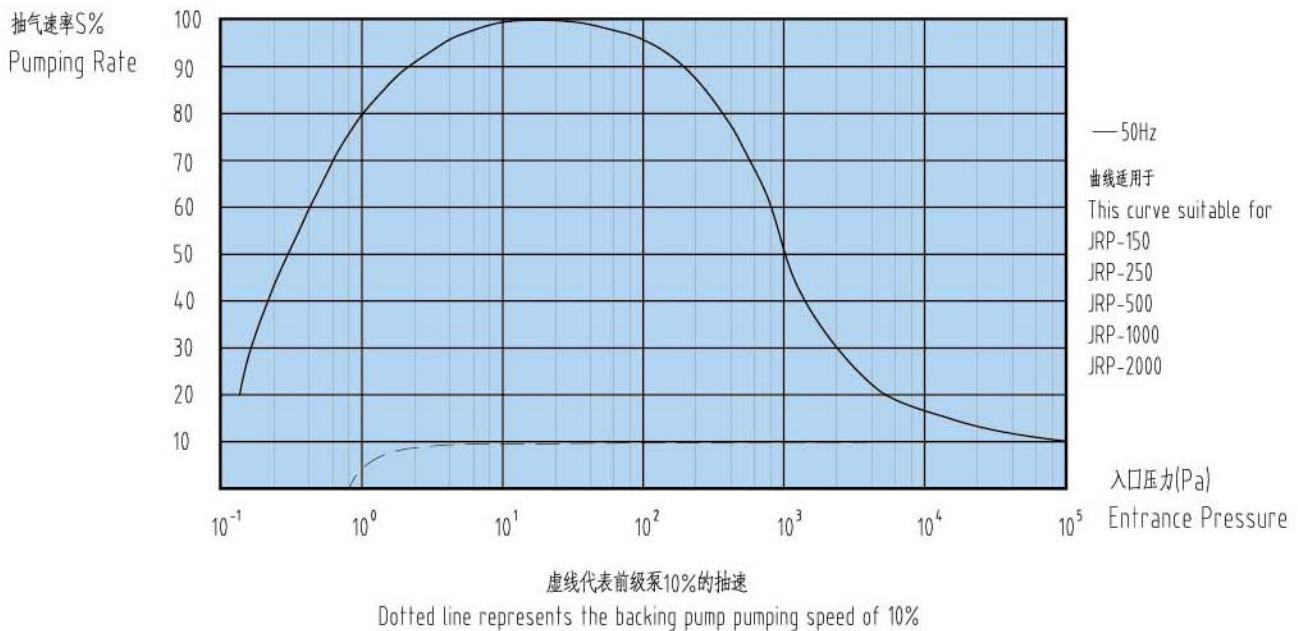


尺寸 Dimensions	A	A1	A2	H1	H4	L	L1	L2	F	F2	H3	H2	I	d	S	D	N
JRP-150	570	300	290	285	348	355	240	194	165	180	5	168	37	70	M12	160	130
JRP-250	740	325	280	285	330	420	240	185	209	180	5	160	37	70	M12	160	130
JRP-500	845	395	316	350	446	370	237	218	236	238	35	207	106	70	M12	160	130
JRP-1000	1080	485	370	419	553	510	290	240	301	302	49	252	129	100	M16	210	170
JRP-2000	1276	642	486	530	760	740	388	292	370	410	44	351	154	150	M16	265	225

★ 注: 若无特殊要求, 真空泵均按水平安装(气流为上进下出)方式供货。

Note: If there have no special requirements, the vacuum pump supplies according to the horizontal way (airflow is top down out).





## ● JSP型螺杆真空泵/JSP Screw vacuum pump

### ◎ 概述/Summarization

螺杆真空泵是我公司根据市场需求自主研发的技术先进的干式真空泵，因螺杆真空泵无需有润滑或水密封，泵腔内完全无油。因此，螺杆真空泵在半导体、电子工业中要求无油洁净真空的场合以及化工制药中对溶剂的回收工艺等具有不可比拟的优势。

JSP Screw vacuum pump is a kind of technologically advanced dry type vacuum pumps. It is our company's independent research and development according to the market demands. Since the screw vacuum pump does not need to have the lubrication or the water seal, the pump chamber is completely without oil. Therefore, the screw vacuum pump has an incomparable advantage in the semiconductor, the occasions which demands clean vacuum in electronic industry, and the solvent recovery process in chemical industry.

### ◎ 工作原理/Pumping Principal:

螺杆式无油机械真空泵又称为干式螺杆真空泵，是利用齿轮传动同步反向旋转的相互啮合而不接触的左右螺杆作高速运转，利用泵壳和相互啮合的螺旋将螺旋槽分隔成多个空间、形成多个级，气体在相等的各个槽内（柱形等螺距）进行传输运动，但无压缩，只有螺杆最末端的螺旋结构对气体有压缩作用。螺杆的各级间可形成压力梯度，用以分散压差和提高压缩比。各部间隙和转速对泵的性能有很大影响。在设计螺杆各部的间隙时，要考虑膨胀、加工及装配精度和工作环境（如抽出含粉空气等）等。该泵与罗茨真空泵一样不设排气阀。这种类型的真空泵若选用适当的较简单的牙形截面螺杆，则制造简单，可保证很高的加工精度，且容易动平衡。

Screw type vacuum pump is also known as dry screw vacuum pump. It takes advantage of the gear transmission to make the synchronous counter-rotating intermeshing without contact two screws running in a high speed. It also uses the pump shell and the spiral of mutual engagement to separate the spiral groove, forming a plurality of stages. Gas is transferred in equal channel (cylindrical and equal pitch), but no compression, only the helical structure of the screw has a compression effect on the gas. The pressure gradient can be formed at all levels of the screw, which can be used to disperse the pressure difference and increase the compression ratio. Each clearance and rotational speed has great influence on the performance of the pump. When design the gap of the screw ministries, expansion, processing and assembly accuracy and working environment (such as the extraction of dust containing gas, etc.) should be considered. This kind of pump has no exhaust valve like the roots vacuum pump. If choose an appropriate simple screw tooth-shaped section, it will be easy to manufacture, get a high machining accuracy and easy to balance.



### ◎ 产品特点/Good Characteristics

1. 泵腔内无油，对真空系统无污染，提高产品质量。
2. 泵腔内无油，解决油乳化及频繁更换工作液、频繁维护和保养等问题，节约使用成本。
3. 干式运行，不会产生废油和油烟，有利环保，节约石油资源。
4. 能抽除带有大量水蒸汽和少量粉尘的气体。增加附件后，也能抽除易燃易爆及放射性等气体。
5. 极限真空达到5Pa，适用于中、低真空，与罗茨泵串联可配成无油中真空机组，与分子泵串联可组成无油高真空机组。
6. 采用防腐涂层处理后，特别适用于变压器、制药、化工工艺中的产品蒸馏、干燥、脱气等适用场合。

1. No oil in the pump cavity, no pollution to the vacuum system, higher quality of products.
2. No oil in the pump cavity, solved the problems of oil emulsification and frequent replacement of the working fluid, frequent maintenance and maintenance, saved the cost of using.
3. Dry running, no waste oils or oil fume, environmentally friendly, save oil resources.
4. Can be pumped with a large amount of water vapor and a small amount of dust of the gas. Adding accessories can also be pumped flammable and explosive and radioactive gases.
5. The ultimate pressure can reach to 5pa, suitable for medium and low vacuum. It can be equipped with roots pumps into a medium vacuum unit without oil, or equipped with molecular pumps into a high vacuum unit without oil.
6. After the anti-corrosion coating treatments, it is especially suitable for transformers, pharmaceutical, distillation, drying, degassing in the chemical processing and other suitable occasions.

### ◎ 适用范围/Applications

1. 电工：变压器、互感器、环氧树脂真空浇注、电容器真空浸油、真空压力浸渍。
2. 工业炉：真空钎焊、真空烧结、真空退火、真空加压气淬、真空脱羟等。
3. 真空镀膜：真空蒸发镀膜、真空磁控溅射镀膜、薄膜卷绕连续镀膜、离子镀膜等。
4. 冶金：特种钢冶炼、真空感应炉、真空脱硫、脱气。
5. 航空、航天：航天搭载飞船轨道舱、返回舱、火箭姿态调整仓、宇航服、宇航员太空出舱、飞机升空等真空模拟实验。
6. 干燥：变压法真空干燥、煤油气箱干燥、木材干燥、蔬菜冷冻干燥。
7. 化工、制药：产品蒸馏、干燥、脱气、物料运输等。

1. Electrical: transformer, mutual inductor, epoxy resin vacuum casting, vacuum oil immersion capacitor, vacuum pressure impregnation.
2. Industrial furnace vacuum brazing, vacuum sintering, vacuum annealing, vacuum gas quenching.
3. Vacuum coating: vacuum evaporation coating, vacuum magnetron sputtering coating, film winding continuous coating, ion coating, etc.
4. Metallurgy: special steel smelting, vacuum induction furnace, vacuum desulfurization, degassing.
5. Aerospace: space equipped with the spacecraft orbit module, return capsule, rocket attitude adjustment positions, space suits, astronauts capsule space, aircraft and other vacuum simulation experiments.
6. Drying: pressure swing method vacuum drying, kerosene gas box drying, wood drying, and vegetable freeze drying.
7. Chemical and pharmaceutical products: distillation, drying, degassing, material transport, etc.



### ◎ JSP型螺杆真空泵主要性能参数

#### Technical parameter for JSP vacuum pump

项目ITEMS \ 型号MODEL	单位Units	JSP-150	JSP-300	JSP-450	JSP-600
抽气速率/Pumping rate	m <sup>3</sup> /h	140	274	430	570
极限压力/Utmost Pressure	Pa	5	5	5	5
进气口尺寸/Size of inlet	mm	40	50	65	80
排气口尺寸/Size of inlet	mm	30	40	50	50
噪音/Noise	dB ( A )	78	78	80	80
电机额定功率/Motor Power	kW	4/5.5	7.5/11	11	15/18.5
电机同步转速/Motor synchronous speed	r/min	3000	3000	3000	3000
油量/Oil consumption	L	1.3	1.6	1.8	2
冷却水/Cooling water	L/min	2	4	8	10

★正常情况下改变技术规格参数，恕不另行通知

We won't notice the changes of our technical specifications under normal circumstances.

### ● 前级过滤器/Pre-filter

#### ◎ 概述/Summarize

前级过滤器是根据市场需求设计、研发的过滤产品，主要配置在食品包装、医疗设备等带有水汽并影响工作质量的行业中。其优点有：

1. 去除真空环境中的液态水分
2. 去除真空环境中的细微颗粒
3. 稳定抽气流量

Pre-filter is a filtration products which was designed and developed based on market demand. It's main configuration includes food packaging, medical equipment and other industries with water vapor which affect the quality of works. Its advantages are:

1. Remove the liquid water in a vacuum environment;
2. Remove the fine particles in a vacuum environment;
3. Stable the suction flow rate.

#### ◎ 注意事项/Matters needing attention

此前级过滤器安装在真空泵和客户所需真空环境中间位置，在使用的过程中需注意以下几点：

1. 严格按过滤器的铭牌接入进出管路
2. 根据过滤器的污水的量定时通过排污阀排除污水。建议每班结束后排污
3. 根据过滤器内进入粉尘的量定时清洗过滤器内的过滤金属丝网，建议每周清洗一次。

This Pre-filter is installed in the middle position of vacuum pumps or vacuum environments clients demand . We should pay attention to the following points in the use of the process:

1. Access in and out of the pipeline in strict accordance with the filter plate;
2. Drain sewage through the drain valve timely according to the amount of the filter bearing. Suggest drain the sewage after each class;
3. Regularly clean the filter wire mesh in the filter according to the amount of entering dust. Recommend cleaning once a week.



◎ PF-27/42前级过滤器技术参数

PF-27/42 Technical parameter for Pre-filter

型号MODEL	单位Units	PF-27	PF-42
额定抽速/Rated Speed	m <sup>3</sup> /h	≤100	≤302
额定压力/Utmost Pressure	mbar	0.05	0.05
泵的配置/Configuration	台	X-10~X-100	X-160~X-302
排气口螺纹/Whorl of outlet	inch	G1 1/4"	G2"
容积/Capacity	L	27	42
进气口螺纹/Whorl of inlet	inch	G1 1/4"	G2"
整机重量/Total weight	kg	19	39
外形尺寸/Vacuum pump size	cm	Φ220 × 1060	Φ275 × 1080

- 注：1.正常情况下改变技术规格参数，恕不另行通知。
- 2.根据客户的需求不同，过滤的介质有两种，一种为金属丝网，另一种为玻璃球。
- 1. We won't notice the changes of our technical specifications under normal circumstances.
- 2. According to the different needs of customers, we have two media for filter: one is golden screen, the other is glass spheres.



## ● X型单级旋片真空机组

### X series single stage rotary vane vacuum pump set

#### ◎ 概述/Summarization

X单级旋片真空机组是选用一台或一台以上X型单级旋片式真空泵进行合理组合，配上缓冲储气罐和配电箱，成为一套新型的真空抽气设备，从而弥补了原来真空泵在使用上的不足。其优点有：

加大抽气量——由一台真空泵和一个缓冲储气罐的组合就可以增加总的（瞬时）抽气量。

节约电能源——由一个缓冲储气罐，配上真空表的控制就可以节约能源。（根据用户的实际情况）

提高使用寿命——真空泵使用可降低真空泵的温升，泵不会过热；真空表控制真空可以减少真空泵运行时间；缓冲储气罐加上进气过滤器可以减少异物和微颗粒状固体进入真空泵。

X type single-stage rotary vane vacuum unit is a suction of one or more than one X type single stage rotary vane vacuum pump for the rational combination,with a buffer tank and distribution boxes,into a new type of vacuum exhaust set up Prepared in order to make up for the original in the use of vacuum pump deficiency.Has its advantages:

Enlarge the capacity of suction—— It can increase the total or instant suction using two or above vacuum pumps and a buffering air tank.

Save electrical power—— It can make this with a buffering air tank equipped with vacuum meter.( It depends on the actual circumstance )

Extent its using life—— It can reduce the raise of pump's temperature to prevent over-heating. It cuts the running time under the control of vacuum meter.It can prevent foreign matter or granule entering the vacuum pump with buffering air tank and inlet filter.

#### ◎ 应用范围/Application Range

X型单级旋片真空机组使用于温度为5~30℃，湿度小于80%的环境中，X型单级旋片真空机组能抽除低于1个大气压的空气和在其它工矿企业中不含有酸性腐蚀性气体，有毒、易燃、易爆气体及对真空泵油有破坏作用的气体。

X型单级旋片真空机组可用于真空吸塑、真空包装、真空排气、真空脱气、真空吸引、真空蒸馏、真空分离、真空成型、真空浇铸、真空运输、真空保护，热处理和焊接等工艺。

X型单级旋片真空机组广泛应用于医院、制鞋工业、机械、化工、电子、纺织、印刷等行业中。

X型单级旋片真空机组还可以组合成其它多种形式，进一步扩大它的使用范围：

- 1、加大抽气量
- 2、抽除大量的水蒸气

X series Vacuum pump is suitable for applying on the environment of temperature between 5~30℃ and humidity less than 80%,our X series vacuum pump is capable to deflate air less than one atmosphere from vessel, it is prohibited to use for the gas with acidity, cauterization, toxin, flammability, explosive and any elements which can court damage of pump.

X series single-grade rotating patch vacuum pump can be applied to the work of vacuum absorbing plastic film, vacuum packing, vacuum exhausting, vacuum Air-eliminating,vacuum suction, vacuum distillation,vacuum abruption, vacuum molding, vacuum casting, vacuum transportation, vacuum heat treatment and welding etc. the applicable field includes hospital, machine, chemical, metallurgy, electron, electric,press & textile etc.

X series single-stage rotary vane pump also can be combined according to using-purpose to enlarge use range:

1. Enlarge deflating capacity
2. Suck mass of vapour

◎ JX型单级旋片真空机组  
JX series single stage rotary vane vacuum pump set



◎ JX-40/63/100/160/202/250/302单级旋片真空泵机组技术参数  
JX-40/63/100/160/202/250/302 Technical parameter for single-stage rotary vane vacuum pump set

项目ITEMS	型号MODEL	单位Units	JX-40	JX-63	JX-100	JX-160	JX-202	JX-250	JX-302
额定抽速/Rated Speed		m <sup>3</sup> /h	40	63	100	160	202	250	302
极限压力/Utmost Pressure		mbar	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5	0.1-0.5
泵的配置/Configuration		台	X-40	X-63	X-100	X-160	X-202	X-250	X-302
排气口螺纹/Whorl of outlet		inch	1*G1¼"	2*G1¼"	2*G1¼"	1*G2"	1*G2"	1*G2"	1*G2"
储气罐容积/Tank capacity		L	125	125	125	300	300	300	300
进气口螺纹/Whorl of inlet		inch	G1¼"	G1¼"	G1¼"	G2"	G2"	G2"	G2"
电机额定功率/Motor rated power		kW	1.1	1.5	2.2	4	4.8	5.5	7.5
整机重量/Total weight		kg	115	150	164	317	317	385	390
外形尺寸/Vacuum pump size		cm	124 × 41 × 99	150 × 51 × 115	150 × 51 × 115	179 × 66 × 154	179 × 66 × 154	183 × 70 × 154	183 × 70 × 154

- 根据客户的具体需求，我公司可以设计不同组合形式的机组。  
According to customer's specific needs, our company can design different combinations of pump set.



◎ JZX型单级旋片真空机组  
JZX series single stage rotary vane vacuum pump set



◎ JZX-150/250/500/502/1000/2000真空泵机组技术参数  
JZX-150/250/500/502/1000/2000 Technical parameter for vacuum pump set

项目ITEMS		型号MODEL	单位 Units	JZX-150	JZX-250	JZX-500	JZX-502	JZX-1000	JZX-2000
泵的配置/ Configuration	罗茨泵/Roots pump		台	JRP-150	JRP-250	JRP-500	JRP-500	JRP-1000	JRP-2000
	旋片泵/Rotary vane pump		台	X-40	X-100	X-160	X-202	X-302	X-630
额定抽速/Rated Speed			m <sup>3</sup> /h	150	253	505	505	1000	2000
极限全压力/Utmost Pressure			Pa	0.5	0.5	0.5	0.5	0.5	0.5
进气口尺寸/Size of inlet			mm	70	70	70	70	100	150
电机额定功率/Motor rated power			kW	2.2	3.3	6.2	7	11.5	26
整机重量/Total weight			kg	150	205	370	375	515	1160
外形尺寸/Vacuum pump size			cm	100×50×120	100×60×120	110×70×120	110×70×120	110×70×122	180×102×170

● 根据客户的具体需求，我公司可以设计不同组合形式的机组。  
According to customers specific needs,  
our company can design different combinations of pump set.

## ● JZH罗茨滑阀真空机组/JZH series rotary piston vacuum pump set

### ◎ 概述/Summarization

罗茨滑阀真空机组由罗茨真空泵与滑阀真空泵串联组成，滑阀真空泵作为预抽真空泵以及罗茨泵的前级真空泵使用，罗茨真空泵作为主抽真空泵。罗茨真空泵与滑阀真空泵抽速比大小选择的主要依据是机组中工作时间较长的真空泵，如果该泵长期工作在低真空区间，宜选择较小的抽速比（2:1至4:1），如果该泵长期工作中高真空区间，则可选择较大的抽速比（4:1至10:1）。

JZH series rotary piston vacuum pump set is made up with the Roots pump and rotary piston vacuum pump. Rotary piston vacuum pump is used as the pre-vacuum pump and the backing vacuum pump of the roots vacuum pump. The selection of displacement ratio between the Roots vacuum pump, is mainly referred to the pump under long term running; when working in low vacuum, it is advised to select small displacement ratio(2:1 to 4:1); if working in medium or high vacuum, the bigger displacement ratio(4:1 to 10:1) should be preferred.

### ◎ 特点/Features:

真空度高，中高真空区间抽气效率高，工作范围宽，节能效果显著；  
一体化机架，结构紧凑，占地面积小；  
自动化程度高，操作简单，维护方便，运行安全，可靠耐用；

High vacuum, high exhausting efficiency in medium or high vacuum, wide working range, obvious energy-saving;  
Integrated rack, compact structure, small required space;  
High automation, simple operation, easy maintenance, safe, reliable and durable running;

### ◎ 适用范围/Applications

广泛应用于真空镀膜、真空冶炼、真空热处理、真空干燥、真空浸渍、真空滤油、多晶硅生产、航空航天模拟试验等领域。

Widely used in vacuum metallurgy, vacuum heat treatment, vacuum dry, vacuum impregnation, vacuum strainer, poly-silicon production, aerospace simulation and so on.





◎ JZH罗茨滑阀真空机组主要性能参数

Technical parameter for JZH series rotary piston vacuum pump set

项目ITEMS		单位 Units	JZH-250	JZH-500	JZH-1000	JZH-2000
泵的配置/ Configuration	罗茨泵/Roots Pump	台	JRP-250	JRP-500	JRP-1000	JRP-2000
	滑阀泵/Rotary Piston Pump	台	2H-15	2H-30	2H-50	2H-100
额定抽速/Rated Speed		m <sup>3</sup> /h	253	505	1000	2050
极限分压力/Utmost Pressure		Pa	0.02	0.02	0.02	0.02
极限全压力/Utmost Pressure		Pa	0.5	0.5	0.5	0.5
进气口尺寸/Size of inlet		mm	70	70	100	150
排气口尺寸/Size of inlet		mm	40	50	63	80
电机额定功率/Motor Rated Power		kW	3.3/2.7	6.2/5.2	9.5	18.5

\* 根据客户的具体要求，我公司可以设计不同组合形式的机组。

According to customers specific needs, Our company can design different combinations of pump set.

## ● JZS罗茨螺杆真空机组/JZS series screw roots vacuum pump set

### ◎ 概述/Summarization

罗茨螺杆真空机组由罗茨真空泵与螺杆真空泵串联组成，螺杆真空泵作为预抽真空泵以及罗茨泵的前级真空泵使用，罗茨真空泵作为主抽真空泵。

JZS series screw roots vacuum pump set is made up with the Roots pump and screw vacuum pump. Screw vacuum pump is used as the pre-vacuum pump and the backing vacuum pump of the roots vacuum pump.

### ◎ 特点/Features:

罗茨螺杆真空机组为完全的干式系统，对被抽介质无污染；  
对于被抽介质有水蒸汽或粉尘的环境不敏感，相比于罗茨旋片或罗茨滑阀机组优势明显；  
干式运行，不会产生废油、废水和油烟，有利于环保，节约石油资源和水源；  
真空度高，单台罗茨和螺杆串联即能达到小于1Pa的极限真空；  
整套机组维护清洗便捷，由于泵腔内无接触不磨损，长期使用真空性能基本不变；  
被抽气体直接排出泵外，无水和油的污染，气体、溶剂方便回收。

JZS series screw roots vacuum pump set is a completely dry system, it has no pollution to the pumped medium;  
It's not sensitive to the pumped medium steam or dust environment, it has obvious advantages compared to the JZX series single stage rotary vane vacuum pump set or JZH series rotary piston vacuum pump set;  
Dry running, will not produce waste oil, waste water or smoke, is conducive to environmental protection, saving oil and water resources;  
High vacuum degree, single roots and screw tandem can reach the ultimate vacuum of less than 1Pa;  
The maintenance and cleaning of the pump set is convenient, because there is no contact and no wear in the pump cavity, the vacuum performance of the long-term use is basically unchanged;  
The gas is directly discharged from the pump, no pollution of water and oil, gas and solvent is convenient to recycle.

### ◎ 适用范围/Applications

广泛应用于化工、制药、电工、航空航天、真空镀膜、真空炉、真空干燥、真空压力浸渍、真空冶金等领域。

Widely used in chemical, pharmaceutical, electrical engineering, aerospace, vacuum coating, vacuum furnace, vacuum drying, vacuum pressure impregnation, vacuum metallurgy and so on.





◎ JZS罗茨螺杆真空机组主要性能参数

Technical parameter for JZS series screw roots vacuum pump set

项目ITEMS		单位 Units	JZS-250	JZS-500	JZS-1000	JZS-2000
泵的配置/ Configuration	罗茨泵/Roots Pump	台	JRP-250	JRP-500	JRP-1000	JRP-2000
	螺杆泵/Screw Pump	台	JSP-150/300	JSP-300/450	JSP-450/600	JSP-600
* 额定抽速/Rated Speed		m <sup>3</sup> /h	253	505	1000	2050
极限压力/Utmost Pressure		Pa	< 1	< 1	< 1	< 1
进气口尺寸/Size of inlet		mm	70	70	100	150
排气口尺寸/Size of inlet		mm	30/40	40/50	50	50

根据客户的具体要求，我公司可以设计不同组合形式的机组。

According to customers specific needs, Our company can design different combinations of pump set.

● 性能卓越的单级旋片真空泵零配件  
 Good-functionspare parts for single-stage rotary vane vacuum pump





◎ 性能卓越的罗茨真空泵零配件  
Good-functionspare parts for roots vacuum pump



研发/Research and development



- ◎ 科技领先 追求卓越
- ◎ 质量为本 信誉第一
- ◎ 诚信 致远 合作 双赢

加工/Processing



- ◎ Science and technology leading, excellence pursuit
- ◎ Quality-oriented, credit first
- ◎ Honest, cooperative, forward-looking and win-win spirited

装配/Mounting

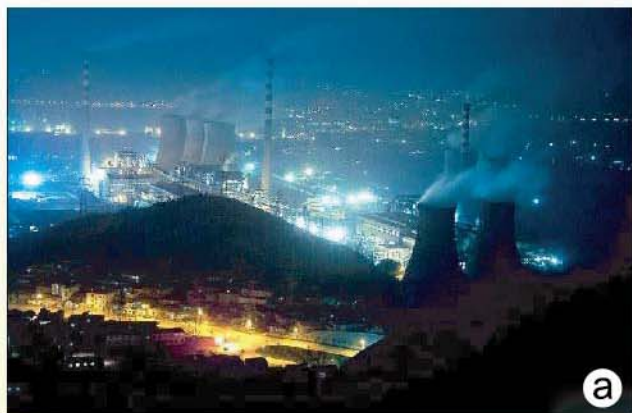


仓储/Warehousing





● 真空泵的应用领域 / Applications



JOYSUN 产品应用领域:

- a. 电力   b. 太阳能电池板   c. 风电叶片  
d. 木工机械   e. 化工   f. 医院负压系统

JOYSUN Application of our product:

- a. electric power   b. power solar panel   c. wind blades  
d. woodworking machinery   e. Chemical engineering   f. hospital subpressure vacuum system





g. 科研实验室 h. 电子工程 i. 铸造设备

j. 环境工程 k. 塑料橡胶 l. 食品包装

g. Research Laboratories h. electronic equipments i. Foundry equipment

j. Environmental Engineering and etc k. Plastics and Rubber l. Food Packaging



● 认证证书  
Certificate

# CERTIFICATE



## 油润滑旋片真空泵故障排除指南

Troubleshooting Guides For oil lubricated rotary vane pumps

**故障现象:**  
Failure phenomenon

真空度降低  
Lower vacuum level

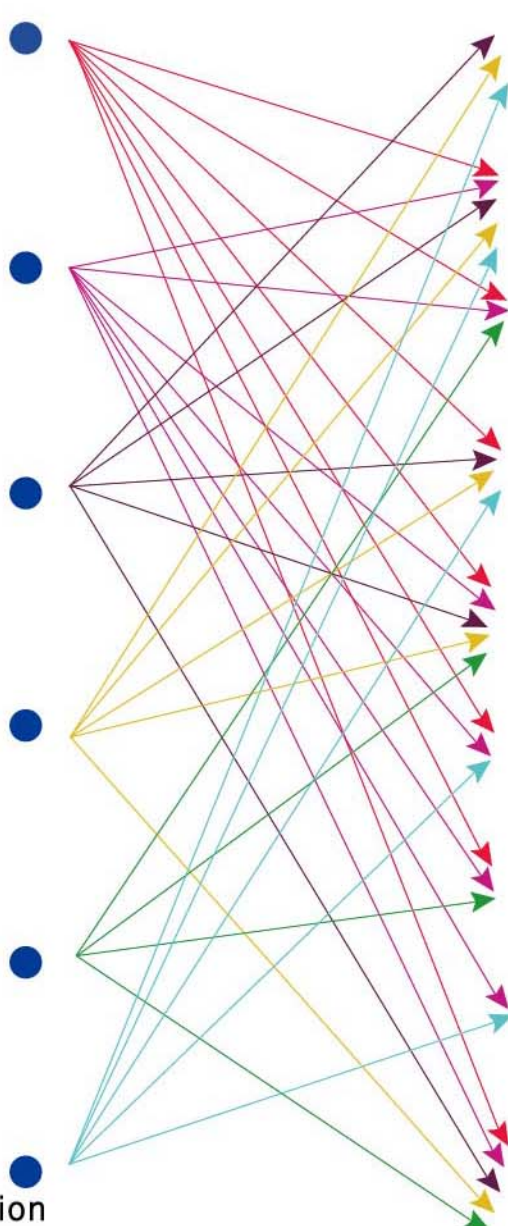
抽速降低  
Lower pumping speed

噪音增大  
Noise increases

温度升高  
Temperature rises

漏油  
Oil leaks

电耗增加  
Power consumption increases



**相关因素:**  
Related Factors

轴承损坏  
Bearing damages

叶片损坏  
Vaness damages

轴承损坏/油路泄露  
Bearing damages/  
Oil passage leaks

油问题-加油/换油/使用  
正确的油/更换油过滤器  
Oil factors-oil filler/ oil change  
/ use the correct oil /  
oil filter replacement

排气过滤器堵塞  
Exhaust filter blocks

进气滤网堵塞  
Intake air filter blocks

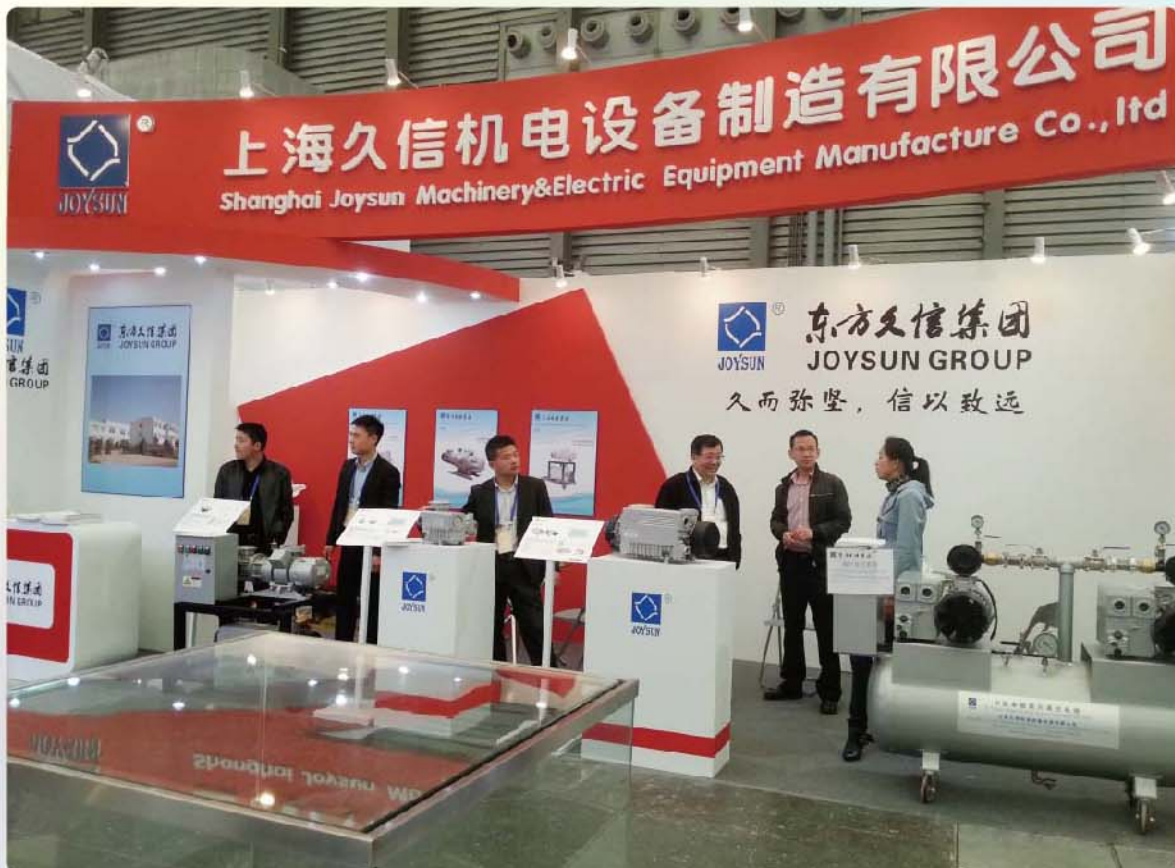
吸气阀损坏  
Suction valve damages

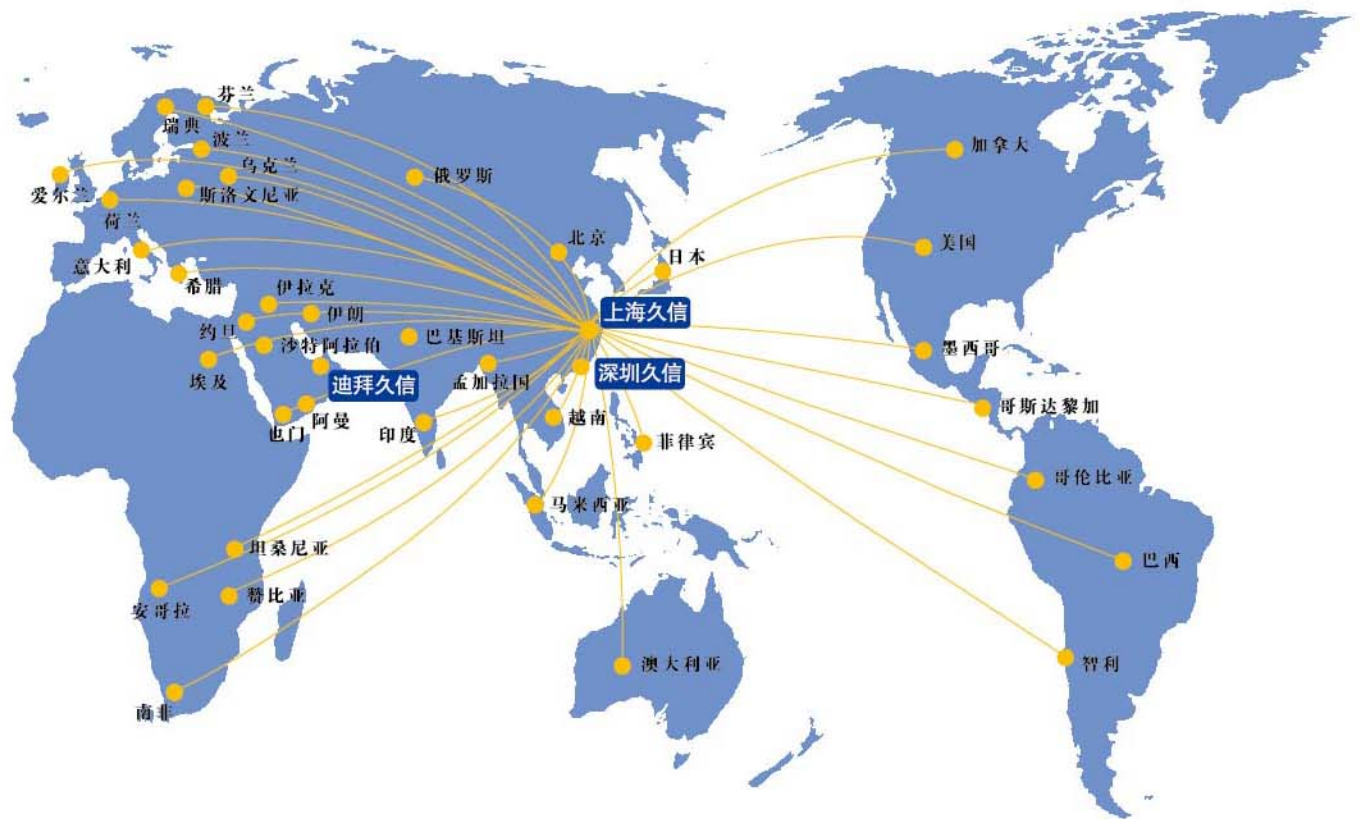
电机故障  
Motor failure

气镇阀损坏  
Gas ballast valve  
damages



● 展会  
Exhibition





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