

ORION DRY-PUMP
OIL-FREE ROTARY VANE VACUUM PUMP

DRY-PUMP FIRST.

IF YOU ARE PLANNING AUTOMATION AND LABOR SAVING, STUDY
THE ORION DRY PUMP FIRST.
OIL-LESS ROTARY VANE VACUUM PUMP NEW
QUIETER AND LONGER SERVICE LIFE

ISO品质方针:制造出让客户感动而满意的产品

ORION

真空机械综合说明书

电机直连高真空KHF系列
High Vacuum



标准KRX系列
Standard



复合式CBF系列
CBF Series (Combination)



12.8月版

世界第五代真空泵
KRF Series



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世界第五代真空泵

标准型真空泵 KRF series

- 长寿命
- 安全环保设计
CE认证, RoHS指令对应
- 静音设计



F全系列全新登场

新复合型真空泵 CBF series

- 独立双泵设计
- 安全环保设计
CE认证, RoHS指令对应
- 保养性能高
- 双功能调节自由化
- 过滤芯更易更换



高真空型真空泵 KHF series

- 安全环保设计
CE认证, RoHS指令对应
- 可在极限真空~大气压力
范围内使用
- 滑片更易更换 (KHF14 KHF20)



Attestation certificate




Precautions For Safety

在采用、选定无油式真空泵前一定要详读产品使用说明书，确认产品的特点、式样、使用条件、注意事项等所有内容。并且确认使用用途、目的、所希望的性能是否能满足要求后再决定，在产品的正确使用范围内使用。

使用上的注意事项(危险/警告)









▲ 危险

误操作时，可导致使用者死亡或受重伤

-  **严禁吸入易燃、易爆气体**
请绝对不要吸入易燃、易爆气体！另外，不要在易燃、易爆气体的环境下使用！否则，会造成爆炸、火灾！

▲ 警告


误操作时，可导致使用者死亡或受重伤

-  **运转时禁止排气配管阻塞（B型以及V.B型）**
运行时请不要把压力调节器全关或使出口排气管堵塞，否则，配管内的压力·温度异常上升时会造成配管、泵零部件损坏。
-  **禁止使用有机溶剂清洗元件**
在清洗滤清元件等污垢时，请勿使用香蕉水、酒精、挥发油、汽油、灯油等。否则，会造成爆炸、火灾。
-  **绝对不要取下防护罩**
在使用时请绝对不要取下皮带罩、风扇罩。因传送带、皮带轮、风扇高速回转时会对人身造成危害。
-  **绝对不要把手伸入回转部**
请不要把手伸入回转部、否则会切断手指、造成重大伤害。
-  **请勿弄破电源线**
请勿弄破电源线，或强硬弯曲、拉、捆等。另外，请勿将重物放在电源线上，以免电源线破损，造成触电、火灾。
-  **请勿洒水**
请勿直接往泵、电机上洒水，或用水洗。另外，请勿在水、液体能接触的地方使用。否则，会造成触电、火灾、引起故障。
-  **小心触电**
请勿用湿的手去触摸电源插头等电气零件。另外，请勿用湿手去操作开关。否则，会造成触电事故。
-  **请勿改造**
请绝对不要改造，当自行改造时即不属于保修对象。

Precautions for Use (Danger/Warning)









▲ DANGER

Indicates a potentially hazardous situation that, if the product is misused, may bring about death or serious injury to the operator.

-  **Keep flammable or explosive gas out.**
Keep the pump from inhaling flammable or explosive gases out. Do not use the unit in the place where flammable or explosive gas exists. or else It may cause explosion or fire.

▲ WARNING

Indicates a potentially hazardous situation that, if the product is misused, may bring about death or serious injury to the operator.

-  **Blockage operation of exhaust piping is prohibited.**
Do not operate the machine when the pressure controller is all closed and the exhaust piping is blocked. If blocked the piping, pressure and temperature of inside the piping may rise abnormally and may cause burst of the piping and pump parts.
-  **Do not wash filter element with organic solvents.**
When cleaning the filter element, do not use organic solvents such as thinner, alcohol, benzene, gasoline, and kerosene. It may result in explosion or fire.
-  **Do not remove the cover during operation.**
Do not operate this product while the cover is removed. Otherwise, Your hand(s) may be cut off or be seriously hurt because the cooling fan and the cooling rotate at high speeds
-  **Do not put hand into the rotating parts.**
Put hand into the rotating part may cause severe injury like amputation of hand, etc.
-  **Prevent the power cord from any damage.**
Do not damage, bend, pull, or bind the power cord. Do not place heavy objects on it or let it get caught or pined. It may damage the cord, and may cause electric shock or fire.
-  **Keep this product away from water.**
Do not pour water over the pump and the motor, and do not use water for cleaning this product. Also, do not use this product where it may touch water or other liquid. It may cause electric shock or fire.
-  **Be alert to electric shock.**
Do not touch electrical parts such as power plug with wet hand. Also, do not operate switch with wet hand. It may cause electric shock.
-  **Do not modify the product.**
Do not modify the product. It may cause the abnormal operation and may result in injury, electric shock or fire.

⚠ 为了安全，请一定遵守

Always observe these for safety reasons

在采用、选定无油式真空泵前一定要详读产品使用说明书，确认产品的特点、式样、使用条件、注意事项等所有内容、并且确认使用用途、目的、所希望的性能是否能满足要求后再决定、在产品的正确使用范围内使用。

Before selecting and adopting the dry pump, be sure to read the catalog carefully to check and confirm all the contents such as features, specifications, using conditions, and precautions to make sure the selected type matches your application, purpose and expected performance before determining your final selection and, also, use the dry pump properly within the ranges of the specifications

使用上的注意事项(危险/警告)

⚠ 警告

误操作时，可导致使用者死亡或受重伤



地线请一定接地

在电机、端子箱内或机架下部附有接地用螺丝，请一定接地，如不接地的话，会造成触电事故。



安装时请一定委托专业人员或专门技术人员来实施
当安装不当时，容易造成翻倒、掉落从而引起受伤、触电、火灾等事故。



异常时请停止运转

异常时请停止运转，拔掉电源插头，或切断总电源并请与销售店或专门作业者磋商。当在异常情况下继续运转的话，会引发触电、火灾等事故。



清扫·检查时关掉总电源

清扫·整備·检查时，请一定要切断总电源。否则会造成触电以及受伤。
※ 整備、检查时请委托专门的作业者来进行。



定期检查电源插头

当使用电源插头的情况下，请定期确认电源插头上是否沾有灰尘。
为使其不松动，请把插头确实插到插座的底部。沾有灰尘连接不完全时会引发触电、火灾。



请一定设置保护装置

请专业人员设置漏电保护器，如不设置的话，会引起触电、火灾。另外，还请设置过负荷保护器（热动继电器），如不设置的话，由于过负荷会造成故障或火灾。



漏电保护器动作时联络销售店或专门作业者

漏电保护器动作时，请与销售店或专门作业者磋商。强硬恢复电源的话，会造成触电、火灾。



请不要在室外使用

本产品为室内使用式样、如果在室外使用时、遇风雨导致漏电保护器动作时，请与销售商或专门作业者磋商。强硬恢复电源的话，会造成触电、火灾。

Precautions for Use (Danger/Warning)

⚠ WARNING

Indicates a potentially hazardous situation that, if the product is misused, may bring about death or serious injury to the operator.



Be sure to ground this product.

Be sure to ground this product with the grounding screw inside the terminal box or at the lower part of the frame of the motor. If not, it may cause electric shock.



Installation must be done by specialized personnel.

The product may fall down or drop when it is improperly installed. It may result in personal injury electric shock or fire.



Do not operate this product under abnormal conditions.

Stop the operation when it is abnormal. Then, pull out the power plug or shut off the main power supply, and consult with our dealer or a specialized company. If the operation is continued under such conditions it may cause electric shock or fire.



Shut off the main power supply before cleaning, maintenance and inspection.

Shut off the main power supply before cleaning, maintenance and inspection, and clearly post a sign on the power supply switch to indicate it is under maintenance. Failure to do so may result in electric shock or personal injury. Consult with a specialized company for maintenance and inspection.



Inspect the power plug periodically.

If the product is operated with the power plug, periodically inspect the power plug and confirm it is not covered with dust. The power plug must be fully inserted to the root of pins. If the power plug is covered with dust or not fully inserted, it may cause electric shock or fire.



Be sure to install the protective device.

Consult with a specialized company to install an earth leakage breaker. Failure to do so may cause electric shock or fire. Also, install an overload protection device (thermal relay). Operation without such a device may cause malfunction due to overload or fire.



Contact with a specialized company when the earth leakage breaker is activated.

When the earth leakage breaker is activated, contact with a specialized company. If you force to turn on the power supply, it may cause electric shock or fire.




Do not use this product outdoors.


This product is intended for indoor specification. If the product is used outside and is exposed to wind or rain, the motor may suffer from incomplete insulation and may cause electric shock or fire.


使用上注意事项（注意）


⚠ 注意


误操作时，可导致使用者死亡或受重伤


 **请勿将手伸入防护罩内侧**
请绝对不要将手伸入皮带罩、联轴节罩、风扇盖的内侧。否则会对手、手指造成伤害。


 **除电机指定的额定电源以外，不能使用其他的电源。**
如使用与电机指定的额定电源以外的电源运转的话，会引起泵的故障、事故等。


 **请勿将物品放在真空泵上**
真空泵上请勿放置装有重物或水的容器。掉落使人受伤或因水溢出而生锈。造成电气绝缘不良，引起漏电、触电。


 **不要超过使用范围来使用**
当超过使用范围(压力、真空)来使用时、会缩短产品的使用寿命、同时会引起产品的故障。


 **注意烫伤**
真空泵、散热器表面、排气口及排气侧配管表面温度很高，请勿触摸。否则，会造成烫伤。


 **定期检查漏电保护器**
请定期确认漏电保护器的动作状况。否则当设备发生漏电时漏电保护器不运作，造成人身伤害。


 **逆止阀的安装**
泵停止时，因残留压力会产生机器逆转，在使用时请装上逆止阀，如不安装的话，会引起设备的故障等。

 **长时间不使用时，请切断总电源**
为安全起见，长时间不使用时，请切断总电源。否则由于绝缘恶化，会造成触电或漏电、火灾。

 **拿住电源线顶端的插头，拔掉电源插头**
拔掉电源插头时，请拿起电源线顶端来进行拔掉。如直接拿软线拔的话，芯线的一部分会断线，造成电源线发热引起火灾。

 **防止电线表皮熔化**
在配线时不要使电缆与电机的外壳相接触、如果接触的话容易引起电缆的表皮熔化导致漏电和引起火灾。


 **清扫、点检时要使用保护装置**
清扫、点检时要使用手套、否则真空泵的高温会引起烫伤。
在搬运真空泵时要使用防滑手套、穿戴安全鞋、以免发生事故。


 **建议连续运转**
起停频繁的情况下(起停间隔5分以内)会明显降低产品使用寿命、容易引发产品的故障。


Precautions for Use(caution)


⚠ CAUTION


Indicates a critical situation that,if the product is misused,may bring about injure to the operator or damage to the product.


 **Do not put your hand inside the covers**
Do not put your hand inside the belt, coupling or fan covers,or it could result in severe injury such as cutting of your hands of fingers.


 **Do not operate this product with any voltage other than the rated one specified for the motor.**
Operation with any voltage other than the rated voltage specified for the motor may result in failure or accident.


 **Do not sit on, lean on, or place objects on this product.**
Do not place heavy objects or object containing water on the product, and do not get on it. If you get on the product, you may fall and be injured. If water spills, it may cause rust inside or poor insulation and may cause leakage or electric shock.


 **Do not use the machine over the specified pressure.**
If using the machine over the specified pressure,it may shorten the life of product and may cause failure or trouble.


 **Be alert to burn.**
Do not touch areas around the dry pump,the surface of after cooler, the exhaust port and the piping surface of exhaust side. They are heated to high temperature, and it may result in burn.


 **Inspect the earth leakage breaker periodically.**
Periodically check performance of the earth leakage breaker. If using the product with failure of the earth leakage breaker, it may cause electric shock in case of short circuit.

 **Installation of check valve**
Be sure to install the check valve within 50cm from the suction port of the pump in order to avoid the reverse-rotation by residual pressure at the time of stopping the pump. Failure to do so may result in malfunction of pump.


 **Shut off the main power supply in case of not using for a long time.**
When you do not use the product for a long time, shut off the main power supply. Otherwise, it may cause electric shock or short circuit fire due to degenerated insulation.

 **Pull out the power plug to disconnect it.**
When the product is used with power plug, pull the power plug to disconnect it. Pulling the power cord may result in disconnection of part of the core wire, and may cause generation of heat or deterioration.

 **Prevention of melting of distribution cable covering due to contact.**
Install the motor so that wiring cables do not touch the motor frame. Contacting with cables may result in melting covering or fire.

 **Be sure to wear personal protective equipment for cleaning and maintenance.**
When you carry out cleaning or maintenance, be sure to wear gloves. Failure to do so may result in injury or burn.

when you transfer the product, be sure to wear nonslip gloves and safety shoes. Failure to do so may result in injury.

 **Continuous operation is recommended.**
If the start and stop frequency is high, start and stop cycle in 5 minutes or less,it may cause significant lifetime deterioration or malfunction of the product.

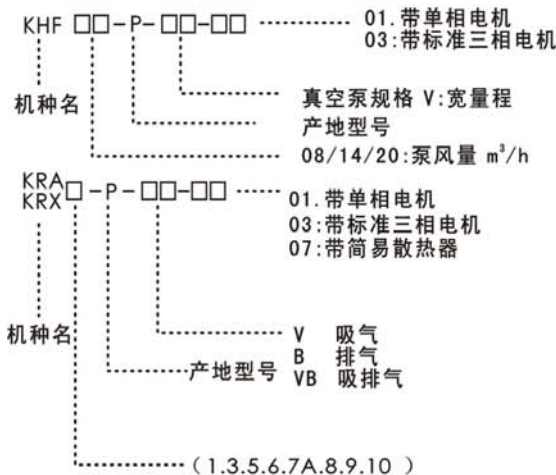
**能够满足清洁化要求的
无油式回转真空泵**

自从1965年好利旺无油式真空泵揭开了日本无给油回转式真空泵历史新的篇章以来,即以其优越的性能,在自动化、省力化、节能等各个行业得到广泛的应用。但是在其优越性的相对面,还存在噪音大、寿命短的现象。经过多年的努力,好利旺人成功地实现并推出了使人难以置信的静音·长寿命无油式真空泵。现在我们正以其在自动化、省力化、节能等方面良好的开端为契机,去继续开拓好利旺无油式真空泵在其他领域的应用。

特长

- 在使用真空·排气的场合也不含有油份,不会像油式真空泵那样对作业环境或制品(纸,材料)造成污染。能够在各个领域使用。
- 与油式真空泵相比,不需要给泵加油,基本不需要点检和检修。
- 运行声音低、使用寿命长。同时装备有真空压力表、调压控制器。
- 由于使用了特殊的自润滑碳素滑片、具有很强的耐磨性。
- 由于能够高速运转、因此可以与电机直连、这样可使泵小型化。
- 由于多枚滑片的高速回转、可使脉动很小、吸、排气稳定。

型号说明



KRX □-P-(V/B/VB) -01, 03, 07

● 整机

KRX □-P-TV/TB/TVB (单体)

- 无电机
- 无底座
- 无联轴节
- 无联轴节罩

KRX □-P-F (单体)

● 泵头

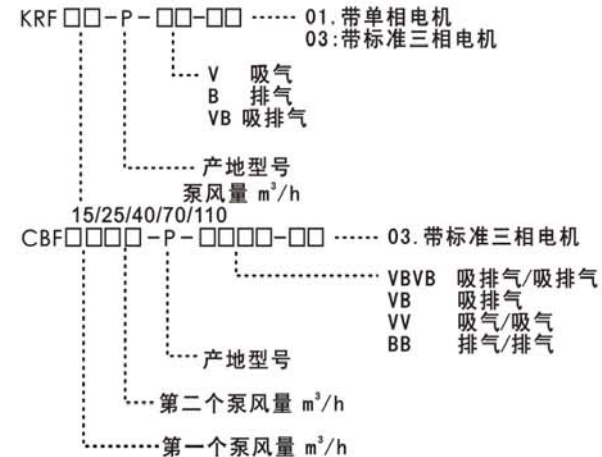
ORION DRY-PUMPS THE LEADING EXPERT IN OIL-LESS ROTARY VANE PUMP TECHNOLOGY,NEW QUIETER OPERATION AND LONGER SERVICE LIFE

The superb performance and multi-purpose function of the Orion Dry Pump has proven to be indispensable in automated industries;saving time and labor in printing and medical applications,precision high-technology production and office machinery,as well as in food processing. Since the development of our first oil-less rotary vane pump in 1965,ORION has constantly upgraded vane pump technology so that the state of the art pumps available today provide and oil free system capable of quiet,durable operation.

Features

- No oil contamination of the work environment or products Orion's Dry Pump contains no oil in either vacuum,pressure or combination systems.The pumps are ideally suited for :
-offset paper printing,collating,folding,binding or cutting
-medical and dental equipment
-food precessing
-vacuum transport equipment
- Minimal maintenance is minimal.lubrication is unnecessary and the modular design allows for quick filter,vane and bearing servicing.
- Long service life
designed for long service life, the pump's quiet compact construction complete with all necessary accessories as standard equipment eliminates the need for additional filters,gauges or air regulators.
- Special poeprietary self-lubricating vanes are wear-resistant and allow for quiet operation at all vacuum and pressure level.
- Multi vane ,high speed rotation,combined with a unique cylinder design allows for constant vacuum and/or pressure with little pulsation
- The high-technology,energy efficient pump design allows for smaller electric motor and overall compact dimentions.

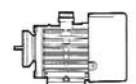
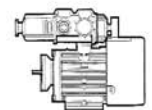
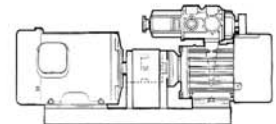
Model



● Fully equipped (Complete)

● Motor,Base,Coupling,and (pump only)
Coupling Cover excluded

● Pump Body (Flanged)



※根据各机种不同,请参照各页。
※Each model is different,Please refer to each page.

动作原理

●其构造为缸体和侧端盖所围的空间内、转子对缸体的偏心安装、并与缸体间存在着间隙。在转子表面的槽里安装了数枚滑片、当转子内的滑片在离心力的作用下使其与缸体内壁处于接触状态。

●由滑片、转子、缸体以及侧端盖所围的空间随转子的回转而变化。如图所示随着由①到②、回转时其容积逐渐变大、在大气压力差的作用下气体被吸入。随着由②向③回转时其容积逐渐变小，吸入的气体被压缩由③变化到④时气体被排出外部。随着此过程的连续进行，空气由吸入口被移送到排气口处。

●具有4枚滑片的泵当回转一周要进行4次吸排气过程。当吸入结束的最大容积为V(L)、回转数为N(rpm)，在1分钟内排出4VN(L)的空气，这个理论值作为设计排气速度。

用途

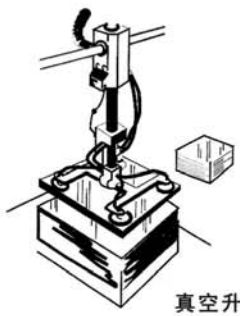
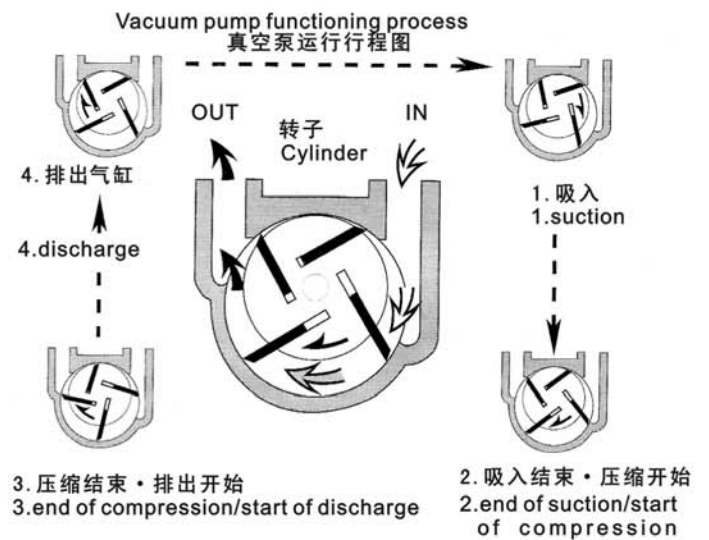
- 真空升降机
 - 真空吸盘
 - 机器臂
 - 印刷机
 - 装订机
 - 照相制版机
 - 包装机
 - 真空成型机
 - 计算机
 - 纸计数器
 - 标签粘贴机
- 零件装载机
 - 灰尘、气体取样
 - 真空摄子
 - 空气轴承
 - 氧气发生器
 - 医疗、健身机器
 - 办公机器
 - 其他各种自动机
 - 燃烧炉
 - 安装机

Purpose

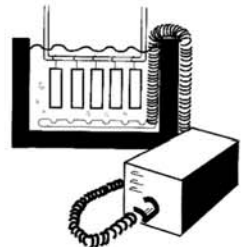
- Vacuum lift
 - Vacuum chuck
 - Robot arm
 - Printing press
 - Book binder
 - Film developer
 - Packing machine
 - Vacuum forming
 - Computer
 - Paper counter
 - Labelling machine
- Parts feeder
 - Dust、gas sampler
 - Vacuum pincette
 - Air bearing
 - Oxygen generator
 - Medical instrument
 - Office machine
 - Other automation
 - Burner
 - Mounter

Functioning Principles

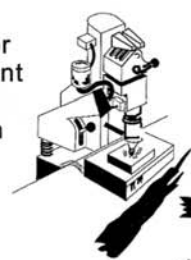
- A rotor is placed eccentrically toward the cylinder in the space enclosed with the cylinder and the side plates, and each component is precisely adjusted and constructed with minimum clearance. With centrifugal effect created when the rotor turns, the vanes inserted in cuts of the rotor continuously slide on the inner wall of the cylinder,
- The volume of space enclosed with the vanes, rotor, cylinder, and side plates varies as the rotor turns. as indicated in the figure, when a rotor turns from state 1 to 2, increasing volume produces pressure differential from outside air and then the pump inhales. As the volume decreases, the inhaled air is compressed on process 2 to 3. Then inhaled air is discharged on 3 to 4. Consecutive repeat of process 1 through 4 carries air from inlet to outlet.
- A four-vane-type pump provides intake/discharge 4 times in a single rotation. Defining volume at the end of intake as V(L), and rotation speed as N(rpm), 4VN(L) of air is discharged per minute. This theoretical value is called the designed pumping capacity.



真空升降机
Vacuum lift



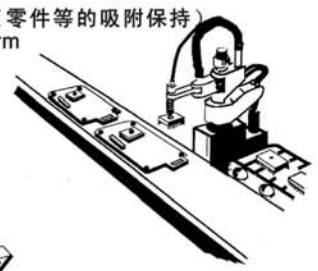
液体搅拌 (电镀液层的搅拌)
Liquid agitation (of plating)



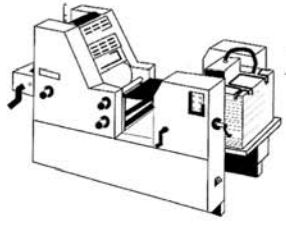
真空吸盘
Vacuum chuck



真空成型机
Vacuum forming

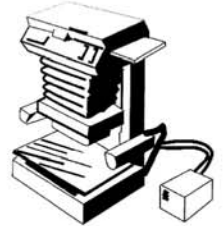


机械臂 (零件等的吸附保持)
Robot arm



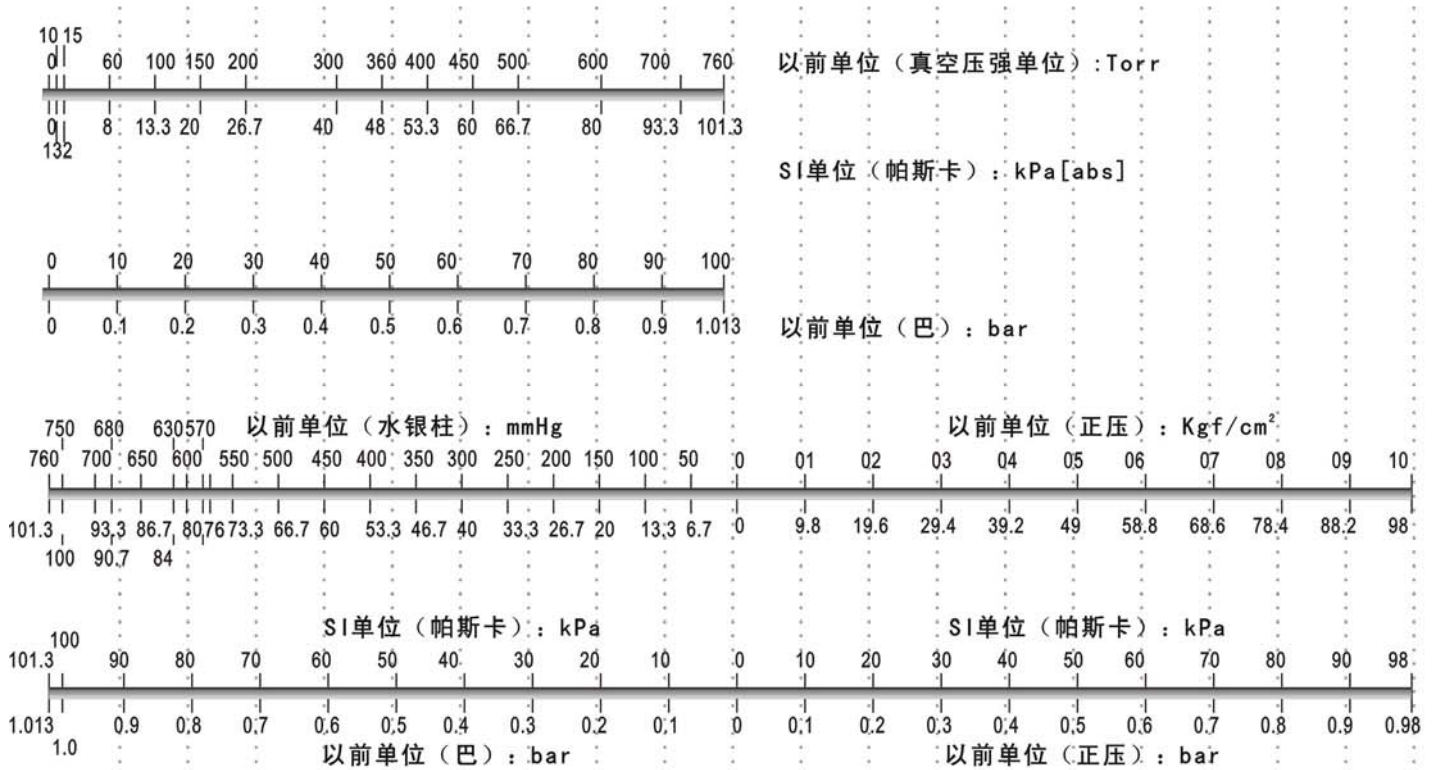
印刷机 (自动送纸)
Printing press (Paper feeding)

照相制版机 (胶片吸附保持)
Film developer (Film adhesion)



压力单位比较表

Pressure unit comparison



泵压力表

Dry pump capacity

绝对真空
Absolute

真空 : kPa
Vacuum

大气压
Atmospheric Pressure

正压 : kPa
Positive Pressure



换算表

Conversion table

真空单位 真空度 (表压)
Vacuum unit Vacuum(Gauge)

From	To	KPa	AtmmHg[abs]	Mmbar
1 kPa	→	1	7.5	10
1mmHg	→	0.1333	1	1.333
1mbar	→	0.1	0.75	1

真空单位 绝对压力
Vacuum unit Absolute pressure

From	To	KPa[abs]	Torr	atm	mbar[abs]
1kPa[abs]	→	1	7.5	9.87x10 ⁻³	10
1 Torr	→	0.1333	1	1.316x10 ⁻³	1.333
1atm	→	1.013x10 ²	760	1	1.013x10 ³
1mbar[abs]	→	0.1	0.75	9.87x10 ⁻⁴	1

压力单位 排气压力
Pressure unit Exhaust Pressure

From	To	KPa[abs]	Kgf/cm ²	PSi	mbar
1kPa	→	1	1.02x10 ⁻²	1.45x10 ⁻¹	10
1 kgf/cm ²	→	98.07	1	14.223	9.807x10 ²
1psi(Lb/in)	→	6.89	7.031x10 ⁻²	1	68.9
1mbar	→	0.1	1.02x10 ⁻³	1.45x10 ⁻²	1

流量单位
Flow unit

From	To	cfm	m ³ /h	L/min	L/s	m ³ /s
1cfm (ft ³ /min)	→	1	1.6992	28.32	0.472	4.72x10 ⁻⁴
1 m ³ /h	→	0.598	1	16.67	0.278	2.78x10 ⁻⁴
1L/min	→	0.0353	0.06	1	0.0167	1.67x10 ⁻⁵
1L/s	→	2.119	3.6	60	1	10 ⁻³
1m ³ /s	→	2119	3600	60000	1000	1

真空度的表示以相同的单位有大气压基准和绝对压力基准。请注意应根据用途区别使用。

Degree of vacuum has two methods. One is atmospheric standard and the other absolute pressure standard. Care that which method is used depending on the application.

关于真空度表示
Regarding indication of the degree of vacuum

真空度	大气压基准	绝对压力基准	Degree of vacuum	Atomospheric pressure standard	Absolute pressure standard
说明	<ul style="list-style-type: none"> • 大气压作为0表示 • 也说成为表压 • 本公司表示真空度、不带- 	<ul style="list-style-type: none"> • 绝对真空 (完全真空) 作为0表示 • 表示为绝对真空度 	Explanations	Indications will be made deeming the atmospheric pressure level as "0". It is also called gauge pressure. Our company calls it degree of vacuum and will not use "-" mark.	Indications will be made deeming the absolute vacuum as "0". It is also called the degree of absolute vacuum
单位	kPa mmHg	kPa[abs] mbar[abs] torr	Units	kPa mmHg	kPa[abs] mbar[abs] torr

※mmHg、torr是在新计量方法及商业交易上不使用。

mmHg and torr are not being used in business transactions.

绝对真空 Absolute vacuum

真空 Vacuum

压缩空气 Compressed air

真空度 Vacuum

大气压 Atmospheric Pressure

kPa, mmHg

KPa

KPa[abs]
Mbar[abs]
torr

极限真空 8kPa[abs]以下
流量 120~330L/min (50Hz)

Ultimate vacuum 8kPa[abs] or low
Capacity 120~330L/min (50Hz)



Photo:KHA400-P-V-03

特长

- 在极限真空度（8kPa以下）时能连续运行
- 运行真空度高、最适合于电子元器件等小型零部件的自动机器（安装机械等）

Features

- It is possible to make continuous operation at the reached degree of vacuum(8kPa or less)
- Since the operating degree of vacuum is high, they are most suitable to use with the automatic machines(mounting machine,etc.) for small parts such as electronics parts.

规格

Specifications

型号 Model	转速 Speed (rpm)	设计排气量 Designed pumping capacity (L/min) (※1)		到达极限真空 Ultimate vacuum ※2 (kPa[abs])	配管连接孔径 Suction, exhaust port diameter	电源 Motor voltage				噪音 Noise (dB)		重量 Mass (Kg)		装载电机 (kw) Motor
		50Hz	60Hz			单相 single phase		三相 Three phase		50Hz	60Hz	单相 Single phase	三相 Three phase	
						100V	220V	200V	380V					
KHA□-P-□□						50Hz / 60Hz								
200-P-V-01 200-P-V-03	1200	120	145	8	Rc1/4	○	○			61	62	15		0.25
400-P-V-01 400-P-V-03	1190	220	260	8	Rc3/8	○	○			63	66	28		0.4
750-P-V-03	1190	330	400	8	Rc3/8			○	○	67	70		33	0.75

※1设计排气量：由容积所要求的理论值。实际流量参考性能实测数据。

※2泵到达最高真空点时可连续运行使用的压力。

※使用压力范围：48kPa[abs]~到达压力

※允许脉动范围：13.3kPa/s 以内

※也备有排气管道配管型（KHA 200A.400A.750A）。

管道配管的允许阻力：25 kPa以下（不可以用于排气）

※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%），

※因为高真空泵在压缩比高时、泵内部容易结露、所以必须要采取以下措施防止生锈。

●试运行时、吸气侧加上48 kPa[abs]以下的负荷、连续运行5分钟以上。

●试运行和工作时间在5分钟以内时，为了除去凝结露水、开放吸气侧、进行10~15分钟的空（干燥）运行。

※电源电压的允许波动范围为额定电压±10%。请设置过负荷保护器（热敏继电器等）。

设定值：请以电机标牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume regarding the actual flow rate, refer to the actual measurement data of performances.

※ 2 Pressure level where continuous operation is possible at the maximum degree of vacuum reached by the pump.

※ Using pressure range:48kPa<abs>~Reaching pressure.

※ Allowable pulsation range:within 13.3kPa/s.

※ Those types with which duct piping can be used for the exhaust circuit are also available.(KHA 200A.400A.750A).

※ Allowable resistance of the duct piping:25kPa or less (Cannot be used for exhaust gas)

※ As the intake gas,use clean air of ordinary temperature and ordinary humidity whenever possible.[Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20% in the humidity].

※ Since high degree vacuum pumps possess higher compression ratio and more dewing occurs inside the pump,it is necessary to take rusting trouble preventive measure as follows.

※ As the test operation,make continuous operation for more than 5 minutes applying a load or 48kPa[abs] or less to the suction side.

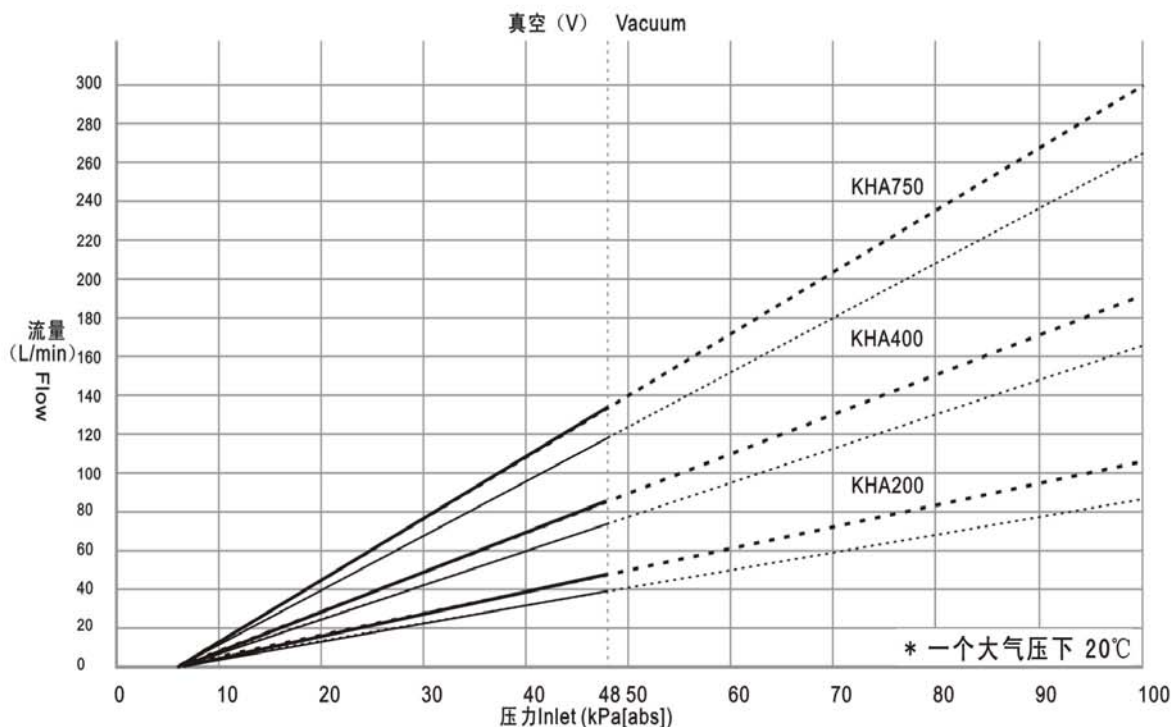
※ If in test operation or the regular operation time is less than 5 minutes,make no load (dry) operation for 10 to 15 minutes opening the suction side in order to remove the dewing water.

※ The allowable variation range of the supply voltage should be rated voltage(10%).

※ Install an overload protector (thermal relays,etc.).
Setting value:Use the rated current value being indicated on the specification plate of the motor as target value.

性能实测数据 (—60Hz —50Hz)

Performance data

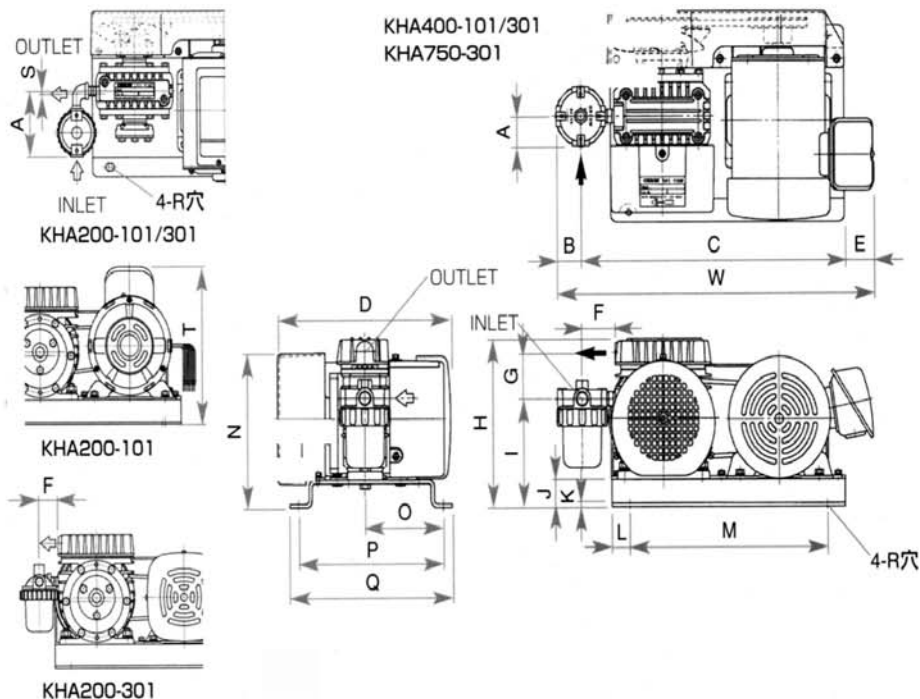


※性能实测数据表示带过滤器的数据。配管连接时，由于有阻力、流量会有所不同。
 ※要在48 kPa[abs]以上（性能数据的虚线）时的连续运行，则请预先与经销商联系。
 ※在1大气压下 20°C

※ Performance curves show the date with a filter. Air flow may differ depending on piping resistance.
 ※ For application over 48kPa [abs] please ask for ORION dealers before use.
 ※ Under one normal atmospheric pressure 20°C

外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)



型式	H	D	W	A	B	C	E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T	U
200-P-V-01	(180)	(225)	(346)	(87)	(25)	(290)	-	(31)	51.4	117	32	3.2	25	240	164	1005	180	205	4	207	-	-
200-P-V-03		(218)																	4			
400-P-V-01		(264)	(408)																			
400-P-V-03	(199)	(247)	(451)	(35)	(42)	(330)	-	(47)	55	127	32	4.5	25	280	180	111	205	230	∅9	-	-	-
750-P-V-03	(234)	(296.5)	(482)	(35)	(44)	(360)	(42)	(51)	68	144.5	32	4.5	30	300	198	88.5	215	240	∅10	-	-	-

安全设计.低运转音.使用寿命长.环保

常见真空度 60kPa(MAX80kPa 以下)
※ KRF15 MAX75kPa

常见排气压力 60kPa(MAX70kPa 以下)

流量 235~575L/min (50Hz)

RoHs指令 符合CE标准

Continuous operative vacuum 60kPa or low
Capacity 235~575L/min (50Hz)



Photo:KRF15-P-V-03

Photo:KRF40-P-V-03

特长

- 安全环保设计，带CE认证，符合RoHs标准。
- 静音化设计，比KRX系列降低2~5dB。

用途

- 印刷.包装.自动化.电子机械等多领域使用的真空源。

性能

型式 Model	设计排气量 Designed pumping capacity (L/min)※1		到达真空度 Ultimate vacuum (kPa以上) (※2) (Over:kPa)		常用真空度 Continous operative vacuum (kPa以下) (※3)		常用排气压力 Continous operative pressure (kPa以下) (※3)		配管 接口 Suction. Exhaust port diameter
	50Hz	60Hz	50Hz	60Hz	推荐	最高	推荐	最高	

KRF15-P-□-□

Model	设计排气量		到达真空度		常用真空度		常用排气压力		配管接口	电源 Motor voltage						运转噪音		装载电机	质量(kg)	
	50Hz	60Hz	50Hz	60Hz	推荐	最高	推荐	最高		单相 Single phase		三相 Three phase				50Hz	60Hz		单相 Single phase	三相 Three phase
V-01	235	280	84	86	60	75	-	-	Rc3/4	○	-	-	-	-	-	62	64	0.4	22.5	-
V-03	235	280	84	86	60	75	-	-	Rc3/4	-	○	○	○	○	○	60	62	0.4	-	19
B-01	235	280	84	86	-	-	60	70	Rc3/4	○	-	-	-	-	-	64	65	0.4	22.5	-
B-03	235	280	84	86	-	-	60	70	Rc3/4	-	○	○	○	○	○	64	65	0.4	-	19
VB-01	235	280	84	86	合计小于60、最高75				Rc3/4	○	-	-	-	-	-	62	64	0.4	22.5	-
VB-03	235	280	84	86	合计小于60、最高75				Rc3/4	-	○	○	○	○	○	60	62	0.4	-	19

KRF25-P-□-□

Model	设计排气量		到达真空度		常用真空度		常用排气压力		配管接口	电源 Motor voltage						运转噪音		装载电机	质量(kg)	
	50Hz	60Hz	50Hz	60Hz	推荐	最高	推荐	最高		单相 Single phase		三相 Three phase				50Hz	60Hz		单相 Single phase	三相 Three phase
V-01	405	480	86	90	60	80	-	-	Rc3/4	○	-	-	-	-	-	64	66	0.75	31	-
V-03	405	480	86	90	60	80	-	-	Rc3/4	-	○	○	○	○	○	62	64	0.75	-	28
B-01	405	480	86	90	-	-	60	70	Rc3/4	○	-	-	-	-	-	67	69	0.75	31	-
B-03	405	480	86	90	-	-	60	70	Rc3/4	-	○	○	○	○	○	65	67	0.75	-	28
VB-01	405	480	86	90	合计小于60、最高80				Rc3/4	○	-	-	-	-	-	64	66	0.75	31	-
VB-03	405	480	86	90	合计小于60、最高80				Rc3/4	-	○	○	○	○	○	62	64	0.75	-	28

KRF40-P-□-□

Model	设计排气量		到达真空度		常用真空度		常用排气压力		配管接口	电源 Motor voltage						运转噪音		装载电机	质量(kg)	
	50Hz	60Hz	50Hz	60Hz	推荐	最高	推荐	最高		单相 Single phase		三相 Three phase				50Hz	60Hz		单相 Single phase	三相 Three phase
V-03	575	685	86	90	60	80	-	-	Rc3/4	-	○	○	○	○	○	66	67	1.5	-	37
B-03	575	685	86	90	-	-	60	70	Rc3/4	-	○	○	○	○	○	68	70	1.5	-	37
VB-03	575	685	86	90	合计小于60、最高80				Rc3/4	-	○	○	○	○	○	66	67	1.5	-	37

※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据

※2泵所到达最高真空度在实际上不能使用。只是为了机种选定时计算而使用

※3可能使用的真空度（排气压力）范围。

※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）

※电源电压的允许波动范围为额定电压±10%。

※请设置过负荷保护器（热敏继电器等）。

设定值：请以电机标牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume.Regarding the actual flow rate, refer to the actual measurement data of performances.

※ 2 It is not allowable to use it at the maximum vacuum reaching point of the pump. Use it for model selection calculations.

※ 3. Usable range of the degree of vacuum (exhaust pressure) range

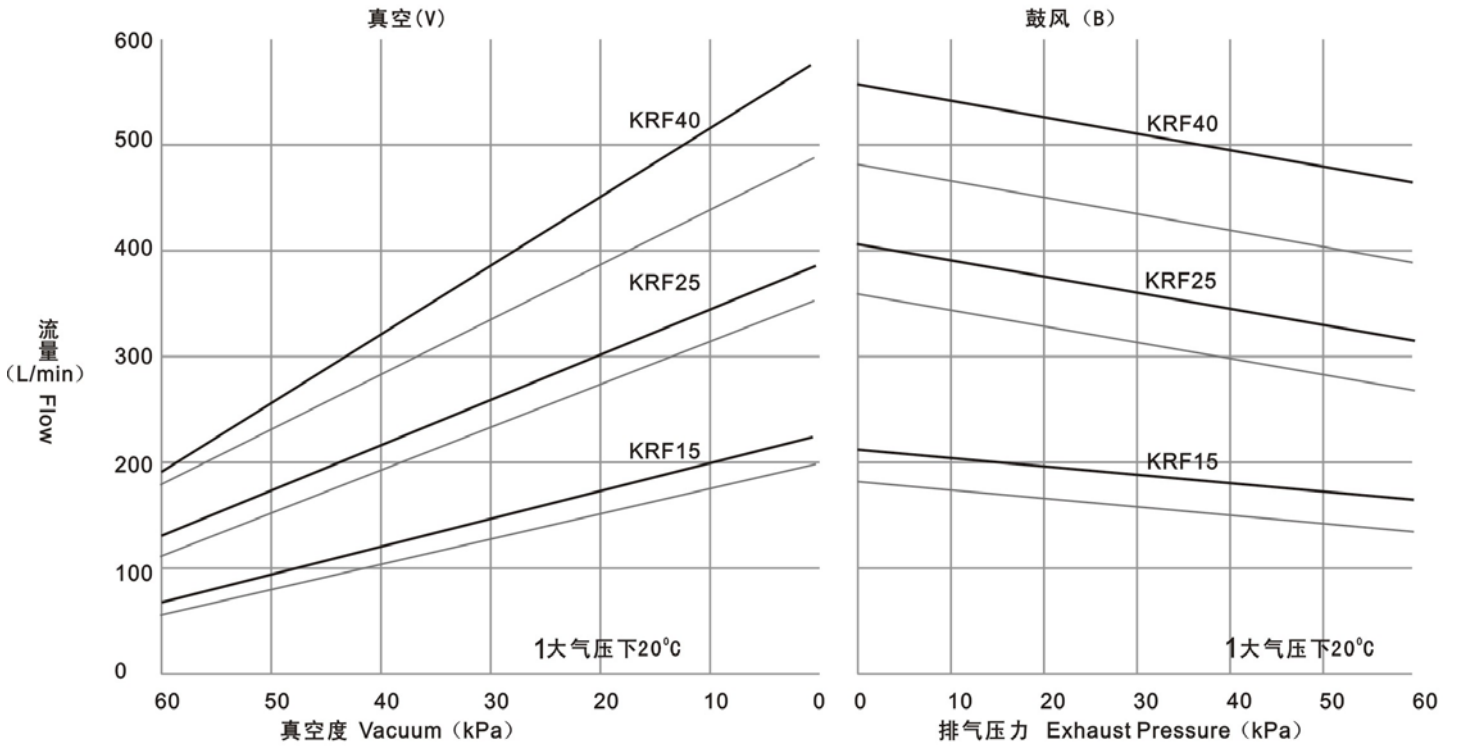
※ As the intake gas,use clean air of ordinary temperature and ordinary humidity w -henever possible.[Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20% in the humidity].

※ The allowable variation range of the supply voltage should be rated voltage(10%). Install an overload protector (thermal relays,etc.).

※ Setting value:Use the rated current value being indicated on the specification plate of the motor as target value.

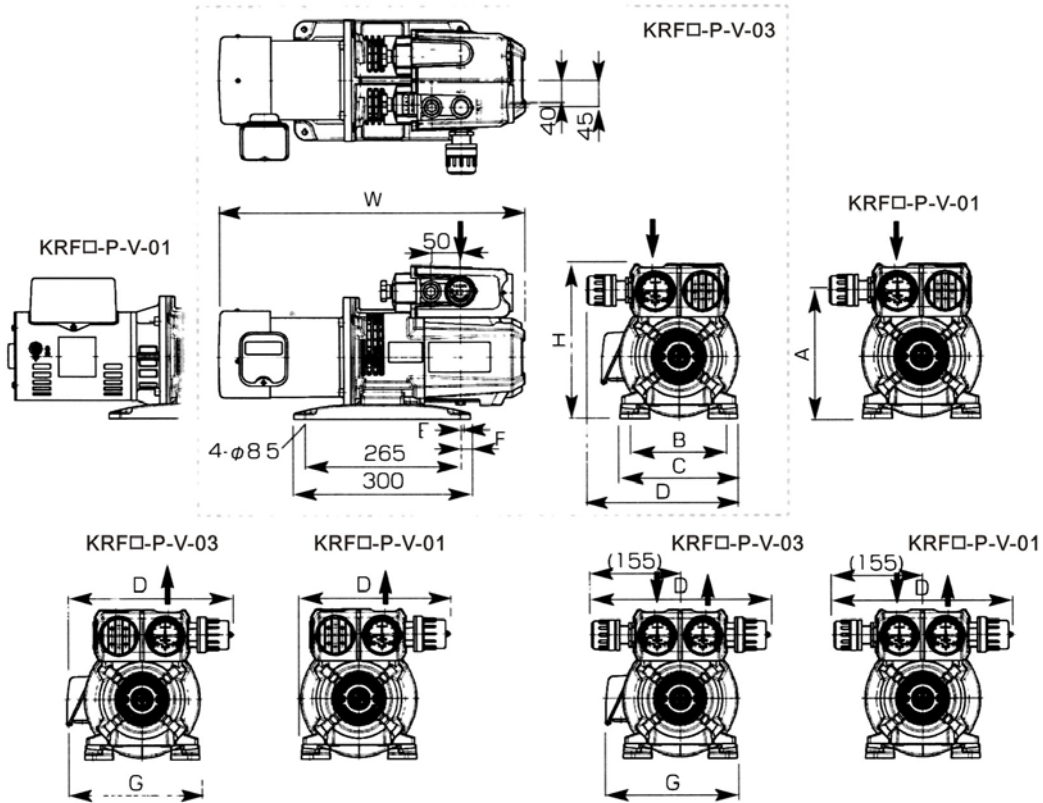
性能实测数据 (—60Hz —50Hz)

Performance data



外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)



型式	H	D	W	A	B	C	E	F	G
KRF15-P-V-01.03	(248)	(249)	03 (462) .01 (502)	(204)	(160)	(188)	(26)	(70)	-
KRF15-P-B-01.03	(248)	03 (283) .01 (251)	03 (462) .01 (502)	(205)	(160)	(188)	(26)	(70)	03 (220)
KRF15-P-VB-01.03	(248)	(312)	03 (462) .01 (502)	(204)	(160)	(188)	(26)	(70)	03 (220)
KRF25-P-V-01.03	(257)	(254)	03 (521) .01 (536)	(213)	(170)	(198)	(1)	(111)	-
KRF25-P-B-01.03	(257)	03 (289) .01 (256)	03 (521) .01 (536)	(214)	(170)	(198)	(1)	(111)	03 (231)
KRF25-P-VB-01.03	(257)	(312)	03 (521) .01 (536)	(213)	(170)	(198)	(1)	(111)	03 (231)
KRF40-P-V-03	(269)	(254)	(628)	(226)	(170)	(198)	(43)	(167)	-
KRF40-P-B-03	(269)	(298)	(628)	(226)	(170)	(198)	(43)	(167)	(240)
KRF40-P-VB-03	(269)	(312)	(628)	(226)	(170)	(198)	(43)	(167)	(240)

安全设计·低运转音·使用寿命长·环保

常用真空度 60kPa以下 (V/B/VB)
流量 1130~1850L/min (50Hz)

RoHS指令 符合CE标准

Continuous operative vacuum 80kPa or low (V/B/VB)
Capacity 1130~1850L/min (50Hz)



Photo:KRF70-P-V-03

Photo:KRF110-P-V-03

特长

- 安全环保设计，带CE认证，符合RoHs标准。
- 静音化设计，比KRX系列降低2~5dB。

用途

- 印刷. 包装. 自动化. 电子机械等多领域使用的真空源。

性能

Specifications

型式 Model	设计排气量 Designed pumping capacity		到达真空度 Ultimate vacuum (kPa以上) (※2) (Over:kPa)	常用真空度 Continous operative vacuum (kPa以下) (※3)	常用排气压力 Continuous operative pressure (kPa以下) (※3)	配管 接口 Suction. Exhaust port diameter	电源 Motor voltage					运转噪音 (dB) Noise		装载电机 (kw) Motor	质量(kg) Mass
	三相 Three phase						50Hz	60Hz	50Hz	60Hz					
	200V	380V									400V	415V	440V		
	(L/min)(※1)						50/60Hz	50Hz	60Hz	50Hz	60Hz			三相 Three phase	

KRF70-P-□-□

V-03	1130	1350	90	60	-	Rc1	○	○	○	○	67	68	2.2	75
B-03	1130	1350	-	-	60	Rc1	○	○	○	○	74	76	2.2	75
VB-03	1130	1350	-	合计60kPa以下		Rc1	○	○	○	○	67	68	2.2	75

KRF110-P-□-□

V-03	1850	2200	90	60	-	Rc11/4	○	○	○	○	74	75	3.7	120
B-03	1850	2200	-	-	60	Rc11/4	○	○	○	○	76	77	3.7	120
VB-03	1850	2200	-	合计60kPa以下		Rc11/4	○	○	○	○	74	75	3.7	120

※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据。

※2泵所到达最高真空度在实际上不能使用。只是为了机种选定时计算而使用。

※3可能使用的真空度（排气压力）范围。

※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）。

※电源电压的允许波动范围为额定电压±10%。

※请设置过负荷保护器（热敏继电器等）。

设定值：请以电机标牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume.Regarding the actual flow rate, refer to the actual measurement data of performances.

※ 2 It is not allowable to use it at the maximum vacuum reaching point of the pump. Use it for model selection calculations.

※ 3 Usable range of the degree of vacuum (exhaust pressure) range

※ As the intake gas,use clean air of ordinary temperature and ordinary humidity whenever possible.[Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20%in the humidity].

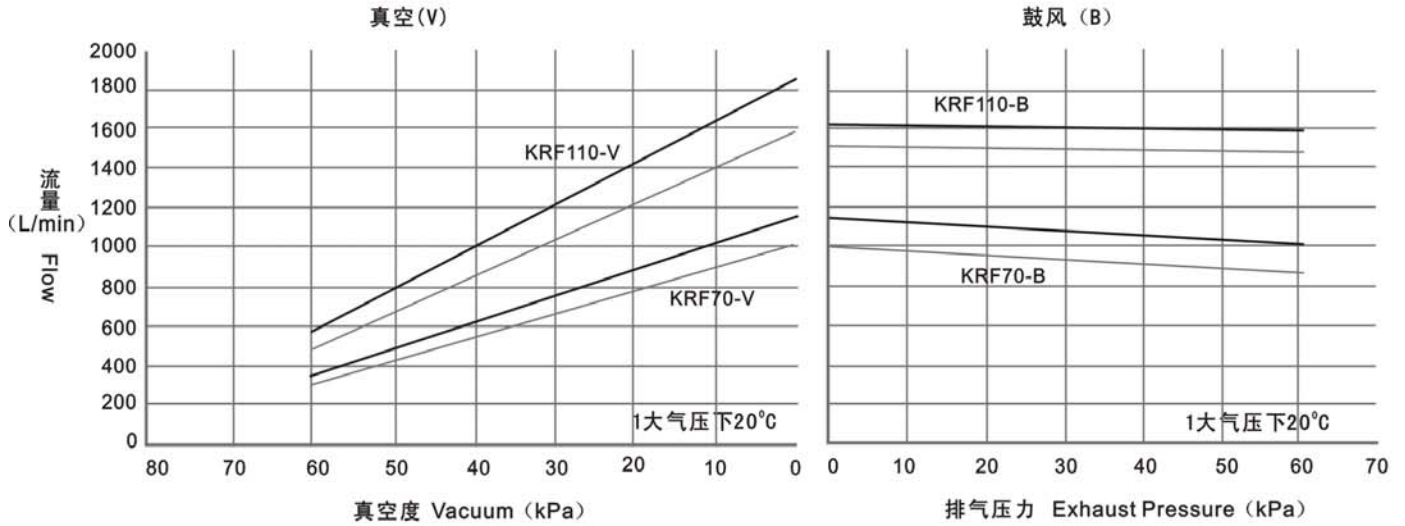
※ The allowable variation range of the supply voltage should be rated voltage(10%).

※ Install an overload protector (thermal relays,etc.).

Setting value:Use the rated current value being indicated on the specification plate of the motor as target value.

性能实测数据 (—60Hz —50Hz)

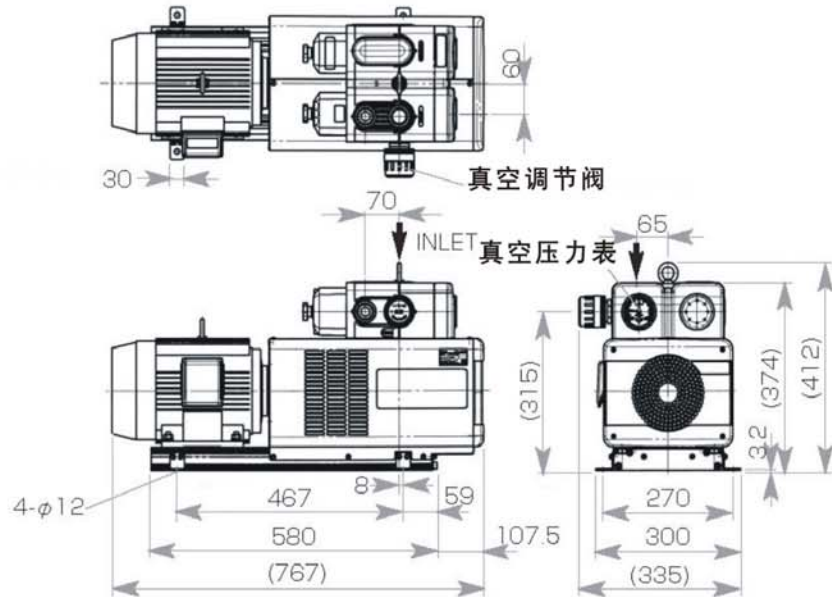
Performance data



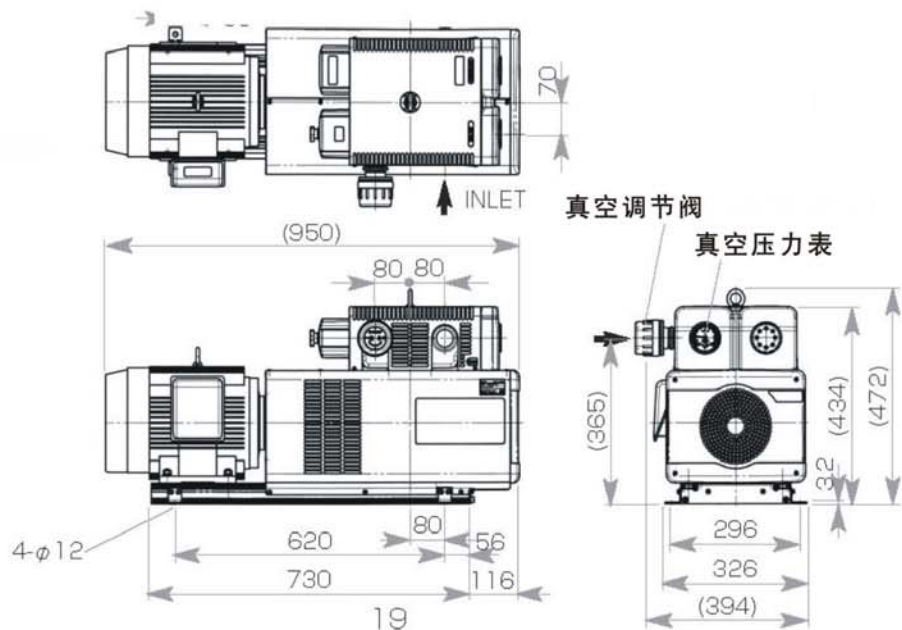
外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)

KRF70-P-□-03
※图示是真空规格尺寸



KRF110-P-□-03
※图示是真空规格尺寸





电机直接连接型高真空KHF系列

电机直接连接型高真空KHF系列1/2

ORION

KHF Series (High vacuum and motor mounting)

极限真空 8kPa[abs]以下
常用真空 可在极限真空~大气压力的宽量程范围内使用
 (但是, KHF08-V型只能在极限真空~48 kPa[abs]内范围使用)
流量 125~340L/min(50Hz)

Ultimate vacuum 8kPa [abs] or low
 Continuous pressure Wide range from ultimate pressure to atmospheric pressure is available (KHF08-V; from ultimate pressure to 48kpa[abs])
 Capacity 125~340L/min (50Hz)



Photo:KHF08-P-V-03

Photo:KHF20-P-V-03

特长

- 在极限真空 (8kPa [abs]) 下能连续运行。
- 比其他泵更容易更换滑片。(与KRX系列相较)
- 运行真空度高, 最适合在电子行业中应用

Features

- Possible to make continuous operation at ultimate pressure. (8kPa[abs] or less)
- In comparison with other pumps (KRX series), easy blade replacement
- Since the operative vacuum is high, they are most suitable for the alternative of ejector, or to use as the automatic machines for small parts such as electronics parts.

规格

Specifications

型号 Model	设计排气量 Designed pumping capacity		到达极限真空 Ultimate vacuum (kPa[abs])	使用真空 Continuous operative vacuum (kPa[abs])	配管连 接孔径 Suction exhaust port diameter	电源 Motor voltage				运转噪音 (dB) Noise	装 载 电 机 (kw) Motor	重 量 Mass (Kg)		
	(L/min) (※1)					单相 Single phase	三相 Three phase	75/60Hz	50/60Hz			50Hz/60Hz	单相	三相
	50Hz	60Hz												
KHF08-P-V-01	125	150	8	8~48	Rc1/4	○	○	-	-	64	67	0.2	15.5	-
KHF08-P-V-03						-	-	○	○	64	67	0.2	-	13.5
KHF14-P-V-01	230	280	8	全量程内可以使用	Rc3/4	○	○	-	-	66	68	0.4	24	-
KHF14-P-V-03						-	-	○	○	66	68	0.4	-	22.5
KHF20-P-V-01	340	400	8	全量程内可以使用	Rc3/4	○	○	-	-	67	69	0.75	35	-
KHF20-P-V-03						-	-	○	○	67	69	0.75	-	31

※1设计排气量: 由容积所计算出的理论值。实际流量参考性能实测数据。

※2在到达泵的最高真空度点时可能连续使用的压力。

※要在性能数据的虚线下连续使用, 请与代理商联系。

※允许脉动范围: 13.3 kPa/s以内。

※对排气进行配管时, 允许阻力: 10 kPa以下。(不可以用于排气)

※使用环境(吸入空气)条件: 温度: 0~40°C、湿度: 通常湿度(65 ± 20%)

※因为高真空泵在压缩比高时, 泵内部容易结露, 所以必须要采取以下措施防止生锈。

● 试运行、吸气侧加上48 kPa[abs]以下的负荷、连续运行5分钟以上。

● 试运行和工作时间在5分钟以内时, 为了除去凝结露水、开放吸气侧、进行10~15分钟的空(干燥)运行。

※电源电压的允许波动范围为额定电压±10%。

※请设置过负荷保护器(热敏继电器等)。

设定值: 设定值以电机牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume. Regarding the actual flow rate, refer to the actual measurement data of performance.

※ 2 Pressure level where continuous operation is possible at the maximum degree of vacuum reached by the pump.

※ For continuous operation on the dotted line of performance data, please ask for ORION dealers before use.

※ Allowable pulsation range: within 13.3kPa/s.

※ In case of using duct piping for exhaust circuit, the allowable resistance is 10 kPa or less (using the exhaust air for any purpose is not available).

※ Allowable resistance of the duct piping: 25kPa or less (Cannot be used for exhaust gas).

※ As the intake gas, use clean air of ordinary temperature and ordinary humidity whenever possible. [Using environmental conditions (intake air) should be 0~40°C in the temperature and 65±20% in the humidity.]

※ Since high degree vacuum pumps possess higher compression ratio and more dewing occurs inside the pump, it is necessary to take rusting trouble preventive measure as follows.

※ As the test operation, make continuous operation for more than 5 minutes applying a load or 48kPa[abs] or less to the suction side.

※ If the test operation or the regular operation time is less than 5 minutes, make no load or (dry) operation for 10 to 15 minutes opening the suction side in order to remove the dewing water.

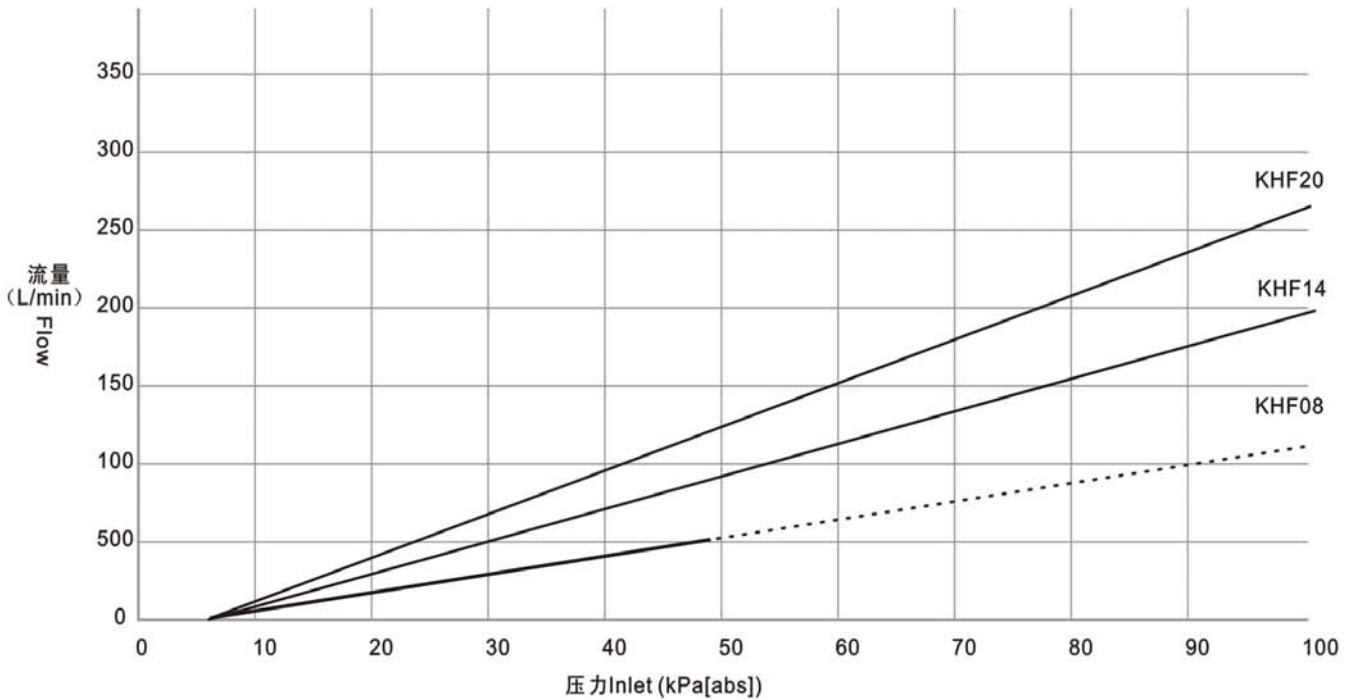
※ The allowable variation range of the supply voltage should be rated voltage. (10%)

※ Install an overload protector (thermal relays, etc.). setting value: Use the rated current value being indicated on the specification plate of the motor as the target value.

性能实测数据 (-50Hz)

Performance date

真空 (V) Vacuum



※性能实测数据表示带过滤器的数据。配管连接时由于其阻力、流量会有差异。

※ Performance curves show the date with a filter. Air flow may differ depending on piping resistance.

※要在48 kPa[abs]以上(性能数据的虚线)时进行连续运行,则请与代理商联系。

※ For application over 48kPa [abs] please ask for ORION dealers before use.

※在1大气压下 20℃

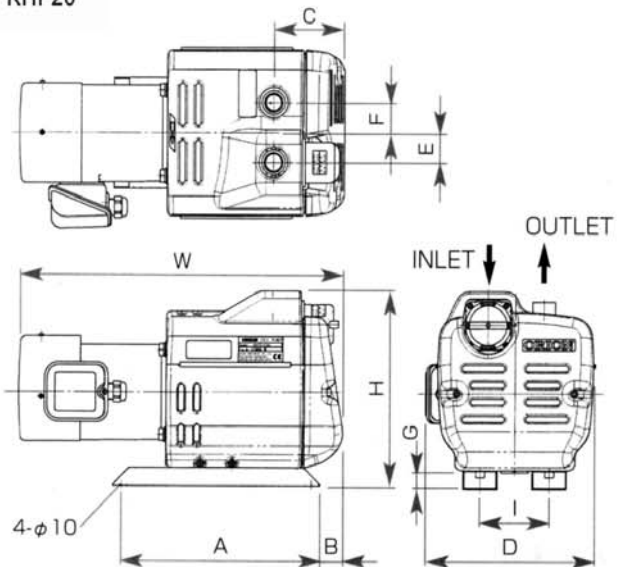
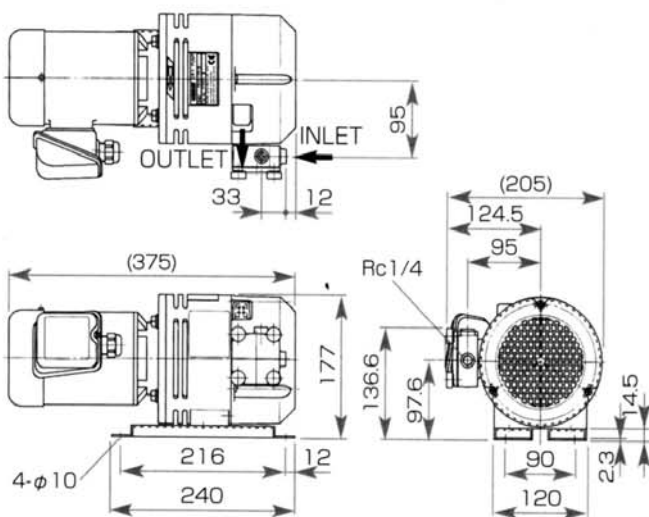
※ Under one normal atmospheric pressure 20℃

外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)

KHF08

KHF14
KHF20



型式	H	D	W	A	B	C	E	F	G	I
KHF14-P	(245)	(237)	(458)	275	(29)	(100)	(245)	(42)	25	(80)
KHF20-P	(269)	(246)	(470)		(45)	(103)	(245)	(40)		(100)

安全设计.低运转音.使用寿命长.环保

常用真空度 60kPa以下(V式样)
常用排气压力 60kPa以下(B式样)
常用压力 真空和压力合计60kPa以下(VB式样)
流量 235~575 L/min (50Hz)

RoHS指令 符合CE标准

Continuous operative vacuum 60kPa or low
Continuous operative pressure 60kPa or low
Capacity 235~575L/min (50Hz)



Photo:CBF4040-P-VB-03

特长

- 安全环保设计，带CE认证，符合RoHs标准。
- 静音化设计，比CBX系列降低3dB。

用途

- 印刷.包装.自动化.电子机械等多领域使用的真空源。

性能

Specifications

型式 Model	设计排气量 Designed pumping capacity (L/min)(※1)				常用真空度 Continous operative vacuum (kPa以下)(※3)	常用排气压力 Continuous operative pressure (kPa以下)(※3)	常用压力(VB) Continuous operative vacuum and pressure (kPa)		配管接口 Suction. Exhaust port diameter	电源 Motor voltage					运转噪音 (dB) Noise		装载电机 (kw) Motor	质量(kg) Mass
	泵1		泵2				推荐	最高		三相 Three phase					50Hz	60Hz		
	50Hz	60Hz	50Hz	60Hz						200V	380V	400V	415V	440V				

CBF1515-P-□-□

VB-03	235(V)	280(V)	235(B)	280(B)	60	60	-	-	Rc3/4	○	○	○	○	○	62	63	0.75	36
VBVB-03	235(V,B)	280(V,B)	235(V,B)	280(V,B)	-	-	※4	※5	Rc3/4	○	○	○	○	○	65	66	0.75	36
VV-03	235(V)	280(V)	235(V)	280(V)	60	-	※4	※5	Rc3/4	○	○	○	○	○	61	66	0.75	36
BB-03	235(B)	280(B)	235(B)	280(B)	-	60	-	-	Rc3/4	○	○	○	○	○	61	66	0.75	36

CBF2525-P-□-□

VB-03	405(V)	480(V)	405(B)	480(B)	60	60	-	-	Rc3/4	○	○	○	○	○	64	67	1.5	46
VBVB-03	405(V,B)	480(V,B)	405(V,B)	480(V,B)	-	-	※4	※5	Rc3/4	○	○	○	○	○	67	70	1.5	46
VV-03	405(V)	480(V)	405(V)	480(V)	60	-	※4	※5	Rc3/4	○	○	○	○	○	63	66	1.5	46
BB-03	405(B)	480(B)	405(B)	480(B)	-	60	-	-	Rc3/4	○	○	○	○	○	67	70	1.5	46

CBF4040-P-□-□

VB-03	575(V)	685(V)	575(B)	685(B)	60	60	-	-	Rc3/4	○	○	○	○	○	68	70	2.2	58
VBVB-03	575(V,B)	685(V,B)	575(V,B)	685(V,B)	-	-	※4	※5	Rc3/4	○	○	○	○	○	69	71	2.2	58
VV-03	575(V)	685(V)	575(V)	685(V)	60	-	※4	※5	Rc3/4	○	○	○	○	○	67	69	2.2	58
BB-03	575(B)	685(B)	575(B)	685(B)	-	60	-	-	Rc3/4	○	○	○	○	○	71	73	2.2	58

※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据。

※2泵所到达最高真空度在实际上不能使用。只是为了机种选定时计算而使用。

※3可能使用的真空度（排气压力）范围。

※4推荐范围：真空和压力合计小于60kPa。

※5最高值：真空/压力可能的组合为55/20, 55/30, 40/40, 35/50。在这种情况下运行，会缩短泵的寿命。

※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）。

※电源电压的允许波动范围为额定电压±10%。

※请设置过负荷保护器（热敏继电器等）。

设定值：请以电机标牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume.Regarding the actual flow rate, refer to the actual measurement data of performances.

※ 2 It is not allowable to use it at the maximum vacuum reaching point of the pump. Use it for model selection calculations.

※ 3. Usable range of the degree of vacuum (exhaust pressure) range.

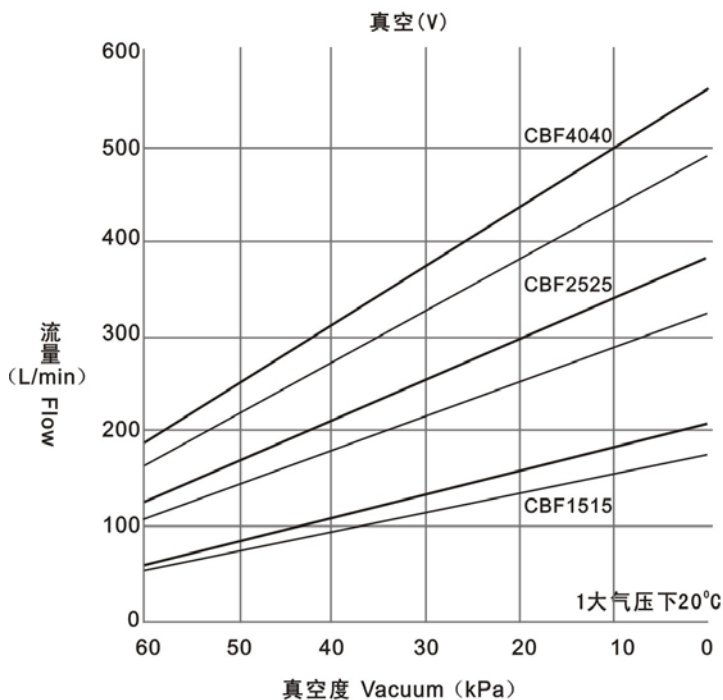
※ As the intake gas,use clean air of ordinary temperature and ordinary humidity whenever possible.[Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20%in the humidity].

※ The allowable variation range of the supply voltage should be rated voltage(10%).

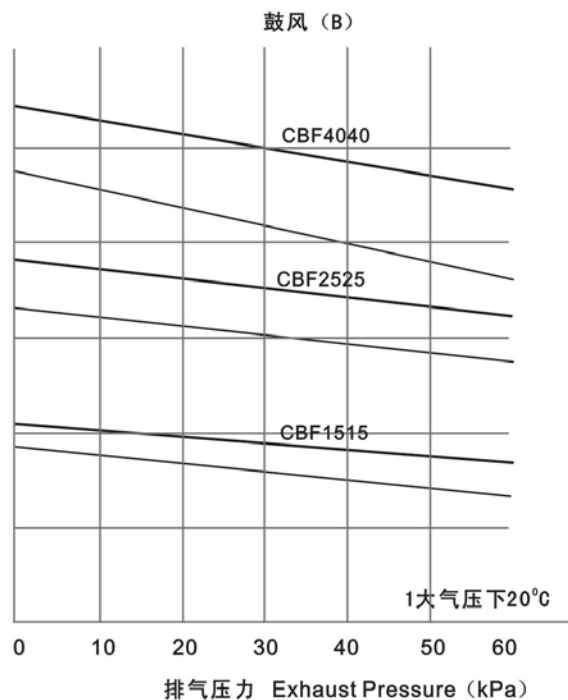
※ Install an overload protector (thermal relays,etc.).

Setting value:Use the rated current value being indicated on the specification plate of the motor as target value.

性能实测数据 (—60Hz —50Hz)

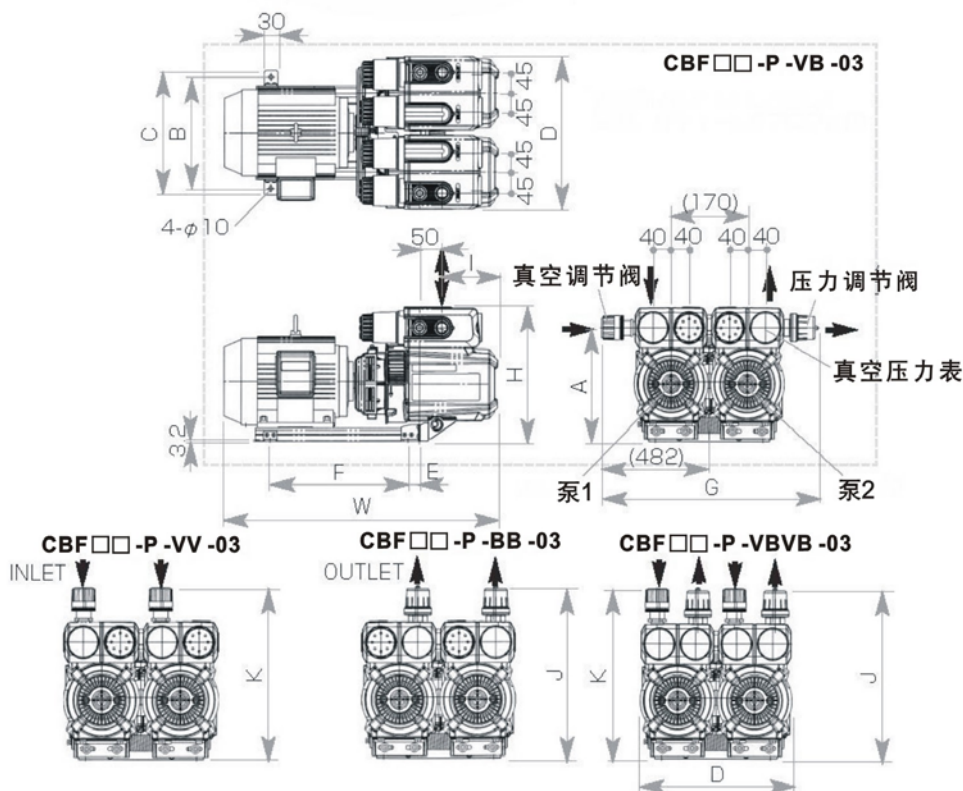


Performance date



外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)



型式	H	D	W	A	B	C	E	F	G	I	J	K
CBF1515-P-VB-03	(269)	(331)	(476)	224	205	233	15	225	(482)	(95)	-	-
CBF1515-P-VBVB-03	(267)	(331)	(476)	224	205	233	15	225	-	(95)	(343)	(341)
CBF1515-P-VV-03	(269)	(335)	(476)	224	205	233	15	225	-	(95)	-	(341)
CBF1515-P-BB-03	(269)	(335)	(476)	224	205	233	15	225	-	(95)	(343)	-
CBF2525-P-VB-03	(276)	(331)	(546)	231	220	248	15	270	(482)	(109)	-	-
CBF2525-P-VBVB-03	(274)	(331)	(546)	231	220	248	15	270	-	(109)	(350)	(348)
CBF2525-P-VV-03	(276)	(335)	(546)	231	220	248	15	270	-	(109)	-	(348)
CBF2525-P-BB-03	(276)	(335)	(546)	231	220	248	15	270	-	(109)	(350)	-
CBF4040-P-VB-03	(288)	(334)	(606)	244	240	268	25	305	(482)	(124)	-	-
CBF4040-P-VBVB-03	(286)	(334)	(606)	244	240	268	25	305	-	(124)	(363)	(361)
CBF4040-P-VV-03	(288)	(335)	(606)	244	240	268	25	305	-	(124)	-	(361)
CBF4040-P-BB-03	(288)	(335)	(606)	244	240	268	25	305	-	(124)	(363)	-

Standard KRX Series

特許 Patent

常见真空度 60kPa以下
流量 135~1190L/min (50Hz)

Continuous operative Vacuum 60kPa or low
Capacity 135~1190L/min (50Hz)



Photo:KRX6-P-V-03

特长

- 因为是无油式，所以在使用真空（真空规格）、排气（鼓风机规格）时，也不含有油分，不会对作业环境和产品（物体）造成油污。
- 运行声音低（由于去掉了使人感到厌烦的高周波音，即使在相同的dB值下，刺耳的声音也少）、寿命长。而且同时装备有真空压力表、调压控制阀。

Features

- No oil in either vacuum, pressure or combination application.
- Quiet operation.
- Long life.
- Gauge and controller equipment standard.
- Dependable proven Design.

规格

型式 Model	设计排气量 Designed pumping capacity		到达真空度 Ultimate vacuum (kPa以上) (※2) (Over:kPa)	常用真空度 Continous operative vacuum (kPa以下) (※3) (Under:kPa)	常用排气压力 Continuous operative pressure (kPa以下) (※3) (Under:kPa)	配管 接口 Suction. exhaust port diameter
	(L/min)(※1)					
	50Hz	60Hz	50Hz			

Specifications

电源 Motor voltage	三相 Three phase						装载电机 (kw) Motor	质量(kg) Mass		
	单相 Single phase							单相 Single phase	三相 Three phase	
	100V	220V	200V	380V	400V	415V				440V
			50/60Hz				50Hz	60Hz		

KRX1-P-□-□

V-01	135	155	78	60	-	Rc3/4	○	○	-	-	-	-	-	0.2	16.5	-
V-03	135	155	78	60	-	Rc3/4	-	-	○	○	○	○	○	0.2	-	15
B-01	135	155	-	-	60	Rc3/4	○	○	-	-	-	-	-	0.2	16.5	-
B-03	135	155	-	-	60	Rc3/4	-	-	○	○	○	○	○	0.2	-	15
VB-01	135	155	-	V(吸气)+B(排气)<60kPa		Rc3/4	○	○	-	-	-	-	-	0.2	16.5	-
VB-03	135	155	-	V(吸气)+B(排气)<60kPa		Rc3/4	-	-	○	○	○	○	○	0.2	-	15

KRX3-P-□-□

V-01	235	280	84	60	-	Rc3/4	○	○	-	-	-	-	-	0.37	25.5	-
V-03	235	280	84	60	-	Rc3/4	-	-	○	○	○	○	○	0.37	-	21
B-01	235	280	-	-	60	Rc3/4	○	○	-	-	-	-	-	0.37	25.5	-
B-03	235	280	-	-	60	Rc3/4	-	-	○	○	○	○	○	0.37	-	21
VB-01	235	280	-	V(吸气)+B(排气)<60kPa		Rc3/4	○	○	-	-	-	-	-	0.37	25.5	-
VB-03	235	280	-	V(吸气)+B(排气)<60kPa		Rc3/4	-	-	○	○	○	○	○	0.37	-	21

KRX5-P-□-□

V-01	405	480	86	60	-	Rc3/4	○	○	-	-	-	-	-	0.75	34	-
V-03	405	480	86	60	-	Rc3/4	-	-	○	○	○	○	○	0.75	-	33
B-01	405	480	-	-	60	Rc3/4	○	○	-	-	-	-	-	0.75	34	-
B-03	405	480	-	-	60	Rc3/4	-	-	○	○	○	○	○	0.75	-	33
VB-01	405	480	-	V(吸气)+B(排气)<60kPa		Rc3/4	○	○	-	-	-	-	-	0.75	34	-
VB-03	405	480	-	V(吸气)+B(排气)<60kPa		Rc3/4	-	-	○	○	○	○	○	0.75	-	33

KRX6-P-□-□

V-03	575	685	86	60	-	Rc3/4	-	-	○	○	○	○	○	1.5	-	50
B-03	575	685	-	-	60	Rc3/4	-	-	○	○	○	○	○	1.5	-	50
VB-03	575	685	-	V(吸气)+B(排气)<60kPa		Rc3/4	-	-	○	○	○	○	○	1.5	-	50

KRX7A-P-□-□

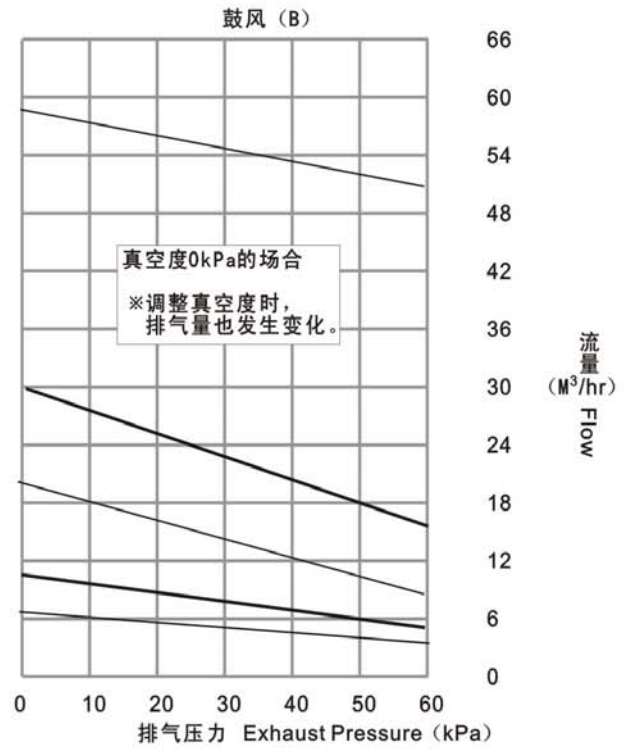
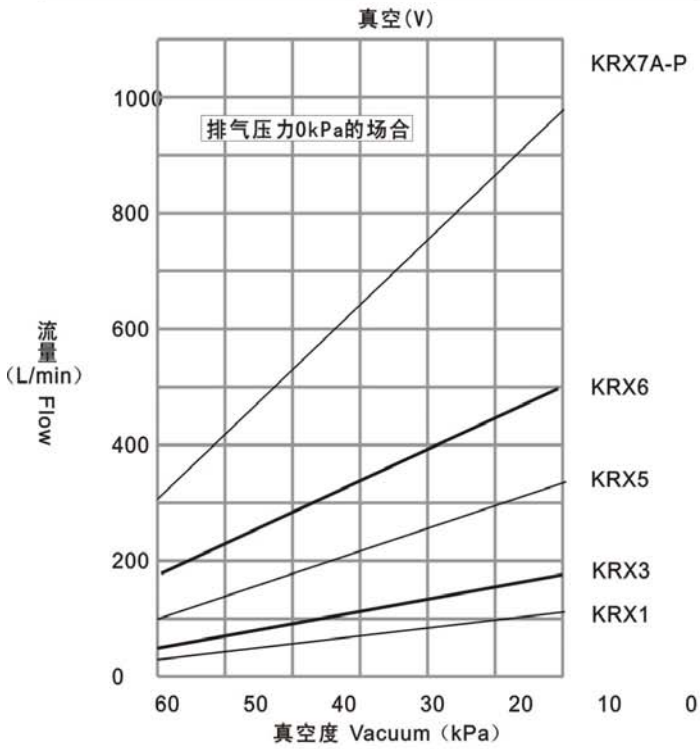
V-03	1190	-	90	60	-	Rc1	-	-	○	○	○	○	-	2.2	-	79
B-03	1190	-	-	-	60	Rc1	-	-	○	○	○	○	-	2.2	-	79
VB-03	1190	-	-	V(吸气)+B(排气)<60kPa		Rc1	-	-	○	○	○	○	-	2.2	-	79

- ※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据。
- ※2泵所到达最高真空点在实际上不能使用。只是为了机种选定计算而使用。
- ※3可能使用的真空度（排气压力）范围。
- ※KRX7A泵不能使用于60Hz区域。当在60Hz区域使用时请与代理商或厂家联系。
- ※也有各机种的单体泵（只有泵头）。
- ※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）。
- ※电源电压的允许波动范围为额定电压±10%。
- ※请设置过负荷保护器（热敏继电器等）。
- ※设定值请以电机标牌上记载的额定电流值为标准。

- ※1 Design displacement: Logic value calculated from the cubic Volume. Regarding the actual flow rate, refer to the actual measurement data of performances.
- ※2 It is not allowable to use it at the maximum vacuum reaching point of the pump. Use it for model selection calculations.
- ※3. Usable range of the degree of vacuum (exhaust pressure) range.
- ※ The pump of the KRX7A series models is unusable in the 60Hz range. Please ask for ORION dealers or manufactures if it is used in this condition. And various independent pumps are also available.
- ※ As the intake gas, use clean air of ordinary temperature and ordinary humidity whenever possible. [Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20% in the humidity].
- ※ The allowable variation range of the supply voltage should be rated voltage (10%).
- ※ Install an overload protector (thermal relays, etc.). setting value: Use the rated current value being indicated on the specification plate of the motor as target value.

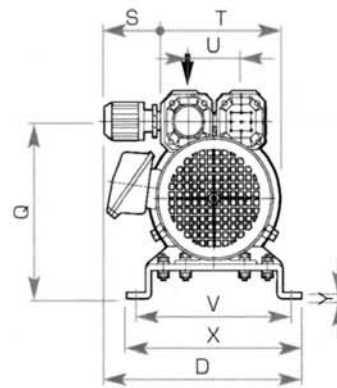
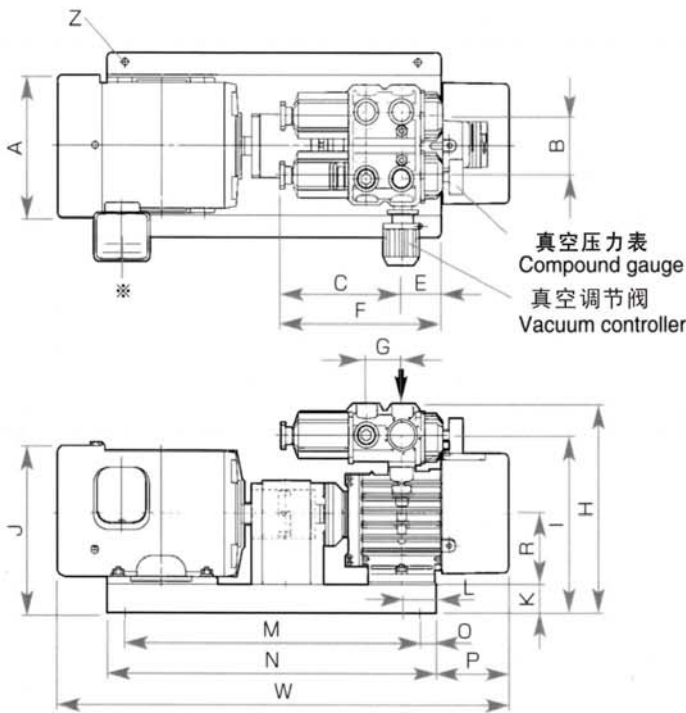
性能实测数据 (- 50Hz)

Performance data



外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)



型式	H	D	W	A	B	C	E	F	G	I	J	K	L
KRX1-P	227(234)	245	372(379)	φ119(φ131)		135	42	177		187(195)	158(212)		40
KRX3-P	248(257)	270	468(482)	φ144(φ137)	80	135	42	177	92	208(217)	176(172)	32	30
KRX5-P	250		542(548)	φ162(φ150)		135	42	177		210	193(187)		45
KRX6-P	273	276	646	φ186		173	54	227		233	222	38	50
KRX7A-P	325	379	739	φ207	100	197.5	24	221.5	70	270	241.5	38	4

型式	M	N	O	P	Q	R	S	T	U	V	X	Y	Z
KRX1-P	240	300		44	189.5(197.5)	63(71)	63			186	210	3.2	
KRX3-P	304	364	30	77	210.5(219.5)	71							
KRX5-P	340	402	31	83	212.5	80	78	154	90	205	230	4.5	4-φ9
KRX6-P	420	470	25	102	235.5	90				220	242		
KRX7A-P	430	530	50	185.5	270	100	86	200	110	250	280	4.5	4-φ12

※()内尺寸表示带单相电机。
※图表示真空规格。

Standard KRA Series

常见真空度 55kPa以下
流量 1130~1850L/min (50Hz)

Continuous operative vacuum 55kPa or low
Capacity 1130~1850L/min (50Hz)

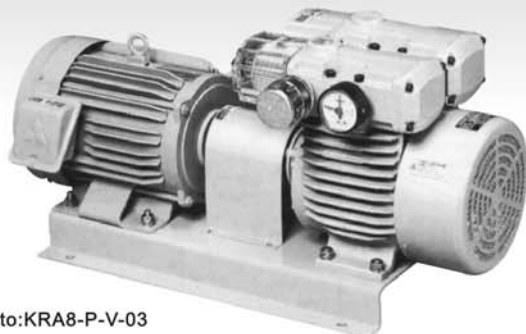


Photo:KRA8-P-V-03



Photo:KRA10-P-V-03

特长

- 因为是无油式，所以在使用真空（真空规格）、排气（鼓风机规格）时，也不含有油分，不会对作业环境和产品（物体）造成油污染。
- 运行声音低、寿命长。而且同时装备有真空压力表、调压控制阀。
- 大流量型最适合于印刷机械、装订机械等的大型化、高速化以及集中配管系统。

Features

- No oil in either vacuum, pressure or combination application.
- Quiet operation.
- Long Life.
- Gauge and controller equipment standard.
- Dependable proven Design for continuous duty operation.
- Designed for printing press applications.

性能

Specifications

型式 Model	设计排气量 Designed pumping capacity		到达真空度 Ultimate vacuum (kPa以上) (※2) (Over:kPa)	常用真空度 Continous operative vacuum (kPa以下) (※3)	常用排气压力 Continuous operative pressure (kPa以下) (※3)	配管 接口 Suction. Exhaust port diameter	电源 Motor voltage					运转噪音 (dB) Noise		装载电机 (kw) Motor	质量(kg) Mass
	(L/min)(※1)						三相 Three phase								
	50Hz	60Hz					200V	380V	400V	415V	440V	50/60Hz	50Hz		

KRA8-P-□-□

Model	1130	1350	90	55	-	Rc1	○	○	○	○	○	67	68	2.2	98
V-03	1130	1350	90	55	-	Rc1	○	○	○	○	○	67	68	2.2	98
B-03	1130	1350	-	-	50	Rc1	○	○	○	○	○	74	76	2.2	98
VB-03	1130	1350	90	合计55kPa以下		Rc1	○	○	○	○	○	67	68	2.2	98

KRA10-P-□-□

Model	1850	2200	90	55	-	Rc11/4	○	○	○	○	○	74	75	3.7	127
V-03	1850	2200	90	55	-	Rc11/4	○	○	○	○	○	74	75	3.7	127
B-03	1850	2200	-	-	50	Rc11/4	○	○	○	○	○	76	77	3.7	127
VB-03	1850	2200	90	合计55kPa以下		Rc11/4	○	○	○	○	○	74	75	3.7	127

※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据。

※2泵所到达最高真空点在实际上不能使用。只是为了机种选定时计算而使用。

※3可能使用的真空度（排气压力）范围。

※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）

※电源电压的允许波动范围为额定电压±10%。

※请设置过负荷保护器（热敏继电器等）。

设定值：请以电机标牌上记载的额定电流值为标准。

※ 1 Design displacement: Logic value calculated from the cubic volume. Regarding the actual flow rate, refer to the actual measurement data of performance.

※ 2 It is not allowable to use it at the maximum vacuum reaching point of the pump. Use it for model selection calculations.

※ 3. Usable range of the degree of vacuum (exhaust pressure) range.

※ In the KRA8, KRA10, various independent pumps are also available.

※ As the intake gas, use clean air of ordinary temperature and ordinary humidity whenever possible. [Using environmental conditions (intake air) should be 0~40℃ in the temperature and 65±20% in the humidity].

※ The allowable variation range of the supply voltage should be rated voltage (10%).

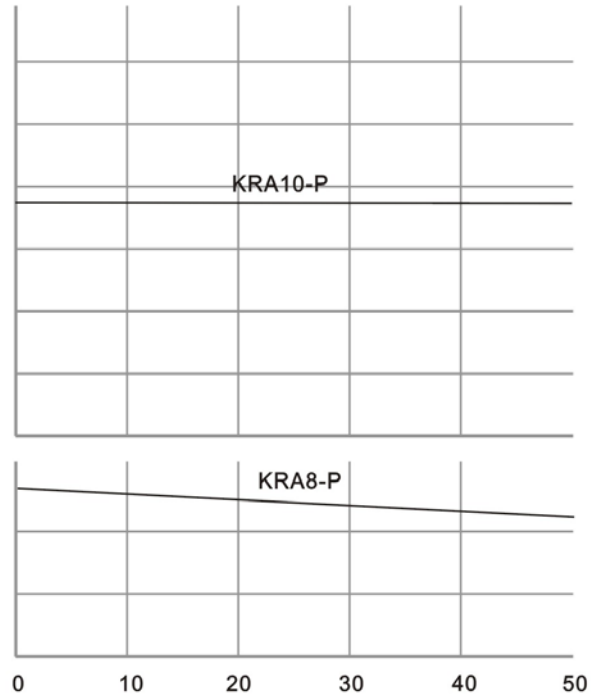
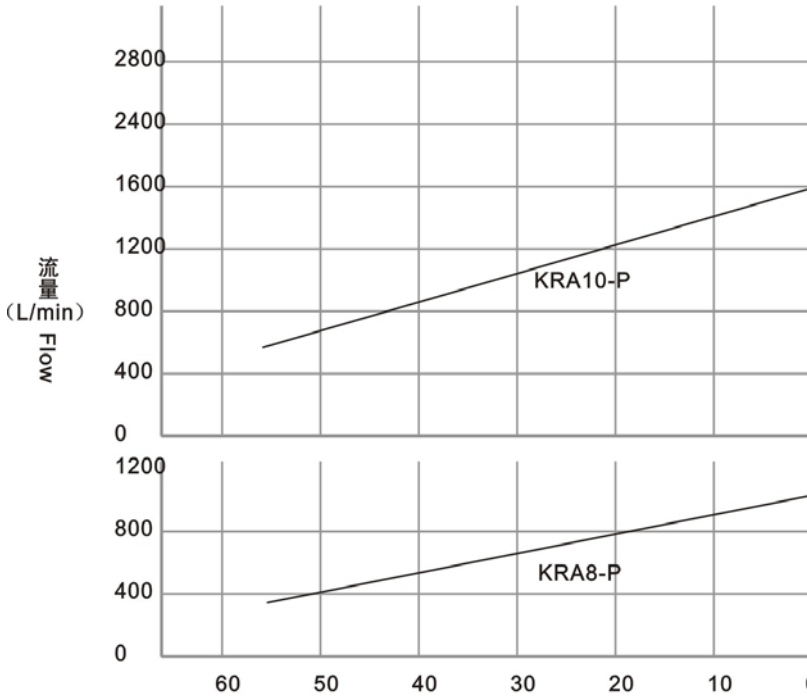
※ Install an overload protector (thermal relays, etc.). setting value: Use the rated current value being indicated on the specification plate of the motor as target value.

性能实测数据 (- 50Hz)

Performance data

真空度 (V) Vacuum

鼓风机 (B) Blower



真空度 Vacuum (kPa)

排气压力 Exhaust Pressure (kPa)

※ 1大气压下20℃

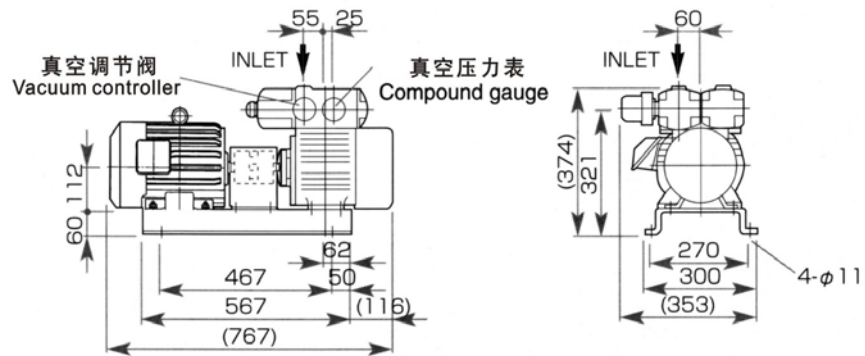
※ Under one normal atmospheric pressure 20℃

外形尺寸 (尺寸单位: mm)

Outer dimensions (Unit:mm)

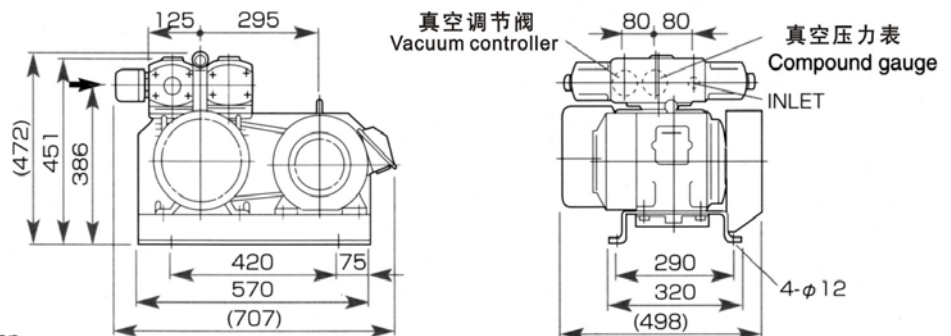
KRA8-P-□-03

※ 图示是真空规格尺寸



KRA10-P-□-03

※ 图示是真空规格尺寸



※ 图表表示真空规格

※ Drawings are for vacuum application.

CBX Series (Combination)

常用真空度 60kPa以下(除CBX □ VBVB型)
 常用排气压力 60kPa以下(除CBX □ VBVB型)
 流量 280~1115L/min (50Hz)

特許 Patent

Continuous operative vacuum
 60kPa or low (Except CBX □ VBVB)
 Continuous operative pressure
 60kPa or low (Except CBX □ VBVB)
 Capacity 280~1115L/min (50Hz)



Photo:CBX40-P-VB-03



Photo:CBX15-P-VBVB-03

特长

- 由于双气缸-双功能（真空泵、鼓风机并列）方式，可以同时作为真空度60 kPa以下的真空源、排气压力60kPa以下的空气源来独立使用。
- 该泵体积小、重量轻、操作简便。

Features

- "COMBINATION" Vacum/Pressure operation.
- Compact Dual Pump Design.
- Quiet Operation

规格

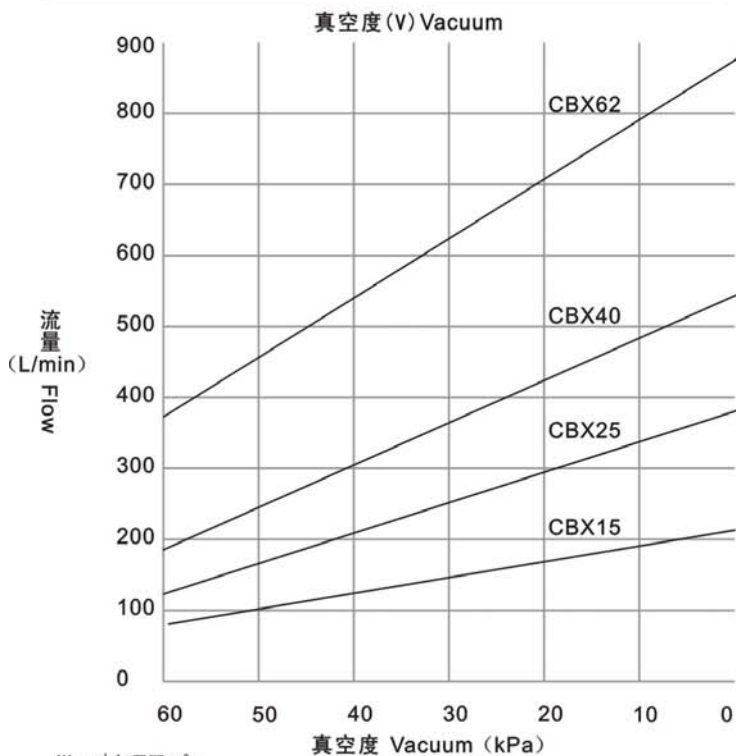
Specifications

型式 Model	设计排气量 Designed pumping capacity (L/min)(※1) 50Hz	常用真空度 Continous operative vacuum (kPa以下) (※3) (Under:kPa)	常用排气压力 Continuous operative pressure (kPa以下) (※3) (Under:kPa)	配管 接口 Suction. exhaust port diameter	电源 Motor voltage				装载电机 (kw) Motor	质量(kg) Mass	
					三相 Three phase						
					200V	380V	400V	415V			
CBX□-P-□-03(VB式样)											
15-P-VB-03	280	60	60	Rc3/4	○	○	○	○	0.75	41	
25-P-VB-03	480	60	60	Rc3/4	○	○	○	○	1.5	53	
40-PVB-03	685	60	60	Rc3/4	○	○	○	○	2.2	69	
62-P-VB-03	1115	60	60	Rc1	○	○	○	○	3.7	110	
CBX□-P-□-03(VBVB式样)											
15-P-VBVB-03	真空	280	55	20	Rc3/4	○	○	○	○	0.75	41
	鼓风	280	35	50	Rc3/4						
25-P-VBVB-03	真空	480	55	20	Rc3/4	○	○	○	○	1.5	53
	鼓风	480	35	50	Rc3/4						
40-P-VBVB-03	真空	685	55	20	Rc3/4	○	○	○	○	2.2	69
	鼓风	685	35	50	Rc3/4						

- ※1设计排气量：由容积所计算出的理论值。实际流量参考性能实测数据。
- ※2可能使用的真空度（排气压力）范围。
- ※本真空泵的转速设计为增速设计、不能用于60Hz的区域、当在60Hz区域使用时，请与代理商或厂家联系。
- ※使用环境（吸入空气）条件：温度：0~40℃、湿度：通常湿度（65±20%）。
- ※电源电压的允许波动范围为额定电压±10%。
- ※请设置过负荷保护器（热敏继电器等）。设定值以电机标牌上记载的额定电流值为标准、50Hz时为110%、60Hz时为120%。

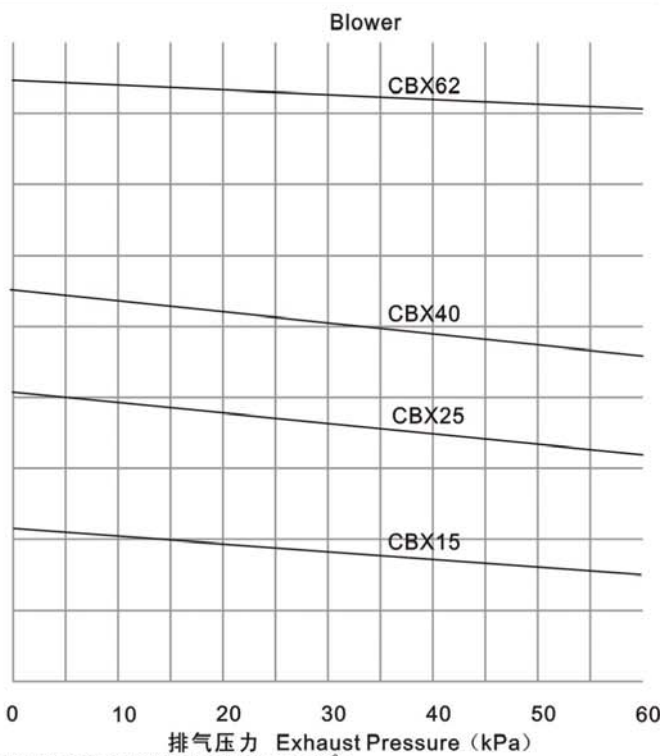
- ※1 Design displacement: Logic value calculated from the cubic volume. Regarding the actual flow rate, refer to the actual measurement data of performance.
- ※ Usable range of the degree of vacuum (exhaust pressure) range.
- ※ The rotate speed of the dry-pump is designed as speedup, unusable in the 60HZ range. Please ask for ORION dealers or manufacturers if it is used in this condition.
- ※ As the intake gas, use clean air of ordinary temperature and ordinary humidity whenever possible. [Using environmental conditions (intake air) should be 0~ 40℃ the temperature and 65±20% in the humidity].
- ※ The allowable variation range of the supply voltage should be rated voltage(10%).
- ※ Install an overload protector (thermal relays, etc.). setting value: Use the rated current value being indicated on the specification plate of the motor as target value. 110% in 50HZ 120% in 60HZ.

性能实测数据 (-50Hz)



※ 1大气压下20℃

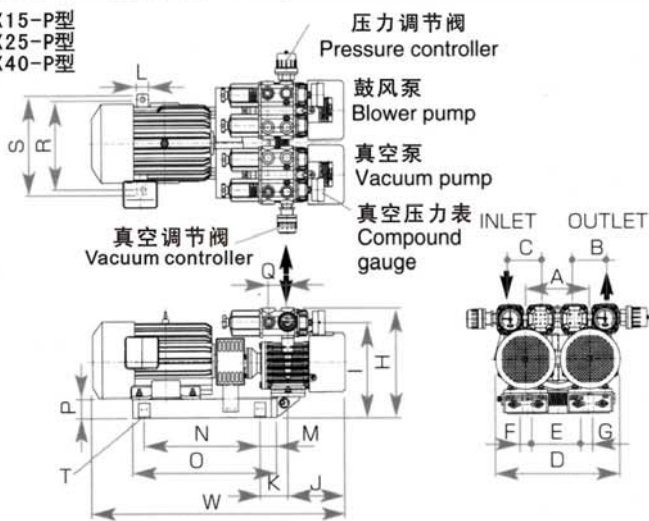
Performance date



※ Under one normal atmospheric pressure 20℃

外形尺寸 (尺寸单位: mm)

CBX15-P型
CBX25-P型
CBX40-P型



Outer dimensions (Unit:mm)

CBX15

H	D	W	A	B	C	E	F	G	I	J
269	324	473.5	170	90	97	28	229.5	107		
K	L	M	N	O	P	Q	R	S	T	
65	30	35.5	225	280.5	50	205	233	4-φ9		

CBX25

H	D	W	A	B	C	E	F	G	I	J
272	329	553	170	90	112	28	231.5	127		
K	L	M	N	O	P	Q	R	S	T	
65	30	35.5	270	325.5	50	220	248	4-φ9		

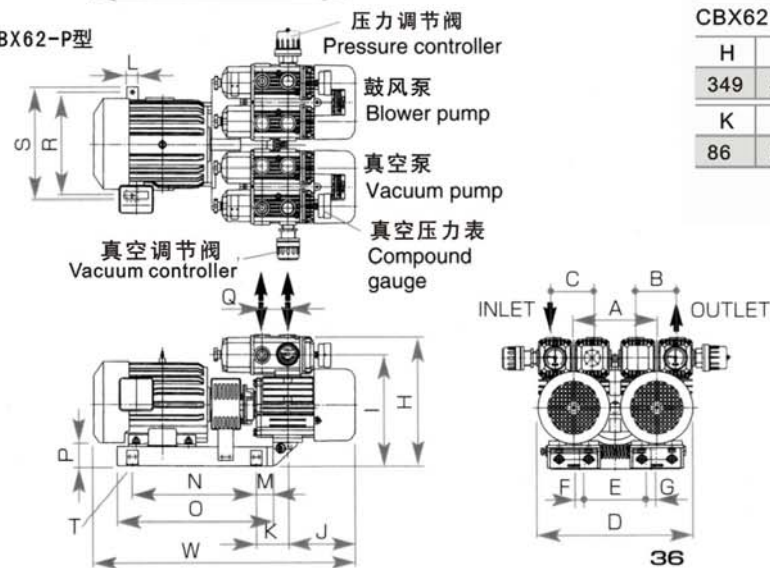
CBX40

H	D	W	A	B	C	E	F	G	I	J
288	334	648	170	90	112	28	248.5	152		
K	L	M	N	O	P	Q	R	S	T	
75	30	35.5	305	380.5	50	240	268	4-φ9		

CBX62

H	D	W	A	B	C	E	F	G	I	J
349	413	699	221	110	162	28	294	182		
K	L	M	N	O	P	Q	R	S	T	
86	30	46	330	416	50	270	298	4-φ10		

CBX62-P型



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产品品种

经营品种 空压机

照片：空气干燥器
(变换器控制)
RAXE2300A-W
商品范围
■空气干燥器
(冷冻式压缩空气除湿装置)
■空气过滤器
(压缩空气清净装置)
■其他



经营品种 电子机械

照片：热空气清洗机
AP-750FSK-FW
商品范围
■热气流机
(操作型恒温恒湿器)
■热空气清洗机
(超精密空气供给装置)
■其他



经营品种 食品机械

照片：鼓风冷冻机和
吸湿器RB101A1
商品范围
■鼓风冷冻机和吸湿器
(急速冷冻·结冰机)
■蓄冰式冰水冷却机
■人工急冷运送
(高温急冷发送车)



经营品种 冷冻机械

照片：变频冷却装置
RKE3750A-V
商品范围
■单元冷却器
(循环式液体用冷却器)
■除湿干燥机
■油冷却器
(油温自动控制装置)



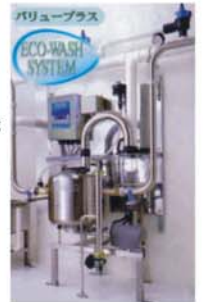
经营品种 加热机械

照片：热辐射加热器
HR330G
商品范围
■喷射加热器
(可移动式暖风机)
■热辐射加热器
(红外线取暖器)
■德尔加多 (dellguard)
(远红外线取暖器)



经营品种 畜牧机械

照片：新型超级挤奶生产线
(挤奶器)
商品范围
■挤奶机器
■冷却机器
■饲料供给机器
■环境保护机器



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是通过ISO9001质量管理体系认证的公司

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