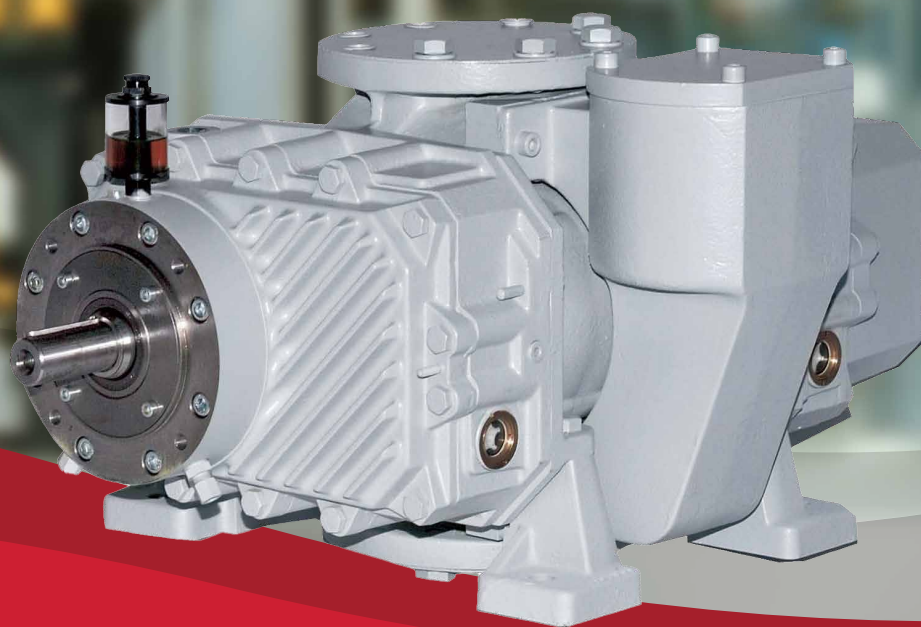


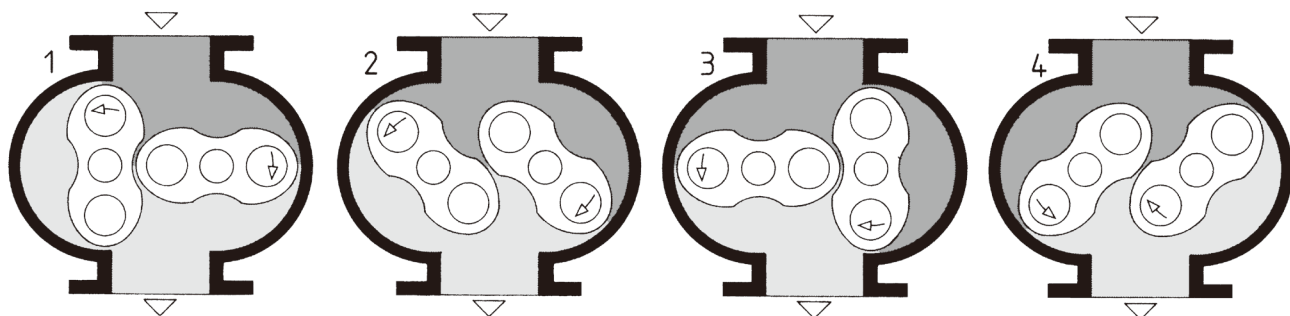
# VWP 罗茨真空泵

## VWP Vacuum Pump



## 操作原理

在旋转过程中，第1第2阶段为吸气阶段，气体空间逐渐增大，第3和第4阶段气体空间减小，压缩气体体积。驱动轴每旋转一圈，这个循环就会重复四次。



### 结构形式

#### A-2型

从传动轴看

**气体方向：**从左到右。

**轴位置：**底部

**旋转方向：**向左（逆时针）

#### B-4型

从传动轴正面看

**气体方向：**从上到下

**轴位置：**向左

**旋转位置：**向左（逆时针）

注：1、B-4型为标准操作；

2、带有旁通阀的只能采用B-4型。

## Operating Principles

During rotation, a progressively growing space is created which corresponds to the suction stage: phases 1 and 2, with phases 3 and 4 being gradually decreased, compressing the volume of gas.

This cycle is repeated four times per each complete rotation of the drive shaft.

### CONSTRUCTION FORM

#### TYPE A-2

From view of the drive shaft

**Direction of gas:** From left to right.

**Shaft position:** Bottom

**Rotation direction:** To the left (anticlockwise)

#### TYPE B-4

From front view of the drive shaft

**Direction of gas:** From top to bottom

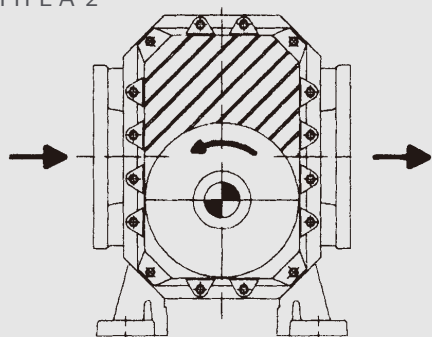
**Shaft position:** To the left

**Rotation position:** To the left (anticlockwise)

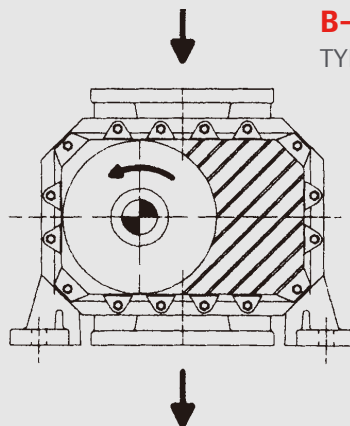
NOTE: 1. Type B-4 is the standard operation.

2. By-pass model only have Type B-4.

**A-2型**  
TYPE A-2



**B-4型**  
TYPE B-4

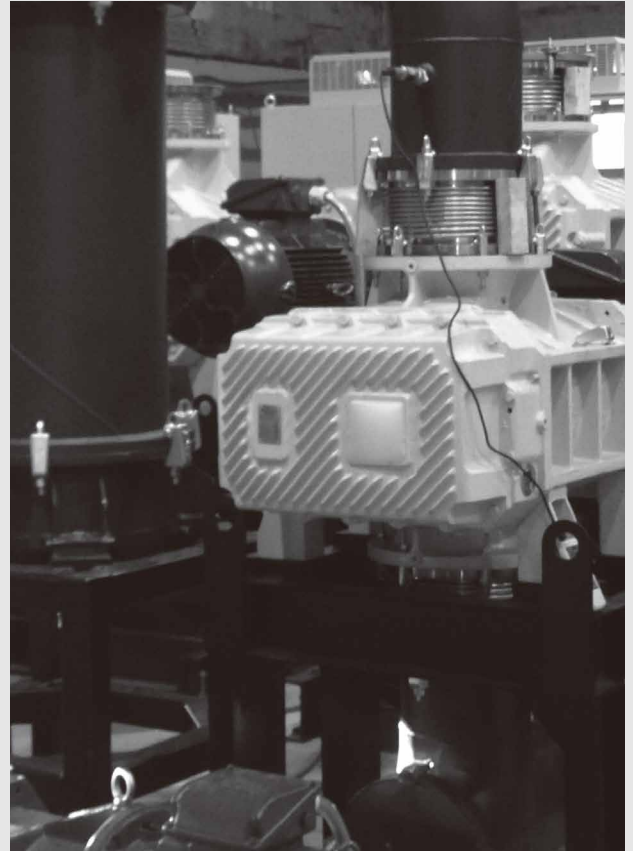


**VWP**

**BY PASS**

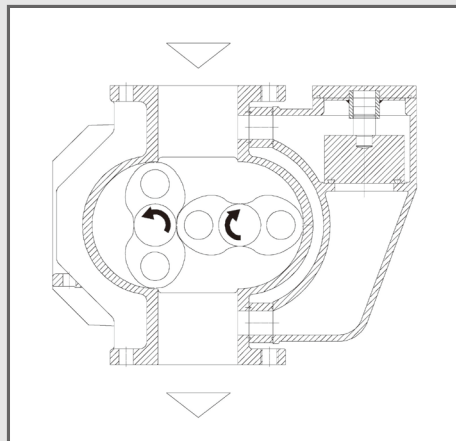
## 罗茨真空泵

带再循环功能的VWP真空泵特别适用于经常中断真空的应用场合，例如食品真空包装。为了保护泵体以适应这些工作条件，该泵配备了由溢流阀调节的再循环旁通通道。该泵也非常适用于由于工作条件的不断变化最终损坏电机而无法使用变频器的应用场合。由于该泵带有旁通阀，因此可以同时启动罗茨泵和前级泵，因为机器可以在粗真空的情况下暂时工作。建议不要在可能导致旁通导管常开的压力范围内工作，因为气体会持续升温，直至达到机器的热极限。

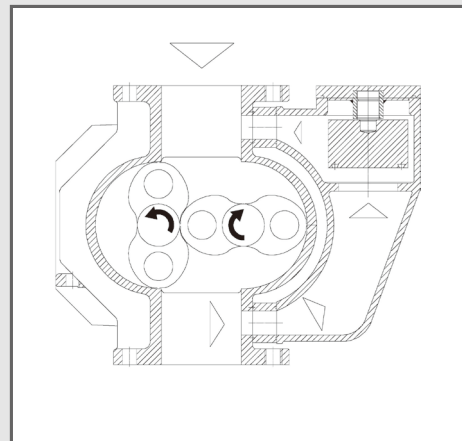


## General details on the roots-type vacuum pumps

The VWP vacuum pump with recirculation is especially designed for applications in which the vacuum needs to be interrupted constantly, for instance, vacuum packaging of food. In order to protect the pump from these working conditions, it is provided with the recirculation by-pass conduit, regulated by a relief valve. This pump is very well suited for applications in which a frequency shifter cannot be used due to the fact that constant changes in the working conditions end up damaging the electrical motor. Since this pump is provided with the by-pass, it is possible to simultaneously start the Roots pump and the backing pump, because the machine is able to work temporarily without a prior high vacuum. It is advisable not to work within a range of pressures that can result in permanent opening of the by-pass conduit, since the gas will continue to heat up until it reaches the thermal limit of the machine.



**安全阀关闭**  
Relief valve closed



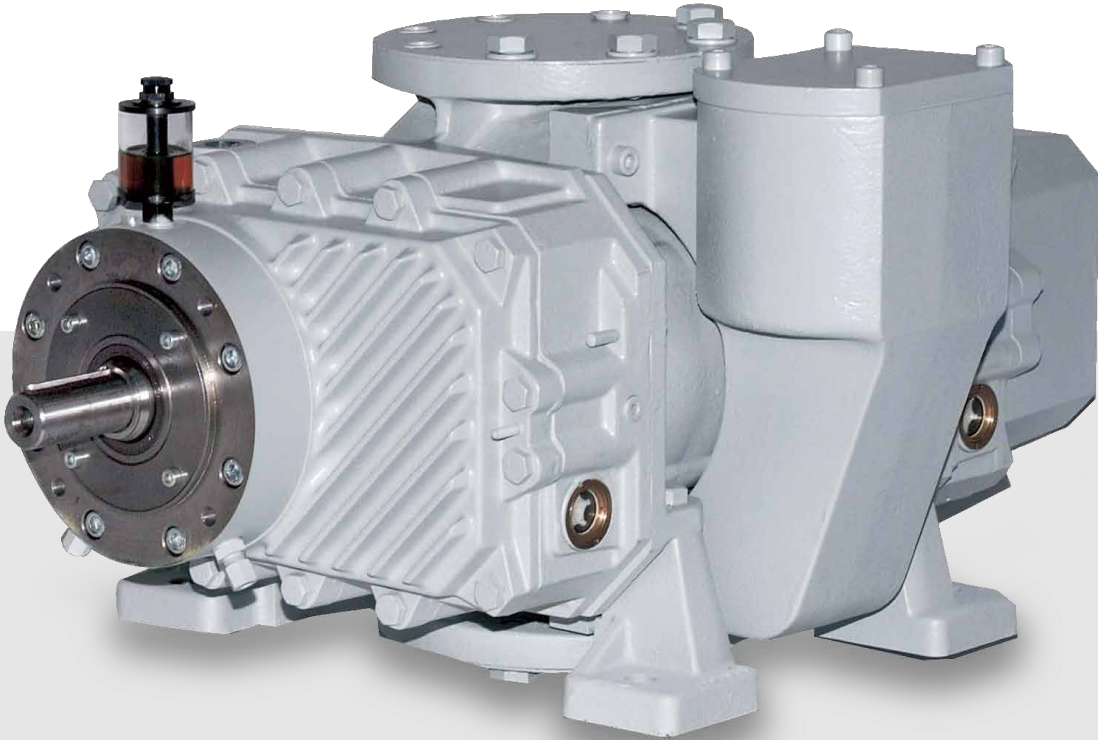
**安全阀开启**  
Relief valve open

参数及材料

Specification and Materials

型号 / Model		VWP 500	VWP 1000	VWP 2000
额定流量 Rated flow	m³/h	500	1000	2000
转速 Rotation speed	min	2860	2895	2910
最大压力差（连续操作） Maximum pressure difference (with continuous operation)	mbar	60	60	60
电机功率 Motor power	kW	2,2	4	5,5
电压，50 Hz Normal supply voltage, 50 Hz	V	230/400	230/400	230/400
油箱 A/B 内的油容量 Oil Capacity in oil tank A/B	Ltr	1,1/1,61	1,58/2,45	3,05/4,69
油容量（轴通道密封） Oil capacity (shaft passage seal)	Ltr	0.07	0.08	0.1
重量（带电机） Weight of Roots pump with motor	kg	156	260	402
泵重量（自由轴） Weight of pump (free shaft)	kg	141	228	360

气缸 Cylinder	铸铁 GG-25 Cast iron GG-25
旁通阀 By-pass	
中间顶板 Intermediate headplates	
油箱 Oil tanks	锻钢 CK-45 Forged steel CK-45
活塞 - 轴 Piston - Shaft	
齿轮 Gears	

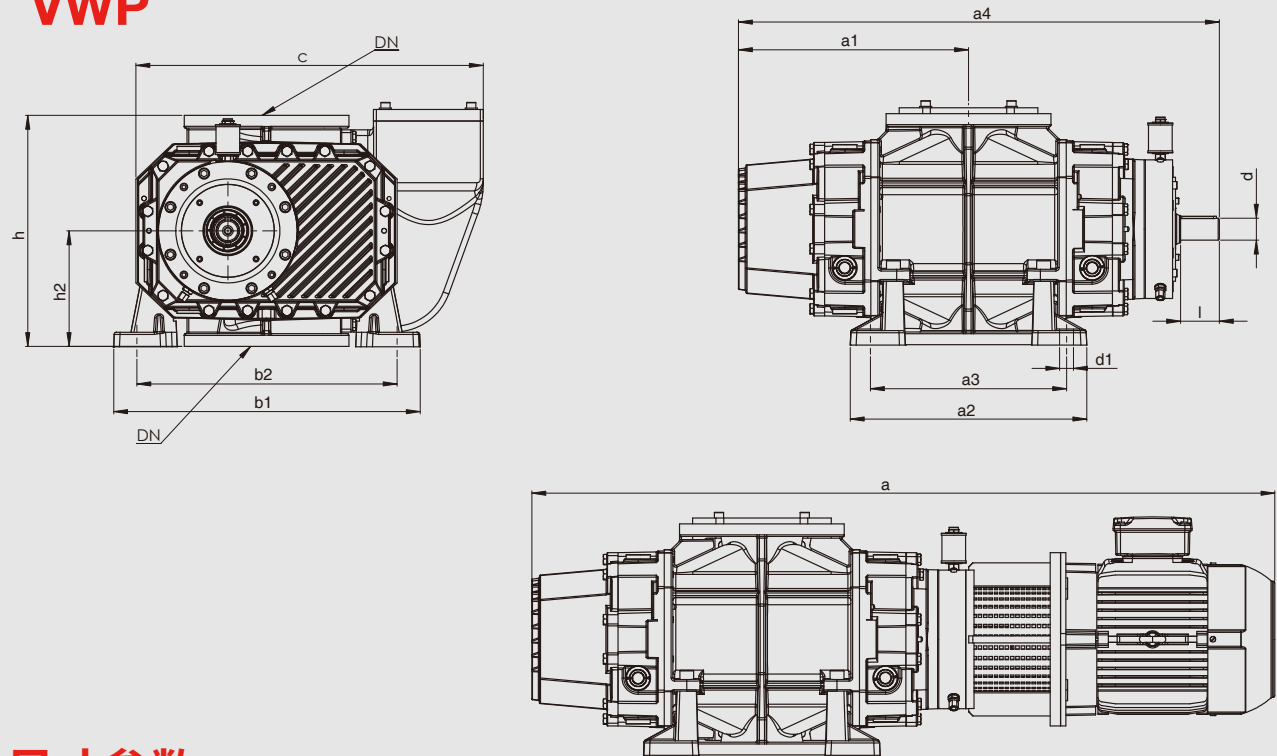


技术规格

Technical data

VWP

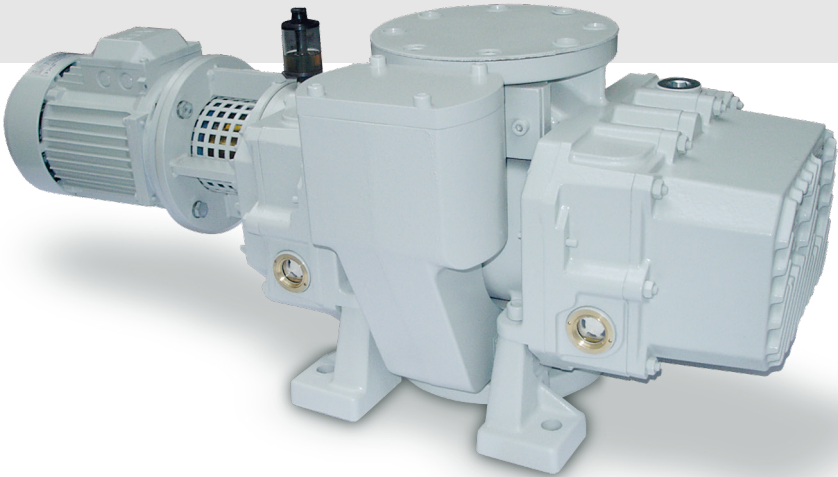
法兰/Flanges  
DIN 2532/PN10  
Tol ±2 mm



尺寸参数

Dimensions(mm)

型号 Model	DN	a	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	b <sub>1</sub>	b <sub>2</sub>	c	h	h <sub>2</sub>	d <sub>1</sub>
VWP 500	100	932	291	270	230	366	290	395	320	160	18
VWP 1000	100	1130	345	327	282	426	354	474	350	175	18
VWP 2000	150	1268	398	412	362	534	444	601	410	200	24





G-Series Side Channel / 侧流式风机



L-Series Liquid Ring / 液环式真空泵



V-Series Rotary Vane / 旋片泵



R-Series Roots / 罗茨泵



C-Series Claw / 爪式泵



S-Series Screw / 螺杆式真空泵



Pump Solution / 真空系统



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