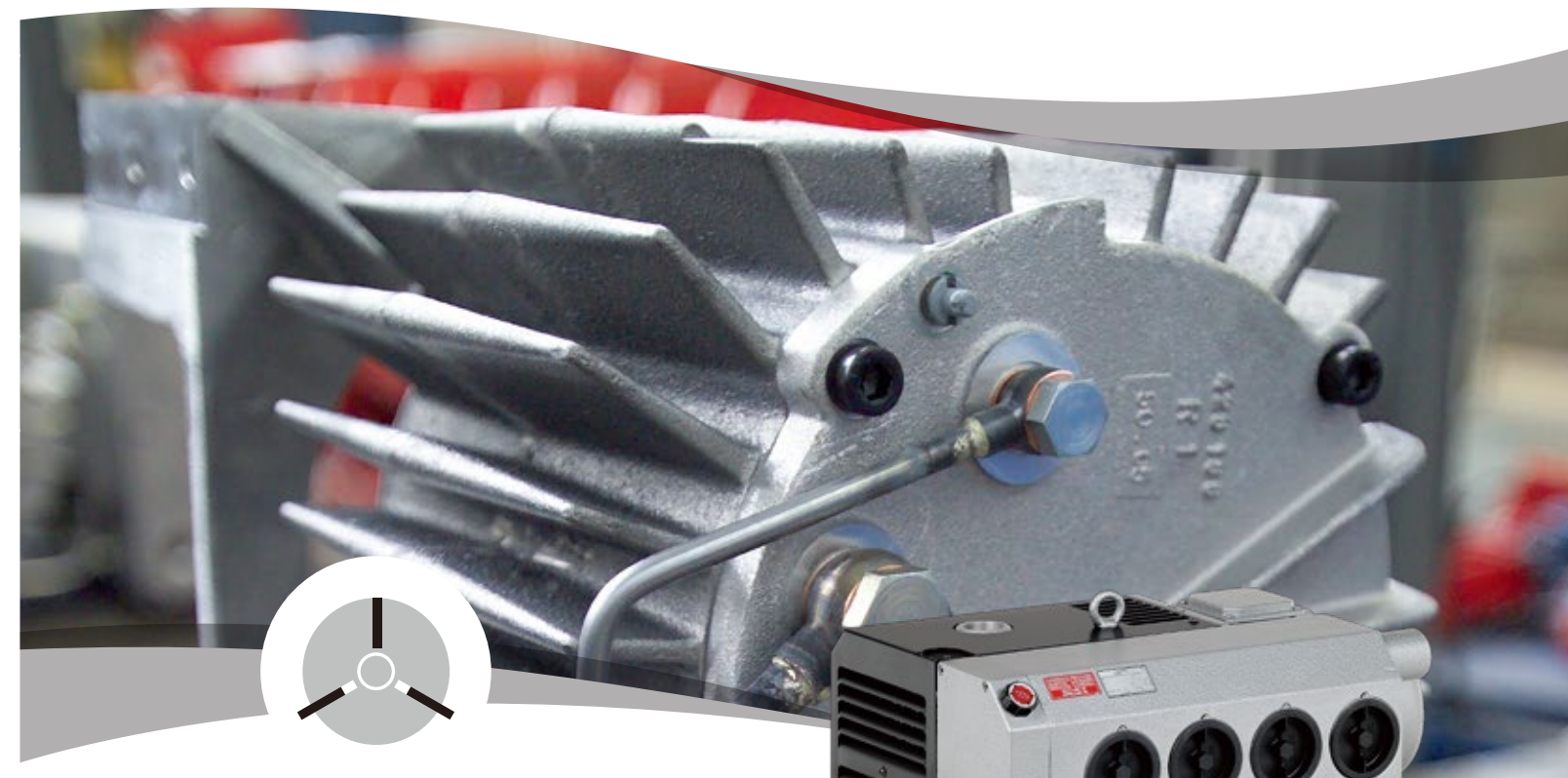


里其乐

油式旋片真空泵 Oil Lubricated Rotary Vane

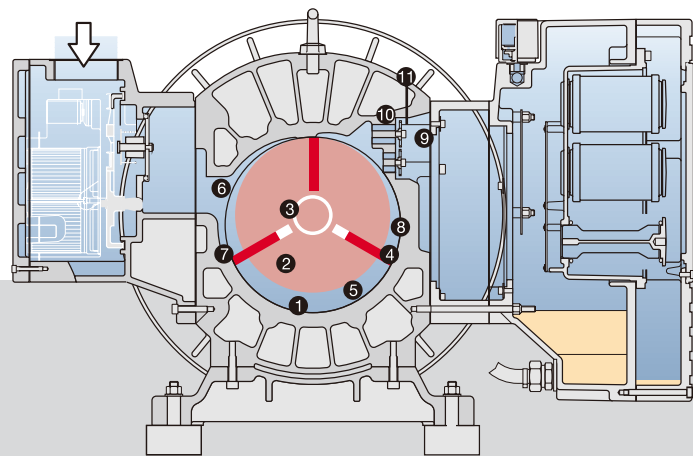
- | | |
|---|--------------------------------------|
|  | F-Series Radial / 离心风机 |
|  | G-Series Side Channel / 侧流式风机 |
|  | L-Series Liquid Ring / 液环式真空泵 |
|  | V-Series Dry Running / 旋片泵 |
|  | R-Series Roots / 罗茨泵 |
|  | C-Series Claw / 爪式泵 |
|  | S-Series Screw / 螺杆式真空泵 |
|  | X-Series Pump Stands / 真空系统 |



V-Series



设计原理 Operating Principle



体积减少压力增加：静态压缩系统

体积少压力增加是旋片式运行的原理。这种静态设计可以在真空，压力和两者结合的应用中产生良好的效果。根据规格和构造，油润滑式真空泵，真空度可达0.1mbar，流量从50到360m³/hr。

在圆柱体的泵腔（1）内，转子（2）是偏心安装的，紧靠顶部几乎与缸体接触，转子叶片（4）安装在众多的转子槽（3）中。当转子开始转动，由于离心力的作用叶片抛出后沿缸体内部滑动。这样，两个叶片之间形成一个气室，其体积随着转动不断改变。当后面的叶片到达进气口（7）时，气体从进气口进入气室，在这时，气室（5）达到其最大的容积。当气室移动，其容积越来越小，气体被压缩，压强增加，直到气室（8）内的气体压强超过力腔（9）内的压强时，气体从出气口（10）排出。有些型号安装了单向阀（11）用于防止达到极限压强时排出的气体回流。

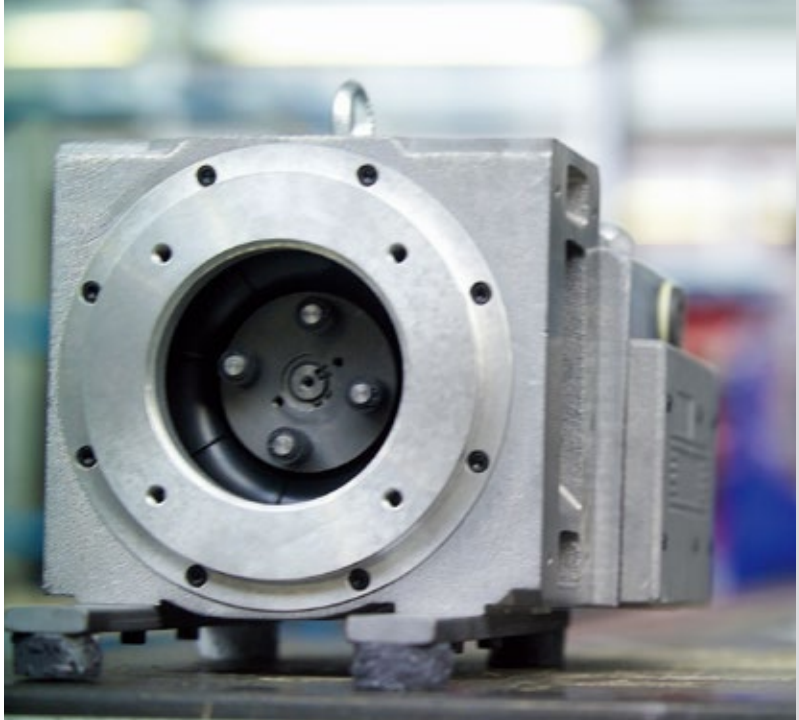
作为真空泵运行时，其过程相同，但气室（8）提供的是负压，腔体（9）内为大气压。

Pressure increase by volume reduction is the principle behind rotary vane operation. This static design offers excellent service in pressure, vacuum or a combination of both. Depending upon size and design - i.e. oil lubricated or dry running - vacuum up to 0.1 mbar abs with capacities ranging from 50 to 360m³/hr can be reached.

In a cylindrical housing (1) a rotor (2) is positioned eccentrically so that it is on the top almost touching the cylinder. Rotor blades (4) are positioned into numerous rotor slots (3). When the rotor starts turning, due to centrifugal force the blades are thrown out and slide against the internal surface of the cylinder. In this way a cell (5) is formed between two blades with a volume that changes constantly during rotation. Air enters from the inlet port into a cell until the rear blade reaches the

inlet port (7). At this point the cell (5) has achieved its maximum air volume. As the cell then moves away from the port its volume becomes smaller and smaller, the air is thus compressed and the pressure rises. This continues until the pressure in the cell (8) exceeds that in the pressure chamber (9) and the air then exits through the outlet port (10). Some models are fitted with exhaust valves (11) which stop the backflow of this discharged air if the maximum pressure has been reached.

In a vacuum pump the process is similar, but the cell (8) gives decreasing pressure, and the chamber (9) is at atmospheric pressure.



油式旋片真空泵
Oil lubricated / Oil flooded

我们的油式旋片真空泵被广泛的应用于各个工业领域，为需要真空的应用行业提供广泛系列的油式旋片真空泵。

Our oil lubricated rotary vane vacuum pumps are used in wide variety of industrail applications. We offer the largest range of oil flooded vacuum pumps for industrail vacuum operation.

优势一览 Superior

- 长寿命叶片
- 低噪音水平
- 易维护
- 能耐受较高水蒸气
- 保养周期长
- 适合于多种工业应用
- Long vane life
- Low noise level
- Easy to service
- High water vapor tolerance
- Long service interval
- For many industrial applications



V-VC

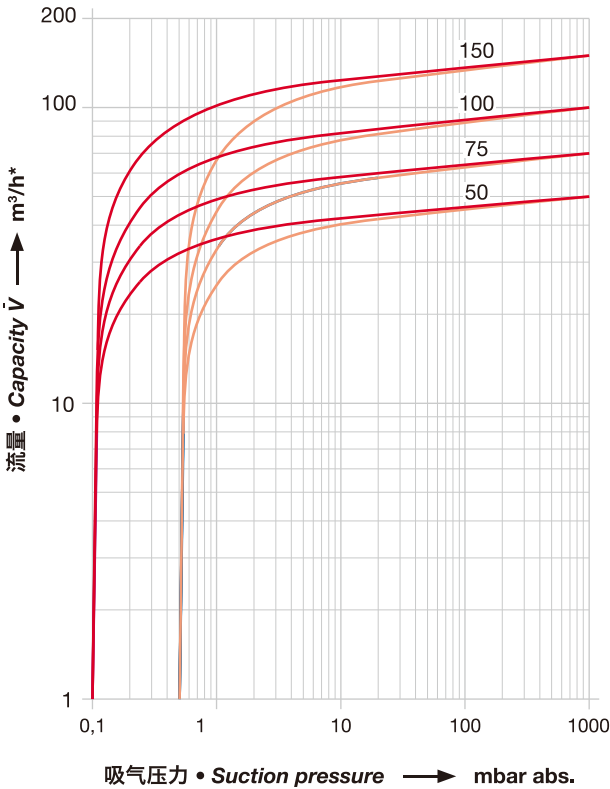
VC 50 | 75 | 100 | 150



油润滑旋片式真空泵。流量从50至180 m³/hr，极限真空0.1mbar（绝对值）。法兰式电机，转子两侧装有轴承，装有油/气热交换器。内置筛网过滤器，真空逆止阀，气镇阀，保护罩和油分离器。

Oil flooded rotary vane vacuum pump with capacities ranging from 50 to 180 m³/h and an ultimate vacuum of 0.1 mbar (abs.). Flange motor, bearings on both sides of the rotor, oil/air heat exchanger. Fitted as standard with fine mesh filter, vacuum non-return valve, gas ballast valve, protection cover and oil separator.

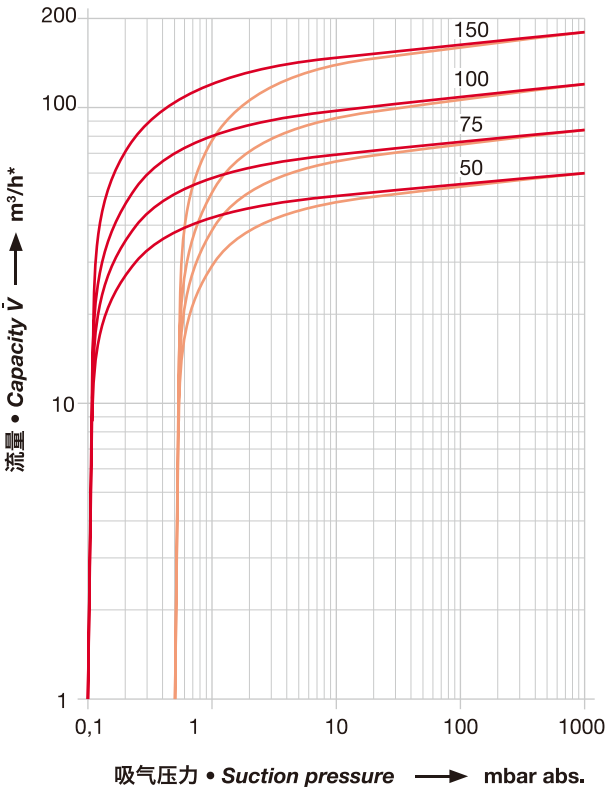
50 Hz 选型图 • Selection diagram



— 关闭气镇阀 • without gas ballast
— 打开气镇阀 • with gas ballast

VC			50	75	100	150
额定流量 Nominal capacity	m³/h	50 Hz	50	70	100	150
		60 Hz	60	84	120	180
名义真空 Ultimate partial vacuum 极限真空 Ultimate vacuum	mbar (abs.)				0,1	0,5
电机类型 Motor version	3~	50 Hz	200 – 255 / 346 – 440 V (± 5%)			
		60 Hz	200 – 277 / 346 – 480 V (± 5%)			
电机功率 Motor rating	kW	50 Hz	1,25	1,85	3	4
		60 Hz	1,5	2,2	3,6	4,8
电流 Current drawn	A	50 Hz	8,3 / 4,8	11.6 / 6	16.7 / 9.6	20.0 / 11.5
		60 Hz	7,3 / 4,2	10.7 / 6.2	15.7 / 9.1	21.0 / 12.1
转速 Speed	min ⁻¹	50 Hz	1450			
		60 Hz	1740			
平均噪音 Average noise level	dB(A) → DIN 45635	50 Hz	64	64	66	68
		60 Hz	67	68	69	71
最大重量 Maximum weight	kg	50 Hz	57	59	88	89
		60 Hz	57	59	90	98
油量 Oil capacity	l		3,0	3,0	3,0	3,5

60 Hz 选型图 • Selection diagram



吸气压力 • Suction pressure → mbar abs.

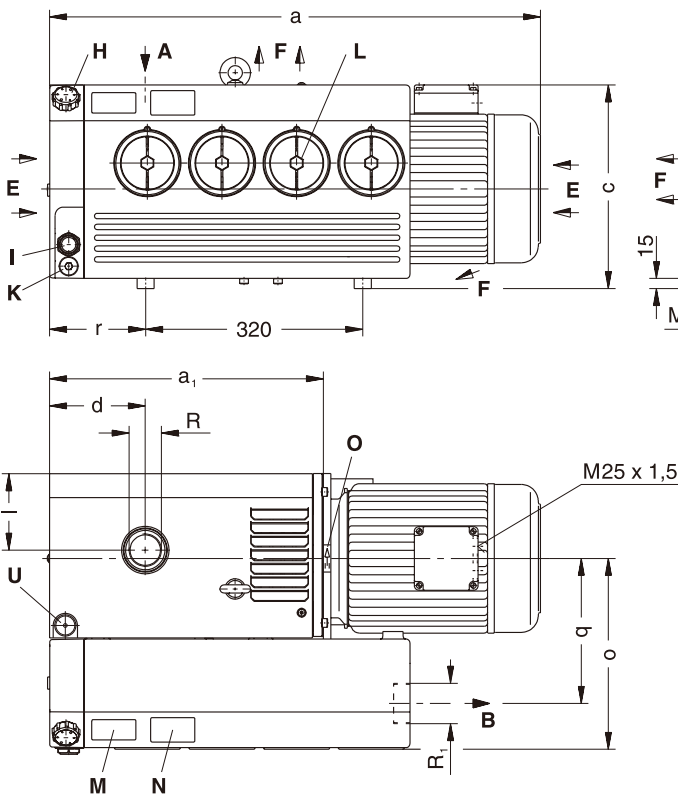
V-VC

VC 50 | 75 | 100 | 150

附件 • Accessories

VC			50	75	100	150
真空密封灰尘分离器 Vacuum tight dust separator	ZFP		145 (06)	145 (06)	216 (06)	216 (06)
真空密封进气口过滤器 Vacuum tight suction filter	ZVF		32 (53)	32 (53)	32 (54)	40 (53)
电机启动器 Motor starter	ZMS	50 Hz	100 / 63	100 / 63	100 / 63	160 / 100
		60 Hz	100 / 63	100 / 63	100 / 63	160 / 100

尺寸 • Dimensions [mm]



- A 真空联接处
Vacuum connection
- B 排气口
Exhaust
- E 冷却空气入口
Cooling air inlet
- F 冷却空气出口
Cooling air outlet
- H 注油口
Oil filling point
- I 油位镜
Oil check
- K 排油口
Oil drain point
- L 油雾分离器
成份VC 50 / 75 -> 3
Oil separator element
VC 50 / 75 -> 3 elements
- M 油标牌
Oil type plate
- N 数据牌
Data plate
- O 旋转方向
Direction of rotation
- U 气镇阀
Gas ballast valve

VC	50	75	100	150
a	601	621,5	732,5	757
a ₁	318	318	404	404
b	336	336	406	406
c	267	267	300	300
c ₁	267	267	297	297
d	113,5	113,5	141	141
f	287,5	287,5	360	360
f ₁	23,5	23,5	24	24
l	90,5	90,5	112	112
o	236	236	281	281
p	242	242	259	259
q	166,5	166,5	214	214
r	104,5	104,5	142	142
R	G 1¼	G 1¼	G 1½	G 1½
R ₁	Rp 1¼	Rp 1¼	Rp 2	Rp 2

* 与进气口联接的吸气状态有关。工作曲线和数据表是按PNEUROP标准计算的，其所示为真空泵在正常温度下运行。我们保留调整技术数据的权利。尺寸a和电流值会因不同电机而与数据表不同。水气容纳，见数据I 200。

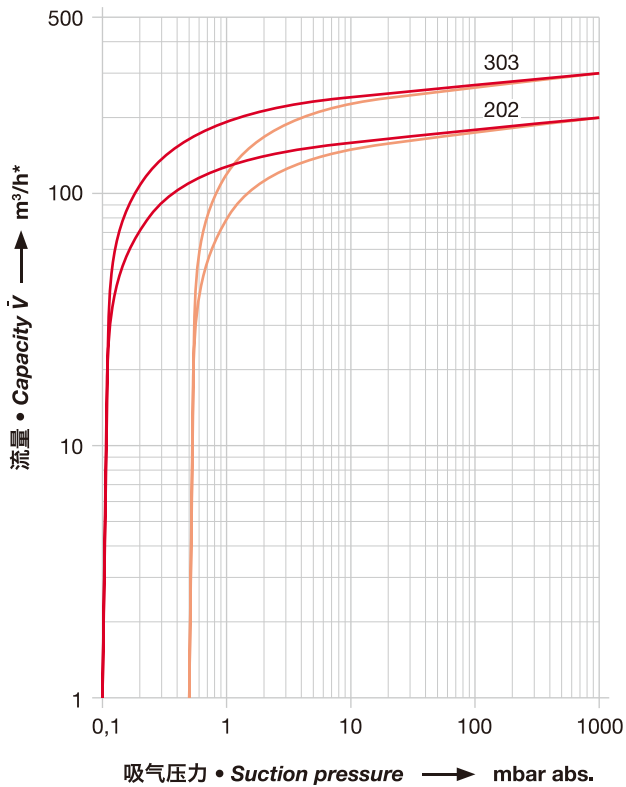
* refers to suction conditions at inlet connection. Curves, table content (tolerance ±10 %) according to PNEUROP standards and refer to vacuum pump at normal operating temperature. The dimensions a, p and ø w and/or the current drawn can differ. Water vapour tolerance, see leaflet I 200.



油润滑旋片式真空泵。流量从200至360 m³/hr，极限真空0.1mbar（绝对值）。法兰式电机，转子两侧装有轴承，装有油/气热交换器。内置筛网过滤器，真空逆止阀，气镇阀，保护罩和油分离器。

Oil flooded rotary vane vacuum pump with capacities ranging from 200 to 360 m³/h and an ultimate vacuum of 0.1 mbar (abs.). Flange motor, bearings on both sides of the rotor, oil/air heat exchanger. Fitted as standard with fine mesh filter, vacuum non-return valve, gas ballast valve, protection cover and oil separator.

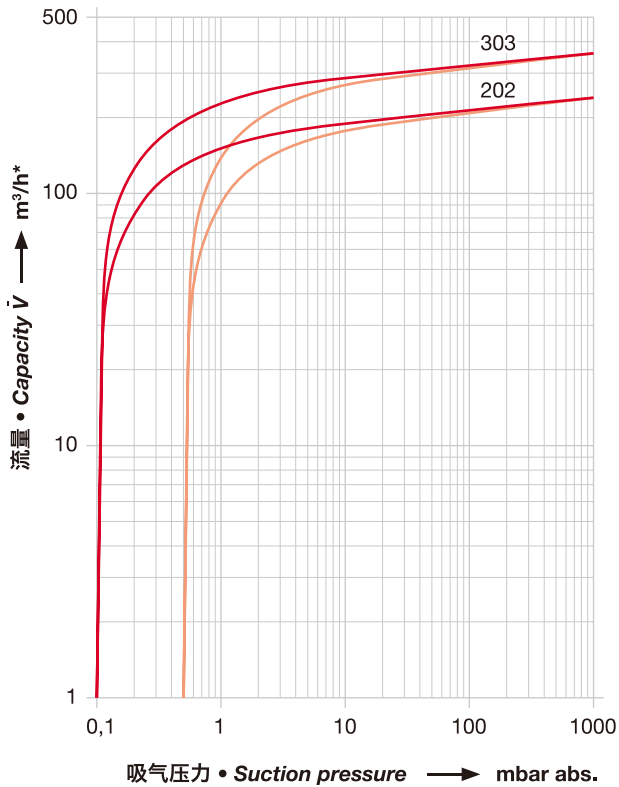
50 Hz 选型图 • Selection diagram



— 关闭气镇阀 • without gas ballast
— 打开气镇阀 • with gas ballast

VC			202	303
额定流量 Nominal capacity	m³/h	50 Hz 60 Hz	200 240	300 360
名义真空 Ultimate partial vacuum 极限真空 Ultimate vacuum		mbar (abs.)	0.1 0.5	
电机类型 Motor version	3~	50 Hz 60 Hz	200-255/346-440(±5%) 200-277/346-480(±5%)	200-255/346-440(±5%) 200-277/346-480(±5%)
电机功率 Motor rating	kW	50 Hz 60 Hz	5.5 6.5	7.3 8
电流 Current drawn	A	50 Hz 60 Hz	11.7/6.8 11.5	30.0/17.3 33.0/19.1
转速 Speed	min ⁻¹	50 Hz 60 Hz	1450 1740	
平均噪音 Average noise level	dB(A) → DIN 45635	50 Hz 60 Hz	69 73	70 74
最大重量 Maximum weight	kg	50 Hz 60 Hz	174 191	187 192
油量 Oil capacity	l		8	8

60 Hz 选型图 • Selection diagram

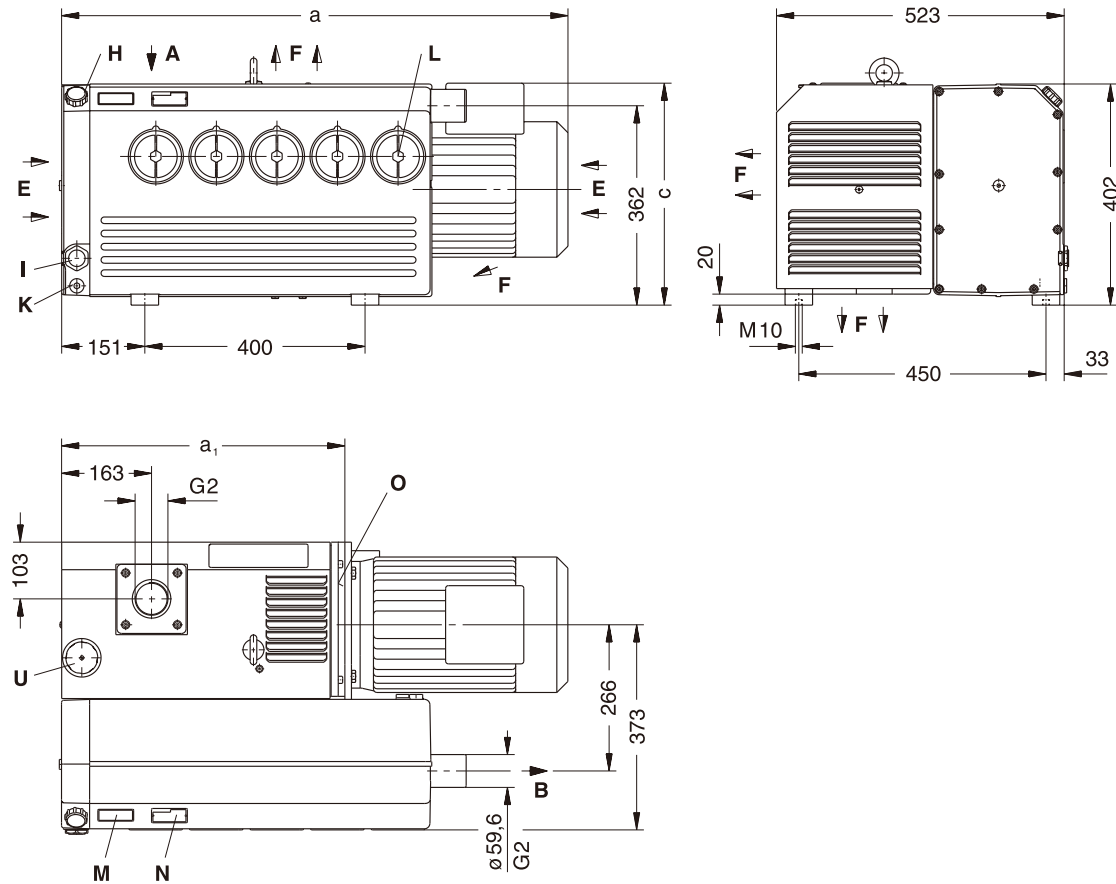


吸气压力 • Suction pressure → mbar abs.

附件 • Accessories

VC			202	303
逆止阀 Non-return valve	ZRK		50 (03)	50 (03)
真空密封灰尘分离器 Vacuum tight dust separator	ZFP		216 (01)	216 (51)
真空密封进气口过滤器 Vacuum tight suction filter	ZVF		50 (53)	50 (53)
电机启动器 Motor starter	ZMS	50 Hz 60 Hz	160 / 100 160 / 100	160 / 100 160 / 100
软启动器 Soft starter	ZAD		尺寸根据需要 Sizes on request	

尺寸 • Dimensions [mm]



VC	202	303
a	935	935
a1	515	515
c	407	407

A	真空联接处 Vacuum connection	K	排油口 Oil drain point
B	排气口 Exhaust	L	油雾分离器 Oil separator element
E	冷却空气入口 Cooling air inlet	M	油标牌 Oil type plate
F	冷却空气出口 Cooling air outlet	N	数据牌 Data plate
H	注油口 Oil filling point	O	旋转方向 Direction of rotation
I	油位镜 Oil check	U	气镇阀 Gas ballast valve

* 与进气口联接的吸气状态有关。工作曲线和数据表是按PNEUROP标准计算的，其所示为真空泵在正常温度下运行。我们保留调整技术数据的权利。尺寸a和电流值会因不同电机而与数据表不同。水气容纳，见数据I 200。

* refers to suction conditions at inlet connection. Curves, table content (tolerance ±10 %) according to PNEUROP standards and refer to vacuum pump at normal operating temperature. The dimensions a, p and ø w and/or the current drawn can differ. Water vapour tolerance, see leaflet I 200.