

S-系列 · S-Series

螺杆 · Screw





S-系列
S-Series





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螺杆真空泵

Screw Vacuum Pumps

Elmo Rietschle S系列螺杆真空泵采用干式运行、无接触操作方法,不需要在泵腔内进行润滑。这可成为该产品的主要优势:工艺过程没有污染,泵的运行也不会产生污染。

性能范围广

我们的S-VSA、S-VSB和S-VSI螺杆泵可以实现0.05 mbar的极限真空,可以在极限真空和大气压之间的任何压力条件下工作。

坚固耐用的设计

在泵壳内,两个平行的螺杆转子(均为同步定时齿轮)向相反方向转动。气体在排出口方向被压缩。变速箱和机械密封环使用润滑油进行润滑。在泵壳内,通过冷却剂的连续流动进行冷却。

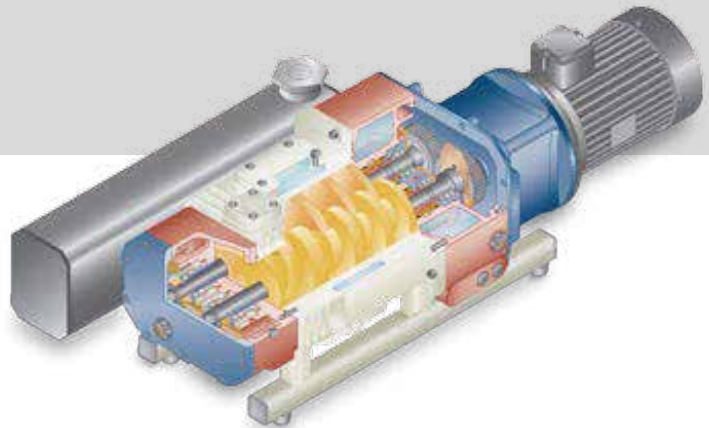
The dry and contact free operation of the Elmo Rietschle S-Series screw vacuum pumps requires no lubrication in the pumping chamber. This translates into major advantages: no process contamination and no pollution caused by the pump operation.

Wide performance range

Our S-VSA, S-VSB and S-VSI screw vacuum pumps achieve an ultimate vacuum of 0.05 mbar (abs.) and can operate at any pressure between end vacuum and atmospheric pressure.

Rugged and durable design

In the pump housing, two parallel screw rotors, both timing gear synchronized, turn in opposite directions. Gas is compressed in the direction of the discharge port. Gearbox and mechanical seals are oil lubricated. Cooling is achieved through the continuous flow of coolant through the pump housing.



优势一瞥

- 干式, 无接触操作
- 单级压缩实现高真空
- 根据应用订制
- 高耐水汽性
- 流量大, 抽吸时间短
- 噪音水平低
- 容易维护
- 有兼容ATEX的版本

Advantages at a glance

- Dry running, contact free operation
- High vacuum in one stage
- Application specific options
- High water vapor tolerance
- Short evacuation time due to high suction capacities
- Low noise level
- Easy to service
- ATEX available

螺杆真空泵 *Screw Vacuum Pumps*

我们的S系列螺杆泵具有较高的耐蒸汽和液体性能,易于维修,使用寿命长——低转速可确保低噪音和低振动运行。

多种应用

Elmo Rietschle螺杆泵主要用于许多不同行业中需要清洁、无油真空环境的应用;也可以与定制真空系统中的罗茨增压泵相结合,以获得非常高的吸力。

S-VSB系列产品被应用于许多化学和制药工艺,还提供兼容ATEX的版本。

对于包装、干燥和涂层或真空炉等普通工业应用,我们的S-VSI系列产品是理想选择。

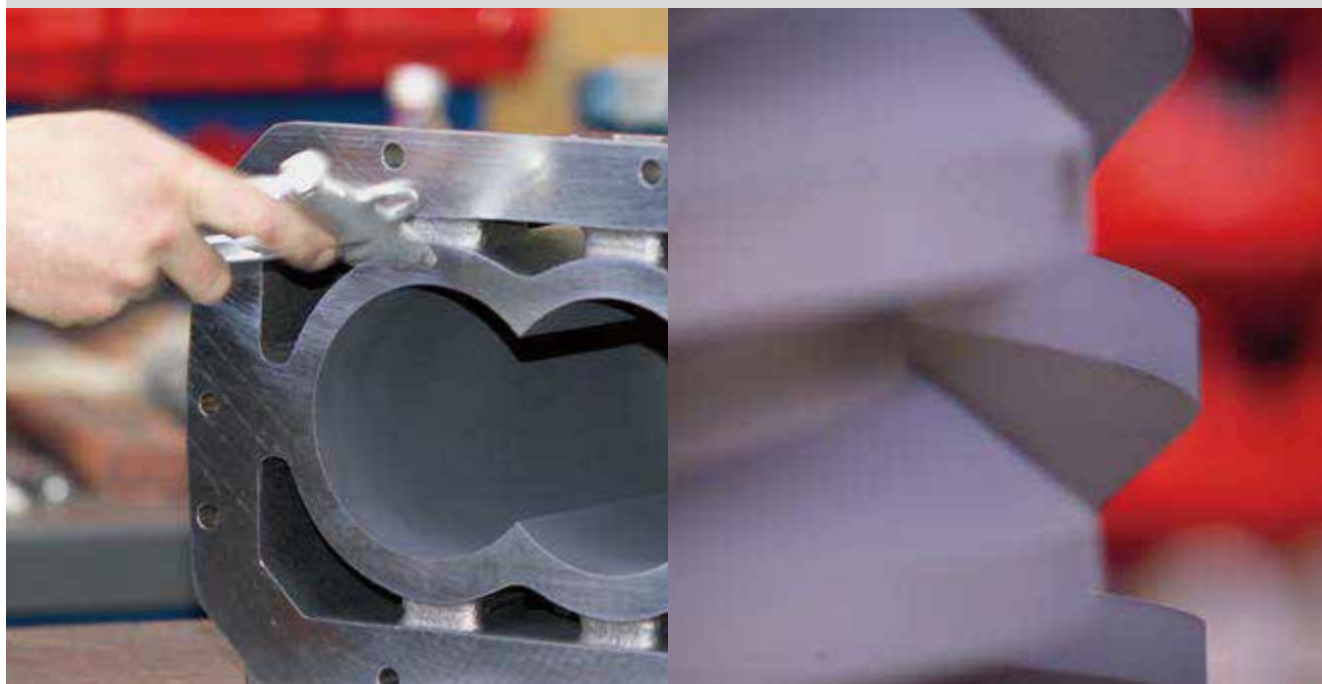
Our S-Series screw pumps feature high vapor and liquid tolerance, are easy to service and have a long service life – the low rotational speed ensures low noise and low vibration operation.

Multiple applications

Elmo Rietschle screw vacuum pumps are primarily used in applications across many different industries where clean, oil free vacuum is needed. They can also be combined with a vacuum booster in customized vacuum systems for very high suction capacities.

The S-VSB range are to be found in many chemical and pharmaceutical processes. ATEX compliant versions are available.

General industrial applications such as packaging, drying and coating or vacuum furnaces are best served by our S-VSI range of pumps.



螺杆真空泵产品概述

Product Overview Screw Vacuum Pumps



S-VSA TWISTER



S-VSB TWISTER



S-VSI TWISTER

S-VSA TWISTER

流量范围为105至720m³/h，极限真空为0.05mbar (abs.)。螺杆转子有固定螺距。机械密封和双唇PTFE密封件相组合，可确保更大限度的轴密封性。噪音低，维修方便。

耐腐蚀版本具有特殊涂层，具体取决于应用。适用于塑料工业的溶剂回收和干燥工艺。

S-VSA TWISTER

Suction capacities ranging from 105 to 720 m³/h, end vacuum 0.05 mbar (abs.). Screw rotors with a fixed pitch. A combination of mechanical seals and double-lip PTFE seals assure maximum shaft tightness. Low noise level, easy to service.

Corrosion resistant versions feature special coatings, depending on the application. Suitable for solvent recovery and drying processes in the plastics industry.

S-VSB TWISTER

流量范围为80至2700m³/h，极限真空为0.05mbar (abs.)。螺杆转子采用变螺距设计。机械密封和双唇PTFE密封件相组合，可确保更大限度的轴密封性。设计为使用密封吹扫气体。噪音低，维修方便。操作温度较低。耐腐蚀版本具有特殊涂层，具体取决于应用。适用于化工和制药业的溶剂回收和干燥工艺。提供兼容ATEX的版本。

S-VSB TWISTER

Capacities ranging from 80 to 2700 m³/h, end vacuum 0.05 mbar (abs.). Screw rotors with a progressive graduation. A combination of mechanical seals and double-lip PTFE seals assure maximum shaft tightness. Designed for use with seal purge gas. Low noise level, easy to service. Low operating temperature. Corrosion resistant versions feature special coatings, depending on the application. Suitable for solvent recovery and drying processes in the chemical and pharmaceutical industry. ATEX compliant versions are available.

S-VSI TWISTER

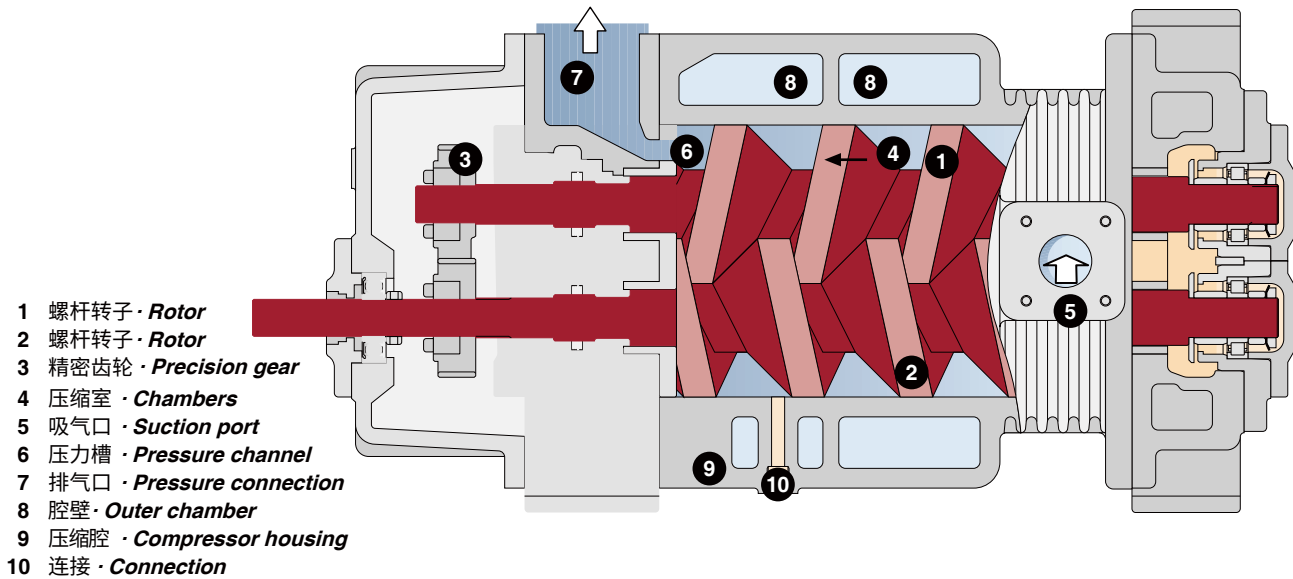
流量范围为100至360m³/h，极端真空为0.1mbar(abs.)。螺杆转子采用变螺距设计。由于使用迷宫式密封件、轴和活塞环密封件，可实现更大的密封性。可选配密封气体。其优点包括低噪音、低工作温度和易于维护。专为无腐蚀性气体的工业应用而设计。

S-VSI TWISTER

Capacities from 100 to 360 m³/h, end vacuum 0.1 mbar (abs.) Progressive graduation of the screw pitch. Maximum tightness thanks to labyrinth, shaft and piston ring seals. Sealing gas is optional. Benefits include low noise, low operating temperatures and easy serviceability. Designed for industrial applications devoid of aggressive gases.

螺杆操作原理

Operating Principle Screw



螺杆式真空泵是由两根螺杆(1, 2)组成, 一根右旋螺纹, 另外一根左旋螺纹。两根结合的非常密致螺杆, 无摩擦的向压缩腔(9)转动, 经由一根精密齿轮(3)同步。压缩腔和特别形状的螺杆形成了压缩室(4)。

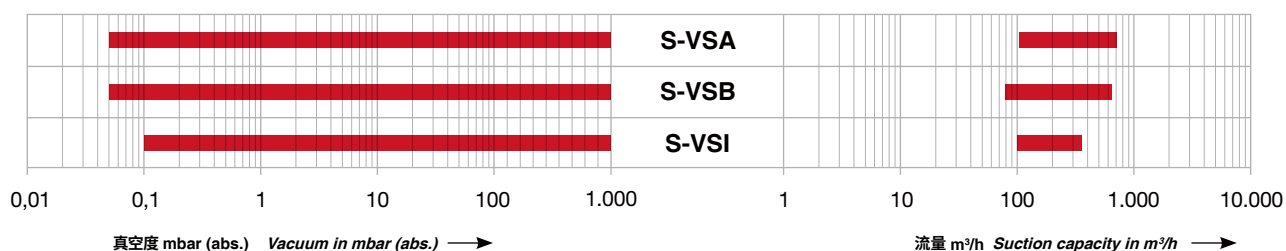
由于两根螺杆反方向运转, 与吸气点(5)连接的腔室被放大, 气体被输送至压缩腔。腔室沿吸气侧到压力侧轴向移动。在输送期间, 由于流量的增加使得腔室中大量的气体增加。压力侧的腔室沿着腔壁轴向移动, 体积逐渐减少直到螺杆(1)的前表面打开压力通道(6), 预压缩气体通过压力连接点(7)被排出。冷却水被获得用于冷却外面的腔壁(8)。部分规格的泵, 附加的冷却空气能被导入泵体。

A screw vacuum pump consists of two parallel, screw-shaped rotors (1 and 2), one with a right-hand thread and the other with a left-hand thread. Both screws turn in the compressor housing (9) without friction and at very tight clearances. They are synchronized via a precision gear (3). The compression housing and the special shape of the screws form the compression chambers (4).

Due to the opposite rotation of both screws the chamber connected with the suction p (5) is enlarged and the gas is transported into the compression chamber. Then the chamber moves axially from the suction side to the pressure side (arrow). In variable pitch models, the gas is compressed at each pitch change and cooled before the next pitch change, resulting in greater efficiency. On the pressure side the chamber is moved against the axial housing wall and the volume is reduced until the front surface of the screw (1) opens the pressure channel (6) and the pre-compressed gas is discharged through the pressure connection (7). Cooling is achieved using a water cooled outer chamber (8). For some pump sizes additional cooling gas can be introduced into the pump. (10).

真空
Vacuum





螺杆真空泵选型数据

- S-VSA TWISTER 范围
- S-VSB TWISTER 范围
- S-VSI TWISTER 范围

Selection data for screw vacuum pumps

- *S-VSA TWISTER range*
- *S-VSB TWISTER range*
- *S-VSI TWISTER range*

10 – 17

12 – 13

14 – 15

16 – 17





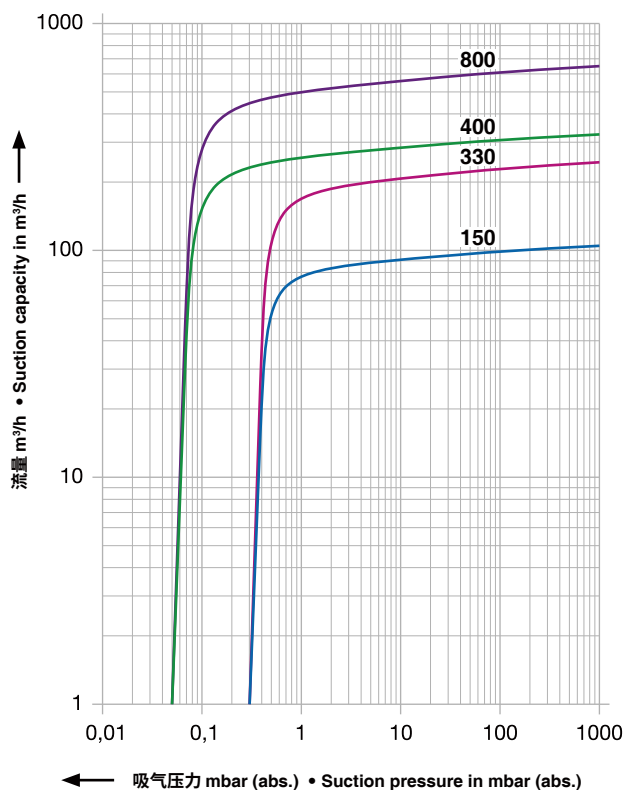
S-VSA TWISTER 150 (30) | 330 (30) | 400 (20) | 800 (20)



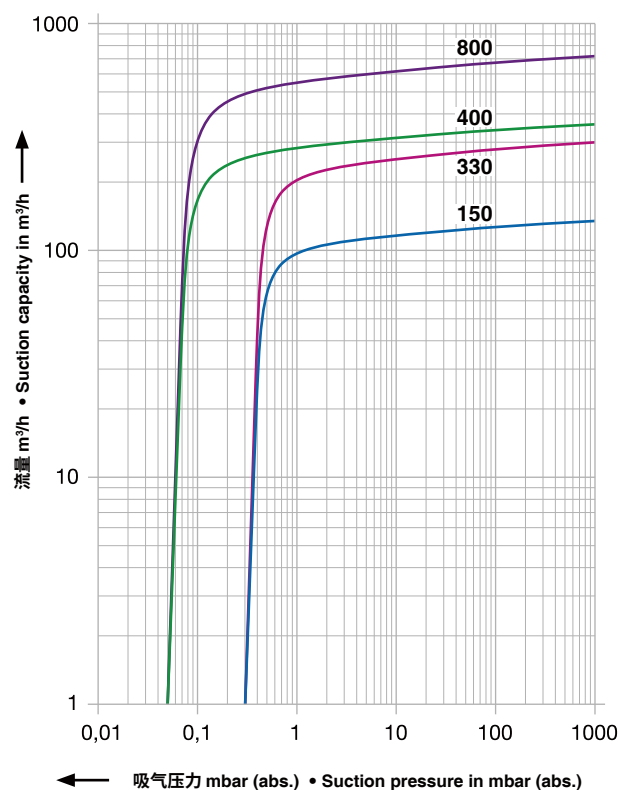
干式，无接触式螺杆真空泵，流量从105至720m³/h，极限真空0.05mbar (abs)。易维护，不同的涂层增强耐腐蚀性，特别适用于溶剂回收和干燥工艺。

Dry running, non contact operation screw vacuum pumps with capacities ranging from 105 to 720 m³/h, ultimate vacuum 0.05 mbar (abs). Easy to service. Different coatings enhance corrosion resistance. Especially suitable for solvent recovery and drying processes.

50 Hz 选型图 • Selection diagram



60 Hz 选型图 • Selection diagram



V-VSA			150 (30)	330 (30)	400 (20)	800 (20)
额定流量	m³/h	50 Hz	105	245	325	650
Nominal capacity		60 Hz	135	300	360	720
极限真空	mbar (abs.)		0,3	0,3	0,05	0,05
End vacuum						
电机版本	3~	50 Hz	230 / 400 V ±10 %			
Motor version		60 Hz	380 / 660 V			
电机功率	kW	50 Hz	4,0	7,5	15	18,5
Motor rating		60 Hz	4,8	9,0	18	22,0
电流消耗	A	50 Hz	#	#	#	#
Current drawn		60 Hz	#	#	#	#
转速	min⁻¹	50 Hz	2850			
Speed		60 Hz	3450			
平均噪音水平	dB(A)	50 Hz	#	79	80	81
Average noise level		60 Hz	#	#	81	#
最大重量	kg		320	520	610	810
Maximum weight						
油量 (齿轮)	l		1,3	1,6	2,0	4,0
Oil intake (gear)						
冷却水消耗量	l/h		120	210	420	600
Cooling water consumption						

S-VSA TWISTER 150 (30) | 330 (30) | 400 (20) | 800 (20)

选装附件 • Accessories

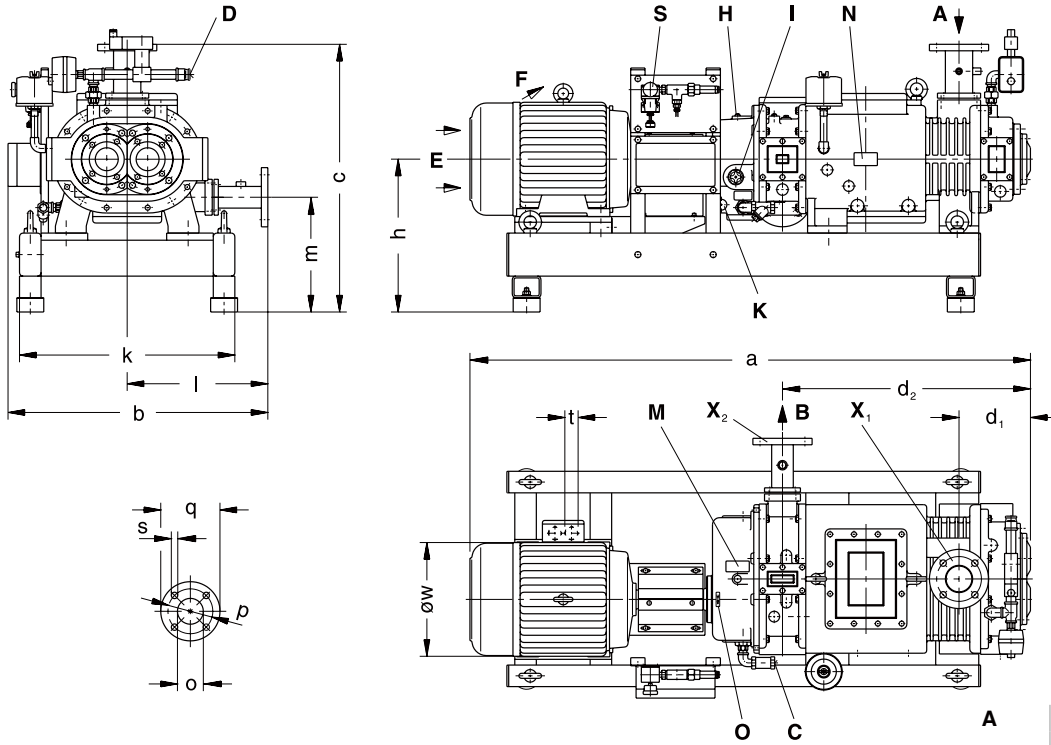
冲洗系统
放气阀
控制箱
真空开关

Flushing unit
Bleeding valve
Control box
Vacuum switch

真空表
蝶阀
冷凝器

Vacuum gauge
Butterfly valve
Condenser

尺寸 • Dimensions [mm]



A	真空联接处 Vacuum connection
B	排气 Exhaust
C	冷却水入口 Cooling water inlet
D	冷却水出口 Cooling water outlet
E	冷却气体入口 Cooling air inlet
F	冷却气体出口 Cooling air outlet
H	油注入口 Oil filling point
I	油位镜 Oil check
K	新油排油口 Oil drain point
M	油标牌 Oil type plate
N	数据牌 Data plate
O	旋转方向 Direction of rotation
S	密封气体连接 G ¼ Sealing gas connection G ¼
X₁, X₂	法兰 DIN 2501 Flange

V-VSA	150 (30)	330 (30)	400 (20)	800 (20)
a	1174	1374	1562	1730
b	667	707	724	867
c	664	692	746	807
d₁	173	199	199	235
d₂	532	642	691	790
h	365	375	426	412
k	600	600	600	800
l	335	375	392	435
m	278	284	320	332
p	110	125	125	180
q	150	165	165	220
s	18	18	18	18
o (X₁ / X₂)	44,3 / 44,3	56,3 / 44,3	72 / 56	100 / 72
t	M 32 x 1,5	M 32 x 1,5	M 40 x 1,5	M 40 x 1,5
ø w	220	246	317	317
C / D	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ¾ / Rp ¾
X₁, X₂	DN 40 PN 10	DN 50 PN 10	DN 50 PN 10	DN 100/DN 65 PN 10

* 与进气口联接的吸气状态有关。工作曲线和数据表（公差±10%）是按PNEUROP标准计算，其所示为真空泵在正常状态下运行。尺寸a、ø w和/或电流值会因不同电机而与数据表不同。

根据要求

* 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 and ø w and/or the current drawn can differ.

on request



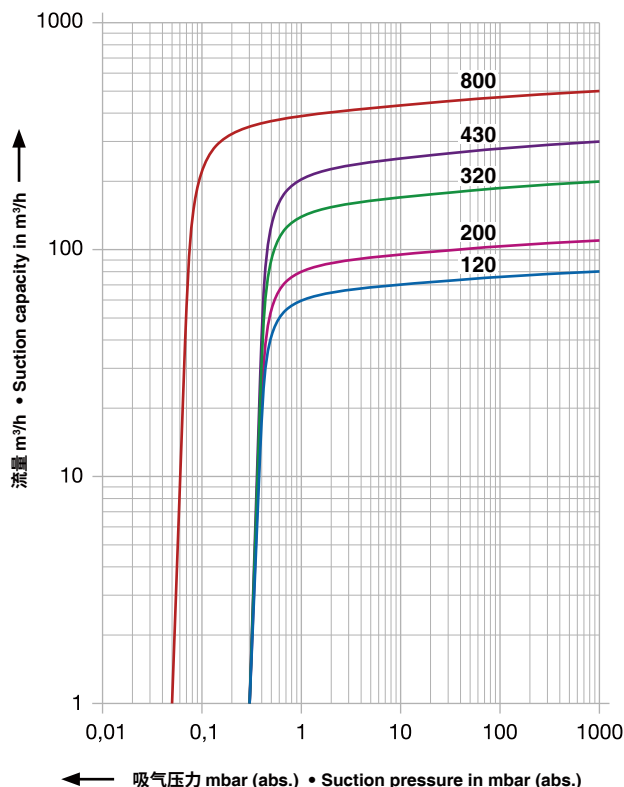
S-VSB TWISTER 120 (30) | 200 (30) | 320 (30) | 430 (30) | 800 (30)



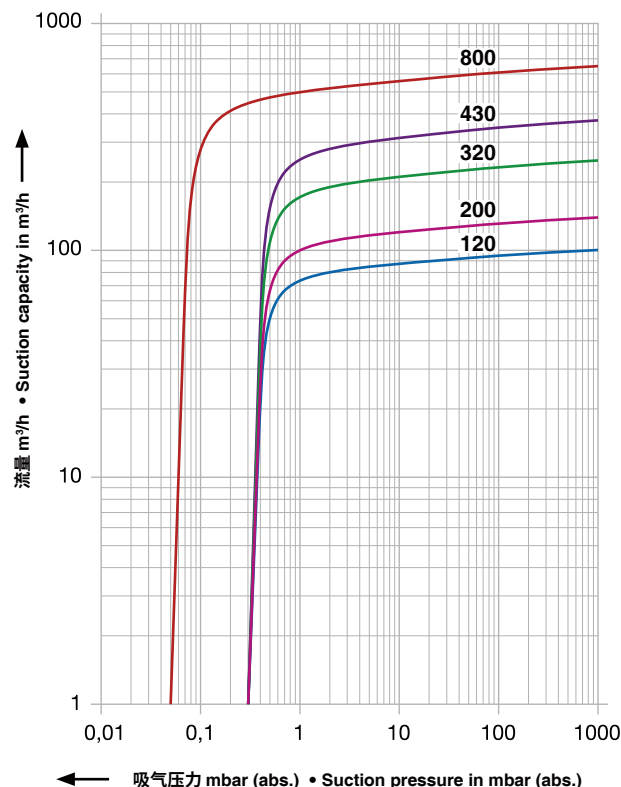
干式，无接触式螺杆真空泵，流量从80至650m³/h，极限真空0.05mbar(abs)。易维护，不同的涂层增强耐腐蚀性，特别适用于溶剂回收和干燥工艺。螺杆螺距的精密分度，实现较低的运行温度。

Dry running, non contact operation screw vacuum pumps with capacities ranging from 80 to 650 m³/h, ultimate vacuum 0.05 mbar (abs). Easy to service. Different coatings enhance corrosion resistance. Especially suitable for solvent recovery and drying processes. Low running temperature due to the precision graduation of the screw pitch.

50 Hz 选型图 • Selection diagram



60 Hz 选型图 • Selection diagram



V-VSB			120 (30)	200 (30)	320 (30)	430 (30)	800 (30)
额定流量 Nominal capacity	m³/h	50 Hz	80	110	200	300	500
		60 Hz	100	140	250	375	650
极限真空 End vacuum	mbar (abs.)		0,3	0,3	0,3	0,3	0,05
电机版本 Motor version	3~	50 Hz	230 / 400 V ±10 %				
		60 Hz	380 / 660 V				
电机功率 Motor rating	kW	50 Hz	3,0	4,0	5,5	7,5	15
		60 Hz	3,6	4,8	6,5	9,0	18
电流消耗 Current drawn	A	50 Hz	#	#	#	#	#
		60 Hz	#	#	#	#	#
转速 Speed	min⁻¹	50 Hz	2850				
		60 Hz	3450				
平均噪音水平 Average noise level	dB(A)	50 Hz	72	73	74	76	78
		60 Hz	74	75	76	78	80
最大重量 Maximum weight	kg		230	280	380	450	750
油量 (齿轮) Oil intake (gear)	l		0,45	1,0	1,6	1,8	2,0
冷却水消耗量 Cooling water consumption	l/h		120	240	480	660	1200

S-VSB TWISTER 120 (30) | 200 (30) | 320 (30) | 430 (30) | 800 (30)

选装附件 • Accessories

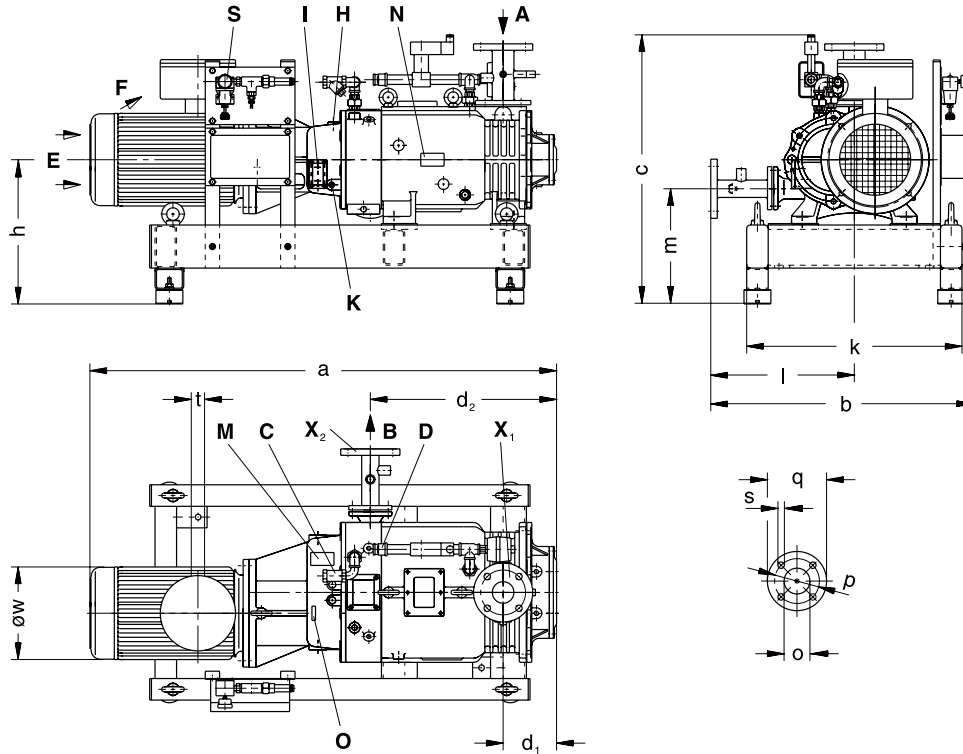
冲洗系统
放气阀
控制箱

Flushing unit
Bleeding valve
Control box

真空开关/真空表
蝶阀
冷凝器

Vacuum switch / Vacuum gauge
Butterfly valve
Condenser

尺寸 • Dimensions [mm]



A	真空联接处 Vacuum connection
B	排气口 Exhaust
C	冷却水入口 Cooling water inlet
D	冷却水出口 Cooling water outlet
E	冷却空气入口 Cooling air inlet

F	冷却空气出口 Cooling air outlet
H	油注入口 Oil filling point
I	油位镜 Oil check
K	新油排油口 Oil drain point
M	油标牌 Oil type plate

N	数据牌 Data plate
O	旋转方向 Direction of rotation
S	密封气体连接 G ¼ Sealing gas connection G ¼
X₁, X₂	法兰 DIN 2501 Flange DIN 2501

V-VSB	120 (30)	200 (30)	320 (30)	430 (30)	800 (30)
a	838	1123	1300	1592	1648
b	617	671	732	797	822
c	577	609	725	751	779
d₁	111	126	149	163	200
d₂	351	482	519	603	586
h	280	303	402	416	432
k	450	450	600	600	700
l	325	379	400	430	440
m	190	235	321	320	346
p (X₁/X₂)	110	125 / 110	125 / 110	160 / 125	180 / 160
q (X₁/X₂)	150	165 / 150	165 / 150	200 / 165	220 / 200
s (X₁/X₂)	18	18 / 18	18 / 18	18 / 18	18 / 18
o (X₁/X₂)	ø 40	ø 50 / ø 40	ø 50 / ø 40	ø 80 / ø 50	ø 100 / ø 80
t	M 32 x 1,5	M 32 x 1,5	M 32 x 1,5	M 32 x 1,5	M 40 x 1,5
ø w	194	220	258	258	317
C / D	Rp ¾ / Rp ¾	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ½ / Rp ½
X₁, X₂	DN 40 PN 10	DN 50 / DN 40 PN10	DN 50 / DN 40 PN10	DN 80 / DN 50 PN10	DN 100 / DN 80 PN10

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根据要求

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on request



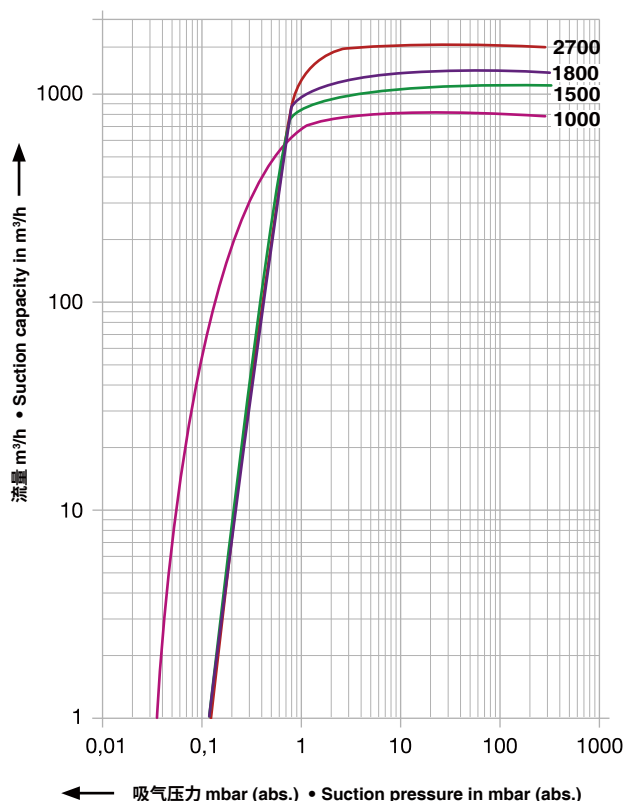
S-VSB TWISTER 1000 (30) | 1500 (30) | 1800 (30) | 2700 (30)



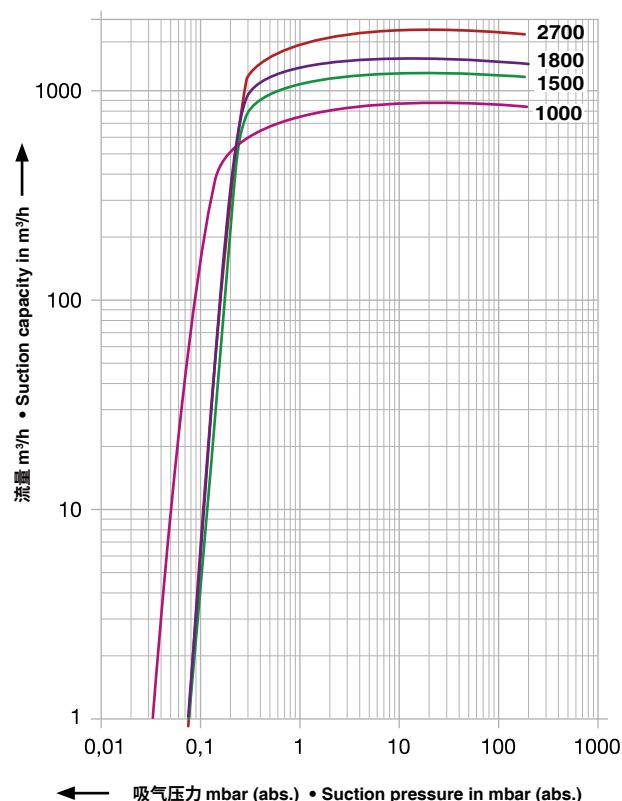
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50 Hz 选型图 • Selection diagram



60 Hz 选型图 • Selection diagram



V-VSB			1000 (30)	1500 (30)	1800 (30)	2700 (30)
额定流量	m ³ /h	50 Hz	750	1300	1500	2250
Nominal capacity		60 Hz	900	1495	1799	2698
极限真空	mbar (abs.)		0,04	0,13	0,13	0,13
End vacuum			0,01	0,07	0,07	0,07
电机版本	3~	50 Hz	230 / 400 V ±10 %			
Motor version		60 Hz	380 / 660 V			
电机功率	kW	50 Hz	18,5	37	45	55
Motor rating		60 Hz				
电流消耗	A	50 Hz	#	#	#	#
Current drawn		60 Hz	#	#	#	#
转速	min ⁻¹	50 Hz	2850	1450		
Speed		60 Hz	3450	1750		
平均噪音水平	dB(A)	50 Hz	78	82	82	82
Average noise level		60 Hz	85	90	90	90
最大重量	kg		600	1350	1350	1650
Maximum weight						
油量 (齿轮)	l		2,2	4,5	4,5	5
Oil intake (gear)						
冷却水消耗量	l/h		1200	2160	2400	2880
Cooling water consumption			1320	2380	2640	3170

S-VSB TWISTER 1000 (30) | 1500 (30) | 1800 (30) | 2700 (30)

选装附件 • Accessories

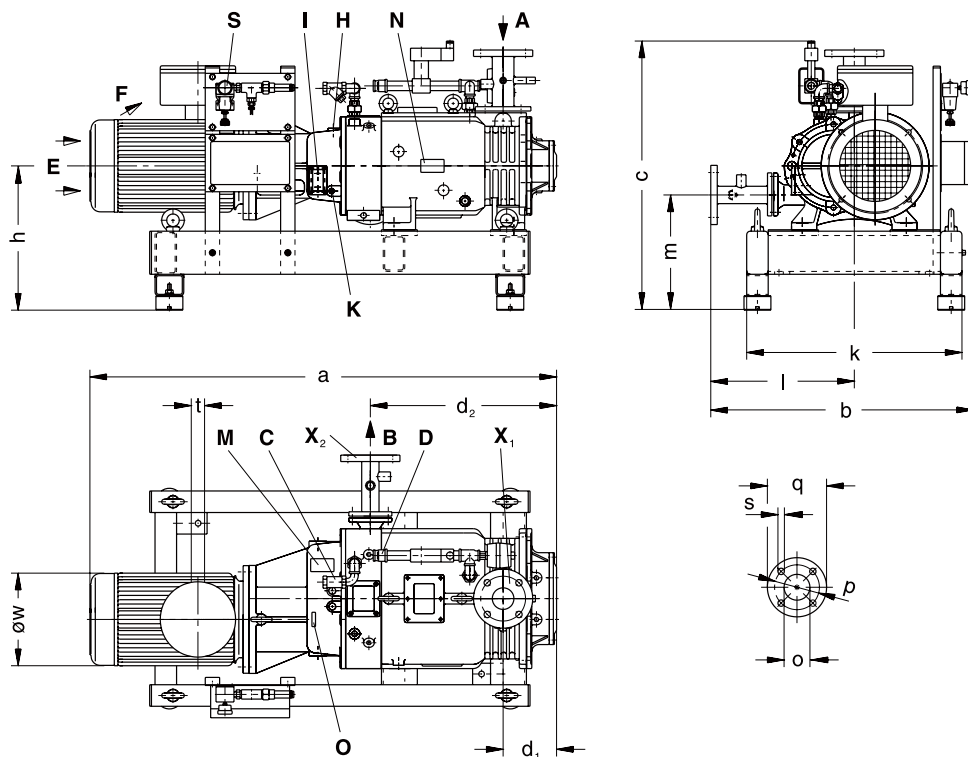
冲洗系统
放气阀
控制箱

Flushing unit
Bleeding valve
Control box

真空开关/真空表
蝶阀
冷凝器

Vacuum switch / Vacuum gauge
Butterfly valve
Condenser

尺寸 • Dimensions [mm]



A	真空联接处 Vacuum connection
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M	油标牌 Oil type plate

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O	旋转方向 Direction of rotation
S	密封气体连接 G ¼ Sealing gas connection G ¼
X1, X2	法兰 DIN 2501 Flange DIN 2501

V-VSB	1000 (30)	1500 (30)	1800 (30)	2700 (30)
a	1691	2187	2237	2446
b	649	865	865	883
c	939	1179	1179	1285
d1	200	279	279	350
d2	499.5	1002	1002	1086
h	612	740	740	820
k	458	580	580	524
l	420	575	575	621
m	516	630	630	710
p (X1 / X2)	180 / 145	210 / 160	210 / 160	240 / 180
q (X1 / X2)	220 / 185	250 / 200	250 / 200	285 / 220
s (X1 / X2)	18 / 18	18 / 18	18 / 18	22 / 18
o (X1 / X2)	107 / 70	132 / 82.5	132 / 82.5	159 / 107
t	M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5
ø w	330	420	470	510
C / D	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ½ / Rp ½	Rp ½ / Rp ½
X1, X2	DN 100 PN10 / DN65 PN10	DN 125 PN10 / DN80 PN10	DN 125 PN10 / DN80 PN10	DN 150 PN10 / DN100 PN10

* 与进气口联接的吸气状态有关。工作曲线和数据表（公差±10%）是按PNEUROP标准计算，其所示为真空泵在正常状态下运行。尺寸a、ø w和/或电流值会因不同电机而与数据表不同。

根据要求

* 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 and ø w and/or the current drawn can differ.

on request



S-VSI

TWISTER S-VSI 100



干式, 无接触螺杆真空泵

流量从110至380m³/hr, 极限真空0.1mbar (abs.)。

易维护。

特别适合于真空成型、冶金和表面处理技术。

高效是由于采用精密的螺杆渐倾式设计。版本能处理高氧含量气体。

Dry running, non-contact operation screw vacuum pumps

Capacities ranging from 110 to 380 m³/hr, ultimate vacuum 0.1 mbar (abs.).

Easy to service.

Suitable for industrial applications like vacuum forming, metallurgy and surface technology.

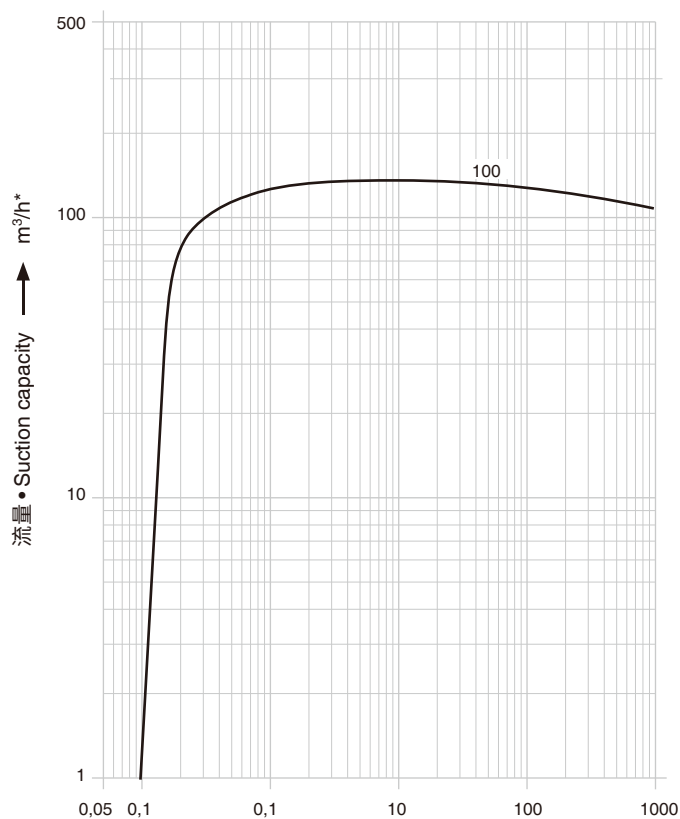
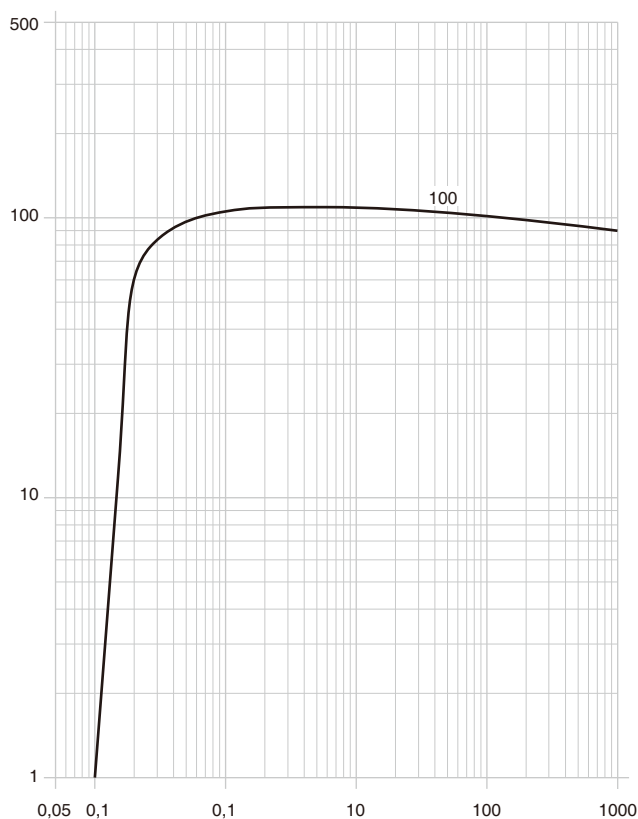
High efficiency thanks to the precision graduation of the screw pitch.

Versions for handling of gases with raised oxygen-share are available.

选型图 • Selection diagram

50 Hz

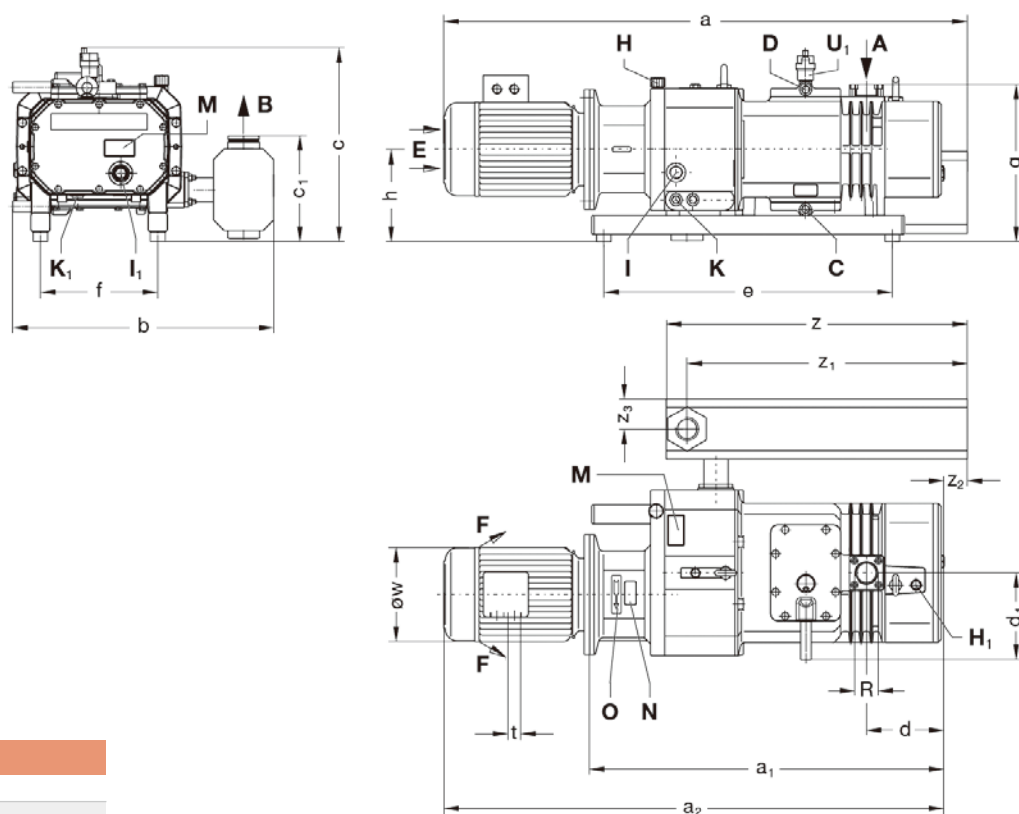
60 Hz



吸气压力 • Suction pressure → mbar abs.

S-VSI			100
最大流量	m ³ /h	50 Hz	100
Suction capacity maximum		60 Hz	138
极限真空	mbar (abs.)		0,1
Ultimate vacuum			
电机类型	3~	50 Hz	230 / 400 V ± 10 %
Rated voltage		60 Hz	220 / 380 V
电机功率	kW	50 Hz	3,0
Motor rating		60 Hz	3,6
电流消耗	A	50 Hz	10,5 / 6,0
Current consumption		60 Hz	#
转速	min ⁻¹	50 Hz	2880
Speed		60 Hz	3550
平均噪音	dB(A)	50 Hz	72
Average noise level		60 Hz	75
最大重量	kg		190
Max. weight			
油量	l		1,65 (1,0→H + 0,65→H ₁)
Oil capacity			
冷却水消耗	l / min		1,8
Cooling water consumption			

尺寸 • Dimensions [mm]



S-VSI	100
a	1082
a ₁	740
a ₂	1043
b	542,5
c	403,5
c ₁	220
d	164
d ₁	179,5
e	600
f	244
g	332
h	197
t	M 32 x 1,5
Øw	196
z / z ₁	626 / 576
z ₂ / z ₃	39 / 62,5
R	G 1½

A	真空联接处 • Vacuum connection
B	排气口 • Exhaust
C	冷却水进口 G ¾ • Cooling water inlet
D	冷却水出口 G ¾ • Cooling water outlet
E	冷却空气入口 • Cooling air entry
F	冷却空气出口 • Cooling air exit
H, H ₁	油注入口 • Oil filling point
I, I ₁	油位镜 • Oil check
K, K ₁	新油排油口 • Oil drain point
M	油标牌 • Oil type plate
N	数据牌 • Data plate
O	旋转方向 • Direction of rotation
U ₁	排气阀 • Vent valve

选装附件 • Accessories

S-VSI			100
逆止阀 Non-return valve	ZRK		40(03)
真空密封进气口过滤器 Vacuum tight suction filter	ZVF	50 Hz	32(54)
		60 Hz	40(53)
电机启动器 Motor starter	ZMS	50 Hz	160 / 100
		60 Hz	#
软启动器 Soft starter	ZAD		#

m³/h * 与进气口联接的吸气状态有关。

- 工作曲线和数据表 (公差±10%) 是按PNEUROP标准计算, 其所示为真空泵在正常状态下运行。
- 电机尺寸和电流值会因不同电机而与数据表不同。
- # 根据要求
- 我们保留调整技术数据的权利。

m³/h * refers to suction conditions at inlet connection

- Curves, tables content (tolerance ±10%) according to PNEUROP standards and refer to vacuum pump at normal operating temperature.
- The motor dimensions as well as the current drawn can differ depending on the motor type.
- # on request
- We reserve the right to alter technical information!



S-VSI

TWISTER S-VSI 301(01)



干式, 无接触螺杆真空泵, IE3电机
流量380m³/hr, 极限真空0.1mbar (abs.).
易维护。
短时间排空工艺的理想选择, 像食品加工、包装和干燥工艺。
高效是由于采用精密的螺杆渐倾式设计。

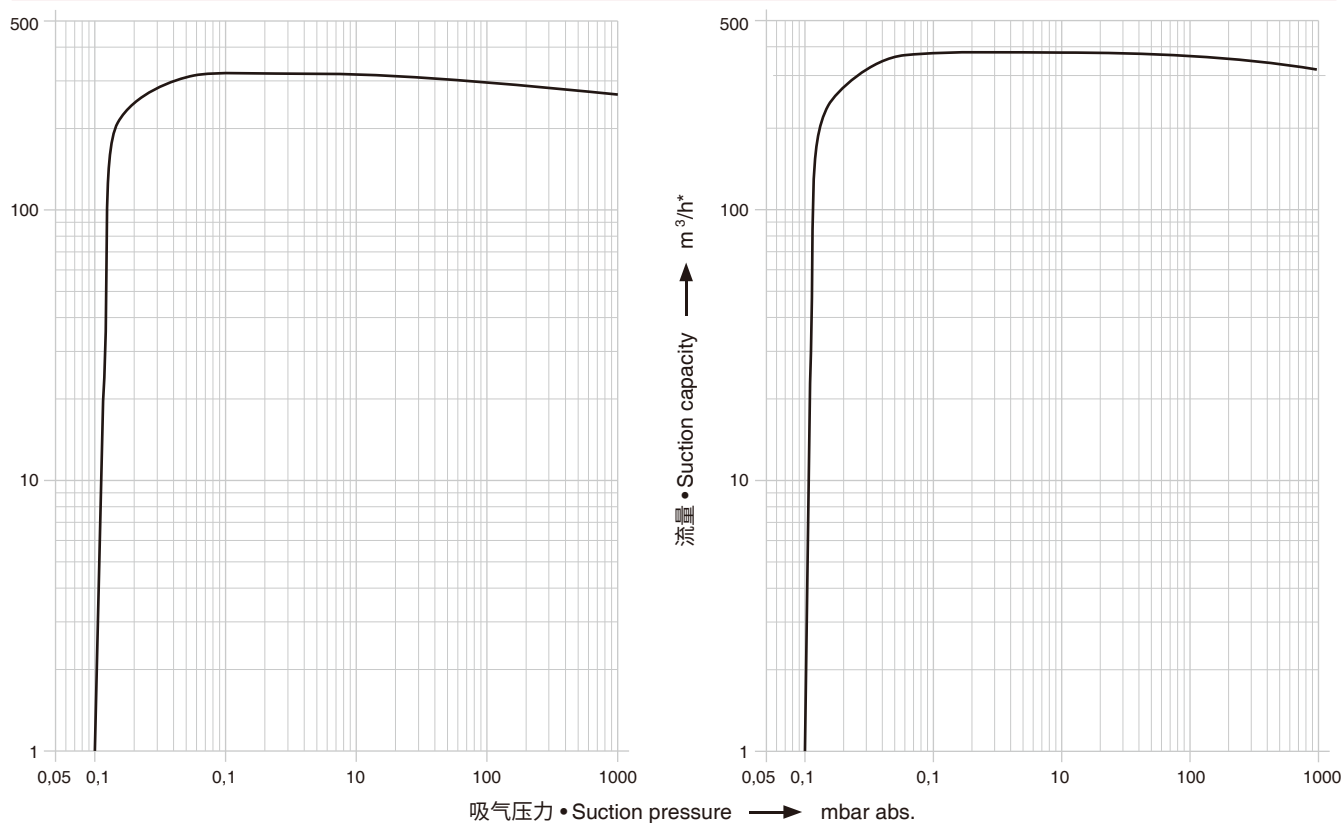
**Dry running, non-contact operation
screw vacuum pump
with IE3 motor**

Capacities ranging to 380 m³/hr,
ultimate vacuum 0.1 mbar (abs.).
Easy to service.
Ideally for realization of short evacuation
times, like e.g. in the food processing and
packaging or with drying processes.
High efficiency thanks to the precision
graduation of the screw pitch.

选型图 • Selection diagram

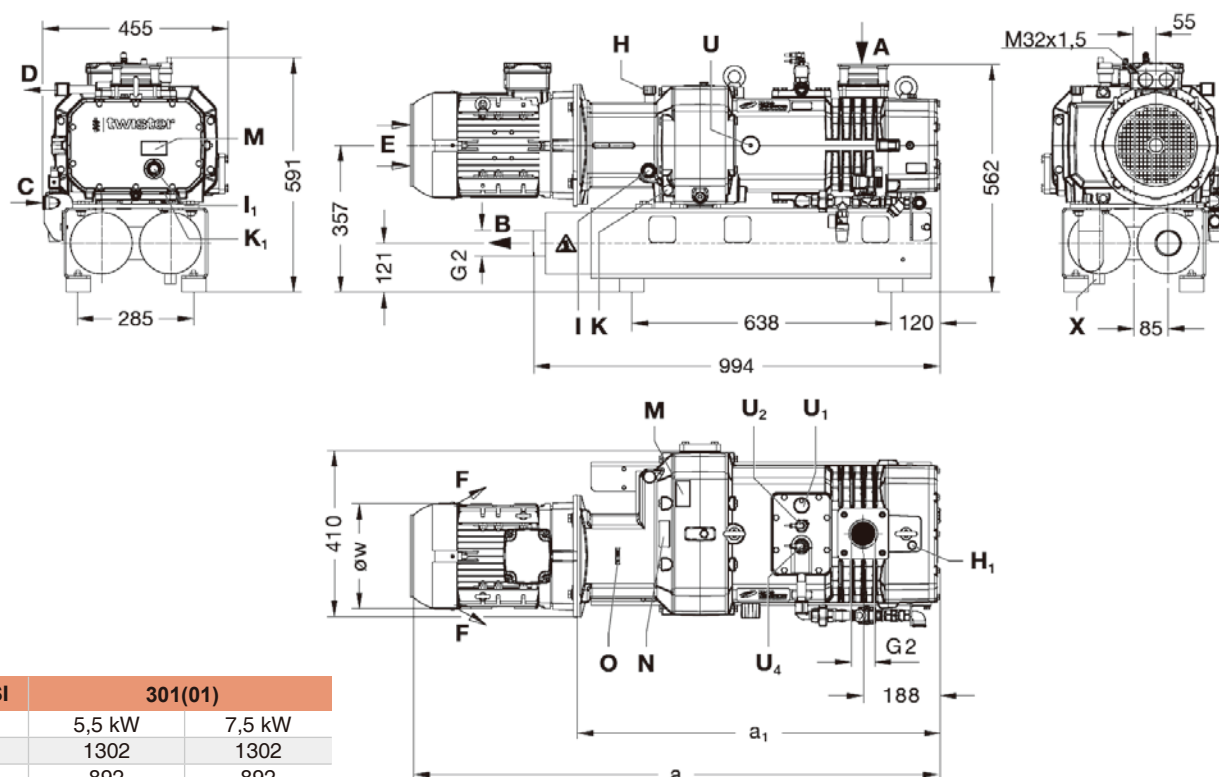
50 Hz

60 Hz



S-VSI			301(01)	
最大流量	m³/h max	50 Hz	320	
Suction capacity maximum		60 Hz	380	
极限真空	mbar (abs.)		0,1	
Ultimate vacuum				
电机类型	3~	50 Hz	400 / 690 V $\pm$ 10 %	
Rated voltage		60 Hz	460 V $\pm$ 10 %	
电机功率	kW	50 Hz	5,5	7,5
Motor rating		60 Hz	-	9,0
电流消耗	A	50 Hz	10,1 / 5,86	14,0 / 8,1
Current consumption		60 Hz	-	14,4
电机效率	η [%]	50 Hz	90,0	90,1
Motor efficiency		60 Hz	-	90,2
转速	min⁻¹	50 Hz	2900	
Speed		60 Hz	3500	
平均噪音	dB(A)	50 Hz	74	74
Average noise level	EN ISO 3744	60 Hz	-	76
最大重量	kg		300	335
Max. weight				
油量	l		1,9 (1,1→H + 0,8→H₁)	
Oil capacity				
冷却水消耗	l/min**		6,7	
Cooling water consumption				

尺寸 • Dimensions [mm]



S-VSI	301(01)	
	5,5 kW	7,5 kW
a	1302	1302
a ₁	892	892
ØW	270	270

A	真空联接处 • Vacuum connection
B	排气口 • Exhaust
C	冷却水进口 G ³ / ₈ • Cooling water inlet
D	冷却水出口 G ³ / ₈ • Cooling water outlet
E	冷却空气入口 • Cooling air entry
F	冷却空气出口 • Cooling air exit
H, H ₁	油注入口 • Oil filling point
I, I ₁	油位镜 • Oil sight glass
K, K ₁	新油排油口 • Oil drain point

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
U ₁	排气阀 • Vent valve
U ₂	温度控制 • Temperature control
U ₄	液位监视器 • Liquid level monitor
X	冷凝水排水 • Condensate drain

选装附件 • Accessories

S-VSI	301(01)	
湿度分离器 Dampness separator	ZFF	216
真空密封进气口过滤器 Vacuum tight suction filter	ZVF	65
电机启动器 Motor starter	ZMS	160 / 63
		160 / 100
		160

m³/h * • 与进气口连接的吸气状态有关。

l / min ** 最大进气温度: 50°C

• 工作曲线和数据表 (公差10%) 是按PNEUROP标准计算, 其所示为真空泵在正常状态运行, 无气镇阀和逆止阀。

• 噪音水平是根据EN ISO 3744标准测量的, 测量时离真空泵1米距离, 泵的吸气口真空度处于400 mbar(a), 同时在吸氣口由管道连接至室外並配置真空安全阀, 公差±3dB(A)

• 电机尺寸和电流值会因不同电机而与数据表不同

• VSI匹配2006/42/EC (机器), 2006/95/EC (低电压)指令及EN60034-1标准旋转电机

• 电机符合EN60034-1/-2/-3(IEC60034) 和热等级F

• #根据需要

• 我们保留更改技术数据的权利。

m³/h * • refers to suction conditions at inlet connection

l / min ** max. intake temperature: 50°C

• Curves, tables content (tolerance ±10%) according to PNEUROP standards and refer to vacuum pump at normal operating temperature (1bar (abs.) and 20°C) without gas ballast valve and non-return valve.

• Measuring surface sound pressure level acc. to EN ISO 3744, measured with an equivalent unit at a distance of 1 m. The pump is throttled to 400 mbar (a) suction pressure, with suction side piping connected and vacuum relief valves fitted, toleranc e ± 3 dB (A).

• The motor dimensions as well as the current drawn can differ depending on the motor type.

• The VSI match the 2006/42/EC (machinery) and 2006/95/EC (lowvoltage) directives and the EN 60034-1 norm "Rotating electrical machines".

• The motors comply with EN 60 034-1 / -2 / -30 (IEC 60034) and thermal class F.

• # on request

• We reserve the right to alter technical information!



S-VSI

TWISTER S-VSI 301(31)



干式, 无接触螺杆真空泵, 循环冷却, IE3 电机

流量380m³/hr, 极限真空0.1mbar (abs.)。易维护。
短时间排空工艺的理想选择, 像食品加工、包装和干燥工艺。
高效是由于采用精密的螺杆渐倾式设计。

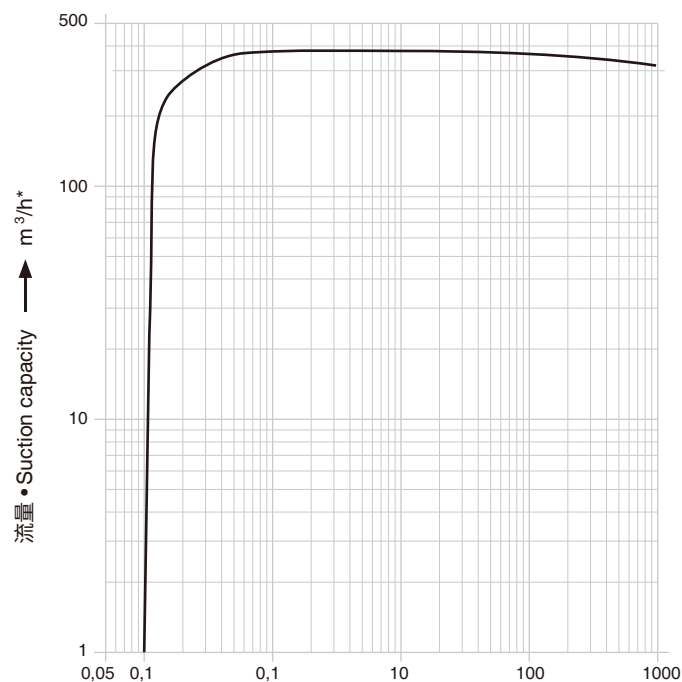
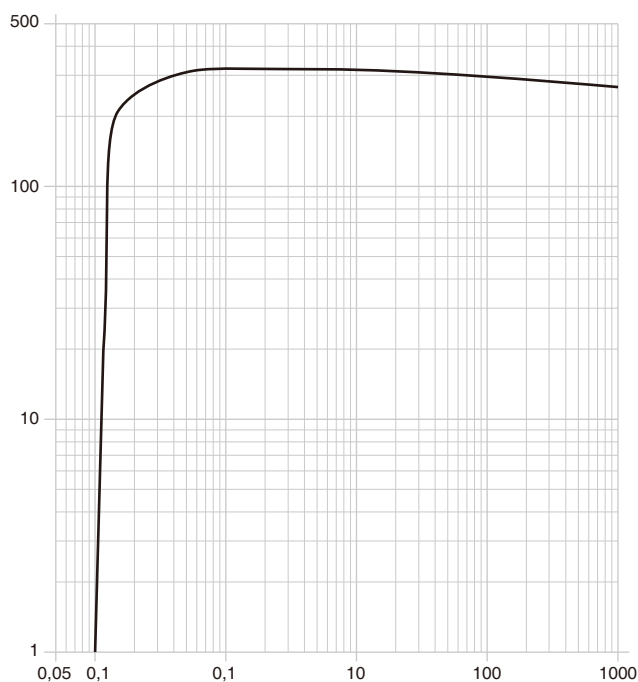
Dry running, non-contact operation screw vacuum pump with circulation cooling and IE3 motor

Capacities ranging to 380 m³/hr, ultimate vacuum 0.1 mbar (abs.). Easy to service.
Ideally for realization of short evacuation times, like e.g. in the food processing and packaging or with drying processes.
High efficiency thanks to the precision graduation of the screw pitch.

选型图 • Selection diagram

50 Hz

60 Hz



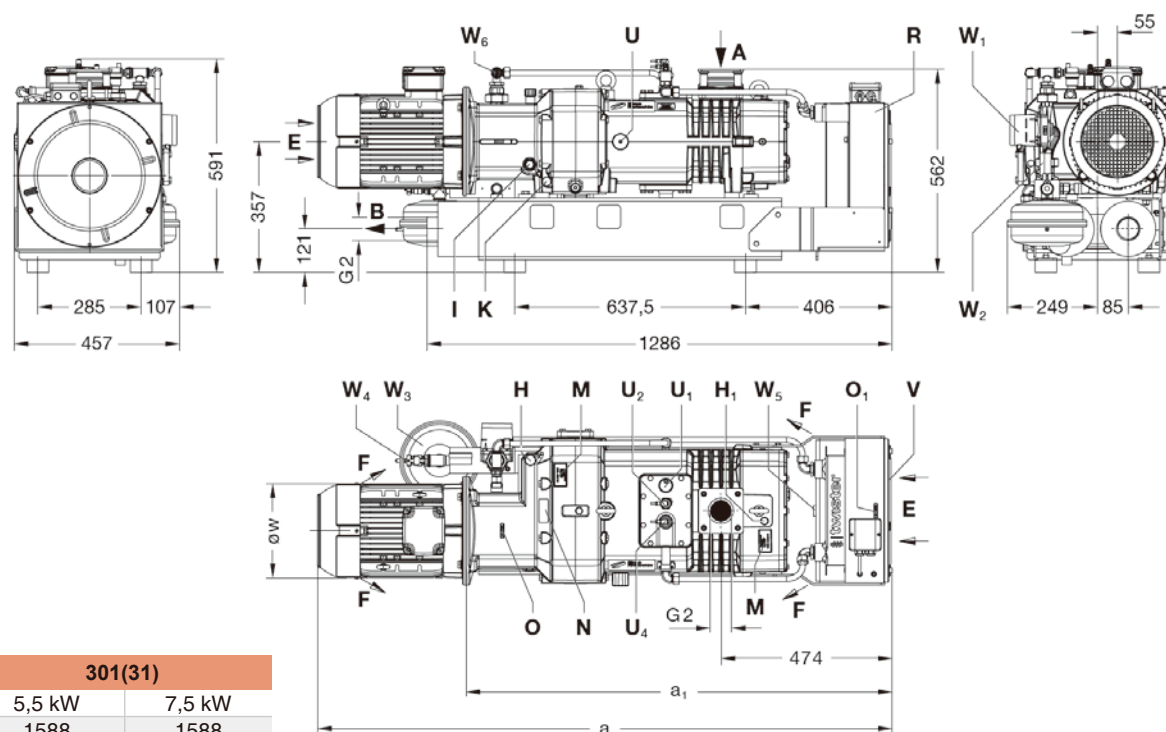
吸气压力 • Suction pressure → mbar abs.

S-VSI			301(31)	
最大流量	m³/h max	50 Hz	320	
Suction capacity maximum		60 Hz	380	
极限真空	mbar (abs.)		0,1	
Ultimate vacuum				
电机类型	3~	50 Hz	400 / 690 V ± 10 %	
Rated voltage		60 Hz	460 V ± 10 %	
电机功率	kW	50 Hz	5,5	7,5
Motor rating		60 Hz	-	9,0
电流消耗	A	50 Hz	10,1 / 5,86	14,0 / 8,1
Current consumption		60 Hz	-	14,4
电机效率	η [%]	50 Hz	90,0	90,1
Motor efficiency		60 Hz	-	90,2
转速	min⁻¹	50 Hz	2900	
Speed		60 Hz	3500	
平均噪音	dB(A)	50 Hz	74	74
Average noise level	EN ISO 3744	60 Hz	-	76
最大重量	kg		375	380
Max. weight				
油量	l		1,9 (1,1→H + 0,8→H ₁)	
Oil capacity				

	循环泵 • Circulation pump -> (W1)
电源电压	230 V ± 10 % (50 / 60 Hz)
Supply voltage	
能量消耗	34
Power consumption	
电流消耗	0,32
Current consumption	

	风扇 • Fan -> (V)
电源电压	230 V ± 10 % (50 / 60 Hz)
Supply voltage	
能量消耗	230 / 350 (50 / 60 Hz)
Power consumption	
电流消耗	1,10 / 1,55 (50 / 60 Hz)
Current consumption	

尺寸 • Dimensions [mm]



S-VSI	301(31)	
	5,5 kW	7,5 kW
a	1588	1588
a ₁	1178	1178
øW	246	246

A	真空联接处 • Vacuum connection
B	排气口 • Exhaust
C	冷却水进口 G ^{3/8} • Cooling water inlet
D	冷却水出口 G ^{3/8} • Cooling water outlet
E	冷却空气入口 • Cooling air entry
F	冷却空气出口 • Cooling air exit
H, H ₁	油注入口 • Oil filling point
I, I ₁	油位镜 • Oil check
K, K ₁	新油排油口 • Oil drain point
M	油标牌 • Oil type plate
N	数据牌 • Data plate
O, O ₁	旋转方向 • Direction of rotation

R	热交换器 • Heat exchanger
U	气镇阀 • Gas ballast valve
U ₁	排气阀 • Vent valve
U ₂	温度控制 • Temperature control
U ₄	液位监视器 • Liquid level monitor
V	风扇 (IP 44) • Fan (IP 44)
W ₁	循环泵 (IP 42) • Circulation pump (IP 42)
W ₂	压力计 • Manometer
W ₃	缓冲罐 • Surge tank
W ₄	球阀 (灌装) • Ball cock (filling)
W ₅	排气螺杆 (热交换器) • De-aeration screw (heat exchanger)
W ₆	排气螺杆 (冷却水循环) • De-aeration screw (cooling water circulation)

选装附件 • Accessories

S-VSI	301(31)	
湿度分离器 Dampness separator	ZFF	216
真空密封进气口过滤器 Vacuum tight suction filter	ZVF	65
电机启动器 Motor starter	ZMS	160 / 63
		160 / 100
		160

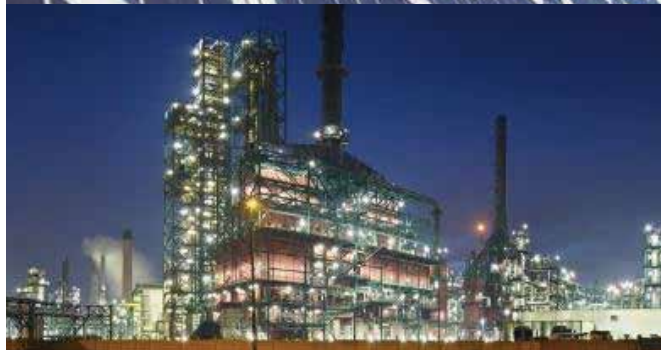
m³/h * 与进气口连接的吸气状态有关。

- 工作曲线和数据表 (公差10%) 是按PNEUROP标准计算, 其所示为真空泵在正常状态运行, 无气镇阀和逆止阀。
- 噪音水平是根据EN ISO 3744标准测量的, 测量时离真空泵1米距离, 泵的吸气口真空度处于400 mbar(a), 同时在吸气口由管道连接至室外并配置真空安全阀, 公差±3dB(A)
- 电机尺寸和电流值会因不同电机而与数据表不同
- VSI匹配2006/42/EC (机器), 2006/95/EC (低电压指令及EN60034-1标准旋转电机
- 电机符合EN60034-1/-2/-3(IEC60034) 和热等级F
- # 根据需要
- 我们保留更改技术数据的权利。

m³/h * refers to suction conditions at inlet connection

- Curves, tables content (tolerance ±10%) according to PNEUROP standards and refer to vacuum pump at normal operating temperature (1bar (abs.) and 20°C) without gas ballast valve and non-return valve.
- Measuring surface sound pressure level acc. to EN ISO 3744, measured with an equivalent unit at a distance of 1 m. The pump is throttled to 400 mbar (a) suction pressure, with suction side piping connected and vacuum relief valves fitted, tolerance ± 3 dB (A).
- The motor dimensions as well as the current drawn can differ depending on the motor type.
- The VSI match the 2006/42/EC (machinery) and 2006/95/EC (low voltage) directives and the EN 60034-1 norm "Rotating electrical machines".
- The motors comply with EN 60 034-1 / -2 / -30 (IEC 60034) and thermal class F.
- # on request
- We reserve the right to alter technical information!

应用 *Applications*



化学制药工业

- 冷却
- 脱气
- 蒸馏
- 干燥
- 蒸发
- 分馏
- 浸渍

食品行业

- 氧包装

工业应用

- 清洁
- 涂层
- 干燥
- 除尘系统
- 工业炉
- 真空冶金

Chemical and pharmaceutical industry

- Cooling
- Degassing
- Distillation
- Drying
- Evaporation
- Fractionation
- Impregnation

Food industry

- Oxy packaging

Industrial applications

- Cleaning
- Coating
- Drying
- Dust extraction systems
- Industrial furnaces
- Vacuum metallurgy



包装行业

- 中央真空系统

研发 / 实验室

- 不同工艺应用

太阳能技术

- 面板层压
- 玻璃板处理

表面技术 / 电子产品

- CVD工艺
- PVD工艺
- 真空冶金

Packaging industry

- Central vacuum systems

R&D / laboratories

- Different process applications

Solar technology

- Cell lamination
- Glass plate handling

Surface technology / electronics

- CVD processes
- PVD processes
- Vacuum metallurgy

认证质量 Certified Quality

技术进步和市场成功离不开高质量的Elmo Rietschle产品。为保证这一高质量水平，我们建立了一个可靠的质量保证体系，用于监控从开发到交付的所有生产阶段。本质量保证体系符合全球要求，涵盖所有相关规范和法规，并符合ISO 9001和14001的要求。因此，我们的客户可享受以下优势：

- 具有更高的操作安全性
- 高交货可靠性
- 长使用寿命
- 满足全球市场的需求

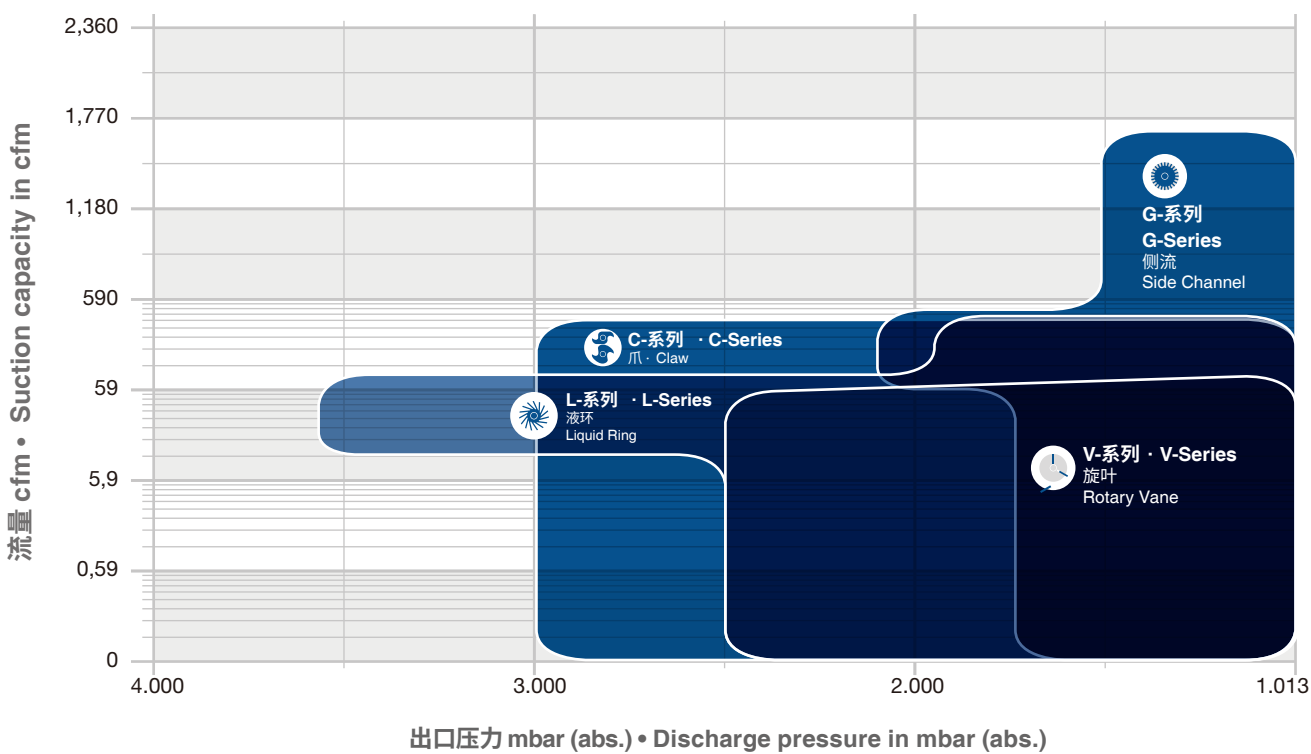
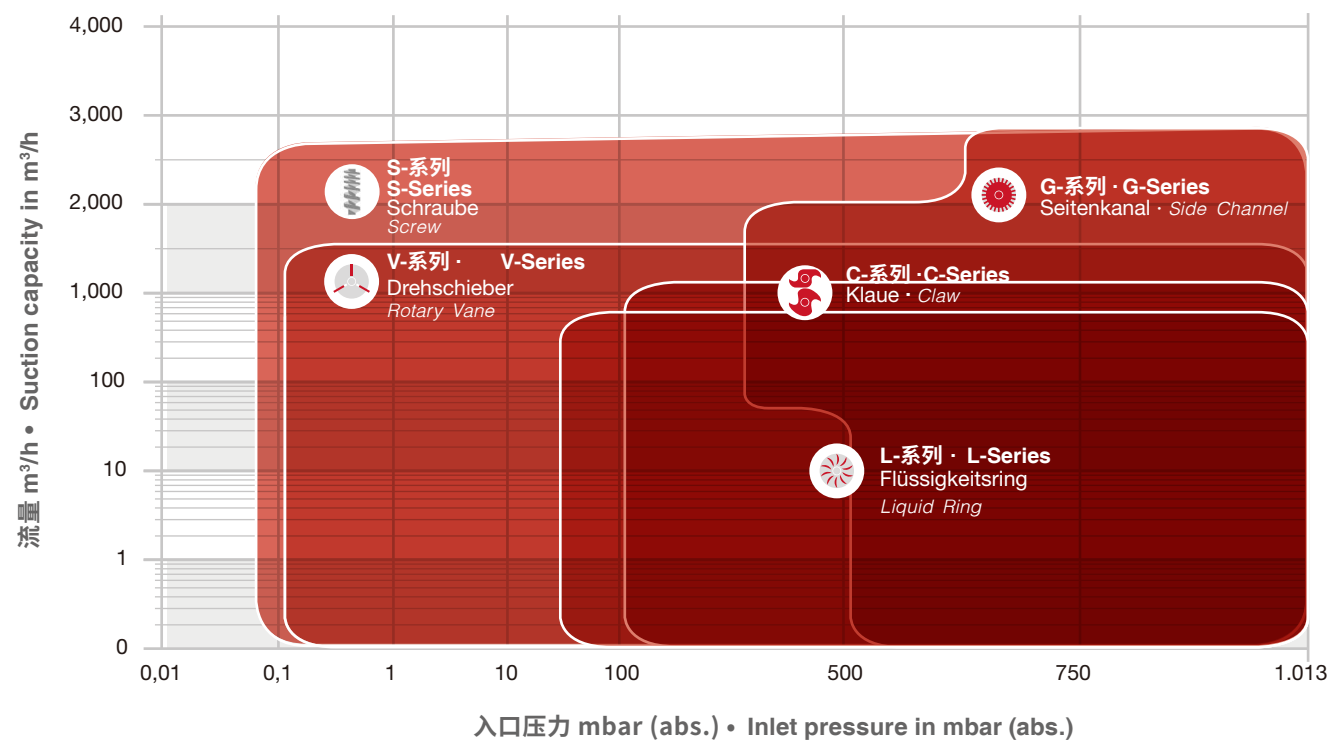
Technical progress and market success are inseparable from the high quality of Elmo Rietschle products. To guarantee this high quality level, a reliable quality assurance system has been established for monitoring all phases of production from development to delivery. This quality assurance system complies with world-wide requirements, covers all relevant norms and regulations and also meets the requirements of ISO 9001 and 14001. Consequently, our customers enjoy the following advantages:

- Highest operating safety
- High delivery reliability
- Long service life
- Meeting the requirements of a global market



工作范围

Operating Range





英格索兰集团风机&真空事业部
登福机械(上海)有限公司

上海市仙霞路99号尚嘉中心11楼
全国免费咨询电话: 400-168-8866

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英格索兰ITS风机与真空泵
微信公众号



F-系列
F-Series
离心风机
Radial



G-系列
G-Series
侧流式风机
Side Channel



L-系列
L-Series
液环式真空泵
Liquid Ring



V-系列
V-Series
旋片泵
Rotary Vane



R-系列
R-Series
罗茨泵
Rotary Lobe



C-系列
C-Series
爪式泵
Claw



S-系列
S-Series
螺杆式真空泵
Screw



X-系列
X-Series
真空系统
Systems