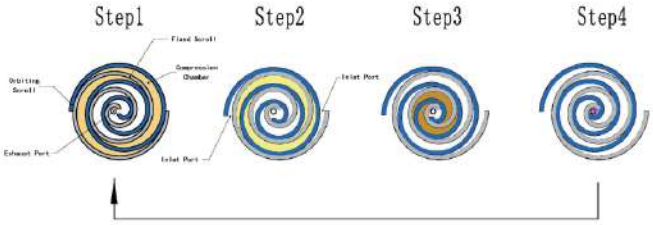
Product Description

The VPS series scroll vacuum pump is a completely oil-free and clean vacuum solution. It features one of the most advanced bellows-shielded structures in the world, ensuring complete isolation between the compression chamber and the bearings. By using fewer bearings, the pump operates more quietly and with enhanced reliability. It is capable of handling non-corrosive organic solvents and demonstrates superior water vapor handling capability.

Equipped with an independent controller, the VPS pump offers intelligent operation and supports user-defined control functions such as variable speed, flow limitation, and pressure stabilization, based on process requirements.

Due to its scroll compression mechanism and top-sealing structure, this pump is not suitable for applications involving flammable, explosive, highly corrosive gases, or particulate matter.

Working Principle



Step 1: Air is drawn into the compression chamber and completely sealed; compression begins.

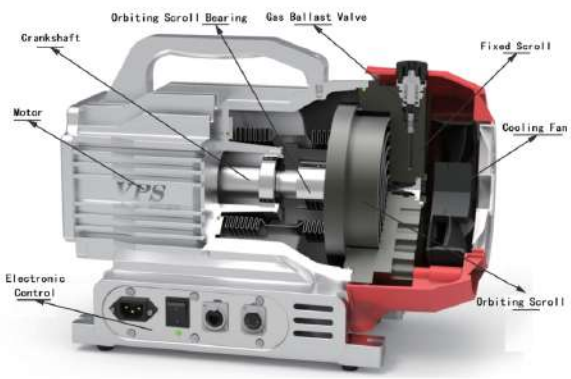
Step 2: The trapped air is gradually compressed toward the center of the chamber.

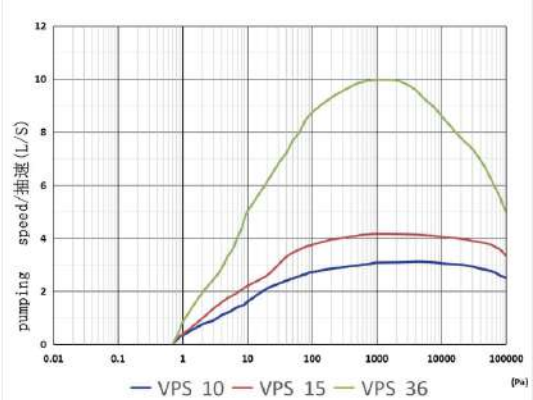
Step 3: The air reaches the center point of the chamber, preparing for exhaust.

Step 4: Air is discharged; the complete compression cycle is now finished.

Technical Parameters

Parameters	Model	VPS10	VPS15	VPS36
Theoretical Pumping Speed	m^3/hr	12.2	16.0	36.0
	L/s	3.3	4.4	10.0
Ultimate Pressure	mbar	0.007	0.008	0.01
	Pa	0.7	0.8	1.0
Motor Power	W	400	400	1100
Input Voltage	V	200-240	200-240	200-240
Noise Level	dB(A)	52	52	53
Inlet/Outlet Flange	—	KF25/KF25	KF25/KF25	KF40/KF25
Water Vapor Handling Capacity	g/hr	136	268	270
Leak Rate	mbar·l/s	$< 1\times10^{-6}$		
Dimensions(L×W×H)	mm	438×268×300		517×325×358
Weight	kg	26	27	47
Cooling Method	—	风冷		
Ambient Temperature	℃	0至40		



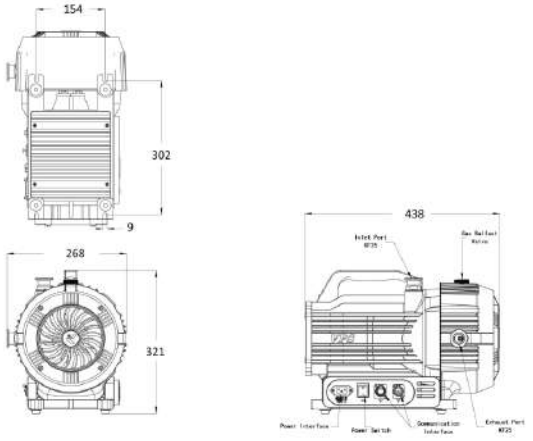


Application

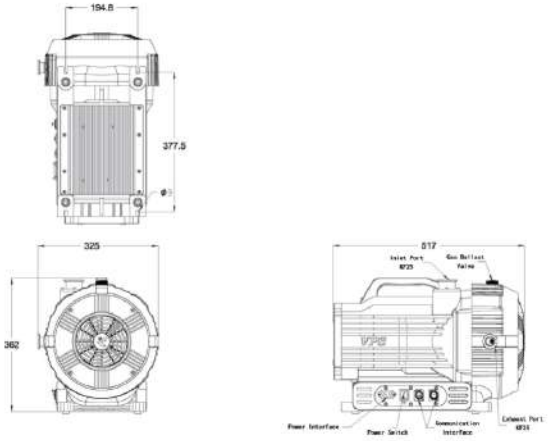
Mass Spectrometry(Vacuum leak detection);Electron Microscopy(Electron accelerators);High-Energy Physics Research(Beamlines);Industrial Applications(Vacuum drying ovens);Electronics & Semiconductors(Backing pumps for turbomolecular pumps);Laboratory Applications(Vacuum experimental setups);Photovoltaic / Solar Energy(Annealing furnaces);Medical Equipment(Breath-based cancer detectors);Biochemical Research(Protein moisture separation);Aerospace Research(Space environment simulation systems);Industrial Automation (Custom Solutions)

Dimension

VPS10/15



VPS36



Features

- Built-in controller for intelligent operation and support for automated processes
- Fewer bearings for quieter performance and improved reliability.
- Bellows-sealed isolation structure provides broader applicability and prevents contamination.
- Integrated design for enhanced aesthetics and improved leak-tightness.
- Compact structure and lightweight for easier installation and space-saving.
- Simplified mechanical design for extended service life and reduced operating costs.

Unit conversion

	pa	mbar	torr	psi
pa	1	1×10^{2}	7.5×10^{3}	1.45×10^{4}
mbar	100	1	0.75	14.7
torr	133	1.33	1	1.93×10^{4}
psi	6.89×10^{0}	68.95	51.84	1

	l/s	l/min	m^3/hr	cfm
l/s	1	60	3.6	2.12
l/min	1.67×10^{0}	1	0.06	3.53×10^{0}
m^3/hr	0.28	16.67	1	0.589
cfm	0.472	28.32	1.70	1