

THE SHAPE OF VACUUM

UV SERIES VACUUM PUMPS

Every installation is a **success story**

Vacuum is the energy that Pneumofore delivers to its worldwide customers, ensuring **efficiency, reliability and accuracy in many industrial sectors**. With about 100 years of experience in different applications and in more than 50 countries, Pneumofore guarantees a unique know-how: every vacuum system project is considered according to the specific production needs, manufacturing environment and industrial process. That is why the **UV Series of rotary vane vacuum pumps is the best solution for energy savings, reduced operation costs and versatility even in the harshest environmental conditions**. Along with constant performance, Pneumofore units set another record: **the lowest Life Cycle Cost** in today's market.

TECHNOLOGY

performance, reliability and constant efficiency

Since its founding in 1923, Pneumofore has continuously developed and improved rotary vane technology. In the UV Series vacuum pumps, the concept of efficiency itself reaches new heights: the sliding vanes' active sealing ensures a **minimum residual pressure of 0,5 mbar(a)** while the high capacity delivered by the UV pumps allows **centralized vacuum systems**. These consists of few **high-performance units, that are easy to install and maintain**. The UV Series guarantees the highest performance compared to other single-stage machines, constant in every working and weather condition.

The UV Series **capacity ranges from 250 to 3240 m³/h** single stage, with a nearly constant flow rate from 450 to 50 mbar(a). **The multi-stage option reaches an even higher flow** with vacuum values down to 0,05 mbar(a). UV Series pumps offer the highest flow rates and the lowest power consumption in the global market for single-stage rotary vane vacuum pumps.

PRODUCTS

customization and lasting guarantee

What Pneumofore means by "customer care", is system design to worldwide assistance.

The UV Series vacuum pumps are **"ready-to-use"** machines, designed for easy installation and trouble free integration into the industrial process: an attentive care for the customer's needs that turns into high savings and the guarantee of reliability.

For every project, **Pneumofore designs a complete system that fits the specific application requirements**, delivering the best pumps and accessories sizing solution for the vacuum system centralization. Along with the standard version, the offer includes **special and customizable machines**: the VS version, with frequency converter for power consumption optimization and constant pressure, and the H version, for water vapor suction, are just few of numerous options.

Pneumofore also takes care of its customers during the system start-up, providing the appropriate maintenance training to the plant technicians. Furthermore, the **international service** ensures the ordinary and long-term maintenance at lower cost. Ultimately, the UV Series vacuum pumps can be supplied with **warranty as long as 5 years**.

ENVIRONMENT

environmental concern and cost savings

The design efficiency and the mechanical parts durability guarantee **low power consumption** and provide added value in terms of **sustainability and reduced operating costs**. These are not promises but facts based on objective data.

The air-cooling system of the UV series vacuum pumps drastically cuts down the installation costs and resets to zero the expenses related to water connections, water treatment and disposal.

This means high savings and environmental protection, as water is the world's most precious resource. **The closed-loop lubrication circuit ensures negligible coolant consumption**, prevents air and environment contamination with harmful substances, and reduces maintenance requirements. The plant sizing, designed to fit the process needs, and the frequency converter option **considerably reduce the energy waste**, with increased savings and environmental sustainability. The simple, sturdy design and the use of built-to-last components also guarantee **low operational and maintenance costs**. Therefore, the UV series vacuum pumps offer the best Return on Investment when replacing other pumps and **the lowest Life Cycle Cost** in the market.

UV SERIES Vacuum, signed by Pneumofore

The Series UV rotary vane vacuum pumps are easy-to-install, automatic units that represent the best solution for the industrial vacuum production and a fast Return on Investment when replacing other pumps. The UV Series offers single-stage intake volumes of 250 up to 3240 m³/h and 99,95% maximum vacuum degree reached with 0,5 mbar(a) residual pressure and constant performance curves: the best results for single-stage vacuum pumps. The high degree of vacuum and the constant efficiency guarantee superior performances along with significant energy and maintenance cost savings.



UV50 and UV16 open view

MAIN FEATURES

Air cooling system through an aluminum radiator and electric fan thermostat for operating without cooling water

No coolant consumption thanks to the closed-loop lubrication circuit and high efficiency separation element

Durability and efficiency guarantee by the special aluminum alloy vanes that ensure constant performances even after tens of thousands of hours of operation

Reduced energy consumption that other vacuum technologies cannot achieve

Ready-to-use machines that can be easily and directly connected to the vacuum plant and the power supply, with no need of foundations

Limited footprint thanks to the compact layout designed to minimize the space needs

Direct coupling between motor and air end to avoid energy losses

Sound-proof cabin for reduced noise impact

Fully automatic operation: intake valve regulated by safety vacuum switch, coolant temperature control, thermostat and auxiliary control switches

Coolant separator and recovery for clean air exhaust without treatment

Control panel complete with main power switch, easy to operate

Model		UV4	UV8	UV16	UV30	UV50
Nominal Capacity at 50 Hz	m ³ /h	250	462	971	1775	2700
Operating Pressure range ⁽¹⁾	mbar(a)	450 - 0,5				
Water vapor Capacity ⁽²⁾	kg/h	17	32	66	126	181
Pump Motor (400V)	kW	5,5	11	22	45	75
Rotation Speed	rpm	1450	1460	1460	1470	1475
Fan Motor	kW	0,07	0,1	0,37	0,75	1
Intake and Exhaust connections		2 ½" - 2" BSP	4" - 3" BSP	DN 125	DN 150	DN 200 - DN 150
Lenght	mm	825	1600	1850	2270	2670
Width		915	680	950	1450	1500
Height		1170	1775	1950	2050	2250
Weight	kg	200	780	1070	1800	2100
Total absorbed Power at 150 mbar(a)	kW	5,2	9	18	35	54
"VS" version Nominal Capacity variable speed, 4 poles motor, 35-60 Hz	m ³ /h	175 - 300	324 - 554	680 - 1165	1242 - 2130	1890 - 3240

Performance according to ISO 1607 and DIN 28426

(1) from UV4 to UV50: 1013 - 0,5 mbar(a) upon request

(2) "H" version, Water Vapor Tolerance: 120 mbar(a)

APPLICATIONS



GLASS FORMING

DRYING AND DEGASSING

PICK & PLACE

PASTA PRODUCTION

BOTTLING

CERAMICS, BRICKS AND TILES

EXTRUSION

AEROSPACE

ELECTRONICS

ELECTRICAL WINDING

SURFACE COATING

THERMOFORMING

EPS and more



FOOD PACKAGING

METAL AND PLASTIC CONTAINERS FORMING

PHARMACEUTICAL INDUSTRY

FOOD PROCESSING

The UV vacuum pumps are operating in a variety of industrial processes where they can handle massive workloads at constant speed, 24/7, ensuring high reliability even in harsh environments with ambient temperatures up to 50°C. Along the standard version, the UV Series includes **special and dedicated machines**:

UV VS Series_ with **frequency converter** to lower the power consumption and to ensure the constant pressure during the process

UV H Series_ for **water vapor suction**, with machine temperature at 110°C, specially designed **for drying processes**

UV B Series_ **double-stage** vacuum system with a **roots booster** as second stage. It can be combined with every UV Series vacuum unit

UV HC Series_ air-cooled vacuum pumps **for hot climates** with ambient temperatures **up to 50°C**. They are equipped with oversized cooling system along with motor and fan for tropical climates

UV W Series_ **water cooled** version for installation in closed areas

UV HR Series_ equipped with a combined air/water cooling system that allows the **heat recovery** for heating purposes

UV IC Series_ **inlet control** for evacuation starting from ambient pressure

UV S Series_ **special versions** with customized sizes, ethernet, stainless steel, off-shore paint and other special designs



UV16 VS30



UV16 H IC B2500

PARTS AND ACCESSORIES

perfection technology



Rotor detail



direct Coupling

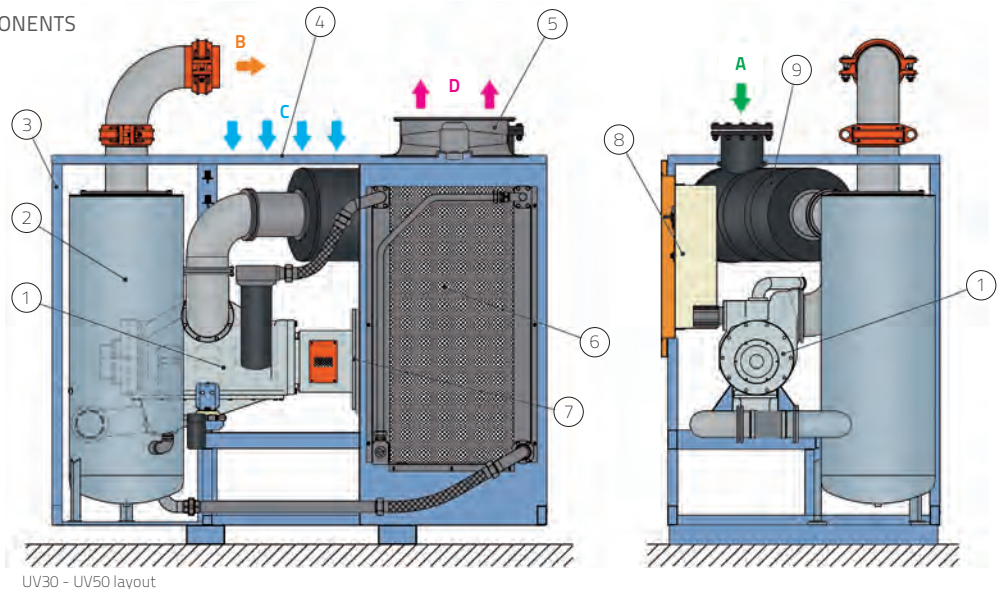


UV50 air end

UV SERIES VACUUM PUMP COMPONENTS

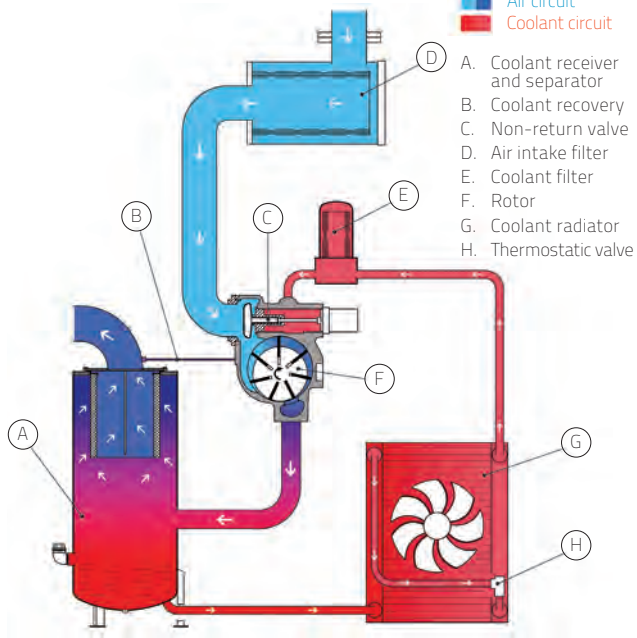
1. Air end
2. Coolant receiver and separator
3. Soundproof cabin
4. Cooling inlet air filter
5. Fan
6. Coolant radiator
7. Electric motor
8. Control and power panel
9. Air intake filter

- A. Air intake
- B. Exhaust
- C. Cooling air inlet
- D. Cooling air outlet

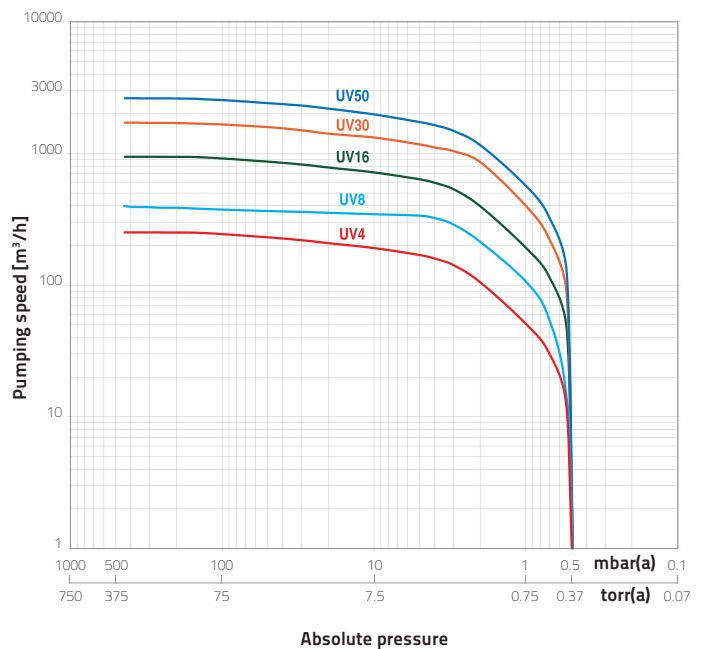


UV SERIES SCHEMATIC OPERATING DIAGRAM

- Air / Coolant
- Air circuit
- Coolant circuit



VACUUM FLOW DIAGRAM at 50 Hz





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