



EVS SERIES

SCREW VACUUM PUMP



Schmied starting from R&D, design, manufacturing and service, provides customers with vacuum pumps, compressors and blowers with high performance, good quality and high cost performance. As a young and energetic gas equipment company, Schmied is in line with high-end well-known brands in the industry, learns from them and pays tribute to them benchmarks their excellent product performance and service quality. Schmied focuses on technology and management innovation, continuously improves products and services, promotes the sustainable development of it and the industry, and strives to become the preferred partner of customers.

Schmied will provide efficient and environmentally friendly products to the market and strive to create more value for customers through unremitting technological research and development. Schmied will always practice the concept of green, environmental protection, energy saving and emission reduction, and actively assume corporate social responsibility. Schmied will make great efforts to achieve a long-lasting foundation, jointly protect our blue water and blue sky, and make the blue homeland of mankind more beautiful.

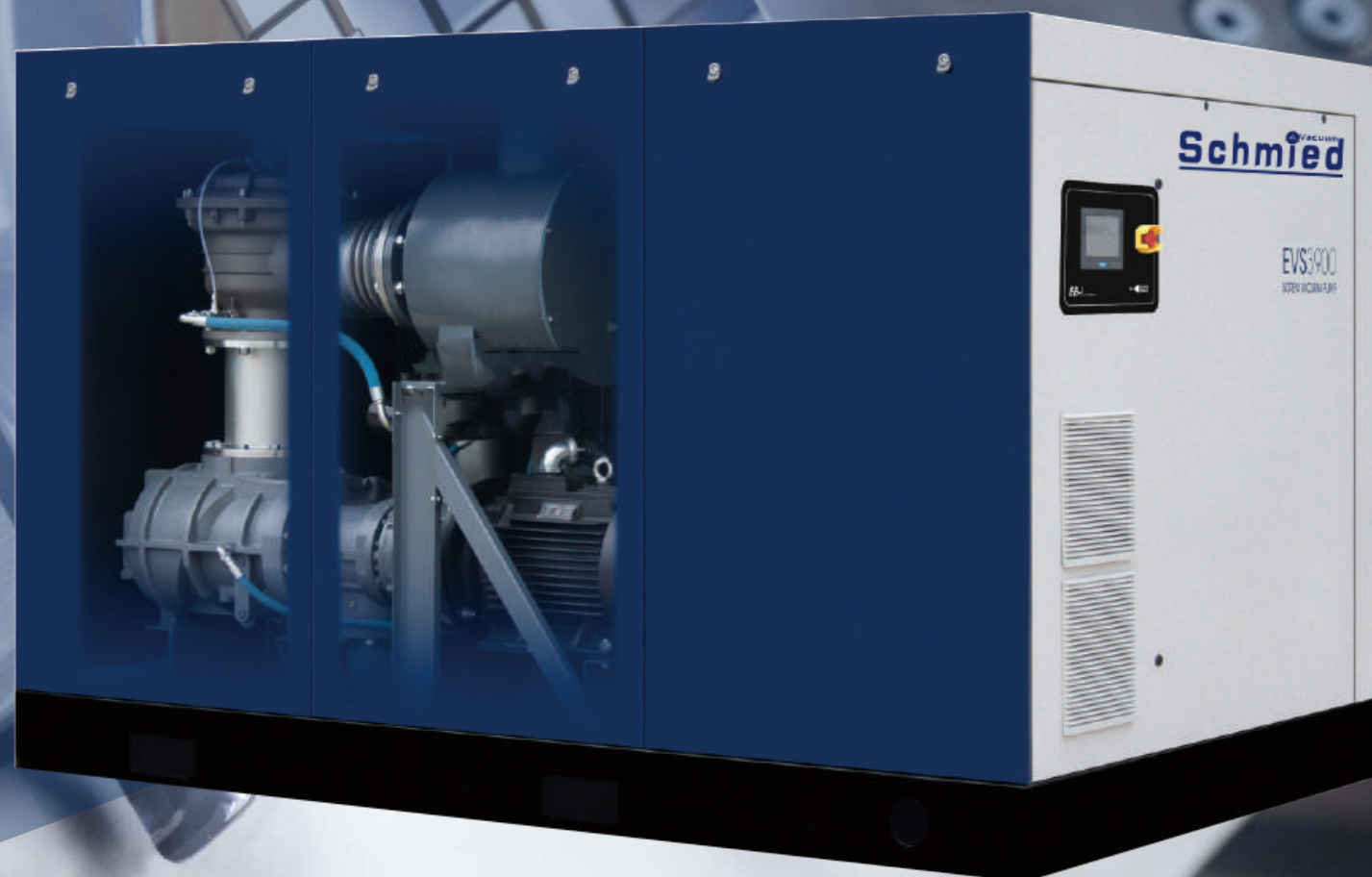
EVS SERIES

SCREW VACUUM PUMP

EVS 450-6200

- Special air end for vacuum applications
- Permanent magnetic direct drive
- Oil lubricating
- Efficient and reliable

Proudly Made With Heart
By People Who Care



EOS series vacuum special oil-sealed twin-screw air end



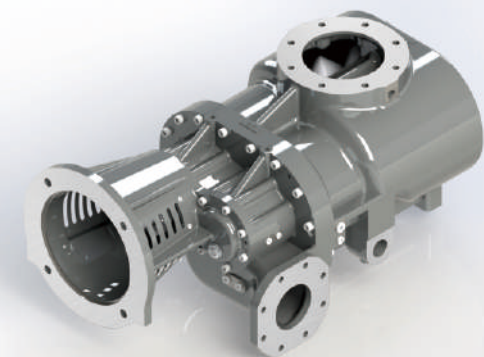
Efficient



Reliable



Low noise



The EOS air end is equipped with 7 or 8 sets of bearings, which fully guarantee the stability and reliability of the equipment. The adoption of exhaust end drive mode makes the shaft seal assembly more reliable, reduces vacuum leakage, and thereby further improves the efficiency of the air end.



After the optimization of the lubricating oil passage and bearing seat structure in the EOS air end, it does not require an external forced lubricating oil pump. Only by relying on differential pressure, good lubrication and cooling conditions can be obtained, thus ensuring the reliability of the air end and reducing parts and fault points. The absence of an external forced lubricating oil pump also reduces power consumption and improves the efficiency of the whole machine.

The rotor profile optimized specially for the industrial vacuum field, machining with a high-precision special rotor grinding machine, optimized exhaust pressure ratio setting, and orifice design make the vacuum pump air end more efficient.



Special vacuum intake filter Intake control valve

The special vacuum intake filter is designed for prefiltration, and has high dust holding capacity and a filtering efficiency of 99% @ 5micro, which fully guarantees the safe operation of the air end. The ultra-low pressure drop improves the efficiency of the whole vacuum pump. Polyester fiber material has the advantage of moisture resistance and is suitable for wet vacuum applications.

The opening degree of the intake control valve specially developed for the oil-sealed screw vacuum pump is automatically controlled to ensure the minimum vacuum degree of the air end and the circulation of lubricating oil.



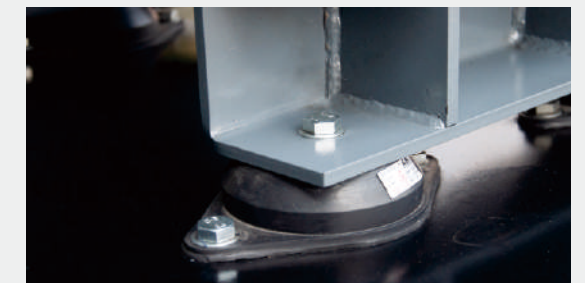
Cooling system and oil way system

The ultra-low pressure drop high-efficiency cooler, lubricating oil filter system and temperature control valve specially designed for vacuum applications have sufficient redundancy to ensure the proper working temperature of the equipment and can control the pressure drop of the oil way system very well. The low-noise and high-efficiency fan has low wind noise, and the reasonable air flow field design can also control the inner temperature of the machine.



High-efficiency oil-gas separator

After the optimization of the pre-separation structure, the completely redesigned oil-gas separator for vacuum applications allows most of the lubricating oil to be separated before the oil-gas mixture enters the oil separator element. The polymeric separation load of the oil separator element is relieved, the separation effect is better, and the oil content of the exhaust gas is controlled at 3ppm or below, which effectively protects the atmospheric environment. The ultra-low back pressure of the oil separator element reduces the shaft power of the motor and improves the efficiency of the whole machine more effectively.



Noise reduction and sound insulation system

The noise reduction and sound insulation enclosure and shock absorption foundation can effectively block the spread of noise, reduce the noise level of the equipment, and provide customers with a good production environment.

High motor efficiency

High power factor

97% 98%



More suitable for vacuum pumps

Permanent magnet synchronous variable-frequency motor direct drive

In practical applications, oil-sealed screw vacuum pumps will face a variety of working conditions, and run within a wide range of speeds generally and at low speeds frequently. If a traditional three-phase asynchronous motor is used, and the motor runs within a low speed range for a long time, its efficiency will be greatly reduced, which will seriously reduce the overall efficiency of vacuum pumps.

Schmied series oil-sealed screw vacuum pumps are directly driven by a permanent magnet synchronous frequency motor, which perfectly solves the problem of drive motor efficiency.

- ▶ Adoption of permanent magnets with high coercivity and high temperature resistance to ensure no demagnetization at 150°C
- ▶ Built-in PTC temperature protection to prevent demagnetization caused by high temperature resulting from faults;
- ▶ IP55 protection level, clean inside of the motor to guarantee the service life of the permanent magnet and insulation;
- ▶ According to the application characteristics of the vacuum pump, the low-temperature rise design is adopted, which allows the vacuum pump to operate within a low speed range for a long time;
- ▶ Relying on the independent forced cooling fan with large air volume, the motor can be well cooled even if it runs within a low speed range for a long time;
- ▶ The permanent magnet synchronous motor achieves strict synchronization, and has characteristics including easy frequency conversion control, good dynamic response performance, rapid response adjustment in a large range, and precise adjustment and control of vacuum degree;
- ▶ Smooth variable-frequency adjustment starting to reduce the impact on the power grid;
- ▶ Super first-class energy efficiency, IE4 motor efficiency up to over 97%;
- ▶ The high power factor is more than 98%, reducing the load on the customer's power grid, maintaining the quality of the power grid, and reducing the apparent current of equipment.

Maintaining high efficiency in wide speed range:

- ▶ Within a wide speed range and load range, both the efficiency and power factor of the motor are always kept close to the highest value;
- ▶ This feature is especially suitable for the application of oil-sealed screw vacuum pumps.

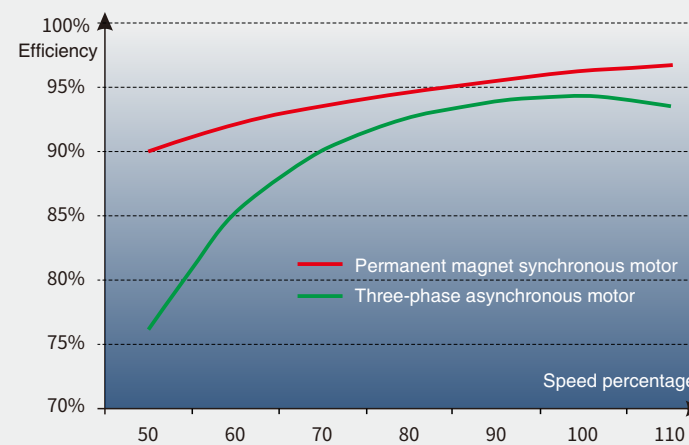


Variable-frequency drive system

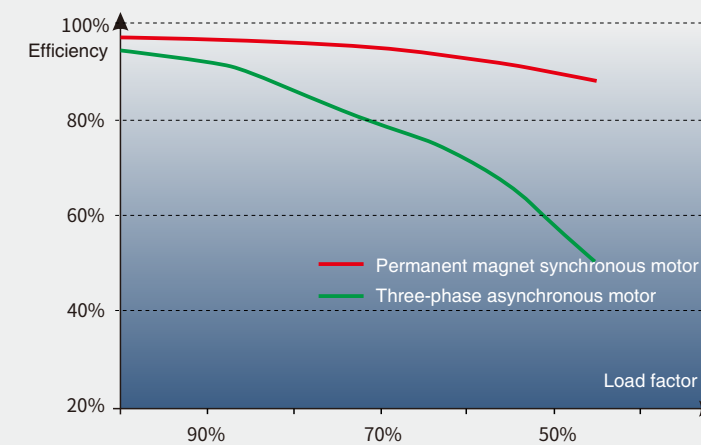
VCS vector frequency conversion drive in cooperation with the permanent magnet synchronous motor can achieve variable frequency starting and fast wide-range dynamic response, and can also be accurately controlled under target working conditions. The system uses special inverters in the industrial field, and is efficient, stable and reliable.

EB-1 intelligent control system

- ▶ The programmable intelligent industrial controller has a series of functions such as power-on self-check, operation logic control, operation monitoring, fault alarm, maintenance tips, etc.
- ▶ The 6" color touch screen has a beautiful and friendly interface, and its operation is simple and convenient.
- ▶ Provide RS485 interface, and natively support modbus protocol, upper computer joint control and multi-computer direct joint control.
- ▶ The built-in IoT module supports the Internet of Things and can achieve monitoring remotely via PC and mobile terminals.



Permanent magnet synchronous motors maintain close to their highest efficiency over a wide range of speeds



Permanent magnet synchronous motors maintain close to their highest efficiency over a wide range of loads

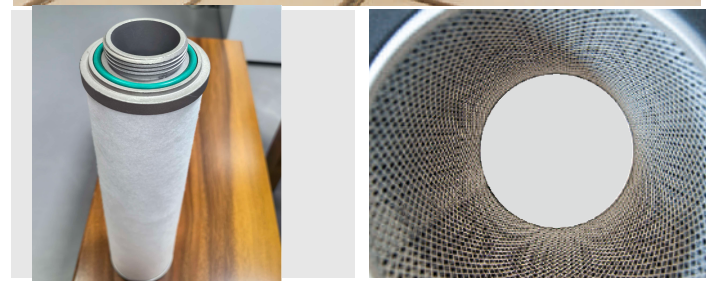


Schmied provides you not only efficient and reliable physical products, but also a complete service system covering the whole process of pre-sales, in-sales and after-sales.

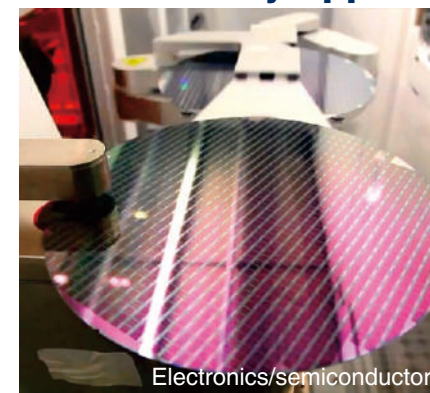
Before the start of a project, we will provide you with services such as technical consultation, scheme design, rationalization proposal, etc.

During the implementation of the project, we will provide you with technical training about the running operation and maintenance of the equipment.

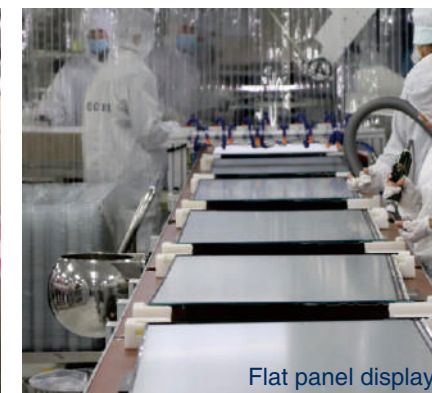
After the project handover, we will provide you with professional after-sales services to ensure that the equipment is always in a healthy and efficient operating state and that efficient and stable productivity is provided to you.



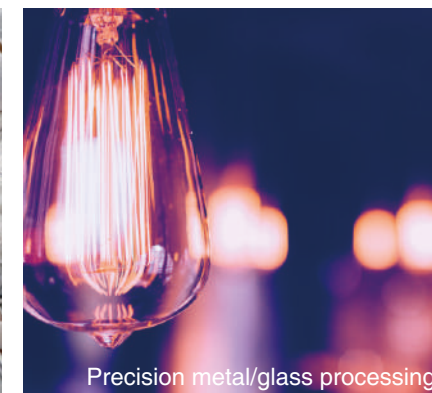
Main industry applications



Electronics/semiconductor



Flat panel display



Precision metal/glass processing



Printing/packaging



Food processing/packaging



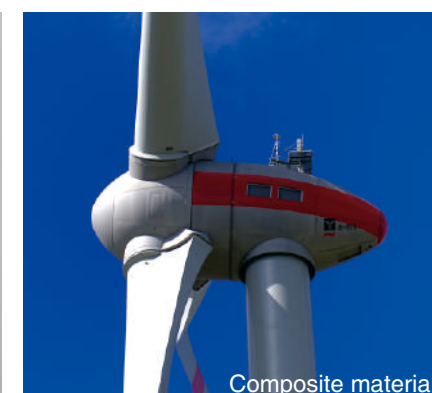
Tobacco



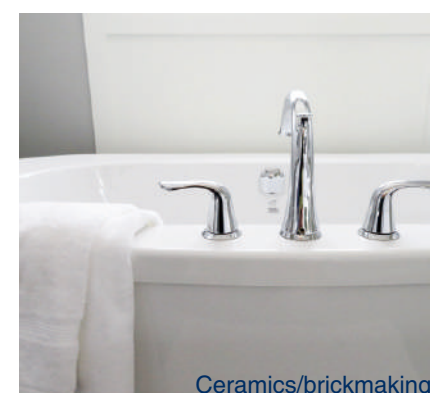
Woodworking/furniture



Bottle making/can making



Composite material



Ceramics/brickmaking



Aerospace



High altitude simulation

STANDARD GUARANTEE

The whole machine and the air end enjoy one-year and two-year guarantee services respectively. The time starts from the date of commissioning, or 6 months after arrival of goods at the customer site, whichever comes first.



BLUE GUARANTEE

On the basis of the standard warranty, the warranty period of the core equipment, the air end, is extended to five years, and the customer only needs to sign and implement the "E SERVICE PLAN".



E SERVICE PLAN

The five-year maintenance plan, including labor and materials, preferential packaging, etc., is implemented year by year, so that customers can save worry, effort and money in maintenance (Easy and Economical), and can obtain EVER BLUE air end blue guarantee certification.



EVS series specification parameters

Model	Max. Volume Flow m³/h	Ultimate Vacuum mbar	Motor Power kW	Noise dB(A)	Inlet Connect	Discharge Connect	Weight kg	Dimensions L×W×H mm
EVS 450	426	0.3	5.5	55~70	G2 1/2	G2	700	1250×780×1360
EVS 550	545	0.3	7.5	55~70	G2 1/2	G2	700	1250×780×1360
EVS 750	727	0.3	11	55~70	G2 1/2	G2	700	1250×780×1360
EVS 950	963	0.3	15	55~74	DN100	DN80	1050	1500×1350×1290
EVS 1100	1112	0.3	18.5	55~76	DN100	DN80	1050	1500×1350×1290
EVS 1300	1285	0.3	22	55~76	DN100	DN80	1050	1500×1350×1290
EVS 1800	1751	0.3	30	65~79	DN150	DN100	1500	1804×1420×1455
EVS 2000	1925	0.3	37	65~79	DN150	DN100	1500	1804×1420×1455
EVS 3000	3052	0.3	45	67~80	DN200	DN150	3200	2600×1910×1760
EVS 3900	3863	0.3	55	67~80	DN200	DN150	3200	2600×1910×1760
EVS 4800	4870	0.3	75	72~85	DN200	DN150	5500	3400×2100×1893
EVS 5600	5632	0.3	90	72~85	DN200	DN150	5500	3400×2100×1893
EVS 6200	6181	0.3	110	72~85	DN200	DN150	5500	3400×2100×1893

Performance test is in line with ISO 21360-2-2012 standard

380V/3P/50Hz power system is adopted by default; please consult for other power systems

Air cooling/water cooling optional

Wet application version optional

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