VSV

VSV Series Variable Frequency Screw Vacuum Pump

APPLICATION

Application fields

Industries (partial)	Applications
Solar photovoltaic industry	Retaining and handling
Glass and ceramic industry	Clamping and handling
CNC industry	Jigs and fixtures
Food industry	Preservation, transporting, and vacuum packaging
New energy and battery industry	Acid extraction, acid removal, and handling
PVC plastics industry	Extrusion, molding, and deaeration
Electronic industry	Handling, adsorption, fixation, and packaging
Healthcare industry	contaminants extraction
Printing industry	Pick & place, suction, handling, and clamping

AIREND

Vacuum exclusive pump

The exclusive design series can better meet the requirements of vacuum appli - cations, highly efficient and reliable.

The sideward exhaust design reduces the pressure loss from the internal pipelines & elbows.

The specially designed spray nozzles can spray liquid in the direction of the screw gear groove, reduce the resis tance of the coolant to the screw, and enhance compression efficiency.

1. Main air filter
2. Vacuum air
3. intake pipe
4. Auxiliary air
5. filter
6. Induction

INTAKE VALVE

Vacuum control system pump

When the vacuum degree reaches the upper limit, the solenoid valve mounted below the auxiliary air filter will be induced timely to actuate the air intake valve to react in a series of responses:

- The air is sucked through the auxiliary air filter and switched over to the air charging pipeline of the cylinder to the air intake valve so that the plunger of the air intake valve is thrusted to the closed state, and the main air filter no longer sucks the air that keeps the vacuum degree from rising.
- Open the bypass pipeline to allow the air sucked through the auxiliary air filter to directly flow into the screw pump for the system to enable the idle running state.
- It eliminates the damage due to the failure of air suction by the system and carries over the possible presence of water vapor.
- In this process, simultaneously and precisely the system can regulate the rpm of the permanent magnet motor. If the demand for vacuum degrees is not on the rise, the input power consumption will be further reduced.
- If the demand for vacuum degrees rises, the solenoid valve will be induced again to open the plunger valve and restore the working state of the main air filter.
- This design not only maintains the reliable operation of the system but also saves energy efficiently.

VSV SERIES

Permanent magnet variable frequency screw vacuum pump

PACKAGE DESINN

Considerate and Efficient overall design

Permanent magnet variable frequency saves more energy

The integration of a high-efficiency permanent magnet motor and the high-precision frequency inverter has a linearly stable operation and constant pressure control without a large starting current that makes substantial energy saving available.

Easy to use and maintain

Simple structure that meets the premise for small-size & lightweight, and provides adequate maintenance space.

Higher transmissio n efficiency

Direct driving between the motor and the pump can almost obtain 100% transmission efficiency.

Low noise and high reliability

The system operates continuously and steadily without pressure fluctuation. The design of the whole pump unit follows the principles of low noise, high reliability, high efficiency, and energy saving.

Independent cooling air duct

A relatively cold airflow can be sucked from outside to go through the independent electronically-controlled heat dissipation system, independent cooler air duct, and independent motor cooling air duct that ensures the cooling effect and the reliable operation of the respective system.

CONTROL SYSTEM

Intelligent Internet of Things (IoT) control system

A large color screen configured with a touch control design makes your control like a palmtop to realize the intelligent IoT control.

- Fairly self-explanatory interactive interface, supporting multiple languages
- Better anti-interference performance
- Remote on/off function
- RS485 communication can control multiple units in sequence
- Current monitor for main motor and blower motor
- Modular design for better expandability
- Configured with CAN network communication port

TECHNICAL DATA

VSV Series permanent magnet variable frequency screw vacuum pump parameters

Model	Motor power	Air-extracting capacity	Vacuum limit	Inlet size	Outlet size	Outline – Length	Outline – Width	Outline – Height
	kW	m^3/h	pa			mm	mm	mm
VSV590	7.5	570	50	DN80	DN50	1650	1200	1300
VSV740	11	735	50	DN80	DN50	1650	1200	1300
VSV910	15	910	50	DN80	DN50	1650	1200	1300
VSV1300	22	1260	50	DN150	DN100	2150	1500	1600
VSV1600	30	1600	50	DN150	DN100	2150	1500	1600
VSV2000	37	1820	50	DN150	DN100	2150	1500	1600
VSV2700	45	2700	100	DN200	DN150	2800	1700	1850
VSV3900	55	3850	100	DN200	DN150	2800	1700	1850
VSV4500	75	4500	100	DN200	DN150	3250	2250	2150

VSV SERIES

Permanent magnet variable frequency screw vacuum pump

VSD

Variable frequency control

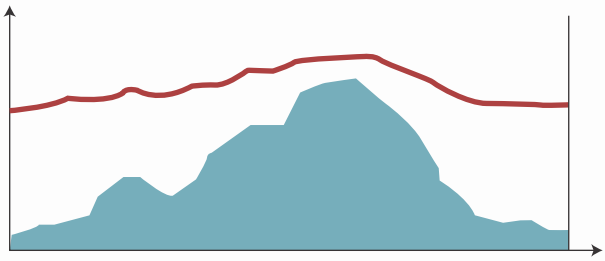
Ultra-high performance vector frequency invert - er, intelligent logic control, integrated with permanent magnet variable frequency motor, will save you money from the first minute of use.

- Integrated into the vacuum pump, integral design
- Modular design, convenient and friend - ly for application and maintenance
- Provided the powerful communication functions
- Configured an independent air duct to make the whole control unit operate at a suitable temperature, more stable and reliable

High-efficiency energy saving ENERGY SAVING

In almost all production environments, the vacuum demand may fluctuate with different factors at any time; VSV series fully variable frequency speed regulation, output power consumption, and air extracting rate are adjustable per customer requirements, which greatly saves energy and maintenance costs.

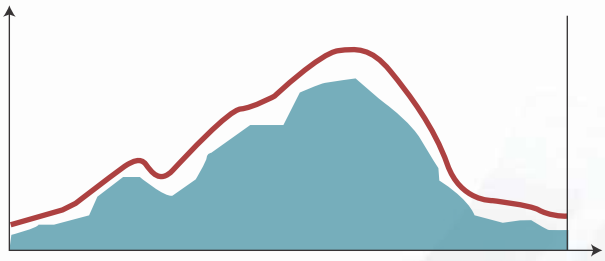
Constant-rpm vacuum pump demand



Fluctuation of vacuum demand

Energy consumption of constant-rpm vacuum pump

VSV Series requirements



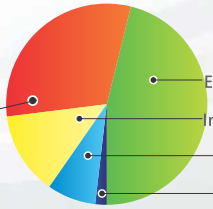
Fluctuation of vacuum demand

VSV series energy consumption

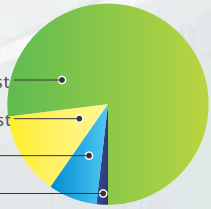
The operating life cycle of a VSV permanent magnet variable-frequency vacuum pump can save more than 45% energy compared with the mains frequency model unit of the same power.

Significant energy saving of up to 45%

Variable frequency control cost composition



Mains frequency control cost composition



Energy consumption cost

Investment purchase cost

Maintenance cost

Installation cost

CONTINUED COMMITMENT

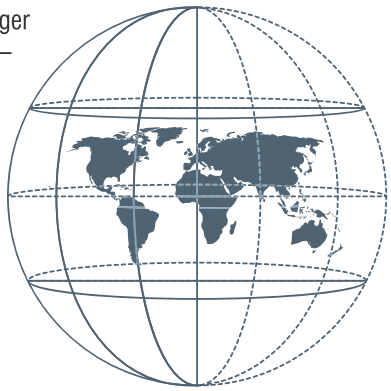
A company history that dates back more than 170 years is a company history that, to us, is just the beginning. FS-Curtis is committed to offering a world-class portfolio of products. Through the dependability of our people and our quality-focused manufacturing, FS-Curtis will continue to be the most trusted and dependable name in compressed air serving even more markets through our ever-growing global presence.

You can count on **FS-Curtis** to approach the next 170 years by staying true to the values and strengths that are appreciated by our customers today.

A WORLD OF DIFFERENCE

The FS-Curtis headquarters in St. Louis, Missouri, U.S.A. is the anchor of a larger global network. FS-Curtis builds quality products — and a quality reputation — at locations around the world.

In addition to our manufacturing and packaging locations, a large global network of sales agents and distributors ensures that sales and service support is available around the world, day in and day out.



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