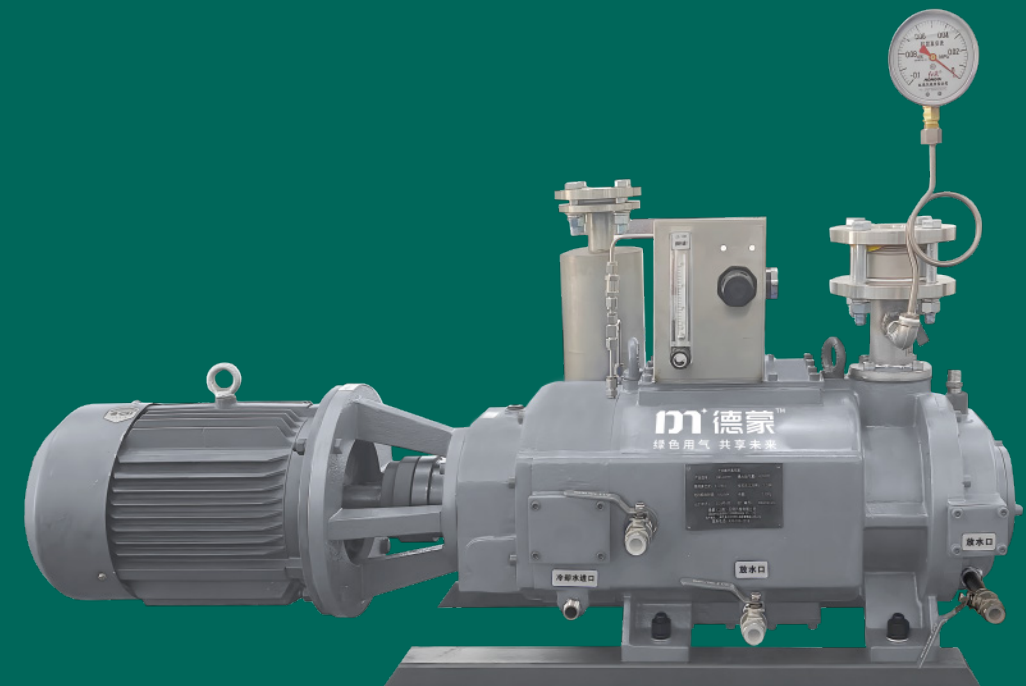


STABLE | ENERGY-SAVING | CLEAN | AND EFFICIENT

# Vacuum Pump Series Products



**Dream (Shanghai) Compressor Co.,Ltd.**

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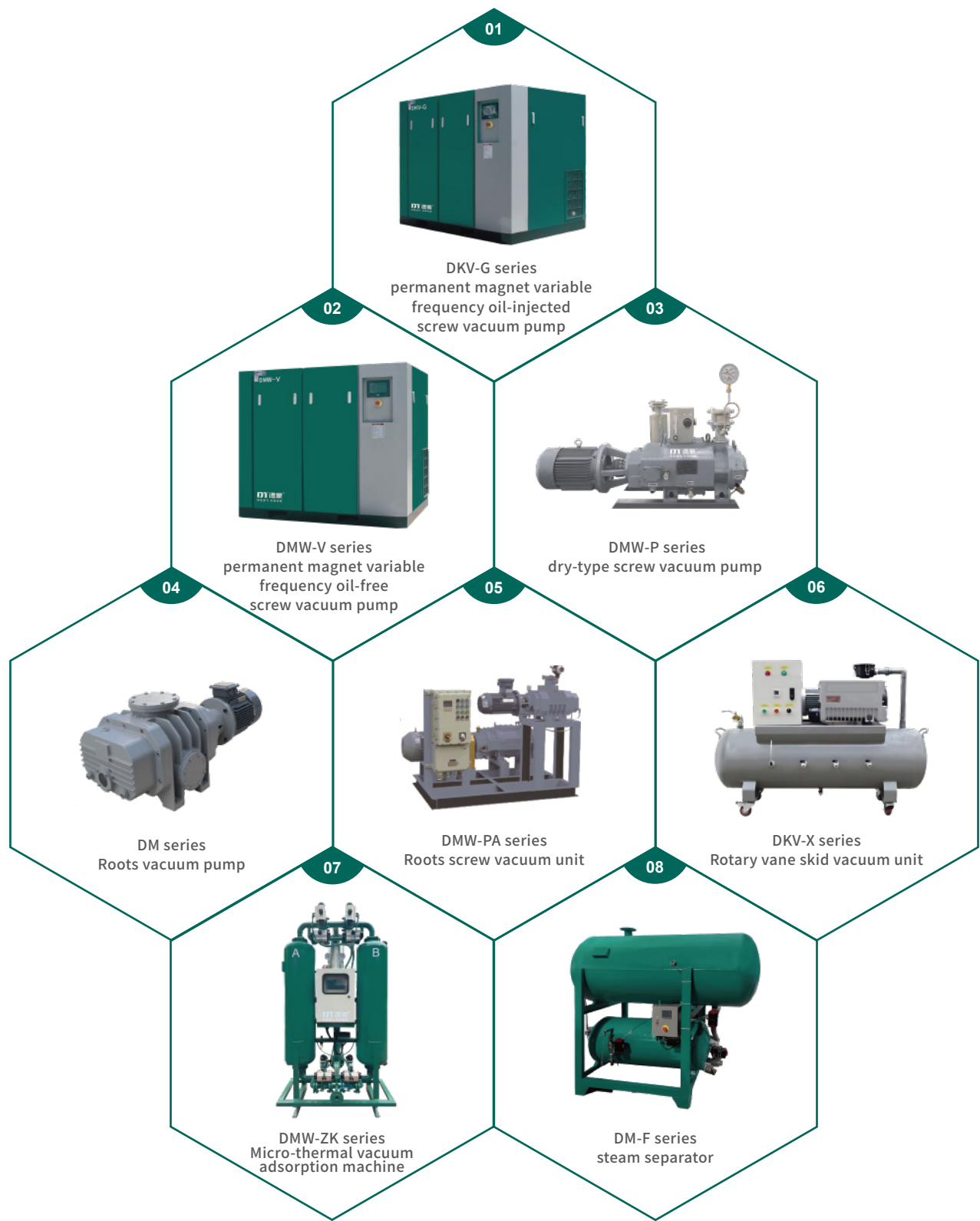
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[www.dreamcompressor.com](http://www.dreamcompressor.com)  
[www.dmcomp.com](http://www.dmcomp.com)

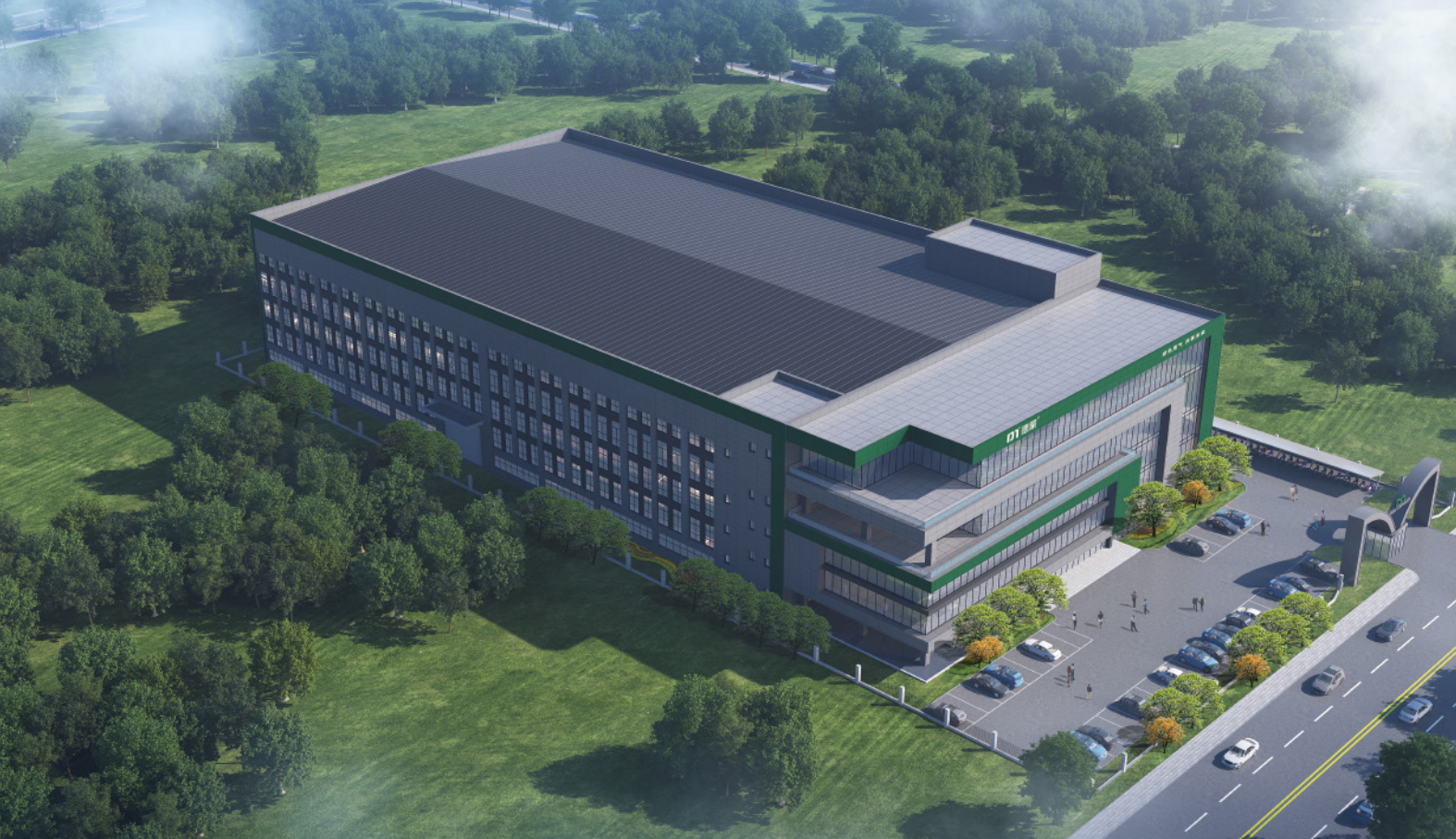
Dream(Shanghai) Compressor Co.,Ltd.



Catalogue／

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## ABOUT DREAM

 **45000** m<sup>2</sup>  
factory area

 **100+** 项  
Invention patents and honors

 **20+**  
Regional branches/subsidiaries

Dream (Shanghai) Compressor Co., Ltd. which established in Shanghai in 2011. It is a company specialized in designing, manufacturing and marketing of air compressors, A high-tech enterprise to offer system solutions. It has won honors such as Shanghai Brand Cultivation Demonstration Enterprise, special new enterprise, energy-saving equipment contribution enterprise, high-tech achievement transformation project, etc. The products are used widely in new energy, chemical industry & chemistry, Electronics, textiles, brewing mill, laser cutting, medicine & food and other fields. Since its establishment, Dream has R&D the application of air compressor system related technologies continuously, strictly abide by the ISO9001 quality management system, ISO14001 environmental management system, ISO45001 occupational health and safety management system standards, ensure that various processes are closely synchronized with international standards. We set up a professional R & D center to meet the demand and application conditions of different application clients worldwide. Based on concepts of stable, energy-saving, clean, efficiency, simple operation & maintenance, DREAM insists on developing based on market demand and innovation. The company invests 10%-15% of its profits every year into R&D and the upgrading & optimization of products. Innovation is main driver for DREAM grow up. As manufacturer supplier of Air compressor system solutions, Our service cover client requirement analysis, site investigation, technical solution design, and project cost analysis, non-standard solution customization, solution demonstration and promotion. we provide exclusive compressed gas solutions based on project needs.

After development for 14+ years, Dream has always adhered to the enterprise spirit of "One heart One Dream, striving for excellence", constantly innovating and pursuing excellence. Dream people continue to explore and innovate to meet customer needs and provide users with better products and service. Based in China, Dream's products has exported to worldwide countries successfully, mainly market as South Asia, South East Asia, Europe, Africa, South America, North America, and CIS countries, footprints all over the world. Its excellent product performance and efficient service concept continue to create value for users. Dream will be always your trust partner. We believe that you will experience our high-quality products and professional services, by working with us. Welcome to pursue dream and create better future with DREAM together!

## DREAM CULTURE



### Vision

To become the industry's most competitive vacuum technology and gas compressor solutions provider



### Mission

Give users more worry free Sustainably save energy and gas



### Value

Concentric shared dream professional focused co-created shared



Enterprise honor

- High-tech enterprise
- Specialized in special new enterprises
- Energy-saving technology and equipment contributing enterprises
- Shanghai brand cultivation model enterprise
- CE Certificates
- EMC Certificates
- TUV Rheinland Class 0 Oil Free Certificates
- Germany TUV product safety certification
- GCCA product quality and safety certification
- ISO 9001,14001,45001



Adhering to the business philosophy of "market-oriented,customer-centric,technical support and service guarantee",Dream is committed to providing customers with high quality products and industry-leading services. With Shanghai as the center and 20 service outlets nationwide as the auxiliary,Dream covers 34 provinces and autonomous regions of China's sales and service network,dedicated to provide customers with better service.

Global service

Dream is committed to providing quality products and services on a global scale,and has conducted overseas operations in many countries and regions,including Southeast Asia,Eu-rope,and the Americas,and has established strong partnerships in overseas markets. Our overseas agents have rich experience in cross-cultural communication and international vision,and are able to better understand and meet the needs of local customers and markets. In the future,we will continue to strengthen the development of overseas business,expand more overseas markets,and let China intelligent manufacturing shine on the international stage.



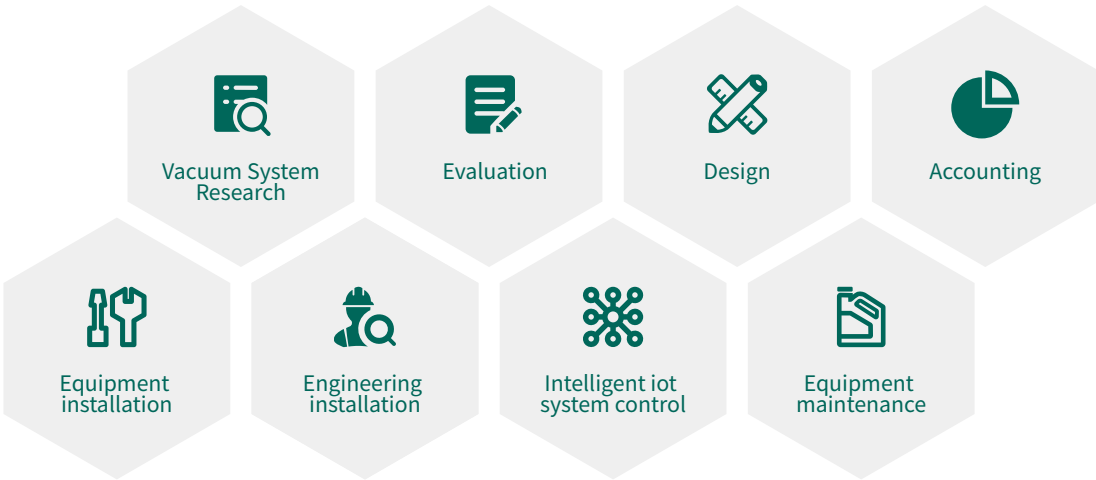
Dream Intelligent Manufacturing  
Six core competencies



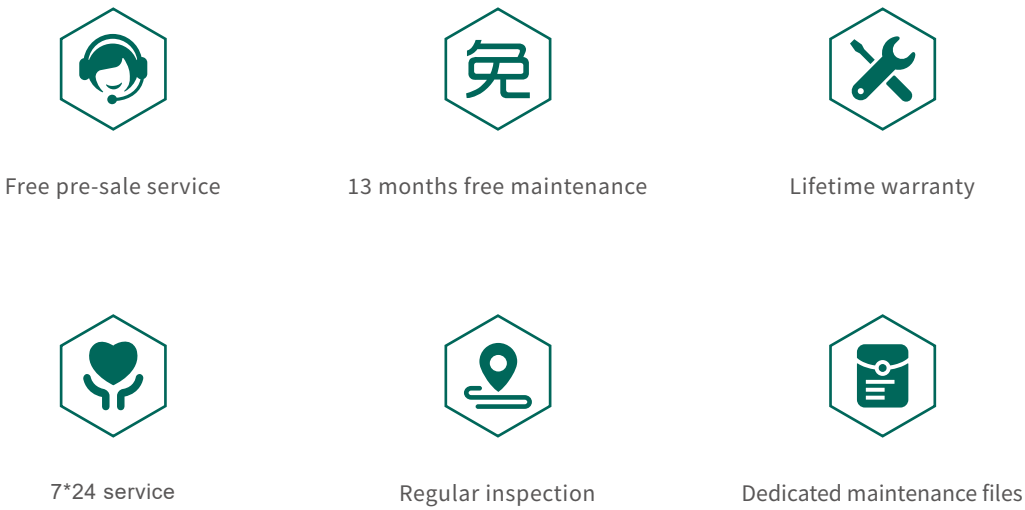
| Full process cycle and service

We design or upgrade vacuum stations for our customers, providing full process cycle services covering vacuum system research, evaluation, design, accounting, equipment installation, engineering installation, intelligent IOT system control, and equipment maintenance.

| Service process



| Performance pledge





# DKV-Gseries

## Permanent magnet variable frequency micro-oil screw vacuum pump

The DKV-G series vacuum pump can save about 50% of energy compared to other technologies; it is one of the most energy-efficient permanent magnet variable frequency screw vacuum pumps on the market. In comparison, technologies such as oil-lubricated rotary vane pumps and water ring pumps have low mechanical efficiency and high cost expenditures.

In vacuum applications, nearly 90% of electrical energy is usually converted into heat energy. The integrated energy recovery system of the DKV-G series screw vacuum pump can convert 75% of the electrical energy input into heat energy without any impact on the equipment. By effectively using the energy recovery system, you will save a lot of energy costs and get a high return on investment.



Intelligent design



Energy saving and low noise



Easy installation



Internet of Things System

Model NO.	Pumping Speed	Extreme Pressure	Motor power	Ambient Temperature	Air Input Pipe Diameter	Air Outlet Pipe Diameter	Dimensions (mm)	Weight
	m3/h	mba	kW	℃			L×W×H	Kg
DKV-4.5G	290	0.6	4.5	0-46	DN80	DN50	1100*750*1120	550
DKV-5.5G	390	0.6	5.5	0-46	DN80	DN50	1100*750*1120	550
DKV-7.5G	580	0.6	7.5	0-46	DN80	DN65	1200*1000*1260	600
DKV-11G	760	0.6	11	0-46	DN100	DN65	1500*1080*1365	700
DKV-15G	930	0.6	15	0-46	DN100	DN65	1500*1080*1365	1100
DKV-22G	1360	0.6	22	0-46	DN150	DN100	1650*1130*1500	1500
DKV-30G	1800	0.6	30	0-46	DN150	DN100	2000*1500*1810	1800
DKV-37G	2200	0.6	37	0-46	DN150	DN100	2000*1500*1810	2000
DKV-45G	2800	0.6	45	0-46	DN150	DN100	2000*1500*1810	2300
DKV-55G	3800	0.6	55	0-46	DN200	DN150	2700*1700*1860	2700
DKV-75G	4700	0.6	75	0-46	DN200	DN150	2700*1700*1860	3500
DKV-90G	5400	0.6	90	0-46	DN300	DN200	3000*1800*1860	3800

Note: Operating vacuum pressures are gauge pressures, atmospheric pressure is 1 atm (1 standard atmosphere 1013mbar) for reference. The selection of vacuum pumps is related to the characteristics of the gases to be pumped by the user, so please contact Demont or one of its regional distributors before making a selection. Please contact Dermont or one of our regional distributors before selecting a pump.

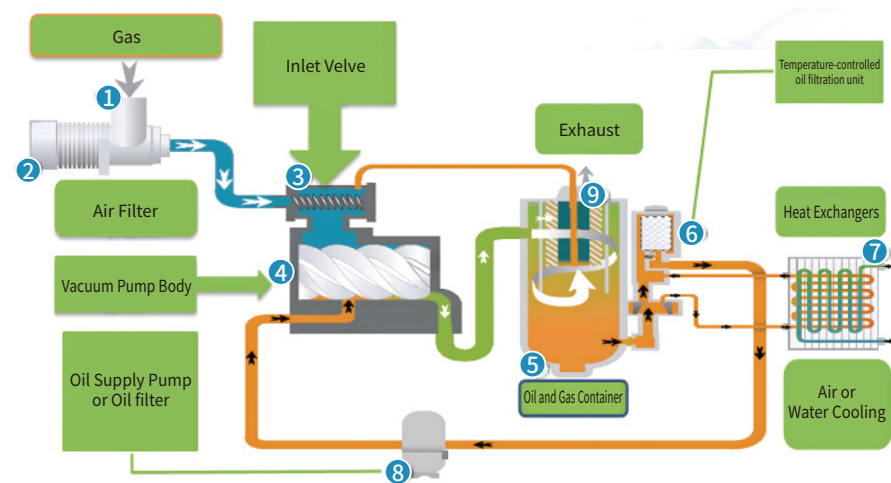
Special order specifications are available depending on the customer's process.

Working principle

**Working principle Suction process:**When the male rotor and the female screw rotate simultaneously in opposite directions (counterclockwise and clockwise), the volume between the teeth will gradually increase due to meshing, forming an intertooth volume. This increase in interdental volume increases the internal vacuum, and only the suction port is connected to Application scena Advantages of Micro Oil Screw Vacuum Pum Average energy saving of 30-60%, specially designed to achieve energy saving p rios it. Therefore, the gas will enter the interdental volume through the suction port driven by the pressure difference.

**Compression process:**As the rotor continues to rotate, the inter-tooth volume will gradually decrease because the meshing force between the rotor teeth will cause the volume of the inter-tooth volume to decrease. The volume of the gas sealed in the volume between the teeth decreases, causing the pressure to increase and completing the compression process of the gas.

**Exhaust process:**When the interdental volume is connected to the exhaust port, it will serve as an exhaust channel, allowing gas with higher exhaust pressure to be exhausted through the exhaust port. At this time, the interdental volume further decreases until it is completely closed, preventing further gas inhalation.



Advantages of Micro-Oil Screw Vacuum Pump

Low noise and no pollution

Compared with other vacuum pumps on the market, the DKV-G Series operates with extremely low noise. With its industry-leading oil recovery capability, the purity of the exhaust gas is excellent and will not pollute the factory floor. The cleanliness of the working environment has been greatly improved. promote.

Stable operation and low cost

The DKV-G Series is easy to maintain, has low maintenance frequency, and has no rotary vane, no rotary vane vibration, and no rotary vane wear. The average maintenance interval is extremely long, and this Series of equipment does not require water. With the help of the IoT cloud, you can understand the equipment's operating performance and maintenance needs at any time.

Convenient installation and maintenance design

Overall modular design: The modular design of the drive and cooling system effectively reduces the number of parts, and the more compact and reasonable space layout makes installation and maintenance easier and faster.

Application scenario



CNC industry Adsorption clamping vacuum application



Printing industry Vacuum application for clamping and lifting



Electronics industry HV PV vacuum applications



Food industry Food vacuum packaging canning, freeze drying



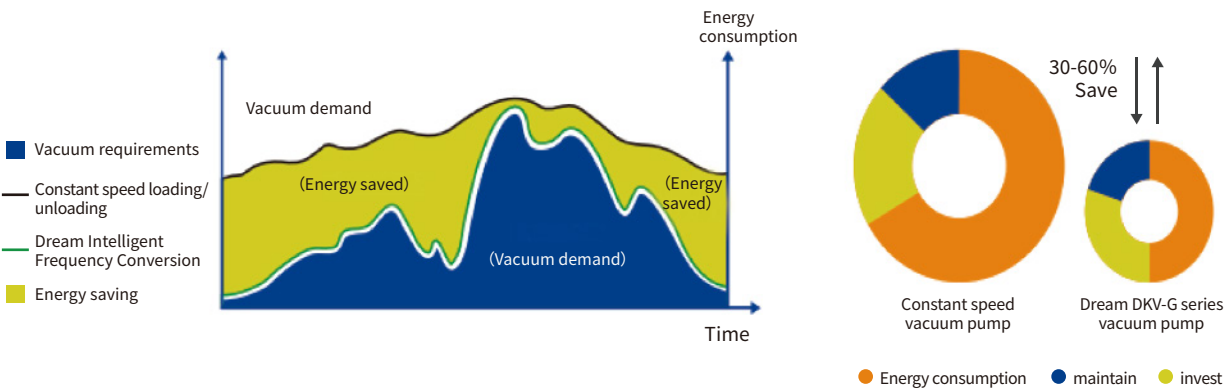
Vacuum forming industry Vacuum forming and blister forming of various plastic products



Vacuum forming and blister forming of various plastic products

Note: Only some industries are shown above. For more details, please contact our relevant business

Average energy saving of 30-60%, specially designed for energy saving







# DMW-V series

## Permanent magnet variable frequency oil-free screw vacuum pump

- 1.The two-stage oil-free vacuum pump saves 40%-60% energy compared to the traditional water ring vacuum pump. It has high efficiency and low power consumption. It is more than 1.8 times more efficient than the water ring vacuum pump. It can quickly pay back the investment. The operating cost is low and the investment can be paid back in one year.
- 2.The oil-free two-stage vacuum pump adopts the energy-saving and environmental protection technology independently developed by Demeng, without any pollution.
- 3.Adhere to the high-end quality line, check the production process layer by layer, and operate the permanent magnet variable frequency intelligently and stably without worries, which helps global enterprises to develop rapidly.



Energy saving



Environmental friendly



high quality

### DMW-V series permanent magnet variable frequency single stage oil-free screw vacuum pump

Model NO.	Negative Pressure (Kpa)	Pumping Speed m³/min	Motor power (KW)	Power Supply	Drive Type	Ambient Temperature	air intake temperature	noise level (dB)	weights (Kg)	Exterior Dimensions (L*W*H mm)	Air Inlet Pipe Diameter	Air Outlet Pipe Diameter
DMW-15V	-10~ -50	2.40-17.65	15	380V 50HZ 60HZ	Permanent magnet synchronous direct coupled integrated drive	≤46	≤55	76±5	855	1500*1050*1300	DN150	DN150
DMW-22V		3.38-23.76	22					78±5	885	1500*1050*1300	DN150	DN150
DMW-30V		4.60-32.21	30					78±5	1080	500*1050*1300	DN150	DN150
DMW-37V		6.23-43.60	37					79±5	1880	1700*1350*1300	DN200	DN200
DMW-45V		7.15-50.03	45					82±5	1950	1980*1450*1300	DN200	DN200
DMW-55V		8.73-61.03	55					83±5	2080	1980*1450*1300	DN200	DN200
DMW-75V		13.14-91.89	75					85±5	2300	2100*1510*1400	DN250	DN250
DMW-90V		5.37-107.65	90					91±5	3600	2100*1510*1400	DN300	DN300
DMW-110V		7.35-121.09	110					93±5	3900	2650*1850*1750	DN300	DN300
DMW-110+V		25.55-178.84	110+					95±5	4600	2650*2030*1750	DN350	DN350

### DMW-VV series permanent magnet variable frequency two-stage oil-free screw vacuum pump

Model NO.	Negative Pressure (Kpa)	Pumping Speed m³/min	Motor power (KW)	Power Supply	Drive Type	Ambient Temperature	air intake temperature	noise level (dB)	weights (Kg)	Exterior Dimensions (L*W*H mm)	Air Inlet Pipe Diameter	Air Outlet Pipe Diameter
DMW-15VV	-50 ~ -80	2.05-14.40	15	380V 50HZ 60HZ	Permanent magnet synchronous direct coupled integrated drive	≤46	≤55	76±2	1400	1450*1050*1200	DN100	DN100
DMW-22VV		3.21-22.52	22					78±2	1500	1670*1200*1350	DN100	DN100
DMW-30VV		4.72-31.08	30					78±2	1800	1930*1290*1500	DN150	DN150
DMW-37VV		5.72-40.10	37					79±2	1900	1930*1290*1500	DN150	DN150
DMW-45VV		7.32-51.23	45					82±2	2080	2100*1500*1600	DN150	DN150
DMW-55VV		8.61-60.29	55					82±2	2800	2200*1350*1800	DN150	DN150
DMW-75VV		11.70-81.88	75					87±2	3000	2100*1700*1760	DN200	DN200
DMW-90VV		24.15-99.75	90					89±2	3600	2600*1350*2100	DN200	DN200
DMW-110VV		30.45-121.80	110					89±2	3750	2600*1350*2100	DN250	DN250
DMW-132VV		36.75-152.25	132					91±2	4300	2600*1350*2100	DN300	DN250
DMW-160VV		48.30-194.25	160					91±2	4900	2950*1850*2100	DN300	DN250
DMW-185VV		55.10-262.50	185					92±2	5600	2950*1850*2100	DN350	DN250
DMW-220VV		78.75-312.90	220					92±2	5900	3200*2050*2400	DN350	DN250
DMW-250VV		86.10-341.25	250					92±2	7000	3200*2050*2400	DN400	DN300





## 01 Oil-free host

Adopt German SKF heavy-duty bearings and chisel wheels, stable operation;  
Adopt imported high-end machining center to process the main machine, high precision, high efficiency;  
Ultra-low maintenance costs, reducing operating costs;  
Ultra-high temperature anti-corrosion coating design, long high temperature operation life.



## 02 High-efficiency permanent magnet motor (with independent fan)

Adopt high temperature stable permanent magnet steel (SH-40), high temperature resistance  
low risk of demagnetization;  
soft start operation, stable running flow rate;  
wider constant torque range and weak magnetic range, better control performance;  
adopt extended core design, increase motor torque, good low frequency operation performance;  
independent fan design, reduce low frequency running motor temperature rise;  
independent motor bearing temperature control system to ensure motor no bearing damage.



## 03 Advantages of intelligent controller

Intelligent control system improves the operability of vacuum pump system  
High-performance controller realizes IoT remote control Automatically switch working modes of multiple machines Humanized human-machine interface.



## 04 Inlet filter

The unique pre-filter design inside the machine keeps the whole machine clean and extends the maintenance cycle. It is easy to disassemble and clean and can be reused.



## 05 Intelligent inverter

Adopt the top domestic frequency system, support IoT program  
Reducing system cost Multi-power built-in DC reactor  
Improves overall efficiency Dual-stage cascade control to ensure pressure  
Transmitter signal transmission, true dual-stage operation.



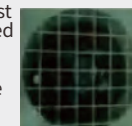
## 06 High-precision sensor

The signal processing adopts stable and efficient linear strict testing and aging to ensure the transmitter has high accuracy, good stability, strong anti-interference ability, reverse polarity protection and instantaneous overcurrent protection, and meets EMI protection requirements.  
Through the internal electrical appliances, the zero point and range can be accurately adjusted; all stainless steel structure, various pressure interface forms, with flush model; protection level IP65.



## 07 Intelligent silent exhaust system

The cooling fan adopts variable frequency control, which is more energy-saving. According to the exhaust temperature, the fan speed is controlled to suppress power waste, stabilize the system and the overall components, thereby improving the durability of the components. The variable frequency control of the fan further reduces the noise. The fan has the advantages of high efficiency, low noise, no wind blind area, and stable pressure curve.



## Application Industry



Blister industry



Optoelectronics Industry



Foam Industry



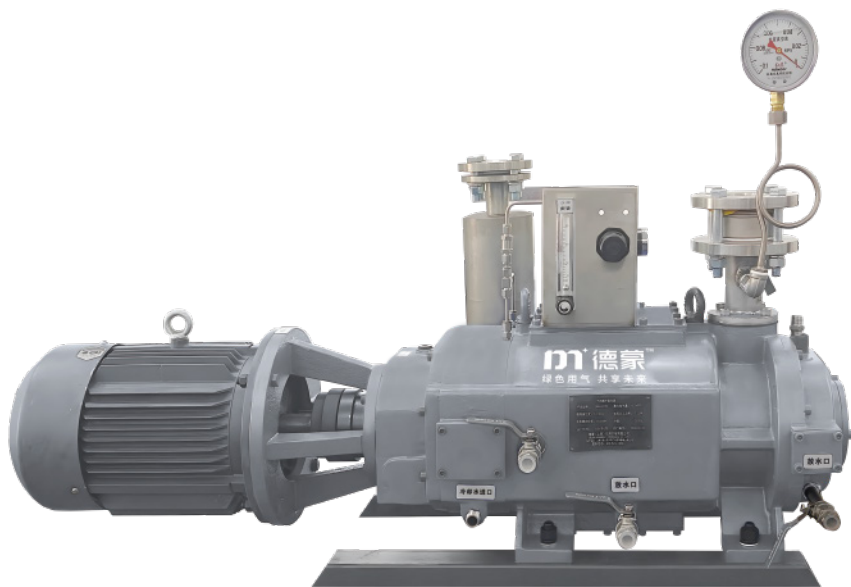
Paper tray industry



Cement Industry



Glass Industry



Parameter table of Demon dry screw vacuum pump (equal pitch)

Model NO.	Pumping Speed (m3/h)	Extreme Pressure (Pa)	Motor power (kW)	Power Supply (V)	Noise Level db(A)	Air Inlet Pipe Diameter (mm)	Air Outlet Pipe Diameter (mm)
DMW108P	108	5	4	380	≤76	50	40
DMW180P	180		5.5		≤80	50	40
DMW250P	250		7.5		≤80	50	40
DMW530P	530		15		≤83	65	50
DMW720P	720		22		≤85	80	80
DMW910P	910		30		≤86	100	80

DMW-Pseries  
1.Dry screw vacuum pump

- 1. It can run at full speed under atmospheric pressure and ultimate vacuum.
- 2. A single stage can achieve a higher vacuum degree, with an ultimate pressure of 2-5Pa.
- 3. There is no oil or water in the working chamber of the pump that contacts the process gas.
- 4. The rotors do not touch each other, reducing wear; the rotors, housings, and flow-through parts can be coated with anti-corrosion coatings such as Teflon and Hastelloy.
- 5. The gas channel in the pump is short and can be exhausted quickly.
- 6. It can be operated alone or as a fore-stage pump.
- 7. Dry screw vacuum pumps are available in two types: equal pitch and variable pitch, also known as external compression screws and internal compression screws. Compared with equal pitch screws, variable pitch screw pumps have lower exhaust temperature and higher efficiency.



run smoothly



Self-developed anti-corrosion coating

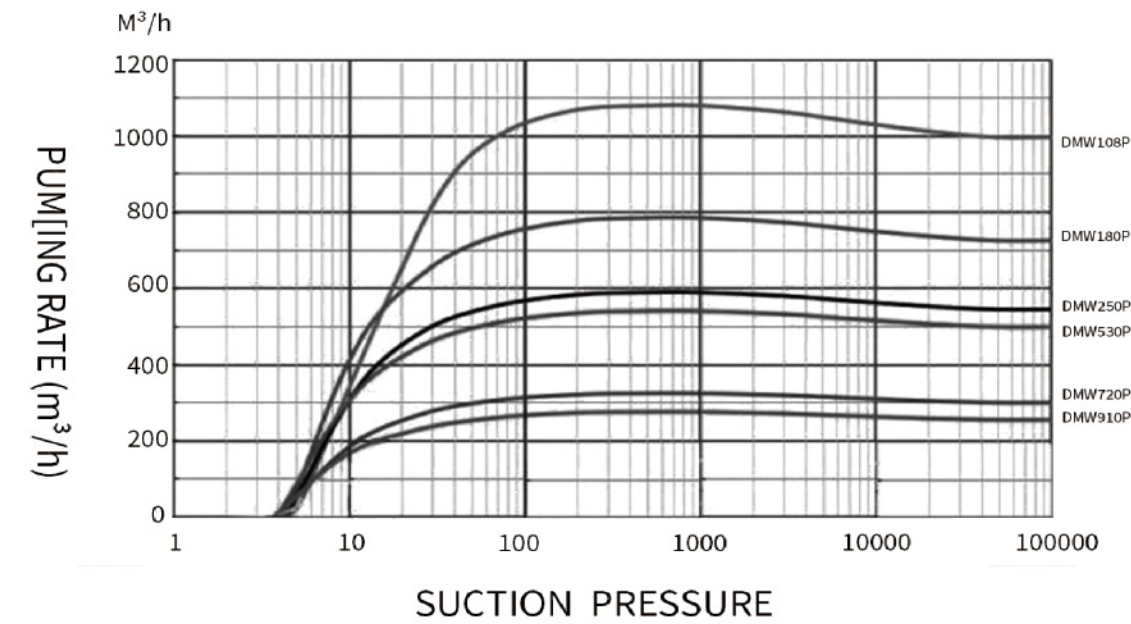


Safety and environmental protection



No oil consumption no dripping

DMW series equal pitch screw vacuum pump pumping speed curve 50HZ



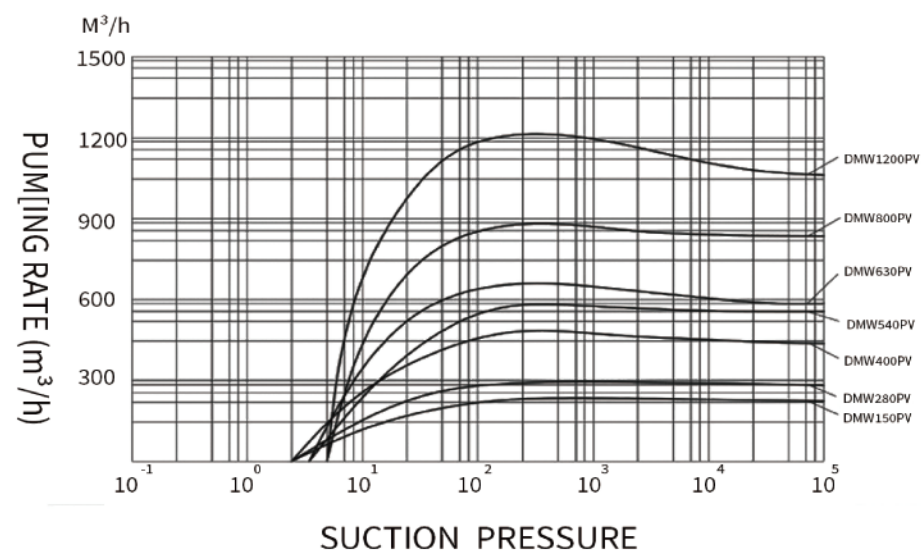
Note: 1. The oil volume in the above table is for reference only. The oil level should be at the correct position. Special lubricating oil can be used for dangerous applications.  
2. The cooling water volume in the above table is based on the cooling water at 20°C at the inlet. The amount of cooling water varies according to the secondary cooler. The temperature difference between the inlet and outlet water should be around 7°C.



Dream dry screw vacuum pump (variable pitch) parameter table

Model NO.	Pumping Speed (m³/h)	Extreme Pressure (Pa)	Motor power (kW)	Rotation Speed (rpm)	Air Inlet Pipe Diameter (mm)	Air Outlet Pipe Diameter (mm)	Noise Level(dBA)	Cooling Water (L/min)
DMW180PV	180	1	3.7	2900	50	40	≤75	5-10
DMW260PV	260	1	5.5		65	50		
DMW330PV	330	1	7.5		65	50		10-15
DMW450PV	450	1	11		80	65		
DMW650PV	650	1	15	2900	100	80	≤85	15-20
DMW780PV	780	1	18.5		100	80		
DMW960PV	960	1	22		100	80		
DMW1500PV	1500	1	30		150	100		
DMW1860PV	1860	1	37		150	100		

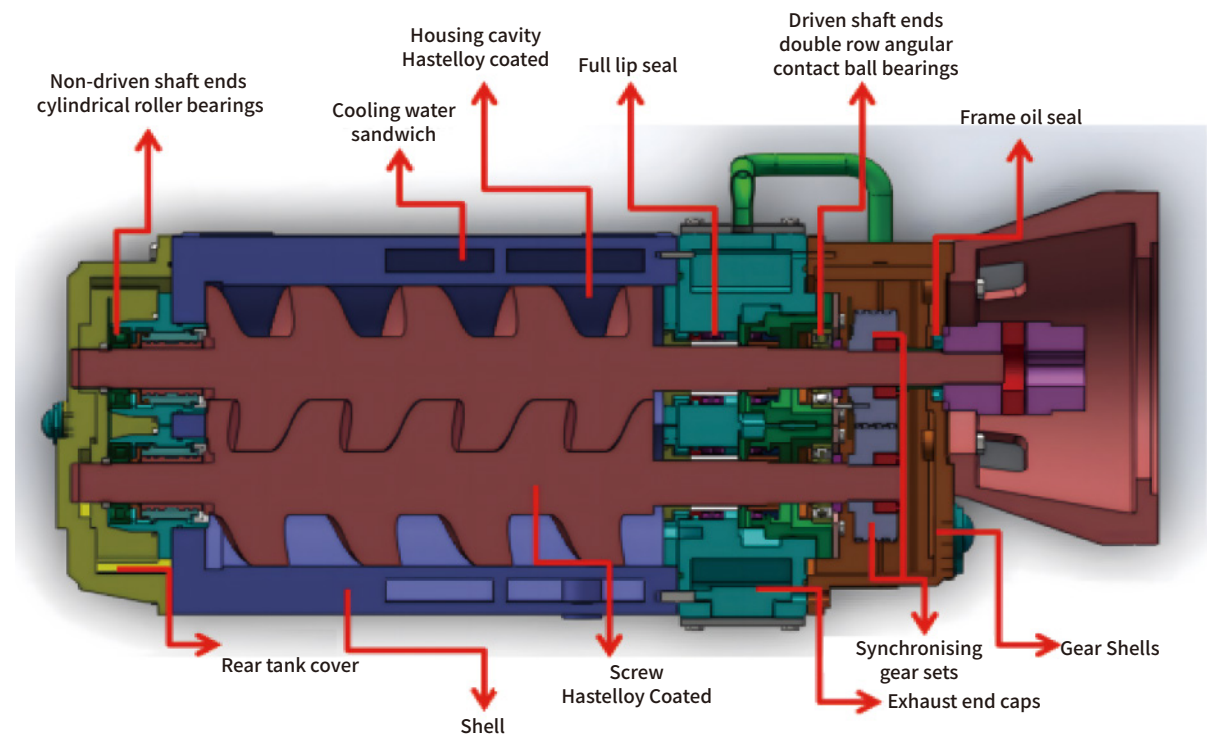
DMW Series Variable pitch screw vacuum pumps pumping speed curve 50HZ



Note: 1. The oil quantity in the above table is for reference only. The oil level should be in the correct position. Special lubricating oil can be used for hazardous applications.  
2. The amount of cooling water in the above table is based on the cooling water at the inlet of 20°C. The amount of cooling water is different according to the different secondary coolers. The temperature difference between the inlet and outlet water should be about 7°C.

Dry Screw Vacuum Pumps Features

- (1) The working chamber is free of any medium, so that a clean vacuum can be obtained.
- (2) Corrosion-resistant plating of the working chamber and the screw surface, suitable for severe working conditions.
- (3) Dry operation of the working chamber, suitable for pumping out gases containing dust and condensable gases.
- (4) Single pump can pump from atmosphere to 1Pa, vacuum system can be greatly simplified.
- (5) No friction between rotating parts, resulting in long life.
- (6) The dry screw vacuum pumps are balanced with high precision and can run at high speed with smooth operation and small size.
- (7) Compared with multi-stage claw pump, it has simple and compact structure, fewer parts, more stable operation and easier maintenance.
- (8) Compared with oil-sealed, reciprocating vacuum pumps, condensable substances will not be retained in the pump, no oil vapour and oil mist emission, preferred for environmental protection.
- (9) Compared with water ring pump, dry screw vacuum pump only needs recyclable cooling water, the pumped gas does not contact with water, the tail gas can be easily recovered, eliminating the sewage treatment process, more environmentally friendly, and avoiding the effect of water temperature on vacuum.
- (10) It can be combined with Roots pump and molecular pump to form oil-free unit.



Advantage

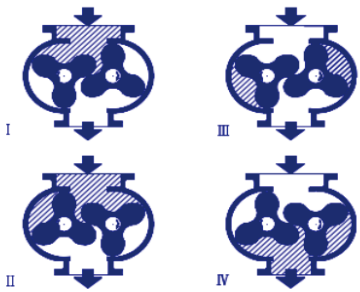
- 1. Simple structure and easy maintenance.
- 2. No oil consumption, no dripping. Dry screw pumps require only a small amount of circulating cooling water and have low running costs.
- 3. no compression of gas in the pump, suitable for pumping condensable gases. Dry screw vacuum pumps also have their advantages in terms of safety in chemical production and product quality.
- 4. anti-corrosion performance, the working chamber and screw rotor surface with anti-corrosion coating, can adapt to the harsh working conditions.
- 5. the pumped gas is discharged directly from the pump body, no pollution of water, no environmental protection pressure, gas recovery is more convenient.





DM Series  
Roots vacuum pump

The Roots vacuum pump is a rotary positive displacement vacuum pump. The two three-lobe rotors keep a certain clearance with the pump chamber, and the two rotors mesh with each other and keep a certain clearance by a pair of synchronous counter-rotating high-precision gears. The right figure shows the structure of the pump, from Figure I to IV for the rotor. Rotating in the pump chamber and complete a suction and discharge process. The Roots vacuum pump with a three-lobe rotor has obvious technical advantages over the traditional Roots vacuum pump with a two-lobe rotor in terms of pumping efficiency, maximum permissible differential pressure, temperature rise, vibration, noise and other main performance indexes.



Fast start-up  
low power consumption

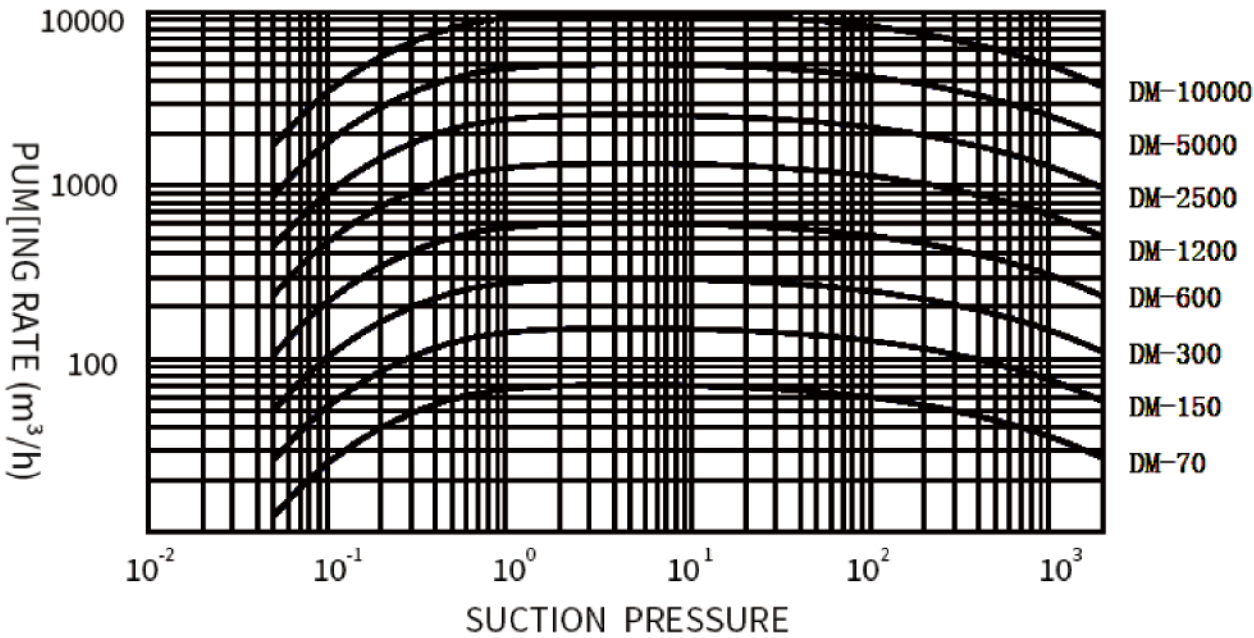
High compression ratio

Strong geometrical  
symmetry of the rotor

Clean and oil-free  
pump chamber

DM series water-cooled Roots parameter table

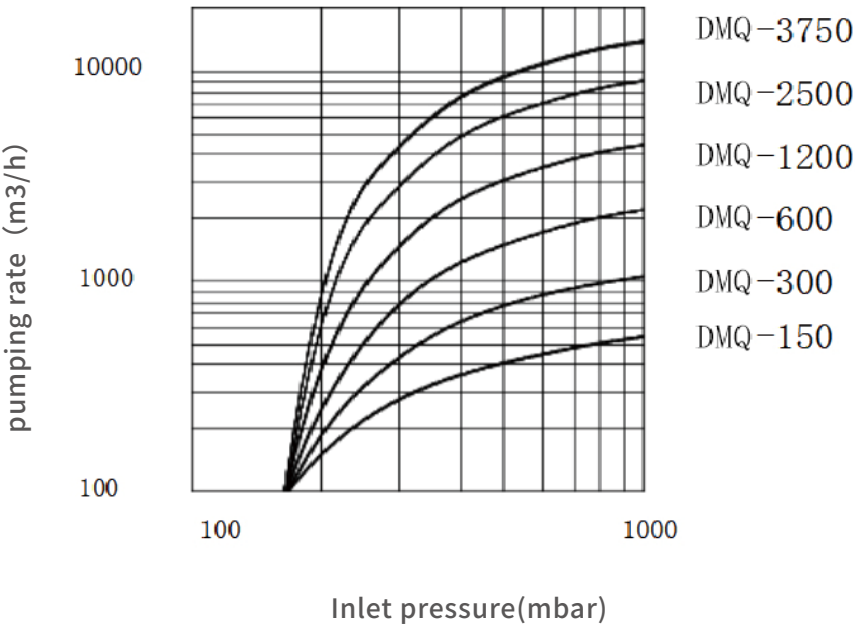
Model NO.	Pumping Speed L/s	Extreme Pressure Pa	Maximum Allowable pressure difference	Power Kw	Rotation Speed rpm	Air Input Pipe Diameter mm	Air Output Pipe Diameter mm	Weight Kg
DM-70	70	≤ 0.5	≥ 1.2*10 <sup>-4</sup>	1.5	1450	100	80	165
DM-150	150	≤ 0.5	≥ 1*10 <sup>-4</sup>	3	2900	100	80	165
DM-300	300	≤ 0.5	≥ 8*10 <sup>-4</sup>	4	2900	160	100	275
DM-600	600	≤ 0.5	≥ 6*10 <sup>-4</sup>	5.5	2900	200	160	420
DM-1200	1200	≤ 0.05	≥ 5*10 <sup>-4</sup>	11	2900	250	200	980
DM-2500	2500	≤ 0.05	≥ 4*10 <sup>-4</sup>	18.5	2900	320	250	1800
DM-5000	5000	≤ 0.05	≥ 3*10 <sup>-4</sup>	37	1450	300	300	3580



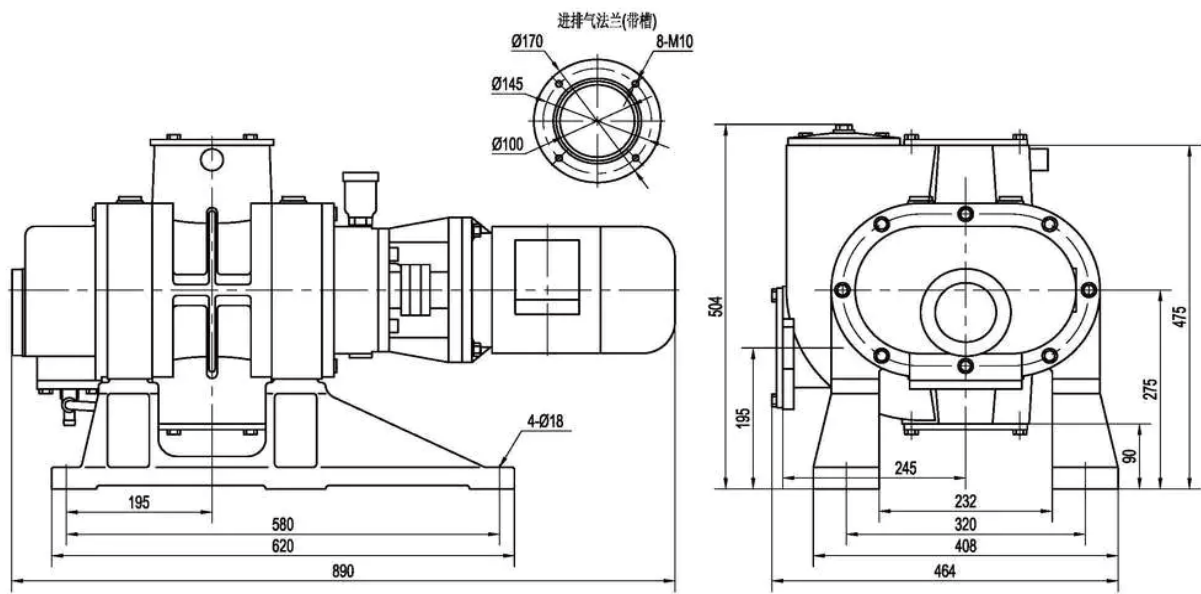
DMQ series air-cooled Roots parameter table

Model NO.	Pumping Speed L/s	Extreme Pressure Pa	Power Kw	Rotation Speed rpm	Air Input Pipe Diameter mm	Air Output Pipe Diameter mm	Maximum water consumption L/h	Pump head weight Kg
DMQ-150	150	15000	3~18.5	2900	80	80	3500	350
DMQ-300	300	15000	5.5 ~ 37	2900	125	125	6000	350
DMQ-600	600	15000	7.5-75	1460	250	200	9000	650
DMQ-1200	1200	15000	11~132	1470	300	250	15000	1200
DMQ-2500	2500	15000	22 ~280	980	350	350	28000	2300
DMQ-3750	3750	15000	30~400	1470	350	350	35000	2300

Air-cooled Roots vacuum pump performance curves



Dimension Picture



Advantage

- 1. The applicable pressure range of Roots pump is large, and a large pumping speed can be obtained within this range. If gas is suddenly released from the system, the Roots pump can release the mixed gas at a faster pumping speed. This feature makes the Roots pump superior to diffusion pumps and oil-sealed mechanical pumps. In the Roots pump unit, it can be used as a booster pump in the air extraction system.
  - 2. It is equipped with a bypass relief valve that can be started under atmospheric pressure, shortening the pumping time; there is a gap between the rotor and the rotor, and between the rotor and the pump cavity wall. There is no friction in the moving parts in the pump and no lubrication is required. The pump cavity No oil inside.
  - 3. The rotor has symmetrical shape, good dynamic balance performance, smooth movement, high-precision gear transmission, and low operating noise.
  - 4. The structure is compact and occupies a small area. The horizontal structure is usually selected. The gas in the pump chamber flows vertically, which is beneficial to the removal of dust or condensate being pumped.
  - 5. Selecting the appropriate rotor profile and fine grinding can achieve higher volumetric efficiency.
  - 6. Low operation and maintenance co
- It starts quickly, consumes less power, has low operation and maintenance costs, has high pumping speed and high.

Range of application

Fast start-up, low power consumption, low operation and protection costs, high pumping speed, high efficiency, insensitive to the large amount of water vapour and dust contained in the pumped gas. In 1 ~ 100 pressure range has a large pumping rate, can quickly eliminate the sudden release of gas. This pressure scale is exactly in the oil-sealed mechanical vacuum pumps and dispersing pumps between. Therefore, it is often connected in series between the dispersing pump and the oil-sealed mechanical vacuum pump, which is used to improve the pressure limit and pumping volume. It is also called mechanical booster pump.



# DMW-PA Series

## Roots screw vacuum unit

The working principle of the Roots screw vacuum unit combines the characteristics of the Roots pump and the screw pump as follows:  
Roots pump consists of two impellers rotating with each other, these two impellers mesh with each other through gears but do not touch, this can reduce the energy loss and friction heat, the rotation of the impeller makes the gas being sucked into the pump, and then compressed and discharged, this structure makes the Roots pump able to work in a high vacuum environment without pollutants, and it can handle a large amount of gas.  
Screw pump section. The screw pump works through two intermeshing screws, these screws gradually squeeze the gas and discharge it, during the rotation of the screws, the gas enters from the inlet, is compressed along the helical grooves, and finally discharged from the exhaust port.  
Combined with the principle of operation. When the Roots screw vacuum unit is in operation, the efficient suction process of the Roots pump is combined with the compression and exhaust process of the screw pump to achieve a rapid establishment of vacuum and efficient gas transfer. This type of unit is suitable for a wide range of applications, and in particular has obvious advantages when dealing with gases containing a small amount of condensable gases or a small amount of dust.



Special coating inside the pump chamber



Low noise design



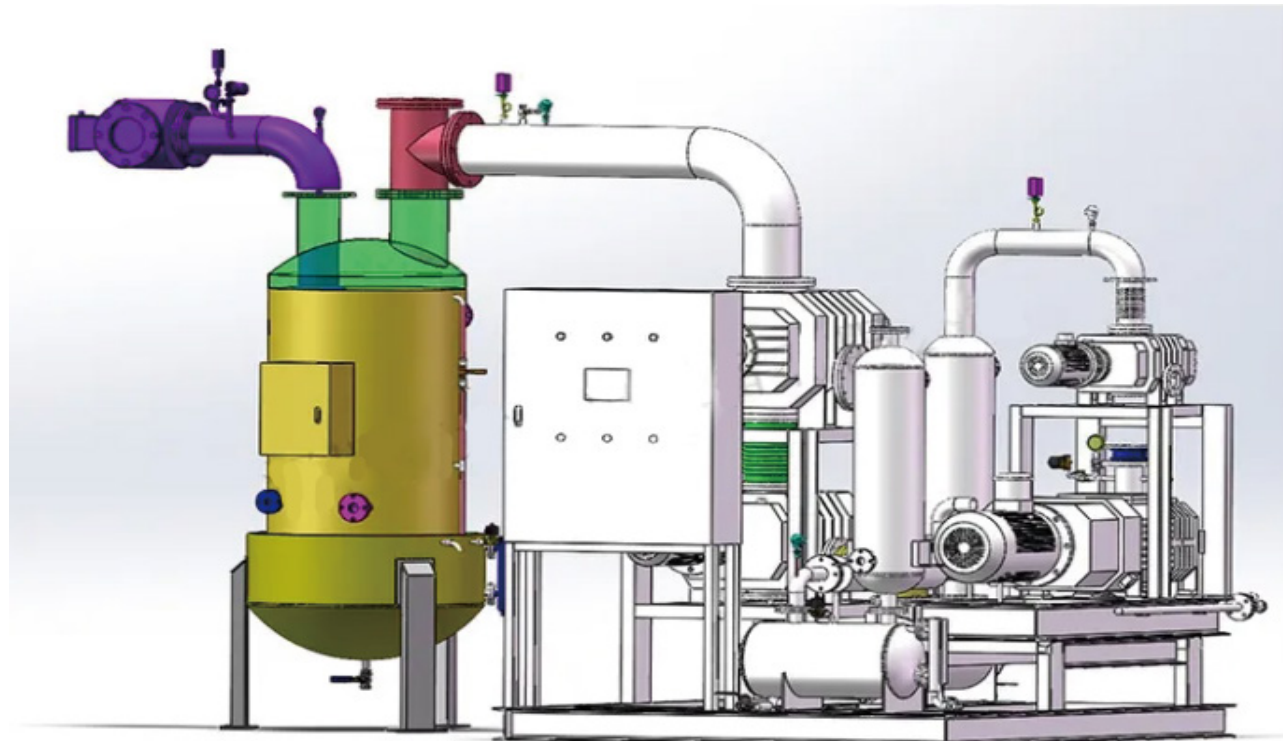
Clean and oil-free pump



Vacuum relay control

Model NO.	Pumping Speed L/s	Extreme Pressure Pa	Unit Model			Air Input Pipe Diameter mm	Air Output Pipe Diameter mm	Total Power (kw)
			main pump	intermediate pump	preliminary pump			
DMW-250PA	70	0.1	DM -70	/	DMW-108PV	100	40	7
DMW-540PA1	150	0.1	DM-150	/	DMW-108PV	100	40	8.5
DMW-540PA2	150	0.1	DM-150	/	DMW-260PV	100	40	14
DMW-540PA3	150	0.1	DM-150	/	DMW-360PV	100	50	14
DMW-1080PA1	300	0.1	DM-300	/	DMW-108PV	150	40	15
DMW-1080PA2	300	0.1	DM-300	/	DMW-360PV	150	50	15
DMW-1080PA3	300	0.1	DM-300	/	DMW-540PV	150	65	26.5
DMW-2160PA1	600	0.1	DM-600	/	DMW-360PV	150	65	16.5
DMW-2160PA2	600	0.1	DM-600	/	DMW-540PV	150	65	27.5
DMW-2160PA3	600	0.1	DM-600	/	DMW-720PV	150	65	27.5
DMW-2160PA4	600	0.1	DM-600	/	DMW-1080PV	150	100	42.5
DMW-4320PA1	1200	0.1	DM-1200	/	DMW-720PV	300	65	33
DMW-4320PA2	1200	0.1	DM-1200	/	DMW-1080PV	300	100	48
DMW-540PAA	150	0.05	DM-150	DM-70	DMW-108PV	100	40	10
DMW-1080PAA	300	0.05	DM-300	DM-150	DMW-260PV	150	40	18
DMW-2160PAA1	600	0.05	DM-600	DM-150	DMW-260PV	150	40	19.5
DMW-2160PAA2	600	0.05	DM-600	DM-300	DMW-260PV	150	40	20.5
DMW-2160PAA3	600	0.05	DM-600	DM-300	DMW-540PV	150	65	31.5
DMW-4320PAA1	1200	0.05	DM-1200	DM-300	DMW-540PV	300	65	37
DMW-4320PAA2	1200	0.05	DM-1200	DM-600	DMW-540PV	300	65	38.5
DMW-4320PAA3	1200	0.05	DM-1200	DM-600	DMW-720PV	300	100	38.5





## Characteristics

1. High Altitude: Ultimate Vacuum 0.1PA-0.01PA
2. Pumping speed: Pumping capacity 70L/S-20000L/S
3. Power: 5.5KW-180KW
4. Because the main pump and the fore stage pump are oil-free dry vacuum pumps, there is no waste water and oil discharge and no pollution to the environment.
5. Both Roots pump chamber and screw pump chamber can be nickel-plated and PTFE-coated, which can pump out a large amount of water vapour and many kinds of corrosive media.
6. There is no oil in the pump chamber, no pollution to the pumped system, and clean vacuum can be obtained.
7. The oil-free pump chamber makes solvent recovery very easy.

## Application Fields



Semiconductor Industry



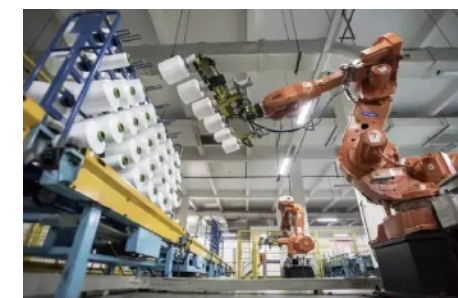
Pharmaceutical industry



Paper industry



Chemical industry

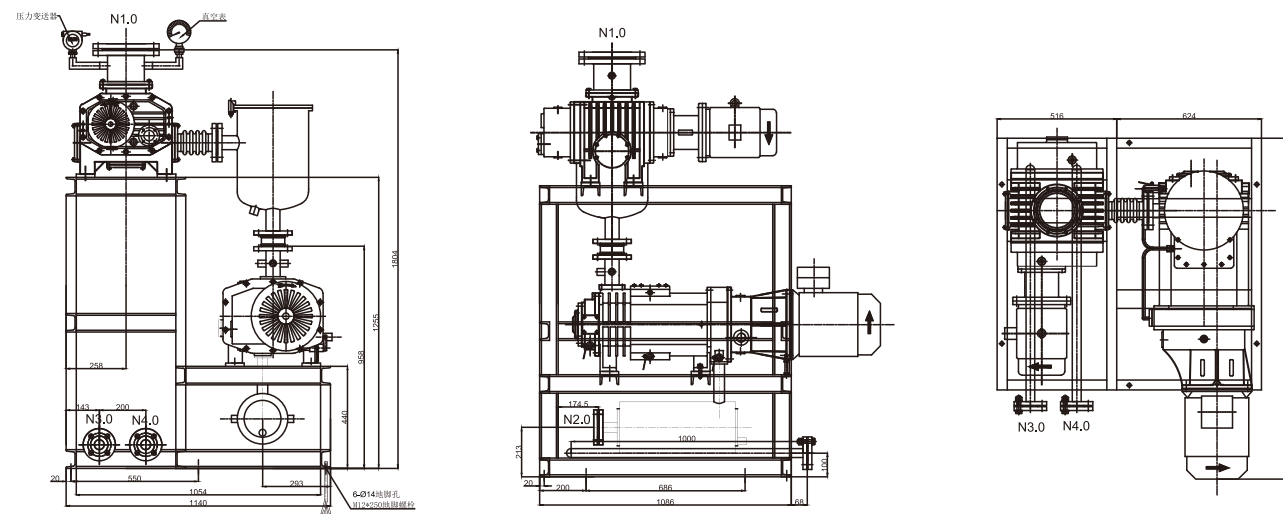


Textile Industry



Metallurgy

## Installation diagram





# DKV-XSeries

## Rotary Vane Skid Mounted Vacuum Unit

- 1 . Simple structure
- The rotary vane vacuum pump consists of motor, rotating shaft, rotating impeller, static vane and front and back cover plate, etc. The structure is simple and easy to install, maintain and operate. Compared with compared with other types of vacuum pumps, rotary vane vacuum pump is small in size and light in weight, has high mechanical strength and rigidity, and runs stably and reliably.
- 2 . Low noise level
- The noise of rotary vane vacuum pump is lower than other types of vacuum pumps. When it operates, there is almost no friction and impact between the rotor and static vane surfaces, which makes it less noisy and suitable for some noise-restricted environments, such as medical treatment and laboratories.
- 3 . Easy maintenance
- The construction of rotary vane vacuum pump is simple and easy to maintain. Its core parts are rotary impeller and static vane, which can be replaced at any time with short maintenance period. In addition, the rotary vane vacuum pump has a low cooling water requirement and only requires a fixed flow rate, resulting in low use and maintenance costs.
- 4 . Long service life
- Rotary vane vacuum pumps have a long service life. The rotary impeller and static vanes are made of high quality materials with good wear and corrosion resistance. These advantages ensure that the rotary vane vacuum pump has a long service life. ensure the long service life of rotary vane vacuum pump and high economic benefits.



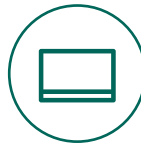
Stable operation



Low noise design



Easy installation

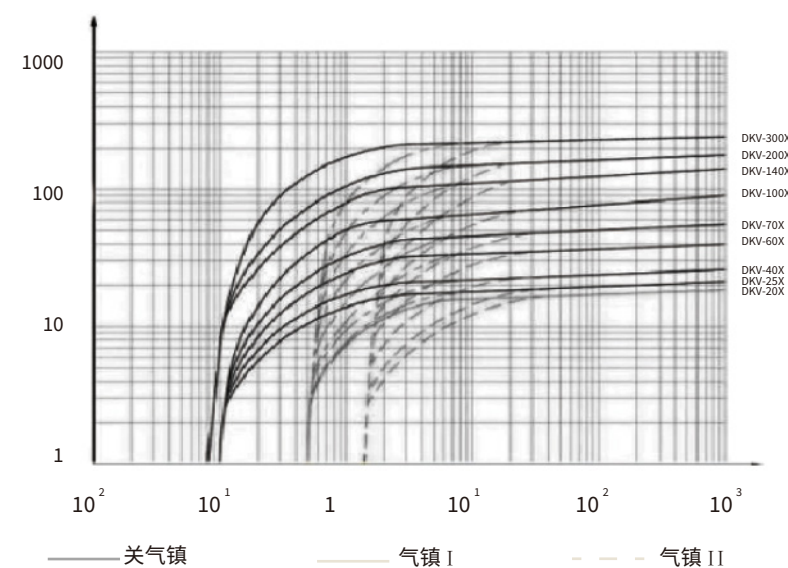


IOT system

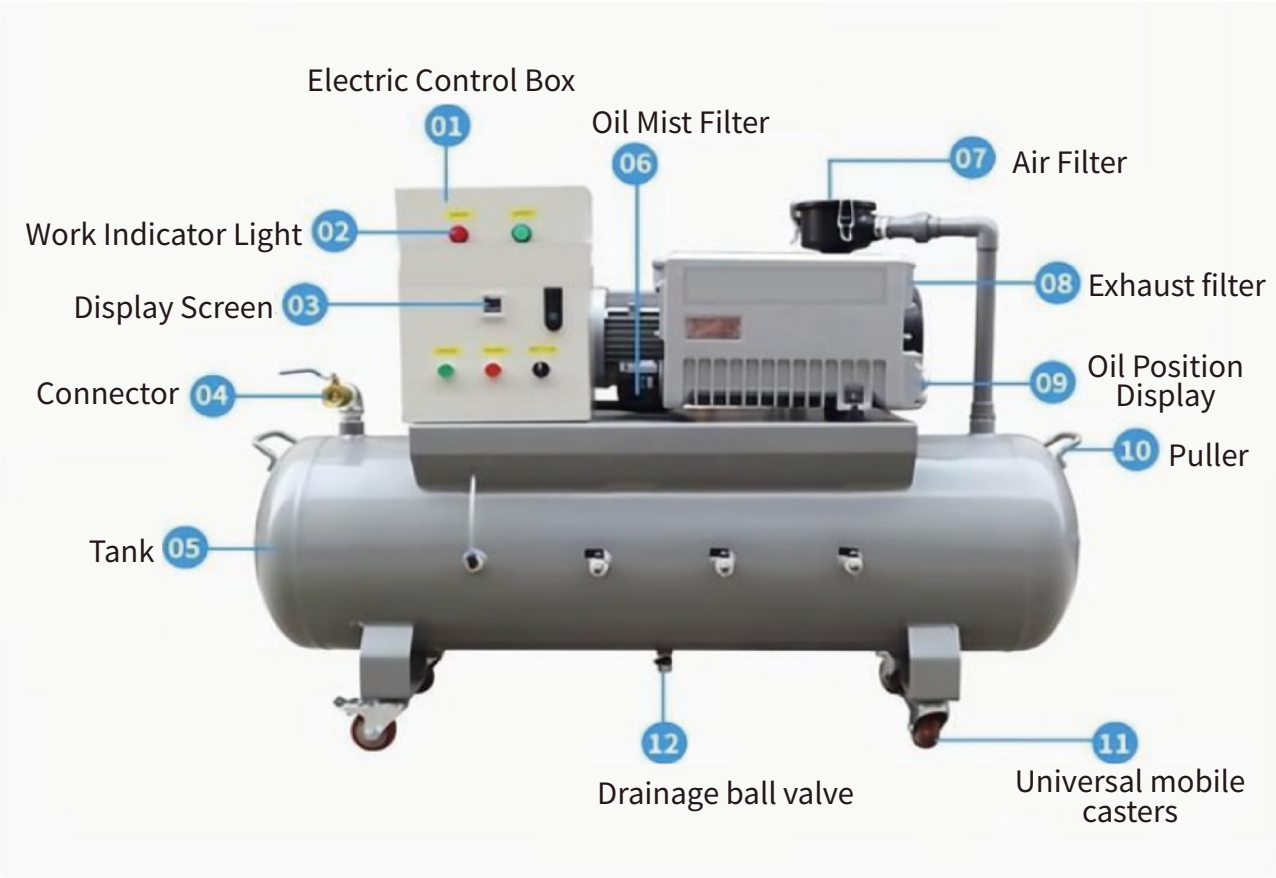
Model NO.	Rotation Speed (rmp)	Voltage(V)	Pumping Speed (m3/h)	Extreme Pressure (kpa)	quantity of gasoline (L)	Power (W)	Air Input Pipe Diameter	Exterior Dimensions (L×W×H)
DKV-20X	2800r/min	220V	20m³/h	-100	0.5L	900	G1/2"	68*33*71cm
DKV-25X	2800r/min	220V	25m³/h	-100	0.5L	750	G1/2"	58.5*37*75cm
DKV-40X	1400r/min	380V	40m³/h	-100	1.5L	1500	G1-1/4"	133*34*85cm
DKV-60X	1440r/min	380V	63m³/h	-100	1.5L	1500	G1-1/4"	133*34*89cm
DKV-70X	1440r/min	380V	70m³/h	-100	2.5L	2200	G1-1/4"	152*40*100cm
DKV-100X	1440r/min	380V	100m³/h	-100	2.5L	3090	G1-1/4"	152*40*100cm
DKV-140X	1440r/min	380V	140m³/h	-100	5L	3500	G1-1/2"	170*53*121cm
DKV-200X	1440r/min	380V	202m³/h	-100	6L	4500	G2	170*53*143cm
DKV-300X	1440r/min	380V	302m³/h	-100	8L	7500	G2	170*53*143cm



Pumping Speed Curve



parts analysis



Scope of Application.

- 1. Gas type: clean dry air at room temperature without other mixtures, no air containing other dust and moisture is allowed.
- 2. Work requirements: Inlet pressure greater than 6500Pa continuous working time, not more than 3 minutes to avoid oil spray caused by pump damage.
- 3. Work requirements: Inlet pressure is less than 1330pa, long time continuous work is allowed.
- 4. Ambient Temperature: The vacuum pump should be used in a room temperature of not less than 5°C and a relative humidity of not more than 90%.

Fields of application



Vacuum metallurgy: used for smelting, purifying and refining metals and alloys in a vacuum, etc.



Medical devices: used for manufacturing and repairing medical equipment and tools, such as vacuum blood collection tubes, vacuum surgical instruments, etc.



Scientific research institutions: for conducting scientific research and experiments, such as physics, chemistry, materials science, etc.



Industrial and mining enterprises: for production and work, such as manufacturing, maintenance, testing, etc.

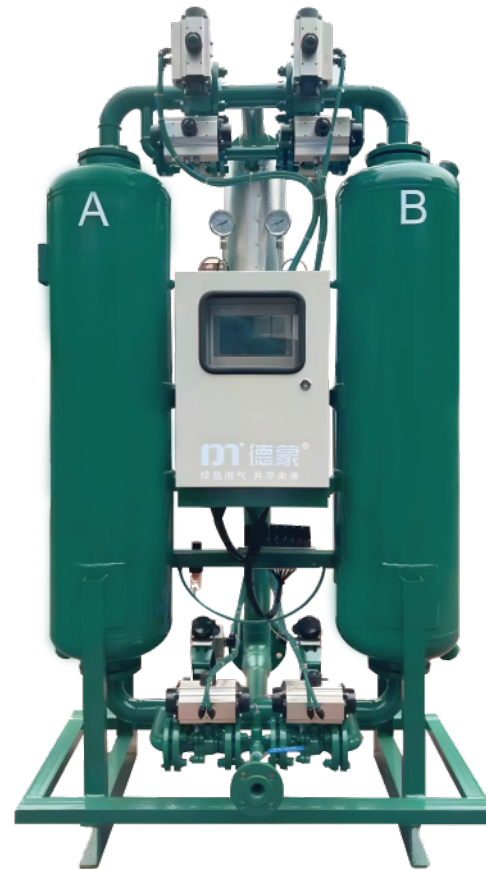


## DMW-ZK Series Microthermal vacuum adsorber

Specially designed for acidic gas corrosion of dry vacuum pumps, a variety of gas adsorption processing capacity, cyclic regeneration, to solve the corrosion of vacuum pumps and the serious pollution of exhaust gas and other issues. It extends the service life of the equipment and improves the vacuum degree.

### Adsorption gas types:

Water, Ammonia, Hydrogen, Helium, Hydrogen Sulfide, Carbon Dioxide, Manganese Hydroxide, EtSH, MeSH, Acetylene, COS, Methane, Nitrogen, Carbon Monoxide, Oxygen, Ethyl Alcohol, Ethane, Propane, Propylene, Olefins, Alkanes, Benzene, Toluene.



### Scope of application:

In high vacuum condition, to slow down the corrosion of corrosive gases on the vacuum pump and to reduce the environmental protection index.

### Sustainability:

Extremely long adsorption cycle and short regeneration cycle to maintain high adsorption capacity for a long time.

### Safety:

automatic start-up, automatic switching of adsorption and regeneration, autonomous regeneration to the initial state, various emergency plans, automatic stop

### Low pressure loss:

measured pressure loss less than 300PA.

## DM-F Series Gas-water separator

Used in low vacuum with high water content, suitable for CNC machining centers, food vacuum equipment, packaging equipment, printing machine, hospital centralized system, plastic finishing machine, wood processing, paper industry (de-watering), etc.



### Work of the gas-liquid separator:

The manual valve above the equalizing valve and the equalizing valve are used to regulate the vacuum fluctuations of the switching after draining and to provide a stable vacuum for the user's vacuum system.

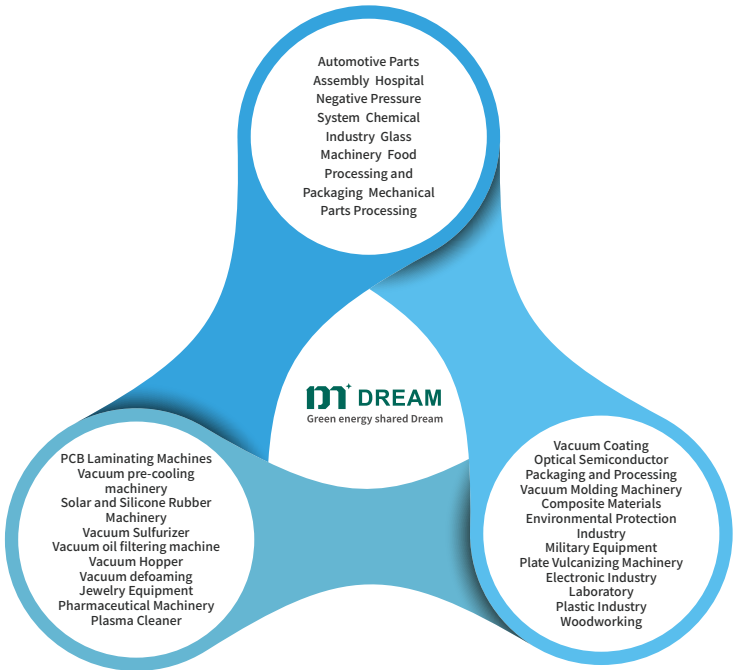
① Working sequence: equalizing ---- collecting ---- pressurizing ---- discharging, cycling.

② Valve adjustment: first close the valve by half, observe for one cycle to see the fluctuation of vacuum meter during switching, gradually adjust to the state of minimum fluctuation, and adjust the time of pressure equalization at the same time.

③ Reducing the number of discharges: The number of discharges can be reduced by extending the collection time.

Product Application Fields

The application fields of vacuum system are very wide, and have penetrated into aerospace, vehicles, civil engineering, machinery, packaging, environmental protection, medicine and medical equipment, petroleum, chemical industry, food, optics, electricity, electronics, atomic energy, semiconductor, cryogenic, professional machinery, textile, paper, civil industry and military industry. Environmental protection, medicine and medical equipment, petroleum, chemical, food, optical, electrical, electronic, atomic energy, semiconductor, cryogenic, professional machinery, textile, paper, civil industry and military industry. With years of in-depth research in the vacuum field and unique insights into the application of vacuum processes, the team of Dermont can customize the best vacuum system solutions according to the customer's process.



Intelligent Controls

Rustproof Housing

High Efficiency and Energy Saving

Constant current and voltage stabilization

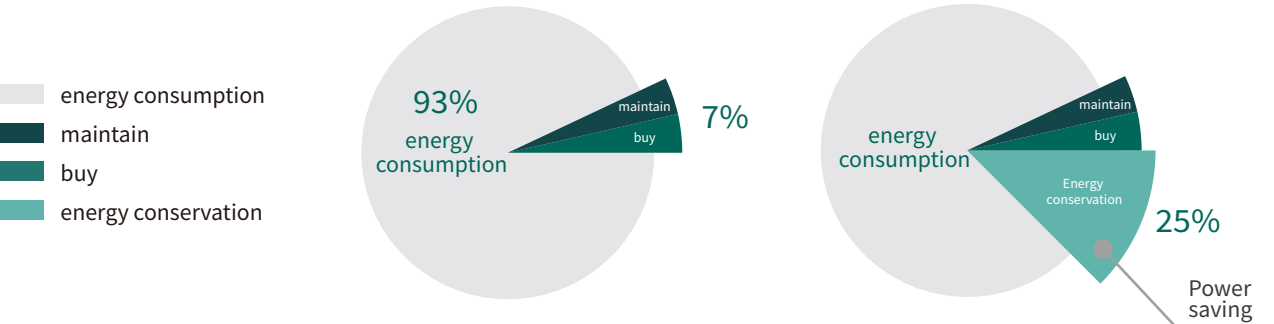
easy to use and worry-free

Noise reduction

Energy saving and cost reduction

When purchasing vacuum pumps, the traditional cost (that is, purchase cost + maintenance cost) accounts for only 7% of the total cost, while energy consumption accounts for 93%.

— aking 11KW as an example



Water ring vacuum pump



Dream vacuum pump



Dream 11KW vacuum pump  
It saves about 25% of electricity a year

Intelligent control technology

cloud intelligent control three functions and value

- Digital Station**

Intelligent control: 10-30% reduction in O&M costs

  - 3D virtual vacuum pump
  - Data dynamic monitoring
  - Workshop diagnostic reports
  - Failure online warning
  - Maintenance interval reminder
- Intelligent control**

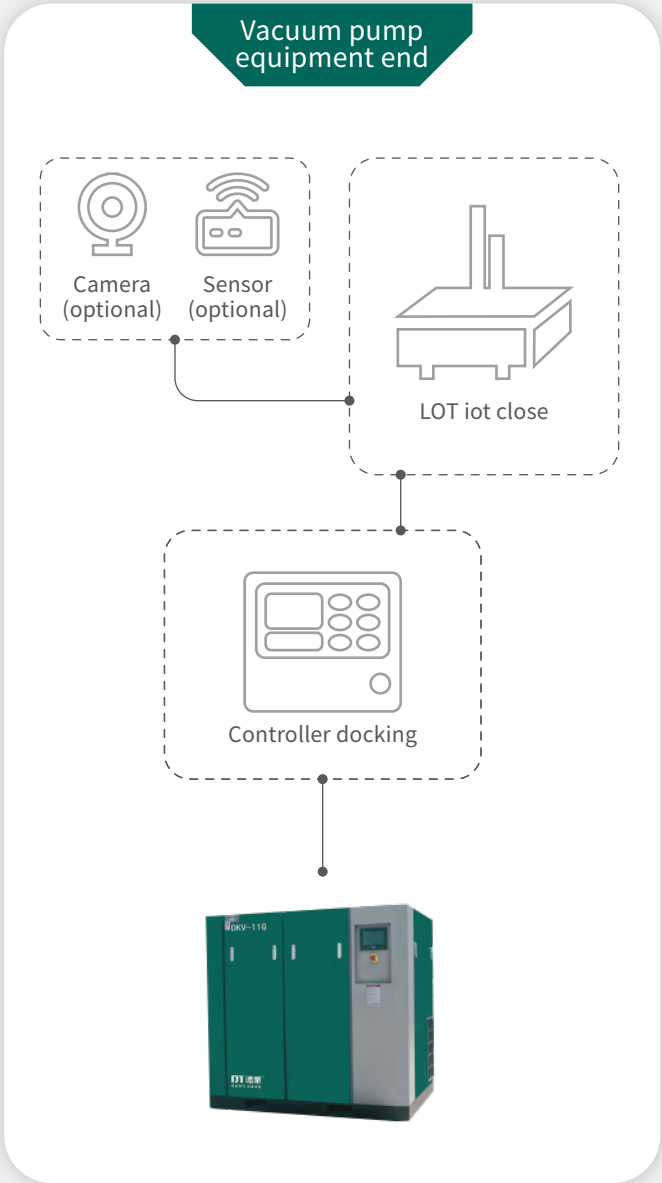
Intelligent machine adjustment: reduce manual labor time  $\geq 50\%$ .

  - Vacuum pump automatic control
  - AI algorithm autonomous parameterization
  - Dynamic decision making for equipment prioritization
  - Intelligent control of ancillary equipment
- Whole station energy saving**

Whole station energy saving

save the power consumption of 5-30%

  - edge computing technology
  - narrow band constant voltage technology
  - multi-parameter and multi
  - constraint control algorithm
  - big data visualization technology



Digital station house

Station monitoring + control (computer side)  
Vacuum pump, fan, electric meter, etc

Intelligent monitoring technology

Based on the "Internet of Things" intelligent control technology, the product has the ability to transport parameters through cloud technology, and our users can achieve it through computers or mobile phone apps.

