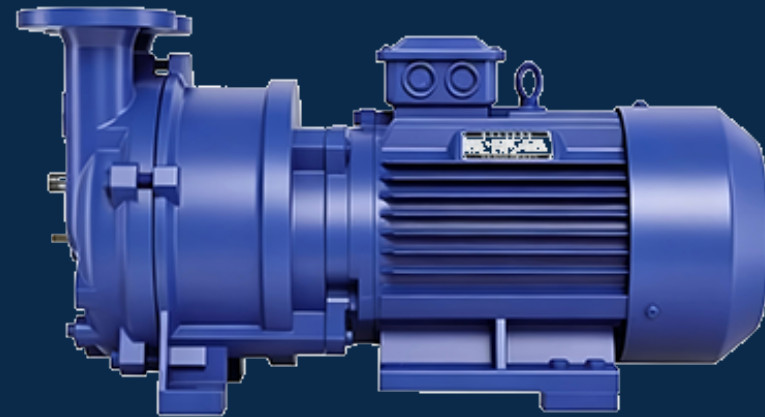


ULPMAT

WATER RING VACUUM PUMPS

SKA (2BV) Series · 2SK Series · SK Series

Reliable, safe and efficient vacuum solutions for industrial process applications.



About ULPMAT

UltraPurMat Group Co., Ltd (ULPMAT) is an integrated R&D, manufacturing and sales company specializing in high-purity thin-film deposition materials and advanced inorganic powders. Extending our expertise in vacuum and PVD process environments, ULPMAT now offers a complete range of industrial water ring vacuum pumps engineered for demanding process applications.

Isothermal compression

Gas is compressed at near-constant temperature, making the pump inherently safe for flammable and explosive gases.

Water as working fluid

Low maintenance cost; tolerates moisture, condensable vapour and small amounts of dust or liquid carry-over.

Simple, robust design

Only the impeller rotates; no sliding friction parts inside the working chamber.

Wide application range

Vacuum evaporation, concentration, drying, impregnation, degassing and smelting across food, textile, chemical, pharmaceutical, metallurgy and electronics industries.

Product Series Overview

Series	Type	Ultimate Vacuum	Capacity Range	Key Features
SKA (2BV)	Single-stage, direct-coupled	-0.098 MPa	27 – 500 m³/h	Compact, mechanical seal, low noise (from 62 dB)
2SK	Two-stage (high vacuum)	-0.098 MPa (–0.099 w/ jet pump)	1.5 – 30 m³/min	High pumping speed in deep-vacuum zone
SK	Direct-coupled, pump & compressor	-0.093 MPa	1.5 – 120 m³/min	Sucks or pressurizes; safe for flammable gas

Note: Performance data are obtained under standard conditions (atmospheric pressure 1013 mbar, water temperature 15 °C, air temperature 20 °C, relative humidity 70%, tolerance ±10%).

SKA (2BV) Series — Single-Stage Water Ring Vacuum Pump

Direct-coupled, compact design for small to medium flow

The SKA (2BV) series is a single-stage, direct-coupled water ring vacuum pump built for continuous-duty vacuum service. The coaxial pump-and-motor design saves space and simplifies installation. A unique flexible exhaust port prevents over-compression, keeping the pump operating at optimum efficiency.

Features & Benefits

- Standard mechanical seal — leak-free, low maintenance
- Smooth and quiet running — noise as low as 62 dB(A)
- Bronze impeller as standard; stainless steel option available
- Compact footprint — direct coupling saves installation space
- Flexible exhaust port — prevents over-compression, maximizes efficiency

Key Specifications

Model	Max. Air Volume (m³/h)	Ultimate Vacuum (MPa)	Power (kW)	Speed (r/min)	Noise dB(A)	Weight (kg)
SKA(2BV)-2060	27	-0.098	0.81	2880	62	30
SKA(2BV)-2061	52	-0.098	1.45	2880	65	32
SKA(2BV)-2070	80	-0.098	2.35	2880	66	48
SKA(2BV)-2071	110	-0.098	3.85	2880	72	56
SKA(2BV)-5110	165	-0.098	4.0	1450	63	88
SKA(2BV)-5111	230	-0.098	5.5	1450	68	100
SKA(2BV)-5121	280	-0.098	7.5	1450	69	120
SKA(2BV)-5131	400	-0.098	11	1450	73	164
SKA(2BV)-5161	500	-0.098	15	970	74	276

Applications: vacuum evaporation, vacuum concentration, vacuum drying, vacuum impregnation, vacuum filtering and general process vacuum.

2SK Series — Two-Stage Water Ring Vacuum Pump

High-vacuum performance with large pumping speed in the deep-vacuum zone

The 2SK series is a two-stage water ring vacuum pump that delivers a higher ultimate vacuum than single-stage designs, with high pumping speed in the deep-vacuum zone. For even deeper vacuum, the 2SK-P1 series combines the pump with an atmospheric jet pump unit, reaching -0.099 MPa.

Features & Benefits

- High ultimate vacuum and large pumping speed in the deep-vacuum zone
- Compact structure, reliable operation and convenient maintenance
- Handles vapour, moisture, small dust and small liquid carry-over
- Water as working fluid — minimal maintenance cost
- Reliable performance even in harsh operating environments

Key Specifications

Model	Suction Volume (m ³ /min)	Ultimate Vacuum (MPa)	Power (kW)	Speed (r/min)	Water (L/min)	In/Out (mm)	Weight (kg)
2SK-1.5	1.5	-0.098	4	1440	10–15	40 / 40	230
2SK-3	3	-0.098	7.5	1440	15–20	40 / 40	320
2SK-6	6	-0.098	15	1460	25–35	50 / 50	500
2SK-12	12	-0.098	22	970	40–50	100 / 100	800
2SK-20	20	-0.098	37	740	60–80	125 / 125	1750

2SK-P1 atmospheric jet pump units: 2SK-0.4P1, 2SK-0.8P1, 2SK-1.5P1, 2SK-3P1, 2SK-6P1, 2SK-12P1, 2SK-20P1 — ultimate vacuum up to -0.099 MPa.

SK Series — Water Ring Vacuum Pump & Compressor

Direct-coupled, dual function: suction or compression

The SK series is a direct-coupled water ring machine designed to operate as both a vacuum pump and a compressor. Its compression process operates under near-isothermal conditions, making the series particularly suitable for applications involving flammable or explosive gases. The complete system consists of the pump, coupling, motor, gas-water separator and piping. An automatic overflow switch is used to control the working-water level.

Features & Benefits

- Dual-function operation — vacuum pumping and gas compression in one machine
- Near-isothermal compression for applications involving flammable and explosive gases
- Can tolerate small quantities of liquid mixed with the gas stream
- Integrated gas-water separator supports working-water recirculation
- Direct-coupled construction
- Wide capacity range from 1.5 to 120 m³/min
- Suitable for continuous industrial vacuum and compression service

Key Specifications

Model	Max. Air Volume (m ³ /min)	Ultimate Vacuum (MPa)	Compressor Pressure (MPa)	Power (kW)	Speed (r/min)	In/Out (mm)
SK-1.5	1.5	-0.091	0–1	3	1450	70 / 70
SK-3	3	-0.093	0–1	5.5	1450	70 / 70
SK-6	6	-0.093	0–1	11	970	80 / 80
SK-9	9	-0.093	0–1	15	970	80 / 80
SK-12	12	-0.093	0–1	18.5	970	80 / 80
SK-15	15	-0.093	0–1	30	970	80 / 80
SK-20	20	-0.093	0–1	37	740	150 / 150
SK-30	30	-0.093	0–1	55	740	150 / 150
SK-42	42	-0.093	–	75	740	150 / 150
SK-60	60	-0.093	–	95	590	250 / 250
SK-85	85	-0.093	–	132	590	250 / 250
SK-120	120	-0.093	–	185	590	300 / 300

Applications: machinery, petroleum, chemical, pharmaceutical, ceramics, sugar, printing & dyeing, metallurgy and electronics industries.

Contact Us

For quotations, technical consultation or customization, our team is ready to help.

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ULPMAT — Advancing vacuum and PVD process technology with high-purity materials and reliable equipment.

