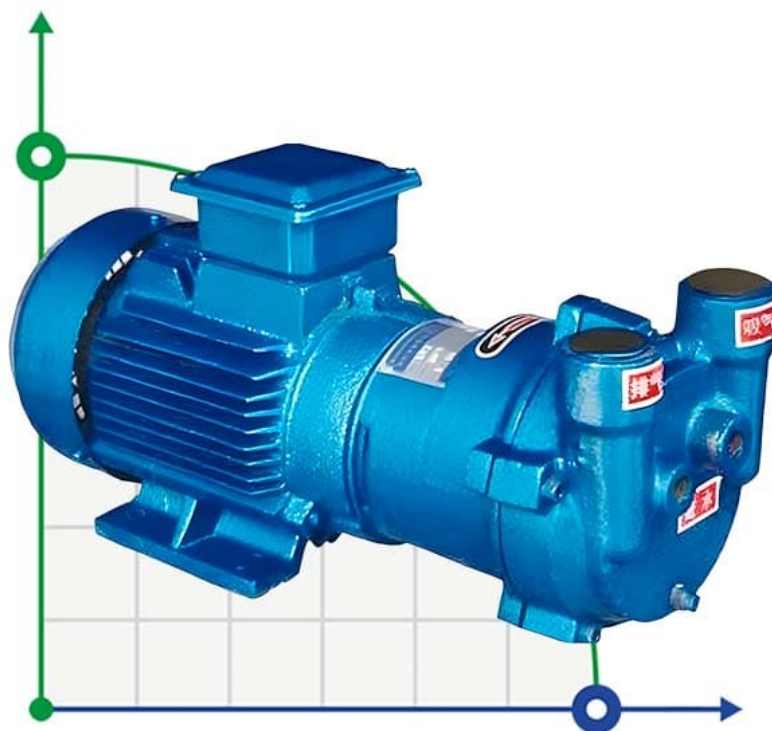


<https://prom-nasos.pro>
<https://bts.net.ua>
<https://prom-nasos.com.ua>
+38 095 656-37-57,
+38 067 360-71-01,
+38 063 362-12-31,
info@prom-nasos.pro



Catalog 2BV series water ring vacuum pumps

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2BV series water ring vacuum pumps

2BV series can be used to pumping air and steam. The suction absolute pressure can reach 33mbar (vacuum degree 97%). When the vacuum pump always works in the condition that the gas pressure is below 80mbar, cavitation protection tube is supposed to be linked. If air ejector is equipped, the suction pressure can reach 10mbar. The ejector can be installed directly on the pump. Worked as a compressor, 2BVA's highest pressure can reach 0.26Mpa (absolute pressure).

Water ring vacuum pumps and compressors are widely used in petrochemical engineering, medicine, food, sugar industry and other areas. In the gas compression processes, the temperature is constant, so this series, which should be used more widely, can be more safe when pumping explosion hazard gases.

Usage and characteristics

With coaxial direct design, pumps become space-saving and easy to install.

Using mechanical seal as normal technology, avoiding revealing, it is easy to repair and reliable when operating, with noise below 62DB.

With corrosion resistance to uniform design, bronze impellers and stainless steel material, pumps are resistant to corrosion.

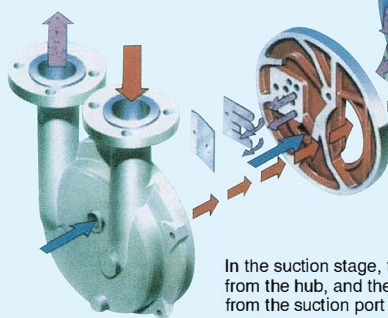
With special flexibility exhaust port design, avoiding overcompression, 2BVA can reach the best efficiency in the performance range.



Decomposition structure diagram

The impeller, the only rotating component installed eccentrically with the pump body, rotates to form a liquid ring in the elliptical pump body. The working fluid acts as sealing medium, compressing medium and cooling medium at the same time. No wear, no lubrication.

During the exhaust phase, the liquid ring gradually approached the hub and discharged the pumping medium from the outlet along the axis.

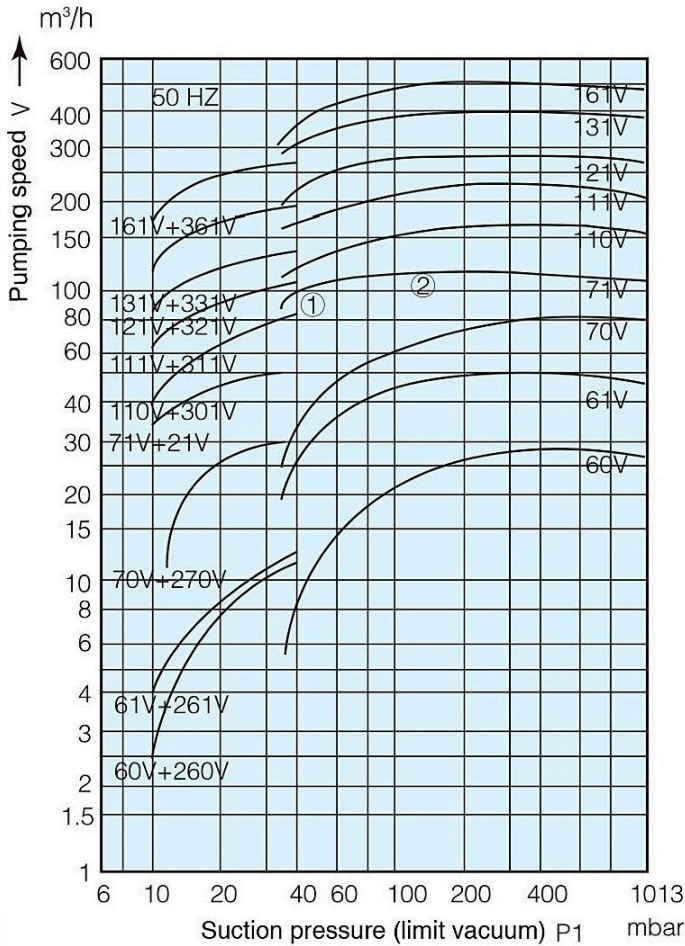


Because the impeller is eccentric relative to the rotating liquid ring, the liquid reciprocates in the space between the blades, just as the piston moves in the cylinder - sucking and compressing the pumping medium.

In the suction stage, the liquid ring is gradually away from the hub, and the pumping medium is sucked from the suction port along the axis.

Continuous injection of working fluid is used to compensate for the liquid taken away by the exhausted gas.

Performance curve



Example of selection

1. Design parameter points

Inspiratory capacity: $V=100\text{m}^3/\text{h}$

Inhalation pressure plus $P1 = 40\text{mbar}$.

2. The remaining parameters are in the same standard state (see note) Selection and design of the nearest curve at point 1.

3. This example is 71V.

According to the curve number, the corresponding product type (i.e. order number, but only standard type) can be found. For example, the pump type which can be checked from the curve chart is 2BV-2071.

Note: The performance curve is obtained under the condition of saturated air with 20 °C inhalation medium, 15 °C working fluid temperature and 1013 mbar exhaust pressure. Performance allowed 10% of the difference. On the left side of the figure is the performance curve of the air ejector.

2BV Series Main Technical Parameters

Curve num	Model	Power (kw)	Pumping speed		Limit vacuum		Speed (r.p.m)	Fluid-flow (L/min)	Noise dB(A)	Weight (kg)
			m³/min	m³/h	Pa	-Mpa				
60V	2BV2060	0.81	0.45	27	3300	0.098	2880	2	62	35
61V	2BV2061	1.45	0.86	52	3300	0.098	2880	2	65	37
70V	2BV2070	2.35	1.33	80	3300	0.098	2850	2.5	66	56
71V	2BV2071	3.85	1.83	110	3300	0.098	2860	4.2	72	65
110V	2BV5110	4	2.75	165	3300	0.098	1450	6.7	63	106
111V	2BV5111	5.5	3.83	230	3300	0.098	1450	8.3	68	125
121V	2BV5121	7.5	4.66	280	3300	0.098	1450	10	69	150
131V	2BV5131	11	6.66	400	3300	0.098	1450	15	73	195
161V	2BV5161	15	8.33	500	3300	0.098	970	20	74	330
110V	2BV6110	4	2.75	165	3300	0.098	1450	6.7	63	167
111V	2BV6111	5.5	3.83	230	3300	0.098	1450	8.3	68	207
121V	2BV6121	7.5	4.66	280	3300	0.098	1450	10	69	268
131V	2BV6131	11	6.66	400	3300	0.098	1450	15	73	324
161V	2BV6161	15	8.33	500	3300	0.098	970	20	74	460

1. The data is listed in the table in the condition that air temperature of 20°C, the water temperature of 15°C, exhaust pressure 1013 hpa, suction medium for saturated air.

2. 2BV6 Series is Explosion-proof Products