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Leading in Excellence and Innovativeness

Siemens Copy

2BVC

2BEA

2BEC *series*

Liquid Ring Vacuum Pump

Liquid ring vacuum pumps

These Liquid ring vacuum pumps is the professional replacement for Siemens liquid ring vacuum pump and compressor. All our pumps are interchangeable withSiemens both in dimension and performance. Most our client are using our pump toreplace their existed Siemens and Nash pump. Some clients are also buying our spareparts for original Siemens pump repair.

The company has its own professional technical center,advanced equipment, foundry and machining workshop, assembling workshop and test center.Assure our products high quality, the company carry out 100% performance testing for allorders. Our strict quality control system and process guarantee that our products are producedaccording to the highest industrial standards, include casting material inspection, castingdimension inspection, welded part material inspection, dye penetrant inspection for welded
parts, machining dimension inspection, balance testing for rotor, hydraulic pressure testing for casing and cover, dimension inspection for all finished parts before assembling.

Due to our high quality and competitive price, our pump are widely used for original Siemens and Nash pump replacement in Mining industry, Electric power industry, petro chemical industry, pulp and paper industry, pharmaceutical industry, environment industry, food and beverage industry, Marine industry and other general industry process.

Our experienced and knowledgeable staff is dedicated to providing high quality products and after sales supports. Welcome clients to contact us and establish business relation ship.

Production range of Liquid ring vacuum pumps as follows:

1. 2BV Series Vacuum Pump and Compressor

2. 2BE1 Series Vacuum Pump and Compressor

3. 2BE3 Series Vacuum Pump and Compressor

4. Vacuum System according to clients detailed requirement.

2BV series Liquid Ring Vacuum Pumps

Summary

2BV series liquid ring vacuum pumps are suitable for pumping the gases and steam. Its suction pressure can reach 33mbar (abs) (i.e. 97 % vacuum degree). If the transformer oil is used as the operating liquid, these pumps are called oil ring vacuum pump and the suction pressure can reach 6.7mbar (abs) (i.e. 99 % vacuum degree). So the oil ring vacuum pumps can replace the reciprocated vacuum pumps completely. When the liquid ring vacuum pumps work under the condition near the limited vacuum for a long time, it is necessary to couple with the cavitation protection pipe in order to get rid of the screaming and protect the pump.

When the compressor is working, the maximum pressure is 0.26MPa (abs). And the higher of discharge pressure, the larger of the power of the compressors. So it is necessary that the data of the discharge pressure is provided to choose the proper motor.

2BV2-Ex, 2BV6 series water ring vacuum pumps and compressors are mainly used for pumping the explosive gases or work in the flammable and explosive environment. The technical parameter of each type is the same as the corresponding type of the 2BV2 or 2BV5 series products.

2BV series stainless steel pumps can be used under the conditions with higher requirements for the corrosive-proof or the lustration.

According to the working situation, the material of all the parts where the liquid flows (i.e. pump casing, pump cover, port plate, and impeller) are made of various stainless steel as bellow:

SUS304 (0Cr18Ni9), SUS316 (0Cr17Ni12Mo2), SUS316L (00Cr17Ni14Mo2)

the material of the shaft is 2Cr13 or 0Cr18Ni12Mo2Ti

the mechanical seals are used the John Crane products and the seals material is optional for FPM or PTFE.

2BV series products possess the characteristics as bellow

- The close-coupled design is convenient to install and can save space.
- The standard seals are all used the John Crane mechanical seals.
- 2BV series products have the cavitation protection port. When they work under the condition near the limited vacuum, the cavitation protect port opens (or connects with the separator) to get rid of the screaming to protect the pump.

- Aluminum bronze impeller is of high intensity and wearing well. The erosive-proof capacity of the pump can be improved by using it. If the parts where the liquid flows are made of the stainless steel, the pumps can be used under the more rigorous condition.
- The unique design of the discharge port can protect the pump from the over-pressure to ensure the best efficient performance in the working range of the pump.
- The motors are all adopted Y2 series products. The protection class is IP54 or IP55 (normal is IP44) and the insulation grade is F.
- The bearings are all used the imported products with brand name of NTN or NSK.

The main application areas of the 2BV series products

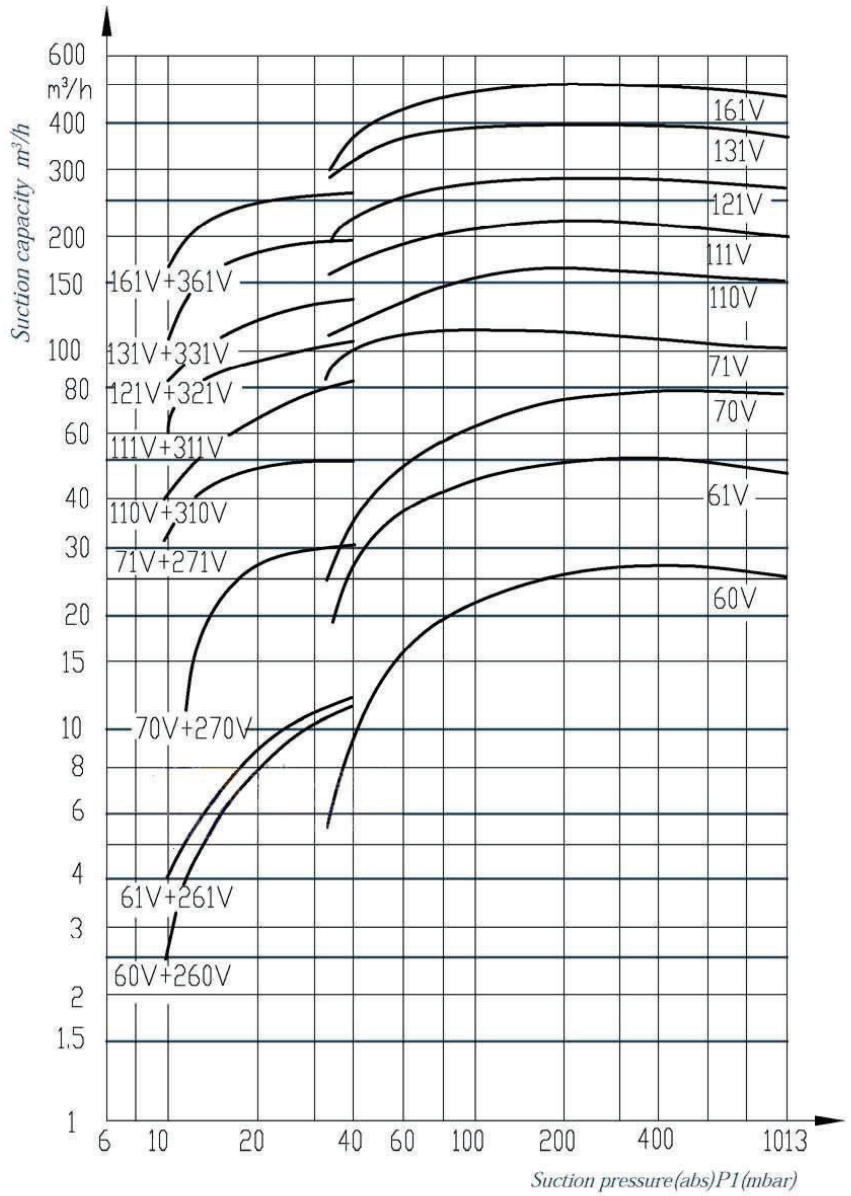
Vacuum filtering	(Chemical filtering factories, chemical processing factories, iron ore factory, mining, phosphorite, paper making, poultry processing, coal-selecting factories.)	Reclaim of the steam	(alembic, load and unload station)
		Sucking for the water pump	(waterworks)
		Water filling for the condenser	Power plant
Vacuum distillation	(milk factory, foodstuff processing, chemical industry, the paper plasma factory)	Drying	(chemical industry, pharmacy manufacture)
Vacuum disinfection	(hospital, infirmary, the laboratory)	Wood processing /dryness	
Extrusion and mold	(plastic trade)	Pharmacy/laboratory vacuum	
Molding	(Plastic, the polyethylene, rubber, tyre manufacture etc.)	Solvent reclaiming	
Soak	(Foodstuff processing, the wooden furniture processing, the textile mill, veneer, telegraph pole etc.)	The soil purifying	
		Vacuum pack	
Getting rid of the gases from the liquid	(foodstuff processing, the water softening, the bottling factory)	Extraction	
Rebirth the compressed air	(the paper plasm, iron and steel, automobile, glasses, chemical industry)	Tannery	
Foodstuff	(foodstuff factory, milk factory)	Canning	

Technology Parameter of 2BV series pumps

Type	Suction capacity m^3/min	Limited vacuum mbar(MPa)	Motor power kW	Explosive-proof grade of motor	Protection grade of motor	Pump Speed r.p.m	Liquid flowrate L/min	Noise dB(A)	Weight kg
2BV2 060	0.45	33mbar (-0.098MPa)	0.81	No	IP54	2880	2	62	31
2BV2 061	0.86		1.45			2880	2	65	35
2BV2 070	1.33		2.35			2850	2.5	66	56
2BV2 071	1.83		3.85			2860	4.2	72	65
2BV2 060-Ex	0.45		1.1	dIIBT4	IP55	2880	2	62	39
2BV2 061-Ex	0.86		1.5			2880	2	65	45
2BV2 070-Ex	1.33		3			2850	2.5	66	66
2BV2 071-Ex	1.83		4			2860	4.2	72	77
2BV5 110	2.75		4	No	IP54	1450	6.7	63	103
2BV5 111	3.83		5.5			1450	8.3	68	117
2BV5 121	4.66		7.5			1450	10	69	149
2BV5 131	6.66		11			1430	15	73	205
2BV5 161	8.33		15			970	20	74	331
2BV6 110	2.75		4	dIIBT4	IP55	1450	6.7	63	153
2BV6 111	3.83		5.5			1450	8.3	68	208
2BV6 121	4.66		7.5			1450	10	69	240
2BV6 131	6.66		11			1430	15	73	320
2BV6 161	8.33		15			970	20	74	446

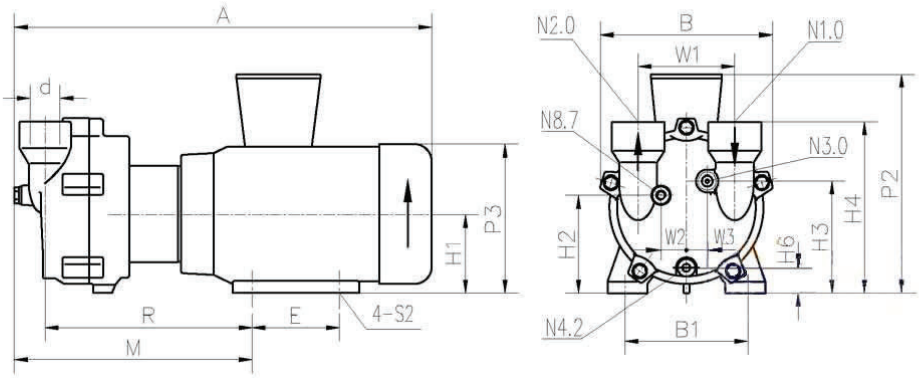
Notes: the data is obtained under the situation that the suction medium is saturation air at 20°C, the operating liquid at 15°C, and the discharge pressure is 1013mbar. The performance tolerance is 10%.

The performance curve of the 2BV series water ring vacuum pumps



Notes: the above curve is obtained under the conditions that the suction media is saturated air at 20℃, the operating liquid temperature is at 15℃ and the discharge pressure is 1013mbar.The allowance tolerance is ±10%. As the performance curve with an ejector, please refer to the left part.

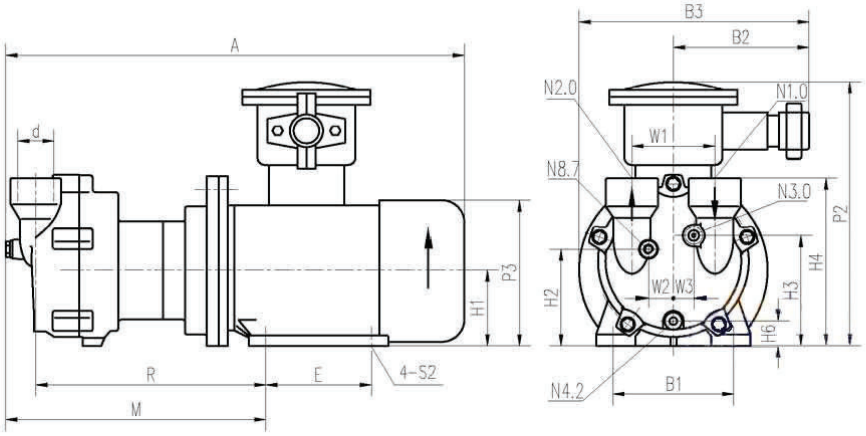
The overall dimension of the 2BV2 series water ring vacuum pumps (Unit: mm)



N1.0 Inlet N3.0 Operating liquid connection N8.7 Cavitation connection
N2.0 Outlet N4.2 Drain port

Type	A	B	B1	E	H1	H2	H3	H4	H6	M	P2
2BV2060	455	186	140	100	90	118	126	195	37.5	244	250
2BV2061	476	186	140	100	90	118	126	195	37.5	263	250
2BV2070	545	223	160	140	100	128	146	222	33	280	270
2BV2071	566	223	190	140	112	140	158	234	45	309	300
Type	P3	R	S2	W1	W2	W3	d	N3.0	N4.2	N8.7	
2BV2060	180	217	ϕ10	110	25.5	21	G1 "	G3/8"	G1/4"	G3/8"	
2BV2061	180	236	ϕ10	110	25.5	21	G1 "	G3/8"	G1/4"	G3/8"	
2BV2070	203	252	ϕ12	110	33	27	G1½"	G3/8"	G1/4"	G3/8"	
2BV2071	225	278	ϕ12	110	33	27	G1½"	G3/8"	G1/4"	G3/8"	

The overall dimension of the 2BV2-Ex water ring vacuum pumps (Unit: mm)

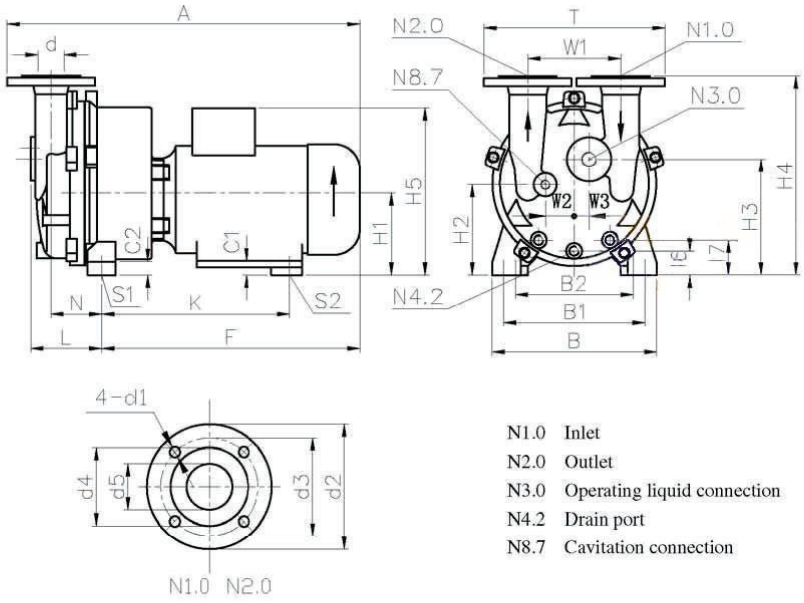


N1.0 Inlet N3.0 Operating liquid connection N8.7 Cavitation connection
N2.0 Outlet N4.2 Drain port

Type	A	B1	B2	B3	E	H1	H2	H3	H4	H6	M
2BV2060-Ex	522	125	180	280	100	80	108	116	185	27.5	282
2BV2061-Ex	555	140	180	280	100	90	118	126	195	37.5	301
2BV2070-Ex	634	160	180	305	140	100	128	146	222	33	317
2BV2071-Ex	674	190	200	325	140	112	140	158	234	45	344
Type	P2	P3	R	S2	W1	W2	W3	d	N3.0	N4.2	N8.7
2BV2060-Ex	320	165	255	ϕ10	110	25.5	21	G1 "	G3/8 "	G1/4 "	G3/8 "
2BV2061-Ex	350	180	274	ϕ10	110	25.5	21	G1 "	G3/8 "	G1/4 "	G3/8 "
2BV2070-Ex	400	205	289	ϕ12	110	33	27	G1½ "	G3/8 "	G1/4 "	G3/8 "
2BV2071-Ex	420	230	313	ϕ12	110	33	27	G1½ "	G3/8 "	G1/4 "	G3/8 "

▲ The overall dimension of the 2BV2-Ex water ring vacuum pumps (Unit: mm)

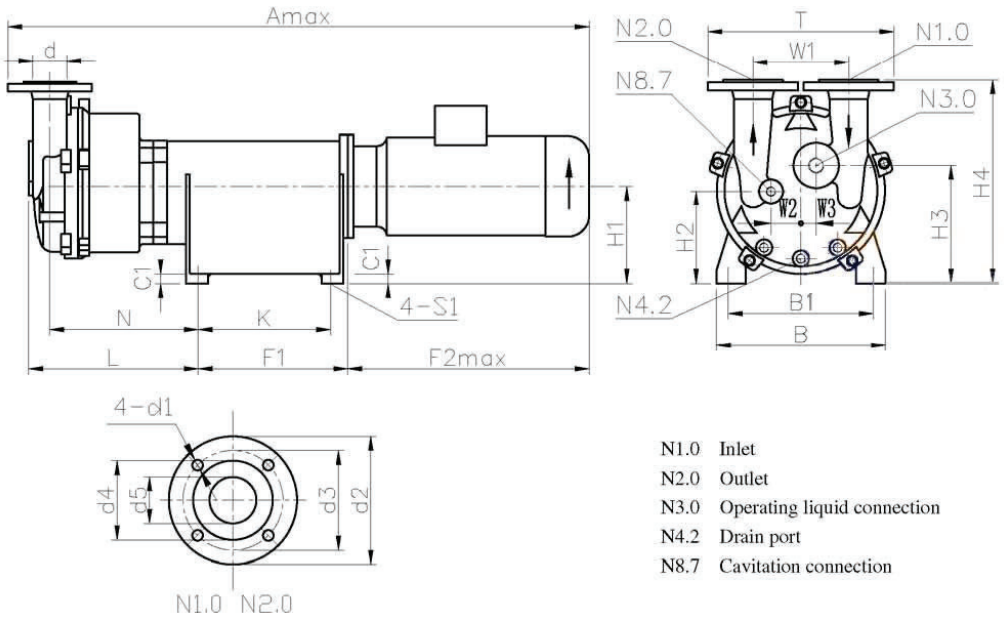
The overall dimension of the 2BV5 series water ring vacuum pumps (Unit: mm)



N1.0 Inlet
N2.0 Outlet
N3.0 Operating liquid connection
N4.2 Drain port
N8.7 Cavitation connection

Type	A	B	B1	B2	C1	C2	H1	H2	H3	H4	H5	H6	H7	K	L	F
2BV5110	637	325	255	190	41	26	140	156	202	361	328	38	57	342	130	464
2BV5111	679	325	265	216	36	26	150	166	212	371	363	48	68	348	130	500
2BV5121	771	347	265	216	36	26	150	167	217	385	363	39	60	430	147	584
2BV5131	852	377	300	254	35	30	175	194	249	427	435	53	76	477.5	147	658.5
2BV5161	1044	479	370	279	30	30	210	225	303	521	485	51	80	565	201	808
Type	N	S1	S2	T	d1	d2	d3	d4	d5	W1	W2	W3	d	N3.0	N4.2	N8.7
2BV5110	92	ϕ12	ϕ12	340	19	160	123	97	52	180	52	27	DN50	G3/4"	G3/8"	G3/8"
2BV5111	92	ϕ12	ϕ12	340	19	160	123	97	52	180	52	27	DN50	G3/4"	G3/8"	G3/8"
2BV5121	97	ϕ12	ϕ12	381.5	19	182	142	113	66.5	200	57	29	DN65	G3/4"	G3/8"	G3/8"
2BV5131	103	ϕ15	ϕ15	381.5	19	182	142	113	66.5	200	57	29	DN65	G3/4"	G3/8"	G3/8"
2BV5161	138	ϕ15	ϕ15	450	22	200	156	130	80	250	81	41	DN80	G3/4"	G3/8"	G3/8"

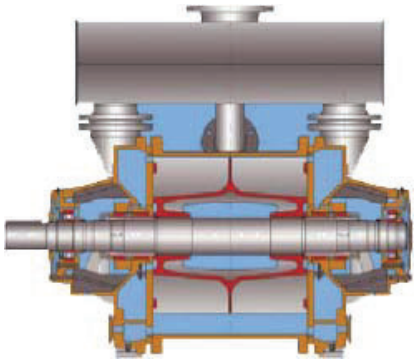
The overall dimension of the 2BV6 water ring vacuum pumps (Unit: mm)



N1.0 Inlet
N2.0 Outlet
N3.0 Operating liquid connection
N4.2 Drain port
N8.7 Cavitation connection

Type	Amax	B	B1	C1	F1	F2max	H1	H2	H3	H4	K	L	N	W1
2BV6110	1190	325	255	26	291	450	160	173	223	381	250	319	281	180
2BV6111	1237	325	279	26	360	470	180	196	242	401	320	365	327	180
2BV6121	1368	347	279	26	360	575	180	197	247	415	320	384	342	200
2BV6131	1495	377	320	26	461	585	215	234	287	467	414	405	357	200
2BV6161	1625	479	320	26	461	640	215	230	310	526	414	480	416	250
Type	W2	W3	S1	T	d1	d2	d3	d4	d5	d	N3.0	N4.2	N8.7	
2BV6110	52	27	ϕ13	340	19	160	123	97	52	DN50	G3/4 "	G3/8 "	G3/8 "	
2BV6111	52	27	ϕ13	340	19	160	123	97	52	DN50	G3/4 "	G3/8 "	G3/8 "	
2BV6121	57	29	ϕ13	381.5	19	182	142	113	66.5	DN65	G3/4 "	G3/8 "	G3/8 "	
2BV6131	57	29	ϕ15	381.5	19	182	142	113	66.5	DN65	G3/4 "	G3/8 "	G3/8 "	
2BV6161	81	41	ϕ15	450	22	200	156	130	80	DN80	G3/4 "	G3/8 "	G3/8 "	

2BE1 series Liquid Ring Vacuum Pumps



Application scope and characteristics:

2BE1 series liquid ring vacuum pumps and compressors are the products with high efficiency and economic power, which are manufactured by our company integrating with the advanced technology of the imported products from Germany.

These series products adopt single stage and single action structure and have many advantages, such as, compact structure, convenient maintenance, reliable running, high efficiency and economic power.

The main characteristics of 2BE1 series products:

All the bearings are the imported products with the brand name of NSK or NTN for ensuring the precise orientation and the high stability during the working of the pump.

The material of the impeller is QT400 nodular iron or stainless steel for ensuring the stability when the pump works under the rigorous condition and can extend the lifetime of the pump.

The casing is made of steel or stainless steel plates to extend the lifetime of the 2BE1 series pumps.

The shaft bushing is made of stainless steel to improve the lifetime of the pump 5 times than the normal material.

The V-belt pulley (when the pump is driven by the belt) is used the high precise pulley with taper bushing to keep the reliability of the pump and extend its life. And it is also easy to mantle and dismantle.

The coupling is used to drive the pump directly. The flexible part connecting the two half coupling is made of polyurethane that makes the pump more reliable.

The unique design to set the separator above the pump saves the space and decreases the noise efficiently.

All the parts are cast by the resin sands that make the pump surface very smooth. It is not necessary to cover the surface of the pumps with putty and gives out the heat efficiently.

The mechanical seals (optional) are used the imported products to avoid the leakage when the pump works for a long time.

2BE1series vacuum pumps technology preferences

Type	Speed (Drive type)	Shaft power	Motor power	Motor type	Limited vacuum	Suction capacity	Weight (Whole set)

	r/min	kW	kW		mbar	m^3/h	m^3/min	kg
2BE1 151-0	1450(D)	10.8	15	Y160L-4	33mbar (-0.098MPa)	405	6.8	469
	1100(V)	7.2	11	Y160M-4		300	5.0	428
	1300(V)	9.2	11	Y160M-4		360	6.0	444
	1625(V)	13.2	15	Y160L-4		445	7.4	469
	1750(V)	14.8	18.5	Y180M-4		470	7.8	503
2BE1 152-0	1450(D)	12.5	15	Y160L-4	33mbar (-0.098MPa)	465	7.8	481
	1100(V)	8.3	11	Y160M-4		340	5.7	437
	1300(V)	10.5	15	Y160L-4		415	6.9	481
	1625(V)	15.0	18.5	Y180M-4		510	8.5	515
	1750(V)	17.2	22	Y180L-4		535	8.9	533
2BE1 153-0	1450(D)	16.3	18.5	Y180M-4	33mbar (-0.098MPa)	600	10.0	533
	1100(V)	10.6	15	Y160L-4		445	7.4	480
	1300(V)	13.6	18.5	Y180M-4		540	9.0	533
	1625(V)	19.6	22	Y180L-4		660	11.0	551
	1750(V)	22.3	30	Y200L-4		700	11.7	601
2BE1 202-0	970(D)	17	22	Y200L2-6	33mbar (-0.098MPa)	760	12.7	875
	790(V)	14	18.5	Y180M-4		590	9.8	850
	880(v)	16	18.5	Y180M-4		670	11.2	850
	1100(V)	22	30	Y200L-4		850	14.2	940
	1170(V)	25	30	Y200L-4		890	14.8	945
	1300(V)	30	37	Y225S-4		950	15.8	995
2BE1 203-0	970(D)	27	37	Y250M-6	33mbar (-0.098MPa)	1120	18.7	1065
	790(V)	20	30	Y200L-4		880	14.7	995
	880(V)	23	30	Y200L-4		1000	16.7	995
	1100(V)	33	45	Y225M-4		1270	21.2	1080
	1170(V)	37	45	Y225M-4		1320	22.0	1085
	1300(V)	45	55	Y250M-4		1400	23.3	1170
2BE1 252-0	740(D)	38	45	Y280M-8	33mbar (-0.098MPa)	1700	28.3	1693
	558(V)	26	30	Y200L-4		1200	20.0	1460
	660(V)	31.8	37	Y225S-4		1500	25.0	1515
	832(V)	49	55	Y250M-4		1850	30.8	1645
	885(V)	54	75	Y280S-4		2000	33.3	1805
	938(V)	60	75	Y280S-4		2100	35.0	1805
2BE1 253-0	740(D)	54	75	Y315M-8	33mbar (-0.098MPa)	2450	40.8	2215
	560(V)	37	45	Y225M-4		1750	29.2	1695
	660(V)	45	55	Y250M-4		2140	35.7	1785
	740(V)	54	75	Y280S-4		2450	40.8	1945
	792(V)	60	75	Y280S-4		2560	42.7	1945
	833(V)	68	90	Y280M-4		2700	45.0	2055
	885(V)	77	90	Y280M-4		2870	47.8	2060
	938(V)	86	110	Y315S-4		3020	50.3	2295
2BE1 303-0	740(D)	98	110	Y315L2-8	33mbar (-0.098MPa)	4000	66.7	3200
	590(D)	65	75	Y315L2-10		3200	53.3	3200
	466(V)	48	55	Y250M-4		2500	41.7	2645
	521(V)	54	75	Y280S-4		2800	46.7	2805
	583(V)	64	75	Y280S-4		3100	51.7	2810

	657(V) 743(V)	78 99	90 132	Y280M-4 Y315M-4		3580 4000	59.7 66.7	2925 3290
2BE1 305-1 2BE1 306-1	740(D) 590(D) 490(V) 521(V) 583(V) 657(V) 743(V)	102 70 55 59 68 84 103	132 90 75 75 90 110 132	Y355M1-8 Y355M1-10 Y280S-4 Y280S-4 Y280M-4 Y315S-4 Y315M-4	160mbar (-0.085MPa)	4650 3750 3150 3320 3700 4130 4650	77.5 62.5 52.5 55.3 61.2 68.8 77.5	3800 3800 2950 3000 3100 3300 3450
2BE1 353-0	590(D) 390(V) 415(V) 464(V) 520(V) 585(V) 620(V) 660(V)	121 65 70 81 97 121 133 152	160 75 90 110 132 160 160 185	Y355L2-10 Y280S-4 Y280M-4 Y315S-4 Y315M-4 Y315L1-4 Y315L1-4 Y315L2-4	33mbar (-0.098MPa)	5300 3580 3700 4100 4620 5200 5500 5850	88.3 59.7 61.7 68.3 77.0 86.7 91.7 97.5	4750 3560 3665 3905 4040 4100 4100 4240
2BE1 355-1 2BE1 356-1	590(D) 390(V) 435(V) 464(V) 520(V) 555(V) 585(V) 620(V)	130 75 86 90 102 115 130 145	160 90 110 110 132 132 160 185	Y355L2-10 Y280M-4 Y315S-4 Y315S-4 Y315M-4 Y315M-4 Y315L1-4 Y315L2-4	160mbar (-0.085MPa)	6200 4180 4600 4850 5450 5800 6100 6350	103.3 69.7 76.7 80.8 90.8 98.3 101.7 105.8	5000 3920 4150 4160 4290 4300 4350 4450
2BE1 403-0	330(V) 372(V) 420(V) 472(V) 530(V) 565(V)	97 110 131 160 203 234	132 132 160 200 250 280	Y315M-4 Y315M-4 Y315L1-4 Y315L2-4 Y355M2-4 Y355L1-4	33mbar (-0.098MPa)	5160 5700 6470 7380 8100 8600	86.0 95.0 107.8 123.0 135.0 143.3	5860 5870 5950 6190 6630 6800
2BE1 405-1 2BE1 406-1	330(V) 372(V) 420(V) 472(V) 530(V) 565(V)	100 118 140 170 206 235	132 160 185 200 250 280	Y315M-4 Y315L1-4 Y315L2-4 Y315L2-4 Y355M2-4 Y355L1-4	160mbar (-0.085MPa)	6000 6700 7500 8350 9450 10100	100.0 111.7 125.0 139.2 157.5 168.3	5980 6070 6200 6310 6750 6920

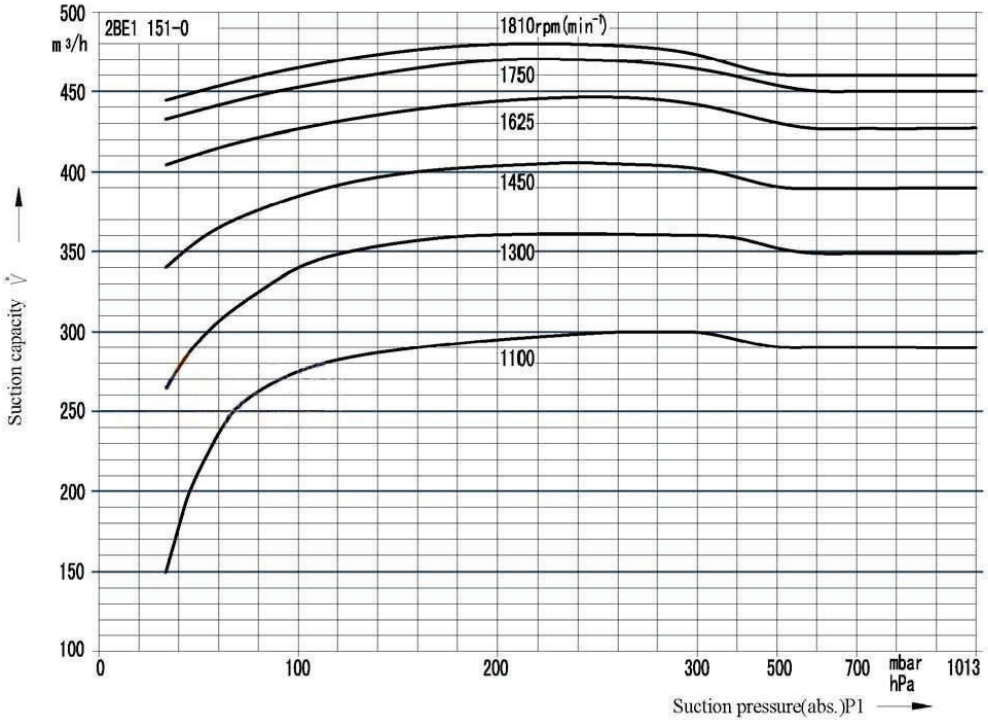
Notes:

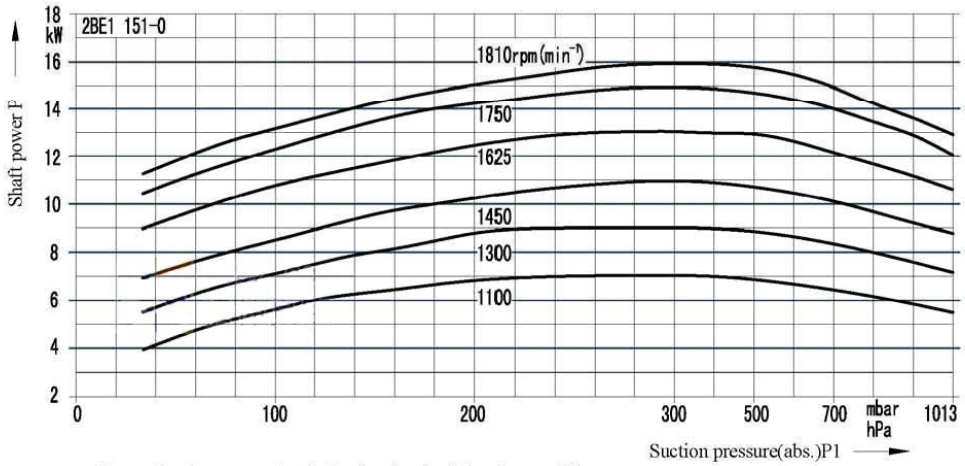
1."D" means "Direct drive"; "V" means "V-Belt drive".

2. The motor recommended above can work under most conditions. If the discharge pressure exceeds the scope of 0.02~0.05 Mpa (G), it is necessary to increase the motor power. If the shaft power corresponding with the work pressure of the 2BE series vacuum pump is lower, the motor with lower power closed to the shaft power can be used for saving energy.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 151-0 water ring vacuum pumps



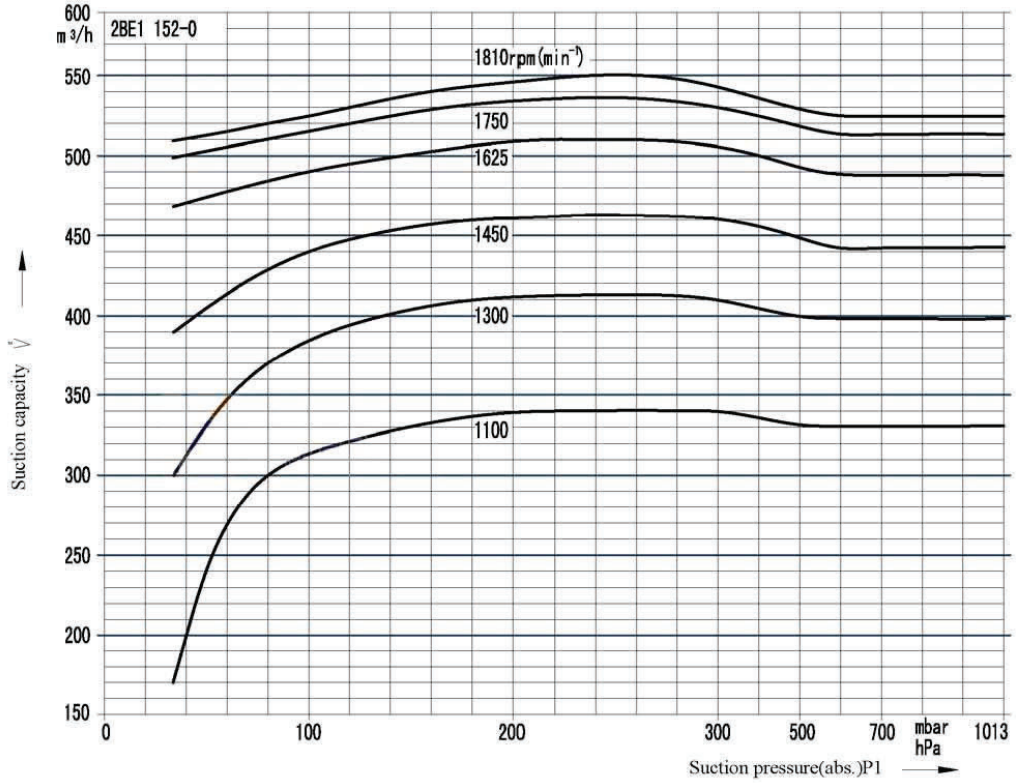


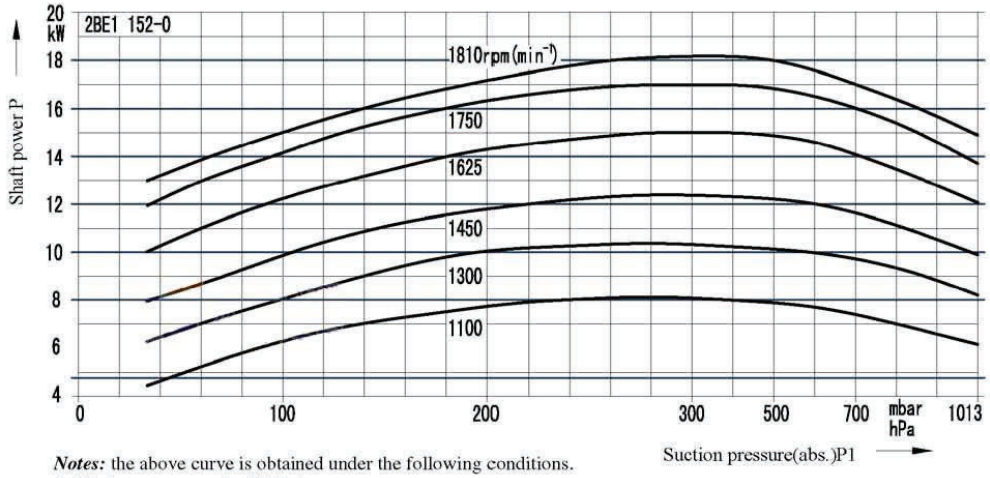
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➤ The performance curve of the 2BE1 152-0 water ring vacuum pumps



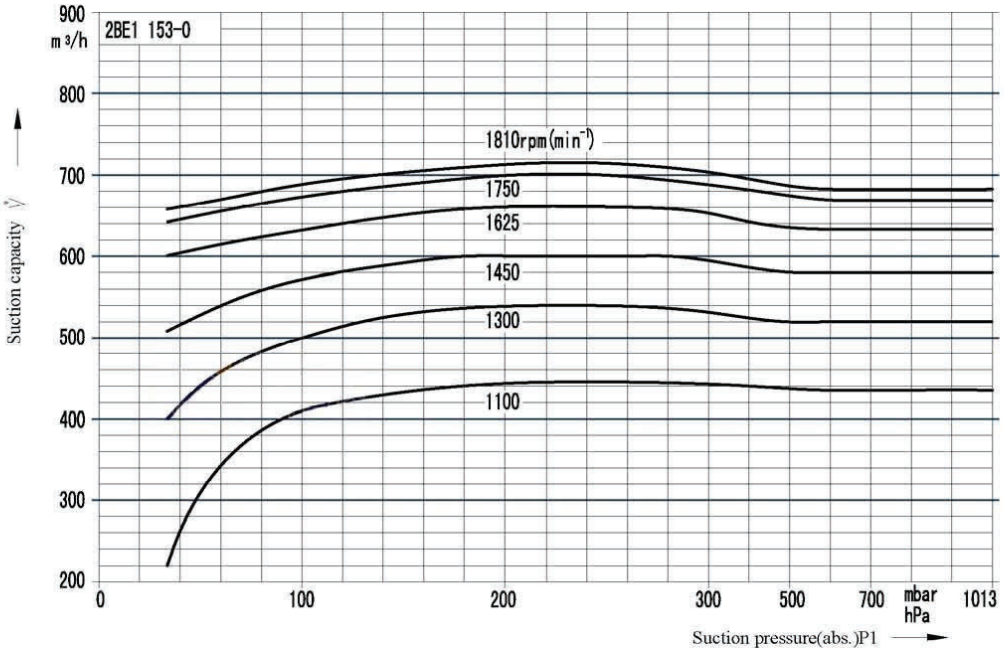


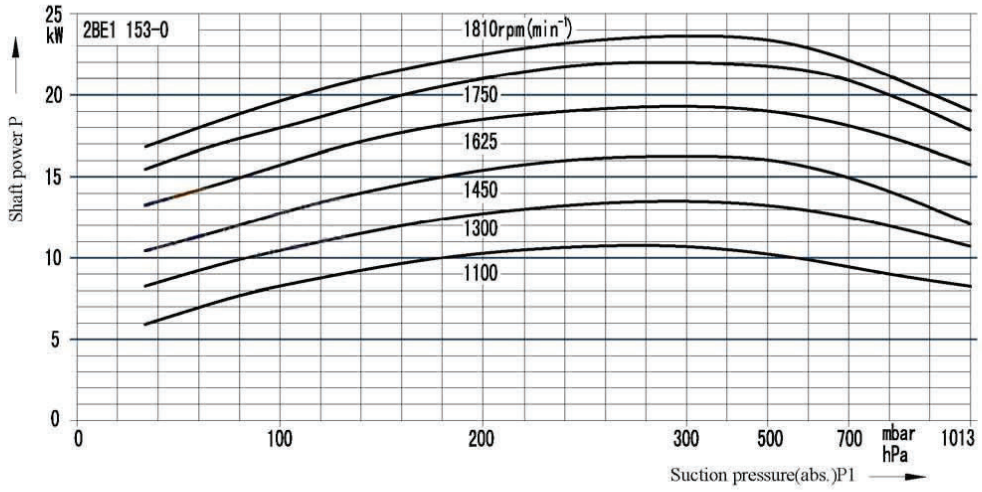
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➤ The performance curve of the 2BE1 153-0 water ring vacuum pumps



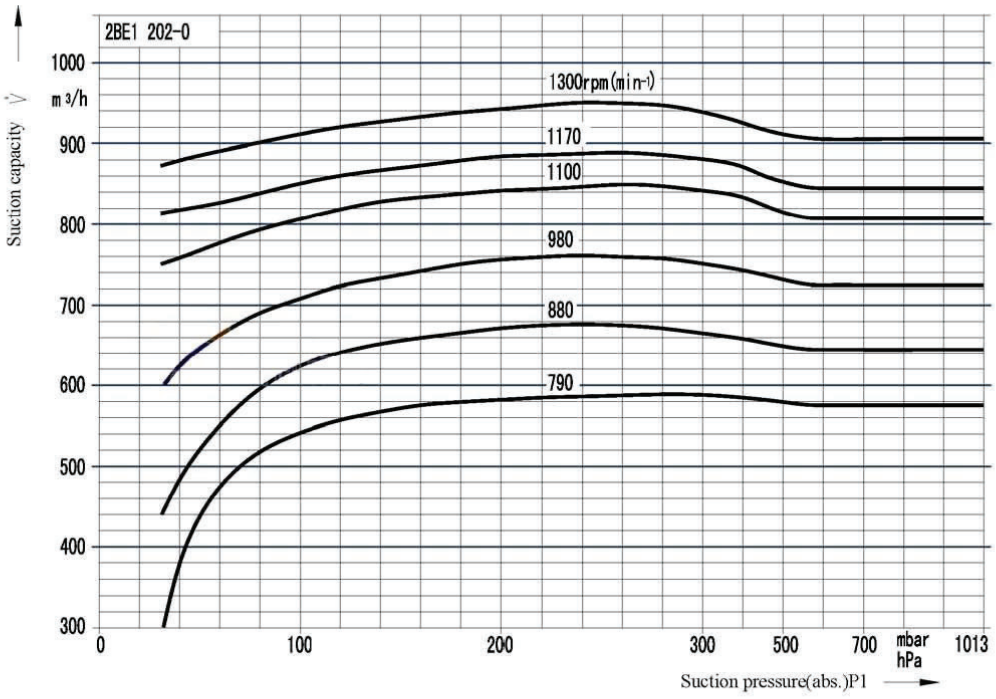


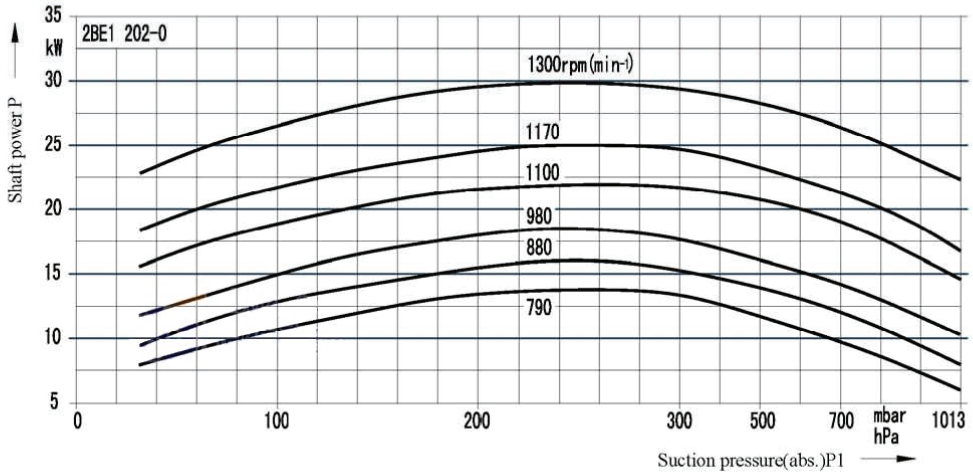
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 202-0 water ring vacuum pumps



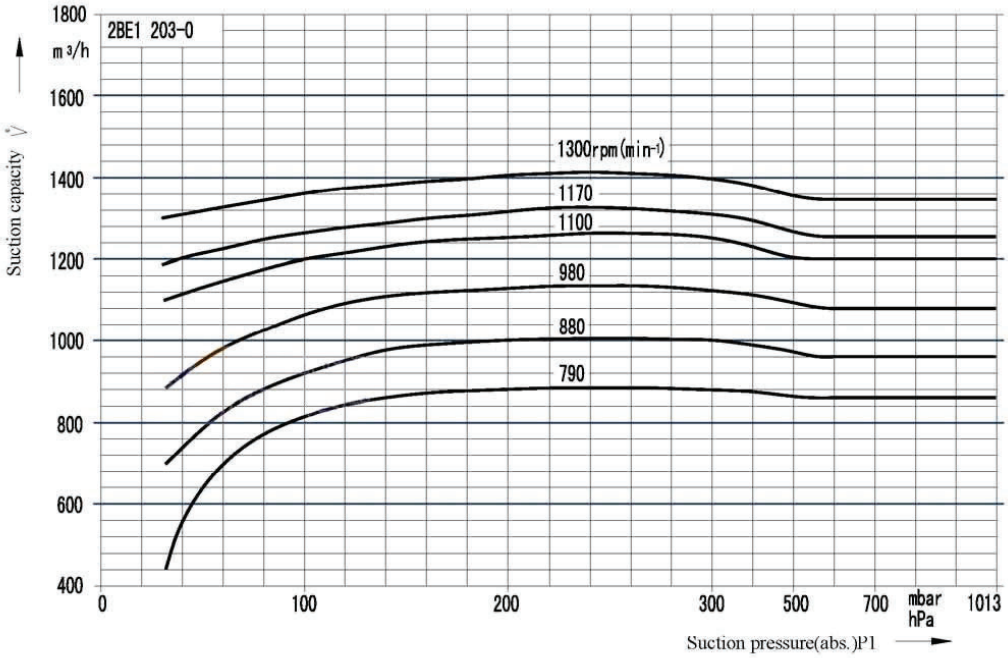


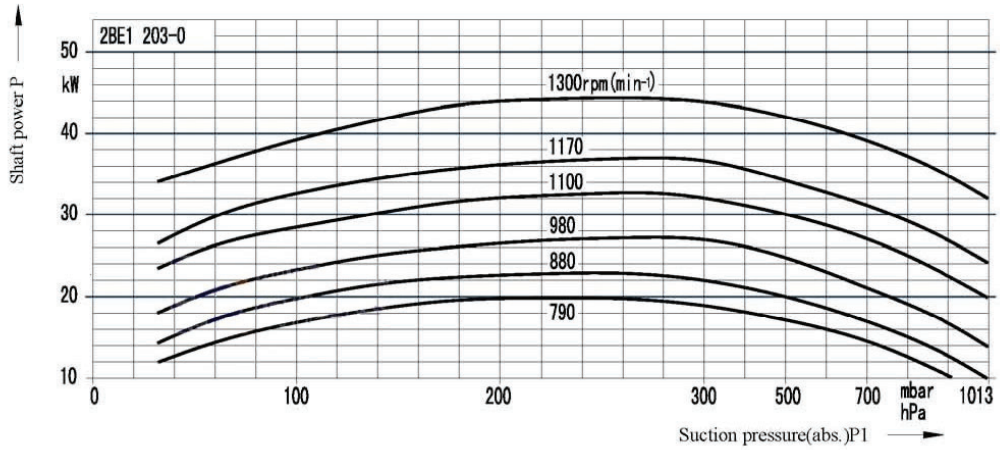
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 203-0 water ring vacuum pumps



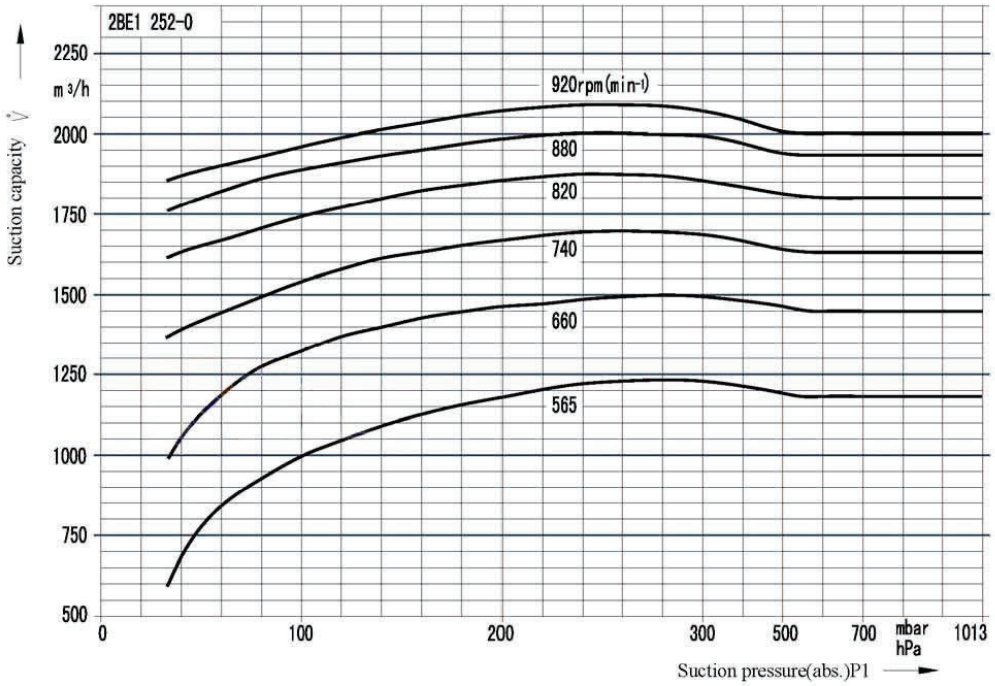


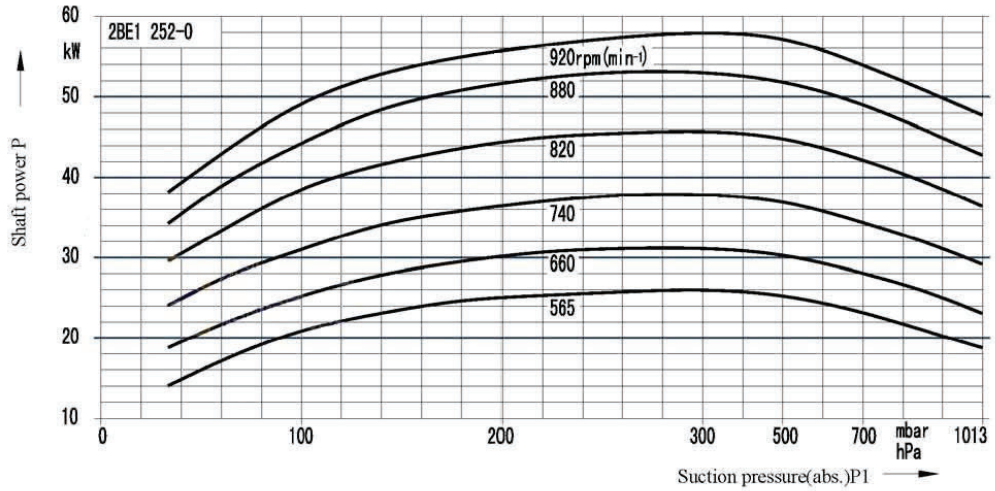
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 252-0 water ring vacuum pumps

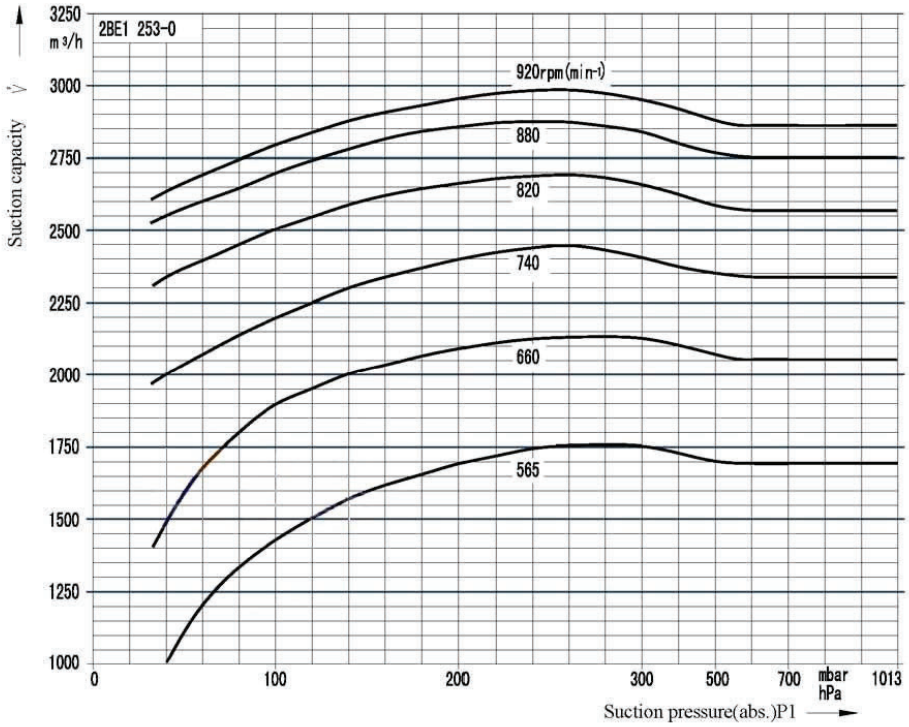


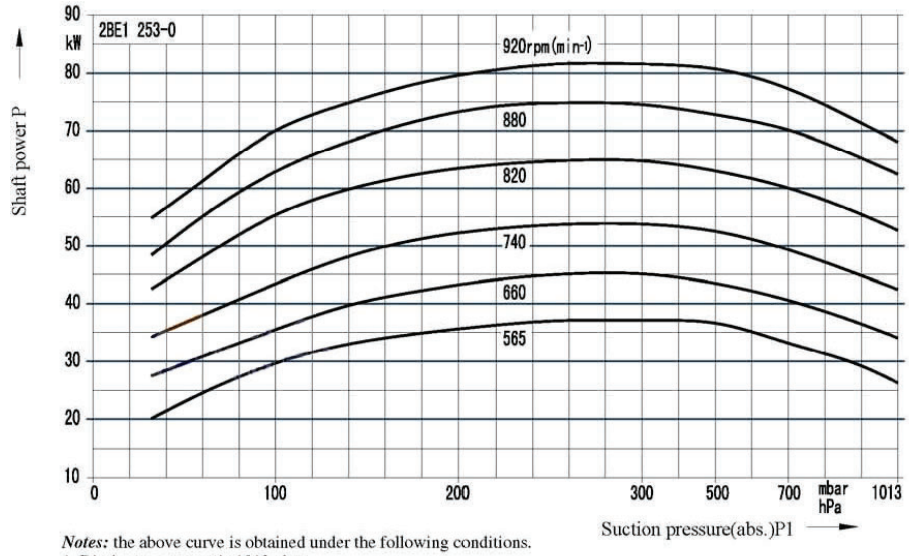


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 253-0 water ring vacuum pumps

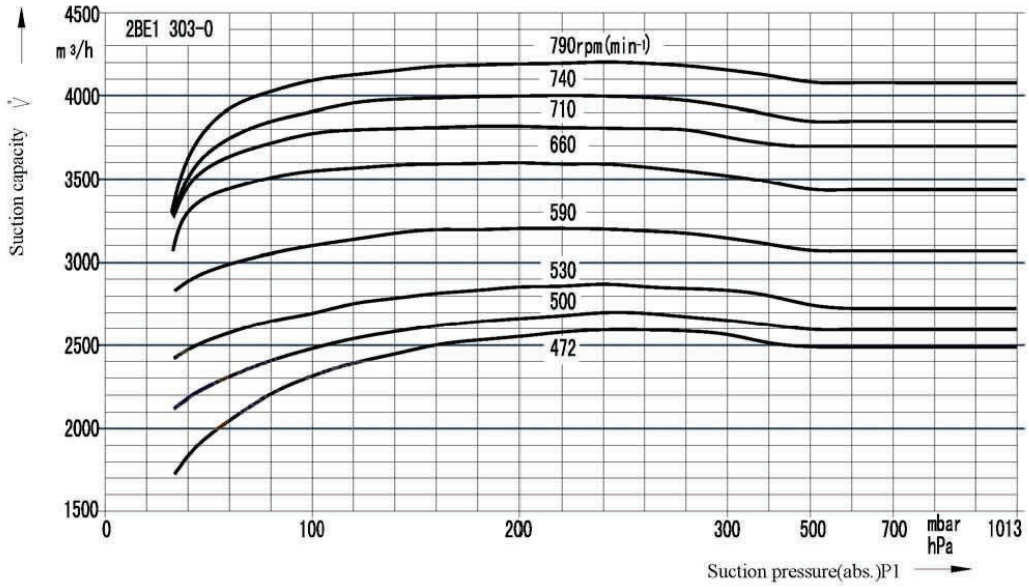


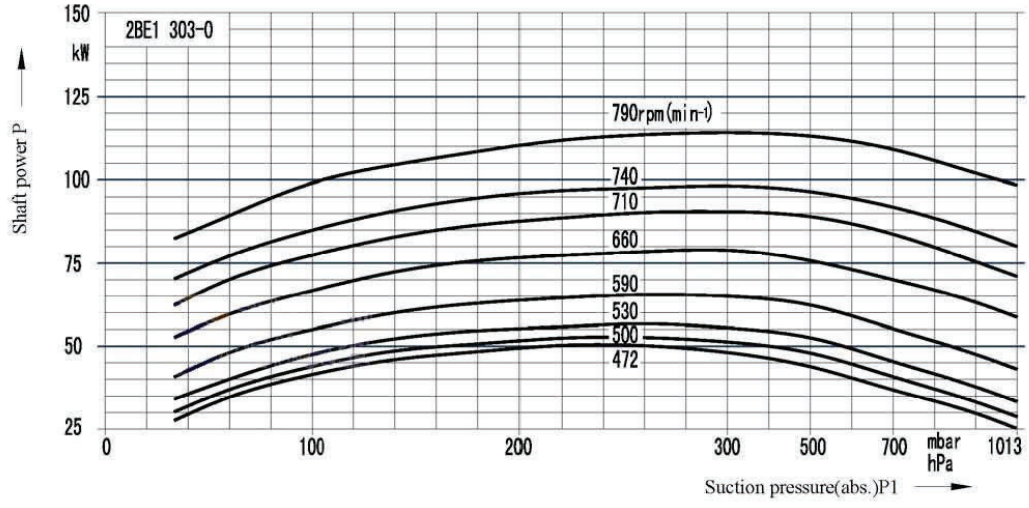


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 303-0 water ring vacuum pumps

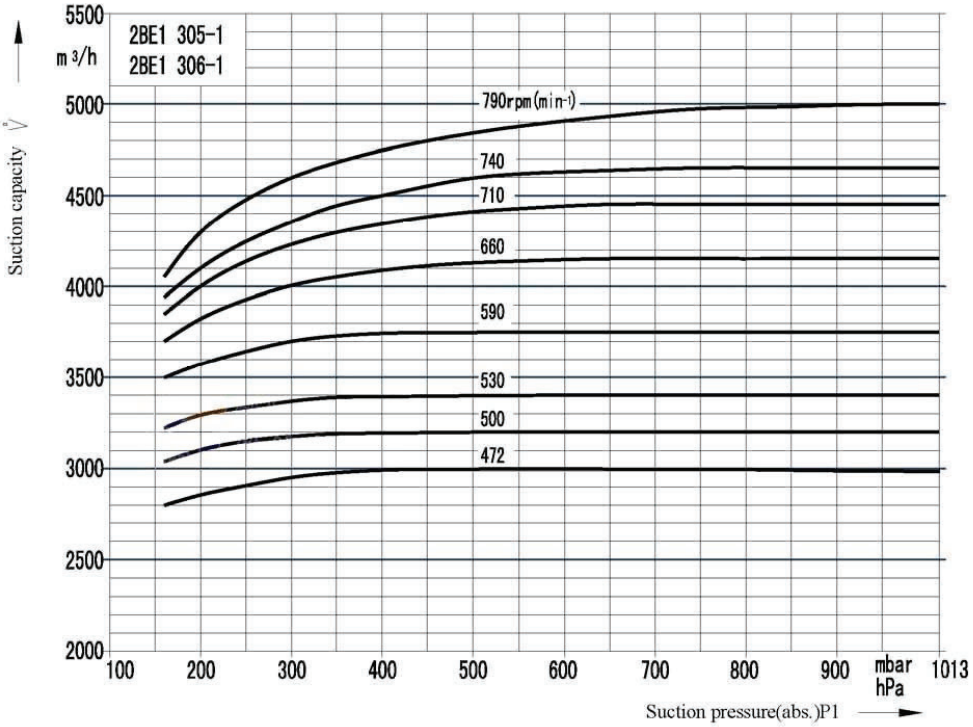


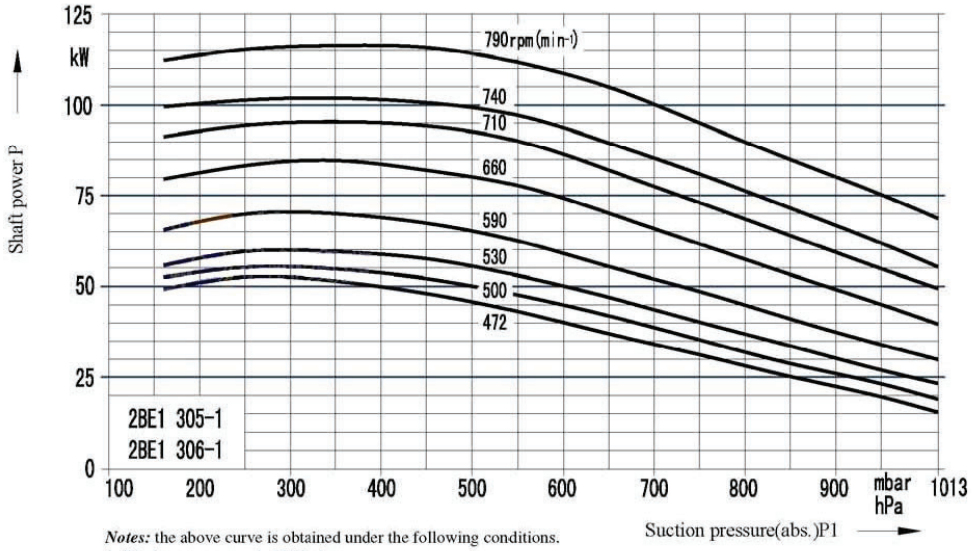


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 305-1/306-1 water ring vacuum pumps

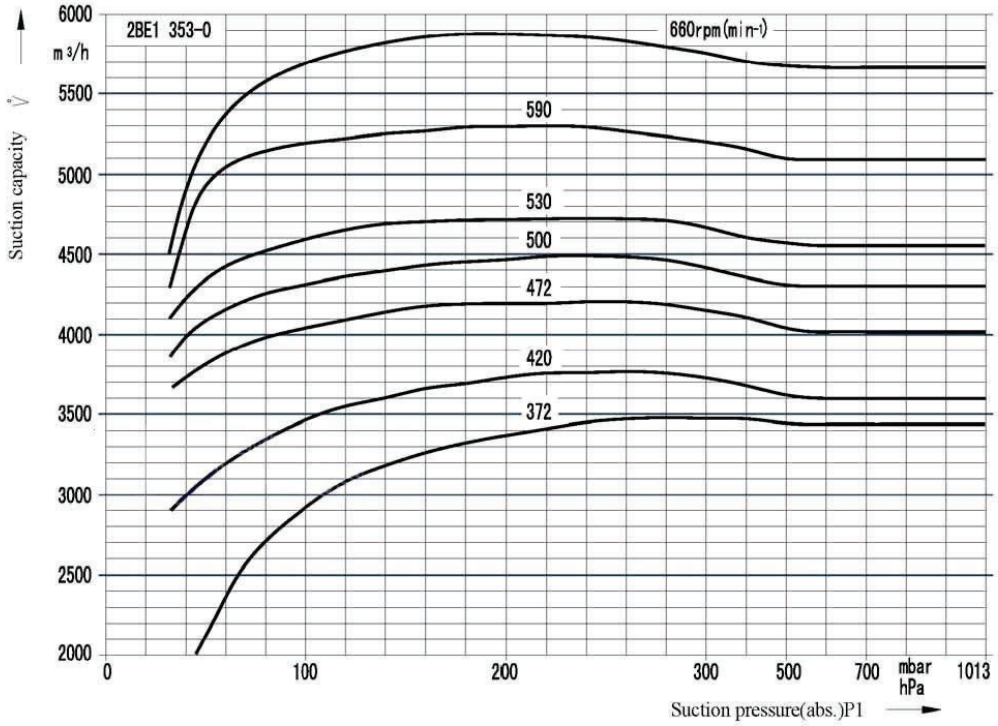


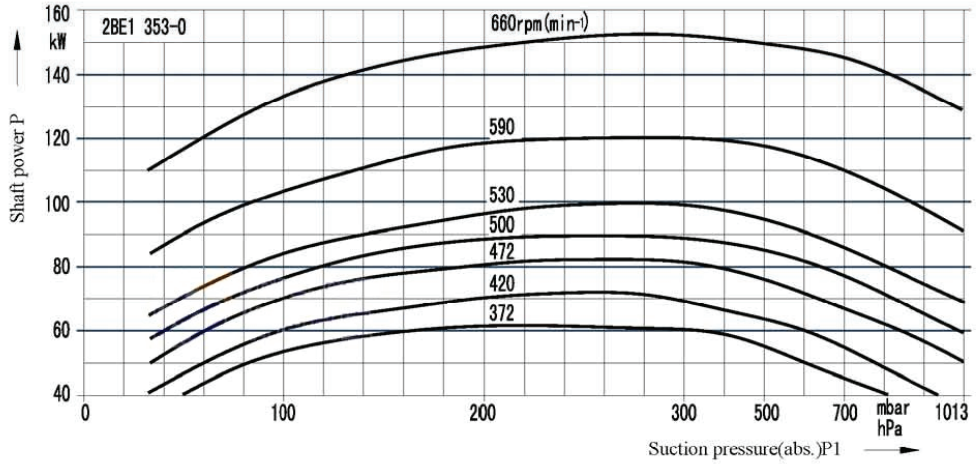


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 353-0 water ring vacuum pumps



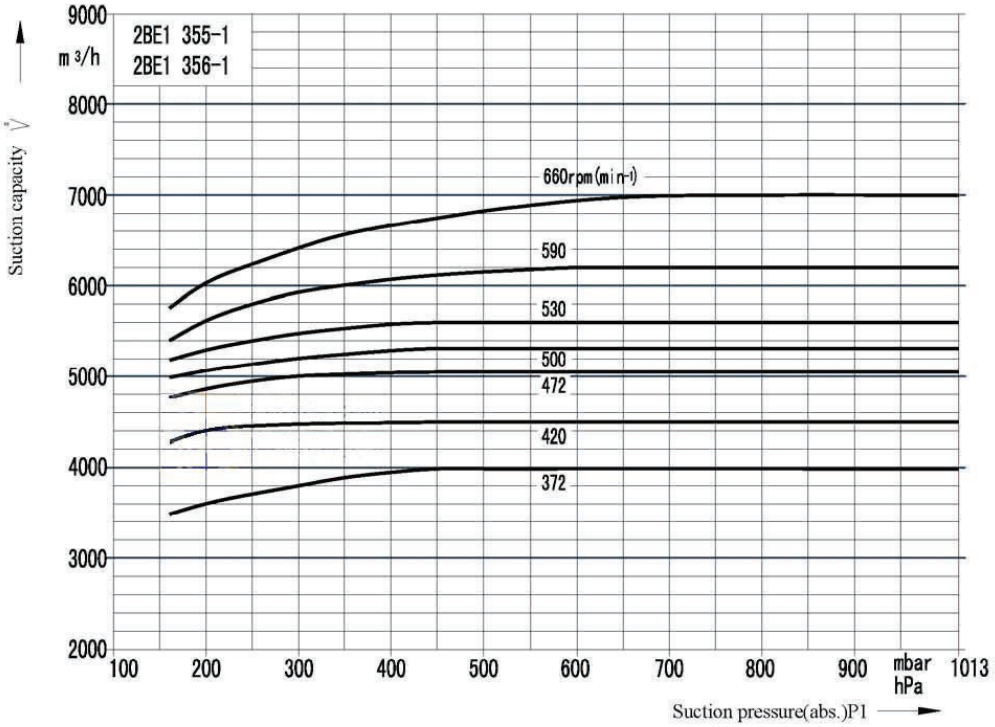


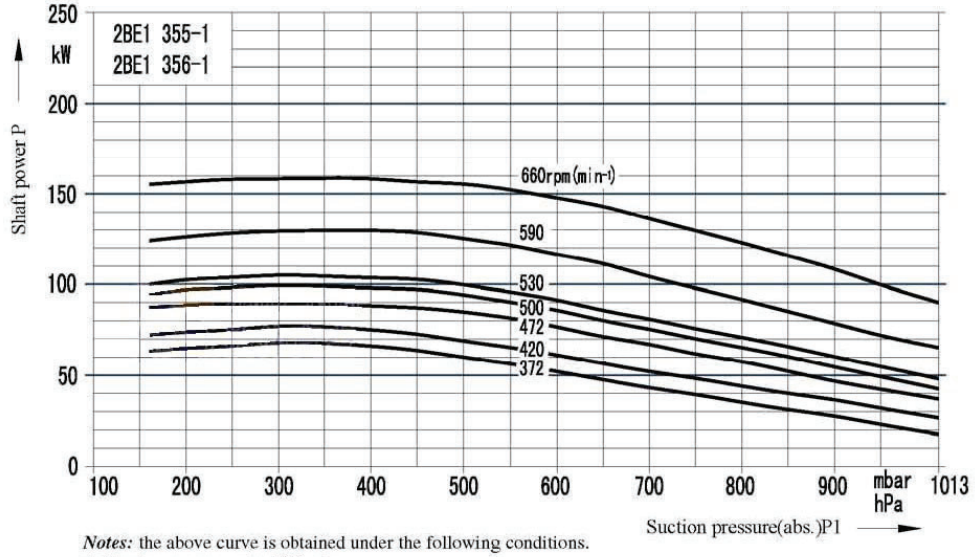
Notes: the above curve is obtained under the following conditions.

1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE1 series water ring vacuum pumps

➢ The performance curve of the 2BE1 355-1/356-1 water ring vacuum pumps

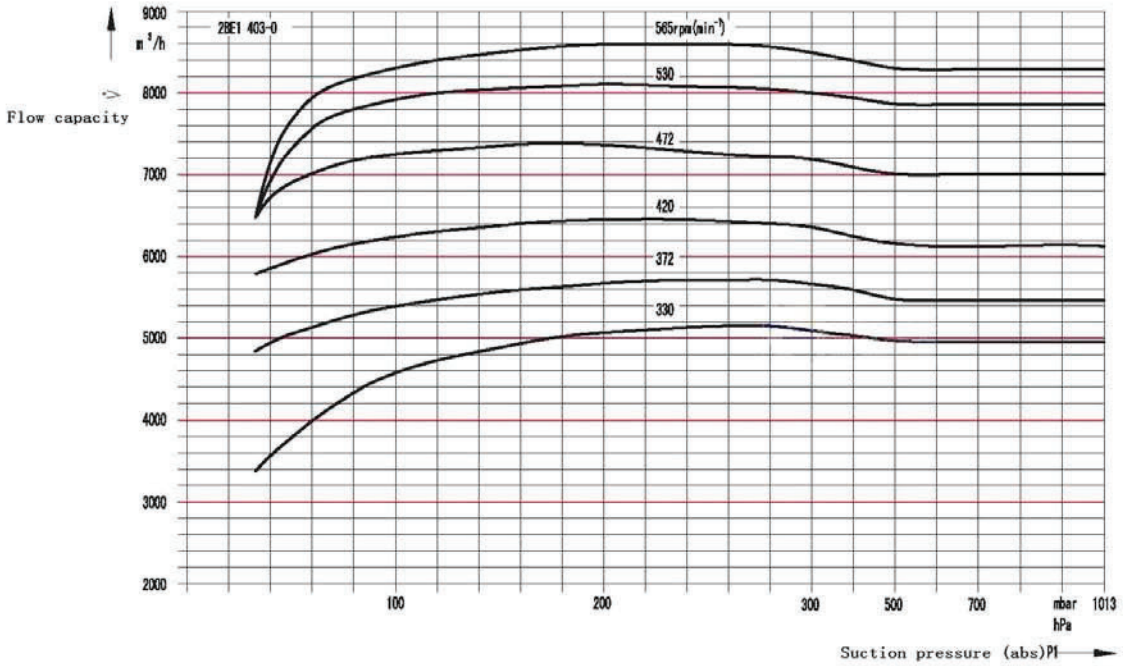


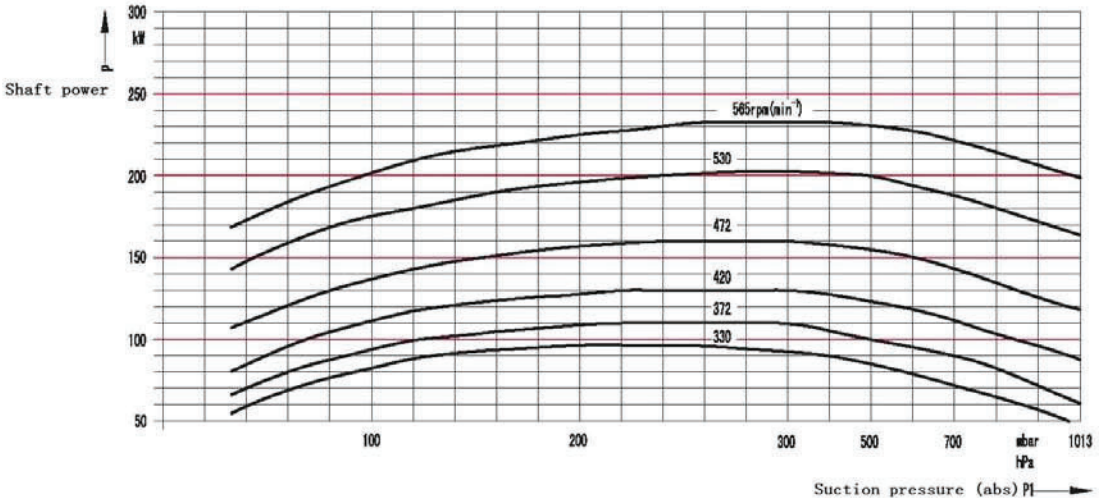


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

2BE1

▶ 2BE1 403-0



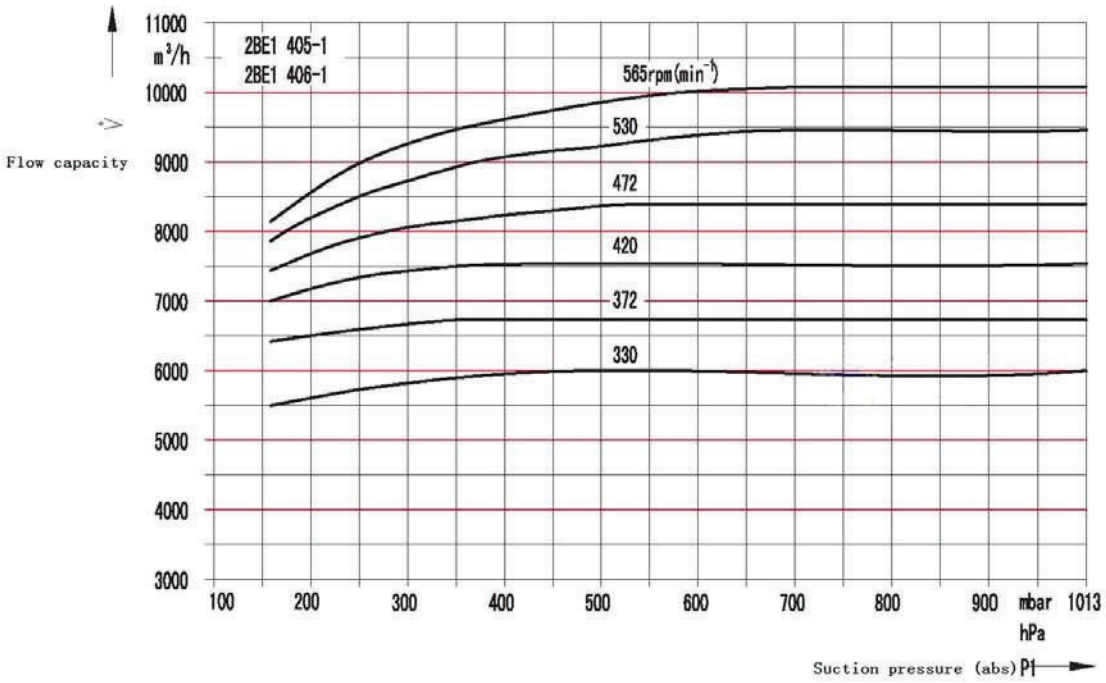


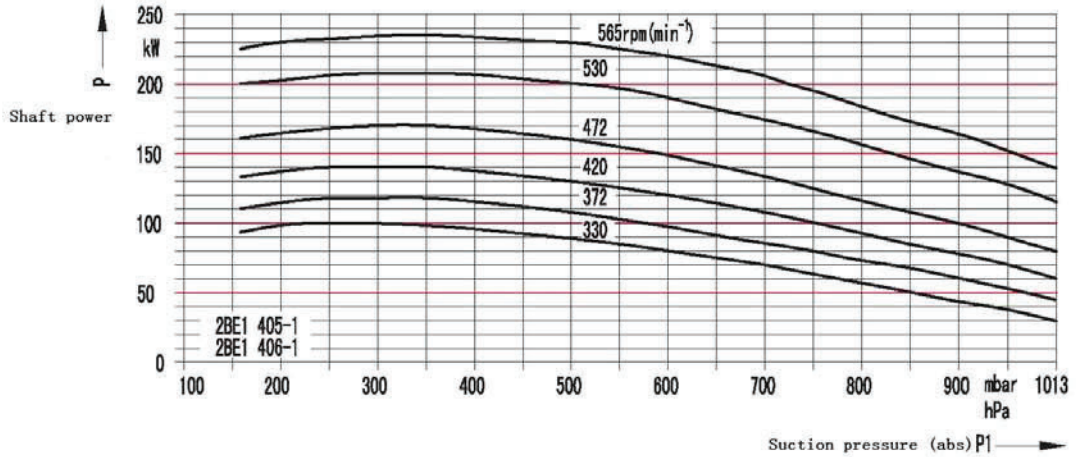
Note: the performance cover under following conditions:

1. discharge pressure: 1013mbar
2. air temperature 20℃
3. working liquid temperature 15℃
4. performance tolerance allowable ±5%

2BE1

▶ 2BE1 405-1/406-1

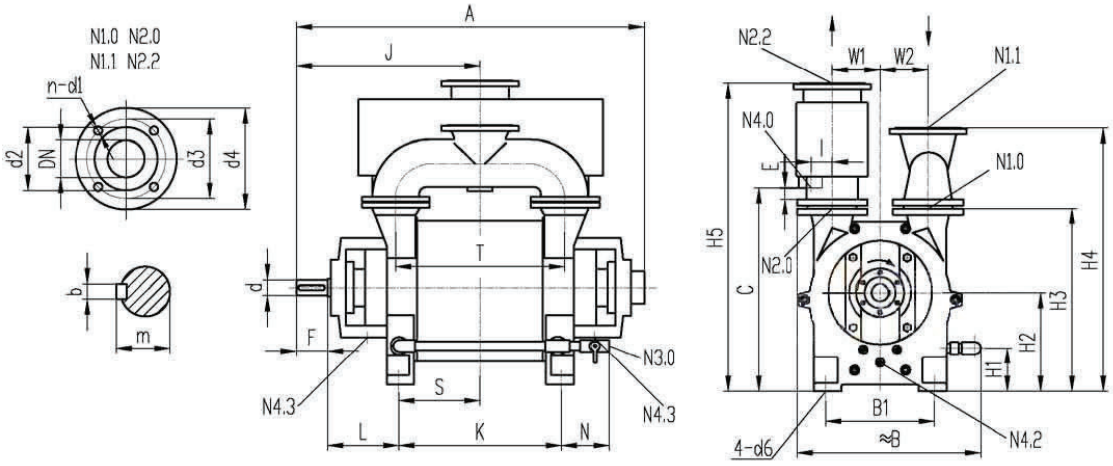




Note: the performance cover under following conditions:

1. discharge pressure: 1013mbar
2. air temperature 20℃
3. working liquid temperature 15℃
4. performance tolerance allowable ±5%

The overall dimension and drawing of the 2BE1 151/152/153 bare pumps (Unit: mm)



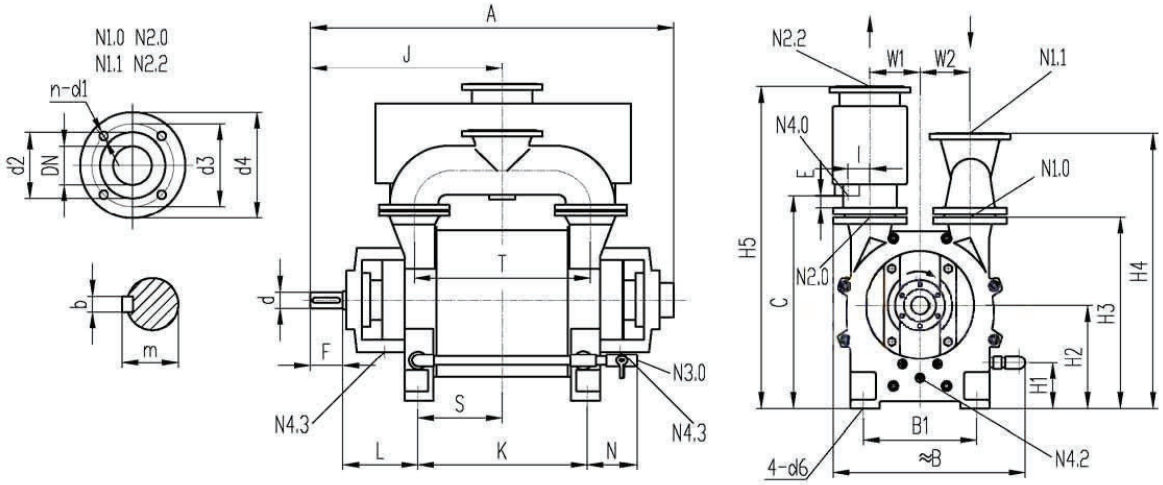
N1.0 Inlet flange
N1.1 Flange manifold
N2.0 Discharge flange
N2.2 Flange liquid separator
N3.0 Connection for operating liquid
N4.0 Drain separator liquid
N4.2 Flush and drain openings
N4.3 Connection for leakage liquid

Type \ Code	A	B1	B	b	C	d	d6	E	F	H1	H2	H3	H4	H5	I
2BE1151	800	260	550	10	467	35	19	50	58	94	225	425	600	745	50
2BE1152	825	260	550	10	467	35	19	50	58	94	225	425	600	745	50
2BE1153	885	260	550	10	467	35	19	50	58	94	225	425	600	745	50

Type \ Code	J	K	L	m	N	S	T	W1	W2	N3.0	N4.0	N4.2	N4.3		
2BE1151	411.5	295	206	38	145	147.5	307	125	125	$G^3/_4"$	G2"	$G^1/_2"$	$G^1/_4"$		
2BE1152	424	320	206	38	145	160	332	125	125	$G^3/_4"$	G2"	$G^1/_2"$	$G^1/_4"$		
2BE1153	454	380	206	38	145	190	392	125	125	$G^3/_4"$	G2"	$G^1/_2"$	$G^1/_4"$		

							Type \ Code		DN	d1	d2	d3	d4	n
							2BE1151	**N1.0 N2.0**	65	18	122	145	185	4
							2BE1152 2BE1153	**N1.1 N2.2**	100	18	158	180	220	8

The overall dimension and drawing of the 2BE1 202/203/252/253 bare pumps (Unit: mm)



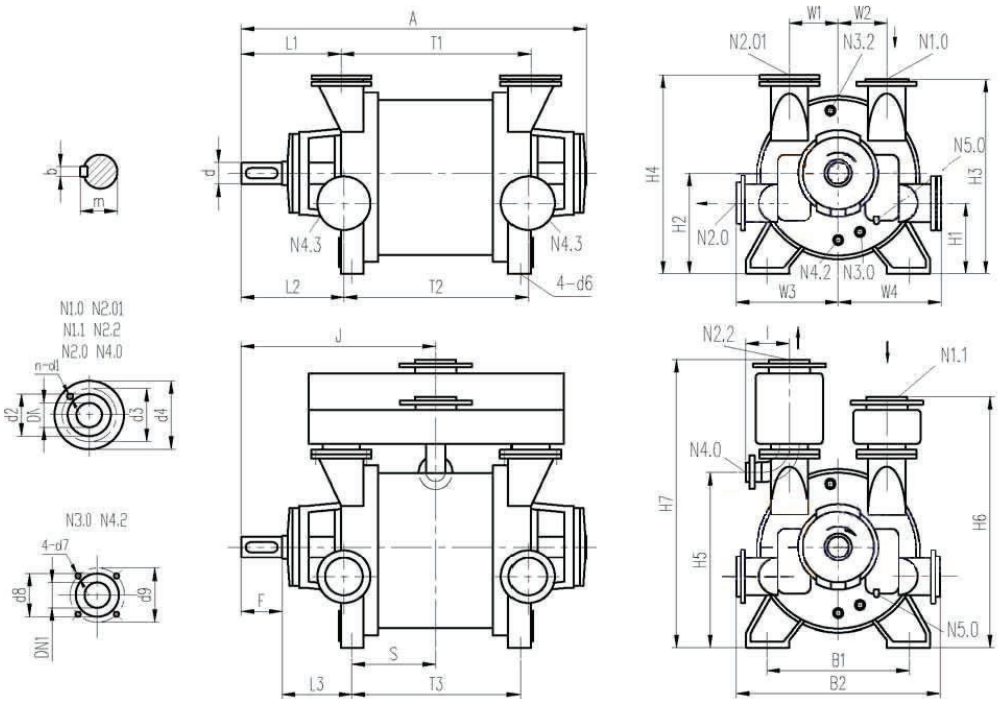
N1.0 Inlet flange
N1.1 Flange manifold
N2.0 Discharge flange
N2.2 Flange liquid separator
N3.0 Connection for operating liquid
N4.0 Drain separator liquid
N4.2 Flush and drain openings
N4.3 Connection for leakage liquid

Type \ Code	A	B1	B	b	C	d	d6	E	F	H1	H2	H3	H4	H5	I
2BE1202	975	340	700	14	629	50	24	37	82	127	315	590	840	985	50
2BE1203	1095	340	700	14	629	50	24	37	82	127	315	590	840	985	50
2BE1252	1225	465	800	20	799	70	28	42	105	148	400	755	1030	1245	80
2BE1253	1375	465	800	20	799	70	28	42	105	148	400	755	1030	1245	80

Type \ Code	J	K	L	m	N	S	T	W1	W2	N3.0	N4.0	N4.2	N4.3		
2BE1202	507	395	227	53.5	175	198	427	155	155	G1 "	G3 "	G3/4 "	G3/4 "		
2BE1203	567	515	227	53.5	175	258	547	155	155	G1 "	G3 "	G3/4 "	G3/4 "		
2BE1252	630	525	263	74.5	200	263	570	215	215	G1 1/4 "	G3 "	G1 "	G3/4 "		
2BE1253	705	675	263	74.5	200	338	720	215	215	G1 1/4 "	G3 "	G1 "	G3/4 "		

Type \ Code		DN	d1	d2	d3	d4	n	Type \ Code		DN	d1	d2	d3	d4	n
2BE1202 2BE1203	N1.0 N2.0	100	18	158	180	220	8	2BE1252 2BE1253	N1.0 N2.0	125	18	188	210	250	8
	N1.1 N2.2	125	18	188	210	250	8		N1.1 N2.2	150	22	212	240	285	8

The overall dimension and drawing of the 2BE1 303/305/306/353/355/356 bare pumps (Unit: mm)



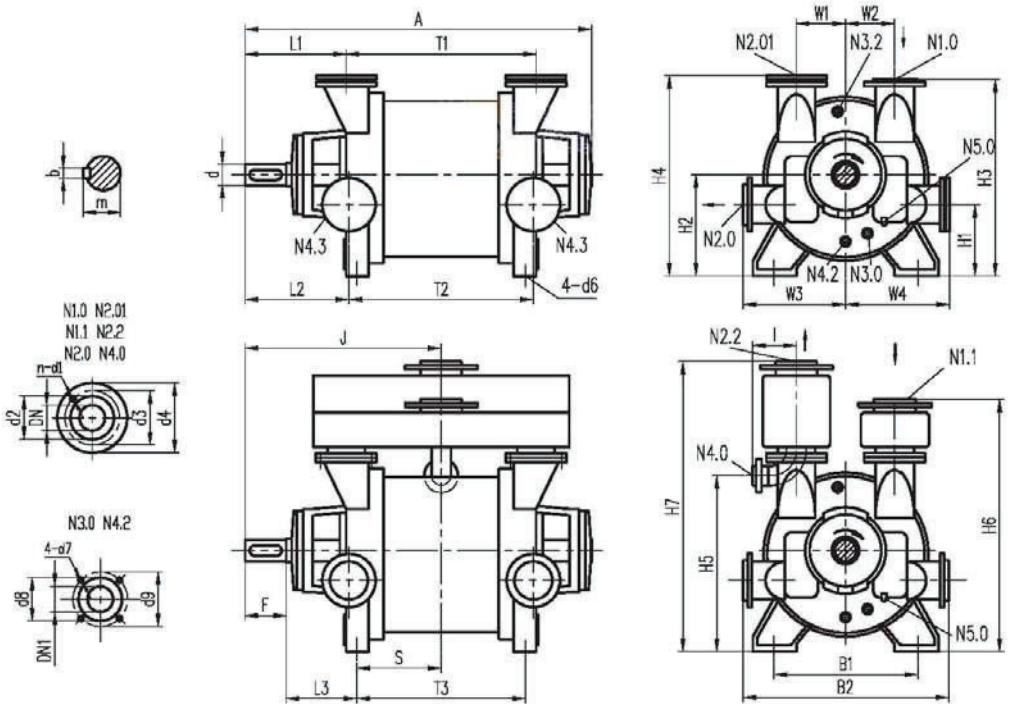
N1.0 Inlet flange
N1.1 Flange manifold
N2.0 Discharge flange
N2.01 Discharge flange at the top
N2.2 Flange liquid separator
N3.0 Connection for operating liquid
N3.2 Connection for sealing liquid to stuffing boxes (external supply only)
N4.0 Drain liquid separator
N4.2 Flush and drain openings
N4.3 Connection for leakage liquid
N5.0 Automatic drain valve

Type \ Code	A	B1	B2	b	DN1	d	d6	d7	d8	d9	F	H1	H2	H3	H4	H5	H6
2BE1303	1580	670	1010	28	25	100	35	M12	68	85	165	335	475	910	935	825	1185
2BE1305/306	1690	670	1010	28	25	100	35	M12	68	85	165	335	475	910	935	825	1185
2BE1353	1745	800	1160	32	32	120	35	M16	78	100	165	395	560	1050	1080	930	1370
2BE1355/356	1885	800	1160	32	32	120	35	M16	78	100	165	395	560	1050	1080	930	1370

Type \ Code	H7	I	J	L1	L2	L3	m	S	T1	T2	T3	W1	W2	W3	W4	N3.2	N4.3
2BE1303	1360	205	875	430	443	315	106	395	890	864	790	230	230	480	505	G½"	G½"
2BE1305/306	1360	205	930	430	443	315	106	450	1000	974	900	230	230	480	505	G½"	G½"
2BE1353	1570	245	955	430	455	335	127	455	1050	1000	910	285	285	555	580	G½"	G½"
2BE1355/356	1570	245	1025	430	455	335	127	525	1190	1140	1050	285	285	555	580	G½"	G½"

Type \ Code		DN	d1	d2	d3	d4	n	Type \ Code		DN	d1	d2	d3	d4	n		
2BE1303 2BE1305 2BE1306	N1.0 N2.01	150	22	212	240	285	8	2BE1353 2BE1355 2BE1356	N1.0 N2.01	200	22	268	295	340	8		
	N1.1 N2.2	200	22	268	295	340	8		N1.1 N2.2	250	22	320	350	395	12		
	N2.0	125	18	188	210	250	8		N2.0	150	22	212	240	285	8		
	N4.0	100	18	158	180	220	8		N4.0	125	18	188	210	250	8		

2BE1 403/405/406



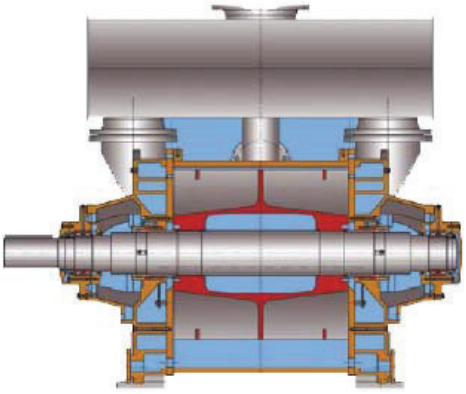
N1.0 Inlet Flang **N1.1** Flange manifold **N2.0** Discharge Flange **N2.01** Upside discharge Flange
N2.2 Flange liquid separator **N3.0** Connection for operating liquid **N4.0** Drain separator liquid
N3.2 Connection for gland packing liquid **N4.2** Flush and drain opening
N4.3 Connection for leakage liquid **N5.0** Automatic relief valve

Type \ Code	A	B1	B2	b	DN1	d	d6	d7	d8	d9	F	H1	H2	H3	H4	H5	H6
2BE1403	2020	950	1370	36	40	140	42	M16	88	110	200	475	670	1265	1295	1120	1625
2BE1405/406	2170	950	1370	36	40	140	42	M16	88	110	200	475	670	1265	1295	1120	1625

Code	H7	I	J	L1	L2	L3	m	S	T1	T2	T3	W1	W2	W3	W4	N3.2	N4.3
2BE1403	1865	285	1110	480	505	355	148	555	1260	1210	1110	335	335	655	685	G3/4"	G3/4"
2BE1405/406	1865	285	1185	480	505	355	148	630	1410	1360	1260	335	335	655	685	G3/4"	G3/4"

Type \ Code		DN	d1	d2	d3	d4	n	Type \ Code		DN	d1	d2	d3	d4	n		
2BE1403	N1.0 N2.01	250	22	320	350	395	12	2BE1403	N2.0	200	22	268	295	340	8		
2BE1405 2BE1406	N1.1 N2.2	300	22	370	400	445	12	2BE1405 2BE1406	N4.0	150	22	212	240	285	8		

2BE3 series Liquid Ring Vacuum Pumps



The application range and characteristics:

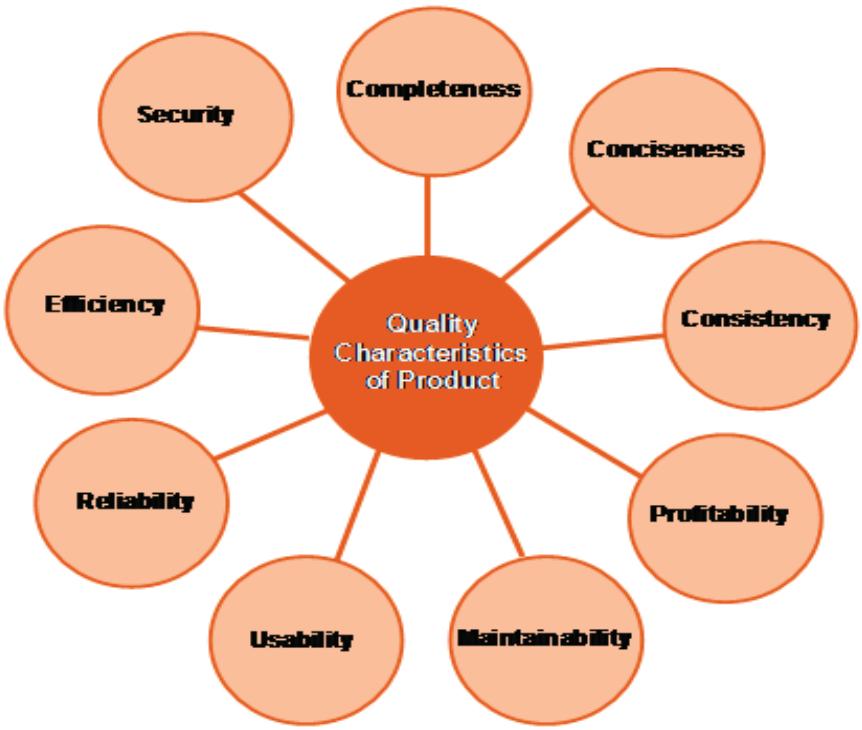
2BE3 series liquid ring vacuum pumps and compressors are designed and manufactured by our company integrating with the advanced technology abroad. They are not only can save energy, but also can work constantly for a long time.

Under the rough vacuum situation, the requirements for the liquid ring vacuum pumps are very rigorous. So the 2BE3 series products are designed for pumping various gases. They are widely used in many industries, such as, the paper, mine, power station, chemical etc.

2BE3 series products can be driven with many different sets, such as, the V-belt, synchronal motor, gear box etc. In order to save space, more than two or at most four sets of the 2BE3 series pumps can be driven by one motor simultaneously.

When set a middle wall in the casing, the pressure tolerance between the two sides is lower than 80kPa and the two parts can work in different vacuum status respectively. Thus one pump can work well like two. Hereby the product operating flexibility is improved effectively.

The main characteristics of 2BE3 series products:



- The tolerance, corrosive status, and the begrime situation can be easily observed by the big inspection port on both sides of the end-shield.
- The 2BE3 series pumps have flanges both on the top and sides with the same diameter. It is more convenient to connect with the 2BE3 series pumps.
- The bearings are all used of the imported products in order to keep the precise orientation and the high stability during the working of the pump.
- The material of the impeller is QT400 nodular iron or steel plates for ensuring the stability of the pump under the various rigorous situations and extending the life of the pump effectively.
- The casing is made of steel or stainless steel plates to extend the lifetime of the 2BE3 series pumps.
- The shaft bushing is made of stainless steel plates to extend the life of the pumps 5 times more than the normal material.
- The V-belt pulley (when the pump is driven by the belt) is used of the high precise pulley with taper bushing to keep the reliability of the pump and extend its life. And it is also easy to mantle and dismantle.
- The unique design of setting the separator above the pump saves the space and decreases the noise efficiently.
- All the spare parts are cast by the resin sands that make the surface of the pump very smooth. So it is not necessary to cover the surface of the pump with putty and gives out the heat efficiently.
- The mechanical seals (optional) are all used the imported products so as to avoid the leakage during the working of the pump for a long time.

2BE3 series vacuum pump technology parameter

Type	Speed (Drive type) r/min	Max shaft power kW	Motor Power kW	Suction Capacity		Limited vacuum (abs) mbar	Weight of bare pump with separator kg
				m^3/h	m^3/min		
2BE3 400	340(V-Belt/gear box)	82	110	4850	80.8	160	3275
	390(V-Belt/gear box)	95	110	5650	94.2		
	440(V-Belt/gear box)	115	132	6250	104.2		
	490(V-Belt/gear box)	134	160	6900	115.0		
	530(V-Belt/gear box)	148	185	7470	124.5		
	570(V-Belt/gear box)	167	200	8000	133.3		
	610(V-Belt/gear box)	189	220	8600	143.3		
2BE3 420	340(V-Belt/gear box)	108	132	6650	110.8	160	3720
	390(V-Belt/gear box)	132	160	7650	127.5		
	440(V-Belt/gear box)	157	185	8550	142.5		
	490(V-Belt/gear box)	180	200	9400	156.6		
	530(V-Belt/gear box)	204	220	10150	169.2		
	570(V-Belt/gear box)	229	250	10700	178.3		
	610(V-Belt/gear box)	260	315	11600	193.3		
2BE3 500	260(gear box)	142	160	8700	145.0	160	6110
	300(gear box)	171	200	10150	169.2		
	340(gear box)	203	250	11400	190.0		
	380(gear box)	238	280	12700	211.7		
	420(gear box)	277	315	13800	230.0		
	470(gear box)	338	400	15500	258.3		

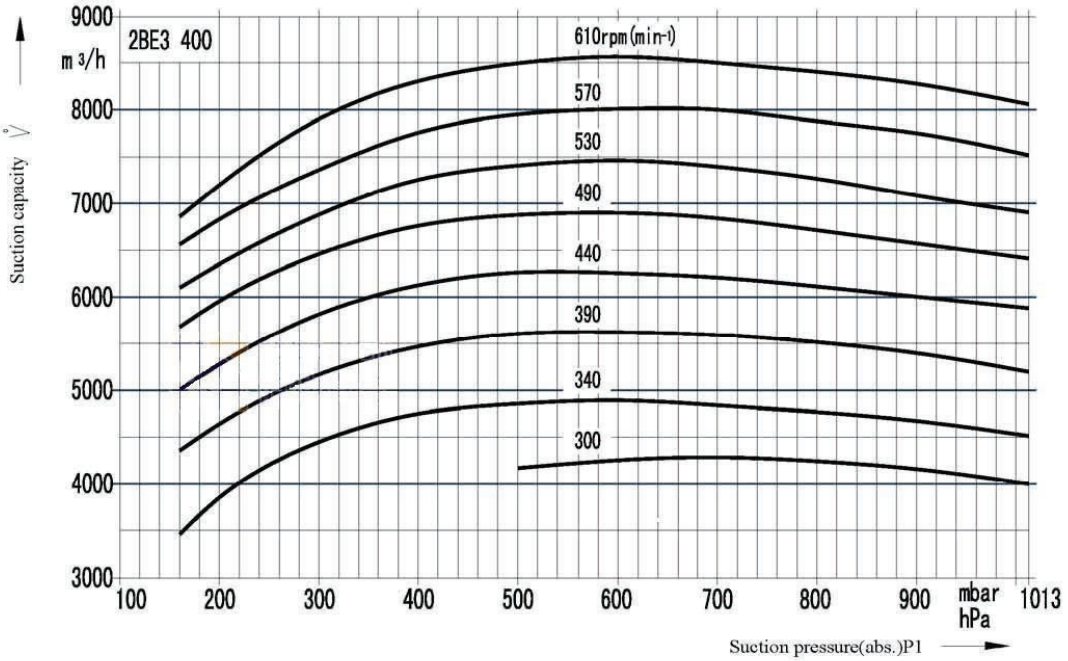
2BE3 520	260(gear box) 300(gear box) 340(gear box) 380(gear box) 420(gear box) 470(gear box)	172 210 245 288 337 412	200 250 280 315 400 500	10700 12300 14000 15400 16800 18700	178.3 205.0 233.3 256.7 280.0 311.7	160	6740
2BE3 600	230(gear box) 260(gear box) 290(gear box) 320(gear box) 350(gear box) 400(gear box)	205 243 285 322 365 465	250 280 315 355 450 560	12700 14400 16000 17500 19000 21600	211.7 240.0 266.7 291.7 316.7 360.0	160	9100
2BE3 620	230(gear box) 260(gear box) 290(gear box) 320(gear box) 350(gear box) 400(gear box)	250 300 340 390 450 570	280 355 400 450 500 630	15600 17700 19500 21300 23200 26200	260.0 295.0 325.0 355.0 386.7 436.7	160	10700
2BE3 670	210(gear box) 240(gear box) 270(gear box) 300(gear box) 320(gear box) 330(gear box) 370(gear box)	280 350 415 465 523 545 670	315 400 450 560 630 630 800	18300 20400 23160 25500 27000 27720 30960	305 340 386 425 450 462 516	160	12700
2BE3 720	190(gear box) 210(gear box) 240(gear box) 270(gear box) 300(gear box) 340(gear box)	345 395 475 550 642 795	400 450 560 630 710 900	21900 24300 27480 30540 33780 38100	365 405 458 509 563 635	160	15700

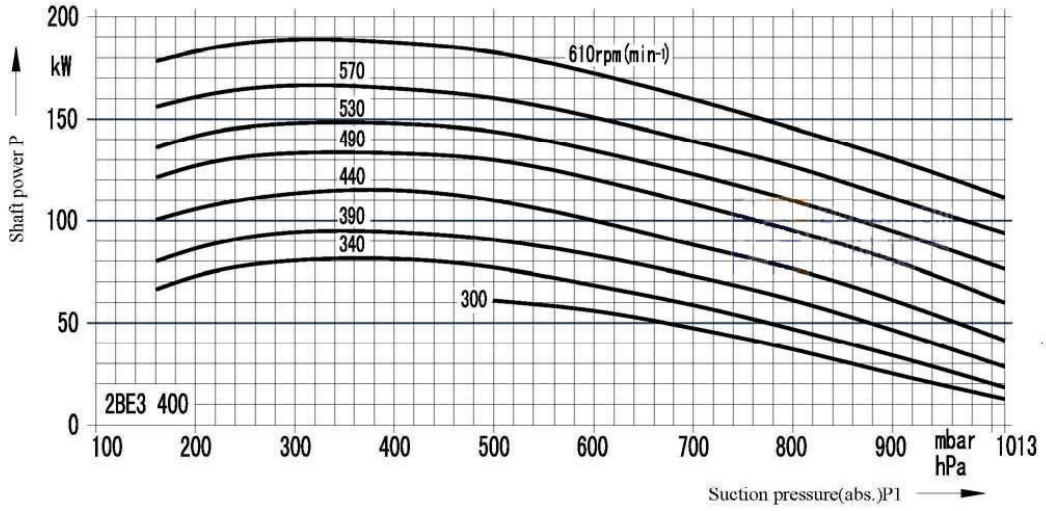
Notes:

1. The voltage and frequency of the motor can be chosen by the customers' requirements.
2. The above data of the speed are only for reference. The practical speed is confirmed according to the driving type and the customer's requirements.
3. The optional speeds for 2BE3 400/420 pumps driven with V-belt:327/349/393/446/475/498/527 rpm.
4. We don't recommend to use the V-belt to drive the pump whose suction capacity is larger than the 2BE3 500.
5. The installation dimension of the pump driven by the gear box is confirmed by the supplier of the gear box.
6. The data of the suction capacity in the above table indicates the maximum of the suction capacity. The practical data is various for the different suction pressure.
7. The temperature of the water influences the performance of the pump. The performance data of the pump is obtained when the temperature of the water is at 15^{o}C, so the mending data of the suction capacity is needed when you choose the pump in the practice.

The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 400 series water ring vacuum pumps

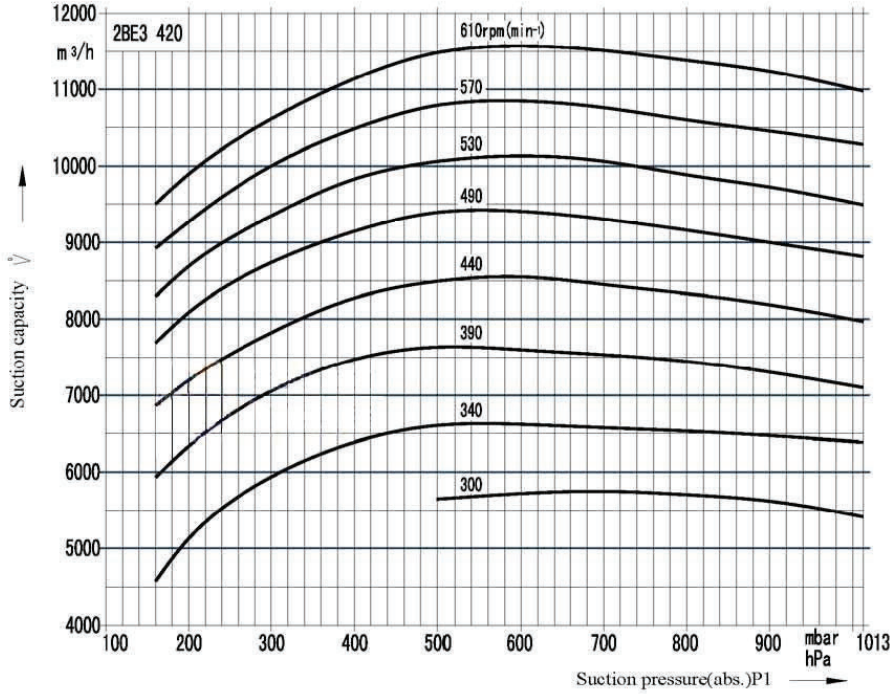


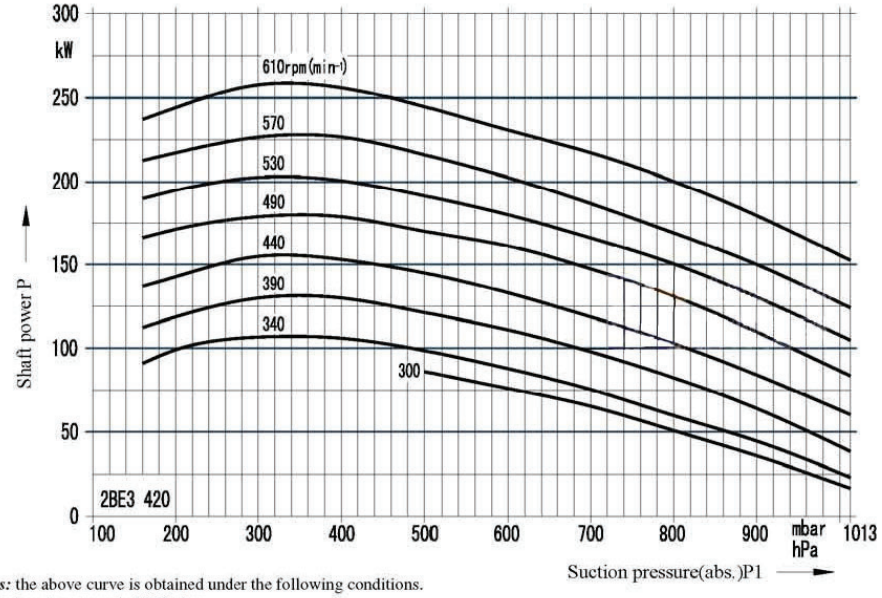


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 420 series water ring vacuum pumps

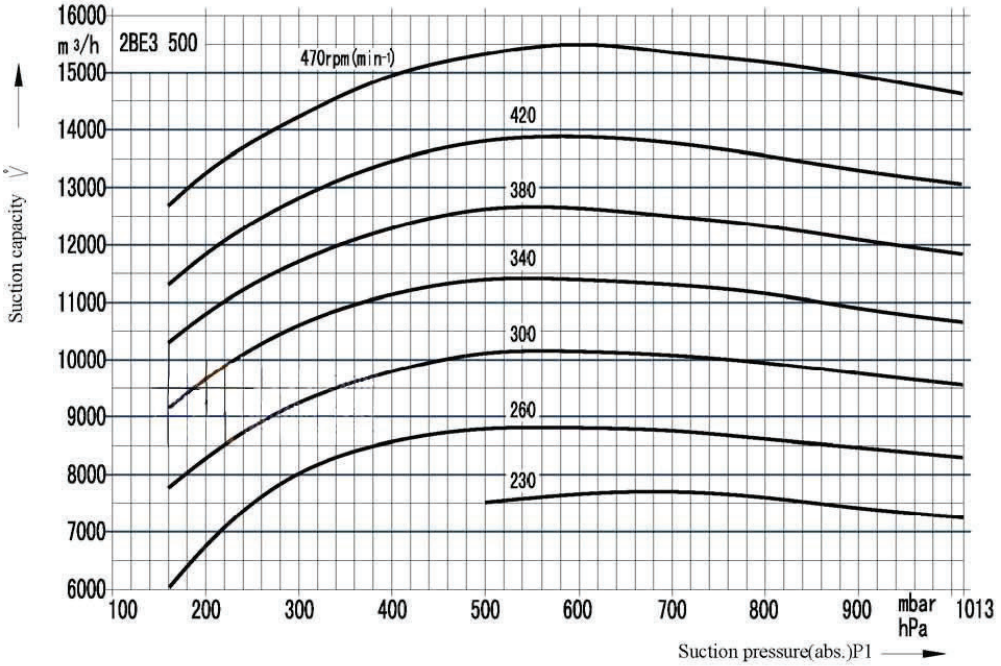


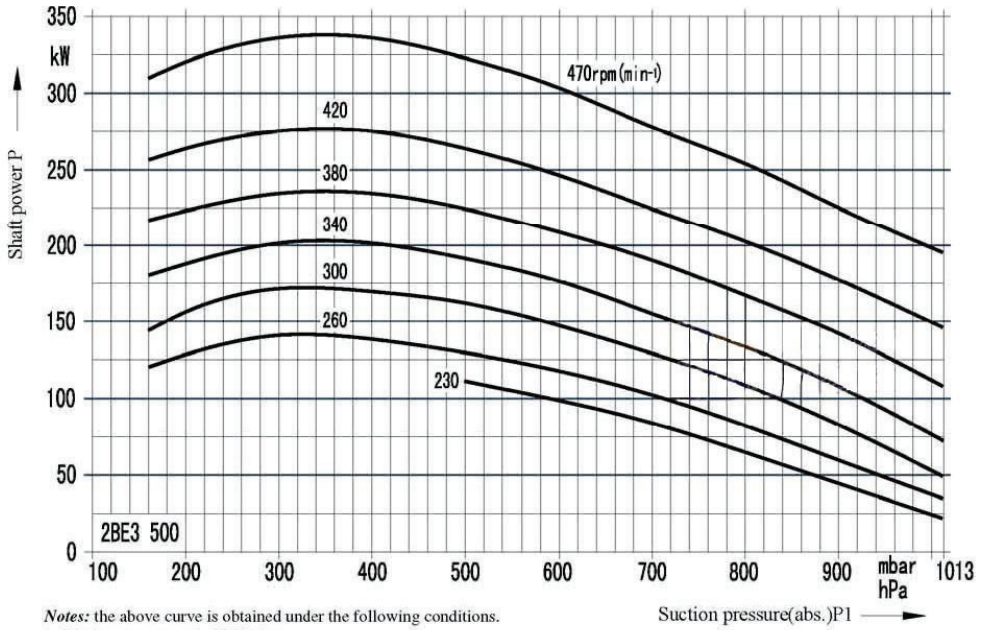


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➤ The performance curve of the 2BE3 500 series water ring vacuum pumps

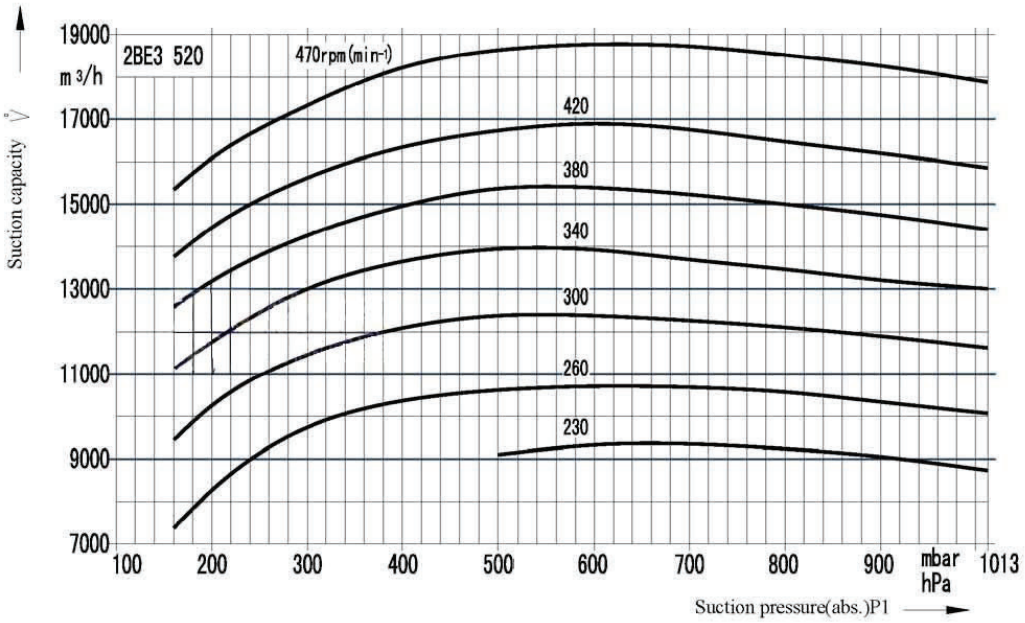


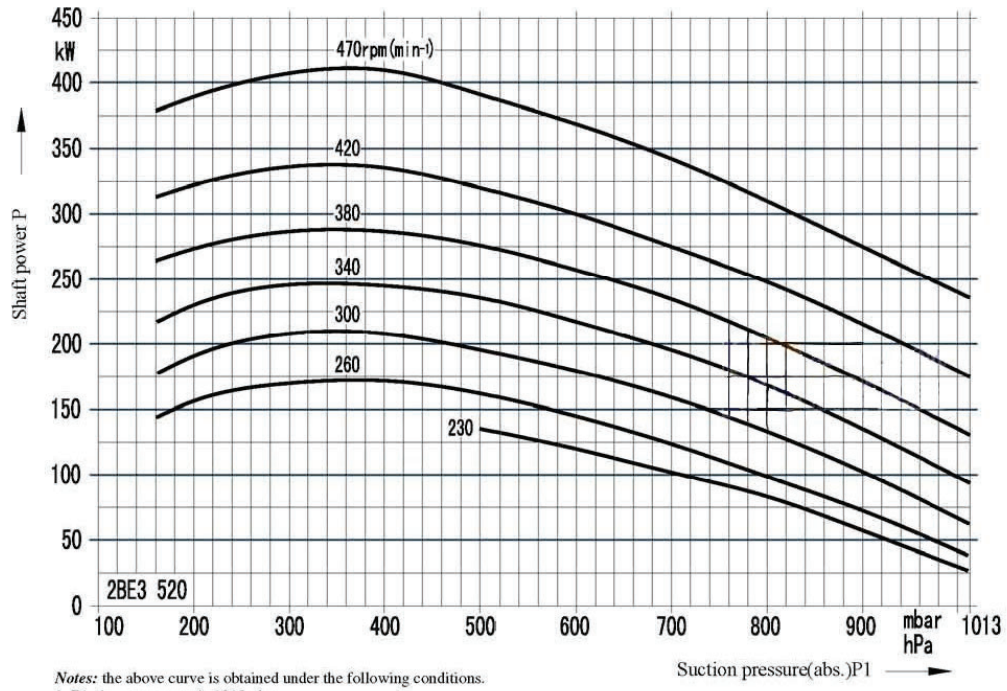


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 520 series water ring vacuum pumps

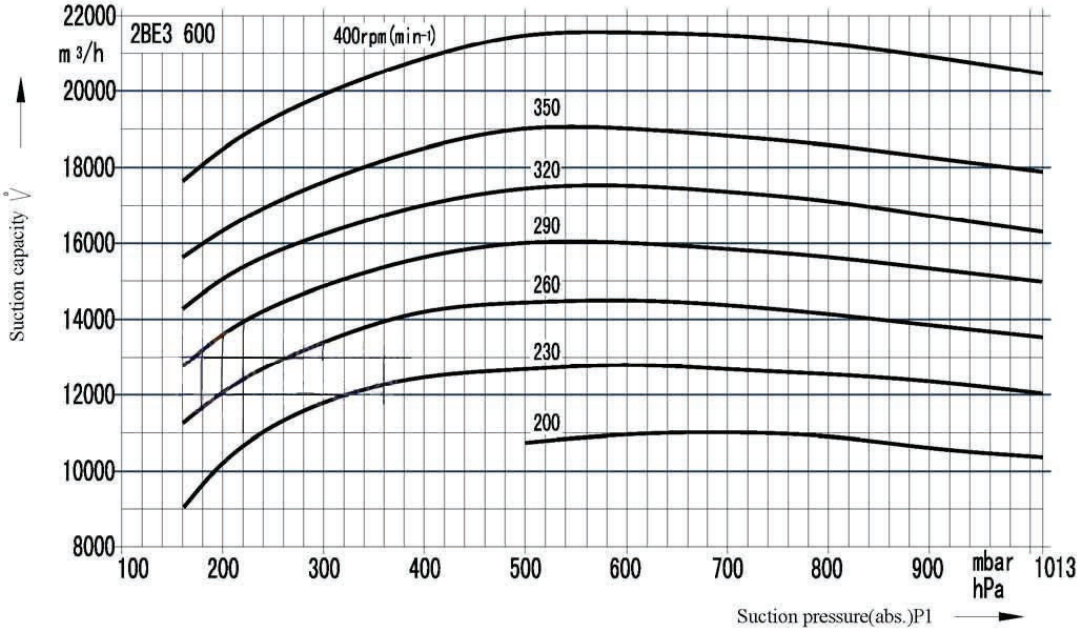


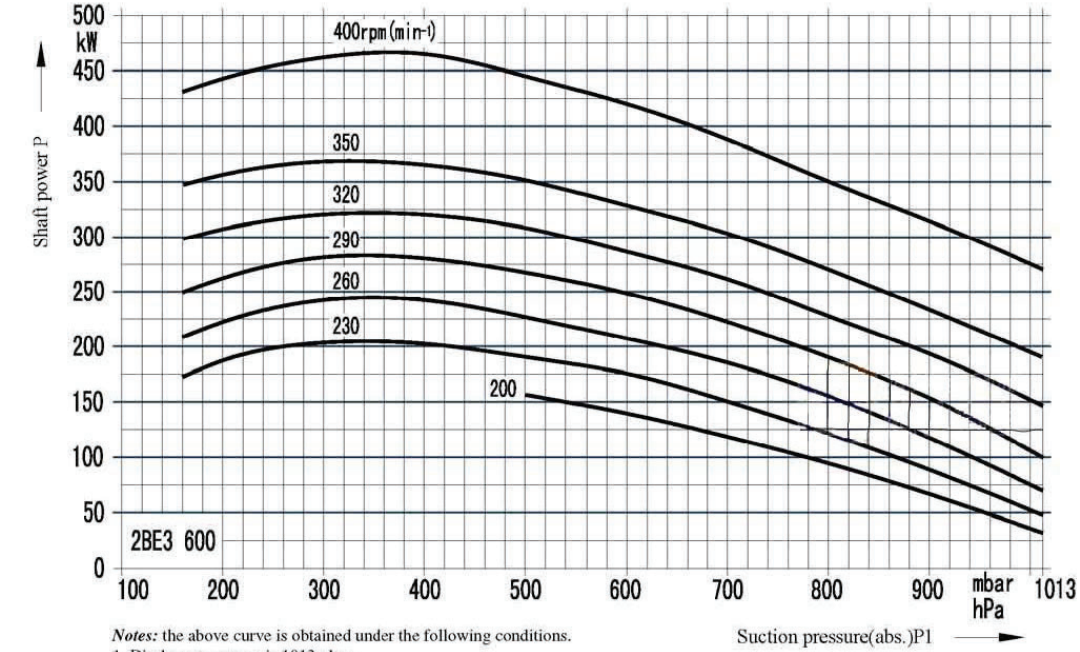


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➤ The performance curve of the 2BE3 600 series water ring vacuum pumps

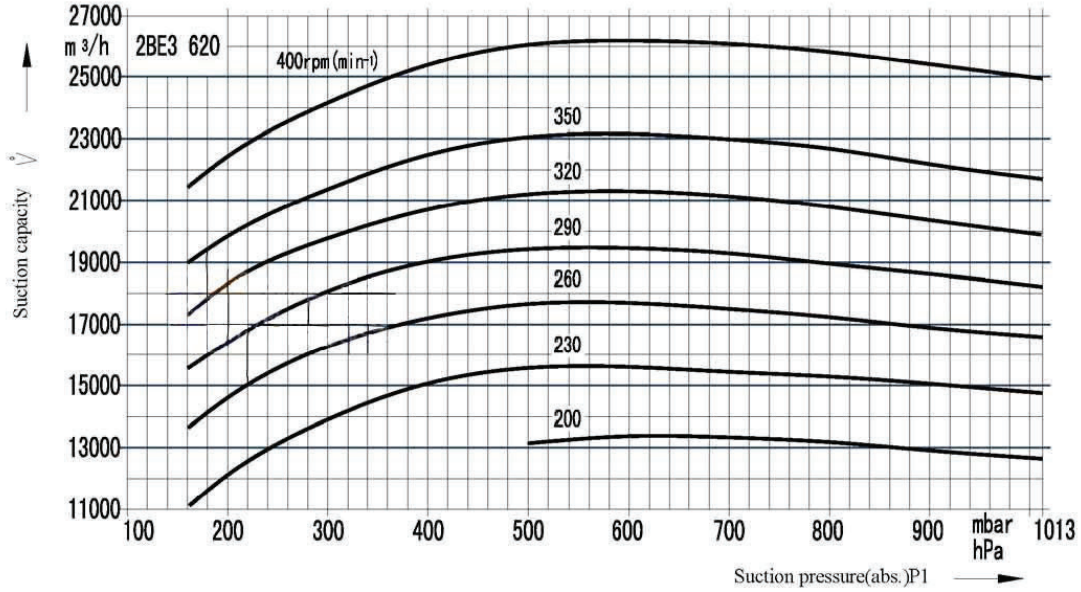


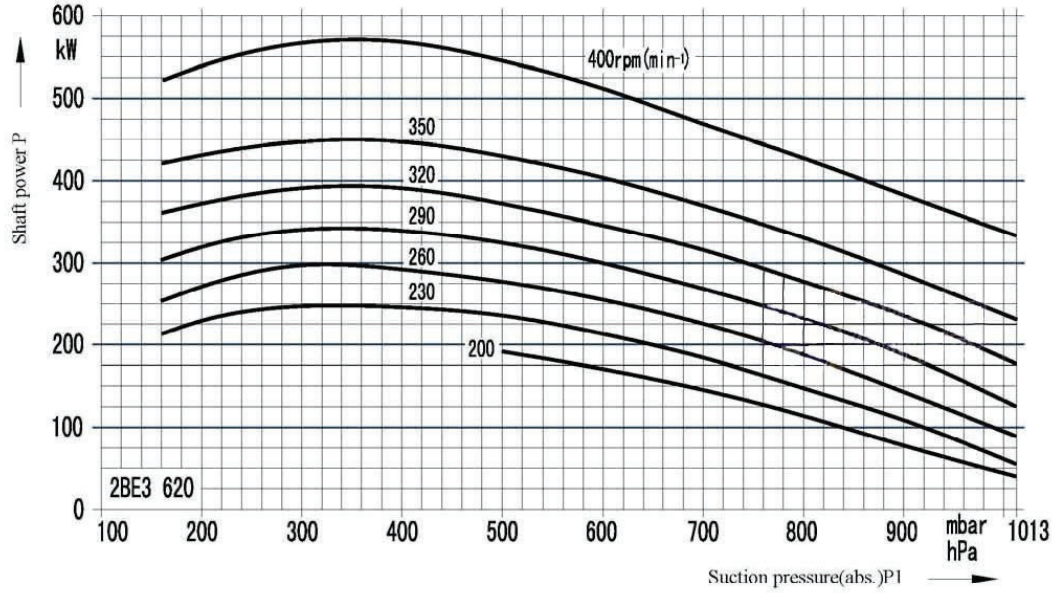


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 620 series water ring vacuum pumps

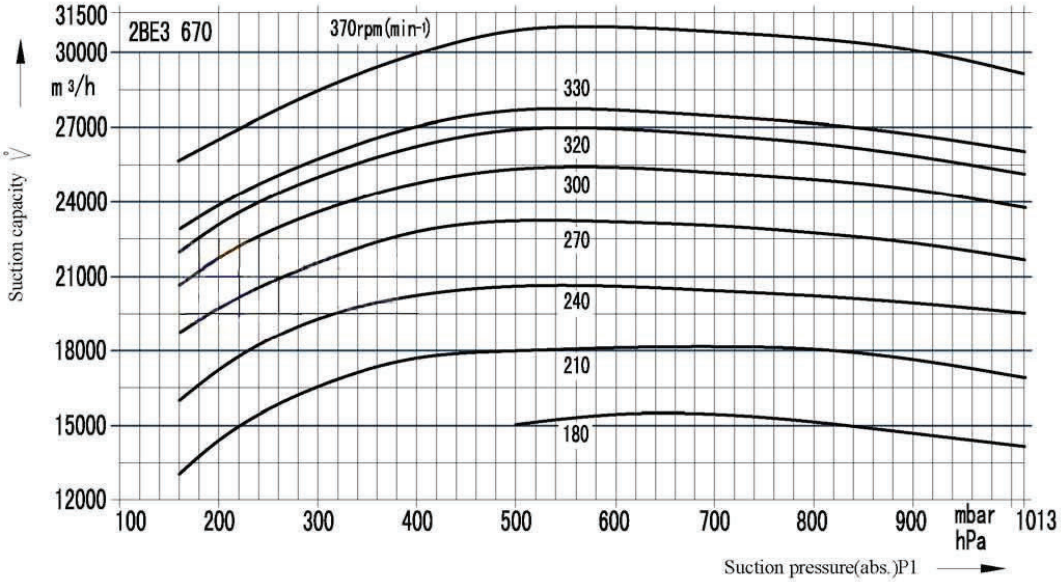


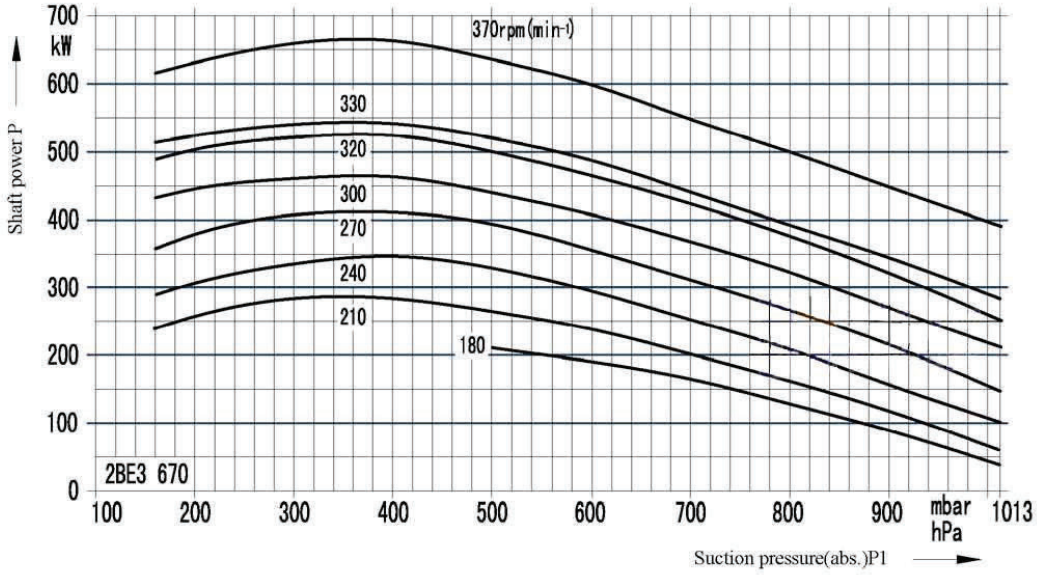


Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 670 series water ring vacuum pumps

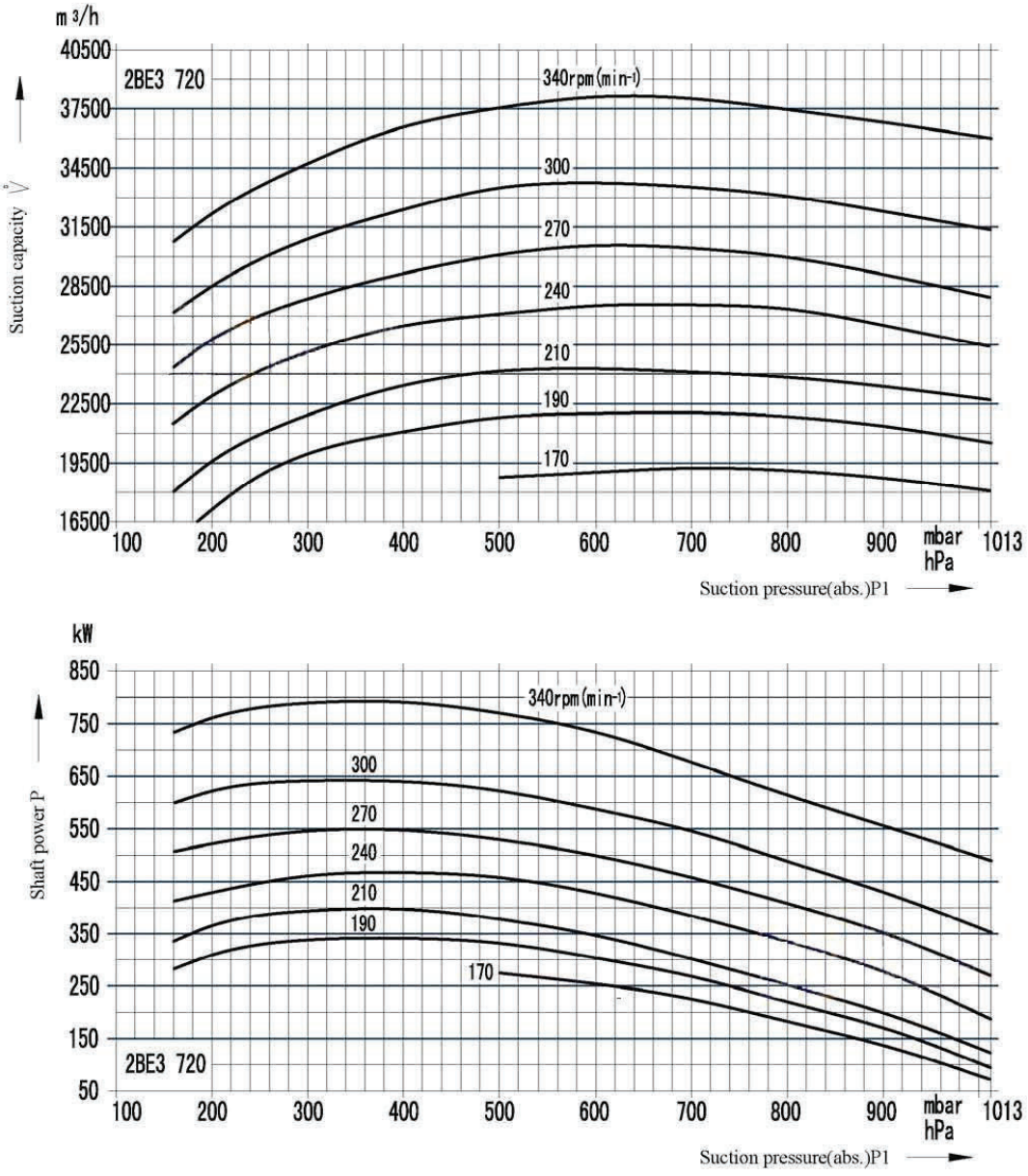




Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

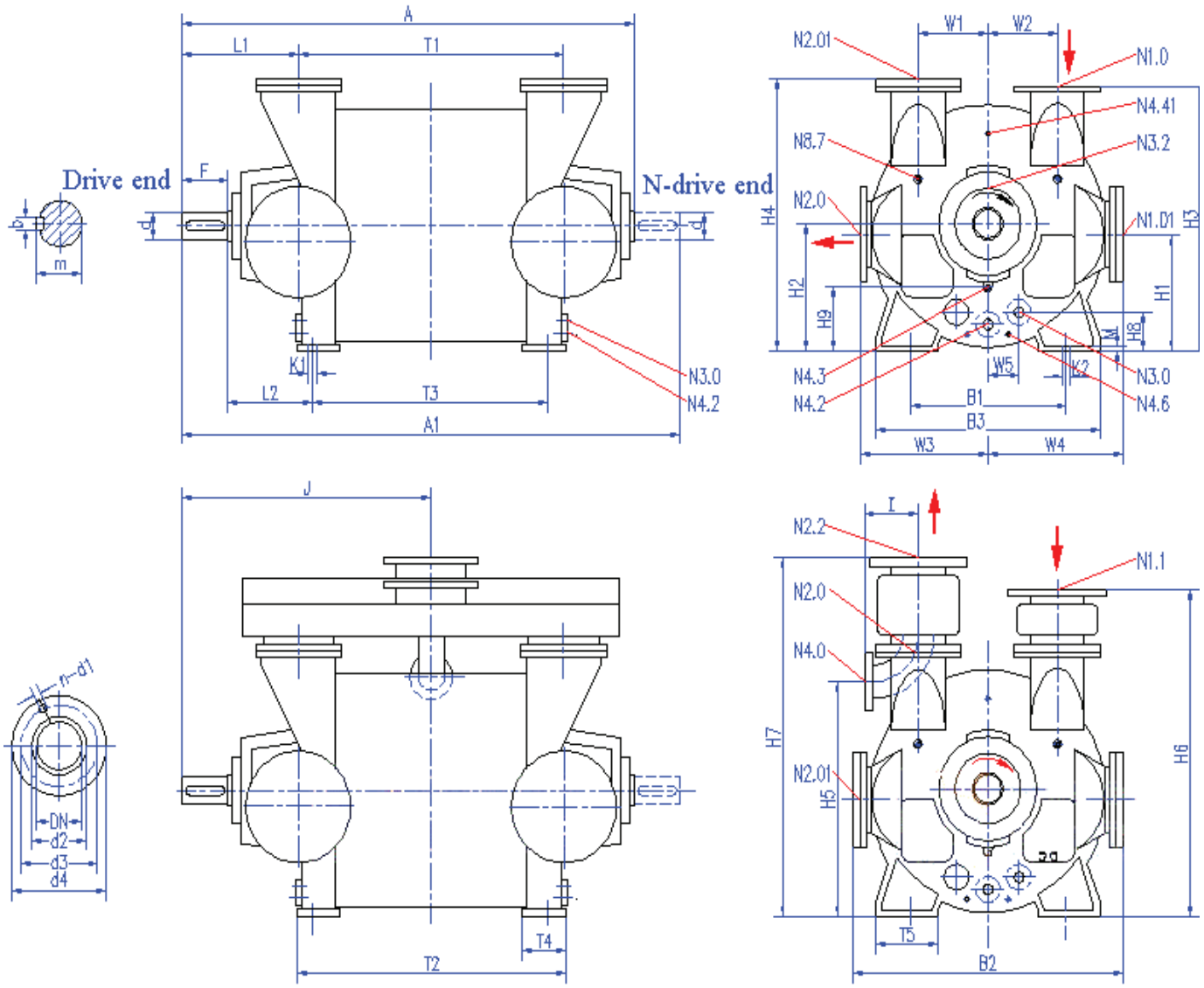
The performance curve of the 2BE3 series water ring vacuum pumps

➢ The performance curve of the 2BE3 720 series water ring vacuum pumps



Notes: the above curve is obtained under the following conditions.
1. Discharge pressure is 1013mbar.
2. Saturated air temperature is 20℃.
3. The operating liquid temperature is 15℃.
4. Allowance tolerance is ±5%.

The Dimension of the 2BE3400/420/500/520/600/620/670/720 bare pumps



Code	Name	Code	Name	Code	Name
N1.0/1.01	Inlet flanges	N3.0	Connection for operating liquid	N4.3	Leaking port
N1.1	Y-pipe flange	N3.2	Connection for sealing liquid of the stuffing box packing	N4.41	Spare connection for internal shaft sealant
N2.0/2.01	Outlet flange	N4.0	Separator drian port	N4.6	Plug for total drian port
NN2.2	Separator outlet flange	N4.2	Flushing and drian port	N8.7	Plug for instrument

Installation dimension of the 2BE3 series bare pumps (Unit:mm)

Code	A	A1	B1	B2	B3	b	d	F	H1	H2	H3	H4	H5	H6	H7	H8	H9	I	J	K1
2BE3 400	2102	2359	875	1320	1090	32	130	250	560	620	1160	1195	1014	1520	1760	209	332	284	1179	50
2BE3 420	2391	2648	875	1320	1090	32	130	250	560	620	1160	1195	1014	1520	1760	209	332	284	1323	50
2BE3 500	2603	2913	1120	1580	1370	40	160	300	698	775	1450	1490	1232	1850	2185	227	451	367	1456	50
2BE3 520	2853	3163	1120	1580	1370	40	160	300	698	775	1450	1490	1232	1850	2185	227	451	367	1581	50
2BE3 600	2837	3144	1320	1830	1620	45	180	300	809	900	1720	1760	1503	2170	2560	249	539	367	1572	58
2BE3 620	3132	3439	1320	1830	1620	45	180	300	809	900	1720	1760	1503	2170	2560	249	539	367	1719	58
2BE3 670	3389	3748	1400	1960	1740	45	200	350	877	975	1855	1900	1734	2308	2990	261	576	449	1873	58
2BE3 720	3587	3946	1600	2140	1900	45	200	350	952	1060	1985	2030	1734	2308	2990	273	663	449	1972	58
Code	K2	L1	L2	M	m	T1	T2	T3	T4	T5	W1	W2	W3	W4	W5	N3.2	N4.3	N4.41	N4.6	N8.7
2BE3 400	42	594	377	30	137	1169	1314	1103	220	215	300	300	625	660	160	1/4″	3/4″	1/2″	1/2″	1/2″
2BE3 420	42	594	377	30	137	1458	1603	1392	220	215	300	300	625	660	160	1/4″	3/4″	1/2″	1/2″	1/2″
2BE3 500	42	672	411	35	169	1568	1723	1490	250	250	385	385	750	790	175	1/4″	3/4″	1/2″	1/2″	1/2″
2BE3 520	42	672	411	35	169	1818	1973	1740	250	250	385	385	750	790	175	1/4″	3/4″	1/2″	1/2″	1/2″
2BE3 600	48	650	398	45	190	1843	2043	1747	300	300	435	435	875	915	200	1/2″	3/4″	1/2″	1/2″	1/2″
2BE3 620	48	650	398	45	190	2138	2338	2042	300	300	435	435	875	915	200	1/2″	3/4″	1/2″	1/2″	1/2″
2BE3 670	48	733	423	45	210	2280	2480	2200	300	320	460	460	935	980	200	1/2″	3/4″	1/2″	1/2″	1/2″
2BE3 720	48	722	427	45	210	2500	2730	2390	340	340	490	490	1025	1070	200	1/2″	3/4″	1/2″	1/2″	1/2″
Code	Connection	DN	d1	d2	d3	d4	n	Connection	DN	d1	d2	d3	d4	n						
2BE3 400 2BE3 420	N1.0/N1.01 N2.0/N2.01	250	22	320	350	395	12	N3.0 N4.2	50	M16	102	125	-	4						
	N1.1/N2.2	300	22	370	400	445	12	N4.0	150	22	212	240	285	8						
2BE3 500 2BE3 520	N1.0/N1.01 N2.0/N2.01	300	22	370	400	445	12	N3.0 N4.2	50	M16	102	125	-	4						
	N1.1/N2.2	350	22	430	460	505	16	N4.0	200	22	268	295	340	8						
2BE3 600 2BE3 620	N1.0/N1.01 N2.0/N2.01	350	22	430	460	505	16	N3.0 N4.2	80	M16	128	150	-	4						
	N1.1/N2.2	400	26	482	515	565	16	N4.0	200	22	268	295	340	8						
2BE3 670	N1.0/N1.01 N2.0/N2.01	350	22	430	460	505	16	N3.0 N4.2	80	M16	128	150	-	4						
	N1.1/N2.2	500	26	585	620	670	20	N4.0	200	22	268	295	340	8						
2BE3 720	N1.0/N1.01 N2.0/N2.01	400	26	482	515	565	16	N3.0 N4.2	80	M16	128	150	-	4						
	N1.1/N2.2	500	26	585	620	670	20	N4.0	250	22	320	350	395	12						