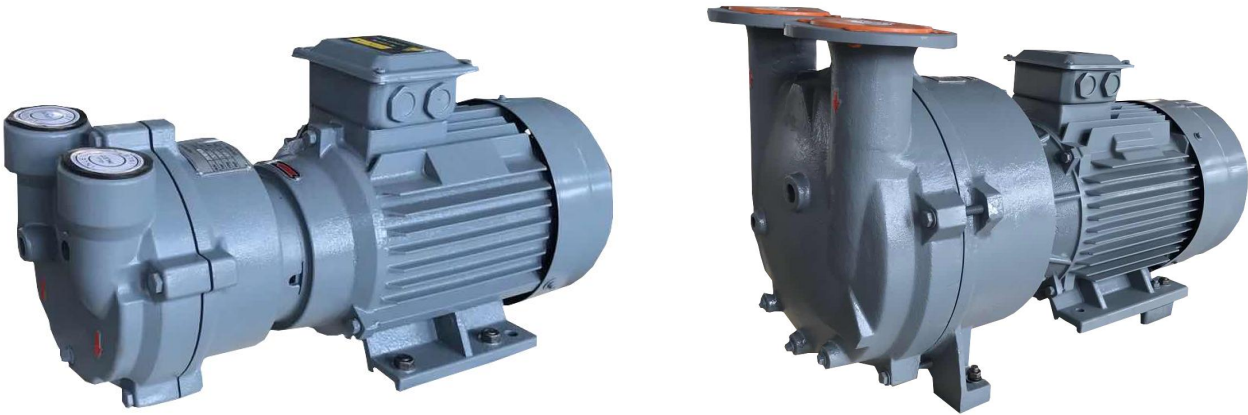


## 2BV Water Ring Vacuum Pump/Compressor



### Introduction:

2BV series water ring vacuum pump is suitable for pumping gas and vapor. Its suction pressure can reach 33mbar (absolute pressure) (97% vacuum degree). When the transformer oil is used as working liquid (it is called oil ring vacuum pump), the suction pressure can reach 6.7mbar (absolute pressure) (99.3% vacuum degree), so it can fully replace reciprocating vacuum pump. When the vacuum pump works for a long time under the suction pressure near to the ultimate vacuum, it needs to connect with cavitations protection tube in order to eliminate screaming and protect the pump. As the compressor, the ultimate pressure is 0.26MPa (absolute pressure). 2BV series water ring vacuum pump and compressor as the new generation of energy saving products, its outstanding performance and advantages will replace SK, 2SK series water ring vacuum pump, W, WY, WL series reciprocating vacuum pump.

2BV2-Ex, 2BV6 series water ring vacuum pump/ compressor are mainly used for pumping the explosive gas or work in the various inflammable and explosive environments, and their performance parameter are the same as 2BV2, 2BV5 series.

### Main features:

1. The direct-coupled design is easy installation and can save space.
- 2, The bearings are all the Japanese NSK.
- 3, The standard configuration uses the John Crane mechanical seal which can eliminate leakage and easy to maintain.
- 4, The pump has the cavitation protection port, when it works under the ultimate pressure, the cavitation protection port opens (or connects with the separator) in the case of ensure maximum suction effect to eliminate the noise of cavitation and protect the pump
- 5, 2BV whole series are all use the aluminum bronze impeller with high strength and raise its corrosion resistance and durability. If the liquid flows parts adopt stainless steel, the pump can work in the more hard condition.
- 6, Special flexible the exhaust port can avoid over-pressure and ensure the best efficiency within the range of its performance.
- 7, All motors are all adopted Y2 series products. The protective grade is IP54 or IP55 (common is IP44), the insulation grades is F (common is B).
- 8, 2BV series water ring vacuum pump can bring soft seal parts are all PTFE which can last its workable life under the more harsh environments.
- 9, Stable Operation and noise can low to 62 decibel.

### The difference between 2BV5 and 2BV6:

The performance of 2BV5 and 2BV6 is the same.

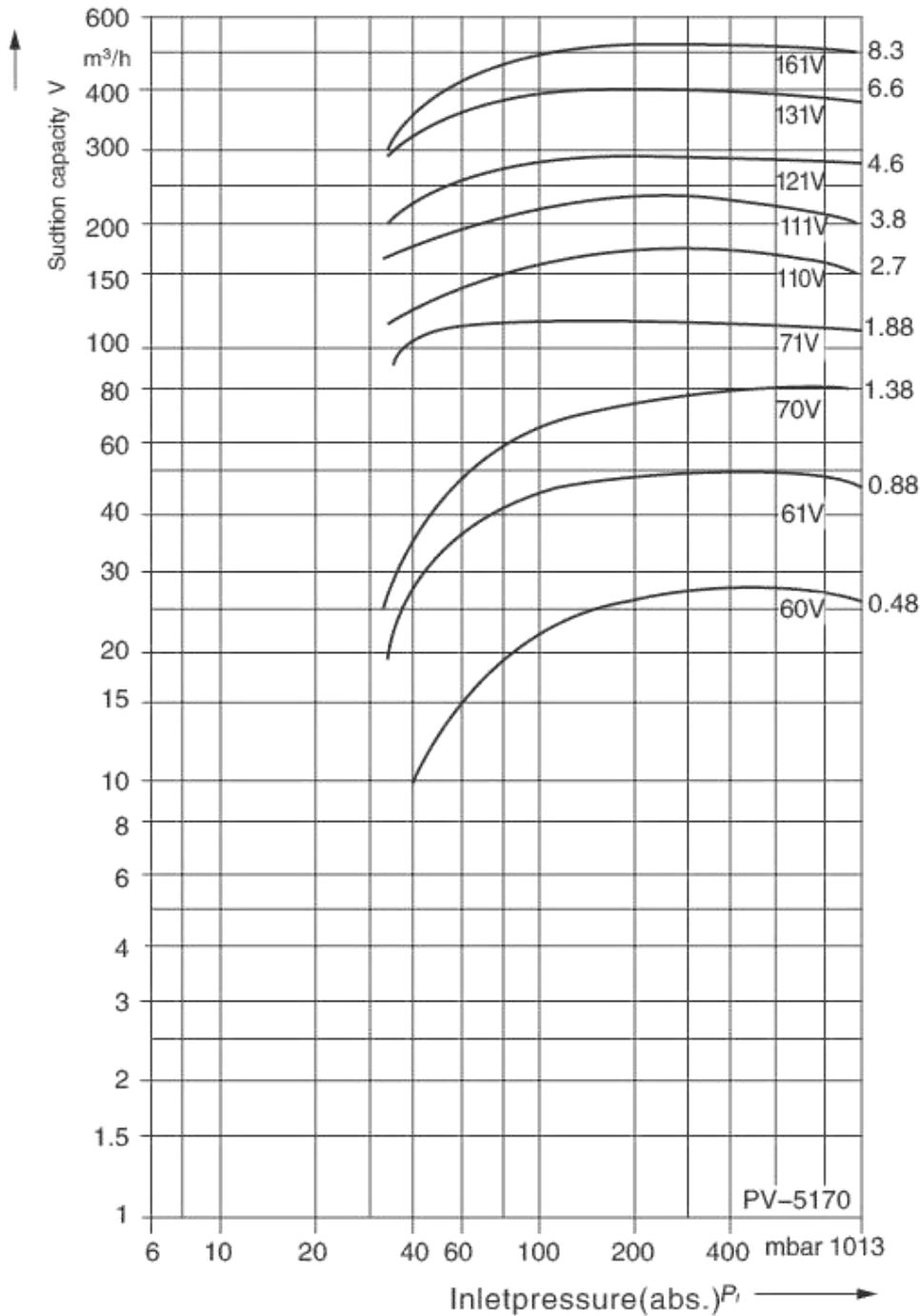
The size of 2BV6 is longer.

Because 2BV5 don't have the coupling between pump and motor. The pump is installed with the same shaft with motor.

The pump shaft and motor shaft is connected by coupling for 2BV5. So the materials of pump shaft can be SS304 or other ones. And can be installed with Explosion-Proof Motor.

### 2BV specification data

Curve No.	Model	Suction amount		Ultimate vacuum mbar (MPa)	Motor power kW	Pump speed r.p.m	Liquid flow-rate L/min	Noise dB(A)	Inlet/outlet diam. mm	Weight kg
		m3/min	m3/h							
60V	2BV2 060	0.45	27	33mbar (-0.098MPa) a)	0.81	2840	1-3	62	G1"	37
61V	2BV2 061	0.86	52		2.2	2840	2-4	65	G1"	41
70V	2BV2 070	1.33	80		2.35	2860	3-5	66	G1 1/2"	66
71V	2BV2 071	1.83	110		3.85	2880	5-8	72	G1 1/2"	85
60V	2BV2 060-Ex	0.45	27		1.1	2840	1-3	62	G1"	37
61V	2BV2 061-Ex	0.86	52		1.5	2840	2-4	65	G1"	41
70V	2BV2 070-Ex	1.33	80		3	2860	3-5	66	G1 1/2"	66
71V	2BV2 071-Ex	1.83	110		4	2880	5-8	72	G1 1/2"	85
110V	2BV5 110	2.75	165		4	1440	6-10	63	50	120
111V	2BV5 111	3.83	230		5.5	1440	6-10	68	50	150
121V	2BV5 121	4.66	280		7.5	1440	10-12	69	65	210
131V	2BV5 131	6.66	400		11	1460	15-20	73	65	280
161V	2BV5 161	8.33	500		15	970	20-25	74	80	390
110V	2BV6 110	2.75	165		4	1440	6-10	63	50	148
111V	2BV6 111	3.83	230		5.5	1440	6-10	68	50	196
121V	2BV6 121	4.66	280		7.5	1440	10-12	69	65	220
131V	2BV6 131	6.66	400		11	1460	15-20	73	65	314
161V	2BV6 161	8.33	500		15	970	20-25	74	80	426
	2BV5110-P1	2.75	165		4	1450	6-10	63	50	
	2BV5111-P1	3.83	230		5.5	1450	6-10	68	50	
	2BV5121-P1	4.66	280	7.5	1450	10-12	69	65		
	2BV5131-P1	6.66	400	11	1450	15-20	73	65		

**Performance curves**

**Note:**

1. The curve is obtained under the following condition:

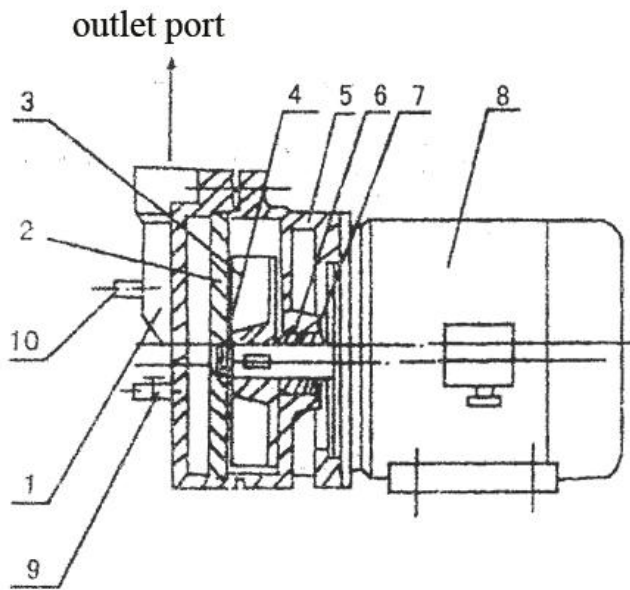
suction medium: saturated air temperature 20°C

operating liquid temperature 15°C

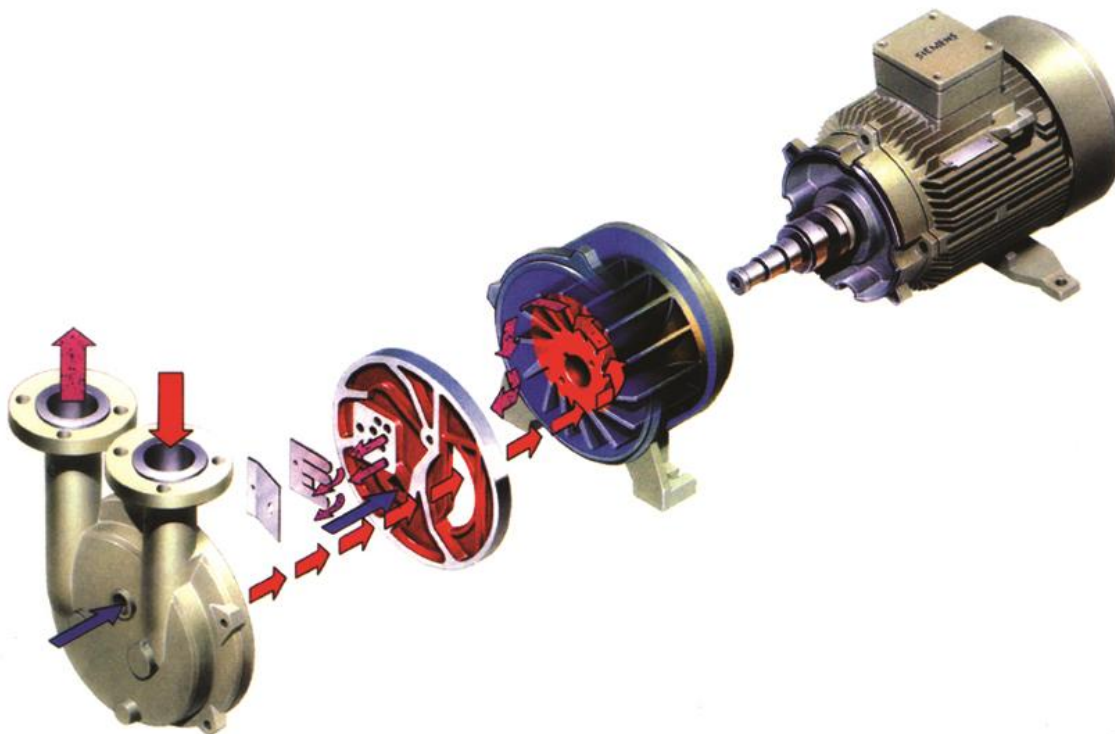
discharge pressure 1013mbar

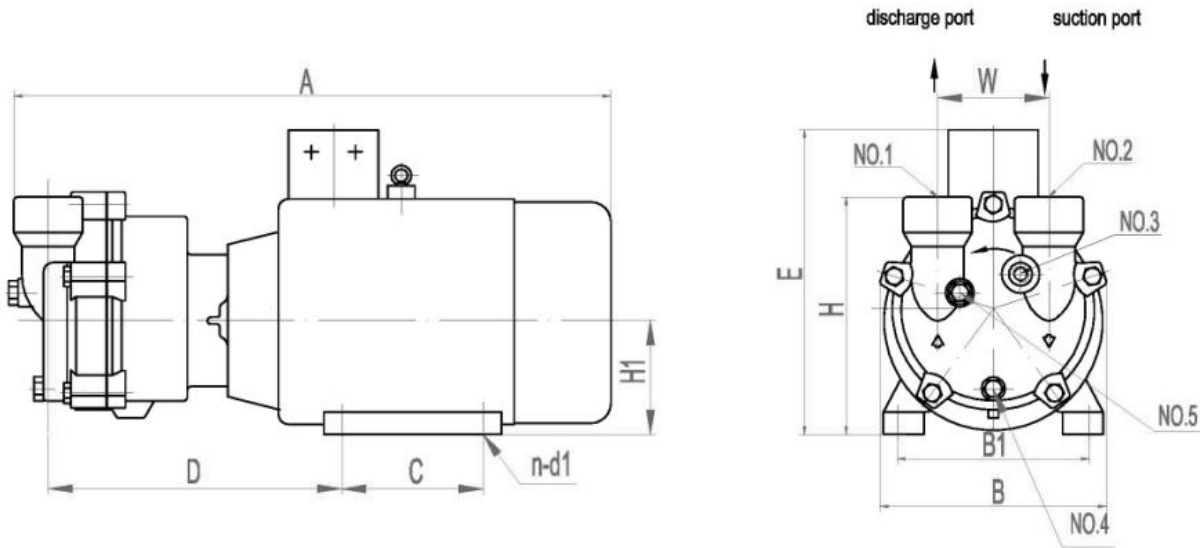
2. Performance tolerance 10%

2. Curves on the left side are obtained with air ejector

**Structure**


- |                               |                    |               |                  |
|-------------------------------|--------------------|---------------|------------------|
| 1.pump cover                  | 2.port plate       | 3.impeller    | 4.fastening bolt |
| 5.pump body                   | 6. mechanical seal | 7. check ring | 8.motor          |
| 9. Cavitation protective tube | 10.water in        |               |                  |

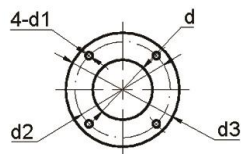
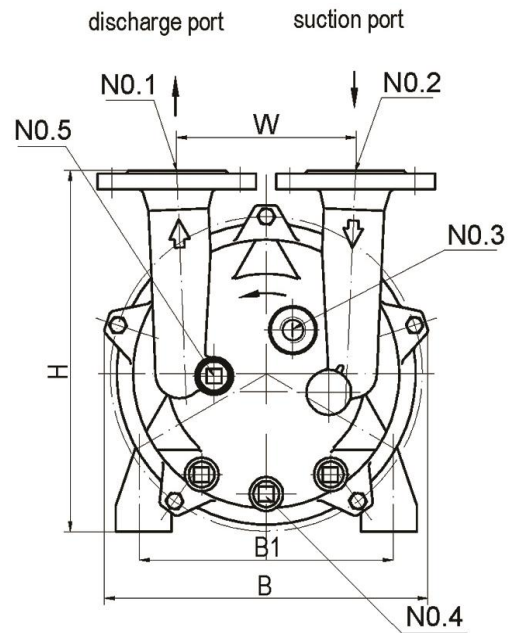
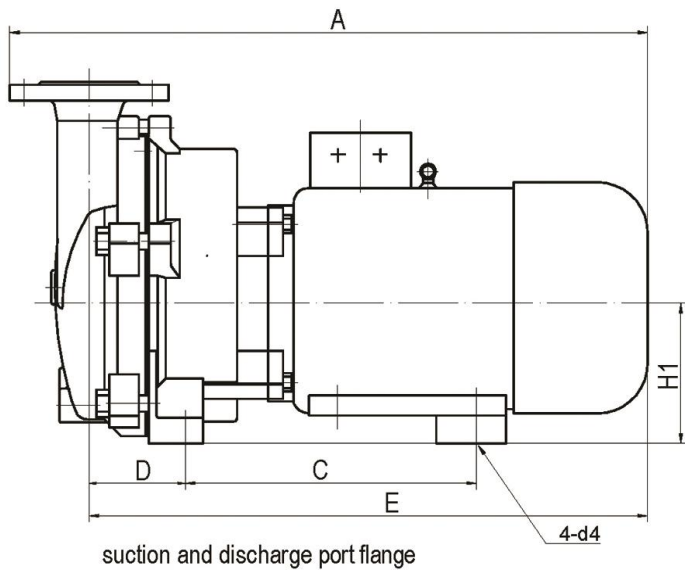


**Dimensional drawing(mm)**
**2BV2 series :**


NO.1. discharge port    NO.2. suction port    NO.3. water supply    NO.4. water outlet  
 NO.5. anti-cavitation protection port

SIZE	A	B	B1	C	D	E	H	H1	W
2BV2060	450	186	140	100	203	250	196	90	110
2BV2061	475	186	140	100	223	250	196	90	110
2BV2070	565	224	160	140	260	270	222	100	110
2BV2071	590	224	160	140	260	300	222	112	110
SIZE	n	d1	NO.1	NO.2	NO.3	NO.4	NO.5		
2BV2060	4	10	G1"	G1"	G3/8"	G1/4"	G3/8"		
2BV2061	4	10	G1"	G1"	G3/8"	G1/4"	G3/8"		
2BV2070	4	12	G1 1/2"	G1 1/2"	G3/8"	G1/4"	G3/8"		
2BV2071	4	12	G1 1/2"	G1 1/2"	G3/8"	G1/4"	G3/8"		

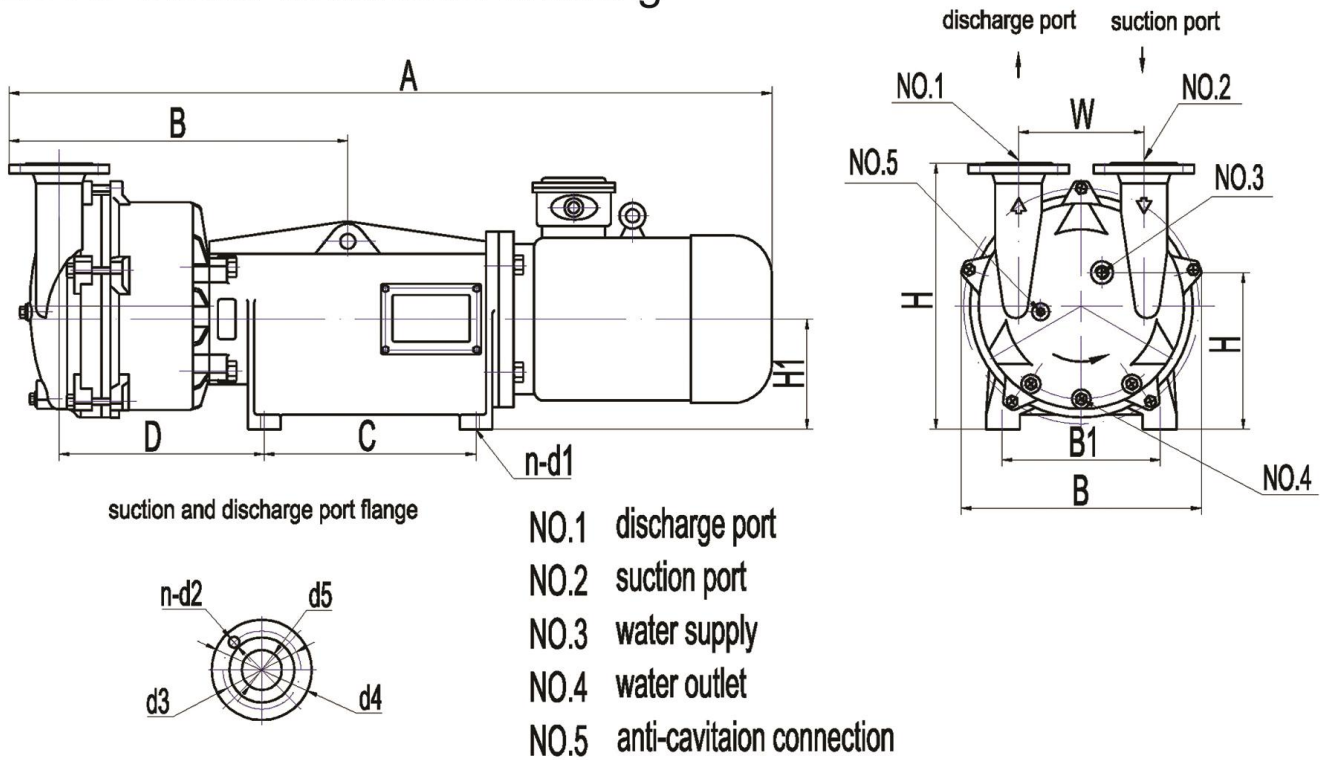
## 2BV5 series dimension drawing



N0.1. discharge port    N0.2. suction port    N0.3. water supply    N0.4. water outlet  
 N0.5. anti-cavitation protection port

SIZE	A	B	B1	C	D	E	H	H1	W
2BV5110	647	325	255	340	97	567	360	140	180
2BV5111	669	325	265	340	106	589	371	150	180
2BV5121	772	347	265	420	96	681	385	150	200
2BV5131	850	377	300	475	103	759	427	175	200
2BV5161	1060	479	370	570	137	960	521	210	250
SIZE	n	d1	d2	d3	d4	N0.3	N0.4	N0.5	
2BV5110	50	19	123	160	13	G1/2"	G3/8"	G3/8"	
2BV5111	50	19	123	160	14	G1/2"	G3/8"	G3/8"	
2BV5121	65	19	145	182	14	G3/4"	G3/8"	G3/8"	
2BV5131	65	19	145	182	14	G3/4"	G3/8"	G3/8"	
2BV5161	80	22	156	200	14	G3/4"	G3/4"	G3/8"	

## 2BV6 series dimension drawing



SIZE	A	B	B1	C	D	H	H1	W	
2BV6110	1043	340	252	248	281	383	163	180	
2BV6111	1216	340	290	325	332	406	185	180	
2BV6121	1264	382	290	325	349	420	185	200	
2BV6131	1455	390	316	417	351	531	220	200	
2BV6161	1615	480	316	417	409	521	220	200	
SIZE	d1	d2	d3	d4	d5	N0.3	N0.4	N0.5	
2BV6110	13	19	123	160	50	G1/2"	G3/8"	G3/8"	
2BV6111	14	19	123	160	50	G1/2"	G3/8"	G3/8"	
2BV6121	14	19	145	182	65	G3/4"	G3/8"	G3/8"	
2BV6131	14	19	145	182	65	G3/4"	G3/8"	G3/8"	
2BV6161	14	22	156	200	80	G3/4"	G3/4"	G3/8"	