

### GENERAL

**BNC VTX BV** is a Vortex Flowmeter based on Von Karman theory of vortices generated by a bluff body in the pipe. The number of vortices are linearly proportional to the volumetric flow in the pipe. The BV is versatile flowmeter widely used for Gases, Steam & Liquid applications. There are no moving parts and comes with either Flange or wafer connection. Standard configuration comes with local indication for flowrate and total flow as well as a 4-20mA output function output. The electronics are designed to filter out erroneous signals as well as noise due pipe vibration.

### FEATURES

- Simplified setup and diagnostic functions
- Auto. Temperature & Pressure compensation
- 4-20 mA and pulse outputs, user selectable
- a very wide selection of sizes
- Wide temperature range of up to 420 Deg. C
- Non-volatile memory for setup and calibration

### SPECIFICATION

- |                       |  |                    |   |
|-----------------------|--|--------------------|---|
| ● Size                | : 10,15,20,25,32,40,50,65,80,100,125,150<br>200,250,300,350,400,450,500mm  | ● Local display    | : 4 lines LCD<br>: 4 digit flowrate<br>: 8 digit Totalizer  |
| ● Measuring Range     | : Steam - 1.6 to 540,000 Kg/Hr<br>: Gas - 3 to 46,000 M3/Hr<br>: Liquid - 0.3 to 4950 M3/Hr  | ● Current output   | : 4-20 mA (2 wire)<br>Load : 600 Ohm  |
| ● Material            | : Stainless Steel 301 / 304 / 316  | ● Pulse output     | : Scale Pulse(3 wire)<br>Rating : 3 to 30VDC, 20mA Max.   |
| ● Accuracy            | Liquid : +/- 0.7% of reading<br>Gas & Steam : +/- 1.0% of reading  | ● Communication    | : RS485   |
| ● Repeatability       | : +/- 0.2% of reading  | ● Data storage     | : Operation Parameter and Totalizer<br>Figures are stored by EEPROM for more<br>then 10 years   |
| ● Process Connection  | : Flange / Wafer<br>Flanges type : JIS 10K / JIS 20K / JIS 40K<br>ANSI 150# / ANSI 300# / ANSI 600#<br>DIN PIN 10 / PN 16 / PN25 / PN 40 | ● Housing Material | : Aluminum Alloy  |
| ● Temperature         | : -40 ~ +280 Deg. C (Standard)<br>: -40 ~ +420 Deg. C (Optional)   | ● Cable Entry      | : 2 X M20 *1.5  |
| ● Ambient Temperature | : -20 ~ +60 Deg. C   | ● Power supply     | : 12-36 VDC<br>: Ni-MH Battery(3 years working Hours)   |
| ● Pressure            | : 78 Kg/cm2 (Max.)   | ● Key Pad          | : 4 keys from internal for Programming<br>and display control   |
| ● Protection          | : IP 65<br>: Explosion Proof, Exd IIC T6<br>: Intrinsically Safe, Eex ia IIC T4  | ● Option           | Pressure Sensor : Pressure compensation<br>Signal output : 0-30 mV DC(20 uA Power supply)<br>Temperature sensor : Temperature compensation<br>Signal output : PT100 ohm (3 wires) |



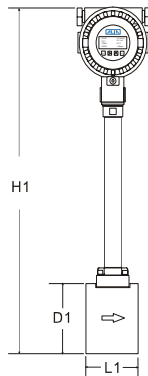
**FLOW RANGE**

Normal Size		Flow Range											
mm	Inch	Water(25 C)		Air - Nm <sup>3</sup> /Hr - 20 Deg. C									
		M3/Hr		0 BarG		2 BarG		4 BarG		6 BarG		8 BarG	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
10	3/8"	0.12	2.4	1.1	18	3.1	55	5.2	91	7.3	127	9.3	164
15	1/2"	0.28	5.4	2.0	44	5.8	130	10	216	14	302	17	389
20	3/4"	0.48	9.6	3.4	77	10	229	17	381	23	533	30	685
25	1"	0.72	14	5.3	115	16	342	26	569	37	796	47	1023
32	1-1/4"	1.2	24	9.2	196	27	581	46	967	64	1353	82	1739
40	1-1/2"	1.8	38	13	345	40	1026	66	1707	92	2388	118	3069
50	2"	2.8	60	20	575	60	1710	100	2845	141	3980	181	5115
65	2-1/2"	4.8	101	32	897	94	2668	156	4438	218	6209	280	7979
80	3"	7.2	152	53	1380	158	4104	263	6828	371	9552	473	12276
100	4"	11	238	77	2300	229	6840	381	11380	533	15920	685	20459
125	5"	18	372	119	3335	354	9918	589	16501	824	23083	1059	29666
150	6"	26	534	182	4715	541	14022	900	23328	1260	32635	1619	41942
200	8"	46	949	336	8625	999	25649	1662	42674	2326	59698	2989	76723
250	10"	71	1484	511	14375	1520	42749	2528	71123	3537	99497	4546	127871
300	12"	102	2136	742	18975	2207	56429	3671	93882	5136	131336	6600	168790
350	14"	138	2940	980	25300	2914	75238	4849	125177	6783	175115	8717	225053
400	16"	181	3792	1260	34500	3747	102598	6234	170695	8721	238793	11208	306891
450	18"	229	4800	1610	42550	4788	126537	7966	210524	11144	294512	14322	378499
500	20"	284	5940	2030	52900	6037	157316	10044	261733	14051	366149	18058	470566

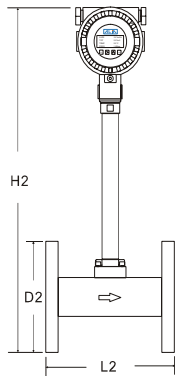
Normal Size		Saturated Steam - Kg/Hr											
mm	Inch	1 BarG		2 BarG		4 BarG		6 BarG		8 BarG		10 BarG	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
10	3/8"	1.1	20	1.6	30	2.6	48	3.6	66	4.5	83	5.5	101
15	1/2"	2.5	46	3.7	68	5.9	109	8.0	149	10	188	12	229
20	3/4"	4.4	81	6.5	121	10	193	14	265	18	334	22	406
25	1"	6.8	126	10	188	16	302	22	414	28	521	34	635
32	1-1/4"	11	207	17	308	27	495	36	677	46	853	56	1039
40	1-1/2"	16	390	24	582	39	933	53	1278	66	1609	81	1960
50	2"	25	715	37	1066	59	1711	80	2343	101	2949	123	3594
65	2-1/2"	41	1027	62	1531	99	2457	135	3365	170	4236	208	5163
80	3"	63	1554	93	2316	150	3717	205	5090	258	6408	315	7809
100	4"	98	2431	146	3625	235	5817	321	7966	404	10028	493	12220
125	5"	154	3783	230	5641	369	9052	505	12396	635	15605	774	19016
150	6"	224	5460	334	8141	536	13065	734	17891	924	22523	1126	27446
200	8"	392	9750	585	14538	938	23330	1285	31949	1617	40219	1971	49011
250	10"	609	15080	908	22485	1457	36084	1996	49414	2512	62205	3061	75804
300	12"	875	21710	1305	32371	2094	51949	2867	71139	3609	89554	4398	109132
350	14"	1197	29640	1785	44195	2864	70924	3922	97124	4938	122265	6017	148994
400	16"	1568	37700	2338	56213	3752	90211	5138	123535	6468	155513	7882	189510
450	18"	1981	48100	2954	71721	4740	115096	6491	157613	8172	198413	9958	241788
500	20"	2443	60840	3643	90717	5846	145581	8005	199360	10077	250965	12280	305830

➤ DIMENSIONS

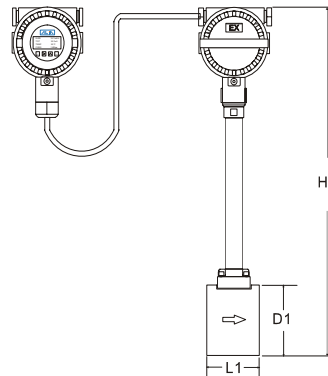
Normal Size												
mm	Inch	H1	H2	H3	H4	H5	L1	L2	L3	L4	D1	
10	3/8"	390	475			475	50	200			250	41
15	1/2"	396	480			480	50	200			250	46
20	3/4"	405	490			490	50	200			250	56
25	1"	418	500	477	500	500	50	200	112	250	65	
32	1-1/4"	420	515	481	515	515	54	200	112	250	76	
40	1-1/2"	450	525	485	525	525	65	200	112	250	92	
50	2"	460	540	490	540	540	78	200	112	250	98	
65	2-1/2"	475	560	500	560	560	78	200	112	275	110	
80	3"	495	575	525	575	575	78	225	112	300	134	
100	4"	520	610	550	610	612	65	250	112	350	158	
125	5"	540	625	565	625	625	65	275	112	375	175	
150	6"	565	675	590	675	675	88	300	140	400	200	
200	8"	615	735	640	735	735	98	350	160	450	250	
250	10"	665	800	690	800	800	118	400	180	500	300	
300	12"	715	860	740	860	860	138	450	200	550	350	
350	14"	765	930	790	930	930	152	500	220	600	400	
400	16"	815	995	840	995	995	172	550	240	650	450	
450	18"	865	1045	890	1045	1045	192	600	260	700	500	
500	20"	915	1105	940	1105	1105	212	650	280	750	550	



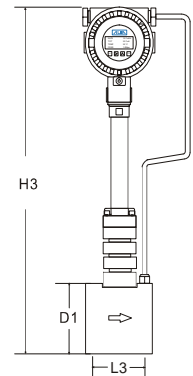
Wafer Type



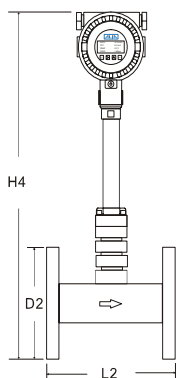
Flange Type



Separate Type

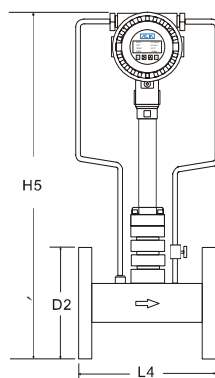


Wafer Type + Pressure Sensor  
Under Pressure Replace Sensor

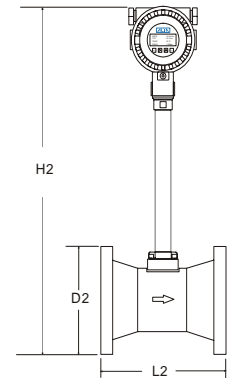


Flange Type

Under Pressure Replace Sensor



Flange Type with T/P Sensor



Reduced Bore Type

**➤ Model Selection Guide**

<b>BV Series</b>												
Example: BV-W050-6A2-A1NC-N												
BV-	X	XXX-	-X	X	X	-X	X	X	X	-X	Description	
<b>Body style</b>	W										Wafer Type	
	F										Flange Type	
<b>Size</b>	010 ~ 500											10 ~ 500mm (3/8" ~ 20")
<b>Material</b>			- 1									Stainless Steel 301(Wafer Type Only)
			- 4									Stainless Steel 304
			- 6									Stainless Steel 316
<b>Flange Rating</b>			1									PN10
			2									PN16
			3									PN25
			4									PN40
			A									ANSI 150 #
			B									ANSI 300 #
			C									ANSI 600 #
			J									JIS 10K
			K									JIS 20K
			L									JIS 40K
		Z									Others	
<b>Function</b>			1									Display ( without Temp./ Pressure compensation)
			2									Display + Pressure + Temperature calculation
			3									Display + Temperature sensor
			4									Display + Pressure sensor
			5									Display + Pressure / Temperature sensor
<b>Output</b>			- A									4-20 mA (2 Wire)
			- B									Battery Power (Display only, without output)
			- P									Scale Pulse output (3 Wire)
			- R									RS485 Communication + Scale Pulse Output(3 Wire)
<b>Max. Temperature</b>			1									-40 to +280 Deg. C
			2									-40 to +320 Deg. C
			3									-40 to +330 Deg. C (Under pressure replace sensor)
			4									-40 to +420 Deg. C (Under pressure replace sensor)
<b>Protection</b>			N									Intrinsically Safe, Eex ia IIC T4
			X									Explosion Proof, Exd IIC T6
<b>Installation</b>			C									Compact
			R									Remote type with 10M cable
<b>Option</b>			-N									None
			-R									Reduce Bore Type