

### DESCRIPTION

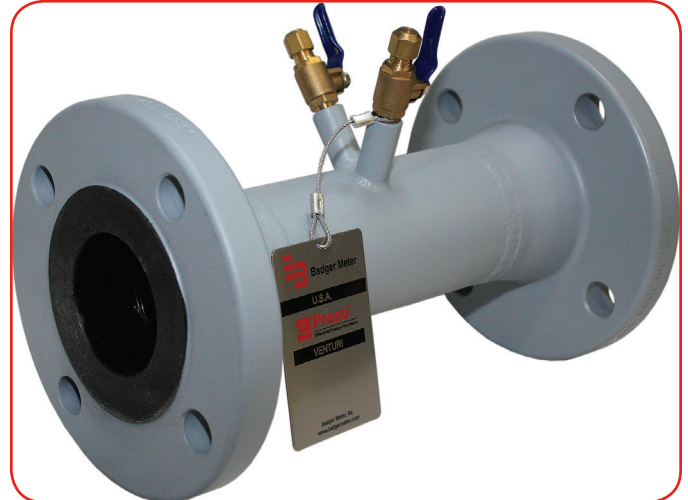
The CV Series Venturi flow meter is a differential pressure element designed to accurately measure the flow of liquids and gases by forcing the flow into a smaller diameter section of pipe, then measuring the pressure differences between the unrestricted flow and the restricted flow. It can be installed in any position with minimal straight pipe requirements (5 pipe diameters upstream and 2 pipe diameters downstream). The success of the Venturi flow meter is due to the low-loss design, which has over 35 years of field performance in a wide variety of applications. Reduced operating costs inherent with the design let the flow meter pay for itself in a very short time. Low installation costs due to short laying length make the Venturi flow meter the right choice for many applications.

### CONFIGURATION

The Venturi flow meter inlet section is cylindrical with a pressure sensing tap the same diameter as the incoming pipe section. The tap is followed by a precise convergent section that causes a uniform change in fluid velocity. The cylindrical throat section with a pressure sensing tap, straight section and exit cone has a precise angle to prevent permanent pressure loss that does not exceed 12% of the generated differential pressure. The beta ratio is determined by the manufacturer according to recognized standards and formulas. The discharge coefficient (Cd) is linear and stable in the operating flow range, has a value above 0.985, and is achieved by adhering to ASME standards.

### APPLICABLE FLUIDS

Liquids and gases



### FEATURES

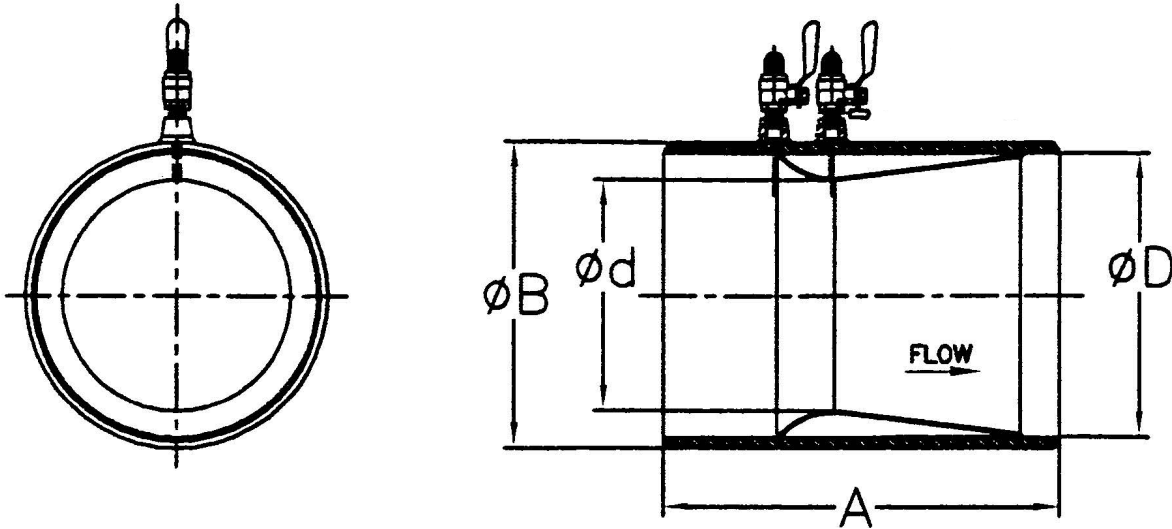
- Carbon steel construction
- 1/8 in. MNPT × 1/4 in. SAE brass ball process connections
- NPT, butt weld or flanged end connections
- Stainless steel ID tag
- Maximum temperature 250° F (121° C)
- Maximum pressure 300 psig (2068 kPa)

### OPTIONS

- Quick disconnect fittings
- Pressure and temperature plugs
- Pressure port extensions
- Stainless steel ID tag

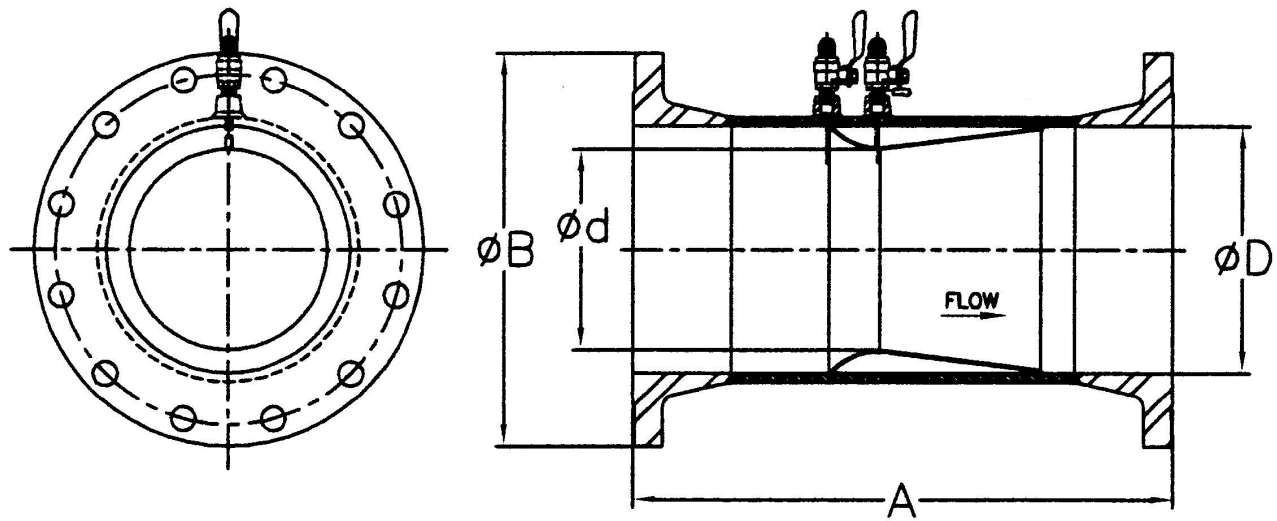
## DIMENSIONS

### Butt Weld and Grooved Models



Throat Size	Model	Ød in. (mm)	ØD in. (mm)	BETA	A in. (mm)	ØB in. (mm)	App. Weight lbs (kg)
2 in. -38	PCVF1XX1X	1.375 (34.9)	2.067 (52.5)	0.665 (16.9)	6 (152.4)	2.38 (60.5)	1.75 (0.8)
2 in. -65	PCVF1XX2X	1.688 (42.9)	2.067 (52.5)	0.816 (20.7)	6 (152.4)	2.38 (60.5)	1.75 (0.8)
2-1/2 in. -38	PCVG1XX1X	1.625 (41.3)	2.469 (62.7)	0.658 (16.7)	6 (152.4)	2.88 (73.2)	3 (1.36)
2-1/2 in. -65	PCVG1XX2X	2 (50.8)	2.469 (62.7)	0.810 (20.6)	6 (152.4)	2.88 (73.2)	3 (1.36)
3 in. -38	PCVH1XX1X	2 (50.8)	3.068 (77.9)	0.652 (16.6)	6 (152.4)	3.5 (88.9)	5 (2.27)
3 in. -65	PCVH1XX2X	2.5 (63.5)	3.068 (77.9)	0.815 (20.1)	6 (152.4)	3.5 (88.9)	5 (2.27)
4 in. -38	PCVI1XX1X	2.625 (66.7)	4.026 (102.3)	0.652 (16.9)	7 (177.8)	4.5 (114.3)	7 (3.18)
4 in. -65	PCVI1XX2X	3.25 (82.6)	4.026 (102.3)	0.807 (20.5)	7 (177.8)	4.5 (114.3)	7 (3.18)
5 in. -38	PCVJ1XX1X	3.25 (82.6)	5.047 (128.2)	0.644 (16.4)	8.5 (215.9)	5.56 (141.2)	9 (4.1)
5 in. -65	PCVJ1XX2X	4.125 (104.8)	5.047 (128.2)	0.817 (20.8)	8.5 (215.9)	5.56 (141.2)	9 (4.1)
6 in. -38	PCVK1XX1X	3.875 (98.4)	6.065 (154.1)	0.639 (16.2)	9.5 (241.3)	6.63 (168.4)	17 (7.71)
6 in. -65	PCVK1XX2X	4.938 (125.4)	6.065 (154.1)	0.814 (20.7)	9.5 (241.3)	6.63 (168.4)	17 (7.71)
8 in. -38	PCVL1XX1X	4.875 (123.8)	7.981 (202.7)	0.611 (15.5)	13.5 (342.9)	8.63 (219.2)	35 (15.88)
8 in. -65	PCVL1XX2X	6.5 (165.1)	7.981 (202.7)	0.814 (20.7)	13.5 (342.9)	8.63 (219.2)	35 (15.88)
10 in. -38	PCVM1XX1X	6 (152.4)	10 (254)	0.599 (15.2)	16 (406.4)	10.75 (273)	59 (26.76)
10 in. -65	PCVM1XX2X	8.125 (206.4)	10 (254)	0.811 (20.6)	16 (406.4)	10.75 (273)	59 (26.76)
12 in. -38	PCVN1XX1X	8 (203.2)	12 (304.8)	0.667 (16.9)	17.25 (438.15)	12.75 (323.9)	106 (48.08)
12 in. -65	PCVN1XX2X	9.75 (247.65)	12 (304.8)	0.813 (20.7)	17.25 (438.15)	12.75 (323.9)	106 (48.08)
14 in. -38	PCVO1XX1X	8.5 (215.9)	13.25 (336.55)	0.642 (16.3)	19.25 (488.95)	14 (355.6)	130 (58.97)
14 in. -65	PCVO1XX2X	10.5 (266.7)	13.25 (336.55)	0.816 (20.7)	19.25 (488.95)	14 (355.6)	130 (58.97)
16 in. -38	PCVP1XX1X	10.5 (266.7)	15.25 (387.35)	0.689 (17.5)	19.25 (514.35)	16 (406.2)	160 (72.57)
16 in. -65	PCVP1XX2X	12.5 (317.5)	15.25 (387.35)	0.820 (20.8)	19.25 (514.35)	16 (406.2)	160 (72.57)

**Flanged**



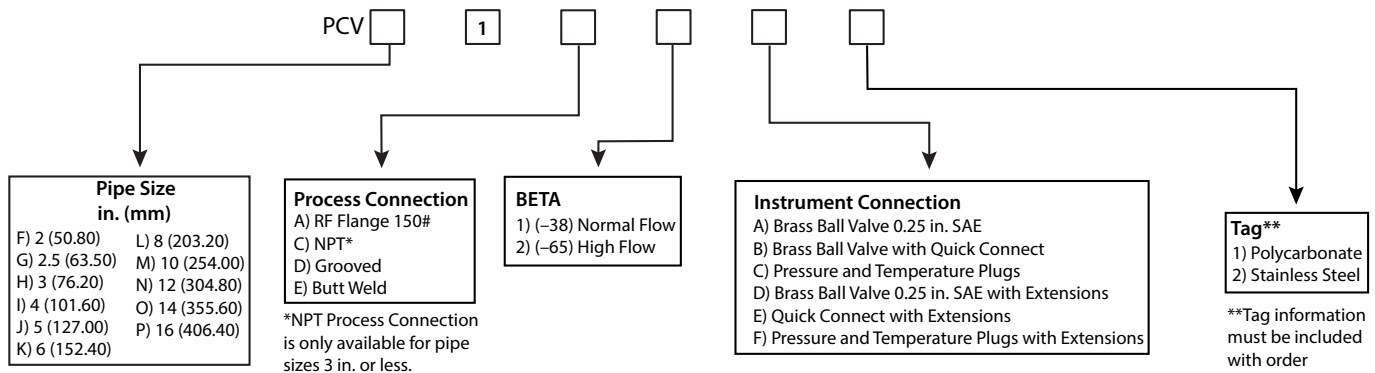
**Flange 150# Model**

Throat Size	Model	Ød in. (mm)	ØD in. (mm)	BETA	A in. (mm)	ØB in. (mm)	App. Weight lbs (kg)
2 in. -38	PCVF1AX1A	1.375 (34.9)	2.067 (52.5)	0.665 (16.9)	11.13 (282.7)	6 (152.4)	15 (6.8)
2 in. -65	PCVF1AX2X	1.688 (42.9)	2.067 (52.5)	0.816 (20.7)	11.13 (282.7)	6 (152.4)	15 (6.8)
2-1/2 in. -38	PCVG1AX1A	1.625 (41.3)	2.469 (62.7)	0.658 (16.7)	11.625 (295.3)	7 (177.8)	19 (8.62)
2-1/2 in. -65	PCVG1AX2X	2 (50.8)	2.469 (62.7)	0.810 (20.6)	11.625 (295.3)	7 (177.8)	19 (8.62)
3 in. -38	PCVH1AX1A	2 (50.8)	3.068 (77.9)	0.652 (16.6)	11.625 (295.3)	7.5 (190.5)	25 (11.34)
3 in. -65	PCVH1AX2X	2.5 (63.5)	3.068 (77.9)	0.815 (20.1)	11.625 (295.3)	7.5 (190.5)	25 (11.34)
4 in. -38	PCVI1AX1A	2.625 (66.7)	4.026 (102.3)	0.652 (16.9)	13.125 (333.4)	9 (228.6)	37 (16.78)
4 in. -65	PCVI1AX2X	3.25 (82.6)	4.026 (102.3)	0.807 (20.5)	13.125 (333.4)	9 (228.6)	37 (16.78)
5 in. -38	PCVJ1AX1A	3.25 (82.6)	5.047 (128.2)	0.644 (16.4)	15.625 (396.9)	10 (254)	47 (21.32)
5 in. -65	PCVJ1AX2X	4.125 (104.8)	5.047 (128.2)	0.817 (20.8)	15.625 (396.9)	10 (254)	47 (21.32)
6 in. -38	PCVK1AX1A	3.875 (98.4)	6.065 (154.1)	0.639 (16.2)	16.625 (422.3)	11 (279.4)	65 (29.48)
6 in. -65	PCVK1AX2X	4.938 (125.4)	6.065 (154.1)	0.814 (20.7)	21.625 (549.3)	11 (279.4)	65 (29.48)
8 in. -38	PCVL1AX1A	4.875 (123.8)	7.981 (202.7)	0.611 (15.5)	21.625 (549.3)	13.5 (342.9)	113 (51.26)
8 in. -65	PCVL1AX2X	6.5 (165.1)	7.981 (202.7)	0.814 (20.7)	24.125 (612.8)	13.5 (342.9)	113 (51.26)
10 in. -38	PCVM1AX1A	6 (152.4)	10 (254)	0.599 (15.2)	24.125 (612.8)	16 (406.4)	163 (73.94)
10 in. -65	PCVM1AX2X	8.125 (206.4)	10 (254)	0.811 (20.6)	24.125 (612.8)	16 (406.4)	163 (73.94)
12 in. -38	PCVN1AX1A	8 (203.2)	12 (304.8)	0.667 (16.9)	26.75 (679.5)	19 (482.6)	266 (120.66)
12 in. -65	PCVN1AX2X	9.75 (247.65)	12 (304.8)	0.813 (20.7)	26.75 (679.5)	19 (482.6)	266 (120.66)
14 in. -38	PCVO1AX1A	8.5 (215.9)	13.25 (336.55)	0.642 (16.3)	29.75 (755.7)	21 (533.4)	350 (158.76)
14 in. -65	PCVO1AX2X	10.5 (266.7)	13.25 (336.55)	0.816 (20.7)	29.75 (755.7)	21 (533.4)	350 (158.76)
16 in. -38	PCVP1AX1A	10.5 (266.7)	15.25 (387.35)	0.689 (17.5)	30.75 (781)	23.5 (596.9)	440 (199.58)
16 in. -65	PCVP1AX2X	12.5 (317.5)	15.25 (387.35)	0.820 (20.8)	30.75 (781)	23.5 (596.9)	440 (199.58)

**Flange 300# Model**

Throat Size	Model	Ød in. (mm)	ØD in. (mm)	BETA	A in. (mm)	ØB in. (mm)	App. Weight lbs (kg)
2 in. -38	PCVF1AX1X	1.375 (34.9)	2.067 (52.5)	0.665 (16.9)	11.63 (295.4)	6.5 (165.1)	20 (9.1)
2 in. -65	PCVF1AX2X	1.688 (42.9)	2.067 (52.5)	0.816 (20.7)	11.63 (295.4)	6.5 (165.1)	20 (9.1)
2-1/2 in. -38	PCVG1AX1X	1.625 (41.3)	2.469 (62.7)	0.658 (16.7)	12.125 (308)	7.5 (190.5)	27 (12.3)
2-1/2 in. -65	PCVG1AX2X	2 (50.8)	2.469 (62.7)	0.810 (20.6)	12.125 (308)	7.5 (190.5)	27 (12.3)
3 in. -38	PCVH1AX1X	2 (50.8)	3.068 (77.9)	0.652 (16.6)	12.625 (320.7)	8.25 (209.6)	35 (15.9)
3 in. -65	PCVH1AX2X	2.5 (63.5)	3.068 (77.9)	0.815 (20.1)	12.625 (320.7)	8.25 (209.6)	35 (15.9)
4 in. -38	PCVI1AX1X	2.625 (66.7)	4.026 (102.3)	0.652 (16.9)	13.875 (352.4)	10 (254)	57 (25.9)
4 in. -65	PCVI1AX2X	3.25 (82.6)	4.026 (102.3)	0.807 (20.5)	13.875 (352.4)	10 (254)	57 (25.9)
5 in. -38	PCVJ1AX1X	3.25 (82.6)	5.047 (128.2)	0.644 (16.4)	16.375 (415.9)	11 (279.4)	73 (33.2)
5 in. -65	PCVJ1AX2X	4.125 (104.8)	5.047 (128.2)	0.817 (20.8)	16.375 (415.9)	11 (279.4)	73 (33.2)
6 in. -38	PCVK1AX1X	3.875 (98.4)	6.065 (154.1)	0.639 (16.2)	17.375 (441.3)	12.5 (317.5)	101 (45.9)
6 in. -65	PCVK1AX2X	4.938 (125.4)	6.065 (154.1)	0.814 (20.7)	17.375 (441.3)	12.5 (317.5)	101 (45.9)
8 in. -38	PCVL1AX1X	4.875 (123.8)	7.981 (202.7)	0.611 (15.5)	21.625 (549.3)	13.5 (342.9)	169 (76.7)
8 in. -65	PCVL1AX2X	6.5 (165.1)	7.981 (202.7)	0.814 (20.7)	21.625 (549.3)	13.5 (342.9)	169 (76.7)
10 in. -38	PCVM1AX1X	6 (152.4)	10 (254)	0.599 (15.2)	24.125 (612.8)	16 (406.4)	241 (109.3)
10 in. -65	PCVM1AX2X	8.125 (206.4)	10 (254)	0.811 (20.6)	24.125 (612.8)	16 (406.4)	241 (109.3)
12 in. -38	PCVN1AX1X	8 (203.2)	12 (304.8)	0.667 (16.9)	26.75 (679.5)	19 (482.6)	386 (175.1)
12 in. -65	PCVN1AX2X	9.75 (247.65)	12 (304.8)	0.813 (20.7)	26.75 (679.5)	19 (482.6)	386 (175.1)
14 in. -38	PCVO1AX1X	8.5 (215.9)	13.25 (336.55)	0.642 (16.3)	29.75 (755.7)	21 (533.4)	490 (222.3)
14 in. -65	PCVO1AX2X	10.5 (266.7)	13.25 (336.55)	0.816 (20.7)	29.75 (755.7)	21 (533.4)	490 (222.3)
16 in. -38	PCVP1AX1X	10.5 (266.7)	15.25 (387.35)	0.689 (17.5)	30.75 (781.1)	23.5 (596.9)	660 (299.4)
16 in. -65	PCVP1AX2X	12.5 (317.5)	15.25 (387.35)	0.820 (20.8)	30.75 (781.1)	23.5 (596.9)	660 (299.4)

**PART NUMBER MATRIX**



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