

## ARMflo CIRCUIT BALANCING VALVES | CBV - VENTURI STYLE ½" TO 2" (DN15 TO DN50) | LEAD FREE, CERTIFIED TO NSF/ANSI 372 | SUBMITTAL

File No: 36.513  
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Job: \_\_\_\_\_ Representative: \_\_\_\_\_  
 \_\_\_\_\_ Order no.: \_\_\_\_\_ Date: \_\_\_\_\_  
 Engineer: \_\_\_\_\_ Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

MODEL NUMBER	QTY REQ'D	IDENTIFICATION	MODEL NUMBER	QTY REQ'D	IDENTIFICATION

### TECHNICAL DATA

**Connection:** Model CBV-vs - Solder Joint  
 Model CBV-vt - Threaded npt  
 Model CBV-vb - Threaded bspp (ISO-228)  
**Maximum Working Pressure:** 300 psi / 20 bar (PN20)  
**Operating Temperature Range:** -4°F to 300°F (-20°C to 150°C)

### NOTES

- Valves can be "line sized" for applications with 2 to 4 ft/sec (0.7 to 1.3 m/s) flow velocity for nominal pipe size.
- For valve sizing based on design flow, check the Range Chart and Flow Rate Ranges.
- All valves are furnished with PT Ports for differential pressure measurement across the venturi.
- Refer to Flow Rate Ranges for venturi Flow Coefficients.
- Do not attempt to use Range Chart or Performance Curves for flow measurement.**

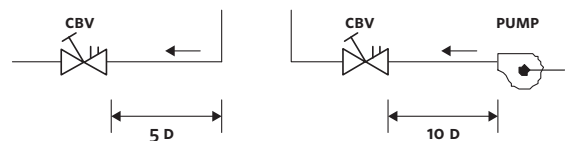
### MATERIALS OF CONSTRUCTION

**Body/Bonnet:** Brass alloy cw617  
**Stem/Disc:** Brass-c46500  
**Elastomers:** EPDM (may contain silicone)  
**Handwheel:** Reinforced Nylon; ABS

### INSTALLATION

ARMflo circuit balancing valves provide excellent results when mounted directly to other fittings. However, for optimum accuracy, locate the valve:

- 5 pipe diameters downstream of a fitting.
- 2 pipe diameters upstream of a fitting.
- 10 pipe diameters upstream or downstream of a pump.



**DIMENSIONS AND WEIGHTS**

**SOLDER JOINT CONNECTION**

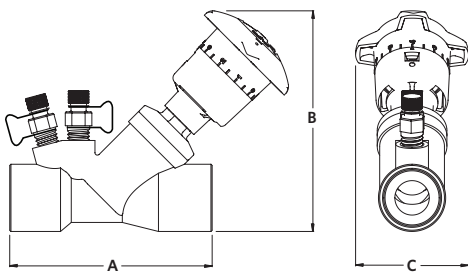
PIPE SIZE	MODEL	inches (mm)			WEIGHT lbs.(kg)
		A	B	C	
½" (DN15)	CBV050VSCR-LF	3.19 (81)	4.56 (116)	2.76 (70)	1.05 (0.48)
	CBV050VSCR				
¾" (DN20)	CBV075VSCR-LF	3.64 (93)	4.65 (118)	2.76 (70)	1.09 (0.49)
	CBV075VSCR				
1" (DN25)	CBV100VSCR	4.26 (108)	4.95 (126)	2.76 (70)	1.68 (0.76)
1¼" (DN32)	CBV125VSCR	4.94 (125)	5.40 (137)	2.76 (70)	2.26 (1.03)
1½" (DN40)	CBV150VSCR	5.67 (144)	5.60 (142)	2.76 (70)	3.22 (1.46)
2" (DN50)	CBV200VSCR	7.03 (179)	6.36 (162)	2.76 (70)	5.40 (2.45)

**THREADED CONNECTION**

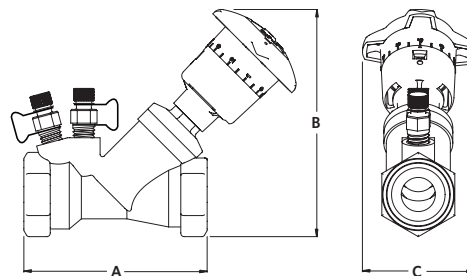
PIPE SIZE	MODEL	inches (mm)			WEIGHT lbs.(kg)
		A	B	C	
½" (DN15)	CBV050V(X)CR-LF	2.99 (76)	4.60 (117)	2.76 (70)	1.07 (0.49)
	CBV050V(X)CR				
¾" (DN20)	CBV075V(X)CR-LF	3.26 (83)	4.90 (125)	2.76 (70)	1.21 (0.55)
	CBV075V(X)CR				
1" (DN25)	CBV100V(X)CR	3.80 (97)	5.29 (135)	2.76 (70)	1.86 (0.84)
1¼" (DN32)	CBV125V(X)CR	4.32 (110)	5.60 (143)	2.76 (70)	2.34 (1.06)
1½" (DN40)	CBV150V(X)CR	5.07 (129)	5.90 (150)	2.76 (70)	3.49 (1.59)
2" (DN50)	CBV200V(X)CR	6.00 (153)	6.68 (170)	2.76 (70)	5.97 (2.46)

**Note:**

All dimensions are in inches (mm) and weights in lbs (kg)  
Where Model (x) = Connection Type: T = NPT or B = BSPP (ISO-228)



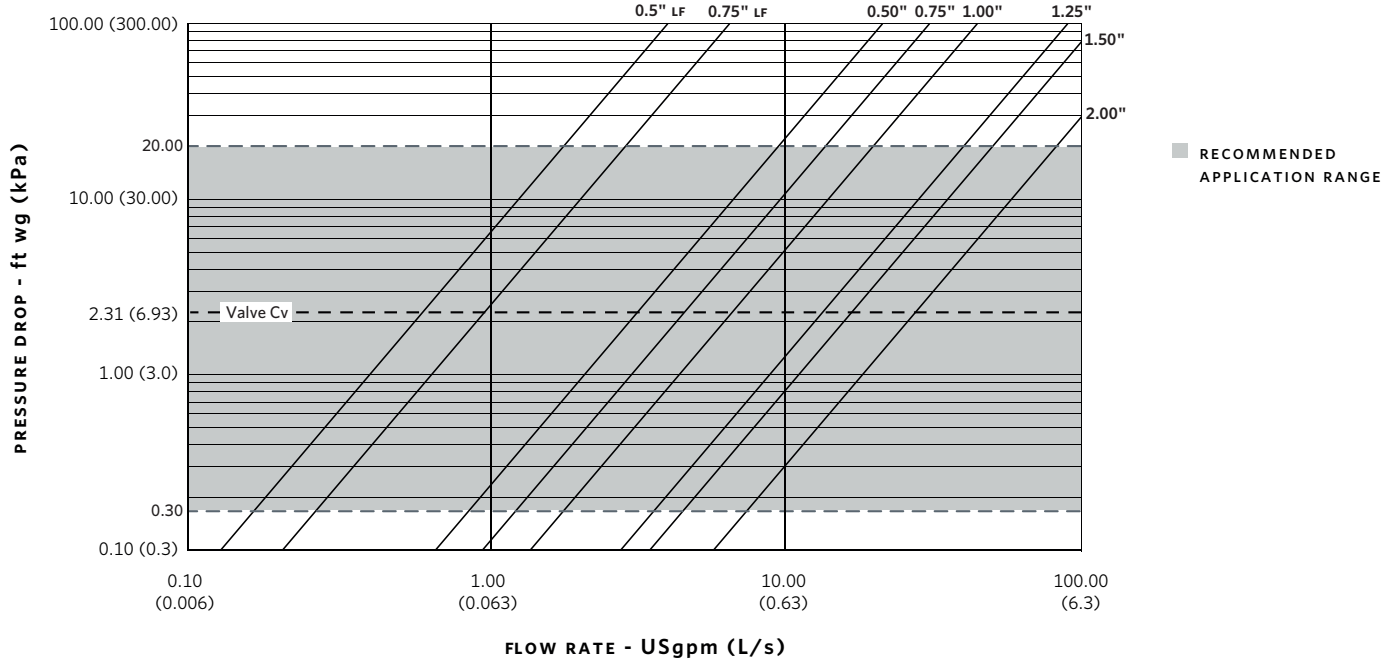
**MODEL: CBV-VS ½" - 2" (DN15 - DN50)**



**MODEL: CBV-VT / CBV-VB ½" - 2" (DN15 - DN50)**

**RANGE CHART**

**CBV - 1/2" TO 2" HEAD LOSS (5 TURNS OPEN)**



**FLOW RATE RANGES**

VALVE	SIZE		MINIMUM FLOW RATE		MAXIMUM FLOWRATE		VENTURI FLOW COEFFICIENTS	
	IMPERIAL	METRIC	Usgpm	L/s	Usgpm	L/s	Cv	Kv
CBV050V(X)CR-LF	½" LF	DN15 LF	0.26	0.02	1.98	0.12	0.69	0.59
CBV075V(X)CR-LF	¾" LF	DN20 LF	0.41	0.03	3.11	0.20	1.08	0.93
CBV050V(X)CR	½"	DN15	1.22	0.08	9.57	0.60	3.20	2.74
CBV075V(X)CR	¾"	DN20	1.99	0.13	13.76	0.87	5.21	4.47
CBV100V(X)CR	1"	DN25	4.57	0.29	22.97	1.45	12.01	10.29
CBV125V(X)CR	1¼"	DN32	6.17	0.39	38.00	2.39	16.19	13.88
CBV150V(X)CR	1½"	DN40	9.02	0.57	50.07	3.15	23.69	20.30
CBV200V(X)CR	2"	DN50	15.50	0.98	81.92	5.16	40.70	34.88

**Note:**  
Where Model (x) = Connection Type: T = NPT, s = Sweat, B = BSPP (ISO-228).

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