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# ARMflo Circuit Balancing Valves

CBV-VS Solder Style, CBV-VT NPT Threaded, CBV-VB BSP Threaded

## SUBMITTAL

JOB: _____	REPRESENTATIVE: _____
ENGINEER: _____	ORDER NO: _____ DATE: _____
CONTRACTOR: _____	SUBMITTED BY: _____ DATE: _____
	APPROVED BY: _____ DATE: _____

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

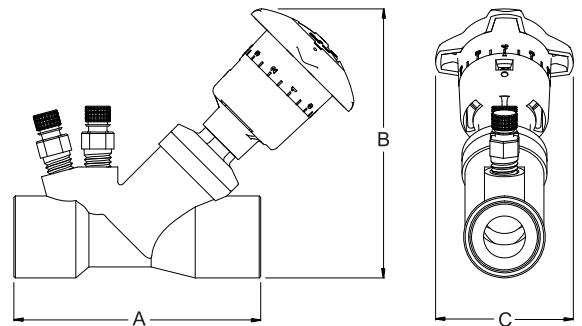
TECHNICAL DATA	
Connection	Model CBV-VS - Solder Joint Model CBV-VT - Threaded NPT Model CBV-VB - Threaded BSP
Maximum Working Pressure	300 psi / 20 bar (PN20)
Operating Temperature Range	-4°F to 300°F (-20°C to 150°C)

MATERIALS OF CONSTRUCTION	
Body, Bonnet	Brass alloy CW617
Stem and Disk	Brass alloy B16
Elastomers	EPDM
Handwheel	Reinforced Nylon; ABS

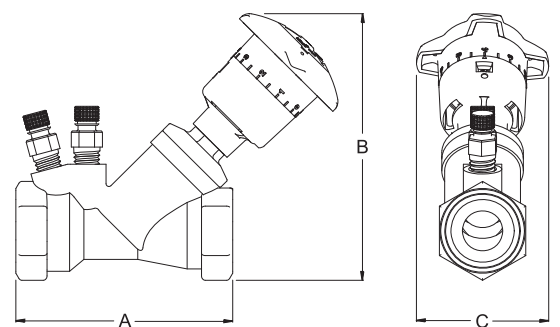
DIMENSIONS and WEIGHTS					
Pipe Size	Model	A	B	C	Weight
<b>Solder Joint Connection</b>					
½" (DN15)	CBV050VS-LF	3.19 (81)	4.56 (116)	2.76 (70)	1.05 (0.48)
	CBV050VS				
¾" (DN20)	CBV075VS-LF	3.64 (93)	4.65 (118)	2.76 (70)	1.09 (0.49)
	CBV075VS				
1" (DN25)	CBV100VS	4.26 (108)	4.95 (126)	2.76 (70)	1.68 (0.76)
1¼" (DN32)	CBV125VS	4.94 (125)	5.40 (137)	2.76 (70)	2.26 (1.03)
1½" (DN40)	CBV150VS	5.67 (144)	5.60 (142)	2.76 (70)	3.22 (1.46)
2" (DN50)	CBV200VS	7.03 (179)	6.36 (162)	2.76 (70)	5.40 (2.45)
<b>Threaded Connection</b>					
½" (DN15)	CBV050VT-LF / VB-LF	2.99 (76)	4.60 (117)	2.76 (70)	1.07 (0.49)
	CBV050VT / VB				
¾" (DN20)	CBV075VT-LF / VB-LF	3.26 (83)	4.90 (125)	2.76 (70)	1.21 (0.55)
	CBV075VT / VB				
1" (DN25)	CBV100VT / VB	3.80 (97)	5.29 (135)	2.76 (70)	1.86 (0.84)
1¼" (DN32)	CBV125VT / VB	4.32 (110)	5.60 (143)	2.76 (70)	2.34 (1.06)
1½" (DN40)	CBV150VT / VB	5.07 (129)	5.90 (150)	2.76 (70)	3.49 (1.59)
2" (DN50)	CBV200VT / VB	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)

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

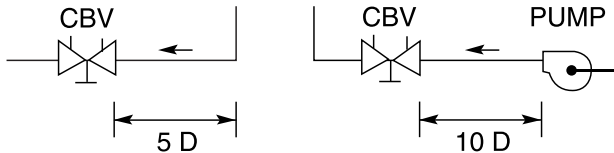


**MODEL: CBV-VT / CBV-VB ½" - 2" (DN15 - DN50)**



## INSTALLATION

Locate the valve 5 pipe diameters downstream from a fitting. If a balancing valve is located downstream from a circulation pump, allow a distance of 10 pipe diameters between the pump and balancing valves (as illustrated).

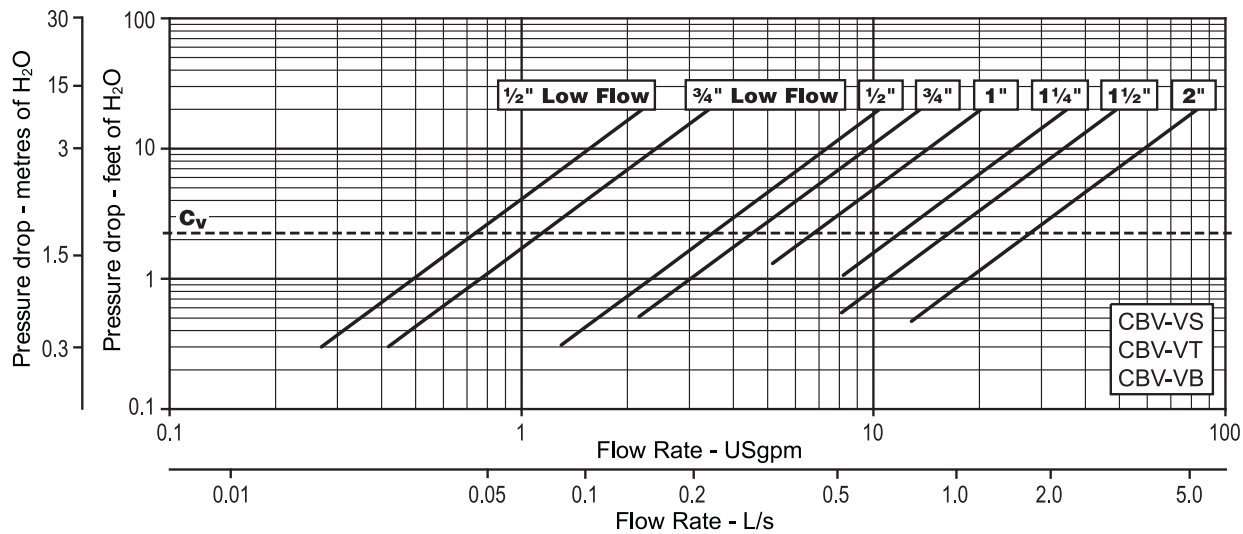


## NOTES:

1. Solder Style Models - Valve body must be opened at least one full turn prior to being soldered in the line.
2. For valve sizing, refer to CBV range chart, which shows the recommended operation range (dP and flow) for each valve size. For balancing, use Venturi  $C_v$  curves or slide rule, which display pressure drop across the Venturi at different flow rates.
3. Suggested differential pressure meters for use with Armstrong CBV's are DPM-15 and DPM-100 digital differential pressure meters and CBDM-135/60 and CBDM-200 analogue meters.
4. All valves furnished with probe metering ports.

## RANGE CHART

Composite Curves - Fully Open Valves



These curves show the pressure drop across the ARMflo balancing valves and are for use in valve sizing. For "pressure drop / flow" curves required for system balancing, please refer to the Venturi  $C_v$  Performance Curves chart in the ARMflo Venturi CBV Installation and Operating Instructions manual.

## FLOW RATE RANGES

Valve Size	Min. Flow	Max. Flow
1/2" Low Flow	0.26 (0.016)	2.2 (0.14)
3/4" Low Flow	0.40 (0.025)	3.4 (0.21)
1/2"	1.4 (0.086)	10.4 (0.66)
3/4"	2.1 (0.13)	13.5 (0.85)
1"	5.2 (0.33)	20.2 (1.28)
1 1/4"	8.2 (0.52)	35.5 (2.24)
1 1/2"	8.1 (0.51)	48.9 (3.09)
2"	14.0 (0.88)	83.3 (5.25)

Note: Flow in USgpm (L/s)

**Consult your local ARMSTRONG representative for literature corresponding to valves with "CR" in the model name or embossed on the valve body.**

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