ARMSTRONG

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SUPERSEDES:	New
DATE:	New

ARM*flo* Circuit Balancing Valves

CBV-G – DN65 to DN300

SUBMITTAL

JOB: _____ REPRESENTATIVE: _____

ORDER NO: _____ DATE: _____

ENGINEER: _____ SUBMITTED BY: _____ DATE: _____

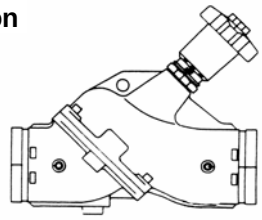
CONTRACTOR: _____ APPROVED BY: _____ DATE: _____

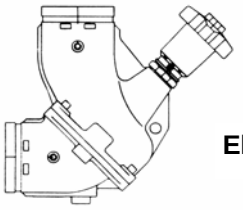
MODEL	SIZE	QUANTITY	IDENTIFICATION	MODEL	SIZE	QUANTITY	IDENTIFICATION
CBV2.5-G	DN65			CBV6-G	DN150		
CBV3-G	DN80			CBV8-G	DN200		
CBV4-G	DN100			CBV10-G	DN250		
CBV5-G	DN125			CBV12-G	DN300		

MATERIALS OF CONSTRUCTION

Item	DN65 - DN150	DN200 – DN300
Body	Ductile Iron – ASTM A536 GR 65-45-12	
Disc	Bronze – ASTM B584 C-84400	
Stem	Brass – ASTM B-16	Stainless Steel
Seat	High Strength Resin	EPDM
O-Rings	EPDM and Buna-N	
Memory Lock	Brass – ASTM B-16	
Meter Ports	Qty 2 – Brass PT ports with caps, EPDM check and gaskets	
Drain Tappings	Qty 2 – 1/4" with brass plug	
Handle	High Strength Resin	Cast Iron

Straight Configuration



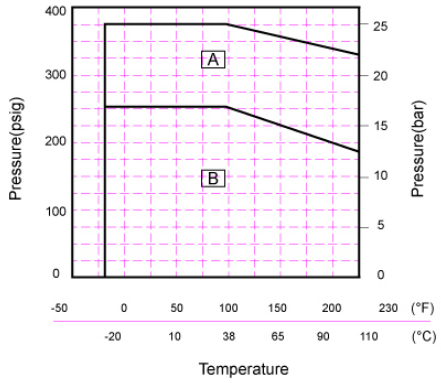


Elbow Configuration

APPLICATION:

ARMflo CBV-G circuit balancing valves are rugged, BS-7350 compliant double regulating valves for balancing hydronic fluid flow in HVAC heating and chiller systems. These valves combine the functions of positive shut-off, precise flow regulation, and variable orifice flow measurement. System connection is made with industry standard grooved couplings for lowest installed cost, or with ARMgrip flange adapters for PN16 or PN25 flange connection requirements. The innovative split case design easily converts on-site from straight to elbow configuration to suit installation space constraints and enable discrete elbow elimination. The valve handle memory stop enables calibration set-point maintenance after use for isolation and system servicing. PT ports across the valve seat provide basic differential pressure to flow correlation. For higher flow measurement accuracy, an Armstrong fixed orifice flow meter may be connected with a single coupling. The integral service seal enables valve stem packing replacement under pressure, eliminating need for unscheduled system shut-down and draining, providing overall life cycle cost savings for every installation.

PRESSURE/TEMPERATURE



LEGEND:

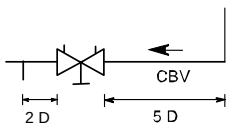
A	CBV-G alone or with PN-25 flange adapter.
B	CBV-G with PN-16 flange adapter.

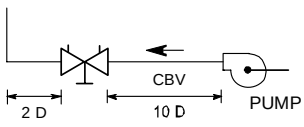
INSTALLATION

Armstrong circuit balancing valves are highly resistant to turbulence induced by nearby piping components and can often provide excellent results when mounted directly to other fittings.

However, for optimum flow measurement accuracy and when practical, locate the valve:

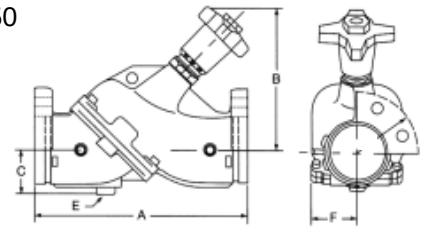
- 5 pipe diameters downstream of a fitting.
- 2 pipe diameters upstream of a fitting.
- 10 pipe diameters upstream or downstream of a pump.



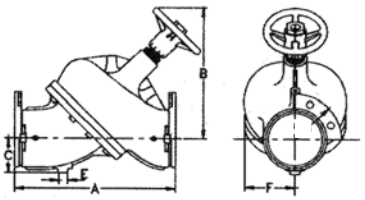


ARMSTRONG

CBV DN65 - DN150
STRAIGHT



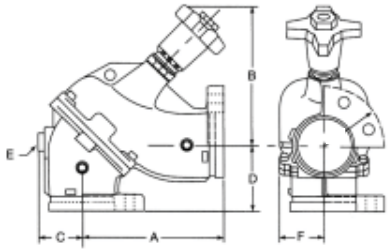
CBV DN200 - DN300
STRAIGHT



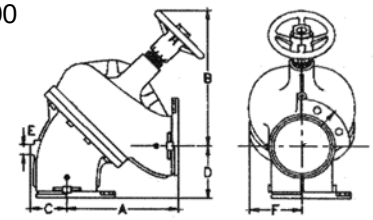
DIMENSIONS: CBV-G STRAIGHT CONFIGURATION – mm (“)

MODEL	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
A	305 (12.0)	305 (12.0)	356 (14.0)	445 (17.5)	525 (20.7)	716 (28.3)	762 (30.0)	967 (38.1)
B Open	244 (9.6)	267 (10.5)	268 (10.6)	324 (12.8)	332 (13.1)	625 (24.6)	673 (26.5)	722 (28.4)
C	70 (2.8)	62 (2.4)	76 (3.0)	92 (3.6)	113 (4.4)	144 (5.7)	167 (6.6)	194 (7.6)
D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
E	25 (1.0)	25 (1.0)	32 (1.3)	32 (1.3)	51 (2.0)	51 (2.0)	51 (2.0)	51 (2.0)
F	65 (2.6)	76 (3.0)	87 (3.4)	125 (4.9)	149 (5.9)	200 (7.9)	241 (9.5)	321 (12.6)
Weight kg (lbs)	9 (19)	11 (24)	19 (42)	37 (81)	54 (120)	141 (310)	209 (460)	395 (870)

CBV DN65 - DN150
ELBOW



CBV DN200 - DN300
ELBOW



DIMENSIONS: CBV-G - ELBOW CONFIGURATION mm (“)

MODEL	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
A	187 (7.4)	208 (8.3)	244 (9.6)	305 (12.0)	359 (14.1)	481 (18.9)	516 (20.3)	611 (24.1)
B Open	244 (9.6)	267 (10.5)	268 (10.6)	324 (12.8)	332 (13.1)	625 (24.6)	673 (26.5)	722 (28.4)
C	70 (2.8)	62 (2.4)	76 (3.0)	92 (3.6)	113 (4.4)	144 (5.7)	167 (6.6)	194 (7.6)
D	117 (4.6)	98 (3.9)	111 (4.3)	140 (5.5)	168 (6.6)	233 (9.2)	248 (9.8)	356 (14)
E	25 (1.0)	25 (1.0)	32 (1.3)	32 (1.3)	51 (2.0)	51 (2.0)	51 (2.0)	51 (2.0)
F	65 (2.6)	76 (3.0)	87 (3.4)	125 (4.9)	149 (5.9)	200 (7.9)	241 (9.5)	321 (12.6)
Weight kg (lbs)	9 (19)	11 (24)	19 (42)	37 (81)	54 (120)	141 (310)	209 (460)	395 (870)

FLOWRATE RANGES

Valve	Size	Kv	Cv	Min Flowrate		Max Flowrate	
Model		(Open)	(Open)	L/s	US GPM	L/s	US GPM
CBV2.5-G	DN65	60	70	1.9	30	4.4	71
CBV3-G	DN80	85	100	3.8	60	8.8	140
CBV4-G	DN100	239	280	8.2	130	17.0	270
CBV5-G	DN125	281	330	15.8	250	31.6	500
CBV6-G	DN150	392	460	25.2	400	50.5	800
CBV8-G	DN200	1024	1200	50.5	800	107.3	1700
CBV10-G	DN250	1877	2200	94.7	1500	189.3	3000
CBV12-G	DN300	2815	3300	151.4	2400	315.5	5000

NOTE: Min and Max flowrates are based on industry recommendations for flow velocity range in the corresponding HVAC system piping. Operating beyond these recommendations may affect the performance of the CBV and other HVAC equipment. For optimum performance, ensure the pressure drop across the CBV is between 3 and 30 kPa, the less the better. For pressure drop to flow correlation at turndown, refer to ARMflo CBV Performance Charts.

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