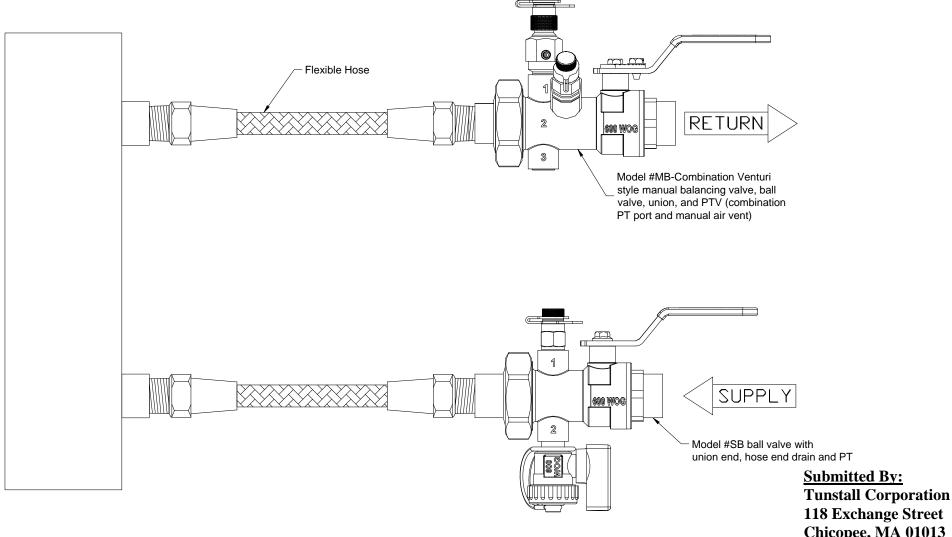


# Valve Package (Model # XXD-MV-FLEX)

**Typical For:** 



118 Exchange Street Chicopee, MA 01013 Phone: 413-594-8695 Fax: 413-598-8109

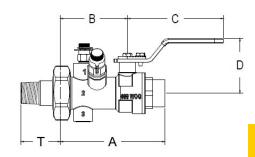


Model MB 0.50" to 2.00" Submittal Data

Model MB is a venturi style manual balancing valve with 100% positive shut-off full port plated ball. Permanently installed venturi section, Teflon seats, double o-ring shaft seals, Pressure/Temperature readout ports, adjustable memory stop with position indicator and union end with o-ring seal. Available with multiple combinations of end connection types and sizes.

SPECIFICATIONS		
Pressure Ratings:	600 PSI (4140 kPa)	
Temperature Ratings:	250°F (121°C)	
Accuracy:	$\pm$ 3% of flow rate	
Body Material:	Forged Brass	+ B
End Connections:	Brass - Fixed End: SWT, FNPT & Press End Union End: SWT, FNPT, MNPT & Press End	-
Flow Element:	Brass Venturi, Permanently installed	
Seals:	EPDM	
Seats:	Teflon	2
Ball:	Chrome Plated Brass. Optional 316 Stainless Steel.	3
Stem:	Brass. Optional 316 Stainless Steel.	
Handle:	Full size Zinc Plated lever w/Vinyl Grip	⊬— I —+— A
Memory Stop:	Zinc Plated Steel	
Available Options:	"PTV" combination PT & Air Vent, DV hose end D	rain Valve & Extensions.





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MODEL	SIZE	]	Flow Range		I	4	D	C	D	*Т	WEI	GHT	
MODEL	in	mm	GPM (10"-100")		FNPT	SWT	В	С	D	SWT	lbs	kg	
MB1A-050-L	0.50"	15	(L) 0.4 - 1.3	in	4.14	4.50	2.45	2.33	1.64	1.50	1.27	0.02	
МВ1В-050-Н	0.50	15	(H) 1.5 - 5.0	mm	105.14	114.30	62.23	59.18	41.65	38.09	1.37	0.62	
MB1A-075-L	0.75"R	20	(L) 0.4 - 1.3	in	4.26	4.79	2.45	2.33	1.64	1.55	1.45	0.66	
MB1B-075-H	0.73 K	20	(H) 1.5 - 5.0	mm	108.20	121.66	62.23	59.18	41.65	39.37	1.43	0.00	
MB1A-100-L	1.00"R	25	(L) 0.4 - 1.3	in	4.59	5.04	2.45	2.33	1.64	1.75	1.52	0.00	
МВ1А-100-Н	1.00 K 23	25	(H) 1.5 - 5.0	mm	116.58	128.01	62.23	59.18	41.65	44.45	1.52	0.69	
							•			•			
MB2A-075-L	0.75"	20	(L) 1.6 - 5.0	in	4.36	4.93	2.46	3.66	2.08	1.56	1.97	0.89	
MB2B-075-H	0.75	20	(H) 4.0 - 13.0	mm	110.74	125.22	62.69	92.99	52.83	39.62	1.97	0.89	
MB2A-100-L	1.00"	25	(L) 1.6 - 5.0	in	4.57	5.22	2.46	3.66	2.08	1.75	2.06	0.93	
МВ2В-100-Н	1.00	1.00 25	23	(H) 4.0 - 13.0	mm	116.07	132.58	62.69	92.99	52.83	44.45	2.00	0.95
MB2A-125-L	1.25"R	32	(L) 1.6 - 5.0	in	4.75	5.30	2.46	3.66	2.08	1.80	2.25	1.02	
MB2B-125-H	1.25 K	25"R 32	32	(H) 4.0 - 13.0	mm	120.64	134.61	62.69	92.99	52.83	45.72	2.23	1.02
		1	T			1	r		-	r	1		
MB3A-125	1.25"	32	6.7 - 21.0	in	6.51	7.49	3.48	5.03	2.26	1.80	4.16	1.89	
110011120	1.20	52	0.7 21.0	mm	165.35	190.24	88.39	127.76	57.40	45.72	1.10	1.09	
MB3A-150	1.50"	40	6.7 - 21.0	in	6.51	7.76	3.48	5.03	2.26	1.80	4.23	1.92	
WID5A-150	1.50	40	0.7 - 21.0	mm	165.35	190.24	88.39	127.76	57.40	45.72	ч.23	1.72	
	1	1				= 2 4				1.00			
MB4A-200	2"	50	15.0 - 50.0	in	6.57	7.36	4.45	5.66	2.83	1.98	7.10	3.22	
	_		ta sheet #Bulletin-N	mm	166.90	187.00	113.00	143.60	71.90	50.29			

STANDARD COMPONENTS



PT Pressure / Temperature test port with brass body, dual durometer EPDM core, brass cap with O-ring seal and neoprene retainer strap. Accepts standard 1/8" (4mm) gauge adapter or thermometer stem. Rated to 500 PSI (3450 kPa) and 275°F (135°C)

Memory stop with position indicator, zinc coated steel.

Please reference data sheet #Bulletin-MB-Accessories for optional accessories.

MS



### Differential Pressure Table - Model MB - 0.50" to 2.00"

				Type Baland				
				tial Pressure: I				
	MB1A-	MB1B-	MB2A-	MB2B-	MB3A-		MB3A-	MB4A
	050-L	050-Н	075-L	075-H	125		125	• • • •
Flow	075R-L	075R-H	100-L	100-H	150	Flow	150	200
<b>GPM</b> 0.10	1		125-L	125-Н		<b>GPM</b> 18.00	71	14
0.10	2					19.00	71	14
0.20	5					20.00	<b>87</b>	15
0.30	10	0.8				20.00	<u> </u>	17
0.42	10	1.1	1			22.00	106	21
0.30	31	2.3	2			22.00	116	21
1.00	55	4.4	4			23.00	110	25
1.00	<u> </u>	6.8	6			25.00	120	23
1.35	101	7.9	7	1		26.00	148	29
1.50	101	10	9	1.4		27.00	148	31
2.00	221	10	16	2.5		27.00	139	31
2.25	221	22	21	3	1.1	29.00	184	36
2.50		27	21	4	1.4	30.00	197	39
3.00		39	36	6	2.0	31.00	210	41
3.50		53	50	8	2.7	32.00	210	44
4.00		70	65	10	3.5	33.00	238	47
4.50		88	82	13	4.4	34.00	253	50
5.00		109	101	15	5.5	35.00	268	53
5.50		132	123	19	6.6	36.00	200	56
6.00		152	146	22	7.9	37.00		59
6.50		184	171	26	9.2	39.00		65
7.25		229	213	33	11.5	40.00		69
7.50		245	228	35	12.3	41.00		72
8.00				40	14.0	42.00		76
8.50				45	15.8	43.00		79
9.00				50	17.7	44.00		83
9.50				56	19.7	45.00		87
10.00				62	21.9	48.50		101
10.50				68	24.1	55.00		130
11.00				75	26.4	60.00		154
11.50				82	28.9	65.00		181
12.00				89	31.5	70.00		210
12.50				97	34.2	75.00		241
13.00				105	36.9			
14.00				121	42.8			
15.00				139	49.2			
16.00				159	56.0			
17.00				179	63.2			
FF	0.1346	0.479	0.4967	1.2704	2.139	FF	2.139	4.8274
Flow Fo GPM = I	<b>rmulas</b> FF x (√DP)			3% of flow rate.		lity ± 0.25% of rate o 100" sizing range		

Optional features and accessories available for this Macon product are an extra charge, and not included in the standard model price.



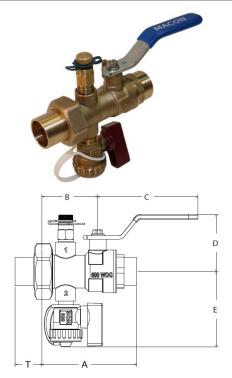
www.maconbalancing.com



Model SB 0.50" to 2.00" Submittal Data

Model SB Union End Ball Valve offers positive shut-off, pressure/temperature measurement and drain. The ball valve has a chrome plated ball with Teflon seats, blowout proof stem with double EPDM O-ring seals. The union has an EPDM O-ring seal and tailpiece available in MNPT, FNPT, SWT and Press End connections. Standard features include Pressure/ Temperature Port and Hose End Drain Valve.

SPECIFICATIONS	
Pressure Ratings:	600 PSI (4140 kPa)
Temperature Ratings:	250°F (121°C)
Body Material:	Forged Brass
End Connections:	Brass -
	Fixed End: SWT, FNPT & Press End
	Union End: SWT, FNPT, MNPT & Press End
Seals:	EPDM
Ball:	Chrome Plated Brass, full port, 100% positive
	shut-off. Optional 316 Stainless Steel.
Stem:	Brass. Optional 316 Stainless Steel.
Handle:	Full size Zinc Plated lever with Vinyl Grip
Available Options:	"PTV" combination PT & Air Vent



MODEL		SIZE			1	D	G	D.	Б	*T	WEI	GHT				
MODEL	in	mm		FNPT	SWT	В	С	D	Ε	MPT	lbs	kg				
SD1E 050	0.50"	15	in	3.72	4.08	2.03	3.66	1.61	2.53	1.50	1.51	0.68				
SB1E-050	0.30	15	mm	94.5	103.6	51.6	93.0	40.9	64.3	38.1	1.51	0.08				
CD1E 055	0.75" R	"R 20	in	3.84	4.37	2.03	3.66	1.61	2.53	1.50	1.55	0.70				
SB1E-075	0.75 K	20	mm	97.5	111.0	51.6	93.0	40.9	64.3	38.1	1.55					
						-		-		•						
SB2E-075	0.75"	20	in	3.92	4.49	2.03	3.66	2.08	2.74	1.56	1.58	0.72				
SD2E-075	0.75	20	mm	99.6	114.0	51.6	93.0	52.8	69.6	39.7	1.56	0.72				
SBBE-100	1.00"	25	in	4.13	4.53	2.03	3.66	2.08	2.74	1.75	2.06	0.02				
SDDE-100		00 23	mm	105.0	115.1	51.6	93.0	52.8	69.6	44.5	2.00	0.93				
						-	-	-			1					
SB3-125	1 25"	1 25"	1 25"	1 25"	1.25"	1.25" 32	in	5.42	6.41	2.37	5.03	2.26	3.12	1.80	4.33	1.96
505-125	1.25	52	mm	137.7	162.8	60.3	127.8	57.4	79.3	45.7	ч.55	1.70				
SB3-150	1 50"	1.50" 40	in	5.42	6.67	2.52	5.65	2.26	3.12	1.80	4.48	2.03				
565-150	1.50	40	mm	137.7	169.3	64.0	143.6	57.4	79.3	45.7	4.40	2.03				
						-		-	-		1					
SB4-200	2.00"	50	in	5.03	5.82	2.90	5.66	2.83	3.51	1.98	6.04	2.74				
SB4-200	2.00	2.00 50	mm	127.8	148.8	73.7	143.8	71.9	89.2	50.2	0.04					

\* Please reference the tailpiece data sheet #Bulletin-MB-TP for other sizes and connection *Dimensions not for construction purposes unless certified by factory.* 

Dimensions not for construction purposes unless certified by fac

STANDAR	D CON	IPONENTS
4	РТ	Pressure/Temperature test port with brass body, dual durometer EPDM core, threaded brass cap with O- ring seal and neoprene retainer strap. Accepts standard 1/8" (4mm) gauge adapter or thermometer stem. Rated to 500 PSI (3450 kPa) and 275°F (135°C)
	DV	Drain valve with forged brass body, chrome plated ball, Teflon seats, double EPDM O-ring stem seals, aluminum handle, 3/4" hose connection with cap and plastic retainer strap. Rated to 600 PSI (4140 kPa) WOG and 250°F (121°C)
Diagon referen	and data	shoet #Dullatin MD Accessories for entired accessories

Please reference data sheet #Bulletin-MB-Accessories for optional accessories.





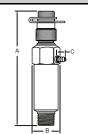
# Accessories

### Submittal Data

## PTV - PRESSURE / TEMPERATURE VENT Installed in Port #1 of MB Valve

	blowout-proof	stem, side di ner strap. Acc	scharge cepts star	vent with 1/8 ndard 1/8" (4	3" (4mm) hos 4mm) gauge	se barb, threa	s body, dual du aded brass cap v ermometer stem	vith O-ring s	
	MODEL	NPT CONN	Α	В	С	WRENCH	WEIGHT		
							SIZE	lbs	kg
	DTV 025	1/4"	in	1.50	0.84	0.32	- 3/4"	0.154	0.07
	PTV-025		mm	40	21	9			0.07
<b>→</b> B <b>→</b>	DTM 050	1/2"	in	1.50	0.98	0.32	3/4"	0.225	0.10
PATENT #6899317	PTV-050	1/2	mm	0.98	25	9	3/4	0.225	0.10

#### **EPTV - EXTENDED PRESSURE / TEMPERATURE VENT**



В

Extended combination manual air vent and pressure/temperature test port with brass body, dual durometer EPDM core, blowout-proof stem, side discharge vent with 1/8" (4mm) hose barb, threaded brass cap with O-ring seal and neoprene retainer strap. Accepts standard 1/8" (4mm) gauge adapter or thermometer stem.
Rated to 250 PSI (1725 kPa) and 250°F (120°C).

MODEL	NPT			р	C	WRENCH	WEI	GHT
MODEL	CONN		А	D	C	SIZE	lbs	kg
EDTV 025	1 / 4 ??	in	3.60	0.87	0.31	3/4"	0.28	0.12
EPTV-025	1/4"	mm	91	21	8			

#### PT - PRESSURE / TEMPERATURE PORT

Pressure/Temperature test port with brass body, dual durometer EPDM core, brass cap with O-ring seal and neoprene retainer strap. Accepts standard 1/8" (4mm) gauge adapter or thermometer stem. Rated to 500 PSI (3450 kPa) and 275°F (135°C).

MODEL	NPT			В	WRENCH	WEIGHT		
MODEL	CONN		А	D	SIZE	lbs	kg	
DT 025	1/4"	in	1.36	0.65	9/16"	0.06	0.03	
PT-025	1/4	mm	34	16	9/10	0.06	0.05	
DE 0.50	1 /0??	in	1.36	1.01	7/022	0.10	0.00	
PT-050	0 1/2"	mm	34	25	7/8"	0.18	0.08	

#### PTE - PTV / PT EXTENDER Single and Dual Extender for PTV and PT models, used on insulated piping systems or where extended length is desired. The PTE is installed above the PTV or PT core with an O-ring seal. The PTE can be installed in the field without removing the PTV or PT from the piping system. Brass body with EPDM O-ring seal. Rated to 500 PSI (3450 kPa) and 250 ° F (120 ° C). WEIGHT MODEL Α B lbs kg 1.59 0.54 **PTE-025** in 0.90 0.04 One 41 14 mm В 1.59 0.54 PTE-025 in 0.90 0.04 Two mm 41 14

Optional features and accessories available for this Macon product are an extra charge, and not included in the standard model price. www.maconbalancing.com





Flexible Hose Connectors Model FH Submittal Data

These hoses have been specially designed for operating conditions in heating and air conditioning, the elastomer is not sensitive to Glycol or water treatment products.

Each hose is made up of several quality components and the special crimping on the ferrule under strict quality control gives this hose security against any leakage.

The special EPDM core meets a fully defined specification: Shore hardness, resistance to ageing, mechanical resistance (elasticity, tensile fracture, stretching), ability to accept chemical agents in contact with the elastomer and nontoxic. ASTM Fire rated hoses meet 25/50 flammability and smoke development classification requirements of codes and specifications when tested by ASTM E 84 method.

HOSES ARE DESIGNED FOR HYDRONIC HEATING/COOLING, NOT FOR GAS.

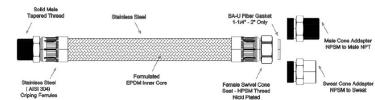
#### SPECIFICATIONS



Temperature Ratings:

External Braiding: Crimping Ferrules: Core: End Connections:

Adaptor Connections: Union Nut: Tailpiece: Gasket (1-1/4" & 2"): All Sizes: 5°F to 230°F Less than 41°F with use of Glycol additive 304 Stainless Steel 304 Stainless Steel **EPDM** Brass - CW614N • 1/2" - 1" MNPT x Male Cone x Hose Adaptor (Gasket Less Connection) • 1-1/4" - 2" MNPT x BA-U Gasket & Hose Adaptor Male NPT, Copper SWT Nickel Plated Brass - CW614N Brass - CW614N **BA-U** Fiber



NOMINAL D	IMENSI	ONS									
SIZE			MOD	DEL #							
SIZE	HCA	HCB	HCC	HCD	HCE	HCF					
12" LENGTH	1/2"	3/4"	1"	N/A	N/A	N/A					
18" LENGTH	1/2"	3/4"	1"	1-1/4"	1-1/2"	N/A					
24" LENGTH	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"					
36" LENGTH	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"					
Cv *											
SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"					
12" LENGTH	3.3	11.0	20.9	N/A	N/A	N/A					
18" LENGTH	3.2	10.7	20.3	37.9	64.4	N/A					
24" LENGTH	3.1	9.9	19.5	36.9	61.0	110.7					
36" LENGTH	3.0	9.3	18.2	34.7	55.0	100.8					
* Note the Cv fac	tor is the f	low rate, i	n GPM, th	rough the l	hose at 1 P	SID.					
Max. Operatin	ıg & Bur	st Pressu	ire Ratin	g							
Size	Ор	erating (	PSI)	E	Burst (PS	I)					
1/2"		375			1500						
3/4"		300			1200						
1"		225		900							
1-1/4"		200		800							
1-1/2"		175			600						

150

#### **Specs for Application and Installation**

• ON INSTALLATION : Avoid absolutely any tension due to stretching, twisting or torsion during the course of tightening the connectors.

- A. Install and tighten the fixed male connector (if applicable)
- B. Install and tighten the union adaptor (if applicable)
- C. Install and tighten the swivel nut

• Use two spanners in order to screw in the union: One to hold the hexagon of the adaptor. The other to tighten the nut at the same time.

**IMPORTANT** - Do not re-screw the fixed connector or adaptor after tightening of the swivel nut; this will cause torsion on the flexible hose, with a risk of rapid deterioration. On removal, take the same precautions. If the flexible incorporates two fixed connectors, at least one must be installed on a counter-part fitted with a screw connector.

\*BEFORE INSTALLING REFER TO THE INSTAL-LATION & OPERATION INSTRUCTIONS FOR COMPLETE DETAILS. WARNING: FAILURE TO FOLLOW THE INSTALLATION & OPERATION INSTRUCTIONS COULD RESULT IN IMPROPER INSTALLATION.

#### Typical Specifications:

 Furnish and install where indicated on plans Flexible Connectors as provided by Macon Balancing. Hoses shall be temperature rated: 5°F to 230°F. Pressure rated from 375 PSI to 150 PSI based on hose diameter. Constructed specifically for operating conditions in heating and air conditioning with solid brass connectors, stainless steel ferrules, AISI 304 stainless steel braid, and formulated EPDM inner core design to not be sensitive to Glycol or water treatment products. Hoses shall meet 25/50 flammability and smoke development classification requirements of codes and specifications when tested by ASTM E 84 method.

 JOB:
 ENGINEER:

 REP:
 CONTRACTOR:

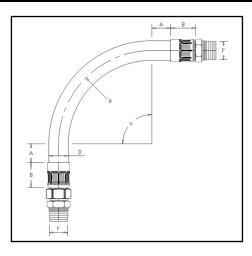
2"

Optional features and accessories available for this Macon product are an extra charge, and not included in the standard model price. www.maconbalancing.com



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### Accessories - Model FH



NOMINAL DIMENSIONS						
F	LENGTH	R min	A min	В	D	CX max
	in	mm	mm	mm	mm	
1/2"	12"	60	40	23	17	89°
	18"	60	40	23	17	180°
	24"	60	40	23	17	180°
	36"	60	40	23	17	180°
3/4"	12"	80	55	35	26	32°
	18"	80	55	35	26	126°
	24"	80	55	35	26	180°
	36"	80	55	35	26	180°
1"	12"	110	65	35	35	5°
	18"	110	65	35	35	75°
	24"	110	65	35	35	142°
	36"	110	65	35	35	180°
1-1/4"	18"	120	100	46	42	30°
	24"	120	100	46	42	92°
	36"	120	100	46	42	180°
1-1/2"	18"	200	140	62	53	5°
	24"	200	140	62	53	27°
	36"	200	140	62	53	104°
2"	24"	280	230	57	63	5°
	36"	280	203	57	63	42°

**IMPORTANT**: Do not re-tighten the fixed end or adaptor after tightening the swivel nut. This will cause tension or torsion and can result in rapid deterioration.

**INSPECTION**: We recommend a good maintenance practice and periodic inspections, typically when servicing other components at the unit or at the installation site. Check all hoses for small water leaks, residue, or discoloration on the exterior braid and fittings. If a leak is detected, stop service to the unit and replace hose immediately. Do not attempt to repair the hose.

**Caution**: Introduction of chemicals into the system or unit may cause damage of the inner core of the hose. Consult a water treatment specialist for chemical compatibility before using any chemical additives.

Warning: Hoses are designed for Hydronic heating and cooling service only; not for gas.