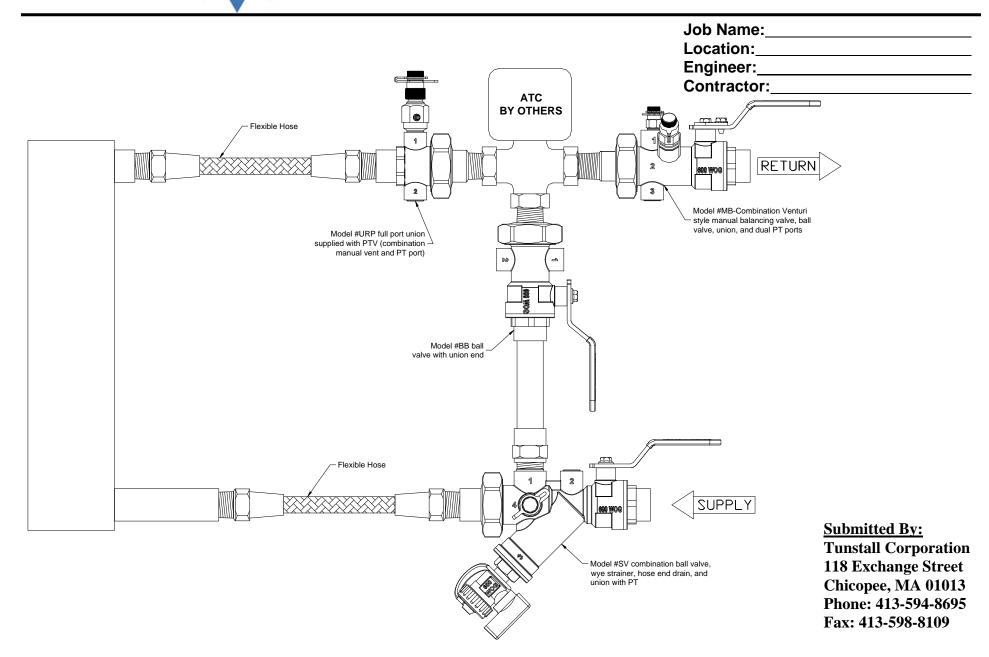


# Valve Package (Model # 3RS-MV-FLEX)

**Typical For:** 



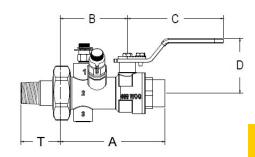


**Model MB** 0.50" to 2.00" Submittal Data

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	1.0020	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"R	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	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	52	(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"

Model MB Venturi Type Balancing Valve 0.50" - 2.00" Differential Pressure: Inches W.C.									
	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



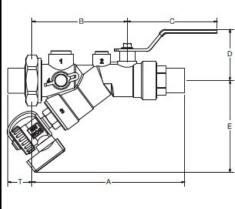
Model SV 0.50" to 2.00" Submittal Data

Model SV is a combination ball valve, wye strainer and union. The 20 mesh stainless steel strainer is removable for cleaning and inspection. 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 and SWT end connections.

Standard features include Pressure/Temperature Port, Hose End Drain Valve and plugged Bypass Port.



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



### NOMINAL DIMENSIONS & WEIGHTS

NUMIN			2010			-		-			-				
MODEL	SIZ	ΖE	Cv*			4	в	С	D	Е	**T	Bypass	Flow		GHT
MODEL	in	mm	C.		FNPT	SWT		_			SWT	Port-In	Range	lbs	kg
SV1e-050	0.50"	15		in	4.74	4.88	2.99	2.33	1.73	3.53	0.83			1.90	0.86
5110 050	0.50	15		mm	120.60	124.05	79.95	59.26	43.94	89.87	21.08		0.35	1.90	0.00
SV1e-075	0.75"	20	5.5	in	4.77	5.22	2.99	2.33	1.73	3.53	0.98	.50	to	2.67	1.21
5110 075	0.75	20	5.5	mm	121.36	132.66	79.95	59.26	43.94	89.87	24.89	.50	5.0	2.07	1.21
SV1e-100	1.00"	25		in	4.91	5.60	2.99	2.33	1.73	3.53	0.98		GPM	2.02	0.92
5110 100	1.00	25		mm	124.79	142.27	79.95	59.26	43.94	89.87	24.89			2.02	0.72
	-		1					2.44	• • • •	0.50	0.00	1	1		
SV2e-050	0.50"	15		in	5.71	5.95	3.86	3.66	2.08	3.72	0.92			2.57	1.17
		-		mm	145.24	151.33	98.04	93.01	52.83	94.64	23.37				
SV2e-075	0.75"	20		in	5.75	6.20	3.86	3.66	2.08	3.72	1.43		0.35	2.61	1.18
			7.0	mm	146.10	157.56	98.04	93.01	52.83	94.64	36.32	.75	to		
SV2e-100	1.00"	25	,	in	5.96	6.36	3.86	3.66	2.08	3.72	1.17	.,	13.0	2.69	1.22
0.776 100	1100	20		mm	151.59	161.62	98.04	93.01	52.83	94.64	29.72		GPM	2.07	1.22
SV2e-125	1 25"	32		in	6.14	6.69	3.86	3.66	2.08	3.72	1.50			2.92	1.32
	1.25	52		mm	156.03	170.00	98.04	93.01	52.83	94.64	38.10			2.92	1.52
		-	1		0.60	0.44	5.60	5.00	2.24	4.70	1.41	1			
SV3-100	1.00"	25		in	8.60	9.44	5.62	5.03	2.26	4.78	1.41			4.54	2.06
				mm	218.40	239.80	142.90	127.76	57.40	121.40	35.81		0.35		
SV3-125	1.25"	32	25.0	in	8.67	9.66	5.62	5.03	2.26	4.78	1.43	.75	to	4.54	2.06
-				mm	220.10	245.30	142.90	127.76	57.40	121.40	36.32		21.0 GPM		
SV3-150	1.50"	40		in	8.67	9.91	5.62	5.03	2.26	4.78	1.17		OFM	4.44	2.01
				mm	220.10	251.70	142.90	127.76	57.40	121.40	29.71				

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



Tunstall Corporation 118 Exchange Street · Chicopee, MA 01013 Phone (413) 594-8695 · Fax (413) 598-8109 Section: Components Bulletin-MB-SV-0915.05

## Components - Model SV - 0.50" to 2.00"

			1	S & W					1		1	T			arre
MODEL-	SIZ	Æ	Cv*		A	1	В	С	D	Е	**T	Bypass		WEI	GHT
MODEL	in	mm	CV		FNPT	SWT	D	C	ν	Ľ	SWT	Port-In	Range	lbs	kg
SV4-150	1.50"	40		in	9.37	9.91	7.44	5.66	2.83	5.31	1.59		22.0	8.72	3.96
514-130	1.50	40	68.0	mm	238.00	251.71	188.98	143.76	71.88	134.87	40.38	1.25	to	0.72	5.90
SVA 200	2 00"	50	08.0	in	9.56	10.35	7.44	5.66	2.83	5.31	1.50	1.23	70.0	0.42	4.27
SV4-200	2.00	50		mm	232.16	262.89	188.98	143.76	71.88	134.87	38.10		GPM	9.42	4.27
										duromet					ap
** Please 1 <i>Dimensi</i> STANDA	ions no	t for co	onstruc	tion pu			TP for oth fied by fac		nd connec	tions.					
-		РТ	w	ith O-1	ing seal a	and neop	rene retai	iner strap	. Accepts	s standard	1 1/8" (41	mm) gau	ige adap	oter or	-
			th		teter sten 500 PSI		Pa) and 2	75°F (13	5°C)						



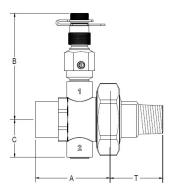


Model URP 0.375" to 2.00" Submittal Data

Model URP Union offers numerous End Connections pressure/temperature measurement and vent. The union has an EPDM O-ring seal and tailpiece available in MNPT, FNPT, SWT and Press End connections.

Standard features include "PTV" Combination PT and Air Vent.





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
Available Options:	"DV" Drain Valve

NOMINAL	DIMENS	IONS &	& WEIG	HTS							
MODEL		SIZE			Α		р	C	*T	WEI	GHT
MODEL	in	mm		FNPT	MNPT	SWT	В	С	MNPT	lbs	kg
URP-038	0.375"	10	in	N/A	N/A	1.88	2.78	0.84	N/A	0.76	035
UKF-038	0.373	10	mm	N/A	N/A	47.68	70.61	21.34	N/A	0.70	035
URP-050	0.50"	15	in	1.90	2.25	1.88	2.78	0.84	1.50	0.86	0.39
UKP-050	0.50	15	mm	48.26	57.23	47.75	70.25	21.34	38.10	0.80	0.39
URP-075	0.75" R	20	in	1.98	2.19	2.12	2.78	0.84	1.55	0.79	0.36
UKF-0/5	0.75 K	20	mm	50.29	55.65	53.85	70.61	21.34	39.37	0.79	0.30
URP-100	1.00"	25	in	2.15	N/A	2.28	3.02	1.08	1.75	75 1.16	0.53
UKF-100	1.00	23	mm	54.61	N/A	57.91	76.65	27.43	44.72	1.10	0.53
URP-125	1.25"	32	in	2.39	N/A	2.56	3.39	1.46	1.80	2.20	1.00
UKF-125	1.23	32	mm	60.71	N/A	65.02	86.18	37.08	45.72	2.20	1.00
URP-150	1.50"	40	in	2.39	N/A	2.69	3.39	1.46	1.80	2.42	1.10
UKF-150	1.50"	40	mm	60.71	N/A	68.32	86.18	37.08	45.72	2.42	1.10
URP-200	2.00"	50	in	2.49	N/A	3.03	3.70	1.76	1.98	3.42	1.55
UKF-200	2.00	50	mm	63.25	N/A	76.96	94.08	44.70	50.17	5.42	1.55

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

## STANDARD COMPONENTS



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 (121°C)

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



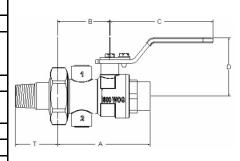


Model BB 0.50" to 2.00" Submittal Data

Model BB Union End Ball Valve is offers shutoff and throttling. The position indicating Memory Stop provides quick and easy flow setting with a single screw adjustment. The ball valve has a chrome plated ball, Teflon seats, a blowout proof stem with double EPDM O-ring seals and dual plugged accessory ports. The union has an EPDM O-ring seal and tailpiece available in MNPT, FNPT, SWT and Press End connections.



SPECIFICATIONS	
Pressure Ratings:	600 PSI (4140 kPa)
Temperature Ratings:	250°F (121°C)
Body Material:	Forged Brass
End Connections:	Fixed End: DZR Brass - SWT & FNPT
	Brass - Press End
	Union End: Brass - 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
Memory Stop:	Zinc Plated Steel with position indicator
Available Options:	"PTV" combination PT & Air Vent,
	hose end "DV" Drain Valve & Port Extensions



NOMINAL D	IMENSI	IONS 8	& WEIG	GHTS								
MODEL	SL	ZE	Cv*		A	A	В	С	D	**T	WEI	GHT
MODEL	in	mm	Cv.		FNPT	SWT	D	C	D	MPT	lbs	kg
BB1E-050	0.50"	15		in	3.72	4.08	2.03	3.66	1.61	1.50	1.15	0.52
DDIE-030	0.50	15	6.0	mm	94.5	103.6	51.6	93.0	40.9	38.10	1.15	0.52
BB1E-075	0.75"	20	0.0	in	3.84	4.37	2.03	3.66	1.61	1.50	1.19	0.54
DDIE-075	0.75	20		mm	97.5	111.0	51.6	93.0	40.9	38.10	1.19	0.54
	Т	T	T	1	1	Γ	1	1	1	1	ī	
BB2E-075	0.75"	20		in	3.92	4.49	2.03	3.66	2.08	1.56	1.54	0.61
<b>DD2E-0</b> 75	0.75	20	9.0	mm	99.6	114.0	51.6	93.0	52.8	39.70	1.24	0.01
BB2E-100	1.00"	25	9.0	in	4.13	4.53	2.03	3.66	2.08	1.75	1.70	0.77
DD2E-100	1.00	23		mm	105.0	115.1	51.6	93.0	52.8	44.5	1.70	0.77
	T			1		-	-	T	-	1	1	-
BB3-125	1.25"	32		in	5.42	6.41	2.37	5.03	2.26	1.80	3.97	1.80
<b>DD5</b> -125	1.25	52	52.0	mm	137.7	162.8	60.3	127.8	57.4	45.72	5.77	1.00
BB3-150	1.50"	40	52.0	in	5.42	6.67	2.52	5.65	2.26	1.80	4.12	1.87
<b>DD3-</b> 130	1.50	40		mm	137.7	169.3	64.0	143.6	57.4	45.72	4.12	1.07
<b>BB4-200</b>	2.00"	50	96.0	in	5.03	5.82	2.90	5.66	2.83	1.98	5.68	2.58
004-200	2.00	50	20.0	mm	127.8	148.8	73.7	143.8	71.9	50.17	5.00	2.50

\* Cv values are for the body only.

\*\* Please reference the tailpiece data sheet #Bulletin-MB-TP for other sizes and connections.

Dimensions not for construction purposes unless certified by factory.

### STANDARD COMPONENTS

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		$\int$

MS Memory stop with position indicator, zinc coated steel.

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

Tunstall



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.

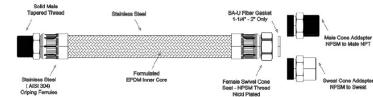
#### **SPECIFICATIONS**



**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 DIMENSIONS									
SIZE	MODEL #								
	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 factor is the flow rate, in GPM, through the hose at 1 PSID.									
Max. Operating & Burst Pressure Rating									
Size	<b>Operating (PSI)</b>			Burst (PSI)					
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

Tunstall

2"

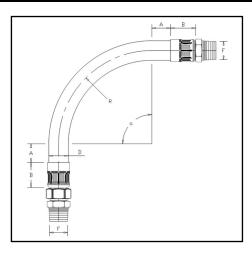
Optional features and accessories available for this Macon product are an extra charge, and not included in the standard model price. www.maconbalancing.com





500

## 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.