

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

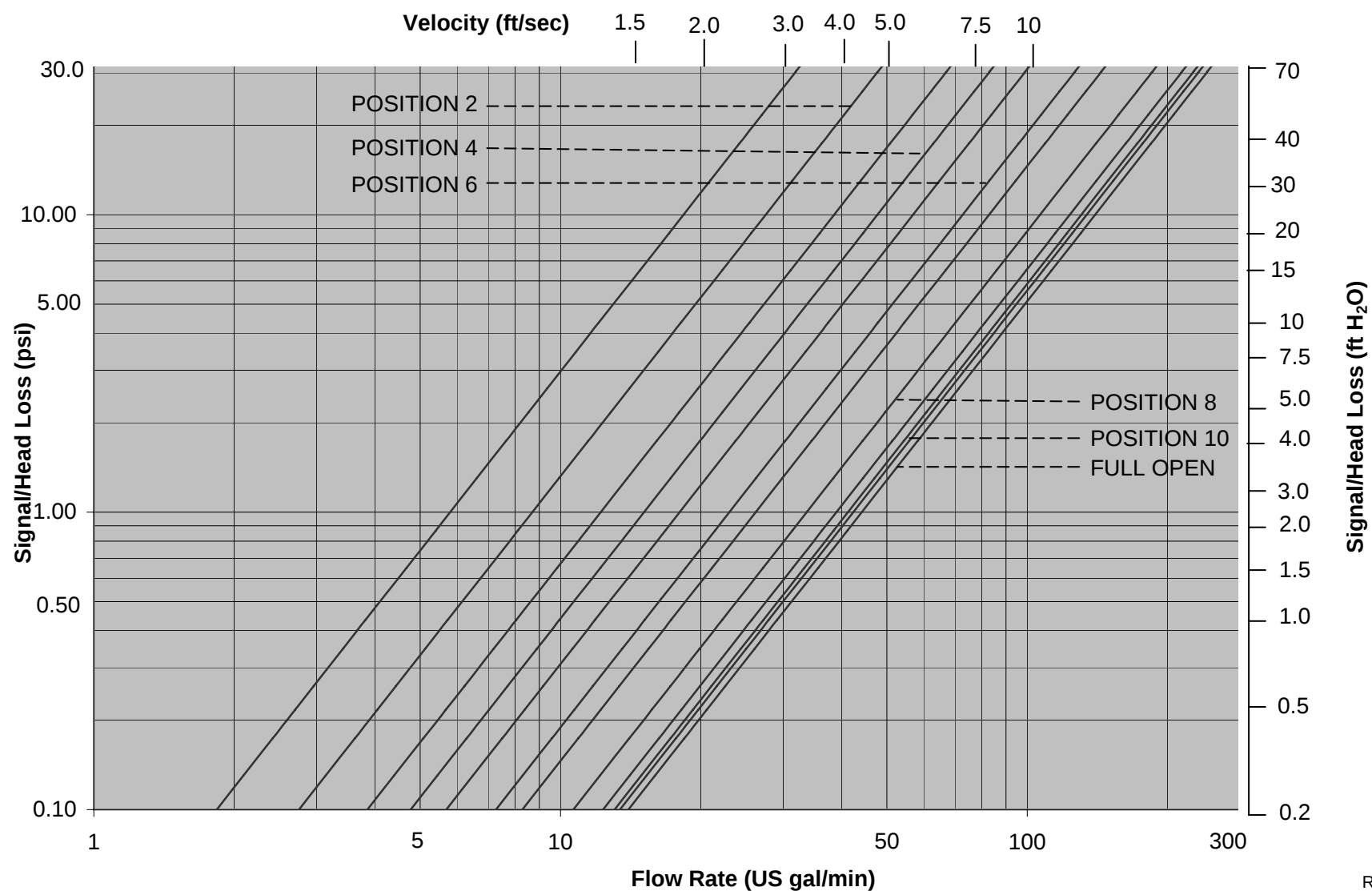
Review Date: 01/18/2012

Original Date: NA

Flow Data for NIBCO® Circuit Balancing Valves 2" to 12" (Figure Number 737A)

CAUTION: Only qualified personnel should undertake the procedures outlined in this document. NIBCO INC., its agents, representatives and employees assumes no liability for the use of these procedures. These procedures are offered as suggestions only.

2 " Fig. 737A Circuit Balancing Valve



Rev 0

737A 2" FLOW DATA

Turns→	1	2	3	4	5	6	7	8	9	10	11	OPEN	
Cv→	5.8	8.7	12.2	15.1	18.0	23.0	26.2	33.7	39.0	41.3	42.4	44.2	ΔP
ΔP PSI	FLOW IN GPM												ft H2O
0.04	1.2	1.7	2.4	3.0	3.6	4.6	5.2	6.7	7.8	8.3	8.5	8.8	0.09
0.06	1.4	2.1	3.0	3.7	4.4	5.6	6.4	8.3	9.6	10.1	10.4	10.8	0.14
0.065	1.5	2.2	3.1	3.9	4.6	5.9	6.7	8.6	9.9	10.5	10.8	11.3	0.15
0.08	1.6	2.5	3.5	4.3	5.1	6.5	7.4	9.5	11.0	11.7	12.0	12.5	0.18
0.087	1.7	2.6	3.6	4.4	5.3	6.8	7.7	9.9	11.5	12.2	12.5	13.0	0.20
0.10	1.8	2.8	3.9	4.8	5.7	7.3	8.3	10.7	12.3	13.1	13.4	14.0	0.23
0.130	2.1	3.1	4.4	5.4	6.5	8.3	9.4	12.2	14.1	14.9	15.3	15.9	0.30
0.173	2.4	3.6	5.1	6.3	7.5	9.6	10.9	14.0	16.2	17.2	17.7	18.4	0.40
0.20	2.6	3.9	5.5	6.8	8.0	10.3	11.7	15.1	17.4	18.5	19.0	19.8	0.46
0.217	2.7	4.1	5.7	7.0	8.4	10.7	12.2	15.7	18.2	19.2	19.7	20.6	0.50
0.260	3.0	4.4	6.2	7.7	9.2	11.7	13.4	17.2	19.9	21.1	21.6	22.5	0.60
0.347	3.4	5.1	7.2	8.9	10.6	13.5	15.4	19.8	23.0	24.3	25.0	26.0	0.80
0.40	3.7	5.5	7.7	9.6	11.4	14.5	16.6	21.3	24.7	26.1	26.8	28.0	0.92
0.434	3.8	5.7	8.0	9.9	11.9	15.1	17.3	22.2	25.7	27.2	27.9	29.1	1.00
0.60	4.5	6.7	9.5	11.7	13.9	17.8	20.3	26.1	30.2	32.0	32.8	34.2	1.38
0.650	4.7	7.0	9.8	12.2	14.5	18.5	21.1	27.2	31.4	33.3	34.2	35.6	1.50
0.80	5.2	7.8	10.9	13.5	16.1	20.6	23.4	30.1	34.9	36.9	37.9	39.5	1.85
0.867	5.4	8.1	11.4	14.1	16.8	21.4	24.4	31.4	36.3	38.5	39.5	41.2	2.00
1.00	5.8	8.7	12.2	15.1	18.0	23.0	26.2	33.7	39.0	41.3	42.4	44.2	2.31
1.301	6.6	9.9	13.9	17.2	20.5	26.2	29.9	38.4	44.5	47.1	48.4	50.4	3.00
1.734	7.6	11.5	16.1	19.9	23.7	30.3	34.5	44.4	51.4	54.4	55.8	58.2	4.00
2.00	8.2	12.3	17.3	21.4	25.5	32.5	37.1	47.7	55.2	58.4	60.0	62.5	4.61
2.168	8.5	12.8	18.0	22.2	26.5	33.9	38.6	49.6	57.4	60.8	62.4	65.1	5.00
2.601	9.4	14.0	19.7	24.4	29.0	37.1	42.3	54.4	62.9	66.6	68.4	71.3	6.00
3.468	10.8	16.2	22.7	28.1	33.5	42.8	48.8	62.8	72.6	76.9	79.0	82.3	8.00
4.00	11.6	17.4	24.4	30.2	36.0	46.0	52.4	67.4	78.0	82.6	84.8	88.4	9.23
4.335	12.1	18.1	25.4	31.4	37.5	47.9	54.6	70.2	81.2	86.0	88.3	92.0	10.00
6.00	14.2	21.3	29.9	37.0	44.1	56.3	64.2	82.5	95.5	101.2	103.9	108.3	13.84
6.503	14.8	22.2	31.1	38.5	45.9	58.7	66.8	85.9	99.5	105.3	108.1	112.7	15.00
8.00	16.4	24.6	34.5	42.7	50.9	65.1	74.1	95.3	110.3	116.8	119.9	125.0	18.45
8.671	17.1	25.6	35.9	44.5	53.0	67.7	77.1	99.2	114.8	121.6	124.9	130.2	20.00
10.00	18.3	27.5	38.6	47.8	56.9	72.7	82.9	106.6	123.3	130.6	134.1	139.8	23.07
13.006	20.9	31.4	44.0	54.5	64.9	82.9	94.5	121.5	140.6	148.9	152.9	159.4	30.00
17.341	24.2	36.2	50.8	62.9	75.0	95.8	109.1	140.3	162.4	172.0	176.6	184.1	40.00
20.00	25.9	38.9	54.6	67.5	80.5	102.9	117.2	150.7	174.4	184.7	189.6	197.7	46.13
21.676	27.0	40.5	56.8	70.3	83.8	107.1	122.0	156.9	181.6	192.3	197.4	205.8	50.00
26.012	29.6	44.4	62.2	77.0	91.8	117.3	133.6	171.9	198.9	210.6	216.2	225.4	60.00
30.00	31.8	47.7	66.8	82.7	98.6	126.0	143.5	184.6	213.6	226.2	232.2	242.1	69.20
30.347	32.0	47.9	67.2	83.2	99.2	126.7	144.3	185.6	214.8	227.5	233.6	243.5	70.00
34.682	34.2	51.2	71.8	88.9	106.0	135.5	154.3	198.5	229.7	243.2	249.7	260.3	80.00
39.018	36.2	54.3	76.2	94.3	112.4	143.7	163.7	210.5	243.6	258.0	264.8	276.1	90.00
40.00	36.7	55.0	77.2	95.5	113.8	145.5	165.7	213.1	246.7	261.2	268.2	279.5	92.27
43.353	38.2	57.3	80.3	99.4	118.5	151.4	172.5	221.9	256.8	271.9	279.2	291.0	100.00

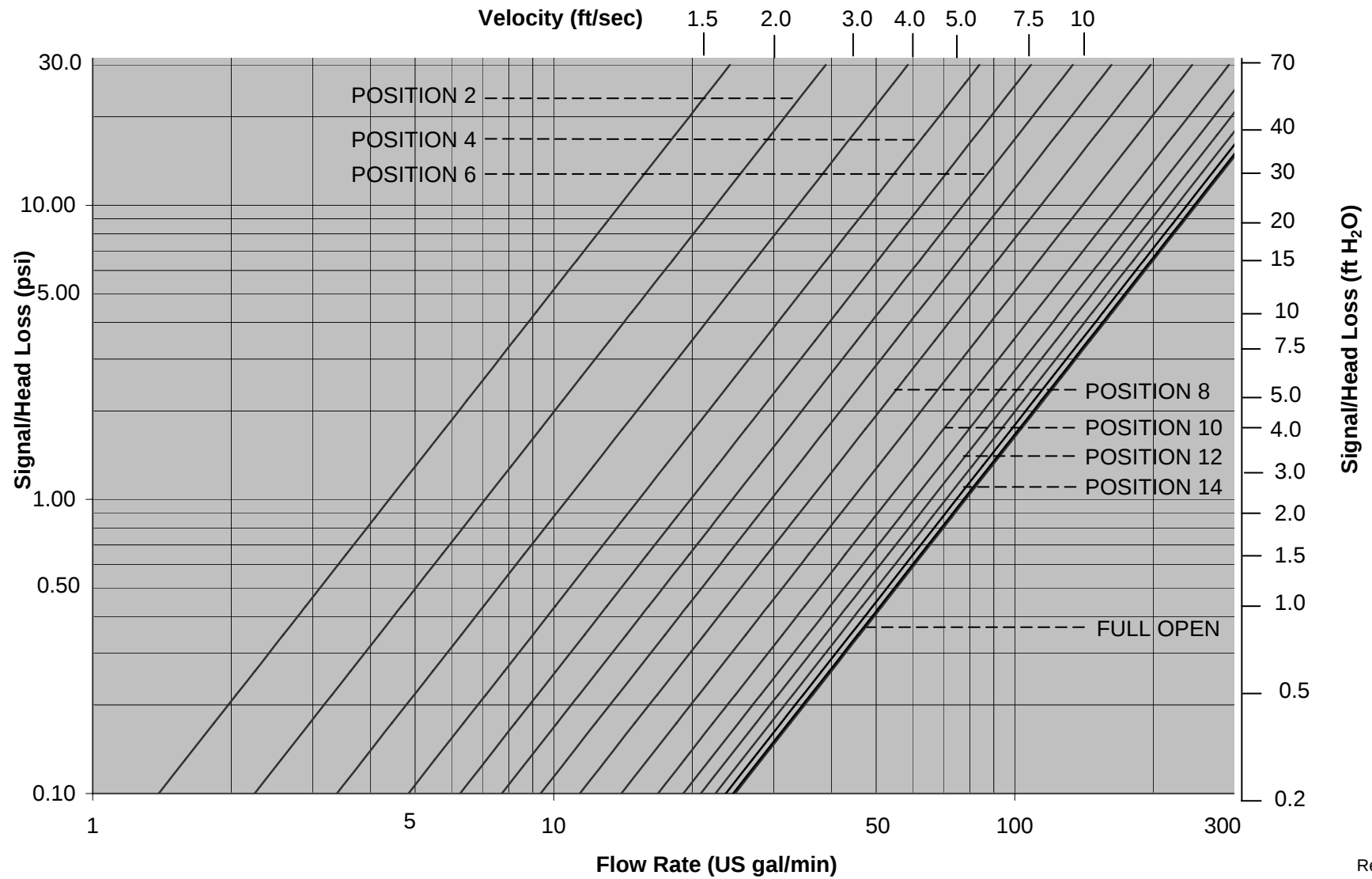
For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	16
2	21
3	31
4	42
5	52
6	63
7.5	78
10	105

737A 50mm (2") FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	OPEN
Kv→	5.0	7.5	10.6	13.1	15.6	19.9	22.7	29.2	33.8	35.8	36.7	38.3
ΔP kPa	FLOW IN LITERS / SECOND											
1	0.14	0.21	0.29	0.36	0.43	0.55	0.63	0.81	0.94	0.99	1.02	1.06
2	0.20	0.30	0.41	0.51	0.61	0.78	0.89	1.15	1.33	1.40	1.44	1.50
3	0.24	0.36	0.51	0.63	0.75	0.96	1.09	1.40	1.62	1.72	1.77	1.84
4	0.28	0.42	0.59	0.73	0.87	1.11	1.26	1.62	1.88	1.99	2.04	2.13
5	0.31	0.47	0.66	0.81	0.97	1.24	1.41	1.81	2.10	2.22	2.28	2.38
6	0.34	0.51	0.72	0.89	1.06	1.35	1.54	1.98	2.30	2.43	2.50	2.60
8	0.39	0.59	0.83	1.03	1.22	1.56	1.78	2.29	2.65	2.81	2.88	3.01
10	0.44	0.66	0.93	1.15	1.37	1.75	1.99	2.56	2.97	3.14	3.22	3.36
15	0.54	0.81	1.14	1.41	1.68	2.14	2.44	3.14	3.63	3.85	3.95	4.12
20	0.62	0.94	1.31	1.62	1.94	2.47	2.82	3.62	4.19	4.44	4.56	4.75
30	0.76	1.15	1.61	1.99	2.37	3.03	3.45	4.44	5.14	5.44	5.58	5.82
40	0.88	1.32	1.86	2.30	2.74	3.50	3.98	5.12	5.93	6.28	6.45	6.72
50	0.99	1.48	2.07	2.57	3.06	3.91	4.45	5.73	6.63	7.02	7.21	7.51
60	1.08	1.62	2.27	2.81	3.35	4.28	4.88	6.28	7.26	7.69	7.90	8.23
80	1.25	1.87	2.62	3.25	3.87	4.95	5.63	7.25	8.39	8.88	9.12	9.51
100	1.39	2.09	2.93	3.63	4.33	5.53	6.30	8.10	9.38	9.93	10.19	10.63
150	1.71	2.56	3.59	4.45	5.30	6.77	7.72	9.92	11.48	12.16	12.49	13.02
200	1.97	2.96	4.15	5.13	6.12	7.82	8.91	11.46	13.26	14.04	14.42	15.03
300	2.42	3.62	5.08	6.29	7.50	9.58	10.91	14.03	16.24	17.20	17.66	18.41
400	2.79	4.18	5.87	7.26	8.66	11.06	12.60	16.21	18.75	19.86	20.39	21.25
500	3.12	4.68	6.56	8.12	9.68	12.37	14.09	18.12	20.97	22.20	22.80	23.76
600	3.42	5.12	7.19	8.89	10.60	13.55	15.43	19.85	22.97	24.32	24.97	26.03
800	3.94	5.92	8.30	10.27	12.24	15.64	17.82	22.92	26.52	28.09	28.83	30.06
1000	4.41	6.61	9.28	11.48	13.69	17.49	19.92	25.62	29.65	31.40	32.24	33.61

NOTE: This Data has been Converted from English Units into Metric Units

2 ½" Fig. 737A Circuit Balancing Valve



Rev 0

CIRCUIT BALANCING VALVES

737A 2 ½" FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	OPEN	
Cv→	4.4	7.1	10.7	15.3	19.8	24.4	29.6	36.0	44.3	53.2	60.4	65.9	70.9	74.7	77.5	78.3	ΔP
ΔP PSI	FLOW IN GPM																ft H2O
0.04	0.9	1.4	2.1	3.1	4.0	4.9	5.9	7.2	8.9	10.6	12.1	13.2	14.2	14.9	15.5	15.7	0.09
0.06	1.1	1.7	2.6	3.7	4.8	6.0	7.3	8.8	10.9	13.0	14.8	16.1	17.4	18.3	19.0	19.2	0.14
0.065	1.1	1.8	2.7	3.9	5.0	6.2	7.5	9.2	11.3	13.6	15.4	16.8	18.1	19.0	19.8	20.0	0.15
0.08	1.2	2.0	3.0	4.3	5.6	6.9	8.4	10.2	12.5	15.0	17.1	18.6	20.1	21.1	21.9	22.1	0.18
0.087	1.3	2.1	3.2	4.5	5.8	7.2	8.7	10.6	13.0	15.7	17.8	19.4	20.9	22.0	22.8	23.1	0.20
0.10	1.4	2.2	3.4	4.8	6.3	7.7	9.4	11.4	14.0	16.8	19.1	20.8	22.4	23.6	24.5	24.8	0.23
0.130	1.6	2.6	3.9	5.5	7.1	8.8	10.7	13.0	16.0	19.2	21.8	23.8	25.6	26.9	27.9	28.2	0.30
0.173	1.8	3.0	4.5	6.4	8.2	10.2	12.3	15.0	18.4	22.2	25.2	27.4	29.5	31.1	32.3	32.6	0.40
0.20	2.0	3.2	4.8	6.8	8.9	10.9	13.2	16.1	19.8	23.8	27.0	29.5	31.7	33.4	34.7	35.0	0.46
0.217	2.0	3.3	5.0	7.1	9.2	11.4	13.8	16.8	20.6	24.8	28.1	30.7	33.0	34.8	36.1	36.5	0.50
0.260	2.2	3.6	5.5	7.8	10.1	12.4	15.1	18.4	22.6	27.1	30.8	33.6	36.2	38.1	39.5	39.9	0.60
0.347	2.6	4.2	6.3	9.0	11.7	14.4	17.4	21.2	26.1	31.3	35.6	38.8	41.8	44.0	45.6	46.1	0.80
0.40	2.8	4.5	6.8	9.7	12.5	15.4	18.7	22.8	28.0	33.6	38.2	41.7	44.8	47.2	49.0	49.5	0.92
0.434	2.9	4.7	7.0	10.1	13.0	16.1	19.5	23.7	29.2	35.0	39.8	43.4	46.7	49.2	51.0	51.6	1.00
0.60	3.4	5.5	8.3	11.9	15.3	18.9	22.9	27.9	34.3	41.2	46.8	51.0	54.9	57.9	60.0	60.7	1.38
0.650	3.5	5.7	8.6	12.3	16.0	19.7	23.9	29.0	35.7	42.9	48.7	53.1	57.2	60.2	62.5	63.1	1.50
0.80	3.9	6.4	9.6	13.7	17.7	21.8	26.5	32.2	39.6	47.6	54.0	58.9	63.4	66.8	69.3	70.0	1.85
0.867	4.1	6.6	10.0	14.2	18.4	22.7	27.6	33.5	41.3	49.5	56.2	61.4	66.0	69.6	72.2	72.9	2.00
1.00	4.4	7.1	10.7	15.3	19.8	24.4	29.6	36.0	44.3	53.2	60.4	65.9	70.9	74.7	77.5	78.3	2.31
1.301	5.0	8.1	12.2	17.4	22.6	27.8	33.8	41.1	50.5	60.7	68.9	75.2	80.9	85.2	88.4	89.3	3.00
1.734	5.8	9.3	14.1	20.1	26.1	32.1	39.0	47.4	58.3	70.1	79.5	86.8	93.4	98.4	102.1	103.1	4.00
2.00	6.2	10.0	15.1	21.6	28.0	34.5	41.9	50.9	62.6	75.2	85.4	93.2	100.3	105.6	109.6	110.7	4.61
2.168	6.5	10.5	15.8	22.5	29.2	35.9	43.6	53.0	65.2	78.3	88.9	97.0	104.4	110.0	114.1	115.3	5.00
2.601	7.1	11.5	17.3	24.7	31.9	39.4	47.7	58.1	71.4	85.8	97.4	106.3	114.3	120.5	125.0	126.3	6.00
3.468	8.2	13.2	19.9	28.5	36.9	45.4	55.1	67.0	82.5	99.1	112.5	122.7	132.0	139.1	144.3	145.8	8.00
4.00	8.8	14.2	21.4	30.6	39.6	48.8	59.2	72.0	88.6	106.4	120.8	131.8	141.8	149.4	155.0	156.6	9.23
4.335	9.2	14.8	22.3	31.9	41.2	50.8	61.6	75.0	92.2	110.8	125.8	137.2	147.6	155.5	161.4	163.0	10.00
6.00	10.8	17.4	26.2	37.5	48.5	59.8	72.5	88.2	108.5	130.3	147.9	161.4	173.7	183.0	189.8	191.8	13.84
6.503	11.2	18.1	27.3	39.0	50.5	62.2	75.5	91.8	113.0	135.7	154.0	168.1	180.8	190.5	197.6	199.7	15.00
8.00	12.4	20.1	30.3	43.3	56.0	69.0	83.7	101.8	125.3	150.5	170.8	186.4	200.5	211.3	219.2	221.5	18.45
8.671	13.0	20.9	31.5	45.1	58.3	71.8	87.2	106.0	130.4	156.7	177.9	194.0	208.8	220.0	228.2	230.6	20.00
10.00	13.9	22.5	33.8	48.4	62.6	77.2	93.6	113.8	140.1	168.2	191.0	208.4	224.2	236.2	245.1	247.6	23.07
13.006	15.9	25.6	38.6	55.2	71.4	88.0	106.7	129.8	159.8	191.9	217.8	237.7	255.7	269.4	279.5	282.4	30.00
17.341	18.3	29.6	44.6	63.7	82.5	101.6	123.3	149.9	184.5	221.5	251.5	274.4	295.2	311.1	322.7	326.1	40.00
20.00	19.7	31.8	47.9	68.4	88.5	109.1	132.4	161.0	198.1	237.9	270.1	294.7	317.1	334.1	346.6	350.2	46.13
21.676	20.5	33.1	49.8	71.2	92.2	113.6	137.8	167.6	206.3	247.7	281.2	306.8	330.1	347.8	360.8	364.5	50.00
26.012	22.4	36.2	54.6	78.0	101.0	124.4	151.0	183.6	225.9	271.3	308.1	336.1	361.6	381.0	395.3	399.3	60.00
30.00	24.1	38.9	58.6	83.8	108.4	133.6	162.1	197.2	242.6	291.4	330.8	360.9	388.3	409.1	424.5	428.9	69.20
30.347	24.2	39.1	58.9	84.3	109.1	134.4	163.1	198.3	244.0	293.1	332.7	363.0	390.6	411.5	426.9	431.3	70.00
34.682	25.9	41.8	63.0	90.1	116.6	143.7	174.3	212.0	260.9	313.3	355.7	388.1	417.5	439.9	456.4	461.1	80.00
39.018	27.5	44.3	66.8	95.6	123.7	152.4	184.9	224.9	276.7	332.3	377.3	411.6	442.9	466.6	484.1	489.1	90.00
40.00	27.8	44.9	67.7	96.8	125.2	154.3	187.2	227.7	280.2	336.5	382.0	416.8	448.4	472.4	490.2	495.2	92.27
43.353	29.0	46.7	70.5	100.7	130.4	160.7	194.9	237.0	291.7	350.3	397.7	433.9	466.8	491.8	510.3	515.6	100.00

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	22
2	30
3	45
4	60
5	75
6	90
7.5	112
10	149

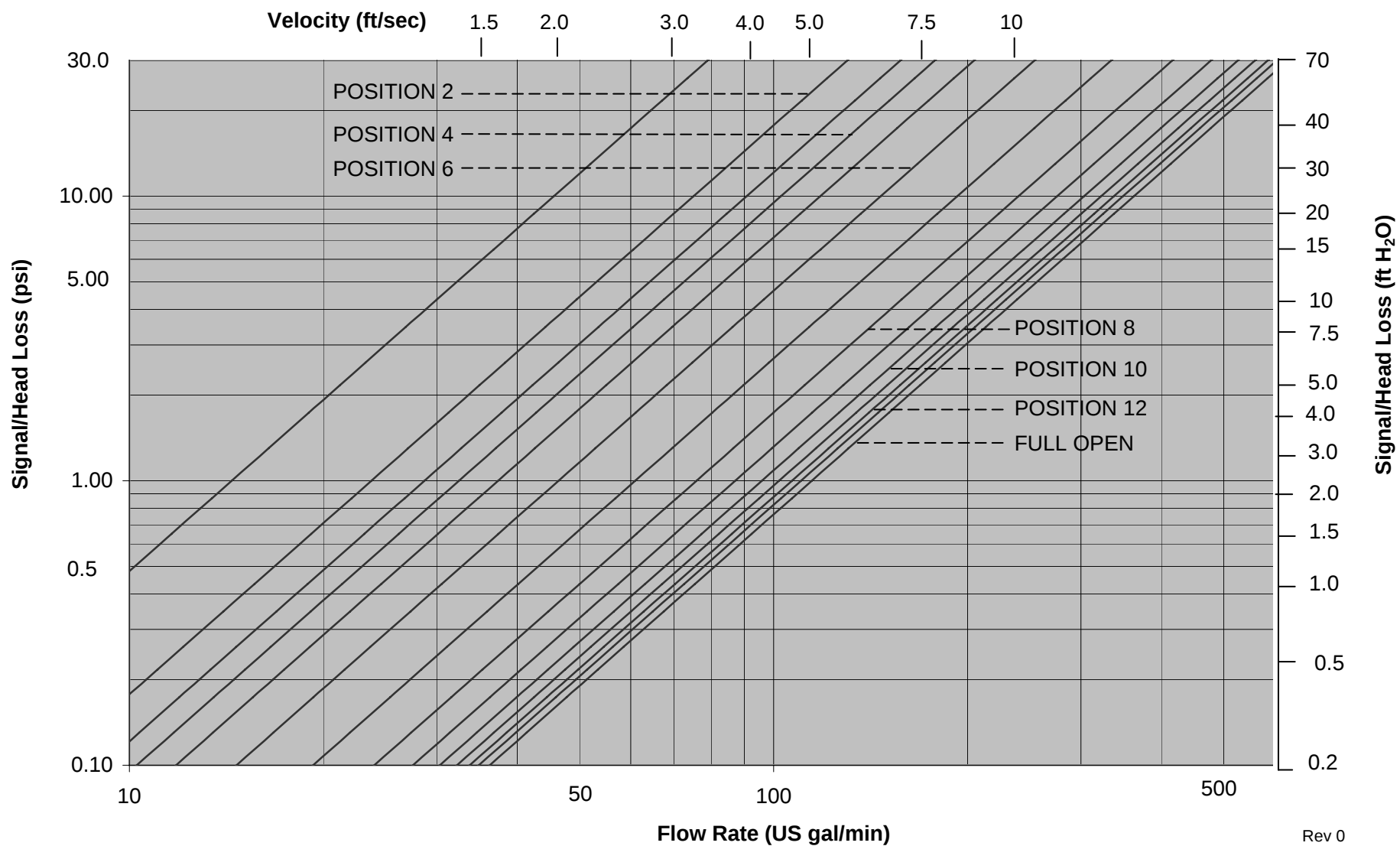
CIRCUIT BALANCING VALVES

737A 65mm (2½") FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	OPEN
Kv→	3.8	6.1	9.3	13.2	17.1	21.1	25.6	31.2	38.4	46.1	52.3	57.1	61.4	64.7	67.1	67.8
ΔP kPa	FLOW IN LITERS / SECOND															
1	0.11	0.17	0.26	0.37	0.48	0.59	0.71	0.87	1.07	1.28	1.45	1.58	1.70	1.80	1.86	1.88
2	0.15	0.24	0.36	0.52	0.67	0.83	1.01	1.22	1.51	1.81	2.05	2.24	2.41	2.54	2.64	2.66
3	0.18	0.30	0.45	0.64	0.82	1.02	1.23	1.50	1.84	2.22	2.52	2.74	2.95	3.11	3.23	3.26
4	0.21	0.34	0.51	0.74	0.95	1.17	1.42	1.73	2.13	2.56	2.90	3.17	3.41	3.59	3.73	3.77
5	0.24	0.38	0.58	0.82	1.06	1.31	1.59	1.94	2.38	2.86	3.25	3.54	3.81	4.02	4.17	4.21
6	0.26	0.42	0.63	0.90	1.17	1.44	1.74	2.12	2.61	3.13	3.56	3.88	4.18	4.40	4.56	4.61
8	0.30	0.48	0.73	1.04	1.35	1.66	2.01	2.45	3.01	3.62	4.11	4.48	4.82	5.08	5.27	5.32
10	0.33	0.54	0.81	1.16	1.51	1.86	2.25	2.74	3.37	4.04	4.59	5.01	5.39	5.68	5.89	5.95
15	0.41	0.66	1.00	1.42	1.84	2.27	2.76	3.35	4.13	4.95	5.62	6.14	6.60	6.96	7.22	7.29
20	0.47	0.76	1.15	1.65	2.13	2.62	3.18	3.87	4.76	5.72	6.49	7.09	7.62	8.03	8.33	8.42
30	0.58	0.93	1.41	2.01	2.61	3.21	3.90	4.74	5.83	7.01	7.95	8.68	9.34	9.84	10.21	10.31
40	0.67	1.08	1.63	2.33	3.01	3.71	4.50	5.47	6.74	8.09	9.18	10.02	10.78	11.36	11.78	11.91
50	0.75	1.21	1.82	2.60	3.37	4.15	5.03	6.12	7.53	9.04	10.27	11.20	12.05	12.70	13.18	13.31
60	0.82	1.32	1.99	2.85	3.69	4.54	5.51	6.70	8.25	9.91	11.25	12.27	13.20	13.91	14.43	14.58
80	0.95	1.53	2.30	3.29	4.26	5.25	6.37	7.74	9.53	11.44	12.99	14.17	15.25	16.06	16.67	16.84
100	1.06	1.71	2.57	3.68	4.76	5.87	7.12	8.66	10.65	12.79	14.52	15.84	17.05	17.96	18.63	18.83
150	1.30	2.09	3.15	4.51	5.83	7.19	8.72	10.60	13.04	15.67	17.79	19.41	20.88	22.00	22.82	23.06
200	1.50	2.41	3.64	5.20	6.73	8.30	10.06	12.24	15.06	18.09	20.54	22.41	24.11	25.40	26.35	26.62
300	1.83	2.96	4.46	6.37	8.25	10.16	12.33	14.99	18.45	22.15	25.15	27.44	29.53	31.11	32.27	32.61
400	2.12	3.41	5.15	7.36	9.52	11.73	14.23	17.31	21.30	25.58	29.04	31.69	34.09	35.92	37.27	37.65
500	2.37	3.82	5.75	8.23	10.64	13.12	15.91	19.35	23.82	28.60	32.47	35.43	38.12	40.16	41.67	42.10
600	2.59	4.18	6.30	9.01	11.66	14.37	17.43	21.20	26.09	31.33	35.57	38.81	41.76	43.99	45.64	46.11
800	2.99	4.83	7.28	10.40	13.46	16.59	20.13	24.48	30.13	36.18	41.07	44.81	48.22	50.80	52.70	53.25
1000	3.35	5.40	8.14	11.63	15.05	18.55	22.51	27.37	33.68	40.45	45.92	50.10	53.91	56.80	58.92	59.53

NOTE: This Data has been Converted from English Units into Metric Units

3" Fig. 737A Circuit Balancing Valve



Rev 0

CIRCUIT BALANCING VALVES

737A 3" FLOW DATA

Turns→	1	2	3	4	5	6	7	8	9	10	11	12	13	OPEN	
Cv→	14.4	23.8	28.7	32.5	37.4	46.4	61.0	75.9	87.1	95.9	102.0	106.8	110.3	114.6	ΔP
ΔP PSI	FLOW IN GPM														ft H2O
0.04	2.9	4.8	5.7	6.5	7.5	9.3	12.2	15.2	17.4	19.2	20.4	21.4	22.1	22.9	0.09
0.06	3.5	5.8	7.0	8.0	9.2	11.4	14.9	18.6	21.3	23.5	25.0	26.1	27.0	28.1	0.14
0.065	3.7	6.1	7.3	8.3	9.5	11.8	15.5	19.4	22.2	24.5	26.0	27.2	28.1	29.2	0.15
0.08	4.1	6.7	8.1	9.2	10.6	13.1	17.2	21.5	24.6	27.1	28.8	30.2	31.2	32.4	0.18
0.087	4.2	7.0	8.5	9.6	11.0	13.7	18.0	22.3	25.7	28.2	30.0	31.4	32.5	33.8	0.20
0.10	4.6	7.5	9.1	10.3	11.8	14.7	19.3	24.0	27.6	30.3	32.2	33.8	34.9	36.3	0.23
0.130	5.2	8.6	10.4	11.7	13.5	16.7	22.0	27.4	31.4	34.6	36.8	38.5	39.8	41.3	0.30
0.173	6.0	9.9	12.0	13.5	15.6	19.3	25.4	31.6	36.3	39.9	42.5	44.5	45.9	47.7	0.40
0.20	6.4	10.6	12.8	14.5	16.7	20.7	27.3	33.9	39.0	42.9	45.6	47.7	49.3	51.3	0.46
0.217	6.7	11.1	13.4	15.1	17.4	21.6	28.4	35.3	40.6	44.6	47.5	49.7	51.3	53.4	0.50
0.260	7.4	12.1	14.6	16.6	19.1	23.6	31.1	38.7	44.4	48.9	52.0	54.4	56.2	58.5	0.60
0.347	8.5	14.0	16.9	19.1	22.0	27.3	35.9	44.7	51.3	56.5	60.1	62.9	64.9	67.5	0.80
0.40	9.1	15.0	18.2	20.5	23.6	29.3	38.6	48.0	55.1	60.6	64.5	67.5	69.7	72.5	0.92
0.434	9.5	15.6	18.9	21.4	24.6	30.5	40.1	50.0	57.4	63.1	67.1	70.3	72.6	75.5	1.00
0.60	11.2	18.4	22.2	25.2	28.9	35.9	47.2	58.8	67.5	74.3	79.0	82.7	85.4	88.8	1.38
0.650	11.6	19.2	23.2	26.2	30.1	37.4	49.2	61.2	70.3	77.3	82.2	86.1	88.9	92.4	1.50
0.80	12.9	21.2	25.7	29.0	33.4	41.5	54.5	67.9	77.9	85.8	91.2	95.5	98.6	102.5	1.85
0.867	13.4	22.1	26.7	30.2	34.8	43.2	56.8	70.7	81.1	89.3	95.0	99.4	102.7	106.7	2.00
1.00	14.4	23.8	28.7	32.5	37.4	46.4	61.0	75.9	87.1	95.9	102.0	106.8	110.3	114.6	2.31
1.301	16.4	27.1	32.7	37.0	42.6	52.9	69.5	86.6	99.4	109.4	116.3	121.7	125.8	130.7	3.00
1.734	19.0	31.3	37.8	42.8	49.2	61.1	80.3	99.9	114.7	126.3	134.3	140.6	145.2	151.0	4.00
2.00	20.4	33.6	40.6	45.9	52.8	65.6	86.2	107.3	123.2	135.6	144.2	151.0	155.9	162.1	4.61
2.168	21.2	35.0	42.3	47.8	55.0	68.3	89.8	111.7	128.3	141.2	150.1	157.2	162.4	168.8	5.00
2.601	23.3	38.3	46.3	52.4	60.2	74.8	98.3	122.4	140.5	154.7	164.5	172.2	177.8	184.9	6.00
3.468	26.8	44.2	53.5	60.5	69.6	86.3	113.6	141.3	162.3	178.6	189.9	198.8	205.4	213.5	8.00
4.00	28.8	47.5	57.4	64.9	74.7	92.7	122.0	151.8	174.3	191.8	203.9	213.5	220.5	229.3	9.23
4.335	30.0	49.5	59.8	67.6	77.8	96.5	127.0	158.0	181.4	199.7	212.3	222.3	229.6	238.7	10.00
6.00	35.3	58.2	70.3	79.5	91.5	113.6	149.4	185.9	213.4	234.9	249.8	261.5	270.1	280.8	13.84
6.503	36.8	60.6	73.2	82.8	95.3	118.2	155.5	193.5	222.2	244.5	260.0	272.2	281.2	292.3	15.00
8.00	40.8	67.2	81.2	91.8	105.7	131.1	172.5	214.7	246.4	271.2	288.4	301.9	311.9	324.2	18.45
8.671	42.5	69.9	84.5	95.6	110.0	136.5	179.6	223.5	256.6	282.4	300.3	314.3	324.7	337.5	20.00
10.00	45.6	75.1	90.8	102.7	118.1	146.6	192.8	240.0	275.5	303.2	322.5	337.6	348.7	362.5	23.07
13.006	52.0	85.7	103.5	117.1	134.7	167.2	219.9	273.7	314.2	345.8	367.7	385.0	397.7	413.4	30.00
17.341	60.0	98.9	119.6	135.2	155.6	193.1	253.9	316.1	362.8	399.3	424.6	444.5	459.2	477.4	40.00
20.00	64.5	106.2	128.4	145.2	167.1	207.3	272.7	339.4	389.7	428.8	456.0	477.4	493.2	512.7	46.13
21.676	67.1	110.6	133.7	151.2	173.9	215.9	283.9	353.4	405.7	446.5	474.8	497.0	513.4	533.7	50.00
26.012	73.5	121.1	146.4	165.6	190.5	236.5	311.0	387.1	444.4	489.1	520.1	544.5	562.4	584.7	60.00
30.00	79.0	130.1	157.3	177.9	204.6	253.9	334.0	415.7	477.2	525.2	558.5	584.7	604.0	627.9	69.20
30.347	79.4	130.8	158.2	178.9	205.8	255.4	335.9	418.1	480.0	528.3	561.7	588.1	607.5	631.5	70.00
34.682	84.9	139.9	169.1	191.2	220.0	273.0	359.1	447.0	513.1	564.7	600.5	628.7	649.4	675.1	80.00
39.018	90.1	148.4	179.3	202.8	233.3	289.6	380.9	474.1	544.3	599.0	637.0	666.8	688.8	716.1	90.00
40.00	91.2	150.2	181.6	205.4	236.3	293.2	385.7	480.0	551.1	606.5	644.9	675.2	697.4	725.0	92.27
43.353	94.9	156.4	189.0	213.8	246.0	305.3	401.5	499.7	573.7	631.4	671.4	702.9	726.1	754.8	100.00

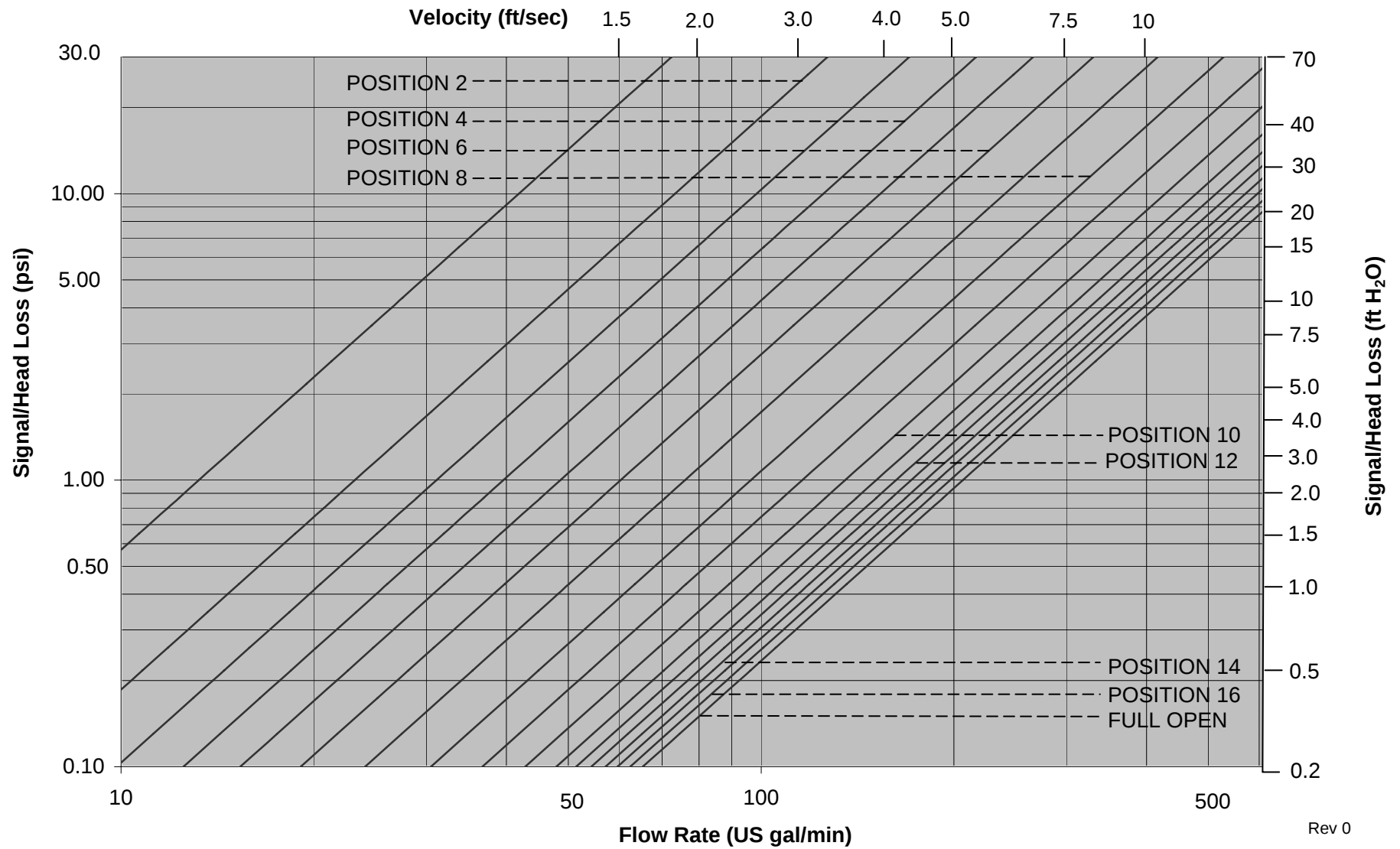
For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	35
2	46
3	69
4	92
5	115
6	138
7.5	173
10	230

737A 80mm (3") CBV FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	12	13	OPEN
Kv→	12.5	20.6	24.9	28.1	32.3	40.1	52.8	65.7	75.4	83.0	88.3	92.4	95.5	99.3
ΔP kPa	FLOW IN LITERS / SECOND													
2	0.49	0.81	0.98	1.10	1.27	1.58	2.07	2.58	2.96	3.26	3.47	3.63	3.75	3.90
3	0.60	0.99	1.20	1.35	1.56	1.93	2.54	3.16	3.63	3.99	4.25	4.45	4.59	4.77
4	0.69	1.14	1.38	1.56	1.80	2.23	2.93	3.65	4.19	4.61	4.90	5.13	5.30	5.51
5	0.78	1.28	1.54	1.75	2.01	2.49	3.28	4.08	4.68	5.16	5.48	5.74	5.93	6.16
6	0.85	1.40	1.69	1.91	2.20	2.73	3.59	4.47	5.13	5.65	6.01	6.29	6.49	6.75
8	0.98	1.62	1.95	2.21	2.54	3.15	4.15	5.16	5.93	6.52	6.93	7.26	7.50	7.80
10	1.10	1.81	2.18	2.47	2.84	3.53	4.64	5.77	6.62	7.29	7.75	8.12	8.38	8.72
15	1.34	2.21	2.67	3.02	3.48	4.32	5.68	7.07	8.11	8.93	9.50	9.94	10.27	10.67
20	1.55	2.55	3.09	3.49	4.02	4.99	6.56	8.16	9.37	10.31	10.96	11.48	11.86	12.33
30	1.90	3.13	3.78	4.28	4.92	6.11	8.03	9.99	11.47	12.63	13.43	14.06	14.52	15.10
40	2.19	3.61	4.37	4.94	5.68	7.05	9.27	11.54	13.25	14.58	15.51	16.23	16.77	17.43
50	2.45	4.04	4.88	5.52	6.35	7.88	10.37	12.90	14.81	16.30	17.34	18.15	18.75	19.49
60	2.68	4.42	5.35	6.05	6.96	8.63	11.36	14.13	16.23	17.86	18.99	19.88	20.54	21.35
80	3.10	5.11	6.17	6.98	8.03	9.97	13.11	16.32	18.74	20.62	21.93	22.96	23.71	24.65
100	3.47	5.71	6.90	7.81	8.98	11.15	14.66	18.25	20.95	23.06	24.52	25.67	26.51	27.56
150	4.25	6.99	8.45	9.56	11.00	13.65	17.96	22.35	25.66	28.24	30.03	31.44	32.47	33.76
200	4.90	8.08	9.76	11.04	12.70	15.76	20.73	25.81	29.63	32.61	34.67	36.30	37.49	38.98
300	6.00	9.89	11.96	13.52	15.56	19.31	25.39	31.61	36.29	39.93	42.46	44.46	45.92	47.74
400	6.93	11.42	13.81	15.62	17.96	22.29	29.32	36.50	41.90	46.11	49.03	51.33	53.03	55.12
500	7.75	12.77	15.44	17.46	20.08	24.93	32.78	40.80	46.84	51.55	54.82	57.39	59.28	61.63
600	8.49	13.99	16.91	19.12	22.00	27.31	35.91	44.70	51.32	56.47	60.05	62.87	64.94	67.51
800	9.80	16.15	19.53	22.08	25.40	31.53	41.47	51.61	59.25	65.21	69.34	72.60	74.99	77.96
1000	10.96	18.06	21.83	24.69	28.40	35.25	46.36	57.71	66.25	72.91	77.53	81.17	83.84	87.16

NOTE: This Data has been Converted from English Units into Metric Units

4" Fig. 737A Circuit Balancing Valve



Rev 0

CIRCUIT BALANCING VAVLES

737A 4" FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	OPEN	
Cv→	13.2	23.2	31.1	39.6	48.6	60.4	76.1	96.4	116.0	135.4	151.3	162.5	171.7	180.6	188.6	197.5	206.6	ΔP
ΔP PSI	FLOW IN GPM																	ft H ₂ O
0.04	2.6	4.6	6.2	7.9	9.7	12.1	15.2	19.3	23.2	27.1	30.3	32.5	34.3	36.1	37.7	39.5	41.3	0.09
0.06	3.2	5.7	7.6	9.7	11.9	14.8	18.6	23.6	28.4	33.2	37.1	39.8	42.1	44.2	46.2	48.4	50.6	0.14
0.065	3.4	5.9	7.9	10.1	12.4	15.4	19.4	24.6	29.6	34.5	38.6	41.4	43.8	46.1	48.1	50.4	52.7	0.15
0.08	3.7	6.6	8.8	11.2	13.7	17.1	21.5	27.3	32.8	38.3	42.8	46.0	48.6	51.1	53.4	55.9	58.4	0.18
0.087	3.9	6.8	9.2	11.7	14.3	17.8	22.4	28.4	34.1	39.9	44.6	47.9	50.6	53.2	55.5	58.2	60.8	0.20
0.10	4.2	7.3	9.8	12.5	15.4	19.1	24.1	30.5	36.7	42.8	47.9	51.4	54.3	57.1	59.6	62.5	65.3	0.23
0.130	4.8	8.4	11.2	14.3	17.5	21.8	27.4	34.8	41.8	48.8	54.6	58.6	61.9	65.1	68.0	71.2	74.5	0.30
0.173	5.5	9.7	13.0	16.5	20.2	25.1	31.7	40.2	48.3	56.4	63.0	67.7	71.5	75.2	78.5	82.2	86.1	0.40
0.20	5.9	10.4	13.9	17.7	21.7	27.0	34.0	43.1	51.9	60.5	67.7	72.7	76.8	80.8	84.4	88.3	92.4	0.46
0.217	6.2	10.8	14.5	18.4	22.6	28.1	35.4	44.9	54.0	63.0	70.5	75.7	79.9	84.1	87.8	92.0	96.2	0.50
0.260	6.7	11.8	15.9	20.2	24.8	30.8	38.8	49.2	59.1	69.0	77.2	82.9	87.6	92.1	96.2	100.7	105.4	0.60
0.347	7.8	13.7	18.3	23.3	28.6	35.5	44.8	56.8	68.3	79.7	89.1	95.7	101.1	106.4	111.1	116.3	121.7	0.80
0.40	8.4	14.7	19.7	25.0	30.7	38.2	48.1	61.0	73.3	85.6	95.7	102.8	108.6	114.2	119.3	124.9	130.7	0.92
0.434	8.7	15.3	20.5	26.1	32.0	39.7	50.1	63.5	76.4	89.1	99.6	107.0	113.0	118.9	124.2	130.0	136.1	1.00
0.60	10.2	18.0	24.1	30.7	37.6	46.8	58.9	74.7	89.8	104.9	117.2	125.9	133.0	139.9	146.1	153.0	160.1	1.38
0.650	10.7	18.7	25.1	31.9	39.2	48.7	61.3	77.8	93.5	109.2	122.0	131.0	138.5	145.7	152.1	159.3	166.6	1.50
0.80	11.8	20.7	27.8	35.4	43.4	54.0	68.0	86.3	103.7	121.1	135.4	145.4	153.6	161.6	168.7	176.6	184.8	1.85
0.867	12.3	21.6	29.0	36.8	45.2	56.2	70.8	89.8	108.0	126.0	140.9	151.3	159.9	168.2	175.6	183.9	192.4	2.00
1.00	13.2	23.2	31.1	39.6	48.6	60.4	76.1	96.4	116.0	135.4	151.3	162.5	171.7	180.6	188.6	197.5	206.6	2.31
1.301	15.1	26.5	35.5	45.1	55.4	68.8	86.8	110.0	132.3	154.4	172.6	185.3	195.8	206.0	215.1	225.2	235.7	3.00
1.734	17.4	30.5	41.0	52.1	64.0	79.5	100.2	127.0	152.7	178.3	199.3	214.0	226.1	237.9	248.4	260.1	272.1	4.00
2.00	18.7	32.8	44.0	56.0	68.7	85.4	107.6	136.4	164.0	191.4	214.0	229.8	242.8	255.5	266.8	279.3	292.2	4.61
2.168	19.5	34.1	45.8	58.3	71.5	88.9	112.0	142.0	170.7	199.3	222.8	239.3	252.8	265.9	277.7	290.8	304.2	5.00
2.601	21.3	37.4	50.2	63.8	78.3	97.3	122.7	155.5	187.0	218.3	244.1	262.1	276.9	291.3	304.2	318.5	333.3	6.00
3.468	24.6	43.2	57.9	73.7	90.5	112.4	141.7	179.6	216.0	252.1	281.8	302.6	319.7	336.4	351.3	367.8	384.8	8.00
4.00	26.5	46.4	62.2	79.1	97.1	120.7	152.2	192.9	232.0	270.7	302.7	325.0	343.4	361.3	377.2	395.0	413.3	9.23
4.335	27.5	48.3	64.8	82.4	101.1	125.7	158.4	200.8	241.5	281.8	315.1	338.4	357.5	376.1	392.7	411.2	430.3	10.00
6.00	32.4	56.8	76.2	96.9	119.0	147.8	186.3	236.2	284.1	331.6	370.7	398.1	420.6	442.5	462.0	483.8	506.2	13.84
6.503	33.7	59.1	79.3	100.9	123.9	153.9	194.0	245.9	295.7	345.2	385.9	414.4	437.8	460.6	481.0	503.6	527.0	15.00
8.00	37.4	65.6	88.0	111.9	137.4	170.7	215.2	272.8	328.0	382.9	428.0	459.6	485.6	510.9	533.5	558.6	584.5	18.45
8.671	38.9	68.3	91.6	116.5	143.0	177.7	224.0	284.0	341.5	398.6	445.6	478.5	505.6	531.9	555.4	581.6	608.5	20.00
10.00	41.8	73.3	98.4	125.1	153.6	190.9	240.6	305.0	366.7	428.0	478.6	513.9	542.9	571.2	596.5	624.5	653.5	23.07
13.006	47.7	83.6	112.2	142.7	175.2	217.7	274.4	347.8	418.2	488.2	545.8	586.1	619.2	651.4	680.2	712.3	745.2	30.00
17.341	55.1	96.6	129.6	164.8	202.3	251.3	316.8	401.6	483.0	563.7	630.2	676.7	715.0	752.2	785.5	822.4	860.5	40.00
20.00	59.2	103.7	139.2	177.0	217.2	269.9	340.2	431.3	518.7	605.4	676.8	726.8	767.8	807.8	843.5	883.2	924.1	46.13
21.676	61.6	108.0	144.9	184.2	226.1	281.0	354.2	449.0	540.0	630.2	704.6	756.6	799.4	841.0	878.2	919.5	962.1	50.00
26.012	67.5	118.3	158.7	201.8	247.7	307.8	388.0	491.9	591.5	690.4	771.8	828.8	875.7	921.3	962.0	1,007.3	1,053.9	60.00
30.00	72.4	127.0	170.4	216.8	266.0	330.6	416.7	528.2	635.2	741.4	828.9	890.1	940.4	989.4	1,033.1	1,081.8	1,131.8	69.20
30.347	72.9	127.8	171.4	218.0	267.6	332.5	419.1	531.3	638.9	745.7	833.7	895.2	945.8	995.1	1,039.1	1,088.0	1,138.4	70.00
34.682	77.9	136.6	183.2	233.1	286.1	355.5	448.0	567.9	683.0	797.2	891.2	957.0	1,011.1	1,063.8	1,110.8	1,163.1	1,217.0	80.00
39.018	82.6	144.9	194.4	247.2	303.4	377.0	475.2	602.4	724.4	845.5	945.3	1,015.1	1,072.5	1,128.3	1,178.2	1,233.7	1,290.8	90.00
40.00	83.7	146.7	196.8	250.3	307.2	381.7	481.1	609.9	733.5	856.1	957.1	1,027.8	1,085.9	1,142.4	1,193.0	1,249.1	1,306.9	92.27
43.353	87.1	152.7	204.9	260.6	319.8	397.4	500.9	635.0	763.6	891.3	996.4	1,070.0	1,130.5	1,189.4	1,241.9	1,300.4	1,360.6	100.00

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	60
2	79
3	119
4	159
5	198
6	238
7.5	298
10	397

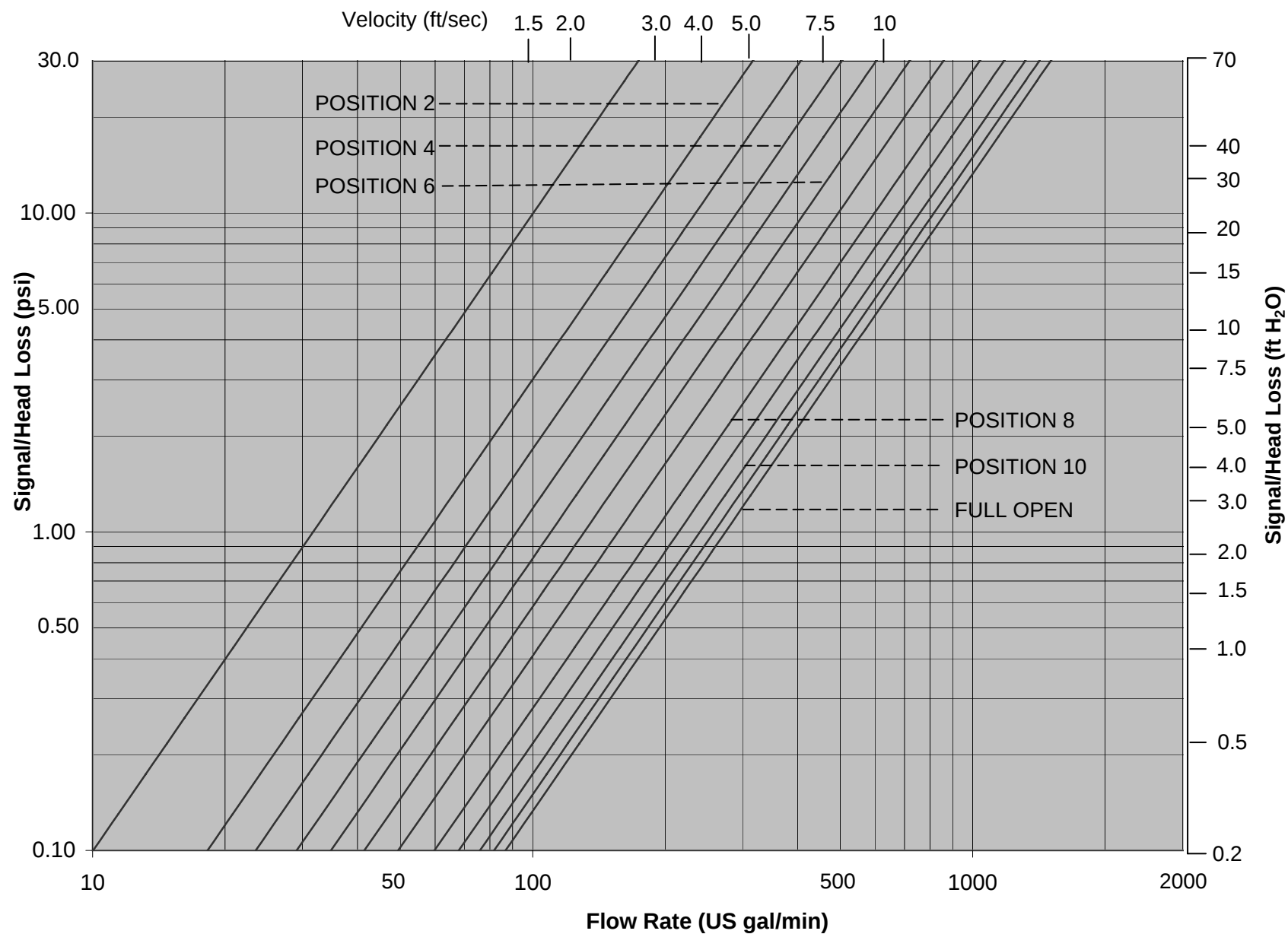
CIRCUIT BALANCING VALVES

737A 100mm (4") FLOW DATA

Turns→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	OPEN
Kv→	11.5	20.1	26.9	34.3	42.1	52.3	65.9	83.5	100.4	117.2	131.0	140.7	148.7	156.4	163.3	171.0	178.9
ΔP kPa	FLOW IN LITERS / SECOND																
1	0.32	0.56	0.75	0.95	1.17	1.45	1.83	2.32	2.79	3.25	3.64	3.91	4.13	4.34	4.54	4.75	4.97
2	0.45	0.79	1.06	1.35	1.65	2.05	2.59	3.28	3.94	4.60	5.15	5.53	5.84	6.14	6.41	6.72	7.03
3	0.55	0.97	1.30	1.65	2.02	2.51	3.17	4.02	4.83	5.64	6.30	6.77	7.15	7.52	7.85	8.22	8.61
4	0.64	1.12	1.50	1.90	2.34	2.90	3.66	4.64	5.58	6.51	7.28	7.81	8.26	8.69	9.07	9.50	9.94
5	0.71	1.25	1.67	2.13	2.61	3.24	4.09	5.18	6.24	7.28	8.14	8.74	9.23	9.71	10.14	10.62	11.11
6	0.78	1.37	1.83	2.33	2.86	3.55	4.48	5.68	6.83	7.97	8.91	9.57	10.11	10.64	11.11	11.63	12.17
8	0.90	1.58	2.12	2.69	3.30	4.10	5.17	6.56	7.89	9.21	10.29	11.05	11.68	12.28	12.83	13.43	14.05
10	1.01	1.76	2.37	3.01	3.69	4.59	5.78	7.33	8.82	10.29	11.51	12.36	13.05	13.73	14.34	15.02	15.71
15	1.23	2.16	2.90	3.69	4.52	5.62	7.08	8.98	10.80	12.60	14.09	15.13	15.99	16.82	17.56	18.39	19.24
20	1.42	2.49	3.35	4.26	5.22	6.49	8.18	10.37	12.47	14.55	16.27	17.47	18.46	19.42	20.28	21.24	22.22
30	1.74	3.05	4.10	5.21	6.40	7.95	10.02	12.70	15.27	17.83	19.93	21.40	22.61	23.79	24.84	26.01	27.21
40	2.01	3.53	4.73	6.02	7.39	9.18	11.57	14.66	17.64	20.58	23.01	24.71	26.11	27.47	28.68	30.03	31.42
50	2.25	3.94	5.29	6.73	8.26	10.26	12.93	16.40	19.72	23.01	25.73	27.63	29.19	30.71	32.07	33.58	35.13
60	2.46	4.32	5.79	7.37	9.05	11.24	14.17	17.96	21.60	25.21	28.18	30.27	31.98	33.64	35.13	36.78	38.49
80	2.84	4.99	6.69	8.51	10.45	12.98	16.36	20.74	24.94	29.11	32.54	34.95	36.92	38.85	40.56	42.47	44.44
100	3.18	5.58	7.48	9.51	11.68	14.51	18.29	23.19	27.88	32.55	36.38	39.07	41.28	43.43	45.35	47.49	49.68
150	3.89	6.83	9.16	11.65	14.30	17.77	22.40	28.40	34.15	39.86	44.56	47.85	50.56	53.19	55.54	58.16	60.85
200	4.50	7.89	10.58	13.46	16.52	20.52	25.87	32.79	39.43	46.03	51.46	55.26	58.38	61.42	64.14	67.15	70.26
300	5.51	9.66	12.96	16.48	20.23	25.14	31.68	40.16	48.30	56.37	63.02	67.68	71.50	75.22	78.55	82.25	86.06
400	6.36	11.15	14.96	19.03	23.36	29.02	36.58	46.37	55.77	65.09	72.77	78.15	82.56	86.86	90.70	94.97	99.37
500	7.11	12.47	16.73	21.28	26.11	32.45	40.90	51.85	62.35	72.77	81.36	87.37	92.31	97.11	101.41	106.18	111.10
600	7.79	13.66	18.32	23.31	28.61	35.55	44.80	56.80	68.30	79.72	89.12	95.71	101.12	106.38	111.09	116.31	121.70
800	8.99	15.77	21.16	26.91	33.03	41.05	51.73	65.58	78.87	92.05	102.91	110.51	116.76	122.84	128.27	134.31	140.53
1000	10.06	17.63	23.66	30.09	36.93	45.89	57.84	73.32	88.18	102.92	115.06	123.56	130.54	137.34	143.41	150.16	157.11

NOTE: This Data has been Converted from English Units into Metric Units

5" Fig. 737A Circuit Balancing Valve



CIRCUIT BALANCING VAVLES

737A 5" FLOW DATA

TURNS→	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	OPEN	
Cv→	31.7	57.7	74.2	92.0	110.1	131.1	156.5	189.2	214.9	239.9	258.3	274.4	ΔP
ΔP PSI	FLOW IN GPM												ft H2O
0.04	6.3	11.5	14.8	18.4	22.0	26.2	31.3	37.8	43.0	48.0	51.7	54.9	0.1
0.06	7.8	14.1	18.2	22.5	27.0	32.1	38.3	46.3	52.6	58.8	63.3	67.2	0.1
0.065	8.1	14.7	18.9	23.5	28.1	33.4	39.9	48.2	54.8	61.2	65.9	70.0	0.2
0.08	9.0	16.3	21.0	26.0	31.1	37.1	44.3	53.5	60.8	67.9	73.1	77.6	0.2
0.087	9.3	17.0	21.8	27.1	32.4	38.6	46.1	55.7	63.3	70.6	76.1	80.8	0.2
0.10	10.0	18.2	23.5	29.1	34.8	41.5	49.5	59.8	68.0	75.9	81.7	86.8	0.2
0.130	11.4	20.8	26.8	33.2	39.7	47.3	56.4	68.2	77.5	86.5	93.2	99.0	0.3
0.173	13.2	24.0	30.9	38.3	45.8	54.6	65.2	78.8	89.5	99.9	107.6	114.3	0.4
0.20	14.2	25.8	33.2	41.1	49.2	58.6	70.0	84.6	96.1	107.3	115.5	122.7	0.5
0.217	14.8	26.9	34.5	42.8	51.3	61.0	72.9	88.1	100.1	111.7	120.3	127.8	0.5
0.260	16.2	29.4	37.8	46.9	56.2	66.9	79.8	96.5	109.6	122.4	131.7	139.9	0.6
0.347	18.7	34.0	43.7	54.2	64.8	77.2	92.2	111.4	126.6	141.3	152.1	161.6	0.8
0.40	20.0	36.5	46.9	58.2	69.6	82.9	99.0	119.7	135.9	151.7	163.4	173.5	0.9
0.434	20.9	38.0	48.9	60.6	72.5	86.3	103.0	124.6	141.5	158.0	170.1	180.7	1.0
0.60	24.6	44.7	57.5	71.3	85.3	101.5	121.2	146.6	166.5	185.8	200.1	212.5	1.4
0.650	25.6	46.5	59.8	74.2	88.8	105.7	126.2	152.6	173.3	193.5	208.3	221.3	1.5
0.80	28.4	51.6	66.4	82.3	98.5	117.3	140.0	169.2	192.2	214.6	231.0	245.4	1.8
0.867	29.5	53.7	69.1	85.7	102.5	122.1	145.7	176.2	200.1	223.4	240.5	255.5	2.0
1.00	31.7	57.7	74.2	92.0	110.1	131.1	156.5	189.2	214.9	239.9	258.3	274.4	2.3
1.301	36.2	65.8	84.6	104.9	125.6	149.5	178.5	215.8	245.1	273.6	294.6	312.9	3.0
1.734	41.7	76.0	97.7	121.2	145.0	172.6	206.1	249.1	283.0	315.9	340.1	361.3	4.0
2.00	44.8	81.6	104.9	130.1	155.7	185.4	221.3	267.6	303.9	339.3	365.3	388.1	4.6
2.168	46.7	85.0	109.2	135.5	162.1	193.0	230.4	278.6	316.4	353.2	380.3	404.0	5.0
2.601	51.1	93.1	119.7	148.4	177.6	211.4	252.4	305.1	346.6	386.9	416.6	442.6	6.0
3.468	59.0	107.5	138.2	171.3	205.0	244.2	291.5	352.4	400.2	446.8	481.0	511.0	8.0
4.00	63.4	115.4	148.4	184.0	220.2	262.2	313.0	378.4	429.8	479.8	516.6	548.8	9.2
4.335	66.0	120.1	154.5	191.6	229.2	273.0	325.9	393.9	447.5	499.5	537.8	571.3	10.0
6.00	77.6	141.3	181.8	225.4	269.7	321.1	383.3	463.4	526.4	587.6	632.7	672.1	13.8
6.503	80.8	147.1	189.2	234.6	280.8	334.3	399.1	482.5	548.0	611.8	658.7	699.7	15.0
8.00	89.7	163.2	209.9	260.2	311.4	370.8	442.6	535.1	607.8	678.5	730.6	776.1	18.5
8.671	93.3	169.9	218.5	270.9	324.2	386.0	460.8	557.1	632.8	706.4	760.6	808.0	20.0
10.00	100.2	182.5	234.6	290.9	348.2	414.6	494.9	598.3	679.6	758.6	816.8	867.7	23.1
13.006	114.3	208.1	267.6	331.8	397.1	472.8	564.4	682.3	775.0	865.2	931.5	989.6	30.0
17.341	132.0	240.3	309.0	383.1	458.5	545.9	651.7	787.9	894.9	999.0	1075.6	1142.7	40.0
20.00	141.8	258.0	331.8	411.4	492.4	586.3	699.9	846.1	961.1	1072.9	1155.2	1227.2	46.1
21.676	147.6	268.6	345.5	428.3	512.6	610.4	728.6	880.9	1000.5	1116.9	1202.6	1277.6	50.0
26.012	161.7	294.3	378.4	469.2	561.5	668.6	798.2	965.0	1096.0	1223.5	1317.4	1399.5	60.0
30.00	173.6	316.0	406.4	503.9	603.0	718.1	857.2	1036.3	1177.1	1314.0	1414.8	1503.0	69.2
30.347	174.6	317.9	408.8	506.8	606.5	722.2	862.1	1042.3	1183.8	1321.6	1422.9	1511.6	70.0
34.682	186.7	339.8	437.0	541.8	648.4	772.1	921.7	1114.2	1265.6	1412.8	1521.2	1616.0	80.0
39.018	198.0	360.4	463.5	574.7	687.7	818.9	977.6	1181.8	1342.4	1498.5	1613.4	1714.0	90.0
40.00	200.5	364.9	469.3	581.9	696.3	829.1	989.8	1196.6	1359.1	1517.3	1633.6	1735.5	92.3
43.353	208.7	379.9	488.6	605.8	724.9	863.2	1030.4	1245.7	1415.0	1579.6	1700.7	1806.7	100.0

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	94
2	125
3	187
4	249
5	312
7.5	468
10	624

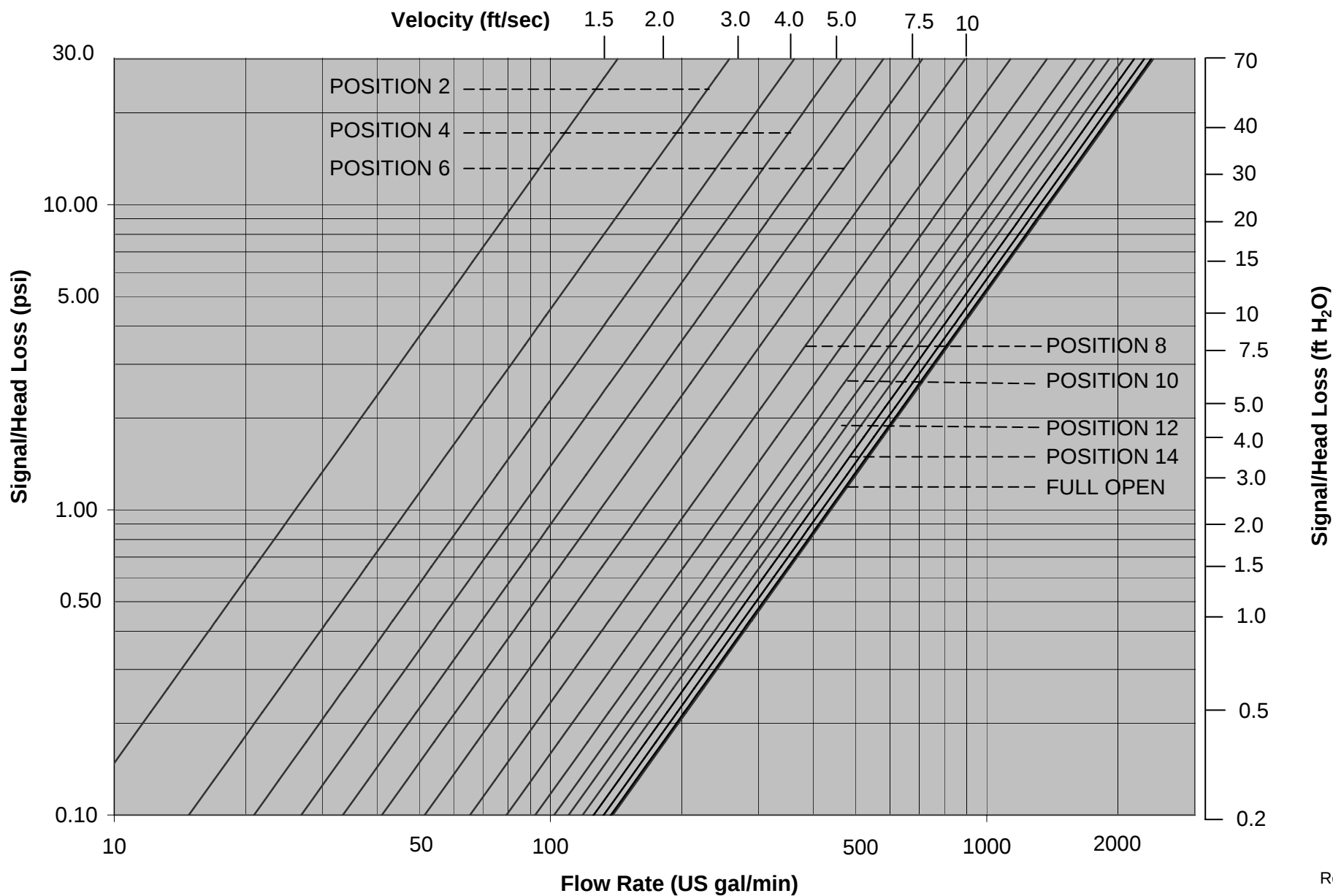
CIRCUIT BALANCING VALVES

737A 125mm (5") FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	OPEN
Kv→	27.45	49.96	64.24	79.65	95.32	113.51	135.50	163.81	186.06	207.71	223.64	237.58
ΔP kPa	FLOW IN LITERS / SECOND											
1	0.76	1.39	1.78	2.21	2.65	3.15	3.76	4.55	5.17	5.77	6.21	6.60
2	1.08	1.96	2.52	3.13	3.74	4.46	5.32	6.43	7.31	8.16	8.78	9.33
3	1.32	2.40	3.09	3.83	4.59	5.46	6.52	7.88	8.95	9.99	10.76	11.43
4	1.52	2.77	3.57	4.42	5.29	6.30	7.53	9.10	10.33	11.54	12.42	13.19
5	1.70	3.10	3.99	4.95	5.92	7.05	8.41	10.17	11.55	12.90	13.89	14.75
6	1.87	3.40	4.37	5.42	6.48	7.72	9.22	11.14	12.66	14.13	15.21	16.16
8	2.16	3.92	5.05	6.26	7.49	8.92	10.64	12.87	14.61	16.31	17.57	18.66
10	2.41	4.39	5.64	6.99	8.37	9.97	11.90	14.39	16.34	18.24	19.64	20.86
15	2.95	5.37	6.91	8.57	10.25	12.21	14.57	17.62	20.01	22.34	24.05	25.55
20	3.41	6.20	7.98	9.89	11.84	14.10	16.83	20.34	23.11	25.80	27.77	29.50
30	4.17	7.60	9.77	12.12	14.50	17.26	20.61	24.92	28.30	31.59	34.02	36.14
40	4.82	8.77	11.28	13.99	16.74	19.94	23.80	28.77	32.68	36.48	39.28	41.73
50	5.39	9.81	12.61	15.64	18.72	22.29	26.61	32.17	36.54	40.79	43.91	46.65
60	5.90	10.75	13.82	17.13	20.50	24.42	29.15	35.24	40.02	44.68	48.11	51.10
80	6.82	12.41	15.96	19.78	23.68	28.19	33.66	40.69	46.21	51.59	55.55	59.01
100	7.62	13.87	17.84	22.12	26.47	31.52	37.63	45.49	51.67	57.68	62.10	65.97
150	9.33	16.99	21.85	27.09	32.42	38.60	46.08	55.71	63.28	70.64	76.06	80.80
200	10.78	19.62	25.23	31.28	37.44	44.58	53.21	64.33	73.07	81.57	87.83	93.30
300	13.20	24.03	30.90	38.31	45.85	54.60	65.17	78.79	89.49	99.90	107.57	114.27
400	15.24	27.75	35.68	44.24	52.94	63.04	75.26	90.98	103.34	115.36	124.21	131.95
500	17.04	31.02	39.89	49.46	59.19	70.48	84.14	101.72	115.53	128.98	138.87	147.52
600	18.67	33.98	43.70	54.18	64.84	77.21	92.17	111.43	126.56	141.29	152.12	161.60
800	21.56	39.24	50.46	62.56	74.87	89.15	106.43	128.66	146.14	163.14	175.66	186.60
1000	24.10	43.87	56.42	69.95	83.71	99.68	118.99	143.85	163.39	182.40	196.39	208.63

NOTE: This Data has been Converted from English Units into Metric Units

6" Fig. 737A Circuit Balancing Valve



CIRCUIT BALANCING VALVES

737A 6" FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	OPEN	
Cv→	26.0	46.9	66.1	84.8	105.7	129.9	162.8	206.8	250.7	291.9	322.5	348.1	374.8	397.2	418.8	435.0	439.5	ΔP
ΔP PSI	FLOW IN GPM																	ft H2O
0.04	5.2	9.4	13.2	17.0	21.1	26.0	32.6	41.4	50.1	58.4	64.5	69.6	75.0	79.4	83.8	87.0	87.9	0.09
0.06	6.4	11.5	16.2	20.8	25.9	31.8	39.9	50.7	61.4	71.5	79.0	85.3	91.8	97.3	102.6	106.6	107.7	0.14
0.065	6.6	12.0	16.9	21.6	27.0	33.1	41.5	52.7	63.9	74.4	82.2	88.8	95.6	101.3	106.8	110.9	112.1	0.15
0.08	7.4	13.3	18.7	24.0	29.9	36.7	46.0	58.5	70.9	82.6	91.2	98.5	106.0	112.3	118.5	123.0	124.3	0.18
0.087	7.7	13.8	19.5	25.0	31.1	38.3	47.9	60.9	73.8	86.0	95.0	102.5	110.4	117.0	123.3	128.1	129.4	0.20
0.10	8.2	14.8	20.9	26.8	33.4	41.1	51.5	65.4	79.3	92.3	102.0	110.1	118.5	125.6	132.4	137.6	139.0	0.23
0.130	9.4	16.9	23.8	30.6	38.1	46.8	58.7	74.6	90.4	105.3	116.3	125.5	135.2	143.2	151.0	156.9	158.5	0.30
0.173	10.8	19.5	27.5	35.3	44.0	54.1	67.8	86.1	104.4	121.6	134.3	145.0	156.1	165.4	174.4	181.1	183.0	0.40
0.20	11.6	21.0	29.6	37.9	47.3	58.1	72.8	92.5	112.1	130.5	144.2	155.7	167.6	177.6	187.3	194.5	196.6	0.46
0.217	12.1	21.8	30.8	39.5	49.2	60.5	75.8	96.3	116.7	135.9	150.1	162.1	174.5	184.9	195.0	202.5	204.6	0.50
0.260	13.3	23.9	33.7	43.2	53.9	66.3	83.0	105.5	127.9	148.9	164.5	177.5	191.2	202.6	213.6	221.9	224.2	0.60
0.347	15.3	27.6	38.9	49.9	62.2	76.5	95.9	121.8	147.6	171.9	189.9	205.0	220.7	233.9	246.6	256.2	258.8	0.80
0.40	16.4	29.7	41.8	53.6	66.9	82.2	103.0	130.8	158.6	184.6	204.0	220.2	237.0	251.2	264.9	275.1	278.0	0.92
0.434	17.1	30.9	43.5	55.8	69.6	85.5	107.2	136.2	165.1	192.2	212.3	229.2	246.8	261.5	275.8	286.4	289.4	1.00
0.60	20.1	36.3	51.2	65.7	81.9	100.6	126.1	160.2	194.2	226.1	249.8	269.6	290.3	307.7	324.4	336.9	340.4	1.38
0.650	21.0	37.8	53.3	68.4	85.2	104.8	131.3	166.8	202.2	235.4	260.1	280.7	302.2	320.3	337.7	350.8	354.4	1.50
0.80	23.3	41.9	59.1	75.8	94.5	116.2	145.6	185.0	224.2	261.1	288.5	311.4	335.2	355.3	374.6	389.1	393.1	1.85
0.867	24.2	43.7	61.5	79.0	98.4	121.0	151.6	192.6	233.4	271.8	300.3	324.1	349.0	369.9	390.0	405.1	409.2	2.00
1.00	26.0	46.9	66.1	84.8	105.7	129.9	162.8	206.8	250.7	291.9	322.5	348.1	374.8	397.2	418.8	435.0	439.5	2.31
1.301	29.7	53.5	75.4	96.7	120.5	148.1	185.7	235.8	285.9	332.9	367.8	397.0	427.4	453.0	477.6	496.1	501.2	3.00
1.734	34.2	61.8	87.0	111.7	139.2	171.1	214.4	272.3	330.1	384.4	424.7	458.4	493.6	523.1	551.5	572.8	578.8	4.00
2.00	36.8	66.3	93.5	119.9	149.5	183.7	230.2	292.5	354.5	412.8	456.1	492.3	530.0	561.7	592.3	615.2	621.5	4.61
2.168	38.3	69.1	97.3	124.9	155.6	191.3	239.7	304.5	369.1	429.8	474.8	512.5	551.8	584.8	616.6	640.4	647.1	5.00
2.601	41.9	75.6	106.6	136.8	170.5	209.5	262.6	333.5	404.3	470.8	520.1	561.4	604.5	640.6	675.4	701.6	708.8	6.00
3.468	48.4	87.3	123.1	157.9	196.8	241.9	303.2	385.1	466.9	543.6	600.6	648.3	698.0	739.7	779.9	810.1	818.5	8.00
4.00	52.0	93.8	132.2	169.6	211.4	259.8	325.6	413.6	501.4	583.8	645.0	696.2	749.6	794.4	837.6	870.0	879.0	9.23
4.335	54.1	97.7	137.6	176.6	220.1	270.5	339.0	430.6	522.0	607.8	671.5	724.8	780.4	827.0	872.0	905.7	915.1	10.00
6.00	63.7	114.9	161.9	207.7	258.9	318.2	398.8	506.6	614.1	715.0	790.0	852.7	918.1	972.9	1025.8	1065.5	1076.6	13.84
6.503	66.3	119.6	168.6	216.2	269.5	331.3	415.2	527.4	639.3	744.4	822.4	887.7	955.8	1012.9	1068.0	1109.3	1120.8	15.00
8.00	73.5	132.7	187.0	239.9	299.0	367.4	460.5	584.9	709.1	825.6	912.2	984.6	1060.1	1123.5	1184.5	1230.4	1243.1	18.45
8.671	76.6	138.1	194.6	249.7	311.2	382.5	479.4	608.9	738.2	859.5	949.6	1025.0	1103.6	1169.6	1233.2	1280.9	1294.1	20.00
10.00	82.2	148.3	209.0	268.2	334.3	410.8	514.8	654.0	792.8	923.1	1019.8	1100.8	1185.2	1256.1	1324.4	1375.6	1389.8	23.07
13.006	93.8	169.1	238.4	305.8	381.2	468.5	587.1	745.8	904.1	1052.7	1163.1	1255.4	1351.7	1432.4	1510.3	1568.8	1585.0	30.00
17.341	108.3	195.3	275.3	353.1	440.2	540.9	677.9	861.2	1044.0	1215.6	1343.0	1449.6	1560.8	1654.0	1744.0	1811.5	1830.2	40.00
20.00	116.3	209.7	295.6	379.2	472.7	580.9	728.1	924.8	1121.2	1305.4	1442.3	1556.8	1676.2	1776.3	1872.9	1945.4	1965.5	46.13
21.676	121.1	218.4	307.7	394.8	492.1	604.8	758.0	962.8	1167.2	1359.0	1501.5	1620.7	1745.0	1849.3	1949.8	2025.3	2046.2	50.00
26.012	132.6	239.2	337.1	432.5	539.1	662.5	830.3	1054.7	1278.6	1488.7	1644.8	1775.4	1911.5	2025.8	2136.0	2218.6	2241.5	60.00
30.00	142.4	256.9	362.0	464.5	578.9	711.5	891.7	1132.7	1373.1	1598.8	1766.4	1906.6	2052.9	2175.6	2293.9	2382.6	2407.2	69.20
30.347	143.2	258.4	364.1	467.1	582.3	715.6	896.8	1139.2	1381.1	1608.0	1776.6	1917.6	2064.7	2188.1	2307.1	2396.3	2421.1	70.00
34.682	153.1	276.2	389.3	499.4	622.5	765.0	958.8	1217.9	1476.4	1719.0	1899.3	2050.0	2207.3	2339.2	2466.4	2561.8	2588.3	80.00
39.018	162.4	293.0	412.9	529.7	660.2	811.4	1016.9	1291.8	1566.0	1823.3	2014.5	2174.4	2341.2	2481.1	2616.0	2717.2	2745.3	90.00
40.00	164.4	296.6	418.1	536.3	668.5	821.6	1029.6	1307.9	1585.6	1846.1	2039.7	2201.6	2370.4	2512.1	2648.7	2751.2	2779.6	92.27
43.353	171.2	308.8	435.2	558.3	696.0	855.3	1071.9	1361.6	1650.7	1922.0	2123.4	2292.0	2467.8	2615.3	2757.5	2864.2	2893.8	100.00

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	135
2	180
3	270
4	360
5	450
6	540
7.5	675
10	900

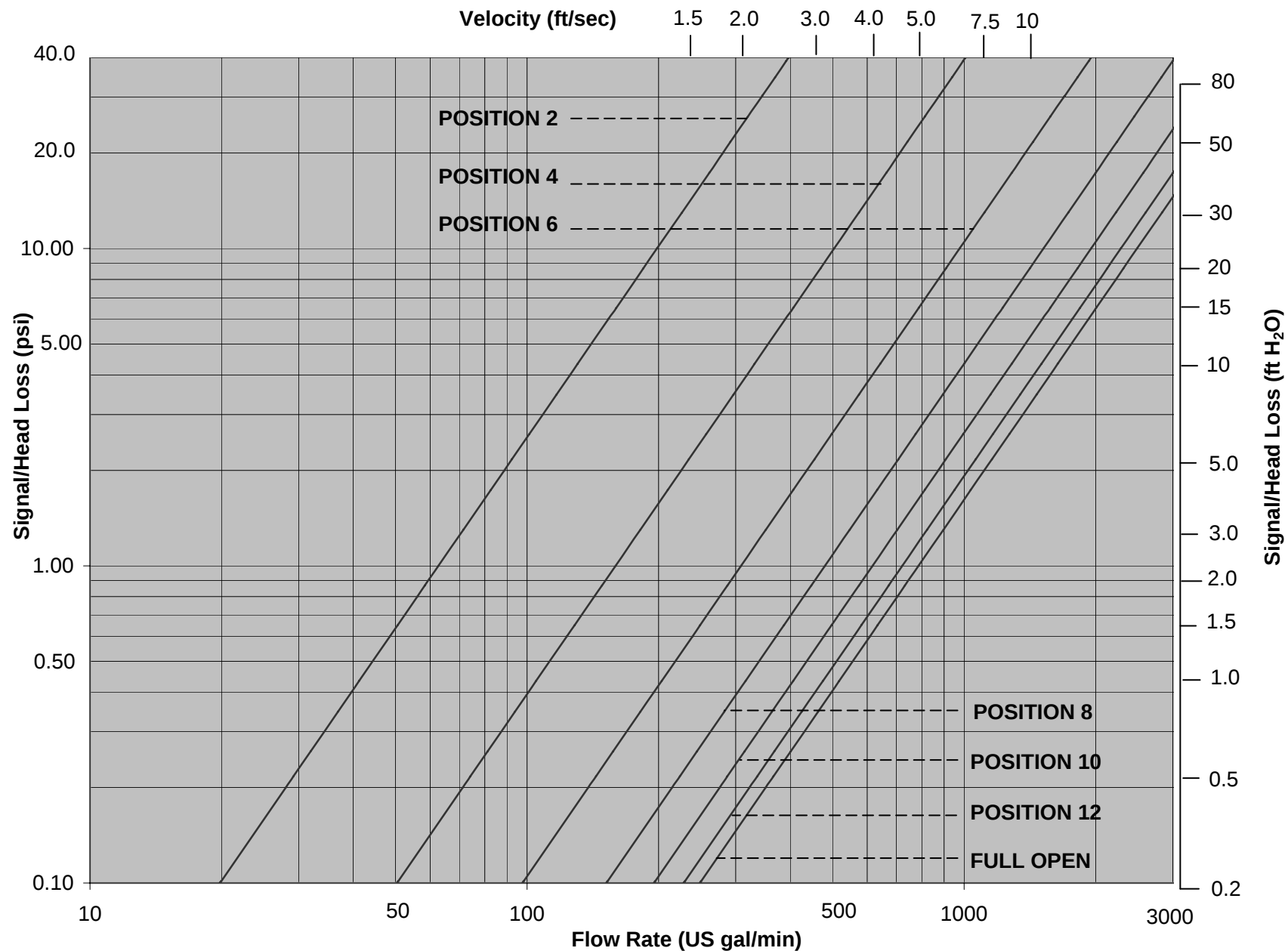
CIRCUIT BALANCING VALVES

737A 150mm (6") FLOW DATA

Turns→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	OPEN
Kv→	22.5	40.6	57.2	73.4	91.5	112.5	141.0	179.0	217.1	252.7	279.2	301.4	324.5	343.9	362.6	376.6	380.5
ΔP kPa	Flow in Liters / Second																
1	0.63	1.13	1.59	2.04	2.54	3.12	3.91	4.97	6.03	7.02	7.75	8.37	9.01	9.55	10.07	10.46	10.57
2	0.88	1.59	2.25	2.88	3.59	4.42	5.54	7.03	8.52	9.93	10.97	11.84	12.74	13.51	14.24	14.79	14.94
3	1.08	1.95	2.75	3.53	4.40	5.41	6.78	8.61	10.44	12.16	13.43	14.50	15.61	16.54	17.44	18.12	18.30
4	1.25	2.26	3.18	4.08	5.08	6.25	7.83	9.94	12.06	14.04	15.51	16.74	18.02	19.10	20.14	20.92	21.13
5	1.40	2.52	3.55	4.56	5.68	6.98	8.75	11.12	13.48	15.69	17.34	18.71	20.15	21.35	22.52	23.39	23.63
6	1.53	2.76	3.89	4.99	6.23	7.65	9.59	12.18	14.76	17.19	18.99	20.50	22.07	23.39	24.66	25.62	25.88
8	1.77	3.19	4.50	5.77	7.19	8.83	11.07	14.06	17.05	19.85	21.93	23.67	25.49	27.01	28.48	29.58	29.89
10	1.98	3.57	5.03	6.45	8.04	9.88	12.38	15.72	19.06	22.19	24.52	26.47	28.50	30.20	31.84	33.07	33.42
15	2.42	4.37	6.16	7.90	9.84	12.10	15.16	19.26	23.34	27.18	30.03	32.41	34.90	36.99	39.00	40.51	40.93
20	2.80	5.04	7.11	9.12	11.37	13.97	17.50	22.24	26.96	31.39	34.68	37.43	40.30	42.71	45.03	46.77	47.26
30	3.42	6.18	8.70	11.17	13.92	17.11	21.44	27.23	33.01	38.44	42.47	45.84	49.36	52.31	55.15	57.29	57.88
40	3.95	7.13	10.05	12.89	16.07	19.75	24.76	31.45	38.12	44.39	49.04	52.93	56.99	60.40	63.68	66.15	66.83
50	4.42	7.97	11.24	14.42	17.97	22.08	27.68	35.16	42.62	49.63	54.83	59.18	63.72	67.53	71.20	73.95	74.72
60	4.84	8.73	12.31	15.79	19.69	24.19	30.32	38.51	46.69	54.36	60.06	64.83	69.80	73.97	78.00	81.01	81.85
80	5.59	10.09	14.21	18.24	22.73	27.93	35.01	44.47	53.91	62.77	69.35	74.86	80.60	85.42	90.06	93.55	94.51
100	6.25	11.28	15.89	20.39	25.41	31.23	39.14	49.72	60.28	70.18	77.54	83.69	90.11	95.50	100.69	104.59	105.67
150	7.66	13.81	19.46	24.97	31.13	38.25	47.94	60.90	73.82	85.96	94.97	102.50	110.37	116.96	123.32	128.09	129.42
200	8.84	15.95	22.48	28.83	35.94	44.17	55.36	70.32	85.24	99.25	109.66	118.36	127.44	135.06	142.40	147.91	149.44
300	10.83	19.53	27.53	35.31	44.02	54.10	67.80	86.12	104.40	121.56	134.30	144.96	156.08	165.41	174.41	181.15	183.03
400	12.50	22.55	31.79	40.78	50.83	62.46	78.28	99.44	120.55	140.36	155.08	167.39	180.23	191.00	201.39	209.18	211.34
500	13.98	25.21	35.54	45.59	56.83	69.84	87.52	111.18	134.78	156.93	173.38	187.15	201.50	213.54	225.16	233.87	236.28
600	15.31	27.62	38.93	49.94	62.25	76.50	95.88	121.79	147.65	171.91	189.93	205.01	220.73	233.93	246.65	256.19	258.84
800	17.68	31.89	44.95	57.67	71.88	88.34	110.71	140.63	170.49	198.50	219.31	236.72	254.88	270.11	284.80	295.82	298.88
1000	19.77	35.66	50.26	64.47	80.37	98.76	123.78	157.23	190.61	221.94	245.20	264.66	284.97	302.00	318.42	330.74	334.16

NOTE: This Data has been Converted from English Units into Metric Units

8" Fig. 737A Circuit Balancing Valve



Rev 0

CIRCUIT BALANCING VALVES

8" FLOW DATA

Turns→	2	4	6	8	10	12	OPEN	
Cv→	62.7	159.3	308.7	480.2	616.9	721.9	786.4	ΔP
ΔP PSI	FLOW IN GPM							ft H ₂ O
0.04	12.5	31.9	61.7	96.0	123.4	144.4	157.3	0.09
0.06	15.4	39.0	75.6	117.6	151.1	176.8	192.6	0.14
0.065	16.0	40.6	78.7	122.5	157.3	184.1	200.5	0.15
0.08	17.7	45.1	87.3	135.8	174.5	204.2	222.4	0.18
0.087	18.5	46.9	90.9	141.4	181.7	212.6	231.6	0.20
0.10	19.8	50.4	97.6	151.9	195.1	228.3	248.7	0.23
0.013	7.2	18.2	35.2	54.8	70.4	82.3	89.7	0.03
0.017	8.3	21.0	40.7	63.2	81.2	95.1	103.6	0.04
0.20	28.0	71.2	138.1	214.8	275.9	322.8	351.7	0.46
0.217	29.2	74.2	143.7	223.6	287.2	336.1	366.1	0.50
0.260	32.0	81.2	157.4	244.9	314.6	368.2	401.1	0.60
0.347	36.9	93.8	181.8	282.8	363.3	425.1	463.1	0.80
0.40	39.7	100.8	195.2	303.7	390.2	456.6	497.4	0.92
0.434	41.3	104.9	203.3	316.2	406.2	475.3	517.8	1.00
0.60	48.6	123.4	239.1	372.0	477.8	559.2	609.1	1.38
0.650	50.6	128.5	248.9	387.2	497.5	582.1	634.2	1.50
0.80	56.1	142.5	276.1	429.5	551.8	645.7	703.4	1.85
0.867	58.4	148.3	287.4	447.1	574.4	672.2	732.3	2.00
1.00	62.7	159.3	308.7	480.2	616.9	721.9	786.4	2.31
1.301	71.5	181.7	352.1	547.6	703.5	823.3	896.8	3.00
1.734	82.6	209.8	406.5	632.4	812.4	950.6	1,035.6	4.00
2.00	88.7	225.3	436.6	679.1	872.4	1,020.9	1,112.1	4.61
2.168	92.3	234.5	454.5	707.0	908.3	1,062.8	1,157.8	5.00
2.601	101.1	256.9	497.9	774.5	994.9	1,164.3	1,268.3	6.00
3.468	116.8	296.7	574.9	894.3	1,148.9	1,344.4	1,464.5	8.00
4.00	125.4	318.6	617.4	960.4	1,233.8	1,443.8	1,572.8	9.23
4.335	130.5	331.7	642.8	999.8	1,284.5	1,503.1	1,637.4	10.00
6.00	153.6	390.2	756.2	1,176.2	1,511.1	1,768.3	1,926.3	13.84
6.503	159.9	406.2	787.2	1,224.6	1,573.1	1,840.9	2,005.4	15.00
8.00	177.3	450.6	873.1	1,358.2	1,744.9	2,041.8	2,224.3	18.45
8.671	184.6	469.1	909.0	1,414.0	1,816.5	2,125.7	2,315.6	20.00
10.00	198.3	503.8	976.2	1,518.5	1,950.8	2,282.8	2,486.8	23.07
13.006	226.1	574.5	1,113.3	1,731.8	2,224.8	2,603.4	2,836.0	30.00
17.341	261.1	663.4	1,285.5	1,999.7	2,568.9	3,006.2	3,274.8	40.00
20.00	280.4	712.4	1,380.5	2,147.5	2,758.9	3,228.4	3,516.9	46.13
21.676	291.9	741.7	1,437.2	2,235.7	2,872.2	3,361.0	3,661.3	50.00
26.012	319.8	812.5	1,574.4	2,449.1	3,146.3	3,681.8	4,010.8	60.00
30.00	343.4	872.5	1,690.8	2,630.2	3,378.9	3,954.0	4,307.3	69.20
30.347	345.4	877.6	1,700.6	2,645.3	3,398.4	3,976.8	4,332.1	70.00
34.682	369.3	938.1	1,818.0	2,828.0	3,633.0	4,251.4	4,631.2	80.00
39.018	391.6	995.1	1,928.3	2,999.5	3,853.4	4,509.3	4,912.2	90.00
40.00	396.5	1,007.5	1,952.4	3,037.1	3,901.6	4,565.7	4,973.6	92.27
43.353	412.8	1,048.9	2,032.6	3,161.8	4,061.9	4,753.2	5,177.9	100.00

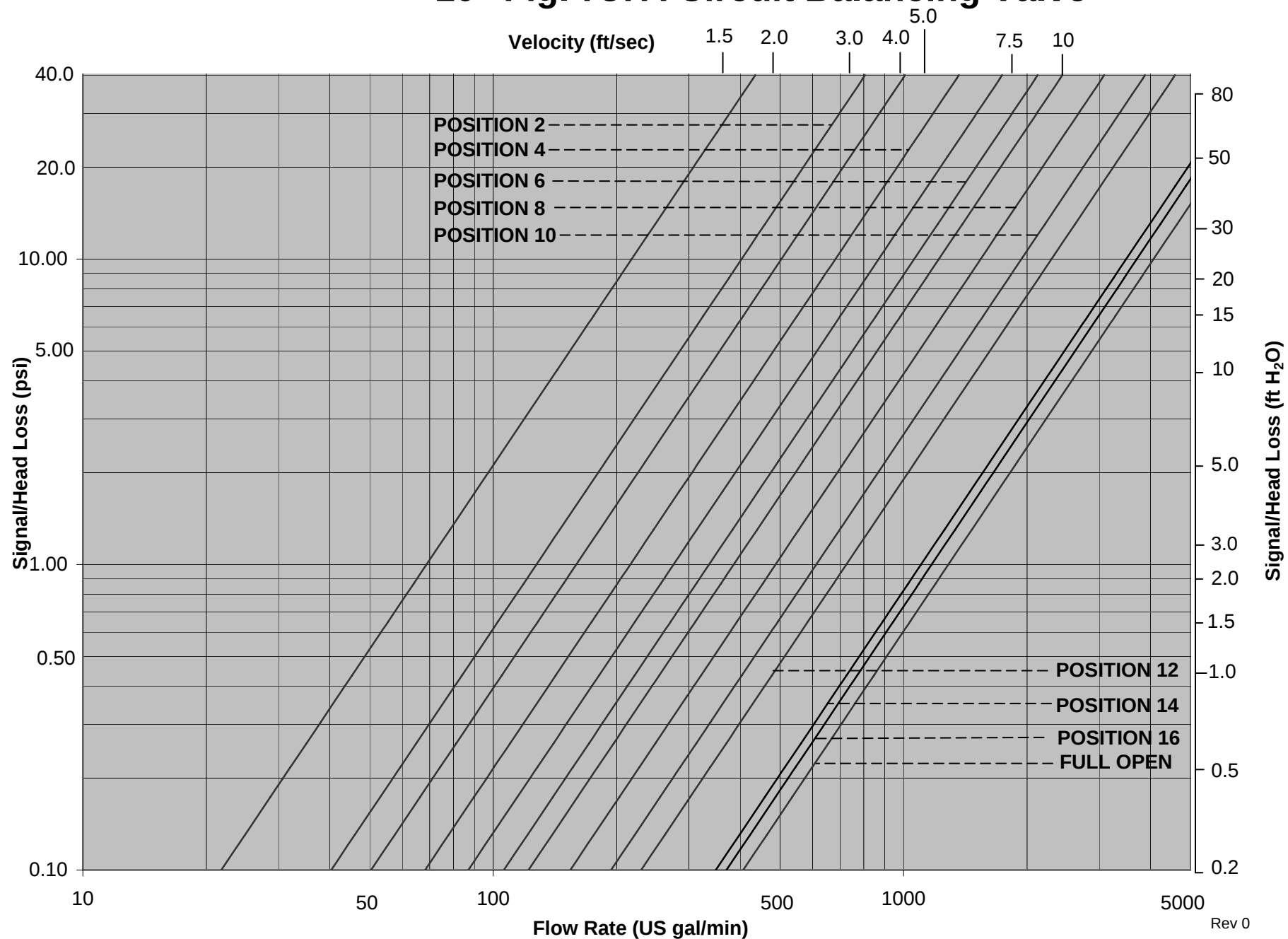
For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	234
2	312
3	468
4	624
5	780
7.5	1169
10	1559

737A 200mm (8") FLOW DATA

TURNS→	2	4	6	8	10	12	OPEN
Kv→	54.3	137.9	267.3	415.8	534.1	625.0	680.9
ΔP kPa	FLOW IN LITERS / SECOND						
1	1.51	3.83	7.42	11.55	14.83	17.36	18.91
2	2.13	5.42	10.50	16.33	20.98	24.55	26.74
3	2.61	6.63	12.86	20.00	25.69	30.06	32.75
4	3.02	7.66	14.84	23.09	29.66	34.71	37.82
5	3.37	8.56	16.60	25.82	33.17	38.81	42.28
6	3.69	9.38	18.18	28.28	36.33	42.52	46.31
8	4.26	10.83	20.99	32.66	41.95	49.09	53.48
10	4.77	12.11	23.47	36.51	46.90	54.89	59.79
15	5.84	14.83	28.75	44.72	57.45	67.22	73.23
20	6.74	17.13	33.19	51.63	66.33	77.62	84.56
30	8.26	20.98	40.65	63.24	81.24	95.07	103.56
40	9.53	24.22	46.94	73.02	93.81	109.77	119.58
50	10.66	27.08	52.48	81.64	104.88	122.73	133.70
60	11.68	29.67	57.49	89.43	114.89	134.45	146.46
80	13.48	34.26	66.39	103.27	132.66	155.24	169.11
100	15.08	38.30	74.22	115.46	148.32	173.57	189.08
150	18.46	46.91	90.90	141.40	181.66	212.58	231.57
200	21.32	54.17	104.96	163.28	209.76	245.46	267.39
300	26.11	66.34	128.56	199.97	256.90	300.63	327.49
400	30.15	76.60	148.44	230.91	296.64	347.14	378.15
500	33.71	85.64	165.96	258.17	331.66	388.11	422.79
600	36.93	93.82	181.80	282.81	363.31	425.15	463.14
800	42.64	108.33	209.93	326.56	419.52	490.92	534.79
1000	47.67	121.12	234.71	365.10	469.04	548.87	597.91

NOTE: This Data has been Converted from English Units into Metric Units

10" Fig. 737A Circuit Balancing Valve



737A 10" FLOW DATA

Turns→	1	2	3	4	5	6	7	8	10	12	14	16	OPEN	
Cv→	68.8	127.4	159.4	215.7	275.0	335.7	385.5	487.4	612.9	725.3	1103.2	1171.1	1286.1	ΔP
ΔP PSI	FLOW IN GPM													ft H2O
0.04	13.8	25.5	31.9	43.1	55.0	67.1	77.1	97.5	122.6	145.1	220.6	234.2	257.2	0.09
0.06	16.9	31.2	39.0	52.8	67.4	82.2	94.4	119.4	150.1	177.7	270.2	286.9	315.0	0.14
0.065	17.5	32.5	40.6	55.0	70.1	85.6	98.3	124.3	156.3	185.0	281.3	298.6	328.0	0.15
0.08	19.5	36.0	45.1	61.0	77.8	95.0	109.0	137.9	173.4	205.1	312.0	331.2	363.8	0.18
0.087	20.3	37.5	46.9	63.5	81.0	98.8	113.5	143.5	180.5	213.6	324.8	344.8	378.7	0.20
0.10	21.8	40.3	50.4	68.2	87.0	106.2	121.9	154.1	193.8	229.4	348.9	370.3	406.7	0.23
0.130	24.8	45.9	57.5	77.8	99.2	121.1	139.0	175.8	221.0	261.6	397.9	422.3	463.8	0.30
0.173	28.7	53.1	66.4	89.8	114.5	139.8	160.5	203.0	255.2	302.0	459.4	487.7	535.6	0.40
0.20	30.8	57.0	71.3	96.5	123.0	150.1	172.4	218.0	274.1	324.4	493.4	523.7	575.2	0.46
0.217	32.0	59.3	74.2	100.4	128.0	156.3	179.5	226.9	285.4	337.7	513.6	545.2	598.8	0.50
0.260	35.1	65.0	81.3	110.0	140.3	171.2	196.6	248.6	312.6	369.9	562.7	597.3	655.9	0.60
0.303	37.9	70.2	87.8	118.8	151.5	184.9	212.4	268.5	337.6	399.6	607.7	645.1	708.5	0.70
0.40	43.5	80.6	100.8	136.4	173.9	212.3	243.8	308.3	387.6	458.7	697.7	740.7	813.4	0.92
0.434	45.3	83.9	105.0	142.0	181.1	221.0	253.8	320.9	403.6	477.6	726.4	771.1	846.8	1.00
0.60	53.3	98.7	123.5	167.1	213.0	260.0	298.6	377.5	474.8	561.8	854.5	907.1	996.2	1.38
0.650	55.5	102.7	128.5	173.9	221.8	270.7	310.9	393.0	494.2	584.9	889.6	944.4	1037.1	1.50
0.80	61.5	114.0	142.6	192.9	246.0	300.3	344.8	435.9	548.2	648.7	986.7	1047.5	1150.3	1.85
0.867	64.1	118.6	148.4	200.9	256.1	312.6	359.0	453.8	570.7	675.4	1027.3	1090.5	1197.6	2.00
1.00	68.8	127.4	159.4	215.7	275.0	335.7	385.5	487.4	612.9	725.3	1103.2	1171.1	1286.1	2.31
1.301	78.5	145.3	181.8	246.0	313.6	382.8	439.6	555.8	699.0	827.2	1258.1	1335.6	1466.7	3.00
1.734	90.6	167.8	209.9	284.0	362.1	442.1	507.6	641.8	807.1	955.1	1452.8	1542.2	1693.6	4.00
2.00	97.3	180.2	225.4	305.0	388.9	474.8	545.2	689.3	866.8	1025.7	1560.2	1656.2	1818.8	4.61
2.168	101.3	187.6	234.7	317.6	404.9	494.2	567.6	717.6	902.4	1067.9	1624.2	1724.2	1893.5	5.00
4.00	137.6	254.8	318.8	431.4	550.0	671.4	771.0	974.8	1225.8	1450.6	2206.4	2342.2	2572.2	9.23
4.335	143.3	265.3	331.9	449.1	572.6	699.0	802.7	1014.8	1276.1	1510.2	2297.0	2438.4	2677.8	10.00
6.00	168.5	312.1	390.4	528.4	673.6	822.3	944.3	1193.9	1501.3	1776.6	2702.3	2868.6	3150.3	13.84
6.503	175.4	324.9	406.5	550.1	701.3	856.1	983.1	1242.9	1562.9	1849.6	2813.3	2986.4	3279.7	15.00
8.00	194.6	360.3	450.9	610.1	777.8	949.5	1090.4	1378.6	1733.5	2051.5	3120.3	3312.4	3637.6	18.45
8.671	202.6	375.1	469.4	635.1	809.8	988.5	1135.1	1435.2	1804.7	2135.7	3248.5	3448.4	3787.0	20.00
10.00	217.6	402.9	504.1	682.1	869.6	1061.6	1219.1	1541.3	1938.2	2293.6	3488.6	3703.3	4067.0	23.07
13.006	248.1	459.5	574.9	777.9	991.8	1210.7	1390.3	1757.7	2210.3	2615.7	3978.5	4223.4	4638.1	30.00
17.341	286.5	530.5	663.8	898.2	1145.2	1397.9	1605.3	2029.7	2552.3	3020.3	4594.0	4876.8	5355.7	40.00
20.00	307.7	569.8	712.9	964.6	1229.8	1501.3	1724.0	2179.7	2741.0	3243.6	4933.7	5237.3	5751.6	46.13
21.676	320.3	593.1	742.1	1004.3	1280.3	1563.0	1794.8	2269.2	2853.5	3376.9	5136.3	5452.4	5987.8	50.00
26.012	350.9	649.8	813.0	1100.1	1402.5	1712.1	1966.1	2485.8	3125.9	3699.2	5626.5	5972.8	6559.3	60.00
30.00	376.8	697.8	873.1	1181.4	1506.2	1838.7	2111.5	2669.6	3357.0	3972.6	6042.5	6414.4	7044.3	69.20
30.347	379.0	701.8	878.1	1188.3	1514.9	1849.3	2123.6	2685.0	3376.4	3995.5	6077.3	6451.4	7084.9	70.00
34.682	405.2	750.3	938.7	1270.3	1619.5	1977.0	2270.3	2870.4	3609.5	4271.4	6496.9	6896.8	7574.1	80.00
39.018	429.8	795.8	995.7	1347.4	1717.8	2096.9	2408.0	3044.5	3828.4	4530.5	6891.0	7315.2	8033.5	90.00
40.00	435.1	805.7	1008.1	1364.2	1739.3	2123.2	2438.1	3082.6	3876.3	4587.2	6977.2	7406.7	8134.0	92.27
43.353	453.0	838.8	1049.5	1420.2	1810.7	2210.3	2538.2	3209.2	4035.5	4775.6	7263.8	7710.9	8468.1	100.00

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	369
2	492
3	737
4	983
5	1229
6	1475
7.5	1843
10	2458

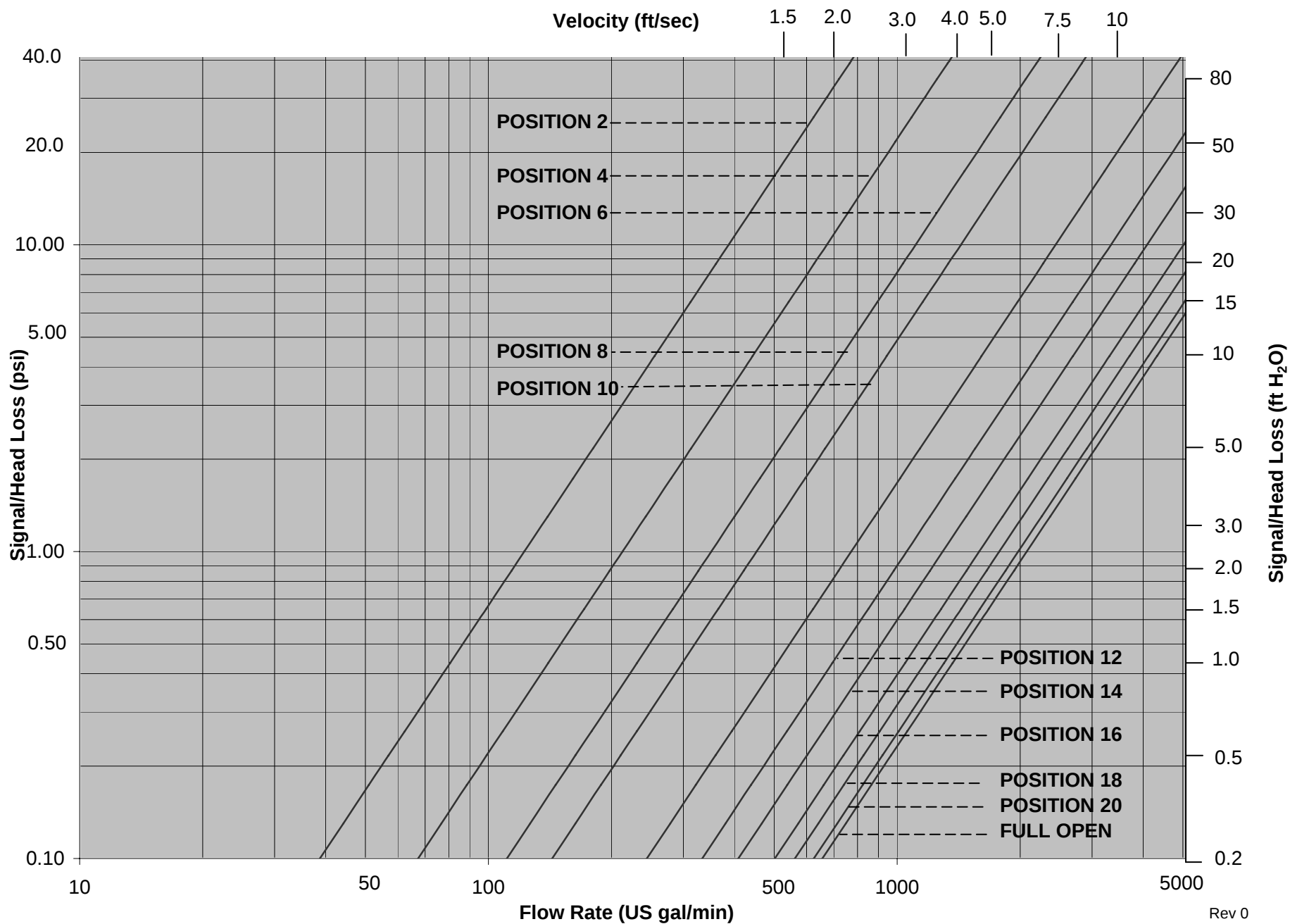
CIRCUIT BALANCING VALVES

737A 250mm (10") CBV FLOW DATA

TURNS→	1	2	3	4	5	6	7	8	10	12	14	16	OPEN
Kv→	59.6	110.3	138.0	186.8	238.1	290.6	333.8	422.0	530.6	628.0	955.2	1013.9	1113.5
ΔP kPa	FLOW IN LITERS / SECOND												
1	1.65	3.06	3.83	5.19	6.61	8.07	9.27	11.72	14.74	17.44	26.52	28.16	30.92
2	2.34	4.33	5.42	7.33	9.35	11.41	13.11	16.57	20.84	24.66	37.51	39.82	43.73
3	2.87	5.31	6.64	8.98	11.45	13.98	16.05	20.30	25.52	30.20	45.94	48.77	53.56
4	3.31	6.13	7.66	10.37	13.22	16.14	18.54	23.44	29.47	34.88	53.05	56.31	61.84
5	3.70	6.85	8.57	11.60	14.78	18.05	20.73	26.20	32.95	38.99	59.31	62.96	69.14
6	4.05	7.50	9.39	12.70	16.20	19.77	22.70	28.70	36.10	42.72	64.97	68.97	75.74
8	4.68	8.66	10.84	14.67	18.70	22.83	26.22	33.15	41.68	49.32	75.02	79.64	87.46
10	5.23	9.69	12.12	16.40	20.91	25.52	29.31	37.06	46.60	55.15	83.88	89.04	97.78
15	6.41	11.86	14.84	20.09	25.61	31.26	35.90	45.39	57.07	67.54	102.73	109.05	119.76
20	7.40	13.70	17.14	23.19	29.57	36.10	41.45	52.41	65.90	77.99	118.62	125.92	138.29
30	9.06	16.78	20.99	28.41	36.21	44.21	50.77	64.19	80.71	95.51	145.28	154.22	169.37
40	10.46	19.37	24.24	32.80	41.82	51.05	58.62	74.12	93.20	110.29	167.76	178.08	195.57
50	11.70	21.66	27.10	36.67	46.75	57.07	65.54	82.86	104.20	123.31	187.56	199.10	218.65
60	12.81	23.73	29.69	40.17	51.22	62.52	71.79	90.77	114.15	135.08	205.46	218.10	239.52
80	14.80	27.40	34.28	46.39	59.14	72.19	82.90	104.81	131.80	155.97	237.24	251.84	276.57
100	16.54	30.63	38.32	51.86	66.12	80.71	92.69	117.19	147.36	174.39	265.24	281.57	309.22
150	20.26	37.52	46.94	63.52	80.98	98.85	113.52	143.52	180.48	213.58	324.86	344.85	378.71
200	23.39	43.32	54.20	73.34	93.51	114.15	131.08	165.73	208.40	246.62	375.11	398.20	437.30
300	28.65	53.05	66.38	89.83	114.52	139.80	160.54	202.97	255.24	302.04	459.42	487.69	535.58
400	33.08	61.26	76.65	103.72	132.24	161.43	185.37	234.37	294.72	348.77	530.49	563.14	618.44
500	36.99	68.49	85.70	115.97	147.85	180.48	207.25	262.04	329.51	389.94	593.10	629.61	691.44
600	40.52	75.03	93.88	127.03	161.96	197.71	227.03	287.05	360.96	427.15	649.71	689.70	757.43
800	46.79	86.64	108.40	146.69	187.01	228.29	262.16	331.45	416.80	493.24	750.22	796.40	874.60
1000	52.31	96.86	121.19	164.00	209.09	255.24	293.10	370.58	466.00	551.45	838.78	890.40	977.84

NOTE: This Data has been Converted from English Units into Metric Units

12" Fig. 737A Circuit Balancing Valve



Rev 0

737A 12" CBV FLOW DATA

TURNS→	2	4	6	8	10	12	14	16	18	20	OPEN	
Cv→	122.4	212.7	350.7	452.7	772.3	1054.2	1292.3	1587.9	1777.5	1977.1	2075.5	ΔP
ΔP PSI	FLOW IN GPM											ft H2O
0.04	24.5	42.5	70.1	90.5	154.5	210.8	258.5	317.6	355.5	395.4	415.1	0.09
0.06	30.0	52.1	85.9	110.9	189.2	258.2	316.5	389.0	435.4	484.3	508.4	0.14
0.065	31.2	54.2	89.4	115.4	196.9	268.8	329.5	404.9	453.3	504.2	529.3	0.15
0.08	34.6	60.2	99.2	128.0	218.4	298.2	365.5	449.1	502.8	559.2	587.0	0.18
0.087	36.0	62.6	103.3	133.3	227.4	310.4	380.5	467.6	523.4	582.2	611.1	0.20
0.10	38.7	67.3	110.9	143.2	244.2	333.4	408.7	502.1	562.1	625.2	656.3	0.23
0.130	44.1	76.7	126.5	163.3	278.5	380.2	466.1	572.7	641.0	713.0	748.5	0.30
0.173	51.0	88.6	146.0	188.5	321.6	439.0	538.1	661.2	740.2	823.3	864.3	0.40
0.20	54.7	95.1	156.8	202.5	345.4	471.5	577.9	710.1	794.9	884.2	928.2	0.46
0.217	57.0	99.0	163.3	210.8	359.6	490.8	601.7	739.3	827.6	920.5	966.3	0.50
0.260	62.4	108.5	178.9	230.9	393.9	537.7	659.1	809.9	906.6	1008.4	1058.5	0.60
0.303	67.4	117.2	193.2	249.4	425.4	580.7	711.9	874.7	979.2	1089.1	1143.4	0.70
0.40	77.4	134.5	221.8	286.3	488.4	666.7	817.3	1004.3	1124.2	1250.4	1312.7	0.92
0.434	80.6	140.0	230.9	298.1	508.5	694.1	850.9	1045.5	1170.4	1301.8	1366.6	1.00
0.60	94.8	164.8	271.7	350.7	598.2	816.6	1001.0	1230.0	1376.8	1531.5	1607.7	1.38
0.650	98.7	171.5	282.8	365.1	622.8	850.1	1042.1	1280.5	1433.4	1594.3	1673.7	1.50
0.80	109.5	190.2	313.7	404.9	690.8	942.9	1155.9	1420.3	1589.8	1768.4	1856.4	1.85
0.867	114.0	198.1	326.6	421.5	719.1	981.6	1203.3	1478.6	1655.1	1841.0	1932.6	2.00
1.00	122.4	212.7	350.7	452.7	772.3	1054.2	1292.3	1587.9	1777.5	1977.1	2075.5	2.31
1.301	139.6	242.6	399.9	516.3	880.8	1202.2	1473.8	1810.9	2027.1	2254.8	2367.0	3.00
1.734	161.2	280.1	461.8	596.1	1017.0	1388.2	1701.8	2091.0	2340.7	2603.6	2733.1	4.00
2.00	173.1	300.8	496.0	640.2	1092.2	1490.9	1827.6	2245.6	2513.8	2796.0	2935.2	4.61
2.168	180.2	313.2	516.3	666.5	1137.1	1552.1	1902.6	2337.9	2617.0	2910.9	3055.7	5.00
4.00	244.8	425.4	701.4	905.4	1544.6	2108.4	2584.6	3175.8	3555.0	3954.2	4151.0	9.23
4.335	254.9	442.9	730.2	942.6	1608.0	2195.0	2690.7	3306.2	3701.0	4116.6	4321.5	10.00
6.00	299.8	521.0	859.0	1108.9	1891.7	2582.3	3165.5	3889.5	4354.0	4842.9	5083.9	13.84
6.503	312.1	542.4	894.3	1154.4	1969.4	2688.3	3295.5	4049.3	4532.8	5041.8	5292.7	15.00
8.00	346.2	601.6	991.9	1280.4	2184.4	2981.7	3655.2	4491.3	5027.5	5592.1	5870.4	18.45
8.671	360.4	626.3	1032.7	1333.0	2274.1	3104.2	3805.3	4675.7	5234.0	5821.7	6111.5	20.00
10.00	387.1	672.6	1109.0	1431.6	2442.2	3333.7	4086.6	5021.4	5620.9	6252.1	6563.3	23.07
13.006	441.4	767.1	1264.8	1632.6	2785.2	3801.8	4660.5	5726.5	6410.3	7130.1	7485.0	30.00
17.341	509.7	885.7	1460.4	1885.2	3216.1	4390.0	5381.5	6612.4	7402.0	8233.2	8642.9	40.00
20.00	547.4	951.2	1568.4	2024.5	3453.8	4714.5	5779.3	7101.3	7949.2	8841.9	9281.9	46.13
21.676	569.9	990.3	1632.8	2107.7	3595.7	4908.1	6016.7	7392.9	8275.7	9205.0	9663.1	50.00
26.012	624.3	1084.8	1788.6	2308.8	3938.9	5376.6	6591.0	8098.6	9065.6	10083.5	10585.4	60.00
30.00	670.4	1165.0	1920.9	2479.5	4230.1	5774.1	7078.2	8697.3	9735.8	10829.0	11368.0	69.20
30.347	674.3	1171.7	1931.9	2493.8	4254.5	5807.4	7119.0	8747.4	9791.9	10891.5	11433.5	70.00
34.682	720.8	1252.6	2065.3	2666.0	4548.2	6208.4	7610.6	9351.4	10468.0	11643.5	12223.0	80.00
39.018	764.6	1328.6	2190.6	2827.7	4824.1	6585.0	8072.2	9918.7	11103.0	12349.8	12964.4	90.00
40.00	774.1	1345.2	2218.0	2863.1	4884.5	6667.3	8173.2	10042.8	11241.9	12504.3	13126.6	92.27
43.353	805.9	1400.5	2309.1	2980.7	5085.0	6941.2	8508.9	10455.2	11703.6	13017.8	13665.7	100.00

For Schedule 40 Pipe	
VELOCITY	FLOW
ft/sec	GPM
1.5	523
2	698
3	1047
4	1396
5	1744
7.5	2617
10	3489

737A 300mm (12") FLOW DATA

TURNS→	2	4	6	8	10	12	14	16	18	20	OPEN
Kv→	106.0	184.2	303.6	391.9	668.7	912.7	1118.9	1374.8	1539.0	1711.8	1797.0
ΔP kPa	FLOW LITERS / SECOND										
1.0	2.94	5.11	8.43	10.88	18.57	25.35	31.07	38.18	42.74	47.54	49.90
2.0	4.16	7.23	11.92	15.39	26.26	35.85	43.94	53.99	60.44	67.23	70.57
3.0	5.10	8.86	14.60	18.85	32.16	43.90	53.82	66.13	74.02	82.33	86.43
4.0	5.89	10.23	16.86	21.77	37.14	50.69	62.14	76.36	85.47	95.07	99.80
5.0	6.58	11.44	18.85	24.34	41.52	56.68	69.48	85.37	95.56	106.29	111.58
6.0	7.21	12.53	20.65	26.66	45.48	62.09	76.11	93.52	104.68	116.44	122.23
8.0	8.32	14.46	23.85	30.79	52.52	71.69	87.88	107.98	120.88	134.45	141.14
10.0	9.31	16.17	26.66	34.42	58.72	80.15	98.26	120.73	135.15	150.32	157.80
15.0	11.40	19.81	32.66	42.15	71.92	98.17	120.34	147.86	165.52	184.11	193.27
20.0	13.16	22.87	37.71	48.68	83.04	113.35	138.95	170.74	191.12	212.59	223.17
30.0	16.12	28.01	46.18	59.62	101.70	138.83	170.18	209.11	234.08	260.36	273.32
40.0	18.61	32.34	53.33	68.84	117.44	160.30	196.51	241.46	270.29	300.64	315.61
50.0	20.81	36.16	59.62	76.96	131.30	179.23	219.71	269.96	302.19	336.13	352.86
60.0	22.80	39.61	65.31	84.31	143.83	196.33	240.68	295.73	331.04	368.21	386.54
80.0	26.32	45.74	75.42	97.35	166.08	226.70	277.91	341.48	382.25	425.17	446.33
100.0	29.43	51.14	84.32	108.84	185.69	253.46	310.71	381.78	427.37	475.36	499.02
150.0	36.04	62.63	103.27	133.31	227.42	310.43	380.54	467.59	523.42	582.19	611.17
200.0	41.62	72.32	119.25	153.93	262.60	358.45	439.41	539.92	604.39	672.26	705.72
300.0	50.97	88.58	146.05	188.52	321.62	439.01	538.17	661.27	740.22	823.34	864.32
400.0	58.86	102.28	168.64	217.69	371.37	506.93	621.42	763.56	854.74	950.72	998.03
500.0	65.80	114.35	188.54	243.38	415.21	566.76	694.77	853.69	955.62	1062.93	1115.83
600.0	72.09	125.27	206.54	266.61	454.83	620.86	761.08	935.17	1046.83	1164.38	1222.34
800.0	83.24	144.65	238.49	307.86	525.20	716.90	878.82	1079.84	1208.78	1344.52	1411.43
1000.0	93.06	161.72	266.64	344.19	587.19	801.52	982.55	1207.30	1351.46	1503.21	1578.03

NOTE: This Data has been Converted from English Units into Metric Units