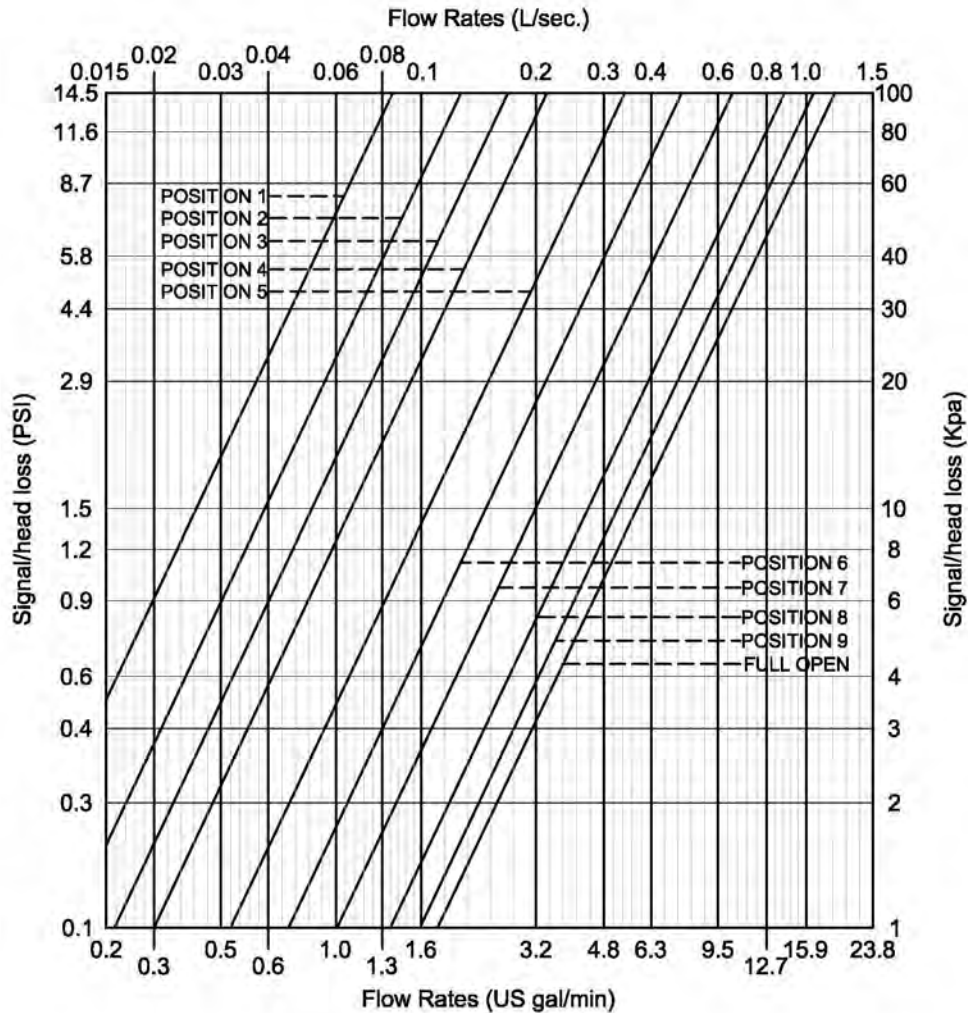


DN 15 1/2" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)

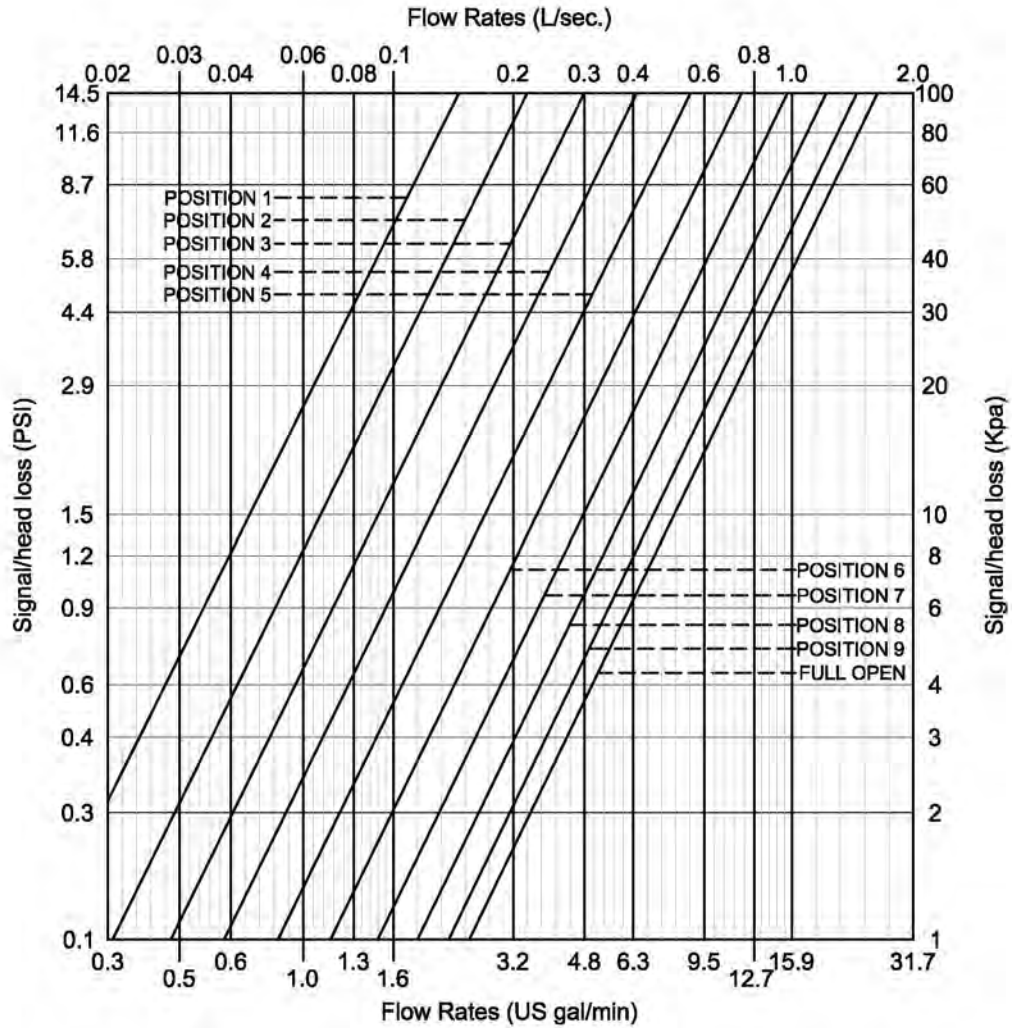


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

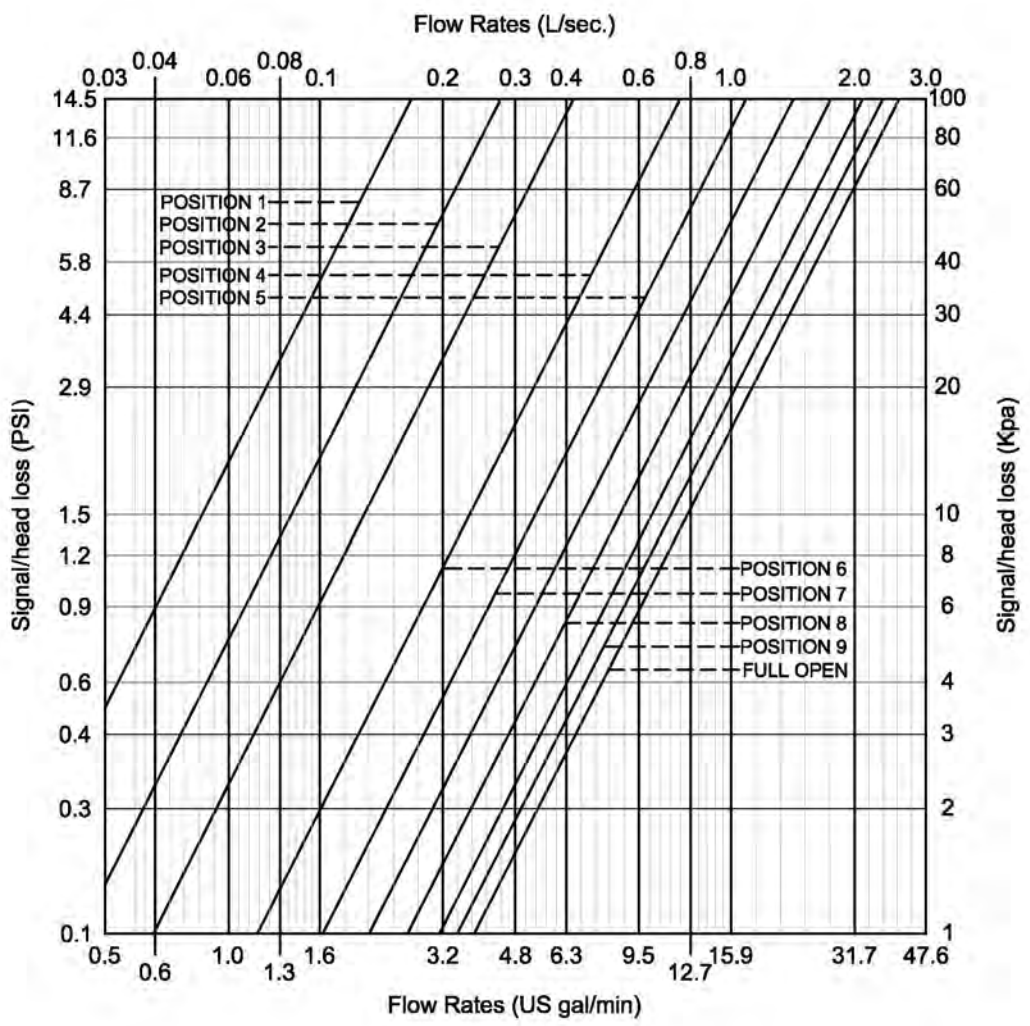
DN 20 3/4" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DN 25 1" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)

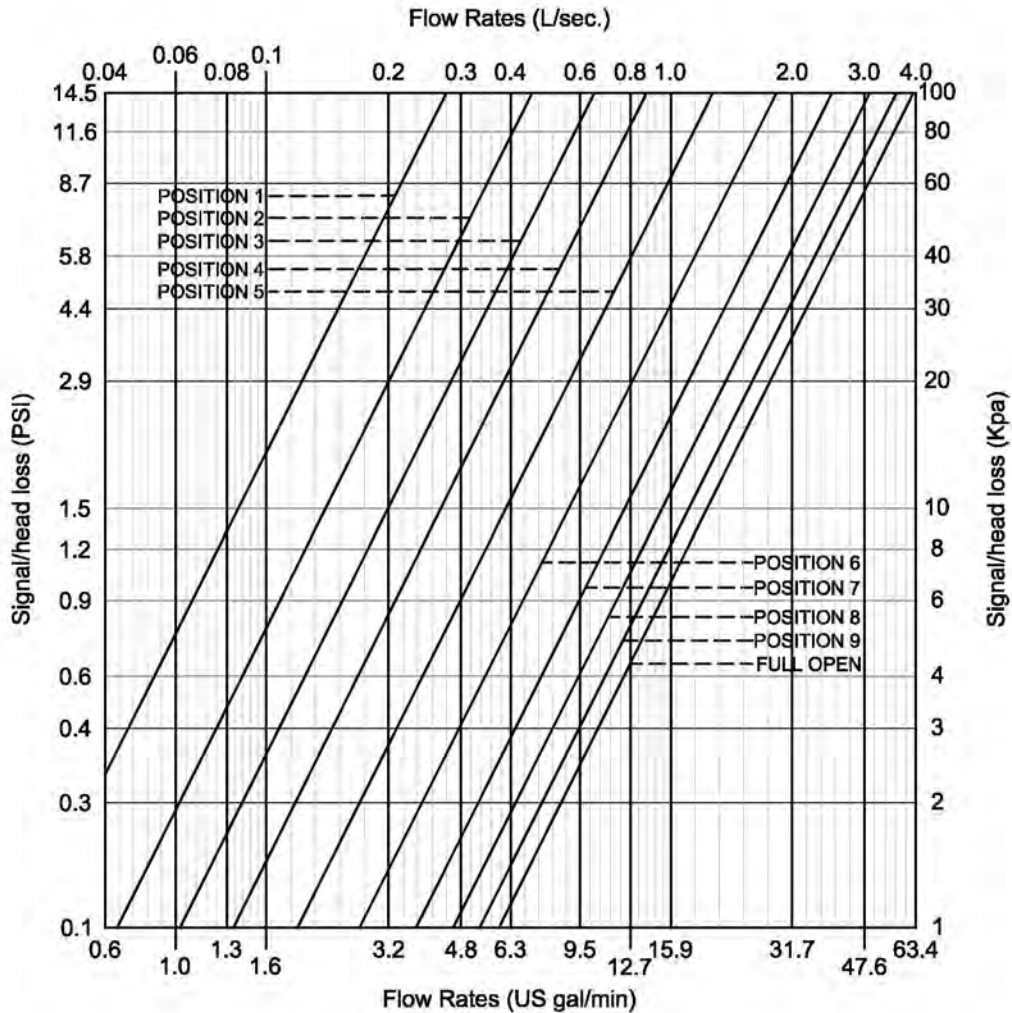


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

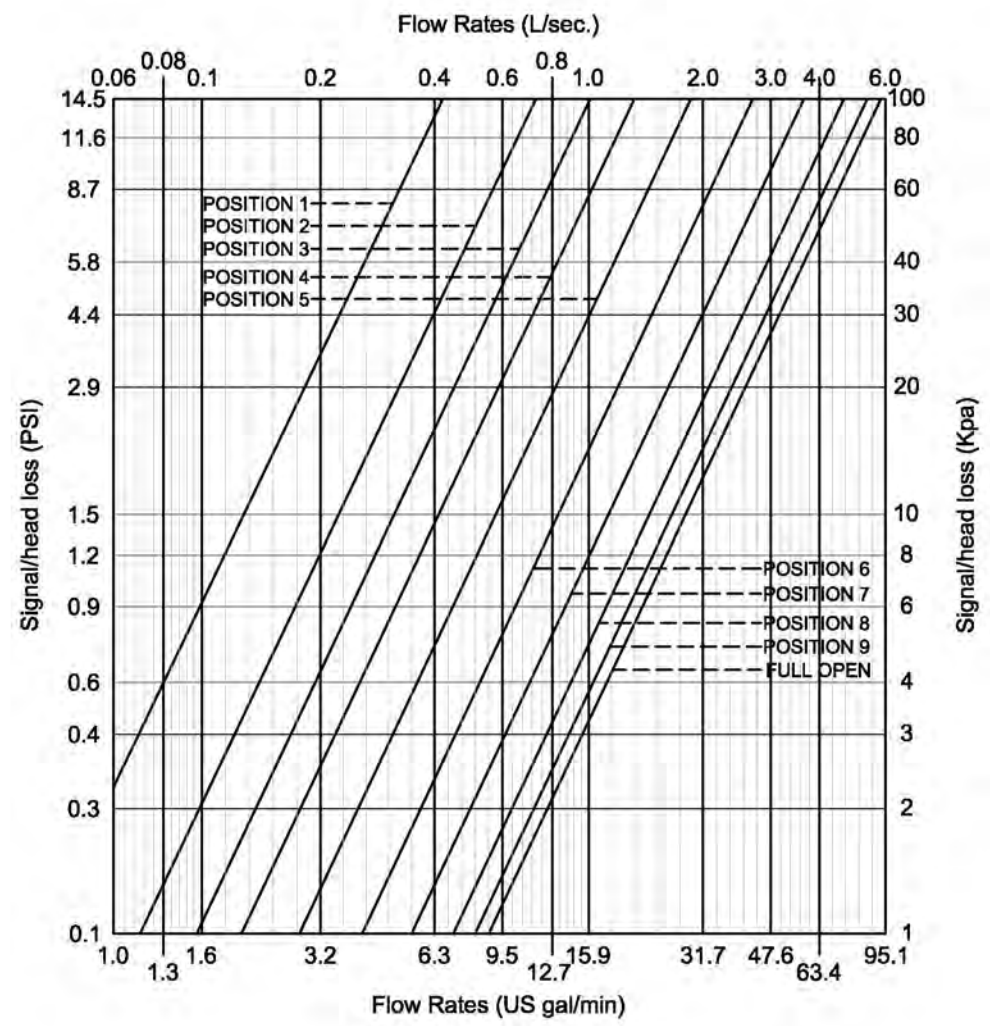
DN 32 1-1/4" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DN 40 1-1/2" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)

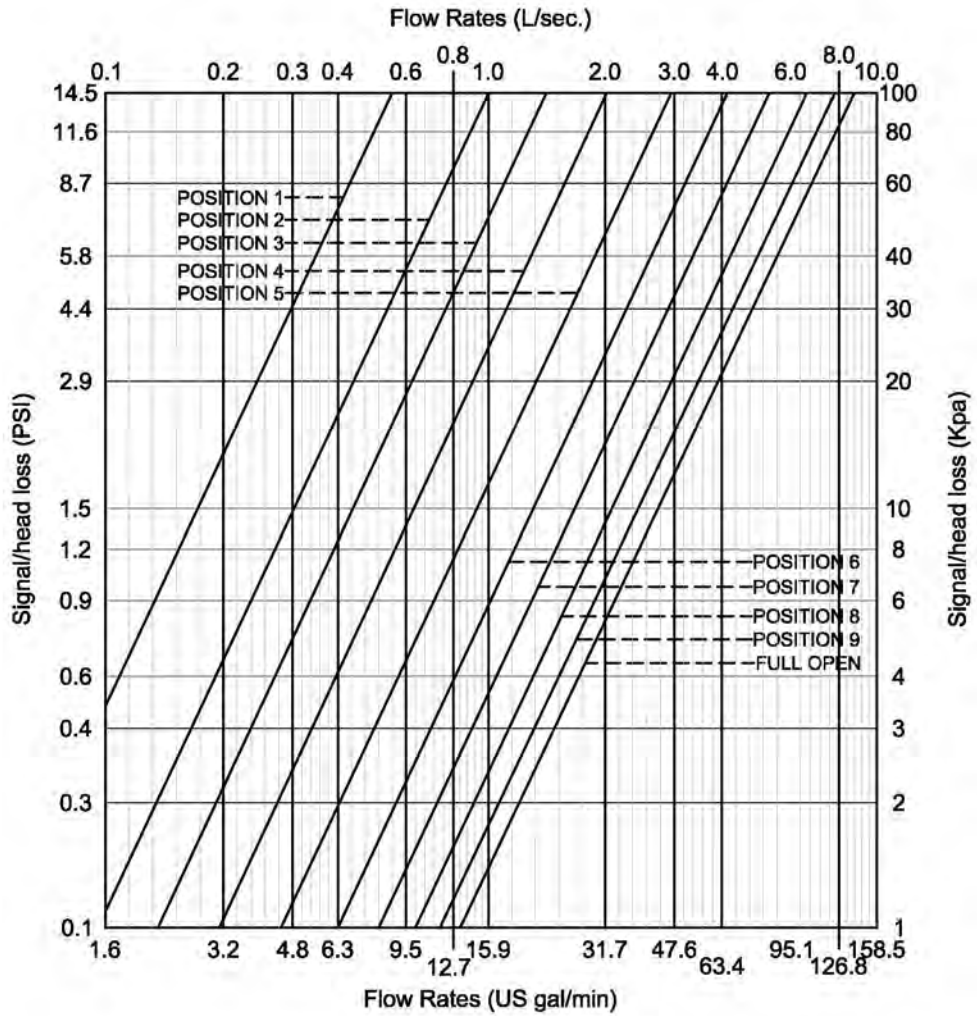


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

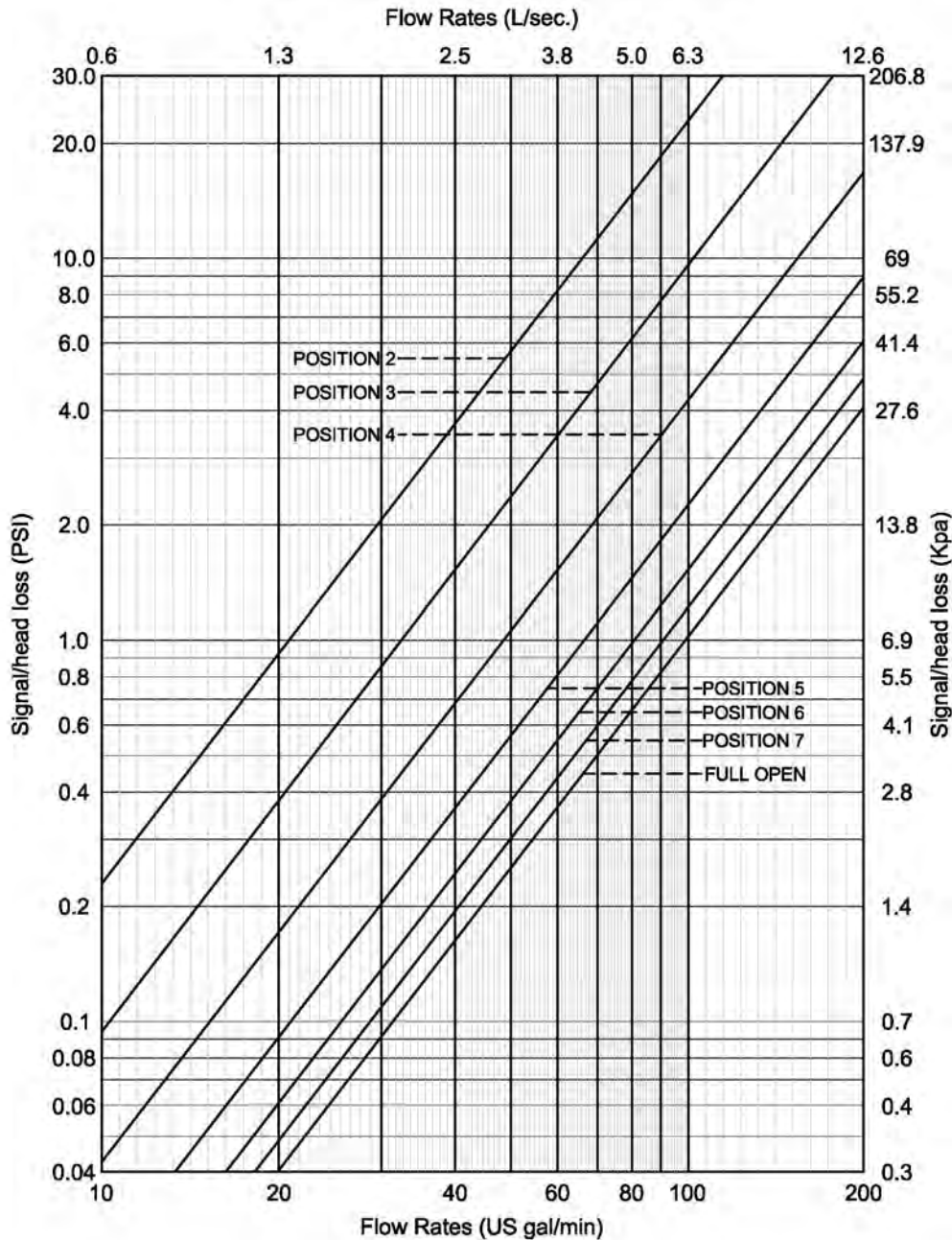
DN 50 2" BALANCING VALVE "LGS" FLOW DIAGRAM (NPT & C X C)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

DN 65 2-1/2" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)

SUBMITTAL DATA SHEET
ISSUE DATE: MAY 2008
REVISION DATE: MAY 2008

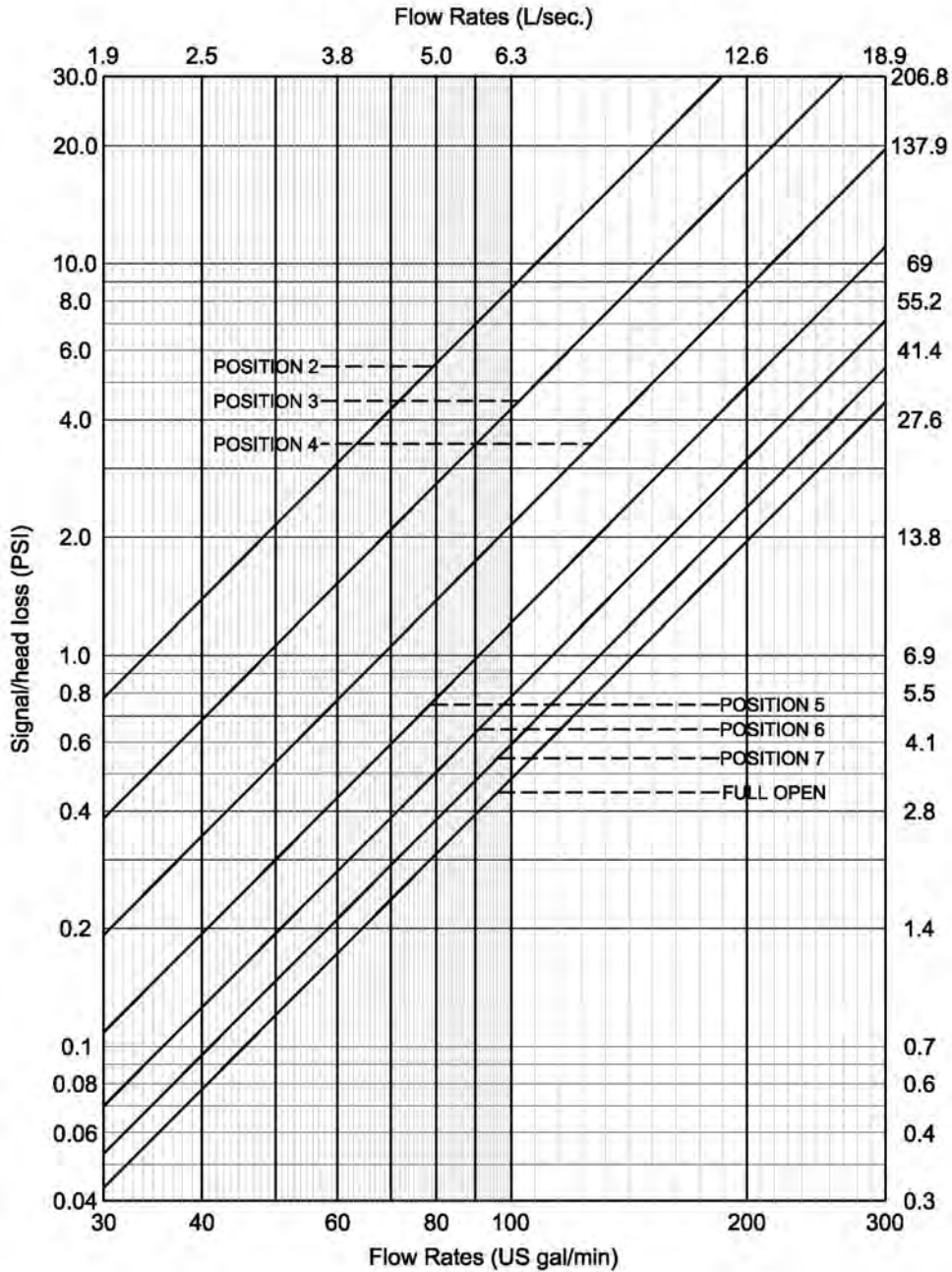


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

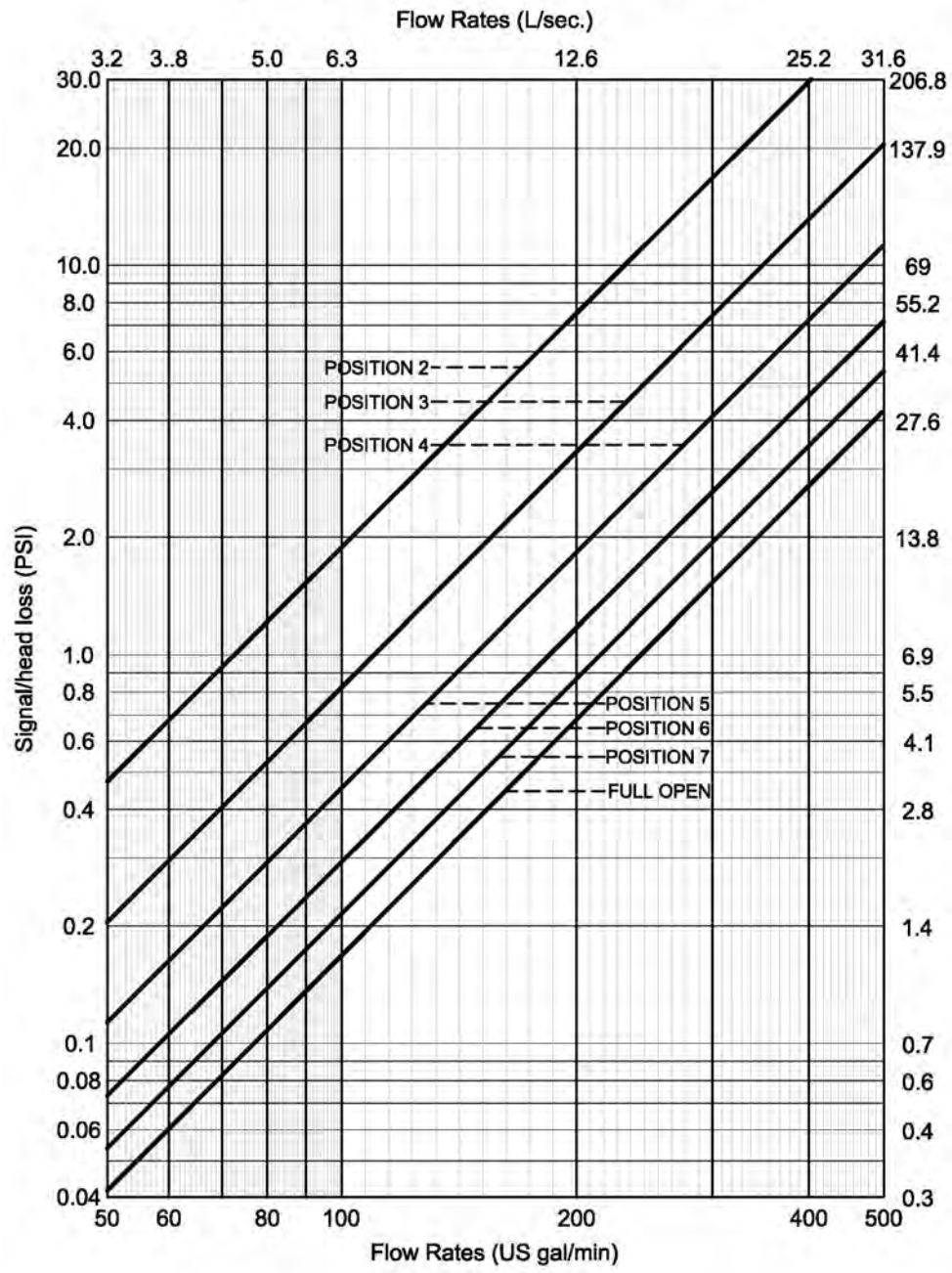
DN 80 3" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

DN100 4" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)

SUBMITTAL DATA SHEET
ISSUE DATE: MAY 2008
REVISION DATE: MAY 2008

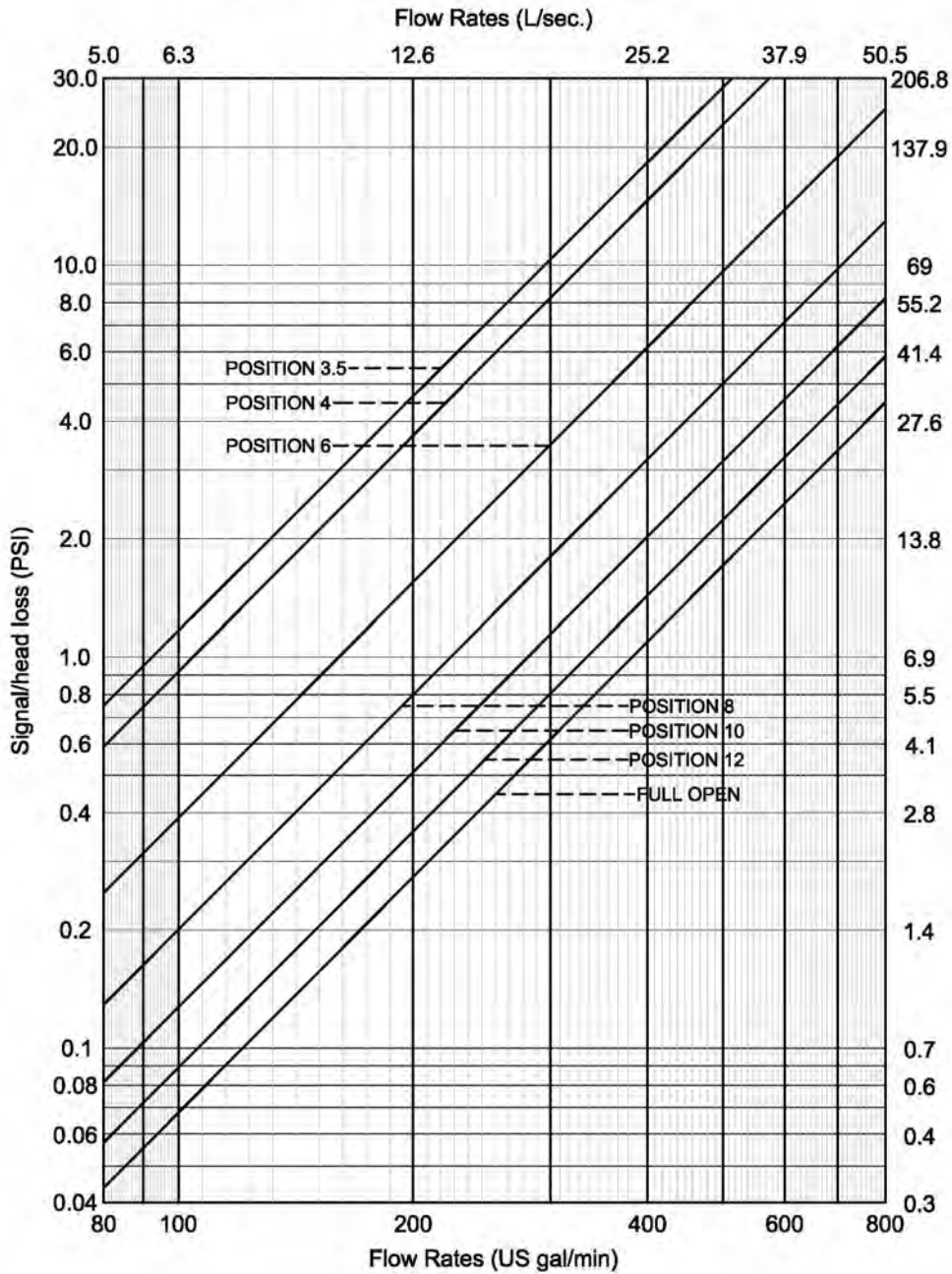


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
Velocity based on average inside diameter of Schedule 40 pipe.



DN 125 5" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)

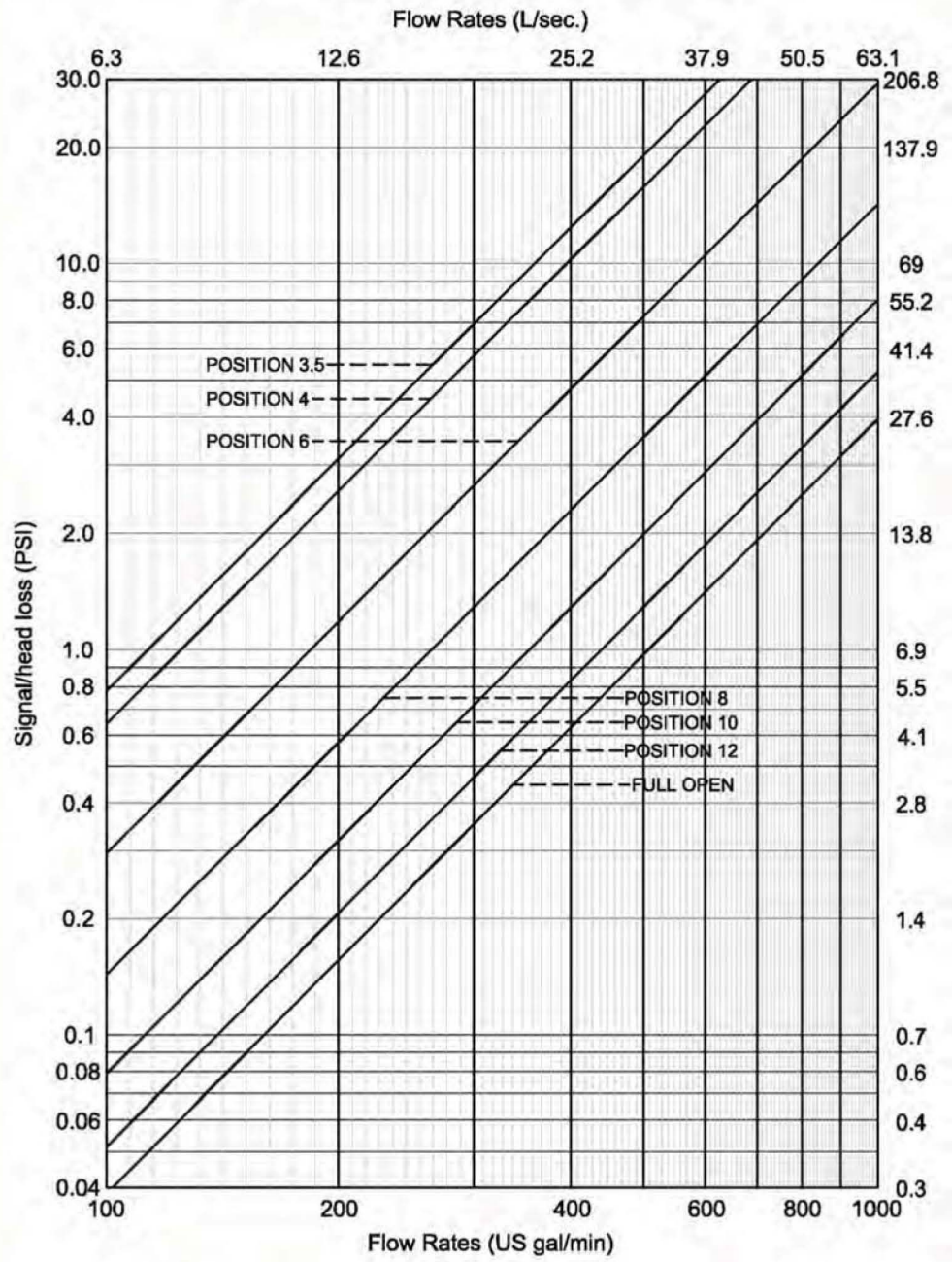
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ISSUE DATE: MAY 2008
REVISION DATE: MAY 2008



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
Velocity based on average inside diameter of Schedule 40 pipe.

SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DN 150 6" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)

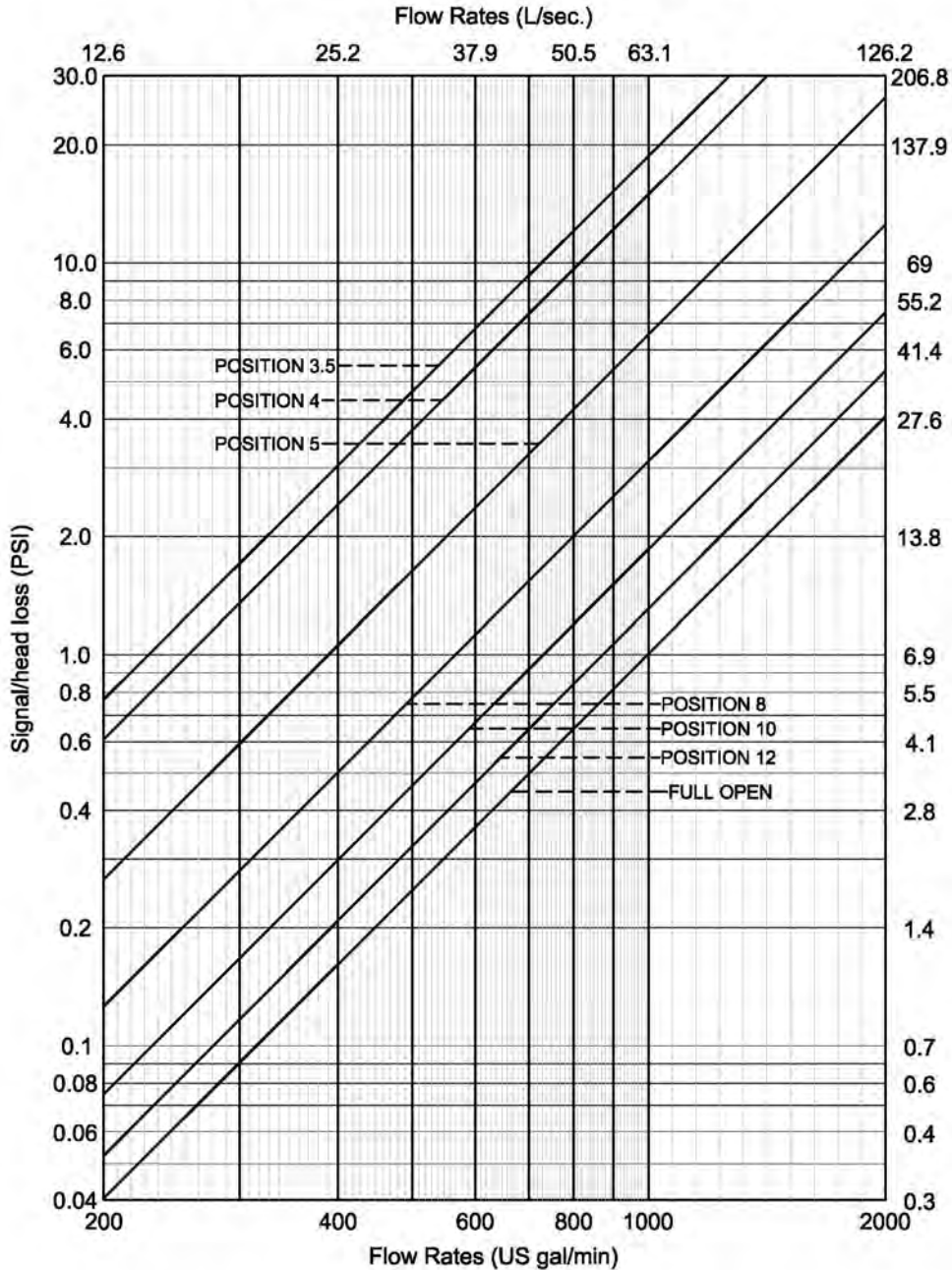


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

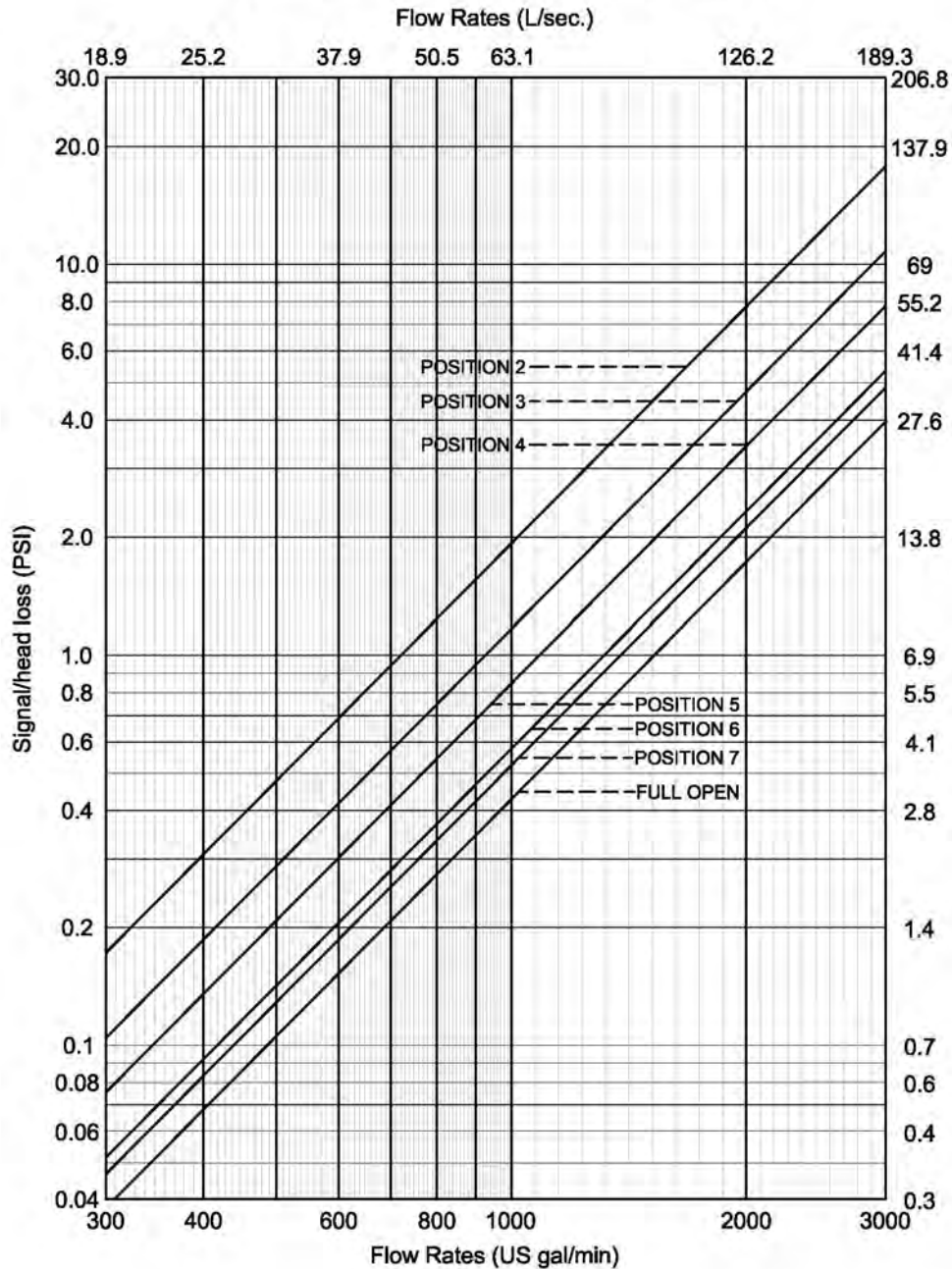
DN 200 8" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

DN 250 10" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)

SUBMITTAL DATA SHEET
ISSUE DATE: MAY 2008
REVISION DATE: MAY 2008

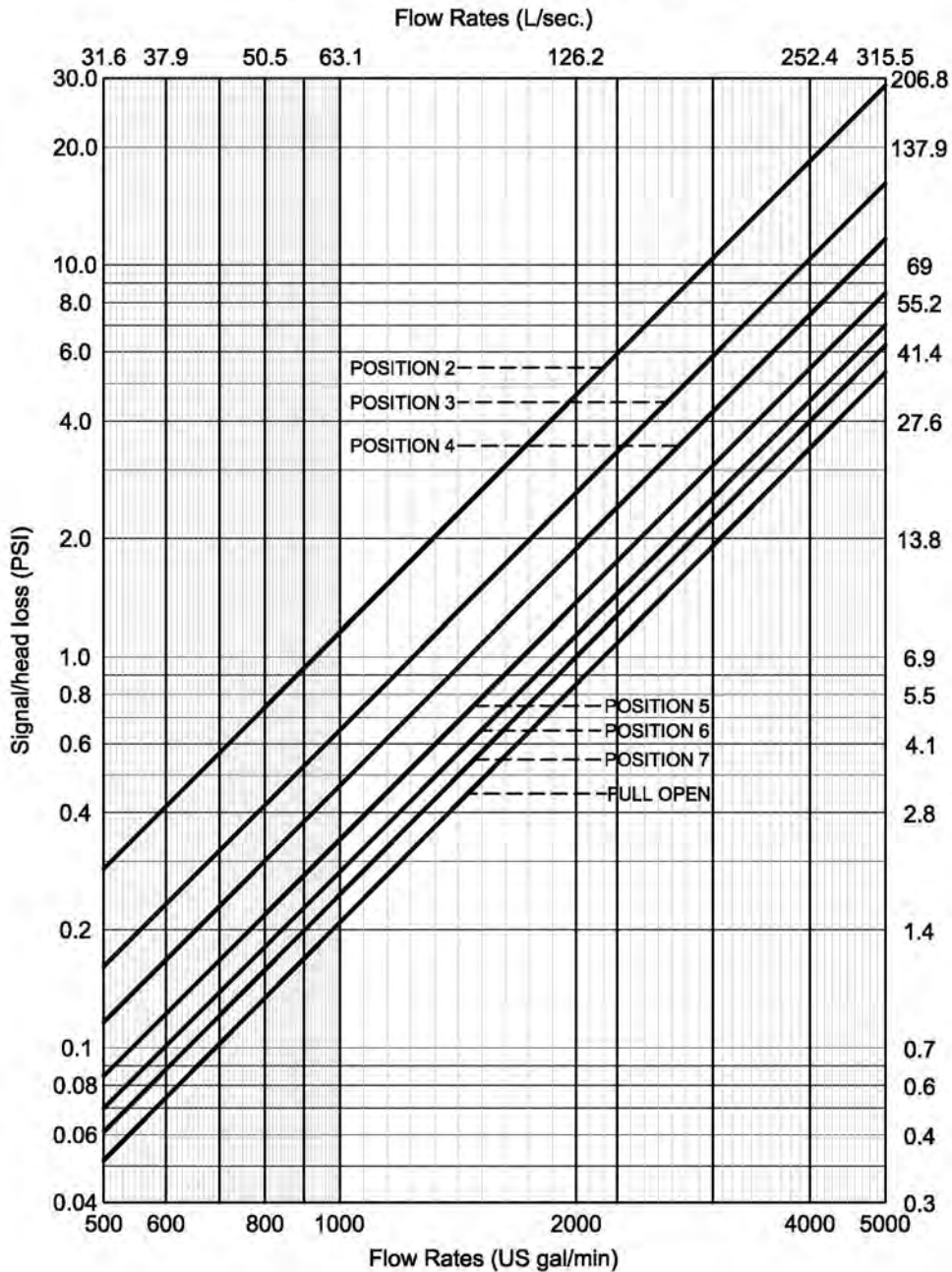


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

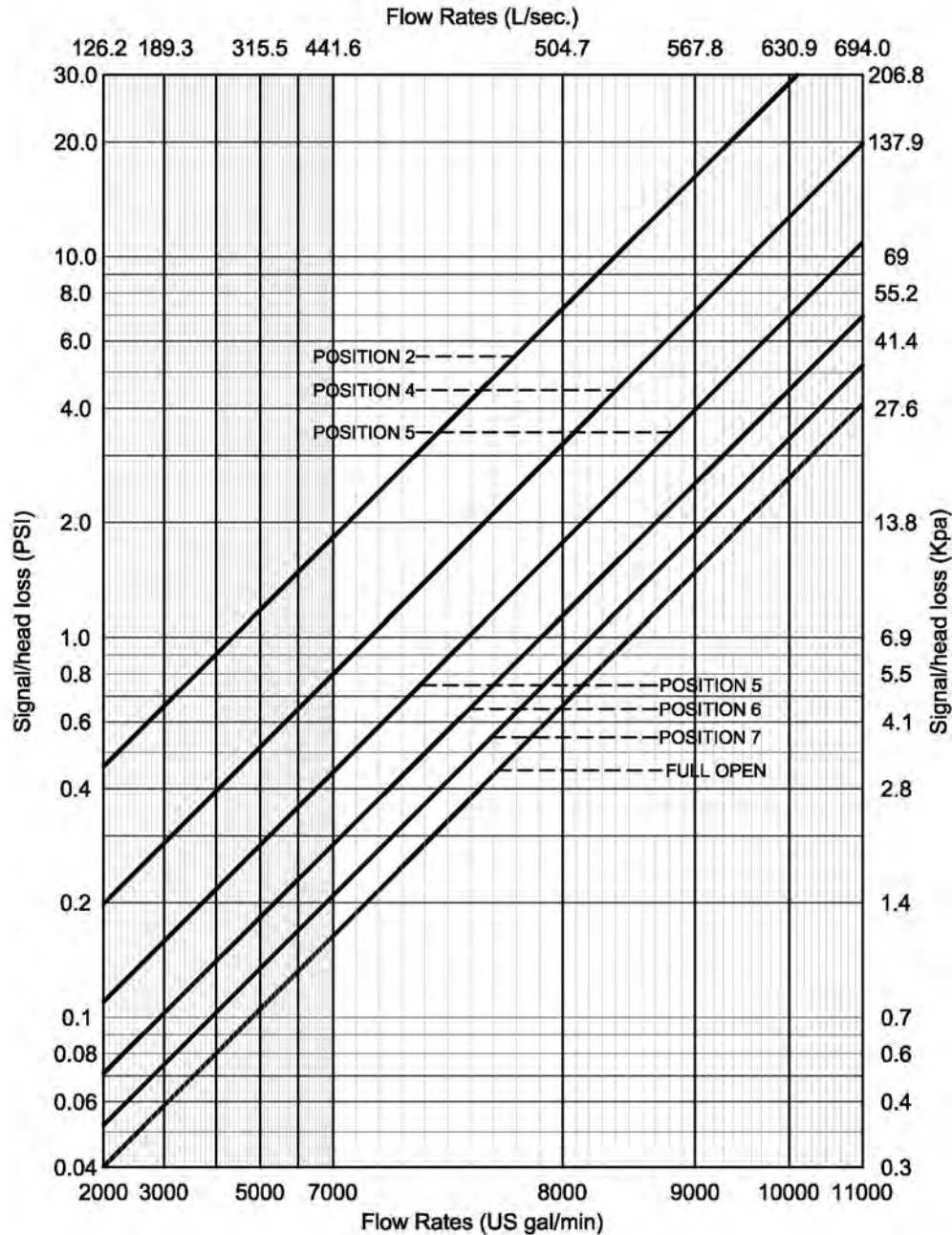
DN 300 12" BALANCING VALVE "LGS" FLOW DIAGRAM (FLANGED & GROOVED)



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DN 400 16" BALANCING VALVE "LGS" FLOW DIAGRAM

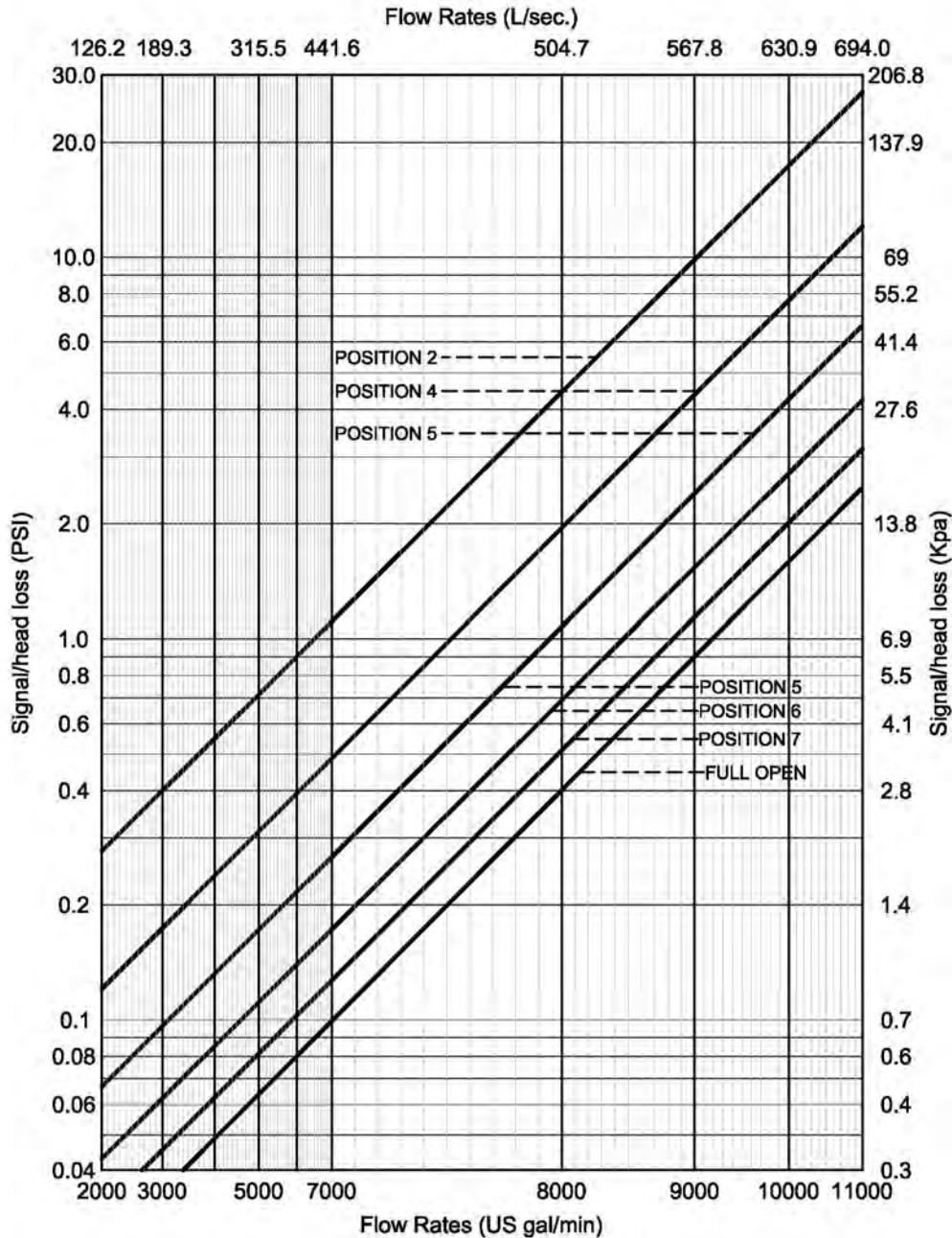


Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DN 450 18" BALANCING VALVE "LGS" FLOW DIAGRAM



Graph of signal/Head Loss against Flow Rate indicating pressure drop attributable to the valve installed in a circuit.
 Velocity based on average inside diameter of Schedule 40 pipe.

SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

Manual Venturi Series LAS

MODEL DESIGNATION	OPTIONS
<p>LASL0075 - FT/FT - DP3&9</p> <p>Model/Diameter Ex: 3/4" (18.75mm) Low Flow</p> <p>Connections Ball valve end first. See specifications for available connections. Ex: Female Thread x Female Thread</p>	<p>Options For options that requires specified locations Ex: DP @ 3:00 & 9:00</p> <p>DP= Dual P/T ports (Instead of standard port) DX= Dual XL P/T port (Instead of standard port) UL= Ultra Low flow range L= Low flow range H= High flow range FT= Female Thread</p>

DIFFERENTIAL PRESSURE: Kpa and Inches Water Cube (in)

Flow		Models											
		050UL		050L		050H 075L		075H		100		125	
L/s	GPM	Kpa	In	Kpa	In	Kpa	In	Kpa	In	Kpa	In	Kpa	In
0	0.1	0.75	3										
0.01	0.2	2.5	10										
0.01	0.3	5.5	22										
0.02	0.4	10	40	3	12								
0.03	0.5	15.5	62	4.75	19								
0.03	0.6	22.25	89	6.75	27								
0.04	0.7	30.25	121	9.25	37								
0.05	0.8	39.5	158	12	48								
0.05	0.9	50	200	15.25	61								
0.06	1.0	61.75	247	18.5	74	3	12						
0.06	1.1	74.75	299	22.75	91	3.75	15						
0.07	1.2	89	356	27	108	4.25	17						
0.08	1.3	104.5	418	31.75	127	5	20						
0.08	1.4	121	484	36.75	147	6	24						
0.09	1.5			42.25	169	6.75	27						
0.10	1.6			48	192	7.75	31						
0.10	1.7			54.25	217	8.75	35						
0.11	1.8			60.5	242	9.5	38						
0.11	1.9			67.75	271	10.75	43						
0.12	2.0			74.75	299	12	48	3	12				
0.13	2.2			90.5	362	14.5	58	3.5	14				
0.15	2.4			107.75	431	17.25	69	4.25	17				
0.16	2.6					20.25	81	5	20				
0.17	2.8					23.5	94	5.75	23				
0.18	3.0					27	108	6.75	27	3	12		
0.20	3.2					30.75	123	7.75	31	3.5	14		
0.21	3.4					34.75	139	8.75	35	3.75	15		
0.22	3.5					36.75	147	9.25	37	4	16		
0.22	3.6					39	156	9.75	39	4.25	17		
0.23	3.8					43.25	173	10.75	43	4.75	19		
0.25	4.0					48	192	12	48	5.25	21		
0.26	4.2					53	212	13.25	53	6	24		
0.27	4.4					58	232	14.5	58	6.5	26		
0.28	4.5					60.5	242	15.25	61	6.75	27		
0.29	4.6					63.5	254	15.75	63	7	28		
0.30	4.8					69	276	17.25	69	7.75	31		
0.31	5.0					74.75	299	18.75	75	8.25	33		
0.32	5.2					81	324	20.25	81	9	36		
0.34	5.4					87.5	350	21.75	87	9.75	39		
0.34	5.5					90.5	362	22.75	91	10	40	3	12
0.35	5.6					94	376	23.50	94	10.5	42	3.25	13
0.36	5.6					101	404	25.25	101	11.25	45	3.5	14
0.37	6.0					107.75	431	27	108	12	48	3.75	15
0.39	6.2					115.25	461	28.75	115	12.75	51	4	16
0.40	6.4					122.75	491	30.75	123	13.75	55	4.25	17
0.41	6.5							31.5	126	14	56	4.25	17
0.41	6.6							32.75	131	14.5	58	4.5	18
0.42	6.8							34.75	139	15.5	62	4.75	19
0.44	7.0							36.75	147	16.25	65	5	20

* The recommended ranges are shown in **bold**

Using the differential pressure (D.P.) tables

- Generally, the recommended low ΔP signal is 24" so it can be read on most HVAC instruments. D.P.'s below 12" are not accurate on some sizes.
- The upper D.P. limit is an effort to minimize the permanent pressure loss which is 10 % of the D.P. signal. Any venturi can be operated above the recommended range if the permanent pressure drop is acceptable.
- The D.P.'s in the table were calculated using the following formula:

$$D.P. = \left(\frac{GPM \cdot 17.3}{FF} \right)^2$$

Flow factors (FF) for all models are listed below.

Model	FF
0500L	1.1
050L	2
075L/050H	5
075H	10
100	15
125	27
150	42
200	80
250	135
300	225
400	480

NOTE: Permanent pressure loss equals 10% of Kpa.

Dimensions not to be used for construction unless prints is certified by factory.



SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

Manual Venturi Series LAS

DIFFERENTIAL PRESSURE: kPa and inches of water

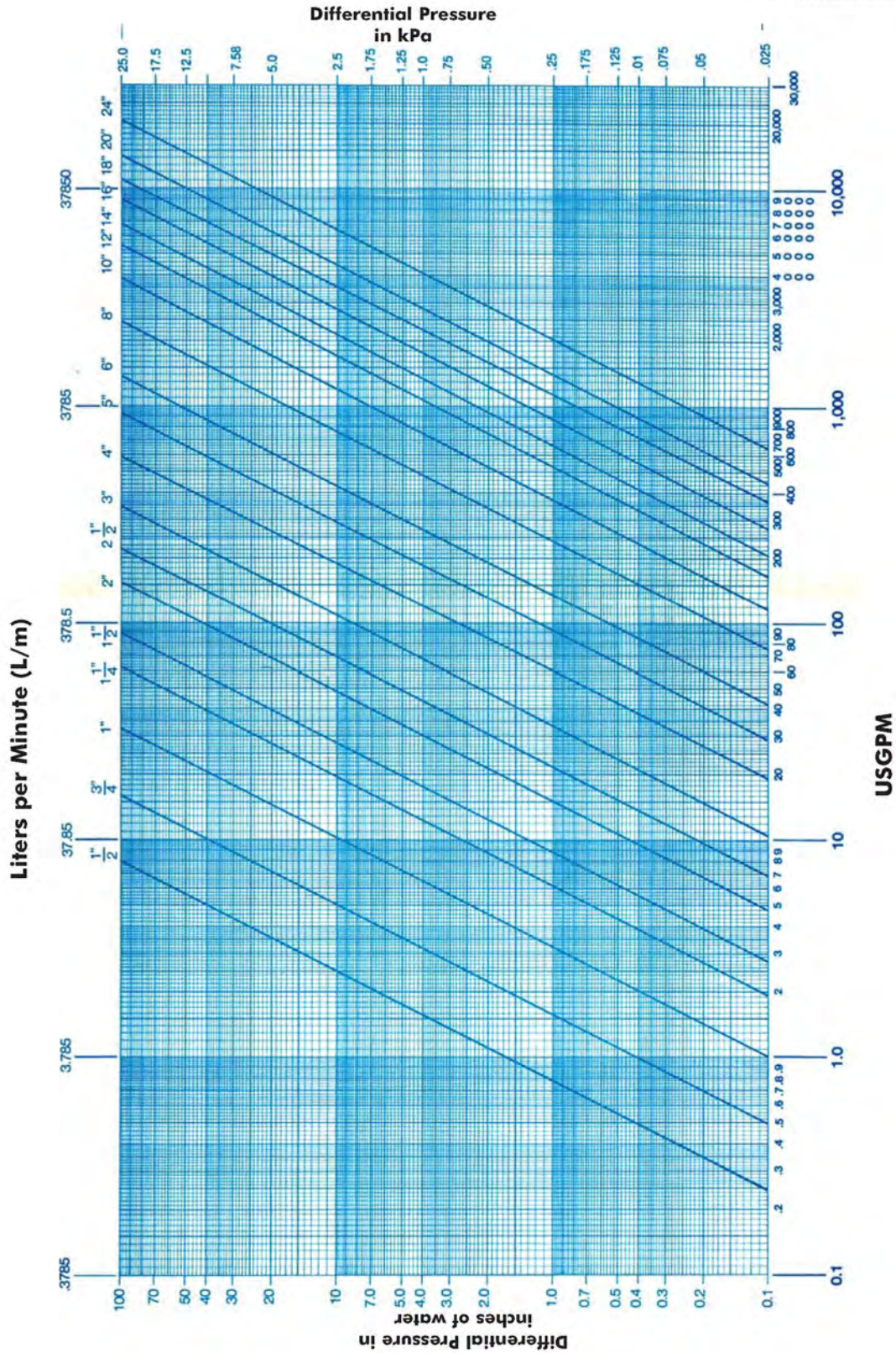
Flow		Models									
		075H		100		125		150		200	
L/s	GPM	Kpa	in	Kpa	in	Kpa	in	Kpa	in	Kpa	in
0.47	7.5	42	168	18.75	75	5.75	23				
0.50	8.0	48	192	21.25	85	6.5	26				
0.53	8.5	54.25	217	24	96	7.5	30				
0.56	9.0	60.5	242	27	108	8.25	33	3.5	14		
0.59	9.5	67.75	271	30	120	9.25	37	3.75	15		
0.63	10	74.75	299	33.25	133	10.25	41	4.25	17		
0.69	11	90.5	362	40.25	161	12.5	50	5.25	21		
0.75	12	107.75	431	48	192	14.75	59	6	24		
0.82	13			56.25	225	17.25	69	7.25	29		
0.88	14			65.25	261	20	80	8.25	33		
0.94	15			74.75	299	23	92	9.5	38		
1	16			85	340	26.25	105	10.75	43	3	12
1.07	17			96	384	29.75	119	12.25	49	3.5	14
1.13	18			107.75	431	33.25	133	13.75	55	3.75	15
1.19	19			120	480	37	148	15.25	61	4.25	17
1.26	20					41	164	17	68	4.75	19
1.38	22					49.75	199	20.5	82	5.57	23
1.51	24					59	236	24.5	98	6.75	27
1.64	26					69.5	278	28.75	115	8	32
1.76	28					80.5	322	33.25	133	9.25	37
1.89	30					92.25	369	38.25	153	10.5	42
2.01	32					105	420	43.5	174	12	48
2.14	34					118.5	474	49	196	13.5	54
2.27	36							55	220	15.25	61

Flow		Models											
		075H		100		125		150		200			
L/s	GPM	Kpa	in	Kpa	in	Kpa	in	Kpa	in	Kpa	in		
2.39	38									61.25	245	17	68
2.52	40									67.75	271	18.75	75
2.64	42									74.75	299	20.5	82
2.77	44									82	328	22.75	91
2.9	46									89.75	359	24.75	99
3.02	48									97.5	390	27	108
3.15	50									106	424	29.25	117
3.28	52									114.5	458	31.5	126
3.40	54									123.5	494	34	136
3.53	56											36.75	147
3.65	58											39.25	157
3.78	60											42	168
4.03	64											48	192
4.28	68											54	216
4.41	70											57.25	229
4.73	75											65.75	263
5.04	80											74.75	299
5.36	85											84.5	338
5.67	90											94.75	379
5.99	95											105.5	422
6.3	100											116.75	467
6.62	105												
6.93	110												
7.25	115												

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SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008



Nominal pipe size
 Schedule 40
 Specific Gravity: 1.0
 Water Temperature: 70°F

Effective: 07-85
 Supersedes: 02-83

L/m = USGPM x 0.2642
 kPa = in of water x 0.25



Manual Venturi with Butterfly Valve Series LAW-LAG-LAF

DIFFERENTIAL PRESSURE: kPa and inches of water

Flow GPM	Models									
	200L	200H	250L	250H	300L	300H	400L	400H	500L	600L
16	10									
18	13									
20	16									
22	19									
24	23									
26	27									
28	31		12							
30	36		14							
32	41	13	16							
34	46	14	18							
36	52	16	20							
38	58	18	22							
40	64	20	25							
42	70	22	27							
44	77	24	30							
46	84	26	33							
48	92	28	36							
50	100	31	39							
55	121	37	47							
60	144	44	56							
65	169	52	66	13	19					
70	196	60	76	15	22					
75	224	69	87	17	25					
80	255	79	99	20	28					
85	288	89	112	22	32					
90		100	126	25	36					
95		111	140	28	40		12			
100		123	155	31	44		14			
110		149	188	37	54	13	17			
120		177	224	44	64	15	20			
130		208	262	52	75	18	23			
140		241	304	60	87	20	27	12	12	
150		277		69	100	23	31	13	14	
160				79	114	27	35	15	16	
170				89	128	30	40	17	18	
180				100	144	34	44	19	20	
190				111	160	38	49	21	23	
200				123	178	42	55	24	25	
220				149	215	50	66	29	30	
240				178	256	60	79	34	36	12
250				193	277	65	86	37	39	13
260				208	300	70	93	40	42	14
280				242		82	107	47	49	16
300				277		94	123	54	56	18
325						110	145	63	66	22
350						127	168	73	77	25
375						146	193	84	88	29
400						166	219	95	100	33

* The recommended ranges are shown in **bold**

Using the differential pressure (D.P.) tables

- Generally, the recommended low ΔP signal is 24" so it can be read on most HVAC instruments. D.P.'s below 12" are not accurate on some sizes.
- The upper D.P. limit is an effort to minimize the permanent pressure loss which is 10 % of the D.P. signal. Any venturi can be operated above the recommended range if the permanent pressure drop is acceptable.
- The D.P.'s in the table were calculated using the following formula:

$$D.P. = \left(\frac{GPM \cdot 17.3}{FF} \right)^2$$

Flow factors (FF) for all models are listed below.

Models	FF
200L	86.6
200H	156
250L	139
250H	312
300L	260
300H	537
400L	468
400H	710
500L	693
500H	1730
600L	1210
600H	3465
800L	2080
800H	4765
1000L	3118
1000H	6930
1200L	5200
1200H	8660
1400L	6930

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SUBMITTAL DATA SHEET
 ISSUE DATE: MAY 2008
 REVISION DATE: MAY 2008

DIFFERENTIAL PRESSURE: kPa and inches of water

Flow GPM	Models											
	400H	500L	500H	600L	600H	800L	800H	1000L	1000H	1200L	1200H	1400L
400	95	100	16	33								
425	108	113	18	37								
450	121	126	20	41		14						
475	134	141	23	46		16						
500	149	156	25	51		17						
525	164	172	28	56		19						
550	180	189	30	62		21						
575	197	207	33	68		23						
600	214	225	36	74		25						
625	232	244	39	80		27		12				
650	251	263	42	87		29		13				
675	271	285	46	93		32		14				
700	292	306	49	100	12	34		15				
750			56	115	14	39		17				
800			64	131	16	44		20				
850			72	148	18	50		22				
900			81	166	20	56		25				
950			90	185	23	63	12	28				
1000			100	205	25	69	13	31				
1100			121	248	30	84	16	37		13		
1200			144	295	36	100	19	44		16		
1300			169		42	117	22	52		19		
1400			196		49	136	26	60	12	22		
1500			226		56	156	30	69	14	25		14
1600			257		64	178	34	79	16	28		16
1700			290		72	200	38	89	18	32	12	18
1800					81	225	43	100	20	36	13	20
1900					90	250	48	111	23	40	14	23
2000					100	277	53	123	25	44	16	25
2200					121		64	149	30	54	15	30
2400					144		76	178	36	64	23	36
2600					169		89	209	42	75	27	42
2800					196		104	242	49	87	31	49
3000					225		119	278	56	100	36	56
3200					256		135		64	114	41	64
3400					289		153		72	128	46	72
3600							171		81	144	52	81
3800							191		90	160	58	90
4000							211		100	178	64	100
4200							233		110	196	71	110
4400							256		121	215	77	121
4600							280		132	235	85	132
4800									144	256	92	144
5000									156	277	100	156
5500									189		121	189
6000									224		144	224
6500									264		169	264
7000											196	306

Dimensions not to be used for construction unless prints is certified by factory.