# **6.0 Sizing Tables**

# **NATURAL GAS LOW PRESSURE**

Locate proper sizing table based on total pressure drop allowed in piping system by local utility for each installation.

## **CAPACITY TABLES OF CSST - TABLE 1**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 6 – 7 inches WC (1/4 psig) Pressure Drop: 0.5 inch WC (Based on a 0.6 Specific Gravity Gas)

	Tubing Length (feet)																	
Tube Size	(EHD)	5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250	300
3/8"	15	64	45	37	32	29	26	23	20	18	17	16	15	14	12	10	9	8
1/2"	18	95	68	56	49	44	40	35	32	29	27	25	24	23	19	16	14	13
3/4"	25	283	200	163	141	126	115	100	89	81	75	70	66	63	51	44	40	36
1"	31	626	424	337	287	253	228	194	171	154	141	131	123	116	92	78	69	62
11/4"	37	950	671	547	474	423	386	334	299	273	252	236	222	211	172	149	133	121

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n)

L = is the additional length (ft.) of tubing to be added to actual run.

n = is the number of additional fittings and/or bends.

## **CAPACITY TABLES OF CSST - TABLE 2**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 6 - 7 inches WC (1/4 psig) Pressure Drop: 1.0 inch WC (Based on a 0.6 Specific Gravity Gas)

	Tubing Length (feet)																	
Tube Size	(EHD)	5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250	300
3/8"	15	90	64	52	45	41	37	32	29	26	24	23	21	20	16	14	13	12
1/2"	18	132	95	78	68	61	56	49	44	40	37	35	33	32	26	23	20	19
3/4"	25	400	283	231	200	179	163	141	126	115	107	100	94	89	73	63	56	51
1"	31	925	626	498	424	373	337	287	253	228	209	194	181	171	136	116	102	92
1¹/4"	37	1346	950	775	671	600	547	474	423	386	357	334	315	299	244	211	188	172

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n)

L = is the additional length (ft.) of tubing to be added to actual run.

n = is the number of additional fittings and/or bends.

#### **NATURAL GAS**

Locate proper sizing table based on total pressure drop allowed in piping system by local utility for each installation.

## **CAPACITY TABLES OF CSST – TABLE 3**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 8 – 10 inches WC Pressure Drop: 3 inch WC (Based on a 0.6 Specific Gravity Gas)

Tubing Length (feet)																	
(EHD)	5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250	300
15	156	110	90	78	70	64	55	50	45	42	39	37	35	29	25	22	20
18	222	160	132	115	103	95	83	74	68	63	59	56	53	44	38	34	32
25	692	490	400	346	310	283	245	219	200	185	173	163	155	126	109	98	89
31	1717	1162	925	787	694	626	532	469	424	388	360	337	318	253	215	189	171
-		-															299
	15 18 25	15 156 18 222 25 692 31 1717	15 156 110 18 222 160 25 692 490 31 1717 1162	15 156 110 90   18 222 160 132   25 692 490 400   31 1717 1162 925	15 156 110 90 78   18 222 160 132 115   25 692 490 400 346   31 1717 1162 925 787	15 156 110 90 78 70   18 222 160 132 115 103   25 692 490 400 346 310   31 1717 1162 925 787 694	15 156 110 90 78 70 64   18 222 160 132 115 103 95   25 692 490 400 346 310 283   31 1717 1162 925 787 694 626	(EHD)     5     10     15     20     25     30     40       15     156     110     90     78     70     64     55       18     222     160     132     115     103     95     83       25     692     490     400     346     310     283     245       31     1717     1162     925     787     694     626     532	(EHD)     5     10     15     20     25     30     40     50       15     156     110     90     78     70     64     55     50       18     222     160     132     115     103     95     83     74       25     692     490     400     346     310     283     245     219       31     1717     1162     925     787     694     626     532     469	(EHD)     5     10     15     20     25     30     40     50     60       15     156     110     90     78     70     64     55     50     45       18     222     160     132     115     103     95     83     74     68       25     692     490     400     346     310     283     245     219     200       31     1717     1162     925     787     694     626     532     469     424	(EHD)     5     10     15     20     25     30     40     50     60     70       15     156     110     90     78     70     64     55     50     45     42       18     222     160     132     115     103     95     83     74     68     63       25     692     490     400     346     310     283     245     219     200     185       31     1717     1162     925     787     694     626     532     469     424     388	(EHD)     5     10     15     20     25     30     40     50     60     70     80       15     156     110     90     78     70     64     55     50     45     42     39       18     222     160     132     115     103     95     83     74     68     63     59       25     692     490     400     346     310     283     245     219     200     185     173       31     1717     1162     925     787     694     626     532     469     424     388     360	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90       15     156     110     90     78     70     64     55     50     45     42     39     37       18     222     160     132     115     103     95     83     74     68     63     59     56       25     692     490     400     346     310     283     245     219     200     185     173     163       31     1717     1162     925     787     694     626     532     469     424     388     360     337	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100       15     156     110     90     78     70     64     55     50     45     42     39     37     35       18     222     160     132     115     103     95     83     74     68     63     59     56     53       25     692     490     400     346     310     283     245     219     200     185     173     163     155       31     1717     1162     925     787     694     626     532     469     424     388     360     337     318	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150       15     156     110     90     78     70     64     55     50     45     42     39     37     35     29       18     222     160     132     115     103     95     83     74     68     63     59     56     53     44       25     692     490     400     346     310     283     245     219     200     185     173     163     155     126       31     1717     1162     925     787     694     626     532     469     424     388     360     337     318     253	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150     200       15     156     110     90     78     70     64     55     50     45     42     39     37     35     29     25       18     222     160     132     115     103     95     83     74     68     63     59     56     53     44     38       25     692     490     400     346     310     283     245     219     200     185     173     163     155     126     109       31     1717     1162     925     787     694     626     532     469     424     388     360     337     318     253     215	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150     200     250       15     156     110     90     78     70     64     55     50     45     42     39     37     35     29     25     22       18     222     160     132     115     103     95     83     74     68     63     59     56     53     44     38     34       25     692     490     400     346     310     283     245     219     200     185     173     163     155     126     109     98       31     1717     1162     925     787     694     626     532     469     424     388     360     337     318     253     215     189

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n) L = is the additional length (ft.) of tubing to be added to actual run. n = is the number of additional fittings and/or bends.

# **CAPACITY TABLES OF CSST - TABLE 4**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 11 – 13 inches WC Pressure Drop: 6 inch WC (Based on a 0.6 Specific Gravity Gas)

Tubing Length (feet)																	
(EHD)	5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250	300
15	220	156	127	110	99	90	78	70	64	59	55	52	50	41	35	31	29
18	308	222	183	160	144	132	115	103	95	88	83	78	74	61	53	48	44
25	979	692	565	490	438	400	346	310	283	262	245	231	219	179	155	138	126
31	2536	1717	1366	1162	1025			694	628	574	532	498	469	373	318	280	253
_																	423
	15 18	15 220 18 308 25 979 31 2536	15 220 156   18 308 222   25 979 692   31 2536 1717	15 220 156 127   18 308 222 183   25 979 692 565   31 2536 1717 1366	15 220 156 127 110   18 308 222 183 160   25 979 692 565 490   31 2536 1717 1366 1162	15 220 156 127 110 99   18 308 222 183 160 144   25 979 692 565 490 438   31 2536 1717 1366 1162 1025	15 220 156 127 110 99 90   18 308 222 183 160 144 132   25 979 692 565 490 438 400   31 2536 1717 1366 1162 1025 925	(EHD)     5     10     15     20     25     30     40       15     220     156     127     110     99     90     78       18     308     222     183     160     144     132     115       25     979     692     565     490     438     400     346       31     2536     1717     1366     1162     1025     925     787	(EHD)     5     10     15     20     25     30     40     50       15     220     156     127     110     99     90     78     70       18     308     222     183     160     144     132     115     103       25     979     692     565     490     438     400     346     310       31     2536     1717     1366     1162     1025     925     787     694	(EHD)     5     10     15     20     25     30     40     50     60       15     220     156     127     110     99     90     78     70     64       18     308     222     183     160     144     132     115     103     95       25     979     692     565     490     438     400     346     310     283       31     2536     1717     1366     1162     1025     925     787     694     628	(EHD)     5     10     15     20     25     30     40     50     60     70       15     220     156     127     110     99     90     78     70     64     59       18     308     222     183     160     144     132     115     103     95     88       25     979     692     565     490     438     400     346     310     283     262       31     2536     1717     1366     1162     1025     925     787     694     628     574	(EHD)     5     10     15     20     25     30     40     50     60     70     80       15     220     156     127     110     99     90     78     70     64     59     55       18     308     222     183     160     144     132     115     103     95     88     83       25     979     692     565     490     438     400     346     310     283     262     245       31     2536     1717     1366     1162     1025     925     787     694     628     574     532	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90       15     220     156     127     110     99     90     78     70     64     59     55     52       18     308     222     183     160     144     132     115     103     95     88     83     78       25     979     692     565     490     438     400     346     310     283     262     245     231       31     2536     1717     1366     1162     1025     925     787     694     628     574     532     498	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100       15     220     156     127     110     99     90     78     70     64     59     55     52     50       18     308     222     183     160     144     132     115     103     95     88     83     78     74       25     979     692     565     490     438     400     346     310     283     262     245     231     219       31     2536     1717     1366     1162     1025     925     787     694     628     574     532     498     469	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150       15     220     156     127     110     99     90     78     70     64     59     55     52     50     41       18     308     222     183     160     144     132     115     103     95     88     83     78     74     61       25     979     692     565     490     438     400     346     310     283     262     245     231     219     179       31     2536     1717     1366     1162     1025     925     787     694     628     574     532     498     469     373	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150     200       15     220     156     127     110     99     90     78     70     64     59     55     52     50     41     35       18     308     222     183     160     144     132     115     103     95     88     83     78     74     61     53       25     979     692     565     490     438     400     346     310     283     262     245     231     219     179     155       31     2536     1717     1366     1162     1025     925     787     694     628     574     532     498     469     373     318	(EHD)     5     10     15     20     25     30     40     50     60     70     80     90     100     150     200     250       15     220     156     127     110     99     90     78     70     64     59     55     52     50     41     35     31       18     308     222     183     160     144     132     115     103     95     88     83     78     74     61     53     48       25     979     692     565     490     438     400     346     310     283     262     245     231     219     179     155     138       31     2536     1717     1366     1162     1025     925     787     694     628     574     532     498     469     373     318     280

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n) L = is the additional length (ft.) of tubing to be added to actual run. n = is th

n = is the number of additional fittings and/or bends.

### **NATURAL GAS**

Locate proper sizing table based on total pressure drop allowed in piping system by local utility for each installation.

### **CAPACITY TABLES OF CSST – TABLE 5**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 13 – 14 inches WC Pressure Drop: 6 inch WC (Based on a 0.6 Specific Gravity Gas)

	Tubing Length (feet)																	
Tube Size	(EHD)	5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250	300
3/8"	15	220	156	127	110	99	90	78	70	64	59	55	52	50	41	35	31	29
1/2"	18	308	222	183	160	144	132	115	103	95	88	83	78	74	61	53	48	44
3/4"	25	979	692	565	490	438	400	346	310	283	262	245	231	219	179	155	138	126
1"	31	2536	1717	1366	1162	1025	925	787	694	626	574	532	498	469	373	318	280	253
<b>1</b> ¹/4"	37	3310	2337	1906	1650	1475	1346	1165	1041	950	880	822	775	735	600	519	464	423

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n) L =is the additional length (ft.) of tubing to be added to actual run.

n = is the number of additional fittings and/or bends.

# **CAPACITY TABLES OF CSST - TABLE 6**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 2 psig Pressure Drop: 1 psig (Based on a 0.6 Specific Gravity Gas)

							<b>Tubing Le</b>	ength (feet	t)						
Tube Size	(EHD)	10	25	30	40	50	75	80	100	150	200	250	300	400	500
3/8"	15	332	211	193	167	150	123	119	106	87	75	67	62	53	48
1/2"	18	458	297	272	238	214	176	171	154	127	111	100	91	80	72
3/4"	25	1488	941	859	744	666	544	526	471	384	333	298	272	235	210
1"	31	4065	2427	2190	1862	1642	1307	1261	1112	885	752	664	599	509	449
11/4"	37	5040	3181	2903	2513	2246	1833	1774	1586	1294	1120	1001	913	791	707

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n) L = is the additional length (ft.) of tubing to be added to actual run. n = is the number of additional fittings and/or bends.

Caution: Capacities show in Table 6 may exceed maximum capacity of the regulator. With a 1 psig regulator inlet pressure and a 20 inch WC drop across the regulator (8" WC regulator outlet setting), the maximum flow capacity of a single 325-3 is 252 CFH, while the 325-5A is 587. The use of multiple parallel regulators may be required if permitted by local code.

#### **NATURAL GAS**

Locate proper sizing table based on total pressure drop allowed in piping system by local utility for each installation.

## **CAPACITY TABLES OF CSST - TABLE 7**

Maximum Capacity of Pro-Flex® CSST in Cubic Feet per Hour of Gas Gas Pressure: 5 psig Pressure Drop: 3.5 psig (Based on a 0.6 Specific Gravity Gas)

	Tubing Length (feet)														
Tube Size	(EHD)	10	25	30	40	50	75	80	100	150	200	250	300	400	500
3/8"	15	617	392	359	311	279	228	221	198	162	140	126	115	99	89
1/2"	18	828	537	493	430	387	319	310	279	230	201	180	166	144	130
3/4"	25	2783	1761	1608	1393	1245	1017	985	881	719	623	557	508	440	394
1"	31	8228	4912	4433	3770	3325	2647	2552	2251	1791	1524	1344	1213	1031	909
11/4"	37	9452	5967	5445	4713	4213	3437	3328	2975	2427	2101	1878	1714	1483	1326

\*Table includes losses for four 90 degree bends and two (2) end fittings. Tubing runs with larger numbers of bends and/or fitting shall be increased by an equivalent length of tubing according to the following formula:

L = 1.3 (n) L = is the additional length (ft.) of tubing to be added to actual run. n = is the number of additional fittings and/or bends.

**Note:** Table 7 does include the effects of pressure drop across the line regulator. If regulator pressure drop exceeds 1 psig across 325-3 or 325-5A regulators, DO NOT USE THIS TABLE. Consult with Tru-Flex Metal Hose Corp. for guidance.

Caution: Capacities shown in Table 7 may exceed maximum capacity of the regulator. With a 1.5 psig regulator inlet pressure and a 1 psig pressure drop across the regulator, the maximum flow capacity of a single 325-3 is 298 CFH while the 325-5A is 695 CFH. The use of multiple parallel regulators may be required if permitted by local code.