

Office of Building Department

Town of Southington, Connecticut

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NATURAL GAS PIPE SIZING TABLES

In the 2021 *International Residential Code* (IRC) portion of the 2022 Connecticut State Building Code, the tables for sizing gas piping are given in cubic feet per hour for natural gas and for Btu per hour (BtuH) for propane. This can be confusing and, because most gas-fired appliances are rated in Btu rather than in cubic feet per hour, it requires an extra calculation when installing natural gas-fired appliances.

As a convenience for permit applicants, the Southington Building Department has converted the natural gas tables from the IRC from cubic feet per hour to BtuH. The converted charts are found on the following pages.

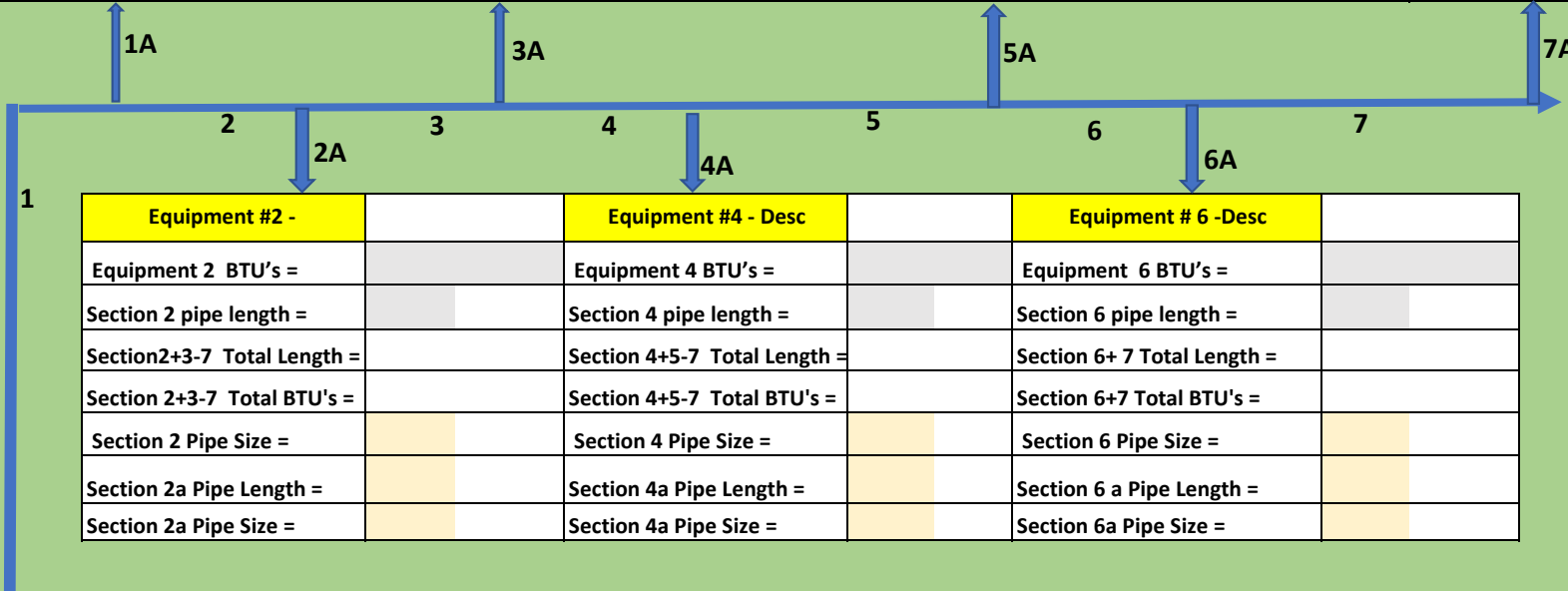
Please keep in mind that the conversion factor represents 100 percent efficiency, which does not exist with current technology. If the appliance(s) is (are) rated in BtuH output, the numbers in the tables on the following pages will need to be adjusted by the efficiency rating of the appliance(s).

Reset Form

Town of Southington Building Department
Gas Line & Equipment Specs

Label Equipment in the Order it is
Installed
Water Heater , Furnace /Boiler ,
Range, Fireplace Generator,
Pool Heater

Equipment #1 - Desc		Equipment #3- Desc		Equipment #5 - Desc		Label Equipment in the Order it is Installed Water Heater , Furnace /Boiler , Range, Fireplace Generator, Pool Heater	
Equipment 1 BTU's =		Equipment 3 BTU's =		Equipment 5 BTU's =			
Section 1 pipe length =		Section 3 pipe length =		Section 5 pipe length =			
Section 1+2-7 Total Length =		Section 3+4-7 Total Length =		Section 5+6-7 Total Length =			Equipment #7 - Desc
Section 1+2-7 Total BTU's =		Section 3+4-7 Total BTU's =		Section 5+6-7 Total BTU's =			Equipment 7 BTU's =
Section 1 Pipe Size =		Section 3 Pipe Size =		Section 5 Pipe Size =			Section 7 pipe length =
Section 1a Pipe Length =		Section 3a Pipe Length =		Section 5a Pipe Length =			Section 7 pipe size =
Section 1a Pipe Size =		Section 3a Pipe Size =		Section 5a Pipe Size =		Section 7a Pipe size	



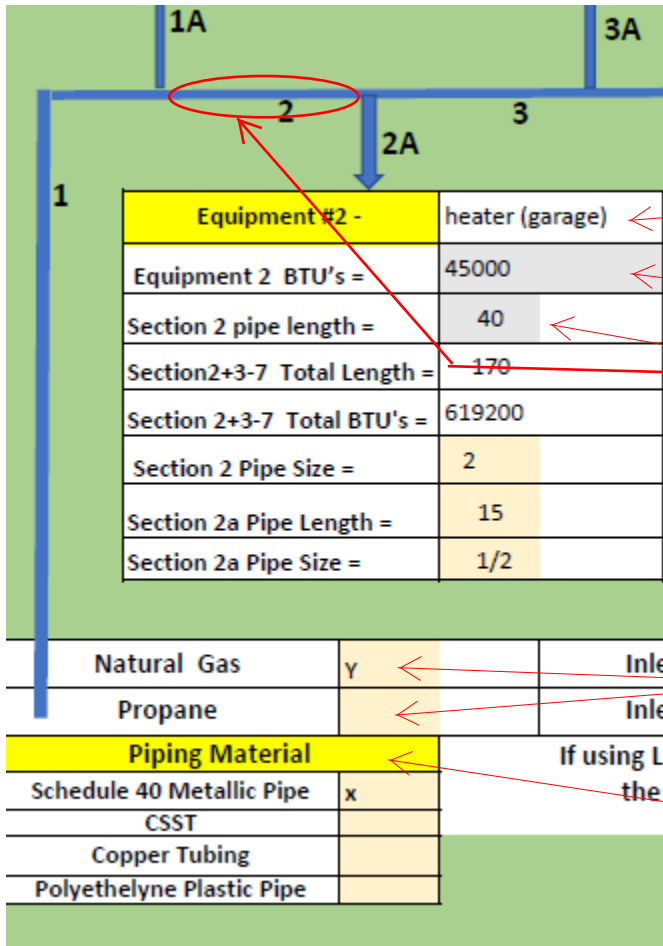
Equipment #2 -		Equipment #4 - Desc		Equipment #6 - Desc	
Equipment 2 BTU's =		Equipment 4 BTU's =		Equipment 6 BTU's =	
Section 2 pipe length =		Section 4 pipe length =		Section 6 pipe length =	
Section 2+3-7 Total Length =		Section 4+5-7 Total Length =		Section 6+7 Total Length =	
Section 2+3-7 Total BTU's =		Section 4+5-7 Total BTU's =		Section 6+7 Total BTU's =	
Section 2 Pipe Size =		Section 4 Pipe Size =		Section 6 Pipe Size =	
Section 2a Pipe Length =		Section 4a Pipe Length =		Section 6 a Pipe Length =	
Section 2a Pipe Size =		Section 4a Pipe Size =		Section 6a Pipe Size =	

Natural Gas		Inlet Pressure		Pressure Drop (WC)	
Propane		Inlet Pressure		Pressure Drop	

Piping Material	If using LP indicate the location of the 2nd stage regulator
Schedule 40 Metallic Pipe	
CSST	
Copper Tubing	
Polyethelyne Plastic Pipe	

Instructions on how to fill out a gas sizing chart using the longest run method.

NOTE: When filling out the form in Excel the tables will automatically calculate for you



Add equipment type here

Add equipment size in BTU's here

Add the section of pipe length here

Natural Gas	<input checked="" type="checkbox"/>	Inle
Propane	<input type="checkbox"/>	Inle
Piping Material		If using LI the:
Schedule 40 Metallic Pipe	<input checked="" type="checkbox"/>	
CSST	<input type="checkbox"/>	
Copper Tubing	<input type="checkbox"/>	
Polyethelyne Plastic Pipe	<input type="checkbox"/>	

Select natural gas or LP

Select piping material

Equipment #2 -	heater (garage)	
Equipment 2 BTU's =	45000	E
Section 2 pipe length =	40	St
Section 2+3-7 Total Length =	170	St
Section 2+3-7 Total BTU's =	619200	St
Section 2 Pipe Size =	2	S
Section 2a Pipe Length =	15	St
Section 2a Pipe Size =	1/2	St

This section is calculated for you based on system total pipe length

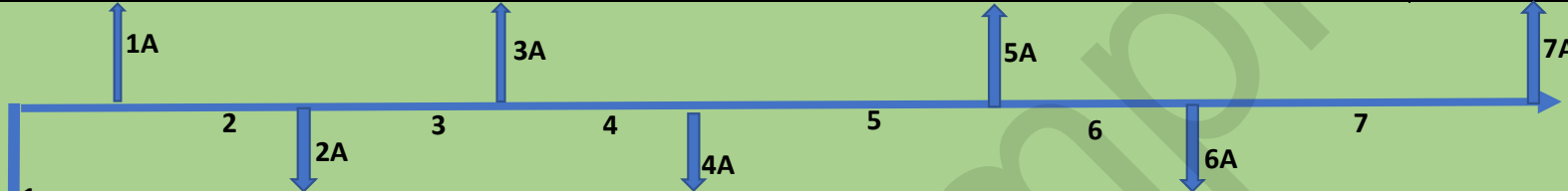
This section is calculated for you based on the systems total BTU's

Section pipe size is based on total length and total BTU's. Use converted tables based on the IRC G2413.4

**Town of Southington Building Department
Gas Line & Equipment Specs**

Label Equipment in the Order it is
Installed
Water Heater , Furnace /Boiler ,
Range, Fireplace
Generator,
Pool Heater

Equipment #1 - Desc	Generator	Equipment #3- Desc	stove top	Equipment #5 - Desc	fireplace		
Equipment 1 BTU's =	279000	Equipment3 BTU's =	60200	Equipment 5 BTU's =	40000		
Section 1 pipe length =	10	Section 3 pipe length =	40	Section 5 pipe length =	40		
Section 1+2-7 Total Length =	180	Section 3+4-7 Total Length =	130	Section 5+6-7 Total Length =	80	Equipment #7 - Desc	pool heater
Section 1+2-7 Total BTU's =	898200	Section 3+4-7 Total BTU's =	574200	Section 5+6-7 Total BTU's =	402000	Equipment 7 BTU's =	250000
Section 1 Pipe Size =	2 1/2	Section 3 Pipe Size =	2	Section 5 Pipe Size =	1 1/4	Section 7 pipe length =	20
Section 1a Pipe Length =	20	Section 3a Pipe Length =	10	Section 5a Pipe Length =	10	Section 7 pipe size =	3/4
Section 1a Pipe Size =	1	Section 3a Pipe Size =	1/2	Section 5a Pipe Size =	1/2	Section 7a Pipe size	3/4



Equipment #2 -	heater (garage)	Equipment #4 - Desc	furnace	Equipment #6 -Desc	furnace
Equipment 2 BTU's =	45000	Equipment 4 BTU's =	112000	Equipment 6 BTU's =	112000
Section 2 pipe length =	40	Section 4 pipe length =	10	Section 6 pipe length =	20
Section2+3-7 Total Length =	170	Section 4+5-7 Total Length =	90	Section 6+ 7 Total Length =	40
Section 2+3-7 Total BTU's =	619200	Section 4+5-7 Total BTU's =	514000	Section 6+7 Total BTU's =	362000
Section 2 Pipe Size =	2	Section 4 Pipe Size =		Section 6 Pipe Size =	1 1/4
Section 2a Pipe Length =	15	Section 4a Pipe Length =		Section 6 a Pipe Length =	8
Section 2a Pipe Size =	1/2	Section 4a Pipe Size =		Section 6a Pipe Size =	1/2

Natural Gas	Y	Inlet Pressure	2	Pressure Drop (WC)	0.5
Propane		Inlet Pressure		Pressure Drop	

Piping Material		If using LP indicate the location of the 2nd stage regulator
Schedule 40 Metallic Pipe	X	
CSST		
Copper Tubing		
Polyethelyne Plastic Pipe		

**IRC TABLE G2413.4(1)
SCHEDULE 40 METALLIC PIPE**

Gas	Natural
Inlet Pressure	Less than 2 psi
Pressure Drop	0.5 in. w.c.
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

PIPE SIZE (Inches)														
Nominal	½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026	5.047	6.065	7.981	10.020	11.938
Length (ft)	Capacity in Thousands of Btu/Hour													
10	178	372	701	1,437	2,161	4,157	6,618	11,686	23,888	43,226	69,907	143,744	260,600	412,616
20	122	255	482	990	1,479	2,854	4,550	8,046	16,443	29,679	48,087	98,759	178,904	284,385
30	98	206	387	794	1,189	2,296	3,650	6,463	13,133	23,785	38,573	79,317	143,744	227,508
40	84	176	331	679	1,019	1,965	3,123	5,533	11,272	20,372	32,989	67,839	123,061	195,450
50	74	156	294	603	903	1,737	2,771	4,902	9,990	18,097	29,266	60,186	109,617	172,699
60	67	142	266	546	818	1,572	2,513	4,436	9,059	16,339	26,474	54,498	98,966	157,187
70	62	130	245	503	753	1,448	2,306	4,085	8,325	15,098	24,405	50,155	91,107	143,744
80	58	121	228	467	700	1,344	2,151	3,795	7,746	14,064	22,751	46,639	84,695	134,436
90	54	114	214	438	657	1,262	2,017	3,568	7,270	13,133	21,303	43,744	79,524	126,163
100	52	108	202	414	620	1,200	1,903	3,371	6,867	12,410	20,165	41,365	75,078	118,924
125	46	95	179	367	550	1,055	1,686	2,989	6,091	10,962	17,787	36,608	66,494	105,481
150	41	86	162	333	498	960	1,531	2,699	5,512	9,979	16,132	33,195	60,290	95,450
175	38	80	149	306	458	883	1,406	2,492	5,078	9,183	14,891	30,507	55,429	87,797
200	35	73	139	284	426	821	1,313	2,316	4,716	8,542	13,857	28,438	51,603	81,696
250	31	65	123	252	378	728	1,158	2,048	4,188	7,570	12,306	25,129	45,708	72,389
300	28	59	112	229	342	660	1,055	1,861	3,795	6,856	11,065	22,854	41,468	65,564
350	26	55	102	210	315	607	967	1,706	3,485	6,308	10,217	20,993	38,159	60,393
400	24	51	95	195	293	565	900	1,593	3,247	5,874	9,504	19,545	35,471	56,153
450	23	48	89	183	275	529	844	1,489	3,040	5,512	8,914	18,304	33,299	52,637
500	22	44	85	174	260	501	797	1,406	2,875	5,202	8,428	17,270	31,437	49,741
550	21	42	81	164	247	475	757	1,334	2,730	4,943	8,004	16,443	29,886	47,260
600	20	40	77	157	236	453	723	1,282	2,606	4,716	7,632	15,719	28,438	45,088
650	19	39	73	150	225	434	692	1,220	2,492	4,509	7,311	14,995	27,301	43,226
700	18	37	70	145	216	417	665	1,179	2,399	4,333	7,022	14,478	26,163	41,468
750	18	36	68	140	209	402	640	1,127	2,306	4,178	6,763	13,857	25,233	39,917
800	17	35	65	134	202	388	618	1,096	2,234	4,033	6,536	13,444	24,405	38,573
850	17	34	63	130	195	375	599	1,055	2,161	3,909	6,319	13,030	23,578	37,332
900	16	33	61	126	189	364	580	1,026	2,089	3,785	6,132	12,616	22,854	36,194
950	16	32	60	122	184	354	564	996	2,027	3,671	5,957	12,203	22,234	35,160
1,000	14	31	58	119	179	344	548	969	1,975	3,578	5,791	11,892	21,613	34,230
1,100	14	29	55	113	170	327	520	920	1,872	3,392	5,502	11,272	20,476	32,472
1,200	13	28	53	108	161	311	496	878	1,789	3,237	5,243	10,755	19,545	31,024
1,300	12	27	51	103	155	299	476	841	1,717	3,102	5,026	10,321	18,718	29,679
1,400	12	26	49	99	149	286	457	808	1,644	2,978	4,829	9,917	17,994	28,542
1,500	11	25	47	96	144	276	441	778	1,582	2,875	4,654	9,555	17,373	27,508
1,600	11	24	46	92	139	267	425	752	1,531	2,771	4,488	9,224	16,753	26,474
1,700	11	23	43	89	134	259	412	727	1,479	2,678	4,343	8,925	16,236	25,646
1,800	10	23	42	87	130	250	399	705	1,437	2,606	4,209	8,656	15,719	24,922
1,900	10	22	41	84	126	243	388	685	1,396	2,523	4,095	8,407	15,305	24,199
2,000	NA	21	40	82	123	237	376	666	1,355	2,461	3,981	8,180	14,891	23,475

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

IRC TABLE G2413.4(2)
SCHEDULE 40 METALLIC PIPE

Gas	Natural
Inlet Pressure	2.0 psi
Presssure Drop	1.0 psi
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

PIPE SIZE (Inches)									
Nominal	½	¾	1	1¼	1½	2	2½	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Thousands of Btu/Hour								
10	1,566	3,152	5,766	11,822	17,733	34,117	54,443	96,234	195,993
20	1,110	2,230	4,075	8,369	12,548	24,162	38,473	68,027	138,958
30	901	1,825	3,329	6,834	10,246	19,703	31,421	55,583	113,033
40	781	1,576	2,883	5,921	8,866	17,111	27,273	48,117	98,204
50	698	1,410	2,582	5,299	7,933	15,244	24,370	43,036	87,834
60	638	1,286	2,354	4,832	7,238	14,000	22,192	39,302	80,160
70	590	1,193	2,178	4,480	6,709	12,963	20,636	36,399	74,249
80	552	1,120	2,043	4,189	6,274	12,133	19,288	34,014	69,479
90	521	1,047	1,918	3,951	5,911	11,407	18,148	32,043	65,435
100	479	969	1,773	3,640	5,455	10,474	16,696	29,555	60,353
125	429	867	1,587	3,256	4,874	9,395	14,933	26,444	54,028
150	386	779	1,421	2,924	4,376	8,431	13,481	23,747	48,428
175	357	721	1,317	2,697	4,055	7,809	12,444	21,984	44,902
200	330	666	1,213	2,499	3,744	7,218	11,511	20,325	41,480
250	289	605	1,078	2,219	3,329	6,409	10,214	18,044	36,814
300	262	548	980	2,012	3,018	5,807	9,250	16,385	33,391
350	241	504	901	1,856	2,769	5,341	8,514	15,037	30,695
400	224	469	839	1,721	2,582	4,967	7,923	14,000	28,518
450	211	440	787	1,618	2,416	4,667	7,435	13,170	26,755
500	199	416	744	1,524	2,292	4,407	7,020	12,444	25,303
550	189	395	706	1,452	2,167	4,179	6,668	11,822	24,058
600	180	376	674	1,379	2,074	3,992	6,357	11,200	22,918
650	172	361	645	1,327	1,981	3,816	6,087	10,785	21,984
700	166	346	620	1,276	1,908	3,671	5,849	10,339	21,051
750	160	334	597	1,224	1,835	3,536	5,641	9,966	20,325
800	155	323	577	1,182	1,773	3,412	5,444	9,623	19,599
850	149	312	558	1,141	1,711	3,308	5,268	9,312	18,977
900	144	303	541	1,110	1,659	3,204	5,112	9,032	18,459
950	140	293	526	1,078	1,618	3,111	4,957	8,773	17,836
1,000	137	285	511	1,047	1,576	3,028	4,822	8,524	17,422
1,100	130	272	485	996	1,493	2,872	4,584	8,099	16,488
1,200	123	259	463	951	1,421	2,738	4,376	7,726	15,762
1,300	118	248	443	910	1,369	2,624	4,189	7,404	15,140
1,400	114	239	426	874	1,307	2,520	4,024	7,114	14,518
1,500	110	229	411	842	1,265	2,427	3,878	6,844	14,000
1,600	106	222	396	813	1,224	2,344	3,744	6,616	13,481
1,700	103	215	384	787	1,182	2,271	3,619	6,398	13,066
1,800	100	207	371	763	1,141	2,198	3,515	6,201	12,651
1,900	96	202	361	741	1,110	2,136	3,412	6,025	12,340
2,000	94	196	352	721	1,078	2,084	3,318	5,859	11,926

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(3)
SEMIRIGID COPPER TUBING**

Gas	Natural
Inlet Pressure	Less than 2 psi
Pressure Drop	0.5 in. w.c.
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

TUBE SIZE (Inches)										
Nominal	K & L	¼	⅜	½	¾	¾	1	1¼	1½	2
	ACR	⅜	½	⅝	¾	¾	1¼	1½	—	—
Outside		0.375	0.500	0.625	0.750	0.875	1.125	1.375	1.625	2.125
Inside		0.305	0.402	0.527	0.652	0.745	0.995	1.245	1.481	1.959
Length (ft)	Capacity in Thousands of Btu/Hour									
10		28	57	115	202	286	612	1,099	1,742	3,619
20		19	39	80	139	197	421	757	1,193	2,489
30		16	31	63	111	158	338	608	959	2,001
40		13	27	55	95	136	289	521	820	1,711
50		11	24	49	85	120	256	461	727	1,514
60		10	22	44	77	109	232	418	658	1,369
70		NA	20	40	71	100	214	385	607	1,265
80		NA	19	37	65	93	199	358	564	1,172
90		NA	18	35	61	87	187	336	529	1,099
100		NA	17	33	58	82	176	317	500	1,037
125		NA	15	29	52	73	157	281	443	923
150		NA	13	27	47	66	141	254	401	836
175		NA	12	25	43	61	130	234	369	769
200		NA	11	23	40	57	121	218	343	716
250		NA	NA	21	35	50	107	193	305	635
300		NA	NA	19	32	46	97	175	276	574
350		NA	NA	17	29	41	89	161	254	529
400		NA	NA	16	27	39	83	149	236	492
450		NA	NA	15	26	36	78	140	222	461
500		NA	NA	13	24	34	74	133	209	436
550		NA	NA	13	23	33	71	127	199	414
600		NA	NA	12	22	31	66	120	190	395
650		NA	NA	12	21	30	64	115	181	379
700		NA	NA	11	21	29	61	111	174	363
750		NA	NA	11	20	28	59	107	168	351
800		NA	NA	10	19	27	57	103	162	338
850		NA	NA	10	19	26	55	100	157	327
900		NA	NA	NA	18	25	54	96	152	317
950		NA	NA	NA	18	25	52	93	148	308
1,000		NA	NA	NA	17	24	51	91	144	300
1,100		NA	NA	NA	16	23	48	87	137	284
1,200		NA	NA	NA	16	22	46	83	131	272
1,300		NA	NA	NA	15	21	44	79	124	260
1,400		NA	NA	NA	13	20	43	76	120	250
1,500		NA	NA	NA	13	19	40	74	115	241
1,600		NA	NA	NA	13	19	39	71	112	232
1,700		NA	NA	NA	12	18	38	68	108	225
1,800		NA	NA	NA	12	18	37	66	105	218
1,900		NA	NA	NA	11	17	36	64	102	212
2,000		NA	NA	NA	11	17	35	62	99	206

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

IRC TABLE G2413.4(4)
SEMIRIGID COPPER TUBING

Gas	Natural
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

TUBE SIZE (Inches)										
Nominal	K & L	¼	⅜	½	¾	1	1¼	1½	2	
	ACR	⅝	¾	⅞	1	1¼	1½	—	—	
Outside		0.375	0.500	0.625	0.750	0.875	1.125	1.375	1.625	2.125
Inside		0.305	0.402	0.527	0.652	0.745	0.995	1.245	1.481	1.959
Length (ft)		Capacity in Thousands of Btu/Hour								
10		254	525	1,068	1,867	2,644	5,652	10,183	16,074	33,391
20		175	361	734	1,286	1,825	3,889	7,000	10,992	23,021
30		140	289	589	1,030	1,462	3,121	5,621	8,866	18,459
40		120	248	504	881	1,255	2,675	4,812	7,580	15,762
50		107	220	447	782	1,110	2,364	4,262	6,720	14,000
60		96	199	405	708	1,005	2,147	3,868	6,087	12,651
70		89	184	372	651	924	1,970	3,557	5,600	11,718
80		83	170	346	606	860	1,835	3,308	5,216	10,889
90		78	160	326	568	807	1,721	3,101	4,895	10,183
100		74	151	307	537	762	1,628	2,935	4,615	9,623
125		65	134	273	476	675	1,441	2,593	4,096	8,524
150		59	121	247	431	612	1,307	2,354	3,712	7,726
175		54	112	227	397	563	1,203	2,167	3,412	7,103
200		51	104	212	369	524	1,120	2,012	3,173	6,616
250		45	92	188	327	465	991	1,784	2,810	5,859
300		40	83	170	297	421	898	1,618	2,551	5,309
350		37	77	156	273	387	826	1,483	2,344	4,884
400		34	72	145	254	360	768	1,379	2,178	4,542
450		32	67	136	239	338	722	1,296	2,043	4,262
500		31	63	129	225	319	681	1,224	1,939	4,024
550		29	60	122	214	303	647	1,161	1,835	3,827
600		28	57	116	203	289	617	1,110	1,753	3,650
650		27	55	112	195	277	591	1,068	1,680	3,495
700		26	53	107	188	265	568	1,022	1,607	3,360
750		25	51	104	180	256	548	985	1,556	3,235
800		24	49	100	174	248	529	951	1,504	3,121
850		23	48	96	169	240	511	921	1,452	3,028
900		23	46	93	164	232	496	893	1,410	2,935
950		22	45	91	159	225	481	867	1,369	2,841
1,000		21	44	88	155	219	469	843	1,327	2,769
1,100		20	41	84	147	208	445	801	1,265	2,634
1,200		19	39	80	140	199	424	764	1,203	2,510
1,300		19	37	77	134	190	407	731	1,151	2,406
1,400		18	36	74	129	183	390	703	1,110	2,313
1,500		17	35	71	124	176	376	677	1,068	2,219
1,600		17	34	68	120	170	363	653	1,031	2,147
1,700		16	32	66	116	165	352	633	998	2,074
1,800		16	31	64	112	160	341	614	968	2,012
1,900		15	31	62	109	155	331	596	940	1,960
2,000		15	30	61	106	150	321	580	914	1,898

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(5)
CORRUGATED STAINLESS STEEL TUBING (CSST)**

Gas	Natural
Inlet Pressure	Less than 2 psi
Presssure Drop	0.5 in. w.c.
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

TUBE SIZE (EHD)														
Flow Designation	13	15	18	19	23	25	30	31	37	39	46	48	60	62
Length (ft)	Capacity in Thousands of Btu/Hour													
5	48	65	119	139	233	280	488	566	928	1,075	1,856	2,147	3,795	4,293
10	33	46	85	99	167	199	342	397	663	774	1,307	1,524	2,696	3,038
15	26	36	68	80	137	163	277	321	543	638	1,068	1,244	2,219	2,489
20	23	32	60	69	120	142	240	279	473	556	921	1,089	1,918	2,157
25	20	28	54	62	108	127	214	249	424	500	822	971	1,721	1,929
30	19	26	49	57	100	116	195	226	388	458	750	888	1,576	1,763
40	16	22	43	49	86	101	168	195	337	400	648	769	1,369	1,524
50	13	20	38	44	78	90	149	174	303	360	580	690	1,224	1,369
60	12	18	35	39	71	83	136	159	277	330	528	630	1,120	1,244
70	11	17	32	37	65	77	125	146	257	306	488	584	1,037	1,151
80	10	16	30	34	62	72	117	137	241	287	456	546	975	1,078
90	10	15	29	33	59	67	111	130	227	272	430	516	920	1,019
100	9	13	27	31	56	64	105	122	216	258	408	489	874	968
150	7	10	21	24	44	50	81	94	177	213	332	401	717	790
200	6	9	19	22	39	46	74	85	153	186	287	348	622	685
250	5	8	17	20	35	40	65	77	138	167	256	312	558	613
300	5	7	16	18	33	37	59	69	99	153	234	285	510	560

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

IRC TABLE G2413.4(6)
CORRUGATED STAINLESS STEEL TUBING (CSST)

Gas	Natural
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

TUBE SIZE (EHD)														
Flow Designation	13	15	18	19	23	25	30	31	37	39	46	48	60	62
Length (ft)	Capacity in Thousands of Btu/Hour													
10	280	366	609	726	1,141	1,421	2,686	3,101	4,677	5,223	9,955	11,096	19,288	22,399
25	172	228	388	460	735	908	1,680	1,939	2,997	3,379	6,263	7,031	12,340	14,207
30	157	207	355	420	674	831	1,535	1,763	2,738	3,098	5,714	6,429	11,303	12,963
40	134	178	308	364	588	722	1,317	1,524	2,385	2,701	4,936	5,579	9,789	11,303
50	119	160	276	326	529	647	1,182	1,358	2,136	2,430	4,418	4,998	8,783	10,080
75	96	129	226	267	436	531	956	1,110	1,753	2,003	3,598	4,096	7,197	8,234
80	92	124	219	258	422	514	925	1,068	1,701	1,943	3,484	3,961	6,979	7,975
100	82	111	196	230	380	461	824	954	1,524	1,747	3,111	3,547	6,253	7,135
150	66	90	161	189	313	377	670	776	1,255	1,440	2,530	2,904	5,123	5,828
200	57	78	140	163	273	329	578	669	1,089	1,257	2,188	2,520	4,449	5,050
250	51	69	125	146	245	295	515	597	976	1,130	1,960	2,261	3,992	4,521
300	46	63	114	134	225	270	470	544	894	1,036	1,784	2,064	3,650	4,127
400	39	54	100	115	196	233	404	470	777	903	1,545	1,794	3,173	3,578
500	35	48	89	104	176	209	361	419	572	812	1,379	1,607	2,841	3,204

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(7)
POLYETHYLENE PLASTIC PIPE**

Gas	Natural
Inlet Pressure	Less than 2 psi
Pressure Drop	0.5 in. w.c.
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

PIPE SIZE (inches)						
Nominal OD	½	¾	1	1¼	1½	2
Designation	SDR 9	SDR 11	SDR 11	SDR 10	SDR 11	SDR 11
Actual ID	0.660	0.860	1.077	1.328	1.554	1.943
Length (ft)	Capacity in Thousands of Btu/Hour					
10	208	418	753	1,307	1,970	3,536
20	143	287	517	897	1,358	2,437
30	115	230	416	721	1,089	1,950
40	99	197	356	616	931	1,670
50	87	175	315	546	825	1,483
60	79	159	286	495	748	1,348
70	73	145	263	455	688	1,234
80	67	136	245	424	640	1,151
90	63	128	229	397	600	1,078
100	60	120	217	375	567	1,019
125	53	107	192	333	503	903
150	48	96	174	302	455	818
175	45	89	160	278	419	753
200	41	83	149	258	390	700
250	36	74	132	229	345	620
300	33	66	119	207	313	562
350	30	61	110	191	288	517
400	28	57	103	177	268	481
450	27	53	96	166	251	451
500	25	50	91	158	237	426

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(8)
POLYETHYLENE PLASTIC PIPE**

Gas	Natural
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	0.60

(Converted from Cubic Feet per Hour to Btu per Hour)

PIPE SIZE (inches)						
Nominal OD	½	¾	1	1¼	1½	2
Designation	SDR 9	SDR 11	SDR 11	SDR 10	SDR 11	SDR 11
Actual ID	0.660	0.860	1.077	1.328	1.554	1.943
Length (ft)	Capacity in Thousands of Btu/Hour					
10	1,929	3,858	6,958	12,029	18,251	32,769
20	1,327	2,655	4,781	8,286	12,548	22,503
30	1,068	2,126	3,847	6,658	10,049	18,044
40	910	1,825	3,287	5,693	8,607	15,451
50	807	1,618	2,914	5,050	7,622	13,688
60	731	1,462	2,644	4,573	6,906	12,444
70	673	1,348	2,427	4,210	6,357	11,407
80	625	1,255	2,261	3,920	5,911	10,577
90	587	1,172	2,126	3,671	5,548	9,966
100	555	1,110	2,001	3,474	5,237	9,416
125	492	984	1,773	3,080	4,646	8,348
150	445	892	1,607	2,790	4,210	7,560
175	410	820	1,483	2,561	3,868	6,958
200	382	763	1,379	2,385	3,598	6,471
250	338	676	1,224	2,115	3,194	5,735
300	306	613	1,110	1,918	2,893	5,195
350	282	564	1,017	1,763	2,665	4,781
400	262	525	947	1,638	2,478	4,449
450	246	493	888	1,535	2,323	4,169
500	232	465	839	1,452	2,198	3,941
550	221	442	796	1,379	2,084	3,744
600	211	421	760	1,317	1,991	3,567
650	201	403	728	1,265	1,908	3,422
700	194	388	699	1,213	1,825	3,287
750	187	373	673	1,172	1,763	3,163
800	180	361	650	1,130	1,701	3,059
850	174	348	629	1,089	1,649	2,955
900	169	338	610	1,058	1,597	2,872
950	164	329	593	1,027	1,556	2,790
1,000	160	319	577	999	1,504	2,707
1,100	151	304	548	949	1,431	2,572
1,200	144	289	523	905	1,369	2,458
1,300	139	277	500	867	1,307	2,354
1,400	133	267	480	833	1,255	2,261
1,500	129	256	463	802	1,213	2,178
1,600	123	248	447	775	1,172	2,105
1,700	119	240	432	750	1,130	2,033
1,800	116	232	419	727	1,099	1,970
1,900	113	226	408	705	1,068	1,918
2,000	110	220	396	686	1,037	1,867

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(9)
SCHEDULE 40 METALLIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	10 psi
Pressure Drop	1 psi
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN FIRST STAGE (high pressure regulator) AND SECOND STAGE (low pressure regulator)									
PIPE SIZE (Inches)									
Nominal	½	¾	1	1¼	1½	2	2½	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Thousands of Btu/Hour								
10	3,320	6,950	13,100	26,900	40,300	77,600	124,000	219,000	446,000
20	2,280	4,780	9,000	18,500	27,700	53,300	85,000	150,000	306,000
30	1,830	3,840	7,220	14,800	22,200	42,800	68,200	121,000	246,000
40	1,570	3,280	6,180	12,700	19,000	36,600	58,400	103,000	211,000
50	1,390	2,910	5,480	11,300	16,900	32,500	51,700	91,500	187,000
60	1,260	2,640	4,970	10,200	15,300	29,400	46,900	82,900	169,000
70	1,160	2,430	4,570	9,380	14,100	27,100	43,100	76,300	156,000
80	1,080	2,260	4,250	8,730	13,100	25,200	40,100	70,900	145,000
90	1,010	2,120	3,990	8,190	12,300	23,600	37,700	66,600	136,000
100	956	2,000	3,770	7,730	11,600	22,300	35,600	62,900	128,000
125	848	1,770	3,340	6,850	10,300	19,800	31,500	55,700	114,000
150	768	1,610	3,020	6,210	9,300	17,900	28,600	50,500	103,000
175	706	1,480	2,780	5,710	8,560	16,500	26,300	46,500	94,700
200	657	1,370	2,590	5,320	7,960	15,300	24,400	43,200	88,100
250	582	1,220	2,290	4,710	7,060	13,600	21,700	38,300	78,100
300	528	1,100	2,080	4,270	6,400	12,300	19,600	34,700	70,800
350	486	1,020	1,910	3,930	5,880	11,300	18,100	31,900	65,100
400	452	945	1,780	3,650	5,470	10,500	16,800	29,700	60,600
450	424	886	1,670	3,430	5,140	9,890	15,800	27,900	56,800
500	400	837	1,580	3,240	4,850	9,340	14,900	26,300	53,700
550	380	795	1,500	3,070	4,610	8,870	14,100	25,000	51,000
600	363	759	1,430	2,930	4,400	8,460	13,500	23,900	48,600
650	347	726	1,370	2,810	4,210	8,110	12,900	22,800	46,600
700	334	698	1,310	2,700	4,040	7,790	12,400	21,900	44,800
750	321	672	1,270	2,600	3,900	7,500	12,000	21,100	43,100
800	310	649	1,220	2,510	3,760	7,240	11,500	20,400	41,600
850	300	628	1,180	2,430	3,640	7,010	11,200	19,800	40,300
900	291	609	1,150	2,360	3,530	6,800	10,800	19,200	39,100
950	283	592	1,110	2,290	3,430	6,600	10,500	18,600	37,900
1,000	275	575	1,080	2,230	3,330	6,420	10,200	18,100	36,900
1,100	261	546	1,030	2,110	3,170	6,100	9,720	17,200	35,000
1,200	249	521	982	2,020	3,020	5,820	9,270	16,400	33,400
1,300	239	499	940	1,930	2,890	5,570	8,880	15,700	32,000
1,400	229	480	903	1,850	2,780	5,350	8,530	15,100	30,800
1,500	221	462	870	1,790	2,680	5,160	8,220	14,500	29,600
1,600	213	446	840	1,730	2,590	4,980	7,940	14,000	28,600
1,700	206	432	813	1,670	2,500	4,820	7,680	13,600	27,700
1,800	200	419	789	1,620	2,430	4,670	7,450	13,200	26,900
1,900	194	407	766	1,570	2,360	4,540	7,230	12,800	26,100
2,000	189	395	745	1,530	2,290	4,410	7,030	12,400	25,400

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(10)
SCHEDULE 40 METALLIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	10 psi
Pressure Drop	3 psi
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN FIRST STAGE (high pressure regulator) AND SECOND STAGE (low pressure regulator)									
PIPE SIZE (Inches)									
Nominal	½	¾	1	1¼	1½	2	2½	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Thousands of Btu/Hour								
10	5,890	12,300	23,200	47,600	71,300	137,000	219,000	387,000	789,000
20	4,050	8,460	15,900	32,700	49,000	94,400	150,000	266,000	543,000
30	3,250	6,790	12,800	26,300	39,400	75,800	121,000	214,000	436,000
40	2,780	5,810	11,000	22,500	33,700	64,900	103,000	183,000	373,000
50	2,460	5,150	9,710	19,900	29,900	57,500	91,600	162,000	330,000
60	2,230	4,670	8,790	18,100	27,100	52,100	83,000	147,000	299,000
70	2,050	4,300	8,090	16,600	24,900	47,900	76,400	135,000	275,000
80	1,910	4,000	7,530	15,500	23,200	44,600	71,100	126,000	256,000
90	1,790	3,750	7,060	14,500	21,700	41,800	66,700	118,000	240,000
100	1,690	3,540	6,670	13,700	20,500	39,500	63,000	111,000	227,000
125	1,500	3,140	5,910	12,100	18,200	35,000	55,800	98,700	201,000
150	1,360	2,840	5,360	11,000	16,500	31,700	50,600	89,400	182,000
175	1,250	2,620	4,930	10,100	15,200	29,200	46,500	82,300	167,800
200	1,160	2,430	4,580	9,410	14,100	27,200	43,300	76,500	156,100
250	1,030	2,160	4,060	8,340	12,500	24,100	38,400	67,800	138,400
300	935	1,950	3,680	7,560	11,300	21,800	34,800	61,500	125,400
350	860	1,800	3,390	6,950	10,400	20,100	32,000	56,500	115,300
400	800	1,670	3,150	6,470	9,690	18,700	29,800	52,600	107,300
450	751	1,570	2,960	6,070	9,090	17,500	27,900	49,400	100,700
500	709	1,480	2,790	5,730	8,590	16,500	26,400	46,600	95,100
550	673	1,410	2,650	5,450	8,160	15,700	25,000	44,300	90,300
600	642	1,340	2,530	5,200	7,780	15,000	23,900	42,200	86,200
650	615	1,290	2,420	4,980	7,450	14,400	22,900	40,500	82,500
700	591	1,240	2,330	4,780	7,160	13,800	22,000	38,900	79,300
750	569	1,190	2,240	4,600	6,900	13,300	21,200	37,400	76,400
800	550	1,150	2,170	4,450	6,660	12,800	20,500	36,200	73,700
850	532	1,110	2,100	4,300	6,450	12,400	19,800	35,000	71,400
900	516	1,080	2,030	4,170	6,250	12,000	19,200	33,900	69,200
950	501	1,050	1,970	4,050	6,070	11,700	18,600	32,900	67,200
1,000	487	1,020	1,920	3,940	5,900	11,400	18,100	32,000	65,400
1,100	463	968	1,820	3,740	5,610	10,800	17,200	30,400	62,100
1,200	442	923	1,740	3,570	5,350	10,300	16,400	29,000	59,200
1,300	423	884	1,670	3,420	5,120	9,870	15,700	27,800	56,700
1,400	406	849	1,600	3,280	4,920	9,480	15,100	26,700	54,500
1,500	391	818	1,540	3,160	4,740	9,130	14,600	25,700	52,500
1,600	378	790	1,490	3,060	4,580	8,820	14,100	24,800	50,700
1,700	366	765	1,440	2,960	4,430	8,530	13,600	24,000	49,000
1,800	355	741	1,400	2,870	4,300	8,270	13,200	23,300	47,600
1,900	344	720	1,360	2,780	4,170	8,040	12,800	22,600	46,200
2,000	335	700	1,320	2,710	4,060	7,820	12,500	22,000	44,900

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(11)
SCHEDULE 40 METALLIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN 2 PSIG SERVICE AND LINE PRESSURE REGULATOR									
PIPE SIZE (Inches)									
Nominal	½	¾	1	1¼	1½	2	2½	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Thousands of Btu/Hour								
10	2,680	5,590	10,500	21,600	32,400	62,400	99,500	176,000	359,000
20	1,840	3,850	7,240	14,900	22,300	42,900	68,400	121,000	247,000
30	1,480	3,090	5,820	11,900	17,900	34,500	54,900	97,100	198,000
40	1,260	2,640	4,980	10,200	15,300	29,500	47,000	83,100	170,000
50	1,120	2,340	4,410	9,060	13,600	26,100	41,700	73,700	150,000
60	1,010	2,120	4,000	8,210	12,300	23,700	37,700	66,700	136,000
70	934	1,950	3,680	7,550	11,300	21,800	34,700	61,400	125,000
80	869	1,820	3,420	7,020	10,500	20,300	32,300	57,100	116,000
90	815	1,700	3,210	6,590	9,880	19,000	30,300	53,600	109,000
100	770	1,610	3,030	6,230	9,330	18,000	28,600	50,600	103,000
125	682	1,430	2,690	5,520	8,270	15,900	25,400	44,900	91,500
150	618	1,290	2,440	5,000	7,490	14,400	23,000	40,700	82,900
175	569	1,190	2,240	4,600	6,890	13,300	21,200	37,400	76,300
200	529	1,110	2,080	4,280	6,410	12,300	19,700	34,800	71,000
250	469	981	1,850	3,790	5,680	10,900	17,400	30,800	62,900
300	425	889	1,670	3,440	5,150	9,920	15,800	27,900	57,000
350	391	817	1,540	3,160	4,740	9,120	14,500	25,700	52,400
400	364	760	1,430	2,940	4,410	8,490	13,500	23,900	48,800
450	341	714	1,340	2,760	4,130	7,960	12,700	22,400	45,800
500	322	674	1,270	2,610	3,910	7,520	12,000	21,200	43,200
550	306	640	1,210	2,480	3,710	7,140	11,400	20,100	41,100
600	292	611	1,150	2,360	3,540	6,820	10,900	19,200	39,200
650	280	585	1,100	2,260	3,390	6,530	10,400	18,400	37,500
700	269	562	1,060	2,170	3,260	6,270	9,990	17,700	36,000
750	259	541	1,020	2,090	3,140	6,040	9,630	17,000	34,700
800	250	523	985	2,020	3,030	5,830	9,300	16,400	33,500
850	242	506	953	1,960	2,930	5,640	9,000	15,900	32,400
900	235	490	924	1,900	2,840	5,470	8,720	15,400	31,500
950	228	476	897	1,840	2,760	5,310	8,470	15,000	30,500
1,000	222	463	873	1,790	2,680	5,170	8,240	14,600	29,700
1,100	210	440	829	1,700	2,550	4,910	7,830	13,800	28,200
1,200	201	420	791	1,620	2,430	4,680	7,470	13,200	26,900
1,300	192	402	757	1,550	2,330	4,490	7,150	12,600	25,800
1,400	185	386	727	1,490	2,240	4,310	6,870	12,100	24,800
1,500	178	372	701	1,440	2,160	4,150	6,620	11,700	23,900
1,600	172	359	677	1,390	2,080	4,010	6,390	11,300	23,000
1,700	166	348	655	1,340	2,010	3,880	6,180	10,900	22,300
1,800	161	337	635	1,300	1,950	3,760	6,000	10,600	21,600
1,900	157	327	617	1,270	1,900	3,650	5,820	10,300	21,000
2,000	152	318	600	1,230	1,840	3,550	5,660	10,000	20,400

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(12)
SCHEDULE 40 METALLIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Pressure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN SINGLE- OR SECOND-STAGE (low pressure) REGULATOR AND APPLIANCE									
PIPE SIZE (Inches)									
Nominal	½	¾	1	1¼	1½	2	2½	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Thousands of Btu/Hour								
10	291	608	1,150	2,350	3,520	6,790	10,800	19,100	39,000
20	200	418	787	1,620	2,420	4,660	7,430	13,100	26,800
30	160	336	632	1,300	1,940	3,750	5,970	10,600	21,500
40	137	287	541	1,110	1,660	3,210	5,110	9,030	18,400
50	122	255	480	985	1,480	2,840	4,530	8,000	16,300
60	110	231	434	892	1,340	2,570	4,100	7,250	14,800
80	101	212	400	821	1,230	2,370	3,770	6,670	13,600
100	94	197	372	763	1,140	2,200	3,510	6,210	12,700
125	89	185	349	716	1,070	2,070	3,290	5,820	11,900
150	84	175	330	677	1,010	1,950	3,110	5,500	11,200
175	74	155	292	600	899	1,730	2,760	4,880	9,950
200	67	140	265	543	814	1,570	2,500	4,420	9,010
250	62	129	243	500	749	1,440	2,300	4,060	8,290
300	58	120	227	465	697	1,340	2,140	3,780	7,710
350	51	107	201	412	618	1,190	1,900	3,350	6,840
400	46	97	182	373	560	1,080	1,720	3,040	6,190
450	42	89	167	344	515	991	1,580	2,790	5,700
500	40	83	156	320	479	922	1,470	2,600	5,300
550	37	78	146	300	449	865	1,380	2,440	4,970
600	35	73	138	283	424	817	1,300	2,300	4,700
650	33	70	131	269	403	776	1,240	2,190	4,460
700	32	66	125	257	385	741	1,180	2,090	4,260
750	30	64	120	246	368	709	1,130	2,000	4,080
800	29	61	115	236	354	681	1,090	1,920	3,920
850	28	59	111	227	341	656	1,050	1,850	3,770
900	27	57	107	220	329	634	1,010	1,790	3,640
950	26	55	104	213	319	613	978	1,730	3,530
1,000	25	53	100	206	309	595	948	1,680	3,420
1,100	25	52	97	200	300	578	921	1,630	3,320
1,200	24	50	95	195	292	562	895	1,580	3,230
1,300	23	48	90	185	277	534	850	1,500	3,070
1,400	22	46	86	176	264	509	811	1,430	2,930
1,500	21	44	82	169	253	487	777	1,370	2,800
1,600	20	42	79	162	243	468	746	1,320	2,690
1,700	19	40	76	156	234	451	719	1,270	2,590
1,800	19	39	74	151	226	436	694	1,230	2,500
1,900	18	38	71	146	219	422	672	1,190	2,420
2,000	18	37	69	142	212	409	652	1,150	2,350

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(13)
SEMIRIGID COPPER TUBING**

Gas	Undiluted Propane
Inlet Pressure	10.0 psi
Pressure Drop	1.0 psi
Specific Gravity	1.50

INTENDED USE: SIZING BETWEEN FIRST STAGE (high-pressure regulator) AND SECOND STAGE (low-pressure regulator)										
TUBE SIZE (Inches)										
Nominal	K & L	¼	⅜	½	⅝	¾	1	1¼	1½	2
	ACR	⅜	½	⅝	¾	⅞	1½	1¾	—	—
Outside		0.375	0.500	0.625	0.750	0.875	1.125	1.375	1.625	2.125
Inside		0.305	0.402	0.527	0.652	0.745	0.995	1.245	1.481	1.959
Length (ft)		Capacity in Thousands of Btu/Hour								
10	513	1,060	2,150	3,760	5,330	11,400	20,500	32,300	67,400	
20	352	727	1,480	2,580	3,670	7,830	14,100	22,200	46,300	
30	283	584	1,190	2,080	2,940	6,290	11,300	17,900	37,200	
40	242	500	1,020	1,780	2,520	5,380	9,690	15,300	31,800	
50	215	443	901	1,570	2,230	4,770	8,590	13,500	28,200	
60	194	401	816	1,430	2,020	4,320	7,780	12,300	25,600	
70	179	369	751	1,310	1,860	3,980	7,160	11,300	23,500	
80	166	343	699	1,220	1,730	3,700	6,660	10,500	21,900	
90	156	322	655	1,150	1,630	3,470	6,250	9,850	20,500	
100	147	304	619	1,080	1,540	3,280	5,900	9,310	19,400	
125	131	270	549	959	1,360	2,910	5,230	8,250	17,200	
150	118	244	497	869	1,230	2,630	4,740	7,470	15,600	
175	109	225	457	799	1,130	2,420	4,360	6,880	14,300	
200	101	209	426	744	1,060	2,250	4,060	6,400	13,300	
250	90	185	377	659	935	2,000	3,600	5,670	11,800	
300	81	168	342	597	847	1,810	3,260	5,140	10,700	
350	75	155	314	549	779	1,660	3,000	4,730	9,840	
400	70	144	292	511	725	1,550	2,790	4,400	9,160	
450	65	135	274	480	680	1,450	2,620	4,130	8,590	
500	62	127	259	453	643	1,370	2,470	3,900	8,120	
550	59	121	246	430	610	1,300	2,350	3,700	7,710	
600	56	115	235	410	582	1,240	2,240	3,530	7,350	
650	54	111	225	393	558	1,190	2,140	3,380	7,040	
700	51	106	216	378	536	1,140	2,060	3,250	6,770	
750	50	102	208	364	516	1,100	1,980	3,130	6,520	
800	48	99	201	351	498	1,060	1,920	3,020	6,290	
850	46	96	195	340	482	1,030	1,850	2,920	6,090	
900	45	93	189	330	468	1,000	1,800	2,840	5,910	
950	44	90	183	320	454	970	1,750	2,750	5,730	
1,000	42	88	178	311	442	944	1,700	2,680	5,580	
1,100	40	83	169	296	420	896	1,610	2,540	5,300	
1,200	38	79	161	282	400	855	1,540	2,430	5,050	
1,300	37	76	155	270	383	819	1,470	2,320	4,840	
1,400	35	73	148	260	368	787	1,420	2,230	4,650	
1,500	34	70	143	250	355	758	1,360	2,150	4,480	
1,600	33	68	138	241	343	732	1,320	2,080	4,330	
1,700	32	66	134	234	331	708	1,270	2,010	4,190	
1,800	31	64	130	227	321	687	1,240	1,950	4,060	
1,900	30	62	126	220	312	667	1,200	1,890	3,940	
2,000	29	60	122	214	304	648	1,170	1,840	3,830	

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(14)
SEMIRIGID COPPER TUBING**

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Pressure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN SINGLE- OR SECOND-STAGE (low-pressure) REGULATOR AND APPLIANCE										
TUBE SIZE (Inches)										
Nominal	K & L	¼	⅜	½	⅝	¾	1	1¼	1½	2
	ACR	⅜	½	⅝	¾	⅞	1½	1¾	—	—
Outside		0.375	0.500	0.625	0.750	0.875	1.125	1.375	1.625	2.125
Inside		0.305	0.402	0.527	0.652	0.745	0.995	1.245	1.481	1.959
Length (ft)	Capacity in Thousands of Btu/Hour									
10	45	93	188	329	467	997	1,800	2,830	5,890	
20	31	64	129	226	321	685	1,230	1,950	4,050	
30	25	51	104	182	258	550	991	1,560	3,250	
40	21	44	89	155	220	471	848	1,340	2,780	
50	19	39	79	138	195	417	752	1,180	2,470	
60	17	35	71	125	177	378	681	1,070	2,240	
70	16	32	66	115	163	348	626	988	2,060	
80	15	30	61	107	152	324	583	919	1,910	
90	14	28	57	100	142	304	547	862	1,800	
100	13	27	54	95	134	287	517	814	1,700	
125	11	24	48	84	119	254	458	722	1,500	
150	10	21	44	76	108	230	415	654	1,360	
175	NA	20	40	70	99	212	382	602	1,250	
200	NA	18	37	65	92	197	355	560	1,170	
250	NA	16	33	58	82	175	315	496	1,030	
300	NA	15	30	52	74	158	285	449	936	
350	NA	14	28	48	68	146	262	414	861	
400	NA	13	26	45	63	136	244	385	801	
450	NA	12	24	42	60	127	229	361	752	
500	NA	11	23	40	56	120	216	341	710	
550	NA	11	22	38	53	114	205	324	674	
600	NA	10	21	36	51	109	196	309	643	
650	NA	NA	20	34	49	104	188	296	616	
700	NA	NA	19	33	47	100	180	284	592	
750	NA	NA	18	32	45	96	174	274	570	
800	NA	NA	18	31	44	93	168	264	551	
850	NA	NA	17	30	42	90	162	256	533	
900	NA	NA	17	29	41	87	157	248	517	
950	NA	NA	16	28	40	85	153	241	502	
1,000	NA	NA	16	27	39	83	149	234	488	
1,100	NA	NA	15	26	37	78	141	223	464	
1,200	NA	NA	14	25	35	75	135	212	442	
1,300	NA	NA	14	24	34	72	129	203	423	
1,400	NA	NA	13	23	32	69	124	195	407	
1,500	NA	NA	13	22	31	66	119	188	392	
1,600	NA	NA	12	21	30	64	115	182	378	
1,700	NA	NA	12	20	29	62	112	176	366	
1,800	NA	NA	11	20	28	60	108	170	355	
1,900	NA	NA	11	19	27	58	105	166	345	
2,000	NA	NA	11	19	27	57	102	161	335	

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(15)
SEMIRIGID COPPER TUBING**

Gas	Undiluted Propane
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	1.50

INTENDED USE: PIPE SIZING BETWEEN 2 PSIG SERVICE AND LINE PRESSURE REGULATOR										
TUBE SIZE (Inches)										
Nominal	K & L	¼	⅜	½	⅝	¾	1	1¼	1½	2
	ACR	⅜	½	⅝	¾	⅞	1½	1¾	—	—
Outside		0.375	0.500	0.625	0.750	0.875	1.125	1.375	1.625	2.125
Inside		0.305	0.402	0.527	0.652	0.745	0.995	1.245	1.481	1.959
Length (ft)		Capacity in Thousands of Btu/Hour								
10	413	852	1,730	3,030	4,300	9,170	16,500	26,000	54,200	
20	284	585	1,190	2,080	2,950	6,310	11,400	17,900	37,300	
30	228	470	956	1,670	2,370	5,060	9,120	14,400	29,900	
40	195	402	818	1,430	2,030	4,330	7,800	12,300	25,600	
50	173	356	725	1,270	1,800	3,840	6,920	10,900	22,700	
60	157	323	657	1,150	1,630	3,480	6,270	9,880	20,600	
70	144	297	605	1,060	1,500	3,200	5,760	9,090	18,900	
80	134	276	562	983	1,390	2,980	5,360	8,450	17,600	
90	126	259	528	922	1,310	2,790	5,030	7,930	16,500	
100	119	245	498	871	1,240	2,640	4,750	7,490	15,600	
125	105	217	442	772	1,100	2,340	4,210	6,640	13,800	
150	95	197	400	700	992	2,120	3,820	6,020	12,500	
175	88	181	368	644	913	1,950	3,510	5,540	11,500	
200	82	168	343	599	849	1,810	3,270	5,150	10,700	
250	72	149	304	531	753	1,610	2,900	4,560	9,510	
300	66	135	275	481	682	1,460	2,620	4,140	8,610	
350	60	124	253	442	628	1,340	2,410	3,800	7,920	
400	56	116	235	411	584	1,250	2,250	3,540	7,370	
450	53	109	221	386	548	1,170	2,110	3,320	6,920	
500	50	103	209	365	517	1,110	1,990	3,140	6,530	
550	47	97	198	346	491	1,050	1,890	2,980	6,210	
600	45	93	189	330	469	1,000	1,800	2,840	5,920	
650	43	89	181	316	449	959	1,730	2,720	5,670	
700	41	86	174	304	431	921	1,660	2,620	5,450	
750	40	82	168	293	415	888	1,600	2,520	5,250	
800	39	80	162	283	401	857	1,540	2,430	5,070	
850	37	77	157	274	388	829	1,490	2,350	4,900	
900	36	75	152	265	376	804	1,450	2,280	4,750	
950	35	72	147	258	366	781	1,410	2,220	4,620	
1,000	34	71	143	251	356	760	1,370	2,160	4,490	
1,100	32	67	136	238	338	721	1,300	2,050	4,270	
1,200	31	64	130	227	322	688	1,240	1,950	4,070	
1,300	30	61	124	217	309	659	1,190	1,870	3,900	
1,400	28	59	120	209	296	633	1,140	1,800	3,740	
1,500	27	57	115	201	286	610	1,100	1,730	3,610	
1,600	26	55	111	194	276	589	1,060	1,670	3,480	
1,700	26	53	108	188	267	570	1,030	1,620	3,370	
1,800	25	51	104	182	259	553	1,000	1,570	3,270	
1,900	24	50	101	177	251	537	966	1,520	3,170	
2,000	23	48	99	172	244	522	940	1,480	3,090	

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(16)
CORRUGATED STAINLESS STEEL TUBING (CSST)**

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Presssure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE: SIZING BETWEEN SINGLE OR SECOND STAGE (Low Pressure) REGULATOR AND THE APPLIANCE SHUTOFF VALVE														
TUBE SIZE (EHD)														
Flow Designation	13	15	18	19	23	25	30	31	37	39	46	48	60	62
Length (ft)	Capacity in Thousands of Btu/Hour													
5	72	99	181	211	355	426	744	863	1,420	1,638	2,830	3,270	5,780	6,550
10	50	69	129	150	254	303	521	605	971	1,179	1,990	2,320	4,110	4,640
15	39	55	104	121	208	248	422	490	775	972	1,620	1,900	3,370	3,790
20	34	49	91	106	183	216	365	425	661	847	1,400	1,650	2,930	3,290
25	30	42	82	94	164	192	325	379	583	762	1,250	1,480	2,630	2,940
30	28	39	74	87	151	177	297	344	528	698	1,140	1,350	2,400	2,680
40	23	33	64	74	131	153	256	297	449	610	988	1,170	2,090	2,330
50	20	30	58	66	118	137	227	265	397	548	884	1,050	1,870	2,080
60	19	26	53	60	107	126	207	241	359	502	805	961	1,710	1,900
70	17	25	49	57	99	117	191	222	330	466	745	890	1,590	1,760
80	15	23	45	52	94	109	178	208	307	438	696	833	1,490	1,650
90	15	22	44	50	90	102	169	197	286	414	656	787	1,400	1,550
100	14	20	41	47	85	98	159	186	270	393	621	746	1,330	1,480
150	11	15	31	36	66	75	123	143	217	324	506	611	1,090	1,210
200	9	14	28	33	60	69	112	129	183	283	438	531	948	1,050
250	8	12	25	30	53	61	99	117	163	254	390	476	850	934
300	8	11	23	26	50	57	90	107	147	234	357	434	777	854

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(17)
CORRUGATED STAINLESS STEEL TUBING (CSST)**

Gas	Undiluted Propane
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	1.50

INTENDED USE: SIZING BETWEEN 2 PSI SERVICE AND THE LINE PRESSURE REGULATOR														
TUBE SIZE (EHD)														
Flow Designation	13	15	18	19	23	25	30	31	37	39	46	48	60	62
Length (ft)	Capacity in Thousands of Btu/Hour													
10	426	558	927	1,110	1,740	2,170	4,100	4,720	7,130	7,958	15,200	16,800	29,400	34,200
25	262	347	591	701	1,120	1,380	2,560	2,950	4,560	5,147	9,550	10,700	18,800	21,700
30	238	316	540	640	1,030	1,270	2,330	2,690	4,180	4,719	8,710	9,790	17,200	19,800
40	203	271	469	554	896	1,100	2,010	2,320	3,630	4,116	7,530	8,500	14,900	17,200
50	181	243	420	496	806	986	1,790	2,070	3,260	3,702	6,730	7,610	13,400	15,400
75	147	196	344	406	663	809	1,460	1,690	2,680	3,053	5,480	6,230	11,000	12,600
80	140	189	333	393	643	768	1,410	1,630	2,590	2,961	5,300	6,040	10,600	12,200
100	124	169	298	350	578	703	1,260	1,450	2,330	2,662	4,740	5,410	9,530	10,900
150	101	137	245	287	477	575	1,020	1,180	1,910	2,195	3,860	4,430	7,810	8,890
200	86	118	213	248	415	501	880	1,020	1,660	1,915	3,340	3,840	6,780	7,710
250	77	105	191	222	373	448	785	910	1,490	1,722	2,980	3,440	6,080	6,900
300	69	96	173	203	343	411	716	829	1,360	1,578	2,720	3,150	5,560	6,300
400	60	82	151	175	298	355	616	716	1,160	1,376	2,350	2,730	4,830	5,460
500	53	72	135	158	268	319	550	638	1,030	1,237	2,100	2,450	4,330	4,880

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(18)
CORRUGATED STAINLESS STEEL TUBING (CSST)**

Gas	Undiluted Propane
Inlet Pressure	5.0 psi
Pressure Drop	3.5 psi
Specific Gravity	1.50

TUBE SIZE (EHD)														
Flow Designation	13	15	18	19	23	25	30	31	37	39	46	48	60	62
Length (ft)	Capacity in Thousands of Btu/Hour													
10	826	1,070	1,710	2,060	3,150	4,000	7,830	8,950	13,100	14,441	28,600	31,200	54,400	63,800
25	509	664	1,090	1,310	2,040	2,550	4,860	5,600	8,400	9,339	18,000	19,900	34,700	40,400
30	461	603	999	1,190	1,870	2,340	4,430	5,100	7,680	8,564	16,400	18,200	31,700	36,900
40	396	520	867	1,030	1,630	2,030	3,820	4,400	6,680	7,469	14,200	15,800	27,600	32,000
50	352	463	777	926	1,460	1,820	3,410	3,930	5,990	6,717	12,700	14,100	24,700	28,600
75	284	376	637	757	1,210	1,490	2,770	3,190	4,920	5,539	10,300	11,600	20,300	23,400
80	275	363	618	731	1,170	1,450	2,680	3,090	4,770	5,372	9,990	11,200	19,600	22,700
100	243	324	553	656	1,050	1,300	2,390	2,760	4,280	4,830	8,930	10,000	17,600	20,300
150	196	262	453	535	866	1,060	1,940	2,240	3,510	3,983	7,270	8,210	14,400	16,600
200	169	226	393	464	755	923	1,680	1,930	3,050	3,474	6,290	7,130	12,500	14,400
250	150	202	352	415	679	828	1,490	1,730	2,740	3,124	5,620	6,390	11,200	12,900
300	136	183	322	379	622	757	1,360	1,570	2,510	2,865	5,120	5,840	10,300	11,700
400	117	158	279	328	542	657	1,170	1,360	2,180	2,498	4,430	5,070	8,920	10,200
500	104	140	251	294	488	589	1,050	1,210	1,950	2,247	3,960	4,540	8,000	9,110

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(19)
POLYETHYLENE PLASTIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Pressure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE: PE PIPE SIZING BETWEEN INTEGRAL 2-STAGE REGULATOR AT TANK OR SECOND STAGE (low-pressure regulator) AND BUILDING						
PIPE SIZE (Inches)						
Nominal OD	½	¾	1	1¼	1½	2
Designation	SDR 9	SDR 11	SDR 11	SDR 10	SDR 11	SDR 11
Actual ID	0.660	0.860	1.077	1.328	1.554	1.943
Length (ft)	Capacity in Thousands of Btu per Hour					
10	340	680	1,230	2,130	3,210	5,770
20	233	468	844	1,460	2,210	3,970
30	187	375	677	1,170	1,770	3,180
40	160	321	580	1,000	1,520	2,730
50	142	285	514	890	1,340	2,420
60	129	258	466	807	1,220	2,190
70	119	237	428	742	1,120	2,010
80	110	221	398	690	1,040	1,870
90	103	207	374	648	978	1,760
100	98	196	353	612	924	1,660
125	87	173	313	542	819	1,470
150	78	157	284	491	742	1,330
175	72	145	261	452	683	1,230
200	67	135	243	420	635	1,140
250	60	119	215	373	563	1,010
300	54	108	195	338	510	916
350	50	99	179	311	469	843
400	46	92	167	289	436	784
450	43	87	157	271	409	736
500	41	82	148	256	387	695

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(20)
POLYETHYLENE PLASTIC PIPE**

Gas	Undiluted Propane
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	1.50

INTENDED USE: PE PIPE SIZING BETWEEN 2 PSIG SERVICE REGULATOR AND LINE PRESSURE REGULATOR						
PIPE SIZE (Inches)						
Nominal OD	½	¾	1	1¼	1½	2
Designation	SDR 9	SDR 11	SDR 11	SDR 10	SDR 11	SDR 11
Actual ID	0.660	0.860	1.077	1.328	1.554	1.943
Length (ft)	Capacity in Thousands of Btu per Hour					
10	3,130	6,260	11,300	19,600	29,500	53,100
20	2,150	4,300	7,760	13,400	20,300	36,500
30	1,730	3,450	6,230	10,800	16,300	29,300
40	1,480	2,960	5,330	9,240	14,000	25,100
50	1,310	2,620	4,730	8,190	12,400	22,200
60	1,190	2,370	4,280	7,420	11,200	20,100
70	1,090	2,180	3,940	6,830	10,300	18,500
80	1,010	2,030	3,670	6,350	9,590	17,200
90	952	1,910	3,440	5,960	9,000	16,200
100	899	1,800	3,250	5,630	8,500	15,300
125	797	1,600	2,880	4,990	7,530	13,500
150	722	1,450	2,610	4,520	6,830	12,300
175	664	1,330	2,400	4,160	6,280	11,300
200	618	1,240	2,230	3,870	5,840	10,500
250	548	1,100	1,980	3,430	5,180	9,300
300	496	994	1,790	3,110	4,690	8,430
350	457	914	1,650	2,860	4,320	7,760
400	425	851	1,530	2,660	4,020	7,220
450	399	798	1,440	2,500	3,770	6,770
500	377	754	1,360	2,360	3,560	6,390
550	358	716	1,290	2,240	3,380	6,070
600	341	683	1,230	2,140	3,220	5,790
650	327	654	1,180	2,040	3,090	5,550
700	314	628	1,130	1,960	2,970	5,330
750	302	605	1,090	1,890	2,860	5,140
800	292	585	1,050	1,830	2,760	4,960
850	283	566	1,020	1,770	2,670	4,800
900	274	549	990	1,710	2,590	4,650
950	266	533	961	1,670	2,520	4,520
1,000	259	518	935	1,620	2,450	4,400
1,100	246	492	888	1,540	2,320	4,170
1,200	234	470	847	1,470	2,220	3,980
1,300	225	450	811	1,410	2,120	3,810
1,400	216	432	779	1,350	2,040	3,660
1,500	208	416	751	1,300	1,960	3,530
1,600	201	402	725	1,260	1,900	3,410
1,700	194	389	702	1,220	1,840	3,300
1,800	188	377	680	1,180	1,780	3,200
1,900	183	366	661	1,140	1,730	3,110
2,000	178	356	643	1,110	1,680	3,020

* For pipe length, add allowance of 5 feet for each 90-degree fitting.

**IRC TABLE G2413.4(21)
POLYETHYLENE PLASTIC TUBING**

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Pressure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE: PE PIPE SIZING BETWEEN INTEGRAL 2-STAGE REGULATOR AT TANK OR SECOND STAGE (low-pressure regulator) AND BUILDING		
Plastic Tubing Size (CTS) (inch)		
Nominal OD	½	¾
Designation	SDR 7	SDR 11
Actual ID	0.445	0.927
Length (ft)	Capacity in Thousands of Btu per Hour	
10	305	2,084
20	209	1,432
30	169	1,150
40	143	984
50	128	873
60	116	790
70	106	727
80	98	677
90	93	634
100	88	599
125	78	531
150	70	481
175	65	443
200	60	413
250	55	388
300	53	365
350	50	347
400	48	332
450	45	305
500	40	284
550	38	267
600	38	252

* For pipe length, add allowance of 5 feet for each 90-degree fitting.