

## COPPER NATURAL GAS SYSTEMS

**TABLE 1** - Maximum Capacity for Copper Tube in Thousands of Btu/h, including a Factor of 20% for Fittings, for Gas Supply Pressures of Less than 7 inches w.c., based on a Pressure Drop of 0.5 inches w.c.

Length of Tube (feet)	Outside Diameter of Tube in Inches						
	3/8	1/2	5/8	3/4	7/8	1 1/8	1 3/8
10	24	50	101	176	250	535	963
20	17	34	69	121	172	368	662
30	13	27	56	97	138	295	531
40	11	23	48	83	118	253	455
50	10	21	42	74	105	224	403
60	9.1	19	38	67	95	203	365
70	8.4	17	35	62	87	187	336
80	7.8	16	33	57	81	174	313
90	7.3	15	31	54	76	163	293
100	6.9	14	29	51	72	154	277
125	6.1	13	26	45	64	136	245
150	5.6	11	23	41	58	124	222
175	5.1	11	21	38	53	114	205
200	4.8	10	20	35	50	106	190
250	4.2	8.7	18	31	44	94	169

**TABLE 2** - Maximum Capacity for Copper Tube in kW, including a Factor of 20% for Fittings, for Gas Supply Pressures of Less than 1.75 kPa, based on a Pressure Drop of 125 Pa

Length of Tube (metres)	Outside Diameter of Tube in Millimetres						
	9.5	13	16	19	22	29	35
3	7.1	15	30	52	74	158	285
6	4.9	10	21	36	51	109	196
9	3.9	8.1	17	29	41	87	157
12	3.5	6.9	14	25	35	75	135
15	3.0	6.2	13	22	31	66	119
18	2.7	5.6	11	20	28	60	108
21	2.5	5.1	10	18	26	55	100
24	2.3	4.8	9.7	17	24	51	93
27	2.2	4.5	9.1	16	23	48	87
30	2.1	4.2	8.6	15	21	46	82
35	1.9	3.9	7.9	14	20	42	76
40	1.8	3.6	7.4	13	18	39	70
45	1.6	3.4	6.9	12	17	37	66
50	1.6	3.2	6.5	11	16	35	62
60	1.4	2.9	5.9	10	15	31	56

**TABLE 3** - Maximum Capacity for Copper Tube in Thousands of Btu/h, including a Factor of 20% for Fittings, for Gas Supply Pressures of 7 inches w.c. to 14 inches w.c., based on a Pressure Drop of 1 inch w.c

Length of Tube (feet)	Outside Diameter of Tube in Inches						
	3/8	1/2	5/8	3/4	7/8	1 <sup>1</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>
10	35	72	147	257	364	778	1 401
20	24	50	101	176	250	535	963
30	19	40	81	142	201	429	773
40	17	34	69	121	172	368	662
50	15	30	61	107	152	326	586
60	13	27	56	97	138	295	531
70	12	25	51	90	127	272	489
80	11	23	48	83	118	253	455
90	11	22	45	78	111	237	427
100	10	21	42	74	105	224	403
125	8.9	18	37	65	93	198	357
150	8.1	17	34	59	84	180	324
175	7.4	15	31	55	77	165	298
200	6.9	14	29	51	72	154	277
250	6.1	13	26	45	64	136	245

**TABLE 4** - Maximum Capacity for Copper Tube in kW, including a Factor of 20% for Fittings, for Gas Supply Pressures of 1.75 kPa up to 3.50 kPa, based on a Pressure Drop of 250 Pa.

Length of Tube (metres)	Outside Diameter of Tube in Millimetres						
	9.5	13	16	19	22	29	35
3	10	21	44	76	108	231	415
6	7.1	15	30	52	74	158	285
9	5.7	12	24	42	60	127	229
12	4.9	10	21	36	51	109	196
15	4.3	9.0	18	32	45	97	174
18	3.9	8.1	17	29	41	87	157
21	3.6	7.5	15	27	38	80	145
24	3.4	6.9	14	25	35	75	135
27	3.2	6.5	13	23	33	70	126
30	3.0	6.2	13	22	31	66	119
35	2.7	5.7	12	20	29	61	110
40	2.6	5.3	11	19	27	57	102
45	2.4	4.9	10	18	25	53	96
50	2.3	4.7	10	17	24	50	91
60	2.1	4.2	8.6	15	21	46	82

**TABLE 5** - Maximum Capacity for Copper Tube in Thousands of Btu/h, including a Factor of 20% for Fittings, for Gas Supply Pressures of 2 psig, based on a Pressure Drop of 1 psig.

Length of Tube (feet)	Outside Diameter of Tube in Inches						
	3/8	1/2	5/8	3/4	7/8	1 <sup>1</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>
10	222	458	933	1 630	2 312	4 939	8 891
20	153	315	641	1 120	1 589	3 395	6 111
30	123	253	515	899	1 276	2 726	4 907
40	105	217	440	770	1 092	2 333	4 200
50	93	192	390	682	968	2 068	3 722
60	84	174	354	618	877	1 873	3 373
70	78	160	325	569	807	1 724	3 103
80	72	149	303	529	751	1 603	2 887
90	68	140	284	496	704	1 504	2 708
100	64	132	268	469	665	1 421	2 558
125	57	117	238	416	590	1 260	2 267
150	51	106	215	377	534	1 141	2 055
175	47	97	198	346	492	1 050	1 890
200	44	91	184	322	457	977	1 758
250	39	80	163	286	405	866	1 558

**TABLE 6** - Maximum Capacity for Copper Tube in kW, including a Factor of 20% for Fittings, for Gas Supply Pressures of 14 kPa, based on a Pressure Drop of 7 kPa.

Length of Tube (metres)	Outside Diameter of Tube in Millimetres						
	9.5	13	16	19	22	29	35
3	66	137	278	486	690	1 474	2 653
6	46	94	191	334	474	1 013	1 824
9	37	75	154	268	381	813	1 464
12	31	65	131	230	326	696	1 253
15	28	57	116	204	289	617	1 111
18	25	52	106	184	262	559	1 006
21	23	48	97	170	241	514	926
24	22	44	90	158	224	478	861
27	20	42	85	148	210	449	808
30	19	39	80	140	199	424	763
35	18	36	74	129	183	390	702
40	16	34	69	120	170	363	653
45	15	32	64	112	159	341	613
50	14	30	61	106	151	322	579
60	13	27	55	96	136	291	525

**TABLE 7** - Maximum Capacity for Copper Tube in Thousands of Btu/h, including a Factor of 20% for Fittings, for Gas Supply Pressures of 2 psig, based on a Pressure Drop of 1.5 psig.

Length of Tube (feet)	Outside Diameter of Tube in Inches						
	3/8	1/2	5/8	3/4	7/8	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>
10	274	566	1 151	2 012	2 855	6 099	10 980
20	189	389	791	1 383	1 962	4 192	7 546
30	151	312	636	1 111	1 576	3 366	6 060
40	130	267	544	951	1 349	2 881	5 186
50	115	237	482	843	1 195	2 553	4 597
60	104	215	437	763	1 083	2 313	4 165
70	96	198	402	702	996	2 128	3 832
80	89	184	374	653	927	1 980	3 565
90	84	172	351	613	870	1 858	3 345
100	79	163	331	579	822	1 755	3 159
125	70	144	294	513	728	1 555	2 800
150	63	131	266	465	660	1 409	2 537
175	58	120	245	428	607	1 296	2 334
200	54	112	228	398	565	1 206	2 171
250	48	99	202	353	500	1 069	1 924

**TABLE 8** - Maximum Capacity for Copper Tube in kW, including a Factor of 20% for Fittings, for Gas Supply Pressures of 14 kPa, based on a Pressure Drop of 10 kPa.

Length of Tube (metres)	Outside Diameter of Tube in Millimetres						
	9.5	13	16	19	22	29	35
3	80	165	335	586	831	1 774	3 194
6	55	113	230	402	571	1 220	2 196
9	44	91	185	323	458	979	1 763
12	38	78	158	277	392	838	1 509
15	33	69	140	245	348	743	1 337
18	30	62	127	222	315	673	1 212
21	28	57	117	204	290	619	1 115
24	26	53	109	190	270	576	1 037
27	24	50	102	178	253	541	973
30	23	47	96	168	239	511	919
35	21	44	89	155	220	470	846
40	20	41	83	144	205	437	787
45	18	38	77	135	192	410	738
50	17	36	73	128	181	387	697
60	16	33	66	116	164	351	632