LP Gas Regulator Selection Chart

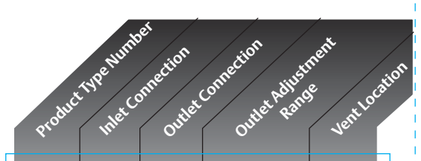
CAPACITY BTU/HOUR	SERVICE
1,100,000	FIRST STAGE Based on 30 psig inlet pressure and 20 % droop
1,800,000	
1,800,000	
1,875,000	
2,000,000	
2,200,000	
2,200,000	
2,400,000	
2,600,000	
650,000	SECOND STAGE Based on 10 psig inlet pressure and 2" WC droop
875,000	
900,000	
1,100,000	
1,100,000	
1,500,000	
1,500,000	
2,300,000	
2,600,000	
5,500,000	
10,000,000+	
450,000	INTEGRAL TWO-STAGE Based on 30 psig inlet pressure and 2" WC droop
450,000	
750,000	
750,000	
850,000	
850,000	
750,000+	HIGH PRESSURE (pounds to pounds) Based on inlet pressure 20 psig greater than outlet pressure with 20% droop
2,625,000+	
10,770,000	
14,000,000	
70,000,000+	

1 Select the type of regulator or service that you require, and set the red bar on the desired capacity requirements. Refer to Bulletin LP-31 for more information on all regulators available.

- **First Stage:** Reduces pressure from the container to 10 psi or less.
- **Second Stage:** Reduces first stage outlet pressure to 14" WC or less (typically 11" WC).
- **Integral Two-Stage:** Combines a first stage pressure regulator and a second-stage regulator in a single unit.
- **High Pressure:** Reduces pressure from the container to a lower pressure in excess of 1 psi.

2 Read the recommended product in the window below, along with other useful information.

The capacities given are for propane in BTU/Hour. To obtain capacity for butane multiply by 0.87, for natural gas multiply by 1.59.



EMERSON

FISHER

Pipe and Tubing Sizing Requirements

Pipe or Tubing Length
10'
20'
30'
40'
50'
60'
70'
80'
90'
100'
150'
200'
250'
300'
350'
400'
450'
500'

Directions For Sizing Between First Stage And Second Stage Regulators:

1 Set the red bar on the required length of pipe or tubing. (If exact length is not shown, use the next longer length.)

2 Add up the total gas demand and locate the maximum capacity requirements in the window. Read the needed size of pipe or tubing above the capacity figure. (If exact capacity is not shown, use the next larger figure.)

For Flowing Pressures other than 10 psi, multiply required gas demand by the correction factor in the table and repeat Step 2. These correction factors are based on a 10% droop from the flowing pressure.

Flowing Pressure, PSI	5	15	20	25	30
Correction Factor	0.61	1.37	1.75	2.13	2.5

SIZING BETWEEN FIRST STAGE AND SECOND STAGE REGULATORS
Based on 10 psig First Stage Setting and 1 psig Pressure Drop

Schedule 40 Iron Pipe						Copper Tubing Type L (O.D.)				Plastic Pipe (O.D.)	
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3/8"	1/2"	5/8"	3/4"	1/2"	1"

Capacities in 1,000 BTU/Hour

Directions for Sizing Between Second Stage Regulators And Appliance:

1 Set the red bar on the required length of pipe or tubing to the most remote outlet. This is the only length needed. (If exact length is not shown, use the next longer length.)

2 For each outlet and section of pipe, identify the maximum capacity requirements and locate in the window. (If exact capacity is not shown, use the next larger figure.)

3 Read the size of pipe or tubing needed for each section above the capacity figure.

SIZING BETWEEN SECOND STAGE REGULATORS AND APPLIANCE
Based on 11" WC Setting and 1/2" Pressure Drop
*(*Based on 2 psig setting and 1 psig pressure drop. (CSST only))*

Schedule 40 Iron Pipe						Copper Tubing Type L (O.D.)				Plastic Pipe (O.D.)		Corrugated Stainless Steel Tubing - CSST (EHD)*			
1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3/8"	1/2"	5/8"	3/4"	1/2"	1"	3/8" (15)	1/2" (19)	3/4" (25)	1" (31)

Capacities in 1,000 BTU/Hour

Contact Your local Sales Office.

Method and data in accordance with NFPA No. 54

Flexigroup 800 665 8053

99 Series	2" NPT	2" NPT	Varies	Not Applicable
630-104/78	2" NPT	2" NPT	8 to 20 psig	Side
627 Series	3/4" or 1" NPT	3/4" or 1" NPT	5 to 20 psig	Side
64 Series	1/2" NPT	1/2" NPT	Varies	----
67C Series	1/4" NPT	1/4" NPT	Varies	----

R632A-JFF	FPOL	3/4" NPT	9 to 13" wc	Over Outlet
R632A-CFF	1/4" NPT	3/4" NPT	9 to 13" wc	Over Outlet
R632A-HCF	FPOL	1/2" NPT	9 to 13" wc	Over Outlet
R632A-BCF	1/4" NPT	1/2" NPT	9 to 13" wc	Over Outlet
R232A-BBF	1/4" NPT	1/2" NPT	10.2" to 13" wc	Over Outlet
R232A-HBF	FPOL	1/2" NPT	10.2" to 13" wc	Over Outlet

CS800IR	1-1/2" or 2" NPT	1-1/2" or 2" NPT	8 to 12" wc	As Specified
CS400IR	1-1/4", 1-1/2", or 2" NPT	1-1/4", 1-1/2", or 2" NPT	10 to 14" wc	As Specified
HSRL-CFC	1" NPT	1" NPT	9 to 13" wc	Over Inlet
HSRL-BFC	3/4" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R622-DFF	3/4" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R622-CFF	1/2" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R652-DFF	3/4" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R652-CFF	1/2" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R642-DFF	3/4" NPT	3/4" NPT	9 to 13" wc	Over Inlet
R622-BCF	1/2" NPT	1/2" NPT	9 to 13" wc	Over Inlet
R222-BAF	1/2" NPT	1/2" NPT	9.5 to 13" wc	Over Inlet

R622H-DGJ	3/4" NPT	3/4" NPT	8 to 12 psig	Over Outlet
R622H-JGJ	FPOL	3/4" NPT	8 to 12 psig	Over Outlet
R622H-HGJ	FPOL	1/2" NPT	8 to 12 psig	Over Outlet
R622H-BGJ	1/2" NPT	1/2" NPT	8 to 12 psig	Over Outlet
R222H-DGJ	3/4" NPT	3/4" NPT	8 to 12 psig	Over Outlet
R222H-JGJ	FPOL	3/4" NPT	8 to 12 psig	Over Outlet
R222H-HGJ	FPOL	1/2" NPT	8 to 12 psig	Over Outlet
R222H-BGJ	1/2" NPT	1/2" NPT	8 to 12 psig	Over Outlet
R122H-AAJ	1/4" NPT	1/2" NPT	10 psig Non Adjustable	Over Outlet

Note: 299H and 133 Series Not Included in Selection Chart

PULL

402	841	1584	3253	4874	9387	68	153	284	481	166	1140	
426	890	1677	3444	5160	9938	70	162	301	509	176	1207	
454	949	1788	3670	5499	10591	76	172	321	543	188	1287	
488	1020	1922	3945	5911	11385	82	185	345	584	202	1383	
530	1109	2089	4270	6426	12375	89	201	375	634	219	1503	
585	1224	2305	4733	7092	13658	90	222	414	700	242	1659	
660	1381	2601	5340	8002	15410	111	251	467	790	273	1872	
772	1613	3039	6240	9349	18005	130	293	546	923	319	2188	
961	2009	3785	7770	11642	22422	161	365	679	1149	397	2724	
1017	2127	4007	8226	12325	23737	171	386	719	1217	421	2884	
1084	2267	4270	8767	13136	25299	182	412	767	1297	448	3074	
1165	2437	4590	9424	14120	27194	196	443	824	1394	482	3304	
1267	2649	4989	10244	15348	29559	213	481	896	1515	524	3591	
1398	2923	5507	11306	16939	32623	235	531	988	1672	578	3964	
1577	3298	6213	12756	19113	36809	265	599	1115	1887	653	4472	
1843	3854	7260	14904	22331	43008	309	700	1303	2205	762	5225	
2280	4780	9000	18500	27700	53300	727	1480	2580	3670	----	----	
3320	6950	13100	26900	40300	77600	1060	2150	3760	5330	----	----	

33	69	140	282	405	810	6	12	22	41	----	----	72	158	319	638
37	77	148	300	440	860	6	13	25	43	----	----	77	167	337	677
40	83	156	320	479	923	7	15	28	47	16	113	82	175	355	716
43	89	167	344	515	992	7	16	30	51	18	121	89	189	383	773
46	97	182	373	560	1078	8	18	33	55	19	132	96	203	411	829
51	107	201	412	618	1190	9	19	36	61	21	145	105	222	448	910
58	120	227	465	697	1343	10	22	41	69	24	164	118	248	501	1019
67	141	265	544	815	1569	11	26	48	80	28	191	137	287	575	1182
84	175	330	677	1014	1954	14	32	59	100	35	238	169	350	703	1450
87	185	349	717	1074	2068	----	----	----	----	37	252	179	372	736	1540
94	198	372	764	1144	2204	16	36	67	113	39	269	189	393	768	1629
106	222	417	857	1285	2470	----	----	----	----	42	289	205	424	844	1766
110	231	435	892	1337	2575	19	42	78	132	46	314	224	460	915	1919
122	255	480	985	1476	2842	20	46	86	146	51	347	243	496	986	2072
137	287	541	1111	1665	3207	23	52	97	164	57	391	271	554	1100	2323
161	336	632	1299	1946	3747	27	61	113	192	67	457	316	640	1266	2692
200	418	788	1617	2423	4666	34	76	141	239	83	569	437	873	1717	3706
291	608	1146	2352	3523	6789	49	110	206	348	121	829	558	1106	2168	4720

PULL