

## Approximate HYDROGEN Gas Pressure Loss Data in (Mbar / m) in Steel Tube

Heat Input Gross	Heat Input Net	GAS RATE M3/HR	Pressure	Pressure	Pressure	Pressure	Pressure	Pressure
			loss / m 1/4"	loss / m 3/8"	loss / m 1/2"	loss / m 3/4"	loss / m 1"	loss / m 1, 1/4"
0.35	0.32	0.1	0.00681					
0.71	0.64	0.2	0.01530	0.00361				
1.06	0.96	0.3	0.02615	0.00596	0.00192			
1.41	1.28	0.4	0.03903	0.00873	0.00275	0.00077		
1.76	1.60	0.5	0.05377	0.01187	0.00370	0.00102	0.000378	
2.12	1.92	0.6	0.07022	0.01535	0.00474	0.00129	0.000474	0.000145
2.47	2.25	0.7	0.08831	0.01917	0.00588	0.00159	0.000578	0.000175
2.82	2.57	0.8	0.10796	0.02329	0.00710	0.00191	0.000689	0.000206
3.18	2.89	0.9	0.12911	0.02772	0.00842	0.00224	0.000807	0.000240
3.53	3.21	1	0.15172	0.03244	0.00981	0.00260	0.000932	0.000276
3.88	3.53	1.1	0.17573	0.03744	0.01129	0.00298	0.001064	0.000313
4.23	3.85	1.2	0.20111	0.04271	0.01284	0.00338	0.001202	0.000352
4.59	4.17	1.3	0.22782	0.04825	0.01447	0.00380	0.001347	0.000393
4.94	4.49	1.4	0.25585	0.05406	0.01618	0.00423	0.001497	0.000435
5.29	4.81	1.5	0.28515	0.06012	0.01795	0.00469	0.001654	0.000479
5.64	5.13	1.6	0.31572	0.06642	0.01980	0.00516	0.001816	0.000524
6.00	5.45	1.7	0.34751	0.07298	0.02172	0.00564	0.001984	0.000571
6.35	5.77	1.8	0.38053	0.07978	0.02371	0.00615	0.002158	0.000620
6.70	6.09	1.9	0.41474	0.08681	0.02576	0.00667	0.002337	0.000670
7.06	6.41	2	0.45013	0.09408	0.02789	0.00721	0.002521	0.000721
7.41	6.74	2.1	0.48668	0.10158	0.03007	0.00776	0.002711	0.000774
7.76	7.06	2.2	0.52438	0.10931	0.03232	0.00833	0.002906	0.000828
8.11	7.38	2.3	0.56321	0.11727	0.03464	0.00891	0.003107	0.000884
8.47	7.70	2.4	0.60316	0.12544	0.03702	0.00951	0.003312	0.000941
8.82	8.02	2.5	0.64422	0.13384	0.03946	0.01013	0.003523	0.001000
9.17	8.34	2.6	0.68638	0.14246	0.04196	0.01076	0.003739	0.001059
9.53	8.66	2.7	0.72962	0.15129	0.04453	0.01141	0.003959	0.001120
9.88	8.98	2.8	0.77394	0.16033	0.04715	0.01207	0.004185	0.001183
10.23	9.30	2.9	0.81932	0.16959	0.04983	0.01274	0.004415	0.001246
10.58	9.62	3	0.86575	0.17905	0.05258	0.01343	0.004650	0.001311
10.94	9.94	3.1	0.91323	0.18872	0.05538	0.01413	0.004890	0.001378
11.29	10.26	3.2	0.96175	0.19860	0.05824	0.01485	0.005134	0.001445
11.64	10.58	3.3	1.01130	0.20868	0.06116	0.01558	0.005384	0.001514
12.00	10.90	3.4	1.06186	0.21897	0.06413	0.01633	0.005638	0.001584
12.35	11.23	3.5	1.11344	0.22945	0.06716	0.01709	0.005896	0.001655
12.70	11.55	3.6	1.16602	0.24013	0.07025	0.01786	0.006159	0.001728
13.05	11.87	3.7	1.21960	0.25101	0.07340	0.01865	0.006427	0.001801
13.41	12.19	3.8	1.27418	0.26209	0.07660	0.01945	0.006699	0.001876
13.76	12.51	3.9	1.32973	0.27336	0.07985	0.02026	0.006975	0.001952
14.11	12.83	4	1.38626	0.28483	0.08316	0.02109	0.007256	0.002029
14.46	13.15	4.1	1.44377	0.29649	0.08652	0.02193	0.007541	0.002108
14.82	13.47	4.2	1.50224	0.30833	0.08994	0.02278	0.007831	0.002187
15.17	13.79	4.3	1.56167	0.32037	0.09341	0.02365	0.008125	0.002268
15.52	14.11	4.4	1.62206	0.33260	0.09693	0.02453	0.008423	0.002350
15.88	14.43	4.5	1.68339	0.34501	0.10051	0.02542	0.008726	0.002432
16.23	14.75	4.6	1.74566	0.35761	0.10414	0.02633	0.009032	0.002517
16.58	15.07	4.7	1.80888	0.37040	0.10782	0.02724	0.009343	0.002602
16.93	15.39	4.8	1.87303	0.38337	0.11156	0.02817	0.009659	0.002688
17.29	15.72	4.9	1.93810	0.39653	0.11534	0.02912	0.009978	0.002776
17.64	16.04	5	2.00411	0.40986	0.11918	0.03007	0.010301	0.002864
17.99	16.36	5.1	2.07102	0.42338	0.12307	0.03104	0.010629	0.002954
18.35	16.68	5.2	2.13886	0.43708	0.12701	0.03202	0.010961	0.003044
18.70	17.00	5.3	2.20760	0.45096	0.13100	0.03301	0.011297	0.003136
19.05	17.32	5.4	2.27725	0.46502	0.13504	0.03402	0.011637	0.003229
19.40	17.64	5.5	2.34781	0.47925	0.13913	0.03504	0.011980	0.003323
19.76	17.96	5.6	2.41926	0.49367	0.14327	0.03607	0.012328	0.003418
20.11	18.28	5.7	2.49160	0.50826	0.14746	0.03711	0.012680	0.003514
20.46	18.60	5.8	2.56484	0.52302	0.15170	0.03816	0.013036	0.003611



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21.17	19.24	6		0.5531	0.16033	0.04030	0.01376	0.003809
21.87	19.89	6.2	2.8666	0.5838	0.16916	0.04249	0.01450	0.004011
22.58	20.53	6.4		0.6153	0.17817	0.04473	0.01525	0.004216
23.28	21.17	6.6		0.6474	0.18738	0.04701	0.01602	0.004426
23.99	21.81	6.8		0.6802	0.19678	0.04934	0.01681	0.004640
24.70	22.45	7	4.5118	0.7136	0.20637	0.05172	0.01761	0.004858
25.40	23.09	7.2		0.7478	0.21615	0.05414	0.01843	0.005080
26.11	23.73	7.4		0.7826	0.22611	0.05661	0.01926	0.005306
26.81	24.38	7.6		0.8180	0.23626	0.05912	0.02010	0.005536
27.52	25.02	7.8		0.8541	0.24660	0.06167	0.02097	0.005770
28.22	25.66	8	6.3944	0.8909	0.25711	0.06428	0.02184	0.006008
28.93	26.30	8.2		0.9283	0.26781	0.06692	0.02273	0.006249
29.64	26.94	8.4		0.9664	0.27869	0.06961	0.02363	0.006495
30.34	27.58	8.6		1.0051	0.28975	0.07234	0.02455	0.006744
31.05	28.22	8.8		1.0444	0.30099	0.07511	0.02549	0.006997
31.75	28.87	9	5.3591	1.0843	0.31240	0.07793	0.02643	0.007254
32.46	29.51	9.2		1.1249	0.32399	0.08079	0.02739	0.007514
33.16	30.15	9.4		1.1661	0.33576	0.08370	0.02837	0.007778
33.87	30.79	9.6		1.2080	0.34770	0.08664	0.02936	0.008046
34.57	31.43	9.8		1.2504	0.35982	0.08963	0.03036	0.008318
35.28	32.07	10	6.4036	1.2935	0.37211	0.09266	0.03138	0.008593
35.99	32.71	10.2		1.3371	0.38457	0.09573	0.03241	0.008872
36.69	33.36	10.4		1.3814	0.39720	0.09884	0.03345	0.009155
37.40	34.00	10.6		1.4263	0.41000	0.10199	0.03451	0.009441
38.10	34.64	10.8		1.4718	0.42297	0.10519	0.03558	0.009730
38.81	35.28	11		1.5179	0.43611	0.10842	0.03667	0.010024
39.51	35.92	11.2		1.5646	0.44942	0.11170	0.03777	0.010321
40.22	36.56	11.4		1.6119	0.46290	0.11502	0.03888	0.010621
40.92	37.20	11.6		1.6598	0.47654	0.11837	0.04000	0.010925
41.63	37.85	11.8		1.7083	0.49035	0.12177	0.04114	0.011232
42.34	38.49	12	8.7248	1.7573	0.50432	0.12521	0.04229	0.011543
43.04	39.13	12.2		1.8070	0.51846	0.12868	0.04346	0.011858
43.75	39.77	12.4		1.8572	0.53276	0.13220	0.04464	0.012175
44.45	40.41	12.6		1.9080	0.54723	0.13575	0.04583	0.012497
45.16	41.05	12.8		1.9594	0.56185	0.13935	0.04703	0.012821
45.86	41.69	13			0.57664	0.14298	0.04825	0.013149
46.57	42.34	13.2			0.59160	0.14665	0.04948	0.013481
47.28	42.98	13.4			0.60671	0.15037	0.05072	0.013816
47.98	43.62	13.6			0.62198	0.15412	0.05197	0.014154
48.69	44.26	13.8			0.63741	0.15790	0.05324	0.014496
49.39	44.90	14	11.3450	2.2789	0.65301	0.16173	0.05452	0.014841
50.10	45.54	14.2			0.66876	0.16560	0.05581	0.015189
50.80	46.18	14.4			0.68466	0.16950	0.05712	0.015540
51.51	46.83	14.6			0.70073	0.17344	0.05844	0.015895
52.21	47.47	14.8			0.71695	0.17742	0.05977	0.016254
52.92	48.11	15			0.73333	0.18144	0.06111	0.016615
53.63	48.75	15.2			0.74987	0.18549	0.06247	0.016980

