

GAS FLOW TABLES POLYETHYLENE PIPE

The flow tables below are reproduced from AS/NZS 5601.1:2013 “Gas installations. Part 1: General installations” and are to be read in conjunction with this Standard.

The sizing of piping for materials or conditions other than those in the pipe sizing tables should be determined using recognised systems or formulae.

NATURAL GAS—FLOW THROUGH— POLYETHYLENE PIPE (AS/NZS 4130 SDR 11) (MJ/h) (Pressure drop of 0.25 kPa; suitable for supply pressures within the range 1.5–2.5 kPa)

Nom. dia. DN	Length of straight pipe in metres								
	2	4	6	8	10	12	14	16	18
20	170	117	94	80	71	65	59	55	52
25	395	272	218	187	165	150	138	128	120
32	928	638	512	438	388	352	324	301	283
40	1680	1154	927	793	703	637	586	545	512
50	3036	2086	1676	1434	1271	1152	1059	986	925
63	5596	3846	3089	2644	2343	2123	1953	1817	1705
75	8950	6151	4939	4228	3747	3395	3123	2906	2726
90	14353	9865	7922	6780	6009	5445	5009	4660	4372
110	24508	16844	13526	11577	10260	9297	8553	7957	7465
160	65337	44906	36061	30864	27354	24784	22801	21212	19903
	20	25	30	35	40	45	50	55	60
25	114	101	91	84	78	73	69	66	63
32	267	237	214	197	183	172	163	154	147
40	483	428	388	357	332	312	294	280	267
50	874	774	701	645	600	563	532	505	482
63	1610	1427	1293	1190	1107	1038	981	932	889
75	2575	2282	2068	1902	1770	1661	1569	1490	1421
90	4130	3660	3317	3051	2839	2663	2516	2389	2279
110	7052	6250	5663	5210	4847	4547	4296	4080	3892
160	18800	16662	15097	13889	12921	12124	11452	10876	10376
	65	70	75	80	85	90	100	120	140
32	141	136	131	126	122	118	112	101	93
40	255	245	236	228	221	214	202	183	169
50	462	444	427	413	399	387	366	331	305
63	851	818	788	761	736	714	674	611	562
75	1361	1308	1260	1216	1177	1141	1078	977	899
90	2183	2097	2020	1951	1888	1830	1729	1567	1441
110	3727	3581	3449	3331	3224	3125	2952	2675	2461
160	9936	9546	9196	8881	8594	8332	7871	7131	6561
	160	180	200	220	240	260	280	300	320
40	157	147	139	132	126	121	116	112	108
50	284	266	251	239	228	218	210	202	195
63	523	491	463	440	420	402	386	372	359
75	836	784	741	704	671	643	618	595	575
90	1341	1258	1188	1129	1077	1031	991	954	922
110	2289	2148	2029	1927	1838	1761	1691	1629	1574
160	6104	5727	5410	5138	4901	4694	4509	4344	4195

NOTE: Use of values printed in shaded areas is not recommended and require professional advice. Deliverable energy flow may be increased by 20% provided supply pressure and 1.5 times pressure drop can meet device minimum inlet pressure requirements. Refer to Paragraph F1 of AS/NZS 5601.1:2013 where further, detailed explanation is provided on these values and the use of the tables in general.

**NATURAL GAS—FLOW THROUGH—
POLYETHYLENE PIPE (AS/NZS 4130 SDR 11) (MJ/h)**
(Pressure drop of 0.75 kPa; suitable for supply pressures within the range 2.75–5 kPa)

Nom. dia. DN	Length of straight pipe in metres								
	2	4	6	8	10	12	14	16	18
20	308	212	170	146	129	117	108	100	94
25	716	492	395	338	300	272	250	232	218
32	1681	1155	928	794	704	638	587	546	512
40	3043	2092	1680	1437	1274	1154	1062	988	927
50	5500	3780	3036	2598	2303	2086	1920	1786	1676
63	10140	6969	5596	4790	4245	3846	3539	3292	3089
75	16215	11145	8950	7660	6789	6151	5659	5264	4939
90	26006	17874	14353	12285	10888	9865	9076	8443	7922
110	44404	30519	24508	20975	18590	16844	15496	14416	13526
	20	25	30	35	40	45	50	55	60
20	89	79	71	66	61	57	54	51	49
25	206	183	165	152	142	133	125	119	114
32	484	429	388	357	332	312	295	280	267
40	876	776	703	647	602	565	533	507	483
50	1583	1403	1271	1169	1088	1021	964	916	874
63	2918	2586	2343	2156	2005	1881	1777	1688	1610
75	4666	4135	3747	3447	3207	3009	2842	2699	2575
90	7483	6632	6009	5528	5143	4826	4558	4329	4130
110	12777	11324	10260	9439	8781	8239	7783	7392	7052
160	34063	30189	27354	25165	23411	21966	20749	19706	18800
	65	70	75	80	85	90	100	120	140
25	109	105	101	97	94	91	86	78	72
32	256	246	237	228	221	214	202	183	169
40	463	445	428	414	400	388	367	332	306
50	836	804	774	748	723	701	663	600	552
63	1542	1481	1427	1378	1334	1293	1221	1107	1018
75	2466	2369	2282	2204	2133	2068	1953	1770	1628
90	3955	3800	3660	3535	3421	3317	3133	2839	2611
110	6753	6488	6250	6035	5841	5663	5349	4847	4459
160	18003	17296	16662	16090	15571	15097	14261	12921	11887
	160	180	200	220	240	260	280	300	320
32	157	147	139	132	126	121	116	112	108
40	284	267	252	239	228	219	210	202	195
50	514	482	455	433	413	395	380	366	353
63	947	889	840	797	761	728	700	674	651
75	1515	1421	1343	1275	1216	1165	1119	1078	1041
90	2429	2279	2153	2045	1951	1868	1795	1729	1670
110	4148	3892	3676	3492	3331	3190	3065	2952	2851
160	11059	10376	9801	9309	8881	8504	8170	7871	7601

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**NATURAL GAS—FLOW THROUGH—
POLYETHYLENE PIPE (AS/NZS 4130 SDR 11) (MJ/h)**
(Pressure drop of 1.5 kPa; suitable for supply pressures within the range 5–10 kPa)

Nom. dia. DN	Length of straight pipe in metres								
	2	4	6	8	10	12	14	16	18
20	448	308	248	212	188	170	157	146	137
25	1042	716	575	492	436	395	363	338	317
32	2445	1681	1350	1155	1024	928	853	794	745
40	4428	3043	2444	2092	1854	1680	1545	1437	1349
50	8003	5500	4417	3780	3350	3036	2793	2598	2438
63	14753	10140	8143	6969	6177	5596	5149	4790	4494
75	23593	16215	13021	11145	9877	8950	8233	7660	7187
90	37838	26006	20884	17874	15841	14353	13205	12285	11526
110	64607	44404	35658	30519	27048	24508	22547	20975	19680
	20	25	30	35	40	45	50	55	60
20	129	114	104	95	89	83	79	75	71
25	300	266	241	221	206	193	183	173	165
32	704	624	565	520	484	454	429	407	388
40	1274	1129	1023	941	876	822	776	737	703
50	2303	2041	1849	1701	1583	1485	1403	1332	1271
63	4245	3762	3409	3136	2918	2738	2586	2456	2343
75	6789	6017	5451	5015	4666	4378	4135	3927	3747
90	10888	9649	8743	8044	7483	7021	6632	6299	6009
110	18590	16476	14928	13734	12777	11988	11324	10755	10260
160	49561	43925	39799	36615	34063	31960	30189	28672	27354
	65	70	75	80	85	90	100	120	140
25	158	152	147	142	137	133	125	114	105
32	372	357	344	332	322	312	295	267	246
40	673	647	623	602	582	565	533	483	445
50	1217	1169	1126	1088	1053	1021	964	874	804
63	2244	2156	2077	2005	1941	1881	1777	1610	1481
75	3588	3447	3321	3207	3103	3009	2842	2575	2369
90	5754	5528	5326	5143	4977	4826	4558	4130	3800
110	9825	9439	9093	8781	8498	8239	7783	7052	6488
160	26195	25165	24243	23411	22656	21966	20749	18800	17296
	160	180	200	220	240	260	280	300	320
32	228	214	202	192	183	176	169	163	157
40	414	388	367	348	332	318	306	294	284
50	748	701	663	629	600	575	552	532	514
63	1378	1293	1221	1160	1107	1060	1018	981	947
75	2204	2068	1953	1855	1770	1695	1628	1569	1515
90	3535	3317	3133	2975	2839	2718	2611	2516	2429
110	6035	5663	5349	5080	4847	4641	4459	4296	4148
160	16090	15097	14261	13544	12921	12374	11887	11452	11059

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**PROPANE—FLOW THROUGH—
POLYETHYLENE PIPE (AS/NZS 4130 SDR 11) (MJ/h)
(Pressure drop of 0.25 kPa; suitable for supply pressures within the range 3 kPa)**

Nom. dia. DN	Length of straight pipe in metres								
	2	4	6	8	10	12	14	16	18
20	292	201	161	138	122	111	102	95	89
25	678	466	374	320	284	257	237	220	206
32	1591	1094	878	752	666	604	555	517	485
40	2881	1980	1590	1361	1206	1093	1005	935	878
50	5207	3579	2874	2460	2180	1975	1817	1691	1586
63	9600	6598	5298	4535	4019	3642	3350	3117	2924
75	15351	10551	8473	7252	6427	5823	5357	4984	4676
90	24621	16922	13589	11630	10308	9339	8592	7993	7500
110	42039	28893	23202	19858	17600	15947	14671	13648	12806
160	112075	77029	61857	52941	46921	42514	39112	36386	34140
	20	25	30	35	40	45	50	55	60
20	84	74	67	62	58	54	51	49	46
25	195	173	157	144	134	126	119	113	108
32	458	406	368	338	315	295	279	265	253
40	829	735	666	612	570	535	505	480	458
50	1498	1328	1203	1107	1030	966	913	867	827
63	2762	2448	2218	2041	1898	1781	1683	1598	1525
75	4417	3915	3547	3263	3036	2849	2691	2555	2438
90	7084	6279	5689	5234	4869	4568	4315	4098	3910
110	12096	10721	9714	8936	8314	7800	7368	6998	6676
160	32248	28581	25897	23825	22164	20796	19644	18657	17799
	65	70	75	80	85	90	100	120	140
40	438	421	406	392	379	367	347	314	289
50	792	761	733	708	685	664	627	568	523
63	1460	1403	1351	1305	1263	1224	1156	1048	964
75	2335	2243	2161	2087	2019	1958	1849	1676	1542
90	3744	3597	3465	3346	3238	3140	2966	2687	2472
110	6393	6142	5917	5714	5530	5361	5064	4588	4221
160	17044	16375	15775	15233	14742	14293	13501	12233	11254
	160	180	200	220	240	260	280	300	320
40	269	253	239	227	216	207	199	192	185
50	486	456	431	409	391	374	359	346	334
63	897	841	795	755	720	690	663	638	616
75	1434	1346	1271	1207	1152	1103	1059	1021	986
90	2300	2158	2038	1936	1847	1769	1699	1637	1581
110	3927	3685	3481	3306	3154	3020	2901	2795	2699
160	10470	9823	9279	8813	8408	8051	7735	7452	7196

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**PROPANE—FLOW THROUGH—
POLYETHYLENE PIPE (AS/NZS 4130 SDR 11) (MJ/h)
(Pressure drop of 10.0 kPa; suitable for supply pressures around 70 kPa)**

Nom. dia. DN	Length of straight pipe in metres								
	2	4	6	8	10	12	14	16	18
20	2791	1918	1540	1318	1169	1059	974	906	850
25	6482	4455	3577	3062	2714	2459	2262	2104	1974
32	15219	10460	8400	7189	6372	5773	5311	4941	4636
40	27554	18938	15208	13016	11536	10452	9616	8946	8394
50	49804	34230	27488	23526	20851	18892	17381	16169	15171
63	91814	63103	50674	43371	38439	34828	32041	29808	27968
75	146825	100912	81036	69356	61469	55695	51239	47668	44725
90	235477	161842	129965	111233	98584	89324	82177	76450	71730
	20	25	30	35	40	45	50	55	60
20	803	712	645	593	552	518	489	465	443
25	1865	1653	1498	1378	1282	1203	1136	1079	1029
32	4379	3881	3517	3235	3010	2824	2667	2533	2417
40	7929	7027	6367	5857	5449	5113	4830	4587	4376
50	14331	12701	11508	10587	9849	9241	8729	8291	7909
63	26419	23414	21215	19518	18157	17036	16093	15284	14581
75	42247	37443	33926	31212	29036	27244	25734	24441	23317
90	67756	60051	54411	50057	46568	43694	41273	39199	37396
110	115691	102534	92904	85470	79513	74605	70471	66930	63852
	65	70	75	80	85	90	100	120	140
20	424	408	393	379	367	356	336	305	280
25	986	947	912	881	853	827	781	707	651
32	2314	2224	2142	2069	2002	1941	1833	1661	1528
40	4190	4026	3878	3745	3624	3514	3319	3008	2767
50	7574	7277	7010	6769	6551	6352	6000	5436	5001
63	13963	13414	12923	12479	12077	11709	11060	10021	9220
75	22329	21452	20666	19957	19313	18725	17687	16026	14744
90	35811	34404	33143	32006	30974	30030	28367	25702	23646
110	61146	58743	56591	54649	52886	51276	48435	43885	40374
	160	180	200	220	240	260	280	300	320
25	605	568	537	510	486	466	447	431	416
32	1422	1334	1260	1197	1142	1093	1050	1012	977
40	2574	2415	2281	2167	2067	1979	1902	1832	1769
50	4653	4365	4124	3916	3736	3578	3437	3311	3198
63	8577	8048	7602	7220	6888	6596	6337	6104	5895
75	13716	12869	12156	11545	11014	10548	10133	9762	9427
90	21998	20640	19496	18516	17665	16916	16251	15656	15119
110	37560	35241	33289	31616	30162	28884	27749	26732	25815

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