

Flow Rate Tables

Illustrating flow at various velocities in Copper, Plastic & MDPE Pipes

Nom	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN150	DN16	DN20	DN15	DN20	DN25	DN40	DN50
Tube	Copper Tube - Table X										Plastic Tube		MDPE (SDR11)				
OD mm	15	22	28	35	42	54	67.7	76.1	108	159	16	20	20	25	32	50	63
WALL mm	0.7	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.2	2.0	2.5	2.5	3.2	4.9	6.2
ID mm	13.6	20.2	26.2	32.6	39.6	51.6	65.3	73.7	105.6	156.6	11.6	16.0	15.1	20.1	25.6	40.2	50.7
Area mm ²	145	320	539	835	1232	2091	3349	4266	8758	19261	106	201	179	317	515	1269	2019

Vel m/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s	Lt/s
0.5	0.07	0.16	0.27	0.42	0.62	1.05	1.67	2.13	4.38	9.63	0.05	0.10	0.09	0.16	0.26	0.63	1.01
1.0	0.15	0.32	0.54	0.83	1.23	2.09	3.35	4.27	8.76	19.26	0.11	0.20	0.18	0.32	0.51	1.27	2.02
1.5	0.22	0.48	0.81	1.25	1.85	3.14	5.02	6.40	13.14	28.89	0.16	0.30	0.27	0.48	0.77	1.90	3.03
2.0	0.29	0.64	1.08	1.67	2.46	4.18	6.70	8.53	17.52	38.52	0.21	0.40	0.36	0.63	1.03	2.54	4.04
2.5	0.36	0.80	1.35	2.09	3.08	5.23	8.37	10.67	21.90	48.15	0.26	0.50	0.45	0.79	1.29	3.17	5.05
3.0	0.44	0.96	1.62	2.50	3.69	6.27	10.05	12.80	26.27	57.78	0.32	0.60	0.54	0.95	1.54	3.81	6.06
3.5	0.51	1.12	1.89	2.92	4.31	7.32	11.72	14.93	30.65	67.41	0.37	0.70	0.63	1.11	1.80	4.44	7.07
4.0	0.58	1.28	2.16	3.34	4.93	8.36	13.40	17.06	35.03	77.04	0.42	0.80	0.72	1.27	2.06	5.08	8.08

Vel m/s	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min	Lt/min
0.5	4.4	9.6	16.2	25.0	36.9	62.7	100.5	128.0	262.7	577.8	3.2	6.0	5.4	9.5	15.4	38.1	60.6
1.0	8.7	19.2	32.3	50.1	73.9	125.5	200.9	256.0	525.5	1156	6.3	12.1	10.7	19.0	30.9	76.2	121.1
1.5	13.1	28.8	48.5	75.1	110.8	188.2	301.4	383.9	788.2	1733	9.5	18.1	16.1	28.6	46.3	114.2	181.7
2.0	17.4	38.5	64.7	100.2	147.8	250.9	401.9	511.9	1051	2311	12.7	24.1	21.5	38.1	61.8	152.3	242.3
2.5	21.8	48.1	80.9	125.2	184.7	313.7	502.4	639.9	1314	2889	15.9	30.2	26.9	47.6	77.2	190.4	302.8
3.0	26.1	57.7	97.0	150.2	221.7	376.4	602.8	767.9	1576	3467	19.0	36.2	32.2	57.1	92.6	228.5	363.4
3.5	30.5	67.3	113.2	175.3	258.6	439.1	703.3	895.9	1839	4045	22.2	42.2	37.6	66.6	108.1	266.5	424.0
4.0	34.9	76.9	129.4	200.3	295.6	501.9	803.8	1024	2102	4623	25.4	48.3	43.0	76.2	123.5	304.6	484.5

Vel m/s	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr
0.5	0.26	0.58	0.97	1.50	2.22	3.76	6.03	7.68	15.76	34.67	0.19	0.36	0.32	0.57	0.93	2.28	3.63
1.0	0.52	1.15	1.94	3.00	4.43	7.53	12.06	15.36	31.53	69.34	0.38	0.72	0.64	1.14	1.85	4.57	7.27
1.5	0.78	1.73	2.91	4.51	6.65	11.29	18.08	23.04	47.29	104.0	0.57	1.09	0.97	1.71	2.78	6.85	10.90
2.0	1.05	2.31	3.88	6.01	8.87	15.06	24.11	30.72	63.06	138.7	0.76	1.45	1.29	2.28	3.71	9.14	14.54
2.5	1.31	2.88	4.85	7.51	11.08	18.82	30.14	38.39	78.82	173.3	0.95	1.81	1.61	2.86	4.63	11.42	18.17
3.0	1.57	3.46	5.82	9.01	13.30	22.58	36.17	46.07	94.59	208.0	1.14	2.17	1.93	3.43	5.56	13.71	21.80
3.5	1.83	4.04	6.79	10.52	15.52	26.35	42.20	53.75	110.4	242.7	1.33	2.53	2.26	4.00	6.49	15.99	25.44
4.0	2.09	4.61	7.76	12.02	17.74	30.11	48.23	61.43	126.1	277.4	1.52	2.90	2.58	4.57	7.41	18.28	29.07

Vel	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr	Lt/hr
0.5	261	577	970	1502	2217	3764	6028	7679	15765	34669	190	362	322	571	926	2285	3634
1.0	523	1154	1941	3005	4434	7528	12056	15358	31530	69339	380	724	645	1142	1853	4569	7268
1.5	784	1731	2911	4507	6651	11292	18085	23037	47295	104008	571	1086	967	1713	2779	6854	10902
2.0	1046	2307	3882	6010	8868	15056	24113	30715	63059	138677	761	1448	1289	2285	3706	9138	14536
2.5	1307	2884	4852	7512	11085	18821	30141	38394	78824	173347	951	1810	1612	2856	4632	11423	18170
3.0	1569	3461	5823	9015	13302	22585	36169	46073	94589	208016	1141	2171	1934	3427	5559	13706	21804
3.5	1830	4038	6793	10517	15519	26349	42198	53752	110354	242686	1332	2533	2256	3998	6485	15992	25438
4.0	2092	4615	7763	12020	17735	30113	48226	61431	126119	277355	1522	2895	2579	4569	7412	18277	29072

Vel	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min
0.5	0.96	2.12	3.56	5.51	8.13	13.80	22.10	28.16	57.80	127.1	0.70	1.33	1.18	2.09	3.40	8.38	13.32
1.0	1.92	4.23	7.12	11.02	16.26	27.60	44.21	56.31	115.6	254.2	1.40	2.65	2.36	4.19	6.79	16.75	26.65
1.5	2.88	6.35	10.67	16.53	24.39	41.41	66.31	84.47	173.4	381.4	2.09	3.98	3.55	6.28	10.19	25.13	39.97
2.0	3.84	8.46	14.23	22.04	32.52	55.21	88.41	112.6	231.2	508.5	2.79	5.31	4.73	8.38	13.59	33.51	53.30
2.5	4.79	10.58	17.79	27.54	40.64	69.01	110.5	140.8	289.0	635.6	3.49	6.64	5.91	10.47	16.99	41.88	66.62
3.0	5.75	12.69	21.35	33.05	48.77	82.81	132.6	168.9	346.8	762.7	4.19	7.96	7.09	12.57	20.38	50.26	79.95
3.5	6.71	14.81	24.91	38.56	56.90	96.61	154.7	197.1	404.6	889.8	4.88	9.29	8.27	14.66	23.78	58.64	93.27
4.0	7.67	16.92	28.47	44.07	65.03	110.4	176.8	225.2	462.4	1017	5.58	10.62	9.46	16.75	27.18	67.02	106.6

Conversion Factors

Litres per second to Litres per minute	X 60.0
Litres per second to cubic metres per hour	X 3.6
Litres per second to Litres per hour	X 3600
Litres per second to gallons per minute	X 13.2

Arrow Valves Ltd

Tel: 01442 823123 Fax: 01442 823234

www.arrowvalves.co.uk
info@arrowvalves.co.uk

Arrow Valves Ltd reserve the right to change specifications, design and materials at any time without notice.
All unit-less dimensions in mm.

© Copyright Arrow Valves Ltd 2001-2012

