

Pipe Flow rates Q - Velocity v- Pressure Drops R



PP-RCT Faser-Climatec D111...  
20°C/1.6 Mpa • 70°C/0.8 Mpa

Temperature: 60 °C  
Pipe Friction Factor: 0.007  
Pipe Roughness: 0.0070 mm

Q = Flow rate (l/s)		v = Flow Velocity (m/s)					R = Pressure Drop (mbar/Mtr)									
d x s		20x2.8	25x3.5	32x3.6	40x3.7	50x4.6	63x5.8	75x6.8	90x8.2	110x10	125x11.4	160x9.5	180x10.7	200x11.9	225x13.4	250x14.8
SDR		7.4	7.4	9	11	11	11	11	11	11	11	17	17	17	17	17
Q	ID →	14.4	18	24.8	32.6	40.8	51.4	61.8	73.6	90.0	102.2	141.0	158.6	176.2	198.2	220.4
0.05	v	0.31	0.20													
	R	1.06	0.36													
0.07	v	0.43	0.28	0.14												
	R	1.90	0.66	0.14												
0.09	v	0.55	0.35	0.19												
	R	2.97	1.02	0.22												
0.10	v	0.61	0.39	0.21	0.12											
	R	3.58	1.23	0.27	0.07											
0.12	v	0.74	0.47	0.25	0.14	0.09										
	R	4.95	1.69	0.37	0.10	0.03										
0.16	v	0.98	0.63	0.33	0.19	0.12	0.08									
	R	8.29	2.82	0.61	0.16	0.06	0.02									
0.18	v	1.11	0.71	0.37	0.22	0.14	0.09									
	R	10.25	3.48	0.75	0.20	0.07	0.02									
0.20	v	1.23	0.79	0.41	0.24	0.15	0.10									
	R	12.40	4.21	0.90	0.24	0.08	0.03									
0.30	v	1.84	1.18	0.62	0.36	0.23	0.14	0.10								
	R	25.93	8.73	1.85	0.50	0.17	0.06	0.02								
0.40	v	2.46	1.57	0.83	0.48	0.31	0.19	0.13	0.09							
	R	43.99	14.73	3.11	0.83	0.28	0.09	0.04	0.02							
0.50	v	3.07	1.97	1.04	0.60	0.38	0.24	0.17	0.12							
	R	66.49	22.17	4.65	1.24	0.42	0.14	0.06	0.03							
0.60	v	3.69	2.36	1.24	0.72	0.46	0.29	0.20	0.14	0.09						
	R	93.38	31.01	6.47	1.72	0.58	0.19	0.08	0.03	0.01						
0.70	v	4.30	2.75	1.45	0.84	0.54	0.34	0.23	0.16	0.11	0.09					
	R	124.63	41.24	8.57	2.27	0.77	0.25	0.10	0.05	0.02	0.01					
0.80	v	4.91	3.15	1.66	0.96	0.61	0.39	0.27	0.19	0.13	0.10					
	R	160.20	52.84	10.94	2.89	0.98	0.32	0.13	0.06	0.02	0.01					
0.90	v	5.53	3.54	1.86	1.08	0.69	0.43	0.30	0.21	0.14	0.11					
	R	200.09	65.82	13.57	3.58	1.21	0.40	0.16	0.07	0.03	0.01					
1.00	v	6.14	3.93	2.07	1.20	0.77	0.48	0.33	0.24	0.16	0.12	0.06				
	R	244.28	80.16	16.48	4.33	1.46	0.48	0.20	0.09	0.03	0.02	0.00				
1.20	v	7.37	4.72	2.49	1.44	0.92	0.58	0.40	0.28	0.19	0.15	0.08	0.06			
	R	345.53	112.90	23.07	6.04	2.03	0.66	0.27	0.12	0.05	0.02	0.01	0.00			
1.40	v	8.60	5.50	2.90	1.68	1.07	0.68	0.47	0.33	0.22	0.17	0.09	0.07	0.06		
	R	463.89	151.03	30.72	8.02	2.69	0.88	0.36	0.16	0.06	0.03	0.01	0.00	0.00		
1.60	v	9.83	6.29	3.31	1.92	1.22	0.77	0.53	0.38	0.25	0.20	0.10	0.08	0.07		
	R	599.33	194.54	39.39	10.25	3.43	1.12	0.46	0.20	0.08	0.04	0.01	0.01	0.00		
1.80	v	11.06	7.08	3.73	2.16	1.38	0.87	0.60	0.42	0.28	0.22	0.12	0.09	0.07	0.06	
	R	751.82	243.40	49.10	12.74	4.25	1.38	0.57	0.24	0.09	0.05	0.01	0.01	0.00	0.00	
2.00	v	12.29	7.86	4.14	2.40	1.53	0.96	0.67	0.47	0.31	0.24	0.13	0.10	0.08	0.06	
	R	921.35	297.60	59.83	15.48	5.15	1.68	0.69	0.30	0.11	0.06	0.01	0.01	0.00	0.00	
2.5	v	15.36	9.83	5.18	3.00	1.91	1.21	0.83	0.59	0.39	0.30	0.16	0.13	0.10	0.08	0.07
	R	1419.65	456.45	91.10	23.43	7.77	2.52	1.03	0.44	0.17	0.09	0.02	0.01	0.01	0.00	0.00
3.00	v	18.43	11.80	6.21	3.60	2.30	1.45	1.00	0.71	0.47	0.37	0.19	0.15	0.12	0.10	0.08
	R	2024.25	648.56	128.71	32.94	10.89	3.51	1.43	0.61	0.23	0.13	0.03	0.02	0.01	0.01	0.00
3.5	v	21.50	13.76	7.25	4.20	2.68	1.69	1.17	0.82	0.55	0.43	0.22	0.18	0.14	0.11	0.09
	R	2735.09	873.90	172.62	43.99	14.49	4.66	1.90	0.81	0.31	0.17	0.04	0.02	0.01	0.01	0.00
4.0	v	24.57	15.73	8.29	4.79	3.06	1.93	1.33	0.94	0.63	0.49	0.26	0.20	0.16	0.13	0.10
	R	3552.14	1132.44	222.81	56.58	18.59	5.97	2.42	1.04	0.39	0.21	0.04	0.03	0.02	0.01	0.01
4.5	v	27.65	17.69	9.32	5.39	3.44	2.17	1.50	1.06	0.71	0.55	0.29	0.23	0.18	0.15	0.12
	R	4475.38	1424.14	279.28	70.69	23.16	7.42	3.01	1.29	0.48	0.26	0.06	0.03	0.02	0.01	0.01
5.0	v		19.66	10.36	5.99	3.83	2.41	1.67	1.18	0.79	0.61	0.32	0.25	0.21	0.16	0.13
	R		1749.01	342.01	86.33	28.23	9.02	3.65	1.56	0.59	0.32	0.07	0.04	0.02	0.01	0.01
5.5	v		21.63	11.39	6.59	4.21	2.65	1.83	1.29	0.87	0.67	0.35	0.28	0.23	0.18	0.14
	R		2107.04	411.00	103.49	33.76	10.77	4.36	1.86	0.70	0.38	0.08	0.05	0.03	0.02	0.01
6.0	v		23.59	12.43	7.19	4.59	2.89	2.00	1.41	0.94	0.73	0.38	0.30	0.25	0.19	0.16
	R		2498.21	486.25	122.17	39.78	12.67	5.12	2.18	0.82	0.44	0.09	0.05	0.03	0.02	0.01
6.5	v		25.56	13.46	7.79	4.97	3.13	2.17	1.53	1.02	0.79	0.42	0.33	0.27	0.21	0.17
	R		2922.52	567.74	142.36	46.28	14.71	5.94	2.52	0.95	0.51	0.11	0.06	0.04	0.02	0.01
7.0	v		27.52	14.50	8.39	5.36	3.38	2.33	1.65	1.10	0.85	0.45	0.35	0.29	0.23	0.18
	R		3379.96	655.49	164.06	53.25	16.90	6.81	2.89	1.08	0.58	0.12	0.07	0.04	0.02	0.01
7.5	v		29.49	15.53	8.99	5.74	3.62	2.50	1.76	1.18	0.91	0.48	0.38	0.31	0.24	0.20
	R		3870.55	749.47	187.27	60.69	19.23	7.74	3.28	1.23	0.66	0.14	0.08	0.05	0.03	0.02
8.0	v		31.46	16.57	9.59	6.12	3.86	2.67	1.88	1.26	0.98	0.51	0.41	0.33	0.26	0.21
	R		4394.26	849.71	211.99	68.61	21.71	8.73	3.70	1.38	0.75	0.16	0.09	0.05	0.03	0.02

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Pipe Roughness: 0.0070 mm

Q = Flow rate (l/s)		v = Flow Velocity (m/s)					R = Pressure Drop (mbar/Mtr)									
d x s	20x2.8	25x3.5	32x3.6	40x3.7	50x4.6	63x5.8	75x6.8	90x8.2	110x10	125x11.4	160x9.5	180x10.7	200x11.9	225x13.4	250x14.8	
SDR	7.4	7.4	9	11	11	11	11	11	11	11	17	17	17	17	17	
Q	ID →	14.4	18	24.8	32.6	40.8	51.4	61.8	73.6	90.0	102.2	141.0	158.6	176.2	198.2	220.4
9.0	v			18.64	10.79	6.89	4.34	3.00	2.12	1.42	1.10	0.58	0.46	0.37	0.29	0.24
	R			1068.89	265.96	85.86	27.10	10.88	4.60	1.72	0.93	0.19	0.11	0.07	0.04	0.02
10.0	v			20.71	11.99	7.65	4.82	3.34	2.35	1.57	1.22	0.64	0.51	0.41	0.32	0.26
	R			1313.04	325.96	105.01	33.06	13.25	5.60	2.09	1.12	0.24	0.13	0.08	0.05	0.03
12.0	v			24.86	14.38	9.18	5.79	4.00	2.82	1.89	1.46	0.77	0.61	0.49	0.39	0.31
	R			1876.19	464.03	148.94	46.71	18.66	7.86	2.93	1.57	0.33	0.19	0.11	0.06	0.04
14.0	v			29.00	16.78	10.71	6.75	4.67	3.29	2.20	1.71	0.90	0.71	0.57	0.45	0.37
	R			2539.12	626.16	200.40	62.65	24.96	10.49	3.89	2.09	0.44	0.25	0.15	0.08	0.05
16.0	v			33.14	19.18	12.24	7.72	5.34	3.76	2.52	1.95	1.03	0.81	0.66	0.52	0.42
	R			3301.81	812.35	259.36	80.85	32.14	13.48	4.99	2.67	0.56	0.31	0.19	0.11	0.06
18.0	v			37.28	21.58	13.78	8.68	6.00	4.23	2.83	2.20	1.15	0.91	0.74	0.58	0.47
	R			4164.26	1022.59	325.83	101.33	40.20	16.83	6.22	3.33	0.69	0.39	0.23	0.13	0.08
20.0	v				23.97	15.31	9.64	6.67	4.70	3.15	2.44	1.28	1.01	0.82	0.65	0.52
	R				1256.86	399.79	124.08	49.14	20.54	7.58	4.05	0.84	0.47	0.28	0.16	0.10
25.0	v				29.97	19.13	12.05	8.34	5.88	3.93	3.05	1.60	1.27	1.03	0.81	0.66
	R				1947.68	617.47	190.84	75.30	31.36	11.52	6.14	1.26	0.71	0.43	0.24	0.14
30.0	v				35.96	22.96	14.47	10.01	7.06	4.72	3.66	1.92	1.52	1.23	0.97	0.79
	R				2788.67	881.94	271.73	106.91	44.40	16.26	8.65	1.77	1.00	0.60	0.34	0.20
35.0	v				41.95	26.79	16.88	11.67	8.23	5.50	4.27	2.24	1.77	1.44	1.14	0.92
	R				3779.81	1193.18	366.72	143.96	59.64	21.78	11.57	2.36	1.33	0.79	0.45	0.27
40.0	v					30.61	19.29	13.34	9.41	6.29	4.88	2.56	2.03	1.64	1.30	1.05
	R					1551.18	475.81	186.43	77.09	28.09	14.90	3.03	1.70	1.01	0.57	0.34
45.0	v					34.44	21.70	15.01	10.58	7.08	5.49	2.88	2.28	1.85	1.46	1.18
	R					1955.93	599.00	234.32	96.73	35.17	18.63	3.78	2.12	1.26	0.71	0.42
50.0	v					38.26	24.11	16.68	11.76	7.86	6.10	3.20	2.53	2.05	1.62	1.31
	R					2407.44	736.27	287.63	118.56	43.03	22.76	4.60	2.58	1.54	0.86	0.51
55.0	v					42.09	26.52	18.35	12.93	8.65	6.71	3.52	2.79	2.26	1.78	1.44
	R					2905.69	887.63	346.36	142.58	51.66	27.30	5.51	3.08	1.83	1.03	0.61
60.0	v					45.92	28.93	20.01	14.11	9.44	7.32	3.84	3.04	2.46	1.95	1.57
	R					3450.69	1053.07	410.50	168.80	61.07	32.25	6.49	3.63	2.16	1.21	0.72
65.0	v					49.74	31.34	21.68	15.29	10.22	7.93	4.17	3.29	2.67	2.11	1.70
	R					4042.42	1232.59	480.06	197.20	71.26	37.59	7.54	4.21	2.51	1.41	0.84
70.0	v						33.75	23.35	16.46	11.01	8.54	4.49	3.55	2.87	2.27	1.84
	R						1426.20	555.02	227.79	82.21	43.34	8.68	4.84	2.88	1.61	0.96
75.0	v						36.16	25.02	17.64	11.80	9.15	4.81	3.80	3.08	2.43	1.97
	R						1633.88	635.40	260.57	93.94	49.48	9.89	5.52	3.28	1.84	1.09
80.0	v						38.58	26.68	18.81	12.58	9.76	5.13	4.05	3.28	2.59	2.10
	R						1855.65	721.19	295.54	106.44	56.03	11.18	6.23	3.70	2.07	1.23
85.0	v						40.99	28.35	19.99	13.37	10.37	5.45	4.30	3.49	2.76	2.23
	R						2091.49	812.39	332.69	119.72	62.98	12.55	6.99	4.15	2.32	1.38
90.0	v						43.40	30.02	21.17	14.15	10.98	5.77	4.56	3.69	2.92	2.36
	R						2341.41	909.00	372.03	133.76	70.32	13.99	7.79	4.62	2.58	1.53
95.0	v						45.81	31.69	22.34	14.94	11.59	6.09	4.81	3.90	3.08	2.49
	R						2605.41	1011.02	413.56	148.58	78.07	15.51	8.63	5.12	2.86	1.69
100.0	v						48.22	33.36	23.52	15.73	12.20	6.41	5.06	4.10	3.24	2.62
	R						2883.49	1118.44	457.27	164.17	86.22	17.10	9.51	5.64	3.15	1.87
105.0	v						50.63	35.02	24.69	16.51	12.81	6.73	5.32	4.31	3.41	2.75
	R						3175.64	1231.28	503.16	180.53	94.76	18.77	10.43	6.18	3.45	2.04
110.0	v						53.04	36.69	25.87	17.30	13.42	7.05	5.57	4.51	3.57	2.88
	R						3481.87	1349.53	551.24	197.65	103.71	20.52	11.40	6.75	3.77	2.23
115.0	v						55.45	38.36	27.05	18.09	14.03	7.37	5.82	4.72	3.73	3.02
	R						3802.18	1473.18	601.51	215.55	113.05	22.34	12.41	7.35	4.10	2.42
120.0	v						57.86	40.03	28.22	18.87	14.64	7.69	6.08	4.92	3.89	3.15
	R						4136.57	1602.24	653.96	234.22	122.80	24.24	13.46	7.96	4.44	2.63
125.0	v							41.69	29.40	19.66	15.25	8.01	6.33	5.13	4.05	3.28
	R							1736.71	708.59	253.67	132.94	26.21	14.55	8.61	4.80	2.84
130.0	v							43.36	30.57	20.45	15.86	8.33	6.58	5.33	4.22	3.41
	R							1876.59	765.41	273.88	143.48	28.26	15.68	9.27	5.17	3.05
135.0	v							45.03	31.75	21.23	16.47	8.65	6.84	5.54	4.38	3.54
	R							2021.87	824.42	294.86	154.42	30.39	16.85	9.96	5.55	3.28
140.0	v							46.70	32.92	22.02	17.08	8.97	7.09	5.74	4.54	3.67
	R							2172.57	885.61	316.61	165.76	32.59	18.06	10.68	5.95	3.51
145.0	v							48.37	34.10	22.81	17.69	9.29	7.34	5.95	4.70	3.80
	R							2328.67	948.98	339.13	177.50	34.87	19.32	11.42	6.35	3.75
150.0	v							50.03	35.28	23.59	18.30	9.61	7.60	6.15	4.86	3.93
	R							2490.18	1014.54	362.42	189.64	37.22	20.62	12.18	6.78	4.00