

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: 20 °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	1.28	0.45													
0.07	v	0.43	0.28	0.14												
	R	2.29	0.80	0.18												
0.09	v	0.55	0.35	0.19												
	R	3.55	1.23	0.27												
0.10	v	0.61	0.39	0.21	0.12											
	R	4.26	1.48	0.32	0.09											
0.12	v	0.74	0.47	0.25	0.14	0.09										
	R	5.87	2.03	0.45	0.12	0.04										
0.16	v	0.98	0.63	0.33	0.19	0.12	0.08									
	R	9.74	3.35	0.73	0.20	0.07	0.02									
0.18	v	1.11	0.71	0.37	0.22	0.14	0.09									
	R	12.00	4.12	0.90	0.25	0.09	0.03									
0.20	v	1.23	0.79	0.41	0.24	0.15	0.10									
	R	14.46	4.96	1.08	0.30	0.10	0.03									
0.30	v	1.84	1.18	0.62	0.36	0.23	0.14	0.10								
	R	29.85	10.17	2.20	0.60	0.21	0.07	0.03								
0.40	v	2.46	1.57	0.83	0.48	0.31	0.19	0.13	0.09							
	R	50.14	17.00	3.66	0.99	0.34	0.11	0.05	0.02							
0.50	v	3.07	1.97	1.04	0.60	0.38	0.24	0.17	0.12							
	R	75.20	25.39	5.41	1.46	0.50	0.17	0.07	0.03							
0.60	v	3.69	2.36	1.24	0.72	0.46	0.29	0.20	0.14	0.09						
	R	104.92	35.31	7.53	2.03	0.69	0.23	0.10	0.04	0.02						
0.70	v	4.30	2.75	1.45	0.84	0.54	0.34	0.23	0.16	0.11	0.09					
	R	139.24	46.71	9.92	2.66	0.91	0.30	0.13	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	178.11	59.58	12.60	3.38	1.15	0.38	0.16	0.07	0.03	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	221.49	73.51	15.58	4.17	1.42	0.47	0.20	0.08	0.03	0.02					
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	269.36	89.67	18.77	5.00	1.70	0.56	0.23	0.10	0.04	0.02	0.01				
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	378.48	125.48	26.14	6.94	2.35	0.78	0.32	0.14	0.05	0.03	0.01	0.01			
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	505.32	166.94	34.62	9.16	3.10	1.02	0.42	0.18	0.07	0.04	0.01	0.01	0.01		
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	649.81	214.00	44.21	11.67	3.94	1.30	0.54	0.23	0.09	0.05	0.01	0.01	0.01		
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	811.87	266.62	54.88	14.45	4.87	1.60	0.66	0.29	0.11	0.06	0.02	0.01	0.01	0.01	
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	991.46	324.79	66.63	17.50	5.89	1.93	0.80	0.34	0.13	0.07	0.02	0.01	0.01	0.01	
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	1503.86	491.71	100.68	26.31	8.83	2.89	1.19	0.51	0.20	0.11	0.02	0.01	0.01	0.01	0.01
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	2151.35	698.13	141.35	36.77	12.30	4.01	1.65	0.71	0.27	0.15	0.03	0.02	0.01	0.01	0.01
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	2863.58	936.08	188.56	48.87	16.30	5.33	2.19	0.94	0.36	0.20	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	3703.38	1208.07	242.29	62.57	20.82	6.76	2.77	1.19	0.45	0.25	0.05	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	4649.64	1514.06	302.50	77.87	25.85	8.41	3.44	1.48	0.56	0.31	0.07	0.04	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		1853.99	369.16	94.76	31.39	11.16	4.15	1.78	0.68	0.37	0.08	0.04	0.04	0.02	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		2227.83	442.26	113.23	37.44	12.13	4.96	2.13	0.81	0.44	0.09	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		2635.56	521.79	133.28	43.99	14.18	5.78	2.48	0.94	0.51	0.11	0.06	0.04	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		2077.16	607.74	154.89	51.04	16.47	6.72	2.88	1.09	0.59	0.13	0.07	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		3552.61	700.09	178.07	58.58	18.87	7.69	3.29	1.25	0.67	0.14	0.08	0.05	0.03	0.02
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		4061.91	798.84	202.81	66.62	21.39	8.69	3.72	1.40	0.76	0.16	0.09	0.06	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		4605.05	903.98	229.10	75.15	24.13	9.81	4.20	1.59	0.86	0.18	0.10	0.06	0.04	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			1133.43	286.34	93.69	29.97	12.15	5.18	1.95	1.06	0.22	0.13	0.08	0.04	0.03
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			1388.40	349.78	114.18	36.44	14.75	6.28	2.37	1.28	0.27	0.15	0.09	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			1954.24	491.87	160.42	51.19	20.66	8.78	3.30	1.78	0.38	0.21	0.13	0.07	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			2633.16	660.18	214.59	68.31	27.51	11.67	4.37	2.36	0.50	0.28	0.17	0.10	0.06
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			3412.05	852.69	276.37	87.79	35.27	14.94	5.59	3.01	0.63	0.36	0.22	0.12	0.07
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			4290.84	1069.35	345.74	109.62	43.96	18.58	6.94	3.73	0.78	0.44	0.27	0.15	0.09
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				1310.15	422.66	133.78	53.55	22.60	8.43	4.53	0.95	0.54	0.32	0.18	0.11
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				2017.57	647.96	204.37	81.49	34.28	12.73	6.83	1.43	0.81	0.48	0.27	0.16
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				2875.45	920.28	289.45	115.05	48.26	17.87	9.57	1.99	1.12	0.67	0.38	0.23
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				3883.67	1239.53	388.97	154.20	64.52	23.83	12.74	2.64	1.49	0.89	0.51	0.30
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					1605.66	499.01	197.85	82.79	30.58	16.35	3.39	1.91	1.15	0.65	0.39
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					2018.63	625.92	247.69	103.45	38.13	20.37	4.21	2.37	1.42	0.80	0.48
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					2478.41	766.98	302.98	126.33	46.48	24.80	5.11	2.88	1.73	0.97	0.58
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					2985.00	922.16	363.72	151.43	55.62	29.64	6.10	3.43	2.06	1.16	0.69
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					3538.38	1091.47	429.91	178.74	65.54	34.90	7.16	4.03	2.41	1.36	0.81
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					4138.53	1274.89	501.53	208.25	76.26	40.57	8.31	4.67	2.80	1.58	0.94
70.0	v						33.75	23.35	16.46	11.01	8.54	4.49	3.55	2.87	2.27	1.84
	R						1472.41	578.59	239.98	87.76	46.65	9.54	5.36	3.21	1.81	1.08
75.0	v						36.16	25.02	17.64	11.80	9.15	4.81	3.80	3.08	2.43	1.97
	R						1684.04	661.08	273.90	100.04	53.14	10.85	6.09	3.64	2.05	1.22
80.0	v						38.58	26.68	18.81	12.58	9.76	5.13	4.05	3.28	2.59	2.10
	R						1909.76	748.99	310.03	113.10	60.04	12.23	6.87	4.10	2.31	1.38
85.0	v						40.99	28.35	19.99	13.37	10.37	5.45	4.30	3.49	2.76	2.23
	R						2149.58	842.33	348.35	126.94	67.34	13.70	7.69	4.59	2.58	1.54
90.0	v						43.40	30.02	21.17	14.15	10.98	5.77	4.56	3.69	2.92	2.36
	R						2403.49	941.09	388.87	141.56	75.05	15.24	8.55	5.10	2.87	1.71
95.0	v						45.81	31.69	22.34	14.94	11.59	6.09	4.81	3.90	3.08	2.49
	R						2671.49	1045.28	431.58	156.96	83.16	16.87	9.45	5.64	3.17	1.89
100.0	v						48.22	33.36	23.52	15.73	12.20	6.41	5.06	4.10	3.24	2.62
	R						2953.59	1154.88	476.49	173.14	91.68	18.57	10.40	6.21	3.49	2.08
105.0	v						50.63	35.02	24.69	16.51	12.81	6.73	5.32	4.31	3.41	2.75
	R						3249.76	1269.90	523.59	190.10	100.60	20.35	11.40	6.80	3.82	2.27
110.0	v						53.04	36.69	25.87	17.30	13.42	7.05	5.57	4.51	3.57	2.88
	R						3560.03	1390.33	572.89	207.82	109.92	22.21	12.43	7.41	4.16	2.48
115.0	v						55.45	38.36	27.05	18.09	14.03	7.37	5.82	4.72	3.73	3.02
	R						3884.38	1516.18	624.37	226.33	119.65	24.14	13.51	8.05	4.52	2.69
120.0	v						57.86	40.03	28.22	18.87	14.64	7.69	6.08	4.92	3.89	3.15
	R						4222.81	1647.45	678.04	245.61	129.78	26.16	14.63	8.72	4.89	2.91
125.0	v							41.69	29.40	19.66	15.25	8.01	6.33	5.13	4.05	3.28
	R							1784.13	733.91	265.67	140.32	28.25	15.79	9.41	5.28	3.14
130.0	v							43.36	30.57	20.45	15.86	8.33	6.58	5.33	4.22	3.41
	R							1926.22	791.96	286.49	151.25	30.42	17.00	10.12	5.68	3.38
135.0	v							45.03	31.75	21.23	16.47	8.65	6.84	5.54	4.38	3.54
	R							2073.72	852.21	308.10	162.59	32.66	18.25	10.86	6.09	3.62
140.0	v							46.70	32.92	22.02	17.08	8.97	7.09	5.74	4.54	3.67
	R							2226.64	914.64	330.47	174.33	34.99	19.54	11.63	6.52	3.87
145.0	v							48.37	34.10	22.81	17.69	9.29	7.34	5.95	4.70	3.80
	R							2384.97	979.26	353.62	186.47	37.38	20.87	12.42	6.96	4.13
150.0	v							50.03	35.28	23.59	18.30	9.61	7.60	6.15	4.86	3.93
	R							2548.71	1046.06	377.54	199.01	39.86	22.25	13.23	7.41	4.40