Pipe Flow rates Q - Velocity v- Pressure Drops R

PP-RCT Solid Wall D130._ _ _
20°C/1.6 Mpa • 70°C/0.8 Mpa

Temperature: 20 °C
Pipe Friction Factor: 0.007
Pipe Roughness: 0.0070 mm

dynatherm PP-R PIPE SYSTEMS

Q = Flow rate (l/s) **v = Flow Velocity (m/s)** **R = Pressure Drop (mbar/Mtr)**

d x s		20x2.3	25x2.8	32x2.9	40x3.7	50x4.6	63x5.8	75x6.8	90x8.2	110x10	125x11.4	160x14.6	180x16.4	200x18.2	225x20.5
SDR		9	9	11	11	11	11	11	11	11	11	11	11	11	11
Q	ID →	15.4	19.4	26.2	32.6	40.8	51.4	61.8	73.6	90.0	102.2	130.8	147.2	163.6	184.0
0.05	v	0.27	0.17	0.09											
	R	0.93	0.31	0.08											
0.07	v	0.38	0.24	0.13	0.08										
	R	1.67	0.56	0.14	0.05										
0.09	v	0.48	0.30	0.17	0.11										
	R	2.58	0.86	0.21	0.08										
0.10	v	0.54	0.34	0.19	0.12	0.08									
	R	3.10	1.03	0.25	0.09	0.03									
0.12	v	0.64	0.41	0.22	0.14	0.09									
	R	4.26	1.42	0.34	0.12	0.04									
0.16	v	0.86	0.54	0.30	0.19	0.12	0.08								
	R	7.06	2.34	0.57	0.20	0.07	0.02								
0.18	v	0.97	0.61	0.33	0.22	0.14	0.09								
	R	8.69	2.88	0.69	0.25	0.09	0.03								
0.20	v	1.07	0.68	0.37	0.24	0.15	0.10								
	R	10.47	3.46	0.83	0.30	0.10	0.03								
0.30	v	1.61	1.02	0.56	0.36	0.23	0.14	0.10							
	R	21.57	7.09	1.70	0.60	0.21	0.07	0.03							
0.40	v	2.15	1.35	0.74	0.48	0.31	0.19	0.13	0.09						
	R	36.18	11.84	2.81	0.99	0.34	0.11	0.05	0.02						
0.50	v	2.69	1.69	0.93	0.60	0.38	0.24	0.17	0.12	0.08					
	R	54.20	17.67	4.15	1.46	0.50	0.17	0.07	0.03	0.01					
0.60	v	3.22	2.03	1.11	0.72	0.46	0.29	0.20	0.14	0.09					
	R	75.53	24.54	5.78	2.03	0.69	0.23	0.10	0.04	0.02					
0.70	v	3.76	2.37	1.30	0.84	0.54	0.34	0.23	0.16	0.11					
	R	100.14	32.44	7.61	2.66	0.91	0.30	0.13	0.05	0.02					
0.80	v	4.30	2.71	1.48	0.96	0.61	0.39	0.27	0.19	0.13	0.10				
	R	127.98	41.34	9.67	3.38	1.15	0.38	0.16	0.07	0.03	0.01				
0.90	v	4.83	3.05	1.67	1.08	0.69	0.43	0.30	0.21	0.14	0.11	0.07			
	R	159.03	51.24	11.95	4.17	1.42	0.47	0.20	0.08	0.03	0.02	0.01			
1.00	v	5.37	3.38	1.86	1.20	0.77	0.48	0.33	0.24	0.16	0.12	0.07	0.06		
	R	193.26	62.13	14.38	5.00	1.70	0.56	0.23	0.10	0.04	0.02	0.01	0.01		
1.20	v	6.45	4.06	2.23	1.44	0.92	0.58	0.40	0.28	0.19	0.15	0.09	0.07		
	R	271.20	86.82	20.01	6.94	2.35	0.78	0.32	0.14	0.05	0.03	0.01	0.01		
1.40	v	7.52	4.74	2.60	1.68	1.07	0.68	0.47	0.33	0.22	0.17	0.10	0.08	0.07	
	R	361.69	115.38	26.49	9.16	3.10	1.02	0.42	0.18	0.07	0.04	0.01	0.01	0.01	
1.60	v	8.59	5.42	2.97	1.92	1.22	0.77	0.53	0.38	0.25	0.20	0.12	0.09	0.08	
	R	464.66	147.75	33.80	11.67	3.94	1.30	0.54	0.23	0.09	0.05	0.01	0.01	0.01	
1.80	v	9.67	6.09	3.34	2.16	1.38	0.87	0.60	0.42	0.28	0.22	0.13	0.11	0.09	0.07
	R	580.06	183.92	41.94	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	10.74	6.77	3.71	2.40	1.53	0.96	0.67	0.47	0.31	0.24	0.15	0.12	0.10	0.08
	R	707.84	223.87	50.89	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	13.43	8.46	4.64	3.00	1.91	1.21	0.83	0.59	0.39	0.30	0.19	0.15	0.12	0.09
	R	1073.06	338.70	76.82	26.31	8.83	2.89	1.19	0.51	0.20	0.11	0.02	0.02	0.01	0.01
3.00	v	16.11	10.15	5.57	3.60	2.30	1.45	1.00	0.71	0.47	0.37	0.22	0.18	0.14	0.11
	R	1531.61	479.67	107.74	36.77	12.30	4.01	1.65	0.71	0.27	0.15	0.05	0.03	0.02	0.01
3.5	v	18.80	11.85	6.50	4.20	2.68	1.69	1.17	0.82	0.55	0.43	0.26	0.21	0.17	0.13
	R	2038.59	642.39	143.61	48.87	16.30	6.76	2.19	0.94	0.36	0.20	0.06	0.03	0.02	0.01
4.0	v	21.49	13.54	7.42	4.79	3.06	1.93	1.33	0.94	0.63	0.49	0.30	0.24	0.19	0.15
	R	2634.18	828.21	184.39	62.57	20.82	11.16	2.77	1.19	0.45	0.25	0.08	0.04	0.03	0.01
4.5	v	24.17	15.23	8.35	5.39	3.44	2.17	1.50	1.06	0.71	0.55	0.34	0.26	0.21	0.17
	R	3304.84	1037.07	230.06	77.87	25.85	14.18	3.44	1.48	0.56	0.31	0.09	0.05	0.03	0.02
5.0	v	26.86	16.92	9.28	5.99	3.83	2.41	1.67	1.18	0.79	0.61	0.37	0.29	0.24	0.19
	R	4050.49	1268.93	280.59	94.76	31.39	21.39	4.15	1.78	0.68	0.37	0.11	0.06	0.04	0.02
5.5	v	29.54	18.62	10.21	6.59	4.21	2.65	1.83	1.29	0.87	0.67	0.41	0.32	0.26	0.21
	R	4871.08	1523.77	335.98	113.23	37.44	29.97	4.96	2.13	0.81	0.44	0.13	0.08	0.05	0.03
6.0	v		20.31	11.14	7.19	4.59	2.89	2.00	1.41	0.94	0.73	0.45	0.35	0.29	0.23
	R		1801.56	396.20	133.28	43.99	36.44	5.78	2.48	0.94	0.51	0.16	0.09	0.05	0.03
6.5	v		22.00	12.06	7.79	4.97	3.13	2.17	1.53	1.02	0.79	0.48	0.38	0.31	0.24
	R		2102.29	461.26	154.89	51.04	16.47	6.72	2.88	1.09	0.59	0.18	0.10	0.06	0.04
7.0	v		23.69	12.99	8.39	5.36	3.38	2.33	1.65	1.10	0.85	0.52	0.41	0.33	0.26
	R		2425.95	531.13	178.07	58.58	18.87	7.69	3.29	1.25	0.67	0.21	0.12	0.07	0.04
7.5	v		25.39	13.92	8.99	5.74	3.62	2.50	1.76	1.18	0.91	0.56	0.44	0.36	0.28
	R		2772.51	605.83	202.81	66.62	21.39	8.69	3.72	1.40	0.76	0.23	0.13	0.08	0.05
8.0	v		27.08	14.85	9.59	6.12	3.86	2.67	1.88	1.26	0.98	0.60	0.47	0.38	0.30
	R		3141.98	685.33	229.10	75.15	24.13	9.81	4.20	1.59	0.86	0.26	0.15	0.09	0.05

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PP-RCT Solid Wall D130._ _ _
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Temperature: 20 °C
Pipe Friction Factor: 0.007
Pipe Roughness: 0.0070 mm

dynatherm PP-R PIPE SYSTEMS

Q = Flow rate (l/s) **v = Flow Velocity (m/s)** **R = Pressure Drop (mbar/Mtr)**

d x s		20x2.3	25x2.8	32x2.9	40x3.7	50x4.6	63x5.8	75x6.8	90x8.2	110x10	125x11.4	160x14.6	180x16.4	200x18.2	225x20.5
SDR		9	9	11	11	11	11	11	11	11	11	11	11	11	11
Q	ID →	15.4	19.4	26.2	32.6	40.8	51.4	61.8	73.6	90.0	102.2	130.8	147.2	163.6	184.0
9.0	v		30.46	16.70	10.79	6.89	4.34	3.00	2.12	1.42	1.10	0.67	0.53	0.43	0.34
	R		3949.62	858.74	286.34	93.69	29.97	12.15	5.18	1.95	1.06	0.32	0.18	0.11	0.06
10.0	v		33.85	18.56	11.99	7.65	4.82	3.34	2.35	1.57	1.22	0.74	0.59	0.48	0.38
	R		4848.81	1051.35	349.78	114.18	36.44	14.75	6.28	2.37	1.28	0.39	0.22	0.13	0.08
12.0	v			22.27	14.38	9.18	5.79	4.00	2.82	1.89	1.46	0.89	0.71	0.57	0.45
	R			1479.58	491.87	160.42	51.19	20.66	8.78	3.30	1.78	0.54	0.31	0.18	0.10
14.0	v			25.98	16.78	10.71	6.75	4.67	3.29	2.20	1.71	1.04	0.82	0.67	0.53
	R			1992.13	660.18	214.59	68.31	27.51	11.67	4.37	2.36	0.71	0.40	0.24	0.14
16.0	v			29.69	19.18	12.24	7.72	5.34	3.76	2.52	1.95	1.19	0.94	0.76	0.60
	R			2579.82	852.69	276.37	87.79	35.27	14.94	5.59	3.01	0.91	0.51	0.31	0.18
18.0	v			33.41	21.58	13.78	8.68	6.00	4.23	2.83	2.20	1.34	1.06	0.86	0.68
	R			3242.60	1069.35	345.74	109.62	43.96	18.58	6.94	3.73	1.13	0.64	0.38	0.22
20.0	v			37.12	23.97	15.31	9.64	6.67	4.70	3.15	2.44	1.49	1.18	0.95	0.75
	R			3980.43	1310.15	422.66	133.78	53.55	22.60	8.43	4.53	1.36	0.77	0.46	0.26
25.0	v				29.97	19.13	12.05	8.34	5.88	3.93	3.05	1.86	1.47	1.19	0.94
	R				2017.57	647.96	204.37	81.49	34.28	12.73	6.83	2.05	1.16	0.69	0.39
30.0	v				35.96	22.96	14.47	10.01	7.06	4.72	3.66	2.23	1.76	1.43	1.13
	R				2875.45	920.28	289.45	115.05	48.26	17.87	9.57	2.87	1.61	0.97	0.55
35.0	v				41.95	26.79	16.88	11.67	8.23	5.50	4.27	2.61	2.06	1.67	1.32
	R				3883.67	1239.53	388.97	154.20	64.52	23.83	12.74	3.81	2.14	1.28	0.72
40.0	v					30.61	19.29	13.34	9.41	6.29	4.88	2.98	2.35	1.90	1.51
	R					1605.66	499.01	197.85	82.79	30.58	16.35	4.89	2.75	1.64	0.93
45.0	v					34.44	21.70	15.01	10.58	7.08	5.49	3.35	2.65	2.14	1.69
	R					2018.63	625.92	247.69	103.45	38.13	20.37	6.07	3.41	2.04	1.15
50.0	v					38.26	24.11	16.68	11.76	7.86	6.10	3.72	2.94	2.38	1.88
	R					2478.41	766.98	302.98	126.33	46.48	24.80	7.38	4.14	2.48	1.40
55.0	v					42.09	26.52	18.35	12.93	8.65	6.71	4.10	3.23	2.62	2.07
	R					2985.00	922.16	363.72	151.43	55.62	29.64	8.81	4.94	2.95	1.66
60.0	v					45.92	28.93	20.01	14.11	9.44	7.32	4.47	3.53	2.86	2.26
	R					3538.38	1091.47	429.91	178.74	65.54	34.90	10.35	5.80	3.46	1.95
65.0	v					49.74	31.34	21.68	15.29	10.22	7.93	4.84	3.82	3.09	2.45
	R					4138.53	1274.89	501.53	208.25	76.26	40.57	12.01	6.73	4.02	2.26
70.0	v						33.75	23.35	16.46	11.01	8.54	5.21	4.12	3.33	2.63
	R						1472.41	578.59	239.98	87.76	46.65	13.79	7.72	4.60	2.59
75.0	v						36.16	25.02	17.64	11.80	9.15	5.58	4.41	3.57	2.82
	R						1684.04	661.08	273.90	100.04	53.14	15.69	8.78	5.23	2.95
80.0	v						38.58	26.68	18.81	12.58	9.76	5.96	4.70	3.81	3.01
	R						1909.76	748.99	310.03	113.10	60.04	17.70	9.90	5.90	3.32
85.0	v						40.99	28.35	19.99	13.37	10.37	6.33	5.00	4.05	3.20
	R						2149.58	842.33	348.35	126.94	67.34	19.83	11.09	6.60	3.71
90.0	v						43.40	30.02	21.17	14.15	10.98	6.70	5.29	4.28	3.39
	R						2403.49	941.09	388.87	141.56	75.05	22.08	12.33	7.34	4.13
95.0	v						45.81	31.69	22.34	14.94	11.59	7.07	5.59	4.52	3.57
	R						2671.49	1045.28	431.58	156.96	83.16	24.44	13.64	8.12	4.56
100.0	v						48.22	33.36	23.52	15.73	12.20	7.45	5.88	4.76	3.76
	R						2953.59	1154.88	476.49	173.14	91.68	26.91	15.02	8.93	5.02
105.0	v						50.63	35.02	24.69	16.51	12.81	7.82	6.17	5.00	3.95
	R						3249.76	1269.90	523.59	190.10	100.60	29.50	16.46	9.78	5.50
110.0	v						53.04	36.69	25.87	17.30	13.42	8.19	6.47	5.24	4.14
	R						3560.03	1390.33	572.89	207.82	109.92	32.20	17.96	10.67	5.99
115.0	v						55.45	38.36	27.05	18.09	14.03	8.56	6.76	5.47	4.33
	R						3884.38	1516.18	624.37	226.33	119.65	35.02	19.52	11.59	6.51
120.0	v						57.86	40.03	28.22	18.87	14.64	8.94	7.06	5.71	4.52
	R						4222.81	1647.45	678.04	245.61	129.78	37.95	21.14	12.56	7.05
125.0	v							41.69	29.40	19.66	15.25	9.31	7.35	5.95	4.70
	R							1784.13	733.91	265.67	140.32	40.99	22.83	13.55	7.60
130.0	v							43.36	30.57	20.45	15.86	9.68	7.64	6.19	4.89
	R							1926.22	791.96	286.49	151.25	44.15	24.58	14.59	8.18
135.0	v							45.03	31.75	21.23	16.47	10.05	7.94	6.43	5.08
	R							2073.72	852.21	308.10	162.59	47.42	26.39	15.66	8.78
140.0	v							46.70	32.92	22.02	17.08	10.42	8.23	6.66	5.27
	R							2226.64	914.64	330.47	174.33	50.80	28.26	16.76	9.39
145.0	v							48.37	34.10	22.81	17.69	10.80	8.53	6.90	5.46
	R							2384.97	979.26	353.62	186.47	54.30	30.20	17.90	10.03
150.0	v							50.03	35.28	23.59	18.30	11.17	8.82	7.14	5.64
	R							2548.71	1046.06	377.54	199.01	57.91	32.20	19.08	10.69