Rovanco
Piping Systems, Inc.

20535 S.E. FRONTAGE ROAD
JOLIET, ILLINOIS 60431
PHONE: 815-741-6700
FAX: 815-741-4229
Website: www.rovanco.com

RHINOFLEX PEX-A PIPING SYSTEMS

Technical Manual & Pressure Loss Tables

3/4" - 2" Pre-Insulated SDR-9 PEX-A

50 mm - 140 mm Pre-Insulated SDR-11 PEX-A

November 5, 2018

Rhinoflex Pipe				Carrier Pipe				
Size	Casing O.D. In (mm)	Weight lb/ft	Min Ben Radius ft	SDR	Avg O.D. Inches (mm)	Wall Inches (mm)	Avg I.D. Inches (mm)	Temperature & Pressure Ratings
3/4"	3.07 (76)	0.80	2' 5"	9	0.871	0.105 (2.67)	0.677	160 psi @ 73.4ºF (1105 kPa @ 23ºC) 100 psi @ 180ºF (690 kPa @ 82ºC) 80 psi @ 200ºF (550 kPa @ 93ºC)
1"	3.07 (76)	0.80	2' 5"	9	1.125	0.13 (3.2)	0.875	
1-1/4"	3.07 (76)	0.88	2' 5"	9	1.375	0.15 (3.9)	1.070	
1-1/2"	3.6 (91)	1.26	3'	9	1.625	0.18 (4.6)	1.263	
2"	4.4 (111)	1.45	3'	9	2.125	0.24 (6.0)	1.653	
63 mm	5.0 (126)	1.75	3' 3"	11	2.492	0.23 (5.8)	2.035 (51.7)	125 psi @ 73ºF (860 kPa @ 23ºC) 80 psi @ 180ºF (550 kPa @ 82ºC) 65 psi @ 200ºF (450 kPa @ 93ºC)
75 mm	5.6 (142)	2.28	3' 5"	11	2.967	0.27 (6.8)	2.431 (61.8)	
90 mm	6.4 (162)	3.06	4'	11	3.561	0.32 (8.2)	2.915 (74.1)	
110mm	6.4 (162)	3.82	4'	11	4.350	0.39 (10.0)	3.563 (90.5)	
125mm	7.2 (182)	4.85	4' 5"	11	4.945	0.44 (11.4)	4.047 (102.8)	
140mm	8.0 (202)	5.85	4' 9"	11	5.51	.50 (12.7)	4.51 (114.6)	

One-pipe Rhinoflex specifications

Rhinoflex Capacities		
Size	Gal/Ft	L/m
1"	0.0316	0.394
1-1/4"	0.0467	0.583
1-1/2"	0.065	0.812
2"	0.1114	1.391
63 mm	0.1684	2.091
75 mm	0.2384	2.961
90 mm	0.3425	4.254
110 mm	0.5123	6.362
125 mm	0.6537	8.120
140mm	0.8305	10.314

Rhinoflex carrier pipe capacity

TABLE OF CONTENTS

Table 1A: Pressure Loss for Inch-Sized SDR9 PEXa Carrier Pipe with 100% Water

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) Water				120°F (49°C) Water				180°F (82°C) Water			
GPM	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"
0.1	0.3	0.2	0.1	0.1	0.18	0.06	0.03	0.01	0.09	0.03	0.01	<.01	0.10	0.02	<.01	<.01
0.2	0.6	0.3	0.2	0.2	0.36	0.11	0.05	0.03	0.39	0.10	0.03	0.01	0.33	0.08	0.03	0.02
0.3	0.9	0.5	0.4	0.3	0.98	0.17	0.08	0.04	0.78	0.19	0.08	0.04	0.67	0.16	0.07	0.03
0.4	1.3	0.7	0.5	0.4	1.58	0.39	0.11	0.06	1.28	0.31	0.13	0.06	1.11	0.27	0.11	0.05
0.5	1.6	0.9	0.6	0.4	2.30	0.57	0.24	0.07	1.88	0.46	0.19	0.09	1.64	0.39	0.16	0.08
0.6	1.9	1.0	0.7	0.5	3.14	0.77	0.32	0.16	2.58	0.62	0.26	0.13	2.27	0.54	0.22	0.11
0.7	2.2	1.2	0.8	0.6	4.09	1.00	0.42	0.20	3.38	0.81	0.34	0.16	2.99	0.71	0.29	0.14
0.8	2.5	1.4	1.0	0.7	5.15	1.26	0.52	0.25	4.28	1.03	0.42	0.21	3.79	0.90	0.37	0.18
0.9	2.8	1.6	1.1	0.8	6.31	1.54	0.64	0.31	5.27	1.26	0.52	0.25	4.69	1.11	0.45	0.22
1.0	3.2	1.7	1.2	0.9	7.58	1.84	0.77	0.37	6.35	1.52	0.63	0.30	5.67	1.34	0.55	0.26
1.2	3.8	2.1	1.4	1.1	10.4	2.52	1.04	0.51	8.80	2.09	0.86	0.41	7.89	1.85	0.76	0.36
1.4	4.4	2.4	1.7	1.2	13.6	3.29	1.36	0.66	11.6	2.75	1.13	0.54	10.5	2.44	0.99	0.47
1.6	5.0	2.8	1.9	1.4	17.3	4.15	1.71	0.83	14.8	3.48	1.42	0.68	13.4	3.11	1.26	0.60
1.8	5.7	3.1	2.2	1.6	21.3	5.09	2.10	1.01	18.3	4.29	1.75	0.84	16.6	3.84	1.56	0.74
2.0	6.3	3.5	2.4	1.8	25.7	6.13	2.52	1.22	22.1	5.18	2.12	1.01	20.2	4.65	1.88	0.90
2.2	6.9	3.8	2.6	1.9	30.4	7.24	2.98	1.43	26.4	6.15	2.51	1.20	24.1	5.54	2.24	1.06
2.4	7.6	4.2	2.9	2.1	35.5	8.44	3.47	1.67	30.9	7.20	2.93	1.40	28.3	6.49	2.62	1.24
2.6	8.2	4.5	3.1	2.3	41.0	9.72	3.99	1.92	35.8	8.32	3.38	1.61	32.9	7.52	3.03	1.43
2.8	8.8	4.9	3.4	2.5	46.9	11.1	4.55	2.18	41.1	9.51	3.86	1.84	37.8	8.62	3.47	1.64
3.0	9.5	5.2	3.6	2.6	53.1	12.5	5.13	2.46	46.6	10.8	4.37	2.08	43.1	9.79	3.93	1.86
3.2		5.6	3.8	2.8		14.1	5.75	2.76		12.1	4.90	2.33		11.0	4.42	2.09
3.4		5.9	4.1	3.0		15.7	6.40	3.07		13.5	5.47	2.60		12.3	4.94	2.33
3.6		6.3	4.3	3.2		17.3	7.09	3.39		15.0	6.07	2.88		13.7	5.49	2.59
3.8		6.6	4.6	3.3		19.1	7.80	3.73		16.6	6.69	3.17		15.2	6.06	2.85
4.0		6.9	4.8	3.5		20.9	8.54	4.08		18.2	7.34	3.48		16.7	6.66	3.13
4.2		7.3	5.0	3.7		22.9	9.31	4.45		19.9	8.02	3.80		18.3	7.29	3.43
4.4		7.6	5.3	3.9		24.8	10.1	4.83		21.7	8.73	4.13		19.9	7.94	3.73
4.6		8.0	5.5	4.1		26.9	11.0	5.23		23.6	9.47	4.48		21.7	8.63	4.05
4.8		8.3	5.7	4.2		29.1	11.8	5.64		25.5	10.2	4.84		23.5	9.33	4.38
5.0		8.7	6.0	4.4		31.3	12.7	6.06		27.5	11.0	5.21		25.3	10.1	4.72
5.5		9.6	6.6	4.8		37.2	15.1	7.18		32.8	13.1	6.19		30.3	12.0	5.62
6.0			7.2	5.3			17.6	8.39			15.4	7.25			14.1	6.61
6.5			7.8	5.7			20.4	9.68			17.9	8.40			16.4	7.66
7.0			8.4	6.2			23.3	11.1			20.5	9.62			18.9	8.80
7.5			9.0	6.6			26.4	12.5			23.3	10.9			21.5	10.0
8.0			9.6	7.0			29.7	14.0			26.2	12.3			24.3	11.3
8.5				7.5				15.7				13.7				12.6
9.0				7.9				17.4				15.3				14.1
9.5				8.4				19.2				16.9				15.6
10.0				8.8				21.0				18.6				17.1
11.0				9.7				25.0				22.2				20.5

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 1B: Pressure Loss for Inch-Sized SDR9 PEXa Carrier Pipe with 100% Water

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) Water				120°F (49°C) Water				180°F (82°C) Water			
GPM	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"
1	0.5	0.4	0.3	0.1	0.11	0.04	0.01	<.01	0.09	0.04	0.02	<.01	0.08	0.03	0.01	<.01
2	1.1	0.7	0.5	0.3	0.37	0.14	0.07	0.02	0.31	0.12	0.05	0.01	0.27	0.10	0.05	0.01
3	1.6	1.1	0.8	0.4	0.75	0.29	0.13	0.04	0.62	0.24	0.11	0.03	0.55	0.21	0.09	0.03
4	2.1	1.4	1.0	0.6	1.23	0.48	0.22	0.06	1.04	0.40	0.18	0.05	0.92	0.35	0.16	0.04
5	2.7	1.8	1.3	0.7	1.82	0.70	0.32	0.09	1.54	0.59	0.26	0.07	1.39	0.52	0.23	0.06
6	3.2	2.1	1.5	0.9	2.51	0.96	0.44	0.12	2.14	0.82	0.37	0.10	1.93	0.73	0.33	0.09
7	3.7	2.5	1.8	1.0	3.30	1.27	0.57	0.16	2.83	1.07	0.48	0.13	2.56	0.96	0.43	0.12
8	4.3	2.9	2.0	1.2	4.19	1.60	0.72	0.20	3.61	1.37	0.61	0.17	3.27	1.23	0.55	0.15
9	4.8	3.2	2.3	1.3	5.17	1.97	0.89	0.25	4.47	1.69	0.75	0.21	4.07	1.52	0.68	0.18
10	5.3	3.6	2.6	1.5	6.24	2.38	1.07	0.30	5.42	2.04	0.91	0.25	4.94	1.85	0.82	0.22
11	5.9	3.9	2.8	1.6	7.40	2.82	1.27	0.35	6.45	2.43	1.08	0.30	5.90	2.20	0.97	0.26
12	6.4	4.3	3.1	1.8	8.66	3.29	1.48	0.41	7.57	2.84	1.27	0.35	6.94	2.58	1.14	0.31
13	6.9	4.6	3.3	1.9	10.0	3.80	1.70	0.47	8.77	3.29	1.46	0.40	8.06	3.00	1.32	0.36
14	7.5	5.0	3.6	2.1	11.4	4.34	1.94	0.53	10.1	3.77	1.67	0.46	9.26	3.44	1.51	0.41
15	8.0	5.4	3.8	2.2	13.0	4.91	2.20	0.60	11.4	4.27	1.90	0.52	10.5	3.91	1.72	0.46
16	8.5	5.7	4.1	2.4	14.6	5.51	2.47	0.68	12.9	4.81	2.13	0.58	11.9	4.40	1.94	0.52
17	9.1	6.1	4.4	2.5	16.3	6.15	2.75	0.75	14.4	5.38	2.38	0.65	13.3	4.93	2.17	0.58
18	9.6	6.4	4.6	2.7	18.0	6.82	3.04	0.83	16.0	5.97	2.64	0.72	14.9	5.48	2.41	0.65
19		6.8	4.9	2.8		7.52	3.35	0.92		6.60	2.92	0.79		6.07	2.66	0.71
20		7.1	5.1	3.0		8.25	3.68	1.01		7.26	3.20	0.87		6.68	2.93	0.78
22		7.9	5.6	3.3		9.80	4.37	1.19		8.65	3.82	1.03		7.99	3.49	0.93
24		8.6	6.1	3.6		11.5	5.11	1.39		10.2	4.48	1.20		9.41	4.11	1.09
26		9.3	6.7	3.9		13.3	5.91	1.61		11.8	5.19	1.39		10.9	4.77	1.27
28			7.2	4.2			6.75	1.84			5.95	1.60			5.48	1.45
30			7.7	4.5			7.66	2.08			6.76	1.81			6.24	1.65
32			8.2	4.8			8.61	2.34			7.62	2.04			7.05	1.86
34			8.7	5.1			9.62	2.61			8.53	2.28			7.90	2.08
36			9.2	5.4			10.7	2.89			9.49	2.53			8.80	2.32
38			9.7	5.7			11.8	3.19			10.5	2.79			9.75	2.56
40				6.0				3.49				3.07				2.82
42				6.3				3.82				3.36				3.09
44				6.6				4.15				3.66				3.37
46				6.9				4.50				3.97				3.66
48				7.2				4.87				4.30				3.97
50				7.5				5.24				4.64				4.28
52				7.8				5.63				4.99				4.61
54				8.1				6.03				5.35				4.95
56				8.4				6.44				5.72				5.30
58				8.7				6.87				6.11				5.66
60				9.0				7.31				6.51				6.04
65				9.7				8.46				7.56				7.03

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.
– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.
– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 1D: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 100% Water

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) Water				120°F (49°C) Water				180°F (82°C) Water			
GPM	50	63	75	90	50	63	75	90	50	63	75	90	50	63	75	90
2	0.3	0.2	0.1	0.1	0.02	<.01	<.01	<.01	0.02	<.01	<.01	<.01	0.01	<.01	<.01	<.01
4	0.6	0.4	0.3	0.2	0.07	0.02	<.01	<.01	0.06	0.02	<.01	<.01	0.05	0.02	<.01	<.01
6	0.9	0.6	0.4	0.3	0.14	0.05	0.02	<.01	0.11	0.04	0.02	<.01	0.10	0.03	0.01	<.01
8	1.3	0.8	0.6	0.4	0.22	0.07	0.03	0.01	0.19	0.06	0.03	0.01	0.17	0.05	0.02	<.01
10	1.6	1.0	0.7	0.5	0.33	0.11	0.05	0.02	0.28	0.09	0.04	0.02	0.25	0.08	0.03	0.01
12	1.9	1.2	0.8	0.6	0.45	0.15	0.06	0.03	0.38	0.13	0.05	0.02	0.34	0.11	0.05	0.02
14	2.2	1.4	1.0	0.7	0.60	0.20	0.09	0.04	0.51	0.17	0.07	0.03	0.46	0.15	0.06	0.03
16	2.5	1.6	1.1	0.8	0.75	0.25	0.11	0.05	0.65	0.21	0.09	0.04	0.58	0.19	0.08	0.03
18	2.8	1.8	1.2	0.9	0.93	0.31	0.13	0.06	0.80	0.26	0.11	0.05	0.72	0.23	0.10	0.04
20	3.1	2.0	1.4	1.0	1.12	0.37	0.16	0.07	0.97	0.32	0.13	0.06	0.87	0.28	0.12	0.05
22	3.4	2.2	1.5	1.1	1.33	0.44	0.19	0.08	1.15	0.38	0.16	0.07	1.04	0.34	0.14	0.06
24	3.8	2.4	1.7	1.2	1.55	0.51	0.22	0.09	1.34	0.44	0.19	0.08	1.22	0.40	0.17	0.07
26	4.1	2.6	1.8	1.2	1.79	0.59	0.25	0.11	1.56	0.51	0.22	0.09	1.42	0.46	0.19	0.08
28	4.4	2.8	1.9	1.3	2.05	0.68	0.29	0.12	1.78	0.58	0.25	0.10	1.62	0.52	0.22	0.09
30	4.7	3.0	2.1	1.4	2.32	0.76	0.33	0.14	2.02	0.66	0.28	0.12	1.84	0.60	0.25	0.10
35	5.5	3.5	2.4	1.7	3.06	1.01	0.43	0.18	2.68	0.87	0.37	0.15	2.46	0.79	0.33	0.14
40	6.3	3.9	2.8	1.9	3.90	1.28	0.54	0.23	3.43	1.11	0.47	0.19	3.15	1.01	0.42	0.18
45	7.0	4.4	3.1	2.2	4.83	1.58	0.67	0.28	4.26	1.38	0.58	0.24	3.93	1.26	0.53	0.22
50	7.8	4.9	3.5	2.4	5.85	1.91	0.81	0.34	5.18	1.67	0.70	0.29	4.79	1.53	0.64	0.26
55	8.6	5.4	3.8	2.6	6.96	2.27	0.96	0.40	6.19	1.99	0.84	0.35	5.73	1.83	0.76	0.31
60	9.4	5.9	4.1	2.9	8.16	2.66	1.13	0.47	7.28	2.34	0.98	0.41	6.76	2.15	0.90	0.37
65		6.4	4.5	3.1		3.07	1.30	0.54		2.71	1.14	0.47		2.50	1.04	0.43
70		6.9	4.8	3.4		3.52	1.49	0.62		3.11	1.30	0.54		2.87	1.19	0.49
75		7.4	5.2	3.6		3.99	1.68	0.70		3.53	1.48	0.61		3.27	1.36	0.56
80		7.9	5.5	3.8		4.49	1.89	0.79		3.99	1.67	0.69		3.69	1.53	0.63
85		8.4	5.9	4.1		5.01	2.11	0.88		4.46	1.86	0.77		4.14	1.71	0.70
90		8.9	6.2	4.3		5.57	2.35	0.97		4.96	2.07	0.85		4.61	1.91	0.78
95		9.4	6.6	4.6		6.15	2.59	1.07		5.49	2.29	0.94		5.10	2.11	0.86
100		9.9	6.9	4.8		6.75	2.84	1.18		6.04	2.52	1.03		5.62	2.32	0.95
105			7.3	5.0			3.11	1.29			2.76	1.13			2.55	1.04
110			7.6	5.3			3.38	1.40			3.00	1.23			2.78	1.13
115			7.9	5.5			3.67	1.52			3.26	1.34			3.02	1.23
120			8.3	5.8			3.97	1.64			3.53	1.45			3.28	1.33
130			9.0	6.2			4.59	1.90			4.10	1.68			3.81	1.55
140			9.7	6.7			5.26	2.17			4.71	1.93			4.39	1.78
150				7.2				2.46				2.19				2.02
160				7.7				2.77				2.47				2.29
170				8.2				3.10				2.76				2.56
180				8.7				3.44				3.07				2.86
190				9.1				3.80				3.40				3.16
200				9.6				4.18				3.74				3.49

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.
– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
  Example: for 200 lineal ft of pipe, double the value listed in this table.
– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
  Example: 1 psi = 2.307 ft of head.

Table 1E: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 100% Water

Flow Rate	Flow Velocity ft/sec			pressure loss in psi per 100 ft of pipe								
				60°F (16°C) Water			120°F (49°C) Water			180°F (82°C) Water		
GPM	110	125	140	110	125	140	110	125	140	110	125	140
5	0.2	0.1	0.1	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
10	0.3	0.2	0.2	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
15	0.5	0.4	0.3	0.02	<.01	<.01	0.01	<.01	<.01	0.01	<.01	<.01
20	0.6	0.5	0.4	0.03	0.01	<.01	0.02	0.01	<.01	0.02	0.01	<.01
25	0.8	0.6	0.5	0.04	0.02	0.01	0.03	0.02	0.01	0.03	0.02	<.01
30	1.0	0.7	0.6	0.05	0.03	0.02	0.04	0.02	0.01	0.04	0.02	0.01
40	1.3	1.0	0.8	0.09	0.05	0.03	0.07	0.04	0.02	0.07	0.04	0.02
50	1.6	1.2	1.0	0.13	0.07	0.04	0.11	0.06	0.03	0.10	0.05	0.03
60	1.9	1.5	1.2	0.18	0.10	0.06	0.15	0.08	0.05	0.14	0.07	0.04
70	2.3	1.7	1.4	0.24	0.13	0.07	0.20	0.11	0.06	0.18	0.10	0.06
80	2.6	2.0	1.6	0.30	0.16	0.09	0.26	0.14	0.08	0.23	0.13	0.07
90	2.9	2.2	1.8	0.37	0.20	0.12	0.32	0.17	0.10	0.29	0.16	0.09
100	3.2	2.5	2.0	0.45	0.24	0.14	0.39	0.21	0.12	0.35	0.19	0.11
110	3.5	2.7	2.2	0.53	0.29	0.17	0.46	0.25	0.14	0.42	0.23	0.13
120	3.9	3.0	2.4	0.62	0.34	0.19	0.54	0.29	0.17	0.50	0.27	0.15
130	4.2	3.2	2.6	0.72	0.39	0.22	0.63	0.34	0.19	0.58	0.31	0.18
140	4.5	3.5	2.8	0.82	0.44	0.26	0.72	0.39	0.22	0.66	0.35	0.20
150	4.8	3.7	3.0	0.93	0.50	0.29	0.82	0.44	0.25	0.75	0.40	0.23
160	5.1	4.0	3.2	1.05	0.56	0.33	0.92	0.50	0.28	0.85	0.45	0.26
170	5.5	4.2	3.4	1.17	0.63	0.36	1.03	0.55	0.32	0.95	0.51	0.29
180	5.8	4.5	3.6	1.30	0.70	0.40	1.15	0.61	0.35	1.06	0.56	0.32
190	6.1	4.7	3.8	1.43	0.77	0.44	1.27	0.68	0.39	1.17	0.62	0.36
200	6.4	5.0	4.0	1.57	0.85	0.49	1.39	0.75	0.43	1.29	0.69	0.39
225	7.2	5.6	4.5	1.95	1.05	0.60	1.74	0.93	0.53	1.61	0.85	0.49
250	8.0	6.2	5.0	2.36	1.27	0.73	2.11	1.13	0.64	1.96	1.04	0.59
275	8.8	6.9	5.5	2.82	1.51	0.87	2.52	1.35	0.77	2.35	1.25	0.71
300	9.7	7.5	6.0	3.31	1.78	1.02	2.97	1.58	0.90	2.77	1.47	0.83
325		8.1	6.4		2.06	1.18		1.84	1.05		1.71	0.97
350		8.7	6.9		2.36	1.35		2.11	1.20		1.96	1.11
375		9.4	7.4		2.68	1.53		2.40	1.37		2.24	1.27
400		10.0	7.9		3.02	1.73		2.71	1.54		2.53	1.43
425			8.4			1.93			1.73			1.61
450			8.9			2.14			1.92			1.79
475			9.4			2.37			2.13			1.98
500			9.9			2.60			2.34			2.19
525												
550												
575												
600												
625												
650												

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 2A: Pressure Loss for Inch-Sized SDR9 9PEXa Carrier Pipe with 80% Water/20% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 20% Glycol				120°F (49°C) 20% Glycol				180°F (82°C) 20% Glycol			
GPM	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"
0.1	0.3	0.2	0.1	0.1	0.38	0.11	0.05	0.03	0.16	0.05	0.02	0.01	0.09	0.03	0.01	<.01
0.2	0.6	0.3	0.2	0.2	0.75	0.23	0.11	0.06	0.32	0.10	0.05	0.02	0.39	0.10	0.03	0.01
0.3	0.9	0.5	0.4	0.3	1.13	0.34	0.16	0.09	0.94	0.14	0.07	0.04	0.77	0.19	0.08	0.04
0.4	1.3	0.7	0.5	0.4	1.51	0.46	0.22	0.12	1.52	0.37	0.09	0.05	1.26	0.31	0.13	0.06
0.5	1.6	0.9	0.6	0.4	1.88	0.57	0.27	0.15	2.22	0.55	0.23	0.11	1.86	0.45	0.19	0.09
0.6	1.9	1.0	0.7	0.5	4.01	0.69	0.33	0.18	3.03	0.74	0.31	0.15	2.56	0.62	0.26	0.12
0.7	2.2	1.2	0.8	0.6	5.18	0.80	0.38	0.21	3.95	0.96	0.40	0.20	3.35	0.81	0.33	0.16
0.8	2.5	1.4	1.0	0.7	6.49	0.92	0.44	0.24	4.98	1.21	0.50	0.24	4.24	1.02	0.42	0.20
0.9	2.8	1.6	1.1	0.8	7.91	1.95	0.49	0.26	6.11	1.48	0.62	0.30	5.22	1.25	0.52	0.25
1.0	3.2	1.7	1.2	0.9	9.46	2.33	0.98	0.29	7.35	1.78	0.74	0.36	6.30	1.50	0.62	0.30
1.2	3.8	2.1	1.4	1.1	12.9	3.17	1.33	0.65	10.1	2.44	1.01	0.49	8.73	2.07	0.85	0.41
1.4	4.4	2.4	1.7	1.2	16.8	4.11	1.72	0.84	13.3	3.19	1.32	0.64	11.5	2.72	1.12	0.54
1.6	5.0	2.8	1.9	1.4	21.1	5.16	2.15	1.05	16.8	4.02	1.66	0.80	14.7	3.45	1.41	0.68
1.8	5.7	3.1	2.2	1.6	25.9	6.31	2.63	1.27	20.7	4.95	2.04	0.98	18.1	4.26	1.74	0.83
2.0	6.3	3.5	2.4	1.8	31.1	7.55	3.14	1.52	25.0	5.95	2.45	1.18	22.0	5.14	2.10	1.00
2.2	6.9	3.8	2.6	1.9	36.7	8.90	3.70	1.79	29.7	7.04	2.89	1.39	26.2	6.11	2.49	1.19
2.4	7.6	4.2	2.9	2.1	42.7	10.3	4.29	2.08	34.7	8.22	3.37	1.62	30.7	7.14	2.90	1.38
2.6	8.2	4.5	3.1	2.3	49.2	11.9	4.92	2.38	40.1	9.47	3.88	1.86	35.6	8.25	3.35	1.60
2.8	8.8	4.9	3.4	2.5	56.0	13.5	5.59	2.70	45.9	10.8	4.42	2.12	40.8	9.44	3.83	1.82
3.0	9.5	5.2	3.6	2.6	63.2	15.2	6.29	3.04	52.0	12.2	4.99	2.39	46.4	10.7	4.33	2.06
3.2		5.6	3.8	2.8		17.0	7.04	3.40		13.7	5.60	2.68		12.0	4.87	2.31
3.4		5.9	4.1	3.0		18.9	7.81	3.77		15.3	6.24	2.98		13.4	5.43	2.58
3.6		6.3	4.3	3.2		20.9	8.63	4.16		16.9	6.90	3.30		14.9	6.02	2.86
3.8		6.6	4.6	3.3		23.0	9.48	4.57		18.7	7.60	3.63		16.5	6.64	3.15
4.0		6.9	4.8	3.5		25.1	10.4	4.99		20.5	8.33	3.97		18.1	7.29	3.45
4.2		7.3	5.0	3.7		27.4	11.3	5.43		22.3	9.09	4.33		19.8	7.97	3.77
4.4		7.6	5.3	3.9		29.7	12.2	5.89		24.3	9.87	4.71		21.6	8.67	4.10
4.6		8.0	5.5	4.1		32.1	13.2	6.36		26.3	10.7	5.09		23.4	9.40	4.44
4.8		8.3	5.7	4.2		34.6	14.2	6.85		28.5	11.5	5.49		25.3	10.2	4.80
5.0		8.7	6.0	4.4		37.2	15.3	7.35		30.6	12.4	5.91		27.3	11.0	5.17
5.5		9.6	6.6	4.8		44.0	18.1	8.68		36.4	14.7	7.01		32.6	13.0	6.15
6.0			7.2	5.3			21.1	10.1			17.3	8.19			15.3	7.20
6.5			7.8	5.7			24.3	11.6			19.9	9.45			17.7	8.34
7.0			8.4	6.2			27.7	13.2			22.8	10.8			20.3	9.55
7.5			9.0	6.6			31.2	15.0			25.9	12.2			23.1	10.8
8.0			9.6	7.0			35.0	16.8			29.1	13.7			26.1	12.2
8.5				7.5				18.6				15.3				13.7
9.0				7.9				20.6				17.0				15.2
9.5				8.4				22.7				18.8				16.8
10.0				8.8				24.9				20.6				18.4
11.0				9.7				29.5				24.5				22.0

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 2B: Pressure Loss for Inch-Sized SDR9 PEXa Carrier Pipe with 80% Water/20% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 20% Glycol				120°F (49°C) 20% Glycol				180°F (82°C) 20% Glycol			
GPM	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"
1	0.5	0.4	0.3	0.1	0.11	0.05	0.02	<.01	0.11	0.04	0.02	<.01	0.09	0.04	0.02	<.01
2	1.1	0.7	0.5	0.3	0.47	0.18	0.05	0.02	0.36	0.14	0.06	0.02	0.30	0.12	0.05	0.01
3	1.6	1.1	0.8	0.4	0.93	0.36	0.17	0.05	0.72	0.28	0.13	0.04	0.62	0.24	0.11	0.03
4	2.1	1.4	1.0	0.6	1.52	0.59	0.27	0.08	1.20	0.46	0.21	0.06	1.03	0.39	0.18	0.05
5	2.7	1.8	1.3	0.7	2.24	0.87	0.39	0.11	1.77	0.68	0.31	0.09	1.53	0.58	0.26	0.07
6	3.2	2.1	1.5	0.9	3.06	1.19	0.54	0.15	2.45	0.94	0.42	0.12	2.13	0.81	0.36	0.10
7	3.7	2.5	1.8	1.0	4.01	1.55	0.70	0.20	3.22	1.23	0.55	0.15	2.81	1.07	0.48	0.13
8	4.3	2.9	2.0	1.2	5.06	1.95	0.88	0.25	4.09	1.56	0.70	0.19	3.58	1.35	0.61	0.17
9	4.8	3.2	2.3	1.3	6.22	2.39	1.08	0.30	5.05	1.92	0.86	0.24	4.44	1.68	0.75	0.21
10	5.3	3.6	2.6	1.5	7.48	2.88	1.30	0.36	6.10	2.32	1.04	0.29	5.38	2.03	0.90	0.25
11	5.9	3.9	2.8	1.6	8.84	3.40	1.54	0.43	7.24	2.75	1.23	0.34	6.41	2.41	1.07	0.29
12	6.4	4.3	3.1	1.8	10.3	3.96	1.79	0.50	8.47	3.21	1.44	0.40	7.52	2.82	1.26	0.34
13	6.9	4.6	3.3	1.9	11.9	4.56	2.06	0.57	9.79	3.71	1.66	0.46	8.71	3.27	1.45	0.40
14	7.5	5.0	3.6	2.1	13.5	5.19	2.34	0.65	11.2	4.24	1.90	0.52	9.99	3.74	1.66	0.45
15	8.0	5.4	3.8	2.2	15.3	5.86	2.64	0.73	12.7	4.80	2.14	0.59	11.3	4.24	1.88	0.51
16	8.5	5.7	4.1	2.4	17.2	6.57	2.96	0.82	14.3	5.39	2.41	0.66	12.8	4.78	2.12	0.57
17	9.1	6.1	4.4	2.5	19.1	7.31	3.29	0.91	16.0	6.02	2.68	0.74	14.3	5.34	2.36	0.64
18	9.6	6.4	4.6	2.7	21.2	8.09	3.64	1.01	17.7	6.68	2.98	0.81	15.9	5.93	2.62	0.71
19		6.8	4.9	2.8		8.91	4.01	1.11		7.36	3.28	0.90		6.56	2.90	0.78
20		7.1	5.1	3.0		9.76	4.39	1.21		8.08	3.60	0.98		7.21	3.18	0.86
22		7.9	5.6	3.3		11.6	5.19	1.43		9.62	4.27	1.16		8.60	3.79	1.02
24		8.6	6.1	3.6		13.5	6.06	1.67		11.3	5.00	1.36		10.1	4.45	1.20
26		9.3	6.7	3.9		15.6	6.98	1.93		13.1	5.79	1.57		11.7	5.16	1.38
28			7.2	4.2			7.97	2.19			6.62	1.80			5.91	1.58
30			7.7	4.5			9.01	2.48			7.51	2.03			6.72	1.80
32			8.2	4.8			10.1	2.78			8.45	2.29			7.58	2.02
34			8.7	5.1			11.3	3.09			9.44	2.55			8.48	2.26
36			9.2	5.4			12.5	3.42			10.5	2.83			9.44	2.51
38			9.7	5.7			13.8	3.77			11.6	3.12			10.4	2.77
40				6.0				4.13				3.42				3.05
42				6.3				4.50				3.74				3.34
44				6.6				4.89				4.07				3.64
46				6.9				5.30				4.42				3.95
48				7.2				5.72				4.77				4.27
50				7.5				6.15				5.14				4.61
52				7.8				6.60				5.53				4.96
54				8.1				7.06				5.92				5.32
56				8.4				7.54				6.33				5.69
58				8.7				8.03				6.75				6.07
60				9.0				8.53				7.18				6.47
65				9.7				9.85				8.32				7.51

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 2D: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 80% Water/20% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 20% Glycol				120°F (49°C) 20% Glycol				180°F (82°C) 20% Glycol			
GPM	50	63	75	90	50	63	75	90	50	63	75	90	50	63	75	90
2	0.3	0.2	0.1	0.1	0.02	<.01	<.01	<.01	0.02	<.01	<.01	<.01	0.02	<.01	<.01	<.01
4	0.6	0.4	0.3	0.2	0.09	0.03	<.01	<.01	0.06	0.02	<.01	<.01	0.05	0.02	<.01	<.01
6	0.9	0.6	0.4	0.3	0.17	0.06	0.02	0.01	0.13	0.04	0.02	<.01	0.11	0.04	0.02	<.01
8	1.3	0.8	0.6	0.4	0.28	0.09	0.04	0.02	0.22	0.07	0.03	0.01	0.19	0.06	0.03	0.01
10	1.6	1.0	0.7	0.5	0.40	0.14	0.06	0.03	0.32	0.11	0.05	0.02	0.28	0.09	0.04	0.02
12	1.9	1.2	0.8	0.6	0.55	0.19	0.08	0.03	0.44	0.15	0.06	0.03	0.38	0.13	0.05	0.02
14	2.2	1.4	1.0	0.7	0.72	0.24	0.10	0.04	0.58	0.19	0.08	0.03	0.50	0.17	0.07	0.03
16	2.5	1.6	1.1	0.8	0.91	0.31	0.13	0.06	0.74	0.24	0.10	0.04	0.64	0.21	0.09	0.04
18	2.8	1.8	1.2	0.9	1.12	0.38	0.16	0.07	0.91	0.30	0.13	0.05	0.79	0.26	0.11	0.05
20	3.1	2.0	1.4	1.0	1.35	0.45	0.19	0.08	1.09	0.36	0.15	0.06	0.96	0.31	0.13	0.06
22	3.4	2.2	1.5	1.1	1.60	0.53	0.23	0.10	1.30	0.43	0.18	0.08	1.14	0.37	0.16	0.07
24	3.8	2.4	1.7	1.2	1.86	0.62	0.27	0.11	1.52	0.50	0.21	0.09	1.33	0.44	0.19	0.08
26	4.1	2.6	1.8	1.2	2.14	0.71	0.31	0.13	1.75	0.58	0.25	0.10	1.54	0.50	0.21	0.09
28	4.4	2.8	1.9	1.3	2.44	0.81	0.35	0.15	2.00	0.66	0.28	0.12	1.77	0.58	0.24	0.10
30	4.7	3.0	2.1	1.4	2.76	0.92	0.39	0.17	2.27	0.75	0.32	0.13	2.01	0.65	0.28	0.12
35	5.5	3.5	2.4	1.7	3.63	1.20	0.52	0.22	3.00	0.98	0.42	0.17	2.66	0.86	0.37	0.15
40	6.3	3.9	2.8	1.9	4.60	1.52	0.65	0.27	3.82	1.25	0.53	0.22	3.41	1.10	0.47	0.19
45	7.0	4.4	3.1	2.2	5.68	1.88	0.80	0.34	4.74	1.55	0.66	0.27	4.24	1.37	0.58	0.24
50	7.8	4.9	3.5	2.4	6.86	2.26	0.97	0.41	5.74	1.87	0.79	0.33	5.15	1.66	0.70	0.29
55	8.6	5.4	3.8	2.6	8.13	2.68	1.14	0.48	6.84	2.22	0.94	0.39	6.15	1.98	0.83	0.34
60	9.4	5.9	4.1	2.9	9.51	3.13	1.34	0.56	8.02	2.61	1.10	0.46	7.23	2.32	0.98	0.40
65		6.4	4.5	3.1		3.61	1.54	0.65		3.01	1.27	0.53		2.69	1.13	0.47
70		6.9	4.8	3.4		4.13	1.76	0.74		3.45	1.46	0.61		3.09	1.29	0.53
75		7.4	5.2	3.6		4.67	1.99	0.83		3.92	1.65	0.69		3.51	1.47	0.61
80		7.9	5.5	3.8		5.24	2.23	0.93		4.41	1.86	0.77		3.96	1.66	0.68
85		8.4	5.9	4.1		5.85	2.49	1.04		4.93	2.07	0.86		4.43	1.85	0.76
90		8.9	6.2	4.3		6.48	2.75	1.15		5.47	2.30	0.95		4.93	2.06	0.85
95		9.4	6.6	4.6		7.14	3.03	1.27		6.04	2.54	1.05		5.46	2.27	0.93
100		9.9	6.9	4.8		7.84	3.33	1.39		6.64	2.79	1.15		6.01	2.50	1.03
105			7.3	5.0			3.63	1.52			3.05	1.26			2.74	1.12
110			7.6	5.3			3.95	1.65			3.32	1.37			2.99	1.22
115			7.9	5.5			4.28	1.78			3.60	1.49			3.24	1.33
120			8.3	5.8			4.62	1.92			3.90	1.61			3.51	1.44
130			9.0	6.2			5.33	2.22			4.52	1.86			4.08	1.67
140			9.7	6.7			6.10	2.54			5.18	2.13			4.69	1.91
150				7.2				2.87				2.42				2.18
160				7.7				3.23				2.72				2.45
170				8.2				3.60				3.05				2.75
180				8.7				3.99				3.38				3.06
190				9.1				4.40				3.74				3.38
200				9.6				4.83				4.11				3.72

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 2E: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 80% Water/20% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 20% Glycol				120°F (49°C) 20% Glycol				180°F (82°C) 20% Glycol			
GPM	110	125	140	160	110	125	140	160	110	125	140	160	110	125	140	160
5	0.2	0.1	0.1	0.1	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
10	0.3	0.2	0.2	0.2	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
15	0.5	0.4	0.3	0.2	0.02	0.01	<.01	<.01	0.02	<.01	<.01	<.01	0.01	<.01	<.01	<.01
20	0.6	0.5	0.4	0.3	0.03	0.02	0.01	<.01	0.03	0.01	<.01	<.01	0.02	0.01	<.01	<.01
25	0.8	0.6	0.5	0.4	0.05	0.03	0.01	<.01	0.04	0.02	0.01	<.01	0.03	0.02	0.01	<.01
30	1.0	0.7	0.6	0.5	0.06	0.04	0.02	0.01	0.05	0.03	0.02	<.01	0.04	0.02	0.01	<.01
40	1.3	1.0	0.8	0.6	0.11	0.06	0.03	0.02	0.08	0.05	0.03	0.01	0.07	0.04	0.02	0.01
50	1.6	1.2	1.0	0.8	0.16	0.09	0.05	0.03	0.13	0.07	0.04	0.02	0.11	0.06	0.03	0.02
60	1.9	1.5	1.2	0.9	0.22	0.12	0.07	0.04	0.17	0.09	0.05	0.03	0.15	0.08	0.05	0.03
70	2.3	1.7	1.4	1.1	0.28	0.15	0.09	0.05	0.23	0.12	0.07	0.04	0.20	0.11	0.06	0.03
80	2.6	2.0	1.6	1.2	0.36	0.19	0.11	0.06	0.29	0.16	0.09	0.05	0.26	0.14	0.08	0.04
90	2.9	2.2	1.8	1.4	0.44	0.24	0.14	0.07	0.36	0.20	0.11	0.06	0.32	0.17	0.10	0.05
100	3.2	2.5	2.0	1.5	0.53	0.29	0.17	0.09	0.44	0.24	0.14	0.07	0.39	0.21	0.12	0.06
110	3.5	2.7	2.2	1.7	0.63	0.34	0.20	0.11	0.52	0.28	0.16	0.09	0.46	0.25	0.14	0.08
120	3.9	3.0	2.4	1.8	0.73	0.40	0.23	0.12	0.61	0.33	0.19	0.10	0.54	0.29	0.17	0.09
130	4.2	3.2	2.6	2.0	0.85	0.46	0.27	0.14	0.70	0.38	0.22	0.12	0.63	0.34	0.19	0.10
140	4.5	3.5	2.8	2.1	0.97	0.52	0.30	0.16	0.81	0.43	0.25	0.13	0.72	0.38	0.22	0.12
150	4.8	3.7	3.0	2.3	1.09	0.59	0.34	0.18	0.91	0.49	0.28	0.15	0.81	0.44	0.25	0.13
160	5.1	4.0	3.2	2.4	1.23	0.67	0.38	0.20	1.03	0.55	0.32	0.17	0.92	0.49	0.28	0.15
170	5.5	4.2	3.4	2.6	1.37	0.74	0.43	0.23	1.15	0.62	0.36	0.19	1.03	0.55	0.32	0.17
180	5.8	4.5	3.6	2.7	1.52	0.82	0.47	0.25	1.27	0.69	0.39	0.21	1.14	0.61	0.35	0.18
190	6.1	4.7	3.8	2.9	1.67	0.91	0.52	0.28	1.41	0.76	0.43	0.23	1.26	0.67	0.39	0.20
200	6.4	5.0	4.0	3.0	1.83	0.99	0.57	0.30	1.54	0.83	0.48	0.25	1.39	0.74	0.42	0.22
225	7.2	5.6	4.5	3.4	2.27	1.23	0.71	0.38	1.92	1.03	0.59	0.31	1.72	0.92	0.53	0.28
250	8.0	6.2	5.0	3.8	2.74	1.48	0.86	0.45	2.33	1.25	0.72	0.38	2.10	1.12	0.64	0.34
275	8.8	6.9	5.5	4.2	3.26	1.76	1.02	0.54	2.77	1.49	0.85	0.45	2.51	1.34	0.76	0.40
300	9.7	7.5	6.0	4.6	3.82	2.06	1.19	0.63	3.26	1.75	1.00	0.53	2.95	1.57	0.90	0.47
325		8.1	6.4	4.9		2.38	1.37	0.73		2.02	1.16	0.61		1.83	1.04	0.54
350		8.7	6.9	5.3		2.72	1.57	0.83		2.32	1.33	0.70		2.10	1.20	0.62
375		9.4	7.4	5.7		3.09	1.78	0.94		2.64	1.51	0.79		2.39	1.36	0.71
400		10.0	7.9	6.1		3.47	2.00	1.05		2.97	1.70	0.89		2.70	1.53	0.80
425			8.4	6.5			2.23	1.18			1.90	1.00			1.72	0.90
450			8.9	6.9			2.47	1.31			2.11	1.11			1.91	1.00
475			9.4	7.2			2.73	1.44			2.33	1.22			2.12	1.10
500			9.9	7.6			3.00	1.58			2.57	1.34			2.33	1.21
525				8.0				1.73				1.47				1.33
550				8.4				1.88				1.60				1.45
575				8.8				2.04				1.74				1.58
600				9.1				2.20				1.88				1.71
625				9.5				2.37				2.03				1.84
650				9.9				2.54				2.18				1.98

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 3A: Pressure Loss for Inch-Sized SDR9 PEXa Carrier Pipe with 50% Water/50% Propylene Glyco

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 50% Glycol				120°F (49°C) 50% Glycol				180°F (82°C) 50% Glycol			
GPM	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"	3/8"	1/2"	5/8"	3/4"
0.1	0.3	0.2	0.1	0.1	1.31	0.40	0.19	0.10	0.38	0.12	0.06	0.03	0.17	0.05	0.03	0.01
0.2	0.6	0.3	0.2	0.2	2.63	0.80	0.38	0.21	0.77	0.23	0.11	0.06	0.35	0.11	0.05	0.03
0.3	0.9	0.5	0.4	0.3	3.94	1.20	0.57	0.31	1.15	0.35	0.17	0.09	0.96	0.16	0.08	0.04
0.4	1.3	0.7	0.5	0.4	5.26	1.60	0.76	0.41	1.53	0.47	0.22	0.12	1.56	0.39	0.10	0.05
0.5	1.6	0.9	0.6	0.4	6.57	2.00	0.95	0.51	1.92	0.58	0.28	0.15	2.27	0.56	0.23	0.07
0.6	1.9	1.0	0.7	0.5	7.89	2.39	1.14	0.62	2.30	0.70	0.33	0.18	3.10	0.76	0.32	0.16
0.7	2.2	1.2	0.8	0.6	9.20	2.79	1.33	0.72	5.23	0.82	0.39	0.21	4.04	0.99	0.41	0.20
0.8	2.5	1.4	1.0	0.7	10.5	3.19	1.52	0.82	6.54	0.93	0.44	0.24	5.09	1.24	0.52	0.25
0.9	2.8	1.6	1.1	0.8	11.8	3.59	1.71	0.92	7.98	1.97	0.50	0.27	6.24	1.52	0.63	0.31
1.0	3.2	1.7	1.2	0.9	13.1	3.99	1.90	1.03	9.54	2.35	0.99	0.30	7.50	1.82	0.76	0.37
1.2	3.8	2.1	1.4	1.1	15.8	4.79	2.28	1.23	13.0	3.19	1.34	0.65	10.3	2.49	1.03	0.50
1.4	4.4	2.4	1.7	1.2	18.4	5.59	2.66	1.44	16.9	4.14	1.73	0.84	13.5	3.25	1.35	0.65
1.6	5.0	2.8	1.9	1.4	21.0	6.39	3.04	1.64	21.3	5.20	2.17	1.05	17.1	4.10	1.69	0.82
1.8	5.7	3.1	2.2	1.6	23.7	7.18	3.42	1.85	26.1	6.36	2.65	1.29	21.1	5.04	2.08	1.00
2.0	6.3	3.5	2.4	1.8	26.3	7.98	3.80	2.05	31.3	7.61	3.17	1.54	25.4	6.06	2.50	1.20
2.2	6.9	3.8	2.6	1.9	53.8	8.78	4.18	2.26	37.0	8.97	3.73	1.81	30.1	7.17	2.95	1.42
2.4	7.6	4.2	2.9	2.1	62.3	9.58	4.56	2.46	43.1	10.4	4.32	2.09	35.2	8.36	3.43	1.65
2.6	8.2	4.5	3.1	2.3	71.2	10.4	4.94	2.67	49.5	12.0	4.96	2.40	40.7	9.63	3.95	1.90
2.8	8.8	4.9	3.4	2.5	80.7	20.0	5.32	2.88	56.4	13.6	5.63	2.72	46.5	11.0	4.50	2.16
3.0	9.5	5.2	3.6	2.6	90.6	22.4	5.70	3.08	63.7	15.3	6.34	3.07	52.7	12.4	5.08	2.44
3.2		5.6	3.8	2.8		25.0	6.08	3.29		17.2	7.09	3.42		13.9	5.70	2.73
3.4		5.9	4.1	3.0		27.6	11.6	3.49		19.1	7.87	3.80		15.5	6.34	3.04
3.6		6.3	4.3	3.2		30.4	12.7	3.70		21.1	8.69	4.19		17.2	7.02	3.36
3.8		6.6	4.6	3.3		33.3	13.9	3.90		23.1	9.55	4.60		18.9	7.73	3.69
4.0		6.9	4.8	3.5		36.3	15.2	7.41		25.3	10.4	5.03		20.8	8.46	4.04
4.2		7.3	5.0	3.7		39.4	16.5	8.03		27.6	11.4	5.47		22.7	9.23	4.41
4.4		7.6	5.3	3.9		42.6	17.8	8.68		29.9	12.3	5.93		24.6	10.0	4.79
4.6		8.0	5.5	4.1		46.0	19.2	9.35		32.4	13.3	6.41		26.7	10.9	5.18
4.8		8.3	5.7	4.2		49.4	20.6	10.0		34.9	14.3	6.90		28.8	11.7	5.59
5.0		8.7	6.0	4.4		52.9	22.1	10.7		37.5	15.4	7.41		31.0	12.6	6.01
5.5		9.6	6.6	4.8		62.2	26.0	12.6		44.4	18.2	8.75		36.9	15.0	7.12
6.0			7.2	5.3			30.1	14.6			21.2	10.2			17.5	8.31
6.5			7.8	5.7			34.5	16.7			24.4	11.7			20.2	9.60
7.0			8.4	6.2			39.1	19.0			27.9	13.3			23.1	11.0
7.5			9.0	6.6			44.0	21.3			31.5	15.1			26.2	12.4
8.0			9.6	7.0			49.1	23.8			35.3	16.9			29.4	13.9
8.5				7.5				26.4				18.8				15.6
9.0				7.9				29.1				20.8				17.2
9.5				8.4				31.9				22.9				19.0
10.0				8.8				34.8				25.0				20.9
11.0				9.7				41.0				29.7				24.8

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.
– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.
– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 3B: Pressure Loss for Inch-Sized SDR9 PEXa Carrier Pipe with 50% Water/50% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 50% Glycol				120°F (49°C) 50% Glycol				180°F (82°C) 50% Glycol			
GPM	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"	1"	1-1/4"	1-1/2"	2"
1	0.5	0.4	0.3	0.1	0.38	0.17	0.09	0.03	0.11	0.05	0.03	<.01	0.11	0.04	0.02	<.01
2	1.1	0.7	0.5	0.3	0.75	0.34	0.17	0.06	0.47	0.19	0.05	0.02	0.37	0.14	0.06	0.02
3	1.6	1.1	0.8	0.4	1.13	0.51	0.26	0.09	0.94	0.37	0.17	0.05	0.74	0.29	0.13	0.04
4	2.1	1.4	1.0	0.6	1.51	0.68	0.35	0.12	1.54	0.60	0.27	0.08	1.22	0.47	0.21	0.06
5	2.7	1.8	1.3	0.7	3.33	0.85	0.43	0.15	2.25	0.87	0.40	0.11	1.80	0.69	0.31	0.09
6	3.2	2.1	1.5	0.9	4.51	1.01	0.52	0.18	3.09	1.20	0.54	0.15	2.49	0.96	0.43	0.12
7	3.7	2.5	1.8	1.0	5.84	2.29	0.61	0.21	4.04	1.56	0.71	0.20	3.27	1.25	0.57	0.16
8	4.3	2.9	2.0	1.2	7.32	2.86	1.31	0.24	5.10	1.97	0.89	0.25	4.15	1.59	0.71	0.20
9	4.8	3.2	2.3	1.3	8.93	3.49	1.60	0.27	6.26	2.41	1.09	0.31	5.12	1.95	0.88	0.24
10	5.3	3.6	2.6	1.5	10.7	4.17	1.91	0.54	7.53	2.90	1.31	0.37	6.19	2.36	1.06	0.29
11	5.9	3.9	2.8	1.6	12.6	4.89	2.24	0.64	8.91	3.43	1.55	0.43	7.34	2.79	1.25	0.35
12	6.4	4.3	3.1	1.8	14.6	5.67	2.59	0.73	10.4	3.99	1.80	0.50	8.59	3.26	1.46	0.40
13	6.9	4.6	3.3	1.9	16.7	6.50	2.97	0.84	12.0	4.59	2.07	0.58	9.92	3.77	1.69	0.46
14	7.5	5.0	3.6	2.1	19.0	7.37	3.36	0.95	13.6	5.23	2.36	0.66	11.3	4.30	1.93	0.53
15	8.0	5.4	3.8	2.2	21.3	8.29	3.78	1.07	15.4	5.91	2.66	0.74	12.9	4.87	2.18	0.60
16	8.5	5.7	4.1	2.4	23.9	9.26	4.22	1.19	17.3	6.62	2.98	0.83	14.5	5.47	2.44	0.67
17	9.1	6.1	4.4	2.5	26.5	10.3	4.68	1.32	19.3	7.37	3.32	0.92	16.1	6.10	2.73	0.75
18	9.6	6.4	4.6	2.7	29.2	11.3	5.16	1.45	21.3	8.15	3.67	1.02	17.9	6.77	3.02	0.83
19		6.8	4.9	2.8		12.4	5.66	1.59		8.97	4.04	1.12		7.46	3.33	0.91
20		7.1	5.1	3.0		13.6	6.18	1.74		9.83	4.42	1.22		8.19	3.65	1.00
22		7.9	5.6	3.3		16.0	7.27	2.04		11.6	5.23	1.45		9.73	4.33	1.18
24		8.6	6.1	3.6		18.6	8.45	2.37		13.6	6.10	1.68		11.4	5.07	1.38
26		9.3	6.7	3.9		21.4	9.70	2.72		15.7	7.03	1.94		13.2	5.86	1.60
28			7.2	4.2			11.0	3.09			8.03	2.21			6.71	1.82
30			7.7	4.5			12.4	3.47			9.08	2.50			7.60	2.06
32			8.2	4.8			13.9	3.88			10.2	2.80			8.55	2.32
34			8.7	5.1			15.4	4.31			11.4	3.12			9.55	2.59
36			9.2	5.4			17.0	4.76			12.6	3.45			10.6	2.87
38			9.7	5.7			18.7	5.22			13.9	3.80			11.7	3.16
40				6.0				5.71				4.16				3.47
42				6.3				6.21				4.54				3.79
44				6.6				6.73				4.93				4.12
46				6.9				7.27				5.34				4.47
48				7.2				7.83				5.76				4.83
50				7.5				8.40				6.19				5.20
52				7.8				9.00				6.64				5.59
54				8.1				9.61				7.11				5.99
56				8.4				10.2				7.59				6.40
58				8.7				10.9				8.08				6.82
60				9.0				11.5				8.59				7.26
65				9.7				13.3				9.92				8.41

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 3D: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 50% Water/50% Propylene Glycol

Flow Rate	Flow Velocity ft/sec				pressure loss in psi per 100 ft of pipe											
					60°F (16°C) 50% Glycol				120°F (49°C) 50% Glycol				180°F (82°C) 50% Glycol			
GPM	50	63	75	90	50	63	75	90	50	63	75	90	50	63	75	90
2	0.3	0.2	0.1	0.1	0.06	0.03	0.01	<.01	0.02	<.01	<.01	<.01	0.02	<.01	<.01	<.01
4	0.6	0.4	0.3	0.2	0.13	0.05	0.03	0.01	0.09	0.03	<.01	<.01	0.07	0.02	<.01	<.01
6	0.9	0.6	0.4	0.3	0.19	0.08	0.04	0.02	0.17	0.06	0.03	0.01	0.13	0.04	0.02	<.01
8	1.3	0.8	0.6	0.4	0.26	0.10	0.05	0.02	0.28	0.09	0.04	0.02	0.22	0.07	0.03	0.01
10	1.6	1.0	0.7	0.5	0.60	0.13	0.06	0.03	0.41	0.14	0.06	0.03	0.33	0.11	0.05	0.02
12	1.9	1.2	0.8	0.6	0.82	0.28	0.08	0.04	0.56	0.19	0.08	0.03	0.45	0.15	0.06	0.03
14	2.2	1.4	1.0	0.7	1.06	0.36	0.16	0.04	0.73	0.24	0.11	0.04	0.59	0.20	0.08	0.04
16	2.5	1.6	1.1	0.8	1.32	0.45	0.20	0.05	0.92	0.31	0.13	0.06	0.75	0.25	0.11	0.04
18	2.8	1.8	1.2	0.9	1.62	0.55	0.24	0.10	1.13	0.38	0.16	0.07	0.92	0.31	0.13	0.06
20	3.1	2.0	1.4	1.0	1.93	0.65	0.28	0.12	1.36	0.45	0.20	0.08	1.11	0.37	0.16	0.07
22	3.4	2.2	1.5	1.1	2.27	0.77	0.33	0.14	1.61	0.54	0.23	0.10	1.32	0.44	0.19	0.08
24	3.8	2.4	1.7	1.2	2.64	0.89	0.39	0.17	1.88	0.62	0.27	0.11	1.54	0.51	0.22	0.09
26	4.1	2.6	1.8	1.2	3.02	1.02	0.44	0.19	2.16	0.72	0.31	0.13	1.78	0.59	0.25	0.11
28	4.4	2.8	1.9	1.3	3.43	1.16	0.50	0.21	2.46	0.82	0.35	0.15	2.03	0.67	0.29	0.12
30	4.7	3.0	2.1	1.4	3.87	1.30	0.56	0.24	2.78	0.92	0.40	0.17	2.30	0.76	0.32	0.14
35	5.5	3.5	2.4	1.7	5.04	1.69	0.73	0.31	3.66	1.21	0.52	0.22	3.04	1.00	0.42	0.18
40	6.3	3.9	2.8	1.9	6.35	2.13	0.92	0.39	4.64	1.53	0.66	0.28	3.87	1.27	0.54	0.23
45	7.0	4.4	3.1	2.2	7.79	2.61	1.13	0.48	5.72	1.89	0.81	0.34	4.79	1.57	0.67	0.28
50	7.8	4.9	3.5	2.4	9.35	3.13	1.35	0.57	6.90	2.28	0.97	0.41	5.81	1.90	0.80	0.34
55	8.6	5.4	3.8	2.6	11.0	3.69	1.59	0.68	8.19	2.70	1.15	0.48	6.91	2.25	0.95	0.40
60	9.4	5.9	4.1	2.9	12.9	4.30	1.85	0.78	9.58	3.15	1.35	0.56	8.11	2.64	1.12	0.47
65		6.4	4.5	3.1		4.94	2.13	0.90		3.64	1.55	0.65		3.05	1.29	0.54
70		6.9	4.8	3.4		5.62	2.42	1.02		4.16	1.77	0.74		3.49	1.48	0.61
75		7.4	5.2	3.6		6.34	2.73	1.15		4.70	2.00	0.84		3.96	1.67	0.70
80		7.9	5.5	3.8		7.10	3.05	1.29		5.28	2.25	0.94		4.46	1.88	0.78
85		8.4	5.9	4.1		7.89	3.39	1.43		5.89	2.50	1.05		4.98	2.10	0.87
90		8.9	6.2	4.3		8.72	3.75	1.58		6.52	2.77	1.16		5.53	2.33	0.97
95		9.4	6.6	4.6		9.59	4.12	1.74		7.19	3.05	1.28		6.11	2.57	1.07
100		9.9	6.9	4.8		10.5	4.50	1.90		7.89	3.35	1.40		6.71	2.82	1.17
105			7.3	5.0			4.90	2.07			3.66	1.53			3.09	1.28
110			7.6	5.3			5.32	2.24			3.97	1.66			3.36	1.39
115			7.9	5.5			5.75	2.42			4.31	1.80			3.64	1.51
120			8.3	5.8			6.20	2.61			4.65	1.94			3.94	1.63
130			9.0	6.2			7.13	3.00			5.37	2.24			4.56	1.88
140			9.7	6.7			8.13	3.42			6.14	2.56			5.23	2.16
150				7.2				3.86				2.89				2.45
160				7.7				4.32				3.25				2.75
170				8.2				4.81				3.62				3.08
180				8.7				5.32				4.02				3.42
190				9.1				5.85				4.43				3.78
200				9.6				6.41				4.86				4.15

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.

Table 3E: Pressure Loss for Metric-Sized SDR11 PEXa Carrier Pipe with 50% Water/50% Propylene Glycol

Flow Rate	Flow Velocity ft/sec			pressure loss in psi per 100 ft of pipe								
				60°F (16°C) 50% Glycol			120°F (49°C) 50% Glycol			180°F (82°C) 50% Glycol		
GPM	110	125	140	110	125	140	110	125	140	110	125	140
5	0.2	0.1	0.1	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
10	0.3	0.2	0.2	0.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
15	0.5	0.4	0.3	0.02	0.01	<.01	0.02	0.01	<.01	0.02	<.01	<.01
20	0.6	0.5	0.4	0.03	0.02	0.01	0.03	0.02	0.01	0.03	0.01	<.01
25	0.8	0.6	0.5	0.07	0.04	0.01	0.05	0.03	0.02	0.04	0.02	0.01
30	1.0	0.7	0.6	0.09	0.05	0.03	0.06	0.04	0.02	0.05	0.03	0.02
40	1.3	1.0	0.8	0.15	0.08	0.05	0.11	0.06	0.03	0.09	0.05	0.03
50	1.6	1.2	1.0	0.22	0.12	0.07	0.16	0.09	0.05	0.13	0.07	0.04
60	1.9	1.5	1.2	0.30	0.17	0.10	0.22	0.12	0.07	0.18	0.10	0.06
70	2.3	1.7	1.4	0.40	0.22	0.13	0.28	0.15	0.09	0.23	0.13	0.07
80	2.6	2.0	1.6	0.50	0.27	0.16	0.36	0.20	0.11	0.30	0.16	0.09
90	2.9	2.2	1.8	0.61	0.33	0.20	0.44	0.24	0.14	0.37	0.20	0.11
100	3.2	2.5	2.0	0.73	0.40	0.23	0.53	0.29	0.17	0.44	0.24	0.14
110	3.5	2.7	2.2	0.87	0.47	0.28	0.63	0.34	0.20	0.53	0.29	0.16
120	3.9	3.0	2.4	1.01	0.55	0.32	0.74	0.40	0.23	0.62	0.33	0.19
130	4.2	3.2	2.6	1.16	0.63	0.37	0.85	0.46	0.27	0.71	0.39	0.22
140	4.5	3.5	2.8	1.32	0.72	0.42	0.97	0.53	0.31	0.82	0.44	0.25
150	4.8	3.7	3.0	1.49	0.81	0.47	1.10	0.60	0.35	0.92	0.50	0.29
160	5.1	4.0	3.2	1.66	0.91	0.53	1.24	0.67	0.39	1.04	0.56	0.32
170	5.5	4.2	3.4	1.85	1.01	0.59	1.38	0.75	0.43	1.16	0.63	0.36
180	5.8	4.5	3.6	2.05	1.12	0.65	1.53	0.83	0.48	1.29	0.69	0.40
190	6.1	4.7	3.8	2.25	1.23	0.71	1.68	0.91	0.53	1.42	0.77	0.44
200	6.4	5.0	4.0	2.46	1.34	0.78	1.85	1.00	0.58	1.56	0.84	0.48
225	7.2	5.6	4.5	3.03	1.65	0.96	2.28	1.24	0.71	1.94	1.04	0.60
250	8.0	6.2	5.0	3.65	1.99	1.15	2.76	1.49	0.86	2.35	1.26	0.73
275	8.8	6.9	5.5	4.32	2.35	1.36	3.28	1.77	1.02	2.80	1.50	0.86
300	9.7	7.5	6.0	5.04	2.74	1.59	3.84	2.08	1.20	3.29	1.77	1.01
325		8.1	6.4		3.16	1.83		2.40	1.38		2.04	1.17
350		8.7	6.9		3.60	2.08		2.74	1.58		2.34	1.34
375		9.4	7.4		4.07	2.35		3.11	1.79		2.66	1.52
400		10.0	7.9		4.56	2.64		3.50	2.01		3.00	1.72
425			8.4			2.94			2.24			1.92
450			8.9			3.25			2.49			2.13
475			9.4			3.58			2.75			2.36
500			9.9			3.92			3.02			2.59
525												
550												
575												
600												
625												
650												

– Flow velocity above 8 fps (2.5 m/s) might result in excessive pressure loss, noise or erosion of the system components.

– Table values shown in pressure loss units of psi per 100 ft (30.5 m) of pipe.
Example: for 200 lineal ft of pipe, double the value listed in this table.

– To express pressure loss in terms of feet of head, multiply the table value by 2.307.
Example: 1 psi = 2.307 ft of head.