

CPVC Pipe SDR 11 (ASTM D 2846) Calculated Loop (offset) Lengths with ΔT of approx. 80°F				
Nominal Pipe Size	Length of Run in Feet			
	40	60	80	100
	Loop Length (ℓ) in inches			
1/2"	22	27	31	34
3/4"	26	32	36	41
1"	29	36	41	46
1-1/4"	32	40	46	51
1-1/2"	35	43	50	56
2"	40	49	57	64

Assume Modulus & Stress at 160°F

CPVC Pipe Schedule 80 (ASTM F441) Calculated Loop (offset) Lengths with ΔT of approx. 80°F				
Nominal Pipe Size	Length of Run in Feet			
	40	60	80	100
	Loop Length (ℓ) in inches			
2-1/2"	47	57	66	74
3"	52	63	73	82
4"	58	72	83	92
6"	71	87	100	112
8"	81	99	114	128
10"	90	111	128	143

Assume Modulus & Stress at 160°F

CPVC Pipe Schedule 11 (ASTM D 2846) Calculated Loop (offset) Lengths with ΔT of approx. 100°F					
Nominal Pipe Size	Length of Run in Feet				
	20	40	60	80	100
	Loop Length (ℓ) in inches				
1/2"	17	24	30	34	39
3/4"	20	29	35	41	46
1"	23	33	40	46	52
1-1/4"	26	36	44	51	57
1-1/2"	28	39	48	56	62
2"	32	45	55	64	71

Assume Modulus & Stress at 160°F

$$\ell = \sqrt{3ED(\Delta L)/2S}$$

Where

ℓ = loop length in inches

E = modulus of elasticity at maximum temperature, psi

D = outside diameter of pipe, inches

 ΔL = change in length due to change in temperature, inches

S = working stress at maximum temperature, psi