

Area and Hydraulic Radius for Corrugated Steel Pipe Flowing Full

Round Pipe - Area & Hydraulic Radius		
Diameter Inches	Area Ft ²	Hydraulic Radius Feet
12	0.8	0.250
15	1.2	0.312
18	1.8	0.375
21	2.4	0.437
24	3.1	0.500
30	4.9	0.625
36	7.1	0.750
42	9.6	0.875
48	12.6	1.000
54	15.9	1.125
60	19.6	1.250
66	23.8	1.375
72	28.1	1.500
78	33.2	1.625
84	38.5	1.750
90	44.2	1.875
96	50.3	2.000
102	56.8	2.125
108	63.6	2.250
114	70.9	2.375
120	78.5	2.500
126	86.6	2.625
132	95.0	2.750
138	103.9	2.875
144	113.1	3.000

Pipe Arch - Area & Hydraulic Radius			
2 2/3" x 1/2" Corrugated Steel Pipe			
Diameter Inches	Pipe Arch Equivalent Size Inches	Waterway Area Ft ²	Hydraulic Radius A/πD Feet
15	17 x 13	1.1	0.280
18	21 x 15	1.6	0.340
21	24 x 18	2.2	0.400
24	28 x 20	2.4	0.462
30	35 x 24	4.5	0.573
36	42 x 29	6.5	0.690
42	49 x 33	8.9	0.810
48	57 x 38	11.6	0.924
54	64 x 43	14.7	1.040
60	71 x 47	18.1	1.153
66	77 x 52	21.9	1.268
72	83 x 57	26.0	1.380

Pipe Arch - Area & Hydraulic Radius			
3" x 1" or 5" x 1" Corrugated Steel Pipe			
Diameter Inches	Pipe Arch Equivalent Size Inches	Waterway Area Ft ²	Hydraulic Radius A/πD Feet
54	60 x 46	15.6	1.104
60	66 x 51	19.3	1.230
66	73 x 55	23.2	1.343
72	81 x 59	27.4	1.454
78	87 x 63	32.1	1.573
84	95 x 67	37.0	1.683
90	103 x 71	42.4	1.800
96	112 x 75	48.0	1.911
102	117 x 79	54.2	2.031
108	128 x 83	60.5	2.141
114	137 x 87	67.4	2.259
120	142 x 91	74.5	2.373

ULTRA FLO® Pipe Arch - Area & Hydraulic Radius			
2 2/3" x 1/2" Corrugated Steel Pipe			
Diameter Inches	Pipe Arch Equivalent Size Inches	Waterway Area Ft ²	Hydraulic Radius A/πD Feet
18	20 x 16	1.7	0.36
21	23 x 19	2.3	0.42
24	27 x 21	3.0	0.48
30	33 x 26	4.7	0.60
36	40 x 31	6.7	0.71
42	46 x 36	9.2	0.84
48	53 x 41	12.1	0.96
54	60 x 46	15.6	1.10
60	66 x 51	19.3	1.23