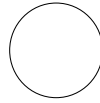


# HEL-COR® Corrugated Steel Pipe

## Heights of Cover

### 2 2/3" x 1/2" Height of Cover Limits for Corrugated Steel Pipe



#### H 20 and H 25 Live Loads

Diameter (Inches)	Minimum Cover (Inches)	Maximum Cover <sup>(2)</sup> (Feet)					
		Specified Thickness (Inches) and Gage					
		(0.052) 18	(0.064) 16	(0.079) 14	(0.109) 12	(0.138) 10	(0.168) 8
6 <sup>(8)</sup>	12	388	486				
8 <sup>(8)</sup>	12	291	365				
10 <sup>(8)</sup>	12	233	292				
12	12	197	248	310			
15	12	158	198	248			
18	12	131	165	206			
21	12	113	141	177	248		
24	12	98	124	155	217		
30	12		99	124	173		
36	12		83	103	145	186	
42	12		71	88	124	159	195
48	12		62	77	108	139	171
54	12			67	94	122	150
60	12				80	104	128
66	12				68	88	109
72	12					75	93
78	12						79
84	12						66

#### H 20 and H 25 Live Loads, Pipe-Arch

Size		Minimum Thickness (Inches)	Minimum Cover (Inches)	Maximum Cover (Feet)
Round Equivalent (Inches)	Span x Rise (Inches)			
				2 Tons/Ft. <sup>2</sup> Corner Bearing Pressure
15	17 x 13	0.064	12	16
18	21 x 15	0.064	12	15
21	24 x 18	0.064	12	15
24	28 x 20	0.064	12	15
30	35 x 24	0.064	12	15
36	42 x 29	0.064	12	15
42	49 x 33	0.064*	12	15
48	57 x 38	0.064*	12	15
54	64 x 43	0.079*	12	15
60	71 x 47	0.109*	12	15
66	77 x 52	0.109*	12	15
72	83 x 57	0.138*	12	15

#### E 80 Live Loads

Diameter (Inches)	Minimum Cover (Inches)	Maximum Cover <sup>(2)</sup> (Feet)					
		Specified Thickness (Inches) and Gage					
		(0.052) 18	(0.064) 16	(0.079) 14	(0.109) 12	(0.138) 10	(0.168) 8
12	12	197	248	310			
15	12	158	198	248			
18	12	131	165	206			
21	12	113	141	177	248		
24	12	98	124	155	217		
30	12		99	124	173		
36	12		83	103	145	186	
42	12		71	88	124	159	195
48	12		62	77	108	139	171
54	18			67	94	122	150
60	18				80	104	128
66	18				68	88	109
72	18					75	93
78	24						79
84	24						66

#### E 80 Live Loads, Pipe-Arch

Size		Minimum Thickness (Inches)	Minimum Cover (Inches)	Maximum Cover (Feet)
Round Equivalent (Inches)	Span x Rise (Inches)			
				3 Tons/Ft. <sup>2</sup> Corner Bearing Pressure
15	17 x 13	0.079	24	22
18	21 x 15	0.079	24	22
21	24 x 18	0.109	24	22
24	28 x 20	0.109	24	22
30	35 x 24	0.138	24	22
36	42 x 29	0.138	24	22
42	49 x 33	0.138*	24	22
48	57 x 38	0.138*	24	22
54	64 x 43	0.138*	24	22
60	71 x 47	0.138*	24	22

\* These values are based on the AISI Flexibility Factor limit (0.0433 x 1.5) for pipe-arch.

#### Heights of Cover Notes:

- These tables are for lock-seam or welded-seam construction. They are not for riveted construction. Consult your Contech Sales Representative for Height of Cover tables on riveted pipe.
- These values, where applicable, were calculated using a load factor of K=0.86 as adopted in the NCSA CSP Design Manual, 2008.
- The haunch areas of a pipe-arch are the most critical zone for backfilling. Extra care should be taken to provide good material and compaction to a point above the spring line.
- E 80 minimum cover is measured from top of pipe to bottom of tie.
- H 20 and H 25 minimum cover is measured from top of pipe to bottom of flexible pavement or top of rigid pavement.
- The pipe-arch tables are based on the corner bearing pressures as shown. These values may increase or decrease with changes in allowable corner bearing pressures. Consider the use of a round pipe in cases where the height of cover exceeds 8'.

- For construction loads, see Page 15.
- 1-1/2" x 1/4" corrugation. H 20, H 25 and E 80 loading.
- Smooth Cor™ has same Height of Cover properties as corrugated steel pipe. The exterior shell of Smooth Cor™ is manufactured in either 2 2/3" x 1/2" or 3" x 1" corrugations; maximum exterior shell is 12 GA.