

# FILL HEIGHT & INCH (mm) SHEET THICKNESS TABLES

H-20 LIVE LOAD

ROUND PIPES														
2 2/3" x 1/2" (68 mm x 13 mm) CORRUGATIONS														
PIPE DIA.	MIN. COVER	STEEL					ALUMINUM							
		MAXIMUM FILL HEIGHTS ABOVE TOP OF PIPE IN FEET (meter)												
		METAL THICKNESS IN INCHES (mm)												
		RIVETED, HELICAL OR SPOT WELDED					RIVETED OR HELICAL FABRICATION					SPOT WELDED FAB.		
INCHES (mm)	.064 (1.6)	.079 (2.00)	.109 (2.8)	.138 (3.5)	.168 (4.26)	.060 (1.5)	.075 (1.9)	.105 (2.67)	.135 (3.4)	.164 (4.0)	.060 (1.5)	.075 (1.9)	.105 (2.67)	.135 (3.4)
12 (305)	12 (305)	84 (25.6)	91 (27.7)				45 (13.7)	45 (13.7)	78 (23.8)	81 (25.6)	84 (25.4)	26 (7.9)	33 (10.0)	
15 (381)	12 (305)	67 (20.4)	73 (22.2)											
18 (457)	12 (305)	56 (17.0)	61 (18.6)				30 (9.1)	30 (9.1)	52 (15.8)	54 (16.5)	56 (17.0)	18 (5.5)	22 (6.7)	
24 (610)	12 (305)	42 (12.8)	46 (14.0)	59 (18)			22 (6.7)	22 (6.7)	39 (11.9)	41 (12.5)	42 (12.8)	14 (4.3)	16 (4.9)	
30 (762)	12 (305)	34 (10.4)	36 (11.0)	47 (14)			18 (5.5)	18 (5.5)	31 (9.4)	32 (9.8)	34 (10.4)	11 (3.4)	13 (4.0)	
36 (914)	12 (305)	28 (8.5)	30 (9.1)	39 (11.9)	41 (12.5)		15 (4.6)	15 (4.6)	26 (7.9)	27 (8.2)	28 (8.5)	9 (2.7)	11 (3.3)	
42 (1067)	12 (305)	31 (9.4)	43 (13.1)	46[67] (14.0)	48[70] (14.6)	50[73] (15.2)		26 (7.9)	43 (13.1)	43 (13.1)	44 (13.4)			
48 (1219)	12 (305)	27 (8.2)	37 (11.3)	45[58] (13.7)	46[61] (14.0)	47[64] (14.3)			40 (12.2)	41 (12.5)	43 (13.1)			
54 (1372)	12 (305)		33 (10.0)	43[52] (13.1)	44[54] (13.4)	45[57] (13.7)			35 (10.7)	37 (11.3)	38 (11.6)			
60 (1524)	12 (305)			43[47] (13.1)	43[49] (13.1)	44[51] (13.4)				33 (10.0)	34 (10.4)			
66 (1676)	12 (305)			42 (12.8)	43 (13.1)	43[47] (13.1)				30 (9.1)	31 (9.4)			
72 (1829)	12 (305)				41 (12.8)	43 (13.1)					29 (8.8)			
78 (1981)	12 (305)					39 (11.9)								
84 (2134)	12 (305)					35 (10.7)								

3" X 1" (76 mm x 25 mm) CORRUGATIONS										6" X 1" (152 mm x 25 mm) CORRUGATIONS					
PIPE DIAMETER	MINIMUM COVER	STEEL					ALUMINUM								
		MAXIMUM FILL HEIGHTS ABOVE TOP OF PIPE IN FEET (meter)													
		METAL THICKNESS IN INCHES (mm)													
		STEEL					ALUMINUM								
INCHES (mm)	.064 (1.6)	.079 (2.00)	.109 (2.76)	.138 (3.5)	.168 (4.26)	INCHES (mm)	.060 (1.5)	.075 (1.9)	.105 (2.67)	.135 (3.4)	.165 (4.0)				
36 (914)	12 (305)	48 (14.6)	60 (18.3)	78[88] (23.8)	89[106] (27)	101[118] (30.8)	30 (762)	15 (381)	29 (8.8)	37 (11.3)	56 (17.0)	58 (17.7)	59 (18.0)		
42 (1067)	12 (305)	41 (12.5)	51 (15.6)	64[76] (19.5)	71[91] (21.6)	79[101] (24.0)	36 (914)	15 (381)	24 (7.3)	31 (9.4)	47 (14.3)	48 (14.6)	49 (14.9)		
48 (1219)	12 (305)	36 (11.0)	45 (13.7)	57[66] (17.4)	61[80] (18.6)	66[88] (20.1)	42 (1067)	15 (381)	21 (6.4)	27 (8.2)	40 (12.2)	41 (12.5)	42 (12.8)		
54 (1372)	12 (305)	32 (9.75)	40 (12.2)	52[59] (15.8)	55[71] (16.7)	59[79] (18.0)	48 (1219)	15 (381)	24 (7.3)	28 (8.5)	37 (11.3)	44 (13.4)	49 (14.9)		
60 (1524)	12 (305)	29 (8.8)	36 (11.0)	49[53] (14.9)	51[64] (15.9)	54[71] (16.4)	54 (1371)	24 (610)	22 (6.7)	25 (7.6)	33 (10.1)	39 (11.9)	46 (14.0)		
66 (1676)	12 (305)	26 (7.9)	33 (10.0)	47 (14.3)	49[58] (14.9)	51[64] (15.5)	60 (1524)	24 (610)	19 (5.8)	22 (6.7)	30 (9.1)	35 (10.7)	42 (12.8)		
72 (1829)	12 (305)	24 (7.3)	30 (9.1)	44 (13.4)	47[53] (14.3)	49[59] (14.9)	66 (1676)	24 (610)	18 (5.5)	20 (6.0)	27 (8.2)	32 (9.7)	38 (11.6)		
78 (1981)	12 (305)	22 (6.7)	28 (8.5)	41 (12.5)	46[49] (14.0)	47[54] (14.3)	72 (1829)	36 (914)		18 (6.4)	25 (7.6)	29 (8.8)	35 (10.7)		
84 (2134)	12 (305)	21 (6.4)	26 (7.9)	38 (11.6)	45 (13.7)	46[51] (14.0)	78 (1981)	36 (914)			23 (7.0)	27 (8.2)	32 (9.7)		
90 (2286)	12 (305)	19 (5.8)	24 (7.3)	35 (10.7)	43 (13.1)	45 (13.7)	84 (2133)	36 (914)			21 (6.4)	25 (7.6)	30 (9.1)		
96 (2438)	12 (305)	18 (5.5)	22 (6.7)	33 (10.0)	40 (12.2)	44 (13.4)	90 (2286)	36 (914)				24 (7.3)	28 (8.5)		
102 (2591)	24 (610)	17 (5.2)	21 (6.4)	31 (9.4)	38 (11.6)	42 (12.8)	96 (2438)	36 (914)				22 (6.7)	26 (7.9)		
108 (2743)	24 (610)		20 (6.0)	30 (9.1)	35 (10.7)	39 (11.9)									
114 (2896)	24 (610)		19 (5.8)	28 (8.5)	34 (10.4)	37 (11.3)									
120 (3048)	24 (610)			27 (8.2)	32 (9.7)	36 (11.0)									

[88] NUMBERS IN BRACKETS ARE MAXIMUM FILL HEIGHTS IN FEET

STANDARD COUPLER BANDS												
CORRUGATED								(A) FLAT-DIMPLED				
CULVERT SIZE	STANDARD ANNULAR		HELICAL		3" X 1" (76 x 25 mm)		6" X 1" (152 x 25 mm)		WIDTH INCHES (mm)	NO. OF ROWS OF DIMPLES	NO. OF BOLTS	
	INCHES (mm)	WIDTH INCHES (mm)	NO. OF BOLTS	WIDTH INCHES (mm)	NO. OF BOLTS	WIDTH INCHES (mm)	NO. OF BOLTS	WIDTH INCHES (mm)			NO. OF BOLTS	(B)
UNDER 18" (457)	7" (178)	2	7" (178)	2					10 1/2" (267)	2	2	2
18" TO 54" (457-1372)	12" (305)	3	12" (305)	3	14" (355)	3	18" (457)	3	10 1/2" (267)	2	3	2
OVER 54" (1372)	24" (610)	5	24" (610)	5	24" (610)	5	24" (610)	4	16 1/4" (413)	4	5	4

- (A) PERMITTED ONLY FOR CONNECTING ANNULAR CORRUGATED TO HELICAL CORRUGATED PIPE, & FOR CONNECTING METAL END SECTIONS.
- (B) FOR BANDS WITH ANGLES.
- (C) FOR BANDS WITH TENSION TYPE CONNECTIONS.

EQUIVALENT THICKNESS		
GAUGE NUMBER	THICKNESS - INCHES (mm)	
	STEEL	ALUMINUM
16	0.064 (1.6)	0.060 (1.5)
14	0.079 (2.0)	0.075 (1.9)
12	0.109 (2.8)	0.105 (2.7)
10	0.138 (3.5)	0.135 (3.4)
8	0.168 (4.3)	0.165 (4.2)

**NOTE:**

- THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.