Pipe Size (in.)	Max. Dead Load on Trapeze (lb)	Vertical, Trans-verse, & Longitudi-nal Angles (Cable Size) (in.)	Maxi-mum Trapeze Span	Trapeze Size (in.)	Bolt to Angle[3] (in.)	Connection Type To Structural Member[4] Connection Level[5] 1	2	Rod Size (in.)	Max. Length for Rods (in.)
2½	395	L4 4 14ga (5⁄16)	2′6	1⅝ 3¼ 16ga	⅝	D	F	1	50
3	540	L3 3 12ga (⅜)	2′6	1⅝ 3¼ 16ga	¾	E	G	1⅛	56
4	815	L4 4 14ga (5⁄16)	3′2	1⅝ 3¼ 16ga	⅝	D	F	1	50
5	932	L3 3 12ga (⅜)	3′0	1⅝ 3¼ 16ga	¾	D	G	1	50
6	945	L3 3 12ga (⅜)	2′8	1⅝ 3¼ 16ga	¾	D	G	1	50
8	1006	L3 3 12ga (⅜)	2′3	1⅝ 3¼ 16ga	¾	D	G	1⅛	56

Table 5–8 Schedule for Bracing Pipes on Trapeze, (SHL AA – g=1.0)

NOTES:

1. This schedule is based on four equal-sized pipe arrangements for pipe 5 in. and smaller. The schedule also limits the number for 6 in. pipes to three and 8 in. pipes to two. However, any combination of pipes can be used if the total combined weight of the pipes on a trapeze is equal to or less than the maximum dead load noted and the maximum trapeze span and size of diagonal braces noted in the schedule are maintained.

2. Provide transverse and longitudinal braces at 40 ft maximum for pipes smaller that 4 in. and at 20 ft maximum for pipes 4 to 8 in. Install one transverse brace and one longitudinal brace at each end of the trapeze.

3. Place standard flat washer between sheet metal angles and nut.

4. *See* Table 8-1 for "Connection Type" to structural supporting member.

5. Connection level 1. For connections into materials other than concrete.
   Connection level 2. Required for connecting into concrete tension zones.

Pipe Size (in.)	Max. Dead Load on Support	Vertical Legs Angles (in.)	Beam Span	Horizontal Beam[2] (in.)	Diagonal Brace[2] Angles (in.)	Machine Bolt[3] (in.)	Connection Type[4]
2.5	395	L2 2 16ga	2′6"	L2.5 2.5 12ga	L3 3 16ga	⅝	F
3	540	L4 4 14ga	2′6"	L2.5 2.5 12ga	L3 3 16ga	¾	G
4	815	L3 3 16ga	3′2"	L2.5 2.5 12ga	L3 3 16ga	⅝	F
5	932	L3 3 16ga	3′0"	L2.5 2.5 12ga	L3 3 16ga	⅝	G
6	945	L3 3 16ga	2′8"	L2.5 2.5 12ga	L3 3 16ga	⅝	G
8	1006	L4 4 14ga	2′3"	L2.5 2.5 12ga	L3 3 16ga	⅝	G

Table 5–9 Floor Supported Pipes, (SHL AA – g=1.0)

NOTES:

1. This schedule is based on four equal-sized pipe arrangements for pipe 5 in. and smaller. The schedule also limits the number for 6 in. pipes to three and 8 in. pipes to two. However, any combination of pipes can be used if the total combined weight of the pipes on a trapeze is equal to or less than the maximum dead load noted and the maximum trapeze span and size of diagonal braces noted in the schedule are maintained.

2. Provide transverse and longitudinal braces at 40 ft maximum for pipes smaller than 4 in. and at 20 ft maximum for pipe 4 to 8 in. Install one longitudinal brace at each leg of the support.

3. Place standard flat washer between sheet metal angles and nut.

4. *See* Table 8-1 for "Connection Type" to structural supporting member.

Duct Size[1] (in.)	Max. Dead Load on Riser Support[3] (lb)	Support Angles	Anchor to Floor (in.)	Number of Screws[4]
30 30	272	L1.5 1.6 3/16	3/8	4
42 42	464	L2 2 3/16	3/8	6
54 54	736	L2.5 2.5 1/4	3/8	8
60 60	864	L2.5 2.5 1/4	3/8	10
84 84	1648	L4 4 1/4	1/2	18
96 96	2064	L5 5 3/8	1/2	22
54 28	544	L2 2 1/4	3/8	6
60 30	624	L2 2 1/4	3/8	8
84 42	1184	L4 4 1/4	3/8	14
96 48	1552	L4 4 1/4	1/2	16
108 54	1760	L5 5 3/8	1/2	18
120 60	1936	L5 5 3/8	1/2	20

Table 5–10 Duct Risers, SHL AA

NOTES:

1. The ducts' maximum dimensions will govern what bracing is required. Example: A 72 30 in. duct will be braced like an 84 24 in. duct.
2. Provide riser supports at 16 ft minimum.
3. Maximum weight of duct or combinations of ducts is per linear foot. For ducts weighing more than the maximum weight per foot, use the next higher duct size.
4. Total number of screws with half each side of the duct.

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Feb. 12, 2009

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Pipe Size (in.)	Max. Dead Load on Riser Support (lb)	Maximum Clear Opening	Support Angles	Anchor to Floor (in.)	Pipe Sleeve
2 ½	632	4′0"	L2 2 ¼	⅜	½" Pipe
3	864	4′0"	L2.5 2.5 ¼	⅜	½" Pipe
4	1304	4′0"	L3 3 ¼	⅜	¾" Pipe
5	1492	4′0"	L4 4 ¼	⅜	1" Pipe
6	1512	4′0"	L4 4 ¼	⅜	1" Pipe
8	1610	4′0"	L4 4 ¼	½	1" Pipe

Table 5–11 Pipe Risers, SHL AA

NOTES:

1. This schedule is based on four equal-sized pipe arrangements for pipe 5 in. and smaller. The schedule also limits the number for 6 in. pipes to three and 8 in. pipes to two. However, any combination of pipes can be used if the total combined weight of the pipes on the support is equal to or less than the maximum dead load noted.

2. The maximum support spacing is 16 feet.

CHAPTER 6

TABLES FOR SEISMIC HAZARD LEVEL A (g = 0.67)

6.1 USE OF TABLES

The tables in Chapter 6 are for use when $\frac{F_p}{W_p} = 0.67$ or less.

Duct Size W×D[1] (in.)	Vertical Hangers Angles (in.)	Diagonal Braces Angle Pipe (Cable Size)[2] (in.)	Horizontal Braces Angles (in.)	Bolt Size (in.)	Connection Type to Structural Members[3] Connection Level[4] 1	2	Max. Wt. Ft[5] (lb)
30 30	L2 2 16ga	L2.5 2.5 16ga (5/32)	L2 2 16ga	3/8	B	C	17
42 42	L2 2 16ga	L4 4 14ga (3/16)	L2 2 16ga	3/8	C	D	29
54 54	L2 2 16ga	L4 4 12ga (1/4)	L2 2 16ga	1/2	C	E	46
60 60	L2 2 16ga	L4 4 12ga (9/32)	L2 2 16ga	1/2	D	E	54
84 84	L3 3 16ga	2 1/2 Pipe (3/8)	L2.5 2.5 16ga	3/4	D	G	103
96 96	L4 4 14ga	2 1/2 Pipe (7/16)	L2.5 2.5 16ga	7/8	E	H	129
54 28	L2 2 16ga	L4 4 14ga (7/32)	L2 2 16ga	1/2	C	D	34
60 30	L2 2 16ga	L4 4 14ga (7/32)	L2 2 16ga	1/2	C	E	39
84 42	L2.5 2.5 16ga	L3 3 12ga (5/16)	L2.5 2.5 16ga	5/8	D	F	74
96 48	L3 3 16ga	L4 4 12ga (3/8)	L2.5 2.5 16ga	3/4	D	G	97
108 54	L4 4 14ga	L4 4 12ga (3/8)	L3 3 16ga	3/4	E	G	110
120 60	L4 4 14ga	2 1/2 Pipe (7/16)	L4 4 16ga	3/4	E	H	121

Table 6–1 Side Bracing For Rectangular Ducts, (SHL A – g=0.67), L=2′ 8" (Max.)

NOTES:

1. The ducts' maximum dimensions will govern what bracing is required. Example: A 72 30 in. duct will be braced like an 84 24 in. duct.
2. Provide transverse bracing at 30 ft and longitudinal bracing at 60 ft.
3. *See* Table 8-1 for "Connection Type" to structural supporting members.
4. Connection level 1. For connections into materials other than concrete. Connection level 2. Use for connecting into concrete tension zones.
5. Maximum weight of duct or combinations of ducts is per linear foot. For ducts weighing more than the maximum weight per foot, use the next higher duct size.

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Duct Size W×D[1] (in.)	Vertical Hangers Angles (in.)	Diagonal Braces Angle Pipe (Cable Size)[2] (in.)	Horizontal Braces Angles (in.)	Rod Size (in.)	Max. Length (in.)	Connection Type to Structural Members[3] Connection Level[4] 1	2	Max. Wt. Ft[5] (lb)
30 30	L4 4 16ga	L4 4 14ga (5/32)	L2.5 2.5 12ga	½	25	B	C	17
42 42	L4 4 14ga	L4 4 14ga (3/16)	L2 2 ¼	⅝	31	C	D	29
54 54	L4 4 14ga	L3 3 12ga (¼)	L2 2 ¼	⅞	43	C	E	46
60 60	L4 4 14ga	L3 3 12ga (9/32)	L2 2 ¼	⅞	43	D	E	54
84 84	L4 4 14ga	L4 4 12ga (⅜)	L2.5 2.5 ¼	1 ¼	62	D	H	103
96 96	L4 4 14ga	2 ½ Pipe (7/16)	L5 3 ⅜	1 ⅜	68	E	H	129
54 28	L4 4 14ga	L4 4 14ga (7/32)	L2 2 ¼	¾	37	C	D	34
60 30	L4 4 14ga	L3 3 12ga (7/32)	L2 2 ¼	¾	37	C	E	39
84 42	L4 4 14ga	L4 4 12ga (5/16)	L2.5 2.5 ¼	1	50	D	F	74
96 48	L4 4 14ga	L4 4 12ga (⅜)	L3 3 ¼	1 ⅛	56	D	G	97
108 54	L4 4 14ga	L4 4 12ga (⅜)	L3 3 ¼	1 ¼	62	E	H	110
120 60	L4 4 14ga	L4 4 12ga (7/16)	L5 3 ⅜	1 ¼	62	E	H	121

Table 6–2 Side Bracing for Rectangular Ducts with Rod Hangers, (SHL A – g=0.67)

NOTES:

1. The ducts' maximum dimensions will govern what bracing is required. Example: A 72 30 in. duct will be braced like an 84 24 in. duct.
2. Provide transverse bracing at 30 ft and longitudinal bracing at 60 ft.
3. *See* Table 8-1 for "Connection Type" to structural supporting members.
4. Connection level 1. For connections into materials other than concrete.
   Connection level 2. Use for connecting into concrete tension zones.
5. Maximum weight of duct or combinations of ducts is per linear foot. For ducts weighing more than the maximum weight per foot, use the next higher duct size.

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Duct Size W×D[1] (in.)	Vertical Hangers Angles (in.)	Diagonal Braces Angle Pipe (Cable Size)[2] (in.)	Horizontal Braces Angles (in.)	Longitudinal Braces Angle (in.)	Bolt Size (in.)	Connection Type to Structural Members[3] Connection Level[4] 1	2	Max. Wt. Ft[5] (lb)
30 30	L4 4 14ga	L4 4 14ga (5/32)	L2 2 16ga	L4 4 14ga (5/32)	3/8	B	C	17
42 42	L4 4 14ga	L4 4 14ga (3/16)	L2 2 16ga	L4 4 14ga (3/16)	3/8	C	D	29
54 54	L4 4 14ga	L2.5 2.5 12ga (7/32)	L2 2 16ga	L3 3 12ga (1/4)	3/8	C	E	46
60 60	L4 4 14ga	L3 3 12ga (7/32)	L2 2 16ga	L3 3 12ga (9/32)	3/8	D	E	54
84 84	L4 4 14ga	L4 4 12ga (9/32)	L2.5 2.5 16ga	L4 4 12ga (3/8)	1/2	D	H	103
96 96	L4 4 14ga	2 1/2 Pipe (5/16)	L2.5 2.5 16ga	2 1/2 Pipe (7/16)	1/2	E	H	129
54 28	L4 4 14ga	L4 4 14ga (3/16)	L2 2 16ga	L4 4 14ga (7/32)	3/8	C	D	34
60 30	L4 4 14ga	L4 4 14ga (3/16)	L2 2 16ga	L3 3 12ga (7/32)	3/8	C	E	39
84 42	L4 4 14ga	L4 4 12ga (1/4)	L2.5 2.5 16ga	L4 4 12ga (5/16)	3/8	D	F	74
96 48	L4 4 14ga	L4 4 12ga (9/32)	L2.5 2.5 16ga	L4 4 12ga (3/8))	1/2	D	G	97
108 54	L4 4 14ga	2 1/2 Pipe (9/32)	L3 3 16ga	L4 4 12ga (3/8)	1/2	E	H	110
120 60	L4 4 14ga	2 1/2 Pipe (9/32)	L4 4 16ga	L4 4 12ga (7/16)	1/2	E	H	121

Table 6–3 Center Bracing For Rectangular Ducts, (SHL A – g=0.67), L=7 ft

NOTES:

1. The ducts' maximum dimensions will govern what bracing is required. Example: A 72 30 in. duct will be braced like an 84 24 in. duct.
2. Provide transverse bracing at 30 ft and longitudinal bracing at 60 ft.
3. *See* Table 8-1 for "Connection Type" to structural supporting members.
4. Connection level 1. For connections into materials other than concrete.
   Connection level 2. Use for connecting into concrete tension zones.
5. Maximum weight of duct or combinations of ducts is per linear foot. For ducts weighing more than the maximum weight per foot, use the next higher duct size.
6. Connection design required.

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Duct Size W×D[1] (in.)	Vertical Hangers Angles (in.)	Diagonal Braces Angle Pipe (Cable Size)[2] (in.)	Horizontal Braces Angles (in.)	Longitudinal Braces Angle (in.)	Bolt Size (in.)	Connection Type to Structural Members[3] Connection Level[4] 1	Connection Type to Structural Members[3] Connection Level[4] 2	Max. Wt. Ft[5] (lb)
30 30	L3 3 12ga	L4 4 12ga (7/32)	L2 2 16ga	2 ½ Pipe (5/32)	⅜	C	D	17
42 42	L4 4 12ga	L4 4 12ga (7/32)	L2 2 16ga	2 ½ Pipe (3/16)	⅜	C	E	29
54 54	L4 4 12ga	L4 4 12ga (¼)	L2 2 16ga	2 ½ Pipe (¼)	⅜	D	E	46
60 60	L4 4 12ga	L4 4 12ga (9/32)	L2 2 16ga	2 ½ Pipe (9/32)	⅜	D	E	54
84 84	2 ½ Pipe	2 ½ Pipe (5/16)	L2.5 2.5 16ga	2 ½ Pipe (⅜)	½	D	H	103
96 96	2 ½ Pipe	2 ½ Pipe (⅜)	L2.5 2.5 16ga	2 ½ Pipe (7/16)	½	E	H	129
54 28	L3 3 12ga	L4 4 12ga (7/32)	L2 2 16ga	2 ½ Pipe (7/32)	⅜	C	D	34
60 30	L4 4 12ga	L4 4 12ga (7/32)	L2 2 16ga	2 ½ Pipe (7/32)	⅜	C	E	39
84 42	2 ½ Pipe	2 ½ Pipe (9/32)	L2.5 2.5 16ga	2 ½ Pipe (5/16)	⅜	D	F	74
96 48	2 ½ Pipe	2 ½ Pipe (9/32)	L2.5 2.5 16ga	2 ½ Pipe (⅜)	½	D	G	97
108 54	2 ½ Pipe	2 ½ Pipe (5/16)	L3 3 16ga	2 ½ Pipe (⅜)	½	E	H	110
120 60	2 ½ Pipe	2 ½ Pipe (5/16)	L4 4 16ga	2 ½ Pipe (7/16)	½	E	H	121

Table 6–4 Center Bracing For Rectangular Ducts, (SHL A – g=0.67), L=10 ft

NOTES:

1. The ducts' maximum dimensions will govern what bracing is required. Example: A 72 30 in. duct will be braced like an 84 24 in. duct.
2. Provide transverse bracing at 30 ft and longitudinal bracing at 60 ft.
3. *See* Table 8-1 for "Connection Type" to structural supporting members.
4. Connection level 1. For connections into materials other than concrete.
   Connection level 2. Use for connecting into concrete tension zones.
5. Maximum weight of duct or combinations of ducts is per linear foot. For ducts weighing more than the maximum weight per foot, use the next higher duct size.

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