

Pipe & Conduit Reference Data

Pipe Spacing Table: (3/4" to 2-1/2")

		Centerline to Centerline (In/mm)																	
Nominal Pipe Dia.		3/4" (19mm)			1" (25mm)			1 1/4" (32mm)			1 1/2" (38mm)			2" (51mm)			2 1/2" (64mm)		
		T	S		T	F	S	T	F	S	T	F	S	T	F	S	T	F	S
3/4" 19mm	T	4 3/4 121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	S	4 1/2 114	4 3/4 108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1" 25mm	T	5 127	4 3/4 121	5 1/4 133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	6 152	5 3/4 146	6 1/4 159	7 1/4 184	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 1/4" 32mm	T	5 1/4 133	5 127	5 1/2 140	6 1/4 165	5 127	5 1/2 140	6 1/4 171	7 1/4 197	-	-	-	-	-	-	-	-	-	-
	F	6 1/4 159	6 152	6 1/2 165	7 1/4 191	6 1/4 159	7 1/4 191	8 1/4 217	9 1/4 243	-	-	-	-	-	-	-	-	-	-
1 1/2" 38mm	T	5 1/4 133	5 127	5 1/2 140	6 1/4 165	5 1/4 133	5 1/2 140	6 1/4 171	7 1/4 197	5 1/4 133	5 1/2 140	6 1/4 171	7 1/4 197	-	-	-	-	-	-
	F	6 1/4 159	6 1/4 159	6 1/2 171	7 1/4 197	6 1/4 159	7 1/4 197	8 1/4 217	9 1/4 243	7 183	8 203	9 229	10 255	-	-	-	-	-	-
2" 51mm	T	5 1/4 146	5 1/2 140	6 152	7 1/4 184	6 1/4 159	7 1/4 184	8 1/4 216	9 1/4 243	6 1/4 159	7 1/4 184	8 1/4 216	9 1/4 243	6 1/2 165	7 1/4 191	8 1/4 217	-	-	-
	F	7 178	6 3/4 171	7 1/4 184	8 1/4 210	7 1/4 184	8 1/4 210	9 1/4 243	10 1/4 269	7 1/4 184	8 1/4 216	9 1/4 243	10 1/4 269	7 1/4 191	8 1/4 217	9 1/4 243	-	-	-
2 1/2" 64mm	T	6 152	5 3/4 146	6 1/4 159	7 1/4 184	6 1/4 152	7 1/4 184	8 1/4 216	9 1/4 243	6 1/4 152	7 1/4 184	8 1/4 216	9 1/4 243	7 183	8 1/4 210	9 1/4 243	6 1/4 152	7 1/4 184	8 1/4 216
	F	7 1/2 191	7 1/4 184	7 3/4 197	8 1/4 222	7 3/4 184	8 1/4 222	9 1/4 243	10 1/4 269	7 3/4 184	8 1/4 216	9 1/4 243	10 1/4 269	8 1/4 217	9 1/4 243	10 1/4 269	7 3/4 197	8 1/4 222	9 1/4 243
3" 76mm	T	6 1/4 159	6 152	6 1/2 165	7 1/4 191	6 1/4 159	7 1/4 191	8 1/4 217	9 1/4 243	6 1/4 159	7 1/4 191	8 1/4 217	9 1/4 243	7 1/4 191	8 1/4 217	9 1/4 243	6 1/4 159	7 1/4 191	8 1/4 217
	F	7 1/4 191	7 1/2 191	8 203	9 1/4 243	8 1/4 217	9 1/4 243	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269	7 1/4 191	8 1/4 217	9 1/4 243
4" 102mm	T	7 1/2 191	7 1/4 184	7 3/4 197	8 1/4 222	7 3/4 184	8 1/4 222	9 1/4 243	10 1/4 269	7 1/4 184	8 1/4 216	9 1/4 243	10 1/4 269	7 1/4 191	8 1/4 217	9 1/4 243	6 1/4 152	7 1/4 184	8 1/4 216
	F	9 229	8 3/4 222	9 1/4 243	10 1/4 269	9 1/4 222	10 1/4 269	11 1/4 295	12 1/4 321	9 1/4 222	10 1/4 269	11 1/4 295	12 1/4 321	9 1/4 222	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269
5" 127mm	T	8 203	7 3/4 197	8 1/4 210	9 1/4 235	8 1/4 197	9 1/4 235	10 1/4 269	11 1/4 295	8 1/4 210	9 1/4 235	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269	7 1/4 184	8 1/4 216	9 1/4 243
	F	9 1/4 241	9 1/4 235	10 1/4 269	11 1/4 295	10 1/4 235	11 1/4 295	12 1/4 321	13 1/4 347	10 1/4 269	11 1/4 295	12 1/4 321	13 1/4 347	10 1/4 269	11 1/4 295	12 1/4 321	9 1/4 222	10 1/4 269	11 1/4 295
6" 152mm	T	8 3/4 222	8 1/2 216	9 229	10 1/4 269	8 1/2 216	9 229	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269	11 1/4 295	8 1/4 217	9 1/4 243	10 1/4 269	7 1/4 184	8 1/4 216	9 1/4 243
	F	10 254	9 3/4 248	10 1/4 269	11 1/4 295	10 1/4 248	11 1/4 295	12 1/4 321	13 1/4 347	10 1/4 269	11 1/4 295	12 1/4 321	13 1/4 347	10 1/4 269	11 1/4 295	12 1/4 321	9 1/4 222	10 1/4 269	11 1/4 295
8" 203mm	T	11 1/4 286	11 279	11 1/2 292	12 1/4 318	11 1/2 279	12 1/4 318	13 1/4 347	14 1/4 373	11 1/4 286	12 1/4 318	13 1/4 347	14 1/4 373	11 1/4 286	12 1/4 318	13 1/4 347	10 1/4 269	11 1/4 295	12 1/4 321
	F	12 1/4 318	12 1/4 311	13 1/4 347	14 1/4 373	12 1/4 311	13 1/4 347	14 1/4 373	15 1/4 399	12 1/4 318	13 1/4 347	14 1/4 373	15 1/4 399	12 1/4 318	13 1/4 347	14 1/4 373	11 1/4 286	12 1/4 318	13 1/4 347
10" 254mm	T	12 1/4 311	12 305	12 1/2 318	13 1/4 343	12 305	13 1/4 343	14 1/4 373	15 1/4 399	12 1/4 311	13 1/4 343	14 1/4 373	15 1/4 399	12 1/4 318	13 1/4 347	14 1/4 373	11 1/4 286	12 1/4 318	13 1/4 347
	F	14 356	13 3/4 349	14 1/4 373	15 1/4 399	14 1/4 349	15 1/4 399	16 1/4 425	17 1/4 451	14 1/4 373	15 1/4 399	16 1/4 425	17 1/4 451	14 1/4 373	15 1/4 399	16 1/4 425	13 1/4 347	14 1/4 373	15 1/4 399
12" 305mm	T	12 1/4 311	12 305	12 1/2 318	13 1/4 343	12 305	13 1/4 343	14 1/4 373	15 1/4 399	12 1/4 311	13 1/4 343	14 1/4 373	15 1/4 399	12 1/4 318	13 1/4 347	14 1/4 373	11 1/4 286	12 1/4 318	13 1/4 347
	F	14 356	13 3/4 349	14 1/4 373	15 1/4 399	14 1/4 349	15 1/4 399	16 1/4 425	17 1/4 451	14 1/4 373	15 1/4 399	16 1/4 425	17 1/4 451	14 1/4 373	15 1/4 399	16 1/4 425	13 1/4 347	14 1/4 373	15 1/4 399

Pipe Spacing Table: (3" to 12")

This chart, developed by Julius Getlan of Seelye Stevenson Value & Knecht, consulting engineers, New York City, enables one to quickly determine the centerline-to-centerline dimension between any two size pipes on a rack.

Select the smaller pipe size at top and select the other at the side of the table. Where the appropriate columns intersect, the dimension is given.

These factors are included in the dimensions given:

- O.D. of flanges and fittings.
- 1" insulation over flanges and fittings.
- All fractional dimensions less than 1/4" were increased to the next larger 1/4".
- Clear space between fittings as follows:
 1. 1" between piping 3" and smaller.
 2. 1 1/2" between a pipe 3" and smaller and a pipe 4" or larger.
 3. 2" between piping 4" and larger.

T – denotes threaded IPS pipe. F – denotes flanged fittings on pipe. S – denotes soldered or brazed tubing.

Centerline to Centerline (In/mm)																		
3" (76mm)			4" (102mm)			5" (127mm)			6" (152mm)			8" (203mm)		10" (254mm)		12" (305mm)		Nominal Pipe Dia.
T	F	S	T	F	S	T	F	S	T	F	S	T	F	T	F	T	F	
7¼	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T
197	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3" 76mm
9¼	10½	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
235	267	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	F	
7¼	8½	6½	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	S
184	216	165	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4" 102mm
9	10¼	8¼	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
229	260	210	254	–	–	–	–	–	–	–	–	–	–	–	–	–	T	
10½	11¼	9¼	11½	13	–	–	–	–	–	–	–	–	–	–	–	–	–	F
267	298	248	292	330	–	–	–	–	–	–	–	–	–	–	–	–	–	5" 127mm
8¼	9½	7½	9¼	10¼	8½	–	–	–	–	–	–	–	–	–	–	–	–	
210	241	191	235	273	216	–	–	–	–	–	–	–	–	–	–	–	S	
9½	10¼	8¼	10¼	12	9¼	11	–	–	–	–	–	–	–	–	–	–	–	T
241	273	222	260	305	248	279	–	–	–	–	–	–	–	–	–	–	–	6" 152mm
11	12¼	10¼	12	13½	11¼	12½	14	–	–	–	–	–	–	–	–	–	–	
279	311	260	305	343	286	318	356	–	–	–	–	–	–	–	–	–	F	
8¼	10	8	9¼	11¼	9	10¼	11¼	9½	–	–	–	–	–	–	–	–	–	S
222	254	203	248	286	229	260	298	241	–	–	–	–	–	–	–	–	–	8" 203mm
10¼	11½	9½	11¼	12¼	10½	11¼	13¼	11	12½	–	–	–	–	–	–	–	–	
260	292	241	286	324	267	298	337	279	318	–	–	–	–	–	–	–	T	
11½	12¼	10¼	12½	14	11¼	13	14½	12¼	13¼	15	–	–	–	–	–	–	–	F
292	311	273	318	356	298	330	368	311	337	381	–	–	–	–	–	–	–	10" 254mm
9¼	10½	8½	10¼	11¼	9½	10¼	12¼	10	11½	12¼	10½	–	–	–	–	–	–	
235	267	216	260	298	241	273	311	254	292	324	267	–	–	–	–	–	S	
11¼	12¼	10¼	12½	14	11¼	13	14½	12¼	13¼	15	12¼	14¼	–	–	–	–	–	T
286	324	273	318	356	298	330	368	311	349	381	324	375	–	–	–	–	–	12" 305mm
12¼	14	12	13¼	15¼	13	14¼	15¼	13½	15	16¼	14	16¼	17.5	–	–	–	–	
324	356	305	349	387	330	362	400	343	381	413	356	413	413	17.5	–	–	F	
12¼	14	12	13¼	15¼	13	14¼	15¼	13½	15	16¼	14	16¼	17¼	17½	–	–	–	T
324	356	305	349	387	330	362	400	343	381	413	356	413	445	445	–	–	–	12" 305mm
14	15¼	13¼	15	16½	14¼	15½	17	14¼	16¼	17½	15¼	17½	18¼	18¼	20	–	–	
356	387	337	381	419	362	394	432	375	413	445	387	445	476	476	508	–	–	
13¼	15	13	14¼	16¼	14	15¼	16¼	14½	16	17¼	15	17¼	18½	18½	19¼	19½	–	T
349	381	330	375	413	356	387	425	368	406	438	381	438	470	470	502	495	–	12" 305mm
15½	16¼	14¼	16½	18	15¼	17	18¼	16¼	17¼	19	16¼	14	20¼	20¼	21½	21¼	29	
394	425	375	419	457	400	432	464	413	451	483	425	356	514	514	546	540	737	

Channel Selection for Sch. 10 Trapeze

CHANNEL SELECTION FOR SCHEDULE 10 SPRINKLER PIPE TRAPEZE HANGERS

Note: Based on NFPA-13-1996 Section Modulus Table 3-10.1.7(a). Each of the following tables indicate the allowable span of the trapeze and the nominal pipe size for the specified channel. An entry of "-" indicates that the channel cannot be used for this span/pipe size combination. The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lb.

Unistrut Channel	Section Modulus in ³ (cm ³)
P3000	0.154 2.52
P1000	0.202 3.31
P5500	0.391 6.41
P5000	0.628 10.29

Unistrut Channel	Section Modulus in ³ (cm ³)
P3001	0.431 7.06
P1001	0.572 9.37
P5501	1.153 18.89
P5001	1.916 31.40

Nominal Pipe Dia. (in)	O.D. (in)	Wall Thickness (in)	I. D. (in)	Pipe Weight (p/f)	Water Weight (p/f)	Total Weight (p/f)
1	1.315	0.109	1.097	1.41	0.42	1.83
1¼	1.660	0.109	1.442	1.81	0.73	2.54
1½	1.900	0.109	1.682	2.09	0.99	3.08
2	2.375	0.109	2.157	2.64	1.63	4.28
2½	2.875	0.120	2.635	3.53	2.44	5.97
3	3.500	0.120	3.260	4.34	3.73	8.07
3½	4.000	0.120	3.760	4.98	4.97	9.95
4	4.500	0.120	4.260	5.62	6.38	12.00
5	5.563	0.134	5.295	7.78	9.85	17.63
6	6.625	0.134	6.357	9.30	14.20	23.50
8	8.625	0.188	8.249	16.96	23.91	40.87
10	10.750	0.188	10.374	21.23	37.82	59.04

NFPA 13 Required Trapeze Section Modulus for Sch 10 Pipe												
Trapeze Span	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	0.08	0.09	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.18	0.24	0.32
2' - 0"	0.11	0.12	0.12	0.13	0.13	0.15	0.16	0.17	0.20	0.24	0.32	0.43
2' - 6"	0.14	0.14	0.15	0.16	0.17	0.18	0.20	0.21	0.25	0.30	0.40	0.54
3' - 0"	0.17	0.17	0.18	0.19	0.20	0.22	0.24	0.26	0.31	0.36	0.48	0.65
4' - 0"	0.22	0.23	0.24	0.25	0.27	0.29	0.32	0.34	0.41	0.48	0.64	0.87
5' - 0"	0.28	0.29	0.30	0.31	0.34	0.37	0.40	0.43	0.51	0.59	0.80	1.08
6' - 0"	0.33	0.35	0.36	0.38	0.41	0.44	0.48	0.51	0.61	0.71	0.97	1.30
7' - 0"	0.39	0.40	0.41	0.44	0.47	0.52	0.55	0.60	0.71	0.83	1.13	1.52
8' - 0"	0.44	0.46	0.47	0.50	0.54	0.59	0.63	0.68	0.81	0.95	1.29	1.73
9' - 0"	0.50	0.52	0.53	0.56	0.61	0.66	0.71	0.77	0.92	1.07	1.45	1.95
10' - 0"	0.56	0.58	0.59	0.63	0.68	0.74	0.79	0.85	1.02	1.19	1.61	2.17

Values taken from NFPA 13 (1996 Edition), Table 2-6.1.5(a)

Single Channel Trapeze for Sch 10 Pipe												
Trapeze Span	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P5500	P5500
2' - 0"	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P1000	P1000	P5500	P5500	P5000
2' - 6"	P3000	P3000	P3000	P1000	P1000	P1000	P1000	P5500	P5500	P5500	P5000	P5000
3' - 0"	P1000	P1000	P1000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	N/A
4' - 0"	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5000	N/A	N/A
5' - 0"	P5500	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A
6' - 0"	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A
7' - 0"	P5500	P5000	P5000	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A
8' - 0"	P5000	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A
9' - 0"	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10' - 0"	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Double Channel Trapeze for Sch 10 Pipe												
Trapeze Span	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2' - 6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001
3' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501
4' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501
5' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501	P5501
6' - 0"	P3001	P3001	P3001	P3001	P3001	P1001	P1001	P1001	P5501	P5501	P5501	P5001
7' - 0"	P3001	P3001	P3001	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5001
8' - 0"	P1001	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	N/A
9' - 0"	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5001	N/A
10' - 0"	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A

Channel Selection for Sch. 40 Trapeze

CHANNEL SELECTION FOR SCHEDULE 40 SPRINKLER PIPE TRAPEZE HANGERS

Note: Based on NFPA-13-1996 Section Modulus Table 3-10.1.7(a). Each of the following tables indicate the allowable span of the trapeze and the nominal pipe size for the specified channel. An entry of "-" indicates that the channel cannot be used for this span/pipe size combination. The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lb.

Unistrut Channel	Section Modulus in ³ (cm ³)	Unistrut Channel	Section Modulus in ³ (cm ³)
P3000	0.154 2.52	P3001	0.431 7.06
P1000	0.202 3.31	P1001	0.572 9.37
P5500	0.391 6.41	P5501	1.153 18.89
P5000	0.628 10.29	P5001	1.916 31.40

Nominal Pipe Dia. (in)	O.D. (in)	Wall Thickness (in)	I. D. (in)	Pipe Weight (p/f)	Water Weight (p/f)	Total Weight (p/f)
1	1.315	0.133	1.049	1.68	0.39	2.07
1¼	1.660	0.140	1.380	2.27	0.67	2.94
1½	1.900	0.145	1.610	2.72	0.91	3.63
2	2.375	0.154	2.067	3.66	1.50	5.16
2½	2.875	0.203	2.469	5.80	2.14	7.94
3	3.500	0.216	3.068	7.58	3.31	10.89
3½	4.000	0.226	3.548	9.12	4.42	13.54
4	4.500	0.237	4.026	10.80	5.70	16.50
5	5.563	0.258	5.047	14.63	8.95	23.58
6	6.625	0.280	6.065	18.99	12.93	31.92
8	8.625	0.322	7.981	28.58	22.38	50.96
10	10.750	0.365	10.020	40.52	35.28	75.80

NFPA 13 Required Trapeze Section Modulus for Sch 40 Pipe												
Trapeze Span	Pipe Diameter											
	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.18	0.22	0.30	0.41
2' - 0"	0.11	0.12	0.12	0.13	0.15	0.16	0.18	0.20	0.24	0.29	0.40	0.55
2' - 6"	0.14	0.15	0.15	0.16	0.18	0.21	0.22	0.25	0.30	0.36	0.50	0.68
3' - 0"	0.17	0.18	0.18	0.20	0.22	0.25	0.27	0.30	0.36	0.43	0.60	0.82
4' - 0"	0.22	0.24	0.24	0.26	0.29	0.33	0.36	0.40	0.48	0.58	0.80	1.09
5' - 0"	0.28	0.29	0.30	0.33	0.37	0.41	0.45	0.49	0.60	0.72	1.00	1.37
6' - 0"	0.34	0.35	0.36	0.39	0.44	0.49	0.54	0.59	0.72	0.87	1.20	1.64
7' - 0"	0.39	0.41	0.43	0.46	0.51	0.58	0.63	0.69	0.84	1.01	1.41	1.92
8' - 0"	0.45	0.47	0.49	0.52	0.59	0.66	0.72	0.79	0.96	1.16	1.61	2.19
9' - 0"	0.50	0.53	0.55	0.59	0.66	0.74	0.81	0.89	1.08	1.30	1.81	2.46
10' - 0"	0.56	0.59	0.61	0.65	0.74	0.82	0.90	0.99	1.20	1.44	2.01	2.74

Values taken from NFPA 13 (1996 Edition), Table 2-6.1.5(a)

Single Channel Trapeze for Sch 40 Pipe												
Trapeze Span	Pipe Diameter											
	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P3000	P1000	P5500	P5500	P5000
2' - 0"	P3000	P3000	P3000	P3000	P3000	P1000	P1000	P1000	P5500	P5500	P5000	P5000
2' - 6"	P3000	P3000	P3000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	N/A
3' - 0"	P1000	P1000	P1000	P1000	P5500	P5500	P5500	P5500	P5500	P5000	P5000	N/A
4' - 0"	P5500	P5500	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	N/A	N/A
5' - 0"	P5500	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A	N/A
6' - 0"	P5500	P5500	P5500	P5500	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A
7' - 0"	P5500	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A
8' - 0"	P5000	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9' - 0"	P5000	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10' - 0"	P5000	P5000	P5000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Double Channel Trapeze for Sch 40 Pipe												
Trapeze Span	Pipe Diameter											
	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	8"	10"
1' - 6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001
2' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001
2' - 6"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501
3' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P5501	P5501
4' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P5501	P5501	P5501
5' - 0"	P3001	P3001	P3001	P3001	P3001	P3001	P1001	P1001	P5501	P5501	P5501	P5001
6' - 0"	P3001	P3001	P3001	P3001	P1001	P1001	P1001	P5501	P5501	P5501	P5001	P5001
7' - 0"	P3001	P3001	P3001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	N/A
8' - 0"	P1001	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A
9' - 0"	P1001	P1001	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5001	N/A	N/A
10' - 0"	P1001	P5501	P5501	P5501	P5501	P5501	P5501	P5501	P5001	P5001	N/A	N/A

Pipe Reference Data: (EMT, Copper Tube, IMC)

ELECTRICAL METALLIC TUBING (EMT) - THIN WALL

Tubing Size (Nominal) In	Outside Diameter In (mm)	Inside Diameter In (mm)	Weight Of Tubing Lbs/Ft (kg/m)
3/8	0.577 14.7	0.497 12.6	0.23 0.34
1/2	0.706 17.9	0.626 15.9	0.29 0.43
3/4	0.922 23.4	0.830 21.1	0.44 0.65
1	1.163 29.5	1.055 26.8	0.64 0.95
1 1/4	1.510 38.4	1.388 35.3	0.95 1.41
1 1/2	1.740 44.2	1.618 41.1	1.10 1.64
2	2.197 55.8	2.075 52.7	1.40 2.08
2 1/2	2.875 73.0	2.731 69.4	2.30 3.42
3	3.500 88.9	3.356 85.2	2.70 4.02
3 1/2	4.000 101.6	3.834 97.4	3.40 5.06
4	4.500 114.3	4.334 110.1	4.00 5.95

INTERMEDIATE METALLIC CONDUIT (IMC)

Conduit Size (Nominal) In	Outside Diameter In (mm)	Inside Diameter In (mm)	Weight Of Conduit Lbs/Ft (kg/m)	Weight of Conduit and Conductor Lbs/Ft (kg/m)
1/2	0.815 20.7	0.745 18.9	0.60 0.89	0.12 0.18
3/4	1.029 26.1	0.954 24.2	0.82 1.22	1.13 1.68
1	1.290 32.8	1.205 30.6	1.16 1.73	1.82 2.71
1 1/4	1.638 41.6	1.553 39.4	1.50 2.23	2.67 3.97
1 1/2	1.883 47.8	1.793 45.5	1.82 2.71	3.42 5.09
2	2.360 59.9	2.266 57.6	2.42 3.60	5.04 7.50
2 1/2	2.857 72.6	2.727 69.3	4.01 5.97	7.75 11.53
3	3.476 88.3	3.346 85.0	4.43 6.59	10.69 15.91
3 1/2	3.971 100.9	3.841 97.6	5.73 8.53	13.46 20.03
4	4.466 113.4	4.336 110.1	6.38 9.49	16.37 24.36

COPPER TUBE (TYPE L)

Nom. Tube Size	O.D. Tubing In (mm)	O.D. In (mm)	Wall Thick. In (mm)	Weight Lbs/Ft (kg/m)	Weight Water Lbs/Ft (kg/m)
1/4"	3/8 10	0.375 9.5	0.030 0.8	0.126 0.19	0.034 0.05
3/8"	1/2 13	0.500 12.7	0.035 0.9	0.198 0.29	0.062 0.09
1/2"	5/8 16	0.625 15.9	0.040 1.0	0.285 0.42	0.100 0.15
3/4"	3/4 19	0.750 19.1	0.042 1.1	0.362 0.54	0.151 0.22
1"	7/8 22	0.875 22.2	0.045 1.1	0.455 0.68	0.209 0.31
1 1/4"	1 1/8 35	1.125 34.9	0.050 1.4	0.655 1.32	0.357 0.81
1 1/2"	1 1/4 41	1.375 41.3	0.055 1.5	0.884 1.70	0.546 1.14
2"	2 1/8 54	2.125 54.0	0.070 1.8	1.750 2.60	1.341 2.00
2 1/2"	2 3/8 67	2.625 66.7	0.080 2.0	2.480 3.69	2.064 3.07
3"	3 1/8 79	3.125 79.4	0.090 2.3	3.330 4.96	2.949 4.39
3 1/2"	3 3/8 92	3.625 92.1	0.100 2.5	4.290 6.38	3.989 5.94
4"	4 1/8 105	4.125 104.8	0.110 2.8	5.380 8.01	5.188 7.72
5"	5 1/8 130	5.125 130.2	0.125 3.2	7.610 11.32	8.081 12.03
6"	6 1/8 156	6.125 155.6	0.140 3.6	10.200 15.18	11.616 17.29
8"	8 1/8 206	8.125 206.4	0.200 5.1	19.290 28.71	20.289 30.19
10"	10 1/8 257	10.125 257.2	0.250 6.4	30.100 44.79	31.590 47.01
12"	12 1/8 308	12.125 308.0	0.280 7.1	40.400 60.12	45.426 67.60

COPPER TUBE (TYPE K)

Nom. Tube Size	O.D. Tubing In (mm)	O.D. In (mm)	Wall Thick. In (mm)	Weight Lbs/Ft (kg/m)	Weight Water Lbs/Ft (kg/m)
1/4"	3/8 10	0.375 9.53	0.035 0.89	0.145 0.22	0.032 0.05
3/8"	1/2 13	0.500 12.70	0.005 0.13	0.269 0.40	0.055 0.08
1/2"	5/8 16	0.625 15.88	0.049 1.24	0.344 0.51	0.094 0.14
3/4"	3/4 19	0.750 19.05	0.049 1.24	0.418 0.62	0.144 0.21
1"	7/8 22	0.875 22.23	0.065 1.65	0.641 0.95	0.188 0.28
1 1/4"	1 1/8 35	1.125 34.93	0.065 1.65	0.839 1.55	0.337 0.78
1 1/2"	1 1/4 41	1.375 41.28	0.072 1.83	1.040 2.02	0.527 1.11
2"	2 1/8 54	2.125 53.98	0.083 2.11	1.360 3.07	0.743 1.95
2 1/2"	2 3/8 67	2.625 66.68	0.095 2.41	2.060 4.35	1.310 2.98
3"	3 1/8 79	3.125 79.38	0.109 2.77	2.920 5.95	2.000 4.40
3 1/2"	3 3/8 92	3.625 92.08	0.120 3.05	4.000 7.62	2.960 5.80
4"	4 1/8 105	4.125 104.78	0.134 3.40	5.120 9.69	3.900 7.53
5"	5 1/8 130	5.125 130.18	0.160 4.06	6.510 14.39	5.060 11.91
6"	6 1/8 156	6.125 155.58	0.192 4.88	9.670 20.64	8.000 16.67
8"	8 1/8 206	8.125 206.38	0.271 6.88	13.870 38.54	11.200 29.02
10"	10 1/8 257	10.125 257.18	0.338 8.59	40.300 59.97	30.423 45.27
12"	12 1/8 308	12.125 307.98	0.405 10.29	57.800 86.02	43.675 65.00

Pipe Reference Data: (Rigid Conduit, PVC)

RIGID STEEL (HEAVY DUTY) CONDUIT

Conduit Size (Nominal) In	I. D. Of Conduit In (mm)	O. D. Of Conduit In (mm)	O. D. Of Coupling In (mm)	Weight of Conduit Lbs/Ft (kg/m)	Maximum Weight* Of Conduit And Conductor Lead Covered Lbs/Ft (kg/m)	Not Lead Covered Lbs/Ft (kg/m)
1/2	0.622 15.8	0.840 21.3	1.063 27.0	0.85 1.26	1.20 1.79	1.00 1.49
3/4	0.824 20.9	1.050 26.7	1.297 32.9	1.13 1.68	1.80 2.68	1.40 2.08
1	1.049 26.6	1.315 33.4	1.563 39.7	1.68 2.50	2.60 3.87	2.30 3.42
1 1/4	1.380 35.1	1.660 42.2	1.969 50.0	2.28 3.39	4.30 6.40	3.60 5.36
1 1/2	1.610 40.9	1.900 48.3	2.234 56.7	2.73 4.06	5.90 8.78	4.50 6.70
2	2.067 52.5	2.375 60.3	2.719 69.1	3.68 5.48	8.50 12.65	7.20 10.71
2 1/2	2.469 62.7	2.875 73.0	3.313 84.2	5.82 8.66	11.50 17.11	10.20 15.18
3	3.068 77.9	3.500 88.9	3.938 100.0	7.62 11.34	16.50 24.55	14.50 21.58
3 1/2	3.548 90.1	4.000 101.6	4.438 112.7	9.20 13.69	19.00 28.28	17.50 26.04
4	4.026 102.3	4.500 114.3	4.938 125.4	10.89 16.21	24.80 36.91	21.50 32.00
5	5.047 128.2	5.563 141.3	6.296 159.9	14.81 22.04	35.90 53.43	30.80 45.84
6	6.065 154.1	6.625 168.3	7.358 186.9	19.19 28.56	50.70 75.45	43.40 64.59

* Maximum weight equals weight of rigid conduit plus weight of heaviest conductor combination (from the National Electrical Code Handbook.)

Nominal Pipe Size In	Max. Span Ft (m)	Nominal Pipe Size In	Max. Span Ft (m)
1	7 2.13	8	19 5.79
1 1/2	9 2.74	10	22 6.71
2	10 3.05	12	23 7.01
2 1/2	11 3.35	14	25 7.62
3	12 3.66	16	27 8.23
3 1/2	13 3.96	18	28 8.53
4	14 4.27	20	30 9.14
5	16 4.88	24	32 9.75

The above spacing based on a combined bending and shear stress of 1500 PSI when pipe is filled with water and the pitch of the line is such that a sag of 0.1 in. between supports is permissible.

CONDUIT SUPPORTS

346-12. Supports. Rigid metal conduit shall be installed as a complete system as provided in Article 344 and shall be securely fastened in place. Conduit shall be firmly fastened within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting. Conduit shall be supported at least every 10 feet (3.05 m).

Exception: If made up with threaded couplings, it shall be permissible to support straight runs of rigid metal conduit in accordance with Table 344.30 (B)(2), provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

Table 344.30 (B)(2)
Support for Rigid Metal Conduit

Conduit Size In (mm)	Maximum Distance Between Supports Ft (m)
1/2-3/4	10
13 - 19	3.05
1	12
25	3.66
1 1/4- 1 1/2	14
32 - 38	4.27
2- 2 1/2	16
51 - 64	4.88
3 & larger	20
76 - Larger	6.10

SCHEDULE 40: PVC PLASTIC PIPE

Pipe Size (Nominal) In	Outside Diameter In (mm)	Inside Diameter In (mm)	Pipe Weight Lbs/Ft (kg/m)	Pipe and Water Weight Lbs/Ft (kg/m)
1/4	0.540 13.7	0.354 9.0	0.081 0.12	0.12 0.18
3/8	0.675 17.1	0.483 12.3	0.109 0.16	0.19 0.28
1/2	0.840 21.3	0.608 15.4	0.161 0.24	0.29 0.43
3/4	1.050 26.7	0.810 20.6	0.214 0.32	0.44 0.65
1	1.315 33.4	1.033 26.2	0.315 0.47	0.68 1.01
1 1/4	1.660 42.2	1.364 34.6	0.426 0.63	1.06 1.58
1 1/2	1.900 48.3	1.592 40.4	0.509 0.76	1.37 2.04
2	2.375 60.3	2.049 52.0	0.682 1.01	2.11 3.14
2 1/2	2.875 73.0	2.445 62.1	1.076 1.60	3.11 4.63
3	3.500 88.9	3.042 77.3	1.409 2.10	4.55 6.77
4	4.500 114.3	3.998 101.5	2.006 2.99	7.44 11.07
6	6.625 168.3	6.031 153.2	3.535 5.26	15.90 23.66
8	8.625 219.1	7.943 201.8	5.305 7.89	26.75 39.81
10	10.750 273.1	9.976 253.4	7.532 11.21	41.35 61.54

Schedule Steel Pipe Data

DATA FOR SCHEDULE STEEL PIPE

Nom. Size In	Pipe Schedule	Outside Dia. In (mm)	Inside Dia. In (mm)	Pipe Weight Lbs/Ft (kg/m)	Pipe and Water Weight Lbs/Ft (kg/m)
1/8	40	0.405 10.3	0.269 6.8	0.24 0.36	0.27 0.40
	80	0.405 10.3	0.215 5.5	0.31 0.46	0.33 0.49
1/4	40	0.540 13.7	0.364 9.2	0.42 0.63	0.47 0.70
	80	0.540 13.7	0.302 7.7	0.53 0.79	0.57 0.85
3/8	40	0.675 17.1	0.493 12.5	0.57 0.85	0.65 0.97
	80	0.675 17.1	0.423 10.7	0.74 1.10	0.80 1.19
1/2	40	0.840 21.3	0.622 15.8	0.85 1.26	0.98 1.46
	80	0.840 21.3	0.546 13.9	1.09 1.62	1.19 1.77
	160	0.840 21.3	0.464 11.8	1.31 1.95	1.38 2.05
3/4	40	1.050 26.7	0.824 20.9	1.13 1.68	1.36 2.02
	80	1.050 26.7	0.742 18.8	1.47 2.19	1.66 2.47
	160	1.050 26.7	0.612 15.5	1.94 2.89	2.07 3.08
1	40	1.315 33.4	1.049 26.6	1.68 2.50	2.05 3.05
	80	1.315 33.4	0.957 24.3	2.17 3.23	2.48 3.69
	160	1.315 33.4	0.815 20.7	2.84 4.23	3.07 4.57
1 1/4	40	1.660 42.2	1.380 35.1	2.27 3.38	2.92 4.35
	80	1.660 42.2	1.278 32.5	2.99 4.45	3.55 5.28
	160	1.660 42.2	1.160 29.5	3.76 5.60	4.22 6.28
1 1/2	40	1.900 48.3	1.610 40.9	2.71 4.03	3.60 5.36
	80	1.900 48.3	1.500 38.1	3.63 5.40	4.39 6.53
	160	1.900 48.3	1.338 34.0	4.85 7.22	5.46 8.13
2	40	2.375 60.3	2.067 52.5	3.65 5.43	5.10 7.59
	80	2.375 60.3	1.939 49.3	5.02 7.47	6.30 9.38
	160	2.375 60.3	1.687 42.8	7.45 11.09	8.42 12.53
2 1/2	40	2.875 73.0	2.469 62.7	5.79 8.62	7.86 11.70
	80	2.875 73.0	2.323 59.0	7.65 11.38	9.49 14.12
	160	2.875 73.0	2.125 54.0	10.00 14.88	11.54 17.17
3	40	3.500 88.9	3.068 77.9	7.57 11.27	10.77 16.03
	80	3.500 88.9	2.900 73.7	10.24 15.24	13.11 19.51
	160	3.500 88.9	2.624 66.6	14.31 21.30	16.65 24.78
3 1/2	40	4.000 101.6	3.548 90.1	9.10 13.54	13.39 19.93
	80	4.000 101.6	3.364 85.4	12.49 18.59	16.35 24.33

Nom. Size In	Pipe Schedule	Outside Dia. In (mm)	Inside Dia. In (mm)	Pipe Weight Lbs/Ft (kg/m)	Pipe and Water Weight Lbs/Ft (kg/m)
4	40	4.500 114.3	4.026 102.3	10.78 16.04	16.30 24.26
	80	4.500 114.3	3.826 97.2	14.97 22.28	19.95 29.69
	120	4.500 114.3	3.624 92.0	18.98 28.25	23.45 34.90
	160	4.500 114.3	3.438 87.3	22.48 33.45	26.51 39.45
5	40	5.563 141.3	5.047 128.2	14.60 21.73	23.27 34.63
	80	5.563 141.3	4.813 122.2	20.75 30.88	28.64 42.62
	120	5.563 141.3	4.563 115.9	27.01 40.20	34.09 50.73
	160	5.563 141.3	4.313 109.5	32.92 48.99	39.26 58.43
6	40	6.625 168.3	6.065 154.1	18.95 28.20	31.48 46.85
	80	6.625 168.3	5.761 146.3	28.54 42.47	39.84 59.29
	120	6.625 168.3	5.501 139.7	36.35 54.09	46.66 69.44
	160	6.625 168.3	5.187 131.7	45.30 67.41	54.47 81.06
8	20	8.625 219.1	8.125 206.4	22.34 33.25	44.82 66.70
	30	8.625 219.1	8.071 205.0	24.67 36.71	46.85 69.72
	40	8.625 219.1	7.981 202.7	28.52 42.44	50.21 74.72
	60	8.625 219.1	7.813 198.5	35.60 52.98	56.39 83.92
	80	8.625 219.1	7.625 193.7	43.34 64.50	63.14 93.96
	100	8.625 219.1	7.437 188.9	50.89 75.73	69.73 103.77
	120	8.625 219.1	7.187 182.5	60.65 90.26	78.23 116.42
	140	8.625 219.1	7.001 177.8	67.68 100.72	84.37 125.56
	160	8.625 219.1	6.813 173.1	74.61 111.03	90.42 134.56
	20	10.750 273.1	10.250 260.4	28.01 41.68	63.78 94.92
	30	10.750 273.1	10.136 257.5	34.20 50.90	69.19 102.97
	40	10.750 273.1	10.020 254.5	40.44 60.18	74.63 111.06
10	60	10.750 273.1	9.750 247.7	54.68 81.37	87.05 129.54
	80	10.750 273.1	9.562 242.9	64.36 95.78	95.50 142.12
	100	10.750 273.1	9.312 236.5	76.95 114.51	106.47 158.44
	120	10.750 273.1	9.062 230.2	89.20 132.74	117.16 174.35
	140	10.750 273.1	8.750 222.3	104.02 154.80	130.09 193.60
	160	10.750 273.1	8.500 215.9	115.52 171.91	140.13 208.54