

# Appendix 1

## Support Spacing for Single Rod Hanger Piping

Pages 83 - 86	Tables 1 & 2 for Seismic Force Level 0.15g (ASD)
Pages 87 - 90	Tables 1 & 2 for Seismic Force Level 0.30g (ASD)
Pages 91 - 94	Tables 1 & 2 for Seismic Force Level 0.45g (ASD)
Pages 95 - 98	Tables 1 & 2 for Seismic Force Level 0.50g (ASD)
Pages 99 - 102	Tables 1 & 2 for Seismic Force Level 0.75g (ASD)
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Table 1 - Maximum Hanger Spacing for Steel Pipe  
 Table 2 - Maximum Hanger Spacing for Copper Tubing

This Appendix contains bracing tables developed using allowable stress design (ASD) for the following seismic force values (i.e. "g-values"): **.15g (ASD), .30g (ASD), .45g (ASD), .50g (ASD), .75g (ASD), and 1.0g (ASD)**. The building code uses strength design. (See Special Note page 2 for further information.) These charts cover the vast majority of seismic requirements from coast to coast, from Zone 1 to Zone 4 applications, and take into account the many codes which may be referenced for a specific project.

The seismic zone, building type, and other factors determine the level of seismic force for a particular project. The project design professional should determine the correct seismic force value using the appropriate building code and local requirements. Use of the correct table is very important to ensure that the correct brace spacing and anchorage is provided. See pages 1 - 8 for more information.



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 0.15g (ASD)

Nominal Pipe Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
1/2"	(15)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	17	(0.07)	3/8"-16	0.98	(1.46)
1/2"	(15)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	17	(0.07)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	17	(0.07)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	20	(0.09)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	22	(0.10)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	23	(0.10)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	23	(0.10)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	24	(0.10)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	28	(0.12)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	31	(0.14)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	36	(0.16)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	35	(0.15)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	37	(0.16)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	42	(0.18)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	46	(0.20)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	50	(0.22)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	50	(0.22)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	52	(0.23)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	60	(0.26)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	66	(0.29)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	62	(0.27)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	62	(0.27)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	36	(10.98)	I	72	(21.94)	I	73	(0.32)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	81	(0.36)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	84	(0.37)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	88	(0.39)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	87	(0.38)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	104	(0.46)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	115	(0.51)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	119	(0.53)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	136	(0.60)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	135	(0.60)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	161	(0.71)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	177	(0.79)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	184	(0.82)	1/2"-13	7.87	(11.71)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size in. (mm)		Field Hanger Spacing See Note 1 ft. (m)		Maximum Transverse Support Spacing ft. (m)		Transverse Structure Connection Type See Note 2		Maximum Longitudinal Support Spacing ft. (m)		Longitudinal Structure Connection Type See Note 2		Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size		Water Filled Weight	
												lbs.	(kN)			lbs./ft.	(kg/m)
3"	(80)	6	(1.83)	36	(10.98)	I		72	(21.94)	I		184	(0.82)	1/2"-13	10.75	(16.00)	
3"	(80)	8	(2.44)	40	(12.19)	I		80	(24.38)	II		219	(0.97)	1/2"-13	10.75	(16.00)	
3"	(80)	10	(3.05)	40	(12.19)	I		80	(24.38)	II		242	(1.07)	1/2"-13	10.75	(16.00)	
3"	(80)	12	(3.66)	36	(10.98)	I		72	(21.94)	I		252	(1.12)	1/2"-13	10.75	(16.00)	
3"	(80)	15	(4.57)	30	(9.15)	I		60	(18.30)	I		266	(1.18)	1/2"-13	10.75	(16.00)	
3 1/2"	(90)	6	(1.83)	36	(10.98)	I		72	(21.94)	II		229	(1.02)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	8	(2.44)	40	(12.19)	I		80	(24.38)	II		273	(1.21)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	10	(3.05)	40	(12.19)	I		80	(24.38)	II		301	(1.34)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	12	(3.66)	36	(10.98)	I		72	(21.94)	II		313	(1.39)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	15	(4.57)	30	(9.15)	I		60	(18.30)	I		331	(1.47)	1/2"-13	13.39	(19.92)	
4"	(100)	6	(1.83)	36	(10.98)	I		72	(21.94)	II		279	(1.24)	5/8"-11	16.31	(24.27)	
4"	(100)	8	(2.44)	40	(12.19)	I		80	(24.38)	II		333	(1.48)	5/8"-11	16.31	(24.27)	
4"	(100)	10	(3.05)	40	(12.19)	I		80	(24.38)	II		367	(1.63)	5/8"-11	16.31	(24.27)	
4"	(100)	12	(3.66)	36	(10.98)	I		72	(21.94)	II		382	(1.70)	5/8"-11	16.31	(24.27)	
4"	(100)	15	(4.57)	30	(9.15)	I		60	(18.30)	II		404	(1.79)	5/8"-11	16.31	(24.27)	
5"	(125)	8	(2.44)	40	(12.19)	II		80	(24.38)	III		477	(2.12)	5/8"-11	23.39	(34.81)	
5"	(125)	10	(3.05)	40	(12.19)	II		80	(24.38)	III		526	(2.34)	5/8"-11	23.39	(34.81)	
5"	(125)	12	(3.66)	36	(10.98)	II		72	(21.94)	III		547	(2.43)	5/8"-11	23.39	(34.81)	
5"	(125)	15	(4.57)	30	(9.15)	I		60	(18.30)	II		579	(2.57)	5/8"-11	23.39	(34.81)	
5"	(125)	18	(5.49)	36	(10.98)	II		54	(16.47)	II		632	(2.81)	5/8"-11	23.39	(34.81)	
6"	(150)	8	(2.44)	40	(12.19)	II		80	(24.38)	IV		642	(2.85)	3/4"-10	31.49	(46.86)	
6"	(150)	10	(3.05)	40	(12.19)	II		80	(24.38)	IV		709	(3.15)	3/4"-10	31.49	(46.86)	
6"	(150)	12	(3.66)	36	(10.98)	II		72	(21.94)	IV		737	(3.28)	3/4"-10	31.49	(46.86)	
6"	(150)	15	(4.57)	30	(9.15)	II		60	(18.30)	III		779	(3.46)	3/4"-10	31.49	(46.86)	
6"	(150)	18	(5.49)	36	(10.98)	II		72	(21.94)	IV		935	(4.16)	3/4"-10	31.49	(46.86)	
8"	(200)	8	(2.44)	40	(12.19)	III		80	(24.38)	V		1025	(4.56)	3/4"-10	50.23	(74.75)	
8"	(200)	10	(3.05)	40	(12.19)	III		80	(24.38)	V		1130	(5.02)	3/4"-10	50.23	(74.75)	
8"	(200)	12	(3.66)	36	(10.98)	III		72	(21.94)	V		1175	(5.22)	3/4"-10	50.23	(74.75)	
8"	(200)	15	(4.57)	30	(9.15)	III		60	(18.30)	IV		1243	(5.53)	3/4"-10	50.23	(74.75)	
8"	(200)	20	(6.10)	40	(12.19)	III		80	(24.38)	V		1658	(7.37)	3/4"-10	50.23	(74.75)	
10"	(250)	8	(2.44)	40	(12.19)	IV		56	(17.08)	V		1253	(5.57)	7/8"-9	74.60	(111.01)	
10"	(250)	10	(3.05)	40	(12.19)	IV		60	(18.29)	V		1455	(6.47)	7/8"-9	74.60	(111.01)	
10"	(250)	12	(3.66)	36	(10.98)	IV		60	(18.29)	V		1611	(7.16)	7/8"-9	74.60	(111.01)	
10"	(250)	15	(4.57)	30	(9.15)	IV		60	(18.29)	V		1846	(8.21)	7/8"-9	74.60	(111.01)	
10"	(250)	20	(6.10)	40	(12.19)	IV		60	(18.29)	V		2238	(9.95)	7/8"-9	74.60	(111.01)	
12"	(300)	8	(2.44)	40	(12.19)	V		40	(12.19)	V		1470	(6.54)	7/8"-9	102.10	(151.94)	
12"	(300)	10	(3.05)	40	(12.19)	V		40	(12.19)	V		1685	(7.49)	7/8"-9	102.10	(151.94)	
12"	(300)	12	(3.66)	36	(10.98)	V		36	(10.98)	V		1838	(8.17)	7/8"-9	102.10	(151.94)	
12"	(300)	15	(4.57)	30	(9.15)	V		45	(13.72)	V		2297	(10.22)	7/8"-9	102.10	(151.94)	
12"	(300)	18	(5.49)	36	(10.98)	V		36	(10.98)	V		2481	(11.03)	7/8"-9	102.10	(151.94)	



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.15g (ASD)

Nominal Tubing Size	in.	(mm)	Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
			ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
1/2"	(15)	5	(1.52)	25	(7.62)	I	50	(15.25)	I	5.5	(0.024)	3/8"-16	0.43	(0.64)	
1/2"	(15)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	5.8	(0.025)	3/8"-16	0.43	(0.64)	
1/2"	(15)	7	(2.13)	21	(6.40)	I	42	(12.81)	I	5.9	(0.026)	3/8"-16	0.43	(0.64)	
1/2"	(15)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	6.7	(0.030)	3/8"-16	0.43	(0.64)	
1/2"	(15)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	5.8	(0.026)	3/8"-16	0.43	(0.64)	
3/4"	(20)	5	(1.52)	30	(9.15)	I	60	(18.30)	I	11.8	(0.052)	3/8"-16	0.83	(1.23)	
3/4"	(20)	6	(1.83)	30	(9.15)	I	60	(18.30)	I	12.7	(0.056)	3/8"-16	0.83	(1.23)	
3/4"	(20)	7	(2.13)	28	(8.54)	I	56	(17.08)	I	13.1	(0.058)	3/8"-16	0.83	(1.23)	
3/4"	(20)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	12.9	(0.057)	3/8"-16	0.83	(1.23)	
3/4"	(20)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	13.7	(0.061)	3/8"-16	0.83	(1.23)	
1"	(25)	5	(1.52)	35	(10.67)	I	70	(21.35)	I	18.6	(0.083)	3/8"-16	1.18	(1.75)	
1"	(25)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	20.2	(0.090)	3/8"-16	1.18	(1.75)	
1"	(25)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	21.1	(0.094)	3/8"-16	1.18	(1.75)	
1"	(25)	8	(2.44)	32	(9.76)	I	64	(19.52)	I	21.2	(0.094)	3/8"-16	1.18	(1.75)	
1"	(25)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	23.0	(0.102)	3/8"-16	1.18	(1.75)	
1 1/4"	(32)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	27.1	(0.120)	3/8"-16	1.57	(2.33)	
1 1/4"	(32)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	26.8	(0.119)	3/8"-16	1.57	(2.33)	
1 1/4"	(32)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	28.0	(0.124)	3/8"-16	1.57	(2.33)	
1 1/4"	(32)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	32.0	(0.142)	3/8"-16	1.57	(2.33)	
1 1/4"	(32)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	30.6	(0.136)	3/8"-16	1.57	(2.33)	
1 1/2"	(40)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	36.2	(0.161)	3/8"-16	2.10	(3.17)	
1 1/2"	(40)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	35.9	(0.159)	3/8"-16	2.10	(3.17)	
1 1/2"	(40)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	42.8	(0.190)	3/8"-16	2.10	(3.17)	
1 1/2"	(40)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	47.2	(0.210)	3/8"-16	2.10	(3.17)	
1 1/2"	(40)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	49.1	(0.218)	3/8"-16	2.10	(3.17)	
2"	(50)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	58.1	(0.258)	3/8"-16	3.37	(5.01)	
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	57.6	(0.256)	3/8"-16	3.37	(5.01)	
2"	(50)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	68.7	(0.305)	3/8"-16	3.37	(5.01)	
2"	(50)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	75.8	(0.337)	3/8"-16	3.37	(5.01)	
2"	(50)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	78.9	(0.351)	3/8"-16	3.37	(5.01)	
2 1/2"	(65)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	84.9	(0.377)	1/2"-13	4.92	(7.32)	
2 1/2"	(65)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	84.1	(0.374)	1/2"-13	4.92	(7.32)	
2 1/2"	(65)	9	(2.74)	36	(10.98)	I	72	(21.94)	I	99.6	(0.443)	1/2"-13	4.92	(7.32)	
2 1/2"	(65)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	110.7	(0.492)	1/2"-13	4.92	(7.32)	
2 1/2"	(65)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	115.1	(0.512)	1/2"-13	4.92	(7.32)	

Continued on following page.



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S 3913

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.15g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type		Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type		Braced Hanger & Rod Loads		Minimum Braced Rod Size		Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)	See Note 2		ft.	(m)	See Note 2		lbs.	(kN)			lbs./ft.	(kg/m)
3"	(80)	5	(1.52)	40	(12.19)	I		80	(24.38)	I		120.1	(0.534)	1/2"-13		6.96	(10.35)
3"	(80)	6	(1.83)	36	(10.98)	I		72	(21.94)	I		119.0	(0.529)	1/2"-13		6.96	(10.35)
3"	(80)	8	(2.44)	40	(12.19)	I		80	(24.38)	I		142.0	(0.631)	1/2"-13		6.96	(10.35)
3"	(80)	10	(3.05)	40	(12.19)	I		80	(24.38)	I		156.6	(0.696)	1/2"-13		6.96	(10.35)
3"	(80)	12	(3.66)	36	(10.98)	I		72	(21.94)	I		162.9	(0.724)	1/2"-13		6.96	(10.35)
3 1/2"	(90)	5	(1.52)	40	(12.19)	I		80	(24.38)	I		155.6	(0.692)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	6	(1.83)	36	(10.98)	I		72	(21.94)	I		154.2	(0.686)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	8	(2.44)	40	(12.19)	I		80	(24.38)	I		184.0	(0.818)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	10	(3.05)	40	(12.19)	I		80	(24.38)	I		202.9	(0.902)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	12	(3.66)	36	(10.98)	I		72	(21.94)	I		211.1	(0.939)	1/2"-13		9.02	(13.42)
4"	(100)	6	(1.83)	36	(10.98)	I		72	(21.94)	II		197.8	(0.880)	1/2"-13		11.57	(17.21)
4"	(100)	8	(2.44)	40	(12.19)	I		80	(24.38)	II		236.0	(1.050)	1/2"-13		11.57	(17.21)
4"	(100)	10	(3.05)	40	(12.19)	I		80	(24.38)	II		260.3	(1.158)	1/2"-13		11.57	(17.21)
4"	(100)	12	(3.66)	36	(10.98)	I		72	(21.94)	II		270.7	(1.204)	1/2"-13		11.57	(17.21)
4"	(100)	15	(4.57)	30	(9.15)	I		60	(18.30)	I		286.3	1.273)	1/2"-13		11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 83 - 86 are for 0.15g (ASD) applications.**



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 0.30g (ASD)

Nominal Pipe Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	35	(10.67)	I	70	(21.35)	I	26	(0.115)	3/8"-16	0.98	(1.46)
1/2"	(15)	6	(1.83)	30	(9.15)	I	60	(18.30)	I	24	(0.107)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	28	(8.54)	I	56	(17.08)	I	24	(0.107)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	32	(9.76)	I	64	(19.52)	I	27	(0.120)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	28	(0.124)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	40	(0.178)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	38	(0.169)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	39	(0.173)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	32	(9.76)	I	64	(19.52)	I	38	(0.169)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	39	(0.173)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	61	(0.271)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	58	(0.258)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	59	(0.262)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	68	(0.302)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	72	(0.320)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	86	(0.382)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	82	(0.365)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	84	(0.373)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	96	(0.427)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	102	(0.453)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	106	(0.471)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	102	(0.453)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	36	(10.98)	I	72	(21.94)	I	113	(0.502)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	126	(0.560)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	125	(0.556)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	150	(0.667)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	144	(0.640)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	167	(0.743)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	40	(12.19)	I	80	(24.38)	I	178	(0.792)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	177	(0.787)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	232	(1.032)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	222	(0.987)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	40	(12.19)	I	80	(24.38)	II	258	(1.147)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	40	(12.19)	I	80	(24.38)	II	275	(1.223)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	274	(1.219)	1/2"-13	7.87	(11.71)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size in. (mm)		Field Hanger Spacing See Note 1 ft. (m)		Maximum Transverse Support Spacing ft. (m)		Transverse Structure Connection Type See Note 2		Maximum Longitudinal Support Spacing ft. (m)		Longitudinal Structure Connection Type See Note 2		Braced Hanger & Rod Loads See Note 3 lbs. (kN)		Minimum Braced Rod Size		Water Filled Weight	
																lbs./ft.	(kg/m)
3"	(80)	6	(1.83)	36	(10.98)	I		72	(21.94)	III		303	(1.348)	1/2"-13	10.75	(16.00)	
3"	(80)	8	(2.44)	40	(12.19)	II		80	(24.38)	III		353	(1.570)	1/2"-13	10.75	(16.00)	
3"	(80)	10	(3.05)	40	(12.19)	II		80	(24.38)	III		376	(1.672)	1/2"-13	10.75	(16.00)	
3"	(80)	12	(3.66)	36	(10.98)	I		72	(21.94)	III		374	(1.663)	1/2"-13	10.75	(16.00)	
3"	(80)	15	(4.57)	30	(9.15)	I		60	(18.30)	II		371	(1.650)	1/2"-13	10.75	(16.00)	
3 1/2"	(90)	6	(1.83)	36	(10.98)	II		72	(21.94)	III		378	(1.681)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	8	(2.44)	40	(12.19)	II		80	(24.38)	IV		439	(1.952)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	10	(3.05)	40	(12.19)	II		80	(24.38)	IV		469	(2.086)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	12	(3.66)	36	(10.98)	II		72	(21.94)	III		466	(2.073)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	15	(4.57)	30	(9.15)	II		60	(18.30)	III		462	(2.055)	1/2"-13	13.39	(19.92)	
4"	(100)	6	(1.83)	36	(10.98)	II		72	(21.94)	III		401	(1.783)	5/8"-11	16.31	(24.27)	
4"	(100)	8	(2.44)	40	(12.19)	II		80	(24.38)	III		457	(2.033)	5/8"-11	16.31	(24.27)	
4"	(100)	10	(3.05)	40	(12.19)	II		80	(24.38)	III		473	(2.104)	5/8"-11	16.31	(24.27)	
4"	(100)	12	(3.66)	36	(10.98)	II		72	(21.94)	III		509	(2.264)	5/8"-11	16.31	(24.27)	
4"	(100)	15	(4.57)	30	(9.15)	II		60	(18.30)	III		563	(2.504)	5/8"-11	16.31	(24.27)	
5"	(125)	8	(2.44)	40	(12.19)	III		80	(24.38)	IV		635	(2.824)	5/8"-11	23.39	(34.81)	
5"	(125)	10	(3.05)	40	(12.19)	III		80	(24.38)	IV		595	(2.646)	5/8"-11	23.39	(34.81)	
5"	(125)	12	(3.66)	36	(10.98)	III		72	(21.94)	IV		595	(2.646)	5/8"-11	23.39	(34.81)	
5"	(125)	15	(4.57)	30	(9.15)	III		60	(18.30)	IV		595	(2.646)	5/8"-11	23.39	(34.81)	
5"	(125)	18	(5.49)	36	(10.98)	III		72	(21.94)	IV		536	(2.384)	5/8"-11	23.39	(34.81)	
6"	(150)	8	(2.44)	40	(12.19)	IV		48	(14.64)	IV		731	(3.251)	3/4"-10	31.49	(46.86)	
6"	(150)	10	(3.05)	40	(12.19)	IV		50	(15.25)	IV		819	(3.643)	3/4"-10	31.49	(46.86)	
6"	(150)	12	(3.66)	36	(10.98)	IV		48	(14.64)	IV		869	(3.865)	3/4"-10	31.49	(46.86)	
6"	(150)	15	(4.57)	30	(9.15)	IV		45	(13.72)	IV		945	(4.203)	3/4"-10	31.49	(46.86)	
6"	(150)	18	(5.49)	36	(10.98)	IV		36	(10.98)	IV		964	(4.288)	3/4"-10	31.49	(46.86)	
8"	(200)	8	(2.44)	40	(12.19)	V		40	(12.19)	V		1045	(4.648)	3/4"-10	50.23	(74.75)	
8"	(200)	10	(3.05)	40	(12.19)	V		40	(12.19)	V		1155	(5.137)	3/4"-10	50.23	(74.75)	
8"	(200)	12	(3.66)	36	(10.98)	V		36	(10.98)	V		1205	(5.360)	3/4"-10	50.23	(74.75)	
8"	(200)	15	(4.57)	30	(9.15)	IV		45	(13.72)	V		1507	(6.703)	3/4"-10	50.23	(74.75)	
8"	(200)	20	(6.10)	40	(12.19)	V		40	(12.19)	V		1708	(7.588)	3/4"-10	50.23	(74.75)	
10"	(250)	8	(2.44)	24	(7.32)	V		24	(7.32)	V		1194	(5.311)	7/8"-9	74.60	(111.01)	
10"	(250)	10	(3.05)	30	(9.15)	V		30	(9.15)	V		1492	(6.636)	7/8"-9	74.60	(111.01)	
10"	(250)	12	(3.66)	24	(7.32)	V		24	(7.32)	V		1522	(6.770)	7/8"-9	74.60	(111.01)	
10"	(250)	15	(4.57)	30	(9.15)	V		30	(9.15)	V		1902	(8.460)	7/8"-9	74.60	(111.01)	
10"	(250)	20	(6.10)	20	(6.10)	V		20	(6.10)	V		2089	(9.292)	7/8"-9	74.60	(111.01)	
12"	(300)	8	(2.44)	16	(4.88)	V		16	(4.88)	V		1388	(6.174)	7/8"-9	102.10	(151.94)	
12"	(300)	10	(3.05)	20	(6.10)	V		20	(6.10)	V		1736	(7.722)	7/8"-9	102.10	(151.94)	
12"	(300)	12	(3.66)	12	(3.66)	V		12	(3.66)	V		1715	(7.628)	7/8"-9	102.10	(151.94)	
12"	(300)	15	(4.57)	15	(4.57)	V		15	(4.57)	V		2144	(9.536)	7/8"-9	102.10	(151.94)	
12"	(300)	16	(4.88)	16	(4.88)	V		16	(4.88)	V		2287	(10.172)	7/8"-9	102.10	(151.94)	



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.30g (ASD)

Nominal Tubing Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	7.5	(0.033)	3/8"-16	0.43	(0.64)
1/2"	(15)	6	(1.83)	18	(5.49)	I	36	(10.98)	I	7.8	(0.033)	3/8"-16	0.43	(0.64)
1/2"	(15)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	6.9	(0.030)	3/8"-16	0.43	(0.64)
1/2"	(15)	8	(2.44)	16	(4.88)	I	32	(9.76)	I	7.9	(0.035)	3/8"-16	0.43	(0.64)
1/2"	(15)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	7.3	(0.032)	3/8"-16	0.43	(0.64)
3/4"	(20)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	14.5	(0.064)	3/8"-16	0.83	(1.23)
3/4"	(20)	6	(1.83)	18	(5.49)	I	36	(10.98)	I	14.4	(0.064)	3/8"-16	0.83	(1.23)
3/4"	(20)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	13.4	(0.059)	3/8"-16	0.83	(1.23)
3/4"	(20)	8	(2.44)	16	(4.88)	I	32	(9.76)	I	15.3	(0.068)	3/8"-16	0.83	(1.23)
3/4"	(20)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	14.1	(0.063)	3/8"-16	0.83	(1.23)
1"	(25)	5	(1.52)	25	(7.62)	I	50	(15.25)	I	24.2	(0.107)	3/8"-16	1.18	(1.75)
1"	(25)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	24.8	(0.110)	3/8"-16	1.18	(1.75)
1"	(25)	7	(2.13)	21	(6.40)	I	42	(12.81)	I	24.0	(0.107)	3/8"-16	1.18	(1.75)
1"	(25)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	27.4	(0.122)	3/8"-16	1.18	(1.75)
1"	(25)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	27.1	(0.120)	3/8"-16	1.18	(1.75)
1 1/4"	(32)	5	(1.52)	30	(9.15)	I	60	(18.30)	I	36.9	(0.164)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	33.0	(0.147)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	7	(2.13)	28	(8.54)	I	56	(17.08)	I	38.5	(0.171)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	36.4	(0.162)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	36.1	(0.160)	3/8"-16	1.57	(2.33)
1 1/2"	(40)	5	(1.52)	30	(9.15)	I	60	(18.30)	I	49.3	(0.219)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	6	(1.83)	30	(9.15)	I	60	(18.30)	I	51.7	(0.230)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	48.7	(0.216)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	48.3	(0.215)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	58.0	(0.258)	3/8"-16	2.10	(3.17)
2"	(50)	5	(1.52)	35	(10.67)	I	70	(22.35)	I	89.3	(0.397)	3/8"-16	3.37	(5.01)
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	95.0	(0.422)	3/8"-16	3.37	(5.01)
2"	(50)	8	(2.44)	32	(9.76)	I	64	(19.52)	I	94.4	(0.420)	3/8"-16	3.37	(5.01)
2"	(50)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	97.7	(0.434)	3/8"-16	3.37	(5.01)
2"	(50)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	93.0	(0.413)	3/8"-16	3.37	(5.01)
2 1/2"	(65)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	145.1	(0.645)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	138.7	(0.617)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	9	(2.74)	36	(10.98)	I	72	(21.94)	I	155.0	(0.689)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	142.7	(0.635)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	135.8	(0.604)	1/2"-13	4.92	(7.32)

Continued on following page.



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**Raafat S. Aboulhosn**  
Structural Engineer

S 3913

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING


**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.30g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		ft.	(m)		ft.	(m)		See Note 3	See Note 3
3"	(80)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	205.3	(0.913)	1/2"-13	6.96	(10.35)
3"	(80)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	196.3	(0.873)	1/2"-13	6.96	(10.35)
3"	(80)	8	(2.44)	40	(12.19)	I	80	(24.38)	II	228.3	(1.015)	1/2"-13	6.96	(10.35)
3"	(80)	10	(3.05)	40	(12.19)	I	80	(24.38)	II	243.6	(1.083)	1/2"-13	6.96	(10.35)
3"	(80)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	242.2	(1.077)	1/2"-13	6.96	(10.35)
3 1/2"	(90)	5	(1.52)	40	(12.19)	I	80	(24.38)	III	266.1	(1.183)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	254.4	(1.131)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	8	(2.44)	40	(12.19)	I	80	(24.38)	III	295.8	(1.316)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	10	(3.05)	40	(12.19)	I	80	(24.38)	III	315.7	(1.404)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	313.9	(1.396)	1/2"-13	9.02	(13.42)
4"	(100)	5	(1.52)	40	(12.19)	II	80	(24.38)	III	341.3	(1.518)	1/2"-13	11.57	(17.21)
4"	(100)	6	(1.83)	36	(10.98)	II	72	(21.94)	III	326.3	(1.451)	1/2"-13	11.57	(17.21)
4"	(100)	8	(2.44)	40	(12.19)	II	80	(24.38)	III	379.5	(1.688)	1/2"-13	11.57	(17.21)
4"	(100)	9	(2.74)	36	(10.98)	II	72	(21.94)	III	364.4	(1.621)	1/2"-13	11.57	(17.21)
4"	(100)	11	(3.35)	33	(10.06)	I	66	(20.13)	III	369.1	(1.642)	1/2"-13	11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 87 - 90 are for 0.30g (ASD) applications.**

 <p><b>Raafat S. Aboulhosh</b> Structural Engineer    S 3913</p>	<h2 style="margin: 0;">B-Line</h2> <p><b>COOPER B-Line</b> 509 West Monroe Street Highland, Illinois 62249 Phone: 800-851-7415 Fax: 618-654-1917</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="margin: 0;"><b>A P P R O V E D</b></p> <p style="margin: 0;">Fixed Equipment Anchorage</p> <p style="margin: 0;">Office of Statewide Health Planning and Development</p> <p style="margin: 0; font-size: 1.2em;"><b>OPA-0114</b></p> <p style="margin: 0;">on</p> <p style="margin: 0;">Friday, June 2, 2006</p> <p style="margin: 0; font-style: italic; font-size: 1.2em;">Anthony R. Pike</p> <p style="margin: 0; font-size: 0.8em;">Anthony R. Pike    (916) 654-3562</p> </div>						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Date:</td> <td style="width: 33%;">Page No.</td> <td style="width: 33%;">Sheet Number:</td> </tr> <tr> <td style="text-align: center; font-size: 1.2em;">6 - 2 - 06</td> <td style="text-align: center; font-size: 1.2em;">90</td> <td style="text-align: center; font-size: 1.2em;">___ of ___</td> </tr> </table>	Date:	Page No.	Sheet Number:	6 - 2 - 06	90	___ of ___	
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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 0.45g (ASD)

Nominal Pipe Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	28	(0.124)	3/8"-16	0.98	(1.41)
1/2"	(15)	6	(1.83)	24	(7.31)	I	48	(14.63)	I	28	(0.124)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	28	(8.54)	I	56	(17.07)	I	33	(0.147)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	24	(7.31)	I	48	(14.63)	I	30	(0.133)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	20	(6.09)	I	40	(12.19)	I	29	(0.129)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	30	(9.15)	I	60	(18.30)	I	45	(0.200)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	30	(9.15)	I	60	(18.30)	I	46	(0.204)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	28	(8.54)	I	56	(17.07)	I	45	(0.200)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	24	(7.31)	I	48	(14.63)	I	42	(0.187)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	20	(6.09)	I	40	(12.19)	I	40	(0.178)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	35	(10.67)	I	70	(21.35)	I	77	(0.342)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	81	(0.360)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	81	(0.360)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	32	(9.75)	I	64	(19.51)	I	78	(0.347)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	30	(9.15)	I	60	(18.30)	I	79	(0.351)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	40	(12.19)	I	80	(24.38)	I	122	(0.542)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	115	(0.511)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	115	(0.511)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	40	(12.19)	I	80	(24.38)	I	132	(0.587)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	30	(9.15)	I	80	(24.38)	I	112	(0.498)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	150	(0.667)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	141	(0.627)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	36	(10.98)	I	72	(21.94)	I	154	(0.685)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	40	(12.19)	I	80	(24.38)	II	171	(0.760)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	36	(10.98)	I	72	(21.94)	I	166	(0.738)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	213	(0.947)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	200	(0.889)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	40	(12.19)	I	80	(24.38)	II	231	(1.027)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	40	(12.19)	I	80	(24.38)	II	242	(1.076)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	236	(1.050)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	40	(12.19)	II	80	(24.38)	II	329	(1.463)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	II	72	(21.94)	II	309	(1.374)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	40	(12.19)	II	80	(24.38)	II	356	(1.583)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	40	(12.19)	II	80	(24.38)	II	374	(1.663)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	36	(10.98)	II	72	(21.94)	II	364	(1.619)	1/2"-13	7.87	(11.71)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size in. (mm)		Field Hanger Spacing See Note 1 ft. (m)		Maximum Transverse Support Spacing ft. (m)		Transverse Structure Connection Type See Note 2		Maximum Longitudinal Support Spacing ft. (m)		Longitudinal Structure Connection Type See Note 2		Braced Hanger & Rod Loads See Note 3 lbs. (kN)		Minimum Braced Rod Size		Water Filled Weight	
																lbs./ft.	(kg/m)
3"	(80)	6	(1.83)	36	(10.98)	II		72	(21.94)	IV		422	(1.877)	1/2"-13	10.75	(16.00)	
3"	(80)	8	(2.44)	40	(12.19)	II		80	(24.38)	IV		486	(2.162)	1/2"-13	10.75	(16.00)	
3"	(80)	10	(3.05)	40	(12.19)	II		80	(24.38)	IV		511	(2.273)	1/2"-13	10.75	(16.00)	
3"	(80)	12	(3.66)	36	(10.98)	II		72	(21.94)	IV		497	(2.211)	1/2"-13	10.75	(16.00)	
3"	(80)	15	(4.57)	30	(9.15)	II		60	(18.30)	III		476	(2.117)	1/2"-13	10.75	(16.00)	
3 1/2"	(90)	6	(1.83)	36	(10.98)	III		72	(21.94)	IV		526	(2.340)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	8	(2.44)	40	(12.19)	III		80	(24.38)	V		605	(2.691)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	10	(3.05)	40	(12.19)	III		80	(24.38)	V		636	(2.829)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	12	(3.66)	36	(10.98)	III		72	(21.94)	IV		619	(2.753)	1/2"-13	13.39	(19.92)	
3 1/2"	(90)	15	(4.57)	30	(9.15)	II		60	(18.30)	IV		592	(2.633)	1/2"-13	13.39	(19.92)	
4"	(100)	6	(1.83)	36	(10.98)	III		72	(21.94)	V		641	(2.851)	5/8"-11	16.31	(24.27)	
4"	(100)	8	(2.44)	40	(12.19)	III		80	(24.38)	V		737	(3.278)	5/8"-11	16.31	(24.27)	
4"	(100)	10	(3.05)	40	(12.19)	III		80	(24.38)	V		775	(3.447)	5/8"-11	16.31	(24.27)	
4"	(100)	12	(3.66)	36	(10.98)	III		72	(21.94)	V		753	(3.349)	5/8"-11	16.31	(24.27)	
4"	(100)	15	(4.57)	30	(9.15)	III		60	(18.30)	IV		722	(3.211)	5/8"-11	16.31	(24.27)	
5"	(125)	8	(2.44)	40	(12.19)	IV		40	(12.19)	IV		636	(2.829)	5/8"-11	23.39	(34.81)	
5"	(125)	10	(3.05)	40	(12.19)	IV		40	(12.19)	IV		690	(3.069)	5/8"-11	23.39	(34.81)	
5"	(125)	12	(3.66)	36	(10.98)	IV		36	(10.98)	IV		702	(3.122)	5/8"-11	23.39	(34.81)	
5"	(125)	15	(4.57)	30	(9.15)	III		45	(13.71)	IV		877	(3.901)	5/8"-11	23.39	(34.81)	
5"	(125)	18	(5.49)	36	(10.98)	IV		36	(10.98)	IV		863	(3.838)	5/8"-11	23.39	(34.81)	
6"	(150)	8	(2.44)	32	(9.76)	IV		32	(9.76)	IV		743	(3.305)	3/4"-10	31.49	(46.86)	
6"	(150)	10	(3.05)	30	(9.15)	IV		30	(9.15)	IV		787	(3.500)	3/4"-10	31.49	(46.86)	
6"	(150)	12	(3.66)	24	(7.32)	IV		24	(7.32)	IV		775	(3.447)	3/4"-10	31.49	(46.86)	
6"	(150)	15	(4.57)	30	(9.15)	IV		30	(9.15)	IV		948	(4.217)	3/4"-10	31.49	(46.86)	
6"	(150)	18	(5.49)	18	(5.49)	IV		18	(5.49)	IV		907	(4.034)	3/4"-10	31.49	(46.86)	
8"	(200)	8	(2.44)	24	(7.32)	V		24	(7.32)	V		1005	(4.470)	3/4"-10	50.23	(74.75)	
8"	(200)	10	(3.05)	30	(9.15)	V		30	(9.15)	V		1256	(5.587)	3/4"-10	50.23	(74.75)	
8"	(200)	12	(3.66)	24	(7.32)	V		24	(7.32)	V		1236	(5.498)	3/4"-10	50.23	(74.75)	
8"	(200)	15	(4.57)	30	(9.15)	V		30	(9.15)	V		1544	(6.868)	3/4"-10	50.23	(74.75)	
8"	(200)	20	(6.10)	20	(6.10)	V		20	(6.10)	V		1607	(7.148)	3/4"-10	50.23	(74.75)	
10"	(250)	8	(2.44)	16	(4.88)	V		16	(4.88)	V		1223	(5.440)	7/8"-9	74.60	(111.01)	
10"	(250)	10	(3.05)	20	(6.10)	V		20	(6.10)	V		1529	(6.801)	7/8"-9	74.60	(111.01)	
10"	(250)	12	(3.66)	12	(3.66)	V		12	(3.66)	V		1432	(6.370)	7/8"-9	74.60	(111.01)	
10"	(250)	15	(4.57)	15	(4.57)	V		15	(4.57)	V		1790	(7.962)	7/8"-9	74.60	(111.01)	
10"	(250)	20	(6.10)	20	(6.10)	V		20	(6.10)	V		2387	(10.618)	7/8"-9	74.60	(111.01)	
12"	(300)	8	(2.44)	8	(2.44)	V		8	(2.44)	V		1307	(5.814)	7/8"-9	102.10	(151.94)	
12"	(300)	10	(3.05)	10	(3.05)	V		10	(3.05)	V		1633	(7.264)	7/8"-9	102.10	(151.94)	
12"	(300)	12	(3.66)	12	(3.66)	V		12	(3.66)	V		1960	(8.718)	7/8"-9	102.10	(151.94)	
12"	(300)	15	(4.57)	15	(4.57)	V		15	(4.57)	V		2450	(10.898)	7/8"-9	102.10	(151.94)	



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.45g (ASD)

Nominal Tubing Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	15	(4.57)	I	30	(9.14)	I	8.3	(0.037)	3/8"-16	0.43	(0.64)
1/2"	(15)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	7.6	(0.034)	3/8"-16	0.43	(0.64)
1/2"	(15)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	8.9	(0.039)	3/8"-16	0.43	(0.64)
1/2"	(15)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	7.1	(0.031)	3/8"-16	0.43	(0.64)
1/2"	(15)	10	(3.05)	0	(0.00)	I	0	(0.00)	I	4.9	(0.022)	3/8"-16	0.43	(0.64)
3/4"	(20)	5	(1.52)	15	(4.57)	I	30	(9.14)	I	16.0	(0.071)	3/8"-16	0.83	(1.23)
3/4"	(20)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	14.7	(0.065)	3/8"-16	0.83	(1.23)
3/4"	(20)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	17.1	(0.076)	3/8"-16	0.83	(1.23)
3/4"	(20)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	13.6	(0.060)	3/8"-16	0.83	(1.23)
3/4"	(20)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	17.0	(0.075)	3/8"-16	0.83	(1.23)
1"	(25)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	28.0	(0.124)	3/8"-16	1.18	(1.75)
1"	(25)	6	(1.83)	18	(5.48)	I	36	(10.97)	I	27.3	(0.121)	3/8"-16	1.18	(1.75)
1"	(25)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	24.4	(0.108)	3/8"-16	1.18	(1.75)
1"	(25)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	27.8	(0.123)	3/8"-16	1.18	(1.75)
1"	(25)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	24.2	(0.107)	3/8"-16	1.18	(1.75)
1 1/4"	(32)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	37.3	(0.166)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	44.7	(0.199)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	42.3	(0.188)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	37.1	(0.165)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	46.3	(0.206)	3/8"-16	1.57	(2.33)
1 1/2"	(40)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	59.3	(0.264)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	59.8	(0.266)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	64.7	(0.288)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	61.9	(0.275)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	51.7	(0.230)	3/8"-16	2.10	(3.17)
2"	(50)	5	(1.52)	30	(9.15)	I	60	(18.30)	I	110.4	(0.491)	3/8"-16	3.37	(5.01)
2"	(50)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	96.0	(0.427)	3/8"-16	3.37	(5.01)
2"	(50)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	103.8	(0.462)	3/8"-16	3.37	(5.01)
2"	(50)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	99.4	(0.442)	3/8"-16	3.37	(5.01)
2"	(50)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	119.3	(0.530)	3/8"-16	3.37	(5.01)
2 1/2"	(65)	5	(1.52)	30	(9.15)	I	55	(16.76)	I	150.1	(0.667)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	6	(1.83)	30	(9.15)	I	54	(16.46)	I	153.5	(0.683)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	9	(2.74)	27	(8.23)	I	54	(16.46)	I	170.5	(0.758)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	10	(3.05)	30	(9.15)	I	50	(15.24)	I	167.3	(0.744)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	174.2	(0.775)	1/2"-13	4.92	(7.32)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING


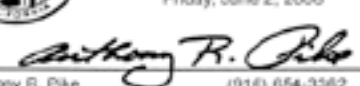
**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.45g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
3"	(80)	5	(1.52)	35	(10.67)	II	70	(21.33)	III	259.3	(1.153)	1/2"-13	6.96	(10.35)
3"	(80)	6	(1.83)	30	(9.15)	I	60	(18.29)	II	235.9	(1.049)	1/2"-13	6.96	(10.35)
3"	(80)	8	(2.44)	32	(9.75)	II	64	(19.61)	II	264.5	(1.176)	1/2"-13	6.96	(10.35)
3"	(80)	10	(3.05)	30	(9.15)	II	60	(18.29)	II	267.9	(1.191)	1/2"-13	6.96	(10.35)
3"	(80)	12	(3.66)	24	(7.32)	I	48	(14.64)	II	246.4	(1.096)	1/2"-13	6.96	(10.35)
3 1/2"	(90)	5	(1.52)	35	(10.67)	II	70	(21.33)	III	336.0	(1.494)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	8	(2.44)	32	(9.75)	II	64	(19.61)	III	342.7	(1.524)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	10	(3.05)	30	(9.15)	II	60	(18.29)	III	347.3	(1.545)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	12	(3.66)	24	(7.32)	II	48	(14.64)	II	319.3	(1.420)	1/2"-13	9.02	(13.42)
4"	(100)	5	(1.52)	36	(10.98)	II	72	(21.94)	IV	454.7	(2.022)	1/2"-13	11.57	(17.21)
4"	(100)	6	(1.83)	32	(9.75)	II	64	(19.61)	IV	439.6	(1.955)	1/2"-13	11.57	(17.21)
4"	(100)	8	(2.44)	30	(9.15)	II	60	(18.29)	III	445.4	(1.981)	1/2"-13	11.57	(17.21)
4"	(100)	9	(2.74)	36	(10.98)	II	72	(21.94)	IV	534.5	(2.377)	1/2"-13	11.57	(17.21)
4"	(100)	11	(3.35)	30	(9.15)	II	60	(18.29)	III	511.9	(2.277)	1/2"-13	11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 91 - 94 are for 0.45g (ASD) applications.**

 <p><b>Raafat S. Aboulhoss</b> Structural Engineer    S 3913</p>	<h2 style="margin: 0;">B-Line</h2> <p style="margin: 0;"><b>COOPER B-Line</b> 509 West Monroe Street Highland, Illinois 62249 Phone: 800-851-7415 Fax: 618-654-1917</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="margin: 0; font-weight: bold; letter-spacing: 0.5em;">A P P R O V E D</p> <p style="margin: 0; font-size: small;">Fixed Equipment Anchorage Office of Statewide Health Planning and Development</p> <p style="margin: 0; font-weight: bold; font-size: large;">OPA-0114</p> <p style="margin: 0; font-size: x-small;">on</p> <p style="margin: 0; font-size: small;">Friday, June 2, 2006</p>  <p style="margin: 0; font-size: x-small;">Anthony R. Pike    (916) 654-3562</p> </div>
	<p style="margin: 0;">Date:                      Page No.                      Sheet Number:</p> <p style="margin: 0; font-size: large;">6 - 2 - 06                      94                      ___ of ___</p>	

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 0.50g (ASD)

Nominal Pipe Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	30	(0.233)	3/8"-16	0.98	(1.46)
1/2"	(15)	6	(1.83)	24	(7.32)	I	48	(14.63)	I	30	(0.233)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	29	(0.129)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	24	(7.32)	I	48	(14.63)	I	33	(0.147)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	31	(0.138)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	30	(9.14)	I	60	(18.30)	I	49	(0.218)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	30	(9.14)	I	60	(18.30)	I	50	(0.222)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	28	(8.53)	I	56	(17.07)	I	49	(0.218)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	24	(7.32)	I	48	(14.63)	I	45	(0.200)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	43	(0.191)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	35	(10.67)	I	70	(21.35)	I	84	(0.373)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	30	(9.14)	I	60	(18.30)	I	76	(0.338)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	28	(8.53)	I	56	(17.07)	I	75	(0.333)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	32	(9.75)	I	64	(19.51)	I	85	(0.378)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	30	(9.14)	I	60	(18.30)	I	86	(0.382)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	35	(10.67)	I	70	(21.35)	I	119	(0.529)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	36	(10.98)	I	72	(21.94)	I	126	(0.560)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	35	(10.67)	I	70	(21.35)	I	126	(0.560)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	32	(9.75)	I	64	(19.51)	I	121	(0.538)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	30	(9.14)	I	60	(18.30)	I	122	(0.542)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	165	(0.734)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	155	(0.689)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	36	(10.98)	I	72	(21.94)	II	167	(0.743)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	30	(9.14)	I	60	(18.30)	I	150	(0.667)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	180	(0.800)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	40	(12.19)	I	80	(24.38)	II	234	(1.041)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	36	(10.98)	I	72	(21.94)	II	219	(0.974)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	40	(12.19)	I	80	(24.38)	II	252	(1.121)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	40	(12.19)	I	80	(24.38)	II	263	(1.170)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	36	(10.98)	I	72	(21.94)	II	255	(1.134)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	40	(12.19)	II	80	(24.38)	III	361	(1.606)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	II	72	(21.94)	III	338	(1.503)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	40	(12.19)	II	80	(24.38)	III	388	(1.726)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	40	(12.19)	II	80	(24.38)	III	407	(1.810)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	36	(10.98)	II	72	(21.94)	III	393	(1.748)	1/2"-13	7.87	(11.71)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size in. (mm)		Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight	
		ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
3"	(80)	6	(1.83)	36	(10.98)	II	72	(21.94)	IV	462	(2.055)	1/2"-13	10.75	(16.00)
3"	(80)	8	(2.44)	40	(12.19)	III	80	(24.38)	IV	530	(2.357)	1/2"-13	10.75	(16.00)
3"	(80)	10	(3.05)	40	(12.19)	III	80	(24.38)	IV	555	(2.469)	1/2"-13	10.75	(16.00)
3"	(80)	12	(3.66)	36	(10.98)	II	72	(21.94)	IV	537	(2.389)	1/2"-13	10.75	(16.00)
3"	(80)	15	(4.57)	30	(9.15)	II	60	(18.30)	IV	511	(2.273)	1/2"-13	10.75	(16.00)
3 1/2"	(90)	6	(1.83)	36	(10.98)	III	72	(21.94)	V	576	(2.562)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	8	(2.44)	40	(12.19)	III	80	(24.38)	V	661	(2.940)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	10	(3.05)	40	(12.19)	III	80	(24.38)	V	692	(3.078)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	12	(3.66)	36	(10.98)	III	72	(21.94)	V	669	(2.976)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	15	(4.57)	30	(9.15)	II	60	(18.30)	IV	636	(2.829)	1/2"-13	13.39	(19.92)
4"	(100)	6	(1.83)	36	(10.98)	III	72	(21.94)	V	701	(3.118)	5/8"-11	16.31	(24.27)
4"	(100)	8	(2.44)	40	(12.19)	IV	80	(24.38)	V	805	(3.581)	5/8"-11	16.31	(24.27)
4"	(100)	10	(3.05)	40	(12.19)	IV	80	(24.38)	V	843	(3.750)	5/8"-11	16.31	(24.27)
4"	(100)	12	(3.66)	36	(10.98)	III	72	(21.94)	V	815	(3.625)	5/8"-11	16.31	(24.27)
4"	(100)	15	(4.57)	30	(9.15)	III	60	(18.30)	V	775	(3.447)	5/8"-11	16.31	(24.27)
5"	(125)	8	(2.44)	40	(12.19)	IV	40	(12.19)	V	686	(3.051)	5/8"-11	23.39	(34.81)
5"	(125)	10	(3.05)	40	(12.19)	IV	40	(12.19)	V	741	(3.296)	5/8"-11	23.39	(34.81)
5"	(125)	12	(3.66)	36	(10.98)	IV	36	(10.98)	V	748	(3.327)	5/8"-11	23.39	(34.81)
5"	(125)	15	(4.57)	30	(9.15)	IV	30	(9.15)	V	760	(3.380)	5/8"-11	23.39	(34.81)
5"	(125)	18	(5.49)	36	(10.98)	IV	36	(10.98)	V	912	(4.056)	5/8"-11	23.39	(34.81)
6"	(150)	8	(2.44)	24	(7.31)	IV	24	(7.31)	IV	672	(2.989)	3/4"-10	31.49	(46.86)
6"	(150)	10	(3.05)	30	(9.15)	IV	30	(9.15)	IV	840	(3.736)	3/4"-10	31.49	(46.86)
6"	(150)	12	(3.66)	24	(7.31)	IV	24	(7.31)	IV	819	(3.643)	3/4"-10	31.49	(46.86)
6"	(150)	15	(4.57)	30	(9.15)	IV	30	(9.15)	IV	1023	(4.550)	3/4"-10	31.49	(46.86)
6"	(150)	18	(5.49)	18	(5.49)	IV	18	(5.49)	IV	945	(4.203)	3/4"-10	31.49	(46.86)
8"	(200)	8	(2.44)	24	(7.31)	V	24	(7.31)	V	1072	(4.768)	3/4"-10	50.23	(74.75)
8"	(200)	10	(3.05)	20	(6.09)	V	20	(6.09)	V	1088	(4.839)	3/4"-10	50.23	(74.75)
8"	(200)	12	(3.66)	24	(7.31)	V	24	(7.31)	V	1306	(5.809)	3/4"-10	50.23	(74.75)
8"	(200)	15	(4.57)	15	(4.57)	V	15	(4.57)	V	1256	(6.587)	3/4"-10	50.23	(74.75)
8"	(200)	20	(6.10)	20	(6.10)	V	20	(6.10)	V	1674	(7.446)	3/4"-10	50.23	(74.75)
10"	(250)	8	(2.44)	16	(4.88)	V	16	(4.88)	V	1293	(5.751)	7/8"-9	74.60	(111.01)
10"	(250)	10	(3.05)	10	(3.05)	V	10	(3.05)	V	1243	(5.529)	7/8"-9	74.60	(111.01)
10"	(250)	12	(3.66)	12	(3.66)	V	12	(3.66)	V	1492	(6.637)	7/8"-9	74.60	(111.01)
10"	(250)	15	(4.57)	15	(4.57)	V	15	(4.57)	V	1866	(8.296)	7/8"-9	74.60	(111.01)
10"	(250)	18	(5.49)	18	(5.49)	V	18	(5.49)	V	2238	(9.955)	7/8"-9	74.60	(111.01)
12"	(300)	8	(2.44)	8	(2.44)	V	8	(2.44)	V	1361	(6.054)	7/8"-9	102.10	(151.94)
12"	(300)	10	(3.05)	10	(3.05)	V	10	(3.05)	V	1701	(7.566)	7/8"-9	102.10	(151.94)
12"	(300)	12	(3.66)	12	(3.66)	V	12	(3.66)	V	2042	(9.083)	7/8"-9	102.10	(151.94)
12"	(300)	13	(3.96)	13	(3.96)	V	13	(3.96)	V	2212	(9.839)	7/8"-9	102.10	(151.94)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.50g (ASD)

Nominal Tubing Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	9.0	(0.040)	3/8"-16	0.43	(0.64)
1/2"	(15)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	8.2	(0.036)	3/8"-16	0.43	(0.64)
1/2"	(15)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	9.5	(0.042)	3/8"-16	0.43	(0.64)
1/2"	(15)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	7.5	(0.033)	3/8"-16	0.43	(0.64)
1/2"	(15)	9	(2.74)	9	(2.74)	I	18	(5.49)	I	8.4	(0.037)	3/8"-16	0.43	(0.64)
3/4"	(20)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	17.3	(0.077)	3/8"-16	0.83	(1.23)
3/4"	(20)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	15.8	(0.070)	3/8"-16	0.83	(1.23)
3/4"	(20)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	18.4	(0.082)	3/8"-16	0.83	(1.23)
3/4"	(20)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	14.4	(0.064)	3/8"-16	0.83	(1.23)
3/4"	(20)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	18.0	(0.080)	3/8"-16	0.83	(1.23)
1"	(25)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	30.5	(0.135)	3/8"-16	1.18	(1.75)
1"	(25)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	29.5	(0.131)	3/8"-16	1.18	(1.75)
1"	(25)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	26.2	(0.116)	3/8"-16	1.18	(1.75)
1"	(25)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	29.9	(0.133)	3/8"-16	1.18	(1.75)
1"	(25)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	25.6	(0.114)	3/8"-16	1.18	(1.75)
1 1/4"	(32)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	40.6	(0.180)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	39.2	(0.174)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	45.8	(0.204)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	39.8	(0.177)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	34.0	(0.151)	3/8"-16	1.57	(2.33)
1 1/2"	(40)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	64.7	(0.288)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	65.1	(0.289)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	53.2	(0.236)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	66.5	(0.296)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	54.6	(0.243)	3/8"-16	2.10	(3.17)
2"	(50)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	103.9	(0.462)	3/8"-16	3.37	(5.01)
2"	(50)	6	(1.83)	24	(7.32)	I	48	(14.64)	I	104.5	(0.465)	3/8"-16	3.37	(5.01)
2"	(50)	8	(2.44)	24	(7.32)	I	48	(14.64)	I	112.3	(0.499)	3/8"-16	3.37	(5.01)
2"	(50)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	106.7	(0.474)	3/8"-16	3.37	(5.01)
2"	(50)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	87.6	(0.389)	3/8"-16	3.37	(5.01)
2 1/2"	(65)	5	(1.52)	30	(9.15)	I	60	(18.29)	II	176.3	(0.784)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	6	(1.83)	30	(9.15)	I	60	(18.29)	II	182.0	(0.809)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	9	(2.74)	27	(8.23)	I	54	(16.46)	II	184.5	(0.820)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	155.8	(0.693)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	12	(3.66)	24	(7.32)	I	48	(14.64)	I	187.0	(0.832)	1/2"-13	4.92	(7.32)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING




**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.50g (ASD)

Nominal Tubing Size in.	(mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight	
		ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
3"	(80)	5	(1.52)	30	(9.15)	I	60	(18.29)	II	249.4	(1.109)	1/2"-13	6.96	(10.35)
3"	(80)	6	(1.83)	30	(9.15)	II	60	(18.29)	II	257.5	(1.145)	1/2"-13	6.96	(10.35)
3"	(80)	8	(2.44)	32	(9.75)	II	64	(19.51)	III	287.7	(1.279)	1/2"-13	6.96	(10.35)
3"	(80)	10	(3.05)	30	(9.15)	II	60	(18.29)	II	290.0	(1.290)	1/2"-13	6.96	(10.35)
3"	(80)	12	(3.66)	24	(7.32)	II	48	(14.64)	II	264.5	(1.176)	1/2"-13	6.96	(10.35)
3 1/2"	(90)	5	(1.52)	35	(10.67)	II	70	(21.33)	III	368.3	(1.638)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	6	(1.83)	36	(10.98)	II	72	(21.94)	IV	387.9	(1.725)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	8	(2.44)	32	(9.75)	II	64	(19.51)	III	372.8	(1.658)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	10	(3.05)	30	(9.15)	II	60	(18.29)	III	375.8	(1.671)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	12	(3.66)	24	(7.32)	II	48	(14.64)	III	342.7	(1.524)	1/2"-13	9.02	(13.42)
4"	(100)	5	(1.52)	40	(12.19)	III	70	(21.33)	IV	472.4	(2.101)	1/2"-13	11.57	(17.21)
4"	(100)	6	(1.83)	36	(10.98)	II	72	(21.94)	IV	497.5	(2.213)	1/2"-13	11.57	(17.21)
4"	(100)	8	(2.44)	40	(12.19)	III	64	(19.51)	IV	478.2	(2.127)	1/2"-13	11.57	(17.21)
4"	(100)	10	(3.05)	36	(10.98)	III	60	(18.29)	IV	482.1	(2.144)	1/2"-13	11.57	(17.21)
4"	(100)	12	(3.66)	33	(10.06)	II	48	(14.64)	III	439.6	(1.955)	1/2"-13	11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 95 - 98 are for 0.50g (ASD) applications.**

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 0.75g (ASD)

Nominal Pipe Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
1/2"	(15)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	36	(0.161)	3/8"-16	0.98	(1.46)
1/2"	(15)	6	(1.83)	18	(5.48)	I	36	(10.98)	I	34	(0.151)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	39	(0.173)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	33	(0.147)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	27	(0.120)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	59	(0.262)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	24	(7.32)	I	48	(14.63)	I	59	(0.262)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	55	(0.244)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	24	(7.32)	I	48	(14.63)	I	63	(0.280)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	58	(0.258)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	25	(7.62)	I	50	(15.24)	I	90	(0.400)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	24	(7.32)	I	48	(14.63)	I	90	(0.400)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	83	(0.369)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	24	(7.32)	I	48	(14.63)	I	95	(0.422)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	88	(0.391)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	30	(9.14)	I	60	(18.30)	II	150	(0.667)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	30	(9.14)	I	60	(18.30)	II	153	(0.680)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	28	(8.53)	I	56	(17.07)	I	148	(0.658)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	24	(7.32)	I	48	(14.63)	I	134	(0.596)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	30	(9.14)	I	60	(18.30)	II	168	(0.747)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	30	(9.14)	I	60	(18.30)	II	184	(0.818)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	30	(9.14)	I	60	(18.30)	II	189	(0.841)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	27	(8.23)	I	54	(16.46)	II	186	(0.827)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	30	(9.14)	I	48	(14.63)	II	207	(0.921)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	24	(7.32)	I	60	(18.30)	II	184	(0.818)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	35	(10.67)	II	70	(21.33)	III	300	(1.334)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	36	(10.98)	II	72	(21.94)	III	314	(1.397)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	32	(9.75)	II	64	(19.51)	III	296	(1.316)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	30	(9.14)	II	60	(18.30)	III	293	(1.303)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	24	(7.32)	II	48	(14.63)	II	260	(1.156)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	40	(12.19)	III	80	(24.38)	IV	521	(2.317)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	III	72	(21.94)	IV	484	(2.153)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	40	(12.19)	III	80	(24.38)	IV	551	(2.451)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	40	(12.19)	III	80	(24.38)	IV	571	(2.540)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	36	(10.98)	III	72	(21.94)	IV	543	(2.415)	1/2"-13	7.87	(11.71)

Continued on following page.



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**Raafat S. Aboulhosn**  
Structural Engineer

S 3913

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size	Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight		
	in.	(mm)	ft.	(m)		ft.	(m)		ft.	(m)		lbs.	(kN)	lbs./ft.
3"	(80)	6	(1.83)	36	(10.98)	IV	54	(16.46)	IV	516	(2.295)	1/2"-13	10.75	(16.00)
3"	(80)	8	(2.44)	40	(12.19)	IV	56	(17.07)	IV	559	(2.486)	1/2"-13	10.75	(16.00)
3"	(80)	10	(3.05)	40	(12.19)	IV	50	(15.24)	IV	537	(2.388)	1/2"-13	10.75	(16.00)
3"	(80)	12	(3.66)	36	(10.98)	IV	48	(14.63)	IV	547	(2.433)	1/2"-13	10.75	(16.00)
3"	(80)	15	(4.57)	30	(9.15)	IV	45	(13.71)	IV	564	(2.508)	1/2"-13	10.75	(16.00)
3 1/2"	(90)	6	(1.83)	36	(10.98)	IV	42	(12.81)	IV	522	(2.322)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	8	(2.44)	40	(12.19)	IV	40	(12.19)	IV	536	(2.384)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	10	(3.05)	40	(12.19)	IV	40	(12.19)	IV	569	(2.531)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	12	(3.66)	36	(10.98)	IV	36	(10.98)	IV	562	(2.500)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	15	(4.57)	30	(9.15)	IV	45	(13.71)	IV	703	(3.127)	1/2"-13	13.39	(19.92)
4"	(100)	6	(1.83)	36	(10.98)	IV	36	(10.98)	IV	563	(2.504)	5/8"-11	16.31	(24.27)
4"	(100)	8	(2.44)	32	(9.75)	IV	32	(9.75)	IV	555	(2.468)	5/8"-11	16.31	(24.27)
4"	(100)	10	(3.05)	30	(9.15)	IV	30	(9.15)	IV	571	(2.540)	5/8"-11	16.31	(24.27)
4"	(100)	12	(3.66)	36	(10.98)	IV	36	(10.98)	IV	685	(3.047)	5/8"-11	16.31	(24.27)
4"	(100)	15	(4.57)	30	(9.15)	IV	30	(9.15)	IV	673	(2.993)	5/8"-11	16.31	(24.27)
5"	(125)	8	(2.44)	24	(7.31)	IV	24	(7.31)	IV	655	(2.913)	5/8"-11	23.39	(34.81)
5"	(125)	10	(3.05)	20	(6.09)	IV	20	(6.09)	IV	643	(2.860)	5/8"-11	23.39	(34.81)
5"	(125)	12	(3.66)	24	(7.31)	IV	24	(7.31)	IV	772	(3.434)	5/8"-11	23.39	(34.81)
5"	(125)	15	(4.57)	15	(4.57)	IV	15	(4.57)	IV	702	(3.122)	5/8"-11	23.39	(34.81)
5"	(125)	18	(5.49)	18	(5.49)	IV	18	(5.49)	IV	842	(3.745)	5/8"-11	23.39	(34.81)
6"	(150)	8	(2.44)	16	(4.88)	IV	16	(4.88)	IV	693	(3.082)	3/4"-10	31.49	(46.86)
6"	(150)	10	(3.05)	20	(6.09)	IV	20	(6.09)	IV	866	(3.852)	3/4"-10	31.49	(46.86)
6"	(150)	12	(3.66)	12	(3.66)	IV	12	(3.66)	IV	756	(3.362)	3/4"-10	31.49	(46.86)
6"	(150)	15	(4.57)	15	(4.57)	IV	15	(4.57)	IV	945	(4.203)	3/4"-10	31.49	(46.86)
6"	(150)	18	(5.49)	18	(5.49)	IV	18	(5.49)	IV	1133	(5.040)	3/4"-10	31.49	(46.86)
8"	(200)	8	(2.44)	16	(4.88)	V	16	(4.88)	V	1105	(4.915)	3/4"-10	50.23	(74.75)
8"	(200)	10	(3.05)	10	(3.05)	V	10	(3.05)	V	1004	(4.466)	3/4"-10	50.23	(74.75)
8"	(200)	12	(3.66)	12	(3.66)	V	12	(3.66)	V	1205	(5.360)	3/4"-10	50.23	(74.75)
8"	(200)	15	(4.57)	15	(4.57)	V	15	(4.57)	V	1507	(6.703)	3/4"-10	50.23	(74.75)
8"	(200)	18	(5.49)	18	(5.49)	V	18	(5.49)	V	1808	(8.042)	3/4"-10	50.23	(74.75)
10"	(250)	5	(1.52)	10	(3.05)	V	10	(3.05)	V	1026	(4.564)	7/8"-9	74.60	(111.01)
10"	(250)	6	(1.83)	12	(3.66)	V	12	(3.66)	V	1231	(5.476)	7/8"-9	74.60	(111.01)
10"	(250)	8	(2.44)	8	(2.44)	V	8	(2.44)	V	1193	(5.307)	7/8"-9	74.60	(111.01)
10"	(250)	10	(3.05)	10	(3.05)	V	10	(3.05)	V	1492	(6.637)	7/8"-9	74.60	(111.01)
10"	(250)	12	(3.66)	12	(3.66)	V	12	(3.66)	V	1790	(7.962)	7/8"-9	74.60	(111.01)
12"	(300)	5	(1.52)	5	(1.52)	V	5	(1.52)	V	1021	(4.541)	7/8"-9	102.10	(151.94)
12"	(300)	6	(1.83)	6	(1.83)	V	6	(1.83)	V	1225	(5.449)	7/8"-9	102.10	(151.94)
12"	(300)	8	(2.44)	8	(2.44)	V	8	(2.44)	V	1633	(7.264)	7/8"-9	102.10	(151.94)
12"	(300)	9	(2.74)	9	(2.74)	V	9	(2.74)	V	1838	(8.176)	7/8"-9	102.10	(151.94)



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.75g (ASD)

Nominal Tubing Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	10	(3.05)	I	20	(6.10)	I	9.1	(0.040)	3/8"-16	0.43	(0.64)
1/2"	(15)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	11.0	(0.049)	3/8"-16	0.43	(0.64)
1/2"	(15)	7	(2.13)	7	(2.13)	I	14	(4.27)	I	8.3	(0.037)	3/8"-16	0.43	(0.64)
1/2"	(15)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	9.5	(0.042)	3/8"-16	0.43	(0.64)
3/4"	(20)	5	(1.52)	10	(3.05)	I	20	(6.10)	I	17.6	(0.078)	3/8"-16	0.83	(1.23)
3/4"	(20)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	21.2	(0.094)	3/8"-16	0.83	(1.23)
3/4"	(20)	7	(2.13)	7	(2.13)	I	14	(4.27)	I	16.0	(0.071)	3/8"-16	0.83	(1.23)
3/4"	(20)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	18.3	(0.081)	3/8"-16	0.83	(1.23)
3/4"	(20)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	22.8	(0.101)	3/8"-16	0.83	(1.23)
1"	(25)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	33.9	(0.151)	3/8"-16	1.18	(1.75)
1"	(25)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	30.1	(0.134)	3/8"-16	1.18	(1.75)
1"	(25)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	35.1	(0.156)	3/8"-16	1.18	(1.75)
1"	(25)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	26.0	(0.115)	3/8"-16	1.18	(1.75)
1"	(25)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	32.4	(0.144)	3/8"-16	1.18	(1.75)
1 1/4"	(32)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	45.1	(0.200)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	54.2	(0.241)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	46.7	(0.208)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	53.4	(0.237)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	43.2	(0.192)	3/8"-16	1.57	(2.33)
1 1/2"	(40)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	76.1	(0.338)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	72.4	(0.322)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	71.4	(0.317)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	57.7	(0.256)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	69.3	(0.308)	3/8"-16	2.10	(3.17)
2"	(50)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	122.2	(0.543)	3/8"-16	3.37	(5.01)
2"	(50)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	116.3	(0.517)	3/8"-16	3.37	(5.01)
2"	(50)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	114.6	(0.510)	3/8"-16	3.37	(5.01)
2"	(50)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	143.2	(0.637)	3/8"-16	3.37	(5.01)
2"	(50)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	111.2	(0.494)	3/8"-16	3.37	(5.01)
2 1/2"	(65)	5	(1.52)	25	(7.62)	I	50	(15.24)	II	215.2	(0.957)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	6	(1.83)	24	(7.32)	I	48	(14.64)	II	214.0	(0.952)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	9	(2.74)	18	(5.49)	I	36	(10.97)	II	188.2	(0.837)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	10	(3.05)	20	(6.10)	I	40	(12.19)	II	209.1	(0.930)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	162.3	(0.722)	1/2"-13	4.92	(7.32)

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S 3913

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 0.75g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		See Note 2	ft.		(m)	See Note 2		lbs.	(kN)
3"	(80)	5	(1.52)	25	(7.62)	II	50	(15.24)	III	304.5	(1.354)	1/2"-13	6.96	(10.35)
3"	(80)	6	(1.83)	24	(7.32)	II	48	(14.64)	III	302.7	(1.346)	1/2"-13	6.96	(10.35)
3"	(80)	8	(2.44)	24	(7.32)	II	48	(14.64)	III	320.1	(1.424)	1/2"-13	6.96	(10.35)
3"	(80)	10	(3.05)	20	(6.09)	II	40	(12.19)	II	295.8	(1.316)	1/2"-13	6.96	(10.35)
3"	(80)	12	(3.66)	12	(3.66)	II	24	(7.32)	II	229.7	(1.022)	1/2"-13	6.96	(10.35)
3 1/2"	(90)	5	(1.52)	25	(7.62)	II	50	(15.24)	IV	394.6	(1.755)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	6	(1.83)	24	(7.32)	II	48	(14.64)	IV	392.4	(1.745)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	8	(2.44)	24	(7.32)	III	48	(14.64)	IV	414.9	(1.845)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	10	(3.05)	20	(6.09)	II	40	(12.19)	III	383.3	(1.705)	1/2"-13	9.02	(13.42)
3 1/2"	(90)	12	(3.66)	24	(7.32)	III	48	(14.64)	IV	460.0	(2.046)	1/2"-13	9.02	(13.42)
4"	(100)	5	(1.52)	30	(9.14)	III	60	(18.29)	V	592.9	(2.637)	1/2"-13	11.57	(17.21)
4"	(100)	6	(1.83)	30	(9.14)	III	60	(18.29)	V	607.4	(2.702)	1/2"-13	11.57	(17.21)
4"	(100)	8	(2.44)	24	(7.32)	III	48	(14.64)	IV	532.2	(2.367)	1/2"-13	11.57	(17.21)
4"	(100)	10	(3.05)	20	(6.09)	III	40	(12.19)	IV	491.7	(2.187)	1/2"-13	11.57	(17.21)
4"	(100)	12	(3.66)	24	(7.32)	III	48	(14.64)	IV	590.0	(2.624)	1/2"-13	11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 99 - 102 are for 0.75g (ASD) applications.**



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 1 - Maximum Hanger Spacing for Steel Pipe**

Seismic Force Level (g's) 1.0g (ASD)

Nominal Pipe Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)	
1/2"	(15)	5	(1.52)	15	(4.57)	I	30	(9.14)	I	36	(0.160)	3/8"-16	0.98	(1.46)
1/2"	(15)	6	(1.83)	18	(5.48)	I	36	(10.98)	I	43	(0.191)	3/8"-16	0.98	(1.46)
1/2"	(15)	7	(2.13)	14	(4.27)	I	28	(8.53)	I	37	(0.164)	3/8"-16	0.98	(1.46)
1/2"	(15)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	42	(0.187)	3/8"-16	0.98	(1.46)
1/2"	(15)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	33	(0.147)	3/8"-16	0.98	(1.46)
3/4"	(20)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	63	(0.280)	3/8"-16	1.36	(2.02)
3/4"	(20)	6	(1.83)	18	(5.48)	I	36	(10.98)	I	60	(0.267)	3/8"-16	1.36	(2.02)
3/4"	(20)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	70	(0.311)	3/8"-16	1.36	(2.02)
3/4"	(20)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	58	(0.258)	3/8"-16	1.36	(2.02)
3/4"	(20)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	45	(0.200)	3/8"-16	1.36	(2.02)
1"	(25)	5	(1.52)	20	(6.10)	I	40	(12.19)	I	96	(0.427)	3/8"-16	2.06	(3.06)
1"	(25)	6	(1.83)	24	(7.32)	I	48	(14.63)	I	118	(0.511)	3/8"-16	2.06	(3.06)
1"	(25)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	106	(0.471)	3/8"-16	2.06	(3.06)
1"	(25)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	88	(0.391)	3/8"-16	2.06	(3.06)
1"	(25)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	110	(0.489)	3/8"-16	2.06	(3.06)
1 1/4"	(32)	5	(1.52)	25	(7.62)	I	50	(15.24)	II	165	(0.734)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	6	(1.83)	24	(7.32)	I	48	(14.63)	II	164	(0.729)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	7	(2.13)	21	(6.40)	I	42	(12.80)	I	150	(0.667)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	8	(2.44)	24	(7.32)	I	48	(14.63)	II	171	(0.760)	3/8"-16	2.92	(4.34)
1 1/4"	(32)	10	(3.05)	20	(6.10)	I	40	(12.19)	I	156	(0.694)	3/8"-16	2.92	(4.34)
1 1/2"	(40)	5	(1.52)	25	(7.62)	I	50	(15.24)	II	204	(0.907)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	6	(1.83)	24	(7.32)	I	48	(14.63)	II	202	(0.898)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	9	(2.74)	27	(8.23)	I	54	(16.46)	II	238	(1.058)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	10	(3.05)	20	(6.10)	I	40	(12.19)	II	192	(0.854)	3/8"-16	3.60	(5.36)
1 1/2"	(40)	12	(3.66)	24	(7.32)	I	48	(14.63)	II	230	(1.023)	3/8"-16	3.60	(5.36)
2"	(50)	5	(1.52)	30	(9.14)	II	60	(18.30)	III	340	(1.512)	3/8"-16	5.10	(7.59)
2"	(50)	6	(1.83)	30	(9.14)	II	60	(18.30)	III	347	(1.543)	3/8"-16	5.10	(7.59)
2"	(50)	8	(2.44)	24	(7.32)	II	48	(14.63)	III	299	(1.330)	3/8"-16	5.10	(7.59)
2"	(50)	10	(3.05)	30	(9.14)	II	60	(18.30)	III	374	(1.663)	3/8"-16	5.10	(7.59)
2"	(50)	12	(3.66)	24	(7.32)	II	48	(14.63)	III	326	(1.450)	3/8"-16	5.10	(7.59)
2 1/2"	(65)	5	(1.52)	35	(10.67)	III	70	(21.33)	V	603	(2.682)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	6	(1.83)	36	(10.98)	III	72	(21.94)	V	630	(2.802)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	8	(2.44)	32	(9.75)	III	64	(19.51)	V	588	(2.615)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	10	(3.05)	30	(9.14)	III	60	(18.30)	IV	577	(2.566)	1/2"-13	7.87	(11.71)
2 1/2"	(65)	12	(3.66)	24	(7.32)	III	48	(14.63)	IV	504	(2.242)	1/2"-13	7.87	(11.71)

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**Raafat S. Aboulhosn**  
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S 3913

# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

Nominal Pipe Size in. (mm)	Field Hanger Spacing See Note 1		Maximum Transverse Support Spacing		Transverse Structure Connection Type See Note 2	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type See Note 2	Braced Hanger & Rod Loads See Note 3		Minimum Braced Rod Size	Water Filled Weight		
	ft. (m)	(m)	ft. (m)	(m)		ft. (m)	(m)		lbs. (kN)	(kN)		lbs./ft. (kg/m)	(kg/m)	
3"	(80)	6	(1.83)	36	(10.98)	IV	60	(18.30)	V	731	(3.251)	1/2"-13	10.75	(16.00)
3"	(80)	8	(2.44)	32	(9.75)	IV	64	(19.51)	V	803	(3.572)	1/2"-13	10.75	(16.00)
3"	(80)	10	(3.05)	30	(9.15)	IV	60	(18.30)	V	788	(3.505)	1/2"-13	10.75	(16.00)
3"	(80)	12	(3.66)	36	(10.98)	IV	60	(18.30)	V	817	(3.634)	1/2"-13	10.75	(16.00)
3"	(80)	15	(4.57)	30	(9.15)	IV	60	(18.30)	V	860	(3.825)	1/2"-13	10.75	(16.00)
3 1/2"	(90)	6	(1.83)	36	(10.98)	V	48	(14.63)	V	750	(3.336)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	8	(2.44)	40	(12.19)	V	48	(14.63)	V	786	(3.496)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	10	(3.05)	40	(12.19)	V	50	(15.24)	V	848	(3.772)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	12	(3.66)	36	(10.98)	V	48	(14.63)	V	857	(3.812)	1/2"-13	13.39	(19.92)
3 1/2"	(90)	15	(4.57)	30	(9.15)	IV	45	(13.71)	V	870	(3.870)	1/2"-13	13.39	(19.92)
4"	(100)	6	(1.83)	36	(10.98)	V	42	(12.80)	V	815	(3.625)	5/8"-11	16.31	(24.27)
4"	(100)	8	(2.44)	40	(12.19)	V	40	(12.19)	V	826	(3.674)	5/8"-11	16.31	(24.27)
4"	(100)	10	(3.05)	40	(12.19)	V	40	(12.19)	V	870	(3.870)	5/8"-11	16.31	(24.27)
4"	(100)	12	(3.66)	36	(10.98)	V	36	(10.98)	V	848	(3.772)	5/8"-11	16.31	(24.27)
4"	(100)	15	(4.57)	30	(9.15)	V	30	(9.15)	V	815	(3.625)	5/8"-11	16.31	(24.27)
5"	(125)	8	(2.44)	24	(7.31)	V	24	(7.31)	V	811	(3.607)	5/8"-11	23.39	(34.81)
5"	(125)	10	(3.05)	20	(6.09)	V	20	(6.09)	V	780	(3.469)	5/8"-11	23.39	(34.81)
5"	(125)	12	(3.66)	24	(7.31)	V	24	(7.31)	V	936	(4.163)	5/8"-11	23.39	(34.81)
5"	(125)	15	(4.57)	15	(4.57)	V	15	(4.57)	V	819	(3.643)	5/8"-11	23.39	(34.81)
5"	(125)	18	(5.49)	18	(5.49)	V	18	(5.49)	V	982	(4.368)	5/8"-11	23.39	(34.81)
6"	(150)	8	(2.44)	16	(4.88)	V	16	(4.88)	V	840	(3.736)	3/4"-10	31.49	(46.86)
6"	(150)	10	(3.05)	20	(6.09)	V	20	(6.09)	V	1050	(4.670)	3/4"-10	31.49	(46.86)
6"	(150)	12	(3.66)	12	(3.66)	V	12	(3.66)	V	1882	(3.923)	3/4"-10	31.49	(46.86)
6"	(150)	15	(4.57)	15	(4.57)	V	15	(4.57)	V	1102	(4.902)	3/4"-10	31.49	(46.86)
6"	(150)	18	(5.49)	18	(5.49)	V	18	(5.49)	V	1322	(5.880)	3/4"-10	31.49	(46.86)
8"	(200)	5	(2.44)	10	(3.05)	V	10	(3.05)	V	837	(3.723)	3/4"-10	50.23	(74.75)
8"	(200)	6	(3.05)	12	(3.66)	V	12	(3.66)	V	1004	(4.466)	3/4"-10	50.23	(74.75)
8"	(200)	8	(3.66)	8	(2.44)	V	8	(2.44)	V	937	(4.168)	3/4"-10	50.23	(74.75)
8"	(200)	10	(4.57)	10	(3.05)	V	10	(3.05)	V	1172	(5.213)	3/4"-10	50.23	(74.75)
8"	(200)	12	(5.49)	12	(3.66)	V	12	(3.66)	V	1406	(6.254)	3/4"-10	50.23	(74.75)
10"	(250)	5	(1.52)	5	(1.52)	V	5	(1.52)	V	870	(3.870)	7/8"-9	74.60	(111.01)
10"	(250)	6	(1.83)	6	(1.83)	V	6	(1.83)	V	1044	(4.644)	7/8"-9	74.60	(111.01)
10"	(250)	8	(2.44)	8	(2.44)	V	8	(2.44)	V	1392	(6.192)	7/8"-9	74.60	(111.01)
10"	(250)	9	(2.74)	9	(2.74)	V	9	(2.74)	V	1566	(6.966)	7/8"-9	74.60	(111.01)
12"	(300)	4	(1.22)	4	(1.22)	V	4	(1.22)	V	953	(4.239)	7/8"-9	102.10	(151.94)
12"	(300)	5	(1.52)	5	(1.52)	V	5	(1.52)	V	1191	(5.298)	7/8"-9	102.10	(151.94)
12"	(300)	6	(1.83)	6	(1.83)	V	6	(1.83)	V	1429	(6.356)	7/8"-9	102.10	(151.94)



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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING

**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 1.0g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type	Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type	Braced Hanger & Rod Loads		Minimum Braced Rod Size	Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)		ft.	(m)		lbs.	(kN)		lbs./ft.	(kg/m)
1/2"	(15)	5	(1.52)	10	(3.05)	I	20	(6.10)	I	11.5	(0.051)	3/8"-16	0.43	(0.64)
1/2"	(15)	6	(1.83)	6	(1.83)	I	12	(3.66)	I	8.6	(0.038)	3/8"-16	0.43	(0.64)
1/2"	(15)	7	(2.13)	7	(2.13)	I	14	(4.27)	I	10.0	(0.044)	3/8"-16	0.43	(0.64)
1/2"	(15)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	11.5	(0.051)	3/8"-16	0.43	(0.64)
3/4"	(20)	5	(1.52)	10	(3.05)	I	20	(6.10)	I	22.1	(0.098)	3/8"-16	0.83	(1.23)
3/4"	(20)	6	(1.83)	6	(1.83)	I	12	(3.66)	I	16.6	(0.074)	3/8"-16	0.83	(1.23)
3/4"	(20)	7	(2.13)	7	(2.13)	I	14	(4.27)	I	19.4	(0.086)	3/8"-16	0.83	(1.23)
3/4"	(20)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	22.1	(0.098)	3/8"-16	0.83	(1.23)
1"	(25)	5	(1.52)	10	(3.05)	I	20	(6.10)	I	31.5	(0.140)	3/8"-16	1.18	(1.75)
1"	(25)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	37.8	(0.168)	3/8"-16	1.18	(1.75)
1"	(25)	7	(2.13)	7	(2.13)	I	14	(4.27)	I	27.5	(0.122)	3/8"-16	1.18	(1.75)
1"	(25)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	31.5	(0.140)	3/8"-16	1.18	(1.75)
1"	(25)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	39.3	(0.175)	3/8"-16	1.18	(1.75)
1 1/4"	(32)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	57.6	(0.256)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	50.2	(0.223)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	7	(2.13)	14	(4.27)	I	28	(8.54)	I	58.6	(0.260)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	8	(2.44)	8	(2.44)	I	16	(4.88)	I	41.9	(0.186)	3/8"-16	1.57	(2.33)
1 1/4"	(32)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	52.3	(0.232)	3/8"-16	1.57	(2.33)
1 1/2"	(40)	5	(1.52)	15	(4.57)	I	30	(9.15)	I	77.0	(0.342)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	6	(1.83)	12	(3.66)	I	24	(7.32)	I	67.2	(0.299)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	89.6	(0.398)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	70.0	(0.311)	3/8"-16	2.10	(3.17)
1 1/2"	(40)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	84.0	(0.373)	3/8"-16	2.10	(3.17)
2"	(50)	5	(1.52)	20	(6.10)	I	35	(10.67)	I	140.4	(0.624)	3/8"-16	3.37	(5.01)
2"	(50)	6	(1.83)	18	(5.49)	I	36	(10.97)	I	148.3	(0.659)	3/8"-16	3.37	(5.01)
2"	(50)	8	(2.44)	16	(4.88)	I	32	(9.75)	I	143.8	(0.639)	3/8"-16	3.37	(5.01)
2"	(50)	10	(3.05)	10	(3.05)	I	20	(6.10)	I	112.3	(0.499)	3/8"-16	3.37	(5.01)
2"	(50)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	134.8	(0.599)	3/8"-16	3.37	(5.01)
2 1/2"	(65)	5	(1.52)	20	(6.10)	I	40	(12.19)	II	229.6	(1.021)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	6	(1.83)	18	(5.49)	I	36	(10.97)	II	216.5	(0.963)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	9	(2.74)	18	(5.49)	II	36	(10.97)	II	236.1	(1.050)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	10	(3.05)	20	(6.10)	II	40	(12.19)	II	262.4	(1.167)	1/2"-13	4.92	(7.32)
2 1/2"	(65)	12	(3.66)	12	(3.66)	I	24	(7.32)	I	196.8	(0.875)	1/2"-13	4.92	(7.32)

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# SUPPORT SPACING FOR SINGLE ROD HANGER PIPING




**Table 2 - Maximum Hanger Spacing for Copper Tubing**

Seismic Force Level (g's) 1.0g (ASD)

Nominal Tubing Size		Field Hanger Spacing		Maximum Transverse Support Spacing		Transverse Structure Connection Type		Maximum Longitudinal Support Spacing		Longitudinal Structure Connection Type		Braced Hanger & Rod Loads		Minimum Braced Rod Size		Water Filled Weight	
in.	(mm)	ft.	(m)	ft.	(m)	See Note 2		ft.	(m)	See Note 2		lbs.	(kN)			lbs./ft.	(kg/m)
3"	(80)	5	(1.52)	20	(6.09)	II		40	(12.19)	III		324.8	(1.445)	1/2"-13		6.96	(10.35)
3"	(80)	6	(1.83)	18	(5.49)	II		36	(10.97)	III		306.2	(1.362)	1/2"-13		6.96	(10.35)
3"	(80)	8	(2.44)	16	(4.88)	II		32	(9.75)	III		296.9	(1.320)	1/2"-13		6.96	(10.35)
3"	(80)	10	(3.05)	20	(6.09)	II		40	(12.19)	III		371.2	(1.651)	1/2"-13		6.96	(10.35)
3"	(80)	12	(3.66)	12	(3.66)	II		24	(7.32)	II		278.4	(1.238)	1/2"-13		6.96	(10.35)
3 1/2"	(90)	5	(1.52)	25	(7.62)	III		50	(15.24)	IV		511.1	(2.273)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	6	(1.83)	24	(7.32)	III		48	(14.64)	IV		505.1	(2.246)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	8	(2.44)	24	(7.32)	III		48	(14.64)	IV		529.1	(2.353)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	10	(3.05)	20	(6.09)	III		40	(12.19)	IV		481.0	(2.139)	1/2"-13		9.02	(13.42)
3 1/2"	(90)	12	(3.66)	12	(3.66)	III		24	(7.32)	III		360.8	(1.605)	1/2"-13		9.02	(13.42)
4"	(100)	5	(1.52)	25	(7.62)	IV		50	(15.24)	V		655.6	(2.916)	1/2"-13		11.57	(17.21)
4"	(100)	6	(1.83)	24	(7.32)	IV		48	(14.64)	V		647.9	(2.882)	1/2"-13		11.57	(17.21)
4"	(100)	8	(2.44)	24	(7.32)	IV		48	(14.64)	V		678.7	(3.019)	1/2"-13		11.57	(17.21)
4"	(100)	10	(3.05)	20	(6.09)	IV		40	(12.19)	IV		617.0	(2.744)	1/2"-13		11.57	(17.21)
4"	(100)	12	(3.66)	24	(7.32)	IV		48	(14.64)	V		740.4	(3.293)	1/2"-13		11.57	(17.21)

**Notes:**

- 1). Many codes require pipe hangers to be spaced every 10'-0" (3.05m) regardless of size. Check your local codes. Spacing and capacities are based on water filled standard weight pipe. Closer hanger spacing may be required when additional valves and fittings increase the load. For electrical conduit support spacing and weight of conduit filled with conductors information, see B-Line Strut Systems Catalog.
- 2). The "structure connection type" is the brace anchorage requirement. See pages 23 thru 38 for brace attachment details.
- 3). The hanger and rod loads indicates the maximum tension in the rod (and hanger) due to gravity and the additional seismic forces at the braced location. Select a pipe hanger from pages 63 thru 71 that meets the hanger load requirements. Select a rod attachment detail from pages 39 thru 56 that meets the rod load requirements. Be sure to follow the guidelines on page 57 & 58 to see if a rod stiffener is required, due to the length of the rod. Rod stiffeners, if necessary, are only required at braced locations. Unbraced hangers do not require rod stiffeners.
- 4). Braces must be attached within 4 inches (101mm) of hanger, see Figure 5, 6 and 8.
- 5). Table 1 is for steel pipe. Spacing limitations may exist for other types of pipe. See Note E) on page 9.
- 6). Seismic forces include 1/3 of horizontal seismic force applied in vertical direction.
- 7). Consult appropriate plumbing code for non-braced hanger rod sizes.
- 8). Charts on pages 103 - 106 are for 1.00g (ASD) applications.**

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