

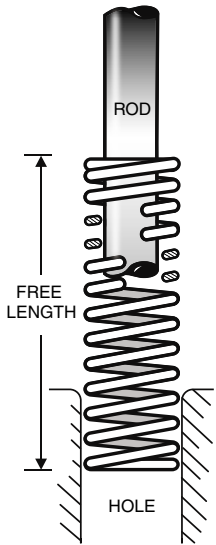
**LOAD DEFLECTION**

**\*Maximum Deflection  
(30% of free length)**

**For Long Life  
(20% of free length)**

**Maximum Operation Def.  
(25% of free length)**

**For Optimum Life  
(15% of free length)**



HOLE (O.D.) x ROD (I.D.)	Length	Product Part#	Box Qty	Load Deflection Table		
				Max. Oper Def 25% of free length	Load at 1/10" (lb.)	
3/8 x 3/16 x Wire Size .054 x .072	1	HP02	200	27.5	11.0	
	1 1/4	HP02A	200	30.6	9.8	
	1 1/2	HP03	100	30.0	8.0	
	1 3/4	HP03A	100	36.8	8.4	
	2	HP04	100	36.0	7.2	
	2 1/2	HP05	100	34.4	5.5	
	3	HP06	100	31.5	4.2	
	12	HP024	50	36.0	1.2	
	1/2 x 9/32 x Wire Size .070 x .093	1	HP12	100	59.0	23.6
		1 1/4	HP12A	100	58.1	18.6
1 1/2		HP13	100	58.1	15.5	
1 3/4		HP13A	100	60.4	13.8	
2		HP14	100	55.0	11.0	
2 1/2		HP15	50	52.5	8.4	
3		HP16	50	55.5	7.4	
3 1/2		HP17	50	52.5	6.0	
12		HP124	50	48.0	1.6	
5/8 x 11/32 x Wire Size .093 x .125		1	HP22	100	106.0	42.4
	1 1/4	HP22A	100	92.5	29.6	
	1 1/2	HP23	50	102.0	27.2	
	1 3/4	HP23A	50	105.0	24.0	
	2	HP24	50	104.0	20.8	
	2 1/2	HP25	50	106.3	17.0	
	3	HP26	50	108.0	14.4	
	3 1/2	HP27	50	106.8	12.2	
	4	HP28	50	108.0	10.8	
	12	HP224	50	90.0	3.0	
	3/4 x 3/8 x Wire Size .125 x .165	1	HP32	50	270.0	108.0
		1 1/4	HP32A	50	275.0	88.0
1 1/2		HP33	50	246.0	65.6	
1 3/4		HP33A	50	262.5	60.0	
2		HP34	50	248.0	49.6	
2 1/2		HP35	50	250.0	40.0	
3		HP36	50	255.0	34.0	
3 1/2		HP37	50	245.0	28.0	
4		HP38	50	250.0	25.0	
4 1/2		HP39	50	247.5	22.0	
5		HP310	50	243.8	19.5	
5 1/2		HP311	50	233.8	17.0	
1 x 1/2 x Wire Size .158 x .225	1	HP42	50	520.0	208.0	
	1 1/4	HP42A	50	535.0	171.2	
	1 1/2	HP43	50	444.0	118.4	
	1 3/4	HP43A	50	455.0	104.0	
	2	HP44	50	450.0	90.0	
	2 1/2	HP45	50	425.0	68.0	
	3	HP46	25	408.0	54.4	
	3 1/2	HP47	25	399.0	45.6	
	4	HP48	25	400.0	40.0	
	4 1/2	HP49	25	396.0	35.2	
	5	HP410	25	390.0	31.2	
5 1/2	HP411	25	396.0	28.8		

HOLE (O.D.) x ROD (I.D.)	Length	Product Part#	Box Qty	Load Deflection Table	
				Max. Oper Def 25% of free length	Load at 1/10" (lb.)
1 x 1/2 x Wire Size .158 x .225	6	HP412	25	384.0	25.6
	7	HP414	25	392.0	22.4
	8	HP416	25	384.0	19.2
	12	HP424	25	360.0	12.0
1 1/4 x 5/8 x Wire Size .200 x .295	1 1/2	HP53	50	795.0	212.0
	1 3/4	HP53A	50	794.5	181.6
	2	HP54	50	748.0	149.6
	2 1/2	HP55	25	735.0	117.6
	3	HP56	25	714.0	95.2
	3 1/2	HP57	25	658.0	75.2
	4	HP58	25	664.0	66.4
	4 1/2	HP59	25	657.0	58.4
	5	HP510	25	662.5	53.0
	5 1/2	HP511	25	649.0	47.2
	6	HP512	25	636.0	42.4
	7	HP514	25	644.0	36.8
1 1/2 x 3/4 x Wire Size .225 x .350	8	HP516	25	656.0	32.8
	10	HP520	25	640.0	25.6
	12	HP524	20	624.0	20.8
	2	HP64	25	952.0	190.4
	2 1/2	HP65	25	968.8	155.0
	3	HP66	25	975.0	130.0
	3 1/2	HP67	25	931.0	106.4
	4	HP68	25	912.0	91.2
	4 1/2	HP69	25	882.0	78.4
	5	HP610	25	890.0	71.2
	5 1/2	HP611	25	880.0	64.0
	6	HP612	25	876.0	58.4
2 x 1 x Wire Size .270 x .470	7	HP614	25	868.0	49.6
	8	HP616	25	864.0	43.2
	10	HP620	20	860.0	34.4
	12	HP624	15	864.0	28.8
	2 1/2	HP85	25	1625.0	260.0
	3	HP86	25	1500.0	200.0
	3 1/2	HP87	25	1487.5	170.0
	4	HP88	25	1500.0	150.0
	4 1/2	HP89	25	1350.0	120.0
	5	HP810	20	1375.0	110.0
	5 1/2	HP811	20	1375.0	100.0
	6	HP812	15	1410.0	94.0
7	HP814	15	1435.0	82.0	
8	HP816	10	1460.0	73.0	
10	HP820	10	1375.0	55.0	
12	HP824	10	1260.0	42.0	

**Associated Spring**  
**RAYMOND**  
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