



Raymond® MEDIUM DUTY DIE SPRINGS					INCH SERIES BLUE								
Spring O.D. Hole Dia.	Spring I.D. Rod Dia.	Free Length (in)	CATALOG NUMBER	PART NUMBER	Load at 1/10 in. Def. (lb)	LOAD DEFLECTION TABLE							
						For Optimum Life (25% of free length)		For Long Life (35% of free length)		Maximum Operating Def. (40% of free length)		*Maximum Deflection (50% of free length)	
						Load (lb)	Deflection (in)	Load (lb)	Deflection (in)	Load (lb)	Deflection (in)	Load (lb)	Deflection (in)
1	1/2	1	10 M 10	M-12	55.0	137.5	0.25	192.5	0.35	220.0	0.40	275.0	0.50
		1 1/4	10 M 12	M-12A	45.0	140.6	0.31	196.9	0.44	225.0	0.50	281.3	0.63
		1 1/2	10 M 15	M-13	35.0	131.3	0.38	183.8	0.53	210.0	0.60	262.5	0.75
		1 3/4	10 M 17	M-13A	30.0	131.3	0.44	183.8	0.61	210.0	0.70	262.5	0.88
		2	10 M 20	M-14	26.0	130.0	0.50	182.0	0.70	208.0	0.80	260.0	1.00
		2 1/2	10 M 25	M-15	20.0	125.0	0.63	175.0	0.88	200.0	1.00	250.0	1.25
		3	10 M 30	M-16	16.5	123.8	0.75	173.3	1.05	198.0	1.20	247.5	1.50
		3 1/2	10 M 35	M-17	15.0	131.3	0.88	183.8	1.23	210.0	1.40	262.5	1.75
		4	10 M 40	M-18	12.0	120.0	1.00	168.0	1.40	192.0	1.60	240.0	2.00
		4 1/2	10 M 45	M-19	10.4	117.0	1.13	163.8	1.58	187.2	1.80	234.0	2.25
		5	10 M 50	M-20	9.6	120.0	1.25	168.0	1.75	192.0	2.00	240.0	2.50
		5 1/2	10 M 55	M-21	8.8	121.0	1.38	169.4	1.93	193.6	2.20	242.0	2.75
6	10 M 60	M-22	8.0	120.0	1.50	168.0	2.10	192.0	2.40	240.0	3.00		
7	10 M 70	M-23	7.2	126.0	1.75	176.4	2.45	201.6	2.80	252.0	3.50		
8	10 M 80	M-24	6.0	120.0	2.00	168.0	2.80	192.0	3.20	240.0	4.00		
12	10 M 120	M-24A	4.0	120.0	3.00	168.0	4.20	192.0	4.80	240.0	6.00		
1 1/4	5/8	1 1/2	12 M 15	M-36	49.6	186.0	0.38	260.4	0.53	297.6	0.60	372.0	0.75
		1 3/4	12 M 17	M-36A	42.4	185.5	0.44	259.7	0.61	296.8	0.70	371.0	0.88
		2	12 M 20	M-37	35.2	176.0	0.50	246.4	0.70	281.6	0.80	352.0	1.00
		2 1/2	12 M 25	M-38	28.8	180.0	0.63	252.0	0.88	288.0	1.00	360.0	1.25
		3	12 M 30	M-39	24.0	180.0	0.75	252.0	1.05	288.0	1.20	360.0	1.50
		3 1/2	12 M 35	M-40	20.0	175.0	0.88	245.0	1.23	280.0	1.40	350.0	1.75
		4	12 M 40	M-41	17.6	176.0	1.00	246.4	1.40	281.6	1.60	352.0	2.00
		4 1/2	12 M 45	M-42	16.0	180.0	1.13	252.0	1.58	288.0	1.80	360.0	2.25
		5	12 M 50	M-43	13.6	170.0	1.25	238.0	1.75	272.0	2.00	340.0	2.50
		5 1/2	12 M 55	M-44	12.8	176.0	1.38	246.4	1.93	281.6	2.20	352.0	2.75
		6	12 M 60	M-45	12.0	180.0	1.50	252.0	2.10	288.0	2.40	360.0	3.00
		7	12 M 70	M-46	10.4	182.0	1.75	254.8	2.45	291.2	2.80	364.0	3.50
8	12 M 80	M-47	8.8	176.0	2.00	246.4	2.80	281.6	3.20	352.0	4.00		
10	12 M 100	M-48	7.2	180.0	2.50	252.0	3.50	288.0	4.00	360.0	5.00		
12	12 M 120	M-48A	6.0	180.0	3.00	252.0	4.20	288.0	4.80	360.0	6.00		
1 1/2	3/4	2	15 M 20	M-49	53.0	265.0	0.50	371.0	0.70	424.0	0.80	530.0	1.00
		2 1/2	15 M 25	M-50	45.0	281.3	0.63	393.8	0.88	450.0	1.00	562.5	1.25
		3	15 M 30	M-51	36.0	270.0	0.75	378.0	1.05	432.0	1.20	540.0	1.50
		3 1/2	15 M 35	M-52	30.0	262.5	0.88	367.5	1.23	420.0	1.40	525.0	1.75
		4	15 M 40	M-53	27.0	270.0	1.00	378.0	1.40	432.0	1.60	540.0	2.00
		4 1/2	15 M 45	M-54	23.0	258.8	1.13	362.3	1.58	414.0	1.80	517.5	2.25
		5	15 M 50	M-55	21.0	262.5	1.25	367.5	1.75	420.0	2.00	525.0	2.50
		5 1/2	15 M 55	M-55A	18.5	254.4	1.38	356.1	1.93	407.0	2.20	508.8	2.75
		6	15 M 60	M-56	17.0	255.0	1.50	357.0	2.10	408.0	2.40	510.0	3.00
		7	15 M 70	M-56A	14.5	253.8	1.75	355.3	2.45	406.0	2.80	507.5	3.50
		8	15 M 80	M-57	12.8	256.0	2.00	358.4	2.80	409.6	3.20	512.0	4.00
		10	15 M 100	M-58	10.0	250.0	2.50	350.0	3.50	400.0	4.00	500.0	5.00
12	15 M 120	M-58A	8.0	240.0	3.00	336.0	4.20	384.0	4.80	480.0	6.00		
2	1	2 1/2	20 M 25	M-70	100.0	625.0	0.63	875.0	0.88	1000.0	1.00	1250.0	1.25
		3	20 M 30	M-71	83.0	622.5	0.75	871.5	1.05	996.0	1.20	1245.0	1.50
		3 1/2	20 M 35	M-72	64.8	567.0	0.88	793.8	1.23	907.2	1.40	1134.0	1.75
		4	20 M 40	M-73	60.0	600.0	1.00	840.0	1.40	960.0	1.60	1200.0	2.00
		4 1/2	20 M 45	M-74	53.0	596.3	1.13	834.8	1.58	954.0	1.80	1192.5	2.25
		5	20 M 50	M-75	47.0	587.5	1.25	822.5	1.75	940.0	2.00	1175.0	2.50
		5 1/2	20 M 55	M-76	39.2	539.0	1.38	754.6	1.93	862.4	2.20	1078.0	2.75
		6	20 M 60	M-77	39.0	585.0	1.50	819.0	2.10	936.0	2.40	1170.0	3.00
		7	20 M 70	M-79	31.2	546.0	1.75	764.4	2.45	873.6	2.80	1092.0	3.50
		8	20 M 80	M-80	28.5	570.0	2.00	798.0	2.80	912.0	3.20	1140.0	4.00
		10	20 M 100	M-82	20.8	520.0	2.50	728.0	3.50	832.0	4.00	1040.0	5.00
		12	20 M 120	M-83	17.5	525.0	3.00	735.0	4.20	840.0	4.80	1050.0	6.00

*Tabulated load values shown represent loads near solid and are for design information only.