

DIE SPRINGS—INCH—MEDIUM PRESSURE BLUE

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
M-100	3/8" 3/16" 9.5mm 4.8mm	Wire .039 x .070	1	25.4	30	6
M-100A			1-1/4	31.8	33.8	5.4
M-101			1-1/2	38.1	30	4
M-101A			1-3/4	44.5	29.8	3.4
M-102			2	50.8	28	2.8
M-103			2-1/2	63.5	30	2.4
M-104			3	76.2	31.5	2.1
M-105			12	304.8	36	0.6

M-110	1/2" 9/32" 12.7mm 7.1mm	Wire .052 x .093	1	25.4	55	11
M-110A			1-1/4	31.8	51.3	8.2
M-111			1-1/2	38.1	51	6.8
M-111A			1-3/4	44.5	52.5	6
M-112			2	50.8	55	5.5
M-113			2-1/2	63.5	56.3	4.5
M-114			3	76.2	52.5	3.5
M-115			3-1/2	88.9	52.5	3
M-115A			4-1/2	114.3	56.3	2.5
M-115B			5-1/2	139.7	57.8	2.1
M-115C	6-1/2	165.1	45.5	1.4		
M-115D	7-1/2	190.5	45	1.2		
M-116	12	304.8	42	0.7		

M-120	5/8" 11/32" 15.9mm 8.7mm	Wire .069 x .109	1	25.4	82	16.4
M-120A			1-1/4	31.8	80	12.8
M-121			1-1/2	38.1	81	10.8
M-121A			1-3/4	44.5	84	9.6
M-122			2	50.8	88	8.8
M-123			2-1/2	63.5	75	6
M-124			3	76.2	84	5.6
M-125			3-1/2	88.9	84	4.8
M-126			4	101.6	88	4.4
M-127			12	304.8	96	1.6

M-1	3/4" 3/8" 19.1mm 9.5mm	Wire .075 x .165	1	25.4	156	31.2
M-1A			1-1/4	31.8	160	25.6
M-2			1-1/2	38.1	150	20
M-2A			1-3/4	44.5	154	17.6
M-3			2	50.8	144	14.4
M-4			2-1/2	63.5	150	12
M-5			3	76.2	144	9.6
M-6			3-1/2	88.9	140	8
M-7			4	114.3	144	7.2
M-8			4-1/2	114.3	144	6.4
M-9	5	127	150	6		
M-10	5-1/2	139.7	151.3	5.5		
M-11	6	152.4	150	5		
M-11B	6-1/2	165.1	146.3	4.5		
M-11C	7-1/2	190.5	142.5	3.8		
M-11A	12	304.8	144	2.4		

LOAD DEFLECTION	
Maximum Deflection	50% of Free Length
For Long Life	35% of Free Length
Maximum Operation	40% of Free Length
For Optimum Life	25% of Free Length

Tabulated load values shown are near solid and are for design info only

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
M-12	1" 1/2" 25.4mm 12.7mm	Wire .100 x .215	1	25.4	275	55
M-12A			1-1/4	31.8	281.3	45
M-13			1-1/2	38.1	262.5	35
M-13A			1-3/4	44.5	262.5	30
M-14			2	50.8	260	26
M-15			2-1/2	63.5	250	20
M-16			3	76.2	247.5	16.5
M-17			3-1/2	88.9	262.5	15
M-18			4	101.6	240	12
M-19			4-1/2	114.3	234	10.4
M-20	5	127	240	9.6		
M-21	5-1/2	139.7	242	8.8		
M-22	6	152.4	240	8		
M-23	7	177.8	252	7.2		
M-24	8	203.2	240	6		
M-24A	12	304.8	240	4		

M-36	1-1/4" 5/8" 31.8mm 15.9mm	Wire .115 x .285	1-1/2	38.1	372	49.6
M-36A			1-3/4	44.5	371	42.4
M-37			2	50.8	352	35.2
M-38			2-1/2	63.5	360	28.8
M-39			3	76.2	360	24
M-40			3-1/2	88.9	350	20
M-41			4	101.6	352	17.6
M-42			4-1/2	114.3	360	16
M-43			5	127	340	13.6
M-44			5-1/2	139.7	352	12.8
M-45	6	152.4	360	12		
M-46	7	177.8	364	10.4		
M-47	8	203.2	352	8.8		
M-48	10	254	360	7.2		
M-48A	12	304.8	360	6		

M-49	1-1/2" 3/4" 38.1mm 19.1mm	Wire .135 x .345	2	50.8	530	53
M-50			2-1/2	63.5	562.5	45
M-51			3	76.2	540	36
M-52			3-1/2	88.9	525	30
M-53			4	101.6	540	27
M-54			4-1/2	114.3	517.5	23
M-55			5	127	525	21
M-55A			5-1/2	139.7	508.8	18.5
M-56			6	152.4	510	17
M-56A			7	177.8	507.5	14.5
M-57	8	203.2	512	12.8		
M-58	10	254	500	10		
M-58A	12	304.8	480	8		

M-70	2" 1" 50.8mm 25.4mm	Wire .195 x .468	2-1/2	63.5	1250	100
M-71			3	76.2	1245	83
M-72			3-1/2	88.9	1134	64.8
M-73			4	101.6	1200	60
M-74			4-1/2	114.3	1192.5	53
M-75			5	127	1175	47
M-76			5-1/2	139.7	1078	3.2
M-77			6	152.4	1170	39
M-79			7	117.8	1092	31.2
M-80			8	203.2	1140	28.5
M-82	10	254	1040	20.8		
M-83	12	304.8	1050	17.5		

DIE SPRINGS—INCH—MEDIUM HEAVY PRESSURE RED

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
MHC-100	3/8" 9.5mm	3/16" 4.8mm	1	25.4	33.3	9
MHC-100A			1-1/4	31.8	33.8	7.3
MHC-101			1-1/2	38.1	37.2	6.7
MHC-101A			1-3/4	44.5	37.6	5.8
MHC-102			2	50.8	37	5
MHC-103			2-1/2	63.5	38.9	4.2
MHC-104			3	76.2	33.3	3
MHC-105			12	304.8	40	0.9

MHC-110	1/2" 12.7mm	9/32" 7.1mm	1	25.4	62.2	16.8
MHC-110A			1-1/4	31.8	60.1	13
MHC-111			1-1/2	38.1	52.7	9.5
MHC-111A			1-3/4	44.5	55	8.5
MHC-112			2	50.8	55.5	7.5
MHC-113			2-1/2	63.5	55.5	6
MHC-114			3	76.2	63.3	5.7
MHC-115			3-1/2	88.9	51.8	4
MHC-117			12	304.8	53.3	1.2

MHC-120	5/8" 15.9mm	11/32" 8.7mm	1	25.4	111	30
MHC-120A			1-1/4	31.8	99.4	21.5
MHC-121			1-1/2	38.1	105.5	19
MHC-121A			1-3/4	44.5	108.8	16.8
MHC-122			2	50.8	109.5	14.8
MHC-123			2-1/2	63.5	106.4	11.5
MHC-124			3	76.2	111	10
MHC-125			3-1/2	88.9	110.1	8.5
MHC-126			4	101.6	112.5	7.6
MHC-127			12	304.8	119.9	2.7

MHC-1	3/4" 19.1mm	3/8" 9.5mm	1	25.4	185	50
MHC-1A			1-1/4	31.8	175.8	38
MHC-2			1-1/2	38.1	177.6	32
MHC-2A			1-3/4	44.5	186.5	28.8
MHC-3			2	50.8	183.5	24.8
MHC-4			2-1/2	63.5	177.6	19.2
MHC-5			3	76.2	159.8	14.4
MHC-6			3-1/2	88.9	165.8	12.8
MHC-7			4	101.6	177.6	12
MHC-8			4-1/2	114.3	186.5	11.2
MHC-9			5	127	166.5	9
MHC-10			5-1/2	139.7	162.8	8
MHC-11	6	152.4	166.5	7.5		
MHC-11A	12	304.8	159.8	3.6		

LOAD DEFLECTION	
Maximum Deflection	37% of Free Length
For Long Life	25% of Free Length
Maximum Operation	30% of Free Length
For Optimum Life	20% of Free Length

Tabulated load values shown are near solid and are for design info only

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
MHC-12	1" 25.4mm	1/2" 12.7mm	1	25.4	281.2	76
MHC-12A			1-1/4	31.8	288.6	62.4
MHC-13			1-1/2	38.1	275.3	49.6
MHC-13A			1-3/4	44.5	284.9	44
MHC-14			2	50.8	296	40
MHC-15			2-1/2	63.5	286.8	31
MHC-16			3	76.2	277.5	25
MHC-17			3-1/2	88.9	279.7	21.6
MHC-18			4	101.6	272.3	18.4
MHC-19			4-1/2	114.3	283.1	17
MHC-20			5	127	266.4	14.4
MHC-21			5-1/2	139.7	260.5	12.8
MHC-22	6	152.4	266.4	12		
MHC-23	7	177.8	259	10		
MHC-24	8	203.2	260.5	8.8		
MHC-24A	12	304.8	275.3	6.2		

MHC-36	1-1/4" 31.8mm	5/8" 15.9mm	1-1/2	38.1	634.9	114.4
MHC-36A			1-3/4	44.5	652.7	100.8
MHC-37			2	50.8	639.4	86.4
MHC-38			2-1/2	63.5	577.2	62.4
MHC-39			3	76.2	568.3	51.2
MHC-40			3-1/2	88.9	569.8	44
MHC-41			4	101.6	544.6	36.8
MHC-42			4-1/2	114.3	532.8	32
MHC-43			5	127	536.5	29
MHC-44			5-1/2	139.7	537.2	26.4
MHC-45			6	152.4	555	25
MHC-46			7	177.8	518	20
MHC-47	8	203.2	544.6	18.4		
MHC-48	10	254	536.5	14.5		
MHC-48A	12	304.8	550.6	12.4		

MHC-49	1-1/2" 38.1mm	3/4" 19.1mm	2	50.8	799.2	108
MHC-50			2-1/2	63.5	791.8	85.6
MHC-51			3	76.2	692.6	62.4
MHC-52			3-1/2	88.9	683.8	52.8
MHC-53			4	101.6	710.4	48
MHC-54			4-1/2	114.3	719.3	43.2
MHC-55			5	127	680.8	36.8
MHC-55A			5-1/2	139.7	700	34.4
MHC-56			6	152.4	674.9	30.4
MHC-56A			7	177.8	683.8	26.4
MHC-57			8	203.2	651.2	22
MHC-58			10	254	651.2	17.6
MHC-58A	12	304.8	639.4	14.4		

MHC-70	2" 50.8mm	1" 25.4mm	2-1/2	63.5	1095.2	118.4
MHC-71			3	76.2	1065.6	96
MHC-72			3-1/2	88.9	1036	80
MHC-73			4	101.6	982.7	66.4
MHC-74			4-1/2	114.3	999	60
MHC-75			5	127	1036	56
MHC-76			5-1/2	129.7	1025.6	50.4
MHC-77			6	152.4	1047.8	47.2
MHC-79			7	177.8	1036	40
MHC-80			8	203.2	1041.9	35.2
MHC-82			10	254	962	26
MHC-83			12	304.8	994.6	22.4

DIE SPRINGS—INCH—HEAVY PRESSURE GOLD

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
H-100	3/8" 9.5mm	3/16" 4.8mm	1	25.4	33	11
H-100A			1-1/4	31.8	36.8	9.8
H-101			1-1/2	38.1	36	8
H-101A			1-3/4	44.5	44.1	8.4
H-102			2	50.8	43.2	7.2
H-103			2-1/2	63.5	41.3	5.5
H-104			3	76.2	37.8	4.2
H-105	12	304.8	43.2	1.2		

H-110	1/2" 12.7mm	9/32" 7.1mm	1	25.4	70.8	23.6
H-110A			1-1/4	31.8	69.8	18.6
H-111			1-1/2	38.1	69.8	15.5
H-111A			1-3/4	44.5	72.5	13.8
H-112			2	50.8	66	11
H-113			2-1/2	63.5	63	8.4
H-114			3	76.2	66.6	7.4
H-115	3-1/2	88.9	63	6		
H-117	12	304.8	57.6	1.6		

H-120	5/8" 15.9mm	11/32" 8.7mm	1	25.4	127.2	42.4
H-120A			1-1/4	31.8	111	29.6
H-121			1-1/2	38.1	122.4	27.2
H-121A			1-3/4	44.5	126	24
H-122			2	50.8	124.8	20.8
H-123			2-1/2	63.5	127.5	17
H-124			3	76.2	129.6	14.4
H-125	3-1/2	88.9	128.1	12.2		
H-126	4	101.6	129.6	10.8		
H-127	12	304.8	108	3		

H-1	3/4" 19.1mm	3/8" 9.5mm	1	25.4	324	108
H-1A			1-1/4	31.8	330	88
H-2			1-1/2	38.1	295.2	65.6
H-2A			1-3/4	44.5	315	60
H-3			2	50.8	297.6	49.6
H-4			2-1/2	63.5	300	40
H-5			3	76.2	306	34
H-6			3-1/2	88.9	294	28
H-7			4	101.6	300	25
H-8			1-1/2	114.3	297	22
H-9			5	127	292.5	19.5
H-10	5-1/2	139.7	280.5	17		
H-11	6	152.4	288	16		
H-11A	12	304.8	288	8		

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
H-12	1" 25.4mm	1/2" 12.7mm	1	25.4	624	208
H-12A			1-1/4	31.8	642	171.2
H-13			1-1/2	38.1	532.8	118.4
H-13A			1-3/4	44.5	546	104
H-14			2	50.8	540	90
H-15			2-1/2	63.5	510	68
H-16			3	76.2	489.6	54.4
H-17			3-1/2	88.9	478.8	45.6
H-18			4	101.6	480	40
H-19			4-1/2	114.3	475.2	35.2
H-20			5	127	468	31.2
H-20A			5-1/2	139.7	475.2	28.8
H-21			6	152.4	460.8	25.6
H-21A			7	177.8	470.4	22.4
H-22	8	203.2	460.8	19.2		
H-22A	12	304.8	432	12		

H-36	1-1/4" 31.8mm	5/8" 15.9mm	1-1/2	38.1	954	212
H-36A			1-3/4	44.5	953.4	181.6
H-37			2	50.8	897.6	149.6
H-38			2-1/2	63.5	882	117.6
H-39			3	76.2	856.8	95.2
H-40			3-1/2	88.9	789.6	75.2
H-41			4	101.6	796.8	66.4
H-42			4-1/2	114.3	788.4	58.4
H-43			5	127	795	53
H-44			5-1/2	139.7	778.8	47.2
H-45			6	152.4	763.2	42.4
H-46			7	177.8	772.8	36.8
H-47			8	203.2	787.2	32.8
H-48			10	254	768.9	25.6
H-48A	12	304.8	748.8	20.8		

H-49	1-1/2" 38.1mm	3/4" 19.1mm	2	50.8	1142.4	190.4
H-50			2-1/2	63.5	1162.5	155
H-51			3	76.2	1170	130
H-52			3-1/2	88.9	1117.2	106.4
H-53			4	101.6	1094.4	91.2
H-54			4-1/2	114.3	1058.4	78.4
H-55			5	127	1068	71.2
H-55A			5-1/2	129.7	1056	64
H-56			6	152.4	1051.2	58.4
H-56A			7	177.8	1041.6	49.6
H-57			8	203.2	1036.8	43.2
H-58			10	254	1032	34.4
H-58A	12	304.8	1036.8	28.8		

H-70	2" 50.8mm	1" 25.4mm	2-1/2	63.5	1950	260
H-71			3	76.2	1800	200
H-72			3-1/2	88.9	1785	170
H-73			4	101.6	1800	150
H-74			4-1/2	114.3	1620	120
H-75			5	127	1650	110
H-76			5-1/2	139.7	1650	100
H-77			6	152.4	1692	94
H-79			7	177.8	1722	82
H-80			8	203.2	1752	73
H-82			10	254	1650	55
H-83			12	304.8	1512	42

LOAD DEFLECTION

Maximum Deflection	30% of Free Length
For Long Life	20% of Free Length
Maximum Operation	25% of Free Length
For Optimum Life	15% of Free Length

Tabulated load values shown are near solid and are for design info only

DIE SPRINGS—INCH—EXTRA HEAVY PRESSURE GREEN

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
XH-100	3/8" 9.5mm	3/16" 4.8mm	1	25.4	55	22
XH-100A			1-1/4	31.8	50	16
XH-101			1-1/2	38.1	46.9	12.5
XH-101A			1-3/4	44.5	50.3	11.5
XH-102			2	50.8	45	9
XH-103			2-1/2	63.5	43.8	7
XH-104			3	76.2	48.8	6.5
XH-105			12	304.8	45	1.5

XH-110	1/2" 12.7mm	9/32" 7.1mm	1	25.4	80	32
XH-110A			1-1/4	31.8	75	24
XH-111			1-1/2	38.1	75	20
XH-111A			1-3/4	44.5	74.4	17
XH-112			2	50.8	70	14
XH-113			2-1/2	63.5	71.9	11.5
XH-114			3	76.2	67.5	9
XH-115			3-1/2	88.9	70	8
XH-116			12	304.8	5	2.5

XH-120	5/8" 15.9mm	11/32" 8.7mm	1	25.4	157.5	63
XH-120A			1-1/4	31.8	146.9	47
XH-121			1-1/2	38.1	142.5	38
XH-121A			1-3/4	44.5	140	32
XH-122			2	50.8	145	29
XH-123			2-1/2	63.5	137.5	22
XH-124			3	76.2	142.5	19
XH-125			3-1/2	88.9	140	16
XH-126			4	101.6	135	13.5
XH-127			12	304.8	135	4.5

XH-1	3/4" 19.1mm	3/8" 9.5mm	1	25.4	350	140
XH-1A			1-1/4	31.8	343.8	110
XH-2			1-1/2	38.1	333.8	89
XH-2A			1-3/4	44.5	328.1	75
XH-3			2	50.8	3430	68
XH-4			2-1/2	63.5	312.5	50
XH-5			3	76.2	303.8	40.5
XH-6			3-1/2	88.9	301.9	34.5
XH-7			4	101.6	300	30
XH-8			4-1/2	114.3	298.1	26.5
XH-9			5	127	293.8	23.5
XH-10			5-1/2	139.7	295.6	21.5
XH-11	6	152.4	292.5	19.5		
XH-11A	12	304.8	285	9.5		

Part No.	Diameter		Free Length		Load	
	Hole O.D.	Rod I.D.	Inch	Mm	0.5 Deflection (lb)	1/10" Deflection (lb)
XH-13	1" 25.4mm	1/2" 12.7mm	1-1/2	38.1	600	160
XH-14			2	50.8	580	116
XH-15			2-1/2	63.5	560	89.6
XH-16			3	76.2	552	73.6
XH-17			3-1/2	88.9	546	62.4
XH-18			4	101.6	552	55.2
XH-19			4-1/2	114.3	549	48.8
XH-20			5	127	540	43.2
XH-21			6	152.4	540	36
XH-22A			12	304.8	528	17.6

XH-37	1-1/4" 31.8mm	5/8" 15.9mm	2	50.8	960	192
XH-38			2-1/2	63.5	900	144
XH-39			3	76.2	888	118.4
XH-40			3-1/2	88.9	882	100.8
XH-41			4	101.6	840	84
XH-42			4-1/2	114.3	882	78.4
XH-43			5	127	850	68
XH-45			6	152.4	840	56
XH-47			8	203.2	832	41.6
XH-48			10	254	840	33.6
XH-48A			12	304.8	92	26.4

XH-49	1-1/2" 38.1mm	3/4" 19.1mm	2	50.8	1880	376
XH-50			2-1/2	63.5	1840	294.4
XH-51			3	76.2	1734	231.2
XH-52			3-1/2	88.9	1715	196
XH-53			4	101.6	1712	171.2
XH-54			4-1/2	114.3	1665	148
XH-55			5	127	1700	136
XH-56			6	152.4	1656	110.4
XH-57			8	203.2	1616	80.8
XH-58			10	254	1680	67.2
XH-58A			12	304.8	1632	54.4

XH-70	50.8mm 25.4mm	Wire .365 x .460	2-1/2	63.5	2385	381.6
XH-71			3	76.2	2340	312
XH-72			3-1/2	88.9	2226	254.4
XH-73			4	101.6	2200	220
XH-74			4-1/2	114.3	2124	188.8
XH-75			5	127	2160	172.8
XH-77			6	152.4	2124	141.6
XH-80			8	203.2	2000	100
XH-82			10	254	2100	84
XH-83			12	304.8	2136	71.2

LOAD DEFLECTION	
Maximum Deflection	25% of Free Length
For Long Life	17% of Free Length
Maximum Operation	20% of Free Length
For Optimum Life	15% of Free Length

Tabulated load values shown are near solid and are for design info only