

Producto precision

Producto/Dieco die springs are precision products manufactured in the USA by Associated Spring – Raymond Barnes Group. These springs are manufactured from the highest quality Chrome Silicon materials on special machines. The result is that you get the maximum tensile strength and life with service temperatures up to 450° F.

Local die spring inventories assure fast off-the-shelf deliveries from convenient Producto service centers

Every Producto Dieco die spring is color-coded by work range to simplify selection specification and in-plant identification

A full range of gas springs, metric springs and special springs are readily available to meet your wide range of needs.

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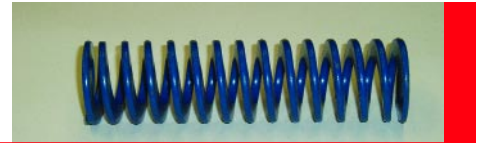


Manufactured by:



Die Springs - Inch Series

MEDIUM PRESSURE BLUE



Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	50%* Deflection (lb)	1/10" Deflection (lb)
MP-02	M-100			1	25.4	30.0	6.0
MP-02A	M-100A	3/8" 9.5 mm	3/16" 4.8 mm	1 1/4	31.8	33.8	5.4
MP-03	M-101			1 1/2	38.1	30.0	4.0
MP-03A	M-101A			1 3/4	44.5	29.8	3.4
MP-04	M-102	WIRE .039 x .070		2	50.8	28.0	2.8
MP-05	M-103			2 1/2	63.5	30.0	2.4
MP-06	M-104			3	76.2	31.5	2.1
MP-024	M-105			12	304.8	36.0	0.6

MP-12	M-110			1	25.4	55.0	11.0
MP-12A	M-110A	1/2" 12.7 mm	9/32" 7.1 mm	1 1/4	31.8	51.3	8.2
MP-13	M-111			1 1/2	38.1	51.0	6.8
MP-13A	M-111A			1 3/4	44.5	52.5	6.0
MP-14	M-112			2	50.8	55.0	5.5
MP-15	M-113			2 1/2	63.5	56.3	4.5
MP-16	M-114			3	76.2	52.5	3.5
MP-17	M-115			3 1/2	88.9	52.5	3.0
MP-19	M-115A			4 1/2	114.3	56.3	2.5
MP-111	M-115B			5 1/2	139.7	57.8	2.1
MP-113	M-115C			6 1/2	165.1	45.5	1.4
MP-115	M-115D			7 1/2	190.5	45.0	1.2
MP-124	M-116			12	304.8	42.0	0.7

MP-22	M-120			1	25.4	82.0	16.4
MP-22A	M-120A	5.8" 15.9 mm	11/32" 8.7 mm	1 1/4	31.8	80.0	12.8
MP-23	M-121			1 1/2	38.1	81.0	10.8
MP-23A	M-121A			1 3/4	44.5	84.0	9.6
MP-24	M-122			2	50.8	88.0	8.8
MP-25	M-123			2 1/2	63.5	75.0	6.0
MP-26	M-124			3	76.2	84.0	5.6
MP-27	M-125			3 1/2	88.9	84.0	4.8
MP-28	M-126			4	101.6	88.0	4.4
MP-224	M-127			12	304.8	96.0	1.6

MP-32	M-1			1	25.4	156.0	31.2
MP-32A	M-1A	3/4" 19.1 mm	3/8" 9.5 mm	1 1/4	31.8	160.0	25.6
MP-33	M-2			1 1/2	38.1	150.0	20.0
MP-33A	M-2A			1 3/4	44.5	154.0	17.6
MP-34	M-3			2	50.8	144.0	14.4
MP-35	M-4			2 1/2	63.5	150.0	12.0
MP-36	M-5			3	76.2	144.0	9.6
MP-37	M-6			3 1/2	88.9	140.0	8.0
MP-38	M-7			4	101.6	144.0	7.2
MP-39	M-8			4 1/2	114.3	144.0	6.4
MP-310	M-9			5	127.0	150.0	6.0
MP-311	M-10			5 1/2	139.7	151.3	5.5
MP-312	M-11			6	152.4	150.0	5.0
MP-313	M-11B	6 1/2	165.1	146.3	4.5		
MP-315	M-11C	7 1/2	190.5	142.5	3.8		
MP-324	M-11A	12	304.8	144.0	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 5% of free length

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

Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	50%* Deflection (lb)	1/10" Deflection (lb)
MP-42	M-12			1	25.4	275.0	55.0
MP-42A	M-12A	1" 25.4 mm	1/2" 12.7 mm	1 1/4	31.8	281.3	45.0
MP-43	M-13			1 1/2	38.1	262.5	35.0
MP-43A	M-13A			1 3/4	44.5	262.5	30.0
MP-44	M-14			2	50.8	260.0	26.0
MP-45	M-15			2 1/2	63.5	250.0	20.0
MP-46	M-16			3	76.2	247.5	16.5
MP-47	M-17			3 1/2	88.9	262.5	15.0
MP-48	M-18			4	101.6	240.0	12.0
MP-49	M-19			4 1/2	114.3	234.0	10.4
MP-410	M-20			5	127.0	240.0	9.6
MP-411	M-21			5 1/2	139.7	242.0	8.8
MP-412	M-22			6	152.4	240.0	8.0
MP-414	M-23	7	177.8	252.0	7.2		
MP-416	M-24	8	203.2	240.0	6.0		
MP-424	M-24A	12	304.8	240.0	4.0		

MP-53	M-36			1 1/2	38.1	372.0	49.6
MP-53A	M-36A	1 1/4" 31.8 mm	5/8" 15.9 mm	1 3/4	44.5	371.0	42.4
MP-54	M-37			2	50.8	352.0	35.2
MP-55	M-38			2 1/2	63.5	360.0	28.8
MP-56	M-39			3	76.2	360.0	24.0
MP-57	M-40			3 1/2	88.9	350.0	20.0
MP-58	M-41			4	101.6	352.0	17.6
MP-59	M-42			4 1/2	114.3	360.0	16.0
MP-510	M-43			5	127.0	340.0	13.6
MP-511	M-44			5 1/2	139.7	352.0	12.8
MP-512	M-45			6	152.4	360.0	12.0
MP-514	M-46			7	177.8	364.0	10.4
MP-516	M-47			8	203.2	352.0	8.8
MP-520	M-48	10	254.0	360.0	7.2		
MP-524	M-48A	12	304.8	360.0	6.0		

MP-64	M-49			2	50.8	530.0	53.0
MP-65	M-50	1 1/2" 38.1 mm	3/4" 19.1 mm	2 1/2	63.5	562.5	45.0
MP-66	M-51			3	76.2	540.0	36.0
MP-67	M-52			3 1/2	88.9	525.0	30.0
MP-68	M-53			4	101.6	540.0	27.0
MP-69	M-54			4 1/2	114.3	517.5	23.0
MP-610	M-55			5	127.0	525.0	21.0
MP-611	M-55A			5 1/2	139.7	508.8	18.5
MP-612	M-56			6	152.4	510.0	17.0
MP-614	M-56A			7	177.8	507.5	14.5
MP-616	M-57			8	203.2	512.0	12.8
MP-620	M-58			10	254.0	500.0	10.0
MP-624	M-58A			12	304.8	480.0	8.0

MP-85	M-70			2 1/2	63.5	1250.0	100.0
MP-86	M-71	2" 50.8 mm	1" 25.4 mm	3	76.2	1245.0	83.0
MP-87	M-72			3 1/2	88.9	1134.0	64.8
MP-88	M-73			4	101.6	1200.0	60.0
MP-89	M-74			4 1/2	114.3	1192.5	53.0
MP-810	M-75			5	127.0	1175.0	47.0
MP-811	M-76			5 1/2	139.7	1078.0	39.2
MP-812	M-77			6	152.4	1170.0	39.0
MP-814	M-79			7	177.8	1092.0	31.2
MP-816	M-80			8	203.2	1140.0	28.5
MP-820	M-82			10	254.0	1040.0	20.8
MP-824	M-83			12	304.8	1050.0	17.5

Die Springs - Inch Series

MEDIUM HIGH PRESSURE RED



Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	37%* Deflection (lb)	1/10" Deflection (lb)
MHP-02	MHC-100			1	25.4	33.3	9.0
MHP-02A	MHC-100A	3/8" 3/16" 9.5 mm 4.8 mm		1 1/4	31.8	33.8	7.3
MHP-03	MHC-101		1 1/2	38.1	37.2	6.7	
MHP-03A	MHC-101A			1 3/4	44.5	37.6	5.8
MHP-04	MHC-102	WIRE .046 x .073		2	50.8	37.0	5.0
MHP-05	MHC-103		2 1/2	63.5	38.9	4.2	
MHP-06	MHC-104		3	76.2	33.3	3.0	
MHP-024	MHC-105		12	304.8	40.0	0.9	

MHP-12	MHC-110			1	25.4	62.2	16.8
MHP-12A	MHC-110A			1 1/4	31.8	60.1	13.0
MHP-13	MHC-111	1/2" 9/32" 12.7 mm 7.1 mm		1 1/2	38.1	52.7	9.5
MHP-13A	MHC-111A		1 3/4	44.5	55.0	8.5	
MHP-14	MHC-112			2	50.8	55.5	7.5
MHP-15	MHC-113	WIRE .061 x .093		2 1/2	63.5	55.5	6.0
MHP-16	MHC-114		3	76.2	63.3	5.7	
MHP-17	MHC-115		3 1/2	88.9	51.8	4.0	
MHP-124	MHC-117		12	304.8	53.3	1.2	

MHP-22	MHC-120			1	25.4	111.0	30.0
MHP-22A	MHC-120A			1 1/4	31.8	99.4	21.5
MHP-23	MHC-121	5.8" 11/32" 15.9 mm 8.7 mm		1 1/2	38.1	105.5	19.0
MHP-23A	MHC-121A		1 3/4	44.5	108.8	16.8	
MHP-24	MHC-122			2	50.8	109.5	14.8
MHP-25	MHC-123	WIRE .081 x .123		2 1/2	63.5	106.4	11.5
MHP-26	MHC-124		3	76.2	111.0	10.0	
MHP-27	MHC-125		3 1/2	88.9	110.1	8.5	
MHP-28	MHC-126		4	101.6	112.5	7.6	
MHP-224	MHC-127			12	304.8	119.9	2.7

MHP-32	MHC-1			1	25.4	185.0	50.0
MHP-32A	MHC-1A			1 1/4	31.8	175.8	38.0
MHP-33	MHC-2	3/4" 3/8" 19.1 mm 9.5 mm		1 1/2	38.1	177.6	32.0
MHP-33A	MHC-2A		1 3/4	44.5	186.5	28.8	
MHP-34	MHC-3			2	50.8	183.5	24.8
MHP-35	MHC-4	WIRE .093 x .156		2 1/2	63.5	177.6	19.2
MHP-36	MHC-5		3	76.2	159.8	14.4	
MHP-37	MHC-6		3 1/2	88.9	165.8	12.8	
MHP-38	MHC-7		4	101.6	177.6	12.0	
MHP-39	MHC-8			4 1/2	114.3	186.5	11.2
MHP-310	MHC-9			5	127.0	166.5	9.0
MHP-311	MHC-10			5 1/2	139.7	162.8	8.0
MHP-312	MHC-11			6	152.4	166.5	7.5
MHP-324	MHC-11A			12	304.8	159.8	3.6

MHP-42	MHC-12			1	25.4	281.2	76.0
MHP-42A	MHC-12A			1 1/4	31.8	288.6	62.4
MHP-43	MHC-13	1" 1/2" 25.4 mm 12.7 mm		1 1/2	38.1	275.3	49.6
MHP-43A	MHC-13A		1 3/4	44.5	284.9	44.0	
MHP-44	MHC-14			2	50.8	296.0	40.0
MHP-45	MHC-15	WIRE .115 x .218		2 1/2	63.5	286.8	31.0
MHP-46	MHC-16		3	76.2	277.5	25.0	
MHP-47	MHC-17		3 1/2	88.9	279.7	21.6	
MHP-48	MHC-18		4	101.6	272.3	18.4	
MHP-49	MHC-19			4 1/2	114.3	283.1	17.0
MHP-410	MHC-20			5	127.0	266.4	14.4
MHP-411	MHC-21			5 1/2	139.7	260.5	12.8
MHP-412	MHC-22			6	152.4	266.4	12.0
MHP-414	MHC-23			7	177.8	259.0	10.0
MHP-416	MHC-24			8	203.2	260.5	8.8
MHP-424	MHC-24A			12	304.8	275.3	6.2

Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	37%* Deflection (lb)	1/10" Deflection (lb)
MHP-53	MHC-36			1 1/2	38.1	634.9	114.4
MHP-53A	MHC-36A	1 1/4" 5/8" 31.8 mm 15.9 mm		1 3/4	44.5	652.7	100.8
MHP-54	MHC-37		2	50.8	639.4	86.4	
MHP-55	MHC-38			2 1/2	63.5	577.2	62.4
MHP-56	MHC-39	WIRE .156 x .281		3	76.2	568.3	51.2
MHP-57	MHC-40		3 1/2	88.9	569.8	44.0	
MHP-58	MHC-41		4	101.6	544.6	36.8	
MHP-59	MHC-42		4 1/2	114.3	532.8	32.0	
MHP-510	MHC-43			5	127.0	536.5	29.0
MHP-511	MHC-44			5 1/2	139.7	537.2	26.4
MHP-512	MHC-45			6	152.4	555.0	25.0
MHP-514	MHC-46			7	177.8	518.0	20.0
MHP-516	MHC-47			8	203.2	544.6	18.4
MHP-520	MHC-48			10	254.0	536.5	14.5
MHP-524	MHC-48A			12	304.8	550.6	12.4

MHP-64	MHC-49			2	50.8	799.2	108.0
MHP-65	MHC-50			2 1/2	63.5	791.8	85.6
MHP-66	MHC-51	1 1/2" 3/4" 38.1 mm 19.1 mm		3	76.2	692.6	62.4
MHP-67	MHC-52		3 1/2	88.9	683.8	52.8	
MHP-68	MHC-53			4	101.6	710.4	48.0
MHP-69	MHC-54	WIRE .187 x .3112		4 1/2	114.3	719.3	43.2
MHP-610	MHC-55		5	127.0	680.8	36.8	
MHP-611	MHC-55A		5 1/2	139.7	700.0	34.4	
MHP-612	MHC-56		6	152.4	674.9	30.4	
MHP-614	MHC-56A			7	177.8	683.8	26.4
MHP-616	MHC-57			8	203.2	651.2	22.0
MHP-620	MHC-58			10	254.0	651.2	17.6
MHP-624	MHC-58A			12	304.8	639.4	14.4

MHP-85	MHC-70			2 1/2	63.5	1095.2	118.4
MHP-86	MHC-71			3	76.2	1065.6	96.0
MHP-87	MHC-72	2" 1" 50.8 mm 25.4 mm		3 1/2	88.9	1036.0	80.0
MHP-88	MHC-73		4	101.6	982.7	66.4	
MHP-89	MHC-74			4 1/2	114.3	999.0	60.0
MHP-810	MHC-75	WIRE .225 x .437		5	127.0	1036.0	56.0
MHP-811	MHC-76		5 1/2	139.7	1025.6	50.4	
MHP-812	MHC-77		6	152.4	1047.8	47.2	
MHP-814	MHC-79		7	177.8	1036.0	40.0	
MHP-816	MHC-80			8	203.2	1041.9	35.2
MHP-820	MHC-82			10	254.0	962.0	26.0
MHP-824	MHC-83			12	304.8	994.6	22.4

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

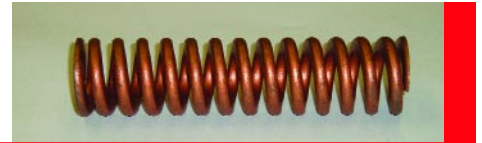
Tabulated load values shown are near solid and are for design info only.

Distributed by:



Die Springs - Inch Series

High PRESSURE GOLD



Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	50%* Deflection (lb)	1/10" Deflection (lb)
HP-02	H-100			1	25.4	33.0	11.0
HP-02A	H-100A	3/8" 9.5 mm	3/16" 4.8 mm	1 1/4	31.8	36.8	9.8
HP-03	H-101			1 1/2	38.1	36.0	8.0
HP-03A	H-101A	WIRE .054 x .072		1 3/4	44.5	44.1	8.4
HP-04	H-102			2	50.8	43.2	7.2
HP-05	H-103			2 1/2	63.5	41.3	5.5
HP-06	H-104			3	76.2	37.8	4.2
HP-024	H-105			12	304.8	43.2	1.2

HP-12	H-110	WIRE .072 x .095	1/2" 12.7 mm	9/32" 7.1 mm	1	25.4	70.8	23.6
HP-12A	H-110A				1 1/4	31.8	69.8	18.6
HP-13	H-111				1 1/2	38.1	69.8	15.5
HP-13A	H-111A				1 3/4	44.5	72.5	13.8
HP-14	H-112				2	50.8	66.0	11.0
HP-15	H-113				2 1/2	63.5	63.0	8.4
HP-16	H-114				3	76.2	66.6	7.4
HP-17	H-115				3 1/2	88.9	63.0	6.0
HP-124	H-117			12	304.8	57.6	1.6	

HP-22	H-120	WIRE .093 x .125	5.8" 15.9 mm	11/32" 8.7 mm	1	25.4	127.2	42.4
HP-22A	H-120A				1 1/4	31.8	111.0	29.6
HP-23	H-121				1 1/2	38.1	122.4	27.2
HP-23A	H-121A				1 3/4	44.5	126.0	24.0
HP-24	H-122				2	50.8	124.8	20.8
HP-25	H-123				2 1/2	63.5	127.5	17.0
HP-26	H-124				3	76.2	129.6	14.4
HP-27	H-125				3 1/2	88.9	128.1	12.2
HP-28	H-126				4	101.6	129.6	10.8
HP-224	H-127						12	304.8

HP-32	H-1	WIRE .125 x .165	3/4" 19.1 mm	3/8" 9.5 mm	1	25.4	324.0	108.0
HP-32A	H-1A				1 1/4	31.8	330.0	88.0
HP-33	H-2				1 1/2	38.1	295.2	65.6
HP-33A	H-2A				1 3/4	44.5	315.0	60.0
HP-34	H-3				2	50.8	297.6	49.6
HP-35	H-4				2 1/2	63.5	300.0	40.0
HP-36	H-5				3	76.2	306.0	34.0
HP-37	H-6				3 1/2	88.9	294.0	28.0
HP-38	H-7				4	101.6	300.0	25.0
HP-39	H-8				4 1/2	114.3	297.0	22.0
HP-310	H-9				5	127.0	292.5	19.5
HP-311	H-10				5 1/2	139.7	280.5	17.0
HP-312	H-11				6	152.4	288.0	16.0
HP-324	H-11A						12	304.8

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.

Manufactured by:



Catalog Number		Diameters		Free length		Load at		
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	50%* Deflection (lb)	1/10" Deflection (lb)	
HP-42	H-12	WIRE .158 x .225	1" 25.4 mm	1/2" 12.7 mm	1	25.4	624.0	208.0
HP-42A	H-12A				1 1/4	31.8	642.0	171.2
HP-43	H-13				1 1/2	38.1	532.8	118.4
HP-43A	H-13A				1 3/4	44.5	546.0	104.0
HP-44	H-14				2	50.8	540.0	90.0
HP-45	H-15				2 1/2	63.5	510.0	68.0
HP-46	H-16				3	76.2	489.6	54.4
HP-47	H-17				3 1/2	88.9	478.8	45.6
HP-48	H-18				4	101.6	480.0	40.0
HP-49	H-19				4 1/2	114.3	475.2	35.2
HP-410	H-20				5	127.0	468.0	31.2
HP-411	H-20A				5 1/2	139.7	475.2	28.8
HP-412	H-21	6	152.4	460.8	25.6			
HP-414	H-21A	7	177.8	470.4	22.4			
HP-416	H-22	8	203.2	460.8	19.2			
HP-424	H-22A			12	304.8	432.0	12.0	

HP-53	H-36	WIRE .200 x .295	1 1/4" 31.8 mm	5/8" 15.9 mm	1 1/2	38.1	954.0	212.0
HP-53A	H-36A				1 3/4	44.5	953.4	181.6
HP-54	H-37				2	50.8	897.6	149.6
HP-55	H-38				2 1/2	63.5	882.0	117.6
HP-56	H-39				3	76.2	856.8	95.2
HP-57	H-40				3 1/2	88.9	789.6	75.2
HP-58	H-41				4	101.6	796.8	66.4
HP-59	H-42				4 1/2	114.3	788.4	58.4
HP-510	H-43				5	127.0	795.0	53.0
HP-511	H-44				5 1/2	139.7	778.8	47.2
HP-512	H-45				6	152.4	763.2	42.4
HP-514	H-46				7	177.8	772.8	36.8
HP-516	H-47				8	203.2	787.2	32.8
HP-520	H-48				10	254.0	768.0	25.6
HP-524	H-48A				12	304.8	748.8	20.8

HP-64	H-49	WIRE .225 x .350	1 1/2" 38.1 mm	3/4" 19.1 mm	2	50.8	1142.4	190.4
HP-65	H-50				2 1/2	63.5	1162.5	155.0
HP-66	H-51				3	76.2	1170.0	130.0
HP-67	H-52				3 1/2	88.9	1117.2	106.4
HP-68	H-53				4	101.6	1094.4	91.2
HP-69	H-54				4 1/2	114.3	1058.4	78.4
HP-610	H-55				5	127.0	1068.0	71.2
HP-611	H-55A				5 1/2	139.7	1056.0	64.0
HP-612	H-56				6	152.4	1051.2	58.4
HP-614	H-56A				7	177.8	1041.6	49.6
HP-616	H-57				8	203.2	1036.8	43.2
HP-620	H-58				10	254.0	1032.0	34.4
HP-624	H-58A				12	304.8	1036.8	28.8

HP-85	H-70	WIRE .280 x .470	2" 50.8 mm	1" 25.4 mm	2 1/2	63.5	1950.0	260.0
HP-86	H-71				3	76.2	1800.0	200.0
HP-87	H-72				3 1/2	88.9	1785.0	170.0
HP-88	H-73				4	101.6	1800.0	150.0
HP-89	H-74				4 1/2	114.3	1620.0	120.0
HP-810	H-75				5	127.0	1650.0	110.0
HP-811	H-76				5 1/2	139.7	1650.0	100.0
HP-812	H-77				6	152.4	1692.0	94.0
HP-814	H-79				7	177.8	1722.0	82.0
HP-816	H-80				8	203.2	1752.0	73.0
HP-820	H-82				10	254.0	1650.0	55.0
HP-824	H-83				12	304.8	1512.0	42.0

Die Springs - Inch Series

MEDIUM HIGH PRESSURE GREEN



Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	25%* Deflection (lb)	1/10" Deflection (lb)
XHP-02	HX-100			1	25.4	55.0	22.0
XHP-02A	HX-100A	3/8" 9.5 mm	3/16" 4.8 mm	1 1/4	31.8	50.0	16.0
XHP-03	HX-101			1 1/2	38.1	46.9	12.5
XHP-03A	HX-101A	WIRE .059 x .080		1 3/4	44.5	50.3	11.5
XHP-04	HX-102			2	50.8	45.0	9.0
XHP-05	HX-103	WIRE .059 x .080		2 1/2	63.5	43.8	7.0
XHP-06	HX-104			3	76.2	48.8	6.5
XHP-024	HX-105			12	304.8	45.0	1.5

XHP-12	HX-110	1/2" 12.7 mm	9/32" 7.1 mm	1	25.4	80.0	32.0
XHP-12A	HX-110A			1 1/4	31.8	75.0	24.0
XHP-13	HX-111			1 1/2	38.1	75.0	20.0
XHP-13A	HX-111A			1 3/4	44.5	74.4	17.0
XHP-14	HX-112			2	50.8	70.0	14.0
XHP-15	HX-113			2 1/2	63.5	71.9	11.5
XHP-16	HX-114			3	76.2	67.5	9.0
XHP-17	HX-115			3 1/2	88.9	70.0	8.0
XHP-124	HX-116			12	304.8	75.0	2.5

XHP-22	HX-120	5.8" 15.9 mm	11/32" 8.7 mm	1	25.4	157.5	63.0
XHP-22A	HX-120A			1 1/4	31.8	146.9	47.0
XHP-23	HX-121			1 1/2	38.1	142.5	38.0
XHP-23A	HX-121A			1 3/4	44.5	140.0	32.0
XHP-24	HX-122			2	50.8	145.0	29.0
XHP-25	HX-123			2 1/2	63.5	137.5	22.0
XHP-26	HX-124			3	76.2	142.5	19.0
XHP-27	HX-125			3 1/2	88.9	140.0	16.0
XHP-28	HX-126			4	101.6	135.0	13.5
XHP-224	HX-127			12	304.8	135.0	4.5

XHP-32	HX-1	3/4" 19.1 mm	3/8" 9.5 mm	1	25.4	350.0	140.0
XHP-32A	HX-1A			1 1/4	31.8	343.8	110.0
XHP-33	HX-2			1 1/2	38.1	333.8	89.0
XHP-33A	HX-2A			1 3/4	44.5	328.1	75.0
XHP-34	HX-3			2	50.8	340.0	68.0
XHP-35	HX-4			2 1/2	63.5	312.5	50.0
XHP-36	HX-5			3	76.2	303.8	40.5
XHP-37	HX-6			3 1/2	88.9	301.9	34.5
XHP-38	HX-7			4	101.6	300.0	30.0
XHP-39	HX-8			4 1/2	114.3	298.1	26.5
XHP-310	HX-9			5	127.0	293.8	23.5
XHP-311	HX-10			5 1/2	139.7	295.6	21.5
XHP-312	HX-11			6	152.4	292.5	19.5
XHP-324	HX-11A			12	304.8	285.0	9.5

Catalog Number		Diameters		Free length		Load at	
Producto Number	Dieco Number	Hole O.D.	Rod I.D.	Inch	Mm	25%* Deflection (lb)	1/10" Deflection (lb)
XHP-43	HX-13	1" 25.4 mm	1/2" 12.7 mm	1 1/2	38.1	600.0	160.0
XHP-44	HX-14			2	50.8	580.0	116.0
XHP-45	HX-15			2 1/2	63.5	560.0	89.6
XHP-46	HX-16			3	76.2	552.0	73.6
XHP-47	HX-17			3 1/2	88.9	546.0	62.4
XHP-48	HX-18			4	101.6	552.0	55.2
XHP-49	HX-19			4 1/2	114.3	549.0	48.8
XHP-410	HX-20			5	127.0	540.0	43.2
XHP-412	HX-21			6	152.4	540.0	36.0
XHP-424	HX-22A			12	304.8	528.0	17.6

XHP-54	HX-37	1 1/4" 31.8 mm	5/8" 15.9 mm	2	50.8	960.0	192.0
XHP-55	HX-38			2 1/2	63.5	900.0	144.0
XHP-56	HX-39			3	76.2	888.0	118.4
XHP-57	HX-40			3 1/2	88.9	882.0	100.8
XHP-58	HX-41			4	101.6	840.0	84.0
XHP-59	HX-42			4 1/2	114.3	882.0	78.4
XHP-510	HX-43			5	127.0	850.0	68.0
XHP-512	HX-45			6	152.4	840.0	56.0
XHP-516	HX-47			8	203.2	832.0	41.6
XHP-520	HX-48			10	254.0	840.0	33.6
XHP-524	HX-48A			12	304.8	792.0	26.4

XHP-64	HX-49	1 1/2" 38.1 mm	3/4" 19.1 mm	2	50.8	1880.0	376.0
XHP-65	HX-50			2 1/2	63.5	1840.0	294.4
XHP-66	HX-51			3	76.2	1734.0	231.2
XHP-67	HX-52			3 1/2	88.9	1715.0	196.0
XHP-68	HX-53			4	101.6	1712.0	171.2
XHP-69	HX-54			4 1/2	114.3	1665.0	148.0
XHP-610	HX-55			5	127.0	1700.0	136.0
XHP-612	HX-56			6	152.4	1656.0	110.4
XHP-616	HX-57			8	203.2	1616.0	80.8
XHP-620	HX-58			10	254.0	1680.0	67.2
XHP-624	HX-58A			12	304.8	1632.0	54.4

XHP-85	HX-70	2" 50.8 mm	1" 25.4 mm	2 1/2	63.5	2385.0	381.6
XHP-86	HX-71			3	76.2	2340.0	312.0
XHP-87	HX-72			3 1/2	88.9	2226.0	254.4
XHP-88	HX-73			4	101.6	2200.0	220.0
XHP-89	HX-74			4 1/2	114.3	2124.0	188.8
XHP-810	HX-75			5	127.0	2160.0	172.8
XHP-812	HX-77			6	152.4	2124.0	141.6
XHP-816	HX-80			8	203.2	2000.0	100.0
XHP-820	HX-82			10	254.0	2100.0	84.0
XHP-824	HX-83			12	304.8	2136.0	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.

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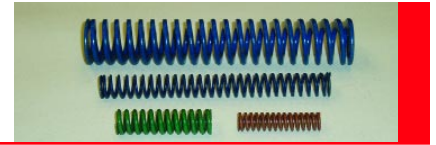


Manufactured by:



Service Parts

COMPRESSION SPRINGS AND ASSORTMENTS



Square Wire Springs

Catalog Number	O.D.	I.D.	Wire Size	Box Qty
SW-0	3/8	3/16	0.063	12
SW-1A	7/16	1/4	0.063	12
SW-1B	1/2	1/4	0.094	12
SW-1	9/16	5/16	0.094	12
SW-4	9/16	1/4	0.125	12
SW-2	11/16	7/16	0.094	12
SW-5	11/16	3/8	0.125	12
SW-10	11/16	5/16	0.156	12
SW-3	13/16	9/16	0.094	12
SW-6	13/16	1/2	0.125	12
SW-11	13/16	7/16	0.156	12
SW-16	13/16	3/8	0.188	12
SW-7	15/16	5/8	0.125	12

Catalog Number	O.D.	I.D.	Wire Size	Box Qty
SW-12	15/16	9/16	0.156	12
SW-17	1 5/16	1/2	0.188	12
SW-8	1 1/16	3/4	0.125	6
SW-13	1 1/16	11/16	0.156	6
SW-18	1 1/16	5/8	0.188	6
SW-23	1 1/16	7/16	0.250	6
SW-9	1 3/16	7/8	0.125	6
SW-14	1 3/16	13/16	0.156	6
SW-19	1 3/16	3/4	0.188	6
SW-24	1 3/16	9/16	0.250	6
SW-15	1 5/16	15/16	0.156	6
SW-20	1 5/16	7/8	0.188	6
SW-25	1 5/16	11/16	0.250	6

Plain End Springs 12" Lengths

Catalog Number	O.D.	I.D.	Wire Size	Box Qty
SW-21	1 7/16	1	0.188	6
SW-26	1 7/16	13/16	0.250	6
SW-22	1 9/16	1 1/8	0.188	6
SW-27	1 9/16	15/16	0.250	6
SW-31	1 9/16	13/16	0.312	6
SW-28	1 13/16	1 3/16	0.250	6
SW-32	1 13/16	1 1/16	0.312	6
SW-29	2 1/16	1 7/16	0.250	6
SW-33	2 1/16	1 5/16	0.312	6
SW-30	2 5/16	1 11/16	0.250	6
SW-34	2 5/16	1 9/16	0.312	6
SW-35	2 9/16	1 13/16	0.312	6

Music Wire Springs

Catalog Number	O.D.	Length	Wire Size	Box Qty
MW-100	0.375	1.000	0.042	12
MW-101	0.375	1.500	0.042	12
MW-102	0.375	2.000	0.042	12
MW-103	0.375	2.500	0.042	12
MW-104	0.375	3.000	0.042	12
MW-105A	0.375	18.000	0.042	12
MW-110	0.500	1.000	0.062	12

Catalog Number	O.D.	Length	Wire Size	Box Qty
MW-111	0.500	1.500	0.062	12
MW-112	0.500	2.000	0.062	12
MW-113	0.500	2.500	0.062	12
MW-114	0.500	3.000	0.062	12
MW-115	0.500	3.500	0.062	12
MW-116A	0.500	18.000	0.062	12
MW-120	0.625	1.000	0.072	12

Squared and Ground Ends

Catalog Number	O.D.	Length	Wire Size	Box Qty
MW-121	0.625	1.500	0.072	12
MW-122	0.625	2.000	0.072	12
MW-123	0.625	2.500	0.072	12
MW-124	0.625	3.000	0.072	12
MW-125	0.625	3.500	0.072	12
MW-126	0.625	4.000	0.072	12
MW-127A	0.625	18.000	0.072	12

R-40 & 450 Compression Spring Assortment Kit

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
3-32-10	93-010	0.093	0.010	12
3-32-14	93-014	0.093	0.014	12
1-8-12	2-012	0.125	0.012	12
1-8-16	2-016	0.125	0.016	12
3-16-14	3-014	0.188	0.014	12
3-16-18	3-018	0.188	0.018	12
3-16-26	3-026	0.188	0.026	12
3-16-35	3-035	0.188	0.035	12
1-4-18	4-018	0.250	0.018	12
1-4-26	4-026	0.250	0.026	12
1-4-31	4-031	0.250	0.031	12
1-4-35	4-035	0.250	0.035	12
1-4-41	4-041	0.250	0.041	12
1-4-47	4-047	0.250	0.047	12

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
5-16-22	5-022	0.312	0.022	12
5-16-31	5-031	0.312	0.031	12
5-16-37	5-037	0.312	0.037	12
5-16-41	5-041	0.312	0.041	12
5-16-47	5-047	0.312	0.047	12
5-16-55	5-055	0.312	0.055	12
3-8-31	6-031	0.375	0.031	12
3-8-35	6-035	0.375	0.035	12
3-8-43	6-043	0.375	0.043	12
3-8-47	6-047	0.375	0.047	12
3-8-55	6-055	0.375	0.055	12
3-8-62	6-062	0.375	0.062	12
3-8-75	6-075	0.375	0.075	12
7-16-35	7-035	0.438	0.035	12

Open Ends 10" Length

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
7-16-47	7-047	0.438	0.047	12
7-16-55	7-055	0.438	0.055	12
7-16-62	7-062	0.438	0.062	12
7-16-75	7-075	0.438	0.075	12
7-16-85	7-085	0.438	0.085	12
1-2-35	8-035	0.500	0.035	12
1-2-47	8-047	0.500	0.047	12
1-2-55	8-055	0.500	0.055	12
1-2-62	8-062	0.500	0.062	12
1-2-75	8-075	0.500	0.075	12
1-2-91	8-091	0.500	0.091	12
1-2-115	8-115	0.500	0.115	12

R-40 assortment includes one of each.
450 Assortment includes two of each

#500 Compression Spring Assortment Kit

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
RW9	DS-221	0.500	0.041	12
RW9A	DS-222	0.500	0.054	12
RW9B	DS-223	0.562	0.062	12
RW9C	DS-224	0.562	0.072	12
RW10	DS-225	0.625	0.054	12
RW10A	DS-226	0.688	0.062	12
RW10B	DS-227	0.688	0.072	12
RW10C	DS-228	0.688	0.068	12

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
RW11	DS-229	0.812	0.062	12
RW11A	DS-230	0.812	0.080	12
RW11B	DS-231	0.875	0.098	12
RW11C	DS-232	0.938	0.125	12
RW12	DS-232A	1.125	0.125	6
RW12A	DS-233	0.938	0.080	12
RW12B	DS-234	1.000	0.098	6
RW12C	DS-235	1.062	0.125	6

Open Ends 18" Length

Product Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Box Qty
RW12D	DS-235A	1.125	0.135	6
RW13	DS-236	1.062	0.085	6
RW13A	DS-237	1.188	0.125	6
RW14	DS-238	1.188	0.090	6
RW14A	DS-239	1.375	0.148	6
RW15	DS-240	1.625	0.148	6
RW16	DS-241	1.875	0.148	6

500 assortment includes one of each.

Service Parts

COMPRESSION & EXTENSION SPRINGS



R48 Compression and Extension Spring Assortment

Catalog Number	O.D.	Wire Size	Length	Box Qty
Compression Springs				
G081	0.312	0.022	1.970	12
G086	0.375	0.042Br	0.780	12
G088	0.375	0.048	2.030	12
G094	0.375	0.063	2.210	12
G093	0.438	0.054	2.000	12
G071	0.438	0.041	2.560	12
G089	0.438	0.048	2.630	12
G090	0.469	0.053	2.500	12
G060	0.500	0.072PhBr	0.970	12

Catalog Number	O.D.	I.D.	Wire Size	Box Qty
G 092	0.500	0.048	2.060	12
G 091	0.500	0.063	2.500	12
G 068	0.625	0.080	2.840	12
G 067	0.688	0.105	4.020	12
G 072	0.750	0.106	2.630	12
G 070	0.844	.08 Br	1.100	12
G 066	0.859	0.135	2.590	12
G 065	0.875	0.120	2.000	12
G 064	0.875	0.092	3.060	12
G 063	0.938	0.080	2.030	12

48 Springs Total (27 different springs)

Catalog Number	O.D.	I.D.	Wire Size	Box Qty
G 062	1.015	0.120	2.560	12
G 058 *	.625 x .75	.08 Br	1.000	12
G 057 *	.656 x .938	.058 PhBr	0.940	12

Extension Springs

G 019	0.375	0.041	3.250	12
G 024	0.719	0.105	4.000	12
G 023	0.734	0.063	4.062	12
G 013	0.562	0.080	5.500	12
G 016	0.266	0.035	6.125	12

Includes one or two of each. * Conical Spring

#350/R35 Extension Spring Assortment Kit

Producto Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Length
G037	15	0.344	0.048	1.438
G022	8	0.484	0.063	4.500
G028	6	0.438	0.063	5.250
G018	13	0.250	0.041	5.344
G027	11	0.344	0.048	5.375
G014	9	0.375	0.054	5.500

Producto Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Length
G012	7	0.547	0.080	5.625
G017	14	0.250	0.028	5.750
G015	12	0.297	0.048	5.750
G009	4	0.438	0.048	6.438
G010	5	0.328	0.035	6.500
G011	3	0.156	0.026	6.625

35 Springs Total

Producto Cat. No.	Dieco Cat. No.	O.D.	Wire Size	Length
G007	2	0.344	0.048	8.125
G008	10	0.172	0.029	9.062
G005	1	0.359	0.054	10.000

Includes minimum two of each.

#375 Extension Spring Assortment Kit

Catalog Number	O.D.	Wire Size	Rate per Inch	Max Ext.
2016	0.125	0.016	1.200	9.00
3016	0.188	0.016	0.300	2.30
3023	0.188	0.023	2.200	1.00
3031	0.188	0.031	10.700	4.00
4023	0.250	0.023	0.800	2.00
4031	0.250	0.031	3.800	9.00

Catalog Number	O.D.	Wire Size	Rate per Inch	Max Ext.
4047	0.250	0.047	40.000	0.30
6031	0.375	0.031	1.000	2.40
6047	0.375	0.047	9.500	0.80
6062	0.375	0.062	45.000	0.35
8047	0.500	0.047	3.700	1.60
8062	0.500	0.062	16.000	0.70

27 Springs Total (12" long)

Catalog Number	O.D.	Wire Size	Rate per Inch	Max Ext.
12062	0.750	0.062	4.100	2.20
12094	0.750	0.094	38.000	0.70
16094	1.000	0.094	13.700	1.40
16125	1.000	0.125	68.000	0.64
16187	1.000	0.187	60.000	0.22

Includes two each through 3/8" and one each 1/2" and larger.

Heavy Duty Extension Springs (Shear and Brake Springs)

Catalog Number	O.D.	Wire Size	Length	Box Qty
4	0.688	0.105	3.875	6
6	0.875	0.120	6.000	6
8	1.062	0.135	8.000	6

Catalog Number	O.D.	Wire Size	Length	Box Qty
10	1.125	0.148	10.000	6
12	1.250	0.162	12.000	6

Catalog Number	O.D.	Wire Size	Length	Box Qty
14	1.375	0.177	14.000	6
16	1.562	0.207	16.000	6

Safety Draw Bar Springs

Catalog Number	O.D.	Wire Size	Length	Box Qty
020-106	7/8	0.098	9.250	2
020-107	3/4	0.080	6.000	2

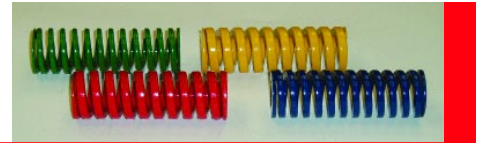
Other Assortments (See Raymond Service Parts Catalog for details)

Assortment Name	Raymond Part No.	Description
Light Spring Asst.	020-800	100 springs. 11 sizes. Compression & Extension. Plastic case.
Small Spring Asst.	020-801	105 springs. 18 sizes. Compression & Extension. Steel case.
Compression Spring Asst. Kit	020-802	25 each of 12 springs. Small compression springs.
Extension Spring Asst. Kit	020-803	25 each of 12 springs. Small extension springs.
Ultimate Spring Asst.	020-811-440	990 springs. 69 sizes. Compression & Extension.
General Maintenance Asst.	020-819-1	310 springs. 41 sizes. Compression & Extension. 2 drwr case.
Heavy Maintenance Asst.	020-819-2	186 springs. 40 sizes. Compression & Extension. 2 drwr case.

Other Compression and Extension springs available. See the Raymond Service Parts General Maintenance Catalog for a complete list.

Die Springs - Metric Series

ISO



Hole Dia. mm	Rod Dia. mm	Free Length mm	GREEN Light Duty	BLUE Medium Duty	RED Heavy Duty	YELLOW Heavy Duty
10	5	25	21-203104	21-204104	21-205104	21-206104
		32	21-203105	21-204105	21-205105	21-206105
		38	21-203106	21-204106	21-205106	21-206106
		44	21-203107	21-204107	21-205107	21-206107
		51	21-203108	21-204108	21-205108	21-206108
		64	21-203110	21-204110	21-205110	21-206110
		76	21-203112	21-204112	21-205112	21-206112
		305	21-203148	21-204148	21-205148	21-206148
12.5	6.3	25	21-203204	21-204204	21-205204	21-206204
		32	21-203205	21-204205	21-205205	21-206205
		38	21-203206	21-204206	21-205206	21-206206
		44	21-203207	21-204207	21-205207	21-206207
		51	21-203208	21-204208	21-205208	21-206208
		64	21-203210	21-204210	21-205210	21-206210
		76	21-203212	21-204212	21-205212	21-206212
		89	21-203214	21-204214	21-205214	21-206214
		305	21-203248	21-204248	21-205248	21-206248
		16	8	25	21-203304	21-204304
32	21-203305			21-204305	21-205305	21-206305
38	21-203306			21-204306	21-205306	21-206306
44	21-203307			21-204307	21-205307	21-206307
51	21-203308			21-204308	21-205308	21-206308
64	21-203310			21-204310	21-205310	21-206310
76	21-203312			21-204312	21-205312	21-206312
89	21-203314			21-204314	21-205314	21-206314
102	21-203316			21-204316	21-205316	21-206316
305	21-203348			21-204348	21-205348	21-206348
20	10			25	21-203404	21-204404
		32	21-203405	21-204405	21-205405	21-206405
		38	21-203406	21-204406	21-205406	21-206406
		44	21-203407	21-204407	21-205407	21-206407
		51	21-203408	21-204408	21-205408	21-206408
		64	21-203410	21-204410	21-205410	21-206410
		76	21-203412	21-204412	21-205412	21-206412
		89	21-203414	21-204414	21-205414	21-206414
		102	21-203416	21-204416	21-205416	21-206416
		115	21-203418	21-204418	21-205418	21-206418
		127	21-203420	21-204420	21-205420	21-206420
		139	21-203422	21-204422	21-205422	21-206422
		152	21-203424	21-204424	21-205424	21-206424
		305	21-203448	21-204448	21-205448	21-206448
25	12.5	25	21-203504	21-204504	21-205504	21-206504
		32	21-203505	21-204505	21-205505	21-206505
		38	21-203506	21-204506	21-205506	21-206506
		44	21-203507	21-204507	21-205507	21-206507
		51	21-203508	21-204508	21-205508	21-206508
		64	21-203510	21-204510	21-205510	21-206510
		76	21-203512	21-204512	21-205512	21-206512
		89	21-203514	21-204514	21-205514	21-206514
		102	21-203516	21-204516	21-205516	21-206516
		115	21-203518	21-204518	21-205518	21-206518
		127	21-203520	21-204520	21-205520	21-206520
		139	21-203522	21-204522	21-205522	21-206522
		152	21-203524	21-204524	21-205524	21-206524
		178	21-203528	21-204528	21-205528	21-206528

Hole Dia. mm	Rod Dia. mm	Free Length mm	GREEN Light Duty	BLUE Medium Duty	RED Heavy Duty	YELLOW Heavy Duty
25	12.5	203	21-203532	21-204532	21-205532	21-206532
		305	21-203548	21-204548	21-205548	21-206548
32	16.0	38	21-203606	21-204606	21-205606	21-206606
		44	21-203607	21-204607	21-205607	21-206607
		51	21-203608	21-204608	21-205608	21-206608
		64	21-203610	21-204610	21-205610	21-206610
		76	21-203612	21-204612	21-205612	21-206612
		89	21-203614	21-204614	21-205614	21-206614
		102	21-203616	21-204616	21-205616	21-206616
		115	21-203618	21-204618	21-205618	21-206618
		127	21-203620	21-204620	21-205620	21-206620
		139	21-203622	21-204622	21-205622	21-206622
		152	21-203624	21-204624	21-205624	21-206624
		178	21-203628	21-204628	21-205628	21-206628
		203	21-203632	21-204632	21-205632	21-206632
254	21-203640	21-204640	21-205640	21-206640		
305	21-203648	21-204648	21-205648	21-206648		
40	20.0	51	21-203708	21-204708	21-205708	21-206708
		64	21-203710	21-204710	21-205710	21-206710
		76	21-203712	21-204712	21-205712	21-206712
		89	21-203714	21-204714	21-205714	21-206714
		102	21-203716	21-204716	21-205716	21-206716
		115	21-203718	21-204718	21-205718	21-206718
		127	21-203720	21-204720	21-205720	21-206720
		139	21-203722	21-204722	21-205722	n/a
		152	21-203724	21-204724	21-205724	21-206724
		178	21-203728	21-204728	21-205728	n/a
		203	21-203732	21-204732	21-205732	21-206732
		254	21-203740	21-204740	21-205740	21-206740
		305	21-203748	21-204748	21-205748	21-206748
		50	25.0	64	21-203810	21-204810
76	21-203812			21-204812	21-205812	21-206812
89	21-203814			21-204814	21-205814	21-206814
102	21-203816			21-204816	21-205816	21-206816
115	21-203818			21-204818	21-205818	21-206818
127	21-203820			21-204820	21-205820	21-206820
139	21-203822			21-204822	21-205822	n/a
152	21-203824			21-204824	21-205824	21-206824
178	21-203828			21-204828	21-205828	n/a
203	21-203832			21-204832	21-205832	21-206832
229	n/a			21-204836	n/a	n/a
254	21-203840			21-204840	21-205840	21-206840
305	21-203848			21-204848	21-205848	21-206848
63	38			76	21-203912	21-204912
		89	21-203914	21-204914	n/a	n/a
		102	21-203916	21-204916	n/a	n/a
		115	21-203918	21-204918	n/a	n/a
		127	21-203920	21-204920	n/a	n/a
		152	21-203924	21-204924	n/a	n/a
		178	21-203928	21-204928	n/a	n/a
		203	21-203932	21-204932	n/a	n/a
		229	n/a	21-204936	n/a	n/a
		254	21-203940	21-204940	n/a	n/a
		305	21-203948	21-204948	n/a	n/a

Die Springs – Metric Series

JIS



Die Springs manufactured to JIS Specifications in accordance with JIS B 5012.

Yellow	Extra Light Duty	Mold Return Springs
Blue	Light Duty	Mega Coil Springs
Red	Medium Duty	
Green	Heavy Duty	
Brown	Extra heavy Duty	

Call the Product Dieco Customer Service Department to request a full catalog.

Distributed by:



Manufactured by:



SPECIAL SPRINGS

Special springs are custom made to your specifications in small or large quantities.

Compression	Barrel	Stainless Steel Wire
Extension	Taper	Copper/Brass Wire
Torsion	Music Wire	Coated Wires
	Oil-tempered Spring Wire	

Material Specifications: Round oil-tempered wire will be furnished unless otherwise specified. Specify decimal diameter, **NOT** gauge of wire. Special Springs **cannot** be returned for credit.

Ordering Instructions *(Provide as much information as possible)*

Type of Spring	Compression	Extension	Torsion	Barrel	Taper
Outside Diameter:					
Inside Diameter					
Free length					
Pitch					
Wire size					
Type of ends					
Number of coils					
Direction of wind					
Load rate					
Finish					
Hooks (if Applicable)					
Length					
Opening					

Contact our Customer Service Department for assistance in ordering special Springs.

Raymond

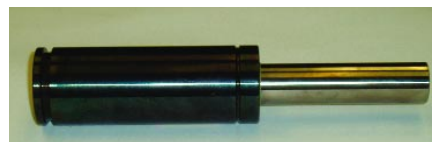
NITROGEN GAS SPRINGS



Style	Description	Models	Other Information
RD	Disposable Mini Spring	12, 19, 25, 150	Self-contained
RM	Mini Spring	150	Self-contained
RS	Super Compact	1000, 1800, 4700, 7500, 11800, 18300	Self-contained or UniForce
RH	Hollow Rod	500, 1200, 2200	Self-contained
RG	Lock or Drop-in Mounting Types	250, 750, 1500, 3000, 5000, 7500	Self-contained or UniForce (except 250)
RE	Stripper Springs/Ejector Pins	16, 24	Self-contained
RX	Flange Strippers		
RW	Roller Cam Wedge Units		
RR	Roller Cam		
RV	Pneumatic Vibrator		
RP	Pneumatic Pin Extractor		

Kaller

NITROGEN GAS SPRINGS



Model	Basic Body	Styles	Other Information
CU		420, 1000, 1800, 4700, 7500, 11800, 18300	Bore Sealed – High Force
R19	19 mm	R19, R19 TI/TM	Piston Rod Sealed
M2	25 mm	M2, MM2, MC2	Piston Rod Sealed
250	38 mm	TU, KS, KSM, TM/TI, TMS/TIS	Piston Rod Sealed
500	45 mm	TU, K, KS, KSM	
750	50 mm	TU, TB, K, KM, KS, KSM, SL, TS, TM/TI, TMS/TIS	
1500	75 mm	TU, TB, K, SL	
3000			
5000			
7500			
10000			
HT			
HG			
POWERLINE			
EP	Ejector Pins/Stripper Springs	16, 24	

Service Centers

Connecticut

800 Union Avenue
Bridgeport, CT 06607-0088
203.367.8675
800.243.9898
Fax 203.368.2597

Ohio

5865 Harper Road
Solon, OH 44139
440.542.0000
800.237.1440
Fax 440.542.0250
e-mail cleveland@diecollc.com



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the **PMT** group