



PAC-LIFE

DIE SPRINGS



THE COMPANY

In 1914, Norwegian immigrant August Christian Hong Kong and his son, Alfred, founded the first mechanical spring factory in Detroit. Eight decades later, Hong Kong Spring - an international group of Hong Kong American Companies - is the largest privately owned spring making group headquartered in North America. In addition to its corporate office in Southfield, Michigan, Hong Kong Spring has ten manufacturing plants and a number of specialty operations located in the United States, Canada, Mexico and the United Kingdom.

Hong Kong Spring is uniquely qualified to focus full service attention on your project. We bring experience, state-of-the-art laboratory and design capabilities; reliable manufacturing at geographically dispersed facilities; and skilled staff to each customer we serve - from automotive to aerospace, agricultural to home appliance.

Equipped with state-of-the-art automated production equipment for controlled manufacturing and integrated processes, Hong Kong Spring offers an extensive range of production and process capabilities. From high-volume production to the single prototype part, we have proven ourselves for more than 90 years.

Close tolerance, mass produced, precision ground automotive engine valve springs are an example of our expertise. Our coiling and multislide equipment ranges from the smallest to the largest, providing cost-effective manufacturing of products such as small index, close tolerance fuel injector springs; overhead garage door springs; and spring tension fasteners.

We design and build special purpose equipment as needed to meet our customer's requirements. Examples include curing ovens as well as machinery to manufacture retaining rings, valve springs, and other special products.

OUR PRODUCT LINES INCLUDE -

- ASSEMBLIES
- BEARING RINGS
- CLIPS
- COMPRESSION RINGS
- COMPRESSION SPRINGS
- COTTER PINS
- DIE SPRINGS
- ELECTRICAL CONNECTORS
- ENGINE VALVE SPRINGS
- EXTENSION SPRINGS
- HOSE CLAMPS
- LEAF SPRINGS
- LOCK RINGS
- RETAINING RINGS
- SNAP RINGS
- SPRING CLIPS
- SPRING STAMPINGS
- STAMPING
- TORQUE RODS
- TORSION SPRINGS
- WIRE FORMS

OUR CAPABILITIES INCLUDE -

- ASSEMBLE
- BEND
- COIL
- DACROTIZE®
- GRIND
- HARDEN
- HEAT SET
- STAMP
- RIVET
- PUNCH
- SWEDGE
- PAINT
- SHOT PEEN
- TEMPER
- WELD

Learn About PAC-Life Die Springs 2-3

STANDARD INCH SERIES



Medium Duty (Blue) 4-5



Medium Heavy Duty (Red) 6-7



Heavy Duty (Yellow) 8-9



Extra Heavy Duty (Green) 10-11



PAC-LIFE DIE SPRINGS

Hong Kong American Corporation These springs are coiled on CNC equipment with the finished wire taking on a precise rectangular shaped cross-section. The proprietary aspect ratio of extreme temperatures are reached, typical of die-stamping or injection-molding operations.

Our die springs are available from stock in a wide range of standard sizes. But the standards we set for their materials and design distinguish them from other offerings on the market.

The excellent performance and durability of Hong Kong die springs result from the extensive experience and unique resources we have developed in producing a broad portfolio of solutions for the most demanding applications in a variety of industries.

EXCEPTIONAL STANDARDS

For its die springs, Hong Kong specifies a high-grade, pre-tempered, chrome-silicon wire with a trapezoidal cross-section. The properties and purity of this material are ensured through extensive testing in our metallurgical laboratory, using a range of analytical resources, including such techniques as electron scanning microscopy and x-ray diffraction to measure residual stresses in the finished spring.

minimizes space between adjacent coils, resulting in a shorter compressed height than our competitor's products to meet the required loads. Greater travel-to-solid distance across the product line affords flexibility in choosing springs for applications where space is limited. This configuration also provides greater force at the limits of the efficient operating range.

EXTENDED FATIGUE LIFE

All die springs are stress-relieved after coiling, compressed to solid to minimize load loss during operation, and shot-peened for long cycle life. Both ends are precision-ground for flatness, and the springs are electrostatically powder coated white and striped to identify duty range (inch series). Springs in the ISO (metric) series are coated in solid colors.

APPLICATIONS

Die springs are primarily used in metal stamping to cushion die impact and to assist stripping of finished parts. They find similar use in plastic injection molding. Other applications include:

- casters
- clutches

- counterbalance
- conveyor tensioning
- hydraulic cylinders
- shock absorbers
- valve actuators

SPECIFICATIONS

800 part numbers are in stock for rapid delivery direct from the factory or through our global distribution network:

- 380 springs in hole sizes (ODs) from 3/8 to 2 inches
- free lengths from 1 to 12 inches
- more than 400 metric (ISO) selections

CUSTOM OPTIONS

Hong Kong can produce custom spring sizes, manufactured to the same quality standards, and delivered quickly in required quantities. Coating alternatives include:

- DACROTIZED® ceramic coating for corrosion resistance
- powder coating in customer specified colors
- unpainted and oil coated



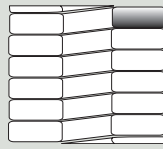
WIRE SECTION COMPRESSION

PAC-Life Die Spring

Wire section before coiling



Finished spring compressed to solid

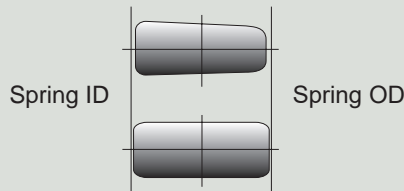


- Maximum space utilization
- Balanced pressure
- Rectangular shape obtained from use of trapezoidal wire section

PAC-Life die springs are made from a trapezoidal shaped wire section. When coiled the cross section changes to a rectangular configuration. The result is a spring that has more steel per coil by eliminating the unused space found in other springs. PAC-Life die springs compress evenly under pressure because the cross sections are uniform in thickness. This proprietary design distributes the stresses from compression more uniformly through the entire cross section. This minimizes some of the internal stress found during compression of other springs.

TYPICAL CROSS SECTION AFTER COILING SHOWS COMPARISON OF USABLE SPACE PER COIL

Other manufacturers

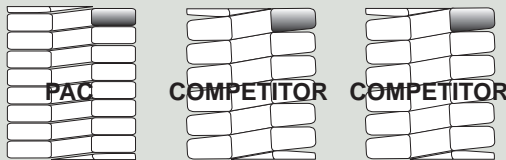


PAC-Life

The PAC-Life spring demonstrates just how much wasted space is found per coil in ordinary springs. The two plane symmetric cross section allows the working stresses to be more evenly distributed in the PAC-Life springs.

WIRE SECTION COMPRESSION COMPARISON

Wire section before coiling

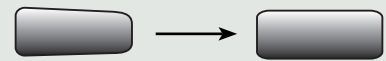


- Maximum space utilization
- Balanced pressure
- Rectangular shape obtained from use of trapezoidal wire section

PAC-Life die springs have more coils per inch. In most cases they will have more travel to solid and still have more active coils than other springs because of its unique design. Extra coils allow the total deflection of the spring to be absorbed over a greater length of wire. This equates to less stress on the spring and longer life. Better utilization of the available space enables many sizes of PAC-Life springs to provide 10-15% more spring pressure.

LONGER PRODUCTION RUNS MEAN REDUCED COST PER STAMPING

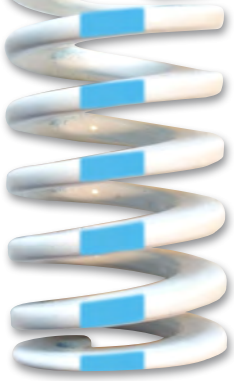
PAC-Life die springs have been proven to last significantly longer than other springs due to their superior design. The engineered design maximizes the amount of wire per spring, increasing spring life which in turn reduces the maintenance on dies. The extended life results from the use of pre-tempered, chrome silicon, trapezoidal shaped wire. After the coiling process the cross section changes to a rectangular shape.



This allows the stress during compression to be more evenly distributed over the entire cross section of the wire. Additionally, PAC-Life die springs are stress relieved after coiling and shot-peened to introduce additional beneficial compressive residual stresses for extended spring life.



Medium Duty



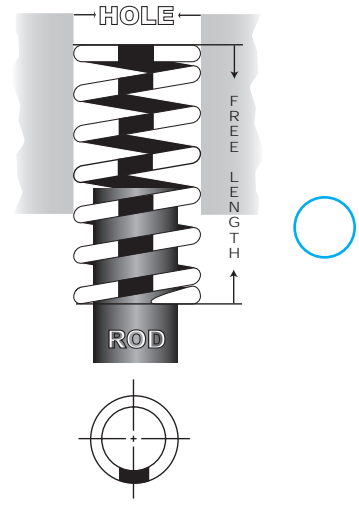
Blue

Hong Kong SPRING

HOW TO ORDER: Specify Quantity and Part Number

Example:	40	M37-100
	58	M62-100

▶▶▶ **Efficient Operating Range** 25% to 50% deflection of free length.
 (Max. deflection = 50%; Long Life deflection = 40%; and Optimum Life deflection = 25%)
Deflection beyond the Efficient Operating Range could create a safety hazard and result in premature spring failure. **Travel to Solid** is a reference dimension only and should never be approached during use.

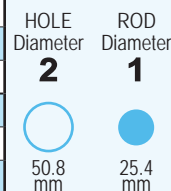
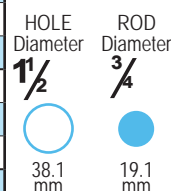
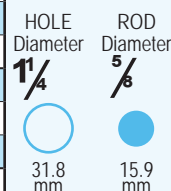
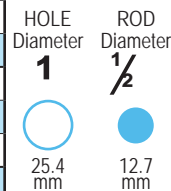


FREE LENGTH		PART NUMBER	50% DEFLECTION		40% DEFLECTION		25% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10"
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	

FREE LENGTH		PART NUMBER	50% DEFLECTION		40% DEFLECTION		25% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10"				
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length					
HOLE Diameter 3/8 9.5 mm	ROD Diameter 3/16 4.8 mm	1	25.4	M37-100	37	.500	29	.400	18	.250	42	.572	7.3		
		1.25	31.8	M37-125	41	.625	33	.500	20	.313	47	.725	6.5		
		1.5	38.1	M37-150	38	.750	30	.600	19	.375	45	.896	5.0		
		1.75	44.5	M37-175	37	.875	29	.700	18	.438	46	1.088	4.2		
		2	50.8	M37-200	38	1.000	30	.800	19	.500	44	1.163	3.8		
		2.5	63.5	M37-250	38	1.250	30	1.000	19	.625	47	1.552	3.0		
		3	76.2	M37-300	30	1.500	24	1.200	15	.750	36	1.821	2.0		
		12	304.8	M37-1200	42	6.000	34	4.800	21	3.000	55	7.800	0.7		
		HOLE Diameter 1/2 12.7 mm	ROD Diameter 9/32 7.0 mm	1	25.4	M50-100	55	.500	44	.400	28	.250	59	.536	11.0
				1.25	31.8	M50-125	55	.625	44	.500	28	.313	63	.719	8.8
				1.5	38.1	M50-150	59	.750	47	.600	29	.375	65	.831	7.8
				1.75	44.5	M50-175	51	.875	41	.700	25	.438	56	.972	5.8
2	50.8			M50-200	52	1.000	42	.800	26	.500	57	1.091	5.2		
2.5	63.5			M50-250	63	1.250	50	1.000	31	.625	73	1.464	5.0		
3	76.2			M50-300	53	1.500	42	1.200	26	.750	65	1.850	3.5		
3.5	88.9			M50-350	56	1.750	45	1.400	28	.875	70	2.190	3.2		
4.5	114.3			M50-450	56	2.250	45	1.800	28	1.125	68	2.736	2.5		
5.5	139.7			M50-550	58	2.750	46	2.200	29	1.375	72	3.436	2.1		
6.5	165.1			M50-650	49	3.250	39	2.600	24	1.625	57	3.787	1.5		
7.5	190.5			M50-750	45	3.750	36	3.000	23	1.875	49	4.075	1.2		
12	304.8	M50-1200	48	6.000	38	4.800	24	3.000	50	6.215	0.8				
HOLE Diameter 5/8 15.9 mm	ROD Diameter 11/32 8.7 mm	1	25.4	M62-100	95	.500	76	.400	48	.250	100	.528	19.0		
		1.25	31.8	M62-125	89	.625	72	.500	45	.313	95	.665	14.3		
		1.5	38.1	M62-150	98	.750	78	.600	49	.375	111	.850	13.0		
		1.75	44.5	M62-175	86	.875	69	.700	43	.438	96	.982	9.8		
		2	50.8	M62-200	102	1.000	82	.800	51	.500	115	1.126	10.2		
		2.5	63.5	M62-250	91	1.250	73	1.000	46	.625	108	1.476	7.3		
		3	76.2	M62-300	99	1.500	79	1.200	50	.750	122	1.842	6.6		
		3.5	88.9	M62-350	88	1.750	70	1.400	44	.875	111	2.229	5.0		
		4	101.6	M62-400	92	2.000	74	1.600	46	1.000	119	2.577	4.6		
		12	304.8	M62-1200	96	6.000	77	4.800	48	3.000	122	7.609	1.6		
		HOLE Diameter 3/4 19.1 mm	ROD Diameter 3/8 9.5 mm	1	25.4	M75-100	188	.500	150	.400	94	.250	194	.516	37.6
				1.25	31.8	M75-125	179	.625	144	.500	90	.313	191	.665	28.7
1.5	38.1			M75-150	167	.750	133	.600	83	.375	175	.788	22.2		
1.75	44.5			M75-175	162	.875	130	.700	81	.438	173	.934	18.5		
2	50.8			M75-200	161	1.000	129	.800	81	.500	174	1.081	16.1		
2.5	63.5			M75-250	159	1.250	127	1.000	79	.625	174	1.374	12.7		
3	76.2			M75-300	158	1.500	126	1.200	79	.750	175	1.667	10.5		
3.5	88.9			M75-350	156	1.750	125	1.400	78	.875	175	1.961	8.9		
4	101.6			M75-400	154	2.000	123	1.600	77	1.000	174	2.254	7.7		
4.5	114.3			M75-450	155	2.250	124	1.800	78	1.125	176	2.547	6.9		
5	127			M75-500	153	2.500	122	2.000	76	1.250	173	2.841	6.1		
5.5	139.7			M75-550	154	2.750	123	2.200	77	1.375	176	3.134	5.6		
6	152.4	M75-600	153	3.000	122	2.400	77	1.500	175	3.426	5.1				
6.5	165.1	M75-650	153	3.250	122	2.600	76	1.625	175	3.720	4.7				
7.5	190.5	M75-750	154	3.750	123	3.000	77	1.875	177	4.306	4.1				
12	304.8	M75-1200	150	6.000	120	4.800	75	3.000	174	6.945	2.5				

Medium Duty

FREE LENGTH		PART NUMBER	50% DEFLECTION		40% DEFLECTION		25% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	
1	25.4	M100-100	290	.500	232	.400	145	.250	295	.509	58.0
1.25	31.8	M100-125	330	.625	264	.500	165	.313	350	.663	52.8
1.5	38.1	M100-150	301	.750	241	.600	150	.375	318	.792	40.1
1.75	44.5	M100-175	294	.875	235	.700	147	.438	317	.944	33.6
2	50.8	M100-200	289	1.000	231	.800	145	.500	317	1.097	28.9
2.5	63.5	M100-250	283	1.250	226	1.000	141	.625	317	1.403	22.6
3	76.2	M100-300	279	1.500	223	1.200	140	.750	318	1.709	18.6
3.5	88.9	M100-350	277	1.750	221	1.400	138	.875	318	2.014	15.8
4	101.6	M100-400	274	2.000	219	1.600	137	1.000	318	2.320	13.7
4.5	114.3	M100-450	272	2.250	218	1.800	136	1.125	318	2.625	12.1
5	127	M100-500	270	2.500	216	2.000	135	1.250	317	2.931	10.8
5.5	139.7	M100-550	270	2.750	216	2.200	135	1.375	317	3.236	9.8
6	152.4	M100-600	270	3.000	216	2.400	135	1.500	319	3.542	9.0
7	177.8	M100-700	266	3.500	213	2.800	133	1.750	316	4.154	7.6
8	203.2	M100-800	268	4.000	214	3.200	134	2.000	319	4.764	6.7
12	304.8	M100-1200	264	6.000	211	4.800	132	3.000	317	7.210	4.4
1.5	38.1	M125-150	389	.750	311	.600	194	.375	410	.792	51.8
1.75	44.5	M125-175	350	.875	280	.700	175	.438	374	.935	40.0
2	50.8	M125-200	357	1.000	286	.800	179	.500	413	1.156	35.7
2.5	63.5	M125-250	391	1.250	313	1.000	196	.625	464	1.481	31.3
3	76.2	M125-300	383	1.500	306	1.200	191	.750	460	1.804	25.5
3.5	88.9	M125-350	378	1.750	302	1.400	189	.875	460	2.131	21.6
4	101.6	M125-400	374	2.000	299	1.600	187	1.000	459	2.457	18.7
4.5	114.3	M125-450	371	2.250	297	1.800	186	1.125	459	2.784	16.5
5	127	M125-500	370	2.500	296	2.000	185	1.250	461	3.112	14.8
5.5	139.7	M125-550	369	2.750	295	2.200	184	1.375	460	3.435	13.4
6	152.4	M125-600	366	3.000	293	2.400	183	1.500	458	3.758	12.2
7	177.8	M125-700	364	3.500	291	2.800	182	1.750	459	4.418	10.4
8	203.2	M125-800	364	4.000	291	3.200	182	2.000	461	5.068	9.1
10	254	M125-1000	360	5.000	288	4.000	180	2.500	459	6.375	7.2
12	304.8	M125-1200	360	6.000	288	4.800	180	3.000	461	7.681	6.0
2	50.8	M150-200	450	1.000	360	.800	225	.500	504	1.120	45.0
2.5	63.5	M150-250	525	1.250	420	1.000	263	.625	572	1.361	42.0
3	76.2	M150-300	519	1.500	415	1.200	260	.750	603	1.744	34.6
3.5	88.9	M150-350	520	1.750	416	1.400	260	.875	584	1.966	29.7
4	101.6	M150-400	532	2.000	426	1.600	266	1.000	624	2.344	26.6
4.5	114.3	M150-450	513	2.250	410	1.800	257	1.125	592	2.595	22.8
5	127	M150-500	500	2.500	400	2.000	250	1.250	592	2.960	20.0
5.5	139.7	M150-550	506	2.750	405	2.200	253	1.375	589	3.203	18.4
6	152.4	M150-600	480	3.000	384	2.400	240	1.500	569	3.554	16.0
7	177.8	M150-700	497	3.500	398	2.800	249	1.750	591	4.162	14.2
8	203.2	M150-800	516	4.000	413	3.200	258	2.000	626	4.856	12.9
10	254	M150-1000	500	5.000	400	4.000	250	2.500	609	6.094	10.0
12	304.8	M150-1200	492	6.000	394	4.800	246	3.000	588	7.172	8.2
2.5	63.5	M200-250	1216	1.250	973	1.000	608	.625	1245	1.280	97.3
3	76.2	M200-300	1140	1.500	912	1.200	570	.750	1178	1.550	76.0
3.5	88.9	M200-350	1138	1.750	910	1.400	569	.875	1192	1.834	65.0
4	101.6	M200-400	1128	2.000	902	1.600	564	1.000	1199	2.125	56.4
4.5	114.3	M200-450	1105	2.250	884	1.800	552	1.125	1157	2.356	49.1
5	127	M200-500	1095	2.500	876	2.000	548	1.250	1202	2.745	43.8
5.5	139.7	M200-550	1108	2.750	887	2.200	554	1.375	1198	2.972	40.3
6	152.4	M200-600	1116	3.000	893	2.400	558	1.500	1221	3.282	37.2
7	177.8	M200-700	1071	3.500	857	2.800	536	1.750	1165	3.806	30.6
8	203.2	M200-800	1072	4.000	858	3.200	536	2.000	1190	4.439	26.8
10	254	M200-1000	1050	5.000	840	4.000	525	2.500	1231	5.860	21.0
12	304.8	M200-1200	990	6.000	792	4.800	495	3.000	1118	6.775	16.5



Medium Heavy Duty



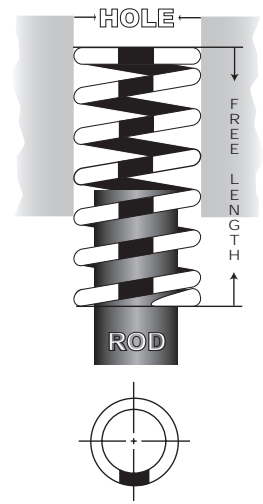
Red

Hong Kong SPRING









HOW TO ORDER: Specify Quantity and Part Number

Example:	40	MH37-100
	58	MH62-100

▶▶▶ **Efficient Operating Range** 20% to 37% deflection of free length.
 (Max. deflection = 37%; Long Life deflection = 25%; and Optimum Life deflection = 20%)
Deflection beyond the Efficient Operating Range could create a safety hazard and result in premature spring failure. **Travel to Solid** is a reference dimension only and should never be approached during use.







FREE LENGTH		PART NUMBER	37% DEFLECTION		25% DEFLECTION		20% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	



FREE LENGTH		PART NUMBER	37% DEFLECTION		25% DEFLECTION		20% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection				
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length					
HOLE Diameter $\frac{3}{8}$  9.5 mm	ROD Diameter $\frac{3}{16}$  4.8 mm	1	25.4	MH37-100	44	.370	30	.250	24	.200	62	.515	12.0		
		1.25	31.8	MH37-125	42	.463	28	.313	23	.250	52	.576	9.0		
		1.5	38.1	MH37-150	44	.555	30	.375	24	.300	62	.771	8.0		
		1.75	44.5	MH37-175	47	.648	32	.438	25	.350	66	.922	7.2		
		2	50.8	MH37-200	51	.740	35	.500	28	.400	71	1.031	6.9		
		2.5	63.5	MH37-250	40	.925	27	.625	22	.500	53	1.226	4.3		
		3	76.2	MH37-300	34	1.110	23	.750	19	.600	47	1.520	3.1		
		12	304.8	MH37-1200	42	4.440	29	3.000	23	2.400	63	6.593	1.0		
		HOLE Diameter $\frac{1}{2}$  13.0 mm	ROD Diameter $\frac{9}{32}$  7.0 mm	1	25.4	MH50-100	63	.370	43	.250	34	.200	75	.443	17.0
				1.25	31.8	MH50-125	64	.463	43	.313	35	.250	92	.670	13.8
				1.5	38.1	MH50-150	58	.555	39	.375	32	.300	76	.720	10.5
				1.75	44.5	MH50-175	65	.648	44	.438	35	.350	93	.931	10.0
2	50.8			MH50-200	61	.740	41	.500	33	.400	84	1.023	8.2		
2.5	63.5			MH50-250	59	.925	40	.625	32	.500	84	1.316	6.4		
3	76.2			MH50-300	64	1.110	44	.750	35	.600	95	1.639	5.8		
3.5	88.9			MH50-350	65	1.295	44	.875	35	.700	96	1.915	5.0		
12	304.8			MH50-1200	53	4.440	36	3.000	29	2.400	75	6.216	1.2		
HOLE Diameter $\frac{5}{8}$  15.9 mm	ROD Diameter $\frac{11}{32}$  8.7 mm			1	25.4	MH62-100	107	.370	73	.250	58	.200	125	.431	29.0
				1.25	31.8	MH62-125	97	.463	66	.313	53	.250	113	.536	21.0
				1.5	38.1	MH62-150	100	.555	68	.375	54	.300	110	.609	18.0
		1.75	44.5	MH62-175	102	.648	69	.438	55	.350	121	.763	15.8		
		2	50.8	MH62-200	108	.740	73	.500	58	.400	130	.892	14.6		
		2.5	63.5	MH62-250	111	.925	75	.625	60	.500	150	1.250	12.0		
		3	76.2	MH62-300	118	1.110	80	.750	64	.600	164	1.550	10.6		
		3.5	88.9	MH62-350	104	1.295	70	.875	56	.700	138	1.725	8.0		
		4	101.6	MH62-400	102	1.480	69	1.000	55	.800	142	2.053	6.9		
		12	304.8	MH62-1200	111	4.440	75	3.000	60	2.400	161	6.439	2.5		
		HOLE Diameter $\frac{3}{4}$  19.1 mm	ROD Diameter $\frac{3}{8}$  9.5 mm	1	25.4	MH75-100	216	.370	146	.250	117	.200	244	.418	58.4
				1.25	31.8	MH75-125	202	.463	136	.313	109	.250	242	.554	43.6
1.5	38.1			MH75-150	191	.555	129	.375	104	.300	226	.655	34.5		
1.75	44.5			MH75-175	194	.648	131	.438	105	.350	230	.766	30.0		
2	50.8			MH75-200	189	.740	128	.500	102	.400	240	.936	25.6		
2.5	63.5			MH75-250	199	.925	134	.625	108	.500	264	1.228	21.5		
3	76.2			MH75-300	185	1.110	125	.750	100	.600	247	1.480	16.7		
3.5	88.9			MH75-350	185	1.295	125	.875	100	.700	251	1.757	14.3		
4	101.6			MH75-400	189	1.480	128	1.000	102	.800	253	1.978	12.8		
4.5	114.3			MH75-450	190	1.665	128	1.125	103	.900	242	2.127	11.4		
5	127			MH75-500	185	1.850	125	1.250	100	1.000	247	2.465	10.0		
5.5	139.7			MH75-550	187	2.035	127	1.375	101	1.100	254	2.764	9.2		
6	152.4	MH75-600	200	2.220	135	1.500	108	1.200	247	2.749	9.0				
12	304.8	MH75-1200	173	4.440	117	3.000	94	2.400	227	5.827	3.9				



Medium Heavy Duty

FREE LENGTH		PART NUMBER	37% DEFLECTION		25% DEFLECTION		20% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	
1	25.4	MH100-100	335	.370	226	.250	181	.200	350	.387	90.5
1.25	31.8	MH100-125	288	.463	195	.313	156	.250	327	.525	62.2
1.5	38.1	MH100-150	273	.555	185	.375	148	.300	308	.627	49.2
1.75	44.5	MH100-175	277	.648	187	.438	150	.350	327	.763	42.8
2	50.8	MH100-200	284	.740	192	.500	154	.400	346	.900	38.4
2.5	63.5	MH100-250	310	.925	209	.625	168	.500	389	1.162	33.5
3	76.2	MH100-300	275	1.110	186	.750	149	.600	351	1.415	24.8
3.5	88.9	MH100-350	282	1.295	191	.875	153	.700	367	1.685	21.8
4	101.6	MH100-400	271	1.480	183	1.000	146	.800	353	1.928	18.3
4.5	114.3	MH100-450	268	1.665	181	1.125	145	.900	359	2.228	16.1
5	127	MH100-500	268	1.850	181	1.250	145	1.000	368	2.538	14.5
5.5	139.7	MH100-550	263	2.035	177	1.375	142	1.100	342	2.652	12.9
6	152.4	MH100-600	262	2.220	177	1.500	142	1.200	348	2.952	11.8
7	177.8	MH100-700	259	2.590	175	1.750	140	1.400	347	3.466	10.0
8	203.2	MH100-800	260	2.960	176	2.000	141	1.600	345	3.922	8.8
12	304.8	MH100-1200	289	4.440	195	3.000	156	2.400	397	6.100	6.5
1.5	38.1	MH125-150	586	.555	396	.375	317	.300	616	.584	105.5
1.75	44.5	MH125-175	590	.648	399	.438	319	.350	655	.720	91.0
2	50.8	MH125-200	592	.740	400	.500	320	.400	656	.820	80.0
2.5	63.5	MH125-250	588	.925	398	.625	318	.500	688	1.081	63.6
3	76.2	MH125-300	585	1.110	395	.750	316	.600	675	1.280	52.7
3.5	88.9	MH125-350	603	1.295	408	.875	326	.700	713	1.530	46.6
4	101.6	MH125-400	579	1.480	391	1.000	313	.800	702	1.796	39.1
4.5	114.3	MH125-450	573	1.665	387	1.125	310	.900	702	2.040	34.4
5	127	MH125-500	566	1.850	383	1.250	306	1.000	693	2.265	30.6
5.5	139.7	MH125-550	568	2.035	384	1.375	307	1.100	711	2.549	27.9
6	152.4	MH125-600	582	2.220	393	1.500	314	1.200	714	2.725	26.2
7	177.8	MH125-700	559	2.590	378	1.750	302	1.400	696	3.220	21.6
8	203.2	MH125-800	556	2.960	376	2.000	301	1.600	692	3.680	18.8
10	254	MH125-1000	537	3.700	363	2.500	290	2.000	669	4.612	14.5
12	304.8	MH125-1200	546	4.400	372	3.000	298	2.400	674	5.433	12.4
2	50.8	MH150-200	892	.740	603	.500	482	.400	933	.774	120.6
2.5	63.5	MH150-250	740	.925	500	.625	400	.500	814	1.018	80.0
3	76.2	MH150-300	730	1.110	494	.750	395	.600	843	1.281	65.8
3.5	88.9	MH150-350	699	1.295	473	.875	378	.700	820	1.519	54.0
4	101.6	MH150-400	789	1.480	533	1.000	426	.800	942	1.767	53.3
4.5	114.3	MH150-450	721	1.665	487	1.125	390	.900	891	2.057	43.3
5	127	MH150-500	688	1.850	465	1.250	372	1.000	856	2.300	37.2
5.5	139.7	MH150-550	692	2.035	468	1.375	374	1.100	883	2.598	34.0
6	152.4	MH150-600	682	2.220	461	1.500	368	1.200	873	2.843	30.7
7	177.8	MH150-700	673	2.590	455	1.750	364	1.400	866	3.329	26.0
8	203.2	MH150-800	693	2.960	468	2.000	374	1.600	940	4.018	23.4
10	254	MH150-1000	759	3.700	513	2.500	410	2.000	947	4.620	20.5
12	304.8	MH150-1200	639	4.440	432	3.000	346	2.400	826	5.735	14.4
2.5	63.5	MH200-250	1036	.925	700	.625	560	.500	1139	1.017	112.0
3	76.2	MH200-300	971	1.110	656	.750	525	.600	1124	1.284	87.5
3.5	88.9	MH200-350	971	1.295	656	.875	525	.700	1163	1.550	75.0
4	101.6	MH200-400	940	1.480	635	1.000	508	.800	1134	1.786	63.5
4.5	114.3	MH200-450	957	1.665	647	1.125	518	.900	1138	1.979	57.5
5	127	MH200-500	981	1.850	663	1.250	530	1.000	1197	2.258	53.0
5.5	139.7	MH200-550	1009	2.035	682	1.375	546	1.100	1241	2.503	49.6
6	152.4	MH200-600	1041	2.220	704	1.500	563	1.200	1321	2.817	46.9
7	177.8	MH200-700	1002	2.590	677	1.750	542	1.400	1274	3.291	38.7
8	203.2	MH200-800	977	2.960	660	2.000	528	1.600	1284	3.892	33.0
10	254	MH200-1000	984	3.700	665	2.500	532	2.000	1261	4.740	26.6
12	304.8	MH200-1200	932	4.440	630	3.000	504	2.400	1233	5.870	21.0

HOLE Diameter **1**
 25.4 mm
 ROD Diameter **1/2**
 12.7 mm

HOLE Diameter **1 1/4**
 31.8 mm
 ROD Diameter **5/8**
 15.9 mm

HOLE Diameter **1 1/2**
 38.1 mm
 ROD Diameter **3/4**
 19.1 mm

HOLE Diameter **2**
 50.8 mm
 ROD Diameter **1**
 25.4 mm

Heavy Duty



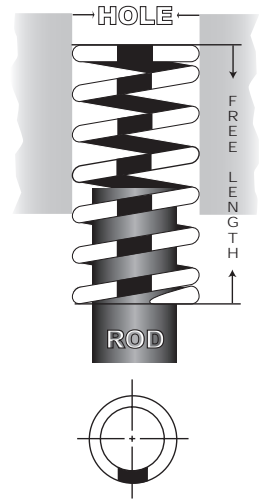
Yellow

Hong Kong SPRING

HOW TO ORDER: Specify Quantity and Part Number

Example:	40	H37-100
	58	H62-100

▶▶▶ **Efficient Operating Range** 15% to 30% deflection of free length.
 (Max. deflection = 30%; Long Life deflection = 20%; and Optimum Life deflection = 15%)
Deflection beyond the Efficient Operating Range could create a safety hazard and result in premature spring failure. **Travel to Solid** is a reference dimension only and should never be approached during use.

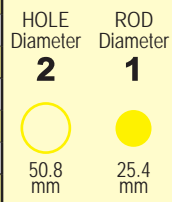
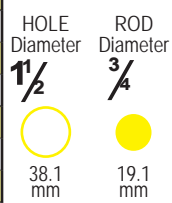
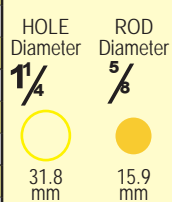
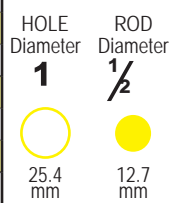


FREE LENGTH		PART NUMBER	30% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	

FREE LENGTH		PART NUMBER	30% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection				
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length					
HOLE Diameter 3/8		ROD Diameter 3/16		1	25.4	H37-100	51	.300	34	.200	26	.150	65	.379	17.1
9.5 mm		4.8 mm		1.25	31.8	H37-125	44	.375	30	.250	22	.188	54	.456	11.8
				1.5	38.1	H37-150	45	.450	30	.300	23	.225	56	.557	10.0
				1.75	44.5	H37-175	46	.525	31	.350	23	.263	61	.697	8.8
				2	50.8	H37-200	49	.600	32	.400	24	.300	65	.804	8.1
				2.5	63.5	H37-250	50	.750	33	.500	25	.375	73	1.100	6.6
				3	76.2	H37-300	45	.900	30	.600	23	.450	61	1.210	5.0
				12	304.8	H37-1200	43	3.600	29	2.400	22	1.800	50	4.180	1.2
HOLE Diameter 1/2		ROD Diameter 9/32		1	25.4	H50-100	75	.300	50	.200	38	.150	117	.468	25.0
13.0 mm		7.0 mm		1.25	31.8	H50-125	66	.375	44	.250	33	.188	100	.573	17.5
				1.5	38.1	H50-150	76	.450	50	.300	38	.225	116	.693	16.8
				1.75	44.5	H50-175	74	.525	49	.350	37	.263	118	.845	14.0
				2	50.8	H50-200	66	.600	44	.400	33	.300	110	1.000	11.0
				2.5	63.5	H50-250	74	.750	49	.500	37	.375	127	1.300	9.8
				3	76.2	H50-300	68	.900	45	.600	34	.450	107	1.430	7.5
				3.5	88.9	H50-350	69	1.050	46	.700	35	.525	117	1.766	6.6
				12	304.8	H50-1200	68	3.600	46	2.400	34	1.800	116	6.122	1.9
HOLE Diameter 5/8		ROD Diameter 11/32		1	25.4	H62-100	143	.300	95	.200	71	.150	172	.363	47.5
15.9 mm		8.7 mm		1.25	31.8	H62-125	131	.375	88	.250	66	.188	167	.476	35.0
				1.5	38.1	H62-150	135	.450	90	.300	68	.225	176	.588	30.0
				1.75	44.5	H62-175	131	.525	88	.350	66	.263	175	.700	25.0
				2	50.8	H62-200	130	.600	86	.400	65	.300	176	.813	21.6
				2.5	63.5	H62-250	126	.750	84	.500	63	.375	188	1.120	16.8
				3	76.2	H62-300	126	.900	84	.600	63	.450	189	1.350	14.0
				3.5	88.9	H62-350	145	1.050	97	.700	72	.525	221	1.600	13.8
				4	101.6	H62-400	127	1.200	85	.800	64	.600	195	1.840	10.6
				12	304.8	H62-1200	119	3.600	79	2.400	59	1.800	175	5.311	3.3
HOLE Diameter 3/4		ROD Diameter 3/8		1	25.4	H75-100	394	.300	263	.200	197	.150	401	.305	131.4
19.1 mm		9.5 mm		1.25	31.8	H75-125	360	.375	240	.250	180	.188	376	.392	96.0
				1.5	38.1	H75-150	329	.450	219	.300	164	.225	358	.491	73.0
				1.75	44.5	H75-175	331	.525	221	.350	166	.263	356	.565	63.0
				2	50.8	H75-200	318	.600	212	.400	159	.300	347	.655	53.0
				2.5	63.5	H75-250	311	.750	207	.500	155	.375	351	.849	41.4
				3	76.2	H75-300	354	.900	236	.600	177	.450	411	1.046	39.3
				3.5	88.9	H75-350	309	1.050	206	.700	154	.525	364	1.238	29.4
				4	101.6	H75-400	360	1.200	240	.800	180	.600	456	1.520	30.0
				4.5	114.3	H75-450	313	1.350	209	.900	157	.675	405	1.745	23.2
				5	127	H75-500	375	1.500	250	1.000	188	.750	478	1.911	25.0
				5.5	139.7	H75-550	368	1.650	245	1.100	184	.825	478	2.144	22.3
				6	152.4	H75-600	362	1.800	241	1.200	181	.900	468	2.326	20.1
				12	304.8	H75-1200	328	3.600	218	2.400	164	1.800	399	4.380	9.1

Heavy Duty

FREE LENGTH		PART NUMBER	30% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	
1	25.4	H100-100			398	.200	299	.150	567	.285	199.0
1.25	31.8	H100-125	600	.375	400	.250	301	.188	613	.383	160.0
1.5	38.1	H100-150	690	.450	460	.300	345	.225	762	.497	153.4
1.75	44.5	H100-175	579	.525	386	.350	290	.263	697	.632	110.3
2	50.8	H100-200	570	.600	380	.400	285	.300	674	.709	95.0
2.5	63.5	H100-250	577	.750	385	.500	288	.375	666	.866	76.9
3	76.2	H100-300	567	.900	378	.600	284	.450	644	1.022	63.0
3.5	88.9	H100-350	446	1.050	298	.700	223	.525	498	1.172	42.5
4	101.6	H100-400	556	1.200	370	.800	278	.600	666	1.438	46.3
4.5	114.3	H100-450	525	1.350	350	.900	263	.675	640	1.645	38.9
5	127	H100-500	531	1.500	354	1.000	266	.750	650	1.836	35.4
5.5	139.7	H100-550	523	1.650	349	1.100	262	.825	659	2.080	31.7
6	152.4	H100-600	515	1.800	343	1.200	257	.900	653	2.282	28.6
7	177.8	H100-700	546	2.100	364	1.400	273	1.050	658	2.532	26.0
8	203.2	H100-800	528	2.400	352	1.600	264	1.200	656	2.984	22.0
12	304.8	H100-1200	540	3.600	360	2.400	270	1.800	687	4.580	15.0
1.5	38.1	H125-150	1013	.450	675	.300	506	.225	1062	.472	225.0
1.75	44.5	H125-175	1029	.525	686	.350	515	.263	1100	.561	196.0
2	50.8	H125-200	960	.600	640	.400	480	.300	1005	.628	160.0
2.5	63.5	H125-250	945	.750	630	.500	473	.375	1016	.806	126.0
3	76.2	H125-300	891	.900	594	.600	446	.450	955	.965	99.0
3.5	88.9	H125-350	882	1.050	588	.700	441	.525	988	1.176	84.0
4	101.6	H125-400	863	1.200	575	.800	431	.600	949	1.320	71.9
4.5	114.3	H125-450	864	1.350	576	.900	432	.675	975	1.523	64.0
5	127	H125-500	855	1.500	570	1.000	428	.750	988	1.733	57.0
5.5	139.7	H125-550	881	1.650	587	1.100	441	.825	1049	1.965	53.4
6	152.4	H125-600	950	1.800	634	1.200	475	.900	1097	2.078	52.8
7	177.8	H125-700	943	2.100	629	1.400	471	1.050	1115	2.483	44.9
8	203.2	H125-800	953	2.400	635	1.600	476	1.200	1126	2.836	39.7
10	254	H125-1000	933	3.000	622	2.000	467	1.500	1085	3.490	31.1
12	304.8	H125-1200	893	3.600	595	2.400	446	1.800	1066	4.300	24.8
2	50.8	H150-200	1152	.600	768	.400	576	.300	1357	.707	192.0
2.5	63.5	H150-250	1125	.750	750	.500	563	.375	1380	.920	150.0
3	76.2	H150-300	1094	.900	729	.600	547	.450	1476	1.215	121.5
3.5	88.9	H150-350	1098	1.050	732	.700	549	.525	1442	1.379	104.6
4	101.6	H150-400	1086	1.200	724	.800	543	.600	1419	1.568	90.5
4.5	114.3	H150-450	1187	1.350	791	.900	593	.675	1587	1.806	87.9
5	127	H150-500	1050	1.500	700	1.000	525	.750	1454	2.077	70.0
5.5	139.7	H150-550	1059	1.650	706	1.100	530	.825	1476	2.299	64.2
6	152.4	H150-600	1053	1.800	702	1.200	527	.900	1535	2.624	58.5
7	177.8	H150-700	1023	2.100	682	1.400	511	1.050	1447	2.972	48.7
8	203.2	H150-800	989	2.400	659	1.600	494	1.200	1436	3.485	41.2
10	254	H150-1000	1020	3.000	680	2.000	510	1.500	1485	4.367	34.0
12	304.8	H150-1200	1037	3.600	691	2.400	518	1.800	1524	5.293	28.8
2.5	63.5	H200-250	1800	.750	1200	.500	900	.375	2160	.900	240.0
3	76.2	H200-300	1683	.900	1122	.600	842	.450	1949	1.042	187.0
3.5	88.9	H200-350	1680	1.050	1120	.700	840	.525	2160	1.350	160.0
4	101.6	H200-400	1680	1.200	1120	.800	840	.600	2212	1.580	140.0
4.5	114.3	H200-450	1566	1.350	1044	.900	783	.675	2119	1.827	116.0
5	127	H200-500	1575	1.500	1050	1.000	788	.750	2153	2.050	105.0
5.5	139.7	H200-550	1592	1.650	1062	1.100	796	.825	2283	2.366	96.5
6	152.4	H200-600	1642	1.800	1094	1.200	821	.900	2396	2.627	91.2
7	177.8	H200-700	1583	2.100	1056	1.400	792	1.050	2322	3.079	75.4
8	203.2	H200-800	1685	2.400	1123	1.600	842	1.200	2499	3.560	70.2
10	254	H200-1000	1575	3.000	1050	2.000	788	1.500	2361	4.497	52.5
12	304.8	H200-1200	1566	3.600	1044	2.400	783	1.800	2427	5.580	43.5



Extra Heavy Duty



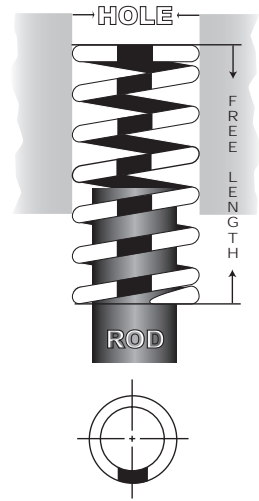
Green

Hong Kong SPRING









HOW TO ORDER: Specify Quantity and Part Number

Example:	40	EH37-100
	58	EH62-100

▶▶▶ **Efficient Operating Range** 15% to 25% deflection of free length.
 (Max. deflection = 25%; Long Life deflection = 20%; and Optimum Life deflection = 15%)
Deflection beyond the Efficient Operating Range could create a safety hazard and result in premature spring failure. **Travel to Solid** is a reference dimension only and should never be approached during use.







FREE LENGTH		PART NUMBER	25% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	



FREE LENGTH		PART NUMBER	25% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection		
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length			
HOLE Diameter $\frac{3}{8}$  9.5 mm	ROD Diameter $\frac{3}{16}$  4.8 mm	1	25.4	EH37-100	56	.250	45	.200	34	.150	65	.289	22.5
		1.25	31.8	EH37-125	58	.313	46	.250	35	.188	66	.356	18.5
		1.5	38.1	EH37-150	57	.375	46	.300	34	.225	77	.505	15.3
		1.75	44.5	EH37-175	50	.438	40	.350	30	.263	68	.599	11.4
		2	50.8	EH37-200	50	.500	40	.400	30	.300	70	.700	10.0
		2.5	63.5	EH37-250	50	.625	40	.500	30	.375	73	.913	8.0
		3	76.2	EH37-300	60	.750	48	.600	36	.450	86	1.077	8.0
		12	304.8	EH37-1200	60	3.000	48	2.400	36	1.800	92	4.585	2.0
HOLE Diameter $\frac{1}{2}$  13.0 mm	ROD Diameter $\frac{9}{32}$  7.0 mm	1	25.4	EH50-100	91	.250	73	.200	55	.150	135	.371	36.5
		1.25	31.8	EH50-125	94	.313	75	.250	56	.188	132	.439	30.0
		1.5	38.1	EH50-150	93	.375	74	.300	56	.225	117	.471	24.8
		1.75	44.5	EH50-175	97	.438	77	.350	58	.263	144	.651	22.1
		2	50.8	EH50-200	95	.500	76	.400	57	.300	142	.747	19.0
		2.5	63.5	EH50-250	90	.625	72	.500	54	.375	132	.916	14.4
		3	76.2	EH50-300	84	.750	67	.600	50	.450	123	1.094	11.2
		3.5	88.9	EH50-350	83	.875	67	.700	50	.525	115	1.211	9.5
12	304.8	EH50-1200	84	3.000	67	2.400	50	1.800	137	4.888	2.8		
HOLE Diameter $\frac{5}{8}$  15.9 mm	ROD Diameter $\frac{11}{32}$  8.7 mm	1	25.4	EH62-100	173	.250	138	.200	104	.150	194	.281	69.0
		1.25	31.8	EH62-125	160	.313	128	.250	96	.188	191	.375	51.0
		1.5	38.1	EH62-150	151	.375	121	.300	91	.225	178	.441	40.3
		1.75	44.5	EH62-175	162	.438	130	.350	97	.263	214	.578	37.0
		2	50.8	EH62-200	153	.500	122	.400	92	.300	185	.605	30.5
		2.5	63.5	EH62-250	158	.625	126	.500	95	.375	198	.786	25.2
		3	76.2	EH62-300	147	.750	118	.600	88	.450	187	.956	19.6
		3.5	88.9	EH62-350	152	.875	122	.700	91	.525	207	1.191	17.4
4	101.6	EH62-400	147	1.000	118	.800	88	.600	202	1.373	14.7		
12	304.8	EH62-1200	150	3.000	120	2.400	90	1.800	219	4.388	5.0		
HOLE Diameter $\frac{3}{4}$  19.1 mm	ROD Diameter $\frac{3}{8}$  9.5 mm	1	25.4	EH75-100	363	.250	290	.200	218	.150	381	.263	145.0
		1.25	31.8	EH75-125	398	.313	318	.250	239	.188	433	.341	127.0
		1.5	38.1	EH75-150	324	.375	260	.300	195	.225	403	.466	86.5
		1.75	44.5	EH75-175	369	.438	295	.350	221	.263	482	.573	84.2
		2	50.8	EH75-200	362	.500	289	.400	217	.300	483	.668	72.3
		2.5	63.5	EH75-250	316	.625	253	.500	190	.375	430	.850	50.6
		3	76.2	EH75-300	311	.750	249	.600	187	.450	421	1.014	41.5
		3.5	88.9	EH75-350	332	.875	265	.700	199	.525	439	1.158	37.9
		4	101.6	EH75-400	300	1.000	240	.800	180	.600	420	1.399	30.0
		4.5	114.3	EH75-450	341	1.125	273	.900	205	.675	485	1.602	30.3
		5	127	EH75-500	344	1.250	275	1.000	206	.750	474	1.722	27.5
		5.5	139.7	EH75-550	303	1.375	242	1.100	182	.825	435	1.976	22.0
6	152.4	EH75-600	332	1.500	265	1.200	199	.900	467	2.111	22.1		
12	304.8	EH75-1200	336	3.000	269	2.400	202	1.800	496	4.432	11.2		



Extra Heavy Duty

FREE LENGTH		PART NUMBER	25% DEFLECTION		20% DEFLECTION		15% DEFLECTION		TRAVEL TO SOLID		Lbs @ 1/10" Deflection
Inches	mm		Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	Pressure Pounds	Deflection Length	
1.5	38.1	EH100-150	666	.375	533	.300	399	.225	692	.390	177.5
2	50.8	EH100-200	615	.500	492	.400	369	.300	749	.609	123.0
2.5	63.5	EH100-250	606	.625	485	.500	364	.375	763	.787	97.0
3	76.2	EH100-300	600	.750	480	.600	360	.450	749	.936	80.0
3.5	88.9	EH100-350	613	.875	490	.700	368	.525	812	1.160	70.0
4	101.6	EH100-400	570	1.000	456	.800	342	.600	752	1.320	57.0
4.5	114.3	EH100-450	585	1.125	468	.900	351	.675	776	1.493	52.0
5	127	EH100-500	651	1.250	521	1.000	391	.750	888	1.704	52.1
6	152.4	EH100-600	648	1.500	518	1.200	389	.900	870	2.013	43.2
12	304.8	EH100-1200	642	3.000	514	2.400	385	1.800	934	4.366	21.4
2	50.8	EH125-200	975	.500	780	.400	585	.300	1057	.542	195.0
2.5	63.5	EH125-250	1058	.625	846	.500	635	.375	1384	.818	169.2
3	76.2	EH125-300	1027	.750	821	.600	616	.450	1346	.983	136.9
3.5	88.9	EH125-350	910	.875	728	.700	546	.525	1194	1.148	104.0
4	101.6	EH125-400	875	1.000	700	.800	525	.600	1146	1.310	87.5
4.5	114.3	EH125-450	872	1.125	698	.900	523	.675	1181	1.524	77.5
5	127	EH125-500	881	1.250	705	1.000	529	.750	1211	1.718	70.5
6	152.4	EH125-600	863	1.500	690	1.200	518	.900	1195	2.078	57.5
8	203.2	EH125-800	986	2.000	789	1.600	592	1.200	1355	2.749	49.3
10	254	EH125-1000	948	2.500	758	2.000	569	1.500	1282	3.383	37.9
12	304.8	EH125-1200	825	3.000	660	2.400	495	1.800	1113	4.047	27.5
2	50.8	EH150-200			1416	.400	1062	.300	1558	.440	354.0
2.5	63.5	EH150-250	1672	.625	1338	.500	1003	.375	1693	.633	267.5
3	76.2	EH150-300			1320	.600	990	.450	1617	.735	220.0
3.5	88.9	EH150-350	1641	.875	1313	.700	984	.525	1749	.933	187.5
4	101.6	EH150-400	1650	1.000	1320	.800	990	.600	2041	1.237	165.0
4.5	114.3	EH150-450	1592	1.125	1274	.900	955	.675	1856	1.312	141.5
5	127	EH150-500	1625	1.250	1300	1.000	975	.750	1968	1.514	130.0
6	152.4	EH150-600	1575	1.500	1260	1.200	945	.900	1950	1.857	105.0
8	203.2	EH150-800	1740	2.000	1392	1.600	1044	1.200	2340	2.690	87.0
10	254	EH150-1000	1680	2.500	1344	2.000	1008	1.500	2332	3.470	67.2
12	304.8	EH150-1200	1560	3.000	1248	2.400	936	1.800	2215	4.260	52.0
2.5	63.5	EH200-250					1538	.375	1968	.480	410.0
3	76.2	EH200-300			1740	.600	1305	.450	1885	.650	290.0
3.5	88.9	EH200-350			1925	.700	1444	.525	2200	.800	275.0
4	101.6	EH200-400	2400	1.000	1920	.800	1440	.600	2424	1.010	240.0
4.5	114.3	EH200-450	2447	1.125	1958	.900	1468	.675	2675	1.230	217.5
5	127	EH200-500	2250	1.250	1800	1.000	1350	.750	2538	1.410	180.0
6	152.4	EH200-600	2310	1.500	1848	1.200	1386	.900	2726	1.770	154.0
8	203.2	EH200-800	2370	2.000	1896	1.600	1422	1.200	2939	2.480	118.5
10	254	EH200-1000	2200	2.500	1760	2.000	1320	1.500	2807	3.190	88.0
12	304.8	EH200-1200	2598	3.000	2078	2.400	1559	1.800	3377	3.900	86.6

HOLE Diameter **1**
 ROD Diameter **1/2**
 
 25.4 mm 12.7 mm

HOLE Diameter **1 1/4**
 ROD Diameter **5/8**
 
 31.8 mm 15.9 mm

HOLE Diameter **1 1/2**
 ROD Diameter **3/4**
 
 38.1 mm 19.1 mm

HOLE Diameter **2**
 ROD Diameter **1**
 
 50.8 mm 25.4 mm

