

# Mechanical Compression Spring Struts

Featuring Stock & Custom Designs



Designed for a long life while maintaining consistent, repeatable loads, Raymond Mechanical Spring Struts are the ideal choice to replace conventional gas springs. They will withstand harsh environments and wide temperature ranges, and offer a variety of loads, strokes and end configurations. The units utilize advanced coiled spring technology, along with engineered components, to provide a low-friction, highly reliable product.

Raymond Mechanical Spring Struts are offered in a full range of standard struts featuring stainless steel springs, and high load struts with carbon steel springs. In addition, our mechanical spring struts and

assembly modules can be custom designed to meet the specific needs of many products within a wide range of industries.

## **Struts For Many Industries**

Automotive	Marine
Recreational	Industrial
Medical	Nuclear
Pharmaceutical	Chemical
Defense	Agriculture
Construction	

## **Struts For Many Applications**

Food Preparation & Processing  
Heating, Ventilation & Aeration  
Motion Control & Dampening

## **Mechanical Spring Struts Are The Better Choice**

- Long life and consistent loads over time
- Corrosion-resistant stainless steel construction
- Design flexibility to meet individual requirements
- No internal gases or seals – no hazardous material concerns
- Proven for FDA applications
- Robust design
- Various end configurations available
- Operating temperatures up to 400°F
- Extension and dampening units offer additional flexibility

# Raymond®



\*Patent Pending

Associated Spring  
Raymond  BARNES  
GROUP INC

# Select From A Wide Range Of Mechanical Spring Struts – Or We'll Design One For You

## STANDARD MECHANICAL SPRING STRUTS (Stainless Steel Construction – Stainless Steel Springs – M6 Ends)

CATALOG NUMBER	Rod Dia. (d)		Body Dia. (D)		Overall Length (L) +/-0.060"		Stroke (S) +/-0.060"		Initial Force +/-10%		Final Force +/-10%	
	in	mm	in	mm	in	mm	in	mm	lbs	N	lbs	N
MSBD-051-0076	0.375	9.53	1.25	31.75	6.95	176.53	2.00	50.80	8	35	17	76
MSBD-051-0116	0.375	9.53	1.25	31.75	8.44	214.38	2.00	50.80	19	85	26	116
MSBD-051-0173	0.375	9.53	1.25	31.75	9.99	253.75	2.00	50.80	30	133	39	173
MSBD-051-0280	0.375	9.53	1.25	31.75	11.61	294.89	2.00	50.80	45	200	63	280
MSBD-076-0102	0.375	9.53	1.25	31.75	9.56	242.82	3.00	76.20	10	44	23	102
MSBD-076-0156	0.375	9.53	1.25	31.75	10.3	261.62	3.00	76.20	15	67	35	156
MSBD-076-0262	0.375	9.53	1.25	31.75	12.26	311.40	3.00	76.20	30	133	59	262
MSBD-127-0133	0.375	9.53	1.25	31.75	17.02	432.31	5.00	127.00	18	80	30	133
MSBD-127-0173	0.375	9.53	1.25	31.75	18.67	474.22	5.00	127.00	25	111	39	173
MSBD-127-0222	0.375	9.53	1.25	31.75	18.96	481.58	5.00	127.00	30	133	50	222
MSBD-127-0271	0.375	9.53	1.25	31.75	19.91	505.71	5.00	127.00	35	156	61	271

## HIGH LOAD MECHANICAL SPRING STRUTS (Stainless Steel Construction – Carbon Steel Springs – M8 Ends)

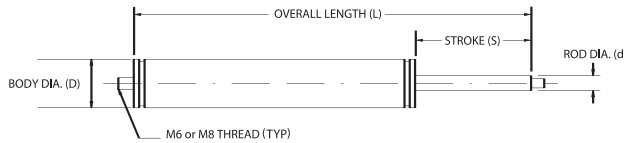
CATALOG NUMBER	Rod Dia. (d)		Body Dia. (D)		Overall Length (L) +/-0.060"		Stroke (S) +/-0.060"		Initial Force		Final Force	
	in	mm	in	mm	in	mm	in	mm	lbs	N	lbs	N
MSCD-026-1057	0.500	12.7	1.25	31.75	7.44	188.98	1.04	26.42	176	782	238	1057
MSCD-026-1240	0.500	12.7	1.25	31.75	5.95	151.13	1.04	26.42	83	369	279	1240
MSCD-033-1069	0.500	12.7	1.25	31.75	6.25	158.75	1.31	33.27	100	446	240	1069
MSCD-039-1072	0.500	12.7	1.25	31.75	6.55	166.37	1.56	39.62	53	236	241	1072
MSCD-039-1111	0.500	12.7	1.25	31.75	7.94	201.68	1.54	39.12	140	622	250	1111
MSCD-041-2354	0.500	12.7	1.25	31.75	13.62	345.95	1.63	41.40	242	1075	529	2354
MSCD-043-2187	0.500	12.7	1.25	31.75	9.69	246.13	1.70	43.18	94	417	492	2187
MSCD-055-1170	0.500	12.7	1.25	31.75	10.19	258.83	2.19	55.63	41	181	263	1170
MSCD-077-1150	0.500	12.7	1.25	31.75	15.12	384.05	3.07	77.98	80	355	259	1150
MSCD-078-1111	0.500	12.7	1.25	31.75	11.09	281.69	3.10	78.74	29	127	250	1111
MSCD-117-1067	0.500	12.7	1.25	31.75	16.62	422.15	4.63	117.60	55	244	240	1067



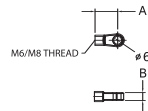
Multiple end configurations, including ball ends, blade or clevis ends are available in various sizes and materials



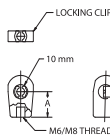
Design and assembly or kitting of adjoining hardware (including brackets and mounts) is also offered per customer requirement.



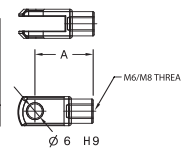
BLADE END (STAINLESS STEEL)					
Suffix		A		B	
		in	mm	in	mm
10	M6	0.71	18.00	0.26	6.70
11	M8	0.85	21.70	0.34	8.70



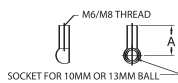
10 MM BALL END (NYLON)				
Suffix		Ball Size	A (REF)	
			in	mm
30	M6	10mm	0.709	18.01
31	M8	10mm	0.709	18.01



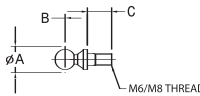
CLEVIS (STAINLESS STEEL)			
Suffix		A	
		in	mm
40	M6	0.94	24.00
41	M8	1.25	32.00



BALL END (STAINLESS STEEL)				
Suffix		Ball Size	A	
			in	mm
20	M6	10mm	1.00	25.40
21	M8	13mm	1.18	30.00



BALL STUD (STAINLESS STEEL)							
Suffix		A (REF)		B		C	
		in	mm	in	mm	in	mm
50	M6	0.39	10.00	0.43	11.00	0.47	12.00
51	M8	0.51	13.00	0.51	13.00	0.65	16.50



**NOTE:** To order a Mechanical Spring Strut with the ends attached, the end suffix must be added to the part number. For example: To order a Mechanical Spring Strut with a blade end on the rod end and a stainless ball end on the strut end, specify MSBD-076-0102-10-20.

STROKE FINAL FORCE

**Associated Spring Raymond** 

We are an ISO 9001 certified company.

Contact Associated Spring Raymond at 1.800.646.6416 to learn how to utilize Mechanical Spring Struts as your engineered spring solution.

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Form 302 - 4128/3M/BL/0105

