

Mechanical Compression Spring Struts

Featuring Stock & Custom Designs



Designed for a long life while maintaining consistent, repeatable loads, Raymond Mechanical 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 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 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 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®

Mechanical Struts

*Patent Pending

Associated Spring
Raymond  BARNES
GROUP INC

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

STANDARD MECHANICAL 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	0.38	9.53	1.25	31.75	6.95	171.70	2.0	50.80	8	35	17	76
MSBD-051-0116	0.38	9.53	1.25	31.75	8.44	209.30	2.0	50.80	19	85	26	116
MSBD-051-0173	0.38	9.53	1.25	31.75	9.99	248.67	2.0	50.80	30	133	39	173
MSBD-051-0280	0.38	9.53	1.25	31.75	11.61	290.07	2.0	50.80	45	200	63	280
MSBD-076-0102	0.38	9.53	1.25	31.75	9.56	238.00	3.0	76.20	10	44	23	102
MSBD-076-0156	0.38	9.53	1.25	31.75	10.3	238.00	3.0	76.20	15	67	35	156
MSBD-076-0262	0.38	9.53	1.25	31.75	12.26	238.00	3.0	76.20	30	133	59	262
MSBD-127-0133	0.38	9.53	1.25	31.75	17.02	427.23	5.0	127.00	18	80	30	133
MSBD-127-0173	0.38	9.53	1.25	31.75	18.67	469.39	5.0	127.00	25	111	39	173
MSBD-127-0222	0.38	9.53	1.25	31.75	18.96	476.76	5.0	127.00	30	133	50	222
MSBD-127-0271	0.38	9.53	1.25	31.75	19.91	500.63	5.0	127.00	35	156	61	271

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

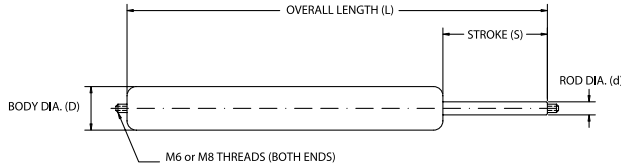
CATALOG NUMBER	Rod Dia. (d)		Body Dia. (D)		Overall Length (L) +/-0.060"		Stroke (S) +/-0.060"		Initial Force		Final Force	
	in	mm	in	mm	in	mm	in	mm	lbs	N	lbs	N
MSCD-026-1057	0.50	12.7	1.25	31.75	7.44	188.98	1.0	26.42	176	782	238	1057
MSCD-026-1240	0.50	12.7	1.25	31.75	5.95	151.13	1.0	26.42	83	369	279	1240
MSCD-033-1069	0.50	12.7	1.25	31.75	6.25	158.75	1.3	33.27	100	446	240	1069
MSCD-039-1072	0.50	12.7	1.25	31.75	6.55	166.37	1.6	39.62	53	236	241	1072
MSCD-039-1111	0.50	12.7	1.25	31.75	7.94	201.68	1.5	39.12	140	622	250	1111
MSCD-041-2354	0.50	12.7	1.25	31.75	13.62	345.95	1.6	41.40	242	1075	529	2354
MSCD-043-2187	0.50	12.7	1.25	31.75	9.69	246.13	1.7	43.18	94	417	492	2187
MSCD-055-1170	0.50	12.7	1.25	31.75	10.19	258.83	2.2	55.63	41	181	263	1170
MSCD-077-1150	0.50	12.7	1.25	31.75	15.12	384.05	3.1	77.98	80	355	259	1150
MSCD-078-1111	0.50	12.7	1.25	31.75	11.09	281.69	3.1	78.74	29	127	250	1111
MSCD-117-1067	0.50	12.7	1.25	31.75	16.62	422.15	4.6	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.

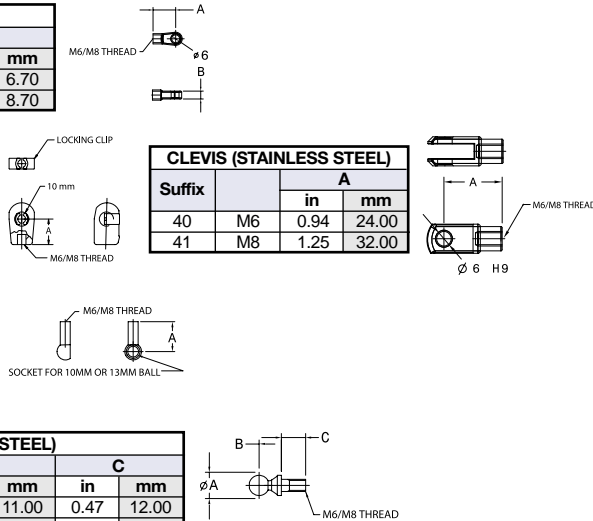


BLADE END (STAINLESS STEEL)					
Suffix		A		B	
		in	mm	in	mm
10	M6	0.71	18.00	0.26	6.70
11	M8	0.85	21.70	0.34	8.70

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

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	0.63	16.00



NOTE: To order a Mechanical Strut with the ends attached, the end suffix must be added to the part number. For example: To order a Mechanical 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 BARNES GROUP INC

We are an ISO 9001 certified company.

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

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