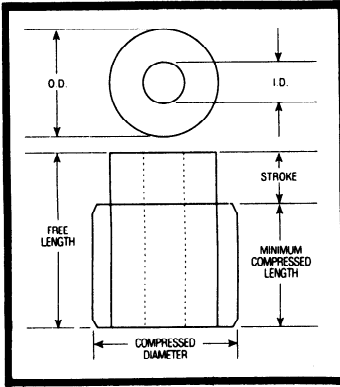




**Lamina INC. Marsh Mellow® Design Data**

**1 1/8" O.D. x 5/16" I.D.**  
**(MAX. LENGTH = 7 IN.)**



Lamina Order Number	MM113-125	MM113-150	MM113-200	MM113-250	MM113-300					
Free Length Inch	1.25	1.50	2.00	2.50	3.00					
Minimum Compressed Length (Free Length - Max. Compression)	.75	.90	1.20	1.50	1.80					
Maximum Compressed Dia. (@ Max. Compression)	1.44	1.44	1.44	1.44	1.44					
Maximum Compression	.50	.60	.80	1.00	1.20					
Total Spring Force Per 1/8" Compression Pounds	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force
	.125	120	.125	100	.125	80	.125	70	.125	60
	.25	240	.25	190	.25	150	.25	120	.250	110
	.375	390	.375	300	.375	220	.375	180	.375	150
	.50	670	.50	450	.50	300	.50	220	.500	200
			.60	670	.625	410	.625	300	.625	250
					.75	570	.75	390	.750	300
					.80	670	.875	500	.875	370
							1.00	670	1.00	450
									1.13	570
								1.20	670	

**1 5/8" O.D. x 5/8" I.D.**  
**(MAX. LENGTH = 10 IN.)**

Lamina Order Number	MM163-150	MM163-200	MM163-250	MM163-325	MM163-400					
Free Length Inch	1.50	2.00	2.50	3.25	4.00					
Minimum Compressed Length (Free Length - Max. Compression)	.90	1.20	1.50	1.95	2.40					
Maximum Compressed Dia. (@ Max. Compression)	2.00	2.00	2.00	2.00	2.00					
Maximum Compression	.60	.80	1.00	1.30	1.60					
Total Spring Force Per 1/8" Compression Pounds	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force
	.125	210	.125	150	.125	110	.125	80	.125	40
	.25	410	.25	270	.25	210	.25	150	.25	120
	.375	640	.375	430	.375	330	.375	230	.375	180
	.50	1,210	.50	600	.50	450	.50	320	.50	250
	.60	1,700	.625	910	.625	610	.625	410	.625	320
			.75	1,440	.75	840	.75	520	.75	400
			.80	1,700	.875	1,200	.875	660	.875	480
					1.00	1,700	1.00	840	1.00	590
							1.125	1,100	1.125	700
							1.25	1,600	1.25	880
							1.30	1,700	1.375	1,090
									1.50	1,390
								1.60	1,700	

**2" O.D. x 3/4" I.D.**  
**(MAX. LENGTH = 20 IN.)**

Lamina Order Number	MM200-125	MM200-150	MM200-200	MM200-250	MM200-325	MM200-400	MM200-500						
Free Length Inch	1.25	1.50	2.00	2.50	3.25	4.00	5.00						
Minimum Compressed Length (Free Length - Max. Compression)	.75	.90	1.20	1.50	1.95	2.40	3.00						
Maximum Compressed Dia. (@ Max. Compression)	2.56	2.56	2.56	2.56	2.56	2.56	2.56						
Maximum Compression	.50	.60	.80	1.00	1.30	1.60	2.00						
Total Spring Force Per 1/8" Compression Pounds	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force	Stroke	Force	
	.125	360	.125	220	.125	170	.125	150	.125	120	.125	100	
	.25	770	.25	540	.25	400	.25	320	.25	230	.25	180	
	.375	1,320	.375	940	.375	660	.375	500	.375	380	.375	270	
	.50	2,570	.50	1,680	.50	920	.50	700	.50	520	.50	380	
			.60	2,700	.625	1,270	.625	960	.625	670	.625	490	
					.75	1,850	.75	1,310	.75	840	.75	620	
					.80	2,400	.875	1,890	.875	1,030	.875	760	
							1.00	2,850	1.00	1,270	1.00	920	
									1.125	1,630	1.125	1,100	
									1.25	2,120	1.25	1,350	
									1.30	2,460	1.375	1,670	
											1.50	2,160	
											1.60	2,700	
												1.75	1,670
												1.875	2,030
											2.00	2,500	