Mustang Coil Spring Reference

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Choosing the right spring to give your steed that look and performance you want can be quite a daunting task. On this page I hope to bring you all the information you will need to make an informed decision when you purchase lowering springs. Here you can compare the performance and looks of various popular springs available to the mustang community. If you have another spring or would like to see another spring type here please email me at chad@2kgt.com and I will be happy to track it down or post it on this page. As always if you have any further questions I am always available via email.

Wheel Rates

WR = Wheel Rate
SR = Spring Rate

$$WR = SR * MR^2$$

Wheel Rate is the amount of force the wheel is exerting on the road. As you can see the wheel rate is a function of Spring Rate and the Square of the Motion Ratio. On the mustangs Modified McPherson Strut design the motion ratio is 0.5. When converting to coil overs and making it a true McPherson strut the motion ratio is closer to 0.9. Wheel Rate is expressed in lbs/in. Meaning if the wheel rate were 400lb/in it would take 400lbs to compress 1 inch.

Motion ratio is important because it determines how effective your springs are and how well your suspension is designed. By running a few numbers you can quickly see how different spring rates affect the Modified McPherson and true McPherson design. With coilovers you can run a much less stiff spring and achieve much higher wheel rates.

Spring Rates

Linear(Fixed)/Specific

Spring Rate is the rate of which a spring will compress and usually denoted in lbs/in (pounds per inch). That is to say it takes x amount of force to compress the spring 1 inch. Say you apply 100lbs of pressure to the spring and it compresses 1 inch, then the spring rate would be 100lb/in. A linear spring will continue in this fashion, you apply 200lbs and it should compress 2 inches. If it doesn't then you have a progressive rate spring. A progressive spring rate is where the force required to compress the spring changes as the spring is compressed. Below you can tell which springs are progressive and which are linear. Progressive rate springs will be denoted by having a range such as 500-560lb/in. A fixed rate spring will only have one number, such as 650lb/in.

K = Spring Constant (Spring Rate)
W = Spring Wire diameter (in)
G = 12,000,000 (constant for steel)
N = Active coil count + .5
D = Diameter of the spring as measured from the center of the wire

$$K = \frac{W^4 G}{8ND^3}$$

		Rate(lb/in)	Rate(lb/in)	Drop(in.)	
	PartNo.	**front**	**rear**	**front**	**rear**
2000 Mustang GT	OEM	450	210		
2000 SVT Cobra R	Eibach	800	750 (IRS)		
2001 Bullitt	1R3Z-5310-CA (front)	600	250	0.75	0.75

	1R3Z-5560-AA (rear)				
2001 SVT Cobra	OEM	500	470 (IRS)		
2003 Mach 1	3R3Z-5310-AA (front) 3R3Z-5560-AA (rear)	600	250	0.75	0.75
2003 SVT Cobra	OEM	600	600 (IRS)		
2003 SVT Cobra (convertible)	OEM	500	470 (IRS)		
Drop Zone 2"	??	??	??	??	??
Eibach ProKit		425-530	200-300	1.5	1.5
Eibach Racekit		700-850	200-260		
Eibach Sportline		425-630	140-295	2	2
Ford Motorsports B	M-5300-B	425-530	200-300	1.5	0.75
Ford Motorsports C	M-5300-C	650	200-300	1.5	0.75
Ford Motorsports F	M-5300-F	460-570	200-250	1.5	1.5
Ford Motorsports G (convertible)	M-5300-G	460-570	170-310	1.5	1.5
Ford Motorsports R	M-5300-R	700-850	200-260		
H&R Race		750-850	260-280	1.25	1
H&R Sport		490-575	250-285	1.6	1.5
H&R Super Race		950-1050	260-300	1.25	1.25
H&R Super Sport		700-760	275-300	1.75	1.6
Kenny Brown					
Progress		580	250-300	1.75	1.75
Roush Sport	SM01-37X0-V8			1.5	0.8
Steeda Competition		750-850	250	1.25	1.25
Steeda Full Competition [front only]		850-1050	N/A	1.5	N/A
Steeda Sport		650	200-250	1.25	1.25