HYPERCO®

MW Industries, Inc.

2020
PRODUCT CATALOG

Your Source for
HIGH-PERFORMANCE SUSPENSION SPRINGS and **COMPONENTS**

hypercoils.com

HYPERCO®
MW Industries, Inc.

Hyperco, an MW Industries company, is a manufacturer of custom and stock high-performance suspension coil springs and related components that improve total performance, aesthetics and durability of your vehicle. Our products are available through direct sales, catalogs and distributors to original equipment manufacturers and aftermarket customers in the motorsports, off-road, powersports, street performance and automotive markets. **www.hypercoils.com.**

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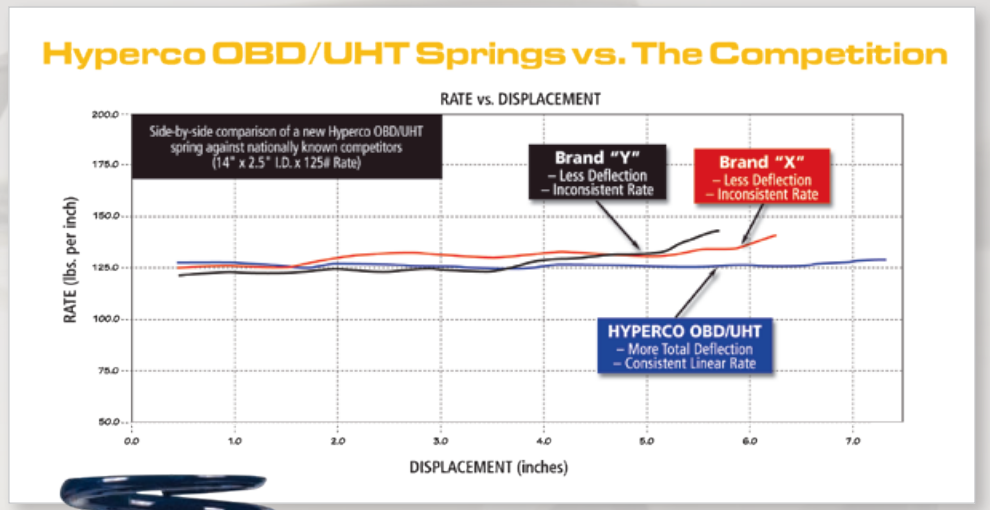
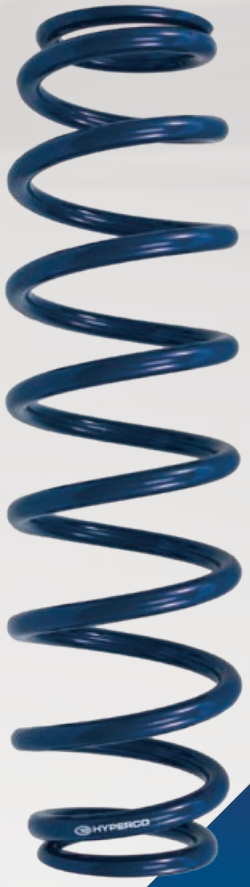
SPRING DESIGNS





Optimum Body Diameter (OBD) Springs

Optimum Body Diameter (OBD) is the standard spring design for Hyperco coil-over springs. Featuring a unique design concept that adjusts the body diameter of the spring relative to the end coils, an OBD spring enables Hyperco to take full advantage of our ultra-high tensile spring materials by optimizing the applied stress through adjusting the spring's body diameter.

Ultra High Travel (UHT) Springs

Our Ultra High Travel springs are designed specifically for light rate and high travel coil-over applications, such as dirt and pavement racing. The UHT design meets the requirements of soft spring and big bar set-ups, and remains consistent in free length and installed height. The Ultra High Travel design features a larger "body bulge" over Hyperco's standard OBD design, which allows for additional deflection, rate linearity, and resistance to bowing.

MADE IN THE U.S.A.

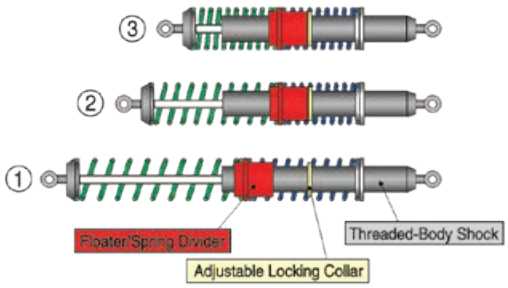
Dual Rate Springs

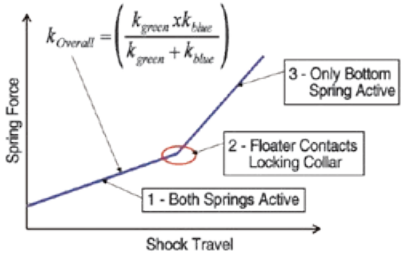
Stacked spring performance in a single spring

Dual Rate UHT Coil-Over Springs essentially provide the performance of an optimized stacked spring set-up, but in a single spring. The Dual Rate UHT Spring combines a relatively low initial spring rate, designed to absorb minor undulations and increase grip with a precise transition point and transition range to a secondary higher spring rate to improve roll control during cornering.

The precise placement of the transition range in the total spring displacement enables accurate shock valving because the initial rate is very linear and the transition range to the secondary rate is quite short.

Variable (Dual Rate) Technology





Example:

$$\frac{\text{Spring Rate "A" x Spring Rate "B" or 600 x 400}}{\text{Spring Rate "A" + Spring Rate "B" or 600 + 400}} = 240\#$$

Stacked Spring System

The Stacked Spring System enables the suspension to be soft-light in the early travel and tuned with precision to transfer to a stiffer secondary rate for optimum performance.

Adjusting the crossover ring on the threaded shock body enables the vehicle to be tuned for loose or tight conditions, while ensuring the suspension does not travel to absolute solid. This controls the transition from a relatively soft combined (dual spring) rate for desired weight transfer and wheel movement. The suspension can be tuned to a higher secondary rate that provides for maximum compliance and wheel/tire loading.

CUSTOM SPRINGS

Contact Hyperco directly for inquiries on custom spring designs or for specifications not found in our catalog.

662.488.4567 or
CustomSprings@hypercoils.com

OPTIMIZED PERFORMANCE BY DESIGN™

COIL SPRINGS

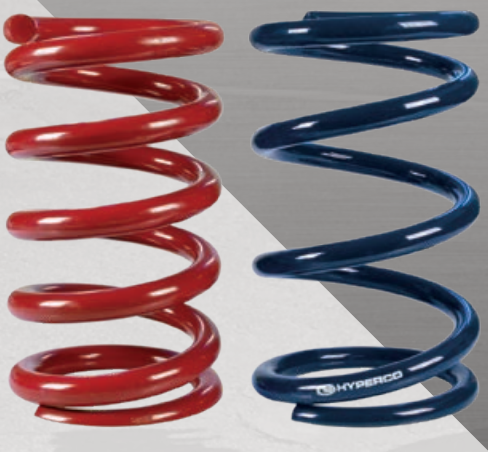
CONVENTIONAL SPRINGS

Stock appearing suspension springs for motorsports

Conventional Springs are high-performance, aftermarket suspension springs primarily used in motorsports and motor racing. The OD (outer diameter) size and free length, along with Hyperco's Dynamic Travel Response™ spring design, allow for optimization of the total vehicle performance on many Circle Track vehicles and applications.

Unlike Coil-Over Springs that are available in a multitude of free lengths, Conventional Springs are limited in their free length offerings, often as a result of the sanctioning bodies and rules. The Engineers at Hyperco decided to analyze the dynamic characteristics essential to Conventional Spring performance. That data resulted in the development of the Dynamic Travel Response spring design concept.

Working within the limitations and rules, the Dynamic Travel Response design allows all springs to exceed the performance requirements for travel and rate linearity, and is still designed with significantly less physical weight.



Fewer coils, less weight and more performance than the competition

COIL-OVER SPRINGS (STANDARD)

Suspension springs with a range of free lengths and rates for a variety of applications

Coil-Over Springs are high-performance, aftermarket suspension springs primarily used in Motorsports and Motor Racing. Hyperco's coil-over springs, also known as Hypercoils®, offer a wide range of free lengths and rates which provide the suspension designer latitude in creating a motion ratio for the suspension system that will permit an optimized damper or spring assembly to control a wide range of wheel travel. Hypercoils are available in two different spring design concepts: OBD and UHT.

¼ Midget Springs

Racing coil-over spring for lightweight competition, i.e. ¼ Midget Racing

Quarter (¼) Midget Springs were developed to meet the specific requirements of modern ¼ midget racing. Hyperco's springs were designed with input from the top ¼ midget chassis builders and the race teams. Our OBD Hypercoils feature a unique design concept. We adjust the body diameter of the spring relative to the end coils. The OBD design technique enables Hyperco to take full advantage of its extensive range of ultra-high tensile material by optimizing the applied stress through adjusting the springs body diameter.

Hyperco's ¼ Midget Springs are available in spring rate increments without tolerance overlap. This ensures predictable suspension tuning for a wide range of track conditions.

Formula SAE Springs

Racing coil-over spring for lightweight competition, i.e. Formula SAE

Formula SAE Springs were developed to meet the specific requirements of Formula SAE race teams. These springs are manufactured using the same OBD spring design as the ¼ midget springs.

Bump Springs

Specialty suspension spring used in conjunction with a primary spring

Bump Springs are used in conjunction with a primary spring to allow a race car to have a relatively soft / compliant initial spring rate to get down to the desired optimum ride height and then pick up the rate of the bump spring to achieve a constant / optimum dynamic ride height.

Pull Bar Springs

5" OD conventional spring often used in Dirt Modified racing

Pull Bar Springs are primarily used in Circle Track racing, especially Dirt Modified racing. The 5" OD size allows for the spring to be used alone or with spring rubbers (urethane donuts). This allows for optimization of the total vehicle performance package on many Circle Track vehicles.

Helper Springs

Coil-over spring to support the main suspension spring

Helper Springs are enhancement springs for high-performance, aftermarket suspensions used in Motorsports, Street Performance and Off-Road applications. The main purpose of the Helper Spring is to support, or help, the main spring by keeping it in contact with its spring perch when the suspension is at full droop. Full droop occurs primarily during pit stops or when the vehicle becomes airborne. The flat wire design allows for a specifically designed solid height which helps with optimization of the total vehicle performance package.

MADE IN THE U.S.A.

Transfer Assist Springs

Coil-over spring similar to Helper Springs but have a higher rate

Hyperco Transfer Assist Springs are special tuning springs used in Midget Sprint and Micro Sprint racing. With a free length of 4", an ID of 1.875" and rates of 25lb/in and 50lb/in; these springs are used in series with the main springs in the suspension. They offer much of the same function of a Helper Spring, but have a higher rate to provide some tuning of the suspension to improve roll control. They are designed in an under-stressed condition because they spend much of their operating life at coil bind.

Conical Springs

A linear rate from free length to solid, tapering from 2.5" ID to 5" OD

Conical Springs are designed to provide a linear spring rate from free length to solid height while tapering from a 2.5" ID to a 5" OD. They have a 5" OD like a conventional rear spring at one end and a 2.5" ID at the other end as is used on the most popular coil-over springs. The 5" OD body diameter helps prevent bowing issues on these long, light-rate, high-deflection springs. With the proper hardware, they can be used as coil-overs or conventional mount springs.

Locker Springs

Specialty spring designed for "Detroit Locker" rear differential assemblies

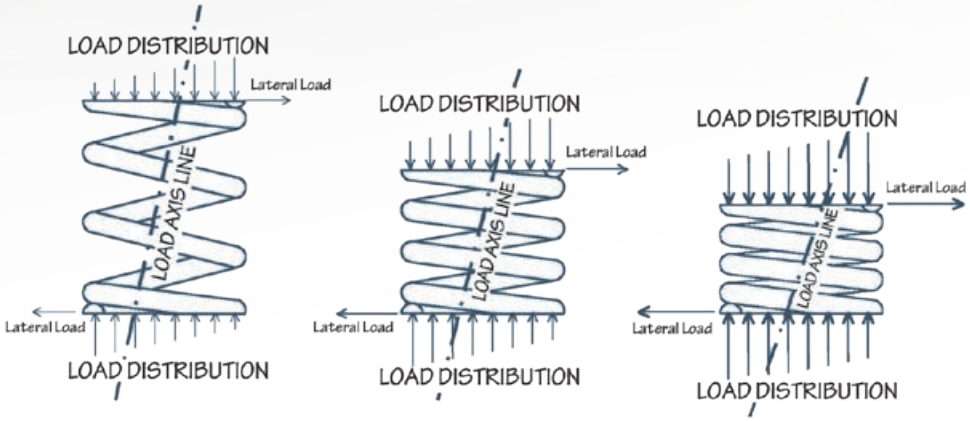
Hyperco Locker Springs are designed for use in most popular Ford 9" based "Detroit Locker" rear differential assemblies. They are used in most popular forms of Circle Track racing. The cone-shaped Locker Spring is designed to run in a load range to allow the "locker-style" differential to operate properly.

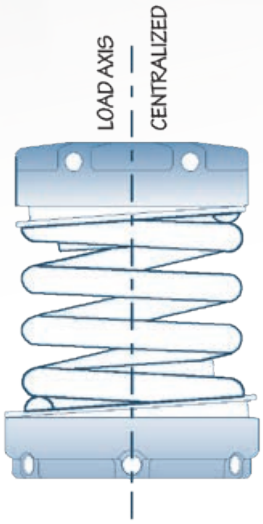
HYDRAULIC SPRING PERCHES

Hyperco's Hydraulic Spring Perches are suspension components used on coil-over springs designed to minimize lateral forces, resulting in maximized total performance of a vehicle.

Coil springs do not distribute their load evenly around the face of the end coils by nature. This results in lateral load. Hyperco's hydraulic spring perches eliminate lateral loads by allowing the spring forces to remain centered on the damper.

By precise shaping of the sealing wall of both the spring perch and cylinder body, a perch can freely tilt as needed to evenly distribute the load over the face of the perch. The result is a reduction of bending load on the shock absorber of up to 96%, along with an enhancement in mechanical grip at the tire.





Load equalized about endcoil face as it tilts (flexes) to accept load

COMPOSITE LEAF SPRINGS

Composite Leaf Springs

Composite Leaf Springs are lightweight, high-performance aftermarket suspension springs used as an alternative to coil springs. Hyperco's leaf springs are designed to be used on select Chrysler, General Motors, Camaro & Corvette applications.

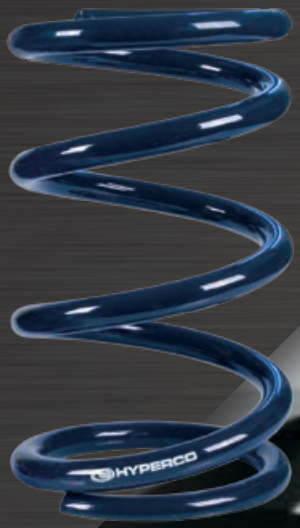
Corvette Composite Leaf Springs

Hyperco's Corvette Composite Leaf Springs enable the serious Corvette owner to select the suspension performance level they desire for their car. We offer two series for Corvettes:

The High Performance Street Series (HPS) provides improved cornering ability, road feel and initial response while maintaining a quiet and comfortable ride. Ride height adjusters, equipped with Delrin® pads, offer a wide range of tuning options. The enables owner to set the look and handling of the car to their preference…mild to aggressive.

The High Performance Track Series (HPT) offers the owner a "race-ready" spring rate option for auto crossing, track days and competitive racing. The Delrin® pad-equipped height adjusters support a wide range of set up choices, enabling the car to be tuned for all out performance.

MOTORSPORTS
HIGH-PERFORMANCE
SUSPENSION SPRINGS



Hyperco suspension coil springs have been "a part of winning" for the Motorsports industry since 1965! For more than 50 years, Indianapolis 500 winners have won driving with Hyperco suspension springs.

Born and raised in the Motorsports world, Hyperco supplies race teams and chassis manufacturers around the world with a wide range of precision suspension springs and components. While some of our product lines tend to take top billing, we don't believe in manufacturing second-tier products. We develop and produce custom springs, designed for better total performance that lasts longer.

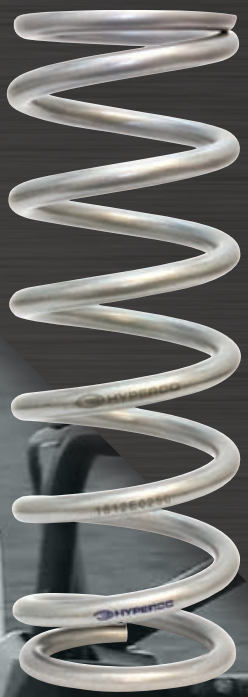
Today, Hyperco suspension springs encompass all areas of competitive motor racing as well as Off-Road racing and Street Performance applications.

BENEFITS OF HYPERCO SPRINGS

- More usable deflection
- Less weight
- 2% rate linearity tolerance from 20% to 60% of deflection
- 4% rate linearity tolerance from 61% to 80% of deflection
- More resistance to bowing than competitor springs due to our OBD (Optimum Body Diameter) and UHT (Ultra High Travel) spring designs
- Designed to fit all standard hardware
- Maintain free length and rate throughout a near infinite operational life and installed height

MOTORSPORTS APPLICATIONS

- Grass Roots
  - Short Track Oval / Circle Track
    - Legend Cars, Micro-Springs, 1/4 Midgets, Formula SAE
    - Dirt, Pavement, Modified
  - Pavement
  - Dirt Tracks
- Drag Racing
- Sports Cars
- Sports Compacts
- Motorcycles
- Corvettes
- Tudor Classes
- SCCA Racing
- Street Stock



SUSPENSION SPRINGS FOR OFF-ROAD & POWERSPORTS

Hyperco is well-known for our high-performance suspension springs in the Motorsports world. Our springs have been on winners of the Indianapolis 500 since 1965. The same technology we use on winning race cars, is also used for Hyperco's coil-over springs for Off-Road and Powersports vehicles. Whether you're riding through mud, sand, puddles, snow or rocks, Hyperco suspension springs and UTV kits are designed to improve the overall ride quality and vehicle performance.

DO YOU OWN A UTV?

Introducing HypercoOffroad.com! Home of the Hyperco Performance Spring Kits for UTVs. Find everything you need to upgrade your suspension.

Hyperco's expanding line of UTV Performance Spring Kits are designed to improve the overall ride quality and performance of your UTV. These kits feature the race winning and trail dominating spring technology that Hyperco is known for.

HYPERCO® OFFROAD.COM

OFF-ROAD & POWERSPORTS APPLICATIONS

- Motorcycles
- Dirt Bikes
- Mountain Bikes
- ATVs
- Quads
- UTVs
- Side x Sides
- Snowmobiles
- Dune Buggies
- Sand Rails
- Light Trucks
- Pick-up Trucks
- Rock Crawlers
- SUVs

STREET PERFORMANCE AFTERMARKET

SPRINGS & COMPONENTS

Hyperco is proudly known as the racing spring company. For more than 50 consecutive years, Hyperco suspension springs have been utilized on winning Indy 500 cars. We bring that same race-winning spring technology to the streets!

Hyperco offers a wide range of suspension springs for Street Performance and Road Car applications, designed specifically for speed. From compact cars to pick-up trucks and hot rods to sports cars, we have the suspension springs that provide the best total performance for your vehicle!

BENEFITS OF HYPERCO SPRINGS

- More usable deflection
- Less weight
- 2% rate linearity tolerance from 20% to 60% of deflection
- 4% from 61% to 80% of deflection
- More resistance to bowing than competitor springs due to our OBD (Optimum Body Diameter) and UHT (Ultra High Travel) spring designs
- Designed to fit all standard hardware
- Maintain free length and rate throughout a near infinite operational life and installed height

STREET PERFORMANCE APPLICATIONS

- Compact Cars
- Mid-Sized Sedans
- Light Trucks
- Pick-Up Trucks
- Road Cars
- Hot Rods
- Muscle Cars
- Sports Cars
- Exotic Cars
- Customs

COIL-OVER SPRINGS

Coil-Over Springs are high-performance, aftermarket suspension springs

ADVANTAGES: More usable deflection · Less weight · Increased rate linearity · More resistance to bowing · Fits all standard hardware · Maintains free length and installed height

UNDERSTANDING THE PART

Prefix • Free Length • I.D. • Rate

18 0 X 0000

1.875" ID D-SERIES

8" LENGTH	10" LENGTH	12" LENGTH
188D0100	1810D0100	1812D0125
188D0112	1810D0112	1812D0150
188D0125	1810D0125	1812D0175
188D0137	1810D0137	1812D0200
188D0150	1810D0150	1812D0225
188D0165	1810D0162	1812D0250
188D0175	1810D0175	
188D0185	1810D0185	
188D0200	1810D0200	
188D0225	1810D0225	
188D0240	1810D0250	
188D0250	1810D0275	
	1810D0300	
	1810D0325	
	1810D0350	
	1810D0375	
	1810D0400	
	1810D0425	
	1810D0450	
	1810D0475	
	1810D050	
	1810D0500	
	1810D0525	
	1810D0600	

2.00" ID C-SERIES

4" LENGTH	5" LENGTH	6" LENGTH
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184C0400	185C0300	186C0450
184C0450	185C0350	186C0500
184C0500	185C0400	186C0550
184C0600	185C0450	186C0600
184C0650	185C0500	186C0650
184C0750	185C0550	186C0700
184C0800	185C0600	186C0750
184C0850	185C0650	186C0800
184C0900	185C0700	186C0850
184C0950	185C0750	186C0900
184C1000	185C0800	186C1000
184C1050	185C0850	186C1400
184C1100	185C0900	186C1500
184C1150	185C0950	186C1800
184C1200	185C1000	186C1900
184C1250	185C1050	186C2000
184C1300	185C1100	
184C1500	185C1150	
184C1600	185C1200	
184C1700	185C1250	
184C1800	185C1300	
184C1900	185C1350	
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184C2300	185C1450	
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	185C1600	
	185C1700	
	185C1800	
	185C1900	
	185C2000	
	185C2100	
	185C2200	
	185C2300	

2.25" ID C-SERIES

4" LENGTH	5" LENGTH	6" LENGTH	7" LENGTH	8" LENGTH	9" LENGTH
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184A0450	185A0350	186A0225	187A0275	188A0200	189A0140
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184A0600	185A0450	186A0275	187A0325	188A0250	189A0175
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184A1350	185A1100	186A0600	187A0750	188A0600	189A0500
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184A1700	185A1300	186A0700	187A0950	188A0800	
184A1900	185A1350	186A0750	187A1000	188A0900	
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	185A1500	186A0900	187A1300	188A1200	
	185A1550	186A0950	187A1400		
	185A1600	186A1000	187A1500		
	185A1650	186A1050	187A1600		
	185A1700	186A1100			
	185A1750	186A1150			
	185A1800	186A1200			
	185A1850	186A1250			
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	185A2000	186A1500			
	185A2100	186A1600			
	185A2150	186A1700			
	185A2200	186A1800			
		186A1900			
		186A2000			

IF YOU CAN'T FIND WHAT YOU'RE LOOKING FOR CALL: 800.365.2645

2.5" ID B-SERIES

4" LENGTH	6" LENGTH	7" LENGTH	8" LENGTH	10" LENGTH	12" LENGTH	14" LENGTH	16" LENGTH
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184B0600	186B0500	187B0200	188B0200	1810B0175	1812B0175	1814B0150	
184B0700	186B0550	187B0225	188B0225	1810B0185	1812B0185	1814B0160	
	186B0600	187B0250	188B0250	1810B0200	1812B0200	1814B0175	
	186B0650	187B0275	188B0275	1810B0225	1812B0225	1814B0185	
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	186B1200	187B0550	188B0475	1810B0425	1812B0425	1814B0375	
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		187B0750	188B0575	1810B0525	1812B0550	1814B085	
		187B0800	188B0600	1810B0550	1812B0600		
		187B0850	188B0650	1810B0575	1812B0650		
		187B0900	188B0700	1810B0600	1812B0700		
		187B0950	188B0750	1810B0650	1812B0750		
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		187B1100	188B0850	1810B0750	1812B085		
		187B1200	188B0900	1810B0800	1812B0850		
		187B1300	188B0950	1810B085	1812B095		
			188B1000	1810B0850			
			188B1100	1810B0900			
			188B1200	1810B0950			

2.5" ID B-SERIES Ultra High Travel

12" LENGTH	14" LENGTH	16" LENGTH
12B0110UHT	14B0125UHT	16B0100UHT
12B0125UHT	14B0140UHT	16B0110UHT
12B0150UHT	14B0150UHT	16B0125UHT
12B0162UHT	14B0165UHT	16B0138/375UHT
12B0175/350UHT	14B0175/350UHT	16B0138UHT
12B0175UHT	14B0175UHT	16B0150UHT
12B0185UHT	14B0185UHT	16B0175UHT

(continued)

2.5" ID B-SERIES Ultra High Travel *(continued)*

12" LENGTH	14" LENGTH	16" LENGTH
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12B0200UHT	14B0200UHT	16B0225UHT
12B0212UHT	14B0212UHT	16B0250UHT
12B0225UHT	14B0225UHT	
12B0230/700UHT	14B0230/700UHT	
12B0237UHT	14B0237UHT	
12B0250UHT	14B0250UHT	
12B0275UHT		
12B0300UHT		
12B0325UHT		

3.00" ID E-SERIES – *silver powder-coated*

6" LENGTH	8" LENGTH	10" LENGTH	12" LENGTH	14" LENGTH	16" LENGTH	18" LENGTH
186E0150	188E0150	1810E0100	1812E0100	1814E0100	1816E0150	1818E0200
186E0200	188E0200	1810E0125	1812E0125	1814E0125	1816E0175	1818E0225
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186E0300	188E0300	1810E0162	1812E0175	1814E0175	1816E0225	1818E0275
186E0350	188E0350	1810E0175	1812E0200	1814E0200	1816E0250	1818E0350
		1810E0200	1812E0225	1814E0225	1816E0275	1818E0500
		1810E0225	1812E0250	1814E0250	1816E0300	1818E0800
		1810E0250	1812E0275	1814E0275	1816E0350	
		1810E0300	1812E0300	1814E0300	1816E0450	
		1810E0350	1812E0350	1814E0350	1816E0500	
		1810E0400	1812E0400	1814E0400	1816E0550	
		1810E0500	1812E0450	1814E0450	1816E0600	
		1810E080	1812E0500	1814E0500		
				1814E0600		

3.00" ID E-SERIES Ultra High Travel – *silver powder-coated*

14" LENGTH	16" LENGTH	18" LENGTH
14E0140UHT	16E0110UHT	18E0200UHT
14E0160UHT	16E0125UHT	18E0300UHT
14E0200UHT	16E0200UHT	
	16E0250UHT	
	16E0300UHT	

UNDERSTANDING THE PART

Prefix • Free Length • I.D. • Rate

18 0 X 0000

3.75" ID G-SERIES – *silver powder-coated*				
6" LENGTH	8" LENGTH	10" LENGTH	12" LENGTH	14" LENGTH
186G0150	188G0150	1810G0150	1812G0150	1814G0150
186G0200	188G0200	1810G0200	1812G0200	1814G0200
186G0250	188G0250	1810G0250	1812G0250	1814G0250
186G0300	188G0300	1810G0300	1812G0300	1814G0300
		1810G0350	1812G0350	1814G0350
		1810G0400	1812G0400	1814G0400

3.75" ID G-SERIES – *silver powder-coated*				
16" LENGTH	18" LENGTH	20" LENGTH	22" LENGTH	24" LENGTH
1816G0150	1818G0250	1820G0500	1822G0500	1824G0500
1816G0200		1820G0600	1822G0600	1824G0550
1816G0250		1820G0700		
1816G0300				
1816G0350				
1816G0400				

Metric Sizes

36mm ID I-SERIES					
STD		4" LENGTH		5" LENGTH	
18I-0300-HT	18I-1000-HT	18I-0500-HT-4	18I-1200-HT-4	18I-1400-HT-5	18I-2300-HT-5
18I-0400-HT	18I-1100-HT	18I-0600-HT-4	18I-1300-HT-4	18I-1500-HT-5	18I-2400-HT-5
18I-0450-HT	18I-1200-HT	18I-0700-HT-4	18I-1400-HT-4	18I-1600-HT-5	18I-2500-HT-5
18I-0500-HT	18I-1300-HT	18I-0800-HT-4	18I-1500-HT-4	18I-1700-HT-5	18I-2600-HT-5
18I-0550-HT	18I-1400-HT	18I-0900-HT-4	18I-1600-HT-4	18I-1800-HT-5	18I-2700-HT-5
18I-0600-HT	18I-1500-HT	18I-1000-HT-4	18I-1800-HT-4	18I-1900-HT-5	18I-2800-HT-5
18I-0650-HT	18I-1700-HT	18I-1100-HT-4	18I-2000-HT-4	18I-2000-HT-5	18I-3000-HT-5
18I-0700-HT	18I-1800-HT			18I-2100-HT-5	18I-3100-HT-5
18I-0750-HT	18I-1900-HT			18I-2200-HT-5	18I-3200-HT-5
18I-0800-HT	18I-2000-HT				
18I-0850-HT	18I-2100-HT				
18I-0900-HT	18I-3700-HT				
18I-0950-HT	18I-3900-HT				

IF YOU CAN'T FIND WHAT YOU'RE LOOKING FOR CALL: 800.365.2645

Metric Sizes

60mm ID M-SERIES					
5.5" LENGTH	6" LENGTH	7" LENGTH	8" LENGTH	9" LENGTH	170mm LENGTH
185.5M0550	186M0350	187M0350	188M0350	189M0600	18170M080
185.5M0650	186M0450	187M0450	188M0450	189M0650	18170M090
185.5M0750	186M0500	187M0500	188M0550	189M0700	18170M100
	186M0550	187M0550	188M0600	189M0750	18170M110
	186M0600	187M0600	188M0800	189M0800	18170M120
	186M0650	187M0650	188M0900	189M0850	18170M130
	186M0700	187M0700	188M1000	189M0900	18170M140
	186M0800	187M0800			18170M150
	186M0900	187M0900			
	186M1000	187M1000			
	186M1100				
	186M1300				

70mm ID P-SERIES		
8" LENGTH	9" LENGTH	10" LENGTH
188P0450	189P0450	1810P0350
188P0500		1810P0400
188P0550		1810P0450
188P0600		

IF YOU CAN'T FIND WHAT YOU'RE LOOKING FOR CALL: 800.365.2645

1/4 Midget Q-Series & Formula SAE FS-Series Springs

¼ Midget & Formula SAE Coil-Over Springs feature the Hyperco OBD "Body Bulge" design to optimize end coil orientation and maximize rate linearity.

ADVANTAGES:

- More usable deflection
- Less weight
- Increased rate linearity
- More resistance to bowing
- Fits all standard hardware
- Maintains free length and installed height

1.680" ID x 4.25" FL ¼" MIDGET SPRINGS
PART#
184.25Q075
184.25Q080
184.25Q087
184.25Q094
184.25Q100
184.25Q108
184.25Q116
184.25Q124
184.25Q132
184.25Q140
184.25Q150

1.45" ID x 4.4 FL FORMULA SAE SPRINGS
PART#
18FS150
18FS175
18FS200
18FS225
18FS250
18FS300
18FS350
18FS400
18FS450

CONVENTIONAL SPRINGS

High-performance, aftermarket suspension springs primarily used in motorsports and motor racing.

ADVANTAGES: More usable deflection · Less weight · Increased rate linearity · More resistance to bowing · Fits all standard hardware · Maintains free length and installed height

S-SERIES 5" OD REAR x 13" FL – Both ends closed and ground
PART#
18S-100
18S-125
18S-150
18S-165
18S-175
18S-185
18S-200
18S-225
18S-250
18S-275
18S-300
18S-325
18S-350
18S-375

SN-SERIES 5" OD REAR x 11" FL – Both ends closed and ground
PART#
18SN-125
18SN-150
18SN-175
18SN-200
18SN-225
18SN-250
18SN-275
18SN-300
18SN-325
18SN-350
18SN-375
18SN-400
18SN-450
18SN-475
18SN-500

SNS-SERIES 5" OD REAR x 15" FL – Both ends closed and ground
PART#
18SNS-150
18SNS-175
18SNS-200
18SNS-225
18SNS-250

SNU-SERIES 5" OD REAR x 16" FL – Both ends closed and ground
PART#
18SNU-050
18SNU-085
18SNU-100
18SNU-125
18SNU-150
18SNU-175
18SNU-200
18SNU-225
18SNU-250

SNT-SERIES 5" OD REAR x 20" FL – Both ends closed and ground
PART#
18SNT-50
18SNT-80
18SNT-100
18SNT-125
18SNT-150

SS-SERIES 5" OD REAR x 5" FL – Both ends closed and ground
PART#
18SS-200
18SS-300
18SS-400

Y-SERIES 5" OD FRONT x 9.5" FL – One end open; one end closed and ground
PART#
18Y0300
18Y0475
18Y0500
18Y0525
18Y0550
18Y0575
18Y0600
18Y0625
18Y0650
18Y0700
18Y0750
18Y0800
18Y0850
18Y0900
18Y0950
18Y1000
18Y1050
18Y1370
18Y1490

Y-SERIES 5" OD FRONT x 9.9" FL – One end open; one end closed and ground
PART#
18Y0350-9.9
18Y0375-9.9
18Y0400-9.9
18Y0425-9.9
18Y0450-9.9
18Y0475-9.9
18Y0500-9.9
18Y0550-9.9

Y-SERIES 5" OD FRONT x 10.5" FL – One end open; one end closed and ground
PART#
18Y0350-10.5
18Y0400-10.5
18Y0450-10.5

Z-SERIES 5.5" OD FRONT x 9.5" FL – One end open; one end closed and ground
PART#
18Z0300
18Z0350
18Z0400
18Z0450
18Z0500
18Z0550
18Z0600
18Z0650
18Z0700
18Z0750
18Z0800
18Z0850
18Z0900
18Z0950
18Z1000
18Z1050
18Z1100
18Z1200
18Z1320
18Z1440

LINEAR PULL BAR SPRING 5" OD x 7" FL – Both ends closed and ground
PART#
700PB

LINEAR PULL BAR SPRING 5" OD x 6.625" FL – Both ends closed and ground
PART#
1225PB

PROGRESSIVE PULL BAR SPRING: 5" OD x 7" FL Both ends closed and ground
PART#
600-1200
900-1300

UNDERSTANDING THE PART

Prefix • Free Length • I.D. • Rate

18 0 X 0000

Street Stocks & Stock Appearing Springs

Hyperco offers various specifications of Conventional Rear Springs. (1) One end pigtail / One end closed. (2) Double pigtail. Designed for Stock Appearing classes (black powder coat finish). Available in the following rates:

SNP-11 SERIES 5.5" OD REAR x 11" FL – One end pigtail; one end closed
PART#
18SNP11-175
18SNP11-200
18SNP11-225
18SNP11-250
18SNP11-275

SNP-12 SERIES 5.5" OD REAR x 12" FL – One end pigtail; one end closed
PART#
18SNP12-175
18SNP12-200
18SNP12-225
18SNP12-250
18SNP12-275
18SNP12-300

SDP-SERIES 7" OD REAR x 14" FL – Double pigtail ends
PART#
18SDP-175
18SDP-200
18SDP-225
18SDP-300

Z-11 SERIES 5.5" OD FRONT x 11" FL – One end open; one end closed and ground
PART#
18Z0800-11
18Z0900-11
18Z1000-11
18Z1100-11
18Z1200-11
18Z1300-11

Z-12 SERIES 5.5" OD FRONT x 12" FL – One end open; one end closed and ground
PART#
18Z0800-12
18Z0900-12
18Z1000-12
18Z1100-12
18Z1200-12
18Z1300-12

IF YOU CAN'T FIND WHAT YOU'RE LOOKING FOR CALL: 800.365.2645

SPECIALTY SPRINGS & PRODUCTS

Hyperco offers specialized conventional and coil-over suspension spring products as well as miscellaneous suspension components to optimize performance for different applications. All parts are blue powder-coated except where noted in description.

Conical Springs

Conical Springs are designed to provide a linear spring rate from free length to solid height while tapering from a 2.5" ID to a 5" OD. They have a 5" OD like a conventional rear spring at one end and a 2.5" ID at the other end.

ADVANTAGES:

- More usable deflection
- Less weight
- Increased rate linearity
- More resistance to bowing
- Can be used ascoil-overs or conventional mount springs

PART #	DESCRIPTION
1816SB0125	2.5" ID-5" OD SB-SERIES CONICAL SPRINGS/ 16" FREE LENGTH
1818SB0110	2.5" ID-5" OD SB-SERIES CONICAL SPRINGS/ 18" FREE LENGTH
1818SB095	2.5" ID-5" OD SB-SERIES CONICAL SPRINGS/ 18" FREE LENGTH

Helper Springs

The main purpose of the Helper Spring (coil-over) is to support, or help, the main spring by keeping it in contact with its spring perch when the suspension is at full droop.

ADVANTAGES:

- A compact solid height
- More usable deflection
- Designed to take years of use at solid height without any compromise in performance

PART #	DESCRIPTION
CS100	Helper Spring (4" FL x 2.5" ID)
CS600	Helper Spring (6" FL x 2.5" ID)
CS650	Helper Spring (6" FL x 2.5" ID x .650" Solid Height)
HELPERSPRG-1.875	Helper Spring (4" FL x 1.875" ID)
HELPERSPRG-2.25	Helper Spring (4" FL x 2.25" ID)
HELPERSPRG-3.00	Helper Spring (5" FL x 3" ID) Silver Powder-Coated
HELPERSPRG-60MM	Helper Spring (4" FL x 60mm ID)

Transfer Assist Springs

Transfer Assist Springs are special tuning coil-over springs used in Midget Sprint and Micro Sprint racing. They offer much of the same function of a Helper Spring, but have a higher rate to provide some tuning of the suspension to improve roll control.

ADVANTAGES:

- Compact design allows use on shocks design for 1 7/8 in ID springs
- Can be run at coil bind indefinitely
- Help improve roll control
- Improve grip on uneven racing surfaces

PART #	DESCRIPTION
18-CS 25	Transfer Assist Spring (4" FL x 25# rate)
18-CS 50	Transfer Assist Spring (4" FL x 50# rate)

Miscellaneous Specialty Springs

PART #	DESCRIPTION
18-400	6th Coil (.909 ID x 3" FL)
184.5H0600	Penske Tracking Damper (1.18" ID x 4.5" FL)
184.5H0900	Penske Tracking Damper (1.18" ID x 4.5" FL)

Locker Springs

Locker Springs are specialty springs designed for use in most popular Ford 9-inch based "Detroit Locker" rear differential assemblies.

ADVANTAGES:

- High temperature capability assures long life
- Accurate applied load at operating height

PART #	DESCRIPTION
LOCKERSPRG	Locker Spring
LOCKER SPRG (SPCL)	Locker Spring (Special)

Bump Springs

Bump Springs are specialty springs used in conjunction with a primary spring to allow a race car to have a relatively soft / compliant initial spring rate to get down to the desired optimum ride height and then pick up the rate of the bump spring to achieve a constant / optimum dynamic ride height.

ADVANTAGES: More usable deflection · Less weight · Increased rate linearity · More resistance to bowing · Fits all standard hardware · Maintains free length and installed height

PART #	FREE LENGTH (in)	O.D. (in)	I.D. (in)	SOLID HEIGHT (in)	DESIGN LOAD (lbs.)	WEIGHT (grams)
24BS0400	2.400	1.920	1.410	1.158	497	165
24BS0500	2.400	1.954	1.410	1.240	580	191
24BS0600	2.400	1.976	1.410	1.250	690	202
24BS0700	2.400	2.000	1.410	1.294	774	219
24BS0800	2.400	1.928	1.338	1.291	887	210
24BS1000	2.400	1.950	1.338	1.327	1073	213
24BS1200	2.400	1.940	1.300	1.345	1265	236
24BS1400	2.400	1.962	1.300	1.354	1464	248
24BS1600	2.400	1.940	1.260	1.422	1565	262
20BS1800	2.000	1.980	1.300	1.248	1354	237
20BS2000	2.000	1.960	1.260	1.342	1316	257
20BS2250	2.000	1.960	1.260	1.329	1510	239
20BS2500	2.000	1.940	1.220	1.331	1671	258
20BS3000	2.000	1.970	1.220	1.344	1967	275
20BS3500	2.000	1.944	1.180	1.354	2000	276
20BS4000	2.000	1.960	1.180	1.500	2000	278
20BS4500	2.000	1.960	1.180	1.550	2000	260
20BS5000	2.000	1.960	1.180	1.600	2000	245
20BS6000	2.000	2.038	1.180	1.372	2500	324
20BS7000	2.000	2.054	1.180	1.320	2500	321
20BS8000	2.000	2.106	1.180	1.441	2500	376

ACCESSORIES

Accessories to compliment your Hyperco Springs.

Spring Hardware

PART #	DESCRIPTION
18DS100	Stacked Spring Divider (2.5" ID)

Spring Covers

Spring Covers prevent dirt, sand, and debris from wearing down shock components and potentially damaging the spring and/or shock assembly.

ADVANTAGES:

- Prevent wear to the spring and shock components for added durability
- Fabric is breathable and prevents overheating and interference
- Washable for multiple use
- UV resistant, water repellent, heat resistant up to 450 degrees and shatter proof in freezing temperatures

PART #	DESCRIPTION
1101-12B	Spring Cover, Fits 12"FL, B-series
1101-12BUHT	Spring Cover, Fits 12"FL, B-series, UHT
1101-12E	Spring Cover, Fits 12"FL, E-series
1101-14B	Spring Cover, Fits 14"FL, B-series
1101-14BUHT	Spring Cover, Fits 14"FL, B-series, UHT
1101-14E	Spring Cover, Fits 14"FL, E-series
1101-16B	Spring Cover, Fits 16"FL, B-series
1101-16E	Spring Cover, Fits 16"FL, E-series
1101-18E	Spring Cover, Fits 18"FL, E-series
1101-18G	Spring Cover, Fits 18"FL, G-series
1101-20E	Spring Cover, Fits 20"FL, E-series
1101-20G	Spring Cover, Fits 20"FL, G-series
1101-22E	Spring Cover, Fits 20"FL, E-series
1101-22G	Spring Cover, Fits 22"FL, G-series
1101-24E	Spring Cover, Fits 24"FL, E-series
1101-24G	Spring Cover, Fits 24"FL, G-series
1101-26E	Spring Cover, Fits 26"FL, E-series
1101-26G	Spring Cover, Fits 26"Fl, G-series
1101-28E	Spring Cover, Fits 28"FL, E-series
1101-28G	Spring Cover, Fits 28"FL, G-series
1101-30E	Spring Cover, Fits 30"FL, E-series
1101-30G	Spring Cover, Fits 30"FL, G-series
1101-32G	Spring Cover, Fits 32"FL, G-series
1101-7PB	Spring Cover, Fits Lin and Prog Pull Bar

HYDRAULIC SPRING PERCHES

Spring Perches are suspension components used on coil-over springs designed to minimize lateral forces, resulting in maximized total performance of a vehicle.

ADVANTAGES:

- Reduces lateral load
- Evenly distributes spring load
- Reduces shock absorber internal frictions
- Reduces bending load on the shock absorber
- Improves mechanical grip at the tire

PART #	DESCRIPTION
HHPERCH-2.00	Add-On/Slide-On Perch
HHPERCH-2.25L	Add-On/Slide-On Perch
HHPERCH-2.50	Add-On/Slide-On Perch
HHPERCH-3.00	Add-On/Slide-On Perch

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Spring Perch Maintenance Items

PART #	DESCRIPTION
ASSEMBLYGREASE	Assembly Grease
SCREWS	Sealing Screws
SWAB	Cotton Swab
02-034	Seal
02-035	Seal
02-037	Seal
02-039	Seal
02-041	Seal
02-042	Seal

PART #	DESCRIPTION
02-043	Seal
ORM-0178-07900	Seal
.084″	Gap Setting Rings (2 pcs.)
.096″	Gap Setting Rings (2 pcs.)
.109″	Gap Setting Rings (2 pcs.)
.113″	Gap Setting Rings (2 pcs.)
.117″	Gap Setting Rings (2 pcs.)
.126″	Gap Setting Rings (2 pcs.)
.126-5″	Gap Setting Rings (2 pcs.)
HCD-PERCH COVERS	Garters: Dirt-Excluding Covers

IF YOU CAN'T FIND WHAT YOU'RE LOOKING FOR CALL: 800.365.2645

COMPOSITE LEAF SPRINGS

Composite Leaf Springs are lightweight, high-performance aftermarket suspension springs used as an alternative to coil springs. Hyperco's leaf springs are designed to be used on select Chrysler, General Motors, Camaro & Corvette applications.

ADVANTAGES: 70% lighter than steel · Retain their designed arch, preventing sagging and chassis inconsistency · Do not corrode · Provide more side bite off the corners · Customers report 5X plus the life of traditional steel leaf springs

PART #	FRONT BOLT	REAR BOLT	TRUE ARCH	RATE
Chrysler Style				
10220	5/8″	1/2″	4.5″	150
10230	5/8″	1/2″	4.5″	175
10231	5/8″	1/2″	4.5″	200
10240	5/8″	1/2″	4.5″	225
General Motors Style				
11338	1/2″	9/16″	4.5″	150
11340	1/2″	9/16″	4.5″	175
11342	1/2″	9/16″	4.5″	200
11344	1/2″	9/16″	4.5″	225
11348	1/2″	9/16″	4.5″	250

Corvette Composite Leaf Springs

Corvette Composite Leaf Springs enable the serious Corvette owner to select the suspension performance level they desire for their car. We offer two series for Corvettes: The High Performance Street Series (HPS) provides improved cornering ability, road feel and initial response while maintaining a quiet and comfortable ride and the High Performance Track Series (HPT) offers the owner a "race-ready" spring rate option for auto crossing, track days and competitive racing.

PART #	SERIES	DESCRIPTION	RATE
12400HPS	C3 Corvette - High Performance Street Series	C3 Rear (Base)	330
12414C3S	C3 Corvette - High Performance Street Series	Ride Height Adjuster	n/a
12413HPS	C3 Corvette - High Performance Street Series	C3 Rear (EZ Ride)	180
12404HPS	C4 Corvette - High Performance Street Series	C4 Rear (Performance/Track)	326
12411HPS	C4 Corvette - High Performance Street Series	C4 Rear (EZ Ride)	228
12406HPS	C5 Corvette - High Performance Street Series	C5 Rear	777
12405HPS	C5 Corvette - High Performance Street Series	C5 Front	571
12408HPT	C5 Corvette - High Performance Track Series	C5 T1 Rear	850
12407HPT	C5/C6 Corvette - High Performance Track Series	C5/C6 T1 Front	634
12409HPT	C6 Corvette - High Performance Track Series	C6 T1 Rear (Performance/Track)	850
12415HPT	C7 Corvette - High Performance Track Series	C7 Front	1085lb/in
12416HPT	C7 Corvette - High Performance Track Series	C7 Rear	942lb/in
12419HPS	C7 Corvette - High Performance Street Series	C7 Front	528lb/in
12420HPS	C7 Corvette - High Performance Street Series	C7 Rear	1011lb/in
12421HPT	C7 Corvette - High Performance Track Series	C7 Rear	725lb/in

TOP 10 TECH TIPS

1. Springs that are reaching coil bind will exhibit signs of coil-to-coil contact. A close visual inspection will indicate damage to the powder-coated (painted) surfaces between adjacent coils. If damage is present, install a longer free length spring or a higher rate spring.

2. There is no need to put a racecar on blocks to keep load off the springs. Properly designed and manufactured suspension coil springs (Hypercoils®) will not lose free length nor will they lose installed height under normal conditions.

3. Pre-loading a spring on a shock will not change its rate, but it will affect the amount of load required to put the spring in motion. For example, a 100 lb. spring with 3" of pre-load wound into it on a shock versus a 300 lb. spring with 1" of pre-load wound into it on a shock will take 301 lbs. to put either spring in motion (overcome pre-load). If you apply 400 lbs. to both units, the 100 lb. spring will move 1" and the 300 lb. spring will move 0.333".

4. When rate-testing Conventional Front Springs, it is important to ensure the helix (rise) in the rate tester is the same as the helix in the lower control arm of the car.

5. When rate testing Suspension Springs for a specific application, the preferred method is to pre-load the springs at an amount equal to the static load they receive when they are installed in the car. Next, test the rate over the displacement range the spring moves dynamically (on the track).

6. Spring Rubbers increase the rate of a spring by reducing the amount of active material. Cut the Spring Rubbers to "tune" the spring to a desired rate. The more rubber that is utilized the higher the rate increase.

7. Select a Suspension Coil-Over Spring free length based on the spring operating dynamically between 20% and 80% of its total available deflection.

8. Establish a few non-race (verification) springs for periodic reference of rate tester's calibration.

9. Install Hyperco's Hydraulic Spring Perches at both ends of the spring, when running free lengths of 10"or less. For free lengths over 10", it is better to run the Hydraulic Spring Perch on only one end of the spring.

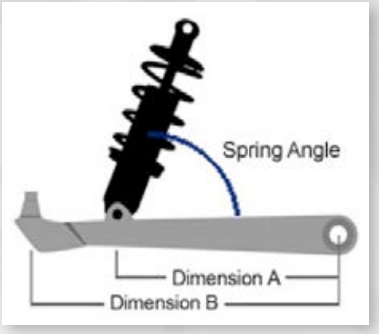
10. Hydraulic Spring Perches are in constant motion when the vehicle is on the track and require rebuilding and maintenance. We recommend a maximum time of 10-12 hours, between rebuilds. Dirty environments and high loading will decrease the time allowed between rebuilds.

TECHNICAL INFORMATION

SUSPENSION SPRING RATE AND WHEEL RATE CALCULATOR

REQUIRED MEASUREMENTS

Corner Weight(lbs):
Unsprung Weight (lbs.):
Dimension A (in.):
Dimension B (in.):
Spring Angle (deg.):
Shock Ride Height from Extended Height (in.):



VISIT hypercoils.com/spring-calculator to use our real-time calculator.

Corner Weight

Use tire scales, as used by racing teams, or weight the vehicle on axle scales used by trucking companies. Make sure to weigh the vehicle in the configuration of its most frequent use. Add weight to compensate for the driver, passengers, and cargo in proper locations.

Unsprung Weight

Unsprung weight is the vehicle weight that is not supported by the springs. Examples include: Tire/wheel assembly; brake rotors and calipers (or drums and components); wheel bearings; steering knuckle; hanging weight of the control arm (or trailing arms on rear axles); differential and axle weight; 1/2 of the spring and shock absorber weights. Unsprung corner weight is usually around 70-120 lbs.

Dimension A

Dimension A - Measure the distance from the control arm pivot point on the subframe (centerline of the bushing) to the point on the control arm directly under the center of the spring or coil-over assembly.

Dimension B

Dimension B - Measure the distance from the control arm pivot point on the subframe to the centerline of the ball joint. Note: If you are running reverse offset wheels, then measure to the center of the wheel.

Spring Angle

Using a protractor or similar measuring device, find the angle of the centerline of the spring or coil-over assembly from the horizontal of the control arm. In most cases, this will be somewhere between 75 and 90 degrees, and 90 degrees can be used for the angle. This measurement helps determine the "force angle" and resultant spring force applied to the control arm.

Shock Ride Height from Extended Height

Determine the total travel of the shock absorber using the shock manufacturer's catalog; or by pulling the shock shaft to the full extension position and measuring the length of the chrome shaft. Generally, the shock should be compressed 40% - 50% of its travel at ride height. For example, if a shock has 4.8" of travel and you want the sprung weight of the vehicle to compress the shock 45% at ride height, you would enter 2.16" (45% x 4.8") of shock compression to ride height.

Sprung Weight

Sprung Weight = Corner Weight - Unsprung Weight. It is the weight of the vehicle that is supported by the spring and is the only weight used when calculating spring rates.

Motion Ratio

Motion Ratio = (Dimension A / Dimension B) *sin (Spring Angle). The motion ratio is the mechanical advantage (lever ratio) that the wheel has over the spring in compressing it.

Static Load

Static Load = Sprung Weight / Motion Ratio. The static load is the load that the spring sees from the sprung weight acting through the motion ratio.

Spring Rate

Spring Rate = Static Load / Shock Ride Height. You should always find the closest spring rate available for your application. When in doubt, choose a lower spring rate. It is easier to achieve handling and performance with a lower spring rate and a "stiff" stabilizer bar or shock.

Wheel Rate

Effective Wheel Rate = Spring Rate* $(\text{Motion Ratio})^2$. Wheel Rate is the effective spring rate at the wheel, due to the leverage advantage the wheel has with respect to the spring on the control arm.

SPRING TECH EQUATIONS

SOLID HEIGHT =
(Number of Coils – 0.25) x Wire Diameter

Example:
A spring with 14 coils and a wire diameter of 0.5" calculates the solid height as follows:
(14 – 0.25) x 0.5 = 6.875 Solid Height

RATE = LOAD ÷ DEFLECTION

Example:
If a spring deflects by 2.75" under a load of 300 lbs., the rate is calculated as follows:
300 ÷ 2.75 = 109# Rate

DEFLECTION = LOAD ÷ RATE

Example:
A spring under a load of 300 lbs., with a 109# rate, calculates the deflection as follows:
300 ÷ 109 = 2.75" Deflection

LOAD = DEFLECTION x RATE

Example:
A spring with a 109# rate and a 2.75" deflection, calculates the load as follows:
2.75 x 109 = 300 lb. Load

Stacked Springs and Combined Spring Rate*
(Spring Rate "A" x Spring Rate "B") ÷
(Spring Rate "A" + Spring Rate "B")

Example:
If the rate of spring "A" is 200# and the rate for spring "B" is 500#, the combined rate is calculated as follows:
(200 x 500) ÷ (200 + 500) = 143# Combined Rate

***This calculation is used when two springs are stacked on top of each other.**

Portable Spring Rate Checkers

Portable checkers are adequate for general testing, and for comparing springs of 1000 lb. rate or less. When using portable checking equipment, follow these tips for more reliable results:

- Use calibration springs and keep them for reference.
- Use a strong, sturdy frame for your equipment, one that will not bow or flex.
- Make sure the top and bottom plates are parallel.
- Inspect the checking equipment for hydraulic leaks on a regular basis.
- Use a consistent set of operating procedures:
  - Orient the springs the same way each time
  - Compress the springs to the pre-load and do not "bleed" back to it.

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NOTES

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hypercoils.com | info@hypercoils.com

CUSTOM SPRINGS
662.488.4567 | CustomSprings@hypercoils.com

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