



CIRCLE TRACK • ROAD RACE • RALLY • DRAG • OFF-ROAD



BILSTEIN®

MOTORSPORTS



SETTING THE PACE FOR 50 YEARS.

BILSTEIN introduced the very first monotube gas pressure shock absorber to the racing world over 50 years ago. It didn’t take long for racers to recognize the superior performance that this new technology provided and the wins started stacking up. In fact, ever since, the world’s most renowned drivers have won on BILSTEIN shocks.

After 50 years of continuously evolving shock technology, the winning tradition continues with victories in 2014. From Daytona to Le Mans to Baja, the legendary BILSTEIN technology can be found in winner’s circles around the globe.

Every BILSTEIN shock featured in this catalog is a true monotube high pressure gas shock; no emulsion, no foam cells, just performance. No matter what you race, BILSTEIN has the technology and performance you need; count on BILSTEIN to deliver the winning results you’re looking for. After all, we’ve been the leader since the very beginning.

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BILSTEIN TECHNOLOGY

The Technology of BILSTEIN's Monotube Design

Heat is one of the major detriments to the performance and longevity of any shock absorber. Conventional twintube designed shocks trap the heat within the shock body and do not let it adequately dissipate, making them prone to heat build-up, fade and eventual failure.

By contrast, BILSTEIN's superior monotube high gas pressure design allows the excessive heat from the oil to transfer to the outer surface of the shock body and dissipate more efficiently. The dividing piston also permits the oil to expand as heat builds, preventing aeration (foaming) and viscosity loss. This allows the shock to maintain full damping characteristics as temperatures rise.

Pressure Differentials

Shock oils contain roughly 10% gas molecules. The compression and rebound strokes of the shock piston in the oil column cause pressure differentials. When the piston rod is forced quickly into the shock tube, the pressure increases in front of the piston and decreases behind it.

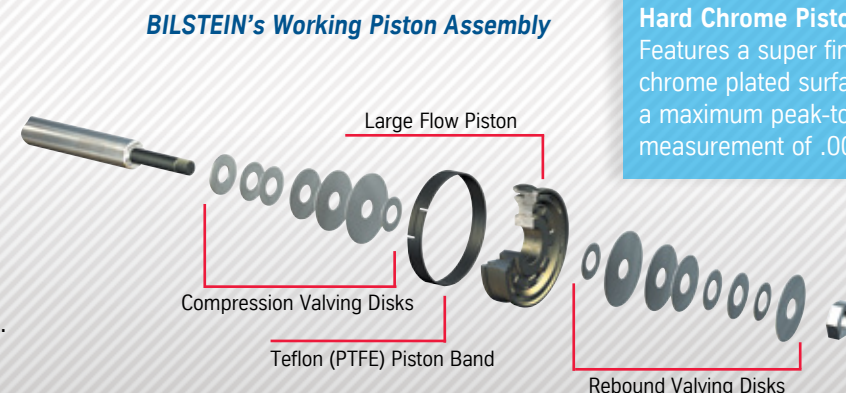
These pressure differentials release gas molecules from the oil column which forms small bubbles (foaming). The foaming can become so excessive that damping force is severely reduced. The shock becomes unresponsive with a corresponding loss of control and grip.

In a monotube gas pressure shock absorber, the nitrogen separated from the oil by a dividing piston keeps the oil column under pressure at all times to prevent the release of gas molecules. This enables the shock to deliver consistent performance under all track conditions.



Twintube piston

The piston head design allows independent tuning of the compression and rebound damping forces to provide optimum performance without compromise. This simple, yet exceptionally functional design contributes to the extreme durability and performance of BILSTEIN shocks.



BILSTEIN's Working Piston Assembly



Non-pressurized shock, foaming

Gas pressure shock, no foaming

High Pressure Nitrogen Gas & "Floating" Dividing Piston

Nitrogen gas maintains constant pressure against the low mass "floating" dividing piston and column of hydraulic oil, eliminating the possibility of oil foaming and performance loss.

Self-Adjusting Piston

Instantly reacts and adjusts for any condition. Provides maximum vehicle body motion control and grip.

BILSTEIN's Industry Leading Monotube Design

Provides superior tube strength while maximizing heat dissipation and shock life.

One Piece Aluminum Rod Guide & Seal

Keeps dirt out and maintains a nearly friction-free surface for longer life.

Hard Chrome Piston Rod

Features a super finished hard chrome plated surface with a maximum peak-to-valley measurement of .0002mm.

Why Race on BILSTEIN Shock Absorbers?

1. Your setups will be more precise due to consistent and repeatable valving designs.
2. BILSTEIN's proprietary piston design and deflective disc technology develops control force when you need it. The combination provides superior weight transfer control at the slightest suspension movement as well as better control under braking.
3. BILSTEIN shocks use custom blended oil and deflective disc technology that prevents performance fading. Your shocks will handle as good at the end of the race as they did at the start.
4. BILSTEIN shocks are rugged. They last for years and are rebuildable.
5. When the advantages of BILSTEIN shocks are tallied up, you will have spent less money on shock absorbers and out-performed the competition.



BILSTEIN's unique deflective disc valving system allows for exact damping of both compression and rebound movements.

THE FOLLOWING ARE SOME COMMONLY ASKED QUESTIONS AND THEIR CORRESPONDING ANSWERS CONCERNING BILSTEIN MONOTUBE GAS PRESSURE SHOCK ABSORBERS:

Q. Why is the shaft on a BILSTEIN shock always extended?

A. As monotube gas shocks, BILSTEIN shocks are under nitrogen pressure to deliver the most responsive damping for ultimate control. This pressure, called the gas reactive force, and BILSTEIN's low friction seals, force the shaft to extend.

Q. Is the car more difficult to scale with BILSTEIN shocks?

A. BILSTEIN shocks have no effect on the results as you weigh the four corners. The gas reactive force in BILSTEIN shocks may raise your car's ride height slightly. Simply adjust the chassis downward to the desired ride height.

Q. Does BILSTEIN offer specific applications for the various dirt and asphalt racing series?

A. BILSTEIN has shocks specifically valved for both dirt and asphalt surfaces of various track lengths and bankings. For more information, please contact the BILSTEIN Racing Department or refer to the supplemental setup charts at www.bilsteinUS.com.

Q. Are BILSTEIN shocks difficult to understand and use?

A. After reviewing the setup charts, you'll be ready to select the proper shocks for your specific race car. BILSTEIN valving is precise. Once you purchase your BILSTEIN shocks, you can be certain they will perform at peak performance throughout their long life.

Q. How can I learn more about tuning BILSTEIN shocks?

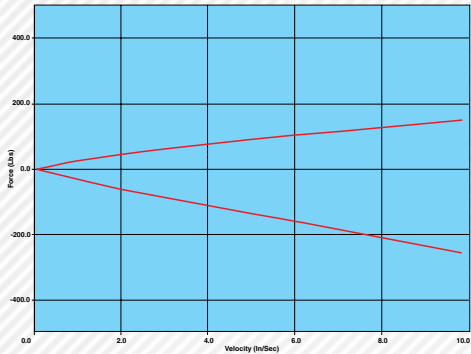
A. If you are interested in learning more about assembling and tuning BILSTEIN products, contact us to learn more about our BILSTEIN Technical Training School. Through a combination of classroom and hands-on training, participants gain further insight into tuning for track conditions and how handling dynamics can be addressed through shock choices. The hands-on experience includes assembly and disassembly of a variety of BILSTEIN shocks as well as dyno testing and diagnostics.

BILSTEIN Pistons and Valving

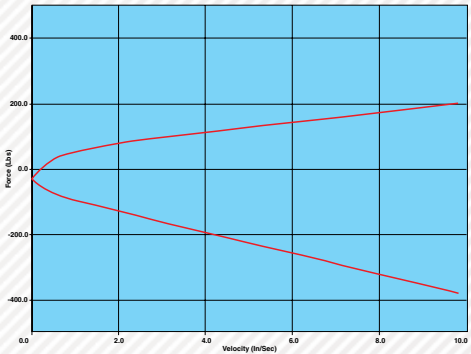
Shock absorbers produce damping force by forcing oil, under pressure, through orifices in the piston. Shock damping forces increase as the vertical velocity of your suspension increases. In other words, when the shock's piston speed through the oil increases, so do the damping forces. Shock dynamometers measure the amount of damping force generated by the piston as it accelerates and decelerates from a dead stop to a chosen peak velocity (usually 10" to 12" per second). The forces are normally depicted in the form of a graph that plots shaft velocity, in inches per second, on the horizontal, and damping forces in pounds on the vertical. Compression forces are normally expressed from zero going up, and rebound forces from zero going down, although that can be reversed by the

"dyno" operator with a single key stroke. Below, study the shock dyno graphs that illustrate the different style performance curves using two, unique piston designs, available from BILSTEIN.

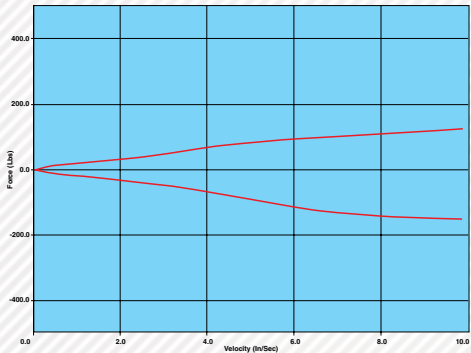
Bleed: The unrestricted flow of oil through the piston that bypasses the valve disc stack is referred to as "bleed", or sometimes as "bypass". The bleed characteristic in the shock's piston design determines the amount of "slow piston speed" control available before the shock's valving begins to control the higher velocity forces. High bleed pistons create small amounts of damping force at low piston speeds, and low bleed pistons create large amounts of damping force at low piston speeds.



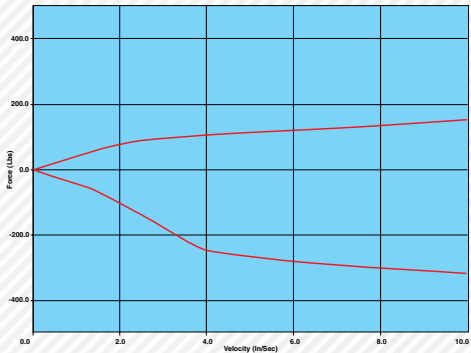
This graph was generated by a BILSTEIN linear piston using 36.4mm diameter cover plates resulting in a high bleed (or high frequency) style, short track linear valving.



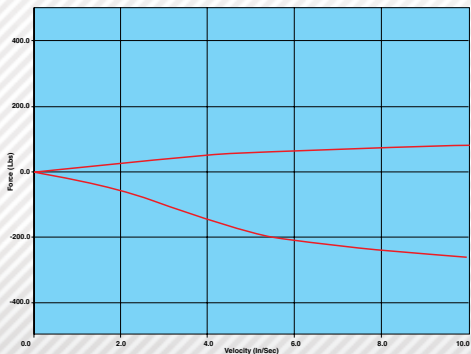
This graph depicts the BILSTEIN linear piston combined with 37.4mm cover plates. The result is valving with more "low-speed" control.



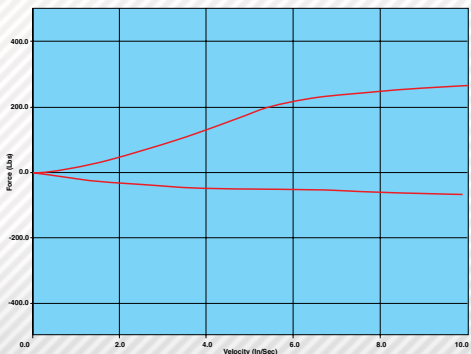
Our standard digressive valvings can be built with a wide range of bleed patterns. The one shown here is a very high bleed valving typical of one that would be used on the rear suspension to promote traction.



Shown here is a standard digressive valving using a low amount of bleed. Notice the large amount of force developed on both compression and rebound at slow piston speeds.



The new BILSTEIN "COB" Digressive piston utilizes a check valve, that when installed on the compression side of the piston creates less bleed and therefore more force on the rebound side.



When the "COB" Digressive piston's check valve is installed on the rebound side, there is less bleed and therefore more force created on the compression side.

How to Shock Tune Your Chassis

Study the current BILSTEIN setup recommendations for your particular type of racing. These combinations are tested and race proven to be successful, but due to the many variables that come into play under racing conditions, it is to your advantage to have a basic understanding of how shock damping rates affect your lap times. Adjustments can then be made with reason and understanding of how they will affect the car. Simply stated, shock absorbers convert the kinetic energy of the spring movements into heat. This heat is then dissipated into the air through the shock tube or body. In practical application, shock absorbers are necessary to maintain maximum tire patch contact to the track as the car corners and negotiates irregularities on the race track surface.

Spring rates determine how far your chassis rolls, pitches or squats. Shock rates determine the length of time it takes for each of these movements to occur.

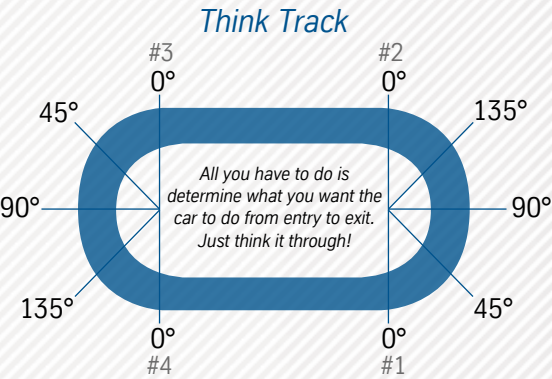
Rebound damping controls the movement of that part of the car's sprung mass that is stored in a compressed spring. The rebound damping rate determines how long it takes for the compressed spring to return to the static ride height. The larger the rebound figure, the more the shock resists the compressed spring's effort to rebound, and the longer it takes for the chassis to return to the static ride height.

Compression damping controls only the oscillation of the car's unsprung weight. Therefore, it is normal to use less compression damping than rebound damping. The exception

occurs when we choose to slow the downward movement on a particular corner of the car to mimic the effect of a stiffer spring.

Here are some guidelines to use when shock tuning your chassis at the track or making the best decisions during initial setup. We are making the assumption that you have removed as many variables as possible and are using the best combination of springs, weights, wheel spacers, tire compound, stagger, etc.

Utilizing the "Think Track" below, study the following list of suggestions. These are not rules, but tendencies that are more often true than not when racing late models and modifieds on asphalt or dirt surfaces.



Troubleshooting the Car at the Track

- If your car is:
- Loose (Oversteer) from 0° to 90°**
 - Increase compression rate on front.
 - Decrease rebound rate on rear, or only on left rear.
 - Tight (Understeer) from 0° to 90°**
 - Decrease compression rate on front, or only on right front.
 - Increase rebound rate on rear, or only on left rear.
 - Loose (Oversteer) from 90° to 0°**
 - Decrease rebound rate on front.
 - Decrease compression rate on rear.
 - Tight (Understeer) from 90° to 0°**
 - Increase rebound rate on front.
 - Increase compression rate on rear, or only on right rear.

When analyzing corner entry, or deceleration handling, realize that the chassis is affected by:

**Compression rate in front.
Rebound rate at rear.**

When analyzing corner exit, or acceleration handling, realize that the chassis is affected by:

**Rebound rate in front.
Compression rate at rear.**

BILSTEIN shocks are famous for their superior performance on very rough asphalt or rutted dirt tracks. You may need to choose a shock with more compression damping than found on our setup sheets under extreme rough track conditions.

We have included this section in our catalog to broaden your understanding of the function of shock absorbers and to show you the effect they have on handling. Keep in mind that there are many adjustments on your chassis other than shock absorbers.

The oversteer/understeer balance may be affected by stagger, tire compound, wheel spacing, spring rates, sway bar, panhard and others. Shocks can be used to fine tune your chassis to gain that last few tenths of a second on the track.

If you have any questions, contact our technical department at 877-666-7662.



PROFESSIONAL
RACING SHOCKS

MINI SPRINT/MIDGET

MOD LITE/DWARF



SG SERIES

Designed for various open wheel circle track applications, the SG Series provides a lightweight race damper for both dirt and asphalt racers.

Product Highlights

- > 36mm monotube technology for consistent, fade-free performance
- > Easily converts to a coilover application
(coilover kit sold separately: B4-B0A-0000187)
- > Race-winning valvings for optimum weight transfer, feel, and grip in various track conditions
- > Proprietary spring steel valving discs provide superior damping performance
- > Lower rod pressure increases driver feel and grip



ASB SERIES

Lightweight and compact, the ASB Series' aluminum design minimizes shock weight for use in circle track applications.

Product Highlights

- > 36mm ultra-lightweight extruded aluminum body for superior heat dissipation
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications
(coilover kit sold separately: B4-B0A-0000257)
- > Recessed Schrader valve for simple coilover installation and low profile
- > Hard anodized finish increases durability and strength
- > Threaded rod guide for easy assembly and disassembly
- > 11mm chrome shaft reduces friction and rod pressure



SPRINT CAR

SPRINT CAR



SN/SNS SERIES

For applications requiring steel body shocks, the SNS comes equipped with a steel cap for races requiring all-steel shock absorbers.

Product Highlights

- > Racer rebuildable
- > 46mm zinc plated steel body designed for improved flow characteristics and durability
- > Equipped with a billet aluminum cap (SN) or steel cap (SNS)
- > 14mm chrome shaft reduces seal drag and breakaway stiction
- > Linear and digressive pistons available for valving versatility
- > Available coilover conversion kit (part #B4-BOA-0000117)



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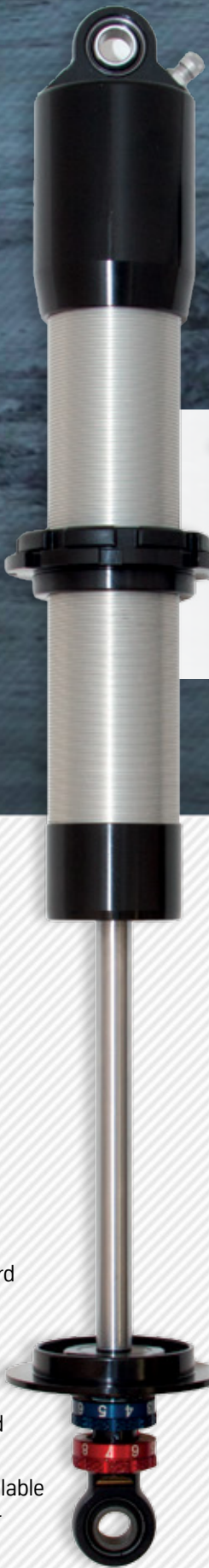


ASN SERIES

Take-apart shock that provides additional damping capacity through the 46mm aluminum body design.

Product Highlights

- > 46mm lightweight extruded aluminum body for superior heat dissipation
- > Schrader valve for quick revalves and rebuilds at the track
- > Threaded body design allows for standard or coilover applications (coilover kit sold separately: B4-BOA-0000190)
- > Anodized finish increases durability and strength
- > 14mm chrome shaft reduces friction and rod pressure
- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir



XVA SERIES

Large bulb aluminum shock body that maximizes stroke in a compact package through greater nitrogen capacity and more controlled fluid flow.

Product Highlights

- > Dual-zone gas bulb decreases gas pressure while increasing grip levels
- > Optimized floating piston improves driver feel and response
- > 46mm extruded aluminum threaded body improves durability and heat dissipation
- > Floating rod guide decreases side load and friction
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications
- > Optional ACV base valve for ultra-low rod pressure





AK SERIES

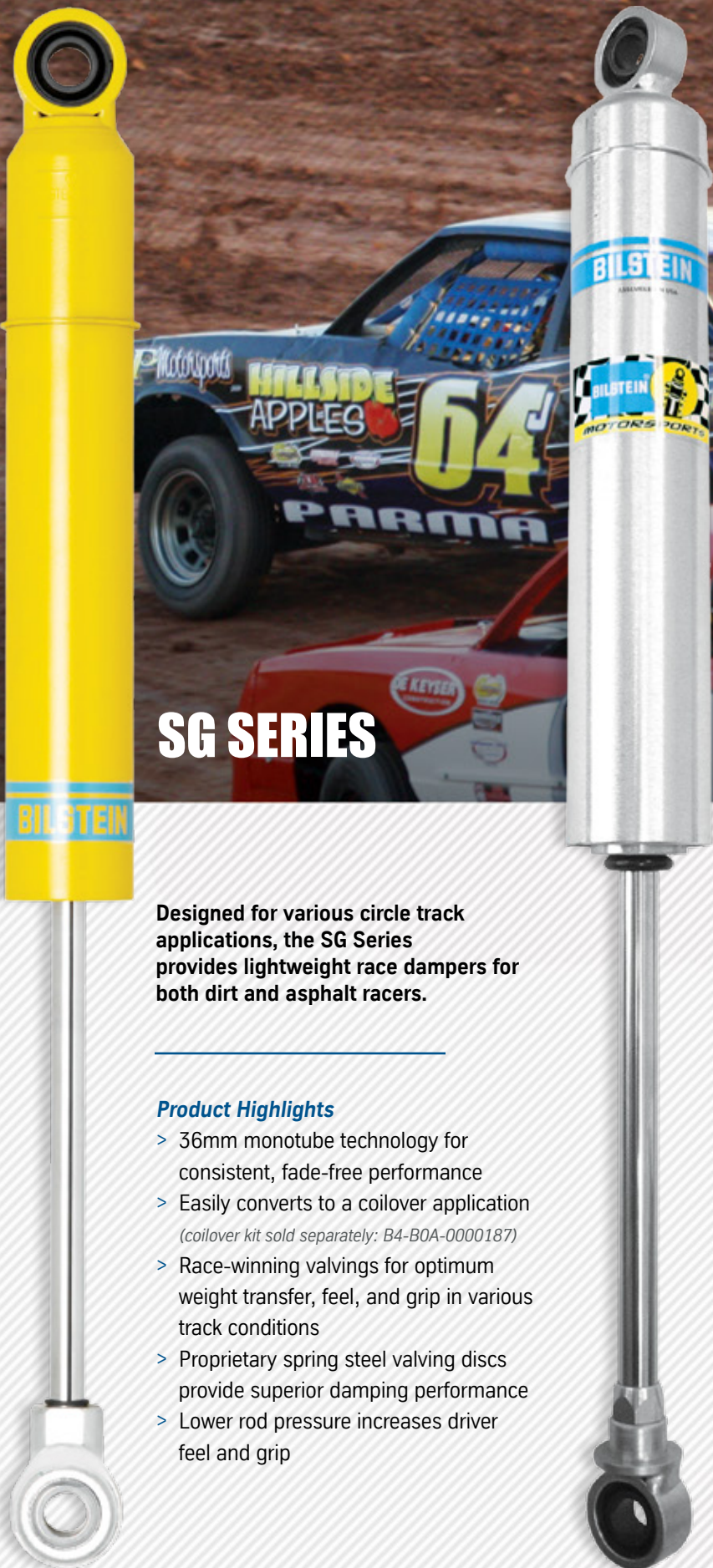
AK Shock Absorber

Combines a direct fit (OE) mounting design with the performance edge of a premium race damper.

Product Highlights

- > Monotube technology dissipates heat for consistent, fade-free performance
- > Direct fit (OE) mounting design
- > Race-winning valvings for optimum weight transfer, feel, and grip in various track conditions
- > Proprietary spring steel valving discs provides superior damping performance
- > Steel body* for increased durability
- > Revalvable inverted monotube strut provides strength and maximum performance

*Meets most sanctioning body requirements

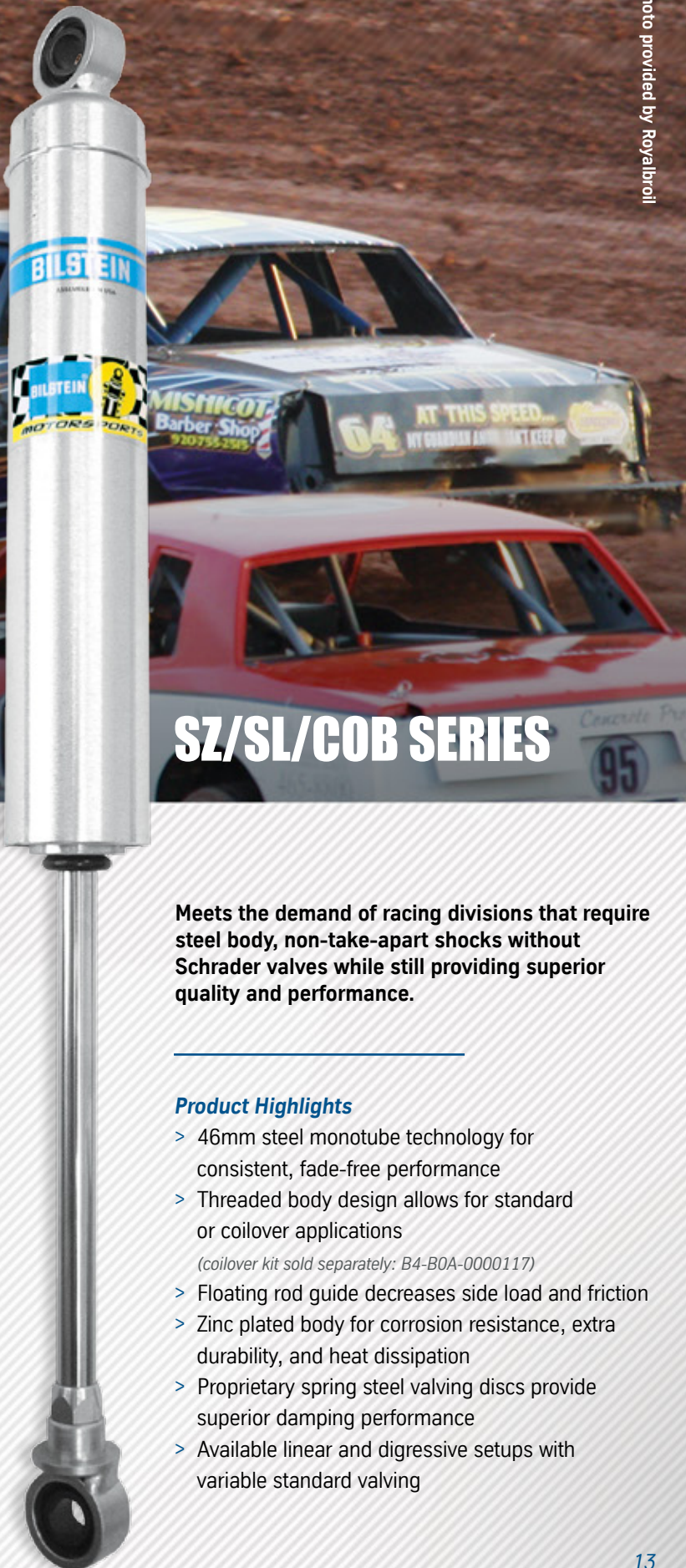


SG SERIES

Designed for various circle track applications, the SG Series provides lightweight race dampers for both dirt and asphalt racers.

Product Highlights

- > 36mm monotube technology for consistent, fade-free performance
- > Easily converts to a coilover application (coilover kit sold separately: B4-B0A-0000187)
- > Race-winning valvings for optimum weight transfer, feel, and grip in various track conditions
- > Proprietary spring steel valving discs provide superior damping performance
- > Lower rod pressure increases driver feel and grip



SZ/SL/COB SERIES

Meets the demand of racing divisions that require steel body, non-take-apart shocks without Schrader valves while still providing superior quality and performance.

Product Highlights

- > 46mm steel monotube technology for consistent, fade-free performance
- > Threaded body design allows for standard or coilover applications (coilover kit sold separately: B4-B0A-0000117)
- > Floating rod guide decreases side load and friction
- > Zinc plated body for corrosion resistance, extra durability, and heat dissipation
- > Proprietary spring steel valving discs provide superior damping performance
- > Available linear and digressive setups with variable standard valving

Photo provided by Royalbroil



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SN/SNS SERIES

For applications requiring steel body shocks, the SNS comes equipped with a steel cap for races requiring all-steel shock absorbers.

Product Highlights

- > Racer rebuildable
- > 46mm zinc plated steel body designed for improved flow characteristics and durability
- > Equipped with a billet aluminum cap (SN) or steel cap (SNS)
- > 14mm chrome shaft reduces seal drag and breakaway stiction
- > Linear and digressive pistons available for valving versatility
- > Available coilover conversion kit (part #B4-BOA-0000117)



XVS SERIES

Large bulb, base valve capable shock that caters primarily to IMCA/UMP modified racers looking for a premium steel body shock that delivers maximum performance and versatility.

Product Highlights

- > Dual-zone gas bulb decreases gas pressure while increasing grip levels
- > Optimized floating piston improves driver feel and response
- > 46mm zinc plated steel body improves durability and heat dissipation
- > Floating rod guide decreases side load and friction
- > Available fully assembled (with IMCA plug installed) or dry (no oil, gas, valving)
- > Optional ACV base valve allows for ultra low rod pressure



ASN SERIES

Take-apart shock that provides additional damping capacity through the 46mm aluminum body design.

Product Highlights

- > 46mm lightweight extruded aluminum body for superior heat dissipation
- > Schrader valve for quick revalves and rebuilds at the track
- > Threaded body design allows for standard or coilover applications
(coilover kit sold separately: B4-B0A-0000190)
- > Anodized finish increases durability and strength
- > 14mm chrome shaft reduces friction and rod pressure
- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir



BGT SERIES

The original benchmark DIRT Modified shock with a 46mm main piston and 60mm floating piston.

Product Highlights

- > 46mm lightweight extruded aluminum body for superior heat dissipation
- > 60mm large volume nitrogen chamber decreases gas pressure
- > Anodized finish increases durability and strength
- > 14mm chrome piston rod reduces friction and rod pressure
- > Floating rod guide for decreased side load and friction
- > Spherical bearings allow shock misalignment
- > Available as a kit for optimized setups
- > Single and double adjustable shafts available
- > Optional ACV base valve allows for ultra-low rod pressure



Optional ACV base valve assembly



XVA SERIES

The new standard in DIRT Modified. Large bulb aluminum shock body that maximizes stroke in a compact package through greater nitrogen capacity and more controlled fluid flow.

Product Highlights

- > Dual-zone gas bulb decreases gas pressure while increasing grip levels
- > Optimized floating piston offers improved driver feel and response
- > 46mm extruded aluminum threaded body improves durability and heat dissipation
- > Floating rod guide for decreased side load and friction
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications
- > Optional ACV base valve allows for ultra-low rod pressure
- > Maximum stroke in a non-remote reservoir configuration

TOUR TYPE MODIFIED

ASPHALT LATE MODEL

ASPHALT LATE MODEL

TOUR TYPE MODIFIED



SZ/SL/COB SERIES

Meets the demands of racing divisions that require steel body, non-take-apart shocks without Schrader valves while still providing superior quality and performance.

Product Highlights

- > 46mm steel monotube technology for consistent, fade-free performance
- > Threaded body design allows for standard or coilover applications
(coilover kit sold separately: B4-BOA-0000117)
- > Floating rod guide for decreased side load and friction
- > Zinc plated body for corrosion resistance, extra durability, and heat dissipation
- > Proprietary spring steel valving discs provide superior damping performance
- > Available linear and digressive setups with variable standard valving



SN/SNS SERIES

For applications requiring steel body shocks, the SNS comes equipped with a steel cap for races requiring all-steel shock absorbers.

Product Highlights

- > Racer rebuildable
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- > Equipped with a billet aluminum cap (SN) or steel cap (SNS)
- > 14mm chrome shaft reduces seal drag and breakaway stiction
- > Linear and digressive pistons available for valving versatility
- > Available coilover conversion kit
(part #B4-BOA-0000117)



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- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir

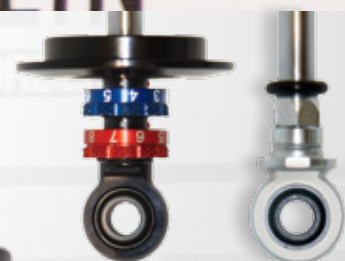


XVA SERIES

Large bulb aluminum shock body that maximizes stroke in a compact package through greater nitrogen capacity and more controlled fluid flow.

Product Highlights


- > Dual-zone gas bulb decreases gas pressure while increasing grip levels
- > Optimized floating piston improves driver feel and response
- > 46mm extruded aluminum threaded body improves durability and heat dissipation
- > Floating rod guide decreases side load and friction
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications
- > Optional ACV base valve for ultra-low rod pressure




AVAILABLE IN NON-, SINGLE-, AND DOUBLE-ADJUSTABLE

DIRT LATE MODEL

DIRT LATE MODEL






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- > Linear and digressive pistons available for valving versatility
- > Available coilover conversion kit (part #B4-BOA-0000117)




XVS SERIES

Large bulb, base valve capable shock that caters to racers looking for a premium steel body shock that delivers maximum performance and versatility.

Product Highlights

- > Dual-zone gas bulb decreases gas pressure while increasing grip levels
- > Optional ACV base valve allows for ultra low rod pressure
- > Optimized floating piston improves driver feel and response
- > 46mm zinc plated steel body improves durability and heat dissipation
- > Floating rod guide decreases side load and friction
- > Available coilover conversion kit (coilover kit sold separately: B4-BOA-0000117)
- > Can be used with non-, single-, or double-adjustable shafts




ASN SERIES

Take-apart shock that provides additional damping capacity through the 46mm aluminum body design.

Product Highlights

- > 46mm lightweight extruded aluminum body for superior heat dissipation
- > Schrader valve for quick revalves and rebuilds at the track
- > Threaded body design allows for standard or coilover applications (coilover kit sold separately: B4-BOA-0000190)
- > Anodized finish increases durability and strength
- > 14mm chrome shaft reduces friction and rod pressure
- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir




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- > Floating rod guide decreases side load and friction
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications
- > Optional ACV base valve for ultra-low rod pressure



AVAILABLE IN NON-, SINGLE-, AND DOUBLE-ADJUSTABLE

20

21



UNIVERSAL
MOTORSPORTS
STRUT (U.M.S.)

Provides a versatile, semi-finished strut assembly that can be customized to meet the fitment needs of a variety of racing applications.

Product Highlights

- > Inverted monotube technology for consistent, fade-free performance
- > 14mm piston rod increases side load support
- > Multiple travel lengths and valving options
- > Schedule 3 olive-drab zinc finish for corrosion resistance
- > Threaded body with 2.5" coilover kit provides adjustable ride-height
- > Increased oil and nitrogen chamber volume for consistent performance at high operating temperatures
- > Unfinished stem allows custom fit for any application



ASN SERIES

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Product Highlights

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- > Schrader valve for quick revalves and rebuilds at the track
- > Threaded body design allows for standard or coilover applications
(coilover kit sold separately: B4-B0A-0000190)
- > Anodized finish increases durability and strength
- > 14mm chrome shaft reduces friction and rod pressure
- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir



BILSTEIN
Clubsport®

Designed to combine direct fit installation with double adjustable technology for aggressive track oriented performance.

Product Highlights

- > Direct fit kit application for easy installation and optimal valving
- > Independent rebound and compression adjustment enables 100 setting variations
- > In-line damping adjustment requires no external reservoir (most applications)
- > Included front uniball camber plates allow for precise track setups
- > Triple-C silver plated for a long lasting, corrosion-resistant finish
- > Clearly marked and defined adjusters with positive detents
- > Track-ready with included matched spring rates



MDS SERIES

Features multiple tuning options as well as durability and consistency in various racing applications.

Product Highlights

- > 2-way independent rebound and compression adjustment system
- > In-line damping adjustment requires no external reservoir
- > Easy Clip System (ECS) spring retainer maintains position in zero preload spring applications and allows rapid changes
- > Bump stop cap protects threaded body
- > Precision machine tolerances minimize friction
- > Ultra-low friction rod guide with redundant seal pack provides durability in harsh environments
- > Available in 36mm and 46mm variants

DRAG RACING

RALLY



ASN SERIES

Take-apart shock that provides additional damping capacity through the 46mm aluminum body design.

Product Highlights

- > 46mm lightweight extruded aluminum body for superior heat dissipation
- > Schrader valve for quick revalves and rebuilds at the track
- > Threaded body design allows for standard or coilover applications
(coilover kit sold separately: B4-B0A-0000190)
- > Anodized finish increases durability and strength
- > 14mm chrome shaft reduces friction and rod pressure
- > Single and double adjustable shafts available
- > Can be adapted to use external reservoir
- > Ultra-quick response provides instant tire control



DRAG SERIES

Designed to provide a high quality monotube damper that meets the specific demands of drag racing applications.

Product Highlights

- > Monotube design for consistent, fade-free performance
- > Stock mount design for ease of installation
- > Drag-tuned valving for improved front suspension lag at launch
- > Increased down-track stability
- > Instant response provides maximum grip at launch



46mm



36mm

UNIVERSAL MOTORSPORTS STRUT (U.M.S.)

Provides a versatile, semi-finished strut assembly that can be customized to meet the fitment needs of a variety of racing applications.

Product Highlights

- > Inverted monotube technology for consistent, fade-free performance
- > 14mm piston rod increases side load support
- > Multiple travel lengths and valving options
- > Schedule 3 olive-drab zinc finish for corrosion resistance
- > Threaded body with 2-1/2" coilover kit provides adjustable ride-height
- > Increased oil and nitrogen chamber volume for consistent performance at high operating temperatures
- > Unfinished stem allows custom fit for any application
- > Large piston provides control in the harshest environments



ASB SERIES

Lightweight and compact, the ASB Series' aluminum design minimizes shock weight for use in circle track applications.

Product Highlights

- > 36mm ultra-lightweight extruded aluminum body for superior heat dissipation
- > Racer rebuildable
- > Threaded body design allows for standard or coilover applications (coilover kit sold separately: B4-B0A-0000257)
- > Recessed Schrader valve for simple coilover installation and low profile
- > Hard anodized finish increases durability and strength
- > Threaded rod guide for easy assembly and disassembly
- > 11mm chrome shaft reduces friction and rod pressure



MDS SERIES

Features multiple tuning options as well as durability and consistency in various racing applications.

Product Highlights

- > 2-way independent rebound and compression adjustment system
- > In-line damping adjustment requires no external reservoir
- > Easy Clip System (ECS) spring retainer maintains position in zero preload spring applications and allows rapid changes
- > Bump stop cap protects threaded body
- > Precision machine tolerances minimize friction
- > Ultra low friction rod guide with redundant seal pack provides durability in harsh environments
- > Available in 36mm and 46mm variants
- > Ultra-low hysteresis results in maximum grip and tire life



PARTS

BILSTEIN offers a wide array of high quality parts and accesories to rebuild or repair your BILSTEIN motorsport shock absorbers.

- | | | |
|--------------------|-------------------------------|-------------------------------------|
| > Pistons | > O-Rings and Seals | > Replacement Take-Apart Components |
| > Piston Shafts | > Retaining Rings | > Tubes |
| > Rod Guides | > Heim Bearings | > Body Caps |
| > Shims and Brakes | > Jam Nuts | |
| > Valving Kits | > Rod Ends | |
| > Coilover Kits | > Adjustable Shaft Assemblies | |

Contact your BILSTEIN distributor for more information regarding the correct components for your application.

TOOLS

BILSTEIN also offers a variety of tools for various shock assembly and disassembly tasks.

- | | |
|-----------------------|-------------------------|
| > Fill Needles | > Nitrogen Fill Tools |
| > Disassembly Collars | > Graduated Oil Beakers |



PROFESSIONAL
OFF-ROAD RACING

8125 SERIES

Designed for the serious off-road enthusiast. Available in multiple lengths for a wide range of custom applications, the 8125 Series features the highest quality machined components for long lasting durability.

Product Highlights

- > Available 46mm* and 60mm* monotube design for consistent, fade-free performance
- > Threaded body with dual-rate coilover hardware
- > Remote reservoir for greater resistance to heat and increased travel length
- > High temperature seal extends life of shock
- > 22mm case hardened piston rod provides brute tensile strength while resisting sand blasting and rock chipping
- > Zinc plated for resistance to off-road elements
- > -8 high temperature hose
- > Owner rebuildable
- > Industry standard 5/8" bearing
- > All components are billet machined. No cast parts used
- > Made in the USA

8125 Series uses industry standard coilover springs

- > 46mm* shock uses a 2.5" ID Coilover Spring
- > 60mm* shock uses a 3.0" ID Coilover Spring

**BILSTEIN measures shock size by piston diameter. Outer body diameter is the industry standard measurement for off-road shocks.*

BILSTEIN Piston Diameter	Outer Body Diameter
46mm	2.0"
60mm	2.65"





9200 SERIES Bypass

Product Highlights

- > Available in 60mm*, 70mm* and 83mm* monotubes
- > 4-tube, position sensitive with adjustable rebound and compression
- > Multiple stroke lengths available ranging from 8" to 18"
- > 60mm* piggy back or remote reservoir
- > Case hardened, centerless ground piston rod (22mm or 1 1/8") depending on body diameter
- > Machined billet aluminum components
- > 5/8" uniball mounts with 1/2" step spacers
- > 3 stage high-temp seal
- > Red synthetic high-temp racing oil
- > Zinc plated
- > Multiple valvings available
- > Owner rebuildable
- > Made in the USA

BILSTEIN 9200 Series Bypass shocks are position sensitive and adjustable, offering 6 zones of damping control and 4 external adjusters: 2 rebound and 2 compression. Utilizing an externally adjustable bypass shock is the easiest and most effective way to tune your off-road suspension for ultimate performance.

**BILSTEIN measures shock size by piston diameter. Outer body diameter is the industry standard measurement for off-road shocks.*

BILSTEIN Piston Diameter	Outer Body Diameter
46mm	2.0"
60mm	2.65"
70mm	3.0"
83mm	3.5"



9200 SERIES Coilover

Product Highlights

- > Available in 46mm* and 60mm* monotubes
- > Threaded body with dual-rate coilover hardware
- > Multiple stroke lengths available ranging from 8" to 16"
- > Case hardened, centerless ground 22mm piston rod
- > Machined billet aluminum components
- > 5/8" uniball mounts with 1/2" step spacers
- > 60mm* remote reservoir
- > 3 stage high-temp seal
- > Red synthetic high-temp racing oil
- > Zinc plated
- > Multiple valvings available
- > Owner rebuildable
- > Made in the USA



9200 Series Coilover uses industry standard coilover springs

- > 46mm* shock uses a 2.5" ID Coilover Spring
- > 60mm* shock uses a 3.0" ID Coilover Spring

**BILSTEIN measures shock size by piston diameter. Outer body diameter is the industry standard measurement for off-road shocks.*

BILSTEIN Piston Diameter	Outer Body Diameter
46mm	2.0"
60mm	2.65"



BLACK HAWK® 9300 SERIES

The Black Hawk® 9300 Series is the ultimate in off-road race shock technology. Its Radial Bypass Damping™ (RBD) design provides a superior level of performance and tuning capability. It's big and bold with an unmistakable hard anodized finish.

Product Highlights

- > One piece 6061 extruded aluminum body with hard anodized finish
- > 30% faster heat dissipation
- > 10% - 25% lighter than similar welded bypass steel shocks
- > 4-1/2" diameter aluminum reservoir with anti-cavitation valve (ACV)
- > Bypass tubes allow for position sensitive damping adjustability
- > Completely owner tunable and rebuildable
- > Made in the USA

Remote Reservoir

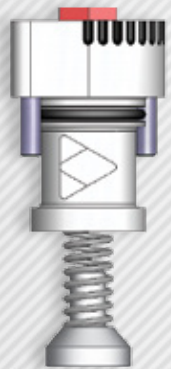
- > 4-1/2" diameter x 12" 6061-T6 aluminum reservoir housing
- > Anti-cavitation valve (ACV) (U.S. Patent 7628259) and larger reservoir diameter reduces the required gas pressure, lowering the piston rod pressure and giving the vehicle greater damping control



Shock Body (U.S. Patent 7191877)

- > Rapid heat dissipating, one piece extruded 6061 aluminum construction featuring Radial Bypass Damping™ (RBD) technology
- > Approximately 30% faster cooling efficiency than steel and up to 100° lower peak operating temperatures
- > Stronger and 10%-25% lighter than similar welded steel bypass shock bodies without the distortion from welding

Incremental Bypass Flow Metering Valve™ (IFMV) (U.S. Patent 7325660)



- > Extremely accurate, incremental flow adjustment within a sealed mechanism for extreme resistance to dirt contamination
- > Easily adjustable color-coded Rebound (red) and Bump (blue) IFMV adjusters with an internal detent feature providing prominent "clicks" to each of the 9 settings
- > High impact, titanium check valve piston providing excellent wear characteristics

NOTES

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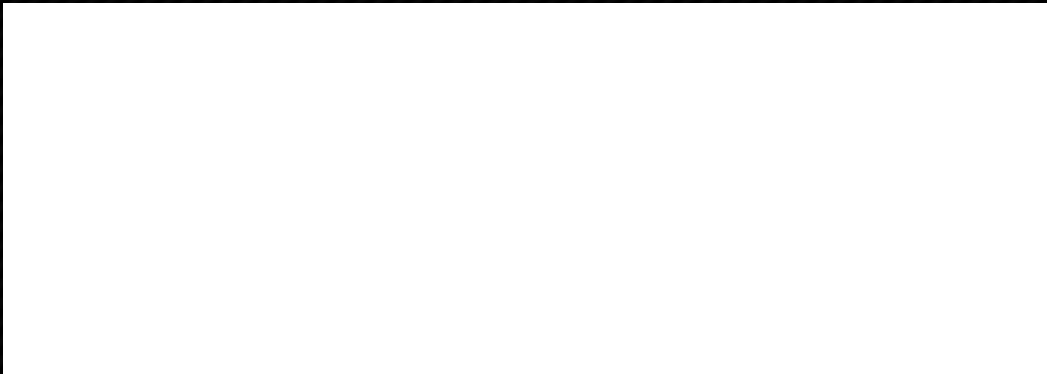
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