Heat is one of the major detriments to the performance and longevity of any shock absorber. Conventional twin tube 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 technically superior, monotube high gas pressure charged 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.

Bilstein Shocks are true high pressure gas shocks, no emulsion, no foam cells, just pure performance. Available for Lifted Truck & SUV, Custom Truck, Rock Crawling and Off-Road Racing Applications

BILSTEIN’s piston has 228% larger surface area than the average piston found in a typical “twin tube” shock offering greater sensitivity and superior vehicle control.

Pressure Differentials
Shock oils contain roughly 10% gas molecules. The compression and rebound sharpness 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 which forms small bubbles (foaming). The foaming can become so excessive that the damping force is severely reduced resulting in loss of vehicle control.

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 driving conditions.

For more information on the full line of Bilstein shocks, call 1-800-537-1085, or visit bilsteinUS.com

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Bilstein Gas Pressure Shock Absorbers
ThyssenKrupp Bilstein of America

BILSTEIN’S Industry Leading Monotube Design
Provides superior load strength while maintaining heat dissipation and shock life.

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.

The piston head design allows independent tuning of the compression and rebound damping forces to provide optimum ride comfort and performance without compromise. It features fewer parts than most conventional twin tube and so-called “road sensing” shock designs. This simple, yet exceptionally functional digressive design contributes to the extreme durability and long life of BILSTEIN shocks.
5100 Bypass  
• Externally adjustable and position sensitive  
• Available in 60mm 4-Tube (2 rebound and 2 compression) or 46mm 2-Tube (1 rebound and 1 compression)  
• 22mm case hardened piston rod  
• Heim ends in 1/2" or 3/4"  
• Rebuildable  
• Electroless nickel plated finish  
• Custom bypass tube layouts available

5100 Coilover  
• Available in 60mm and 46mm  
• Threaded body with dual rate spring hardware kit  
• 9” - 14” travel lengths  
• 46mm diameter shock body  
• Independent rebound & compression tuning  
• High flow piston reduces harshness  
• 1/2” heim ends  
• Easily customer rebuildable  
• True high pressure gas shock, no emulsion  
• Schroeder valve and remote reservoir models available

5100 Series  
For Lifted Trucks & SUVs  
• Specifically designed and manufactured for lifted pickups and SUVs  
• 46mm piston diameter provides superior handling and performance  
• Patented digressive valving instantly readies to changing surface conditions for maximum comfort and control on or off-road  
• Split compression and rebound valving for each specific application  
• O.E. certified shock mounts  
• Available for 2”-6” suspension lifts  
• Limited lifetime warranty

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

5100 Series  
Height Adjustable Leveling Shocks  
• Designed for front coilover style pickup suspensions  
• Multiple snap-ring grooves allow different spring seat positions providing 0” to 2.75” at front end lift, depending on application  
• Utilizes the vehicle’s stock front coil springs  
• An extremely affordable and practical alternative to coil spring spacers, with the benefit of BILSTEIN’S superior monotube design  
• Increases suspension travel  
• Limited lifetime warranty

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

5106 Series  
Stock Location Remote Reservoir Shocks  
• Easily installs in the stock shock mounting location on pickups and SUVs – no cutting or welding required  
• Remote reservoir dramatically increases shock oil capacity for even greater heat dissipation and damping sensitivity  
• Includes reservoir mounting kit designed specifically for each application (does not include optional billet aluminum mounting clamp shown above)  
• For increased wheel travel and more shaft movement, the “floating” dividing piston is located in the reservoir

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

510 Series  
Race inspired fixed CrossFlow reservoir  
• Adjustable shock mount allows unlimited reservoir positioning  
• Advanced design split valving  
• Huge 46mm working piston  
• Maintenance free design  
• Valving for single or multiple shock applications  
• Platinum powdercoat finish  
• Available in 6.5” - 14” travel  
• For use on modified or specialty vehicle applications

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

5160 Series  
• Self-adjusting deflective disc valving  
• Multiple valvings available  
• 5” - 14” travel lengths  
• 46mm diameter shock body  
• Independent rebound & compression tuning  
• High flow piston reduces harshness  
• 1/2” heim ends  
• Easily customer rebuildable  
• True high pressure gas shock, no emulsion  
• Schroeder valve and remote reservoir models available

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

5150 Series  
• Race inspired fixed CrossFlow reservoir  
• Adjustable shock mount allows unlimited reservoir positioning  
• Advanced design split valving  
• Huge 46mm working piston  
• Maintenance free design  
• Valving for single or multiple shock applications  
• Platinum powdercoat finish  
• Available in 6.5” - 14” travel  
• For use on modified or specialty vehicle applications

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

5165 Series  
• Self-adjusting deflective disc valving  
• Multiple valvings available  
• 9” - 14” travel lengths  
• 46mm diameter shock body  
• Independent rebound & compression tuning  
• High flow piston reduces harshness  
• 1/2” heim ends  
• Easily customer rebuildable  
• True high pressure gas shock, no emulsion  
• Schroeder valve and remote reservoir models available

5105 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

7100 Series  
• Soft-adjusting deflective disc valving  
• Multiple valvings available  
• 9” - 14” travel lengths  
• 46mm diameter shock body  
• Independent rebound & compression tuning  
• High flow piston reduces harshness  
• 1/2” heim ends  
• Easily customer rebuildable  
• True high pressure gas shock, no emulsion  
• Schroeder valve and remote reservoir models available

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• Externally adjustable and position sensitive  
• Available in 60mm 4-Tube (2 rebound and 2 compression) or 46mm 2-Tube (1 rebound and 1 compression)  
• 22mm case hardened piston rod  
• Heim ends in 1/2” or 3/4”  
• Rebuildable  
• Electroless nickel plated finish  
• Custom bypass tube layouts available

9100 Coilover  
• Available in 60mm and 46mm  
• Threaded body with dual rate spring hardware kit  
• 10”, 12”, 14” & 17” travel lengths  
• 22mm case hardened piston rod  
• Heim ends in 1/2” or 3/4”  
• 60mm Reservoir  
• Rebuildable  
• Custom valvings available for race or rockcrawling  
• Electroless nickel plated finish  
• Custom bypass tube layouts available

5165 Series [Custom Fit]:  
• Available in various lengths and valvings for use on modified or specialty vehicle applications

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