



Hydra-Shok Deep Delivers Performance Never Before Achievable in 380 Auto

The newest addition to Federal’s Hydra-Shok Deep lineup is the industry’s first expanding 380 Auto to consistently meet FBI protocol recommendations for penetration in bare gel and through heavy clothing.

In the past three years, Federal Premium’s new Hydra-Shok Deep ammunition product line has been greatly recognized by its customers—and the industry—for its improved penetration and superior reliability. This has been most recently proven by it winning a 2019 NRA Golden Bullseye Award for “Ammo of the Year” by *Shooting Illustrated* magazine.

Hydra-Shok Deep was built off the original, time-tested Hydra-Shok platform to penetrate deeper and achieve better performance measurements than its predecessor. New-and-improved Deep offers consumers a round that results in consistent, reliable performance through typical defensive barriers and penetrates to the depth deemed optimum by the leading law-enforcement agency in the United States, the Federal Bureau of Investigation (FBI).

In response to the growing popularity of ultra-compact handguns by citizens of all ages, genders and demographics—particularly among shooters looking for a downsized yet effective defender—Federal Premium has expanded its award-winning Hydra-Shok Deep lineup with a new 99-grain 380 Auto load. This new offering is tailor-made for arming compact concealed carry “pocket pistols” or “micro guns” with an expanding, yet deepest-penetrating round. The new Hydra-Shok Deep 380 Auto even exceeds the FBI protocol performance measures (12 inches minimum) through both the bare gel and heavy clothing tests. These are achievements the industry has never seen before in the 380 Auto cartridge.

The following article provides many details about the Hydra-Shok Deep 380 Auto load and helps explain the performance behind the entire Hydra-Shok Deep line up.

Better Performing, Award-Winning Ammo

Hydra-Shok has been a self-defense staple since its debut in 1989. At that time, the FBI had requested a projectile with better terminal ballistics than traditional cup-and-core bullets. Federal responded with Hydra-Shok, which uses an expanding bullet with a notched jacket, non-bonded lead core and unique center-post hollow-point design. The innovation provided better penetration and more consistent threat-stopping expansion than other bullets at that time.

In 2017, 28 years after the introduction of original Hydra-Shok, Federal’s engineers released Hydra-Shok Deep which delivered dramatically improved terminal ballistics and projectile performance. Although original Hydra-Shok remains very effective, designers knew they could make it better, and they did.

The Hydra-Shok Deep bullet (9mm Luger, 40 S&W and 45 Auto) features a core design that provides up to 50 percent deeper penetration than original Hydra-Shok and similar offerings from

competitors. The center post has been improved so it's more robust, providing better integrity and performance through barriers. Testing shows Hydra-Shok Deep—in those larger calibers—penetrates 15 inches in bare ballistics gelatin, which is the optimal depth, according to FBI standards. That remarkable performance is a major improvement in expansion, penetration and integrity through defensive barriers from the original Hydra-Shok.

Hydra-Shok Deep features corrosion-resistant, nickel-plated brass for easy extraction. It also uses an extremely reliable sealed primer and specially formulated propellant for consistency, critical elements for achieving optimum ballistic performance and reliable functioning of the gun. The propellants also contain flash suppressants to reduce muzzle flash and minimize temporary blindness in low-light shooting situations.

Due to its excellence in overall design, Federal Premium's Hydra-Shok Deep (9mm Luger, 40 S&W and 45 Auto) was chosen as *Shooting Illustrated's* Golden Bullseye Ammo of the Year award.

"Every round of Federal Premium Hydra-Shok Deep I tested penetrated between 15 and 16 inches and expanded to at least 1.45 times its original diameter. Considering bullet weights ranged in weight from 135 to 210 grains, and in diameters from .356 to .45, that's quite impressive," said *Shooting Illustrated* ammo editor Richard Mann. "Federal also supplied me with 100 rounds of each load for follow-up testing. Terminal performance is one thing, but reliability is another. You can have the best bad guy-stopping bullet in the world, but if it will not cycle and feed in your handgun, all you can really count on is one shot. I tested these loads by firing one box each in a variety of handguns, including a Smith & Wesson M&P, several 1911s and Glocks, a Browning Hi Power and the new SIG Sauer P365. There were no stoppages or failures to fire."

Designing a Deep 380 Auto

"The outstanding performance of the Hydra-Shok Deep design allowed us to have a deep penetrating bullet with full expansion that didn't care about barrel length and didn't care about the heavy clothing and bare gel barriers that it was being shot through," said Federal Handgun Ammunition Product Manager Chris Laack. "You get the exact same performance through bare gel and through heavy clothing, out of a three-inch barrel and out of a 16-inch barrel. The bullet just plain works."

"With Hydra-Shok Deep, we now had a great, versatile bullet design, so we started thinking about what else could we do with it. We asked ourselves: How can we use this design that allows us to make a better product than anybody's made before?" explained Laack. "The .380 was the obvious first choice. There's a huge performance gap between 380 Auto and 9mm Luger. With Hydra-Shok Deep we brought the 380's performance a little closer to the 9mm."

This new round was designed to raise the bar in small-frame self-defense handgun performance by striking the best balance between reliable expansion and the deepest penetration possible and we've achieved that goal. While the small 380 Auto will never match the ballistics of a full-power duty pistol, owners of small guns can now have more confidence in their weapon's ability to reliably penetrate deep to stop threats.

"It's a completely new bullet design. We didn't just take a 45 ACP, 40 S&W or 9mm Hydra-Shok Deep bullet and make it smaller. During development, engineers looked at several design elements such as bullet weight, jacket, skiving, profile, and hollow point design elements determine what modifications were necessary for the 380 Auto.

"All that data and research drove us to the 99-grain design, which provided the most consistent performance and balanced a number of key factors," explained Laack. "Basically, we designed built the best performing bullet possible, and then we weighed it. The final number just happened to land on 99 grains."

Like all Hydra-Shok Deep loads, its bullet—built from the ground up—features the robust center post and core design to ensure it penetrates to critical depths through common self-defense barriers. Its hollow point won't easily plug, while the jacket and core hold together to deliver almost 100 percent weight retention on target. Other features include consistent, specially formulated propellant and extremely reliable Federal primer with sealant. The new 99-grain offering boasts 1,000 feet-per-second muzzle velocity and is sold in 20-count with a Manufacturer's Suggested Retail of \$25.95.

What This 380 Auto Can Achieve

Hydra-Shok Deep's bullet design brings the 380 Auto cartridge to all-new heights—or in this case, depths. This micro-handgun ammunition offering is the first expanding 380 Auto load to consistently penetrate beyond the FBI-recommended 12-inch minimum in bare gel and through heavy clothing.

"FBI protocol includes a series of rigorous scenarios. Bullets are shot through materials such as 10-percent ordinance gelatin, laminated automotive safety glass, plywood, wallboard and heavy clothing specified by the FBI," said Laack. "While our larger caliber ammunition is designed to meet and exceed these requirements, the smaller 380 Auto is designed to offer the best possible blend of performance in a compact handgun platform."

Testing done by Federal ammunition engineers in their Anoka, Minnesota facilities showed typical results of 13 to 13 ½ inches of penetration in bare gel and 13 ¼ to 14 inches through heavy clothing. Test gun barrel lengths were from common, compact handguns ranging from 2 ¾ to 3 ½ inches. The bullet and load are also fine-tuned to ensure deliver consistent performance across all handgun platforms, including ones with longer barrels, to stay within that 13- to 14-inch goal range.

Hydra-Shok Deep 380 scores a blistering 1,000 feet per second at the muzzle and delivers full expansion in both the bare gel and heavy clothing tests when shot from a variety of common compact handguns.

"To better understand Hydra-Shok Deep 380 Auto, let's talk about what it is not. Our HST 380 Auto is really focused on getting as good penetration depth as we can, but with the largest possible upsets we can. This means it is focused on making the widest wound channel possible through controlled expansion to be terminally effective," explained Laack. "The difference with Hydra-Shok Deep 380 Auto is that it concentrates on more on depth of penetration, while still providing an effective upset. It's just another, different way to be terminally effective."

To illustrate this point, here is an example from testing conducted by Federal engineers in their Anoka, MN factory. During the ballistic gel test, Hydra-Shok Deep 380 Auto penetrated 13 inches with an upset of .496 and HST 380 Auto penetrated 9.375 inches with an upset of .647. During the heavy clothing over ballistic gel test, Hydra-Shok Deep 380 Auto penetrated 13.5 inches with an upset of .514 and HST 380 Auto penetrated 9.95 inches with an upset of .588. During this same testing Hydra-Shok Deep 380 Auto also penetrated deeper than any other brand including Hornady, Remington, Winchester and SIG.

"Some defensive shooters prefer wide expansion in their bullets, while others prefer deep penetration," said Laack. "Federal delivers an option for both mindsets."

A Fan Favorite

Hydra-Shok Deep has quickly become a favorite of those who rely on ammunition to protect themselves and their families. The product lineup now consists of four loads with the new 380 Auto 99-grain being the latest. Also available are 9mm Luger 135-grain, 40 S&W 165-grain and 45 Auto 210-grain. Manufacturer's Suggested Retail Prices range from \$25.95 to \$33.95 from 20-count boxes.

Federal ammunition can be found at dealers nationwide or purchased online direct from Federal. For more information on all products from Federal or to shop online, visit www.federalpremium.com.

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