.327 Federal Magnum

.327 Federal Magnum			
.327 Federal Magnum Cartridges			
Type Revolver			
Place of origin	United States		
Production history			
Designer	Federal Cartridge and Sturm, Ruger		
Designed	2007		
Produced	2008–Present		
Specifications			
Parent case .32 H&R Magnum			
Case type	Rimmed, straight-walled		
Bullet diameter	.312 in (7.9 mm)		
Neck diameter	.337 in (8.6 mm)		
Base diameter	.337 in (8.6 mm)		
Rim diameter	.375 in (9.5 mm)		
Rim thickness	.055 in (1.4 mm)		
Case length	1.20 in (30 mm)		
Overall length	1.47 in (37 mm)		
Ballistic performance			
Pullet weight/type	Velocity		
Bullet weight/type		Energy 425 ft lbf (5	(00 I)
100 gr (6 g) JHP	1,400 ft/s (430 m/s)	435 ft·lbf (590 J) 431 ft·lbf (584 J)	
115 gr (7 g) JHP	1,300 ft/s (400 m/s)		
100 gr (6 g) JHP*	1,874 ft/s (571 m/s)	780 ft·lbf (1,060 J)	
115 gr (7 g) JHP*	1,659 ft/s (506 m/s) 702 ft·lbf (952 J)		
Test barrel length: 3 1/16", * 5½" Blackhawk Revolver Source(s): Outdoor Writers ^[1] * Ballistics by the inch ^[2]			

The .327 Federal Magnum is a cartridge introduced by Sturm, Ruger and Federal Cartridge, intended to provide the power of a .357 Magnum in six shot, compact revolvers, whose cylinders only hold 5 rounds of the larger .357 Magnum cartridge. The .327 Federal Magnum is actually a super magnum having replaced the .32 H&R Magnum as the pinnacle of the cartridge diameter.

In the April 2008 issue of the NRA's *American Rifleman* magazine, Field Editor Bryce Towsley summed up his review of the cartridge as follows:

The .327 offers more 'real-world' energy than the .357 Mag., (at least in my test), better penetration and one more shot per gun load. It does all this with substantially less recoil and noticeably less muzzle blast than the .357 Mag.

The cartridge ultimately won the NRA Publication's prestigious *Golden Bullseye Award* for "Ammo of the Year" (2009). []

Development

The .327 Federal Magnum is an attempt to improve on the .32 H&R Magnum, introduced in 1984, a round which failed to attract shooters or manufacturers. This is the third updated version of the original .32 S&W cartridge, which dates back to 1878. The original was a black powder cartridge with a case length of 0.61 in. (15 mm), which developed a velocity of around 700 ft/s (215 m/s).^[3] The first improvement of the round came in 1896 with the introduction of the .32 S&W Long, which had a case length of 0.920 in (23.4 mm) and generated slightly higher velocities.^[4] The introduction of the .32 H&R Magnum nearly a century later increased the case length to 1.075 in (27.3 mm) and pushed the pressure up from the very low 15,000 psi to 21,000 psi CUP, which is similar to .38 Special +P. This gave velocities of over 1,200 ft/s (370 m/s), a respectable increase, but was not enough to garner any great interest in the cartridge.^[5]

Based on the .32 H&R Magnum, stretched and loaded to a higher pressure of 45,000 psi (note that standard pressure 44 magnum is 36,000psi), the .327 (actual bullet diameter .312 in, or 7.92 mm) achieves velocities up to 1,400 ft/s (430 m/s) with 100-grain (6.5 g) bullets (420 m/s and 6.5 g), and up to 1,300 ft/s (400 m/s) with 115-grain (7.5 g) bullets (390 m/s and 7.5 g), from the 3 1/16" (78 mm) barreled Ruger SP-101 revolver. [6] The *small* framed Ruger SP-101 chambered in the .327 Federal Magnum was released in January 2008. [1] Currently most of the factory loads on the market are designed for self defense in short barrels, but with a load pressure of a 45,000 psi, velocities can be expected to increase with heavier, hotter loads designed for hunting.

While the .32 H&R Magnum is a near equivalent to the .38 Special +P, the .327 Federal Magnum reaches the velocity levels of the .357 Magnum, if not the same power, with velocities of up to 1400 ft/s (420 m/s) from the short-barreled Ruger SP-101. The case is 1/8" (3 mm) longer than the .32 H&R, and the pressure, at 45,000 psi (310 MPa), exceeds that of the .357 Magnum. Since the .327 still shares all case dimensions, excluding length, with the other .32 caliber cartridges going back to the .32 S&W, revolvers chambered for it can safely chamber and fire the other three cartridges for lower cost and lower recoil practice.

Recoil is substantially more than the .32 H&R mag, but less than the .357 mag., in a snub-nosed revolver. Comparing the two calibers, Chuck Hawks says, "There is no doubt that, for most shooters, the .357 Mag. produces uncomfortable recoil and muzzle blast. ATK recoil figures for the .327 Mag. show free recoil energies of 3.08 ft·lbf (4.18 J). for the 85 grain JHP factory load, 5.62 ft·lbf (7.62 J) for the 115 grain JHP load and 5.58 ft·lbf (7.57 J) for the 100 grain SP load. For comparison, ATK figures are 1.46 ft·lbf (1.98 J) for the 85 grain .32 H&R Mag. load and 7.22 ft·lbf (9.79 J) for the 125 grain .357 Mag. load."

Firearms chambered for the .327 Federal Magnum

Ruger, Charter Arms, Taurus, and Smith & Wesson are the major gun manufacturers producing small frame six-shot .327 revolvers. In addition, Ruger offers a 7-shot version of their GP100, along with an 8-shot New Model Blackhawk, each in .327 FM. Ruger claims the 100 gr. American Eagle load develops 1,525 fps from the 4.20" barreled GP100 and 1,655 fps muzzle velocity from the 5½" barreled Blackhawk. The velocities go up dramatically with longer barrel lengths. Using 14gr of AA#9 with a 113gr cast performance lead flat nose bullets will generate 1,617 fps and 656 foot lbs at muzzle through a 4.25 inch freedom arms model 97. Freedom Arms makes a single action as does U.S. Fire Arms with the 8-shot Sparrowhawk.

Firearms author Chuck Hawks suggests that lever action carbines in .327 mag. would make "excellent, fun to shoot centerfire rifles for hunting javelina, jackrabbit and coyote" and that revolvers with 6" to 8" barrels and adjustable sights "would be excellent hunting handguns for varmints and small predators, as well as offering flat shooting protection from two-legged predators in the field." []

Similar cartridges

The .327 Federal provides performance similar to the high velocity rifle loadings of the old .32-20 Winchester, though in much shorter barrel. Similar to the +P cartridges of today, the rifle loadings of these old cartridges were loaded to higher pressures than standard; they were discontinued because they could destroy .32-20 revolvers if fired in them. The .32-20, while long considered obsolete, has lived on in the sport of handgun metallic silhouette shooting, with handloaded rounds from single shot pistols like the Thompson Center Arms Contender far exceeding standard ballistics, and with the growing popularity of Cowboy action shooting, .32-20 lever action rifles are again being made. If chambered in a suitably modified .32-20 rifle, the .327 Federal should provide a significant boost over the .32-20.

Another close comparison is the .30 Carbine, which has been offered in Ruger's single action Blackhawk revolver line since 1968. [8] The .30 Carbine was essentially the same ballistically as the .32 Winchester Self Loading, which was itself basically a rimless .32-20. The .327 Federal works at even higher pressure than the .30 Carbine (45,000 vs. 40,000 psi). [11] The long, 7½ inch (19 cm) barrel of the .30 Carbine Blackhawk, with suitable loads for a handgun, offers performance levels with similar bullet weights in excess of the factory loaded .327 Federal, along with excellent accuracy. Those who favor the .30 Carbine in a revolver do so due to the excellent accuracy, flat trajectory, and low recoil, all of which the .327 Federal also provides. [9] Both custom gunsmiths working with Ruger small frame single action Single Six and commercial maker Freedom Arms began offering conversions to convert .32 H&R revolvers to .327 Federal by early 2008. Test results from the long barreled guns showed even higher velocities than the .30 Carbine, along with excellent accuracy. [10] It is quite possible the .327 Federal will be offered in a lever action carbine, though no specific models have been publicly announced.

Media reviews

In April 2008, *Guns & Ammo* magazine's Patrick Sweeney reviewed the Ruger SP101 in .327 Federal Magnum and had this to say:

[A] .32 [Gold Dot bullet] of 115 grains going 1,300 fps is going to perform very much like a 9 mm 115-grain Gold Dot going 1,300 fps.

Ballistic testing of the .327 showed it to be superior to a .38 snubbie. I got more gel penetration with the .327 (15 inches) than the .38 [Special] (12-plus inches) and greater expansion as well....

[Out of over] a dozen different 115-grain 9mm loads, only two delivered more velocity than the .327 Federal Magnum did. And in both instances, those 9mm loads did so only out of the five-inch-barreled pistol, not the compact 9mm....

With apparent ignorance of the .357 Chiappa Rhino, Sweeney waxes metaphorical:

If you want more than the .327 delivers, you have to go to the .357 Magnum, and having done so you will pay mightily for it. An SP101 in .357 delivers a 125-grain JHP at more than 1,300 fps, but you get only five shots and muzzle blast and recoil that could make a brass monkey flinch. With the .327 Federal Magnum you get much more than a 9mm or .38 Special in the same gun; you get six shots instead of five, and you get it at much less recoil than the .357.

Shooting Times magazine's Dick Metcalf had this to say about the .327 Mag. in the Ruger SP101 revolver (weight: 28 oz (0.79 kg)):

From a 3 1/16-inch revolver, the 100-grain Soft Point .327 Magnum load develops 100 fps more velocity than a 125-grain .357 Magnum from a four-inch revolver, and delivers only 35 ft/lbs less energy. The recoil of the .327 Magnum 85-grain Personal Defense load is less than half the recoil of a 125-grain .357 Magnum.

Subjected to the standard FBI protocol tests for effectiveness through barriers, the 115-grain .327 Magnum load reaches 15 inches in bare gelatin, 16 inches through heavy clothing, 16 inches through plywood, 14.5 inches through wallboard, 13 inches through auto glass, and 20 inches through single-layer vehicle body steel—all with substantial bullet upset ranging from .40 caliber (steel) to .60 caliber (auto glass)....

There is nothing "small" about the performance of this deceptively diminutive-looking round. Hard-hitting and entirely comfortable to fire, the .327 Magnum should be very appealing to anyone seeking high effectiveness and moderate recoil in a compact defense arm—especially those who want a handgun all responsible members of a family can readily learn to use effectively. And, should Ruger decide also to chamber it in sporting-configuration revolvers such as the Single-Six, it will also be a fine recreational shooter and small-game hunting tool. []

In the Jan-Feb 2009 issue of *American Handgunner* magazine, John Taffin reviewed the .327 Federal Magnum in a Charter Arms Patriot revolver (6-shot, 2.2" barrel):

[T]he .327 Federal Magnum turns the .32 into a real powerhouse even when chambered in a short-barreled, small-framed, self-defense revolver....

In the Patriot Federal's original loading of a 115 grain Gold Dot JHP clocks out at more than 1,200 fps and even in the 21 ounce Patriot produces rather stiff recoil and considerable muzzle blast. For those who can ignore the muzzle blast and recoil the power is certainly there, however for normal self-defense use Federal now offers a Low Recoil load utilizing the 85-grain JHP they load in the .32 Magnum....

For those who definitely cannot handle recoil, the S&W Long 100 grain wad cutter round clocks out at just fewer than 700 fps and could be the best choice for self-defense. []

References

- [3] See main article, .32 S&W
- [4] See main article, .32 S&W Long
- [5] See main article, .32 H&R Magnum
- [6] Ballistics By The Inch .327magnum results. (http://www.ballisticsbytheinch.com/327mag.html)

External links

- Ruger Blackhawk .327 Federal 5.5" 8-shot Revolver (http://www.ruger.com/products/newModelBlackhawkStainless/specSheets/0353.html)
- Ballistics By The Inch .327 Federal Magnum Results. (http://www.ballisticsbytheinch.com/327mag.html)

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