.25-06 Remington

# .25-06 Remington

.25-06 Remington			
.25-06 Remington cartridge			
Type Rifle, Hunting			
Production history			
Designer	Remington Arms Company		
Designed	1969		
Manufacturer	Remington		
Produced	1969-Present		
Specifications			
Parent case	.30-06 [1]		
Bullet diameter	.257 in (6.5 mm)		
Neck diameter	.290 in (7.4 mm)		
Shoulder diameter	.441 in (11.2 mm)		
Base diameter	.470 in (11.9 mm)		
Rim diameter	.473 in (12.0 mm)		
Rim thickness	.05 in (1.3 mm)		
Case length	2.494 in (63.3 mm)		
Overall length	3.250 in (82.6 mm)		
Case capacity	65.8 gr H <sub>2</sub> O (4.26 cm <sup>3</sup> )		
Rifling twist	1 in 10 in (250 mm)		
Primer type	Large rifle		
Maximum pressure 63,000 psi (430 MPa)			
Ballistic performance			
Bullet weight/type	Velocity	Energy	
100 gr (6 g) PSP-CL	3,230 ft/s (980 m/s)	2,316 ft·lb	
115 gr (7 g) PSP-CL Ultra	3,000 ft/s (910 m/s)	2,298 ft·lb	
120 gr (8 g) PSP-CL	2,990 ft/s (910 m/s)	2,382 ft·lb	f (3,230 J)
Test barrel length: 24" Source(s): Remington Arms <sup>[2]</sup>			

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The .25-06 Remington had been a wildcat cartridge for half a century before being standardized by Remington in 1969. It is based on the .30-06 Springfield cartridge necked-down (case opening made narrower) to .257 inch caliber with no other changes. Nominal bullet diameter is 0.257 in (6.53 mm) and bullet weights range from 75 to 120 grains (4.9 to 7.8 g).

#### **History**

Charles Newton necked down the .30-06 Springfield cartridge in 1912 to accept the 117-grain .25-35 Winchester bullet. Newton's early modification encouraged commercial release of a shortened case (from 63 to 49mm) as the .250-3000 Savage in 1915. Frankford Arsenal developed an experimental .25-06 during World War I; and distribution of surplus United States military equipment through the Civilian Marksmanship Program following the war encouraged independent gunsmiths to experiment with the cartridge. A. O. Niedner of Dowagiac, Michigan introduced rifles for the .25 Niedner in 1920. Niedner Arms Corporation retained the 17° 30′ .30-06 shoulder chambering .25 caliber barrels rifled with one twist in 12 inches (300 mm). Similar cartridges were identified as the .25 Hi-Power, .25 Whelen (analogous to .35 Whelen), or .25-100-3000 (to indicate the ability to achieve 3000 feet per second with a 100 grain bullet rather than the 87 grain bullet used in the .250-3000 Savage). Greater case capacity offered minimal velocity improvement over the .250-3000 Savage case with contemporary smokeless powders. Availability of DuPont's Improved Military Rifle (IMR) powders encouraged commercial release of the .257 Roberts using the 57mm-long Mauser case in 1934. Release of IMR 4350 in 1940 and availability of surplus 4831 powder salvaged from Oerlikon 20mm cannon cartridges after World War II greatly improved performance of the full-length .25-06 case.

#### **Performance**

The cartridge is capable of propelling a 117 grain (7.6 g) bullet at up to 3200 feet per second (980 m/s) and energy levels up to 2,500 ft·lbf (3,400 J). Bullets lighter than 75 grains are available in .257" caliber, but were designed for the smaller .25-20 Winchester and .25-35 Winchester cartridges and are too lightly constructed for the high velocities of the .25-06.

The cartridge has less felt recoil than a 30-06 in a similar weight rifle, due to the lighter weight bullets used. Shooters who are recoil sensitive will find the recoil from the 25-06 bearable, but not pleasant enough to shoot all day long. This cartridge is not quite as powerful as the .257 Weatherby Magnum, usually running 200–300 ft/s (61–91 m/s). slower with a given bullet weight in factory ammunition. Handloading can narrow the gap to 150 ft/s (46 m/s); The Weatherby ammunition uses proprietary propellants and data, and cannot be safely enhanced with handloads; it can be argued that the difference in terminal effects are not enough to warrant the extra cost of a Weatherby rifle or the proprietary Weatherby ammunition.

SAAMI pressure limit for the .25-06 is 63,000 PSI.

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#### **Uses**



.25-caliber bullets typically have high ballistic coefficients without being heavy. This characteristic, when combined with the large case capacity of its parent .30-06 case, allows relatively high muzzle velocities without heavy recoil. The combination of high ballistic coefficients with high muzzle velocities give the .25-06 a very flat trajectory as well as retaining kinetic energy down-range.

The .25-06 is generally considered to be a good round for medium-sized game such as deer and antelope because of its combination of substantial kinetic energy and moderate recoil. The addition of a flat trajectory makes it particularly popular in plains states where the open fields can require longer-range shots on game, as this flatness tends to minimize range-estimation errors by the hunter. However bullet types and weights are loaded that allow the .25-06 to be used for taking game ranging from small animals like prairie dogs and coyotes to heavier elk. These bullets range from lightly constructed 75-grain bullets with muzzle velocities in

the 3,700 ft/s (1,130 m/s) range to heavily made 120-grain bullets with muzzle velocities in the 3,000 ft/s (915 m/s) range.

Most manufacturers of bolt action or single-shot rifles offer the .25-06 as a standard chambering and factory loaded ammunition is available from Remington, Winchester, Federal Cartridge and most other major manufacturers.

#### References

- Hornady Handbook of Cartridge Reloading vol I, Sixth Edition; Book by Hornady Mfg Co, 2003 p. 233
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- $\cite{Comparison} \cite{Comparison} \cite{Comp$
- [3] Hornady, J.W. Hornady Handbook of Cartridge Reloading Hornady Manufacturing Corporation (1967) p.104
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- [5] Lyman Ideal Hand Book No. 36 Lyman Gun Sight Corporation (1949) p.138
- [6] Speer, Raymond G. Wildcat Rifle Loads Speer Products Company (1956) p.6
- [7] Hatcher, Julian S. & Barr, Al Handloading National Rifle Association (1951) pp.53-59
- [8] ".25-06 Remington (http://www.accuratepowder.com/data/PerCaliber2Guide/Rifle/Standarddata(Rifle)/257cal(6.55mm)/25 06 Remington pages 221 to 222.pdf)" data from Accurate Powder

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