

**6mm 6XC****Test Specifications:**

Firearm Used: Universal

Barrel Length: 24"

Twist: 1-8"

**Components:**

Case: Nosler

Trim-to Length: 1.898"

Primer: WLR

**Remarks:**

Originally based on a fire formed 22-250 case, the 6XC, developed by David Tubb, provides low recoil, superb accuracy, reasonable barrel life, and (with the correct bullet) tremendous ballistic performance at all ranges.

David Tubb is an 11 time National NRA High Power Rifle Champion (200 600 yards) and 6 time NRA National Long Range Champion (600 1000 yards). Over the course of his shooting career he has used .308 Winchester, 7mm 08, .243 Winchester, .260 Remington, and 6.5x284. In 2002, David began his efforts to improve cartridge design for magazine fed short action rifles. The result of his search and efforts ultimately produced the 6XC.

**6XC design parameters**

1. Cartridge case body length optimized to allow seating depths of high BC bullets to be optimized for use in short action rifle box magazines (2.8"), as well as adequate propellant capacity to obtain excellent velocity.

2. 30 degree shoulder resulting in improved efficiency and minimal case growth (less trimming).

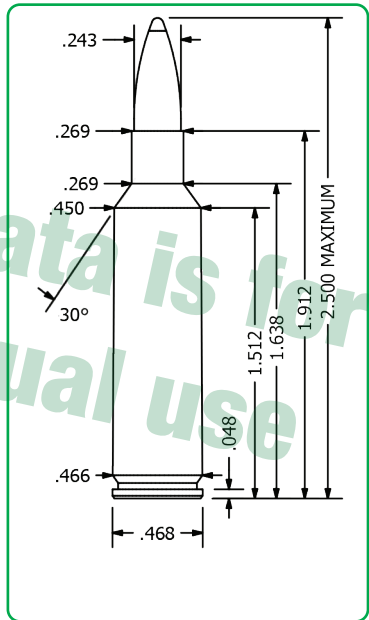
3. A longer case neck length firmly supports the bullet and also allows flexibility in loaded cartridge OAL. The velocities attainable with the 6XC are equivalent to those from .243 Win. Barrel life is better than .243 Win due to the fact that the 6XC uses 7 grains less powder and 30 degree shoulder.

The 6XC is ideally suited to magazine fed rifles. It allows seating the full diameter of the base of the bullet well in front of the neck/shoulder junction while fitting into a standard short action magazine. This round structure doesn't sacrifice any accuracy or reliability, and is simply not possible with a longer case such as a .260 Remington or a .243 Winchester, when using one of the higher BC bullets which are longer.


Additionally, the shorter overall round length of the 6XC allows the shooter to move the bullet outward as the barrel throat wears and still maintain a cartridge overall length that stays within the magazine box.


For events such as the Precision Rifle Series (10 shot magazine fed stages), the 6XC has become a favorite. It simply has the most of everything we consider to be important attributes in a competitive or precision use round.

Additional info: davidtubb.com.






## 6mm HC

Bullet Caliber Weight Type		C.O.A.L.						
	#1502 .243" 55gr. BlitzKing	2.510"						
Powder ∨	Velocity >	3400	3500	3600	3700	3800	3850	3900
Benchmark		33.0	34.0	35.2	36.5	37.9	38.7	
H4895				36.5	37.8	39.2	39.9	40.6
IMR 4166 End.		37.0	38.4	39.7	40.9	41.4		
IMR 4064		38.0	39.5	40.8	42.0			
RE 15		38.2	39.1	40.1	41.2	42.3	42.8	43.4
Varget		38.4	40.0	41.3	42.5	43.1	43.6	
AR Comp		35.9	37.1	38.3	39.5	40.1	40.6	
<b>Energy Ft. Lbs</b>		<b>1412</b>	<b>1496</b>	<b>1582</b>	<b>1672</b>	<b>1763</b>	<b>1810</b>	<b>1857</b>
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
<b>Accuracy Load</b>	Varget	43.6	3900	1857				
<b>Hunting Load</b>	H4895	40.6	3900	1857				

Bullet Caliber Weight Type		C.O.A.L.						
	#1500 .243" 60gr. HP	2.500"						
Powder ∨	Velocity >	3200	3300	3400	3500	3600	3650	3700
Benchmark						36.3	37.0	37.8
H4895				33.8	35.4	36.9	37.6	38.3
IMR 4166 End.		33.3	34.3	35.5	36.7	38.0	38.6	
IMR 4064			35.6	36.9	38.3	39.6	40.3	
RE 15				37.6	38.7	39.9	40.6	41.2
Varget				35.8	37.2	38.7	39.5	40.3
AR Comp				33.9	35.2	36.6	37.4	38.1
<b>Energy Ft. Lbs</b>		<b>1364</b>	<b>1451</b>	<b>1540</b>	<b>1632</b>	<b>1726</b>	<b>1775</b>	<b>1824</b>
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
<b>Accuracy Load</b>	IMR 4064	40.3	3650	1775				
<b>Hunting Load</b>	Benchmark	37.8	3700	1824				

## 6mm HC

Bullet	Caliber	Weight	Type	C.O.A.L.
	#1505	.243"	70gr. HPBT Match	2.550"
	#1507	.243"	70gr. BlitzKing	2.590"
	#1510	.243"	75gr. HP	2.500"

Powder ▾	Velocity >	2900	3000	3100	3200	3300	3350	3400
Benchmark		29.2	30.2	31.4	32.8	34.3		
H4895			30.9	32.2	33.5	34.9	35.6	
IMR 4166 End.			32.4	33.7	35.0	36.4	37.1	
IMR 4064			33.2	34.6	35.9	37.3		
RE 15				34.3	35.7	37.1	37.8	38.6
Varget				34.3	35.9	37.5	38.4	
AR Comp			31.0	32.4	33.8	35.3		
<b>Energy Ft. Lbs</b>		<b>1307</b>	<b>1399</b>	<b>1493</b>	<b>1591</b>	<b>1692</b>	<b>1744</b>	<b>1796</b>




Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
<b>Accuracy Load</b>	Benchmark	34.3	3300	1692
<b>Hunting Load</b>	RE 15	38.6	3400	1796

*Sierra does not recommend MatchKing bullets for hunting applications.*



First deer with a 243 Winchester 100 grain SBT #1560. Photo Nathan Henson

## 6mm HC

	Bullet	Caliber	Weight	Type	C.O.A.L.
	#1515	.243"	80gr.	Blitz SBT	2.550"
	#1520	.243"	85gr.	SPT	2.550"
	#1530	.243"	85gr.	HPBT	2.700"





  

Powder	Velocity	2700	2800	2900	3000	3100	3200	3300
H4895	29.3	31.1	32.5	33.6	34.4	34.9		
IMR 4166 End.		31.3	32.6	34.0	35.5			
IMR 4064	31.2	32.7	34.3	35.7	37.1			
RE 15			33.9	35.2	36.5	38.0		
Varget			32.9	35.4	37.2			
N540			33.3	34.4	36.0	38.2		
IMR 4451 End.		37.1	37.9	39.1	40.5	42.2		
H4350				37.4	38.9	41.3		
RE 16				37.6	38.9	40.5	42.3	
RE 17				37.4	39.9	41.8		
AR Comp		29.8	31.1	32.8				
<b>Energy Ft. Lbs</b>		<b>1295</b>	<b>1392</b>	<b>1494</b>	<b>1598</b>	<b>1707</b>	<b>1819</b>	<b>1934</b>



  

Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
<b>Accuracy Load</b>	Varget	37.2	3100	1707
<b>Hunting Load</b>	RE 16	42.3	3300	1934


## 6mm HC

	Bullet	Caliber	Weight	Type	C.O.A.L.			
	#1535	.243"	90gr.	FMJBT	2.550"			
	#4100	.243"	90gr.	TGK	2.710"*			
	#1537	.243"	95gr.	HPBT Match	2.710"*			
	#7295	.243"	95gr.	TMK Match	2.735"*			
*requires a 1x9" or faster twist								
Powder	Velocity	2600	2700	2800	2900	3000	3100	3200
H4895		28.6	29.9	31.2	32.5	33.8		
IMR 4166 End.			30.4	31.7	33.0	34.4		
RE 15		32.5	33.7	34.9	35.9	36.9		
Varget				32.8	34.3	35.8	37.4	
N540			31.8	33.1	34.3	35.6	36.9	
IMR 4451 End.				36.3	37.8	39.3	40.9	
A 4350				37.0	38.5	39.9	41.4	
H4350				35.7	37.1	38.7	40.4	
RE 16				35.8	37.4	38.8	40.2	
RE 17				35.4	36.6	37.9	39.2	40.7
AR Comp		30.2	31.6	33.0	34.4			
Hybrid 100V				35.6	37.0	38.4	39.8	
RE 19				39.7	41.2	42.5	43.7	44.8
H4831sc		37.6	39.2	40.9	42.5	44.1		
IMR 4955 End.				38.1	39.5	41.1		
N560				39.9	41.5	42.9	44.2	
<b>Energy Ft. Lbs</b>		<b>1351</b>	<b>1457</b>	<b>1566</b>	<b>1680</b>	<b>1798</b>	<b>1920</b>	<b>2046</b>
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
<b>Accuracy Load</b>	H4895	33.8	3000	1798				
<b>Hunting Load</b>	RE 17	40.7	3200	2046				
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>								


## 6mm HC

Bullet	Caliber	Weight	Type	C.O.A.L.					
	#1540	.243"	100gr.	SPT	2.550"				
	#1560	.243"	100gr.	SBT	2.550"				
Powder	Velocity	2450	2550	2650	2750	2850	2950	3000	
IMR 4166 End.		29.5	31.0	32.4	33.8				
RE 15				31.2	32.6	34.3			
Varget			30.1	31.6	33.0	34.2			
N540			30.1	31.8	33.3	34.7			
H4350				33.5	35.2	36.9	38.4		
RE 16					35.3	37.0	38.6	39.3	
RE 17					35.0	36.4	37.9	38.6	
AR Comp		26.6	28.2	29.7	31.4				
H100V					35.2	37.0	38.6	39.4	
RE 19					38.7	40.4	41.9	42.7	
H4831sc					38.2	39.9	41.8		
IMR 4955 End.			35.0	36.2	37.6	39.3			
N560					39.0	40.7	42.2	42.9	
<b>Energy Ft. Lbs</b>		<b>1333</b>	<b>1444</b>	<b>1559</b>	<b>1679</b>	<b>1803</b>	<b>1932</b>	<b>1998</b>	
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs					
<b>Accuracy Load</b>	IMR 4166 End.	33.8	2850	1803					
<b>Hunting Load</b>	RE 16	39.3	3000	1998					

# 6mm HC

Bullet		Caliber	Weight	Type	C.O.A.L.				
	#1570	.243"	107gr.	HPBT Match	2.720"*				
*requires a 1x8" or faster twist									
Powder	Velocity	2500	2600	2700	2800	2900	2950	3000	
Varget		30.0	31.5	33.1	34.6				
N540			31.1	32.6	34.1				
IMR 4451 End.			33.9	35.2	36.7	38.4			
A 4350				34.6	36.3	38.0			
H4350			33.8	35.4	37.1	38.7			
RE 16				35.0	36.6	38.3	39.1		
RE 17				34.7	36.1	37.6	38.3	39.0	
Hybrid 100V			33.5	35.0	36.6	38.0	38.7		
RE 19				38.6	40.1	41.5	42.2	42.9	
H4831sc				38.2	39.8	41.3	42.0		
IMR 4955 End.			35.4	37.0	38.6				
N560				38.4	39.9	41.5	42.2	42.9	
RE 25			39.2	40.9	42.5	44.1	44.9		
Magnum				42.5	44.2	45.9	46.8		
<b>Energy Ft. Lbs</b>		<b>1485</b>	<b>1606</b>	<b>1732</b>	<b>1862</b>	<b>1998</b>	<b>2067</b>	<b>2138</b>	
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs					
<b>Accuracy Load</b>	RE 16	39.1	2950	2067					
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>									

**6mm HC**

Bullet	Caliber	Weight	Type	C.O.A.L.				
	#1575	.243"	110gr. HPBT Match	2.825"*				
<i>*requires a 1x7" or faster twist</i>								
Powder	Velocity	2500	2600	2700	2800	2900	2950	3000
N540		29.4	30.8	32.3	34.0			
IMR 4451 End.		33.0	34.2	35.6	37.0			
A 4350			32.8	34.6	36.5			
H4350			33.0	34.6	36.3			
RE 16			33.2	34.7	36.3	38.3		
RE 17			32.9	34.2	35.7	37.3	38.1	
Hybrid 100V			33.3	34.8	36.3	37.8		
RE 19				38.3	39.8	41.2	41.9	42.6
H4831sc			36.1	37.4	39.0	40.8	41.8	
IMR 4955 End.			35.8	37.4	38.9			
N560				38.0	39.9	41.6	42.4	
Magnum				42.6	43.8	45.3	46.1	47.1
<b>Energy Ft. Lbs</b>		<b>1526</b>	<b>1651</b>	<b>1780</b>	<b>1915</b>	<b>2054</b>	<b>2125</b>	<b>2198</b>
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
<b>Accuracy Load</b>	RE 16	38.3	2900	2054				
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>								