

6.5 PRC

Test Specifications:

Firearm Used: Universal

Barrel Length: 24"

Twist: 1 - 8"

Components:

Case: Nosler

Trim-to Length: 2.015"

Primer: WLR

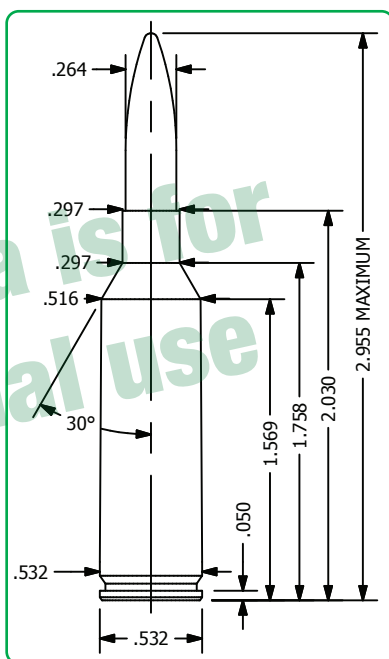
Remarks:

In 2012, gunsmith George Gardner of G.A. Precision decided to design a cartridge specifically for the new Precision Rifles Series, a long range competition taking place over several shoots during the year. Gardner decided high ballistic coefficient 6.5mm bullets were ideal, given the parameters of PRS rules: bullets no more than .30 caliber with a muzzle velocity not exceeding 3200 fps. He did some fooling with QuickLOAD, and after shooting a couple of the resulting designs, decided on the Ruger Compact Magnum case necked down as the ideal combination of accuracy, recoil and barrel life, since it safely started heavier, high BC bullets at velocities close to, but not over, the 3200 fps maximum.



Gardner also saw the round as a very good hunting cartridge, filling the ballistic gap between the smaller factory 6.5's such as the Creedmoor, .260 Remington and 6.5x55 and the .264 Winchester Magnum, 6.5-300 Weatherby Magnum, and 26 Nosler. It does exactly that, because the powder capacity is similar to the 6.5-06 Ackley Improved wildcat. With the same bullet weights, in the same barrel length, the 6.5 PRC develops just about the same muzzle velocities and recoil as the .270 Winchester, but with higher BC bullets, a very useful slot in big game rounds.

My own 6.5 PRC is a custom hunting rifle, built by Kentucky gunsmith Charlie Sisk on a "short magnum" Remington 700 action, weighing a little over eight pounds with a 24 inch Lilja barrel, Bansner High Tech stock, and Nightforce 3-10x42 SHV scope. Five shot (not 3 shot) groups at 100 yards with just about any good bullet average 1/2 to 3/4 inch, at typical .270 velocities from sporter length barrels.

PRS competitors typically use barrels at least 26 inches long, where muzzle velocities of the 6.5 PRC come within about 100 fps of the .264 Winchester Magnum, with noticeably less recoil. It's a great addition to the growing line up of factory 6.5mm cartridges.



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		Bullet	Caliber	Weight	Type	C.O.A.L.		
		#1715	.264"	107gr.	HPBT Match	2.955"		
		#7407	.264"	107gr.	TMK Match	2.955"		
Powder	Velocity	2900	3000	3100	3150	3200	3250	3300
IMR 4451 End.			50.0	52.0	53.0	54.0	55.1	56.1
H4350	46.1	48.0	50.0	51.0	52.1	53.1		
RE 16		48.5	50.7	51.7	52.7	53.6	54.6	
RE 17			49.7	50.8	51.9	52.8	53.8	
Hybrid 100V		48.7	50.5	51.4	52.4	53.4	54.4	
Energy Ft. Lbs		1998	2138	2283	2357	2432	2509	2587
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
Accuracy Load	IMR 4451 End.	56.1	3300	2587				

Sierra does not recommend MatchKing bullets for hunting applications.






Barnsness's hunting rifle was built by Sisk Guns on a Remington 700 action, and weighs a little over eight pounds with scope.



the same weight bullets, in the e length barrels, the 6.5 PRC muzzle velocities very similar to 270 Winchester, but with higher bullets.

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Bullet	Caliber	Weight	Type	C.O.A.L.
	#1720	.264"	120gr. SPT	2.925"
	#1725	.264"	120gr. HPBT Match	2.860"
	#1727	.264"	123gr. HPBT Match	2.955"

Powder	Velocity	2650	2750	2850	2950	3000	3050	3100
IMR 4451 End.	43.8	45.6	47.5	49.3	50.2	51.1		
H4350	43.8	45.8	47.9	49.0				
RE 16			46.0	48.2	49.3	50.4		
RE 17	43.5	45.7	47.8	48.8	49.8	50.7		
Hybrid 100V	44.9	47.0	49.1	50.1	51.0			
H4831sc			51.0	53.3	54.4	55.5	56.5	
IMR 4955 End.	46.8	48.3	50.1	52.1	53.1			
N560			51.7	53.8	54.8	55.8	56.8	
RE 23			50.0	52.2	53.2	54.3	55.3	
IMR 7828ssc		50.7	52.7	54.6	55.5	56.4	57.3	
H1000			54.1	56.1	57.2	58.2	59.3	
Energy Ft. Lbs		1871	2015	2164	2318	2398	2478	2560




Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
Accuracy Load	H4831sc	56.5	3100	2560
Hunting Load	RE 17	50.7	3100	2560

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	Bullet	Caliber	Weight	Type	C.O.A.L.			
	#1728	.264"	130gr.	HPBT	2.800"			
	#7430	.264"	130gr.	TMK Match	2.955"*			
	#4330	.264"	130gr.	TGK	2.955"*			
*requires a 1x8" or faster twist								
Powder	Velocity	2650	2750	2850	2950	3000	3050	3100
IMR 4451 End.		43.7	45.5	47.5	49.4	50.4		
H4350			43.5	45.5	47.4	48.4		
RE 16			44.3	46.4	48.5	49.6	50.7	
RE 17				45.4	47.5	48.6	49.7	50.8
Hybrid 100V			44.1	46.1	48.1	49.1	50.1	
H4831sc				51.5	53.8	54.9		
IMR 4955 End.			47.2	49.3	51.5	52.6		
RE 22				50.7	52.5	53.4	54.3	55.2
RE 23				50.1	52.6	53.6	54.6	55.4
IMR 7828ssc			49.9	52.1	54.1	55.0	55.9	
IMR 7977 End.			54.0	55.8	57.7	58.6	59.5	60.4
H1000				52.7	55.1	56.2	57.4	58.5
Retumbo				54.5	56.8	58.0	59.3	60.6
Energy Ft. Lbs		2027	2183	2344	2512	2597	2685	2774
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
Accuracy Load	RE 17	50.8	3100	2774				
Hunting Load	Retumbo	60.6	3100	2774				
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Bullet	Caliber	Weight	Type	C.O.A.L.				
	#1730	.264"	140gr. SBT	2.880"				
	#1740	.264"	140gr. HPBT Match	2.910"				
	#1742	.264"	142gr. HPBT Match	3.000"*				
*requires a 1x8" or faster twist								
Powder	Velocity	2500	2600	2700	2750	2800	2850	2900
IMR 4451 End.		44.2	46.2	47.4	48.5			
H4350		42.7	44.9	46.1	47.4			
RE 16		42.9	45.6	46.7	47.8			
RE 17		42.3	44.6	45.7	46.8			
H100V		42.5	44.7	46.0	47.3			
H4831sc			47.6	48.8	50.1			
IMR 4955 End.		46.4	48.6	49.9	51.1			
RE 22	42.6	44.9	47.1	48.2	49.4			
N560	43.8	46.3	48.5	49.5	50.4			
RE 23			47.7	49.0	50.2			
IMR 7828ssc			49.9	51.0	52.1	53.1		
RE 25				51.4	52.9	54.3	55.6	
IMR 7977 End.			53.6	54.7	55.8	56.8		
H1000			50.1	51.4	52.7	54.1		
RE 26			47.7	48.9	50.2	51.5		
Magnum		51.6	54.1	55.4	56.7	57.9		
Retumbo				51.3	52.9	54.5	56.1	
RE 33		58.1	60.3	61.3	62.3	63.2	64.0	
Energy Ft. Lbs		1943	2101	2266	2351	2437	2525	2614
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
Accuracy Load	RE 23	50.2	2800	2437				
Hunting Load	RE 25	55.6	2900	2614				
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		Bullet Caliber Weight Type							C.O.A.L.
		#1755 .264" 150gr. HPBT Match							3.080"*
*requires a 1x7.5" or faster twist									
Powder v	Velocity >	2400	2500	2600	2650	2700	2750	2800	
H4831sc			43.0	45.8	47.4	49.1			
IMR 4955 End.	42.5		44.8	46.9	48.0	49.0			
RE 22			43.9	46.3	47.5	48.6			
N560			44.7	46.8	48.0	49.3	50.6		
RE 23			43.9	46.5	47.8	49.1			
IMR 7828ssc			46.3	48.6	49.6	50.7	51.7		
RE 25				49.2	50.4	51.6	52.8	54.1	
IMR 7977 End.			49.9	52.1	53.2	54.2	55.3	56.4	
H1000				49.1	50.3	51.6	52.8		
RE 26				48.0	49.1	50.3	51.5	52.8	
Retumbo				50.1	51.3	52.7	54.1	55.5	
N570					52.1	53.3	54.5	55.8	
RE 33						55.9	57.4	59.0	
Energy Ft. Lbs		1918	2081	2251	2339	2428	2518	2611	
Special Load	Powder	Grains	Velocity fps		Energy Ft. lbs				
Accuracy Load	RE 33	59.0	2800		2611				
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