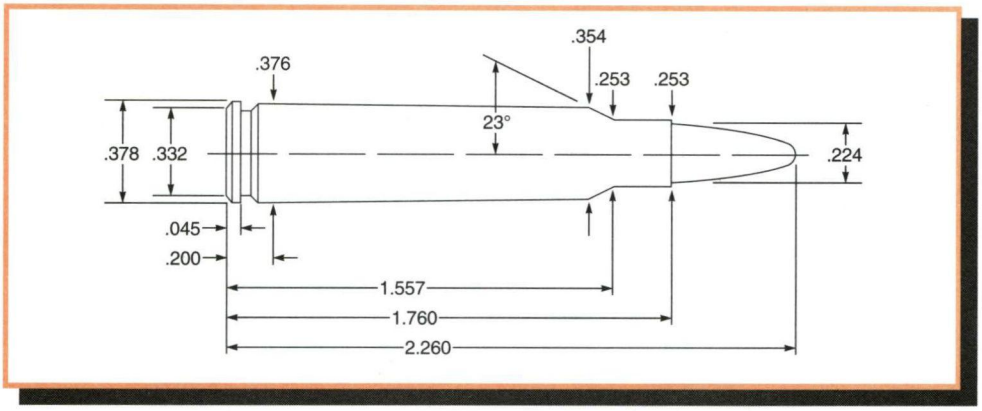
223 Remington



Comments:

The 223 Remington/5.56 NATO has become one of the most popular and versatile commercial cartridges in the United States over the last forty years. It works well with a wide number of components and is easy and economical to reload. Remington introduced this cartridge to the commercial market in 1964 soon after its adoption by the U.S. Army as the 5.56 NATO. Much like the 7.62/308 and the earlier 30-06, ready availability of surplus GI brass nurtured its popularity. The 223 Remington is similar to the older 222 Remington Magnum but is .090" shorter in length and has the shoulder set back approximately .030" Although the 223 Remington cartridges will chamber in 222 Magnum rifles, ***shooters should not fire the 223 Remington cartridge in any rifle chambered in 222 Magnum.*** The 223 Remington has been chambered for a wide variety of firearms over the years including the T/C Contender pistol. In addition to its military service, the cartridge has been used for varmints, small game and target shooting with great success along with use by law enforcement agencies. The 223 Remington should not be considered a deer cartridge. Many states mandate the 6mm/.243" bore size as the minimum caliber for whitetails.

Part of the versatility enjoyed by this cartridge revolves around the wide range of usable bullet weights. Best results with a particular bullet however requires use of a barrel with the appropriate rate of twist. This cartridge was originally introduced by different manufacturers in both 1-12" and 1-14" twist barrels. These twist rates work well for bullets weighing 40 to 55-grains. IMR-3031, H-322, H-335, 748, and XMR-2015 are all great powders in this category. This cartridge has also come a long way in recent years due to development of heavy weight bullets featuring high ballistic coefficients for long-range match competition. The introduction of 80-grain bullets by several different manufacturers allowed the AR-15/M16 series of rifles to compete head to head (shooters of the "black gun" have demonstrated) with the older 30-caliber M14/M1A rifles on the 600 yard stage of the National Match course.

Use of the 77 or 80-grain Sierra MatchKings require a 1-7" or 1-8" twist barrel for proper stabilization. The 80-grain MatchKing has a long, slender ogive and will need to be seated to an overall length longer than the 2.260" specified as maximum. The 80-grain bullet should not be seated to the 2.260" magazine length. Excessive pressures will result from the reduction in available case volume with an 80-grain bullet seated so deeply. Shooters are best advised to use a bullet length comparator (such as those made by Stoney Point) to determine distance of the bullet ogive's engagement to the lands. Bullets should be seated off the lands at least .005"–sometimes more–for best accuracy. The shooter should begin with the bullet approximately .025" off the lands and work closer to the lands of the rifling in .005" increments. This will produce a cartridge OAL around 2.550" in Colt manufactured rifles, shorter in most custom barrels. HBar rifles as manufactured by Colt have a throat approximately .100" longer than other commercially manufactured rifles. Cartridges loaded with 80-grain bullets must be loaded and fired singly. This is no handicap as the 600 yard stage is a slow fire event. These heavier bullets works best with slower burning propellants than what are usually associated with the 223 Remington. H-4895 often gives excellent accuracy with the 80-grainer while N140 and Varget also work well. The 77-grain MatchKing's ogive is more blunt and can be loaded to 2.260" magazine length as can their 69-grain MatchKing. Some shooters do report good results with 75-grain bullets in 1-9" twist barrels, while many shooters have successfully used the 52-grain Sierra MatchKing in 1-7" barrels on the reduced 200-yard course. Sierra's 69-grain MatchKing is suitable for 1-7" to 1-10" barrels.

Cast bullets velocities should be kept between 1,900 and 2,300 feet per second for best accuracy. Bullets should be cast of a hard alloy measuring at least 15 bhn such as Lyman's # 2 alloy. Bullet #225646 gave good results around 2,100 feet per second.

Test Components:

Cases . . . . . .Remington
Trim-to Length . . . . . .1.750"
Primers . . . . . .Remington 7½
Primer Size . . . . . .Small Rifle
Lyman Shell Holder . . . . . .No. 26
Jacketed Bullets Used . .Hornady V-Max, #22241, 40 gr.
Sierra SPT #1310, 45 gr.
Sierra Blitz #1340, 50 gr.
Sierra HPBT #1410, 52 gr.
Sierra SPT #1360, 55 gr.
Hornady V-Max #22281, 60 gr.
Sierra SMP #1370, 63 gr.
Sierra HPBT #1380, 69 gr.
Hornady A-Max #22792, 75 gr.
Sierra HPBT #9377, 77 gr.
Sierra HPBT #9390, 80 gr.
Cast Bullets Used . . . . . .(sized to .224" dia.)
*gas check bullets *#225415, 55 gr.
*#225646, 55 gr.

Test Specifications: (Velocity & Pressure)

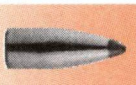
Firearm Used . . . . . .Universal Receiver
Colt AR15
Barrel Length . . . . . .Universal Receiver: 24"
Colt AR15: 20"
Twist . . . . . .Universal Receiver: 1-12"
Colt AR15: 1-7"
Groove Dia. 224

223 Remington

40 gr. Jacketed V-Max
2.215" OAL

BC: .200
SD: .114

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	20.6	3170	34,300	22.9	3545	46,900
XMR-2015	24.4	3253	32,300	27.0	3760	49,700
RX7	21.6	3163	32,300	24.0	3583	47,400
IMR-3031	23.4	2957	31,600	26.0+	3395	44,500
Benchmark	25.2	3276	38,800	28.0+	3627	50,400
H322	24.3	3095	32,000	27.0+	3619	49,000
AA-2230	**24.3**	**3156**	**36,800**	27.0	3649	50,200
IMR-4895	25.0	3001	34,500	27.8+	3444	47,700
H335	25.5	3135	33,200	28.3	3640	50,000
BL-C (2)	27.3	3207	37,800	30.3	3685	50,400
Varget	25.6	3042	31,000	28.0+	3383	38,900



45 gr. Jacketed SPT
2.240" OAL

BC: .210
SD: .128

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	20.6	3171	36,600	22.9	3542	51,800
XMR-2015	23.8	3083	35,100	25.5	3558	50,900
RX7	21.7	3114	35,000	24.2	3537	51,700
IMR-3031	22.9	2798	31,200	25.5+	3346	46,700
Benchmark	24.7	3173	40,200	27.5	3480	48,700
H322	**24.4**	**3274**	**40,300**	27.2+	3571	50,900
AA-2230	24.3	3166	36,600	27.6	3659	51,700
IMR-4895	25.2	3009	32,600	28.1+	3420	47,700
H335	26.1	3200	37,300	29.4	3678	51,700
BL-C (2)	26.0	3218	37,800	29.0	3641	51,300
748	27.0	3211	36,300	30.0	3592	47,600
Varget	25.2	3023	28,600	28.0+	3369	40,700

50 gr. Jacketed Blitz
2.235" OAL

BC: .222
SD: .142

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	20.0	2739	—	22.0	3115	—
XMR-2015	**23.2**	**3069**	**32,200**	25.0	3480	49,200
RX7	21.7	3009	34,200	24.1	3330	47,600
IMR-3031	22.0	2688	—	25.5+	3257	—
Benchmark	23.8	3043	36.400	26.5	3332	48,400
AA2230	23.8	3080	36,800	26.0	3453	50,300
IMR-4895	23.0	2570	—	26.5+	3115	—
H335	24.8	3025	34,300	27.7	3459	51,600
BL-C (2)	24.0	2666	—	27.5	3076	—
AA2460	23.9	2964	38,800	26.6	3303	49,900
748	26.1	2977	33,300	29.0	3401	46,500
IMR-4064	23.0	2538	—	26.0+	2967	—
Varget	25.4	3010	32,800	28.2+	3376	45,400
IMR-4320	24.0	2638	—	27.5	3134	—

52 gr. Jacketed HPBT
2.250" OAL

BC: .225
SD: .148

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	19.0	2666	—	21.6	3039	—
XMR-2015	22.8	2965	32,300	25.3	3396	48,600
IMR-3031	22.0	2645	—	25.0+	3125	—
Benchmark	23.1	2932	37,100	**25.7**	**3251**	**49,400**
AA2230	22.9	2868	34,300	25.5	3299	48,800
IMR-4895	23.0	2538	—	26.5+	3086	—
H335	24.5	2950	34,200	27.2	3361	51,500
BL-C (2)	24.0	2564	—	27.0	2915	—
AA2460	23.9	2907	39,500	26.5	3228	50,200
748	25.2	2974	36,300	28.0	3318	49,200
IMR-4064	23.0	2512	—	26.0+	2941	—
Varget	25.6	3019	35,500	28.0+	3377	48,700
IMR-4320	24.0	2659	—	27.5+	3125	—

55 gr. Jacketed SPT
2.260" OAL

BC: .237
SD: .157

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	19.0	2645	—	21.7	3067	—
XMR-2015	22.5	2970	33,800	25.0	3353	50,800
IMR-3031	21.0	2506	—	24.5+	3076	—
Benchmark	22.7	2793	33,100	25.3	3137	48,000
AA2230	22.5	2891	37,000	25.0	3272	50,600
IMR-4895	23.0	2564	—	26.0+	3030	—
H335	24.3	3142	35,200	27.0	3270	49,100
BL-C (2)	23.0	2525	—	26.5	2949	—
AA2460	23.7	2853	36,700	26.3	3182	49,900
748	25.0	2849	33,500	27.8	3228	49,600
IMR-4064	23.0	2531	—	26.0+	2949	—
Varget	**25.0**	**2977**	**34,700**	27.8+	3346	51,400
IMR-4320	24.0	2672	—	27.5+	3144	—

60 gr. Jacketed V-Max
2.260" OAL

BC: .265
SD: .171

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	22.0	2882	35,500	**24.5**	**3217**	**52,000**
IMR-3031	21.4	2648	35,000	23.8	3047	48,300
Benchmark	22.0	2678	34,900	24.5	3018	48,200
AA2230	22.0	2749	37,300	24.5	3134	51,800
IMR-4895	22.9	2900	37,300	25.5	3023	49,500
H335	23.2	2728	34,700	25.8	3121	51,200
BL-C (2)	23.4	2673	33,200	26.0	3035	47,800
AA-2460	22.5	2678	38,700	25.0	2997	50,600
748	23.4	2608	32,200	26.0	3030	49,400
IMR-4064	23.8	2725	35,500	26.0+	3074	49,900
Varget	24.4	2854	36,300	27.2+	3170	49,300
IMR-4320	23.3	2663	36,300	25.9	2995	49,900
RX15	23.8	2783	36,800	26.5+	3098	47,300

Note: Loads shown in shaded panels are maximum.
Loads shown in bold designate potentially most accurate load.
+Designates a compressed powder charge.

223 Remington

63 gr. Jacketed SMP
2.260" OAL

BC: .231
SD: .179

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
IMR-4198	18.0	2487	—	20.0	2544	—
XMR-2015	22.0	2773	35,100	24.5	3088	50,500
IMR-3031	20.0	2403	—	22.5	2777	—
Benchmark	21.8	2648	34,400	24.3	2943	46,400
AA2230	23.5	2926	37,300	**26.1**	**3250**	**50,400**
IMR-4895	22.0	2444	—	25.0	2865	—
H335	23.7	2800	32,900	26.4	3139	48,700
BL-C (2)	23.0	2544	—	26.0	2840	—
AA2460	23.4	2739	34,700	26.0	3103	50,400
748	24.7	2768	32,600	27.5	3142	49,300
IMR-4064	22.0	2409	—	25.0+	2808	—
Varget	25.0	2891	36,000	27.0	3231	49,700
IMR-4320	22.0	2421	—	25.5	2881	—
RX15	24.7	2892	36,500	27.5	3210	51,200

69 gr. Jacketed HPBT
2.260" OAL

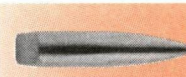
BC: .301
SD: .196

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	21.6	2677	36,600	24.0	2958	49,000
AA2230	22.5	2717	34,200	25.0	3063	48,400
IMR-4895	22.5	2614	38,400	25.0	2896	50,800
H335	22.9	2593	32,700	25.5	2994	51,400
BL-C (2)	23.4	2525	32,100	26.5	3018	50,700
AA-2460	22.5	2613	36,400	25.0	2928	49,300
748	23.6	2584	34,500	26.3	2994	51,100
IMR-4064	22.9	2603	37,100	25.5	2930	48,800
Varget	23.4	2654	33,700	**26.0+**	**2922**	**40,500**
IMR-4320	23.9	2682	37,200	26.5+	2946	47,100
N140	23.4	2650	34,300	26.0+	2926	45,800
RX15	23.9	2721	36,700	26.5+	2975	45,000

75 gr. Jacketed A-Max
2.390" OAL

BC: .435
SD: .214

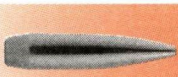
Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	20.3	2548	36,500	22.6	2797	49,100
AA-2230	20.7	2462	35,300	23.0	2758	48,300
IMR-4895	21.6	2390	33,800	24.0	2720	49,100
H335	22.5	2577	37,000	25.1	2850	52,000
BL-C (2)	23.0	2545	36,300	25.6	2845	48,800
AA-2460	21.6	2495	39,300	24.0	2719	49,200
748	23.0	2490	35,700	25.5	2810	50,600
IMR-4064	22.2	2458	37,500	24.7	2767	49,000
Varget	**23.0**	**2606**	**37,200**	25.6	2843	48,600
IMR-4320	22.1	2408	36,800	24.6	2724	50,000
N140	22.7	2557	38,700	25.2	2773	49,000
RX15	23.4	2652	39,300	26.1	2923	52,400



77 gr. Jacketed HPBT
2.260" OAL

BC: .362
SD: .219

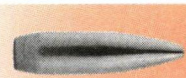
Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	20.2	2443	35,000	22.5+	2724	48,600
AA2230	21.7	2589	38,800	24.2	2880	49,600
IMR-4895	22.0	2469	35,400	24.5+	2771	46,100
H335	22.5	2551	36,500	25.0	2851	51,200
BL-C (2)	23.0	2473	31,600	24.7	2858	50,400
AA-2460	21.9	2470	36,100	24.3	2788	51,000
748	22.6	2417	31,900	24.1	2800	50,300
IMR-4064	22.5	2475	34,600	25.0+	2772	46,200
Varget	22.5	2591	39,000	25.0+	2788	44,500
IMR-4320	22.0	2497	34,600	24.5+	2742	46,900
N140	22.2	2463	35,800	24.7+	2758	48,500
RX15	**22.0**	**2544**	**36,900**	24.5+	2803	46,400



80 gr. Jacketed HPBT
2.550" OAL

BC: .420
SD: .228

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	19.8	2495	38,200	22.2	2769	51,100
AA-2230	21.5	2518	32,700	24.0	2849	47,500
IMR-4895	22.0	2467	33,200	24.5+	2789	47,500
H4895	21.8	2536	36,600	**23.2+**	**2757**	**43,700**
H335	22.5	2464	32,400	25.0	2834	48,600
BL-C (2)	23.4	2522	33,800	25.0	2860	48,600
AA-2460	21.7	2467	33,900	24.1	2744	48,500
748	21.8	2443	31,900	24.0	2799	50,100
IMR-4064	22.0	2451	33,700	24.0+	2833	49,500
Varget	23.0	2595	38,300	25.0+	2823	46,500
IMR-4320	22.5	2460	34,000	25.0+	2777	48,400
N140	22.0	2453	34,000	24.5+	2734	46,200



*69 gr. Jacketed HPBT
2.260" OAL

BC: .301
SD: .196

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	21.6	2596	—	24.0	2936	—
AA-2230	22.5	2629	—	25.0	2979	—
IMR-4895	22.5	2475	—	25.0	2786	—
H335	22.9	2498	—	25.5	2839	—
BL-C (2)	23.4	2442	—	26.5	2861	—
AA-2460	22.5	2511	—	25.0	2883	—
748	23.6	2468	—	26.3	2834	—
IMR-4064	22.4	2344	—	25.5	2743	—
Varget	23.4	2589	—	**26.0+**	**2832**	—
IMR-4320	23.9	2595	—	26.5+	2922	—
N140	23.4	2581	—	26.0+	2897	—
RX15	23.9	2632	—	26.5+	2933	—

Note: Loads shown in shaded panels are maximum.
Loads shown in bold designate potentially most accurate load.
+Designates a compressed powder charge.
*Fired for velocity in 20" barrel, 1-7" twist.

223 Remington

***77 gr. Jacketed HPBT**
2.260" OAL
BC: .362
SD: .219

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	20.2	2395	—	22.5	2680	—
AA-2230	21.7	2512	—	24.2	2827	—
IMR-4895	22.0	2441	—	24.5+	2721	—
H335	22.5	2458	—	25.0	2821	—
BL-C (2)	23.0	2342	—	24.7	2745	—
AA-2460	21.9	2433	—	24.3	2716	—
748	22.6	2348	—	24.1	2697	—
IMR-4064	22.5	2393	—	25.0+	2736	—
Varget	22.5	2460	—	25.0+	2705	—
IMR-4320	22.0	2334	—	24.5+	2663	—
N140	22.2	2422	—	24.7+	2696	—
RX15	**22.0**	**2472**	—	24.5+	2741	—

***80 gr. Jacketed HPBT**
2.550" OAL
BC: .420
SD: .228

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
XMR-2015	19.8	2348	—	22.2	2742	—
AA2230	21.5	2548	—	24.0	2795	—
IMR-4895	22.0	2483	—	24.5+	2669	—
H4895	21.8	2430	—	**23.2+**	**2723**	—
H335	22.5	2471	—	25.0	2752	—
BL-C (2)	23.4	2417	—	25.0	2791	—
AA-2460	21.7	2383	—	24.1	2681	—
748	21.8	2332	—	24.0	2697	—
IMR-4064	22.0	2413	—	24.0+	2654	—
Varget	23.0	2499	—	25.0+	2761	—
N140	22.0	2348	—	24.5+	2644	—

#225415
55 gr. (#2 Alloy) 2.060" OAL
BC: .116
SD: .157

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
Red Dot	5.6	1795	23,400	9.0	2280	40,700
700X	5.6	1790	23,400	7.7	2080	39,400
Green Dot	6.2	1855	23,400	9.2	2270	39,000
PB	6.3	1775	24,000	8.7	2120	39,400
Unique	6.8	1900	20,400	9.5	2300	35,000
SR-7625	6.6	1820	24,000	8.8	2120	39,900
SR-4759	9.3	1762	18,000	11.3	2195	24,200
XMP-5744	**11.0**	**1765**	**18,000**	14.5	2234	26,600
IMR-4227	11.0	1762	18,000	14.0	2193	23,200

#225646
55 gr. (#2 Alloy) 2.260" OAL
BC: .155
SD: .157

Powder	Sugg Starting Grains	Velocity fps	Pressure C.U.P.	Max Load Grains	Velocity fps	Pressure C.U.P.
Unique	6.2	1753	26,700	9.0	2209	41,400
SR-7625	6.7	1763	26,800	9.5	2205	43,900
AA9	7.8	1749	17,500	11.0	2198	28,900
2400	8.0	1753	18,000	11.5	2206	27,100
SR-4759	8.5	1751	17,500	11.5	2206	27,300
XMP-5744	10.3	1757	17,000	14.0	2186	27,000
IMR-4227	10.0	1766	17,000	13.0	2180	26,200
AA-1680	10.9	1756	16,000	14.3	2181	23,500
IMR-4198	10.7	1756	17,000	14.5	2223	25,200
RX7	**11.5**	**1758**	**17,000**	15.6	2226	25,300

Note: Loads shown in shaded panels are maximum.
Loads shown in bold designate potentially most accurate load.
*Fired for velocity in 20" barrel, 1–7" twist.