

FEDERAL PREMIUM® RIFLE

ATT.	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	GOLD MEDAL PRIMER	BALLISTIC COEFFICIENT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)								
				GRAINS	GRAMS			G1	G7	MUZZLE	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.			
FEDERAL PREMIUM BIG GAME																		
NEW	◊	1 2	P223TC1	223 Rem.	55	3.56	Trophy Copper	X			3240	2915	2613	2330	2066	1819		
NEW	◊	2	P223S	223 Rem.	55	3.56	Barnes Triple-Shock X Bullet	X			3200	2738	2320	1940	1604	1323		
	◊	2	P223Q	223 Rem.	60	3.89	Nosler Partition	X			3160	2737	2350	1998	1679	1403		
	◊	1, 2	P223TT3	223 Rem.	62	4.02	Trophy Bonded Tip	X			3050	2680	2339	2024	1736	1480		
	◊	2	P22250G	22-250 Rem.	60	3.89	Nosler Partition	X			3500	3043	2630	2253	1908	1601		
NEW	◊	2	P224VLKBTXS1	224 Valkyrie	78	5.05	Barnes Triple-Shock X Bullet	X			2850	2611	2385	2170	1966	1774		
	◊	2	P243A1	243 Win.	90	5.83	Nosler AccuBond	X			3000	2749	2511	2285	2072	1869		
	◊	2	P243TC1	243 Win.	85	5.51	Trophy Copper	X			3200	2947	2708	2481	2265	2061		
NEW	◊	2	P243K	243 Win.	85	5.51	Barnes Triple-Shock X Bullet	X			3200	2904	2628	2367	2122	1891		
NEW	◊	2	P243BCH1	243 Win.	95	6.16	Berger Hybrid Hunter	X	0.434	0.223	3050	2829	2619	2418	2226	2043		
	◊	2	P243J	243 Win.	95	6.16	Nosler Ballistic Tip	X			3025	2774	2536	2310	2096	1893		
	◊	2	P243C	243 Win.	100	6.48	Sierra GameKing BTSP	X			2960	2741	2533	2334	2145	1964		
	◊	2	P243E	243 Win.	100	6.48	Nosler Partition	X			2850	2612	2386	2171	1968	1776		
	◊	2	P257B	257 Roberts +P	120	7.78	Nosler Partition	X			2800	2569	2349	2140	1941	1755		
NEW	◊	2	P2506H	25-06 Rem.	100	6.48	Barnes Triple-Shock X Bullet	X			3210	2916	2641	2382	2138	1908		
	◊	2	P2506A1	25-06 Rem.	110	7.13	Nosler AccuBond	X			3100	2868	2648	2438	2238	2048		
	◊	2	P2506TC1	25-06 Rem.	100	6.48	Trophy Copper	X			3210	2967	2737	2519	2311	2113		
	◊	2	P2506D	25-06 Rem.	100	6.48	Nosler Ballistic Tip	X			3220	2968	2729	2503	2288	2084		
	◊	2	P2506E	25-06 Rem.	115	7.45	Nosler Partition	X			3030	2785	2553	2333	2124	1925		
	◊	2	P2506C	25-06 Rem.	117	7.58	Sierra GameKing BTSP	X			3030	2797	2577	2366	2166	1975		
	◊	2	P260B	260 Rem.	120	7.78	Nosler Ballistic Tip	X			2950	2725	2512	2308	2113	1928		
	◊	2	P260A	260 Rem.	140	9.07	Sierra GameKing BTSP	X			2700	2487	2284	2090	1905	1733		
	◊	2	P65CRDTC1	6.5 Creedmoor	120	7.78	Trophy Copper	X			2875	2689	2510	2338	2174	2015		
NEW	◊	2	P65CRDETLR1	6.5 Creedmoor	130	8.42	Edge TLR	X	0.545	0.28	2825	2657	2495	2338	2188	2043		
NEW	◊	2	P65CRDBTBSX1	6.5 Creedmoor	130	8.42	Barnes Triple-Shock X Bullet	X			2825	2576	2341	2118	1906	1711		
NEW	◊	2	P65CRDBCH1	6.5 Creedmoor	135	8.75	Berger Hybrid Hunter	X	0.584	0.303	2775	2620	2469	2324	2184	2049		
	◊	2	P65CRDA1	6.5 Creedmoor	140	9.07	Nosler AccuBond	X	0.509	0.244	2675	2501	2334	2173	2018	1870		
NEW	◊	2	P270L	270 Win.	130	8.42	Barnes Triple-Shock X Bullet	X			3060	2804	2562	2333	2115	1909		
NEW	◊	2	P270BCH1	270 Win.	140	9.07	Berger Hybrid Hunter	X	0.528	0.271	2950	2772	2600	2435	2276	2123		
	◊	2	P270A1	270 Win.	140	9.07	Nosler AccuBond	X			2950	2760	2579	2404	2236	2075		
	◊	2	P270ETLR1	270 Win.	136	8.81	Edge TLR	X	0.508	0.255	3000	2813	2633	2460	2294	2135		
	◊	2	P270D	270 Win.	130	8.42	Sierra GameKing BTSP	X			3060	2839	2630	2429	2238	2055		
	◊	2	P270F	270 Win.	130	8.42	Nosler Ballistic Tip	X			3060	2837	2626	2424	2231	2046		
	◊	2	P270P	270 Win.	130	8.42	Nosler Partition	X			3060	2829	2610	2401	2202	2012		
	◊	2	P270TC1	270 Win.	130	8.42	Trophy Copper	X			3060	2850	2650	2459	2275	2100		
	◊	2	P270TT1	270 Win.	130	8.42	Trophy Bonded Tip	X			3060	2841	2633	2434	2244	2063		
	◊	2	P270TT3	270 Win.	140	9.07	Trophy Bonded Tip	X			2950	2744	2547	2358	2177	2004		
	◊	2	P270E	270 Win.	150	9.72	Nosler Partition	X			2830	2634	2446	2266	2093	1928		
	◊	2	P270C	270 Win.	150	9.72	Sierra GameKing BTSP	X			2830	2639	2457	2281	2113	1951		
	◊	2	P270WSMA1	270 Win. Short Magnum	130	8.42	Nosler AccuBond	X			3250	3019	2800	2592	2392	2202		
NEW	◊	2	P270WSMD	270 Win. Short Magnum	130	8.42	Barnes Triple-Shock X Bullet	X			3280	3011	2758	2518	2291	2076		
	◊	2	P270WSMB	270 Win. Short Magnum	130	8.42	Nosler Ballistic Tip	X			3300	3065	2843	2632	2430	2237		
	◊	2	P270WSMTC1	270 Win. Short Magnum	130	8.42	Trophy Copper	X			3280	3059	2850	2650	2458	2275		
	◊	2	P270WSMTT1	270 Win. Short Magnum	130	8.42	Trophy Bonded Tip	X			3280	3050	2832	2624	2426	2236		
	◊	2	P270WSMBCH1	270 Win. Short Magnum	140	9.07	Berger Hybrid Hunter	X	0.528	0.271	3200	3011	2830	2657	2489	2328		
	◊	2	P270WSMETLR1	270 Win. Short Magnum	136	8.81	Edge TLR	X	0.508	0.255	3240	3042	2853	2672	2497	2330		
	◊	2	P270WSMTT3	270 Win. Short Magnum	140	9.07	Trophy Bonded Tip	X			3200	2982	2774	2575	2385	2204		
	◊	2	P270WSMC	270 Win. Short Magnum	150	9.72	Nosler Partition	X			3100	2891	2692	2502	2319	2145		
	◊	2	P730A	7-30 Waters	120	7.78	Sierra GameKing BTSP-FN	X			2700	2297	1929	1603	1329	1128		
	◊	2	P708A1	7mm-08 Rem.	140	9.07	Nosler AccuBond	X			2850	2660	2479	2304	2137	1976		
NEW	◊	2	P708C	7mm-08 Rem.	140	9.07	Barnes Triple-Shock X Bullet	X			2820	2589	2370	2162	1963	1777		
	◊	2	P708A	7mm-08 Rem.	140	9.07	Nosler Partition	X			2800	2591	2392	2202	2020	1847		
	◊	2	P708B	7mm-08 Rem.	140	9.07	Nosler Ballistic Tip	X			2800	2613	2433	2260	2094	1935		
	◊	2	P708TC2	7mm-08 Rem.	140	9.07	Trophy Copper	X			2800	2614	2435	2264	2100	1942		
	◊	2	P708TT2	7mm-08 Rem.	140	9.07	Trophy Bonded Tip	X			2800	2589	2388	2196	2012	1838		
	◊	2	P280TC2	280 Rem.	140	9.07	Trophy Copper	X			2950	2758	2573	2396	2227	2064		
	◊	2	P280TT2	280 Rem.	140	9.07	Trophy Bonded Tip	X			2950	2732	2524	2326	2136	1956		
	◊	2	P280A	280 Rem.	150	9.72	Nosler Partition	X			2890	2687	2494	2308	2130	1960		
NEW	◊	2 3	P280AIETLR1	280 Ackley Improved	155	10.04	Edge TLR	X	0.610	0.313	2930	2776	2627	2483	2343	2208		
NEW	◊	2	P280AIBCH1	280 Ackley Improved	168	10.89	Berger Hybrid Hunter	X	0.566	0.29	2830	2668	2511	2360	2214	2073		
	◊	2	P7RG	7mm Rem. Magnum	140	9.07	Nosler Partition	X			3150	2924	2709	2504	2308	2122		
	◊	2	P7RTC2	7mm Rem. Magnum	140	9.07	Trophy Copper	X			3150	2949	2756	2572	2395	2226		
	◊	2	P7RTT2	7mm Rem. Magnum	140	9.07	Trophy Bonded Tip	X			3150	2922	2705	2499	2301	2113		
	◊	3	P7RTC3	7mm Rem. Magnum	150	9.72	Trophy Copper	X			3025	2833	2649	2472	2302	2139		
	◊	2	P7RH	7mm Rem. Magnum	150	9.72	Nosler Ballistic Tip	X			3025	2832	2647	2469	2298	2134		
	◊	3	P7RD	7mm Rem. Magnum	150	9.72	Sierra GameKing BTSP	X			3110	2887	2675	2472	2279	2094		
	◊	2 3	P7RETLR1	7mm Rem. Magnum	155	10.04	Edge TLR	X	0.610	0.313	3000	2843	2692	2546	2404	2267		
	◊	3	P7RA1	7mm Rem. Magnum	160	10.37	Nosler AccuBond	X			2900	2725	2556	2393	2237	2086		
	◊	3	P7RTT1	7mm Rem. Magnum	160	10.37	Trophy Bonded Tip	X			2900	2721	2549	2383	2224	2070		
	◊	3	P7RF	7mm Rem. Magnum	160	10.37	Nosler Partition	X			2950	2752	2563	2381	2207	2040		
NEW	◊	3	P7RN	7mm Rem. Magnum	160	10.37	Barnes Triple-Shock X Bullet	X			2940	2702	2476	2261	2057	1863		
	◊	3	P7RE	7mm Rem. Magnum	165	10.69	Sierra GameKing BTSP	X			2950	2745	2549	2361	2182	2010		



Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; ◊ = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCL = a portion of the proceeds from the sale of this product is donated to Safari Club International; CLM = cartridge length longer than SAAMI max, may not fit in all magazines. *Molycoat: molybdenum disulfide dry film lubricant

MUZZLE	ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)					WIND DRIFT IN INCHES 10 MPH CROSSWIND					HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE LONG RANGE										TEST BARREL LENGTH INCHES
	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
1282	1038	834	663	521	404	0.9	3.7	8.8	16.6	27.5	-0.3	⊕	-2.6	-10.3	0.4	1.3	⊕	-6.4	-19.3	-40.2	24
1250	915	657	460	314	214	1.3	5.8	14.1	27.7	47.5	-0.3	⊕	-3.2	-12.9	0.5	1.6	⊕	-8.1	-25.8	-57.5	24
1330	998	736	532	375	262	1.2	5.3	13.1	25.2	42.9	-0.2	⊕	-3.2	-12.7	0.5	1.6	⊕	-8.0	-24.8	-54.4	24
1281	989	753	564	415	302	1.2	4.9	11.9	22.8	38.4	-0.2	⊕	-3.3	-13.1	0.6	1.7	⊕	-8.1	-24.8	-53.3	24
1632	1234	922	676	485	341	1.1	4.7	11.3	21.6	36.9	-0.3	⊕	-2.3	-9.6	0.2	1.1	⊕	-6.2	-19.3	-42.4	24
1407	1181	985	815	669	545	0.9	3.4	8.2	15.2	24.9	-0.2	⊕	-3.6	-13.4	0.7	1.8	⊕	-8	-23.3	-47.7	24
1798	1510	1260	1044	858	698	0.8	3.3	7.7	14.4	23.5	-0.2	⊕	-3.1	-11.7	0.6	1.6	⊕	-7.1	-20.9	-42.6	24
1933	1639	1384	1162	969	801	0.7	2.9	6.8	12.5	20.5	-0.3	⊕	-2.5	-9.8	0.3	1.3	⊕	-6.0	-17.6	-36.2	24
1933	1592	1303	1057	850	675	0.8	3.5	8.1	15.2	24.9	-0.3	⊕	-2.7	-10.3	0.4	1.3	⊕	-6.3	-19	-39.2	24
1962	1688	1446	1233	1045	880	0.6	2.8	6.4	11.9	19.3	-0.2	⊕	-2.9	-10.8	0.5	1.4	⊕	-6.5	-18.9	-38.4	24
1930	1623	1356	1126	927	756	0.8	3.2	7.6	14.2	23.0	-0.2	⊕	-3.0	-11.5	0.5	1.5	⊕	-6.9	-20.4	-41.6	24
1945	1669	1425	1210	1021	856	0.7	2.9	6.7	12.6	20.4	-0.2	⊕	-3.1	-11.7	0.6	1.6	⊕	-7.0	-20.4	-41.3	24
1803	1515	1264	1047	860	701	0.9	3.4	8.2	15.2	24.8	-0.2	⊕	-3.6	-13.4	0.7	1.8	⊕	-8.0	-23.3	-47.6	24
2089	1758	1470	1220	1004	821	0.9	3.4	8.2	15.2	25.0	-0.1	⊕	-3.8	-13.9	0.8	1.9	⊕	-8.3	-24.0	-49.2	24
2288	1888	1549	1260	1015	808	0.8	3.4	7.9	15	24.5	-0.3	⊕	-2.6	-10.2	0.4	1.3	⊕	-6.3	-18.8	-38.7	24
2347	2009	1713	1452	1224	1024	0.6	2.8	6.5	12.1	19.8	-0.3	⊕	-2.8	-10.4	0.4	1.4	⊕	-6.3	-18.5	-37.7	24
2288	1955	1664	1409	1185	991	0.7	2.7	6.4	11.8	19.3	-0.3	⊕	-2.5	-9.6	0.3	1.2	⊕	-5.9	-17.2	-35.2	24
2302	1955	1654	1391	1162	964	0.7	2.8	6.6	12.3	20.1	-0.3	⊕	-2.5	-9.6	0.3	1.2	⊕	-5.9	-17.3	-35.5	24
2344	1981	1665	1390	1152	946	0.7	3.1	7.3	13.7	22.2	-0.2	⊕	-3.0	-11.3	0.5	1.5	⊕	-6.8	-20.1	-40.9	24
2385	2033	1725	1454	1219	1014	0.7	3.0	6.9	12.8	20.9	-0.2	⊕	-3.0	-11.1	0.5	1.5	⊕	-6.7	-19.7	-40.0	24
2319	1979	1681	1419	1190	990	0.7	3.0	7.0	13.1	21.2	-0.2	⊕	-3.2	-11.9	0.6	1.6	⊕	-7.1	-20.8	-42.1	24
2266	1922	1621	1358	1128	934	0.8	3.4	8.1	14.8	24.4	-0.1	⊕	-4.1	-15.0	0.9	2.1	⊕	-8.8	-25.3	-51.9	24
2202	1926	1679	1457	1259	1082	0.7	2.6	6.0	11.1	17.9	-0.2	⊕	-3.3	-12.1	0.6	1.7	⊕	-7.1	-20.8	-41.6	24
2303	2037	1797	1578	1382	1204	0.6	2.5	5.5	10.3	16.6	-0.2	⊕	-3.4	-12.4	0.7	1.7	⊕	-7.2	-21	-41.9	24
2303	1916	1581	1294	1049	845	0.9	3.7	8.8	16.2	26.9	-0.2	⊕	-3.7	-13.9	0.8	1.9	⊕	-8.3	-24.2	-50	24
2308	2057	1828	1619	1430	1258	0.6	2.3	5.3	9.8	15.7	-0.1	⊕	-3.6	-12.8	0.7	1.8	⊕	-7.5	-21.5	-42.7	24
2224	1944	1693	1467	1266	1086	0.6	2.7	6.5	11.9	19.2	-0.1	⊕	-4.1	-14.6	-32.4	-58.5	⊕	-8.5	-24.3	-48.4	24
2703	2269	1895	1571	1292	1052	0.7	3.2	7.5	14.1	23	-0.2	⊕	-2.9	-11.2	0.5	1.5	⊕	-6.7	-20	-40.8	24
2705	2388	2102	1843	1610	1401	0.6	2.4	5.4	9.9	16.2	-0.2	⊕	-3.1	-11.2	0.5	1.5	⊕	-6.6	-19.1	-38.5	24
2705	2368	2067	1796	1554	1338	0.6	2.5	5.8	10.7	17.4	-0.2	⊕	-3.1	-11.3	0.6	1.5	⊕	-6.7	-19.5	-39.3	24
2718	2389	2093	1828	1589	1376	0.6	2.4	5.5	10.1	16.5	-0.2	⊕	-2.9	-10.8	0.5	1.5	⊕	-6.4	-18.6	-37.5	24
2703	2327	1996	1703	1445	1219	0.6	2.7	6.3	11.7	19.1	-0.3	⊕	-2.8	-10.7	0.5	1.4	⊕	-6.4	-18.8	-38.1	24
2703	2324	1990	1695	1436	1209	0.6	2.8	6.4	11.9	19.4	-0.3	⊕	-2.9	-10.7	0.5	1.4	⊕	-6.4	-18.8	-38.2	24
2703	2310	1966	1664	1399	1168	0.7	2.9	6.6	12.4	20.2	-0.2	⊕	-2.9	-10.8	0.5	1.4	⊕	-6.5	-19.1	-38.8	24
2703	2345	2027	1745	1494	1273	0.6	2.6	6.0	11.0	18.0	-0.3	⊕	-2.8	-10.5	0.4	1.4	⊕	-6.3	-18.4	-37.3	24
2703	2330	2001	1711	1454	1228	0.6	2.7	6.3	11.6	18.9	-0.3	⊕	-2.8	-10.6	0.5	1.4	⊕	-6.4	-18.7	-38.0	24
2705	2340	2016	1728	1473	1249	0.7	2.8	6.3	11.9	19.2	-0.2	⊕	-3.1	-11.6	0.6	1.6	⊕	-6.9	-20.1	-40.6	24
2667	2310	1992	1709	1459	1238	0.7	2.8	6.6	12.3	19.7	-0.2	⊕	-3.5	-12.8	0.7	1.7	⊕	-7.6	-22.0	-44.1	24
2667	2320	2010	1733	1487	1268	0.7	2.7	6.4	11.9	19.1	-0.2	⊕	-3.5	-12.7	0.7	1.7	⊕	-7.5	-21.8	-43.7	24
3049	2631	2263	1939	1652	1400	0.6	2.5	5.9	10.8	17.6	-0.3	⊕	-2.3	-9.1	0.3	1.2	⊕	-5.6	-16.3	-33.3	24
3105	2616	2195	1830	1515	1244	0.7	2.9	6.9	12.7	20.9	-0.3	⊕	-2.3	-9.3	0.3	1.2	⊕	-5.8	-17	-34.9	24
3143	2712	2333	1999	1704	1444	0.6	2.5	5.8	10.6	17.3	-0.3	⊕	-2.2	-8.7	0.2	1.1	⊕	-5.4	-15.8	-32.2	24
3105	2702	2344	2026	1744	1494	0.6	2.3	5.5	10.1	16.3	-0.3	⊕	-2.2	-8.7	0.2	1.1	⊕	-5.4	-15.8	-31.9	24
3105	2685	2315	1988	1699	1443	0.6	2.4	5.8	10.5	17.1	-0.3	⊕	-2.2	-8.8	0.2	1.1	⊕	-5.5	-16.0	-32.4	24
3183	2818	2490	2194	1926	1685	0.5	2.1	4.9	8.9	14.3	-0.3	⊕	-2.3	-9	0.3	1.2	⊕	-5.6	-16	-32	24
3170	2794	2458	2155	1883	1639	0.5	2.1	5	9.2	14.7	-0.3	⊕	-2.2	-8.8	0.3	1.1	⊕	-5.4	-15.7	-31.5	24
3183	2763	2391	2062	1768	1509	0.6	2.4	5.7	10.4	17.1	-0.3	⊕	-2.4	-9.4	0.3	1.2	⊕	-5.8	-16.7	-33.8	24
3200	2784	2414	2085	1792	1532	0.6	2.5	5.8	10.6	17.4	-0.3	⊕	-2.7	-10.1	0.4	1.3	⊕	-6.1	-17.8	-36.0	24
1942	1405	991	685	471	339	1.6	7.1	17.7	34.4	58.1	-0.1	⊕	-5.1	-19.9	1.2	2.6	⊕	-12.2	-38.1	-84.5	24
2525	2200	1910	1650	1419	1214	0.7	2.7	6.2	11.6	18.7	-0.2	⊕	-3.4	-12.5	0.7	1.7	⊕	-7.3	-21.4	-42.9	24
2472	2084	1746	1452	1198	982	0.9	3.4	8.1	14.9	24.4	-0.2	⊕	-3.7	-13.6	0.8	1.8	⊕	-8.1	-23.6	-48.1	24
2437	2088	1779	1507	1269	1061	0.8	3.1	7.3	13.4	21.8	-0.1	⊕	-3.6	-13.5	0.8	1.8	⊕	-8.0	-23.1	-46.6	24
2437	2122	1839	1587	1363	1164	0.7	2.7	6.4	11.9	19.1	-0.2	⊕	-3.6	-13.1	0.7	1.8	⊕	-7.7	-22.3	-44.5	24
2437	2124	1844	1593	1370	1172	0.7	2.7	6.4	11.8	18.9	-0.2	⊕	-3.6	-13.0	0.7	1.8	⊕	-7.7	-22.2	-44.4	24
2437	2084	1772	1498	1258	1050	0.8	3.1	7.4	13.6	22.1	-0.1	⊕	-3.7	-13.5	0.8	1.8	⊕	-8.0	-23.2	-46.8	24
2705	2364	2059	1785	1541	1324	0.6	2.6	5.9	10.9	17.7	-0.2	⊕	-3.1	-11.4	0.6	1.5	⊕	-6.7	-19.6	-39.5	24
2705	2320	1980	1681	1419	1189	0.7	2.9	6.8	12.7	20.5	-0.2	⊕	-3.2	-11.8	0.6	1.6	⊕	-7.0	-20.6	-41.6	24
2782	2405	2071	1774	1511	1279	0.7	2.9	6.5	12.2	19.6	-0.2	⊕	-3.3	-12.2	0.6	1.7	⊕	-7.2	-21.1	-42.4	24
2954	2652	2375	2122	1890	1678	0.5	2.1	4.7	8.5	13.8	-0.2	⊕	-3	-11.1	0.5	1.5	⊕	-6.5	-18.6	-37.2	24
2987	2655	2352	2078	1829	1604	0.6	2.3	5.3	9.8	15.8	-0.2	⊕	-3.4	-12.2	0.7	1.7	⊕	-7.2	-20.7	-41.3	24
3084	2657	2281	1949	1656	1399	0.6	2.6	6.1	11.3	18.5	-0.3	⊕	-2.6	-9.9	0.4	1.3	⊕	-6.0	-17.6	-35.8	24
3084	2703	2362	2057	1783	1540	0.5	2.3	5.4	9.8	16.0	-0.3	⊕	-2.5	-9.6	0.3	1.3	⊕	-5.9	-16.9	-34.1	24
3084	2654	2275	1941	1646	1388	0.6	2														

FEDERAL PREMIUM® RIFLE

ATT.	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	GOLD MEDAL PRIMER	BALLISTIC COEFFICIENT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)						
				GRAINS	GRAMS			G1	G7	MUZZLE	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
NEW	◇	2	P7RBCH1	7mm Rem. Magnum	168	10.89	Berger Hybrid Hunter	X	0.566	0.29	2870	2706	2549	2396	2249	2107
	◇	3	P7RT1	7mm Rem. Magnum	175	11.34	Trophy Bonded Bear Claw	X			2750	2530	2320	2121	1931	1753
	◇	3	P7WSMA1	7mm Win. Short Magnum	160	10.37	Nosler AccuBond	X			3000	2821	2648	2482	2322	2169
	◇	2	P7WSMTT2	7mm Win. Short Magnum	140	9.07	Trophy Bonded Tip	X			3200	2969	2750	2542	2342	2152
	◇	2	P7WSMB	7mm Win. Short Magnum	140	9.07	Nosler Ballistic Tip	X			3310	3098	2896	2704	2519	2342
	◇	3	P7WSMTC3	7mm Win. Short Magnum	150	9.72	Trophy Copper	X			3140	2943	2754	2573	2399	2232
	◇	3	P7WSMTT1	7mm Win. Short Magnum	160	10.37	Trophy Bonded Tip	X			3000	2817	2641	2472	2309	2153
	◇	3	P7WBTT1	7mm Weatherby Magnum	160	10.37	Trophy Bonded Tip	X			3100	2913	2733	2561	2394	2235
	◇	2	P3030TC1	30-30 Win.	150	9.72	Trophy Copper	X			2300	1943	1625	1354	1150	1021
NEW	◇	2	P3030G	30-30 Win.	150	9.72	Barnes Triple-Shock X Bullet	X			2220	1803	1447	1178	1017	919
	◇	2	P3030D	30-30 Win.	170	11.02	Nosler Partition	X			2200	1894	1619	1380	1191	1060
	◇	2	P308F	308 Win.	150	9.72	Nosler Ballistic Tip	X			2820	2611	2410	2219	2037	1863
	◇	2	P308S	308 Win.	150	9.72	Nosler Partition	X			2840	2604	2380	2168	1966	1776
NEW	◇	2	P308V	308 Win.	150	9.72	Barnes Triple-Shock X Bullet	X			2820	2574	2341	2120	1911	1717
	◇	2	P308TC3	308 Win.	150	9.72	Trophy Copper	X			2820	2625	2439	2260	2089	1925
	◇	2	P308A1	308 Win.	165	10.69	Nosler AccuBond	X			2700	2513	2333	2161	1997	1838
	◇	2	P308TC2	308 Win.	165	10.69	Trophy Copper	X			2700	2510	2329	2155	1988	1829
	◇	2	P308C	308 Win.	165	10.69	Sierra GameKing BTSP	X			2700	2481	2272	2073	1884	1708
	◇	2	P308TT2	308 Win.	165	10.69	Trophy Bonded Tip	X			2700	2503	2314	2133	1960	1797
NEW	◇	3	P308H	308 Win.	165	10.69	Barnes Triple-Shock X Bullet	X			2650	2430	2220	2021	1833	1659
NEW	◇	2	P308BCH1	308 Win.	168	10.89	Berger Hybrid Hunter	X	0.489	0.251	2700	2518	2343	2176	2015	1860
	◇	2	P308ETLR175	308 Win.	175	11.34	Edge TLR	X	0.536	0.266	2600	2437	2280	2130	1984	1845
	◇	3	P308E	308 Win.	180	11.66	Nosler Partition	X			2570	2388	2213	2045	1885	1734
	◇	2	P308TT1	308 Win.	180	11.66	Trophy Bonded Tip	X			2620	2445	2277	2116	1960	1812
	◇	2	P3006A3	30-06 Spring.	150	9.72	Nosler AccuBond	X			2910	2696	2493	2298	2112	1934
	◇	2	P3006G	30-06 Spring.	150	9.72	Sierra GameKing BTSP	X			2910	2666	2435	2216	2008	1812
	◇	2	P3006P	30-06 Spring.	150	9.72	Nosler Ballistic Tip	X			2910	2696	2492	2296	2110	1932
	◇	2	P3006A2	30-06 Spring.	165	10.69	Nosler AccuBond	X			2800	2609	2425	2249	2081	1919
	◇	2	P3006O	30-06 Spring.	165	10.69	Nosler Ballistic Tip	X			2800	2609	2425	2249	2081	1919
	◇	2	P3006TC2	30-06 Spring.	165	10.69	Trophy Copper	X			2800	2619	2445	2278	2118	1963
	◇	2	P3006TT2	30-06 Spring.	165	10.69	Trophy Bonded Tip	X			2800	2598	2405	2221	2044	1875
	◇	2	P3006AD	30-06 Spring.	165	10.69	Nosler Partition	X			2830	2607	2395	2193	2000	1818
	◇	2	P3006D	30-06 Spring.	165	10.69	Sierra GameKing BTSP	X			2800	2576	2362	2159	1966	1784
NEW	◇	2	P3006AF	30-06 Spring.	165	10.69	Barnes Triple-Shock X Bullet	X			2800	2573	2356	2151	1955	1771
NEW	◇	2	P3006BCH1	30-06 Spring.	168	10.89	Berger Hybrid Hunter	X	0.489	0.251	2800	2614	2435	2264	2100	1942
	◇	2	P3006ETLR175	30-06 Spring.	175	11.34	Edge TLR	X	0.536	0.266	2730	2563	2401	2246	2096	1952
	◇	3	P3006A1	30-06 Spring.	180	11.66	Nosler AccuBond	X			2700	2524	2355	2193	2037	1887
	◇	3	P3006F	30-06 Spring.	180	11.66	Nosler Partition	X			2700	2512	2332	2160	1995	1837
	◇	2	P3006TT1	30-06 Spring.	180	11.66	Trophy Bonded Tip	X			2700	2522	2351	2186	2029	1877
	◇	3	P3006TC1	30-06 Spring.	180	11.66	Trophy Copper	X			2700	2530	2366	2208	2056	1910
NEW	◇	3	P3006AE	30-06 Spring.	180	11.66	Barnes Triple-Shock X Bullet	X			2700	2504	2316	2137	1965	1802
	◇	3	P3006T5	30-06 Spring.	200	12.96	Trophy Bonded Bear Claw	X			2540	2324	2118	1922	1740	1571
NEW	◇	2	P300WR	300 Win. Magnum	165	10.69	Barnes Triple-Shock X Bullet	X			3050	2810	2582	2365	2159	1963
	◇	2	P300WK	300 Win. Magnum	165	10.69	Nosler Partition	X			3050	2816	2594	2382	2180	1989
	◇	2	P300WTT2	300 Win. Magnum	165	10.69	Trophy Bonded Tip	X			3050	2837	2633	2439	2253	2075
	◇	2	P300WTC2	300 Win. Magnum	165	10.69	Trophy Copper	X			3050	2859	2675	2499	2330	2167
	◇RMEF	3	P300WA1	300 Win. Magnum	180	11.66	Nosler AccuBond	X			2960	2774	2595	2424	2259	2100
	◇RMEF	3	P300WTT1	300 Win. Magnum	180	11.66	Trophy Bonded Tip	X			2960	2771	2591	2417	2250	2089
	◇RMEF	3	P300WTC1	300 Win. Magnum	180	11.66	Trophy Copper	X			2960	2780	2606	2439	2279	2124
	◇RMEF	3	P300WD2	300 Win. Magnum	180	11.66	Nosler Partition	X			2960	2701	2456	2224	2005	1799
NEW	◇RMEF	3	P300WP	300 Win. Magnum	180	11.66	Barnes Triple-Shock X Bullet	X			2960	2752	2554	2364	2182	2009
NEW	◇	2	P300WBCH1	300 Win. Magnum	185	11.99	Berger Hybrid Hunter	X	0.533	0.273	2950	2773	2603	2440	2282	2130
	◇	3	P300WT1	300 Win. Magnum	200	12.96	Trophy Bonded Bear Claw	X			2700	2476	2263	2060	1868	1689
	◇REMF	2 3	P300WETLR200	300 Win. Magnum	200	12.96	Edge TLR	X	0.625	0.312	2810	2664	2522	2384	2251	2122
	◇	2	P300WSMD	300 Win. Short Magnum	150	9.72	Nosler Ballistic Tip	X			3250	3019	2800	2592	2392	2202
	◇	2	P300WSME	300 Win. Short Magnum	165	10.69	Nosler Partition	X			3120	2883	2659	2445	2241	2047
	◇	3	P300WSMTT2	300 Win. Short Magnum	165	10.69	Trophy Bonded Tip	X			3130	2913	2706	2508	2319	2138
	◇	2	P300WSMTC2	300 Win. Short Magnum	165	10.69	Trophy Copper	X			3120	2926	2739	2561	2389	2224
NEW	◇	2	P300WSMG	300 Win. Short Magnum	165	10.69	Barnes Triple-Shock X Bullet	X			3130	2885	2653	2433	2224	2024
	◇RMEF	3	P300WSMA1	300 Win. Short Magnum	180	11.66	Nosler AccuBond	X			2960	2774	2595	2424	2259	2100
	◇RMEF	3	P300WSMTT1	300 Win. Short Magnum	180	11.66	Trophy Bonded Tip	X			2960	2771	2591	2417	2250	2089
	◇RMEF	3	P300WSMB	300 Win. Short Magnum	180	11.66	Nosler Partition	X			2980	2780	2589	2406	2231	2063
	◇RMEF	3	P300WSMTC1	300 Win. Short Magnum	180	11.66	Trophy Copper	X			2960	2780	2606	2439	2279	2124
NEW	◇RMEF	3	P300WSMF	300 Win. Short Magnum	180	11.66	Barnes Triple-Shock X Bullet	X			2980	2771	2572	2381	2199	2025
NEW	◇	2	P300WSMBCH1	300 Win. Short Magnum	185	11.99	Berger Hybrid Hunter	X	0.533	0.273	2950	2773	2603	2440	2282	2130
	◇	2 3	P300WSMETLR200	300 Win. Short Magnum	200	12.96	Edge TLR	X	0.625	0.312	2810	2664	2522	2384	2251	2122
	◇	2	P300RUMA1	300 Rem. Ultra Magnum	180	11.66	Nosler AccuBond	X			3100	2908	2724	2548	2378	2214
	◇	3	P338FTC2	338 Federal	200	12.96	Trophy Copper	X			2630	2424	2228	2041	1863	1697
	◇	3	P338FTT2	338 Federal	200	12.96	Trophy Bonded Tip	X			2630	2431	2241	2060	1887	1725
	◇RMEF	2 3	P338TT2	338 Win. Magnum	200	12.96	Trophy Bonded Tip	X			2930	2718	2515	2321	2137	1960
	◇RMEF	3	P338A2	338 Win. Magnum	210	13.61	Nosler Partition	X			2830	2601	2383	2176	1980	1794
	◇	3	P338T1	338 Win. Magnum	225	14.58	Trophy Bonded Bear Claw	X			2730	2490	2263	2047	1844	1656
	◇RMEF	3	P338TC1	338 Win. Magnum	225	14.58	Trophy Copper	X			2800	2611	2429	2255	2087	1927
	◇RMEF	3	P338B2	338 Win. Magnum	250	16.2	Nosler Partition	X			2660	2474	2295	2124	1960	1803



Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; ◇ = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCL = a portion of the proceeds from the sale of this product

FEDERAL PREMIUM® RIFLE

ATT.	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	GOLD MEDAL PRIMER	BALLISTIC COEFFICIENT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)						
				GRAINS	GRAMS			G1	G7	MUZZLE	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
	ØRMEF	3	P338A1	338 Win. Magnum	225	14.58	Nosler AccuBond	X		2800	2634	2475	2320	2172	2028	
NEW	Ø	3	P338LTC1	338 Lapua Magnum	250	16.2	Trophy Copper	X		2850	2702	2559	2420	2286	2156	
	Ø	3	P35WT1	35 Whelen	225	14.58	Trophy Bonded Bear Claw	X		2600	2351	2116	1895	1690	1503	
	Ø	3	P375T4	375 H&H Magnum	250	16.2	Trophy Bonded Bear Claw	X		2670	2412	2169	1940	1728	1534	
	Ø	4	P375F	375 H&H Magnum	300	19.44	Nosler Partition	X		2440	2230	2031	1841	1666	1504	
	Ø	3	P4570T4	45-70 Government	300	19.44	Trophy Bonded Bear Claw	X		1850	1612	1401	1227	1099	1011	
FEDERAL PREMIUM CAPE-SHOK®																
	ØSCI	4	P9362SA	9.3x62 Mauser	286	18.53	Swift A-Frame	X		2360	2147	1945	1756	1582	1423	
	ØSCI	4	P9362WH	9.3x62 Mauser	286	18.53	Woodleigh Hydro	X		2360	2049	1763	1509	1295	1133	
	ØSCI	4	P9374SA	9.3x74 R	286	18.53	Swift A-Frame	X		2360	2147	1945	1756	1582	1423	
	ØSCI	4	P9374WH	9.3x74 R	286	18.53	Woodleigh Hydro	X		2360	2049	1763	1509	1295	1133	
	ØSCI	4	P370SA	370 Sako Magnum	286	18.53	Swift A-Frame	X		2550	2328	2117	1916	1730	1557	
	ØSCI	4	P370WH	370 Sako Magnum	286	18.53	Woodleigh Hydro	X		2450	2132	1839	1576	1349	1172	
	ØSCI	4	P375SA	375 H&H Magnum	300	19.44	Swift A-Frame	X		2450	2194	1953	1730	1527	1349	
	ØSCI	4	P375T1	375 H&H Magnum	300	19.44	Trophy Bonded Bear Claw	X		2400	2159	1932	1721	1529	1359	
	ØSCI	4	P375T2	375 H&H Magnum	300	19.44	Trophy Bonded Sledgehammer Solid	X		2440	2115	1815	1548	1321	1147	
	ØSCI	4	P375WH	375 H&H Magnum	300	19.44	Woodleigh Hydro	X		2500	2179	1881	1614	1380	1195	
	ØSCI	4	P416SA	416 Rigby	400	25.92	Swift A-Frame	X		2350	2128	1917	1722	1542	1381	
	ØSCI	4	P416T1	416 Rigby	400	25.92	Trophy Bonded Bear Claw	X		2300	2084	1880	1691	1517	1362	
	ØSCI	4	P416T2	416 Rigby	400	25.92	Trophy Bonded Sledgehammer Solid	X		2370	2073	1798	1551	1339	1171	
	ØSCI	4	P416WH	416 Rigby	400	25.92	Woodleigh Hydro	X		2400	2086	1797	1539	1319	1149	
	ØSCI	4	P416RSA	416 Rem. Magnum	400	25.92	Swift A-Frame	X		2400	2175	1962	1763	1580	1413	
	ØSCI	4	P416RT1	416 Rem. Magnum	400	25.92	Trophy Bonded Bear Claw	X		2400	2179	1969	1772	1591	1426	
	ØSCI	4	P416RT2	416 Rem. Magnum	400	25.92	Trophy Bonded Sledgehammer Solid	X		2400	2100	1823	1574	1357	1185	
	ØSCI	4	P416RWH	416 Rem. Magnum	400	25.92	Woodleigh Hydro	X		2400	2086	1797	1539	1319	1149	
	ØSCI	4	P458T1	458 Win. Magnum	400	25.92	Trophy Bonded Bear Claw	X		2250	2025	1813	1619	1442	1290	
	ØSCI	4	P458T2	458 Win. Magnum	500	32.4	Trophy Bonded Bear Claw	X		2090	1822	1580	1369	1198	1076	
	ØSCI	4	P458T3	458 Win. Magnum	500	32.4	Trophy Bonded Sledgehammer Solid	X		1950	1729	1528	1352	1205	1096	
	ØSCI	4	P458WH	458 Win. Magnum	500	32.4	Woodleigh Hydro	X		2050	1764	1510	1296	1133	1025	
	ØSCI	4	P458SA	458 Win. Magnum	500	32.4	Swift A-Frame	X		2090	1878	1683	1503	1345	1212	
	ØSCI	4	P458LT1	458 Lott	500	32.4	Trophy Bonded Bear Claw	X		2300	2016	1755	1520	1319	1161	
	ØSCI	4	P458LT2	458 Lott	500	32.4	Trophy Bonded Sledgehammer Solid	X		2300	2055	1825	1616	1427	1267	
	ØSCI	4	P458LWH	458 Lott	500	32.4	Woodleigh Hydro	X		2250	1947	1672	1430	1232	1090	
	ØSCI	4	P470SA	470 Nitro Express	500	32.4	Swift A-Frame	X		2150	1936	1738	1555	1391	1251	
	ØSCI	4	P470T1	470 Nitro Express	500	32.4	Trophy Bonded Bear Claw	X		2150	1892	1657	1445	1268	1131	
	ØSCI	4	P470T2	470 Nitro Express	500	32.4	Trophy Bonded Sledgehammer Solid	X		2150	1875	1627	1406	1226	1094	
	ØSCI	4	P470WH	470 Nitro Express	500	32.4	Woodleigh Hydro	X		2150	1855	1591	1361	1180	1056	
	ØSCI	4	P500NSA	500 Nitro Express	570	36.94	Swift A-Frame	X		2100	1851	1625	1422	1252	1122	
	ØSCI	4	P500NWH	500 Nitro Express	570	36.94	Woodleigh Hydro	X		2100	1809	1550	1328	1156	1040	
FEDERAL PREMIUM VARMINT & PREDATOR																
	Ø	1	P204B	204 Ruger	32	2.07	Nosler Ballistic Tip	X		4030	3465	2968	2523	2119	1755	
	Ø	1	P204C	204 Ruger	40	2.59	Nosler Ballistic Tip	X		3650	3200	2793	2421	2079	1766	
	Ø	1	P22D	22 Hornet	30	1.94	Speer TNT Green	X		3150	2154	1387	990	828	715	
	Ø	1	P222C	222 Rem.	40	2.59	Nosler Ballistic Tip	X		3450	2987	2569	2187	1839	1533	
	Ø	1	P222D	222 Rem.	43	2.79	Speer TNT Green	X		3400	2745	2176	1683	1290	1048	
	Ø	1	P223P	223 Rem.	40	2.59	Nosler Ballistic Tip	X		3700	3209	2770	2371	2007	1679	
	Ø	1	P223R	223 Rem.	43	2.79	Speer TNT Green	X		3600	2915	2325	1809	1385	1098	
	Ø	1	P223F	223 Rem.	55	3.56	Nosler Ballistic Tip	X		3240	2870	2528	2212	1918	1653	
	Ø	1	P224VLKBT1	224 Valkyrie	60	3.89	Nosler Ballistic Tip	X		3300	2930	2589	2273	1979	1710	
	Ø	1	P22250D	22-250 Rem.	43	2.79	Speer TNT Green	X		4000	3252	2618	2065	1590	1224	
	Ø	1	P22250F	22-250 Rem.	55	3.56	Nosler Ballistic Tip	X		3670	3263	2892	2550	2233	1939	
	Ø	1	P243H	243 Win.	55	3.56	Nosler Ballistic Tip	X		3850	3438	3064	2721	2402	2105	
	Ø	1	P243F	243 Win.	70	4.54	Nosler Ballistic Tip	X		3450	3113	2802	2511	2238	1983	
	Ø	1	P2506G	25-06 Rem.	85	5.51	Nosler Ballistic Tip	X		3550	3226	2925	2643	2379	2130	
FEDERAL PREMIUM GOLD MEDAL®																
		5	GM223M	223 Rem.	69	4.47	Sierra MatchKing BTHP	X	0.301	0.165	2950	2642	2353	2084	1832	1604
		5	GM223BH73	223 Rem.	73	4.73	Berger BT Target	X	0.348	0.178	2800	2541	2296	2065	1847	1648
		5	GM223M3	223 Rem.	77	4.99	Sierra MatchKing BTHP	X	0.372	0.188	2720	2481	2255	2041	1838	1652
NEW	Ø	5	GM224VLKBH2	224 Valkyrie	80.5	5.22	Berger BT Target	X	0.441	0.226	2925	2713	2512	2318	2134	1958
		5	GM224VLK1	224 Valkyrie	90	5.83	Sierra MatchKing BTHP	X	0.563	0.274	2700	2542	2388	2241	2098	1961
		5	GM6CRDBH1	6mm Creedmoor	105	6.8	Berger Hybrid	X	0.536	0.275	3025	2846	2674	2509	2350	2196
NEW	Ø	5	GM6CRDM1	6mm Creedmoor	107	6.93	Sierra MatchKing BTHP	X	0.547	0.271	3000	2826	2658	2497	2341	2191
		5	GM65GDLBH130	6.5 Grendel	130	8.42	Berger AR Hybrid OTM	X	0.560	0.287	2400	2251	2108	1969	1836	1711
		5	GM65CRDBH130	6.5 Creedmoor	130	8.42	Berger Hybrid OTM	X	0.560	0.287	2825	2661	2503	2351	2204	2062
		5	GM65CRD1	6.5 Creedmoor	140	9.07	Sierra MatchKing BTHP	X	0.535	0.261	2675	2509	2350	2196	2048	1905
		5	GM308M	308 Win.	168	10.89	Sierra MatchKing BTHP	X	0.462	0.224	2650	2460	2277	2103	1936	1778
		5	GM308M2	308 Win.	175	11.34	Sierra MatchKing BTHP	X	0.505	0.250	2600	2427	2262	2102	1949	1803
		5	GM308BH185	308 Win.	185	11.99	Berger Juggernaut OTM	X	0.552	0.283	2600	2442	2289	2143	2001	1864
		5	GM3006M	30-06 Spring.	168	10.89	Sierra MatchKing BTHP	X	0.463	0.224	2700	2508	2324	2148	1980	1819
		5	GM300WM	300 Win. Magnum	190	12.31	Sierra MatchKing BTHP	X	0.534	0.275	2900	2726	2558	2396	2240	2090
NEW	CLM	5	GM300WMBH1	300 Win. Magnum	215	13.93	Berger Hybrid OTM	X	0.691	0.354	2800	2668	2539	2414	2293	2175
NEW	Ø	5	GM300NMBH1	300 Norma Mag	215	13.93	Berger Hybrid	X	0.691	0.354	3000	2861	2727	2597	2470	2347
		5	GM338LM	338 Lapua Mag	250	16.2	Sierra MatchKing BTHP	X	0.587	0.318	2950	2789	2634	2484	2339	2199
		5	GM338LM2	338 Lapua Mag	300	19.44	Sierra MatchKing BTHP	X	0.768	0.387	2580	2466	2355	2248	2143	2040



Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; Ø = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCI = a portion of the proceeds from the sale of this product is donated to Safari Club International; CLM = cartridge length longer than SAAMI max, may not fit in all magazines. *Molycoat: molybdenum disulfide dry film lubricant

FUSION® RIFLE

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	MUZZLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					
			GRAINS	GRAMS			100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
FUSION												
2	F223FS1	223 Rem.	62	4.02	Fusion	3000	2697	2413	2148	1898	1671	
2	F22250FS1	22-250 Rem.	55	3.56	Fusion	3600	3108	2667	2267	1902	1580	
2	F243FS1	243 Win.	95	6.16	Fusion	2980	2730	2493	2268	2056	1854	
2	F2506FS1	25-06 Rem.	120	7.78	Fusion	2980	2778	2585	2399	2222	2052	
2	F65CRDFS1	6.5 Creedmoor	140	9.07	Fusion	2725	2522	2327	2142	1964	1796	
3	F6555FS1	6.5x55 Swedish	140	9.07	Fusion	2530	2336	2150	1973	1804	1648	
2	F6555FSI2	6.5x55 Swedish	156	10.11	Fusion	2500	2326	2159	1999	1845	1702	
2	F260FS1	260 Rem.	120	7.78	Fusion	2950	2710	2483	2266	2061	1866	
2	F270FS1	270 Win.	130	8.42	Fusion	3050	2811	2584	2368	2163	1968	
2	F270FS2	270 Win.	150	9.72	Fusion	2850	2655	2468	2289	2117	1953	
2	F270WSMFS1	270 Win. Short Magnum	150	9.72	Fusion	3060	2867	2682	2504	2333	2169	
2	F708FS2	7mm-08 Rem.	120	7.78	Fusion	3000	2719	2455	2206	1971	1753	
2	F708FS1	7mm-08 Rem.	140	9.07	Fusion	2850	2615	2393	2181	1980	1791	
2	F280FS1	280 Rem.	140	9.07	Fusion	2990	2794	2607	2427	2255	2089	
3	F7RFS1	7mm Rem. Magnum	150	9.72	Fusion	3050	2861	2680	2505	2338	2177	
3	F7RFS2	7mm Rem. Magnum	175	11.34	Fusion	2760	2592	2430	2274	2123	1978	
3	F7WSMFS1	7mm Win. Short Magnum	150	9.72	Fusion	3100	2911	2730	2556	2388	2227	
2	F76239FS1	7.62x39mm Soviet	123	7.97	Fusion	2350	2077	1823	1593	1389	1222	
2	F3030FS1	30-30 Win.	150	9.72	Fusion	2390	2086	1805	1553	1337	1167	
2	F3030FS2	30-30 Win.	170	11.02	Fusion	2200	1950	1719	1510	1329	1182	
2	F308FS1	308 Win.	150	9.72	Fusion	2820	2600	2391	2191	2001	1821	
2	F308FS2	308 Win.	165	10.69	Fusion	2700	2501	2310	2128	1954	1789	
2	F308FS3	308 Win.	180	11.66	Fusion	2600	2427	2260	2101	1947	1801	
2	F3006FS1	30-06 Spring.	150	9.72	Fusion	2900	2674	2459	2254	2059	1874	
2	F3006FS2	30-06 Spring.	165	10.69	Fusion	2790	2590	2399	2217	2042	1875	
2	F3006FS3	30-06 Spring.	180	11.66	Fusion	2700	2521	2349	2185	2026	1874	
2	F300WFS1	300 Win. Magnum	150	9.72	Fusion	3200	2958	2729	2512	2304	2107	
2	F300WFS2	300 Win. Magnum	165	10.69	Fusion	3080	2865	2660	2464	2276	2097	
2	F300WFS3	300 Win. Magnum	180	11.66	Fusion	2960	2766	2580	2401	2230	2065	
2	F300WSMFS3	300 Win. Short Magnum	150	9.72	Fusion	3250	3005	2774	2555	2345	2146	
2	F300WSMFS1	300 Win. Short Magnum	165	10.69	Fusion	3100	2885	2680	2484	2296	2116	
2	F300WSMFS2	300 Win. Short Magnum	180	11.66	Fusion	2950	2756	2570	2391	2220	2055	
2	F338FFS2	338 Federal	200	12.96	Fusion	2700	2487	2284	2090	1905	1733	
2	F338FS1	338 Win. Magnum	225	14.58	Fusion	2850	2661	2479	2305	2138	1978	
2	F35FS1	35 Whelen	200	12.96	Fusion	2800	2537	2289	2055	1835	1634	
2	F4570FS1	45-70 Government	300	19.44	Fusion	1850	1612	1401	1227	1099	1011	
NEW	F450BMFS1	450 Bushmaster	300	19.44	Soft Point	1900	1573	1301	1107	990	910	
FUSION MSR												
2	F223MSR1	223 Rem.	62	4.02	Fusion	2750	2463	2194	1942	1710	1500	
2	F224VLKMSR1	224 Valkyrie	90	5.83	Fusion	2700	2491	2291	2101	1919	1749	
2	F65GDLMSR1	6.5mm Grendel	120	7.78	Fusion	2600	2346	2107	1881	1674	1485	
2	F68MSR2	6.8 SPC	90	5.83	Fusion	2850	2524	2221	1939	1682	1453	
2	F68MSR1	6.8 SPC	115	7.45	Fusion	2470	2248	2037	1838	1654	1485	
2	F300BMSR2	300 Blackout	150	9.72	Fusion	1900	1685	1490	1320	1181	1079	
2	F308MSR1	308 Win.	150	9.72	Fusion	2770	2553	2345	2148	1960	1782	
2	F338FMSR2	338 Federal	185	11.99	Fusion	2680	2447	2226	2016	1819	1636	



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MUZZLE	ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)					WIND DRIFT IN INCHES 10 MPH CROSSWIND					HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT										TEST BARREL LENGTH INCHES		
	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.		400 YDS.	500 YDS.
	YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE.					AVERAGE RANGE LONG RANGE																	
1239	1001	802	635	496	384	1.0	4.0	9.7	18.1	30.4	-0.2	⊕	-3.3	-12.6	0.6	1.6	⊕	-7.7	-22.8	-48.0	24		
1583	1179	869	627	442	305	1.1	4.8	11.6	22.3	38.3	-0.4	⊕	-2.1	-9.2	0.2	1.1	⊕	-6.0	-18.8	-41.8	24		
1873	1572	1311	1085	891	725	0.8	3.3	7.8	14.6	23.7	-0.2	⊕	-3.2	-11.9	0.6	1.6	⊕	-7.2	-21.2	-43.2	24		
2366	2056	1780	1534	1315	1122	0.6	2.6	6.0	11.3	18.3	-0.2	⊕	-3.0	-11.2	0.5	1.5	⊕	-6.7	-19.5	-39.3	24		
2308	1977	1683	1426	1199	1003	0.8	3.1	7.5	13.8	22.5	-0.1	⊕	-4	-14.4	0.9	2	⊕	-8.5	-24.4	-49.4	24		
1990	1696	1437	1210	1012	844	0.8	3.6	8.3	15.3	25.3	0.0	⊕	-4.9	-17.4	1.2	2.5	⊕	-9.9	-28.7	-58.7	24		
2165	1874	1614	1384	1179	1003	0.7	3.3	7.7	13.7	22.7	0.0	⊕	-5.0	-17.5	1.2	2.5	⊕	-10.0	-28.3	-57.5	24		
2319	1957	1642	1369	1132	928	0.8	3.3	7.6	14.2	23.0	-0.2	⊕	-3.2	-12.1	0.6	1.6	⊕	-7.3	-21.4	-43.4	24		
2685	2280	1927	1618	1350	1117	0.7	3.0	7.0	13.1	21.3	-0.2	⊕	-2.9	-11.0	0.5	1.5	⊕	-6.6	-19.6	-39.8	24		
2705	2347	2029	1745	1493	1270	0.7	2.8	6.5	12.0	19.3	-0.2	⊕	-3.4	-12.6	0.7	1.7	⊕	-7.4	-21.6	-43.3	24		
3118	2737	2395	2088	1813	1567	0.5	2.4	5.5	10.0	16.3	-0.3	⊕	-2.8	-10.3	0.4	1.4	⊕	-6.2	-17.9	-36.1	24		
2398	1970	1605	1296	1035	819	0.9	3.7	8.8	16.5	27.3	-0.2	⊕	-3.2	-12.2	0.6	1.6	⊕	-7.4	-22.0	-45.6	24		
2525	2126	1779	1479	1219	997	0.9	3.4	8.0	14.9	24.3	-0.2	⊕	-3.6	-13.3	0.7	1.8	⊕	-7.9	-23.2	-47.2	24		
2779	2427	2113	1831	1580	1357	0.6	2.5	5.8	10.7	17.5	-0.2	⊕	-3.0	-11.0	0.5	1.5	⊕	-6.5	-19.1	-38.5	24		
3098	2726	2391	2091	1820	1578	0.5	2.3	5.4	9.8	16.0	-0.3	⊕	-2.8	-10.4	0.4	1.4	⊕	-6.2	-17.9	-36.1	24		
2960	2610	2294	2008	1751	1521	0.7	2.5	5.8	10.8	17.4	-0.1	⊕	-3.6	-13.2	0.8	1.8	⊕	-7.8	-22.3	-44.5	24		
3200	2822	2481	2175	1899	1652	0.5	2.2	5.2	9.5	15.4	-0.3	⊕	-2.6	-9.9	0.4	1.3	⊕	-6.0	-17.2	-34.7	24		
1508	1178	907	693	527	407	1.5	6.0	14.8	27.7	45.9	0.1	⊕	-6.5	-23.8	1.8	3.3	⊕	-14.0	-41.6	-87.7	24		
1902	1449	1085	803	595	453	1.6	6.6	16.2	30.8	51.1	0.1	⊕	-6.5	-23.9	1.7	3.2	⊕	-14.2	-42.8	-91.5	24		
1827	1435	1115	860	666	527	1.4	6.3	15.1	28.5	46.7	0.3	⊕	-7.7	-27.2	2.2	3.9	⊕	-15.6	-46.8	-97.8	24		
2648	2252	1903	1599	1333	1104	0.8	3.2	7.6	14.1	22.9	-0.2	⊕	-3.6	-13.4	0.7	1.8	⊕	-8.0	-23.1	-46.9	24		
2671	2291	1955	1660	1399	1173	0.7	3.1	7.5	13.7	22.3	-0.1	⊕	-4.1	-14.7	0.9	2.0	⊕	-8.6	-24.8	-50.1	24		
2702	2354	2042	1763	1515	1296	0.6	2.9	6.9	12.6	20.4	-0.1	⊕	-4.4	-15.7	1.0	2.2	⊕	-9.1	-25.8	-51.9	24		
2801	2382	2014	1693	1412	1169	0.8	3.1	7.4	13.7	22.2	-0.2	⊕	-3.4	-12.5	0.7	1.7	⊕	-7.5	-21.8	-44.1	24		
2852	2458	2109	1800	1527	1287	0.8	2.9	7.0	12.9	20.7	-0.1	⊕	-3.7	-13.4	0.8	1.8	⊕	-7.9	-22.9	-46.0	24		
2913	2540	2206	1907	1640	1403	0.7	2.7	6.6	12.1	19.4	-0.1	⊕	-4.0	-14.3	0.9	2.0	⊕	-8.4	-23.9	-47.8	24		
3410	2915	2481	2101	1769	1479	0.6	2.7	6.4	11.8	19.4	-0.3	⊕	-2.5	-9.6	0.3	1.2	⊕	-5.9	-17.3	-35.4	24		
3475	3006	2591	2223	1898	1610	0.6	2.6	6.1	11.2	18.3	-0.3	⊕	-2.8	-10.4	0.4	1.4	⊕	-6.3	-18.3	-37.1	24		
3502	3057	2659	2304	1987	1704	0.6	2.6	5.9	10.9	17.7	-0.2	⊕	-3.1	-11.3	0.6	1.5	⊕	-6.7	-19.5	-39.4	24		
3518	3008	2563	2173	1832	1534	0.6	2.7	6.3	11.6	18.9	-0.3	⊕	-2.4	-9.3	0.3	1.2	⊕	-5.7	-16.7	-34.2	24		
3521	3048	2630	2260	1931	1641	0.6	2.6	6.0	11.1	18.1	-0.3	⊕	-2.7	-10.2	0.4	1.4	⊕	-6.2	-18.0	-36.5	24		
3478	3035	2639	2285	1969	1688	0.6	2.6	5.9	11.0	17.9	-0.2	⊕	-3.1	-11.4	0.6	1.5	⊕	-6.8	-19.7	-39.7	24		
3237	2746	2316	1940	1612	1334	0.8	3.4	8.1	14.8	24.4	-0.1	⊕	-4.1	-15.0	0.9	2.1	⊕	-8.8	-25.3	-51.9	24		
4058	3537	3071	2654	2283	1954	0.7	2.7	6.2	11.6	18.7	-0.2	⊕	-3.4	-12.5	0.7	1.7	⊕	-7.3	-21.3	-42.8	24		
3481	2858	2327	1876	1495	1185	1.0	4.0	9.5	17.7	29.6	-0.1	⊕	-3.9	-14.5	0.8	2.0	⊕	-8.7	-25.4	-53.0	24		
2280	1731	1307	1003	804	681	2.3	8.7	20.6	37.6	59.3	0.7	⊕	-11.9	-41.6	3.7	5.9	⊕	-23.8	-70.9	-146.5	24		
2405	1647	1127	816	652	552	2.9	12.1	28.5	51.4	79.4	0.7	⊕	-12.7	-46.2	3.9	6.4	⊕	-27.1	-82.3	-171.5	24		
1041	835	663	519	402	310	1.1	4.6	10.9	20.8	34.6	-0.1	⊕	-4.3	-15.7	1.0	2.1	⊕	-9.3	-28.1	-58.8	16		
1457	1240	1049	882	736	611	0.8	3.3	7.9	14.5	23.8	-0.1	⊕	-4.1	-14.9	0.9	2.0	⊕	-8.8	-25.2	-51.4	24		
1801	1467	1183	943	747	588	1.0	4.5	10.6	20.2	33.3	0.0	⊕	-4.9	-17.5	1.2	2.4	⊕	-10.1	-30.5	-63.1	24		
1623	1273	986	751	565	422	1.2	5.0	11.8	22.7	37.8	-0.1	⊕	-4.0	-15.0	0.9	2.0	⊕	-9.0	-27.6	-58.4	16		
1558	1290	1059	862	699	563	1.0	4.3	10.1	19.3	31.5	0.0	⊕	-5.4	-19.1	1.4	2.7	⊕	-11.0	-32.7	-66.8	16		
1202	946	739	580	465	388	1.9	7.4	17.4	31.9	51	0.6	⊕	-10.8	-37.3	3.3	5.4	⊕	-21.2	-62.4	-128.7	16		
2555	2170	1832	1536	1279	1058	0.8	3.3	7.8	14.4	23.6	-0.1	⊕	-3.8	-14.1	0.8	1.9	⊕	-8.3	-24.1	-48.9	20		
2950	2459	2035	1670	1358	1100	0.9	3.8	9.0	16.8	28.0	-0.1	⊕	-4.3	-15.7	1.0	2.2	⊕	-9.2	-26.8	-55.5	20		

Usage Key: 1 = Varmints, predators, small game; 2 = medium game; 3 = large, heavy game; 4 = dangerous game; 5 = target shooting, training, practice; 6 = self defense; 7 = competition shooting; 8 = pest control; 9 = low noise, training, specialty.

These trajectory tables were calculated by computer using the best available data for each load. Trajectories are representative of the nominal behavior of each load at standard conditions (59°F temperature; barometric pressure of 29.53 inches; altitude at sea level). Shooters are cautioned that actual trajectories may differ due to variations in altitude, atmospheric conditions, guns, sights and ammunition.



FEDERAL® RIFLE

ATT	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	MUZZLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)				
				GRAMS	GRAMS			100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.
FEDERAL POWER•SHOK®												
1		222A	222 Rem.	50	3.24	SP	3140	2626	2166	1755	1408	1152
1		223A	223 Rem.	55	3.56	SP	3240	2800	2400	2035	1705	1420
2		223L	223 Rem.	64	4.15	SP	3050	2682	2342	2027	1740	1485
1		22250A	22-250 Rem.	55	3.56	SP	3650	3136	2679	2264	1888	1558
2		243AS	243 Win.	80	5.18	SP	3330	3051	2790	2543	2309	2088
2		24385LFA	243 Win.	85	5.51	Copper HP	3200	2783	2403	2054	1737	1459
2		243B	243 Win.	100	6.48	SP	2960	2697	2448	2213	1991	1783
2		6B	6mm Rem.	100	6.48	SP	3100	2827	2571	2329	2100	1883
2		2506BS	25-06 Rem.	117	7.58	SP	3030	2767	2519	2283	2061	1851
2		6555B	6.5x55 Swedish	140	9.07	SP	2650	2450	2258	2075	1900	1736
2		270A	270 Win.	130	8.42	SP	3060	2803	2560	2329	2111	1904
2		270130LFA	270 Win.	130	8.42	Copper HP	3060	2729	2422	2135	1867	1625
2		270B	270 Win.	150	9.72	SPRN	2830	2486	2166	1871	1606	1374
2		270WSME	270 Win. Short Magnum	130	8.42	SP	3250	2978	2722	2480	2251	2034
2		7B	7mm Mauser	140	9.07	SP	2660	2454	2256	2069	1889	1722
2		7A	7mm Mauser	175	11.34	SPRN	2390	2090	1812	1564	1348	1177
2		708CS	7mm-08 Rem.	150	9.72	SP	2650	2438	2235	2043	1859	1689
2		280B	280 Rem.	150	9.72	SP	2890	2667	2455	2253	2060	1877
2		7RA	7mm Rem. Magnum	150	9.72	SP	3110	2841	2587	2347	2120	1905
3		7RB	7mm Rem. Magnum	175	11.34	SP	2860	2646	2441	2246	2060	1882
2		7WSME	7mm Win. Short Magnum	150	9.72	SP	3100	2831	2578	2338	2112	1898
1		30CA	30 Carbine	110	7.13	SPRN	1990	1564	1231	1031	919	839
2		300BLK120LFA	300 Blackout	120	7.78	Copper HP	2100	1799	1533	1307	1136	1024
2		76239B	7.62x39mm Soviet	123	7.97	SP	2350	2055	1783	1539	1329	1164
1		3030C	30-30 Win.	125	8.1	HP	2570	2083	1656	1309	1079	952
2		3030A	30-30 Win.	150	9.72	SPFN	2390	2019	1686	1399	1179	1037
2		3030B	30-30 Win.	170	11.02	SPRN	2200	1894	1619	1380	1191	1060
2		300A	300 Savage	150	9.72	SP	2630	2353	2094	1850	1629	1430
2		300B	300 Savage	180	11.66	SP	2350	2137	1934	1745	1571	1412
2		308A	308 Win.	150	9.72	SP	2820	2532	2261	2007	1771	1557
2		308150LFA	308 Win.	150	9.72	Copper HP	2820	2497	2195	1915	1661	1434
2		308B	308 Win.	180	11.66	SP	2570	2345	2131	1929	1740	1565
1		3006CS	30-06 Spring.	125	8.1	SP	3140	2779	2446	2136	1850	1593
2		3006A	30-06 Spring.	150	9.72	SP	2910	2616	2340	2081	1839	1619
2		3006150LFA	30-06 Spring.	150	9.72	Copper HP	2910	2580	2273	1988	1725	1491
2		3006B	30-06 Spring.	180	11.66	SP	2700	2470	2252	2045	1848	1667
2		3006HS	30-06 Spring.	220	14.26	SP	2400	2120	1859	1623	1412	1238
2		300WGS	300 Win. Magnum	150	9.72	SP	3150	2898	2661	2435	2221	2017
3		300WBS	300 Win. Magnum	180	11.66	SP	2960	2746	2542	2346	2160	1982
3		300W180LFA	300 Win. Magnum	180	11.66	Copper HP	2960	2693	2441	2203	1979	1769
3		300WSMC	300 Win. Short Magnum	180	11.66	SP	2980	2736	2504	2284	2075	1877
3		300WSM180LFA	300 Win. Short Magnum	180	11.66	Copper HP	2950	2684	2432	2195	1971	1761
2		303B	303 British	150	9.72	SP	2690	2442	2208	1988	1780	1590
2		303AS	303 British	180	11.66	SP	2460	2206	1966	1744	1542	1363
2		32A	32 Win. Special	170	11.02	SPFN	2250	1923	1630	1376	1179	1047
2		338FJ	338 Federal	200	12.96	SP	2700	2484	2278	2082	1895	1721
2		8A	8mm Mauser	170	11.02	SP	2250	2025	1814	1620	1444	1292
2		C357G	357 Magnum	180	11.66	HP	1550	1282	1095	982	904	841
2		35A	35 Rem.	200	12.96	SPRN	2080	1697	1374	1138	999	910
3		375A	375 H&H Magnum	270	17.5	SP	2690	2418	2162	1922	1700	1500
3		375B	375 H&H Magnum	300	19.44	SP	2530	2267	2021	1790	1581	1394
2		C44A	44 Rem. Magnum	240	15.55	HP	1760	1387	1123	978	885	813
2		4570AS	45-70 Government	300	19.44	HP	1850	1612	1400	1226	1097	1010
NEW		450BMB	450 Bushmaster	300	19.44	SP	1900	1602	1346	1153	1028	945



Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; ◊ = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCL = a portion of the proceeds from the sale of this product is donated to Safari Club International; CLM = cartridge length longer than SAAMI max, may not fit in all magazines. *Molycoat = molybdenum disulfide dry film lubricant

MUZZLE	ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)					WIND DRIFT IN INCHES 10 MPH CROSSWIND					HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE LONG RANGE										TEST BARREL LENGTH INCHES
	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
1095	765	521	342	220	147	1.6	6.9	17.2	34.0	58.9	-0.2	⊕	-3.6	-14.8	0.7	1.8	⊕	-9.3	-30.4	-70.1	24
1282	957	703	505	355	246	1.2	5.3	12.9	25.0	42.6	-0.3	⊕	-3.0	-12.0	0.5	1.5	⊕	-7.6	-23.8	-52.3	24
1322	1022	779	584	430	313	1.2	4.9	11.8	22.6	38.2	-0.2	⊕	-3.3	-13.1	0.6	1.7	⊕	-8.1	-24.7	-53.2	24
1627	1201	876	626	435	296	1.2	4.9	11.9	22.9	39.4	-0.4	⊕	-2.1	-9.0	0.1	1.0	⊕	-5.9	-18.7	-41.8	24
1970	1654	1382	1148	947	774	0.7	3.0	6.9	12.8	21.1	-0.3	⊕	-2.2	-9.0	0.2	1.1	⊕	-5.6	-16.6	-34.2	24
1933	1462	1090	796	569	402	1.2	5.1	12.4	23.9	40.5	-0.3	⊕	-3.0	-12.1	0.5	1.5	⊕	-7.6	-23.6	-51.4	24
1945	1615	1331	1087	880	706	0.9	3.6	8.4	15.8	25.9	-0.2	⊕	-3.3	-12.4	0.6	1.6	⊕	-7.5	-22.1	-45.4	24
2134	1775	1468	1204	979	787	0.8	3.4	7.9	14.8	24.1	-0.3	⊕	-2.9	-11.0	0.5	1.4	⊕	-6.7	-19.9	-40.7	24
2385	1989	1648	1354	1104	890	0.8	3.4	8	14.9	24.4	-0.2	⊕	-3.1	-11.6	0.5	1.5	⊕	-7.0	-20.8	-42.5	24
2183	1865	1585	1338	1122	937	0.7	3.3	7.8	14.3	23.6	-0.1	⊕	-4.3	-15.5	1.0	2.2	⊕	-9.0	-25.9	-52.8	24
2703	2267	1891	1566	1286	1046	0.8	3.2	7.6	14.2	23.1	-0.2	⊕	-3.0	-11.2	0.5	1.5	⊕	-6.7	-20.0	-40.9	24
2703	2150	1693	1315	1006	763	1.0	4.3	10.3	19.3	32.6	-0.2	⊕	-3.2	-12.4	0.6	1.6	⊕	-7.6	-22.7	-48.4	24
2667	2057	1563	1166	859	629	1.3	5.4	12.8	24.9	41.7	-0.1	⊕	-4.2	-15.7	0.9	2.1	⊕	-9.4	-29.2	-62.6	24
3049	2559	2138	1775	1462	1194	0.7	3.0	7.1	13.2	21.7	-0.3	⊕	-2.4	-9.6	0.3	1.2	⊕	-5.9	-17.5	-36.0	24
2199	1871	1583	1330	1109	922	0.8	3.4	8.0	14.7	24.3	-0.1	⊕	-4.3	-15.5	1.0	2.1	⊕	-9.0	-25.9	-53.1	24
2219	1697	1276	950	706	538	1.6	6.5	16.0	30.2	50.2	0.1	⊕	-6.5	-23.7	1.7	3.2	⊕	-14.1	-42.4	-90.4	24
2339	1979	1664	1390	1151	950	0.8	3.5	8.3	15.3	25.4	-0.1	⊕	-4.4	-15.7	1.0	2.2	⊕	-9.2	-26.5	-54.4	24
2782	2369	2008	1690	1414	1173	0.8	3.1	7.3	13.6	22.0	-0.2	⊕	-3.4	-12.6	0.7	1.7	⊕	-7.5	-21.9	-44.2	24
3221	2687	2229	1834	1497	1209	0.8	3.3	7.7	14.5	23.6	-0.3	⊕	-2.8	-10.8	0.4	1.4	⊕	-6.6	-19.6	-40.1	24
3178	2720	2316	1961	1649	1377	0.8	3.0	7.2	13.3	21.4	-0.2	⊕	-3.5	-12.8	0.7	1.7	⊕	-7.6	-22.1	-44.6	24
3200	2669	2213	1821	1486	1199	0.8	3.3	7.7	14.5	23.7	-0.3	⊕	-2.9	-10.9	0.5	1.4	⊕	-6.6	-19.7	-40.4	24
967	597	370	260	206	172	3.5	15.1	35.8	63.7	97.4	0.7	⊕	-13.0	-49.1	3.9	6.5	⊕	-29.7	-90.9	-190.2	18
1175	863	626	455	344	279	1.9	8.7	20.9	39.2	63.2	0.4	⊕	-9.4	-33.7	2.7	4.7	⊕	-19.6	-59.9	-127.1	16
1508	1153	868	646	482	370	1.6	6.7	16.2	30.7	50.8	0.2	⊕	-6.7	-24.6	1.8	3.4	⊕	-14.5	-43.9	-93.3	20
1833	1204	761	476	323	252	2.3	10.2	25.6	49.9	81.6	0.1	⊕	-6.7	-26.4	1.7	3.3	⊕	-16.4	-53.7	-120.6	24
1902	1358	947	652	463	358	2.0	8.6	20.8	40.0	65.9	0.1	⊕	-7.2	-26.7	1.9	3.6	⊕	-15.9	-50.1	-109.8	24
1827	1354	990	719	535	424	1.8	8.1	19.4	36.7	59.9	0.3	⊕	-8.4	-30	2.4	4.2	⊕	-17.4	-53.5	-114.4	24
2304	1844	1460	1140	884	681	1.1	4.9	11.5	22.1	36.4	-0.1	⊕	-4.8	-17.5	1.2	2.4	⊕	-10.2	-31.1	-64.8	24
2207	1825	1495	1217	986	797	1.2	4.5	10.9	20.5	33.3	0.1	⊕	-6.1	-21.6	1.6	3.0	⊕	-12.5	-36.5	-74.4	24
2648	2134	1702	1341	1044	807	1.1	4.4	10.4	19.7	32.9	-0.1	⊕	-3.9	-14.7	0.8	2.0	⊕	-8.8	-26.3	-55.2	24
2648	2076	1605	1221	918	685	1.2	5.0	12.0	23.0	38.4	-0.1	⊕	-4.1	-15.4	0.9	2.1	⊕	-9.2	-28.3	-59.9	24
2640	2197	1816	1486	1209	979	0.9	4.1	9.4	17.8	29.4	0.0	⊕	-4.9	-17.3	1.2	2.4	⊕	-10.0	-29.5	-60.7	24
2736	2143	1660	1267	949	704	1.0	4.5	10.8	20.4	34.6	-0.3	⊕	-3.0	-11.9	0.5	1.5	⊕	-7.4	-22.3	-48.0	24
2820	2279	1823	1442	1126	873	1.0	4.2	10.0	18.7	31.4	-0.2	⊕	-3.6	-13.6	0.7	1.8	⊕	-8.2	-24.4	-51.3	24
2820	2217	1721	1316	991	740	1.2	4.8	11.5	21.9	36.7	-0.2	⊕	-3.7	-14.3	0.8	1.9	⊕	-8.7	-26.2	-55.7	24
2913	2439	2026	1671	1365	1111	0.9	3.7	8.8	16.2	27.0	-0.1	⊕	-4.2	-15.3	1.0	2.1	⊕	-9.0	-26.2	-54.0	24
2813	2196	1688	1286	974	748	1.5	5.9	14.6	27.3	45.4	0.1	⊕	-6.2	-22.7	1.7	3.1	⊕	-13.5	-40.0	-84.5	24
3305	2798	2358	1975	1643	1355	0.7	3.0	6.9	12.9	21.1	-0.3	⊕	-2.7	-10.2	0.4	1.3	⊕	-6.2	-18.3	-37.5	24
3502	3013	2582	2200	1864	1570	0.7	2.9	6.6	12.3	20.0	-0.2	⊕	-3.1	-11.6	0.6	1.6	⊕	-6.9	-20.3	-41.0	24
3502	2898	2382	1940	1565	1250	0.9	3.6	8.6	16.0	26.4	-0.2	⊕	-3.3	-12.5	0.6	1.6	⊕	-7.5	-22.2	-45.8	24
3549	2991	2506	2084	1721	1408	0.8	3.2	7.6	14.2	23.0	-0.2	⊕	-3.2	-11.9	0.6	1.6	⊕	-7.1	-21.0	-42.7	24
3478	2878	2364	1925	1552	1240	0.9	3.6	8.6	16.1	26.5	-0.2	⊕	-3.3	-12.6	0.6	1.7	⊕	-7.6	-22.4	-46.2	24
2410	1987	1624	1316	1055	842	0.9	4.1	9.7	18.0	30.0	-0.1	⊕	-4.4	-15.9	1.0	2.2	⊕	-9.3	-27.4	-56.9	24
2418	1944	1545	1215	950	742	1.2	5.1	12.2	23.0	37.9	0.1	⊕	-5.7	-20.4	1.5	2.8	⊕	-11.9	-35.3	-73.6	24
1911	1395	1002	715	524	414	1.8	8.4	20.1	38.3	62.5	0.2	⊕	-8.1	-29.3	2.3	4.0	⊕	-17.2	-53.1	-114.4	24
3237	2740	2304	1824	1594	1313	0.8	3.4	8.2	15.0	24.9	-0.1	⊕	-4.1	-15.0	0.9	2.1	⊕	-8.8	-25.5	-52.2	24
1911	1548	1242	991	786	630	1.3	5.3	12.8	23.7	39.1	0.2	⊕	-6.9	-24.8	1.9	3.5	⊕	-14.3	-41.6	-86.1	24
960	657	479	385	326	283	3.5	14.2	31.2	53.4	79.9	1.5	⊕	-19.7	-68.1	6.4	9.9	⊕	-38.5	-111.9	-225.7	18
1921	1278	838	575	443	368	2.8	12.0	29.1	53.5	83.6	0.5	⊕	-10.7	-40.2	3.2	5.4	⊕	-24.1	-75.1	-159.2	24
4338	3505	2803	2214	1733	1348	1.0	4.6	10.7	20.4	33.9	-0.1	⊕	-4.5	-16.4	1.0	2.3	⊕	-9.6	-28.9	-60.3	24
4263	3424	2720	2135	1665	1294	1.2	5.0	11.8	22.5	37.1	0.0	⊕	-5.3	-19.1	1.3	2.6	⊕	-11.1	-33.5	-69.5	24
1651	1025	672	509	417	352	3.9	16.5	37.1	64.0	96.4	1.0	⊕	-16.8	-60.9	5.2	8.4	⊕	-35.6	-106.0	-217.7	20
2280	1730	1305	1001	802	679	2.3	8.8	20.7	37.8	59.5	0.7	⊕	-11.9	-41.7	3.7	5.9	⊕	-23.9	-71.0	-146.8	24
2405	1708	1208	885	703	595	2.7	10.8	25.6	46.5	72.4	0.7	⊕	-12.2	-43.7	3.7	6.1	⊕	-25.4	-77.1	-160.6	24



Usage Key: 1 = Varmints, predators, small game; 2 = medium game; 3 = large, heavy game; 4 = dangerous game; 5 = target shooting, training, practice; 6 = self defense; 7 = competition shooting; 8 = pest control; 9 = low noise, training, specialty.

These trajectory tables were calculated by computer using the best available data for each load. Trajectories are representative of the nominal behavior of each load at standard conditions (59°F temperature; barometric pressure of 29.53 inches; altitude at sea level). Shooters are cautioned that actual trajectories may differ due to variations in altitude, atmospheric conditions, guns, sights and ammunition.

FEDERAL® RIFLE

ATT	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	MUZZLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)				
				GRAINS	GRAMS			100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.
FEDERAL® NON-TYPICAL												
	2	243DT100	243 Win.	100	6.48	SP	2960	2697	2448	2213	1991	1783
	2	65CDT1	6.5 Creedmoor	140	9.07	SP	2725	2522	2327	2142	1964	1796
	2	270DT130	270 Win.	130	8.42	SP	3060	2803	2560	2329	2111	1904
	2	270DT150	270 Win.	150	9.72	SPRN	2830	2486	2166	1871	1606	1374
	2	3030DT150	30-30 Win.	150	9.72	SPFN	2390	2019	1686	1399	1179	1037
	2	3030DT170	30-30 Win.	170	11.02	SPRN	2200	1894	1619	1380	1191	1060
	2	308DT150	308 Win.	150	9.72	SP	2820	2532	2261	2007	1771	1557
	2	308DT180	308 Win.	180	11.66	SP	2570	2345	2131	1929	1740	1565
	2	3006DT150	30-06 Spring.	150	9.72	SP	2910	2616	2340	2081	1839	1619
	2	3006DT180	30-06 Spring.	180	11.66	SP	2700	2470	2252	2045	1848	1667
	2	7RDT150	7mm Rem. Magnum	150	9.72	SP	3110	2841	2587	2347	2120	1905
	2	300WDT150	300 Win. Magnum	150	9.72	SP	3150	2898	2661	2435	2221	2017
	3	300WDT180	300 Win. Magnum	180	11.66	SP	2960	2746	2542	2346	2160	1982
NEW	2	450BMDT1	450 Bushmaster	300	19.44	SP	1900	1602	1346	1153	1028	945

FEDERAL VARMINT & PREDATOR

	1	AE17H20TVP	17 Hornet	20	1.3	Tipped Varmint	3610	3042	2541	2092	1694	1361
	1	AE22H35TVP	22 Hornet	35	2.27	Tipped Varmint	3000	2188	1526	1094	908	795
	1	V204VM32	204 Ruger	32	2.07	Hornady V-MAX	4100	3536	3040	2596	2193	1827
	1	V223VM40	223 Rem. (5.56x45mm)	40	2.59	Hornady V-MAX	3800	3249	2762	2324	1927	1579
	1.5	AE22350VP	223 Rem.	50	3.24	JHP	3325	2839	2402	2006	1653	1355
	1	V223VM53	223 Rem. (5.56x45mm)	53	3.43	Hornady V-MAX	3400	3046	2720	2416	2132	1868
	1	V224VLKM60	224 Valkyrie	60	3.89	Hornady V-MAX	3300	2923	2577	2255	1958	1687
	1	V22250VM40	22-250 Rem.	40	2.59	Hornady V-MAX	4200	3597	3070	2602	2179	1798
	1.5	AE22250VP	22-250 Rem.	50	3.24	JHP	3850	3303	2819	2384	1990	1639
	1	AE24375VP	243 Win.	75	4.86	JHP	3375	2943	2551	2191	1861	1569
	1	AE65GDL90VP	6.5mm Grendel	90	5.83	Speer TNT	3000	2641	2309	2002	1721	1472
	1	V65CRDVM95	6.5 Creedmoor	95	6.16	Hornady V-MAX	3300	3023	2763	2518	2285	2065
	1	AE6890VP	6.8 SPC	90	5.83	Jacketed Hollow Point	2990	2651	2335	2043	1772	1530
	1	V308VM110	308 Win. (7.62x51mm)	110	7.13	Hornady V-MAX	3300	2954	2635	2336	2058	1799
	1	AE308130VP	308 Win.	130	8.42	JHP	3050	2691	2359	2052	1769	1516

AMERICAN EAGLE® RIFLE

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	MUZZLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					
			GRAINS	GRAMS			100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
AMERICAN EAGLE												
	5	AE5728A	5.7x28	40	2.59	TMJ	2250	1606	1151	942	825	735
NEW	1.5	AE223G	223 Rem.	50	3.24	Speer TNT JHP	3325	2839	2402	2006	1653	1355
	5	AE223	223 Rem.	55	3.56	FMJ BT	3240	2874	2536	2222	1931	1667
	5	AE223N	223 Rem.	62	4.02	FMJ BT	3020	2713	2426	2156	1904	1674
	5	AE223T75	223 Rem.	75	4.86	TMJ	2775	2550	2336	2132	1938	1756
	5	AE224VLK1	224 Valkyrie	75	4.86	TMJ	3000	2763	2539	2325	2122	1929
	1.5	AE22250G	22-250 Rem.	50	3.24	JHP	3850	3303	2819	2384	1990	1639
	5	AE65GDL1	6.5mm Grendel	120	7.97	Speer TNT JHP	2580	2410	2246	2089	1938	1794
	5	AE65CRD2	6.5 Creedmoor	120	7.78	OTM	2900	2680	2470	2270	2079	1897
	5	AE68A	6.8 SPC	115	7.45	FMJ	2675	2442	2221	2012	1815	1633
	5	AE30CB	30 Carbine	110	7.13	FMJ	1990	1564	1231	1031	919	839
	5	AE300BLK1	300 Blackout	150	9.72	FMJ BT	1900	1724	1561	1411	1282	1174
	5	AE300BLKSUP2	300 Blackout	220	14.26	OTM	1000	970	944	920	897	876
	5	A76239A	7.62x39mm Soviet	124	8.04	FMJ	2350	2078	1824	1595	1392	1224
	5	AE308D	308 Win.	150	9.72	FMJ BT	2820	2597	2385	2183	1990	1808
	5	A76251M1A	7.62x51mm	168	10.89	OTM	2650	2459	2276	2101	1933	1774
	5	AE3006M1	30-06 Spring.	150	9.72	FMJ BT	2740	2522	2314	2116	1928	1751
	5	AE3006N	30-06 Spring.	150	9.72	FMJ BT	2910	2683	2466	2260	2064	1877
	5	AE338L	338 Lapua Mag	250	16.2	JSP	2875	2708	2547	2392	2242	2097



Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; ‡ = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCL = a portion of the proceeds from the sale of this product is donated to Safari Club International; CLM = cartridge length longer than SAAMI max, may not fit in all magazines. * Molycoat = molybdenum disulfide dry film lubricant

MUZZLE	ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)					WIND DRIFT IN INCHES 10 MPH CROSSWIND					HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE LONG RANGE										TEST BARREL LENGTH INCHES
	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
1945	1615	1331	1087	880	706	0.9	3.6	8.4	15.8	25.9	-0.2	⊕	-3.3	-12.4	0.6	1.6	⊕	-7.5	-22.1	-45.4	24
2308	1977	1683	1426	1199	1003	0.8	3.1	7.5	13.8	22.5	-0.1	⊕	-4	-14.4	0.9	2	⊕	-8.5	-24.4	-49.4	24
2703	2267	1891	1566	1286	1046	0.8	3.2	7.6	14.2	23.1	-0.2	⊕	-3.0	-11.2	0.5	1.5	⊕	-6.7	-20.0	-40.9	24
2667	2057	1563	1166	859	629	1.3	5.4	12.8	24.9	41.7	-0.1	⊕	-4.2	-15.7	0.9	2.1	⊕	-9.4	-29.2	-62.6	24
1902	1358	947	652	463	358	2.0	8.6	20.8	40.0	65.9	0.1	⊕	-7.2	-26.7	1.9	3.6	⊕	-15.9	-50.1	-109.8	24
1827	1354	990	719	535	424	1.8	8.1	19.4	36.7	59.9	0.3	⊕	-8.4	-30	2.4	4.2	⊕	-17.4	-53.5	-114.4	24
2648	2134	1702	1341	1044	807	1.1	4.4	10.4	19.7	32.9	-0.1	⊕	-3.9	-14.7	0.8	2.0	⊕	-8.8	-26.3	-55.2	24
2640	2197	1816	1486	1209	979	0.9	4.1	9.4	17.8	29.4	0.0	⊕	-4.9	-17.3	1.2	2.4	⊕	-10.0	-29.5	-60.7	24
2820	2279	1823	1442	1126	873	1.0	4.2	10.0	18.7	31.4	-0.2	⊕	-3.6	-13.6	0.7	1.8	⊕	-8.2	-24.4	-51.3	24
2913	2439	2026	1671	1365	1111	0.9	3.7	8.8	16.2	27.0	-0.1	⊕	-4.2	-15.3	1.0	2.1	⊕	-9.0	-26.2	-54.0	24
3221	2687	2229	1834	1497	1209	0.8	3.3	7.7	14.5	23.6	-0.3	⊕	-2.8	-10.8	0.4	1.4	⊕	-6.6	-19.6	-40.1	24
3305	2798	2358	1975	1643	1355	0.7	3.0	6.9	12.9	21.1	-0.3	⊕	-2.7	-10.2	0.4	1.3	⊕	-6.2	-18.3	-37.5	24
3502	3013	2582	2200	1864	1570	0.7	2.9	6.6	12.3	20.0	-0.2	⊕	-3.1	-11.6	0.6	1.6	⊕	-6.9	-20.3	-41.0	24
2405	1708	1208	885	703	595	2.7	10.8	25.6	46.5	72.4	0.7	⊕	-12.2	-43.7	3.7	6.1	⊕	-25.4	-77.1	-160.6	24

579	411	287	194	127	82	1.3	5.7	14.0	27.5	47.7	-0.4	⊕	-2.3	-10.1	0.2	1.1	⊕	-6.6	-21.4	-49.1	24
699	372	181	93	64	49	3.0	14.4	38.3	74.2	118.8	-0.1	⊕	-6.1	-28.3	1.4	3.1	⊕	-19.1	-66.9	-152.6	24
1194	888	657	479	342	237	1	4.2	10.2	19.4	32.8	-0.4	⊕	-1.3	-6.4	-0.1	0.6	⊕	-4.4	-14.1	-31.1	24
1282	937	677	479	330	221	1.1	4.9	11.8	22.8	39.4	-0.4	⊕	-1.8	-8.2	0.1	0.9	⊕	-5.5	-17.6	-39.5	24
1227	895	640	447	303	204	1.3	5.6	13.8	27.1	46.5	-0.3	⊕	-2.8	-11.8	0.4	1.4	⊕	-7.5	-24.0	-53.7	24
1360	1092	871	687	535	410	0.9	3.7	8.7	16.5	27.3	-0.3	⊕	-2.3	-9.2	0.2	1.1	⊕	-5.8	-17.7	-37.1	24
1451	1138	884	678	511	379	1	4.3	10.2	19.3	32.4	-0.3	⊕	-2.6	-10.4	0.3	1.3	⊕	-6.5	-20	-42.8	24
1567	1149	837	601	422	287	1	4.4	10.5	20.1	34.1	-0.5	⊕	-1.2	-6.1	-0.2	0.6	⊕	-4.3	-13.9	-30.9	24
1645	1211	882	631	439	298	1.1	4.7	11.3	21.9	37.5	-0.4	⊕	-1.7	-7.8	0.0	0.9	⊕	-5.3	-16.8	-37.5	24
1897	1443	1084	800	577	410	1.1	4.8	11.5	21.9	37.3	-0.3	⊕	-2.5	-10.5	0.3	1.3	⊕	-6.7	-20.6	-45.1	24
1798	1394	1065	801	592	433	1.2	4.9	11.9	22.8	38.3	-0.2	⊕	-3.5	-13.6	0.7	1.7	⊕	-8.3	-25.5	-54.6	24
2297	1928	1610	1337	1101	900	0.7	3	7	13	21.4	-0.3	⊕	-2.3	-9.2	0.3	1.2	⊕	-5.7	-16.9	-34.9	24
1786	1404	1090	834	628	468	1.1	4.6	11.2	21.2	35.7	-0.2	⊕	-3.5	-13.4	0.7	1.7	⊕	-8.2	-24.7	-52.6	24
2660	2132	1695	1333	1034	791	0.9	3.9	9.1	17.2	28.6	-0.3	⊕	-2.5	-10	0.3	1.3	⊕	-6.2	-19	-39.9	24
2685	2090	1606	1215	903	664	1.1	4.7	11.5	21.8	36.8	-0.2	⊕	-3.3	-12.9	0.6	1.7	⊕	-8.0	-24.3	-52.0	24

MUZZLE	ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)					WIND DRIFT IN INCHES 10 MPH CROSSWIND					HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE LONG RANGE										TEST BARREL LENGTH INCHES
	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	50 YDS.	100 YDS.	200 YDS.	300 YDS.	400 YDS.	500 YDS.	
450	229	118	79	60	48	4.4	20.2	48.0	84.7	129.1	0.5	⊕	-12.6	-51.3	3.6	6.3	⊕	-32.4	-101.1	-216.1	24
1227	895	640	447	303	204	1.3	5.6	13.8	27.1	46.5	-0.3	⊕	-2.8	-11.8	0.4	1.4	⊕	-7.5	-24.0	-53.7	24
1282	1008	785	603	455	339	1.0	4.3	10.2	19.4	32.7	-0.3	⊕	-2.7	-10.9	0.4	1.4	⊕	-6.8	-20.6	-44.2	24
1255	1013	810	640	499	386	1.0	4.0	9.7	18.1	30.4	-0.2	⊕	-3.2	-12.4	0.6	1.6	⊕	-7.6	-22.6	-47.6	24
1282	1083	908	757	625	514	0.8	3.4	8.1	14.9	24.6	-0.1	⊕	-3.8	-14.1	0.8	1.9	⊕	-8.4	-24.2	-49.6	24
1499	1272	1073	900	750	619	0.7	3.1	7.2	13.4	21.8	-0.2	⊕	-3.1	-11.5	0.5	1.5	⊕	-6.9	-20.4	-41.3	24
1645	1211	882	631	439	298	1.1	4.7	11.3	21.9	37.5	-0.4	⊕	-1.7	-7.8	0.0	0.9	⊕	-5.3	-16.8	-37.5	24
1818	1586	1378	1192	1026	879	0.6	2.9	6.9	12.5	20.3	-0.1	⊕	-4.5	-16.0	1.1	2.3	⊕	-9.2	-26.1	-52.5	24
2241	1913	1626	1373	1152	959	0.8	3.1	7.2	13.3	21.5	-0.2	⊕	-3.3	-12.4	0.6	1.7	⊕	-7.4	-21.6	-43.5	24
1827	1523	1260	1034	841	681	0.9	3.8	9.1	16.9	28.0	-0.1	⊕	-4.4	-15.8	1.0	2.2	⊕	-9.2	-27.0	-55.8	24
967	597	370	260	206	172	3.5	15.1	35.8	63.7	97.4	0.7	⊕	-13.0	-49.1	3.9	6.5	⊕	-29.7	-90.9	-190.2	18
1202	990	811	663	547	459	1.6	6.1	13.7	25.3	40.6	0.6	⊕	-10.3	-34.7	3.2	5.1	⊕	-19.3	-56.3	-114.5	16
488	460	435	413	393	375	0.7	3.3	7.2	12.5	19.1	3.7	⊕	-35.6	-110.4	12.6	17.8	⊕	-56.9	-154.7	-294.9	16
1520	1189	916	701	533	412	1.5	6	14.7	27.6	45.7	0.1	⊕	-6.5	-23.8	1.8	3.3	⊕	-14.0	-41.5	-87.5	20
2648	2246	1894	1586	1319	1089	0.8	3.3	7.8	14.4	23.3	-0.2	⊕	-3.6	-13.5	0.8	1.8	⊕	-8.0	-23.3	-47.2	24
2619	2255	1932	1646	1394	1174	0.7	3.1	7.4	13.5	22.1	-0.1	⊕	-4.3	-15.3	1.0	2.1	⊕	-8.9	-25.5	-51.6	24
2500	2118	1783	1492	1238	1021	0.8	3.4	8.0	14.7	24.3	-0.1	⊕	-4.0	-14.5	0.9	2.0	⊕	-8.6	-24.7	-50.5	24
2820	2397	2026	1701	1419	1173	0.8	3.2	7.4	13.7	22.2	-0.2	⊕	-3.3	-12.4	0.6	1.7	⊕	-7.4	-21.7	-43.8	24
4588	4070	3601	3175	2789	2442	0.6	2.4	5.3	9.8	15.9	-0.2	⊕	-3.2	-11.8	0.6	1.6	⊕	-6.9	-20.0	-40.1	24



Usage Key: 1 = Varmints, predators, small game; 2 = medium game; 3 = large, heavy game; 4 = dangerous game; 5 = target shooting, training, practice; 6 = self defense; 7 = competition shooting; 8 = pest control; 9 = low noise, training, specialty.

These trajectory tables were calculated by computer using the best available data for each load. Trajectories are representative of the nominal behavior of each load at standard conditions (59°F temperature; barometric pressure of 29.53 inches; altitude at sea level). Shooters are cautioned that actual trajectories may differ due to variations in altitude, atmospheric conditions, guns, sights and ammunition.

FEDERAL® HANDGUN

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)				TRAJECTORY (SIGHTS 9 INCHES ABOVE BORE LINE)				TEST BARREL LENGTH INCHES	
			GRAINS	GRAMS		MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	25 YDS.	50 YDS.	75 YDS.		100 YDS.
FEDERAL POWER•SHOK® HANDGUN																				
2	C357G	357 Magnum	180	11.66	JHP	1080	1050	1020	1000	970	465	440	415	395	380	⊕	-1.1	-4.2	-9.6	4-V
2	C41A	41 Rem. Magnum	210	13.61	JHP	1230	1170	1120	1080	1040	705	640	585	545	505	⊕	-0.7	-3.1	-7.3	4-V
2	C44B	44 Rem. Magnum	180	11.66	JHP	1460	1340	1240	1160	1090	850	720	615	535	470	⊕	-0.3	-2.0	-5.4	4-V
2	C44A	44 Rem. Magnum	240	15.55	JHP	1230	1170	1120	1070	1040	805	730	665	615	570	⊕	-0.7	-3.1	-7.4	4-V
FEDERAL PERSONAL DEFENSE REVOLVER																				
6	C32HRB	32 H&R Magnum	85	5.51	JHP	1120	1070	1020	990	950	235	215	195	185	170	⊕	-1.0	-4.1	-9.4	5
6, 7	C357B	357 Magnum	125	8.10	JHP	1440	1340	1240	1160	1100	575	495	425	375	335	⊕	-0.3	-2.1	-5.4	4-V
6	C357E	357 Magnum	158	10.24	JHP	1240	1190	1140	1100	1060	540	495	455	425	395	⊕	-0.6	-3.0	-7.1	4-V
FEDERAL TRAIN+PROTECT																				
6, 7	TP9VHP1	9mm Luger	115	7.45	JHP	1180	1110	1050	1000	960	355	310	280	255	235	⊕	-0.9	-3.7	-8.7	4
6, 7	TP40VHP1	40 S&W	180	11.66	JHP	1000	970	950	920	900	400	375	360	340	325	⊕	-1.4	-5.3	-11.6	4
6	TP45VHP1	45 Auto	230	14.90	JHP	850	830	820	800	790	370	355	345	330	320	⊕	-2.2	-7.7	-16.4	5
FEDERAL CHAMPION™ HANDGUN																				
5	C32HRA	32 H&R Magnum	95	6.16	LSW	1020	970	930	890	860	220	200	180	170	155	⊕	-1.4	-5.3	-12.0	5
5	C44SA	44 Special	200	12.96	SWHP	870	850	830	810	790	335	320	305	290	275	⊕	-2.1	-7.4	-16.0	4-V
5	C45LCA	45 Colt	225	14.58	SWHP	830	810	790	780	760	345	330	315	300	290	⊕	-2.4	-8.2	-17.7	4-V

SYNTECH® HANDGUN

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)				TRAJECTORY (SIGHTS 9 INCHES ABOVE BORE LINE)				TEST BARREL LENGTH INCHES	
			GRAINS	GRAMS		MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	25 YDS.	50 YDS.	75 YDS.		100 YDS.
SYNTECH RANGE™																				
5	AE9SJ1	9mm Luger	115	7.45	TSJ	1130	1105	1083	1062	1043	326	312	299	288	278	⊕	-0.9	-3.6	-8.3	4
5	AE9SJ2	9mm Luger	124	8.04	TSJ	1050	1011	978	949	922	304	282	263	248	234	⊕	-1.2	-4.7	-10.6	4
5	AE40SJ1	40 S&W	165	10.69	TSJ FP	1050	1027	1007	988	970	404	387	371	357	345	⊕	-1.2	-4.4	-10.0	4
5	AE45SJ1	45 Auto	230	14.9	TSJ	830	821	812	803	795	352	344	337	329	322	⊕	-2.3	-7.9	-16.8	5
SYNTECH ACTION PISTOL™																				
5	AE9SJAP1	9mm Luger	150	9.72	TSJ	870	854	839	824	810	252	243	234	226	219	⊕	-2.1	-7.3	-15.6	4
5	AE40SJAP1	40 S&W	205	13.28	TSJ	830	813	797	782	767	314	301	289	278	267	⊕	-2.4	-8.1	-17.5	4
5	AE45SJAP1	45 Auto	220	14.26	STJ	775	758	742	726	711	293	281	269	258	247	⊕	-2.9	-9.8	-20.7	5
SYNTECH PCC™																				
5	AE9SJPC1	9mm Luger	130	8.42	STJ	1130	1078	1035	999	967	369	336	309	288	270	⊕	-1	-4	-9.1	16
SYNTECH TRAINING MATCH™																				
5	AE9SJ4	9mm Luger	124	8.04	TSJ	1150	1064	1000	949	907	364	312	275	248	226	⊕	-1	-4.2	-9.8	4
5	AE9SJPC1	9mm Luger	130	8.42	TSJ	1130	1078	1035	999	967	369	336	309	288	270	⊕	-1	-4	-9.1	16
5	AE9SJ3	9mm Luger	147	9.53	TSJ	1100	1053	1014	980	951	395	362	336	314	295	⊕	-1.1	-4.2	-9.6	4
5	AE40SJ2	40 S&W	180	11.66	TSJ	1010	958	914	876	842	408	367	334	307	283	⊕	-1.5	-5.5	-12.4	4
5	AE45SJ2	45 Auto	230	14.9	TSJ	890	855	824	794	767	404	374	346	322	300	⊕	-2.1	-7.3	-16	5
SYNTECH DEFENSE™																				
6	S9SJT1	9mm Luger (9x19mm Parabellum)	138	8.94	STJ	1050	989	940	899	862	338	300	271	248	228	⊕	-1.3	-5.1	-11.5	4
6	S40SJT1	40 S&W	175	11.34	STJ	1000	950	907	870	836	389	350	320	294	272	⊕	-1.5	-5.6	-12.7	4
6	S45SJT1	45 Auto	205	13.28	STJ	970	926	887	853	821	428	390	358	331	307	⊕	-1.6	-6	-13.4	5

Usage Key: 1 = Varmints, predators, small game; 2 = medium game; 3 = large, heavy game; 4 = dangerous game; 5 = target shooting, training, practice; 6 = self defense; 7 = competition shooting; 8 = pest control; 9 = low noise, training, specialty.

These trajectory tables were calculated by computer using the best available data for each load. Trajectories are representative of the nominal behavior of each load at standard conditions (59°F temperature; barometric pressure of 29.53 inches; altitude at sea level). Shooters are cautioned that actual trajectories may differ due to variations in altitude, atmospheric conditions, guns, sights and ammunition.



AMERICAN EAGLE® HANDGUN

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)				ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)				TRAJECTORY SIGHTS .9 INCHES ABOVE BORE LINE				TEST BARREL LENGTH INCHES		
			GRAINS	GRAMS		MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	25 YDS.	50 YDS.		75 YDS.	100 YDS.
AMERICAN EAGLE HANDGUN																				
5	AE5728A	5.7x28	40	2.59	TMJ	1655	1514	1387	1275	1179	243	204	171	144	124	⊕	0.0	-1.2	-3.8	4
5	AE25AP	25 Auto	50	3.24	FMJ	760	738	717	697	677	64	60	57	54	51	⊕	-3.1	-10.4	-22.1	2
5	AE32AP	32 Auto	71	4.6	FMJ	900	872	846	821	798	128	120	113	106	100	⊕	-2.0	-7.0	-15.2	4
5	AE327A	327 Federal Magnum	85	5.51	JSP	1400	1306	1221	1150	1091	370	322	281	250	225	⊕	-0.4	-2.2	-5.7	4-V
6	AE327	327 Federal Magnum	100	6.48	JSP	1500	1408	1324	1248	1181	500	440	389	346	310	⊕	-0.2	-1.6	-4.5	4-V
5	AE380AP	380 Auto	95	6.16	FMJ	980	937	899	865	835	203	185	170	158	147	⊕	-1.6	-5.8	-13.0	3.75
5	AE9DP	9mm Luger	115	7.45	FMJ	1180	1106	1048	1001	961	356	312	280	256	236	⊕	-0.9	-3.7	-8.7	4
5	AE9AP	9mm Luger	124	8.04	FMJ	1150	1095	1049	1010	977	364	330	303	281	263	⊕	-0.9	-3.8	-8.8	4
5	AE9FP	9mm Luger	147	9.53	FMJ FP	1000	976	953	933	914	326	311	297	284	273	⊕	-1.4	-5.2	-11.5	4
5	AE38S3	38 Super +P	115	7.45	JHP	1130	1067	1016	974	938	326	290	264	242	225	⊕	-1.0	-4.1	-9.5	5
5	AE357S2	357 Sig	125	8.1	FMJ	1350	1266	1192	1130	1078	506	445	395	354	323	⊕	-0.5	-2.4	-6.1	4
5	AE38K	38 Special	130	8.42	FMJ	890	870	852	834	817	229	219	209	201	193	⊕	-2.0	-7.0	-15.1	4-V
5	AE38B	38 Special	158	10.24	LRN	770	758	745	733	722	208	201	195	189	183	⊕	-2.9	-9.8	-20.7	4-V
5	AE357A	357 Magnum	158	10.24	JSP	1240	1187	1139	1098	1063	539	494	455	423	396	⊕	-0.6	-3.0	-7.1	4-V
5	AE40R2	40 S&W	155	10.04	FMJ	1160	1095	1043	1000	963	463	413	374	344	319	⊕	-0.9	-3.8	-8.9	4
5	AE40R3	40 S&W	165	10.69	FMJ	1130	1078	1035	999	967	468	426	392	365	342	⊕	-1.0	-4.0	-9.1	4
5	AE40R1	40 S&W	180	11.66	FMJ	1000	972	946	923	901	400	377	358	340	324	⊕	-1.4	-5.3	-11.6	4
5	AE10A	10mm Auto	180	11.66	FMJ	1030	998	970	945	921	424	398	376	357	339	⊕	-1.3	-4.9	-10.9	5
5	AE44A	44 Rem. Magnum	240	15.55	JHP	1230	1169	1117	1073	1035	806	729	665	613	571	⊕	-0.7	-3.1	-7.4	4-V
5	AE44B	44 Rem. Magnum	240	15.55	JSP	1270	1204	1146	1098	1056	859	772	700	642	595	⊕	-0.6	-2.9	-6.9	4-V
5	AE45A	45 Auto	230	14.9	FMJ	890	872	856	840	824	404	389	374	360	347	⊕	-2.0	-6.9	-15.0	5
5	AE45LC	45 Colt	225	14.58	JSP	860	844	828	813	799	369	356	343	330	319	⊕	-2.2	-7.5	-16.1	4
AMERICAN EAGLE SUPPRESSOR																				
5	AE9SUP1	9mm Luger	124	8.04	FMJ	1030	996	966	940	915	292	273	257	243	231	⊕	-1.3	-4.9	-11.0	4
5	AE45SUP1	45 Auto	230	14.9	FMJ	840	821	803	785	769	360	344	329	315	302	⊕	-2.3	-8.0	-17.2	5
AMERICAN EAGLE IRT																				
5	AE9N1	9mm Luger	124	8.04	TMJ	1120	1070	1028	993	961	345	315	291	271	255	⊕	-1.0	-4.0	-9.3	4
5	AE9N2	9mm Luger	147	9.53	TMJ	1000	976	953	933	914	326	311	297	284	273	⊕	-1.4	-5.2	-11.5	4
5	AE40N1	40 S&W	180	11.66	TMJ	1000	972	946	923	901	400	377	358	340	324	⊕	-1.4	-5.3	-11.6	4
5	AE45N1	45 Auto	230	14.9	TMJ	850	834	819	804	790	369	355	343	330	319	⊕	-2.2	-7.7	-16.4	5

FEDERAL PREMIUM® RIMFIRE

ATT	USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)				ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)			WIND DRIFT IN INCHES 10 MPH CROSSWIND		HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS. SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE		
				GRAINS	GRAMS		MUZZLE	50 YDS.	100 YDS.	MUZZLE	50 YDS.	100 YDS.	50 YDS.	100 YDS.	50 YDS.	100 YDS.		
FEDERAL PREMIUM GOLD MEDAL®																		
	5	711B	22 Long Rifle	40	2.59	Solid	1080	994	930	104	88	77	1.1	4.2	⊕		-7.3	
	8	719	22 Long Rifle	40	2.59	Solid	1200	1075	991	128	103	87	1.3	4.9	⊕		-6.0	
FEDERAL PREMIUM HUNTER MATCH™																		
	8	720	22 Long Rifle	40	2.59	Match HP	1200	1075	991	128	103	87	1.3	4.9	⊕		-6.0	
FEDERAL PREMIUM V•SHOK®																		
	1	P770	17 HMR	17	1.1	Speer TNT JHP	2530	2150	1804	242	174	123	0.9	3.8	⊕		-0.4	
	1	P771	17 HMR	17	1.1	Hornady V-Max	2530	2194	1884	242	182	134	0.8	3.3	⊕		-0.3	
	1	P765	22 Win. Magnum	30	1.94	Speer TNT HP	2200	1777	1419	322	210	134	1.3	6.0	⊕		-1.3	

FEDERAL® RIMFIRE

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)				ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)			WIND DRIFT IN INCHES 10 MPH CROSSWIND		HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS. SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE		
			GRAINS	GRAMS		MUZZLE	50 YDS.	100 YDS.	MUZZLE	50 YDS.	100 YDS.	50 YDS.	100 YDS.	50 YDS.	100 YDS.		
FEDERAL GAME•SHOK®																	
	1	716	22 Long Rifle	25	1.62	No. 12 Lead Bird Shot	-	-	-	-	-	-	-	-	-	-	-
	5	724	22 Long Rifle	31	2.01	CPHP	1430	1197	1046	141	99	75	1.8	7.1	⊕		-4.6
	1 5	712	22 Long Rifle	38	2.46	CPHP	1260	1110	1010	134	104	86	1.5	5.5	⊕		-5.5
	5	710	22 Long Rifle	40	2.59	CP Solid	1240	1103	1011	137	108	91	1.4	5.1	⊕		-5.6
	5	757	22 Win. Magnum	50	3.24	JHP	1530	1347	1197	260	201	159	1.2	4.7	⊕		-3.3
FEDERAL CHAMPION™																	
	5	745***	22 Long Rifle	36	2.33	CPHP	1260	1104	1003	127	97	80	1.5	5.7	⊕		-5.6
	5	AM22**	22 Long Rifle	40	2.59	Solid	1200	1075	991	128	103	87	1.3	4.9	⊕		-6.0
	5	510	22 Long Rifle	40	2.59	Solid	1240	1103	1011	137	108	91	1.4	5.1	⊕		-5.6
	5	737	22 Win. Magnum	40	2.59	FMJ	1880	1570	1311	314	219	153	1.4	5.8	⊕		-2.1
FEDERAL RANGE & FIELD																	
	5	729*	22 Long Rifle	40	2.59	Solid	1200	1075	991	128	103	87	1.3	4.9	⊕		-6.0
	1 5	730*	22 Long Rifle	38	2.46	CPHP	1260	1110	1010	134	104	86	1.5	5.5	⊕		-5.5

*** 525-count bulk pack
 ** 325-count bulk pack
 * 275-count bulk pack

Abbreviation Key: BTHP = boat-tail hollow point; BTSP = boat-tail soft point; FN = flat nose; LRN = lead round nose; LSW = lead semi-wadcutter; LW = lead wadcutter; SWC = semi-wadcutter; SWHP = semi-wadcutter hollow point; CB = conical ball reduced power/noise; FP = flat point; CP = copper-plated; L = lead; J = jacketed; HP = hollow-point; RN = round nose; SHP = segmented hollow-point; SP = soft point; FMJ = full metal jacket; TSJ = total synthetic jacket; TMF = toxic-metal-free; TMJ = totally encapsulated bullet; V = vented barrel; HE = high energy (not for use in semi-automatic rifles); † = not for revolvers; ‡ = nickel-plated case; RMEF = a portion of the proceeds from the sale of this product is donated to Rocky Mountain Elk Foundation; SCl = a portion of the proceeds from the sale of this product is donated to Safari Club International.

USAGE	FEDERAL LOAD NO.	CALIBER	BULLET WEIGHT IN		BULLET STYLE	VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)			ENERGY IN FOOT-POUNDS (TO NEAREST 5 FOOT-POUNDS)			WIND DRIFT IN INCHES 10 MPH CROSSWIND		HEIGHT OF BULLET TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 50 YARDS, SIGHTS 1.5 INCHES ABOVE BORE LINE. AVERAGE RANGE		
			GRAINS	GRAMS		MUZZLE	50 YDS.	100 YDS.	MUZZLE	50 YDS.	100 YDS.	50 YDS.	100 YDS.	50 YDS.	100 YDS.	
AMERICAN EAGLE																
1	AE17WSM1	17 WSM	20	1.3	Tipped Varmint	3000	2749	2511	400	336	280	0.4	1.6	⊕	0.3	
5	AE22*	22 Long Rifle	38	2.46	CPHP	1260	1110	1010	134	104	86	1.5	5.5	⊕	-5.5	
5	AE5022	22 Long Rifle	40	2.59	Solid	1240	1103	1011	137	108	91	1.4	5.1	⊕	-5.6	
AMERICAN EAGLE SUPPRESSOR																
5	AE22SUP1	22 Long Rifle	45	2.92	CP Solid	970	908	856	94	82	73	1.0	3.7	⊕	-9.0	

* 40-count box

FEDERAL PREMIUM SABOT SLUG

USAGE	FEDERAL LOAD NO.	GAUGE	SHELL LENGTH		SLUG TYPE	SLUG WEIGHT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					ENERGY IN FOOT-POUNDS (TO NEAREST FOOT-POUND)					HEIGHT OF SLUG TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 5 INCHES ABOVE BORE LINE.					TEST BARREL LENGTH INCHES		
			INCHES	MM		OUNCES	GRAINS	MUZZLE	25 YDS.	50 YDS.	100 YDS.	200 YDS.	MUZZLE	25 YDS.	50 YDS.	100 YDS.	150 YDS.	200 YDS.	25 YDS.	50 YDS.	100 YDS.	150 YDS.		200 YDS.	
FEDERAL PREMIUM VITAL•SHOK® TROPHY® COPPER (FULLY RIFLED SLUG BARREL)																									
2	P151 TC	12	3	76	Trophy Copper Slug	.69	300	2000	1900	1800	1620	1450	1310	2665	2400	2160	1745	1400	1135	1.3	2.6	2.9	⊕	-7.1	30
2	P152 TC	12	2¾	70	Trophy Copper Slug	.69	300	1900	1800	1710	1530	1380	1240	2405	2165	1945	1565	1260	1030	1.7	2.9	3.3	⊕	-7.9	30
2	P209 TC	20	3	76	Trophy Copper Slug	.63	275	1900	1790	1690	1500	1340	1200	2205	1965	1750	1380	1090	875	1.6	3.0	3.4	⊕	-8.3	30
2	P208 TC	20	2¾	70	Trophy Copper Slug	.63	275	1700	1600	1510	1340	1200	-	1765	1570	1390	1100	885	-	1.0	1.7	⊕	-6.5	-	30

Note: For optimum slug performance, we recommend matching the chamber length to the slug length. For example, use a 3-inch slug in a 3-inch chamber.

FEDERAL PREMIUM SMOOTHBORE SLUG

USAGE	FEDERAL LOAD NO.	GAUGE	SHELL LENGTH		SLUG TYPE	SLUG WEIGHT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					ENERGY IN FOOT-POUNDS (TO NEAREST FOOT-POUND)					HEIGHT OF SLUG TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 5 INCHES ABOVE BORE LINE.					TEST BARREL LENGTH INCHES		
			INCHES	MM		OUNCES	GRAINS	MUZZLE	25 YDS.	50 YDS.	100 YDS.	200 YDS.	MUZZLE	25 YDS.	50 YDS.	100 YDS.	150 YDS.	200 YDS.	25 YDS.	50 YDS.	100 YDS.	150 YDS.		200 YDS.	
FEDERAL PREMIUM VITAL•SHOK TRUBALL® RIFLED SLUGS (SMOOTHBORE BARREL)																									
2	PB127 LRS*	12	2¾	70	TruBall Rifled Slug	1	438	1300	1150	1040	910	1640	1275	1055	805	0.6	⊕	-7.4	30						
2	PB127 RS	12	2¾	70	TruBall Rifled Slug	1	438	1600	1370	1180	970	2485	1810	1355	915	0.3	⊕	-5.7	30						
2	PB131 RS	12	3	76	TruBall Rifled Slug	1	438	1700	1450	1240	1000	2805	2040	1505	970	0.3	⊕	-5.1	30						
2	PB203 RS	20	2¾	70	TruBall Rifled Slug	¾	328	1600	1390	1220	1010	1865	1410	1090	745	0.3	⊕	-5.3	30						
2	PB209 RS	20	3	76	TruBall Rifled Slug	¾	328	1700	1480	1290	1040	2105	1595	1215	795	0.3	⊕	-4.8	30						
FEDERAL PREMIUM VITAL•SHOK TRUBALL DEEP PENETRATOR RIFLED SLUGS (SMOOTHBORE BARREL)																									
3	PB127 DPRS	12	2¾	70	TruBall Rifled Slug	1	438	1350	1200	1090	950	1775	1400	1150	875	0.5	⊕	-6.8	30						

* Low-recoil load

FEDERAL SLUG

USAGE	FEDERAL LOAD NO.	GAUGE	SHELL LENGTH		SLUG TYPE	SLUG WEIGHT		VELOCITY IN FEET PER SECOND (TO NEAREST 10 FPS)					ENERGY IN FOOT-POUNDS (TO NEAREST FOOT-POUND)					HEIGHT OF SLUG TRAJECTORY IN INCHES ABOVE OR BELOW LINE OF SIGHT IF ZEROED AT 100 YARDS, SIGHTS 5 INCHES ABOVE BORE LINE.					TEST BARREL LENGTH INCHES		
			INCHES	MM		OUNCES	GRAINS	MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	125 YDS.	MUZZLE	25 YDS.	50 YDS.	75 YDS.	100 YDS.	125 YDS.	25 YDS.	50 YDS.	75 YDS.		100 YDS.	125 YDS.
FEDERAL POWER•SHOK® SABOT SLUG (FULLY RIFLED SLUG BARREL)																									
2	F127 SS2	12	2¾	70	Sabot HP	1	438	1500	1420	1350	1280	1220	1170	2190	1970	1775	1600	1455	1330	1.4	2.1	1.7	⊕	-3.2	30
2	F203 SS2	20	2¾	70	Sabot HP	¾	383	1450	1350	1260	1180	1120	1070	1785	1550	1350	1190	1065	965	1.6	2.5	2.0	⊕	-3.8	30
FEDERAL POWER•SHOK RIFLED SLUG (SMOOTHBORE BARREL)																									
2	F103F RS	10	3½	89	HP	1¾	766	1280	1170	1090	1020	970	930	2785	2325	2000	1770	1600	1465	0.5	⊕	-2.4	-6.8	-13.6	32
2	F131 RS	12	3	76	HP	1¼	547	1600	1460	1330	1220	1130	1060	3110	2570	2140	1800	1545	1360	0.3	⊕	-1.5	-4.5	-9.1	30
2	F127 RS	12	2¾	70	HP	1	438	1610	1470	1340	1230	1140	1070	2520	2090	1745	1470	1260	1110	0.3	⊕	-1.5	-4.4	-8.9	30
2	F130 RS	12	2¾	70	HP	1¼	547	1520	1390	1270	1170	1090	1030	2805	2330	1950	1660	1445	1290	0.3	⊕	-1.7	-4.9	-10.0	30
2	F164 RS	16	2¾	70	HP	¾	350	1600	1380	1210	1080	1000	930	1990	1490	1135	910	770	675	0.3	⊕	-1.8	-5.4	-11.2	28
2	F203 RS	20	2¾	70	HP	¾	328	1600	1430	1280	1160	1070	1000	1865	1480	1190	975	830	730	0.3	⊕	-1.6	-4.8	-10.0	26
2	F412 RS	410	2½	64	HP	¼	109	1775	1540	1340	1180	1060	980	760	575	430	335	270	235	0.2	⊕	-1.4	-4.4	-9.3	26

Usage Key: 1 = Varmints, predators, small game; 2 = medium game; 3 = large, heavy game; 4 = dangerous game; 5 = target shooting, training, practice; 6 = self defense; 7 = competition shooting; 8 = pest control; 9 = low noise, training, specialty.

These trajectory tables were calculated by computer using the best available data for each load. Trajectories are representative of the nominal behavior of each load at standard conditions (59°F temperature; barometric pressure of 29.53 inches; altitude at sea level). Shooters are cautioned that actual trajectories may differ due to variations in altitude, atmospheric conditions, guns, sights and ammunition.

