

Comparative External Ballistics

5.56 NATO – 7.62 NATO – 6.8 SPC – 6.5 GRENDDEL

	Round: Bullet:	5.56 NATO 77 OTM Sierra	7.62 NATO 175 OTM Sierra	6.8 SPC 115 OTM Sierra	6.5 Grendel 100 OTM Lapua	6.5 Grendel 108 OTM Lapua	6.5 Grendel 123 OTM Lapua	6.5 Grendel 144 FMJBT Lapua
	Recoil:	5.40 lbs	17.24 lbs	8.71 lbs	8.29 lbs	8.58 lbs	9.23 lbs	9.95 lbs
Muzzle	Velocity	2850	2600	2800	3000	2900	2750	2550
	Energy	1389	2627	2002	1998	2017	2065	2079
100	Velocity	2602	2428	2540	2790	2707	2588	2416
	Energy	1158	2290	1647	1729	1757	1829	1867
	Drop	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drift	0.86	0.71	0.94	0.65	0.64	0.59	0.56
200	Velocity	2368	2262	2293	2590	2522	2432	2287
	Energy	958	1987	1343	1489	1525	1615	1672
	Drop	-2.65	-3.41	-2.91	-1.97	-2.25	-2.70	-3.46
	Drift	3.61	2.94	3.97	2.69	2.64	2.44	2.32
300	Velocity	2145	2102	2061	2398	2345	2281	2161
	Energy	787	1717	1085	1277	1318	1421	1493
	Drop	-11.52	-13.62	-12.45	-9.14	-9.98	-11.28	-13.57
	Drift	8.51	6.84	9.40	6.28	6.15	5.66	5.37
400	Velocity	1935	1949	1844	2214	2174	2135	2039
	Energy	640	1477	868	1089	1133	1245	1330
	Drop	-27.98	-31.72	-30.22	-22.36	-24.04	-26.55	-31.13
	Drift	15.91	12.62	17.63	11.59	11.33	10.38	9.81
500	Velocity	1739	1804	1642	2039	2011	1995	1922
	Energy	517	1264	689	923	970	1087	1181
	Drop	-53.75	-58.98	-58.26	-42.69	-45.33	-49.45	-57.16
	Drift	26.18	20.47	29.13	18.84	18.37	16.76	15.78
600	Velocity	1558	1666	1461	1872	1855	1861	1809
	Energy	415	1079	545	772	825	946	1046
	Drop	-91.08	-96.95	-99.24	-71.40	-75.51	-81.10	-92.41
	Drift	39.74	20.62	44.37	28.27	27.51	24.96	23.39
700	Velocity	1397	1538	1304	1715	1708	1733	1701
	Energy	334	919	435	653	700	820	925
	Drop	-142.78	-147.46	-156.56	-110.06	-115.68	-122.80	-138.39
	Drift	57.03	43.31	63.81	40.15	38.97	25.17	32.79
800	Velocity	1259	1420	1178	1568	1571	1612	1598
	Energy	271	784	354	546	592	710	816
	Drop	-212.33	-212.69	-234.36	-160.57	-167.79	-176.10	-196.41
	Drift	78.37	58.75	87.64	54.76	53.01	47.57	44.12
900	Velocity	1149	1314	1083	1434	1444	1499	1501
	Energy	226	671	300	457	500	614	720
	Drop	-303.84	-295.19	-337.22	-225.25	-234.03	-242.79	-268.06
	Drift	103.82	77.12	115.64	72.39	69.87	62.34	57.12
1000	Velocity	1067	1222	1014	1315	1331	1395	1411
	Energy	195	581	263	384	425	531	636
	Drop	-421.66	-397.84	-469.70	-306.88	-234.03	-242.79	-355.15
	Drift	133.08	98.52	147.27	93.28	89.78	79.68	73.12

- All calculations are based on 24-inch barrels using advertised ballistic coefficients using a G1 drag profile.
 - Conditions are 70 degrees and 50% humidity at an altitude of 50 feet above sea level.
 - Drift is based on a 10 mph crosswind.
 - Recoil calculation based on a rifle weight of 8 pounds for all cartridges.

Cartridge	5.56 NATO 77 OTM Sierra	7.62 NATO 175 OTM Sierra	6.8 SPC 115 OTM Sierra	6.5 Grendel 100 OTM Lapua	6.5 Grendel 108 OTM Lapua	6.5 Grendel 123 OTM Lapua	6.5 Grendel 144 FMJBT Lapua
Max Range – Supersonic Velocity	875 Yards	1075 Yards	825 Yards	1150 Yards	1175 Yards	1275 Yards	1350 Yards
Max Range –500 Ft Lbs Energy	500 Yards	1100 Yards	650 Yards	825 Yards	900 Yards	1025 Yards	1200 Yards