

.224 Dia., 63 Gr. SMP

POINT BLANK RANGE COMPUTED FOR 2.5 INCHES ABOVE AND BELOW LINE OF SIGHT

RANGE	YARDS	MUZZLE	50	100	150	200	250	300	400	500
MAXIMUM POINT BLANK RANGE IS 315 YARDS. SET ZERO AT 270 YARDS.										
VELOCITY FPS		3800	3552	3318	3097	2887	2688	2499	2145	1825
ENERGY FT-LB		2019	1764	1540	1341	1165	1010	874	643	465
DROP INCHES		.00	-.31	-1.31	-3.10	-5.80	-9.53	-14.48	-28.76	-50.67
BULLET PATH	(100 YDS)	-1.50	-.41	.00	-.38	-1.67	-4.01	-7.55	-19.02	-38.12
INCHES	(150 YDS)	-1.50	-.28	.26	.00	-1.16	-3.37	-6.78	-18.00	-36.84
(ZERO RANGE)	(200 YDS)	-1.50	.01	.84	.87	.00	-1.92	-5.03	-15.67	-33.93
	(250 YDS)	-1.50	.40	1.60	2.02	1.53	.00	-2.74	-12.61	-30.10
MPBR ZERO	(270 YDS)	-1.50	.57	1.95	2.54	2.23	.87	-1.69	-11.22	-28.36
WIND DRIFT	(10 MPH)	.00	.24	.98	2.27	4.15	6.68	9.92	18.83	31.63
INCHES	(20 MPH)	.00	.48	1.97	4.54	8.31	13.37	19.84	37.66	63.27

MAXIMUM POINT BLANK RANGE IS 310 YARDS. SET ZERO AT 265 YARDS.										
VELOCITY FPS		3700	3457	3229	3012	2806	2612	2427	2078	1766
ENERGY FT-LB		1914	1672	1458	1269	1101	954	823	604	436
DROP INCHES		.00	-.33	-1.38	-3.27	-6.12	-10.07	-15.29	-30.41	-53.65
BULLET PATH	(100 YDS)	-1.50	-.39	.00	-.45	-1.85	-4.36	-8.14	-20.38	-40.74
INCHES	(150 YDS)	-1.50	-.24	.30	.00	-1.26	-3.62	-7.25	-19.19	-39.25
(ZERO RANGE)	(200 YDS)	-1.50	.08	.93	.94	.00	-2.05	-5.37	-16.68	-36.11
	(250 YDS)	-1.50	.49	1.74	2.17	1.64	.00	-2.91	-13.41	-32.01
MPBR ZERO	(265 YDS)	-1.50	.62	2.02	2.58	2.19	.69	-2.08	-12.30	-30.63
WIND DRIFT	(10 MPH)	.00	.25	1.01	2.34	4.29	6.90	10.25	19.49	32.79
INCHES	(20 MPH)	.00	.49	2.03	4.68	8.57	13.80	20.50	38.98	65.58

MAXIMUM POINT BLANK RANGE IS 300 YARDS. SET ZERO AT 255 YARDS.										
VELOCITY FPS		3600	3363	3140	2927	2726	2536	2354	2011	1707
ENERGY FT-LB		1812	1582	1379	1198	1039	899	775	566	407
DROP INCHES		.00	-.35	-1.46	-3.46	-6.47	-10.65	-16.18	-32.22	-56.91
BULLET PATH	(100 YDS)	-1.50	-.37	.00	-.52	-2.05	-4.75	-8.80	-21.87	-43.61
INCHES	(150 YDS)	-1.50	-.19	.34	.00	-1.36	-3.89	-7.77	-20.50	-41.89
(ZERO RANGE)	(200 YDS)	-1.50	.15	1.02	1.02	.00	-2.19	-5.73	-17.78	-38.49
	(250 YDS)	-1.50	.58	1.90	2.33	1.75	.00	-3.10	-14.28	-34.12
MPBR ZERO	(255 YDS)	-1.50	.63	2.00	2.48	1.94	.24	-2.81	-13.89	-33.63
WIND DRIFT	(10 MPH)	.00	.25	1.05	2.42	4.43	7.14	10.61	20.21	34.04
INCHES	(20 MPH)	.00	.51	2.09	4.84	8.86	14.27	21.21	40.41	68.08

MAXIMUM POINT BLANK RANGE IS 290 YARDS. SET ZERO AT 250 YARDS.										
VELOCITY FPS		3500	3269	3050	2842	2646	2459	2280	1945	1648
ENERGY FT-LB		1713	1494	1301	1130	979	846	727	529	380
DROP INCHES		.00	-.37	-1.55	-3.66	-6.85	-11.28	-17.15	-34.20	-60.50
BULLET PATH	(100 YDS)	-1.50	-.34	.00	-.59	-2.26	-5.17	-9.51	-23.51	-46.77
INCHES	(150 YDS)	-1.50	-.15	.39	.00	-1.47	-4.18	-8.33	-21.93	-44.80
(ZERO RANGE)	(200 YDS)	-1.50	.22	1.13	1.10	.00	-2.34	-6.13	-18.99	-41.12
	(250 YDS)	-1.50	.69	2.07	2.51	1.88	.00	-3.31	-15.24	-36.44
MPBR ZERO	(250 YDS)	-1.50	.69	2.07	2.51	1.88	.00	-3.31	-15.24	-36.44
WIND DRIFT	(10 MPH)	.00	.26	1.08	2.50	4.59	7.39	11.00	20.99	35.40
INCHES	(20 MPH)	.00	.53	2.16	5.01	9.17	14.78	21.99	41.98	70.80

MAXIMUM POINT BLANK RANGE IS 285 YARDS. SET ZERO AT 245 YARDS.										
VELOCITY FPS		3400	3174	2960	2757	2566	2382	2206	1879	1590
ENERGY FT-LB		1616	1409	1225	1063	920	793	680	493	353
DROP INCHES		.00	-.39	-1.64	-3.88	-7.27	-11.98	-18.22	-36.37	-64.45
BULLET PATH	(100 YDS)	-1.50	-.32	.00	-.67	-2.49	-5.63	-10.30	-25.31	-50.26
INCHES	(150 YDS)	-1.50	-.09	.45	.00	-1.59	-4.51	-8.95	-23.52	-48.01
(ZERO RANGE)	(200 YDS)	-1.50	.30	1.25	1.19	.00	-2.52	-6.56	-20.33	-44.03
	(250 YDS)	-1.50	.81	2.25	2.70	2.01	.00	-3.55	-16.31	-39.00
MPBR ZERO	(245 YDS)	-1.50	.75	2.14	2.54	1.79	-.27	-3.87	-16.74	-39.54
WIND DRIFT	(10 MPH)	.00	.27	1.12	2.60	4.76	7.67	11.42	21.84	36.87
INCHES	(20 MPH)	.00	.54	2.24	5.19	9.51	15.34	22.84	43.67	73.74

MAXIMUM POINT BLANK RANGE IS 280 YARDS. SET ZERO AT 240 YARDS.

VELOCITY FPS		3300	3079	2870	2672	2484	2304	2131	1813	1532
ENERGY FT-LB		1523	1326	1152	999	863	742	635	459	328
DROP INCHES		.00	-.41	-1.74	-4.13	-7.73	-12.74	-19.39	-38.76	-68.81
BULLET PATH	(100 YDS)	-1.50	-.29	.00	-.76	-2.74	-6.13	-11.16	-27.30	-54.10
INCHES	(150 YDS)	-1.50	-.04	.51	.00	-1.73	-4.86	-9.64	-25.26	-51.56
(ZERO RANGE)	(200 YDS)	-1.50	.39	1.37	1.29	.00	-2.70	-7.05	-21.81	-47.24
	(250 YDS)	-1.50	.94	2.45	2.92	2.16	.00	-3.80	-17.48	-41.83
MPBR ZERO	(240 YDS)	-1.50	.82	2.22	2.57	1.70	-.58	-4.50	-18.41	-42.99
WIND DRIFT	(10 MPH)	.00	.28	1.16	2.69	4.94	7.97	11.88	22.76	38.46
INCHES	(20 MPH)	.00	.56	2.32	5.39	9.88	15.94	23.77	45.52	76.92

RANGE	YARDS	MUZZLE	50	100	150	200	250	300	400	500
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MAXIMUM POINT BLANK RANGE IS 270 YARDS. SET ZERO AT 230 YARDS.

VELOCITY FPS		3200	2984	2780	2587	2403	2226	2056	1746	1475
ENERGY FT-LB		1432	1246	1081	936	807	693	591	426	304
DROP INCHES		.00	-.44	-1.85	-4.39	-8.23	-13.58	-20.68	-41.41	-73.64
BULLET PATH	(100 YDS)	-1.50	-.26	.00	-.86	-3.02	-6.69	-12.12	-29.49	-58.37
INCHES	(150 YDS)	-1.50	.03	.58	.00	-1.87	-5.25	-10.39	-27.19	-55.49
(ZERO RANGE)	(200 YDS)	-1.50	.49	1.51	1.41	.00	-2.91	-7.58	-23.45	-50.81
	(250 YDS)	-1.50	1.08	2.68	3.15	2.33	.00	-4.08	-18.79	-44.99
MPBR ZERO	(230 YDS)	-1.50	.83	2.19	2.42	1.35	-1.23	-5.56	-20.75	-47.44
WIND DRIFT	(10 MPH)	.00	.29	1.21	2.80	5.14	8.30	12.39	23.76	40.18
INCHES	(20 MPH)	.00	.59	2.42	5.60	10.28	16.60	24.78	47.52	80.37

MAXIMUM POINT BLANK RANGE IS 265 YARDS. SET ZERO AT 225 YARDS.

VELOCITY FPS		3100	2889	2690	2502	2321	2147	1981	1681	1419
ENERGY FT-LB		1344	1167	1012	875	753	645	549	395	281
DROP INCHES		.00	-.47	-1.98	-4.69	-8.79	-14.50	-22.10	-44.34	-79.00
BULLET PATH	(100 YDS)	-1.50	-.23	.00	-.97	-3.33	-7.31	-13.17	-31.93	-63.11
INCHES	(150 YDS)	-1.50	.09	.65	.00	-2.04	-5.69	-11.23	-29.34	-59.87
(ZERO RANGE)	(200 YDS)	-1.50	.60	1.67	1.53	.00	-3.14	-8.17	-25.27	-54.78
	(250 YDS)	-1.50	1.23	2.92	3.41	2.51	.00	-4.40	-20.24	-48.50
MPBR ZERO	(225 YDS)	-1.50	.90	2.27	2.43	1.20	-1.64	-6.37	-22.86	-51.77
WIND DRIFT	(10 MPH)	.00	.31	1.26	2.92	5.36	8.66	12.95	24.85	42.05
INCHES	(20 MPH)	.00	.61	2.52	5.83	10.71	17.33	25.89	49.71	84.09

MAXIMUM POINT BLANK RANGE IS 255 YARDS. SET ZERO AT 220 YARDS.

VELOCITY FPS		3000	2794	2601	2416	2238	2068	1908	1615	1365
ENERGY FT-LB		1258	1092	946	816	701	598	509	365	260
DROP INCHES		.00	-.50	-2.11	-5.01	-9.40	-15.52	-23.68	-47.59	-84.95
BULLET PATH	(100 YDS)	-1.50	-.19	.00	-1.09	-3.67	-7.99	-14.34	-34.64	-68.39
INCHES	(150 YDS)	-1.50	.17	.73	.00	-2.22	-6.17	-12.16	-31.73	-64.75
(ZERO RANGE)	(200 YDS)	-1.50	.73	1.84	1.66	.00	-3.40	-8.83	-27.29	-59.20
	(250 YDS)	-1.50	1.40	3.20	3.70	2.72	.00	-4.75	-21.86	-52.40
MPBR ZERO	(220 YDS)	-1.50	.98	2.35	2.44	1.03	-2.11	-7.28	-25.23	-56.62
WIND DRIFT	(10 MPH)	.00	.32	1.31	3.04	5.59	9.06	13.55	26.04	44.04
INCHES	(20 MPH)	.00	.64	2.62	6.08	11.18	18.12	27.10	52.08	88.09

MAXIMUM POINT BLANK RANGE IS 245 YARDS. SET ZERO AT 210 YARDS.

VELOCITY FPS		2900	2700	2511	2330	2156	1989	1834	1551	1312
ENERGY FT-LB		1176	1020	882	759	650	553	470	336	241
DROP INCHES		.00	-.53	-2.26	-5.37	-10.08	-16.66	-25.43	-51.21	-91.58
BULLET PATH	(100 YDS)	-1.50	-.15	.00	-1.23	-4.05	-8.75	-15.65	-37.66	-74.26
INCHES	(150 YDS)	-1.50	.25	.82	.00	-2.42	-6.71	-13.20	-34.40	-70.18
(ZERO RANGE)	(200 YDS)	-1.50	.86	2.03	1.81	.00	-3.69	-9.57	-29.56	-64.13
	(250 YDS)	-1.50	1.60	3.50	4.03	2.95	.00	-5.15	-23.66	-56.76
MPBR ZERO	(210 YDS)	-1.50	1.00	2.30	2.23	.55	-3.00	-8.74	-28.46	-62.76
WIND DRIFT	(10 MPH)	.00	.33	1.37	3.18	5.85	9.49	14.21	27.32	46.19
INCHES	(20 MPH)	.00	.66	2.73	6.35	11.70	18.99	28.42	54.65	92.37

MAXIMUM POINT BLANK RANGE IS 240 YARDS. SET ZERO AT 205 YARDS.

VELOCITY FPS		2800	2606	2421	2243	2073	1912	1761	1488	1262
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ENERGY FT-LB		1096	950	820	704	601	511	434	309	222
DROP INCHES		.00	-.57	-2.43	-5.76	-10.83	-17.92	-27.39	-55.25	-98.96
BULLET PATH	(100 YDS)	-1.50	-.11	.00	-1.37	-4.48	-9.60	-17.11	-41.04	-88.82
INCHES	(150 YDS)	-1.50	.35	.92	.00	-2.64	-7.31	-14.36	-37.38	-76.24
(ZERO RANGE)	(200 YDS)	-1.50	1.01	2.24	1.98	.00	-4.01	-10.39	-32.09	-69.63
	(250 YDS)	-1.50	1.81	3.84	4.39	3.21	.00	-5.58	-25.68	-61.62
MPBR ZERO	(205 YDS)	-1.50	1.08	2.39	2.21	.30	-3.64	-9.95	-31.50	-68.89
WIND DRIFT	(10 MPH)	.00	.34	1.42	3.32	6.13	9.97	14.92	28.71	48.46
INCHES	(20 MPH)	.00	.69	2.85	6.64	12.27	19.93	29.84	57.42	96.92

MAXIMUM POINT BLANK RANGE IS 235 YARDS. SET ZERO AT 200 YARDS.

VELOCITY FPS		2700	2510	2329	2155	1989	1834	1687	1425	1214
ENERGY FT-LB		1019	881	758	649	553	470	398	284	206
DROP INCHES		.00	-.62	-2.61	-6.21	-11.69	-19.36	-29.62	-59.87	-107.37
BULLET PATH	(100 YDS)	-1.50	-.06	.00	-1.54	-4.96	-10.57	-18.77	-48.91	-88.29
INCHES	(150 YDS)	-1.50	.45	1.03	.00	-2.90	-8.00	-15.69	-40.79	-83.15
(ZERO RANGE)	(200 YDS)	-1.50	1.18	2.48	2.18	.00	-4.37	-11.33	-34.99	-75.90
	(250 YDS)	-1.50	2.05	4.23	4.80	3.50	.00	-6.09	-27.99	-67.15
MPBR ZERO	(200 YDS)	-1.50	1.18	2.48	2.18	.00	-4.37	-11.33	-34.99	-75.90
WIND DRIFT	(10 MPH)	.00	.36	1.50	3.50	6.48	10.52	15.75	30.28	50.97
INCHES	(20 MPH)	.00	.72	3.00	7.01	12.95	21.04	31.50	60.56	101.94

RANGE YARDS	MUZZLE	50	100	150	200	250	300	400	500
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MAXIMUM POINT BLANK RANGE IS 225 YARDS. SET ZERO AT 190 YARDS.

VELOCITY FPS		2600	2414	2237	2067	1907	1756	1614	1364	1170
ENERGY FT-LB		945	815	700	597	508	431	364	260	191
DROP INCHES		.00	-.67	-2.82	-6.72	-12.65	-20.98	-32.12	-65.05	-116.78
BULLET PATH	(100 YDS)	-1.50	.00	.00	-1.73	-5.50	-11.66	-20.65	-49.25	-96.66
INCHES	(150 YDS)	-1.50	.57	1.16	.00	-3.19	-8.78	-17.18	-44.63	-90.88
(ZERO RANGE)	(200 YDS)	-1.50	1.37	2.75	2.39	.00	-4.79	-12.39	-38.25	-82.90
	(250 YDS)	-1.50	2.33	4.67	5.27	3.83	.00	-6.65	-30.59	-73.33
MPBR ZERO	(190 YDS)	-1.50	1.20	2.41	1.87	-.69	-5.65	-13.43	-39.63	-84.63
WIND DRIFT	(10 MPH)	.00	.38	1.59	3.71	6.85	11.12	16.65	31.97	53.59
INCHES	(20 MPH)	.00	.76	3.17	7.41	13.70	22.25	33.30	63.94	107.19

MAXIMUM POINT BLANK RANGE IS 220 YARDS. SET ZERO AT 185 YARDS.

VELOCITY FPS		2500	2318	2145	1980	1825	1679	1543	1306	1129
ENERGY FT-LB		874	752	643	548	466	394	333	238	178
DROP INCHES		.00	-.72	-3.06	-7.29	-13.74	-22.80	-34.94	-70.89	-127.30
BULLET PATH	(100 YDS)	-1.50	.06	.00	-1.95	-6.12	-12.90	-22.76	-54.15	-106.00
INCHES	(150 YDS)	-1.50	.71	1.30	.00	-3.52	-9.65	-18.86	-48.95	-99.51
(ZERO RANGE)	(200 YDS)	-1.50	1.59	3.06	2.64	.00	-5.25	-13.59	-41.91	-90.71
	(250 YDS)	-1.50	2.64	5.16	5.79	4.20	.00	-7.29	-33.51	-80.21
MPBR ZERO	(185 YDS)	-1.50	1.31	2.49	1.79	-1.13	-6.67	-15.28	-44.17	-93.54
WIND DRIFT	(10 MPH)	.00	.40	1.68	3.93	7.26	11.78	17.62	33.77	56.29
INCHES	(20 MPH)	.00	.81	3.36	7.86	14.52	23.56	35.25	67.53	112.57

MAXIMUM POINT BLANK RANGE IS 205 YARDS. SET ZERO AT 175 YARDS.

VELOCITY FPS		2400	2223	2053	1894	1744	1603	1473	1251	1093
ENERGY FT-LB		805	691	589	501	425	359	303	218	167
DROP INCHES		.00	-.78	-3.33	-7.93	-14.97	-24.86	-38.14	-77.47	-139.07
BULLET PATH	(100 YDS)	-1.50	.13	.00	-2.19	-6.81	-14.29	-25.15	-59.66	-116.43
INCHES	(150 YDS)	-1.50	.86	1.46	.00	-3.89	-10.63	-20.77	-53.81	-109.12
(ZERO RANGE)	(200 YDS)	-1.50	1.83	3.41	2.92	.00	-5.78	-14.94	-46.03	-99.40
	(250 YDS)	-1.50	2.99	5.72	6.38	4.62	.00	-8.01	-36.79	-87.85
MPBR ZERO	(175 YDS)	-1.50	1.32	2.38	1.38	-2.04	-8.33	-18.00	-50.12	-104.51
WIND DRIFT	(10 MPH)	.00	.43	1.78	4.17	7.70	12.49	18.67	35.66	59.00
INCHES	(20 MPH)	.00	.86	3.57	8.35	15.40	24.97	37.34	71.31	118.00

MAXIMUM POINT BLANK RANGE IS 200 YARDS. SET ZERO AT 170 YARDS.

VELOCITY FPS		2300	2127	1962	1809	1664	1529	1405	1199	1060
ENERGY FT-LB		739	632	538	457	387	327	276	201	157
DROP INCHES		.00	-.85	-3.63	-8.67	-16.36	-27.19	-41.76	-84.89	-152.18
BULLET PATH	(100 YDS)	-1.50	.21	.00	-2.47	-7.60	-15.87	-27.87	-65.87	-128.03

INCHES	(150 YDS)	-1.50	1.03	1.65	.00	-4.31	-11.75	-22.93	-59.28	-119.80
(ZERO RANGE)	(200 YDS)	-1.50	2.11	3.80	3.23	.00	-6.37	-16.47	-50.67	-109.03
	(250 YDS)	-1.50	3.38	6.35	7.05	5.10	.00	-8.83	-40.48	-96.29
MPBR ZERO	(170 YDS)	-1.50	1.44	2.46	1.22	-2.68	-9.73	-20.50	-56.04	-115.74
WIND DRIFT	(10 MPH)	.00	.46	1.90	4.43	8.17	13.25	19.78	37.61	61.67
INCHES	(20 MPH)	.00	.91	3.80	8.86	16.34	26.49	39.57	75.22	123.33

MAXIMUM POINT BLANK RANGE IS 195 YARDS. SET ZERO AT 165 YARDS.

VELOCITY FPS		2200	2031	1873	1724	1585	1456	1340	1153	1031
ENERGY FT-LB		676	577	491	416	351	296	251	185	148
DROP INCHES		.00	-.93	-3.98	-9.50	-17.94	-29.86	-45.87	-93.27	-166.77
BULLET PATH	(100 YDS)	-1.50	.30	.00	-2.78	-8.49	-17.66	-30.95	-72.86	-140.89
INCHES	(150 YDS)	-1.50	1.23	1.86	.00	-4.78	-13.03	-25.38	-65.44	-131.62
(ZERO RANGE)	(200 YDS)	-1.50	2.43	4.25	3.59	.00	-7.05	-18.21	-55.88	-119.66
	(250 YDS)	-1.50	3.84	7.07	7.82	5.64	.00	-9.75	-44.60	-105.56
MPBR ZERO	(165 YDS)	-1.50	1.57	2.52	1.00	-3.44	-11.35	-23.37	-62.77	-128.27
WIND DRIFT	(10 MPH)	.00	.49	2.02	4.71	8.68	14.06	20.96	39.59	64.21
INCHES	(20 MPH)	.00	.98	4.04	9.42	17.35	28.11	41.92	79.17	128.41

MAXIMUM POINT BLANK RANGE IS 185 YARDS. SET ZERO AT 155 YARDS.

VELOCITY FPS		2100	1937	1785	1641	1508	1386	1278	1110	1004
ENERGY FT-LB		616	525	445	376	318	268	228	172	141
DROP INCHES		.00	-1.03	-4.37	-10.45	-19.75	-32.89	-50.56	102.72	-182.96
BULLET PATH	(100 YDS)	-1.50	.41	.00	-3.14	-9.51	-19.72	-34.45	-80.73	-155.10
INCHES	(150 YDS)	-1.50	1.46	2.09	.00	-5.32	-14.48	-28.16	-72.36	-144.64
(ZERO RANGE)	(200 YDS)	-1.50	2.79	4.76	3.99	.00	-7.83	-20.18	-61.71	-131.33
	(250 YDS)	-1.50	4.35	7.89	8.69	6.26	.00	-10.79	-49.19	-115.67
MPBR ZERO	(155 YDS)	-1.50	1.58	2.34	.37	-4.84	-13.87	-27.43	-71.38	-143.42
WIND DRIFT	(10 MPH)	.00	.52	2.15	5.00	9.21	14.90	22.18	41.52	66.54
INCHES	(20 MPH)	.00	1.04	4.29	10.00	18.42	29.81	44.35	83.04	133.08