

RANGE TABLE FOR 12-INCH MORTAR (STEEL)

With 1046- and 824-pound D. P. Shell (short cap), and 700-pound D. P. Shell (long-pointed).

[Prepared under the direction of the Chief of Coast Artillery, by the Coast Artillery Board.]

1046-LB. SHELL. Zone I.										1046-LB. SHELL. Zone VI.									
Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.	Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.
			O. I.	D. P.									O. I.	D. P.					
°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.	°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.
45	2028	24.3	2.10	2.03	47	2383	514	514	2.3	45	7492	39.2	2.10	2.63	49	6185	915	794	4.5
46	2026	24.8	2.19	2.74	48	2478	515	515	40	7486	40.0	2.19	2.74	50	6430		706		
47	2020	25.2	2.28	2.85	49	2563	515	515	47	7470	40.7	2.28	2.85	51	6674		708		
48	2010	25.7	2.37	2.90	50	2653	516	516	48	7444	41.4	2.37	2.90	52	6919		800		
49	2096	26.1	2.47	3.09	51	2743	516	516	49	7408	42.2	2.47	3.09	53	7163		802		
50	2878	26.5	2.57	3.21	52	2833	517	517	2.4	50	7303	42.9	2.57	3.21	54	7408		803	4.8
51	2856	26.9	2.68	3.35	53	2923	517	517	51	7308	43.6	2.68	3.35	55	7652		805		
52	2830	27.3	2.79	3.49	54	3013	517	517	52	7244	44.3	2.79	3.49	56	7897		806		
53	2800	27.8	2.91	3.64	55	3103	518	518	53	7170	45.0	2.91	3.64	57	8142		807		
54	2767	28.2	3.04	3.80	56	3193	518	518	54	7087	45.6	3.04	3.80	58	8386		808		
55	3731	28.6	3.17	3.98	57	3282	518	518	2.6	55	6994	46.3	3.17	3.98	59	8631		809	5.1
56	2692	28.9	3.31	4.14	58	3372	519	519	56	6892	46.9	3.31	4.14	60	8875		810		
57	2650	29.3	3.46	4.33	59	3461	519	519	57	6781	47.6	3.46	4.33	61	9120		811		
58	2606	29.7	3.62	4.53	60	3550	519	519	58	6661	48.2	3.62	4.53	62	9365		812		
59	2557	30.1	3.79	4.74	61	3640	520	520	59	6532	48.9	3.79	4.74	63	9609		813		
60	2507	30.4	3.97	4.98	62	3729	520	520	2.7	60	6394	49.5	3.97	4.98	64	9854		813	5.3
61	2454	30.8	4.10	5.20	63	3818	520	520	61	6246	50.1	4.16	5.20	65	10098		813		
62	2398	31.2	4.30	5.45	64	3907	520	520	62	6089	50.7	4.30	5.45	66	10343		814		
63	2330	31.5	4.58	5.73	65	3996	520	520	63	5923	51.3	4.58	5.73	67	10588		814		
64	2278	31.9	4.82	6.03	66	4085	520	520	64	5748	51.9	4.82	6.03	68	10832		814		
65	2214	32.2	5.08	6.35	67	4174	520	520	2.7	65	5564	52.5	5.08	6.35	69	11077		814	5.4

Zone II.										Zone VII.									
Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.	Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.
			O. I.	D. P.									O. I.	D. P.					
°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.	°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.
45	3438	26.4	2.10	2.03	47	2796	600	554	2.6	45	9387	43.6	2.10	2.63	50	7627	1050	871	5.3
46	3436	26.8	2.19	2.74	48	2902	600	555	46	9380	44.4	2.19	2.74	51	7931		874		
47	3429	27.3	2.28	2.85	49	3008	600	555	47	9360	45.2	2.28	2.85	52	8235		877		
48	3418	27.8	2.37	2.96	50	3114	600	556	48	9328	46.0	2.37	2.96	53	8539		880		
49	3402	28.3	2.47	3.09	51	3220	600	556	49	9283	46.9	2.47	3.09	54	8843		882		
50	3382	28.8	2.57	3.21	52	3326	600	557	2.7	50	9226	47.7	2.57	3.21	55	9147		884	5.6
51	3358	29.2	2.68	3.35	53	3432	600	557	51	9150	48.4	2.68	3.35	56	9450		888		
52	3329	29.6	2.79	3.49	54	3538	600	558	52	9074	49.2	2.79	3.49	57	9753		888		
53	3296	30.1	2.91	3.64	55	3644	600	558	53	8970	50.0	2.91	3.64	58	10056		890		
54	3259	30.5	3.04	3.80	56	3750	600	559	54	8872	50.7	3.04	3.80	59	10358		892		
55	3218	31.0	3.17	3.98	57	3856	600	559	2.9	55	8753	51.5	3.17	3.98	60	10660		894	5.9
56	3172	31.4	3.31	4.14	58	3961	600	559	56	8622	52.2	3.31	4.14	61	10962		895		
57	3122	31.8	3.46	4.33	59	4067	600	560	57	8470	52.9	3.46	4.33	62	11263		896		
58	3068	32.2	3.62	4.53	60	4173	600	560	58	8324	53.6	3.62	4.53	63	11564		897		
59	3010	32.6	3.79	4.74	61	4278	600	560	59	8157	54.3	3.79	4.74	64	11865		898		
60	2940	33.0	3.97	4.98	62	4384	600	561	3.0	60	7978	55.0	3.97	4.98	65	12165		899	6.2
61	2884	33.4	4.16	5.20	63	4489	600	561	61	7787	55.7	4.16	5.20	66	12465		899		
62	2816	33.8	4.36	5.45	64	4594	600	561	62	7584	56.3	4.36	5.45	67	12765		900		
63	2742	34.2	4.58	5.73	65	4700	600	561	63	7370	57.0	4.58	5.73	68	13065		900		
64	2666	34.6	4.82	6.03	66	4805	600	561	64	7144	57.6	4.82	6.03	69	13365		901		
65	2587	35.0	5.08	6.35	67	4910	600	561	3.1	65	6907	58.3	5.08	6.35	70	13665		901	6.3

Zone III.										824-LB. SHELL. Zone VIII A.									
Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.	Elevation.	Range.	Time of flight.	Drift.		Angle of fall.	Max. ordinate.	Muzzle velocity.	Terminal velocity.	Perforation deck steel.
			O. I.	D. P.									O. I.	D. P.					
°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.	°	Yards.	Seconds.	°	°	°	Feet.	f. s.	f. s.	Ins.
45	4086	28.7	2.10	2.03	48	3314	600	599	2.0	45	12150	51.2	2.67	3.34	55	10522	1300	932	5.4
46	4083	29.2	2.19	2.74	49	3441	600	599	46	12140	52.2	2.78	3.48	56	10968		938		
47	4076	29.8	2.28	2.85	50	3568	600	601	47	12112	53.2	2.89	3.61	57	11414		943		
48	4062	30.3	2.37	2.96	51	3695	600	602	48	12066	54.3	3.01	3.76	58	11860		948		
49	4043	30.8	2.47	3.09	52	3821	600	603	49	12002	55.3	3.13	3.91	59	12306		953		
50	4019	31.3	2.57	3.21	53	3948	600	603	3.1	50	11920	56.3	3.26	4.08	60	12752		957	5.8
51	3989	31.8	2.68	3.35	54	4095	600	604	51	11821	57.3	3.40	4.25	61	13198		961		
52	3954	32.3	2.79	3.49	55	4201	600	604	52	11705	58.2	3.54	4.43	62	13644		965		
53	3914	32.8	2.91	3.64	56	4327	600	605	53	11579	59.1	3.68	4.61	63					

Ord. 2736

P.A. E.O. 3380

Quantity _____ Charges

Loaded at Picatinny Arsenal, N. J.

1931

1 Ten Section Allquot Part Charge for 12 in. Mortar Model 1890-08
Smokeless Powder P. A. Lot 3048-A of 1919

zone	Powder per Section		Total Charge		Temp. of Powder Deg. F.	Wt. of Projectile, lbs.	Muzzle Velocity F. S.	Pressure Pounds Sq. In.
	Lbs.	Ozs.	lbs.	ozs.				
3	6	8.4	19	9.2	70	1046	580	33350
4	6	8.4	26	1.6	70	1046	685	
5	6	8.4	32	10.0	70	1046	790	
6	6	8.4	39	2.4	70	1046	900	
7	6	8.4	45	10.8	70	1046	1000	
8	6	8.4	52	3.2	70	700	1230	
9	6	8.4	58	11.6	70	824	1312	
10	6	8.4	65	4.0	70	700	1500	

Weight of Igniter 12 ozs. Black Powder Lot 115
in separate pad.

USE ONLY ONE (1) IGNITER PER CHARGE AS FIRED

Certified to by: J. NIXON, Inspector.



REMOVE BEFORE FIRING