



WWII United States Navy Ship and Gun List

Ship Class	Body Type	Inches of Class 'A' (vertical/ horizontal) armor														
		Tur F	Tur S	Tur R	Tur Top	BB	Belt Eng	Belt Mag	Up Belt	Deck Eng	Deck Mag	2 nd Tur	Low Belt	AB f,a	CT f,a	FCD f,a,t
Iowa	R	19	9	12	7	17	1½^14	1½^15	1	1½^8	1½^8	2½ 2½	¼^4	11	17,1	18,1,1
South Dakota	R	18	9	12	7	17	1½^14	1½^15	1	1½^7	1½^7	2 2	¼^4	11	16,1	16,1,1
North Carolina	R	16	10	12	7	16	13	15	1	1½^6	1½^6	2 2	½	11	15,1	15,1
Maryland	R	17	9	10	5	13	13^14	13^14	¾	4^6	4^6	¾ 1½	½	13	15,1	,1,1
Tennessee 1943	R	17	9	10	7	13	13^14	13^14	¾	4^8	5^8	¾ ¾	½	13	15,1	,1,1
Tennessee 1941	R	17	9	10	5	13	13^14	13^14	¾	3½^5	3½^6	¾ ¾	½	13	15,1	,1,1
New Mexico	R	17	9	10	5	13	11^14	14^17	¾	5^7	5^8	¾ ¾	½	13	15,1	,1,1
Pennsylvania	R	17	9	9	5	13	11^14	14^17	¾	4^7	4^7	¾ ¾	½	13	15,1	,1,1
Alaska	R	13	6/5	5	5	13	10	10	1	1½^5	1½^5	1 1	½	9	11,1	11,1,1
Baltimore	S	8	4/2	1½	3	6	6	6	3	2½	2½	1 1	½	6	6	,¼
Cleveland	S	7	3	1½	3	6	5	5	3	2	2	1 1	½	5,4	5	,¼
San Francisco	S	8	1½	1½	3	7	6	5	3	2½	2½	1 1	½	3,2	5	,¼
New Orleans	S	6	1½	1½	3	5	6	5	3	2½	2½	1 1	½	3,2	5	,¼
Atlanta	S	S	1½	1½	1½	1½	4	4	1½	1½	1½	¾ ¾	½	4	2½	,¼
Wichita	S	8	4	1½	3	7	6	5	1	2½	2½	¾ ¾	½	6,5	6	,¼
St. Louis CL49-50	S	7	1½	1½	2	6	5	5	3	2	2	1 1	½	5,4	5	,¼
Brooklyn	S	7	3/1½	1½	2	6	5	5	3	2	2	1 1	½	5,4	5	,¼
Portland	S	2½	1	1	2	1½	2½	6	3	2½	2½	¾ 0	½	1½	1½	,¼
Northampton	S	2½	1	1	1½	1½	3	3½/4	1	1	2	¾ 0	½	1½	1	,¼
Pensacola	S	2½	1	1	1½	1	3½	4	1	1½	2	¾ 0	½	1	1½	,¼
Omaha	S	¾				1	2	3	1	1½	1½		½	1	1½	,¼
Sampson	S	¾				½	¾	½		¾	¾			¾	¾	
Wickes	S	¾				½	¾	½		¾	¾	-		¾	¾	
Clemson	S	¾				½	¾	½		¾	¾	-		¾	¾	
Farragut	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Porter	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Mahan	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Somers	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Gridley	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Bagley	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Sims	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Benham	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Benson	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Bristol	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Fletcher	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Sumner	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	
Gearing	S	¾	¾	¾	¾	½	¾	½		¾	¾	-		¾	¾	

Note:

A/B= Two possible values for this armor, each with a 50/50 chance of occurring.

A^B= Two layers of armor. Roll once for penetration. If resulting penetration equals or surpasses B then full damage happens. If it only equals or surpasses A then nominal damage is imparted.

f, a= forward, or aft conning tower

f, a, t= main (usually forward), aft main or secondary, tertiary or torpedo fire control director

Note - Ship configurations changed throughout the war as additional threat of air attack increased more anti-aircraft guns were added. Shown here tend to the earlier configurations.



WWII United States Navy Ship Data List

Ship Class	United States Navy Ship Data																	
	Main	ROF	Secondary	ROF	Tertiary, High AA	ROF	Low AA	Torpedo	Protection			Radar	Rng Fndr	Planes	Hulls	Engines	Speed	Size
									Flash	UW	DC							
Iowa	16"/50 (3x3)	1	5"/38 (10x2):6	2.75	<		80:4,49:2		4	2	5	+1	3	26	5	24	7	
South Dakota	16"/45 (3x3)	1	5"/38 (10x2):6	2.75	<		12:3,12:1		4	2	5	+1	3	20	5	20	6	
Alabama (S.D.)	16"/45 (3x3)	1	5"/38 (8x2):6	2.75	<		20:3,12:1		4	2	5	+1	3	20	5	20	6	
North Carolina	16"/45 (3x3)	1	5"/38 (10x2):6	2.75	<		16:3,12:1		3	2	5	+1	3	20	5	21	6	
Maryland	16"/45 (4x2)	.75	5"/38 (8x2):6	2.75	<		40:4,43:2		3	2	5	+1		16	4	15	6	
Tennessee '43	14"/50 (3x3)	.75	5"/38 (8x2):6	2.75	<		40:4,43:2		3	2	5	+1		18	4	16	6	
Tennessee '41	14"/50 (3x3)	.75	5"/51 (14x1)	2	3"/50 (4x1):3	2.75	8:1	21" (2x1)	1	1	5	+1		16	4	15	6	
New Mexico	14"/50 (4x3)	.75	5"/38 (8):6	2.75	5"/38 (12):6	2.75	40:4,43:2		2	1	5	+1		16	4	15	6	
Pennsylvania '43	14"/45 (4x3)	.75	5"/38 (8x2):6	2.75	<		40:4,43:2		3	2	5	+1		16	4	16	6	
Alaska	12"/50 (3x3)	1.25	5"/38 (6x2):6	2.75	<		56:4,34:2		3	2	5	+1		15	4	24	6	
Baltimore	Mk 21 8"/55 (3x3)	1.75	5"/38 (6x2):6	2.75	<		48:4,26:2		3	1	4	+1		8	4	25	4	
Cleveland	6"/47 (4x3)	2.25	5"/38 (6x2):6	2.75	<		28:4,19:2		3	1	4	+1		6	4	25	3	
San Francisco	Mk19 8"/55 (3x3)	1.75	5"/25 (8x1):6	2.75	<		8:1		3	1	4	+1		6	4	25	3	
New Orleans	Mk19 8"/55 (3x3)	1.25	5"/25 (8x1):6	2.75	<		8:1		3	1	4	+1		6	4	25	3	
Atlanta CL51	5"/38 (8x2):6	2.75	<		<		16:4,24:2	21" (2x4)	2	1	3	+1		4	3	25	2	
Wichita	Mk19 8"/55 (3x3)	1.75	5"/38 (8x1):6	2.75	<		16:3		3	1	4	+1		6	4	24	3	
St. Louis	6"/47 (5x3)	2.25	5"/38 (8x1):6	2.75	<		4:3		3	1	4	+1		6	4	24	3	
Brooklyn	6"/47 (5x3)	2.25	5"/25 (8x1):6	2.75	<		16:4,28:2		2	1	4	+1		5	3	24	3	
Portland	Mk19 8"/55 (3x3)	1.25	5"/25 (8x1):6	2.75	<		8:1		2	1	4	+1		6	4	24	3	
Northampton	Mk19 8"/55 (3x3)	1.25	5"/25 (4x1):6	2.75	<			21" (2x3)	1	1	4	+1		5	3	24	3	
Pensacola	Mk19 8"/55 (2x3,2x2)	1.25	5"/25 (4x1):6	2.75	<		16:3,8:1	21" (2x3)	1	1	4	+1		5	3	24	3	
Omaha	6"/53 (2x2,8x1)	2	3"/50 (2x1):3	2.75	<		8:3,8:1		1		3			4	3	26	2	
Sampson	4"/50 (4x1)	2.25					2:2	21" (4x3)			2			1	2	22	1	
Wickes	4"/50 (4x1)	2.25						21" (4x3)			2			1	2	26	1	
Clemson	4"/50 (4x1)	2.25						21" (4x3)			2			1	2	26	1	
Farragut	5"/38 (5x1):6	2.75					4:1	21" (4x2)			2			2	2	27	1	
Porter	5"/38 (4x2):6	2.75					8:3,2:1	21" (2x4)			2			2	2	27	1	
Mahan	5"/38 (5x1):6	2.75					4:1	21" (3x4)			2			2	2	27	1	
Somers	5"/38 (4x2):6	2.75					8:3,2:1	21" (3x4)			2			2	2	27	1	
Gridley	5"/38 (4x1):6	2.75					4:1	21" (4x4)			2			2	2	28	1	
Bagley	5"/38 (4x1):6	2.75					4:1	21" (4x4)			2			2	2	28	1	
Sims	5"/38 (5x1):6	2.75					4:1	21" (2x4)			2			2	2	26	1	
Benham	5"/38 (4x1):6	2.75					4:1	21" (4x4)			2			2	2	28	1	
Benson	5"/38 (5x1):6	2.75					6:1	21" (2x5)			2			2	2	26	1	
Bristol	5"/38 (5x1):6	2.75					4:3,4:2	21" (1x5)			2			2	2	26	1	
Fletcher	5"/38 (5x1):6	2.75					4:3,8:2	21" (2x5)			2			2	2	28	1	
Sumner	5"/38 (3x2):6	2.75					12:4,11:2	21" (2x5)			2			2	2	27	1	
Gearing	5"/38 (3x2):6	2.75					12:4,11:2	21" (2x5)			2			2	2	27	1	
'GMT' DE	3"/50 (3x1):3	2.75	Hedgehog				4:3,9:2				1			1	1	15	1	
'TE' DE	3"/50 (3x1):3	2.75	Hedgehog				4:3,8:2	21" (1x3)			2			2	1	17	1	
'TEV' & 'WGT' DE	5"/38 (2x1):6	2.75	Hedgehog				4:3,10:2	21" (1x3)			2			2	1	17	1	
'DET' & 'FMR' DE	3"/50 (3x1):3	2.75	Hedgehog				2:3,10:2	21" (1x3)			1			1	1	15	1	

(NxG) = number of turrets or mounts with 'G' number of guns in each.

:B = B is the damage factors inflicted per hit by this AA battery,

C:B = C is the chance to hit aircraft with this weapon. B is the damage factors inflicted to aircraft per hit.

< = Dual Purpose. See column to the left for guns fulfil this role.

ROF .75 - 12=9, 11=8, 10=8, 9=7, 8=6, 7=5, 6=5, 5=4, 4=3, 3=2, 2=2, 1=1.

Range Findervalue applies to the main battery only. For secondaries the value is one less. For tertiaries it is two less.



WWII United States Navy Carrier Data List

Carrier Class	United States Navy Carrier Data																					
	High AA	ROF	Low AA									Service		Protection			Radar	Aircraft	Hulls	Engines	Speed	Size
				Belt Eng	Belt Mag	Up Bel	Deck Eng	Deck Mag	Low Belt	AB f,a	CT	Hang	Lifts	Flash	UW	DC						
Lexington	5"/25(12x1):6	2.75	48:1	6	6	½	1 1½^3½	1 1½^3½	¼^2	7	2	1	2	1	2	4		63	17	4	24	7
Ranger	5"/25(8x1):6	2.75	40:1	½/1	3½	¼	¼^1	¼ 1^2	1	1	-	1	3	1	1	4		76	7	4	21	5
Yorktown	5"/38(8x1):6	2.75	16:2,24:1	2½/4	4½	¼	¼ 2½^3½	¼ 2½^4	1½	4	1½	1	3	1	2	4		96	9	4	24	6
Wasp	5"/38(8x1):6	2.75	16:2,24:1	1½	4	¼	¼ 1½^3	¼ 1½^4	1½	1½	1½	1	3	1	1	4		76	7	4	22	5
Essex	5"/38(12x1):6	2.75	32:4,46:2	2½/4	4½	¼	¼ 1½^3½	¼ 1½^3½	1½	4	1½	2	3	2	2	4		91	13	4	24	7
Independence			24:4,22:2	1½	5	¼	¼ 2^2¼	¼ 2^3	1	5	½	1	2	1	1	3		27	6	4	23	4
Saipan			40:4,32:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1		1	1	4		48	7	4	24	4
Long Island	3"/50(4x1):3	2.75	10:2,4:1	¼	¼	-	¼^½	¼^½	¼	¼	-	1				3		16	6	4	12	3
Charger	3"/50(4x1):3	2.75	10:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1				3		36	6	4	12	3
Bogue	5"/51(2x1)	2	4:4,10:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1	2			3		24	5	4	12	2
Sangamon	5"/51(2x1)	2	8:4,12:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1	2			3		25	5	4	13	3
Casablanca	5"/38(1):6	2.75	8:4,12:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1	2			3		27	4	3	14	2
Commencement Bay	5"/38(2x1):6	2.75	36:4,20:2	¼	¼	-	¼^½	¼^½	¼	¼	-	1			1	4		33	9	4	14	3

16"/ 50 1943-44 Max 38,700	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																										
				32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10				
Up to range	AP	2	N	23	33	45	56	67	79	91	105	118	132	146	162	177	197	217	240	260	283	311	352	370	379	387				
				-	1½	2	2½	3	3½	4	5	6	7	8	9	10	11	12	13	14	DAF	1	2	3	4	5	6	7	8	
Over range				0	66	94	119	144	171	198	242	279	299	314	324	334	340	347	354	362	Range+	85	116	152	188	221	262	309	366	

16"/50 1945+ Max 38,700	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																										
				36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	
Up to range	AP	2	N	17	27	37	47	57	68	79	89	101	113	126	138	152	165	179	197	217	236	256	274	299	324	347	369	378	387	
				-	1½	2	2½	3	3½	4	5	6	7	8	9	10	11	12	13	14	DAF	1	2	3	4	5	6	7	8	
Over range				0	66	94	119	144	171	198	242	279	299	314	324	333	340	347	354	362	Range+	85	116	152	188	221	262	309	366	

16"/45 1939-1944 Max 33,700	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
				29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9					
Up to range	AP	2	N	21	33	45	56	68	81	94	108	123	140	156	173	193	217	240	263	284	303	320	330	337					
				-	1½	2	2½	3	3½	4	5	6	7	8	9	10	11	12	13	14	DAF	1	2	3	4	5	6	7	8
Over range				0	66	89	117	143	167	190	219	251	274	284	293	300	306	312	320	326	Range+	71	102	134	165	196	233	276	322

16"/45 1945+ Max 32,000	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																											
				32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10					
Up to range	AP	2	N	24	34	43	52	62	72	82	93	104	116	129	142	155	169	183	206	229	250	270	293	308	313	320					
				-	1½	2	2½	3	3½	4	5	6	7	8							DAF			1	2	3	4	5	6	7	8
Range over				0	76	107	137	167	192	217	249	279	295	309							Range over			71	102	134	165	196	233	276	322

14"/50 1937-44 Max 33,850	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
				29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8				
Up to range	AP	3	N	20	29	38	48	57	66	76	86	96	109	121	135	149	163	177	197	222	244	265	296	324	339				
				-	1	1½	2	2½	3	3½	4	5	6	7	8						DAF	1	2	3	4	5	6	7	8
Range over				0	53	88	125	162	192	222	243	274	294	311	322						Range over	86	114	146	177	197	242	282	336

14"/50 1937-44 Max 33,500	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
				14	13	12	11	10	9	8	7	6	5	4															
Up to range	HE	2	N	29	48	66	86	109	135	163	197	244	296	335															
				3½	4	5	6														DAF	1	2	3	4	5	6	7	8
Range over				0	241	280	334														Range over	87	115	147	177	196	241	280	334

14"/45 1937-1944 Max 31,800	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
				27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7					
Up to range	AP	4	N	26	35	44	53	62	71	81	91	106	116	131	145	159	174	193	217	24	263	287	309	318					
				-	1	1½	2	2½	3	3½	4	5	6	7							DAF	1	2	3	4	5	6	7	
Range over				0	53	88	125	162	197	226	249	268	293	299							Range over	72	102	134	166	198	232	270	

14"/45 1937-1944 Max 31,700	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
				13	12	11	10	9	8	7	6	5	4	3½															
Up to range	HE	3	N	35	53	71	91	116	145	174	217	263	309	318															
				3½	4	5																DAF	1	2	3	4	5	6	7
Range over				0	232	270																Range over	72	102	134	166	198	232	270

12"/50 1944-1947 Max 35,300	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6			
Up to range	AP	4	N	20	32	44	56	68	81	94	110	126	143	160	177	201	230	262	296	324	347	353			
				-	1	1½	2	2½	3	3½	4	5	6	7	8	9	10			DAF			1	2	3
Range over				0	50	94	131	168	198	231	254	278	294	303	313	323	335			Range over			81	110	140

12"/50 1944+ Max 34,800	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				12	11	10	9	8	7	6	5	4	3½	3											
Up to range	HE	3	N	20	44	68	94	126	160	201	262	324	347	348											
				3	3½	4	5													DAF			1	2	3
Range over				0	232	274	321													Range over			83	112	141

8"/55 mk19 Max 29,100	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				15	14	13	12	11	10	9	8	7	6	5	4	3½	3	2½							
Up to range	AP	7	N	16	28	40	52	66	81	97	116	136	159	189	223	249	272	291							
				-	½	1	1½	2	2½	3	3½	4								DAF			1	2	3
Range over				0	33	98	169	199	221	236	250	264								Range over			71	95	117

8"/55 mk19 Max 27,000	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				7	6	5	4	3½	3	2½	2														
Up to range	HE	5	N	28	52	81	116	136	159	189	270														
				2	2½	3	3½													DAF			1	2	3
Range over				0	185	214	250													Range over			71	95	117

8"/55 Mk 21 Max 27,400	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				13	12	11	10	9	8	7	6	5	4	3½	3										
Up to range	AP	6	N	24	40	55	71	88	110	133	162	198	240	261	274										
				-	½	1	1½	2	2½	3	3½	4	5	6						DAF			1	2	3
Range over				0	26	78	133	178	206	221	232	241	251	270						Range over			80	103	129

8"/55 Mk 21 Max 27,300	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				7	6	5	4	3½	3	2½	2														
Up to range	HE	5	N	28	52	81	116	136	159	189	273														
				2	2½	3	3½													DAF			1	2	3
Range over				0	185	214	250													Range over			70	95	117

6"/53 Max 19,200 Max 23,100	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				10	9	8	7	6	5	4½	4	3½	3	2½	2										
Up to range	AP	9	N	11	21	34	50	71	90	102	113	125	149	210	231										
				-	½	1	1½	2	2½											DAF			1	2	3
Range over				0	35	106	155	181	207											Range over			67	92	111

6"/53 Max 19,200 Max 23,100	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																					
				8	7	6	5	4½	4	3½	3	2½	2	1½											
Up to range	CM	8	N	12	25	40	55	67	83	97	109	125	188	231											
				-	½	1	1½	2												DAF			1	2	3
Range over				0	45	132	171	194												Range over			62	86	103

6" /47 41-43 Max 23,800	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																											
				9	8	7	6	5	4½	4	3½	3	2½	2	1½																
Up to range	AP	8	N	15	32	48	67	83	97	115	134	160	192	223	238																
				-	½	1	1½	2	2½	3	3½									DAF				1	2	3	4	5	6	7	8
Range over				0	35	106	155	181	195	208	221									Range over				62	81	99	114	131	153	177	207

6" /47 1944+ Max 23,800	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																										
				10	9	8	7	6	5	4½	4	3½	3	2½	2	1½														
Up to range	AP	8	N	16	30	44	60	79	96	112	130	149	180	210	232	241														
				-	½	1	1½	2	2½	3	3½								DAF				1	2	3	4	5	6	7	8
Range over				0	35	106	155	181	195	208	221								Range over				62	81	99	114	131	153	177	207

6" /47	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				6	5	4½	4	3½	3	2½	2	1½															
Max 21,500																											
Up to range	CM	7	N	15	40	56	73	89	106	128	232	241															
				-	½	1	1½												DAF	1	2	3	4	5	6	7	8
Range over				0	35	141	194												Range over	62	81	99	114	131	153	177	207

6" /47	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				4	3½	3	2½	2	1½																		
Max 21,500																											
Up to range	HE	7	N	32	48	67	89	114	215																		
			N	1½	2	2½																					
Range over				0	174	202																					

5" /51	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				5	4	3½	3	2½	2	1½	1																
Max 14,500																											
Up to range	CM	9		12	21	30	41	56	70	101	145																
				-	½	1												DAF		1	2	3	4	5	6	7	
Range over				0	38	114												Range over		56	66	78	91	104	116	132	

5"/38 Max 14,500 - 16,400	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				4	3½	3	2½	2	1½	1																	
Up to range	CM	8		17	27	38	51	68	105	164																	
				-	½	1	1½	2										DAF	1	2	3	4	5	6	7	8	
Range over				0	38	112	139	159										Range over	51	62	74	83	94	108	124	146	

5"/25 Max 13,300	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				4	3½	3	2½	2	1½	1																	
Up to range	CM	8		14	22	31	41	55	85	133																	
				-	½	1	1½	2										DAF	1	2	3	4	5	6	7	8	
Range over				0	38	90	105	120										Range over	44	56	66	77	87	99	115	131	

3"/50 Max 14,500 - 13,300	Shell	Damage	Disp	Range 100 x meters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
				2½	2	1½	1	½																			
Up to range	HE	11		15	25	35	65	133																			
				½	1	1 ½												DAF	1	2	3	4	5	6	7	8	9
Range over				0	114	132												Range over	42	52	61	69	78	88	101	114	132

