



WWII German Kriegsmarine 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	CT f,a	FCD f,a,t
Bismarck	C	15	8	15	8	15	14^23	14^23	6	2^5	2^6	4,1½	¼^4	9	15, 6	5, 4, 2
Trippitz	C	15	8	15	8	15	14^22	14^23	6	2^5	2^6	4,1½	¼^4	9	15, 6	5, 4, 2
Scharnhorst	C	15	8	15	8	15	14^17/23	14^23	2	2^5	2^6	4, 2	¼^4	9	15, 6	5, 4, 2
Graf Spee	R	6	4	5	4	4	3^5	3^5	1	1½	1½	1, ½	¼^3	2	6, 2	6, 2, 1
Scheer	R	6	4	5	4	4	2½^4	2½^4	1	1½	1½	1, ½	¼^3	2	6, 2	6, 2, 1
Lutzow	R	6	3	5	4	4	2½^4	2½^4	1	1½	1½	1, ½	¼^4	2	6, 2	6, 2, 1
Hipper	S	7	3	4	3/5	3½	3½^5	3½^5	(1)	1^2	1^2½	½, ½	¼	3	6, 2	1, 1, ½
Blücher	S	7	3	4	3/5	3½	3½^5	3½^5	(1)	1^2	1^2½	½, ½	¼	3	6, 2	1, 1, ½
Nürnberg	S	3½	1	1½	1/1½	2½	2^4	2^3½		1	1	½, ½	¼	3	4, ½	½, ½,
Leipzig	S	1½	1	1	1	1½	2^23	2^3		1½	1½	½, ½	¼	3	4, ½	½, ½,
Köln	S	1½	1	1	1	1½	2^3	2^3		1	1½	½, ½	¼	3	4, ½	½, ½,
Emden	S	1	½		½	1	2^3	2^3		1	1½	½, ¼	¼	1½	4, ½	½, ½,
Z1-Z16	S	¼	¼			½	½	½		½	½			½	0	0,0
Z17-Z22	S	¼	¼			½	½	½		½	½			½	0	0,0
Z23-Z30	S	1,½	½	½	½	½	½	½		½	½			½	0	0,0
Z31-Z39	S	1				½	½	½		½	½			½	0	0,0
Z35-Z45	S	1				½	½	½		½	½			½	0	0,0

Ship Class	German Kriegsmarine Capital Ship Data															
	Main	ROF	Secondary	ROF	Tertiary, High AA	ROF	Low AA	Torpedo	Protection			Radar	Rng Fndr	Planes	Hulls	Engines
									Flash	UW	DC					
Bismarck	15"/47 (4x2)	1	5.9"/55 (6x2)	2.25	105mm (8x2):5	2.5	16:4,12:2		4	4	6	h	+3S	4	24	5
Trippitz	15"/47 (4x2)	1	5.9"/55 (6x2)	2.25	105mm (8x2):5	2.5	16:4, 12:2		4	4	6	h	+3S	4	24	5
Scharnhorst	11"/54 (3x3)	1.5	5.9"/55 (4x2, 4x1)	2.25	105mm (7x2):5	2.5	16:4, 8:2		4	3	5	h	+3S	3	19	5
Graf Spee	11"/52 (2x3)	1.5	5.9"/55 (8x1)	2.25	105mm (3x2):5	2.5	8:4, 6:2	53cm (2x4)	3	1	4	g	+3S	2	7	4
Scheer	11"/52 (2x3)	1.5	5.9"/55 (8x1)	2.25	105mm (3x2):5	2.5	8:4, 6:2	53cm (2x4)	3	1	4	g	+3S	2	7	4
Lutzow	11"/52 (2x3)	1.5	5.9"/55 (8x1)	2.25	105mm (3x2):5	2.5	8:4, 6:2	53cm (4x3)	3	1	4	g	+3S	2	7	4
Hipper	8"/60 (4x2)	1.75	>		105mm (6x2):5	2.5	12:4, 8:2	53cm (4x3)	3	1	4	h	+2S	3	9	4
Blücher	8"/60 (4x2)	1.75	>		105mm (6x2):5	2.5	12:4, 8:2	53cm (4x3)	3	1	4	g	+2S	3	8	4
Nürnberg	5.9"/60 (3x3)	2.25	>		88mm (4x2):4	2.75	8:4, 8:2	53cm (4x3)	2		3	g	+2S	2	4	3
Leipzig	5.9"/60 (3x3)	2.25	>		88mm (3x2):4	2.75	8:4,16:2	53cm (2x3)	2		3	g	+2S	2	4	3
Köln	5.9"/60 (3x3)	2.25	>		88mm (4x2):4	2.75	8:4,8:2	53cm (4x3)	2		3	g	+1	2	4	3
Emden	5.9"/55 (8x1)	2.25	>		88mm(3x1):4	2.75	4:2	53cm (2x2)			3		+1		4	3
Z1-Z16	127mm/45 (5x1)	2.25					4:4, 4:2	53cm (2x4)			2				2	2
Z17-Z22	127mm/45(5x1)	2.25					4:4, 7:2	53cm (2x4)			2				2	2
Z23-Z30	5.9"/50 (4x1)	2					4:4, 5:2	53cm (2x4)			2	g	+1		2	2
Z31-Z39	5.9"/50 (1x2, 3x1)	2					2:4,10:2	53cm (2x4)			2	g	+1		2	2
Z35-Z45	5.9"/50 (5x1)	2					8:4, 16:2	53cm(2x4)			2	j	+1		2	2

Up Belt A,(B)= A is the upper belt armor, B is the funnel Uptake armor for Upper Belt hits. When only (B) appears A is 0.

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

Radar refers to the first type installed at the start of the war. As time progressed improved sets replaced these.

15"/47	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
Max 36,200				33	32	31	30	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	3	N	21	30	39	49	59	69	79	89	101	112	125	137	149	163	177	192	208	224	241	260	280	302	327	350	362	
				-	1½	2	2½	3	3½	4	5	6	7	8	9	10		DAF			1	2	3	4	5	6	7		
Range over				0	76	107	137	168	198	229	266	293	312	328	338	350		Range over			88	122	159	193	228	267	315		

15"/47	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																								
Max 36,200				24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6						
Up to range	CM	2	N	11	24	37	51	65	80	95	111	130	146	166	187	209	233	258	288	321	355	362						
				-	1	1½	2	2½	3	3½	4	5	6	7				DAF			1	2	3	4	5	6	7	
Range over				0	65	109	152	196	240	240	289	311	332	346				Range over			88	122	159	193	228	267	315	

15"/47	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																								
Max 36,200				16	15	14	13	12	11	10	9	8	7	6	5	4												
Up to range	HE	1	N	30	49	69	89	112	137	163	192	224	260	302	350	362												
				3½	4	5	6	7										DAF			1	2	3	4	5	6	7	
Range over				0	193	228	267	315										Range over			88	122	159	193	228	267	315	

11.1" /54				Range 100xeters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																								
Max 42,750	Shell	Damage	Disp	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4					
Up to range	AP	5	N	20	31	42	54	65	77	89	103	117	133	153	171	190	212	238	265	302	343	406	428					
			N	-	1	1½	2	2½	3	3½	4	5	6	7	8	9		DAF			1	2	3	4	5	6	7	8
Range over				0	72	123	169	215	258	280	297	319	340	357	377	400		Range over			95	126	159	189	218	254	296	361

11.1"/54	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (vertical/horizontal) armor																								
Max 42,750				16	15	14	13	12	11	10	9	8	7	6	5	4	3½	3										
Up to range	CM	4	N	24	40	56	72	90	110	131	159	186	215	255	305	351	400	428										
				-	1	1½	2	2½	3	3½	4	5	6	7				DAF			1	2	3	4	5	6	7	8
Range over				0	95	162	223	271	295	314	325	349	373	404				Range over			95	126	159	189	218	254	296	361

11.1"/54	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (vertical/horizontal) armor																											
Max 42,750				11	10	9	8	7	6	5	4	3½	3																		
Up to range	HE	3	N	31	54	77	103	133	171	212	265	302	428																		
				2½	3	3½	4	5										DAF				1	2	3	4	5	6	7	8		
Range over				0	218	254	296	361										Range over				95	126	159	189	218	254	296	361		

11.1" /52	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (ve rtical/ horizontal)) armor																								
Max 36,475				19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3½	3	2½	2					
Up to range	AP	5	N	16	27	39	51	63	76	89	103	117	133	150	168	187	212	240	263	286	325	357	365					
				-	1	1½	2	2½	3	3½	4	5	6	7				DAF			1	2	3	4	5	6	7	8
Range over				0	80	137	187	215	240	260	275	298	329	364				Range over			89	116	148	169	194	220	251	298

11.1"/52	Shell	Damage	Disp	Range 100xeters vs Penetration in Inches of Class 'A' (ve rtical/ horizontal)) armor																							
Max 36,475				13	12	11	10	9	8	7	6	5	4	3½	3	2½	2	1½									
Up to range	CM	4	N	23	40	57	75	94	114	137	162	189	215	236	267	302	350	365									
				-	1	1½	2	2½	3	3½	4	5					DAF		1	2	3	4	5	6	7	8	9
Range over				0	84	180	221	251	273	293	311	347					Range over		84	111	142	164	187	213	243	285	352

11.1"/52	Shell	Damage	Disp	Range 100xmeters vs Penetration in Inches of Class 'A' (vertical/ horizontal)) armor																							
Max 36,475				9	8	7	6	5	4	3½	3																
Up to range	HE	3	N	27	51	76	103	133	168	187	365																
				2½	3	3½	4	5										DAF		1	2	3	4	5	6	7	8
Range over				0	194	220	251	298										Range over		89	116	148	169	194	220	251	298

8" /60	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																								
Max 33,500				17	16	15	14	13	12	11	10	9	8	7	6	5	4	3½	3	2½	2							
Up to range	AP	7	N	14	25	37	49	61	75	89	105	121	139	160	185	216	247	271	296	326	335							
				-	½	1	1½	2	2½	3	3½	4	5					DAF			1	2	3	4	5	6	7	8
Range over				0	34	101	173	216	244	263	274	291	323					Range over			89	114	141	162	184	210	241	284

8"/60	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
Max 33,500				13	12	11	10	9	8	7	6	5	4	3½	3	2½	2	1½											
Up to range	CM	6	N	12	27	43	59	77	96	119	142	172	199	223	250	287	321	335											
				-	½	1	1½	2	2½	3	3½								DAF			1	2	3	4	5	6	7	8
Range over				0	43	155	211	248	269	288	312								Range over			89	114	141	162	184	210	241	284

8" /60	Shell	Damage	Disp	Range 100xmeters vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																										
Max 33,500				8	7	6	5	4	3½	3	2½	2																		
Up to range	HE	5	N	25	49	75	105	121	160	185	260	335																		
				2	2½	3	3½												DAF				1	2	3	4	5	6	7	8
Range over				0	210	241	284												Range over				89	114	141	162	184	210	241	284

Note - CM is Base-fused HE shell.

5.9" /60	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																								
Max 25,700				9	8	7	6	5	4	3½	3	2½	2	1½	1	½												
Up to range	AP	8	N	11	26	42	59	77	93	106	123	140	167	109	253	257												
				-	½	1	1½	2	2½								DAF			1	2	3	4	5	6	7	8	9
Range over				0	34	101	174	216	245								Range over			71	93	108	122	139	157	178	209	257

5.9" /60	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																									
Max 25,700				4	3½	3	2½	2	1½																				
Up to range	HE	7	N	26	42	59	77	93	257																				
				1 ½	2	2½	3											DAF	1	2	3	4	5	6	7	8	9		
Range over				0	178	209	257											Range over	71	93	108	122	139	157	178	209	257		

5.9"/55	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
Max 23,000				8	7	6	5	4	3½	3	2½	2	1½	1													
Up to range	AP	8	N	11	28	45	61	84	90	103	119	151	198	230													
				-	½	1	1½	2	2½								DAF			1	2	3	4	5	6	7	8
Range over				0	44	129	162	181	204								Range over			68	86	102	115	128	144	165	195

5.9"/55	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																							
Max 23,000				4	3½	3	2½	2	1½																		
Up to range	HE	7	N	11	28	45	61	84	230																		
				1½	2	2½											DAF			1	2	3	4	5	6	7	8
Range over				0	164	195											Range over			68	86	102	115	128	144	165	195

5.9"/50	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 21,400				4	3½	3	2½	2	1½	1											
Up to range	CM	8	N	55	64	85	107	137	187	214											
				-	½	1	1½	2									DAF	1	2	3	4
Range over				0	40	127	186	205									Range over	65	81	96	109
																		122	137	157	184

5.9"/50	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 21,400				4	3½	3	2½	2	1½												
Up to range	HE	7	N	6	23	40	56	79	214												
				1½	2	2½											DAF	1	2	3	4
Range over				0	157	184											Range over	65	81	96	109
																		122	137	157	184

127mm/50	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 17,400				4	3½	3	2½	2	1½	1											
Up to range	CM	9		35	50	65	85	110	130	174											
				-	½	1											DAF	1	2	3	4
Range over				0	38	125											Range over	55	69	82	94
																		105	118	133	153

127mm/50	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 17,400				4	3½	3	2½	2	1½												
Up to range	HE	8		23	33	43	57	73	174												
				1	1½	2	2½										DAF	1	2	3	4
Range over				0	133	153	175										Range over	55	69	82	94
																		105	118	133	153

105mm	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 17,300				4	3½	3	2½	2	1½	1	½										
Up to range	CM	9		28	45	60	75	95	110	150	173										
				-	½	1											DAF	1	2	3	4
Range over				0	50	130											Range over	51	62	74	84
																		96	108	122	140

105mm	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 17,300				4	3½	3	2½	2	1½	1											
Up to range	HE	8		18	30	40	50	64	73	173											
				1	1½	2											DAF	1	2	3	4
Range over				0	140	161											Range over	51	62	74	84
																		96	108	122	140

88mm	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 16.200				3½	3	2½	2	1½	1	½											
Up to range	CM	10		27	32	45	60	75	95	162											
				-	¼	½	1										DAF	1	2	3	4
Range over				0	40	62	130										Range over	47	58	68	77
																		87	98	112	127

88mm	Shell	Damage	Disp	Range 100xmetres vs Penetration in Inches of Class 'A' (vertical/ horizontal) armor																	
Max 16.200				3	2½	2	1½	1													
Up to range	HE	9		5	10	15	20	162													
				1	1½												DAF	1	2	3	4
Range over				0	147												Range over	47	58	68	77
																		87	98	112	127