MAIN ENGINES

CLASS		HOLLAND	A1	A2-4	A5-12	A13	B1	B2-B11	C1-10	C11	C12-16	C21-30	C31-32	C35-38
Type of engine	(1)	← HORIZONTAL PETROL →				VERT HOE	← HORIZONTAL PETROL →							
Number of sets		1	1	1	1	1	1	1	1	1	1	1	1	1
Bhp per set, design		160		600	500	600	600	600	600	600	600	600	600	600
" " ", test			←	(4) →	599.7	500.9	592.8	620	627	616	668	596.4		608
Cylinders per engine		4	16	16	16	6	16	16	16	16	16	12	12	12
Diameter of cylinder	in.	11¼	8½	12	11¼	13	11¼	11¼	11¼	11¼	11¼	11¼	11¼	11¼
Stroke " "	in.	14	10	12	12	14	12	12	12	12	12	12	12	12
Rev/Min		320	400	400	400	380	400	400	400	400	400	400	400	400
MIP, test														
" , design		92.2	103.2	71	80.6		80.6	80.6	80.6	80.6	80.6	103.1		
Mechanical efficiency, test														
" " , design		77.5	77.5	77.5	77.5		77.5	77.5	77.5	77.5	77.5	80.5		
Compression pressure	lb	75-80	75-80	75-80	75-80		75-80	75-80	80	75-80	75-80	81.8	75-80	75-80
Sg of fuel oil	(2)	←	.68 -.71	→	.69	.81	.69	.69	.689	.689	.705	←	.69 -.71	→
Consumption of oil, lb/bhp hour		.875	.8	.93	.895	.42 (8)	1.2	.803	.67	.615	.664	.671		
" cylinder oil, lb/bhp hour						.05						.18		
" lubrication oil, lb/bhp hour						.09						.70		
Weight per engine ex flywheel, tons		←	(7)	→	16.94	18.46	16.74	16.52	16.82	16.82	16.82	16.0		
Weight, lb/bhp					63.0	57.6	82.7 (3)	62.50	61.6	62.7	62.7	62.7	59.5		
		FT-in	FT-in	FT-in	FT-in	FT-in	FT-in	↑	↑	↑	↑	FT-in	FT-in	FT-in
Overall length with flywheel		9-1¾	14-1½	19-1½	18-10	15-5½	19-9	As B1	As B1	As B1	As B1	15-8½	15-8½	15-8½
" width		3-2½	6-2½	8-1	7-9⅜	2-4½	8-0¾					8-1½	8-0¾	8-0¾
Height above C/L of crank shaft		5-6¼	10½	3-0	2-7	6-0½	2-9					3-2½	2-9	2-9
Depth below C/L of crank shaft		1-1¼	1-3	1-6	1-1½	1-4	1-1½	↓	↓	↓	↓	1-1½	1-1½	1-1½

NOTES in brackets eg (1) are given in Appendix VI.

MAIN ENGINES

CLASS		D1	D2	D3-6	E3-6	E9-11	E14-16	E17-18	E25-26	NAUTILUS
Type of engine	(1)	←				VERTICAL SA HOE				→
Number of sets		2	2	2	2	2	2	2	2	2
Bhp per set, design		600	600	600	800	800	800	800	800	1850
" " ", test		606.3		614	809	808		808.7		
Cylinders per engine		6	6	6	8	8	8	8	8	12
Diameter of cylinder	in.	14.3	14½	14½	14½	14½	14½	14½	14½	17
Stroke " "	in.	15	15	15	15	15	15	15	15	19
Rev/Min		380	380	380	380	380	380	380	380	340
MIP, test			113.5	114.6	112.1	112	116	111.5		
" , design		99.3			110	110	110	110	110	
Mechanical efficiency, test				75	77.4	74.9	734.	75.75		
" " , design		87.6	74		76.5	76.5	76.5	76.5	76.5	
Compression pressure	lb	400	465	400	376	387	373	368		390
Sg of fuel oil	(2)	.81	.81	.81	.808		.808	.81	.81	.81
Consumption of oil, lb/bhp hour		.536	.5675	.542	.47	.489	.477	.473	.465	.55
" cylinder oil, lb/bhp hour		.107		.119	.127	.1184	.036	.019		
" lubrication oil, lb/bhp hour		.041		.219						
Weight per engine ex flywheel, tons		18.51	19.52	19.56	23.34	23.74	23.74	22.65	22.415	65.11
Weight, lb/bhp		69.0 (3)	72.7 (3)	73.0 (3)	65.3	66.5	66.5	63.7	62.5	78.6
		FT-in	FT-in		FT-in	FT-in	FT-in	FT-in	FT-in	FT-in
Overall length with flywheel		17-0⅜	17-6¾		20-5½	20-5½	20-5½	20-5½	20-5½	41-2
" width		2-0⅞	2-0½	As D2	2-0½	2-0½	2-0½	1-9½	1-9½	2-7
Height above C/L of crank shaft		6-9¾	6-10¼		6-10¼	6-10¼	6-10¼	6-10¼	6-10¼	9-0⅛
Depth below C/L of crank shaft		1-3½	1-3½		1-3½	1-3½	1-3½	1-3½	1-3½	1-8

NOTES in brackets eg (1) are given in Appendix VI.

MAIN ENGINES

CLASS		V1	V2-4	G8-12	G13	K3, 7 K17	L1-4	M1-2	L14-17	F3	J5
					(5)	(6)					
Type of engine	(1)	←				VERTICAL SA HOE					→
Number of sets		2	2	2	2	1	2	2	2	2	3
Bhp per set, design		45	450	800	80	800	1200	1200	1200	450	1200
" " ", test		451	451				1300		1300	457.2	1218
Cylinders per engine		8	8	8	8	8	12	12	12	8	12
Diameter of cylinder	in.	10¾	10¾	14½	14½	14½	14½	14½	14½	10¾	14½
Stroke " "	in.	13	13	15	15	15	15	15	15	13	15
Rev/Min		450	450	380	380	380	380-400	380-400	380-400	450	380
MIP, test		124	118			104.9	106	111	106	100	107
" , design		110	110	110	110	110				110	
Mechanical efficiency, test		67.5	71			75.4		78.6		85	79.7
" " , design		76.2		76.5	76.5	76.5				76.2	76.5
Compression pressure	lb	339 / 327	346 / 335			320 / 360	358	378	363	373	
Sg of fuel oil	(2)	.81	.81	.809	.897	.888		.883		.806	.810
Consumption of oil, lb/bhp hour		.603 / .526	.47 / .524	.462	.455	.48		.417		.465	.466
" cylinder oil, lb/bhp hour		.03						.004		.018	
" lubrication oil, lb/bhp hour		.32 / .125						.0026			
Weight per engine ex flywheel, tons		16.94	15.86	22.56	22.83	21.28	33.76	↑	↑	13.22	33.6
Weight, lb/bhp		84.0	79.0	63.2	62.6	59.6	63.5			65.7	60.6
		FT-in	↑	FT-in	FT-in	FT-in	FT-in			FT-in	FT-in
Overall length with flywheel		17-8¾	As V1	20-3¾	2011¾	20-5½	29-6½	As L1-4	As L1-4	17-7¾	29-6
" width		1-11½		2-0½	2-3	2-0½	2-0			2-0¾	2-0
Height above C/L of crank shaft		6-4⅛		6-10¼	6-10¼	6-10¼	6-10¼			6-4 1/16	6-10¼
Depth below C/L of crank shaft		1-2½	↓	1-3½	1-3½	1-3½	1-3½	↓	↓	1-2½	1-3½

NOTES in brackets eg (1) are given in Appendix VI.

MAIN ENGINES

CLASS	E3	F2	S1-3	W1-2	W3-4	SWORDFISH (1913)	G14	K	H21	R1-10	X1	X1
Type of engine	←		VERTICAL HOE		→	STEAM	VERT HOE	STEAM	←	VERTICAL HOE		→
Cycle	2	2	2	4	4		2		4	4	4	
Injection	←	BLAST	→	← SOLID →			BLAST		←		BLAST	→
Design	BELGIAN CAREL	MAN	SCOTT-FIAT	SCHNEIDER			SCOTT-FIAT		AMERICAN	AMERICAN	ADMIRALTY	MAN ex U126
Number of sets	2	2	2	2	2	2	2	2	2	1	2	2
Bhp per set	800	450	325	355	380	2000	800	5250	240	240	3000	940
Cylinders per engine	6	6	6	8	6		6		8	8	8	
Diameter of cylinder in.	13⅞		9⅜	11.8	12⅝		13.78		9	9	21½	17 $^{11}/_{16}$
Stroke " " in.	15		10½	11	13½		14.17		12½	12½	21½	16½
Rev/Min	360	450	460	400	405	530	430	380-400	375	380	390	
Consumption of oil fuel, lb/bhp hour									.54	.54	.40	.48
Total weight of engine, tons			15	26	29.6				21	10½	134	
Weight, lb/bhp			56	84.9	87.3				98	98	50	
NOTE	(1)	(2)	(3)	(4)	(4)	(5)	(6)	(7)			(8)	(9)

NOTES
(1) These engines were unsuccessful and were replaced by standard E type engines.
(2) A Nuremburg type (MAN) improved by J S White.
(3) Reversible type. Further details in Chapter 25.
(4) Reversible type, also called Schneider-Laubeuf type.
(5) Two sets of Parsons turbines and one Yarrow type boiler.
(6) These engines, of reversible type, were eventually replaced by standard E type engines
(7) Parsons or Brown Curtis type turbines. Two Yarrow type boilers.
(8) Main engines
(9) Auxiliary engines

Blank spaces are applicable but details are not known.

MAIN ENGINES

CLASS	OBERON	OXLEY OTWAY	ODIN	L50	PARTHIAN	RAINBOW	THAMES	SWORDFISH	PORPOISE
Type of engine	←				VERTICAL HOE				→
Cycle	4	4	4	4			4		
Injection	←	BLAST	→	SOLID	←		BLAST		→
Design	←	ADMIRALTY	→	VICKERS	←		ADMIRALTY		→
Number of sets	2	2	2	2	2	2	2	2	2
Bhp per set	1350	1500	2200	1200	2320	2320	5000	775	1650
Cylinders per engine	6	6	8	12	8	8	10	6	6
Diameter of cylinder in.	18½	19¼	20	14¼	20	20	21	14½	20
Stroke " " in.	18½	19¼	20	15	20	20	21	14½	20
Rev/Min	400	400	400	380	400	400	400	420	400
Consumption of oil fuel, lb/bhp hour	.40	.39	.45	.43	.45	.45			
Total weight of engine, tons	67½	77½	124	64	118	120		41	90
Weight, lb/bhp	56	58	60	65	57	58		59.3	61
NOTE							(10)		

NOTES (10) 5000 bhp when supercharged. Normal 4000 bhp

Blank spaces are applicable but details are not known.