

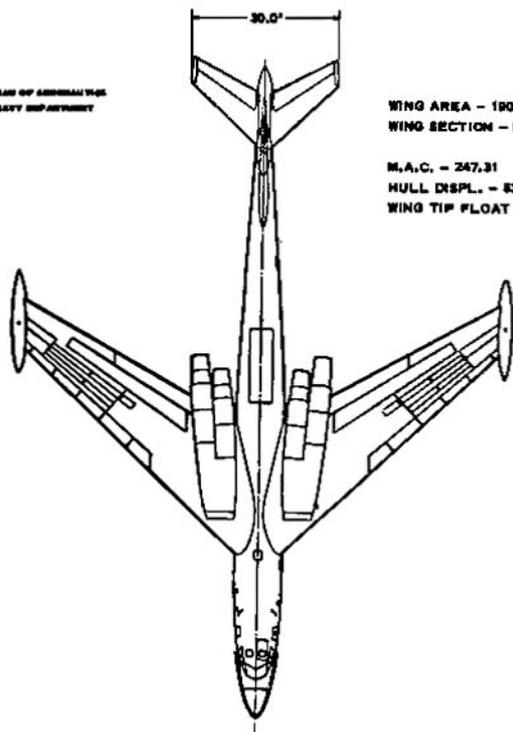
# STANDARD AIRCRAFT CHARACTERISTICS

## YP6M-1 "SEAMASTER"

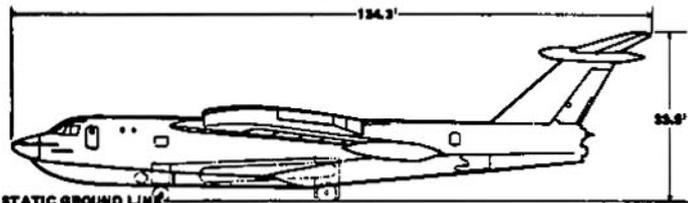
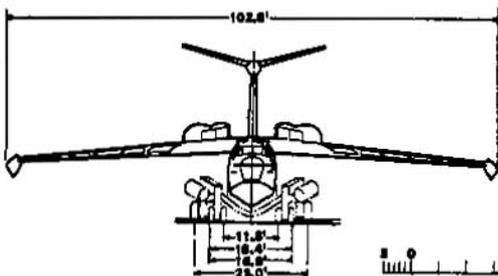
MARTIN

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-55)

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



WING AREA - 1900 SQ FT  
WING SECTION - N.A.C.A. ROOT 65A511  
TIP 65A308  
M.A.C. - 247.31  
HULL DISPL. - 334,000 LBS  
WING TIP FLOAT DISPL. - 5800 LBS



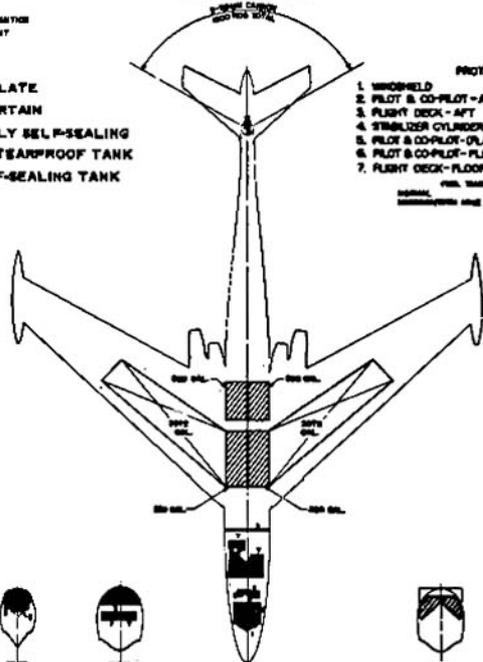
STATIC GROUND LINE



BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

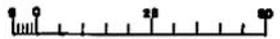
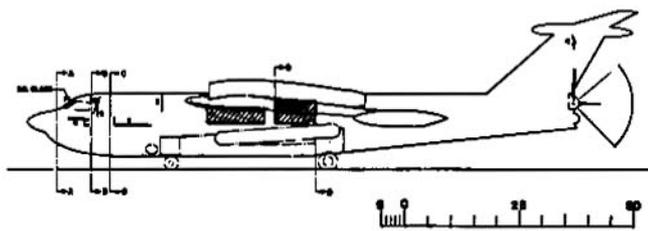
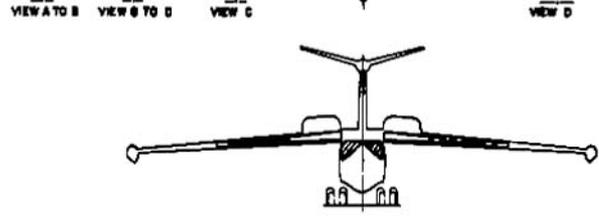
- ARMOR PLATE
- FLAK CURTAIN
- PARTIALLY SELF-SEALING AND/OR TEARPROOF TANK
- NON SELF-SEALING TANK

ARMAMENT & TANKS



- PROTECTION
- 1. WINDSHIELD 1970 LBS.
  - 2. PILOT & CO-PILOT - AFT 2340 LBS.
  - 3. FLIGHT DECK - AFT 1941 LBS.
  - 4. STRUTLER CYLINDER 23.5 LBS.
  - 5. PILOT & CO-PILOT - OLAR CURTAIN 200 LBS.
  - 6. PILOT & CO-PILOT - FLOOR (FLAK) 1486.4 LBS.
  - 7. FLIGHT DECK - FLOOR (FLAK) 2414 LBS.

WING TIP FLOAT DISPL. 5800 LBS



Standard Aircraft Characteristics NAVAR 1335B (Rev. 1-55)

## POWER PLANT

NO. MODEL ..... (4) J71-A-6  
 MFR. .... ALLISON  
 TYPE ..... TURBO-JET  
 LENGTH ..... 210.4 IN.  
 DIAMETER ..... 44 IN.  
 AUGMENTATION ..... AFTERBURNER

## RATINGS

	LBS	RPM	ALT
MIL & AB	13000	6100	S.S.L.
MILITARY	9500	6100	S.S.L.
NORMAL	7920	5950	S.S.L.

## ORDNANCE

## GUNS

NO.	SIZE	LOCATION	RDS
2	20mm	Tail	1,000

## FIRE CONTROL

Aero X-23B Tail Turret

## BOMBS &amp; MINES

STORES	NO.	(LB)	NO.
Photoflash	154	M120(T988)	154
Mine MK	36	Mod 1	1,001
Mine MK	25-2	Mod 2	2,030
Mine MK	50	Mod 0	504
Mine MK	52	Mod 0,1,2, 3,4,5,6	1,348
Mine MK	39	Mod 0	2,025
Mine MK	19	Mod 2	540
Mine MK	10	Mod 9	1,960
Bomb MK	91		3,500
Bomb MK	28		1,800

## MISSION AND DESCRIPTION

The primary mission of the YP6M-1 is low altitude aerial minelaying. The secondary mission is photographic reconnaissance.

The airplane is designed for rough water (6-8 ft. waves) operation. It has "T" type tail with movable horizontal tail mounted atop the vertical tail. The elevator is mechanically geared to the movable stabilizer. The rudder provides directional control on water and in the air, while hydro flaps on the aft hull bottom provide additional directional control on the water. Lateral control is obtained from spoiler ailerons. Single slotted flaps are used in conjunction with leading-edge automatic slats to provide high lift and stall control.

Mines are carried on rotary door forming part of hull bottom. For photographic reconnaissance missions a camera pod is mounted on the rotary door. A remotely operated tail turret provides tail defense.

The YP6M-1 differs from the XP6M-1 in that it incorporates J71-A-6 engines instead of J71-A4 engines and the engine nacelles are canted outward 5 degrees to reduce effects of jet blast on aft hull.

## DEVELOPMENT

First Flight ..... 1 July 1957  
 Est. Service Use ..... 1959

## DIMENSIONS

WING AREA	1,900 sq. ft.
SPAN	102' 7"
MAC	
SWEEPBACK (1/4 chord)	40°
LENGTH	134.3'
HEIGHT	33.9'

## WEIGHTS

LOADINGS	LBS	L.F.
EMPTY	84,685	
BASIC	86,765	
DESIGN	140,000	3.8
COMBAT	147,609	3.62
MAX T.O.		
Rough Water	160,000	2.8
Sheltered		
Water	190,000	3.33

All weights are calculated

## FUEL AND OIL

GALS.	NO. TANKS	LOCATION
1,625	2	Fwd Hull
1,675	2	Aft Hull
7,720	2	Wing
FUEL GRADE		JP-5
FUEL SPEC		applicable MIL-F-5624

## OIL

CAPACITY (Gal/eng)	31
SPEC	applicable MIL-L-7808

## ELECTRONICS

MILITARY VOR (TACAN)	AN/ARN-21
UHF COMMUNICATION	AN/ARC-27A
HF COMMUNICATION	AN/ARC-38
INTERCOMMUNICATION SYSTEM	AN/AIC-5B
UHF DIRECTION FINDER	AN/ARA-25
RADAR ALTIMETER	AN/APN-22
RADAR IDENTIFICATION SET	AN/APX-6B
CODER GROUP	AN/APA-89
ECM TAIL WARNING REC.	AN/ALQ-2
CHAFF DISPENSER	C.F.E.
AERO X-23A ARMAMENT CONTROL SYSTEM	
RADAR NAVIGATION SYSTEM	AN/APN-66
SEARCH RADAR	AN/ASB-1
AUTO. ASTRO COMPASS	KS-50
SHORT RANGE COURSE AND FIX COMPUTER	

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) BASIC MINING MISSION	(3) HIGH ALTITUDE RECONNAISSANCE MISSION	(5) ALTERNATE MINING MISSION		
TAKE-OFF WEIGHT	lb.	167,011	166,985	167,471		
Fuel (JP-5)	lb.	48,507	72,331	58,967		
Fayload	lb.	30,000	4,050	20,000		
Wing loading	lb./sq.ft.	88.0	87.8	88.2		
Stall speed - power-off	kn.	126.0	126.0	126.5		
Take-off time at S.L. - calm (A)	sec.	66.5	66.5	67.0		
Take-off run at S.L. kn, wind	ft.	--	--	--		
Take-off to clear 50 ft. - calm	ft.	--	--	--		
Max. speed/altitude (B)	kn./ft.	560/5,000	560/5,000	560/5,000		
Rate of climb at S.L. (B)	fpm.	3,050	3,000	3,000		
Time: S.L. to 20,000 ft. (B)	min.	8.2	8.2	8.2		
Time: S.L. to 30,000 ft. (B)	min.	17.0	17.0	17.2		
Service ceiling (100 fpm) (B)	ft.	35,000	35,000	35,000		
Combat range	n.mi.	1,385	2,385	1,830		
Average cruising speed	kn.	469	469	469		
Cruising altitude(s)	ft.	32,500 - 43,500	32,500 - 42,500	32,300 - 43,500		
Combat radius	n.mi.	585	1,225	810		
Average cruising speed	kn.	469	469	469		
Mission Time	hr.	2.48	5.05	3.23		
COMBAT LOADING CONDITION		(2) BOMBS RETAINED	(4) FLARES RETAINED	(6) BOMBS RETAINED		
COMBAT WEIGHT	lb.	147,609	138,053	143,884		
Engine power		Military	Military	Military		
Fuel	lb.	29,104	43,398	35,381		
Combat speed/combat altitude	kn./ft.	559/SL	498/36,000	560/SL		
Rate of climb/combat altitude	fpm/ft.	3,550/SL	750/36,000	3,700/SL		
Combat ceiling (500 fpm)	ft.	34,500	36,600	36,000		
Rate of climb at S.L.	fpm.	3,550	3,900	3,700		
Max. speed at S.L.	kn.	559	560	560		
Max. speed/altitude	kn./ft.	561/5,000	561/5,000	561/5,000		
LANDING WEIGHT	lb.	93,709	98,484	94,252		
Fuel	lb.	5,205	7,880	5,748		
Stall speed - power-off	kn.	94.2	96.5	94.5		
Stall speed - with approach power	kn.	91.5	94.7	91.8		

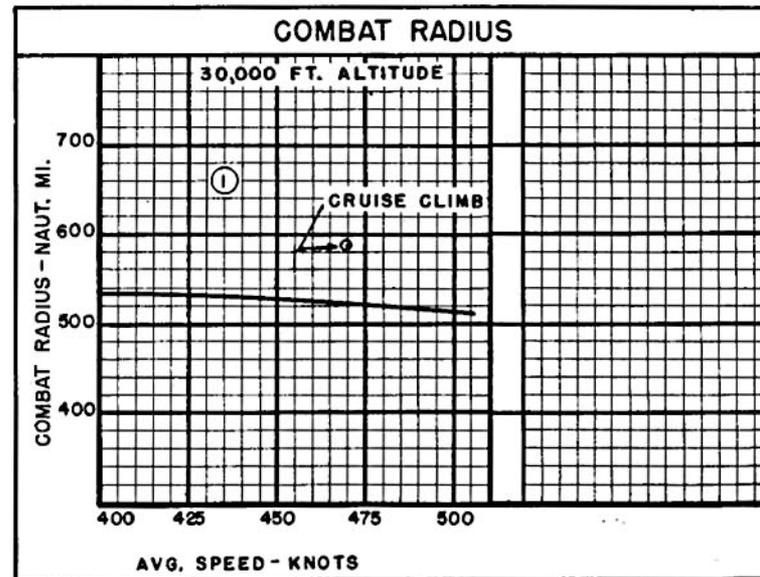
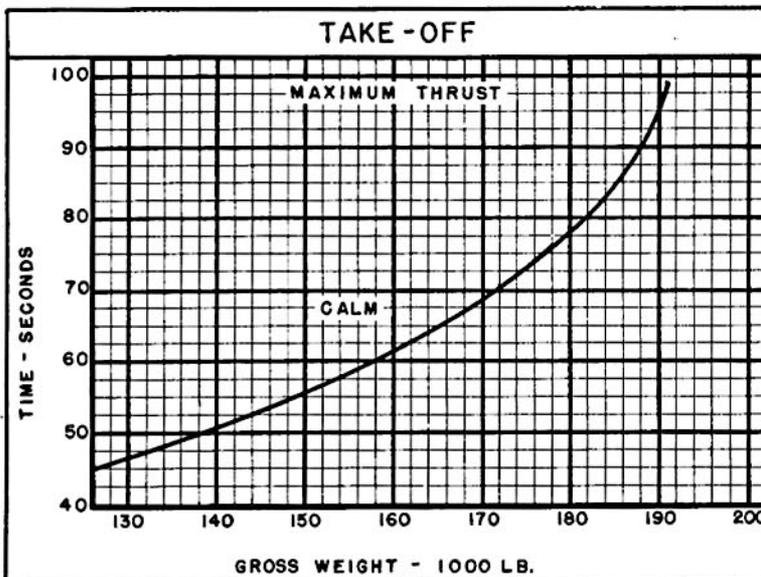
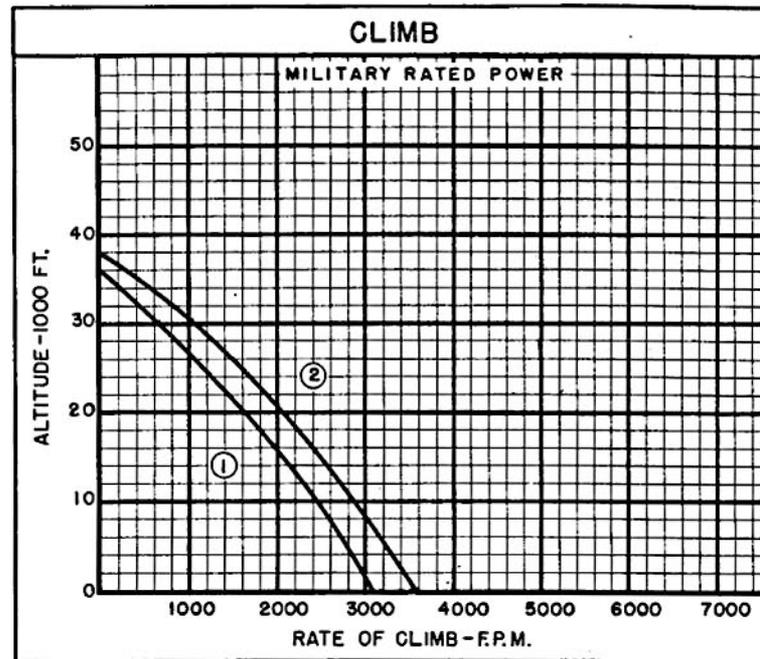
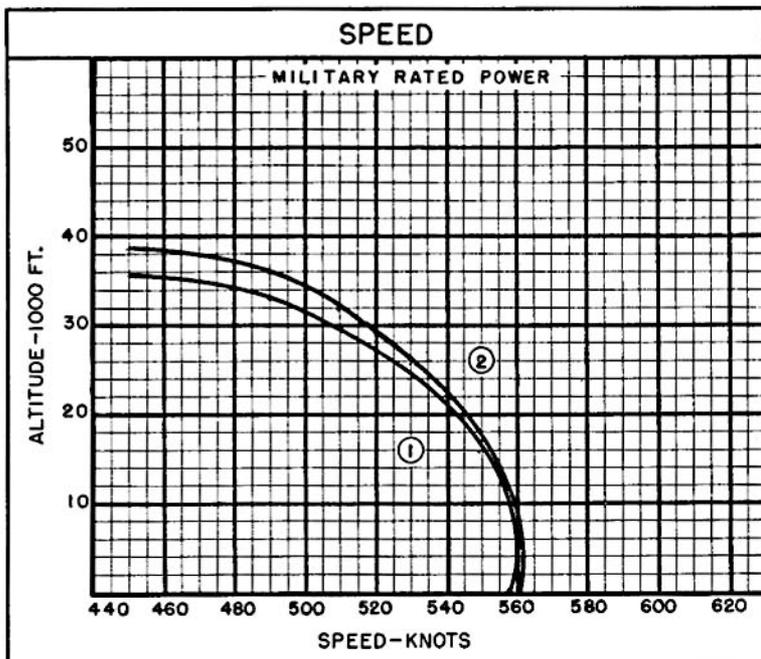
## NOTES

(A) Maximum Thrust (Military & Afterburner)

(B) Military Rated Thrust

Performance Basis: Calculations

Range & Radius are based on Engine Specification Fuel Consumption Data increased by 5%



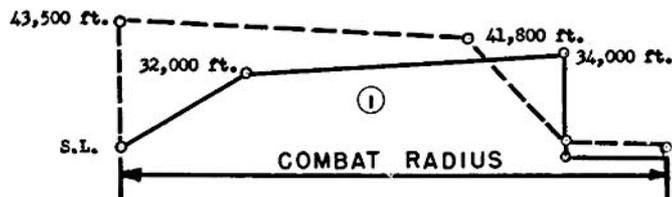
Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

○ LOADING CONDITION COLUMN NUMBER

# NOTES

## MINE LAYER

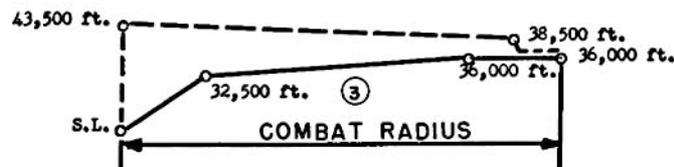
**WARM-UP, TAXI, TAKE-OFF:** Five minutes at normal thrust plus one minute at maximum thrust at sea level.  
**CLIMB:** To cruise altitude at military thrust.  
**CRUISE-OUT:** At speed for long range at cruise altitude.  
**DESCEND:** To sea level.  
**RUN-IN:** 50 nautical miles at military thrust.  
**DROP MINES:**  
**RUN-OUT:** 50 nautical miles at military thrust.  
**CLIMB:** To cruise altitude at military thrust.  
**CRUISE-BACK:** At speed for long range at cruise altitude.  
**RESERVE:** 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.



Combat Radius (Mine Layer problem) is reduced approximately 4.5 nautical miles for each additional minute of military power operation.

## HIGH ALTITUDE PHOTO RECONNAISSANCE

**WARM-UP, TAXI, TAKE-OFF:** 5 minutes at normal rated thrust plus 1 minute maximum thrust at sea level.  
**CLIMB:** To cruise altitude at military rated thrust.  
**CRUISE-OUT:** At speed for long range at cruise altitude.  
**RUN TO TARGET:** For 15 minutes at normal thrust at constant altitude.  
**DROP FLARES:**  
**EVASIVE ACTION:** For 2 minutes at normal thrust at constant altitude - No distance gained.  
**ESCAPE:** For 8 minutes at normal thrust to initial cruise-back altitude.  
**CRUISE-BACK:** At speed for long range at cruise altitude.  
**RESERVE:** 30 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.



Minimum rate of climb, at sea level, military thrust, one engine inoperative, flaps and gear retracted

### GROSS WEIGHT-LBS.

80,000  
120,000  
160,000  
180,000

### RATE OF CLIMB, FPM

5,210  
3,250  
2,200  
1,825

○ LOADING CONDITION COLUMN NUMBER