

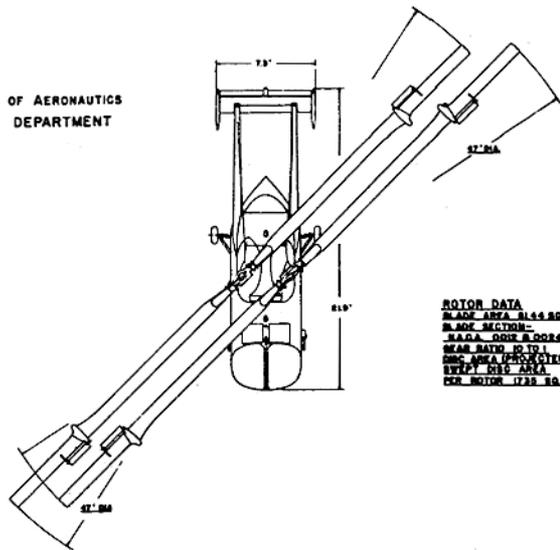
STANDARD AIRCRAFT CHARACTERISTICS

HOK-1

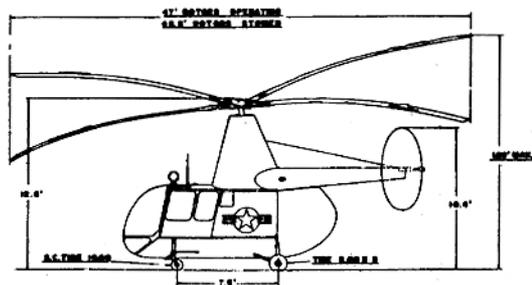
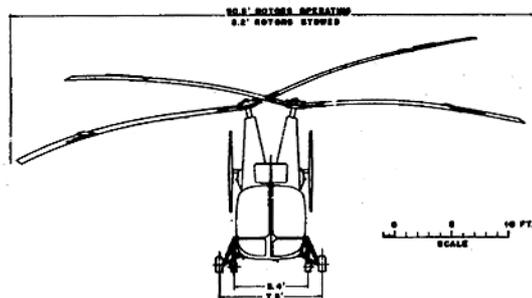
KAMAN

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



ROTOR DATA
 MADE 1722 1128 SQ. FT.
 MADE SECTION -
 MADE OUR 1722 1128 SQ. FT.
 MADE DATA 1722 1128 SQ. FT.
 MADE AREA 1722 1128 SQ. FT.
 MADE 1722 1128 SQ. FT.



DESCRIPTIVE A.

Standard Aircraft Characteristics NAVAER 1335B (REV. 1-49)

POWER PLANT

NO. & MODEL.....(1) R-975-40
 MFR.....Continental
 SUPERCH.....1 Stage, 1 Speed
 ROTOR GEAR RATIO.....0.100

RATINGS

	Bhp @	Rpm @	Alt.
T. O.	525	2,300	2,200'
NORMAL	500	2,500	6,700'
ALTER.	500	2,100	S. L.

See Note on Performance
 Summary Page

SPEC. NO. 2047

ACCOMMODATIONS

PILOT.....1
 CO-PILOT.....1
 PASSENGERS.....2

OR

PILOT.....1
 ATTENDANT.....1
 LITTERS.....2

MISSION AND DESCRIPTION

The HOK-1 helicopter was designed for observation purposes but will probably be used primarily as a utility helicopter performing missions such as transportation of personnel, evacuation of wounded, rescue, wire laying, etc. For the evacuation mission the co-pilot's seat is removed and two litters are carried internally plus an attendant. The port side of the nose bubble swings open for loading and unloading the litters.

The helicopter has two side-by-side intermeshing rotors of two blades which are controlled by means of aerodynamic servo control flaps. Twin tail booms and vertical stabilizers provide forward flight stability. A hoist of 400 pound capacity is installed on the fuselage. Provisions are incorporated for positioning the rotor blades fore and aft parallel to the fuselage centerline to facilitate stowage.

Mock-up -- May 1951

First flight -- August 1952

Service use -- September 1953

DIMENSIONS

DISC AREA*.....1,901 sq. ft.
 BLADE AREA.....81 sq. ft.
 ROTOR DIA.....47' - 0"
 LENGTH.....47' - 0"
 HEIGHT.....16' - 4"
 TREAD.....7' - 6"

* Projected

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	3,302.....	
BASIC.....	3,423.....	
DESIGN.....	4,500.....	3.0
MAX.T.O.....	4,950.....	2.73
MAX.LAND.....	4,950.....	2.73

All weights are estimated.

FUEL AND OIL

Gal.	No. Tanks	Location
102.5	1	Fuselage

FUEL GRADE.....100/130

FUEL SPEC...MIL-F-5572

OIL

CAPACITY (Gals.).....7
 GRADE.....1100
 SPEC.....MIL-O-6082

ELECTRONICS

VHF TRANSMITTER....T-23/ARC-5
 VHF RECEIVER.....R-19
 MHF TRANSMITTER....T-19/ARC-5
 MHF RECEIVER.....R-26/ARC-5
 RANGE RECEIVER.....R-11A

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) OBSERVATION 1 Pilot 1 Observer	(2) AMBULANCE 1 Pilot, 2 Litter Patients, 1 Attendant	(3) OVERLOAD 1 Pilot 1 Co-Pilot 2 Passengers
TAKE-OFF WEIGHT	lb.	4,491	4,861	4,944
Fuel	lb.	615	615	615
Payload	lb.	200	540	400
Disc loading	lb./sq.ft.	2.4	2.6	2.6
Vertical rate of climb at S.L.	(A/B) fpm.	540/970	160/600	100/520
Absolute hovering ceiling	(A/B) ft.	8,500/8,500	6,400/6,400	5,900/3,400
Max. rate of climb at S.L.	(A) fpm.	1,380	1,180	1,150
Service ceiling (100 fpm)	(A) ft.	19,600	17,500	17,000
Speed at S.L.	(A) km.	99	93	91
Max. speed/altitude	(A) km./ft.	99/S.L.	93/S.L.	91/S.L.
Combat range	n.mi.	280	270	270
Average cruising speed	km.	80	80	80
Cruising altitude	ft.	1,500	1,500	1,500
Maximum Endurance	hrs.	4.6	4.4	4.3
Average cruising speed	km.	47	47	47

NOTES

- (A) Normal power (450 BHP @ 2,300 RPM)
 (B) Take-off power (500 BHP @ 2,300 RPM)

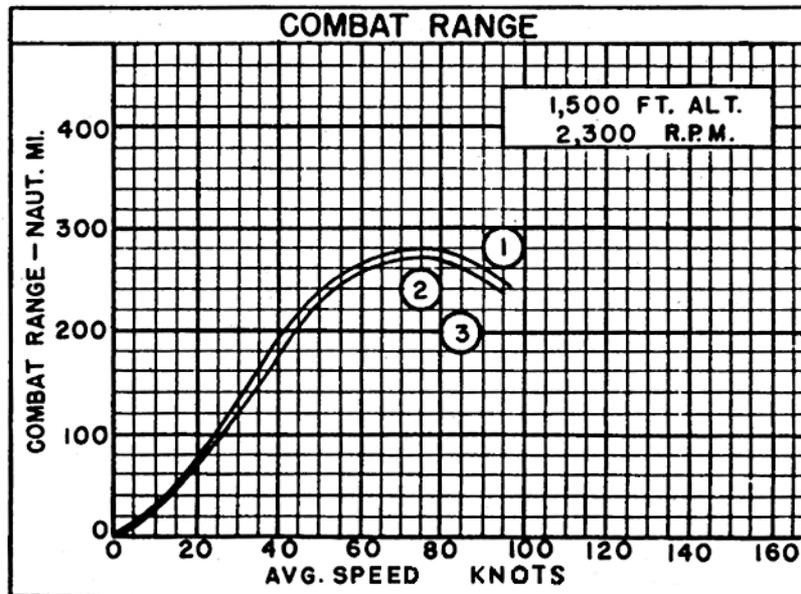
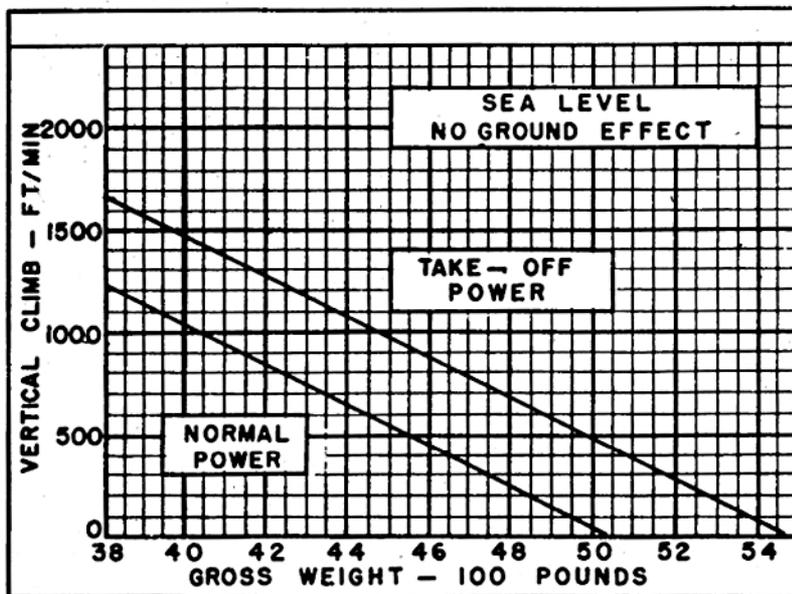
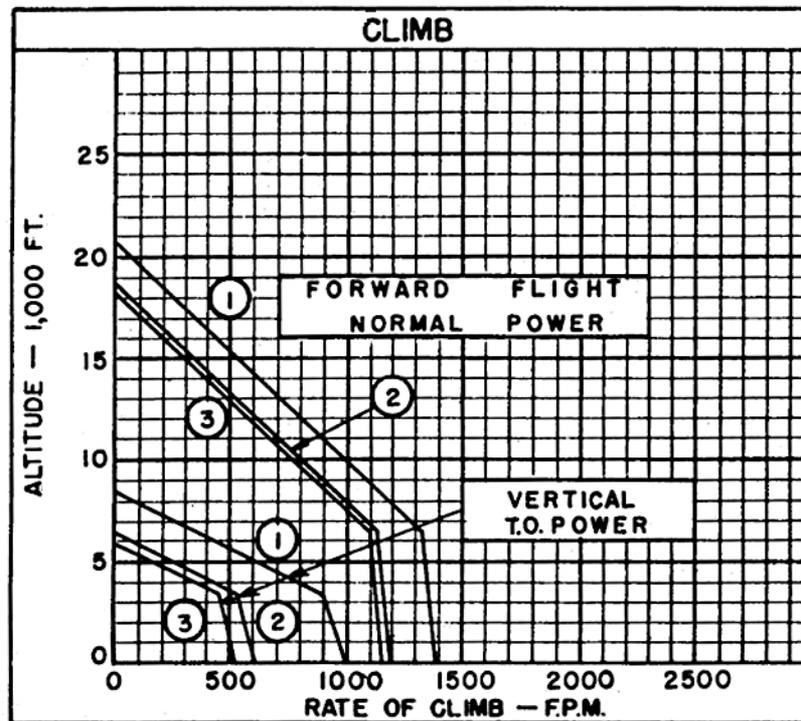
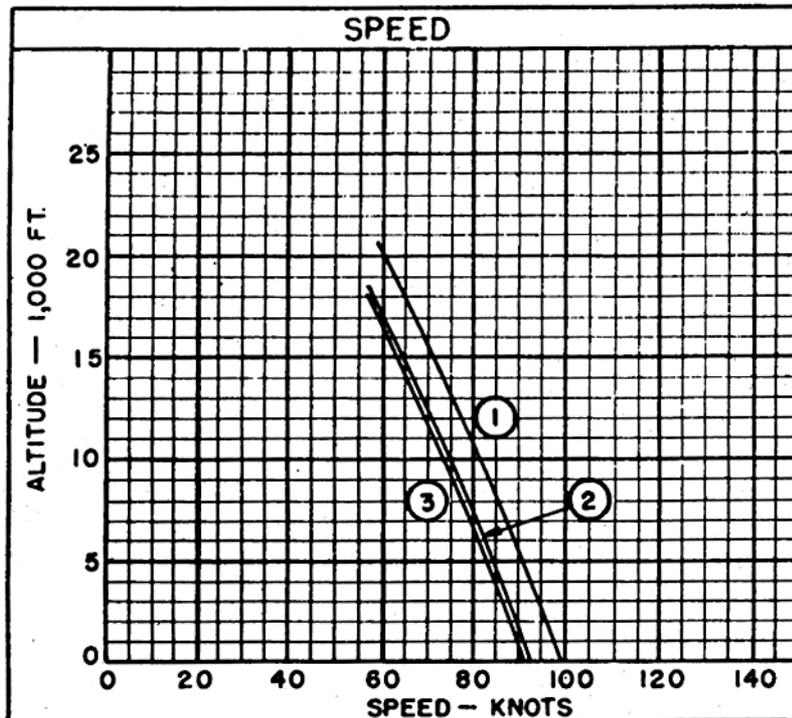
Performance is based on calculations.

Engine power is limited by the transmission capacity as follows:

Take-off power 500 BHP 2,300 RPM (5 minutes)
 Normal rated power 450 BHP 2,300 RPM (continuous)

Maximum speed is limited by blade tip stall.

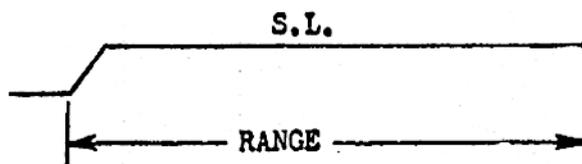
Combat range and maximum endurance are based on engine specification fuel consumption increased by 5% and allowing fuel for warm-up and take-off (5 minutes at NRP) and a 10% fuel reserve. Engine RPM of 2,300 is used for range and endurance calculations.



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics MAYAER 1335E (REV. 2-50)

CHARACTERISTICS SUMMARY

BASIC MISSION
HOK-1


PERFORMANCE

ENDURANCE	RANGE	SPEED
3.20 hours	168 naut. mi.	88 knots at S.L.
40 knots avg.	74 knots avg.	90 knots at 3000 ft.
Sea Level	Sea Level	Normal Gross Weight Normal Power
FORWARD FLIGHT CLIMB	SERVICE CEILING	HOVERING CEILING
1090 ft./min.	17,700 ft.	7800 ft.
Sea Level, N. G. Wt., Normal Power	100 ft./min., N. G. Wt., Normal Power	N. G. Wt., T.O. Power out of ground effect
		10,300 ft. N. G. Wt., T.O. Power in ground effect
LOAD	WEIGHTS	VERTICAL CLIMB
Fuel 102.5 gal.	Empty 4334 lbs.	510 ft./min.
Internal 102.5 gal.	Normal Gross 5542 lbs.	Sea Level, N. G. Wt., T.O. Power
External gal.	Overload 5995 lbs.	
Payload lbs.		

NOTES

Performance is based on NATC evaluation and AEL calibration of R-1340-48 engine.

Range and Endurance are based on AEL fuel flow data increased 5%.

This sheet supersedes previously issued sheet dated 15 February 1957.