

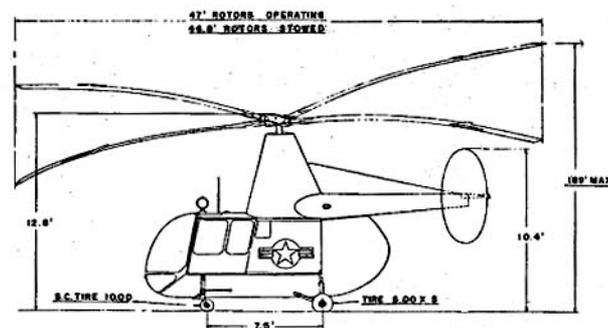
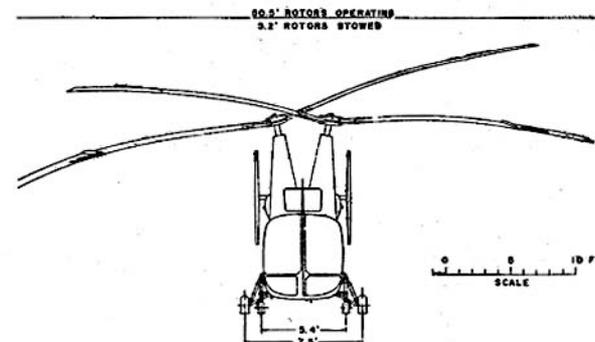
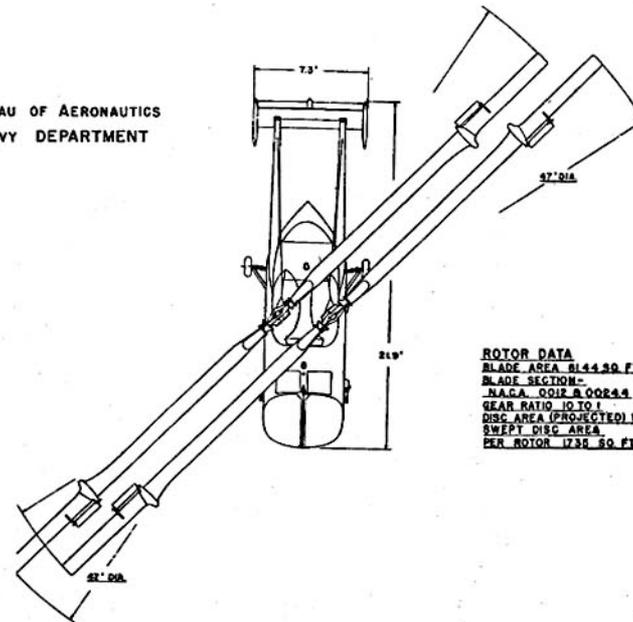


# STANDARD AIRCRAFT CHARACTERISTICS

OH-43D

KAMAN

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



DESCRIPTIVE ARRANGEMENT

**POWER PLANT**

NO. & MODEL ..... (1) R-1340-48  
 MFR ..... Pratt & Whitney  
 ROTOR GEAR RATIO ..... 0.1068

**RATINGS**

(A.E.L. Test Data)

	MAP	BHP	RPM	ALT
T.O.	36.5"	506	2250	6900'
	41.7"	600	2250	2200'
NORM.	35.0"	470	2200	7900'
	39.7"	550	2200	3700'

**ACCOMMODATIONS**

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

OR

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

**MISSION AND DESCRIPTION**

The HOK-1 is an observation and utility type helicopter performing missions such as evacuation of wounded, rescue, wire laying, and reconnaissance.

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.

**DEVELOPMENT**

First Flight ..... November 1953  
 Service Use ..... January 1955

**DIMENSIONS**

DISC AREA \* ..... 1901 sq. ft.  
 BLADE AREA ..... 130.6 sq. ft.  
 ROTOR DIAMETER ..... 47' - 0"  
 LENGTH ..... 47' - 0"  
 HEIGHT (MAX.) ..... 16' - 4"  
 TREAD ..... 7' - 6"

\* Projected

**WEIGHTS**

LOADING	LBS	L.F.
EMPTY .....	4334 .....	
BASIC .....	4411 .....	
DESIGN .....	5542 .....	2.91
MAX. T.O. ....	5995 .....	2.69
MAX. LANDING ....	5995 .....	2.69

All weights are actual

**FUEL AND OIL**

GALS.	NO. TANKS	LOCATION
102.5	1	Fuselage

FUEL GRADE ..... 91/96  
 FUEL SPEC (applicable) .... MIL-F-5572

**OIL**

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

**ELECTRONICS**

VHF RECEIVER ..... R-19  
 UHF TRANSCEIVER .... ARC Type 12, with  
 TV-10 Transverter  
 RANGE RECEIVER \* ..... R-11/A  
 ADF RECEIVER \*\* ..... AN/ARN-41A  
 FM RADIO SET \*\*\* ..... AN/ARC-44

\* Installed in BUONO 129839 and preceding  
 \*\* Installed in BUONO 129840, 139971  
 thru 140001  
 \*\*\* Installed in BUONO 139990 thru 140001

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) OBSERVATION 1 Pilot 1 Co-pilot	(2) OVERLOAD 1 Pilot 1 Co-pilot 2 Passengers		
TAKE-OFF WEIGHT	lb.	5542	5995		
Fuel	lb.	600	600		
Useful load	lb.	1206	1658		
Disc loading	lb./sq.ft.	3.21	3.47		
Vertical rate of climb at S.L. (A)/(B)	fpm.	510/380	110/ -		
Absolute hovering ceiling (A)/(B)	ft.	7800/6000	2500/ -		
Max. rate of climb at S.L. (A)/(B)	fpm.	1088/795	830/545		
Service ceiling (100 fpm) (B)	ft.	17,700	16,800		
Speed at S.L. (B)	kn.	88	85		
Max. speed/altitude (B)	kn./ft.	90/3000	85/S.L.		
Maximum range	n.mi.	168	152		
Average cruising speed	kn.	74	68		
Cruising altitude	ft.	S.L.	S.L.		
Maximum endurance	hrs.	3.2	2.7		
Average cruising speed	kn.	40	42		
Cruising altitude	ft.	S.L.	S.L.		

## NOTES

(A) TAKE-OFF POWER (36.5" Hg)

(B) NORMAL RATED POWER (35.0" Hg)

PERFORMANCE BASIS: Performance is based upon NATESTCEN evaluation of the HOK-1 and AEL calibration of the R-1340-48 engine.

RANGE, RADIUS and ENDURANCE are based on AEL fuel flow data increased 5%.

All performance is out of ground effect.

MAXIMUM ENDURANCE PROBLEM

WARM-UP, TAKE-OFF: 5 minutes at Normal Rated Power.  
CRUISE: At sea level at maximum endurance speeds out and back.  
RESERVE: 10% of initial fuel load.

MAXIMUM RANGE PROBLEM

WARM-UP, TAKE-OFF: 5 minutes at Normal Rated Power.  
CRUISE: At sea level at speed for best range.  
RESERVE: 10% of initial fuel load.

