



STANDARD AIRCRAFT CHARACTERISTICS

XHJP-1

PIASECKI

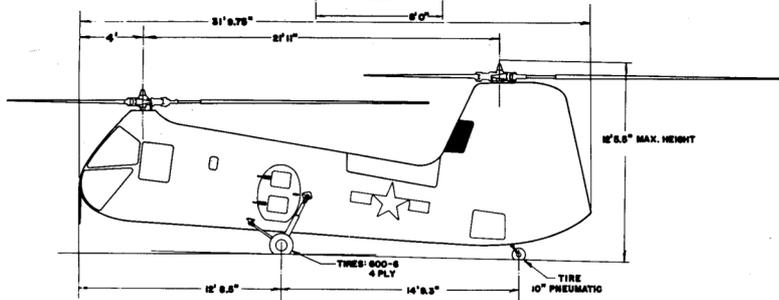
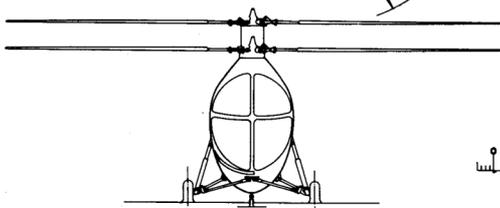
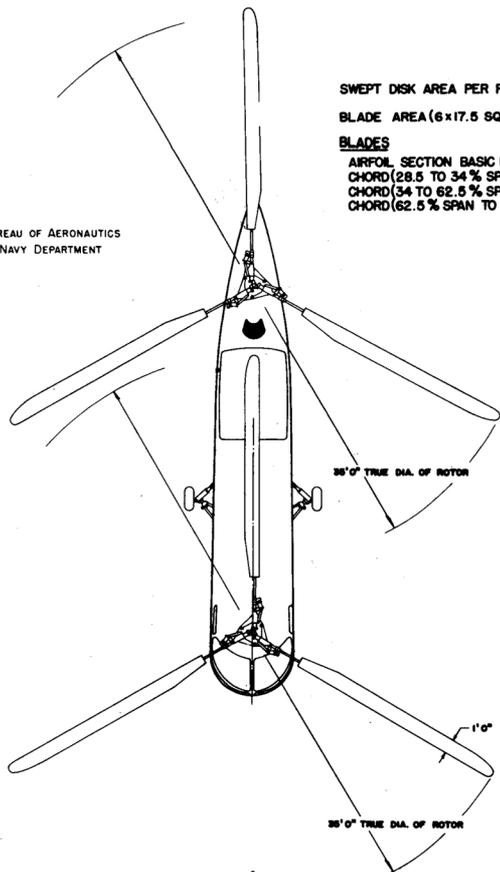
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

SWEPT DISK AREA PER ROTOR-960 SQ. FT.
BLADE AREA (6x17.5 SQ. FT.)-105 SQ. FT.

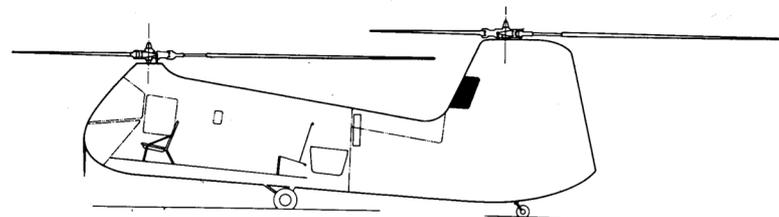
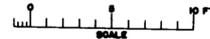
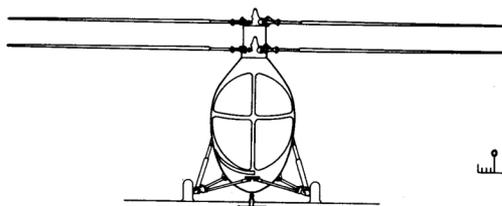
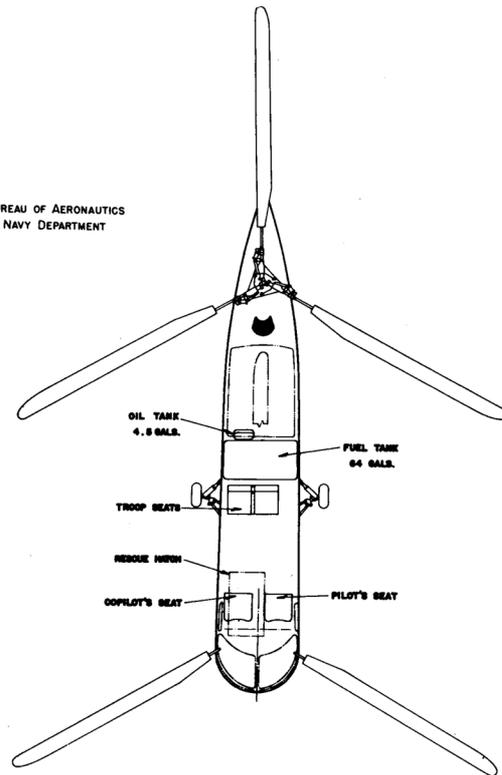
BLADES

AIRFOIL SECTION BASIC N.A.C.A. 00--SERIES
CHORD (28.5 TO 34% SPAN) N.A.C.A. 0014.9
CHORD (34 TO 62.5% SPAN) N.A.C.A. 0013.4
CHORD (62.5% SPAN TO TIP) N.A.C.A. 0012.0

GEAR RATIO 8.6 TO 1



BUREAU OF AERONAUTICS
NAVY DEPARTMENT



MISSION AND DESCRIPTION

The XHJP-1 is a three-place, helicopter designed to perform utility, liaison, and rescue missions in ship-to-ship and ship-to-shore Naval operations.

The basic configuration features the twin rotor tandem arrangement with the rotors overlapped, thus reducing the helicopter to a minimum size. It is specifically designed to fit the elevators of the smallest aircraft carriers in Naval service without the necessity of folding of the rotor blades. However, when the rotor blades are folded, the dimensions of the helicopter are small enough to fit into the hangar deck of Navy cruisers.

The internal arrangement of the helicopter features side-by-side seating of the pilot and co-pilot with dual controls installed. The large internal space behind the cockpit permits the location of the disposable load near the center of gravity. The powerful longitudinal control provided by the tandem arrangement compensates for possible large variations in the location of the disposable loads. A rescue hatch and an internally mounted rescue hoist is provided for hoisting equipment, personnel or litters into the cabin from a hovering position.

DIMENSIONS

DISC AREA
(PROJECTED)...1,670 sq. ft.
BLADE AREA.....105 sq. ft.
BLADE DIA.....35'- 0"
LENGTH.....31'-10"
HEIGHT.....12'- 6"
TREAD.....8'- 0"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	3,473.....	
BASIC.....	3,564.....	
DESIGN.....	4,377.....	2.75
MAX.T.O.....	6,000.....	2.00
MAX.LAND.....	6,000.....	

All Weights are Actual.

FUEL AND OIL

Gals.	No. Tanks	Location
64	1*	Fuselage

*Not Self Sealing

FUEL GRADE....100-130
FUEL SPEC....AN-F-48

OIL

CAPACITY (gals.).....4.5
SPEC.....AN-O-8
GRADE.....1100-1120

ELECTRONICS

RANGE REC.....AN/ARC-5
VHF TRANS. & REC.....AN/ARC-1

POWER PLANT

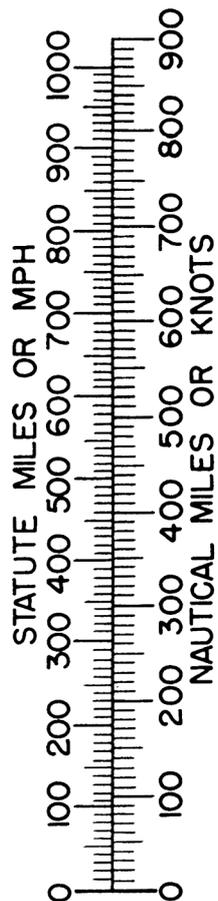
NO. & MODEL.....(1) R-975-34
MFGR.....Continental
SUPERCHG.....1 Stage, 1 Speed
PROP. GEAR RATIO.....D.D.

RATINGS

	Bhp @	Rpm @	Alt.
T.O.	525	2,300	S.L.
NORMAL	500	2,500	6,700
ALTER.	500	2,100	S.L.
SPEC. NO. 2008-A			

ACCOMODATIONS

CREW.....2
PASSENGERS.....3
LITTERS.....2
RESCUE HATCH.....48" x 26"
HOIST CAPACITY.....400 lbs.



PERFORMANCE SUMMARY				
LOADING CONDITION		(1) UTILITY 3 PLACE	(2) UTILITY 5 PLACE	(3) UTILITY 5 PLACE / CARGO
TAKE-OFF WEIGHT	LBS.	4,582	4,982	5,300
FUEL	LBS.	384	384	384
PAY LOAD	LBS.	200	600	918
ENGINE POWER (Normal Rated)	BHP/RPM	500/2,500	500/2,500	500/2,500
DISC LOADING (A)	LBS/SQ.FT.	2.7	3.0	3.2
POWER LOADING (A)	LBS/BHP	9.2	10.0	10.6
MAXIMUM SPEED-SEA LEVEL (B)	KN.	106	104	102
MAXIMUM SPEED/ALT. (B)	KN/FT.	108/6,700	106/6,700	104/6,700
RATE OF CLIMB-SEA LEVEL (B)	FT/MIN.	1,720	1,480	1,280
BEST RATE OF CLIMB SPEED-SEA LEVEL	KN.	56	58	59
TIME TO 5,000FT. (B)	MIN.	3.2	3.8	4.4
TIME TO 10,000FT. (B)	MIN.	7.5	9.2	11.2
SERVICE CEILING (B)	FT.	17,300	14,800	12,800
VERTICAL RATE OF CLIMB (B)/(C)	S.L.FT/MIN.	1,190/1,540	680/1,030	280/630
ABSOLUTE HOVERING CEILING (B)	FT.	8,800	7,400	4,500
COMBAT RANGE/V.A.V1,500 FT	N.M./KN.	175/79	167/79	161/79
MAXIMUM ENDURANCE/V.A.V1,500FT.	HR/KN.	3.0/46	2.8/48	2.6/49

NOTES

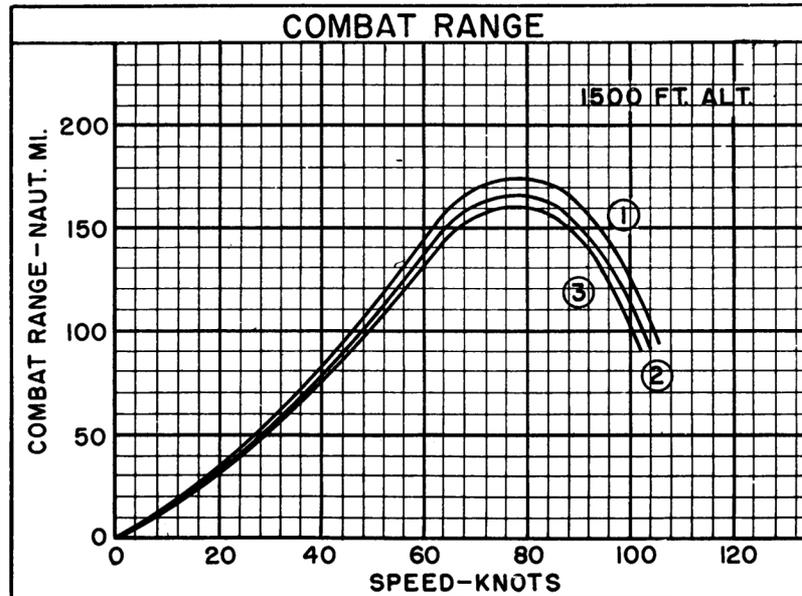
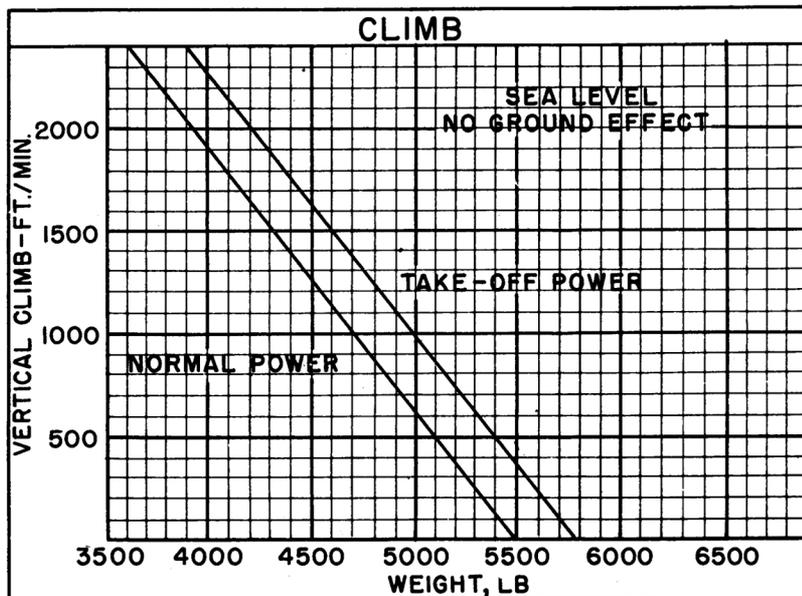
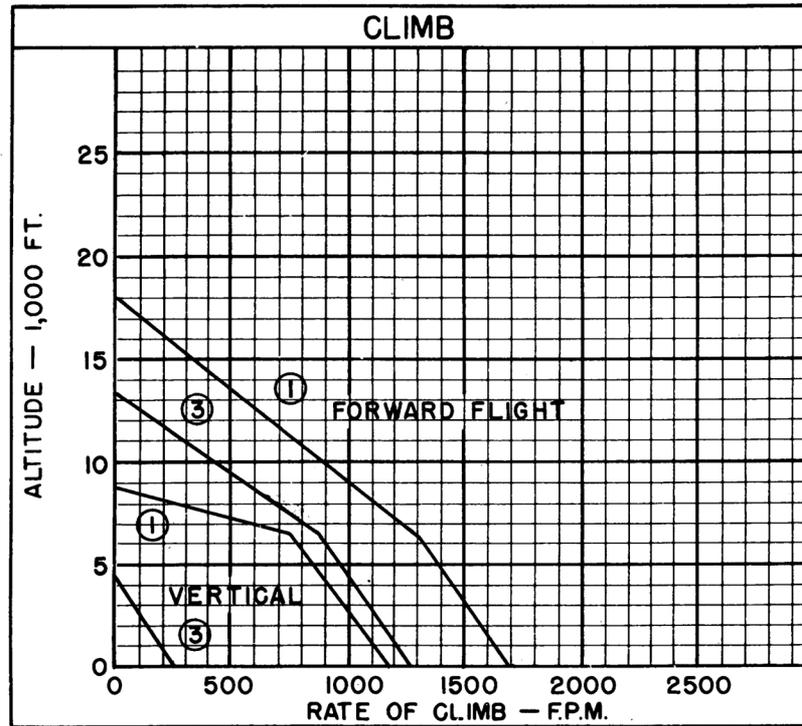
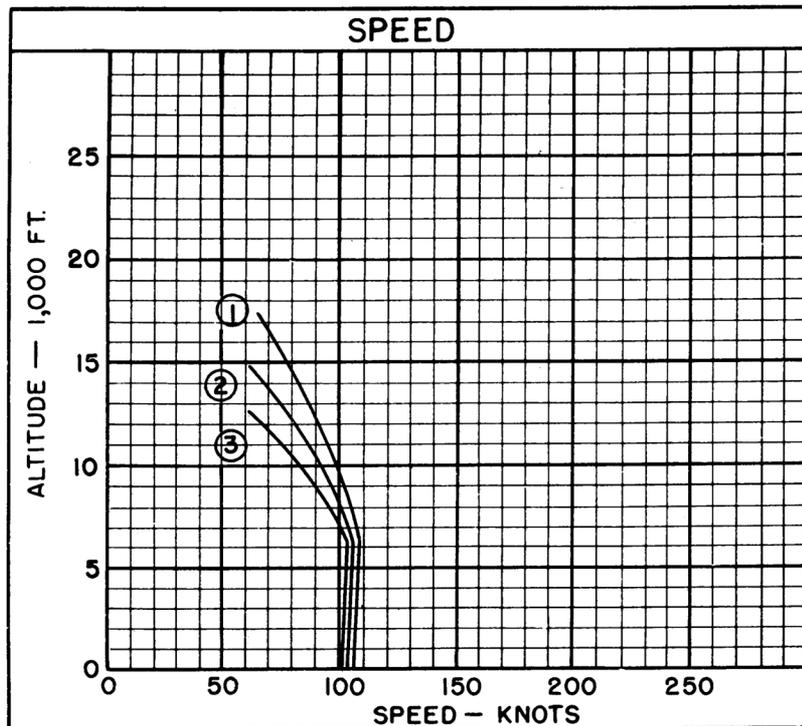
- (A) BHP at Maximum Critical Altitude
- (B) Normal BHP at 2,500 RPM
- (C) Take-off Power

Performance is based on flight test of XHJP-1 helicopter.

 Combat range is based on engine specification fuel consumption data, increased by 5% and allowing a 10% fuel reserve.

Due to engine structural limitations, take-off power is restricted to 2,300 RPM. As a result, NRP is greater than take-off power above 3,500 feet.

Sea level data do not include ground effect.



○ LOADING CONDITION COLUMN NUMBER