



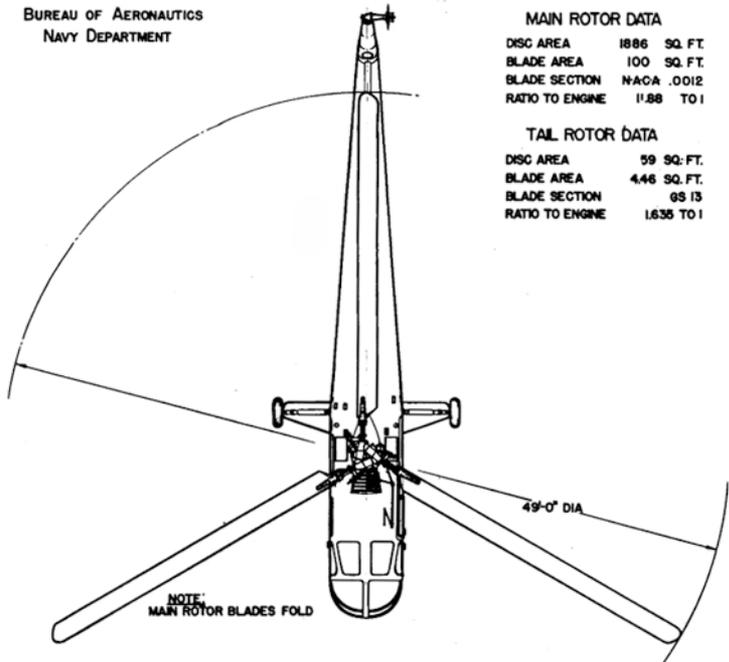
# STANDARD AIRCRAFT CHARACTERISTICS

## XHJS-1

SIKORSKY

# EXPERIMENTAL

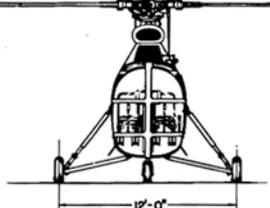
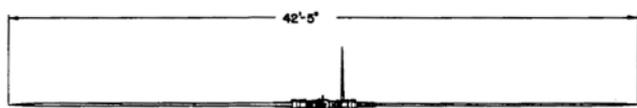
BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



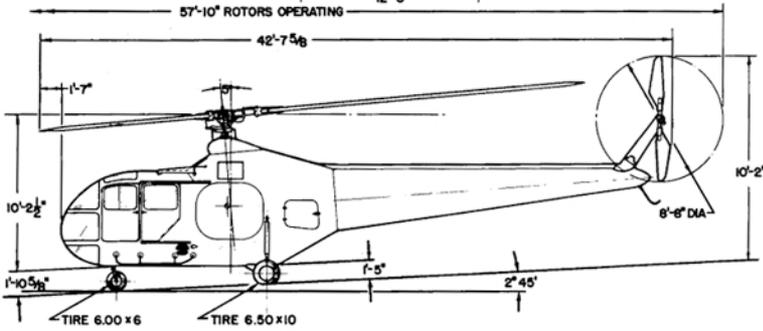
**MAIN ROTOR DATA**  
 DISC AREA 1886 SQ. FT.  
 BLADE AREA 100 SQ. FT.  
 BLADE SECTION NACA .0012  
 RATIO TO ENGINE 1.88 TO 1

**TAIL ROTOR DATA**  
 DISC AREA 99 SQ. FT.  
 BLADE AREA 4.46 SQ. FT.  
 BLADE SECTION GS 13  
 RATIO TO ENGINE 1.636 TO 1

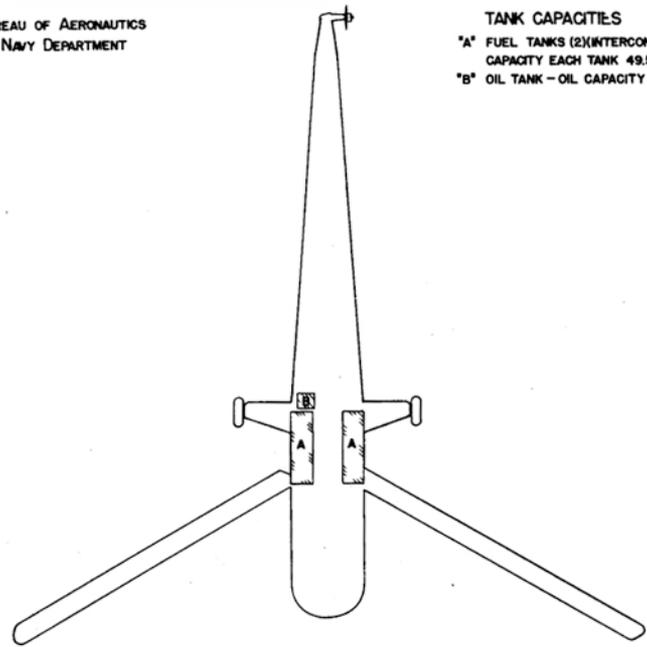
NOTE:  
MAIN ROTOR BLADES FOLD



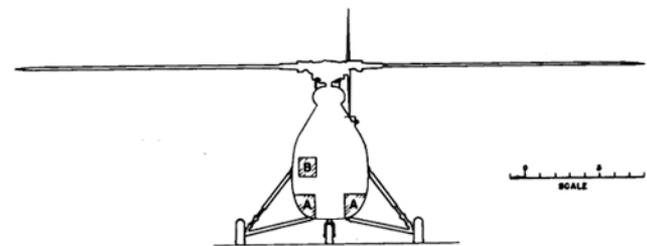
SCALE  
0 1 2 3 4 5 6 7 8 9 10 FT.



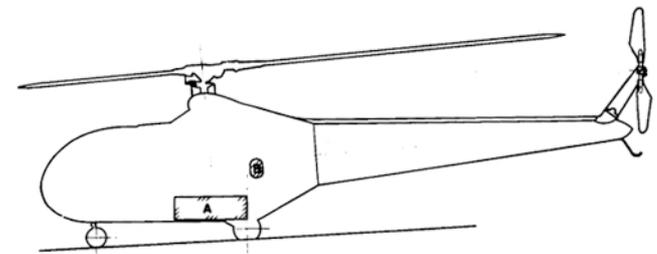
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**TANK CAPACITIES**  
 \*A\* FUEL TANKS (2)(INTERCONNECTED)  
 CAPACITY EACH TANK 49.5 GAL  
 \*B\* OIL TANK - OIL CAPACITY 6.7 GAL



SCALE  
0 1 2 3 4 5 6 7 8 9 10 FT.



**MISSION AND DESCRIPTION**

The XHJS-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 a single main rotor with a tail rotor for directional control.

The internal arrangement of the helicopter features side-by-side seating of the pilot and co-pilot with dual controls installed. Space is provided for litters inside the cabin. An internally mounted rescue hoist is provided for hoisting equipment, personnel, etc. into the cabin from a hovering position through a hatch and a sliding door. The power package arrangement of the engine permits the removal of the engine when a quick change of engines is necessary.

**DIMENSIONS**

DISC AREA.....1,886 sq. ft.  
 BLADE AREA.....100 sq. ft.  
 BLADE DIA.....49'-0"  
 LENGTH.....41'-1"  
 HEIGHT.....12'-1"  
 TREAD.....12'-0"

**WEIGHTS**

| Loadings      | Lbs.       | L.F. |
|---------------|------------|------|
| EMPTY.....    | 3,959..... |      |
| BASIC.....    | 4,056..... |      |
| DESIGN.....   | 5,125..... | 2.67 |
| MAX.T.O.....  | 6,500..... | 2.10 |
| MAX.LAND..... | 6,100..... |      |

All weights are actual.

**FUEL AND OIL**

| Gals.                 | No. Tanks | Location |
|-----------------------|-----------|----------|
| 99                    | 2         | Fuselage |
| FUEL GRADE....100/130 |           |          |
| FUEL SPEC.....AN-F-48 |           |          |

**OIL**

CAPACITY (Gals.).....6.7  
 GRADE.....1100-1120  
 SPEC.....AN-O-8

**ELECTRONICS**

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

**POWER PLANT**

NO. & MODEL.....(1) R-975-34  
 MFGR.....Continental  
 SUPERCH.....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  
 LITERS.....1  
 HOIST CAPACITY.....400 lbs.



| PERFORMANCE SUMMARY                 |                        |                           |                           |  |  |
|-------------------------------------|------------------------|---------------------------|---------------------------|--|--|
| LOADING CONDITION                   |                        | (1)<br>UTILITY<br>3 PLACE | (2)<br>UTILITY<br>5 PLACE |  |  |
| TAKE-OFF WEIGHT                     | LBS.                   | 5,300                     | 5,700                     |  |  |
| FUEL                                | LBS.                   | 594                       | 594                       |  |  |
| PAY LOAD                            | LBS.                   | 200                       | 600                       |  |  |
| ENGINE POWER                        | (Normal Rated) BHP/RPM | 500/2,500                 | 500/2,500                 |  |  |
| DISC LOADING                        | (A) LBS/SQFT           | 2.8                       | 3.0                       |  |  |
| POWER LOADING                       | (A) LBS/BHP            | 10.6                      | 11.4                      |  |  |
| MAXIMUM SPEED-SEA LEVEL             | (B) KN.                | 103                       | 102                       |  |  |
| MAXIMUM SPEED/ALT.                  | (B) KN/FT.             | 113/6,700                 | 112/6,700                 |  |  |
| RATE OF CLIMB-SEA LEVEL             | (B) FT/MIN.            | 1,480                     | 1,310                     |  |  |
| BEST RATE OF CLIMB SPEED-SEA LEVEL  | KN.                    | 59                        | 59                        |  |  |
| TIME TO 5,000 FT.                   | (B) MIN.               | 3.8                       | 4.4                       |  |  |
| TIME TO 10,000 FT.                  | (B) MIN.               | 9.0                       | 10.7                      |  |  |
| SERVICE CEILING                     | (B) FT.                | 17,100                    | 15,000                    |  |  |
| VERTICAL RATE OF CLIMB (B)/(C) S.L. | FT/MIN.                | 790/1,110                 | 450/770                   |  |  |
| ABSOLUTE HOVERING CEILING (B)       | FT.                    | 7,800                     | 6,800                     |  |  |
| COMBAT RANGE/V.A.V. 1,500 FT.       | N.M./KN.               | 286/74                    | 274/75                    |  |  |
| MAXIMUM ENDURANCE/V.A.V. 1,500 FT.  | HR/KN.                 | 5.1/48                    | 4.6/48                    |  |  |

## NOTES

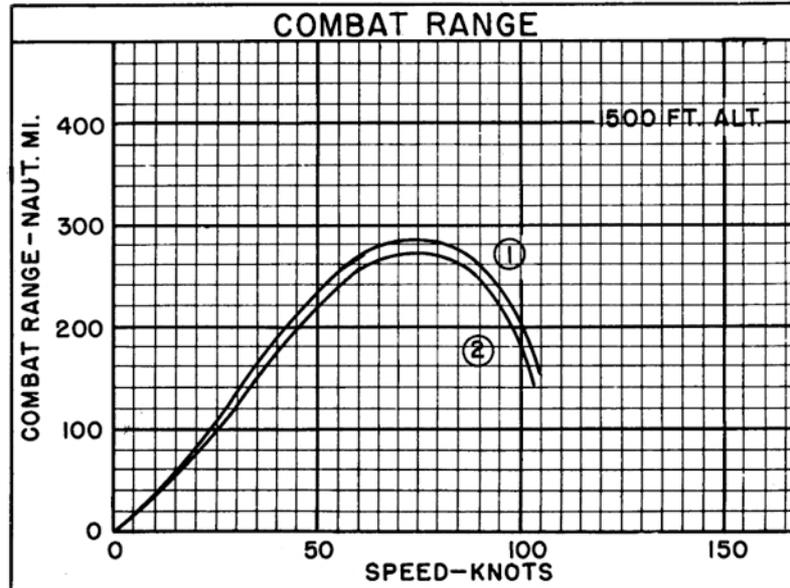
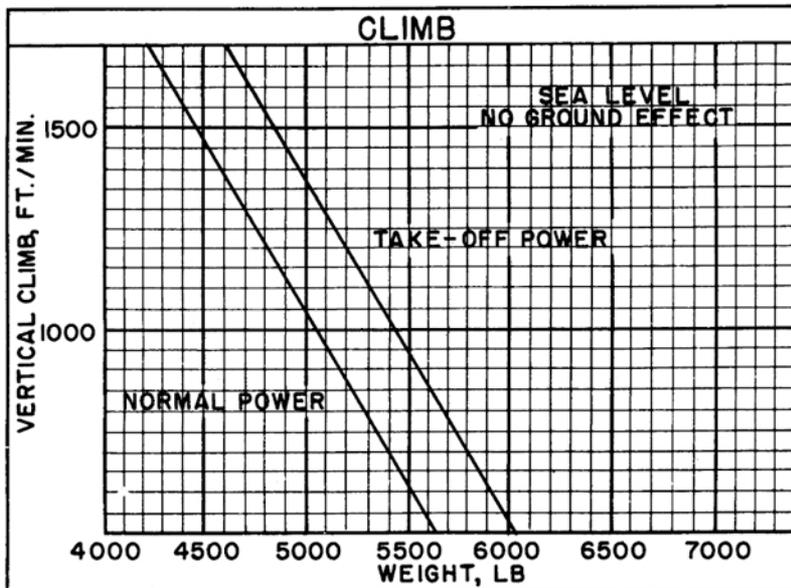
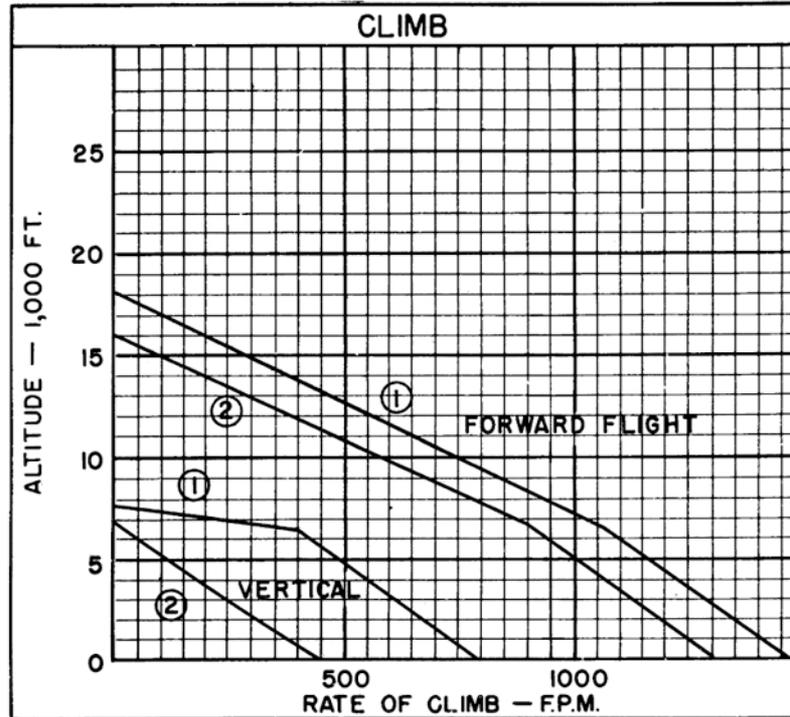
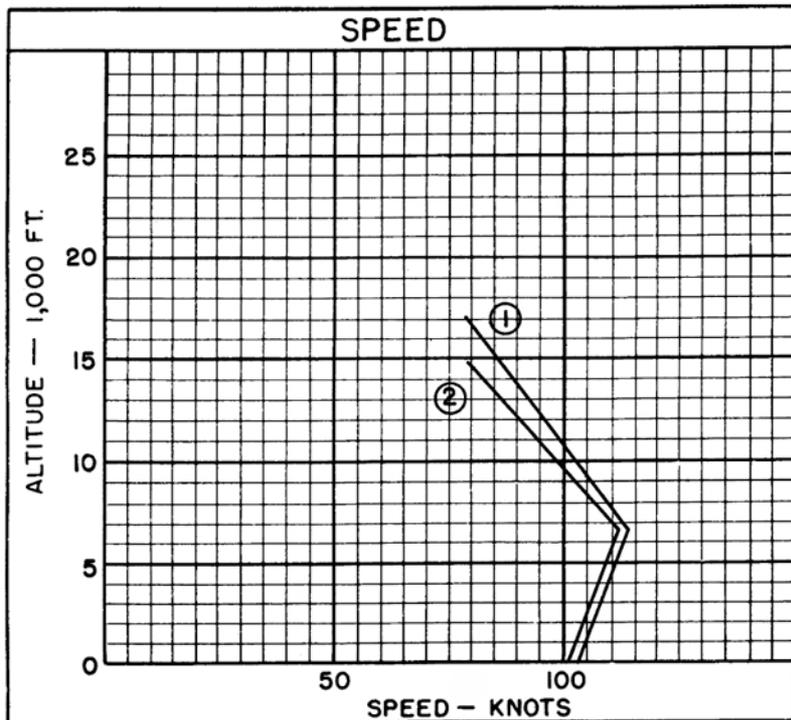
- (A) BHP at Maximum Critical Altitude
- (B) Normal BHP at 2,500 RPM
- (C) Take-off Power

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

Range and endurance are based on engine specification fuel consumption increased by 5%.

Sea level data do not include ground effect.

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.



○ LOADING CONDITION COLUMN NUMBER