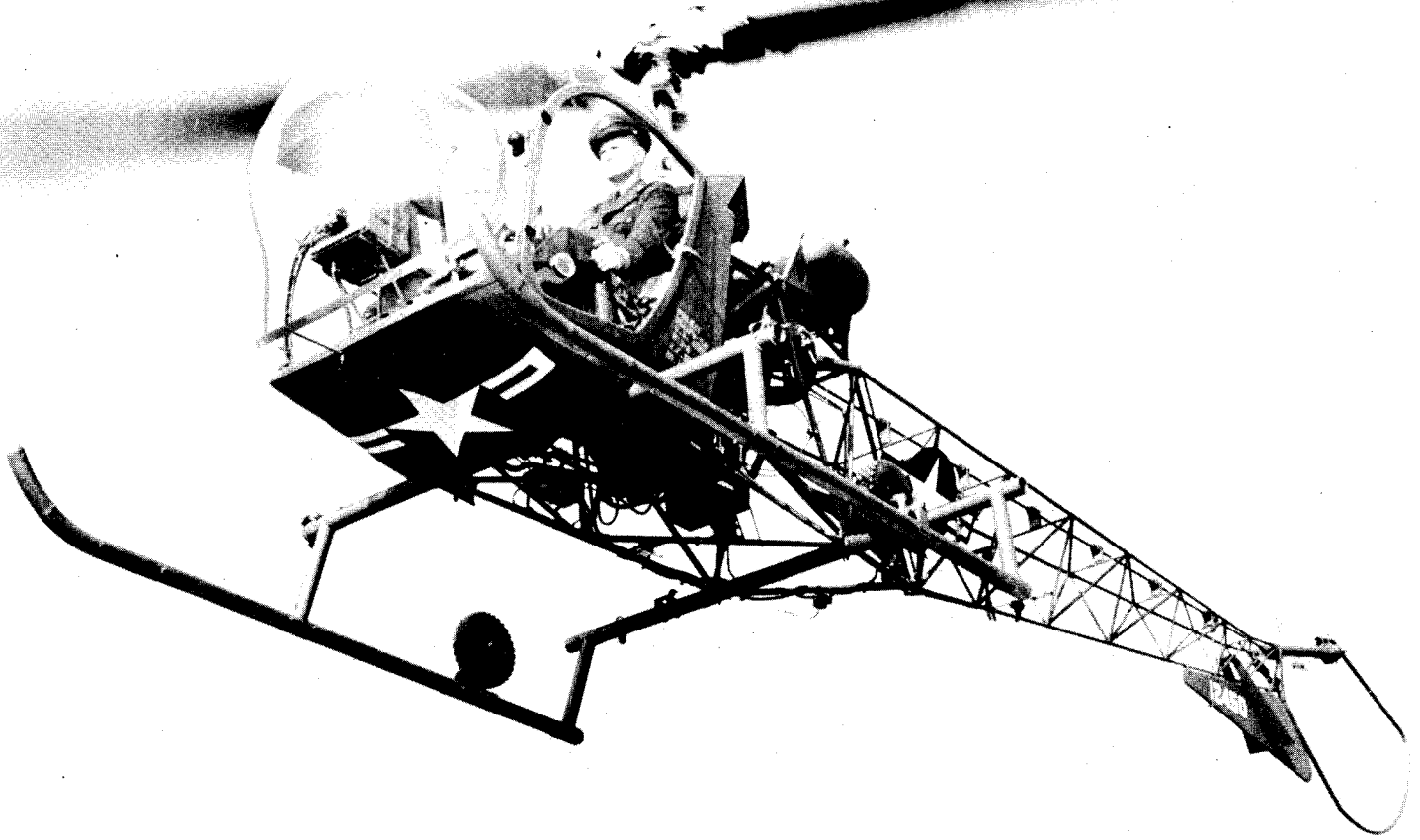


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# STANDARD AIRCRAFT CHARACTERISTICS

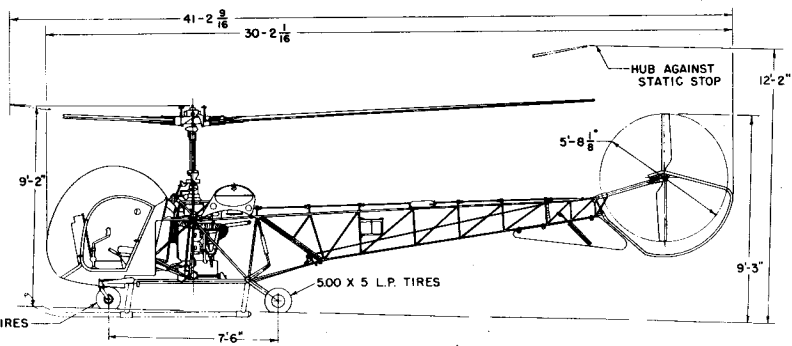
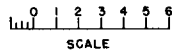
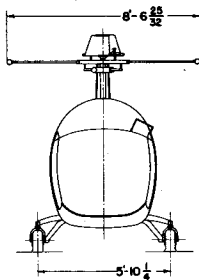
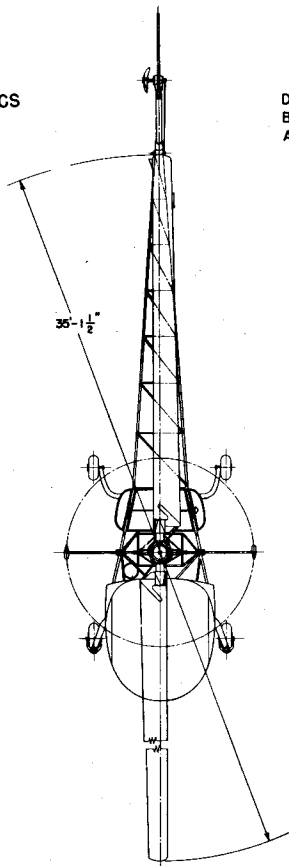
## HTL-4

BELL

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BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

DISC AREA : 965 SQ. FT.  
BLADE AREA (2) : 35.34 SQ. FT.  
AIRFOIL SECTION : ROOT NACA 0017  
TIP NACA 0011



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## POWER PLANT

NO. & MODEL.....(1) O-335-5  
MFR.....Aircooled Motors  
ROTOR GEAR RATIO.....0.111  
TAIL ROTOR RATIO.....0.60

### RATINGS

Bhp @ Rpm @ Alt.

NORMAL 200 3,100 S. L.

SPEC. NO. 19017C

## ACCOMMODATIONS

CREW AND PASSENGERS ON  
SEAT.....3  
EXTERNAL LITTERS.....2

## MISSION AND DESCRIPTION

The primary mission of the HTL-4 is training. It will also be used in combat areas for the evacuation of wounded, mine spotting, liaison, carrying limited amounts of critical supplies, and general utility.

It is similar in general configuration and rotor dimensions to the HTL-3 helicopter, but the removal of the fuselage covering aft of the pilot's enclosure and other equipment has made the helicopter 156 pounds lighter in the normal configuration. Modification of the tail rotor guard has increased the length 2 inches.

Some of the helicopters are being delivered with skid type gear and some with wheel type gear. Kits containing the other type of gear are being delivered with each helicopter.

The HTL-4 is a three-place, single engine helicopter equipped with a two-bladed main rotor with a gyroscopic action stabilizer bar. The main rotor is of the see-saw type, the blade being rigidly interconnected by means of the hub except that each blade is separately journaled to the hub for pitch change.

In service use -- November 1950

## DIMENSIONS

DISC AREA.....969 sq. ft.  
BLADE DIA.....35' - 2"  
LENGTH.....41' - 5"  
HEIGHT\*.....11' - 3"  
TREAD.....5' - 11"  
BLADE AREA.....35 sq. ft.

\* Blades in stowed position.

## WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	1,546.....	
BASIC.....	1,555.....	
DESIGN.....	2,350.....	2.5
MAX.T.O.....	2,350.....	2.5
MAX.LAND.....	2,350*	

All weights are actual.

\* Limited by performance

## FUEL AND OIL

Gals.	No. Tanks	Location
29	1	Fuselage
FUEL GRADE....91/98		
FUEL SPEC...AN-F-48		

### OIL

CAPACITY (Gals.).....	2
GRADE.....	1100
SPEC.....	AN-O-8

## ELECTRONICS

VHF TRANSMITTER.....T-11A  
VHF TRANSMITTER.....T-13  
VHF REC.(118-148 mcs)....R-19  
RANGE REC.(190-550 kcs).R-11A



## PERFORMANCE SUMMARY

LOADING CONDITION		(1) TRAINER 1 Pilot 1 Student	(2) TRAINER 1 Pilot Cargo/Passen.	
TAKE-OFF WEIGHT	lbs.	2,124	2,350	
Fuel	lbs.	174	174	
Pay Load	lbs.	190	416	
Engine Power	bhp/rpm.	200/3,100	200/3,100	
Disc Loading	lbs./sq.ft.	2.2	2.4	
Power Loading	(A) lbs./bhp.	10.6	11.7	
Maximum Speed-S.L.	(B) kn.	80	80	
Maximum Speed/Alt.	(B) kn./ft.	82/1,900	80/S.L.	
Rate of Climb--S.L.	(B) ft./min.	990	850	
Speed for Rate of Climb--S.L.	(B) kn.	45	45	
Time-to-Climb 5,000 ft.	(B) min.	6.2	7.6	
Time-to-Climb 10,000 ft.	(B) min.	17.7	25.0	
Service Ceiling	(B) ft.	12,600	10,600	
Vertical Rate of Climb--S.L. (B/C)	ft./min.	340	--	
Abs. Hover Ceil. No Grd. Effect (B/C)	ft.	1,500	--	
Abs. Hover Ceil. In Grd. Effect (B/C)	ft.	--	--	
Combat Range/Vav 1,500 ft.	n.mi./kn.	105/65	95/65	
Max. Endur./Vav 1,500 ft.	hr./kn.	1.9/45	1.7/45	

### NOTES

- (A) BHP at Maximum Critical Altitude
- (B) Normal BHP
- (C) Take-Off Power

Performance is based on NATC flight test of the HTL-3 helicopter.

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 Combat range and maximum endurance are based on flight test fuel consumption data increased by 5% and allowing fuel for warm-up and take-off (5 minutes at NRP) and a 10% fuel reserve.  
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Maximum speed is restricted to 80 knots IAS by BUAER Technical Order No. 40-51 of 1 June 1951.

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 All performance is based on 3,100 RPM and is out of ground effect.  
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