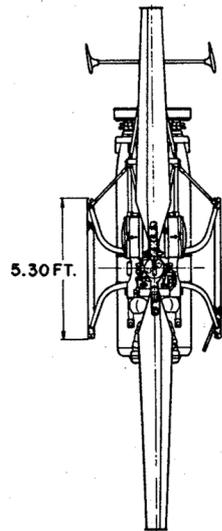


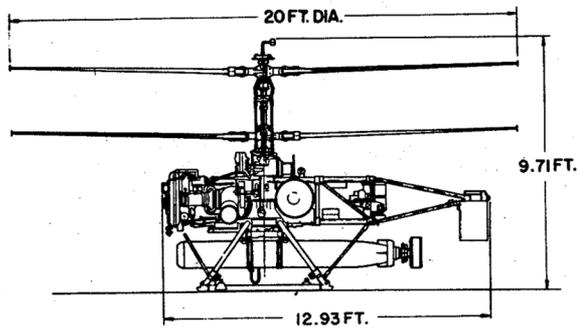
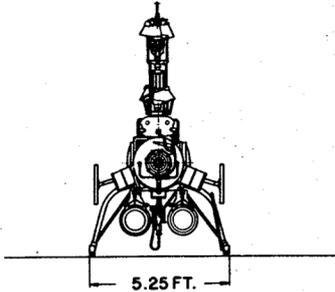
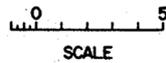
STANDARD AIRCRAFT CHARACTERISTICS

QH-50C



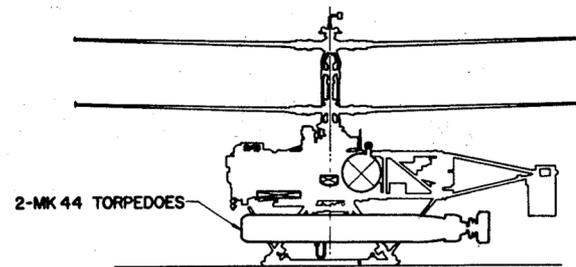
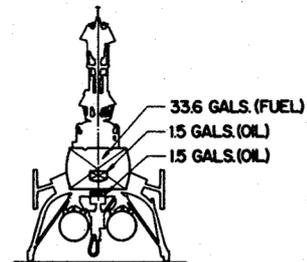
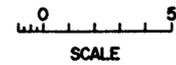
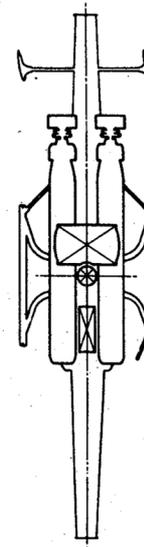
ROTOR DATA

DISC AREA - 3142 SQ. FT.
 BLADE AREA - 32.8 SQ. FT.
 BLADE SECTION - NASA 0017 TO 0012
 ROTOR GEAR RATIO - 9836 TO 1



DESCRIPTIVE ARRANGEMENT

☒ NON SELF-SEALING TANKS



2-MK 44 TORPEDOES

ARMAMENT & TANKAGE

POWER PLANT

ENGINE (1) T50-BO-8A
 MFR. Boeing Airplane Co.
 TYPE Turboshaft

RATINGS

	<u>BHP</u>	<u>RPM</u>	<u>ALT.</u>
MILITARY	300	5950	SSL
NORMAL	270	6000	SSL

Model Spec. No. D4-1700-A
 Dated: 1 December 1961
 Revised: 15 August 1962

ORDNANCE

Weapons:

Mk 44 Torpedo 2
 or
 750 lb. 1

MISSION AND DESCRIPTION

The Model QH-50C Drone is a remotely controlled rotary-wing ASW weapon carrier designed to deliver alternate weapon loads of 750 lb or 850 lb. Combat radius of the drone is about 30 nautical miles, depending on loading condition, at a cruising speed of 80 knots. The combat mission includes a 12 minute hovering capability at the target prior to release of weapon(s).

The drone incorporates two two-bladed counter-rotating coaxial rotors of the semi-rigid (see-saw) type. The blades are of laminated wood construction, incorporating taper in planform and thickness and 12° negative twist. The machine is completely controllable through the rotors. Rotor controls are operated by the automatic stabilization and remote control equipment.

Control in pitch and roll is obtained through conventional cyclic pitch control. Control in yaw is achieved by means of rotor blade tip air (drag) brakes, which provide positive directional control in all flight regimes.

Directional stability in forward flight is provided by means of two vertical tail surfaces.

The power plant is the 300 hp T50-BO-8A gas turbine engine built by the Industrial Products Division of the Boeing Airplane Co.

DEVELOPMENT

The QH-50C is in production and initial Fleet deliveries were inaugurated in November 1962. Concurrently development work is continuing.

DIMENSIONS

DISC AREA 314.2 sq. ft.
 BLADE AREA 32.5 sq. ft.
 ROTOR DIAMETER .. 20 ft. 0 in.
 LENGTH 20 ft. 0 in.
 HEIGHT 9 ft. 8.5 in.
 TREAD 5 ft. 3 in.

WEIGHTS

<u>LOADINGS</u>	<u>LB.</u>
EMPTY	1172
NORMAL GROSS I	2303
NORMAL GROSS II	181

FUEL AND OIL

<u>NO. TANKS</u>	<u>GAL.</u>	<u>LOCATION</u>
1	33.6	Aft of transmission
GRADE		JP-5

OIL

CAPACITY 3.0 gal.
 SPEC MIL-L-7808C

ELECTRONICS

1 (One) Each
 AN/ARW-78 Radio Receiving Set
 AN/ASW-20 Automatic Flight Control Set

PERFORMANCE SUMMARY

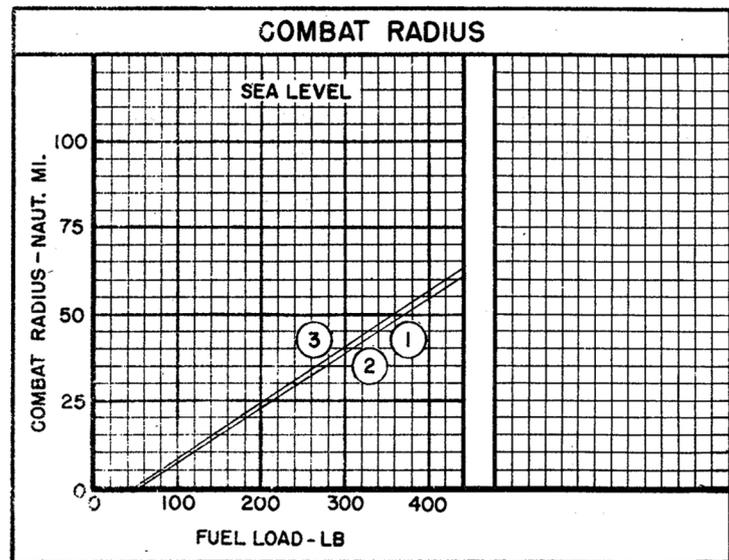
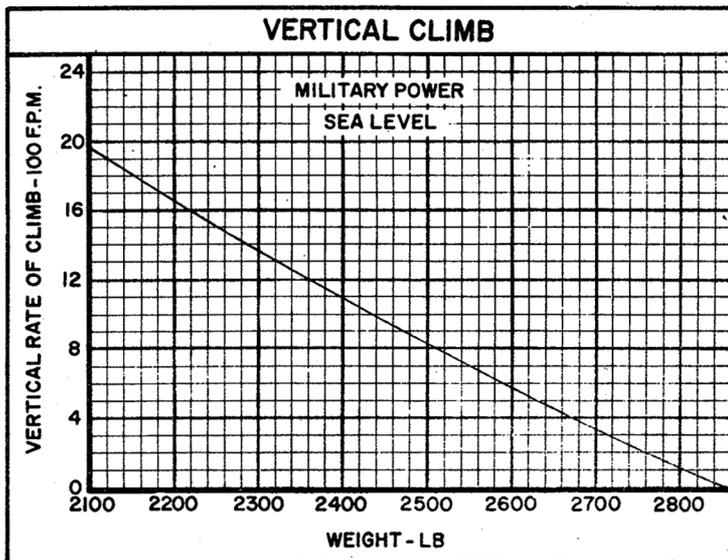
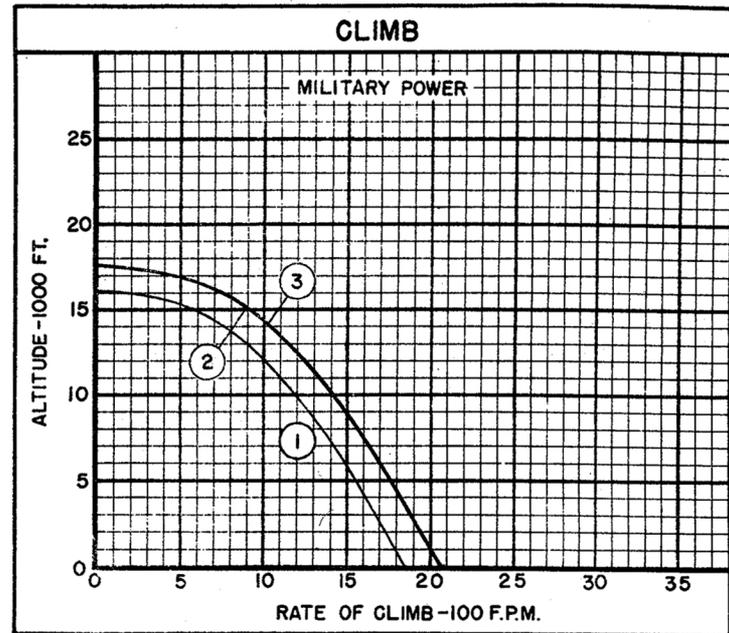
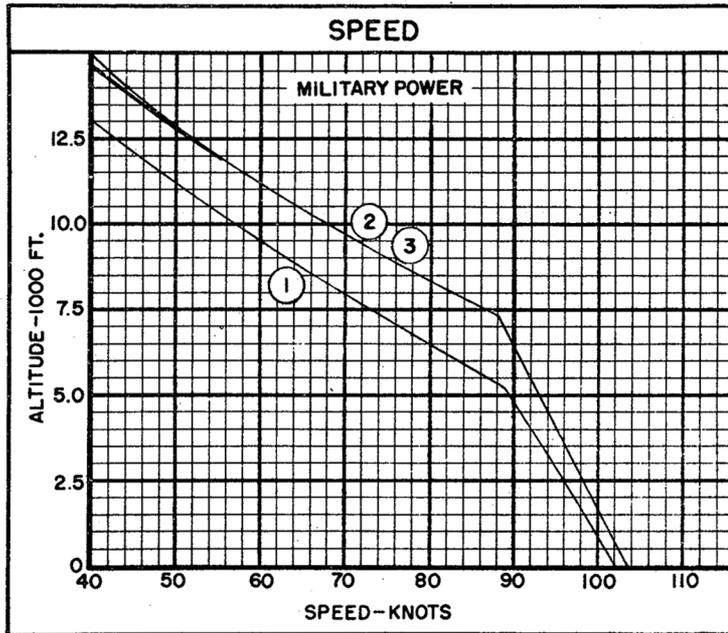
TAKE-OFF LOADING CONDITION		(1) ASW ATTACK 2-MK 44 TORPEDOES	(2) ASW ATTACK 2-MK 44 TORPEDOES	(3) ASW ATTACK 750 LB WEAPON		
TAKE-OFF WEIGHT	LB.	2303	2188	2181		
FUEL	LB.	230	115	230		
PAYLOAD	LB.	866	866	750		
DISC LOADING	LB./SQ.FT.	7.33	6.96	6.96		
VERTICAL RATE OF CLIMB AT S.L.	(A) FPM.	1355	1690	1710		
ABSOLUTE HOVERING CEILING	(A) FT.	11,120	13,320	13,515		
MAX. RATE OF CLIMB AT S.L.	(A) FPM.	1845	2060	2075		
SERVICE CEILING (100 FPM.)	(A) FT.	16,200	17,400	17,470		
SPEED AT S.L.	(B) KN.	80	80	80		
MAX. SPEED/ALTITUDE	(B) KN./FT.	80/S.L.	80/S.L.	80/S.L.		
COMBAT RANGE	N.MI.	70.65	35.14	71.88		
AVERAGE CRUISING SPEED	KN.	80	80	80		
CRUISING ALTITUDE	FT.	S.L.	S.L.	S.L.		
COMBAT RADIUS	N.MI.	27.75	9.40	28.45		
AVERAGE CRUISING SPEED	KN.	80	80	80		
		475	640	655		

NOTES:

PERFORMANCE: Determined from calculation based on test data obtained during Contractor's Flight Demonstration Program at NATC.

All performance is out of ground effect.

- (A) Military Power
- (B) Vmax is restricted to 80 knots pending incorporation of a longitudinal cyclic limiter.

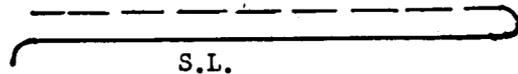


○ LOADING CONDITION COLUMN NUMBER

NOTES

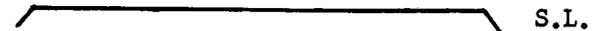
COMBAT RADIUS MISSION

WARM-UP AND TAKE-OFF: 1/2 minute at Normal Rated Power.
 CRUISE OUT: At V_{max} at sea level.
 HOVER: 12 minutes out of ground effect at sea level at objective.
 DROP WEAPON: No fuel used, no distance gained.
 CRUISE BACK: At V_{max} at sea level.
 RESERVE: 10 percent of initial fuel load.



COMBAT RANGE MISSION

WARM-UP AND TAKE-OFF: 1/2 minute at Normal Rated Power
 CRUISE: At sea level at average cruising speed (speed for maximum range.)
 RESERVE: 10 percent of initial fuel load.



Mission Time: Excludes warm-up, take-off and reserve fuel
 Cycle Time: Exclude Warm-up and take-off fuel

○ LOADING CONDITION COLUMN NUMBER