STANDARD AIRCRAFT CHARACTERISTICS

HSS - 2

S I KORSKY

30 JULY 1960
POWER PLANT

NO. & MODELS ........................................... (2) T58-GE-6
MFR ................................................. General Electric
MOTOR GEAR RATIO ........................................ 0.319
TAIL MOTOR RATIO ........................................ 0.0205

RATINGS

SPEC. & REV. & ALT. 
NVL. 1050 19,555 SSL
NO/BL. 900 19,555 SSL

Eng. Spec. No. E-1013
of 11 April 1957

MISSION AND DESCRIPTION

The primary mission of the helicopter is to detect, identify, track and destroy enemy submarines. It is capable of all weather operation from carriers, cruisers and from other naval and merchant ships which have adequate landing provisions and from land bases.

This helicopter is a twin-engine, single-main-rotor type with one anti-torque tail rotor and a fixed trim surface. All metal construction is used throughout the aircraft. A large door toward the rear of the cabin and a personnel door toward the front of the cabin provide entrance for the crew. The fuselage of semi-monocoque construction has an amphibian type hull bottom to provide emergency water landing capability. A sponsor is provided on the outer end of the landing gear to increase lateral stability during emergency water landings. The main rotor blades are prestressed and shall be manually foldable in winds up to 40 knots to reduce the overall length for storage. The tail plane is also foldable. A rotor brake prevents rolling of the rotor blades from bowing up to prevent windmilling. Flight controls include hydraulic servo systems for the main and tail rotor. Automatic stabilization equipment is provided and is capable of being engaged or disengaged at any time during flight without disturbance.

Personnel include pilot, co-pilot, gunner and relief gunner operator.

DEVELOPMENT

First Flight ........................................... April 1959
Service NOS ........................................... March 1961

WEIGHTS

LOADING 
LBS. 
LBS:

EMPTY 10814
BASIC 11196
DESIGN G-N 28
OVERLOAD G-N 19000

All weights are actual

FUEL AND OIL

GAL. NO. TANKS LOCATION
656 2 Internal

Fuel Grade ................. JP-4
Fuel Spec. ................. MIL-F-5622

OIL

Capacity (Gals.) ................. 6.1
Fuel Spec. ................. MIL-O-7808

DIMENSIONS

DISC AREA ................. 3079 sq. ft.
HEADING - LESS AREA .......... 3050 sq. ft.
Breadth of DISC ................. 13 ft.

ELECTRONICS

RADIO SET (HF) ................. AN/ARC-52
RADIO SET (VHF) ................. AN/ARC-99
INTERPHONE, T/R, A/F ................. AN/ARC-46
Radar Identification Set ................. AN/AFE-68
COMS GROUP ................. AN/AFR-89
LOW FREQUENCY A/F ................. AN/ABR-59
RADIO SET ................. AN/ARC-214
Radar Altimeter ................. AN/AFR-117
LOGS ................. AN/AS-14
Radar Navigation Set ................. AN/AFR-130
NAVIGATION COMPUTER GROUP ................. AN/ASA-13a

30 JULY 1960
### PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADING CONDITION</th>
<th>(1) ASW SEARCH &amp; ATTACK 2 MK-44</th>
<th>(2) ASW ATTACK 4 MK-44</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td></td>
<td></td>
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<tr>
<td>Fuel (JP-4)</td>
<td>lb.</td>
<td>lb.</td>
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<tr>
<td>Payload</td>
<td>lb.</td>
<td>lb.</td>
</tr>
<tr>
<td>Disc loading</td>
<td>lb./sq.ft.</td>
<td>lb./sq.ft.</td>
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<tr>
<td>Vertical rate of climb at S.L.</td>
<td>(A) fpm</td>
<td>(A) fpm</td>
</tr>
<tr>
<td>Absolute hovering ceiling</td>
<td>(A) ft.</td>
<td>(A) ft.</td>
</tr>
<tr>
<td>Max. rate of climb at S.L.</td>
<td>(B) fpm</td>
<td>(B) fpm</td>
</tr>
<tr>
<td>Service ceiling (100 fpm)</td>
<td>(B) ft.</td>
<td>(B) ft.</td>
</tr>
<tr>
<td>Max. Speed/Altitude</td>
<td>(B) km</td>
<td>(B) km</td>
</tr>
<tr>
<td>Min./Maximum Speed at S.L.</td>
<td>(A) (C) km/hr</td>
<td>(A) (C) km/hr</td>
</tr>
<tr>
<td>Combat Range</td>
<td>n.m.</td>
<td>n.m.</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km.</td>
<td>km.</td>
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<tr>
<td>Cruising altitude</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Max. Endurance</td>
<td>hr.</td>
<td>hr.</td>
</tr>
<tr>
<td>Average cruising speed/Alt.</td>
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<td>ASW Endurance</td>
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### NOTES

(A) MILITARY POWER (Transmission Limit 2000 HP)
(B) NORMAL POWER
(C) ONE ENGINE INOPERATIVE

PERFORMANCE BASIS: Calculation, contractor flight test data and NAFTEST 022427M
NPS flight test data

ENDURANCE is based on engine specification fuel consumption data increased by 2%

MAXIMUM ENDURANCE MISSION

WARM UP AND TAKE-OFF: 3 min at sea level at normal rated power
CRUISE: at sea level at speed for best endurance
RESERVE: 10% of initial fuel load

ASW SEARCH AND ATTACK MISSION

WARM-UP AND TAKE-OFF: 3 minutes at sea level at normal rated power
CRUISE AND HOVER: Cruise and hover alternately
CRUISE: at 100 knots 50% of time - acceleration, deceleration, and hover 50% of time - ASW endurance equals cruise, acceleration, deceleration, and hover time
RESERVE: 10% of initial fuel load

COURT RANGE MISSION

WARM UP AND TAKE-OFF: 3 min at sea level at normal rated power
CRUISE: At sea level at speed for best range
RESERVE: 10% of initial fuel load

HSS-2
30 JULY 1960