SIKORSKY S-70 SEAHAWK
PRESENTATION

It is our pleasure to offer for sale eleven S-70

- 2 Seahawk helicopters, complete with a full motion simulator and spares / support package.

- These aircraft were introduced into service between 1988 -1992 and have an average of only 5300 hours flown since new.

- The helicopters have been maintained in excellent condition by the Navy. All helicopters had a mid life upgrade providing them even more capability. They are being offered in a fully serviceable condition.

- These aircraft have been mission equipped for ship based missions such as anti-surface and anti-submarine warfare, utility, transportation, and surveillance search and rescue.

SIKORSKY S-70 SEAHAWK

The actual helicopters on offer.

The S-70 Seahawk is specifically designed for ship borne operations. They feature a strengthened gear configured for smaller spaces, a folding tail and quick fold blades.

The baseline helicopter we propose to deliver is the Seahawk with the following equipment installed:

- The folding blade / tail system
- Upgraded engines
- Superior corrosion proofing
- Cargo hook
- Rescue hoist
- Flotation gear
- VFR/IFR avionics with auto flight system

SIKORSKY S-70 SEAHAWK

TheS-70/SH-60 Seahawk's general lines were very similar to those of its Army Black Hawk sibling. The external dimensions are the same, and the reis 83% parts commonality between Army and Navy machines. However, there are many differences as well, some of which are hard to see. For example, the airframe is corrosion-protected and fitted with buoyancy elements for maritime operation.

Other subtle changes include:

- "Recovery assist secure and traverse (RAST)" or "harpoon" gear for operations off frigates and Rother small ocean surface vessels In rough seas.

- An automatic main rotor folding system, rotor brakes, and folding stabilator and tailfin. The Seahawk stabilator is rectangular – In kontrast to the Black Hawk stabilator, which has a swept rear edge – and folds up along each side of the tailfin. The Black Hawk does have a folding tailfin for airlift, but it has to be unbolted for folding.

- Unarmored crew seats and jettison able cockpit doors.

- An automatic flight control system (AFCS).

- A considerably enhanced environment control system to provide a temperature controlled environment for the Seahawk's avionics suite.

- Hoists installed on each of the aircraft.

- An emergency flotation system for ditching at sea.

SIKORSKY S-70 SEAHAWK

There is a stub pylon behind the cabin door on each side for carriage of a total of two Mark 46 homing torpedoes or two 455 –liter (120US gallon) external fuel tanks.

The fact that the Seahawk has a bigger kit of built- in gear makes its empty weight greater than that of the Black Hawk - 6, 190 kilograms(13,650 pounds) versus 4 , 820 kilograms (10,625 pounds). The Seahawk's maximum take off weight is also greater, at 9,925kilograms
(21,885pounds), compared to the Black Hawk's 9 ,185 kilograms (20,250 pounds)

The Seahawks was originally fitted with uprated T 700-GE-401Cs with 1,420kW (1,900SHP) each, to handle the greater weight. The engines are corrosion-protected formaritime operation. The Seahawk transmission system was uprated to handle the more powerful engines. Top speer is Lower due to the heavier weight and great er external clutter of the Seahawk.

SIKORSKY S-70 SEAHAWK

The Seahawk's landing gear is its most obvious distinguishing element. It features a two- wheel tailwheel, moped forward to the rear of the main fuselage, and taller main gear to pro vide clearance for the drumradome. The landing gear is simplified compared to the Black Hawk, since the heavy-duty shock absorber system of the Army version was judged unnecessary. The window and door arrangement was also substantially modified, with the door on the left eliminatek and the door on the right reduced In size.

Three crew are normalny carried, including a pilot, a copilot/airborne tactical officer, and sensor operator or "senso". Most of the data is transferred to the parent vessel for processing, but the crew handles the terminal attaca themselves.

The Seahawk can be fitted with an external rescue hoist on the right side to suport its secondary SAR role, as well as belly cargo sling hook for "vertical replenishment (vertrep)" missions.

SIKORSKY S-70 SEAHAWK

We are offering Seahawks featuring an S-70 airframe with Navy - specified avionics and a rescue hoist on the starboard side.

	Heli 1	Heli 2	Heli 3	Heli 4	Heli 5	Heli 6	Heli 7	Heli8	Heli 9	Heli10	Heli 11
Total Time Since New	5490	5575	6000	4921	4876	4073	6471	4396	5226	4658	6108

SIKORSKY S-70 SEAHAWK

AVIONICS

AFCS Systems
Attitude Heading Reference System (AHRS)
Attitude Indicators (AI)
Automatic Flight Control System (AFCS)
Horizontal Situation Video Display (HSVD)
Stabilator System
Stability Augmentation System (SAS 1)

Communication Suite
Data Handoff System Modem, DHS-901
HF Radio Set, AN/ARC-174(V)2
IFF Transponder, SIT-421T/E
Intercommunications System, ICS-KY-58 Processor (VHF/UHF) COMSEC System
KY-100 Secure Voice Equipment
Transponder Computer, KIT-1C/TSEC VHF/UHF Radio Set, AN/ARC-182

SIKORSKY S-70 SEAHAWK

Navigation Suite

Direction Finder, DF-301E
Global Positioning System
Radar Altimeter, AN/APN-194(V)
Radar Navigation Set (Doppler), AN/APN-217(V)6
Radio Navigation System, LF/ADF-60A
Super Searcher Radar TACAN Navigational Set, AN/ARN-118
VOR/ILS/MB, VIR-130A

Tactical Data Management Suite

Bus System Interface Units (BSIU)
Data Transfer Device, DTD-Display Generator Unit, DGU-850
Horizontal Situation Video Display (HSVD),
MFD-80D
Multifunction Keyset (MFK)
Tactical Display Unit, TDU-850

SIKORSKY S-70 SEAHAWK

Currently several of the ITAR controlled antisubmarine mission equipment has been removed as it is highly controlled. These helicopters came out of service and were released from the Navy progressively over the past 36 months. There are a total of 11 Helicopters and spare parts All currently housed at the same facility.

Weapons Systems

Acoustic and SonobuoyReceivers, AN/ARR-84
Forward Looking Infra-Red (FLIR) Fixed Provisions
Sonobuoy/BARRA Side
SonobuoyLaunch

SIKORSKY S-70 SEAHAWK

S-70B Specifications
Weights, Powerplant Ratings and Performance

WEIGHTS

■ Maximum take-off gross weight	21,884 lb	9947.3 kg
■ Weight empty		
- SAR configuration	15,200 lb	6909.1 kg
- ASW configuration	15,590 lb	7086.4 kg
- ASUW configuration	15,504 lb	7047.3 kg

POWERPLANT RATINGS

Per engine, standard day, sea level

■ Engine type	Two General Electric T700-GE-401C	
■ 2.5-minute One Engine Inoperative (OEI) contingency	1,940 shp	1,447 kw
■ 10-minute takeoff power	1,890 shp	1,409 kw
■ 30-minute intermediate power	1,800 shp	1,342 kw
■ Maximum continuous power	1,662 shp	1,239 kw
■ Dual engine airframe rating	3,400 shp	2,533 kw
■ Fuel capacity (internal)	588 gal	2,226.2 l

PERFORMANCE

Standard day at 21,884 lb except where indicated

■ Maximum speed, sea level (V_{NE})	180 kts	180 kts
■ Maximum cruise speed, sea level	150 kts	150 kts
■ Maximum cruise speed, 4,000 ft ISA + 15°C	133 kts	133 kts
■ Maximum rate of climb	1,650 ft/min	8.38 m/sec
■ Hover ceiling in-ground effect (T.O.P.)	7,750 ft	2,362.8 m
■ Hover ceiling out-of-ground effect (T.O.P.)	Sea level	Sea level
■ Twin engine service ceiling	12,000 ft	3,658.5 m
■ OEI service ceiling	2,000 ft	610 m
■ Range at Long Range Cruise Speed*	590 nm	1,092 km

* SAR configuration, internal fuel plus 2 external tanks, sea level, 132 knots, 20-minute reserve

S-70B Specifications
Dimensions and Cabin Data

AIRCRAFT DIMENSIONS

■ Overall length	64.83 ft	19.76 m
■ Overall width	53.67 ft	16.36 m
■ Overall height	17.16 ft	5.23 m
■ Fuselage width	7.00 ft	2.13 m
■ Fuselage width (including horizontal stabilizer)	14.33 ft	4.37 m
■ Folded length (main rotor, tail pylon and stabilator folded)	41.19 ft	12.55 m
■ Folded length (rotors folded, pylon flight position)	53.25 ft	16.23 m
■ Folded width	10.71 ft	3.26 m
■ Folded height (main rotor, tail pylon and stabilator folded)	13.27 ft	4.04 m
■ Wheel base	15.48 ft	4.72 m
■ Main wheel tread	8.88 ft	2.71 m

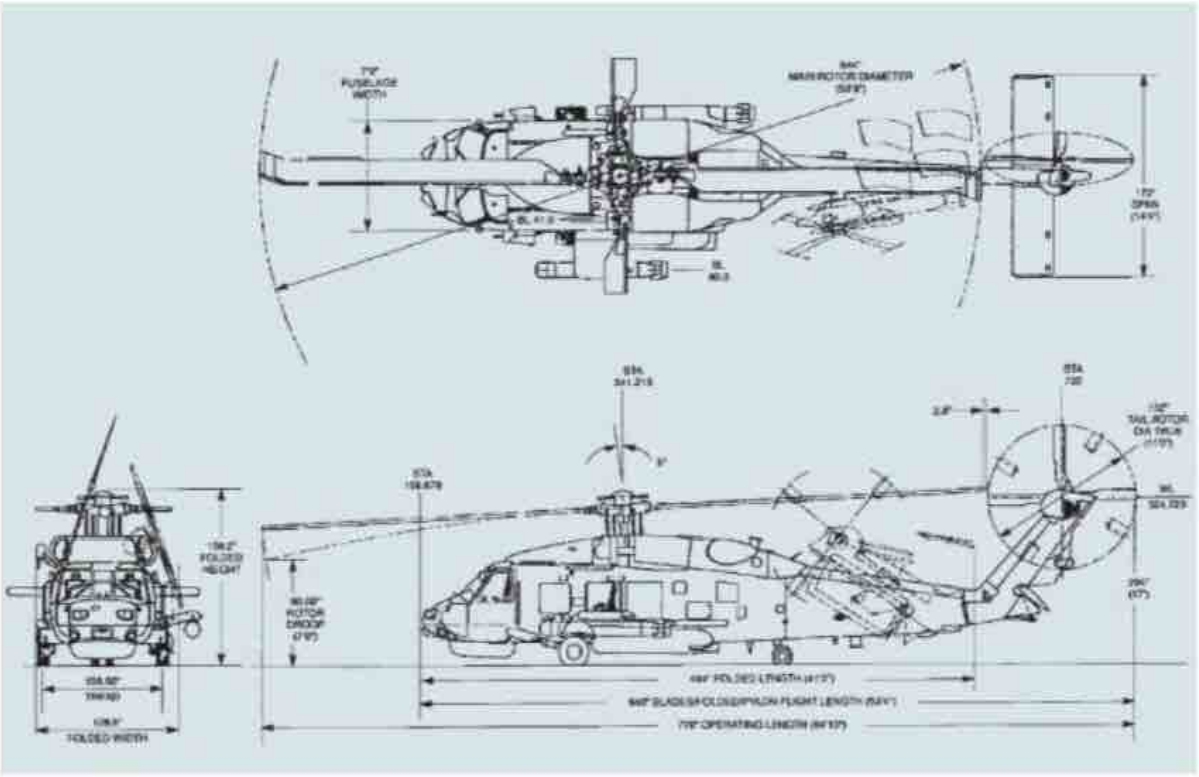
ROTORS DIMENSIONS

■ Main rotor diameter	53.67 ft	16.35 m
■ Tail rotor diameter	11.00 ft	3.35 m

CABIN INFORMATION

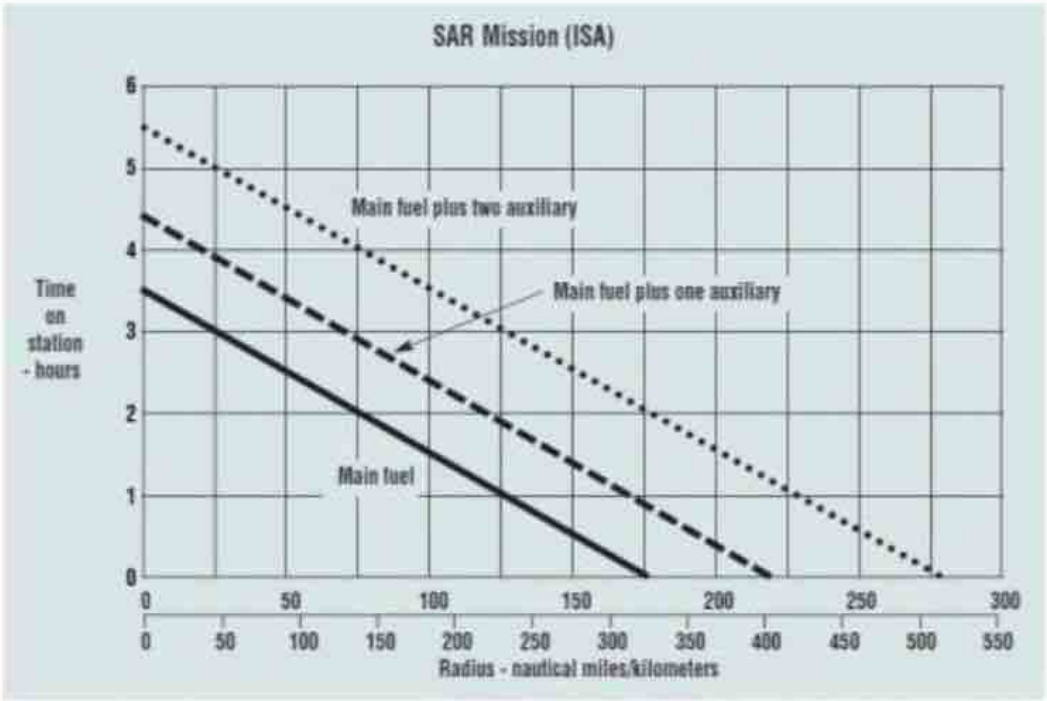
■ Cabin length	10.75 ft	3.28 m
■ Cabin width	6.08 ft	1.85 m
■ Cabin height	4.42 ft	1.34 m
■ Cabin area	65.40 sq ft	6.08 sq m
■ Cabin volume	298.60 cu ft	8.46 cu m
■ Seating capacity		
- SAR/Utility configuration	2 pilots plus 6 passengers	
- ASW configuration	2 pilots plus 3 passengers	
- ASUW configuration	2 pilots plus 5 passengers	

SIKORSKY S-70 SEAHAWK



Time on Station - Radius of Action Performance

Search and Rescue (SAR) Configuration

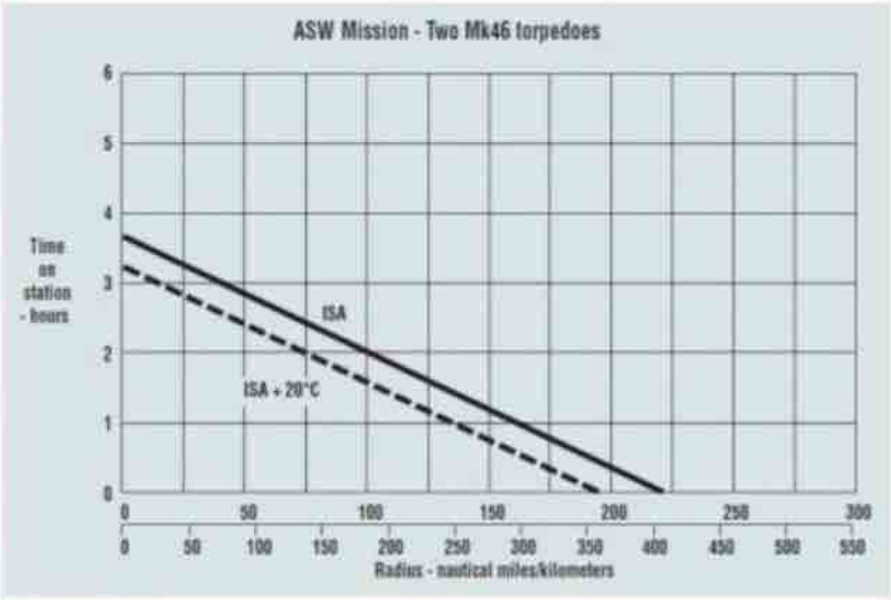


SAR MISSION		
■ Warm/takeoff using five minutes fuel at MCP		
■ Cruise out to search zone at speed for 99% best specific range		
■ Hover Out of Ground Effect (HOGE)		
■ Pick up 6 rescuees at 200 lb/91 kg each (8 mg) 20 minutes hover fuel		
■ Return at speed for 99% best specific range		
■ Reserve: 20 minutes of flight at speed for 99% best specific range		
SAR operating weight	15,920 lb	7,221 kg
■ Fuel - main (JP-5)	4,012 lb	1,820 kg
■ Fuel - external auxiliary (tank 1)	816 lb	370 kg
■ Fuel - external auxiliary (tank 2)	816 lb	370 kg
SAR mission gross weight	21,564 lb	9,781 kg

SIKORSKY S-70 SEAHAWK

Time on Station - Radius of Action Performance

Anti-Submarine Warfare (ASW)



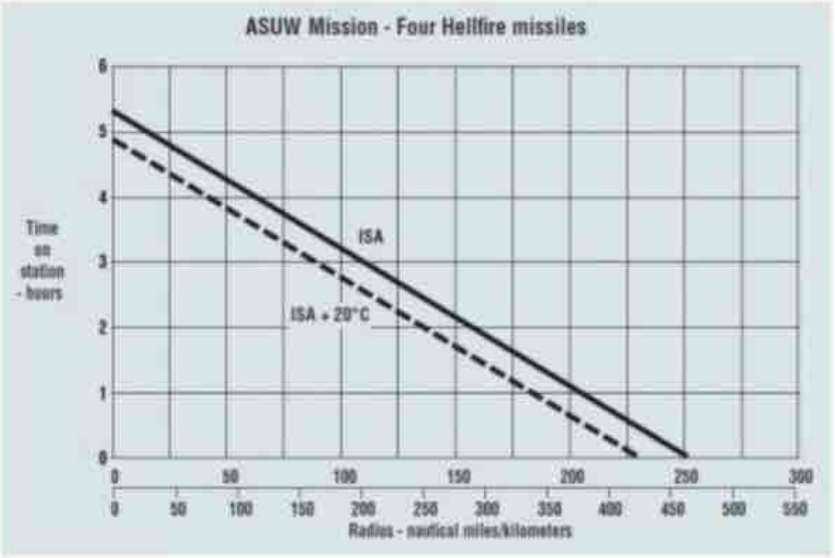
ASW MISSION

- Warm/takeoff using five minutes fuel at MCP
- Cruise out to search zone at speed for 99% best specific range
- Hover Out of Ground Effect (HOGE) for 50% of time on station
- Cruise at best endurance speed for 50% of time on station
- Return at speed for 99% best specific range
- Reserve: 20 minutes of flight at speed for 99% best specific range

ASW operating weight	16,310 lb	7,398 kg
■ Chaff and flare (allowance)	23 lb	10 kg
■ Mk46 torpedo	526 lb	239 kg
■ Mk46 torpedo	526 lb	239 kg
■ Fuel - main (JP-5)	4,012 lb	1,820 kg
■ Fuel - external auxiliary	487 lb	221 kg
ASW mission gross weight	21,884 lb	9,927 kg

Time on Station - Radius of Action Performance

Anti-Surface Unit Warfare (ASUW)



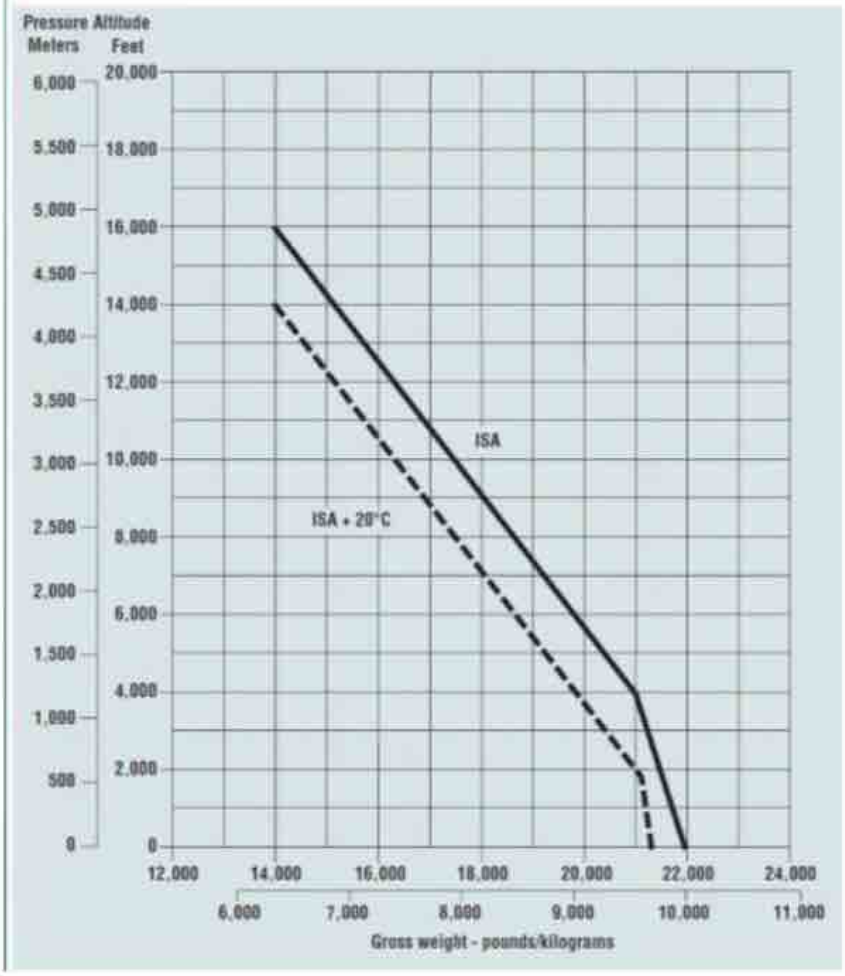
ASUW MISSION

- Warm/takeoff using five minutes fuel at MCP
- Cruise out to search zone at speed for 99% best specific range
- Loiter on station at best endurance speed
- Return at speed for 99% best specific range
- Reserve: 20 minutes of flight at speed for 99% best specific range

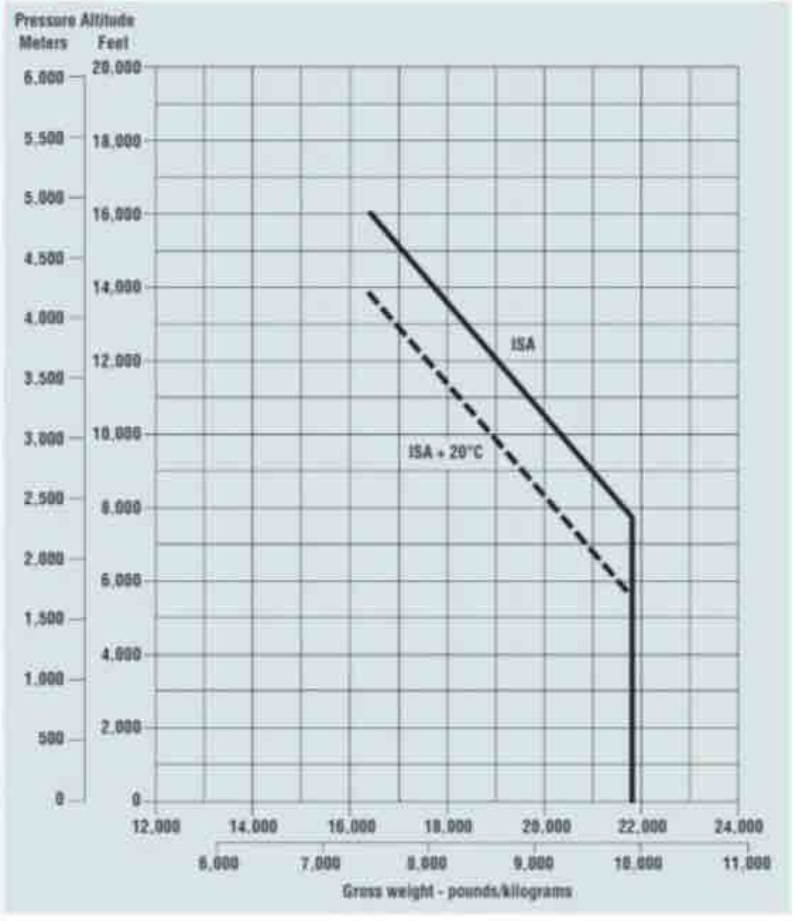
ASUW operating weight	16,044 lb	7,277 kg
■ Chaff and flare (allowance)	23 lb	10 kg
■ Four Hellfire missiles	404 lb	183 kg
■ Fuel - main (JP-5)	4,012 lb	1,820 kg
■ Fuel - external auxiliary (tank 1)	816 lb	370 kg
■ Fuel - external auxiliary (tank 2)	585 lb	265 kg
ASUW mission gross weight	21,884 lb	9,925 kg

SIKORSKY S-70 SEAHAWK

Hover Ceiling
Out of Ground Effect



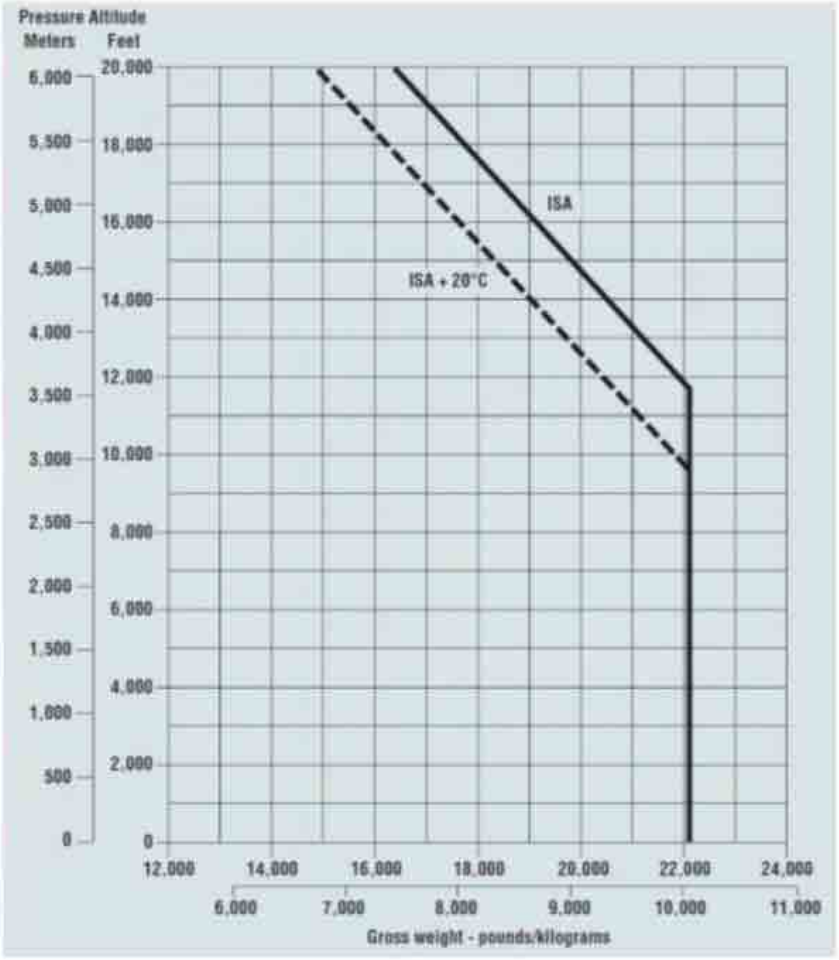
Hover Ceiling
In Ground Effect



SIKORSKY S-70 SEAHAWK

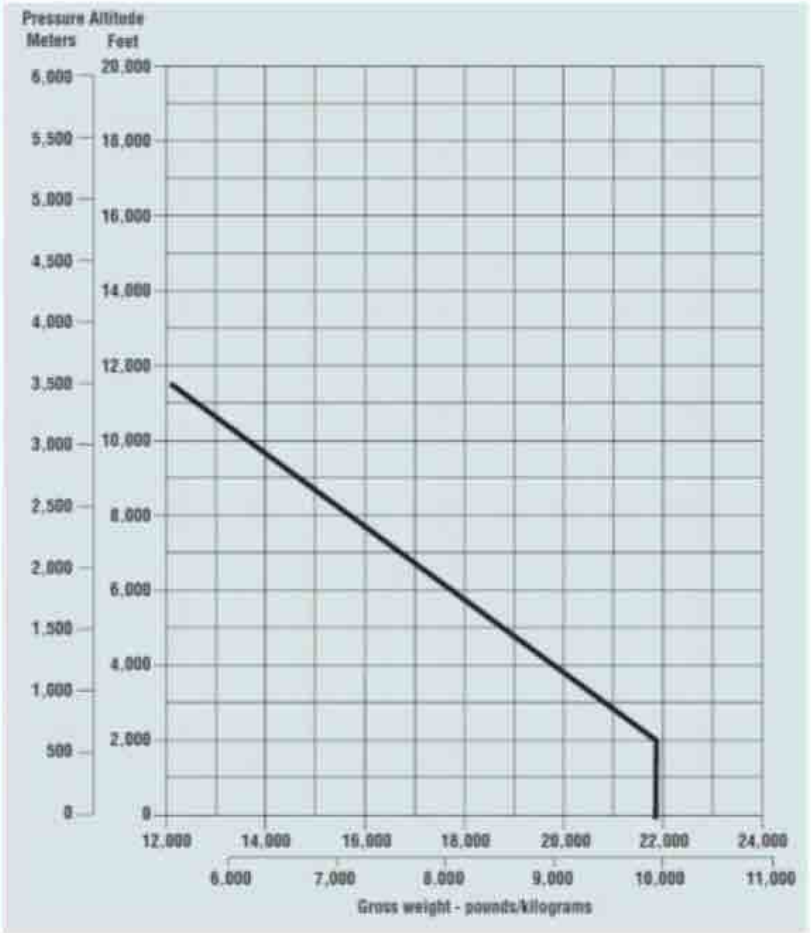
Twin Engine Service Ceiling

IRP, 100 fpm/30.5 mpm Rate of Climb, VROC



One Engine Inoperative (OEI) Service Ceiling

IRP, 100 fpm/30.5 mpm Rate of Climb, Standard Day



SIKORSKY S-70 SEAHAWK

A very large spares package is available and will be provided as part of the package. This spares package contains thousands of items including major components like spare engines, main rotor blades, gearboxes, and transmissions.

Any country should be able to fly these helicopters very cheaply for many years with this spares package as most items needed are included.