

Sikorsky



"The idea of a vehicle that could lift itself vertically from the ground and hover motionless in the air was probably born at the same time that man first dreamed of flying."

Igor Ivanovitch Sikorsky

Sikorsky Aircraft is part of the Defense Systems Group of United Technologies Corporation. The company was founded in 1923 by **Igor Sikorsky** as the Sikorsky Aero Engineering Corp, and has been affiliated with UTC since 1929 when it moved to Stratford, Conn., from Long Island. In the 1920s and 1930s Sikorsky produced land-based aircraft, amphibians and flying-boats, including the flying Clippers, which pioneered commercial transoceanic air routes.

Since the early 1940s, Sikorsky has concentrated its efforts on helicopters and by 1996, they had produced over 7800 rotary wing aircraft; further 1800 built by foreign licensees .

Today, Sikorsky helicopters occupy a prominent position in the intermediate to heavy range of 11,700 lb (5,300 kg) to 73,500 lb (33,000 kg) gross weight. They are used by all five branches of the United States armed forces, along with military services and commercial operators in 40 nations.

1909 :

Igor Sikorsky build his first machine in Russia, but this first Sikorsky helicopter never left the ground, and a second which followed in 1910 fails too, so he stopped and turn to fixed wing aircraft until 1930.

Sikorsky, who fled from the Bolshevik Revolution in 1917, encouraged the United States Government to agree to a considerable budget of two million dollars for rotary-wing research in 1938. The government ended up choosing a joint Sikorsky-Vought effort to be funded. The resulting machine, the VS-300, was indeed quite different from earlier models.

Sept 14, 1939 : First flight of an US helicopter, the VS-300

The **VS designation** was used for several years when the Chance Vought and Sikorsky Divisions of UTC, were combined.

The VS-300 had a four-cylinder, 75 horsepower air-cooled engine, a three-bladed main rotor, 8.53 m in diameter, a welded tubular steel frame; a power transmission consisting of V-belts and bevel gears; a three-wheel landing gear arrangement and a completely open pilot's seat.



By the middle of 1940, the VS-300 was able to stay in the air for 15 minutes. On **May 6, 1941** with Igor Sikorsky at the controls, established a world helicopter endurance record of 1 hour, 32 minutes, 26 seconds.



Jan 14, 1942 : Vought-Sikorsky VS 316 [S-48] Hoverfly (R-4)

Developed from the VS-300, the R-4 was the USAF's (at that time US Army Air Service Corp) first service helicopter.

The Navy designation was **HNS**

R-4B :

Rotor diameter: 11.58 m

Length: 10.35 m

Height: 3.6 m

Weight: 960 kg

Engine: Warner R-550 of 200 hp.

Speed: Max: 120 Km/h Cruise : 104

Range: 240 km

Service Ceiling: 2430 m



May 6, 1943 :

[Frank Gregory 's R-4](#) was the first american helo in operational service in WWII

Notice:: Germans [FL 282](#) were already in service in Europe ~~XXXX~~

Jul 7, 1943 :

[First US Coast Guard Helo Detachment](#) at Sikorsky Helicopter Airport in Bridgeport, Conn.

Aug 18, 1943 : Vought-Sikorsky VS 327 (R-5 / XR-6)

An all metal and bigger than the R-4 was built as XR-5 (prototypes) and YR-5A (pre production) for evaluation by the USAAF.

The Navy designation was **HO2S**



Oct 15, 1943 : Vought-Sikorsky VS 316A Hoverfly II (R-6)



R-6A :

Rotor diameter: 11.58 m

Length: 11.60 m

Height: 3.4 m

Weight: Max: 1082 kg

Engine: One Franklin O-405-9 of 235 hp.

Speed: 110 km/h Max. 154

Range: 565 km

Service Ceiling: 4000 m

This two-seat helicopter was a refined version of the R-4, more advanced in performance and appearance

The Navy designation was **HO5S**

Feb 16, 1946 : [S-51 DragonFly \(H-5\)](#)

A four-seat helo, was designed as a commercial modification of the R-5

Rotor diameter: 14.63 m

Length: 12.45 m

Height: 3.96 m

Weight: Empty: 1715 kg Max: 2189

Engine: One P&W R-985-AN-5 of 450 hp

Speed: Max: 171 km/h

Range: 579 km

Service Ceiling: 4389 m



US Coast Guard designation was HO3S-1G

Feb 12, 1947 : S-52 (YH-18)

A two-seat helo, was featuring all-metal rotor blades. Serial number 49-2888



1947 : S-53

A development of the S-51 that not enter in production. Naval designation **HJS**

Dec 20, 1948 : S-54 A development of the S-52, not built

Nov 10, 1949 : [S-55 Chickasaw \(H-19\)](#) ~~PAGE~~

1952 :

World's first transatlantic helicopter crossing WITH STOPs

Two USAF H-19s (**Sikorsky S-55**) traveled from the USA to Wiesbaden (Germany) with stops in Labrador, Greenland, Iceland, Scotland, and the Netherlands on their way. Total flight time was about 52 hours, but because of stops the trip took 21 days.

Jul 24, 1953 : S-52T (YH-18B)

Turbine powered version of the S-52. It used a french Turbomeca Artouste I.

Dec 18, 1953 : [S-56 Mojave "Deuce" \(H-37\)](#) ~~PAGE~~

1954 : [S-57 \(XV-2\)](#)

Not a real helicopter as we know them today , was a proposed joint US Army/USAF development program for a radial engine powered convertiplane.

The system featured rotors that folded up for take-off and landing and folded away and stored in the fuselage for level flight.

The 54-4403 serial number was assigned to the prototype but was cancelled before it was built.

(Thanks Thomas Mueller)

Mar 8, 1954 : [S-58 Choctaw/Seahorse/Seabat \(H-34\)](#)

Pioneer of commercial airline helicopter operations, it had a single piston engine, four-bladed main rotor, a gross weight of 5900 kg and the ability to carry 12 passengers in airline-style seating or 18 troops. The radial engine was fitted in the nose as in the S-55, but the fuselage was more streamlined. The US Navy used the antisubmarine variant **HSS-1** Sea Bat and the Marines the utility **HUS-1** Sea Horse.

Read about the Vietnam 's S-58 campaign
in our [stories section](#).



"They Called Them GUNS A GO-GO" <http://www.atomic.net/~whitef/>

Jun 1, 1954 : [S-59 \(YH-39\)](#) :

A development of the S-52T, powered with a Turbomeca Artouste II turboshaft engine and a retractable landing gear.

Only one built, serial number 49-2890.

Jan 30, 1957 : S-58 Twin turbine Navy 's HSS-1F

May 14, 1958 : S-62 Sea Guard ([HH-52](#))



The forerunner of an entirely new generation of production models, the S-62 was the company 's first amphibious helicopter, with a boat hull and powered by a single General Electric T58 turbine was first flown with the three-blade main rotor of the S-55 but will then enter production with the four-blade main rotor of the S-58 as the S-62B

Sikorsky S-63 :

Four bladed, twin-engine S-62. Studied, but never built

Mar 11, 1959 : [S-61 \(H-3\)](#) ~~PAPE~~



Mar 25, 1959 : S-60



This machine, dubbed the *Skycrane* , with its thin, strong fuselage could carry any load it could lift. The S-60 grew from the S-56, using the same piston engines and dynamic components. It was built as a research vehicle to demonstrate the flying crane concept.

Dec 6, 1960 : S-61 L/N : S-61 civilian versions (*Large & Naval*)

May 9, 1962 : S-64 Skycrane ([CH-54 Tarhe](#))

Sikorsky 's second Skycrane was delivered first to the West German Minister of Defense in early

1963. The US Army bought 97 with deliveries between June, 1964 and 1972, and in Vietnam was used to retrieve 380 downed aircraft. The last one was retired in 1993 by the 113th Aviation of the Army National Guard based in Reno, Nevada in a time where was already replaced by the less powerful but more flexible Boeing Vertol [CH-47 Chinook](#) ~~XXXX~~



Length: 26.98 m
Height: 7.75 m
Rotor diameter: 21.95 m
Weight: Empty: 8724 - Max: 20000 kg
External load: 9400 kg
Engine: 2 P&W T73-P-1 of 4500 shp each
Speed: Max: 203 km/h Cruise: 169 km/h
Range: 370 km
Service Ceiling: 2475 m



Jun 7, 1963 : S-61 R :



The S-61 Air force's version

Oct 64, 1964 : S-65 Sea Stallion (H-53A/D)



The heavy-lift of the company, the S-65 was (and still is) **the biggest helicopter of the western world**

Engines:

CH-53A : 2 General Electric T64-GE-6 of 2850 shp each

CH-53D : 2 General Electric T64-GE-413 of 3925 shp each



Read about RH-53D Sea Stallion in [Operation Eagle Claw](#)
The failed rescue of American hostages, Iran, 1980

Help us: [RH-53D serial numbers](#)

1965 : [S-61F](#)

An experimental version of the S-61 to test high speeds, it reach 390 km/h

Refueling helicopters from tanker planes was also first attempted this year. After early success, the technique was refined, leading to the decision to produce all later USAF HH-3Es with refueling probes

1966 : [S-66](#)

A development of the S-61F, the S-66 was Sikorsky 's motion for the US Army 's **AAFSS** competition (*Advanced Aerial Fire Support System*)

Not built, lost again the

[Lockheed AH-56 Cheyenne](#) **PAGE**

May 31 / June 1, 1967 :

Two USAF HH-3E (**Sikorsky S-61R**) made the **first non-stop trans-Atlantic flight by helicopters** , en route to the Paris Air Show.

Nine aerial refueling were made by each aircraft from C-130 Hercules tankers at altitudes of between 300 and 2800 m and speeds of 200 km/h.

The 6870 km from New York to Paris were flown in 30 hs 46 min

1969 : S-64E : Commercial version of the Skycrane Tarhe

Aug 26 1970 : S-58T Twin Turbine

New turbine civilian version of the S-58

In a 1977 's issue, [Popular Mechanics](#) invite us to
Go where you've never gone before with a S-58

Aug 27, 1970 : [S-67](#) ~~XXXX~~

1971 : S-68 Not built.

Helicopter History Site

KREYSHOV & MIRMOR
KRYLYA SIKORSKOYO, RUSSIA



Oct 26, 1972 :

Igor Sikorsky dies due a heart attack at the age of 83. His last day in his office at the Stratford plant of Sikorsky Aircraft was the day before

Jul 29, 1973 : S-69 ABC (XH-59)



Helicopter History Site

Thanks Sikorsky

The ABC (*Advancing Blade Concept*) was designed to prove the viability of two counter rotating main rotors on a common axis as a means of achieving higher speeds and better agility

Its simple design eliminates the tail rotor for anti-torque and directional control. Rudders in the twin tail are used instead, as in a fixed-wing aircraft

The concept also offers lower operating and maintenance costs. The ABC has been extensively flight tested as a pure helicopter and, with auxiliary propulsion, flown at speeds in excess of 480 km/h

This system had the additional advantage of eliminating noise caused by the tail rotor and its transmission.

XH-59A serial number 73-21942.

Mar 1, 1974 : [S-65E Super Stallion](#) (H-53E)



Three engine version of the twin turbine H-53

(Notice 1 blade more in the main rotor)



Load: 55 troops

Length: 22.48 m

Height: 8.66 m

Rotor diameter: 27.08 m

Disc Area: 455.36 m²

Weight: 15071 Kg Max: 33339

Engine: 3 General Electric T64-GE-416 of 4380 shp each

Speed: 260 km/h Max. 315

Range: 490 km

Notice the tail making a 20° angle to offset the thrust required on the tail rotor to keep it straight. The CH-53E was put in service in 1981.

Sikorsky VH-53F Super Stallion

Six units ordered for the USAF but with US Navy bureau numbers (159123 / 159128) for VIP transport by the 89th Military Airlift Wing. These were cancelled before deliveries could take place.

Sikorsky S-71 :

Not built, was the Sikorsky entry for the **AAH** program. The models chosen were the [Hughes 77](#) (as the YAH-64) and the [Bell 409](#) (YAH-63)

Sikorsky S-73 :

Not built, was the Sikorsky entry for the **HLH** program. The model chosen was the [Boeing XCH-62](#)

Oct 17, 1974 : [S-70 \(H-60\)](#) ~~PAID~~

Oct 12, 1976 : [S-72 RSRA](#) ~~PAID~~

Mar 13, 1977 : [S-76A](#)

Originally designated **Sikorsky S-74** was changed to tie-in with USA bicentennial.

Sikorsky used the **H-76 Eagle** unofficial designation to promote a military version of this model

Sep 1977 :

The S-70B wins the US Navy LAMPS III competition.
(*Light Airborne Multipurpose System*)

End, 1978 : US Army received the first UH-60

Dec 12, 1979 : S-70L (ex B) SeaHawk (SH-60)



The naval version of the BlackHawk, the SH-60B, designed as an anti submarine, anti surface-ship warfare system capable of operating from frigates and destroyers.

Another version is the SH-60F, CV-Helo, as the new aircraft-carrier-borne ASW helicopter, replacement of the S-61s

1981 : EH-60 QuickFix

ECM version, designed to detect, locate, and jam enemy radio transmissions.



Sep 1, 1983 : [S-80 Sea Dragon \(MH-53E\)](#)

Feb 4, 1984 : NightHawk (HH-60)

Jun 22, 1984 : S-76B Spirit powered with P&W Canada PT-6

Because its religious connotations overseas, the Spirit name was dropped.

LHX program: (*later to be known as RAH-66*)

Jul 12, 1984 : [S-75 ACAP](#) The ACAP (*Advanced Composite Airframe Program*) was an experimental helo to evaluate an airframe that achieved a 22 percent weight savings and a 17 percent cost savings over conventional metal airframes.

[Shadow](#) Also called **ARTI** (*Advanced Rotorcraft Technology Integration*) was funded by the US Army and calls for a cockpit design and technology to permit a single pilot to fly at very low altitudes in all weather conditions, day or night. A S-76 was modified to accept a single-pilot cockpit forward of the conventional cockpit, plus a flight engineer's station in the cabin.

1985 : Began LHX collaboration between Sikorsky and Boeing Helicopters

Sept, 1986 : [HH-60J JayHawk](#) : For the US Coast Guard

May 5, 1994 : Hawk (S-70 family) number **2000** take off

Jan 4, 1996 : [Boeing / Sikorsky RAH-66 Comanche](#) **PAGE**



Sept, 1997 : [Cypher](#)

The vertical takeoff or landing (VTOL) air vehicle is 6.5 feet in diameter. It carries a payload of about 50 lbs for several hours, has an engine in the 50 hp class and cruises at 80 knots with an endurance of three hours and a ceiling of 8,000 feet. Takeoff weight is 250 lbs. Control and sensor information can be transmitted via datalink to control stations aboard ship, on land or in the air.

The Cypher air vehicle combines the efficiency of a ducted airstream with the attributes of a coaxial advancing blade concept (ABC) rotor system. The rotors and the circular shroud that surrounds them share in providing lift.

Dec 23, 1998 : S-92 Helibus : Developed under an international program



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May 10, 1999 : : [Comanche Prototypes Fly Together For First Time](#)

2000 : Cypher II *Dragon Warrior*

The US Marine Corps has awarded Sikorsky a \$5.46 million contract to build two CYPHER II prototype aircraft and ground control stations. The CYPHER II unmanned air vehicle (UAV), with its unique removable wing design, can hover like a helicopter or be flown as a fixed-wing aircraft to 125 knots. The Marine Corps will call the aircraft Dragon Warrior.



Dec, 2001 : Sikorsky delivered its **2500th** Hawk aircraft, a UH-60L for the Hawaii Army National Guard.

Sep 27, 2004 : : [Sikorsky's Announces Acquisition of Schweizer](#)

Aug 19, 2005 : : [First Production Sikorsky MH-60R Delivered](#)



Oct 26, 2005 : : [Schweizer Delivers 1000th Helicopter](#)

Apr 5, 2006 : : [Sikorsky Awarded \\$3.0B Contract For USMC CH-53K](#)

Jun 29, 2006 : : Sikorsky 's team is selected winner of the US Army [LUH program](#)

Jul 31, 2006 : : [First New Production UH-60M Black Hawk delivered to US Army](#)