



Sikorsky S-61
Carson Helicopters, “FireKing”



INCREASING MULTI-MISSION OPERATIONS WORLDWIDE



REDEFINING CAPABILITIES IN MEDIUM-LIFT

Looking to aid operators worldwide, Carson Helicopters focuses its efforts on taking the function of a helicopter and finding ways to increase its flight envelope. Sikorsky's S-61 is a medium-lift rotorcraft marked in essence for its utility uses. With a range of services, the aircraft aids military, and commercial operators worldwide. With several variations of the aircraft, the S-61 can complete many missions tailored towards different serviceability needs. Our team at Carson Helicopters has certified several STC programs that increase the aircraft's flight envelope significantly.

CARSON'S FIREKING

In 2006, Carson took the functions of the S-61 and elevated them. Carson's FireKing, a variant of the S-61, has given the aircraft extended versatility and increased safety. With its series of modifications to the S-61, the Fire King can complete a wide range of missions. Its capabilities compare similarly to many next-generation vertical lift vehicles yet keeps costs significantly low compared to many next generation rotorcraft. Due to the S-61 FireKing's added performance and lower operative costs, it's one of the most efficient multi-mission helicopters used for both commercial military use.

NEXT-GENERATION S-61 UPGRADES

In addition to the Fire King, Carson also provides unique modifications to the S-61 tailored towards specific use of the operator. While the FireKing comes fully equipped with next-generation modifications, specific designs can be implemented onto the S-61 to increase usability in targeted ways. Some of Carson's upgrades to the S-61 include:

- Carson Composite Blades
- Digitized cockpit for improved flight symbology
- Shortened Fuselage for increased lift
- Sponsons for water landings

EXPANDING THE FLIGHT ENVELOPE FOR MAXIMIZED VERSATILITY AND SAFETY

Carson's Fire King has proven to be one of the most versatile variations of the S-61. Expanding its standard flight envelop significantly, Carson's mission kit allows the helicopter to complete the following operations:

- Firefighting
- Heavy-lift operation
- Command and control
- Medivac
- Cargo & Passenger
- Construction

ENSURING SAFETY AND EFFICIENCY

Carson's advancements have taken the S-61's heavy-lift operations and greatly expanded its usability. Design behind the Fire King has increased safety and efficiency of the S-61. With added lift, performance, and range, the aircraft's capabilities reach new heights due to Carson's modifications and use of modern technology.

Enabling pilots with a wider range of missions and enhanced aircraft/mission data, our glass cockpits drive adoption in modern technology:

- Reduction in life cycle cost
- Improved safety
- Elimination of obsolete avionics



ENSURING SAFETY AND EFFICIENCY

- 1

Carson Composite Blades
- 2

Digitized Cockpit
- 3

Advanced Engine Protection
- 4

Martin Baker Troop Seating
- 5

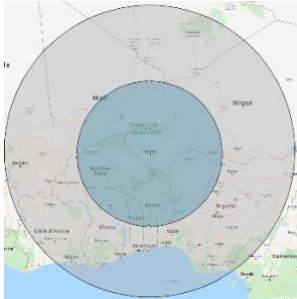
1,000 Gallon Variable Water Tank
- 6

Rescue Hoist



Superior Transport

In a matter of minutes, the Fire King can be transitioned between passenger and cargo transport.



Expanding The Envelope

Carson's Composite Blades have nearly doubled range in hot and high conditions compared to the standard S-61.

The Leading Edge

Since 2013, Carson's team has worked to master S-61 airfoil design. With the certification of the Main and Tail Composite Blades, Carson has cutting-edge advancements that push the boundaries of operational performance.

Performance	Imperial	Metric
Sea level, standard day at maximum gross weight		
Maximum gross weight	20,500 lb	9297 kg
Maximum gross weight, external loads only	21,000	9524 kg
Empty weight	11,400 lb	5170 kg
Capacity	10,100 lb	
VNE	120 kts	242 kph
Maximum cruise speed	120 kts	242 kph
Long range cruise speed	120 kts	242 kph
Range (at 4,000 ft):		
No reserve	664 nm	1,230 km
20-min reserve	623 nm	1,155 km
Avg. cruise speed	131 kts	242 kph
Avg. fuel flow	1,035 pph	469 kg/h
Engine Rating (30 minutes)	1500 shp	1103 kW
Engine Rating (Max continuous)	1,300 shp	956 kW
Endurance	6.9 hr	
Hover out-of-ground effect	5,750 ft	1,753 m
Hover in-ground effect	8,550 ft	2,606 m
Maximum power (10 min)	1,500 shp	1,119 kw
Takeoff power (30 min)	1,500 shp	1,119 kw
Continuous power	1,360 shp	1,014 kw



Carson's Glass Cockpit Provides the S-61 with a Series of Next-Generation Tech

- Multi-functional flight symbology
- Flight management
- Radar video
- Three-dimensional terrain awareness
- Geo-referenced hover cues
- Digital flight recording

