



SIKORSKY  
**S-76D**<sup>TM</sup> EMERGENCY MEDICAL SERVICES  
HELICOPTER







**S-76D™ HELICOPTER:**

# WHEN SAVING LIVES IS YOUR PASSION

Those with a passion for patient care know there's more to helicopter air ambulance service than a quick flight to the hospital. That passion demands the ability to deliver an extra level of care when transporting the most serious cardiac patients or neonatal cases, and to deliver that service on every flight and in all environmental conditions.

Your passion married with the sophistication of our single pilot IFR capability and all weather reliability make this an unsurpassable partnership.

It is an obsession for emergency medical professionals to have the equipment and working environment to match their passion for patient care. The S-76D™ emergency medical service helicopter exceeds those demands with extra margins of safety, reliability and medical mission effectiveness. It has been that way from the beginning, ever since Igor Sikorsky, the pioneer developer of the modern helicopter, declared a helicopter to be "a device for saving lives."

For 35 years, Sikorsky S-76 series rotorcraft have mastered the helicopter emergency medical transportation mission in unprecedented fashion, providing aircraft that are safe, high speed, reliable and fully compliant with the rigid all-weather demands of the industry. There is a new high performing helicopter from Sikorsky, a highly capable, technologically advanced rotorcraft: the S-76D aircraft. The best is even better!

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# EXPERIENCE, RELIABILITY AND PERFORMANCE

## It's In Our DNA

The worldwide fleet of more than 800 S-76 series helicopters has accumulated more than 6.8 million successful flight hours, registering a consistently reliable launch availability rating – earning the series high praise from air medical operators worldwide.

In an industry where safety is continually scrutinized, the S-76 aircraft is the standard by which all other helicopters are measured. The new S-76D model promises even more, powerful engines and improved rotor system for greater lifting capacity, low fuel consumption and longer range travel, a state-of-the-art cockpit derived from the latest business jets and commercial airliners, new safety features, a wide cabin and much more for greater mission effectiveness.

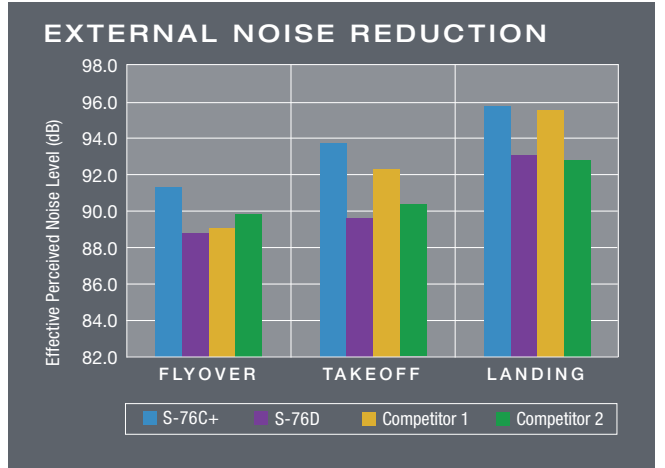
Single pilot IFR and all weather capabilities are just a part of the S-76D helicopter. Another improvement is the Quiet Tail Rotor technology to improve public acceptance in urban settings and around hospital helipads.

Patient and crew comfort is enhanced through reduced cabin noise levels with the Quiet Zone™ main transmission and Active Vibration Control System for a smoother in-flight ride. The unique ability of the S-76 helicopter to hold the rotor system still while running an engine to supply electrical power allows safe, comfortable loading and unloading into cabin.

Sikorsky's exclusive active vibration control and Quiet Zone transmission technology assure that flights are extraordinarily smooth and quiet in the cabin with acoustic enhancements that allow normal conversations.

The S-76 series helicopter has seen service worldwide in a wide range of climates and flight conditions. Always there to transport medical teams and their equipment to save lives and bring people home safely.





**BEST IN CLASS EXTERNAL ACOUSTICS**

# ROOM TO OPERATE

## Spacious Custom Interiors

The spacious cabin will easily handle two litters with full body access. There also is space for up to four attendants and advanced life-saving equipment, including oxygen and medical suction systems and direct communication links to hospitals or other emergency service facilities on the ground. Load or unload patients conveniently and easily through either side of the cabin through wide sliding doors. Above all, the cabin offers the flexibility of alternate configurations to fit specific air medical missions.





# SAFE, POWERFUL, RELIABLE

## Value Added

The S-76D helicopter is a powerful, safe, high performance aircraft developed to exceed customer expectations for modern rotorcraft transportation.

The specially optimized Pratt & Whitney Canada PW210S twin turbines boost performance, ensure reliability and enable ease of maintenance when needed. The PW210S engines and improved rotor system give the S-76D helicopter operator additional confidence in performance and payload capacity, a valued asset when using mission enhancing options such as Night Sun spotlights, rescue hoists and wire strike protection.

Along with other technological advancements, the S-76D is certified for Category A, hot-day takeoff performance and extended range of up to three hours. The result is a helicopter with excellent power-to-weight ratio and best in class fuel efficiency. Also contributing to the aircraft's performance are the PW210S's efficient engines. The engines incorporate dual channel Full Authority Digital Electronic Controls (FADEC) with state-of-the-art diagnostic capability.

New all composite main and tail rotor blades incorporate Sikorsky's optional Rotor Ice Protection System\* (RIPS). Integrated tip caps included to reduce maintenance requirements.

The newly designed wider cord tail rotor ensures positive handling characteristics in cross winds up to 35 kts, another critical performance feature of the S-76D flown in air medical missions. Design improvements also include quiet tail rotor technologies to lessen perceived noise impact on the community.

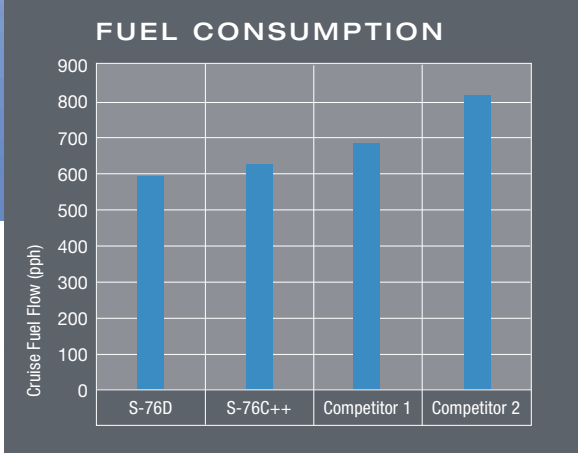
The aircraft's main rotor hub is a derivative of the hub on UH-60 BLACK HAWK helicopters, a system that has flown successfully for millions of hours in every imaginable flight environment.

The S-76D brings it all together, a clean airframe, low drag rotor system and efficient, 21st century technology engines. A best-in-class rating for low fuel consumption.



\* Under Development





**S-76D – THE “GREEN” CHOICE**

# MODERN COCKPIT TECHNOLOGY

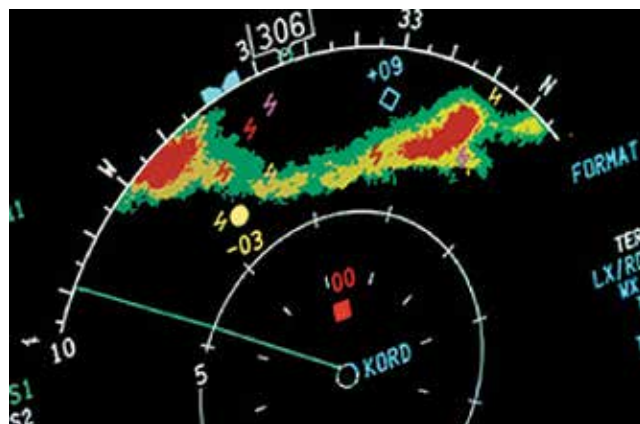
## Advanced Technology Ready When You Are

The S-76D helicopter features state-of-the-art cockpit technology from Thales that is equal in sophistication with your corporate jet and today's modern airliners. In fact, the S-76D helicopter is the only aircraft to offer the Thales TopDeck® avionics suite specifically designed for helicopters.

Easy to read, large-format liquid crystal displays have been consolidated in an efficiently designed console for improved visibility and field of view. Other features such as innovative trackballs for cursor control on the display units, customer defined custom checklist uploads and built in emergency procedures promote ease of use. A digital map with optional integrated Jeppesen approach plates is also available. The avionics suite enables additional situational awareness for the pilots, reducing workload and enhancing safety.

Proven in other aircraft installations, the sophisticated Thales TopDeck avionics package includes a four-axis, fully coupled autopilot to reduce workload and provide additional margins of safety. This technology allows for single or dual pilot Instrument Flight Rule (IFR) operations, a feature critical to safe operations in changing weather conditions.

The Thales solution is a mature application designed for the helicopter. It is proven, reliable and fully supported by Sikorsky.





\*Actual avionics displays shown in non-flight conditions.

# SAFETY YOU EXPECT FROM SIKORSKY

## Safe, Reliable Flight in All Weather Situations

After more than 30 years of continuous improvement and 6.8 million plus hours in flight, the S-76 aircraft series has an outstanding and enviable record for safety and reliability. The S-76D helicopter builds on that legacy with leading edge safety features, including redundant systems for flight controls, avionics, cockpit displays and a Health Usage Monitoring System (HUMS) that captures and records operational data. This data enables technicians to proactively monitor aircraft maintenance trends.

In addition to HUMS, the S-76D aircraft's flight data can be integrated with a Helicopter Flight Data Management System (HFDM) that presents aircraft data in the flight tracking profile for training and flight operations quality assurance.

An Enhanced Ground Proximity Warning System (EGPWS), optimized for helicopter operations is standard on the S-76D, as are a combined Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR). Traffic Collision Avoidance System (TCAS1) is available as an option.

The S-76D helicopter is designed and equipped for safe, reliable flight in all weather situations and is protected against lightning strikes and sensitive avionics are shielded against electromagnetic interference.

Additionally, passengers and crew survivability equipment includes an integrated and certified Emergency Flotation System (EFS), with an optional Automatic Flotation Deployment System (AFDS), single action cabin door releases, larger pop-out cabin windows and an Emergency Locator Transmitter (ELT).

These safety features and high reliability components designed into the S-76D helicopter contribute to the aircraft's safety.



### SAFETY COMES FIRST

The S-76D is the result of years of continuous improvement based on real operational experience. We bring 21st century technology and improvements to a proven airframe that is supported by our broad experience with other Sikorsky products such as the UH-60 BLACK HAWK and the S-92. The S-76's outstanding safety record is further augmented with the excellence of Flight Safety International training and the talent and dedication of our customers.



#### CUTTING EDGE FEATURES INCLUDE

- 1 Honeywell EGPWS
- 2 Thales TopDeck® avionics solution
- 3 Rotor Ice Protection System (Optional)
- 4 Ice diverting engine inlets
- 5 PW210S engines
- 6 Dual Channel FADEC with diagnostics
- 7 Goodrich Vigor™ HUMS
- 8 Cockpit voice recorder / flight data recorder

# EXCEPTIONAL SERVICE

At Sikorsky, our mission is to provide the best aircraft service in the industry.

We have over 90 years of experience supporting rotorcraft deployed globally in some of the most remote locations on earth. From battlefields to offshore oil platforms, Sikorsky has proven itself year over year to be a reliable and committed source for all services needed to keep your aircraft flying and safe.

Wherever your mission takes you, Sikorsky will be there with you.

We pride ourselves on gaining a deep understanding of your operations, aircraft, and missions so we can provide proactive service and solutions to maximize your aircraft availability.

Our support begins even before you purchase your Sikorsky aircraft. We engage with your team, understand your business needs and help you choose the appropriate aircraft and provisioning based on your mission. Our comprehensive service offering include:

## Pre-Operation Services

### TO ENSURE YOU HAVE WHAT YOU NEED

#### Facility Planning Services

- Infrastructure
- Spares Planning
- Tooling and GSE

#### Pilot/Maintenance Training

#### Aircraft Delivery

## In-Operation Services

### TO ENSURE CONTINUED AIRCRAFT AVAILABILITY AND SAFETY

#### Flight Hour based Warranty Programs

(Total Assurance Program and Powertrain Assurance Program)

#### AOG Resolution

#### On Site Support

#### Spares/Depot Management

#### Overhaul & Repair

#### Aircraft Modification/Upgrade Services

#### Publications

#### Product Alerts and Bulletins

#### Engineering Services

#### Pilot/Maintenance Training



## Help is Just a Call Away 1-800-WINGED-S

Our new state-of-the-art Customer Care Center is the heart of our customer support.

Open around the clock, fully staffed with technical and logistics experts, the center is ready to receive your call for assistance. All customer needs are logged, assigned and rapidly solved. Solutions are communicated as fast as possible and cases remain open until the customer confirms resolution. This center is staffed with the sole purpose of solving your needs to keep your aircraft available and flying.

The Customer Care Center is also home to our fleet analytics team that provides pro-active fleet management services. Using the daily fleet HUMS data and proprietary advanced analytics, Sikorsky measures aircraft component wear very precisely. Predicting when a spare will be needed before its needed allows us to pre-position spares at forward stocking locations near the point of usage keeping your aircraft in the air.

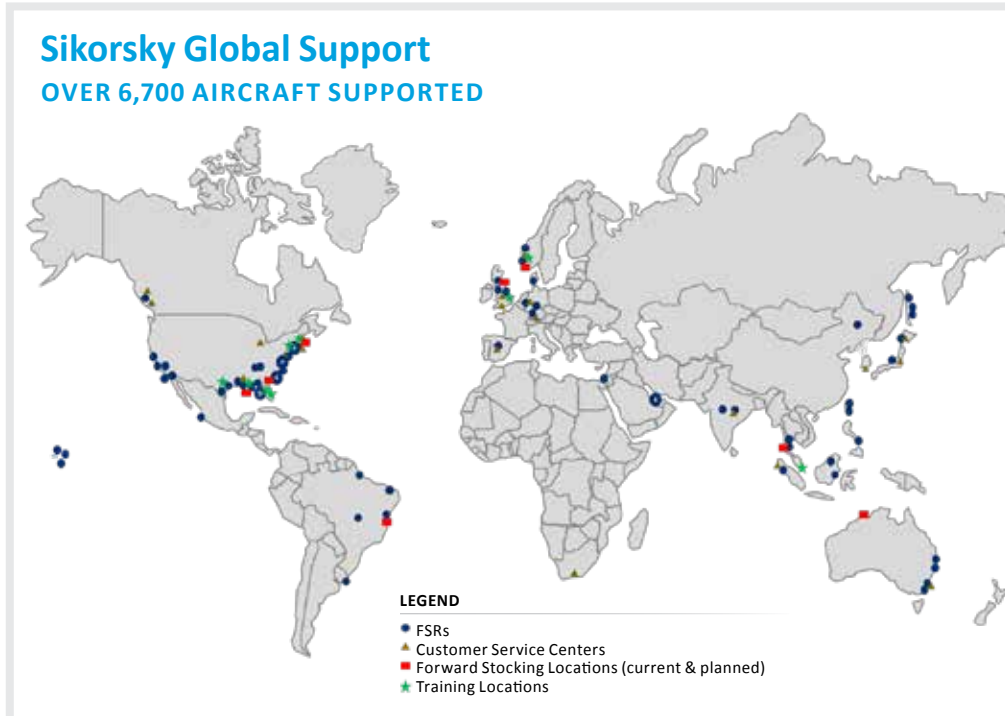


State-of-the-Art Customer Care Center is open 24/7/365 to support your aircraft from Fleet Management to AOG Resolution

Our Expanding Global Support Network provides improved access to services and rapid response to urgent customer needs



Providing global support regionally through Sikorsky-authorized service centers



# S-76D EMS CABIN OPTIONS

The S-76D helicopter will be ready to perform when and where it is needed. The aircraft features a large, rectangular cabin spacious enough to accommodate patients, medical personnel, and all necessary equipment. This flying Intensive Care Unit can accommodate a range of emergency requirements – from neonatal transfers in one or two isolettes, to the transfer of critical cardiac care patients and more. Sliding doors on both sides of the aircraft accommodate safe and easy litter and specialty team equipment loading.







# S-76D EMS EQUIPMENT AND OPTIONS

## Basic Configuration

The new S-76D helicopter builds on the proven success of over 800 S-76 series aircraft delivered. Propulsion is supplied by two Pratt & Whitney Canada PW210S engines with dual FADEC and expanded diagnostics.

The redesigned instrument panel features the integrated Thales TopDeck® avionics system with four large format flat panel displays. The open architecture panels can display attitude indicator, navigation, digital map, flight plan management, systems data monitoring, warning advisory system and other performance management elements. The Collins Pro Line 21 dual nav/comm and Goodrich Vigor™ HUMS complete the suite. Cockpit data is provided by a solid state air data system featuring dual AHRS and dual air data computers. The S-76D aircraft can be certified for single pilot IFR and, to ensure safety, all S-76D helicopters are equipped with EGPWS, combined cockpit voice recorder / flight data recorder, and 406 MHz ELT. TCAS1 is also available as an option.

The four, flaw tolerant main rotor blades feature an all-composite spar, wider chord, enhanced air-foil and integrated tip caps. Quiet Aircraft Technology Designation standards are achieved through a new tail rotor blade design.

The large, rectangular cabin and 38-cubic foot baggage compartment can be custom configured for many mission applications. Speed, long range and a smooth level ride are ensured by the fully articulated rotor system and Active Vibration Control system. The elegantly clean airframe, retractable landing gear and 284 gallons of usable fuel complete the basic configuration.

| S-76D EMS EQUIPMENT   | STANDARD | OPTIONS |
|---|----------|---------|
| HEMS audio/ICS system   | ●        |         |
| VHF/UHF/AM/FM   | ●        |         |
| Traffic Advisory System (TCAS1)                                     | ●        |         |
| Flight following and voice communication system, Sky Connect MMU-II | ●        |         |
| Single pilot IFR capability   | ●        |         |
| HEMS custom interior (dual patient)                                 | ●        |         |
| Weather avoidance radar- Primus 660                                 | ●        |         |
| Air conditioning system   | ●        |         |
| Main rotor recognition light, 2nd landing light, & logo lights      | ●        |         |
| Sliding cabin doors (right-side and left-side)                      | ●        |         |
| Wire strike protection system                                       | ●        |         |
| Cyclic stick position warning system- audible/visual                | ●        |         |
| Upgraded vibration control system                                   | ●        |         |
| Cabin audio selector panel  | ●        |         |
| Shore Power, eight 110 VAC  | ●        |         |
| Night Vision Goggle lighting system                                 |          | ▲       |
| Satellite communications system                                     |          | ▲       |
| Loudhailer system- 600 Watt   |          | ▲       |
| Searchlight systems (Starsun SX-7 or Thommen HSL-1600)              |          | ▲       |
| Emergency Flotation System  |          | ▲       |
| Directional finding system  |          | ▲       |

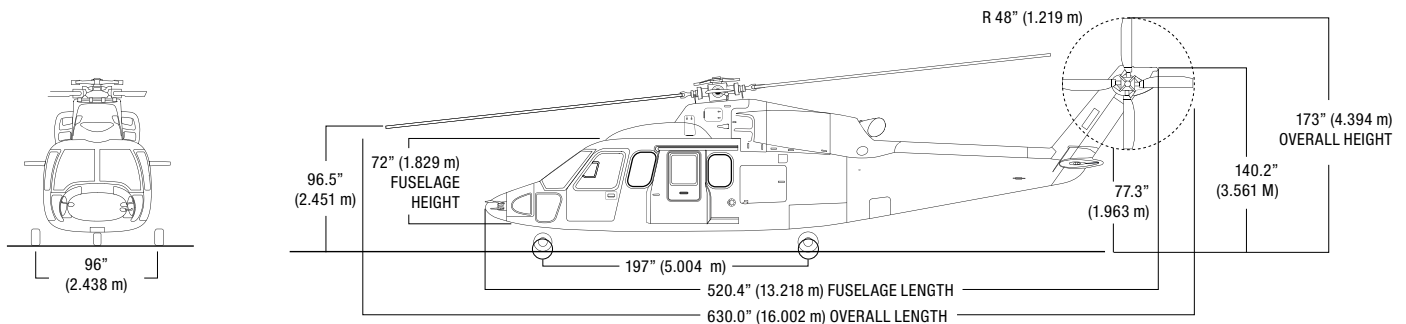
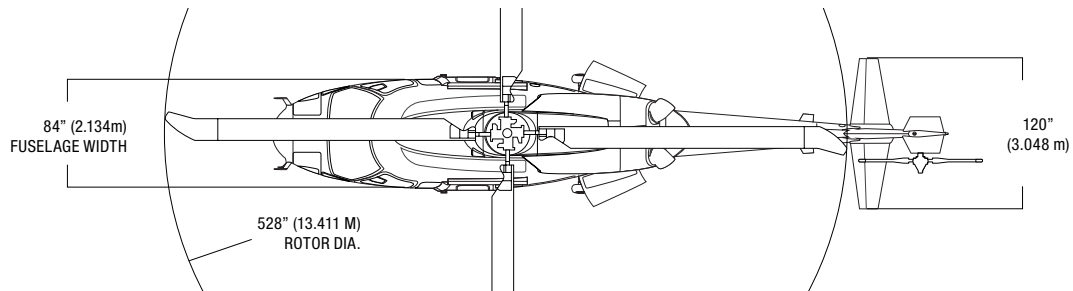
This is not a comprehensive list of options; please consult with your sales specialist to develop a configuration and interior plan to meet your mission needs.

# S-76D EMS SPECIFICATIONS

Standard Day, Sea Level at maximum gross weight unless otherwise noted

|  |           |           |
|--|-----------|-----------|
| Maximum speed (V <sub>NE</sub> )             | 155 kts   | 287 km/hr |
| Maximum cruise speed (V <sub>H</sub> )       | 155 kts   | 287 km/hr |
| Long Range Cruise Speed (V <sub>BR</sub> )   | 152 kts   | 282 km/hr |
| Hover ceiling, In-Ground Effect              | 10,540 ft | 3,213 m   |
| Hover ceiling, Out-of-Ground Effect          | 4,930 ft  | 1,503 m   |
| One Engine Inoperative Service Ceiling       | 8,235 ft  | 2,510 m   |
| Range - long range cruise speed @ 4,000 feet |           |           |
| - with 30 minute reserve                     | 398 nm    | 737 km    |
| - no reserve                                 | 472 nm    | 874 km    |
| - average speed                              | 152 kts   | 282 km/hr |
| - average fuel flow                          | 600 lb/hr | 272 kg/hr |
| Maximum takeoff gross weight                 | 11,875 lb | 5,386 kg  |
| Empty weight, base aircraft*                 | 6,963 lb  | 3,165 kg  |
| Useful load, internal*                       | 4,912 lb  | 2,233 kg  |

\*Weights will vary by specific mission configuration



# WE'RE ENGINEERING A BETTER TOMORROW



6900 Main Street, Stratford, Connecticut 06615 USA  
+1 (800) WINGED-S (946-4337)  
[www.lockheedmartin.com/sikorsky](http://www.lockheedmartin.com/sikorsky)

