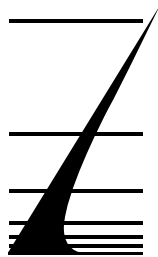


The Market for Medium/Heavy Commercial Rotorcraft

Product Code #F605

A Special Focused Market Segment Analysis by:



FORECAST INTERNATIONAL

Analysis 4

The Market for Medium/Heavy Commercial Rotorcraft 2010-2019

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PROGRAMS

The following reports are included in this section: (**Note:** a single report may cover several programs.)

AgustaWestland AW101
Eurocopter AS 332/532/EC 225/725
Kamov Ka-28/29/31/32
Kamov Ka-60/62
Mil Mi-8/17
Mil Mi-26
Mil Mi-38
Sikorsky S-92

Introduction

In the preparation of this analysis, the first step was a detailed study and market projection of each of several rotorcraft families of existing and anticipated models using the methodology described below. Forecast International defines the medium/heavy commercial rotorcraft market segment to include those rotorcraft with maximum takeoff weights of more than 6,804 kilograms (15,000 lb). Rotorcraft with lower MTOWs are covered in our analysis "The Market for Light Commercial Rotorcraft."

The following rotorcraft programs were reviewed in preparing this analysis:

AgustaWestland AW101
Bell/Agusta Aerospace BA609
Eurocopter AS 332/EC 225
Kamov Ka-32

Kamov Ka-62
Mil Mi-8/17
PT Dirgantera Indo. NAS-332
Sikorsky S-92

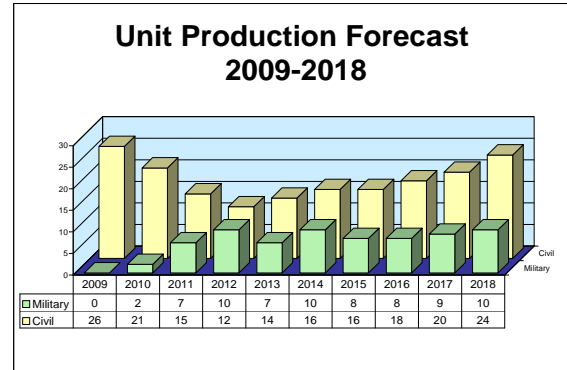
Methodology. Forecasting commercial rotorcraft production is an inexact science. Because rotorcraft are used in so many varied applications, and utilization data are sometimes questionable, development of a statistically valid methodology continues to be extremely difficult. Forecast International's method is based on an analysis of current inventories together with economic projections for the world's geographic regions. Factors such as price, level of product support, differences in performance, and established customer bases are used to project outlooks for individual programs.

* * *

Sikorsky S-92

Outlook

- Production of S-92 forecast to fall through 2012
- S-92 competes primarily against Eurocopter's EC 225/ EC 725
- Primary markets are offshore energy exploration and production support, SAR, and VIP transport
- Canadian H-92 program suffering delays and cost-overruns



Orientation

Description. Twin-engine, single-main-rotor, medium-lift commercial and military helicopter.

Sponsor. United Technologies Sikorsky Aircraft; Stratford, Connecticut, USA.

Status. In production.

Total Produced. Four prototypes and approximately 97 production aircraft produced through 2008.

Application. Utility, offshore transport, search-and-rescue, and overnight cargo roles; military version to seat 18 to 22 troops.

Price Range. S-92, \$21.3 million in 2009 dollars.



S-92

Source: Sikorsky

Sikorsky S-92

Contractors

Prime

Sikorsky Aircraft Corp	http://www.sikorsky.com , 6900 Main St, Stratford, CT 06614 United States, Tel: + 1 (203) 386-4000, Fax: + 1 (203) 386-7300, Prime
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Subcontractor

Aerazur	58 Blvd Gallieni, Issy-Les-Moulineaux, 92130 France, Tel: + 33 145 54 9280 (Fuel Cells)
Aerospace Industrial Development Corp (AIDC)	http://www.aidc.com.tw , No 111-X60, Lane 68, Fu-Hsing N Rd, Taichung, 40722 Taiwan, Tel: + 886 4 270 70001, Fax: + 886 4 228 42849 (Discs)
CPI Aerostructures Inc	http://www.cpiaero.com , 60 Heartland Blvd, Edgewood, NY 11717 United States, Tel: + 1 (631) 586-5200, Fax: + 1 (631) 586-5840 (Search-and-Rescue (SAR) Door Provision and Completion Kits; Seat Fitting Kits)
Curtiss-Wright Corp	http://www.curtisswright.com , 4 Becker Farm Rd, 3rd Fl, Roseland, NJ 07068 United States, Tel: + 1 (973) 597-4700, Fax: + 1 (973) 597-4799 (Recovery Assist Secure and Traverse (RAST) Probes)
Eaton Corp	http://www.eaton.com , 1111 Superior Ave, Cleveland, OH 44144 United States, Tel: + 1 (216) 523-5000, Fax: + 1 (216) 523-4787, Email: garyklasen@eaton.com (Emergency Flotation Bag)
Endevco	30700 Rancho Viejo Rd, San Juan Capistrano, CA 92675 United States, Tel: + 1 (714) 493-8181, Fax: + 1 (714) 661-7231 (Accelerometer)
GE - Aviation	http://www.geae.com , 1000 Western Ave, Lynn, MA 01910-0001 United States, Tel: + 1 (617) 594-0100, Fax: + 1 (617) 594-4729 (CT7 Turboshift)
Goodrich Corp	http://www.goodrich.com , Four Coliseum Centre, 2730 W Tyvola Rd, Charlotte, NC 28217-4578 United States, Tel: + 1 (704) 423-7000, Fax: + 1 (704) 423-7002, Email: corporate.communications@goodrich.com (Health and Usage Monitoring System; Rescue Hoist)
Hamilton Sundstrand	http://www.hamiltonsundstrand.com , One Hamilton Rd, Windsor Locks, CT 06096-1010 United States, Tel: + 1 (860) 654-6000, Fax: + 1 (860) 654-2621, Email: hs.general@hsd.utc.com (Active Vibration Computers; Automatic Flight Control System)
Heads Up Technologies	Suite 100, 2033 Chennault Dr, Carrollton, TX 75006 United States, Tel: + 1 (972) 407-1131, Fax: + 1 (972) 407-1758, Email: rharshaw@heads-up.com (Aural Warning Generator (for H-92))
Honeywell Aerospace, Engines, Systems & Services	http://www.honeywell.com , 111 S 34th St, Phoenix, AZ 85034-2892 United States, Tel: + 1 (602) 231-1000, Fax: + 1 (602) 231-5713 (Radar; APU)
Martin-Baker Aircraft Co Ltd	http://www.martin-baker.com , Higher Denham, Near Uxbridge, UB9 5AJ Middlesex, United Kingdom, Tel: + 44 0 1895 832214, Fax: + 44 0 1895 832587, Email: information@martin-baker.co.uk (Crew Seats)
Messier-Bugatti	http://www.messier-bugatti.com , Zone Aéronautique Louis Breguet, BP40, Velizy-Villacoublay, 78140 France, Tel: + 33 1 4629 8100, Fax: + 33 1 4629 8700 (Wheels; Brakes)
Rockwell Collins Display Systems	http://www.rockwellcollins.com , 2701 Orchard Pkwy, San Jose, CA 95134 United States, Tel: + 1 (408) 432-3000, Fax: + 1 (408) 433-0553 (Multifunction Display)
Tata Advanced Systems Ltd	http://www.tataadvancedsystems.com , Western Wing, Thapar House, 124 Janpath, New Delhi, 110 001 India, Tel: + 91 11 6622 2666, Fax: + 91 11 2334 1585, Email: skapur@tataadvancedsystems.com (Cabin)

Sikorsky S-92

Universal Avionics Systems Corp	http://http://www.uasc.com/home/index.asp , 3260 E Universal Way, Tucson, AZ 85706 United States, Tel: + 1 (520) 295-2300, Fax: + 1 (520) 295-2395 (Flight Management System)
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Comprehensive information on Contractors can be found in Forecast International's "International Contractors" series. For a detailed description, go to www.forecastinternational.com (see Products & Samples/Governments & Industries) or call + 1 (203) 426-0800.

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

Technical Data

(S-92)

Design Features. Single-main-rotor helicopter with integral tailboom and rotor system. Twin turboshafts drive from the cold end directly into the main rotor gearbox. Retractable tricycle landing gear.

	<u>Metric</u>	<u>U.S.</u>
Dimensions		
Length overall(a)	20.88 m	68.5 ft
Fuselage length	17.12 m	56.1 ft
Main rotor diameter	17.71 m	56.25 ft
Height overall	5.46 m	17.95 ft
Cabin length	6.1 m	20 ft
Cabin width	2.0 m	6.6 ft
Cabin height	1.8 m	6.0 ft
Cabin volume	19.8 cu m	700 cu ft
Weight		
Empty weight (offshore oil)	7,654 kg	16,875 lb
Max takeoff weight (internal load)	12,020 kg	26,500 lb
Capacities		
Standard fuel	1,136 liters	300 gal
Performance		
Max cruise speed	280 kmph	151 kt
Hover IGE ceiling	2,743 m	9,000 ft
Hover OGE ceiling	1,981 m	6,500 ft
Range, std internal fuel, 19 pax, 30-min reserves plus 10%	740 km	400 nm
SAR radius of action, max internal fuel, plus 10% reserve	618 km	334 nm
Propulsion		
S-92	(2)	GE Aircraft Engines CT7-8A axial-centrifugal-flow turboshaft engines rated 1,523 kW (2,043 shp) at max continuous.
H-92	(2)	GE CT7-8C turboshaft engines rated approximately 1,900 kW (2,550 shp) each.

Seating

S-92 to seat 19 passengers. H-92 to seat 22 troops in military configuration.

(a) Rotors turning.

Sikorsky S-92

Variants/Upgrades

S-92. The commercial version, intended primarily for the offshore oil/gas market segment. Cabin seats 19 passengers at 30-inch pitch, and is fitted with seven windows per side. Features 168-cubic-foot aft baggage compartment, an emergency flotation system with two floats on either side of the fuselage, a low-noise, 85-dB cabin environment, and a stand-up (72-in-height) cabin. In a typical mission, the aircraft cruises at 3,000 feet for three hours with two pilots, 19 passengers and luggage, and 3,800 pounds of fuel, or flies a 400-nautical-mile mission at 149 knots and lands with 10 percent fuel reserves. Sikorsky has also studied a bulk cargo version accommodating three LD-3-sized containers, and a search-and-rescue variant fitted with internal auxiliary fuel tanks to extend the aircraft's range to a minimum of 700 nautical miles.

H-92. Sikorsky originally proposed the military variant as a low-cost, low-risk alternative to the Bell/Boeing V-22 as a replacement for the U.S. Navy and Marine

Corps CH-46 medium-lift helos. As the latter program has since moved forward, Sikorsky has shifted its marketing emphasis to the international market. The H-92 configured for the land assault mission offers a 200-nautical-mile radius of action while carrying 22 troops at 3,000 feet on a 91.5°F day (compared with 140 nm for the CH-46E). In the amphibious assault role, the Sikorsky aircraft has a dual sortie radius of action of 65 nautical miles with 22 troops under 103°F conditions (versus 45 nm for the CH-46E). The aircraft's main rotor and tailboom can be folded; thus, it requires only 90 percent of the deck space occupied by the CH-46E. The H-92 features twin uprated CT7-8C turboshafts, which offer a 25 percent power increase over the CT7-8A engines used by its civilian stablemate. It is equipped with a fully digital, fly-by-wire system designed to improve the S-92's maneuverability and safety.

Program Review

Background. In March 1992, Sikorsky unveiled a full-scale mockup of its proposed S-92 medium civil helicopter, derived from the manufacturer's UH-60 military helicopter technology. The new model will feature a redesigned transmission; the H-60's three-stage gearbox has been upgraded with a fourth stage. The S-92 was originally to have been fitted with a spindle-type main rotor head, but this has been replaced with a yoke-type unit, which permits both fewer and faster inspections. According to Sikorsky, the rotor head will be the industry's first to offer an infinite life. The aircraft will also feature new rotor blades, scaled-up versions of wide-chord units that have already been test-flown aboard the Black Hawk. The new blades are 16 inches longer than those fitted to the UH-60, and permit the latter to lift an additional 500-pound payload. The S-92 also features a new tail rotor, as well as an intermediate tail gearbox and a supercritical tail driveshaft system.

The S-92 fuselage (less probes) is 98 inches longer than that of the Black Hawk, and features a cabin interior 79 inches wide, 72 inches high, and 20 feet long. A rear ramp, based on that of the Sikorsky CH-53, will accommodate palletized loads; in a bulk cargo version, the S-92 could carry three LD-3-sized containers.

Avionics. The aircraft's avionics feature an open architecture to accommodate MIL-STD 1553 and Arinc 429 interfaces. Four liquid crystal displays (LCDs), provided by Lockheed Sanders and derived

from units developed for the C-130J transport, are installed in the cockpit, with room for an optional fifth. All avionics equipment is accommodated in a removable rack behind the pilot. In a new design departure, the systems' wire bundles pass through conduits attached to aircraft frames, instead of being passed through frame holes.

International Partnership

Sikorsky's S-92 partners are Mitsubishi of Japan, which has a 7.5 percent program share and supplies the cabin structure; the Taiwan Industries consortium, which has a 6.5 percent share and is responsible for the two-crew cockpit; China's Jingdezhen Helicopter Group, which has a 2 percent stake and covers the horizontal stabilizer and vertical tail pylon; Gamesa of Spain, which has a 7 percent share and is responsible for the cabin interior, aft transmission section, and main rotor pylon; and Brazil's Embraer, which has a 4 percent share and provides the fuel system.

Aside from developing the dynamic systems, Sikorsky handles assembly, flight-test, and certification chores. The team has signed aboard the following suppliers and subcontractors: Lucas Aerospace (flexible drive couplings); Endevco (HUMS accelerometers); Dunlop Aviation (engine intake assembly); BAE Systems (SCR500-120 cockpit voice recorder); Martin-Baker (crashworthy crew/passenger seats); and Messier-Bugatti (wheels, steel brakes).

Sikorsky S-92

H-92 Engine Upgrade

In June 2003, Sikorsky entered an agreement with GE whereby the latter will supply updated CT7-8C engines for the H-92. The -8C offers about 25 percent more power than the baseline CT7.

Canadian Award

In July 2004, the H-92 won the \$2.4 billion competition to provide 28 maritime helicopters for the Canadian armed forces. The U.S. manufacturer defeated a bid from AgustaWestland, which had proposed a version of its three-engine EH101. That aircraft won the original competition in 1993 but the contract was canceled following a change in government in Ottawa.

Sikorsky was to have delivered the first of the S-92 variants in 2008, with all 28 to be handed over by 2011. The program has been delayed since then with little explanation by either Sikorsky or the Canadian government. In May 2009, the Canadian government released a new schedule under which the Canadian military would get 5-19 "interim aircraft" that do not meet full contract specifications starting in November 2010 to allow the Canadians to begin operational testing and training. Aircraft that meet full contract specifications will not arrive under the new plan until the summer of 2012. The interim aircraft will then be upgraded to contract standard. The first Canadian H-92, designated the "CH-148 Cyclone" in Canadian service, made its maiden flight in November 2008.

Sikorsky/Boeing Link

Sikorsky and Boeing Air Force Systems announced at the 2005 Paris Air Show that they had reached a preliminary agreement to team up on the former's H-92 proposal for the U.S. Air Force's 146-unit CSAR-X requirement. Boeing will handle the mission systems integration portion of the work. The pair competed against rival bids based on AgustaWestland's AW101 and a variant of Boeing's H-47 Chinook helicopter. The U.S. Air Force selected the H-47-based bid initially, but a subsequent protest by the losing bidders was later upheld by the U.S. Government Accountability Office (GAO). The competition has since been reopened.

Cougar S-92 Crash

An S-92 operated by Cougar Helicopters crashed off the coast of Newfoundland on March 12, 2009, killing 15 of the 16 people aboard. Although the cause of the crash is still under investigation, investigators at Canada's Transportation Safety Board (TSB) focused on the main gearbox after finding that at least one of the aircraft's titanium oil-bowl filter assembly mounting studs had broken before the crash. Just before the aircraft went down, one pilot reported "zero" oil pressure in the main gearbox. The FAA quickly issued an emergency air worthiness directive that the titanium mounting studs be replaced with steel studs. What caused the studs to break is still under investigation, and a final report on the accident had not been issued at time of writing.

Related News

Tata Subsidiary Signs Contract to Make S-92 Cabins – The Tata Group and Sikorsky Aircraft Corp have completed an agreement under which Tata Advanced Systems Ltd (TASL) will manufacture Sikorsky S-92 helicopter cabins in India. The first cabin is scheduled for delivery in late 2010 from a new greenfield facility that TASL will construct at Hyderabad in the state of Andhra Pradesh. (Sikorsky, 6/09)

S-92 Helicopter Operators Complying with Sikorsky Bulletin on Gearbox Oil Bowl Studs – Sikorsky Aircraft Corp announced on March 23, 2009, that the majority of the worldwide S-92 helicopter fleet already has complied with the company notice to retrofit the aircraft's gearbox oil bowl with steel mounting studs. The company expected to have close to 100 percent compliance by the end of June. The company contacted all S-92 helicopter operators on March 20 after broken titanium studs were found during a helicopter crash investigation in Canada. (Sikorsky, 6/09)

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Funding

Estimated S-92 development cost is \$600 million, including \$100 million for General Electric to develop T700 growth engines.

Sikorsky S-92

Contracts/Orders & Options

Operator	Designation	Quantity	Phase
Bahrain Air Force	S-92	1	On Order
Canada CS	S-92	28	On Order
Saudi Arabia Government	S-92	14	On Order
Thailand Air Force	S-92	3	On Order
Note: Above table includes military and government orders only.			

Timetable

Month	Year	Major Development
Late	1990	S-92 design initiated
Mar	1992	Full-scale civil mockup displayed
Apr	1992	Full-scale military mockup displayed
Dec	1992	Marketing studies completed
Late	1994	Risk-reduction studies completed
Jun	1995	S-92 formally launched
Dec	1998	Prototype first flight
	2000	Redesign (including larger cargo door, stretched fuselage)
Dec	2002	S-92 FAA VFR certification
Mar	2004	Initial S-92 deliveries
Jul	2004	H-92 wins Canada's Maritime Helicopter competition
Late	2010	Scheduled first delivery of H-92 to Canada

Worldwide Distribution/Inventories

Operator	Designation	Quantity
Korea Republic of (South) Air Force	S-92	3
Kuwait Air Force	S-92	3
Saudi Arabia Government	S-92	2
Turkey Government	S-92	1
Turkmenistan Government	S-92	2

Forecast Rationale

The Sikorsky Global Helicopters S-92 primarily competes against the Eurocopter EC 225 in the civil market. The market for the S-92 is heavily dependent on activity in the offshore energy exploration/extraction support market. About 65 percent of current S-92

operators are working to support offshore energy activities, and most of the remaining operators use the aircraft either in the search-and-rescue (SAR) or VVIP transport role.

Sikorsky S-92

The Bristow Group, a major provider of offshore helicopter services, reported in March 2009 that it was slashing its workforce by 10 percent to deal with declining demand. However, the price of oil is still at high levels relative to the 1990s and early part of this decade. We have assumed that demand from operators will suffer a modest decline rather than crash.

Over the long term, the limited size of the offshore market limit sales of helicopters in the S-92's class. There has been a growing need for helicopters capable of carrying passengers and equipment farther offshore, and fleet size has grown from around 140-150 aircraft in the 1990s to just over 200 today. If the fleet stabilizes at 210-220 aircraft, the average annual production level to replace the oldest models in the fleet will likely total around 15-25 machines, a market that the S-92 will have to split with the EC 225. In addition, the AgustaWestland AW139 has made major inroads into the market as a smaller competitor able to tackle some of the missions that were once largely the responsibility of larger helicopters.

Orders for the S-92 appear to have dropped significantly from 2008 to 2009 due to the effects of the worldwide economic slowdown. Our forecast calls for lowered deliveries as the existing backlog shrinks without being replenished. The S-92's customer base is highly tied to oil prices and the health of government finances. Both are likely to be lower in coming years than in 2007 and 2008, leading to reduced levels of production. Our forecast assumes that a turnaround will be slow and that deliveries will fall through 2011, with production levels increasing in 2012.

Recent orders for the S-92 include a new one from CHC Helicopter Corp's HeliOne division for 12 S-92s for delivery from 2009-2012. Also, Bristow Group exercised four options for delivery in 2008, and VIH Aviation will add four helicopters to its existing fleet of 11 S-92s held by its Cougar Aviation subsidiary. The latter aircraft will operate in and around Nova Scotia and Newfoundland. Finally, International Handling Co ordered two aircraft for delivery in 2010.

The SAR market provides other opportunities, but the competitions for SAR aircraft in this class have often been few and far between. The first of four S-92s to be dedicated to the SAR mission was delivered to CHC in 2007 for use under a five-year contract, signed in July 2007, between CHC and the U.K.'s Maritime and Coastguard Agency (MCGA). The U.K. Defense Ministry and the MCGA are planning to continue with this privatization of services with a new program, the SAR-H program. In related developments, two competing consortia are after a contract to provide SAR

services through 2025. The first, AirKnight (Lockheed Martin UK, VT Group, British International Helicopters) is offering the EC 225. The second, Soteria (CHC Helicopter Corp, Thales UK, Royal Bank of Scotland), is offering the S-92. The Japanese National Police Agency has also selected the S-92 for the SAR mission, but it will also use its aircraft for special police operations.

The SAR market is likely to be an important component of future S-92 orders, but, as with the offshore support market, one that the S-92 will have to share with the EC 225/EC 725. The VIP market has also accounted for a significant number of S-92 deliveries.

On the military side, the H-92 was under consideration by the Malaysian Air Force to replace its fleet of Sikorsky S-61s in the SAR and transport roles. The S-92 competed against familiar rivals in the program's selection phase, including the AgustaWestland AW101, Kazan Helicopter's Mil Mi-17V-5, and the Eurocopter EC 725. The Malaysian government initially selected the EC 725, but the decision was immediately criticized by opposition leaders and losing bidders because the government failed to conduct flight testing of the competing aircraft. The deal was subsequently canceled in the face of budget shortfalls. Malaysia needs an aircraft to shuttle troops in and around the Sabah and Sarawak provinces, which are located hundreds of miles across the South China Sea. The initial purchase was to include 12 aircraft along with an undisclosed number of options. The NH90 was once considered a likely competitor, but Eurocopter decided the 725 was a better fit for a Malaysian bid because of its existing commercial support system in the area. The competition may be reopened when the budget situation improves, and the Malaysian government was continuing to insist there was nothing wrong in selecting the EC 725 without first flight testing other aircraft even after the program had ground to a halt.

Elsewhere in the military and government markets, delivery to the Canadian military of 28 H-92 variants under a 2004 contract to fill its Maritime Helicopter Project requirement has been delayed yet again. Sikorsky teamed up with General Dynamics Canada and L-3 MAS Canada to develop, certify and field the Canadians' "Cyclone." General Dynamics Canada is handling systems integration, while L-3 MAS is responsible for long-term in-service support of the Cyclone for the Canadian Forces.

Delivery of the aircraft had been pushed back to November 2008, but it now looks as though the first aircraft will not arrive until late 2010. Sikorsky asked for an extra CAD250-CAD300 million to cover the cost

Sikorsky S-92

of developing a more powerful version of the H-92's engine than was specified in the original contract in the spring of 2008. Meanwhile, the Canadian government was withholding CAD200 million in progress payments. The possibility of canceling the contract was raised, but the parties now appear to have worked out their differences with the Canadian government and funding of the program has been increased by around 3 percent. At the same time, Sikorsky is pushing ahead to increase the aircraft's performance. Sikorsky had asked for extra money to fund development of a five-bladed rotor that it plans to add to the baseline H-92 design it is touting for other potential military helicopters, but the Canadian government turned the company down.

Other recent military/government orders include one by the Saudi Arabian Ministry of the Interior for 16 S-92s announced in November 2007. Sikorsky delivered the first of these aircraft in 2008. Also, the Royal Thai Air Force ordered three S-92s for the VIP role in December 2007.

A February 2007 decision by the Norwegian government to reject an options agreement between the Defense Ministry and NH Industries for 10 NH90 helicopters in the SAR configuration for the Norwegian Air Force represents a new opportunity for Sikorsky.

Greece and Poland are also reported to be ready to launch helicopter replacement programs that could see new export orders for the H-92 variant.

The Indian Air Force is considering the S-92 to fill a requirement for 12 VIP and transport helicopters, but the IAF is leaning toward the competing AW101 because the IAF preferred a three-engine helicopter to add a margin of safety when the helicopters are used in mountainous regions of the country. The Indian government also issued a tender in September 2008 for a new program to acquire 16 multirole naval helicopters. The program could eventually lead to procurement of 60 machines.

The H-92 was a contender in the U.S. Air Force's Combat Search and Rescue (CSAR-X) competition, in which the service intended to acquire 141 new platforms to replace its HH-60 Pave Hawks from about 2008. The Air Force selected a variant of Boeing's CH-47 Chinook for the role over both the S-92 and the US101, but subsequent protests of the selection by the losing bidders were later upheld by the Government Accountability Office (GAO). The CSAR-X effort is effectively in limbo at the time of writing, and it is not clear when the program will move ahead.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR CIVIL UNIT PRODUCTION												
Designation or Program	High Confidence					Good Confidence			Speculative			Total
	Thru 2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Sikorsky Aircraft Corp												
S-92 Civil <> CT7 -8 A												
	97	26	21	15	12	14	16	16	18	20	24	182
Total	97	26	21	15	12	14	16	16	18	20	24	182
ESTIMATED CALENDAR YEAR MILITARY UNIT PRODUCTION												
Designation or Program	High Confidence					Good Confidence			Speculative			Total
	Thru 2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
H-92 Military <> CT7 -8 C												
	3	0	2	7	10	7	10	8	8	9	10	71
Subtotal	3	0	2	7	10	7	10	8	8	9	10	71
Total	3	0	2	7	10	7	10	8	8	9	10	71

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ORDER FORM FOR PROPER SHIPPING, PLEASE PROVIDE ALL OF THE FOLLOWING INFORMATION.

Name _____ Title _____

Company _____

Street Address _____

City _____ State/Prov. _____ Country _____ Zip _____




Phone _____ Fax _____

E-Mail _____

Cardholder Name _____

Card# _____ Exp. _____ csc# _____

Billing Address (if different from above) _____

- Check Enclosed
 Bill Company
(Purchase Order # and Signature Required)
 Quotation Requested
 VISA  MasterCard 
 American Express 

Name of Product/Service	Code	E-Mail Address	Qty.	Price

Please include your e-mail address to receive twice-weekly E-Market Alert Newsletters.



Subtotal _____
 Shipping _____
 In Connecticut add 6% sales tax _____
 Grand Total _____

SHIPPING AND HANDLING RATES

	U.S.	World		U.S.	World		U.S.	World
Market Intelligence Services (Pages 6-25)			Intermediate Military Library			Governments & Industries		
Binder	\$45	\$85	Binder	\$540	\$1,020	Binder	\$540	\$1,020
DVD	\$50	\$95	DVD	\$50	\$95	DVD	\$50	\$95
Binder & DVD	\$95	\$180	Binder & DVD	\$590	\$1,115	Binder & DVD	\$590	\$1,115
Binder & RT	\$45	\$85	Binder & RT	\$540	\$1,020	Binder & RT	\$540	\$1,020
Worldwide Inventories			Basic Military Library			International Military Markets (A Subset of G&I above)		
Aerospace Systems (Pages 12-13)			Binder	\$315	\$595	Binder	\$270	\$510
CD	\$50	\$95	DVD	\$50	\$95	DVD	\$50	\$95
Weapons Systems (Page 22)			Binder & DVD	\$365	\$690	Binder & DVD	\$320	\$605
Hard Copy	\$45	\$85	Binder & RT	\$315	\$595	Binder & RT	\$270	\$510
CD	\$50	\$95	Civil/Commercial Library			Naval		
Power Systems (Page 25)			Binder	\$360	\$680	Binder	\$90	\$170
Hard Copy	\$45	\$85	DVD	\$50	\$95	DVD	\$50	\$95
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