

MAGAZINE

# ROTOR

THE WORLD OF HELICOPTERS BY EUROCOPTER - N.96 - NOVEMBER 2013



EMERGENCY MEDICAL SERVICES

# WHEN EVERY MINUTE COUNTS

# ( THINK OIL & GAS )

The rugged and reliable Eurocopter range is put to the test transporting crews safely to and from assignments. Enduring extreme heat and freezing weather conditions to reach offshore rigs and wells in remote land-based locations.

**Specify an EC225.**



Thinking without limits

 **EUROCOPTER**

AN EADS COMPANY



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## FLIGHT SAFETY IS OUR TOP PRIORITY

**Since receiving the European Aviation Safety Agency's validation in July, the EC225 has returned to service around the world.** Approximately 60 percent of the suspended EC225s are back in the skies at the time of writing, with around 80 percent of the global EC225/725 fleet now flying. Almost all helicopters will be back in service by year end.

**However, on August 23, not long after reaching this milestone, an AS332 L2 experienced a tragic accident in the North Sea, in which four people lost their lives.** We all have been deeply saddened by this accident. While the UK Air Accidents Investigation Branch and airworthiness authorities do not suspect a technical or mechanical issue to be the cause, tragedies such as this are a reminder that our helicopters are often at the forefront of difficult missions carried out in demanding environments.

**The safety of our helicopters is paramount – and we will work harder to improve the helicopter industry's safety record,** whether it's by continually investing in the latest designs, technologies and tools, building a strong culture

of safety among our employees and partners, or contributing to industry-wide initiatives.

**This dedication to safety is mirrored in the Airbus brand, which we will adopt as of January 1, 2014, when our parent company, EADS, reorganizes as Airbus Group.** We look forward to becoming Airbus Helicopters. The values embodied in Airbus – flight safety, quality, and industrial excellence – are fully in line with my priorities of enhancing safety, raising customer satisfaction, advancing the quality of our helicopters and services, and improving our competitiveness.

**The scope of our activities will remain unchanged.** We will continue to be a fully focused helicopter division within Airbus Group that capitalizes on the vast number of synergies among our civil and military activities. Under the Airbus Helicopters brand, we will be entirely dedicated to serving your operations in a safe and efficient manner.

I wish you safe flights onboard our helicopters.

Guillaume Faury

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among EMS helicopter markets. But one thing remains the same all around the globe: The helicopter is the perfect tool for performing rescue missions. In addition to their speed, helicopters can avoid traffic jams, land as close as possible to victims, and operate safely at night thanks to night vision goggles (NVG). For EMS missions, the helicopter truly has no equal...



© Alain Ernoult

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© Anthony Pecchi / Eurocopter

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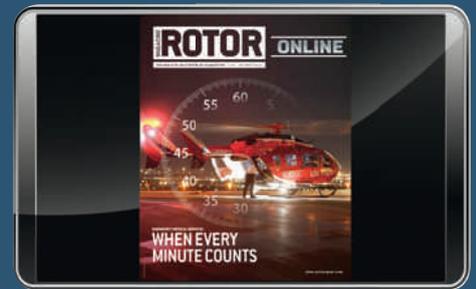
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**FOR** MORE INFORMATION  
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MAGAZINE **ROTOR** ONLINE



Learn more **INFORMATION** about:

- The Eurocopter Foundation website (page 9)



Watch a **VIDEO** of:

- The EC145 EMS (pages 14-15)
- The X<sup>3</sup> world speed record (pages 18-19)
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## THE FLOOR IS YOURS

New! Share your experiences and send your photos and comments about *Rotor Magazine* to [rotor-magazine@eurocopter.info](mailto:rotor-magazine@eurocopter.info)

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## EC725 OPERATIONAL DEMONSTRATION IN POLAND

On August 23, a French Air Force Caracal helicopter arrived in Poland from the base of Cazaux, France for a two-week demonstration tour. The EC725 Caracal is a contender in Poland's multi-role helicopter bid. The tour began with a dynamic display of the EC725 at the well-attended Radom Air Show from August 24 to 25. Audiences were wowed by the presence of several commandos from the French Special Forces, who accompanied the EC725's arrival. On August 26, the EC725 turned heads in Warsaw at a media event. The helicopter's Polish tour concluded at the MSPO Kielce defense exhibition from September 2 to 5, where the helicopter was presented by Eurocopter and French Air Force pilots.



© Lorette Fabre/Eurocopter

## The French Gendarmerie 60 CANDLES FOR THE AIR FORCE



© Anthony Pecchi/Eurocopter

Throughout its storied past, the French Gendarmerie has actively sought out new technology. When helicopters were first introduced, the Gendarmerie quickly recognized the possibilities offered by this new rotary-wing aircraft and created its first helicopter unit in 1953. Initially operating a Bell 47, the Gendarmerie later turned to series-produced helicopters made in France: the Alouette and the Ecoureuil followed by the EC135 and EC145 today. Over the highest summits in Europe, in tropical rainforests and in complex urban environments, Eurocopter and the Gendarmerie have formed an excellent team, combining their unparalleled know-how as they continue to work together for a common goal: ensuring mission success.



© Photos provided courtesy of the French Navy

## NH90 THE 3rd NH90 PRODUCT CONFERENCE

A record number of 120 users from 13 nations attended the third NH90 Product Conference from June 3 to 6, organised by NH Industries at the Gilze Rijen Netherlands Air Force Base in Holland. The conference enabled NH90 military customers to hear from Eurocopter engineering and support teams about their efforts to address technical problems and increase the reliability and availability of the NH90. This annual meeting was also an opportunity for users, operators and the broader aerospace community to learn about NH90 missions in Afghanistan and off the coast of Somalia, and also to build relationships and exchange ideas about future requirements.

## Helisim 100,000 FLIGHT HOURS ON SIMULATORS

On June 13, Helisim celebrated the 100,000th flight hour performed on its simulators, which provide training for customers around the world. Helisim offers operators extremely realistic flight simulation that enables them to test their skills in the most extreme conditions for a wide range of civil, parapublic and military missions. On average, about 3,000 pilots perform 14,000 hours of simulated flight each year at Helisim, which opened its doors in 2000.



© Eric Raz/Eurocopter



© Charles Abbar/Eurocopter

## German Army Special Force CONTRACT FOR 15 EC645 T2s

Eurocopter and the German Federal Ministry of Defence signed a 194 million Euro contract in July for 15 EC645 T2 light utility helicopters to be operated by the German Army's special forces unit (KSK). In addition to the helicopters, this contract also includes the required equipment packages for KSK missions. Deliveries are to begin in late 2015 and continue through mid-2017.



Two Tigers simulate a dogfight at the Paris Air Show.

## TIGER

Article  
**ALEXANDRE MARCHAND**

Two Tigers – one German and one French – made history at the Paris Air Show this summer when they performed an aerial ballet together in the skies above Le Bourget.

# A EUROPEAN BALLET

From June 17 to 23, two Tigers from the Franco-German Training Academy (EFA) in Le Cannel des Maures (France) presented a series of aerial demonstrations at the Paris Air Show. The performances by a Tiger UHT and Tiger HAP were exceptional for more than one reason. First, a special authorization is necessary for helicopters to perform these types of formation flights during the air show. Second, the demonstration itself, during which the two helicopters simulated a dogfight, is quite a rarity. On top of that, the Tiger HAP carries French colors, while the Tiger UHT is a German helicopter. At a debriefing after the demonstration, the two flight crews said that, as far they knew, their flight was “the only international formation flown at the show.”

### SIMULATOR TRAINING

This same presentation by a Tiger duo was first performed in 2011 with French helicopters during an open-house event at the training academy in Le Cannel des Maures. When a German Tiger was introduced into the mix in early 2013, the EFA's flight simulators were used to ensure a smooth transition. Later, a series of training flights were conducted in France's Provence region to fine tune the demonstration. The Tigers' take-off weight in Le Bourget was five tons, and they flew at altitudes between 400 and 1,000 feet in an air show demonstration area of approximately 2,000 by 800 meters.

### *AS SEEN BY*

**CAPITAINE MARC B.  
(ALAT)**

“To simulate a dogfight, our two helicopters perform a series of separations and rejoins in rapid succession, both of which are normally prohibited during the Paris Air Show. The presentation lasts a little over eight minutes. We try to combine combat maneuvers with aesthetic figures. The lead helicopter determines the amplitude of the maneuver, while the wingman is responsible for making it dynamic. For safety reasons, our maneuvers are limited to 90° angles in all directions, which means we can't fly some of the more spectacular loops and rolls that Eurocopter test pilots perform.”

With missions ranging from emergency response to aiding developing countries, the Eurocopter Foundation has reported for duty.



# THE EUROCOPTER FOUNDATION IN ACTION

Three organizations are receiving support from Eurocopter’s philanthropic arm, the Eurocopter Foundation, which launched earlier this year.

In October, the Foundation worked with Mexico-based nonprofit organization World Vision International to distribute humanitarian aid kits by helicopter for disaster victims of storms and floods the states of Veracruz and Guerrero.

The Castel Mauboussin Association, which helps people with disabilities in France pursue employment in the aerospace industry, is using Eurocopter Foundation funding to train three disabled individuals for helicopter operations.

According to Luc Adrien, president of Castel Mauboussin, the unemployment rate today of people with disabilities in France is double that of non-disabled workers, despite there being “a real willingness among aerospace companies to bring these people into the workplace.”

“Hiring managers face a lack of job candidates with the skills required by the industry,” says Mr. Adrien. “We work with aviation companies like Eurocopter to identify the jobs of the future and develop training capable of improving opportunities for placement.”

The other Eurocopter Foundation recipient, the global nonprofit Acting for Life, helps impoverished communities in rural Mexico improve healthcare and local industries, beginning with a three-year community development program in the Sierra Madre Oriental mountain range. The model will expand to other areas of Mexico, where Eurocopter has been present for 30 plus years. “Eurocopter is enabling us to improve the lives of 800 families,” said Fanny Darbois, head of Acting for Life’s Latin American programs. “We’re focused on improving health

and nutrition, strengthening farmers’ organizations, promoting rural sectors such as coffee production and tourism, and providing access to micro-finance and financial education in coordination with the Mexican organization Sierras Verdes.”

With support from the Eurocopter Foundation and other philanthropic organizations, families have built vegetable gardens and chicken coops to support a balanced diet. They learn about credit unions and establishing community savings. And they are becoming involved in the region’s growing tourism industry (*see sidebar*).

Humanitarian aid kits were transported by World Vision in Mexico.



© Christine Maurette

## SPOTLIGHT

### Who We Help

- A former civil security worker and volunteer firefighter injured on the job, is receiving helicopter emergency medical services (HEMS) training in Toulon, France. She will learn how to support the pilot and onboard medical staff.
- A group of women near Pahuatlan, Mexico,

are creating a handmade jewelry business to raise money for the education of village children.

- Village coffee producers are coming together to sell bags of ground coffee to tourists. They received roasting and grinding machines, and are learning how to manage finances.

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# WHEN EVERY MINUTE COUNTS

Article **ALEXANDRE MARCHAND**

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When emergency assistance is needed, the helicopter is irreplaceable. Long aware of this fact, Eurocopter currently offers the widest and most perfectly adapted range of helicopters for emergency medical service (EMS) missions.

During the Vietnam War, the death rate of wounded U.S. soldiers was dramatically reduced thanks to rapid interventions by helicopters. In the years following the war, helicopter use for similar types of missions took hold in civil society, as rotorcraft became more commonplace and traffic accidents continued to increase. Governments in western countries began to lay the foundation for a true air rescue network that could

quickly provide medical assistance to the wounded, wherever they were. As a result of these efforts, the EMS helicopter industry was born. As the following pages show, operating conditions and regulations vary a great deal from one continent to another, resulting in great disparities among EMS helicopter markets. But one thing remains the same all around the globe: The helicopter is the perfect tool for performing rescue missions. In addition to their speed, helicopters can avoid traffic jams, land as close as possible to victims, and operate safely at night thanks to night vision goggles (NVG). For EMS missions, the helicopter truly has no equal. 

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# A HIGHLY SEGMENTED MARKET

There are approximately 2,000 EMS helicopters currently operating worldwide – an impressive figure. But a closer look reveals wide disparities among geographical areas.

Article  
**ALEXANDRE MARCHAND/COURTNEY WOO**

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More than half of the 2,000 EMS helicopters currently in service worldwide are based in North America.



*RUSSIA*  
*MOSCOW*  
*AVIATION CENTER*

Russia currently has four operators performing EMS missions on behalf of the government. The Moscow Aviation Center (MAC) is one of them, and its three EC145s are among the few helicopters with permission to fly over the city of Moscow. An authorized EC145 maintenance center, the city council-owned MAC mainly uses the three helicopters, which are fitted with Air Ambulance Technology medical interiors, to carry out secondary EMS missions between hospitals. The MAC is now looking to add new aircraft to its fleet, with the EC145 T2 representing an attractive option.



Some 1,100 of these helicopters are based in North America, and another 600 operate in Europe. The remaining 300 are divided among Asia, Oceania, South America, Africa and the Middle East.

There is another story hidden in these numbers. Significant disparities exist within individual regions. In Asia for example, Japan and South Korea are well equipped, while Malaysia, Indonesia and even China are further behind. The same holds true for Africa, where South Africa is the only country on the continent that is reasonably well equipped. These differences can be explained by many different factors, including public policy and the types of financing that are available. But the local regulations are also important, as is the local geography. The number of helicopters per million inhabitants is a good yardstick for determining how mature a country's market is. In the United States, there are three helicopters per million inhabitants; this ratio is closer to 1.5 in Europe. Certain countries rely more heavily on rotorcraft because of their specific geography, such as Switzerland and Austria due to their mountainous terrain, and Scandinavia due to the long distances to be covered. Geographical constraints may also have an influence on the types of helicopters that are used. In countries like Australia, for example, bigger helicopters are often chosen as longer operating ranges are a must.

These figures indicate a contrasting outlook for growth in the EMS market, which will likely be sluggish in countries that are already well equipped, and much more brisk in emerging markets such as Russia, China, India and Brazil. A note of caution though: Growth in these countries will depend on the easing of aviation regulations and/or improved standards of living.

*UNITED STATES*  
*AIR METHODS*

The "speed" factor makes air medical services an indispensable healthcare service in the United States. Air Methods is the country's largest operator, with 293 bases serving 48 states, flying the equivalent of 274 transports per day. Almost 300 of its 380 helicopters are Eurocopter aircraft. Since August 2013, these helicopters are equipped with night vision technology, which improves situational awareness during night transports so pilots can better detect hazards and obstructions – especially in the rural mountainous and desert areas that Air Methods often serves.

# A MACHINE FOR EVERY MISSION

With a 60 percent share, Eurocopter is currently the uncontested leader of the EMS market.

Article  
**ALEXANDRE MARCHAND/BELÉN MORANT**

Eurocopter's flagship is the EC135, the benchmark in the field, with approximately 500 units in the EMS configuration currently in service worldwide. The BK117/EC145 family is also popular, with 260 helicopters flying EMS missions. "The EC135, successor to the BO105 for EMS missions, was optimized for this type of work right from the design phase," said Jean-Marc Royer, senior marketing manager. "It's a compact helicopter with a small footprint, enabling it to land in tight spaces. Its Fenestron® shrouded tail rotor increases operational safety, both during approaches and when the aircraft has landed. Ground personnel can approach the EC135 from any angle, and the aircraft can even be loaded while the rotor is turning."

The EC145 T2 also comes equipped with a Fenestron® and has a larger cabin than the EC135 (see graphic). Both helicopters can be rear loaded through half-shell doors, providing easy access to the entire cabin for one or two stretchers and the medical team. When greater range is required, Eurocopter offers larger helicopters from the Dauphin/EC155 family. At the lighter end of the range, single-engine models are also perfectly adapted to EMS missions when regulations permit. The Ecureuil AS350 is a good example, with nearly 200 aircraft currently operated for EMS missions. The EC130 is even more promising. Its large cabin is an excellent calling card for the EMS market in North America, where around 50 EC130s are already performing EMS missions. Sales are expected to take off in the near future.



© Bonc

**25%**  
The EC135 alone represents 25 percent of the global EMS fleet

**362** Eurocopter helicopters delivered between 2008 and 2012 in this segment.

Approximately **1,200** Eurocopter helicopters currently in service worldwide for EMS missions.

The EC145's low noise level is **6.7 dbA** below ICAO limits.

The EC145 is particularly well adapted to primary emergency medical service (EMS) missions and in-flight intensive care. Its unobstructed cabin can house two stretchers, along with three seated persons and all the necessary medical equipment.



**WATCH A VIDEO OF THE EMS EC145 AT ROTOR ONLINE**  
[www.eurocopter.com](http://www.eurocopter.com)

© INAER

## EC145 T2: SPECIALLY DESIGNED FOR EMS MISSIONS

Combining the excellent capabilities, operating range and cabin accessibility of Eurocopter's EC145 T2 with the company's latest innovations in terms of available power, flight safety and mission equipment provides the ideal solution for EMS missions.

- Two Turbomeca Arriel 2 engines with FADEC<sup>(1)</sup> for increased performance levels.
- A 4-axis autopilot that simplifies the pilot's workload, increases functionality, enhances security, and improves mission capabilities.

- A Fenestron<sup>®</sup> shrouded tail rotor for better safety, in particular when loading the cabin through the rear door, which offers lower noise levels – a highly appreciated advantage during landings in urban areas.
- The EC145 T2 conforms completely with the European EN13718 standard for HEMS<sup>(2)</sup> missions.

(1) Full Authority Digital Engine Control  
(2) Helicopter Emergency Medical Services

The medical equipment on board the EC145 T2 is also new. A sample medical configuration includes:

1. Medical cabinet, including backpack holder and fire extinguisher
2. Defibrillator
3. Supply rack and control panel
4. Syringe and infusion pumps
5. Stretcher
6. Oxyrack and modular rear center cabinet
7. Medical crew seat



### MEDICAL MISSIONS

# “A MACHINE BEYOND RIVALRY”

Interview with Dr. Stéphane Bourgeois, chief of staff at the SAMU 84-Smur Adult Emergency Medical Unit at Avignon Hospital in France.

Interviewed by  
**MONIQUE COLONGES**



© Lorette Fabre/Eurocopter

Dr. Stéphane Bourgeois's team includes 45 doctors and nurses from SAMU 84 who can take off with less than five minutes' notice from the helipad at Avignon Hospital.

#### What types of missions do you perform with helicopters?

**Stéphane Bourgeois:** Two-thirds of our flights are for what we call “secondary” missions: the transfer of patients between hospitals, in particular to the university hospitals in the region. The other flights are for “primary” missions directly in the field, when we transport the injured to specialized medical centers. This is normally for patients suffering from multiple traumatic injuries caused by traffic accidents, or for stroke victims. We perform 350 helicopter transport missions each year from our helipad at Avignon Hospital.

#### What medical equipment does the helicopter have?

**S.B.:** The helicopter has the same equipment you would find in a traditional ambulance, such as a standard stretcher, a scoop stretcher, splints, and a ventilation system. We can even install an incubator for the transportation of newborns.

#### What advantages does the helicopter offer your rescue missions?

**S.B.:** High speed... without a doubt. We don't have a second to lose when we're dealing with victims of stroke, heart attack or multiple traumatic injuries. Their lives hang in the balance. Avignon is 90 kilometers from Marseille, and even though there's a direct freeway connection, no ground ambulance can hold a candle to the helicopter. And you can imagine how long it takes to travel by road when we're on the smaller country lanes north of the Vaucluse region or around Mount Ventoux.

What's more, the fact that the helicopter

With its dynamic fleet renewal and development strategy, INAER is clearly set on conquering the French EMS market.



## 350 No less than 350 helicopter transport missions per year are performed off the helipad at Avignon Hospital

can quickly complete its mission significantly increases the availability of our medical teams. It takes 20 minutes to transfer a patient from Apt to Marseille by helicopter, but nearly two hours by road. The helicopter enables us to perform two or three missions in the time it takes an ambulance to perform just one, which means we can save more lives.

### What medical requirements must be respected before transporting a patient by helicopter?

**S.B.:** The patient must be in a stable condition. Helicopter flights are not accepted for all types of illnesses or injuries – the only exception being

pregnant women when birth appears imminent. The one thing we can't get around is the patient's weight. We can't carry someone who weighs more than 140 kilograms, as we would then exceed our authorized maximum payload.

### What is the future of the SAMU helipad in Avignon?

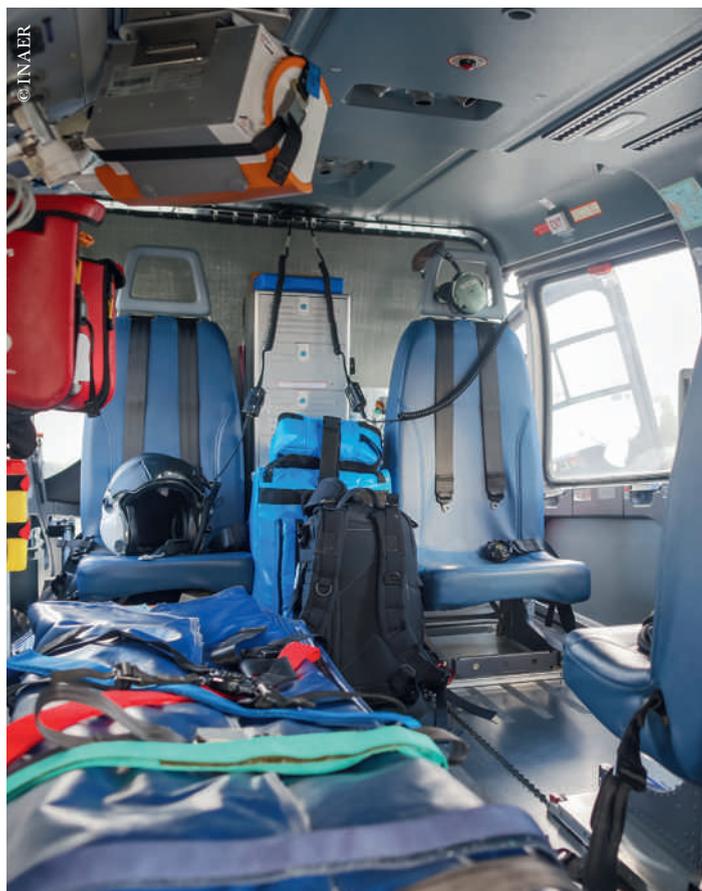
**S.B.:** Following the call for tender that we launched throughout the region, a new five-year contract will begin in January 2014 with INAER and Mont Blanc Hélicoptères, who will provide EC135s to perform EMS missions for emergency units. But that's a whole other story!

## INAER TURNING HEADS IN THE FRENCH EMS MARKET

In August 2013, INAER Helicopter France was awarded the emergency medical services contract for the country's PACA (Provence, Alps and Côte d'Azur) region. The operator's five EC135s will provide air ambulance services to the primary hospitals in the PACA region beginning in January 2014. The five-year arrangement covers medical centers in Nice, Toulon, Gap, Avignon and Marseille. For these last two cities, the services will be provided through a partnership with the French operator MBH SAMU.

This is the first time a contract has been signed with hospitals at the regional level. The agreement will serve as a model for establishing additional long-term agreements, which are beneficial for both sides: When EMS operators know they'll have work over a long period of time, it's easier for them to make long-term investments to optimize their fleets, meaning the hospitals can count on top-notch equipment for their services.

INAER was already active on the French EMS market with the AW109, but these new agreements demonstrate the company's willingness to adapt to its customers' needs by proposing next-generation EC135s equipped with the most cutting-edge technology currently available, such as an ultra-modern autopilot. As part of its continuing development work, INAER became the first – and, to date, the only – private operator in France to receive night vision goggle (NVG) certification. After an initial test run in Nice, INAER now operates NVG services for the university hospitals in Marseille and the Nouméa Hospital Center in New Caledonia. With its dynamic fleet renewal and development strategy, INAER is clearly set on conquering the French EMS market.



The helicopter has the same equipment you would find in a traditional ambulance, such as a standard stretcher, a scoop stretcher, splints, and a ventilation system.

## WORLD SPEED RECORD

Article **ALEXANDRE MARCHAND**

# THE X<sup>3</sup> AT THE TOP OF ITS GAME

In 2011, following an extremely rapid development phase of only two and a half years, the X<sup>3</sup> reached a speed of 232 knots (430 km/hr) in level flight without using all of its installed power. In 2012 at the end of the summer, the Eurocopter team launched a new project to see how the aircraft would behave at maximum speeds using all of its available power. To top it off, they decided to set a new speed record, too. That's when things really began to accelerate. Following a demonstration tour in the United States, the X<sup>3</sup> took part in the Berlin Air Show and the Eurocopter Family Day events before taking a break for a few months to receive new aerodynamic fairings for its landing gear, rotor and engine cowlings. On June 7, 2013, the X<sup>3</sup> set the world record for a hybrid aircraft on its first attempt, clocking in at 255 knots (472 km/hr) in level flight. All the staff at Eurocopter can be proud of this amazing technical feat.



**WATCH THE VIDEO  
OF THE X<sup>3</sup> SPEED  
RECORD AT ROTOR ONLINE**  
[www.eurocopter.com](http://www.eurocopter.com)





# “PROTECTING OUR PEOPLE NO MATTER THE MISSION”

Interviewed by  
**BARBARA SAGEL/BEATA CECE**

The German Federal Police is Eurocopter's biggest commercial customer. It currently operates a fleet of 87 aircraft, all of which are supplied by Eurocopter. Dr. Dieter Romann, President of the German Federal Police since the summer of 2012, talks to *Rotor Magazine* about the police force's everyday work and special operations.

## What are the responsibilities of the German Federal Police's airborne unit?

**Dieter Romann:** One of our ongoing responsibilities is to police all of Germany's borders. The German Federal Police is also active in policing the European Union's external borders, a responsibility

that falls to the respective member states and that is coordinated by the EU border control agency FRONTEX. Another important task is fighting crime and terrorism. We make our helicopters available to special units for use in their operations. Our flight service also supports the German Federal Criminal

Police Office, the Federal Public Prosecutor's Office and the various police forces of Germany's federal states, as well as provides transport for members of the constitutional authorities, the German Federal Government and foreign guests of state.

## Your fleet also participated in the flooding disaster last June?

**D.R.:** Yes indeed, our pilots were on the scene non-stop in up to 20 aircraft during the flood relief operations in Germany, helping people to rescue their belongings. Federal Police helicopters evacuated a total of 123 people. We carried out 63 winch maneuvers, many of which hoisted people to safety from acute emergency situations.

## Were you satisfied with the helicopters' performance during this mission?

**D.R.:** This mission gave the helicopters the chance to demonstrate their power and flexibility. We transported well over a thousand people from our own teams



During the floods in Germany last June, the German Federal Police's helicopter fleet evacuated people and transported relief materials.

© Bundespolizei



## *CV IN BRIEF*

### **Dr. Dieter Romann**

- Born in 1962 in Ahrweiler, Germany
- Studied law at the University of Bonn
- Has worked for the Federal Ministry of the Interior since 1993
- Completed his PhD in 1996 at the German University of Administrative Sciences Speyer
- From 2005 to 2009: Head of the policing principles and operational affairs unit at the German Federal Police
- From 2009 to 2012: Head of unit for foreign terrorism and foreign extremism at the Federal Ministry of the Interior
- Since August 1, 2012: President of the German Federal Police

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## *THE FLEET*

**6** EC120s

**41** EC135 T2s

**20** EC155s

**20** AS332 L1s

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and those of other agencies and aid organizations. What's more, we transported almost 3,000 tons of sling loads and more than 100,000 empty sandbags inside the aircraft.

**How would you describe the collaboration with Eurocopter?**

**D.R.:** Underlying our collaboration is

the spirit of partnership and a commitment to maintaining our relationship. We consider it very important for the contact persons to remain involved in our joint projects over the long term. Our conscious effort to treat knowledge as a resource encourages a trusting working relationship, and allows us to focus on making progress. 

**“We make our helicopters available to special units for use in their operations.”**



© Anthony Pecchi/Eurocopter

## EC225

Article  
JEFF LENOROVITZ

After seven months of thorough testing, research and collaboration with airworthiness authorities, outside agencies and operators, Eurocopter developed a full understanding of the EC225's forced landings, underscoring its commitment to customers to resolve this issue and safely return the helicopter to service.

# SAFETY IS OUR CHIEF PRIORITY

In 2012, two EC225s made controlled landings in the North Sea. Inspections revealed a crack in the base of the vertical gearbox shaft in both cases, resulting from an unlikely combination of three factors occurring together: active corrosion, plus the effects of residual stress and "hot spots". Eurocopter applied its full resources and brought in outside expertise to develop

short-term prevention and detection measures, as well as modified the main gear box lubrication system to ensure its performance throughout the flight envelope. Thanks to these first safety measures, half of the EC225 fleet continued to fly since last October, performing more than 30,000 flight hours without the slightest technical incident.

Updated safety measures were later approved by the European Aviation Safety Agency (EASA) on July 10, 2013. EASA's validation was followed by the U.K. Civil Aviation Authority lifting operational restrictions on the same day, and the Civil Aviation Authority of Norway doing the same on July 19 – allowing for the full return to service of EC225s worldwide. In late July, SonAir – Africa's largest oil & gas helicopter operator – became the first customer to resume passenger transportation flights with the suspended EC225 fleet, with customers such as MHS (Malaysian Helicopter Services), ERA, CHC Australia, Hélicoptères de France and DanCopter beginning these missions again in August. Additionally, Eurocopter has undertaken a shaft redesign that will be retrofitted on the entire EC225 fleet from mid-2014 to increase strength margins in the main gear box and address all contributing factors to these incidents.



© Lorette Fabre/Eurocopter

**“Eurocopter employed more than 100 engineers, meaning thousands of working hours of analysis and bench tests, to solve the EC225 situation. We also ran flight tests that fully replicated the phenomenon, to confirm all of the causes were identified.”**

Jean-Brice Dumont, Eurocopter's Chief Technology Officer.

## CAPTAIN VI DUNG, CEO of VNHS

“ We did not suspend flights with the EC225, and we have never met any issues with our fleet so far. Following Eurocopter’s instructions, we took several precautions to ensure the highest levels of safety. For example, we flew with decreased power and speed to the oil rigs, and Eurocopter installed the updated MOD45, a temporary solution to permanently monitor the main gear box from the cockpit until we are able to install the new main gear box modification. During this entire period, Eurocopter closely supported VNHS<sup>(1)</sup>. We benefited from a permanent on-site Eurocopter technical representative as well as additional support from the Eurocopter representative office in Hanoi and the headquarters in France. This has not been easy for our company, but we have never lost confidence in the EC225.”

(1) Last September, VNHS flew a record 160 hours with a single EC225 aircraft



## JOAO ANDRADE, CEO of SonAir

“ Besides representing roughly 40 percent of SonAir’s rotary wing fleet, the EC225 is highly ranked among SonAir’s customers and plays an instrumental role in supporting the company’s core business of offshore operations in Angola.

## LIU JIAN XIN, Vice President of Marketing and Maintenance, COHC

“ After grounding our EC225 fleet for approximately three weeks, COHC resumed flying on November 14, 2012, with an aircraft carrying 14 passengers from Zhuhai, China to the HUSKI platform. We had asked Eurocopter to perform memory card checks, which they supported at the platforms using three laptops within the given time limit of three hours. Operations have gone very well, though we had to have a technician on each flight to perform the card checks. Regarding the support we received from Eurocopter, we felt they gave their utmost to overcome the incidents, though in critical moments it seems that whatever is done is never enough. At COHC, we never lost confidence in the EC225 and we succeeded

Therefore, it was imperative to return our EC225s to service as soon as possible.

SonAir has already implemented all mandatory technical directives and performed the required modifications to the entire EC225 fleet. Additionally, we have complied with the recommended inspections and operational limitations. Our customers have returned to the normal schedule of daily offshore/onshore flights in August with no concerns thus far. Eurocopter has always fully supported SonAir’s EC225 program. The course of action they took to resume offshore operation demonstrates yet again the manufacturer’s commitment and the partnership between both companies. We also believe such support should include recovery from the effects of this situation. At SonAir, operational safety is our first priority. We fully trust in Eurocopter products and are proud to fly the EC225.”



in conveying that feeling to our customers. We remained flying while most of the oil & gas EC225 fleets around the world were grounded. We are proud of our decision-making. Today, all the flight safety enhancements provided for the EC225, from the MOD45 retrofit to the emergency lubrication system upgrade, make us believe that the EC225 is probably the safest helicopter on the field.”



# CHINA RESCUE MISSIONS

Article  
ARNOLD FREEMAN

Civil helicopters in China are authorized to perform a broader range of missions each year. Eurocopter aircraft piloted by highly qualified crews regularly demonstrate just how effective the helicopter can be in one of the most difficult missions of them all: Search and Rescue.



## *IDENTITY CARD*

### Five Facts About GFS

- Established in April 1993
- Missions: search and rescue, air ambulance, firefighting, law enforcement, aerial filming and passenger transport
- 227 employees, including 28 helicopter pilots, 10 airplane pilots and 29 maintenance engineers
- 7 helicopters (three AS332s and four EC155s)
- 4 airplanes (two Jetstream J41s, one Twin Star DA42NG-VI and one Zlin Z242L)

With their additional fuel tanks, the GFS's Super Pumas are capable of performing up to -4.5 hours of endurance.

Search and Rescue (SAR) missions are among the most difficult – and most noble – that a helicopter is called on to perform. In China, these vital services are no longer provided solely by the military authorities. In the Hong Kong Special Administrative Region, for example, the Government Flying Service (GFS) has seven helicopters available for SAR missions in conjunction with other aircraft in its fleet. Over the past five years, the three Super Puma AS332 L2s and four EC155 B1s operated by the GFS have performed more than 2,000 SAR missions. Their operating range covers the entire area of responsibility of the Hong Kong Maritime Rescue Coordination Centre, which extends across most of the South China Sea, up to 700 nautical miles (1,300 km) from their base at Hong Kong International Airport. Responsible for covering such a vast area, the helicopters must have excellent endurance and be capable of flying both day and night in bad weather. GFS' helicopters have been fitted with all the equipment needed to perform rescue missions in even the most extreme conditions. The three Super Pumas have additional fuel tanks that provide flight endurance of up to four and a half hours. They are also equipped with a search radar and special flight instrumentation compatible with night vision goggles, enabling crews to perform instrument flights (IFR) and difficult missions at night. Their 4-axis autopilot can perform automatic descents and hover flights, both at night and in poor weather conditions. This state-of-the-art



© Government Flying Service

A perilous rescue on August 14, south of Hong Kong. The 21-member crew aboard a container ship in distress was saved by two GFS Super Pumas.

## SPOTLIGHT

### The EC120 and EC135 Perform Relief Work in Sichuan

On April 20, an earthquake measuring 7.0 on the Richter scale struck southwestern China in Sichuan, a province covering 485,000 square kilometers with 83 million inhabitants. The most badly affected area surrounded the city of Ya'an, only about 200 kilometers from the county of Wenchuan, which was devastated by an earthquake just five years earlier. The technical and logistical challenges faced by the Chinese government were tremendous in the hours following the catastrophe, as access to several of the affected areas proved difficult. The military command oversaw relief efforts on many different fronts, but without an authorization from the authorities, civil helicopter operators in the area couldn't lend a hand. In fact, the authorities preferred working with military equipment and personnel – not only because of the huge scale of the operation, but even more importantly because of the expertise required to work under such difficult circumstances. Furthermore, private aviation companies are not part of the Chinese government's established system to handle post-catastrophe rescue operations. Soon after the earthquake struck, however, one civil operator was authorized to provide support to the military forces on the scene: Xilin Fengteng General Aviation Co., based in Guanghan. After being contacted by the authorities, two of the operator's seven helicopters spent two days transporting medicine and medical supplies to the stricken areas. The EC120 and EC135 that were called in performed five rotations totaling 15 hours and 36 minutes of flight time.

equipment means that the GFS crews have the perfect tool at their disposal to successfully complete their missions.

### GALE FORCE WINDS

On August 14, a particularly difficult rescue mission demonstrated once again the reliability of these aircraft and the extreme professionalism of the GFS crews. After Typhoon Utor devastated the Philippines, leaving six dead in its wake, the storm headed south of Hong Kong.

There, it crossed paths with a container vessel carrying 21 crew members. The 180-meter vessel, which was rocked by massive waves, sent out an S.O.S. from its position about 50 kilometers off the coast. Gusts of wind whipped across the deck at 120 kilometers per hour, and 10-meter waves crashed onto the ship, causing the cargo to shift in the hold. The huge boat was soon listing at 20° and could no longer be stabilized: The crew's only chance was an air rescue. The first AS332 L2 on the scene performed hoisting for 30 minutes in hover flight under torrential rains, followed by the second for a full hour. Working together with a rescue vessel, the two GFS Super Pumas were able to hoist up all the crew members who had fallen into the sea or who were hanging on in extremely fragile lifeboats.



© Xilin Fengteng



WATCH A VIDEO OF THE RESCUE  
AT ROTOR ONLINE  
[www.eurocopter.com](http://www.eurocopter.com)

**2,000**  
SAR missions have been  
performed by GFS in 5 years

Landing at Eurocopter's German headquarters in Donauwörth is now easier and safer: the site houses the first helipad in Europe to make use of localizer performance with vertical (LPV) guidance – a highly precise 3D approach procedure.

Article  
SÉBASTIEN TROTIGNON

# SMOOTH LANDING



### Comfort for customers

International Eurocopter customers stand to benefit from these improved conditions for landing approaches, as they can now take off and land in Donauwörth even in bad weather. Eurocopter also offers its customers training courses for the new system.

### Enhanced testing

The license permitting LPV approaches to the helipad means Eurocopter in Donauwörth can use the new procedure when testing and approving the latest navigation systems for use in its helicopters. Eurocopter is currently conducting these tests using its twin-engine EC135 and EC145 T2.

### State of the art helipad

Eurocopter's special on-site helicopter pad in Donauwörth welcomes 6,000 take-offs and landings a year, and is one of the few helipads in the world to receive certification for all-weather operations by the International Civil Aviation Organization (ICAO).

### Improved safety

LPV guidance is a highly precise, GPS-supported instrument approach procedure. This new helicopter landing procedure supplements conventional lateral guidance systems by adding the vertical component, which enables approach guidance to be displayed in 3D. This improved guidance relieves the strain on pilots and increases safety, since obstacles can be safely cleared even when weather and visibility conditions are poor.

© Jean-Marie Lagnel

# FAVORITE CONFIGURATIONS: A WIN-WIN SOLUTION

Article  
ALEXANDRE MARCHAND

Eurocopter has further developed its offering of “favorite” configurations: helicopters with predefined equipment packages perfectly suited for primary mission profiles, with a reduced selection of optional equipment. The concept was first introduced in 2006 with the EC225 for the oil & gas sector.

“At the time, the helicopters we were selling for offshore transport all had very similar configurations due to the operational regulations enforced for these types of flights,” said Nicolas Mouquet, who heads the offshore standard for the EC225/Super Puma program. “It was only natural that we would take the process one step further and define a standard configuration that included all the equipment required for offshore missions.” This initial “favorite” configuration was warmly received by operators, who knew full well that standardized products mean lower costs and faster delivery times.

## OBJECTIVE: FAVORITE 2.0

The “favorite” concept was expanded from the EC225 to include the Dauphin/EC155 family and eventually the entire range. Five main configurations now exist: VIP, Corporate, Oil & Gas, Public Service and Search and Rescue. In the Super Puma family, a helicopter has even been developed that epitomizes the “favorite” concept – the AS332 C1e, which is only offered in a single configuration. This helicopter is currently undergoing certification. Although the configurations may be standardized, this doesn’t mean they don’t reflect new market realities.

“Offshore customers are particularly pleased with the ‘favorite’ concept: they know that all the operators responding to the same competitive tender can offer helicopters with the same equipment packages. It makes things much easier for them.”



There are five main favorite configurations: Oil & Gas (pictured), VIP, Corporate, Public Service and Search and Rescue.

The equipment options are updated regularly as operational needs and regulations continue to evolve. For some of the older helicopters in the range, however, the “weight of history” and technical precedents can sometimes make it difficult to fully benefit from favorite configurations. But the concept will be fully optimized for new helicopters under development, and the next step, already baptized “Favorite 2.0”, is now underway. The future X4 will be the first to reap the benefits.

## SPOTLIGHT

### When Tomorrow Meets Today

Historically, one key reason for Eurocopter’s success has been its ability to offer customers a wide range of customized products. “Favorite configurations are currently a popular choice, but we can still offer customized helicopters with supplemental type certificates (STCs) and have outside companies, such as Vector Aerospace, perform the customization work,” noted Fabrice Arfi, vice president of business development and sales coordination.



## AUSTRALIAN AEROSPACE

Article  
SÉBASTIEN TROTIGNON

Eurocopter's subsidiary Australian Aerospace is the only manufacturer currently assembling helicopters on the continent. In just 10 years, the company has quickly established itself as an undeniable leader in the civil and military rotary-wing markets, as well as fixed-wing aircraft maintenance. *Rotor Magazine* puts the spotlight on this success.

# A LEADER ON AUSTRALIAN SOIL



© Australian Aerospace

When it entered Australia during the late 1980s, Eurocopter initially focused on the civil market.

Ten years ago, Australian Aerospace's 45 employees sold and serviced Eurocopter civilian helicopters from four sites in Australia and New Zealand. Today, the company has evolved into a major industrial aviation company, employing 1,200 people at 15 sites with expertise in assembly, retrofit, maintenance, through-life support, supply chain management, composites, engineering, software development and program management. Over the past decade, Australian Aerospace has carved out a large share of the market for itself. This rapid rise is the result of an effective strategy based on local development. A case in point was the merger with the defense division

of aviation manufacturer Hawker Pacific, a venerable company founded in 1927.

### POLE POSITION

Australian Aerospace is now the country's helicopter market leader, particularly in the defense sector. The subsidiary is active in sales and maintenance, and also performs final assembly work. Key contracts with the Australian Defence Force include the purchase of 47 MRH90s (NH90), which are being assembled locally. Last year, the company also completed deliveries for 22 Tiger helicopters in the ARH armed reconnaissance version, a program that created 220 jobs. In the fixed-wing field, Australian Aerospace is

the heavy maintenance provider of the Royal Australian Air Force's fleet of 18 AP-3C Orion maritime patrol aircraft and the Air Force's fleet of 12 C-130J Hercules transports. The next big campaign is the Australian Defence Force's Phase 7 program, designed to provide helicopter training (both helicopters and synthetic

# 10%

of revenue comes from  
the civil helicopter market



training) to the Army and Navy. The program is valued at up to AUD 1 billion, and Australian Aerospace is one of three final competitors invited to submit a bid.

**CIVIL SECTOR**

Australian Aerospace has also been successful in the civil market — a business it knows inside and out. This was where Eurocopter focused its efforts when it first arrived in the region in the late 1980s. The sector still accounts for nearly 10 percent of revenues and remains an important part of Australian Aerospace’s footprint. The company supports civil operators flying Eurocopter helicopters in Australia, New Zealand,

Papua New Guinea and islands in the South Pacific, including the Cook Islands, Fiji and Vanuatu. One long-term customer is the Surf Life Savers. This iconic Aussie organisation uses helicopters to patrol beaches for swimmers in trouble and to conduct the annual shark patrol. Other customers include courier services, rental operations, and tourism, particularly in New Zealand where the tourism industry is extremely developed and the number of helicopters per capita is the highest in the world.

**CENTER OF EXCELLENCE**

Australian Aerospace is a partner with many companies in the oil & gas sector, which is rapidly expanding in the region. Certain estimates call for an additional 25 EC225s to enter service in the coming years, and Australian Aerospace will provide support and maintenance services at the local level. Last year, a new team of specialists was established in Perth (see box) to strengthen the subsidiary’s support services. Australian Aerospace has solidified its foothold in the Australian market. What’s more, its expertise is now recognized well beyond the country’s borders: Eurocopter has created a technical Center of Excellence in Sydney to serve all of Asia.

*FACT & FIGURES*

**Australian Aerospace by the Numbers**

- **2001:** Merger with the defense division of manufacturer Hawker Pacific
- **1,200 employees at 15 sites**
- **No.1** in defense and civil markets
- **Main customers:** Australian Defence Force (Army and Navy)
- **2005 to 2011:** Assembly and delivery of **22 Tiger ARHs**, which have already logged more than **11,000 flight hours**
- **500 Eurocopter helicopters** in service in the region
- **Fixed-wing support** to the Royal Australian Air Force’s AP-3C reconnaissance and C-130J Hercules transport fleets

*SPOTLIGHT*

**Neighborhood Services out of Perth**

To better meet the needs of customers in the rapidly developing oil & gas sector, Australian Aerospace inaugurated a new center of excellence in November 2012. The city of Perth was selected due to its strategic location, not far from numerous mining sites and offshore platforms (particularly in northwestern Australia). Two specialists in Perth provide customer support at the brand new facilities.



© Patrick Perina / Eurocopter



© Courtesy of KAI

The South Korean armed forces have already received 13 KUH Surions.

## KOREA

Article  
**ALEXANDRE MARCHAND**

A ceremony held on May 22 in Seoul celebrated the entry into service of South Korea's new helicopter, the Surion. This event marked a major milestone for the program, developed in cooperation with Eurocopter.

# THE SURION ENTERS SERVICE

The KUH Surion (Korean Utility Helicopter) has demonstrated that South Korea is fully capable of developing and manufacturing a complex helicopter in the 8-9 ton class. Thirteen Surions have already been received by the South Korean Army, and another 11 are

slated for delivery before the end of the year. The Surion helicopter is built by Koreans, for Koreans. Although the aircraft is manufactured by KAI (Korea Aerospace Industries), Eurocopter's cooperation in the program has been essential to its success. Christoph Zammert, the program's director at Eurocopter, talked about the Group's role in the project, which was first launched in 2006: "We've been working in three main areas. The first step was a technology transfer to South Korea, which remained within a carefully defined scope," he explained. The second area covered technical support. When the program was first launched, a common design office was set up in Marignane for both KAI and Eurocopter. Over the next few years, approximately 100 Eurocopter employees were then sent on assignment to South Korea. The third area under Eurocopter responsibility is the manufacturing of subassemblies (automatic pilot and dynamic components) representing approximately 20 percent of the helicopter's total value. "South Korea has expressed an

initial need for 245 helicopters, and we will be providing all 245 subassemblies," pointed out Mr. Zammert.

While the celebration in Seoul marked the end of the development phase, which KAI has declared a complete success, this does not mean Eurocopter's work is over. KHDS (Korean Helicopter Development Support), a wholly-owned subsidiary of Eurocopter created specifically for the program, will continue to provide the South Koreans with technical support — not only for helicopters already in service, but also for future Surion variants that the South Koreans are already considering. Eurocopter's extensive experience integrating equipment packages on its own helicopters will be of great use in this area. An optimized law enforcement version has already performed its first flight, and additional flights for an anti-submarine version are being planned. This successful partnership with a rapidly growing country will offer Eurocopter many promising opportunities.

The delivery of the first Surion to the South Korean Army took place in Korea on May 22 in the presence of South Korean president Park Geun-hye (center).



© Courtesy of KAI

NORWAY

Article  
MONIQUE COLONGES

Eurocopter and CAE<sup>(1)</sup> announced an agreement to create an EC225 helicopter training facility in Norway during the Helitech international exhibition held in the United Kingdom from September 24 to 26.

# A NEW EC225 SIMULATOR



This new training center will house an EC225 Level D flight and mission simulator (CAE 3000 series) that will enter operation in 2015.

The simulator will provide an unprecedented level of realism for pilot mission training – including flight profiles for the offshore oil & gas sector, search and rescue (SAR) operations, and other complex scenarios. The EC225 simulator will be equipped with a CAE Tropos-6000 visual system and a Eurocopter original simulation package.

“CAE is proud to be named an Approved Simulation Center for Norway. This is the first time CAE and Eurocopter have announced a collaboration of this type. The cooperation is a positive step for two industry leaders to further enhance aviation safety in the helicopter industry,” said Nick Leontidis, CAE Group President, Civil Simulation Products, Training and Services. “We look forward to providing the highest quality flight and mission training in Norway, which is well positioned to serve the oil & gas markets.”

Additionally, Eurocopter and its local representative, ØSTNES, intend to quickly expand the new center’s capabilities by installing an AS350 full flight simulator at the facility.

“Through our agreement with CAE – and as part of our world-class service and support offering – we continue to provide customers with pilot training that leverages the safest and most innovative technologies and is closer to their bases of operation,” said Matthieu Louvot, Eurocopter’s Vice President of Support & Services.



The Level-D EC225 full flight simulator will be operational in 2015.

© CAE

## CAE BY THE NUMBERS

- More than **65 years** of experience
- **100,000** crew members trained per year
- Customers in more than **190** countries
- **8,000** employees at **100** sites and training centers in **30** countries
- **45** helicopter flight training centers around the world

(1) Canadian Aviation Electronics

# POLE POSITION

Interviewed by  
COURTNEY WOO

From the asphalt, Formula One Red Bull racer Mark Webber, who joins Porsche in 2014, takes his sport to the skies.

Just days before his top-3 performance at the Monaco Grand Prix last May, Mark Webber stopped by Eurocopter's Marignane site for a tour of the light helicopter assembly line and demo tests of the AS350 B3 and the EC130 T2. Here's what this racing great had to say about his personal hopes for flying – he's due to receive his pilot's license in 2014 – and the parallels between the helicopter industry and his life's work on the racetrack.

## What inspired you to get behind the controls?

**Mark Webber:** Aviation is a new chapter for me. I've been auto racing since I was 12 years old – and professional for the last 20 years – but I've been fortunate to have been flying with the Red Bull guys for six years now, with no shortage of opportunities to get up in a heli. So aviation is something I've had my eyes on for a long time. It also ties in nicely to my fascination with maps and navigation.

## How is the training going?

**M.W.:** I'm currently training in England on an AS350 B2. A lot of professional people guide you along the way, to help you make the right decisions and know what you have to do to become a better pilot. It's still the early days for me, but hopefully by this time next year I'll be up in the sky.

## Does flying a helicopter compete at all with the thrill of driving race cars?

**M.W.:** There's so much exhilaration when you win and everything goes according to plan for the team. But I've been in racing for so long now that it's become second nature. Flying provides a new challenge – and one that requires the utmost respect. Flying keeps you mentally stimulated and interested. It gives me something new to put my teeth into.

## What does it take to be successful in these two industries?

**M.W.:** You need to be disciplined and you need to take both pursuits very seriously. Like F1 racing, flying helicopters requires the absolute maximum from its pilots at all times. That being said, in motor racing, you take as many risks as you can. But it's completely the opposite with helicopters – you keep risk to an absolute minimum. You make sure procedurally that everything is regimented and that you're consistent in how you go about operating the aircraft.

## Does teamwork matter as much in the skies as on the track?

**M.W.:** You need to trust your team in both

industries, whether it's the people preparing the race car or the people here at Eurocopter preparing the helicopter. No matter what mission the helicopter will perform in the future, it needs to be well-built by experienced individuals who understand the product inside out. So having the right people in place is a big part of both industries.

## What is your impression of Eurocopter helicopters?

**M.W.:** The AS350 B2 and the AS350 B3 are sensational helicopters with a long history. They are extremely versatile, well-proven aircraft with successful DNA. This type of aircraft is effective for learning and getting experience hours, and I expect to work with it in the future. The B3 in particular is quite fast with an impressive range.

## When you receive your license, where will you head first?

**M.W.:** I love the wilderness and outdoors, so I look forward to one day exploring such places myself with a helicopter. I've already been a bit spoiled by flying in Austria with some of the Flying Bulls pilots who use Eurocopter aircraft, so I would like to try Scotland or someplace similar that's quite remote. But first I need to get my license, gain some experience and build trust in myself over time.

## Who will be your first passenger?

**M.W.:** My dad has always interested in planes, but helicopters have been less on his radar, so I'd really like to take him out for a helicopter flight.

## SPOTLIGHT

### Born to Ride

The son of a motorcycle dealer, Aussie Mark Webber started racing motorbikes at a young age but quickly graduated from two wheels to four. He won numerous state and national titles in his teens, before moving to Europe to start his international career.

He now resides in the United Kingdom where he is finishing up his final Formula One season with Red Bull-Renault.

He joins Porsche to race Le Mans and the FIA World Endurance Championship.



© Thierry Rostang/Eurocopter

Mark Webber – who joins Porsche in 2014 – looks just as natural seated in the AS350 B3 as with his F1 race car.

### *CV IN BRIEF*

**37** years old

**2002** Formula One debut

**2013** Retires from Formula One (to join Porsche)

**207** Formula One races

**9** Wins

**37** Podiums



100th EDITION

Article **COURTNEY WOO**

The battle for the Tour de France wages not only on the roads that carry 198 cyclists through more than 3,500 kilometers of French terrain in three weeks each year – it's also in the sky. Here's a look at the fleet of Eurocopter helicopters responsible for broadcasting this iconic race to the world.

# BEHIND THE SCENES OF THE TOUR DE FRANCE



© Éric Raz/Eurocopter



© Ercole Bormand

"If we're doing our job right, television audiences have no idea there's a fleet of helicopters following the race second by second," says Christian Duc, chief executive officer of Hélicoptères de France (HDF), the Tour de France's official videographer for race coordinator Amaury Sport Organization since 1999.

"The aircraft fly in such a way that they never pose a nuisance to the cyclists, and the pilots communicate constantly with one another to avoid collisions and remain out of sight of the TV cameras." These aircraft are HDF's two AS355s and two AS350s – part of their fleet of nine Tour de France Ecureuils that also includes five AS350s for VIP transport<sup>(1)</sup>. The careful orchestration of this quartet is responsible for the distribution of live footage from the Tour de France – the world's third-most followed sporting event, after the Olympic Games and the World Cup – to more than 180 countries each year.

The two AS355s are equipped with external Cineflex cameras, while the two TV AS350s, known as relay helicopters, are equipped with antennas that receive and transmit the live footage.

Planning begins as early as January, explained HDF Chief Operations Officer Jean-Marc Genechesi, speaking to *Rotor Magazine* just after the race's opening sequence in Corsica in July.

"One of our biggest challenges is to secure the special flyover permits required to film certain segments of the race, such as the team time trial in Mont-Saint-Michel, which is a permanent no-fly zone," he added. "Similarly, the Calanques National Park, which extends from Marseille to Cassis, prohibits aircraft from flying at an altitude lower than 1,000 meters (3,300 ft.)."

Also challenging are the pilots' communication needs – they must juggle six different radio frequencies, talking constantly with each other, the cameramen, air traffic control, the France TV television network, technicians and the sportscasters. After scenes are captured, the raw video<sup>(2)</sup> is fed to a broadcast truck at the finish line, where scenic content, interviews and team logos are added. France TV then distributes the final feed to national broadcasters, who insert their own content in their respective languages.

"Eurocopter helicopters are ideally

suited for our work," said Mr. Genechesi. "The Ecureuil meets the performance requirements of the civil aviation authorities and offers the best price-performance ratio for an aircraft of its quality."

The rotorcraft fleet films every stage of the Tour, logging 60 to 100 flight hours per aircraft over three weeks.

"Helicopters are essential in hilly and mountainous terrain," said pilot Richard Sarrazy, who has flown in 27 Tour-de-France missions. "But the biggest challenges are the wind, mountains, and high-voltage power lines."

Beyond following the cyclists, the Ecureuils' cameras keep an eye on scenic points of interest, enabling France TV to present the cultural history and geographic beauty of France through the medium of a cycling race.

"More than being a global sporting event, the Tour is also a living postcard of France," added Mr. Duc.

(1) HDF operates five specially equipped single-engine Ecureuils that are responsible for transporting VIPs to safe spots near the race route.

(2) Raw video feed: basic race coverage containing no additional material other than team classifications and names of the cyclists.

# ( THINK MEDICAL ASSISTANCE )

A Eurocopter helicopter is a flying life support system for paramedics and rescue services.  
Always on call to reach casualties of accidents and disasters or evacuate critical care patients.  
**Prescribe an EC145.**



Thinking without limits

 **EUROCOPTER**

AN EADS COMPANY