

JOURNAL **ROTOR**

THE WORLD OF HELICOPTERS BY EUROCOPTER - NO. 92 - JANUARY/FEBRUARY/MARCH 2012



20 YEARS

THINKING WITHOUT LIMITS

THE EC130 T2 MAKES ITS ENTRANCE

NH90TH
FINAL VERSION CERTIFICATION

EUROCOPTER'S 20TH ANNIVERSARY
CELEBRATING OUR CUSTOMERS

(THINK BUSINESS)

When it comes to gaining a competitive edge in commerce, you simply need the best.
With a Eurocopter helicopter you will fly faster more safely, while enjoying greater comfort and reliability.
Invest in an EC130 T2.



Thinking without limits

 **EUROCOPTER**

AN EADS COMPANY



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20 YEARS AT YOUR SIDE

In 2012, Eurocopter is celebrating its 20th anniversary. The companies that founded our Group are of course much older, but what better occasion than this milestone to take stock of all we've accomplished over the past two decades?

Today, more than 11,000 Eurocopter helicopters are in service in some 140 countries for nearly 2,900 customers. In 2011, Group sales exceeded the five billion Euro mark for the first time, and we now employ more than 20,000 employees around the world. As these figures clearly attest, Eurocopter is a dynamic company with its sights set squarely on the future in order to better meet your needs.

Also in January, we implemented a new organizational setup at the company, grouping together for the first time our Customer, Support & Services and Subsidiaries activities, thus optimizing our customer

interface. Our goal remains the same: to continue to reinforce our service offer in order to guarantee fleet availability worldwide, reduce operational costs and ensure maximum flight safety – in short, to offer you, our customers, the highest added value.

Over the past 20 years, the world in which you fly our helicopters has undergone drastic changes, and your needs continue to evolve as well. In response, we continue to add new products and services to our range. A case in point is the newest member of our family, the EC130 T2, unveiled at the Héli-Expo air show.

But a 20th anniversary is first and foremost a celebration! That's why throughout the year we'll be holding special events for you. It's our way of thanking you for your loyalty and the confidence you've placed in us.

Lutz Bertling, *President and CEO of Eurocopter*

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© Eurocopter China

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"As the world evolves, our customers' needs change, creating demand for new types of helicopter products and services—and opening up new areas for us to meet those needs. At Eurocopter, we view change as an opportunity to improve. That is why in 2011, we made some adjustments to our internal organization in order to better serve you. To this end, we combined our sales and marketing forces, support and services activities and our 30 worldwide subsidiaries under the same leadership to reinforce the consistency and proximity of our relationships with customers across the globe.

Our aim is to ensure that we better listen to you and understand your operational needs so that we improve ourselves and continue offering you products and services that meet your specific requirements. Embracing the future means being driven to develop new ways of helping our customers move their businesses forward—and bringing solutions that are versatile and convenient—all the way to their doorstep."

Dominique Maudet, Executive Vice President of Global Business & Services, Eurocopter Group.

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Eurocopter has taken into account the remarks of its operators to revamp the EC130.



© Anthony Pecchi/Eurocopter

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The Paraná State Secretariat for Public Security, operator of Brazil's first EC130, performed three humanitarian missions in 2011 in the wake of the tragic floods that devastated the country. The Department received its second EC130 in October 2011.



© Bruno Maistrovitz/Julio

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- **The EC145 T2: Development Program and Series Production Move Forward**
- **CH-53GS/GE: Using Sensors for Safer Landings**
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- **First Class-C EC225 Delivered to Airtelis**



IN OPERATION

A "True Mountaineer"

These were the words used to describe the Ecureuil AS350 B3 by the pilots from the Chinese company State Grid GAC. They were won over by the helicopter following

a successful high-altitude test campaign conducted to see how the Ecureuil could handle power line surveillance missions in the Chinese high country.

- **Life-saving Silhouette Is A Familiar Sight in Belgian Skies (EC145)**

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For more **INFORMATION** on UTair, CHC Helicopter and armasuisse, visit www.utair.ru/en, www.chc.ca and www.ar.admin.ch/internet/armasuisse/en/home.html (pages 6-7).



See **VIDEOS** of:

- The trailer for the movie "The Art of Flight" at www.brainfarmcinema.com (pages 8-9),
- The EC130 T2 in flight (pages 14-15),
- The NH90 in Hyères (page 22),
- Airtelis' EC225 (page 28).

www.eurocopter.com



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32 PLANET EUROCOPTER

Tiger ARH: Final Delivery to the Australian Defence Force

Australian Aerospace celebrated a major milestone in its Tiger ARH program by delivering the final production Tiger aircraft, which was formally handed over to the Australian Defence Force (ADF) on December 1 at the subsidiary's Brisbane facility.

- **Eurocopter de México: Reinforcement of its Industrial and Logistic Network**

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Flight Safety: Eurocopter Explores a Promising Avenue

Today, practical applications for an all-electric helicopter remain out of reach: Although electric motors are a reasonable weight and size, the same cannot be said for batteries, where huge progress still needs to be made.

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Flying Bulls: The Kings of Aerial Acrobatics



CELEBRATING OUR CUSTOMERS

In celebration of its 20th anniversary, Eurocopter invited three of its customers having placed a single order for 20 helicopters to say a few words for the occasion.

UTAIR

ANDREY MARTIROSOV,
CEO of UTair

“On the occasion of the 20th anniversary of the Eurocopter company, on behalf of UTair Aviation and myself, I would like to extend my warmest greetings to the whole Eurocopter team.”

“Our partnership with Eurocopter and its Russian subsidiary, Eurocopter Vostok, has proven to be one of the key elements in reaching our strategic goals. In 2011, we can note three important events: the contract for the supply of 15 new EC175 helicopters to UTair, the launch of training for pilots of Eurocopter products and technical staff at UTair’s training center and the joint establishment of a certified maintenance center for Eurocopter helicopters.

UTair currently operates a range of Eurocopter helicopters, including the AS350 B3, AS355 N and BO105. Our Eurocopter fleet has proven to be reliable and efficient and it perfectly fits our missions in severe weather and landscape conditions. Our pilots enjoy high performance and easy piloting of Eurocopter helicopters noting remarkable stability, power-to-weight ratio, short acceleration response time and vast visibility from the cabin.

State-of-the-art products from the world’s leading helicopter producer, along with the excellent maintenance support give us confidence in making new steps in the market and further developing our cooperation.

On the occasion of the 20th anniversary of the Eurocopter company, on behalf of UTair Aviation and myself, I would like to extend my warmest greetings to the whole Eurocopter team. May the next 20 years bring you even more success and even greater leadership in technology, production and customer loyalty all over the world.”



CHC HELICOPTER

DAN MCDONALD,
Senior Vice President Fleet & Corporate Development

“As the largest operator of your Super Puma family of aircraft, CHC is proud to have Eurocopter as valued partner.”

“We want to wish Eurocopter congratulations on your 20 year anniversary! As the largest operator of your Super Puma family of aircraft, CHC is proud to have Eurocopter as valued partner.

Our history with the EC225 in particular is quite strong, and we are looking forward to receiving the 26th and final of these aircraft from the order we placed in 2007, which further highlights our commitment to this helicopter as well as Eurocopter. In addition, CHC recently strengthened our partnership

with Eurocopter even more with an additional commitment to add 20 EC225s to our fleet. This decision is a testament to both the quality of Eurocopter’s products and services and our belief that the future will be even more successful by working together. The fact that CHC ordered 20 more aircraft, as we celebrate Eurocopter’s 20th anniversary, makes both events even more special!

We wish Eurocopter all the best and great success for the next 20 years because as partners, your success is our success!”

ARMASUISSE

KAJ-GUNNAR SIEVERT,
Head of Communications at armasuisse

“We have developed a strong partnership with the Eurocopter teams because we share the same values.”

“There have been many memorable moments and key events in our long partnership with Eurocopter, such as the first flight of the EC635 in May 2007, the first EC635 that armasuisse delivered to the Swiss armed forces as well as the delivery of the final EC635. But there was one day in particular that comes to mind. It was on May 28, 2010, at the Alpnach military airbase in central Switzerland, when we held the ceremony to close out our purchase contract for 20 EC635s with everyone involved in the program. The 20 helicopters that had entered service for Switzerland’s armed forces were all perfectly lined up on the ground, and then they took to the skies to perform an impressive flight in formation. The people attending the ceremony had never seen anything like it.

We have developed a strong partnership with the Eurocopter teams because we share the same values. We appreciate how serious they are about their work, how they always make us a part of the team for each project, and also how their products, training resources and services to help keep aircraft operational are always of exceptional quality.

We hope that Eurocopter will be just as successful in the 20 years to come, that the company will win even more major contracts like ours and continue to satisfy customers, develop even more innovative products and anticipate the needs of the most demanding customers on the civil and military markets.”



© Eric Raz/Eurocopter



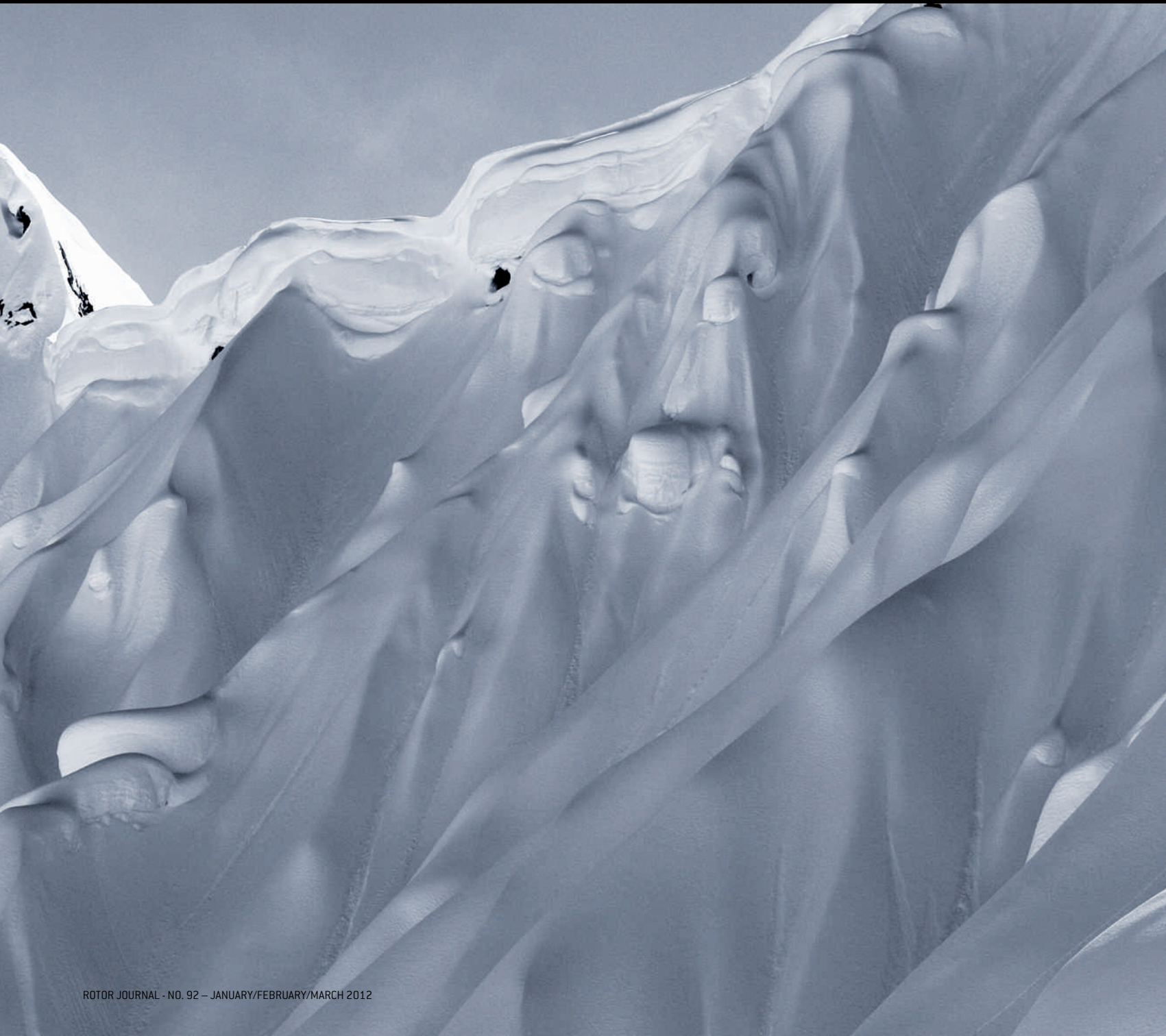
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 - www.utair.ru/en
 - www.chc.ca
 - www.ar.admin.ch/internet/armasuisse/en/home.html

“THE ART OF FLIGHT”

Article **ERIN CALLENDER**
Photo by **SCOTT SERFAS/RED BULL CONTENT POOL**

REACHING UNCHARTED TERRITORY IN AN ECUREUIL/ASTAR



When Brain Farm Digital Cinema needed a helicopter to film a movie about some of the world's best snowboarders as they open up new routes on unexplored remote mountains, the company immediately searched out Eurocopter aircraft for the job. "I have to admit that we are huge fans of Ecureuils," said Chad Jackson, co-producer of the film. "We hired out helicopters everywhere we went, and the Ecureuil is generally the only helicopter we will fly in unless there are no other options."

Jared Slater, cinematographer, talked about his experience filming with this aircraft:

"Our ideal helicopter is the Eurocopter AS350 B3, giving us the best performance and reliability for our missions. The B3's high perform-

ance allows us to fill it with a lot of fuel so that we are able to travel into the backcountry with a lot of both people and gear and still have ample time to film. Its maneuverability at high elevations – hovering or moving at a slow airspeed in variable weather conditions – is crucial for us to get the perfect shot. On a typical day we use two helicopters: an athlete ship to scope out the terrain, get the athletes on the top of the mountain and pick up the camera crew and place them in their desired locations to capture the shot; and a camera ship, on which we mount our Gyro Stabilized High Definition camera system (Cineflex V14). Over a two-year period of shooting this film we flew over 150 flight hours and worked with about 20 different Ecureuil helicopters."



WATCH THE TRAILER FOR
"THE ART OF FLIGHT" ON
www.brainfarmcinema.com



Asia Pacific Region SUPER PUMA/COUGAR ASIA PACIFIC CUSTOMER SYMPOSIUM IN KUALA LUMPUR

Sixty civil and military customers from the Asia Pacific region participated in a Super Puma/Cougar Symposium that took place from October 5 to 7, 2011, in Kuala Lumpur, Malaysia. The seminar was a perfect opportunity for Eurocopter to share the latest technical evolutions of this helicopter family, for which a third of its total in-service fleet of 800 aircraft are operated in Asia. During the seminar, workshops covering important topics such as technical support, services offered and the automatic pilot in operation took place and the participants were able to exchange about their experiences with these machines, which are used in a large variety of missions.



© Paul Joshua/Eurocopter

Eurocopter Chile / Cono Sur EUROCOPTER CHILE CELEBRATES ITS 10TH ANNIVERSARY



© Tango Uno

On November 30, Eurocopter Chile personnel were joined by customers and representatives of authorities from countries across the Southern Cone at the Club Aéreo airfield in Santiago to celebrate Eurocopter Chile's 10th anniversary. No fewer than 300 people were on hand to enjoy a sound and light show and to visit the static display of Eurocopter helicopters that was set up just for the occasion. Created on July 12, 2001, Eurocopter Chile oversees sales and support activities for customers not just in Chile but also in Argentina, Bolivia, Peru and Uruguay. In the past decade, the Eurocopter Group's southernmost subsidiary has sold 82 helicopters and increased its workforce nine-fold, currently employing 90 people.



German Air Rescue AN ORDER FOR 25 EC145 T2s

The contract signed on November 15 of last year by DRF Luftrettung makes the German air rescue organization Europe's largest customer for the EC145 T2. The new helicopters will be delivered in phases through 2022 to progressively replace the DRF's current fleet of BK117s. The organization currently operates a fleet of 46 Eurocopter helicopters out of 31 bases in Germany, Austria and Denmark—

including eight that provide 24-hour services. In 2010 alone, the non-profit organization carried out 36,900 rescue missions. "With its excellent performance levels and Fenestron® shrouded tail rotor, the EC145 T2 is the perfect choice for air rescue missions," said Hans Jörg Eyrich, member of the Board of Directors of DRF Luftrettung, at the signing.

European Customer Conference THE EC135 AND EC145 IN THE SPOTLIGHT

From October 24 to 26 of last year, 20 supplier partners and 128 customers from around Europe came to Madrid for a Eurocopter customer conference to get the latest news about the EC135 and EC145, the available upgrades and their accompanying services. The participants were also very happy with the workshops that were conducted, enabling them to share operational experience and ask any questions they had about the aircraft. An EC145 T2 in EMS configuration was also on hand so that participants could get an exclusive, first-hand look at all the advantages offered by the new machine for air ambulance missions.

In a related event, Eurocopter España held an air ambulance symposium on October 25 for some 50 people. In a series of presentations, the attendees learned about all the solutions Eurocopter offers for emergency medical missions, heard about the latest technical advances in the field, and received operational feedback about air ambulance activities.



2011: THE YEAR IN REVIEW

February 2011: Fleet of in-service NH90s reaches the 10,000 flight hour mark.

1 February 1, 2011: Inauguration of new Eurocopter service and support center in Aberdeen.

February 15, 2011: Death of Jean Boulet.

2 March 7, 2011: UTair signs contract for 15 EC175s.



March 6, 2011: Commercial launch of the EC145 T2 and the new "e" versions at Héli-Expo.



May 12, 2011: The X³ reaches speed of 232 kt (430 km/h).



3 April 19, 2011: Delivery of 1,000th Dauphin to Pawan Hans.

May 9, 2011: Ground broken for Systemhaus project.

June 16, 2011: Inauguration of Eurocopter Global Logistics.

June 24, 2011: Eurocopter confirms signature of contract with Héli-Union for 4 EC175s.

June 27, 2011: Creation of the company KAI-EC Helicopter.

June 30, 2011: Eurocopter acquires Vector Aerospace.

July 7, 2011: First flight of hybrid helicopter.

4 July 12, 2011: Delivery of the 100th EC225 to Bristow Group.

5 July 20, 2011: Delivery of the 1,000th EC135 to the ADAC.

6 September 2011: CHC Helicopter signs a contract for 20 EC225s (+ 4 on option).



November 17, 2011: Delivery of first EC225 to RTE, specially designed for maintenance on high-voltage power lines.



December 1, 2011: Delivery of final Tiger ARH by Australian Aerospace.



October 25, 2011: Ground broken for new plant in Mexico.

7 October 26, 2011: Declaration of conformity for German variants (T1/T2+) and Italian variant (T3) of the NH90 TTH in final configuration (FOC).

October 28, 2011: Declaration of conformity for French variant (T6) and Belgian variant (T11) of NH90 TTH in final configuration (FOC).



8 December 22, 2011:
- Delivery of 1st NH90 TTH to France.
- Delivery of the first two EC225s to Héli-Union

THE EC130 T2 MAKES ITS ENTRANCE

Article
ALEXANDRE MARCHAND
 Photos by
ANTHONY PECCHI/EUROCOPTER

Eurocopter has taken into account the remarks of its operators to revamp the EC130.



The EC130 (also known as the Ecuireuil B4) quickly made a name for itself in the light helicopter market, as operators have been won over by its low operating costs and the machine has proven to be very popular with passengers—in particular for tourist flights. But the EC130 can hardly rest on its laurels, and it was important to upgrade the machine to open new perspectives. The X2 project, which has laid the groundwork for the new EC130 T2, was launched for this very reason.

The most important upgrade on the new helicopter is the Turbomeca Arriel 2D engine (certified last May), replacing the Arriel 2B1. The MGB has been re-dimensioned to transmit the higher power generated by the Arriel 2D (952hp), which will enable the EC130 T2 to perform new types of aerial work. “Not only can the EC130 T2 carry more fuel and passengers, it can also carry sling loads of up to 1,500kg,” said Eric Tresamini, the program’s marketing manager. Other new features include a larger center of gravity

range and a new floor in the rear of the cabin, where the rear box section has been removed to create a completely flat space. With the rear seats removed, the EC130 T2 will have plenty of room to hold cargo. Improvements have also been made to the optional air-conditioning system. A new installation has already been tested on the X2 that is fully integrated on the aircraft, and operators who have had the opportunity to try it out have found it to be excellent. The ventilation system has been optimized as well, with new air inlets added beneath the cabin and on the front cowling. Vibration levels, which are another key factor in terms of comfort, have been reduced on the T2 by introducing an active anti-vibration system similar to the existing one on the EC225. “Eurocopter will install the system on series aircraft with factory settings, and the customer will then be able to reset the system via a control box in the new electrical bay in the right-hand side cargo compartment, which is easy to reach,” explained Mr. Tresamini. “The bay also contains all the secondary busses,

which used to be in the cabin, and an Ethernet port for downloading data from the EDR (Engine Data Recorder).”

The sliding and hinged doors have also been upgraded, and are now easier to maneuver. The carbon components have been replaced by metal frames, and a right-hand sliding door is now offered as an option. The new series EC130 will include a 540-liter crashworthy fuel tank as standard equipment.

Mr. Tresamini summed up the many changes made to the machine as follows: “About 70% of the structure on the current EC130 has been revised for the X2, including new routing for the electrical harnesses and a reinforced tail boom. We have also done away with all the linkages for the optional right-hand pilot configuration, which was never sold on the market.” The X2 prototype performed its first flight on March 3, 2011 and by early December had already logged a hundred flight hours. Certification of the EC130 T2 is expected for mid-2012, with the first deliveries in the fall.



SEE THE EC130 T2 IN FLIGHT
ON ROTOR ONLINE
www.eurocopter.com

Article
BELÉN MORANT

Photos by
BRUNO MAISTROVICZ JULIO

BRAZIL

The Paraná State Secretariat for Public Security, operator of Brazil's first EC130, performed three humanitarian missions in 2011 in the wake of the tragic floods that devastated the country. The Department received its second EC130 in October 2011.

THE LIFE-SAVING EC130

How would you describe your experience with the EC130 during these three humanitarian missions?

Orlando Artur Da Costa: The helicopter is the best means of transportation for humanitarian missions, because the response time is crucial to ensure as many victims as possible are rescued and evacuated. The EC130 B4 excelled itself during these missions in a way that no other single-engine helicopter could have done, because we could transport up to seven passengers (two pilots, a victim and three or four crew). This enabled us to carry out MEDEVAC missions in total safety.

Humanitarian operations require pilots to be extremely effective and react very quickly. How does the Paraná State Secretariat for Public Security prepare to meet these challenges?

O.A.D.C.: We are very proud to be able to perform these missions, the success of which requires the team to undergo intense training. We work hard 365 days a year to ensure we offer our very best in every search and rescue situation. When we save someone's life it makes it all worthwhile.

What has been your most difficult mission with the EC130?

O.A.D.C.: I have been flying for 20 years on all kinds of missions, but the one that sticks in my mind is the disaster of Rio de Janeiro, due to the scale of

the catastrophe and above all the sheer number of victims and people we were unable to find. The philosophy behind our training is to simulate the worst imaginable conditions, but even that does not fully prepare you for the difficulties posed by real-life situations.



2011:
HUMANITARIAN
MISSIONS WITH
THE EC130

January 2011: Operation Redentor – Rio de Janeiro

At the beginning of this year, Rio de Janeiro suffered one of the worst floods in its history after the amount of rainfall forecast for the entire month fell in only 24 hours. Hundreds of people were engulfed by mudslides and thousands more were trapped by the deluge. The EC130 B4 offered its services to the state of Rio de Janeiro, rescuing dozens of victims and locating 6 trapped families. During the 10 days and 25 flight hours of the operation the helicopter transported approximately 8 tons of food, along with specialist relief teams.

March 2011: Operation March Waters – Paraná

The torrential rains in February and March caused flooding and landslides which damaged the road between Curitiba and the Port of Paranaguá. Five bridges were swept away by the water, cutting the local residents off from all essential services (drinking water, food, fuel, etc). The EC130 B4 performed medical evacuations of 34 patients and rescued 289 people, as well as airlifting 68 specialist relief teams and nearly 35 tons of supplies for the victims. During this mission lasting 25 days the EC130 flew no fewer than 105.7 hours.

September 2011: Operation Santa Catarina – Santa Catarina State

For yet another year the intense rainfall in September caused serious flooding in the state of Santa Catarina in the south of the country. According to authorities, 96 cities and almost a million people were affected. The EC130 B4 performed medical evacuations of nine people and rescued two others, as well as transporting two organs for transplants and 17 specialist teams to assist those affected by the tragedy. During the four days of the mission, the EC130 B4 was in the air for 18.4 hours.





EMBRACING THE FUTURE

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AND MORE COST EFFECTIVE**

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**LOGISTIC FIELD
REPRESENTATIVES**



Interviewed by
PAIGE STANTON

“As the world evolves, our customers’ needs change, creating demand for new types of helicopter products and services—and opening up new areas for us to meet those needs.

At Eurocopter, we view change as an opportunity to improve. That is why in 2011, we made some adjustments to our internal organization in order to better serve you.

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Dominique Maudet, Executive Vice President of Global Business & Services, Eurocopter Group.

MAINTENANCE, REPAIR & OVERHAUL

To meet the needs of an ever-evolving fleet, Eurocopter continually expands its maintenance network.

AN EXPANDING NETWORK

Article
ALEXANDRE MARCHAND

Photo by
ANTHONY PECCHI/EUROCOPTER

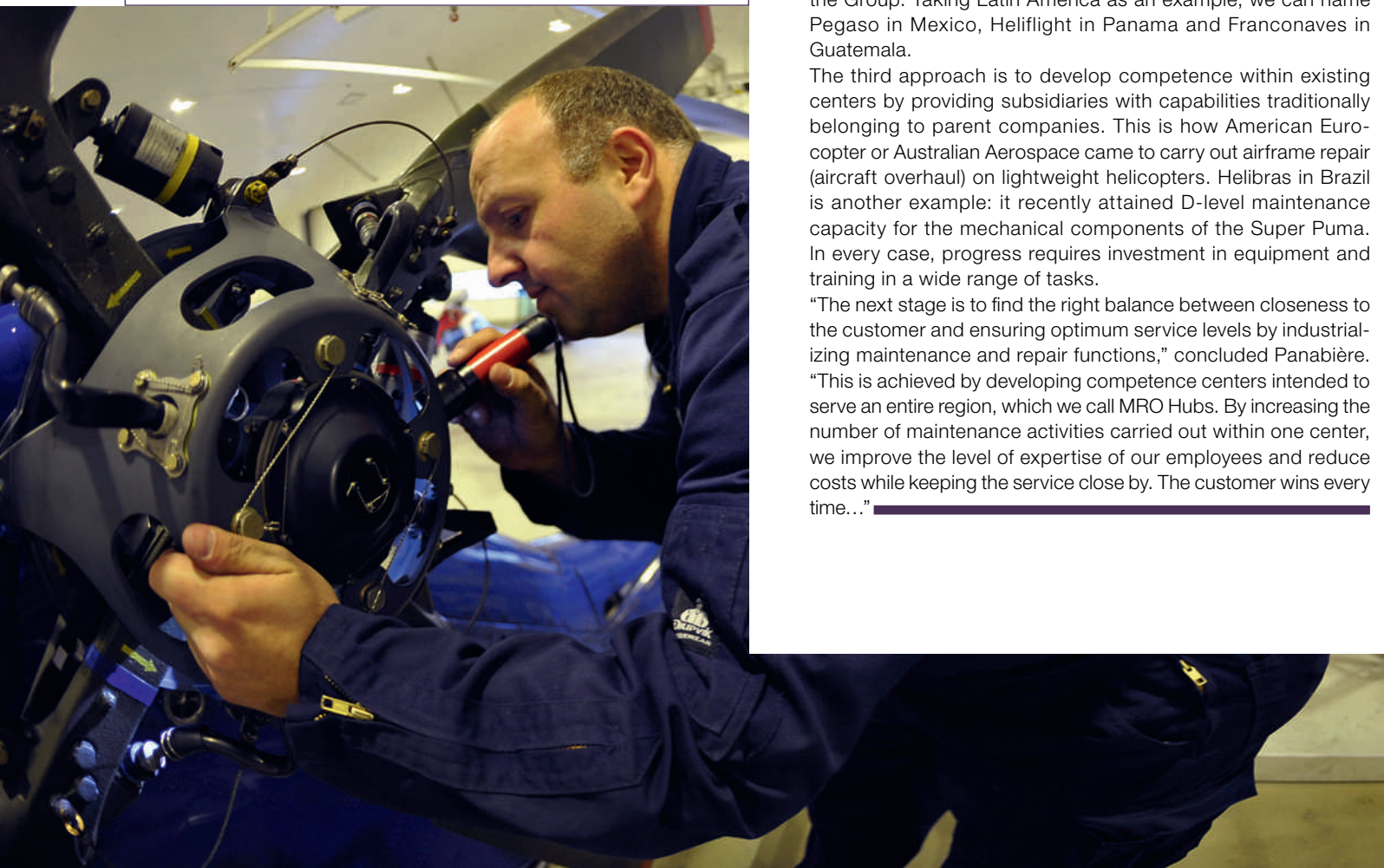
The Eurocopter fleet is constantly growing on every continent. As one aircraft family starts to age, another comes in to replace it. This is an ongoing process demanding a maintenance network which, with around one hundred centers today, is itself always developing. The main underlying principle is to get closer to the customer in order to respond to the demands of every mission and always be within reach.

“Today there are three main levers which enable Eurocopter to develop its maintenance networks,” explained Serge Panabière, Head of MRO at Eurocopter Group, “and they are mergers and acquisitions, seeking out partnerships, and developing the capabilities of our own subsidiaries. Which of these routes we follow depends on the goals to be achieved, the local potential and opportunities which may arise.”

Acquisition is a must when it is a question of quickly gaining new capacity in a specific region. Examples include the acquisition of the British company McAlpine in 2007, of Motorflug in Germany the following year, of the helicopter branch of All Nippon Airways Maintenance in 2009 and of Vector Aerospace in 2011. Partnerships are sought with companies experienced in maintenance. The parties concerned are usually repair centers which choose to represent Eurocopter but without actually joining the Group. Taking Latin America as an example, we can name Pegaso in Mexico, Heliflight in Panama and Franconaves in Guatemala.

The third approach is to develop competence within existing centers by providing subsidiaries with capabilities traditionally belonging to parent companies. This is how American Eurocopter or Australian Aerospace came to carry out airframe repair (aircraft overhaul) on lightweight helicopters. Helibras in Brazil is another example: it recently attained D-level maintenance capacity for the mechanical components of the Super Puma. In every case, progress requires investment in equipment and training in a wide range of tasks.

“The next stage is to find the right balance between closeness to the customer and ensuring optimum service levels by industrializing maintenance and repair functions,” concluded Panabière. “This is achieved by developing competence centers intended to serve an entire region, which we call MRO Hubs. By increasing the number of maintenance activities carried out within one center, we improve the level of expertise of our employees and reduce costs while keeping the service close by. The customer wins every time...”



TRAINING POLICY

CLOSER AND MORE COST EFFECTIVE

Eurocopter is bringing its training solutions ever closer to customers, with the quality and experience that only a helicopter manufacturer can offer.

Article **BELÉN MORANT** Photo by **EUROCOPTER UK**

TRAINING CLOSER TO CUSTOMERS

As part of its policy of improving fleet safety, Eurocopter is establishing new flight simulator facilities all over the world in order to enhance the quantity and quality of the training solutions offered to customers and position itself closer to their operations. The availability of Flight Simulators in close proximity to customers allows a drastic reduction of costs associated with the availability of pilots and also facilitates access to state-of-the-art simulator training, thus increasing fleet safety. Quality training performed on simulators puts pilots in extreme situations



without running the slightest risk, and is far less costly than real flight training. Eurocopter is dedicated to expanding the range of available simulators, as shown with the recent implementation of an AS350 Full Flight Simulator (FFS) and the upcoming deployment of an AS365 N3 FFS.

Eurocopter provides a complete range of training services in 21 training centers throughout the world, from ab-initio up to recurrent, type rating and mission training for both pilots and technicians for civil as well as military customers.

While there were only four simulators in operation worldwide in 2008, by 2011 this number had increased to up to 17 simulators (and 23 are planned for the end of 2013). Eurocopter provided services for over 9,300 trainees in 2010, and 23,500 flight hours were completed in simulators the same year.

EUROCOPTER INSIDE

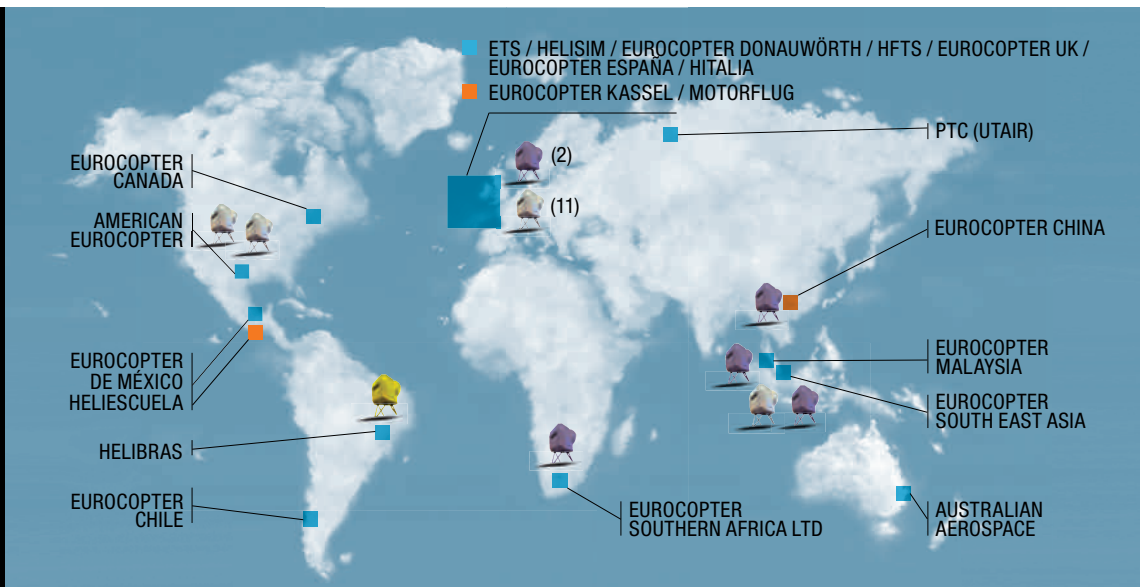
With an original OEM⁽¹⁾ data package, Eurocopter can ensure that the latest helicopter developments and improvements are reflected in its simulator network. In addition, the implementation of an extended field of view (210° H by 80° vertical with -50° below the horizon) in the FFS, together with the integration of the real helicopter data tested by Eurocopter's helicopter flight test pilots (flight loop, avionics models, vibration and sound, engine models, etc.) ensure the FFS is as real-to-life as possible.

(1) Original Equipment Manufacturer

TRAINING DEPLOYMENT

- Type/recurrent training centers → 17
- Ab initio training centers → 4
- In-service flight simulators → 14
- Simulator projects launched → 6
- Simulator projects committed → 1

21





SEE A VIDEO OF THE NH90 IN
HYÈRES ON ROTOR ONLINE
www.eurocopter.com



Since May 2010, Patrick Bourgade and his team have been on permanent assignment to the French Navy at the Hyères naval airbase in Southern France.

NH90 SUPPORT: ATTENDING TO EVERY NEED

Article **ALEXANDRE MARCHAND**

Photos by **EUROCOPTER**

Mr. Bourgade talked about his team's two most important missions: "First, we have to transfer our know-how to the French Navy, and second we have to help them maintain the helicopters operational for all the flights they perform—some of the helicopters have already logged 300 flight hours!" With more than ten years of experience on the NH90, Mr. Bourgade certainly is the ideal man for the job.

"The knowledge transfer has been going well," he said in conclusion. "The Navy flight crews are very pleased. They had the opportunity of flying the NH90 in extremely severe weather conditions along the coast of Brittany, and the experience left them completely convinced of the helicopter's capabilities." When this issue goes to press, the Navy will have officially declared the NH90 operational for sea rescue missions, and the first operational missions onboard Navy vessels are expected in 2012.

The four technicians and two Logistic Field Representatives (LFR - see *article opposite page*) are providing customer support for the entry into service of the first five NH90s in its naval version. In early September 2011, when two NH90s were deployed at the Lanvéoc-Poulmic airbase, four other Tech reps were called in along with an LFR to provide assistance.

"Providing customer support is a crucial activity for Eurocopter," stressed Mr. Bourgade. "The quality of the service we provide now will set the tone for our future relations with the French Navy, which has been at the forefront in terms of NH90 use." The new helicopter and its accompanying technical environment represent a major technological leap from the Lynx and Super Frelon they're replacing, and the Eurocopter team must be attentive to many different needs.



PROVIDING LOGISTICS HELP TO CUSTOMERS

To help customers who want to benefit from end-to-end logistics management skills, Eurocopter has created the Logistic Field Representative function.

Article **ALEXANDRE MARCHAND** Photos by **EUROCOPTER**

“We’re responsible for the entire logistics process—from the initial evaluation of need through to final part shipments—and also take care of all administrative aspects, part storage and packaging,” explained Stéphanie Bonnefoy, who is in charge of Strategy and Development for logistics services. “We came to realize that not all our customers had the same amount of experience handling parts logistics. Some are quite capable of managing their needs themselves, while others could use some help, and might even benefit from outsourcing their logistics activities. To meet these different needs, we introduced the Logistic Field Representative (LFR).”

The LFR provides direct support to customers, enabling them to save time by optimizing flows and inventory. The overriding goal is to reduce AOG time and part management costs to a minimum. Some 30 LFRs have already been deployed worldwide, and their work has been such a success that their ranks are set to double in the near future.

LFRs serve as customers’ single point of contact for all their logistic needs within the Group. Customers are also reassured to know they can count on help from someone with intimate knowledge of Eurocopter processes and networks. When the correct technical solution is combined with the expertise of someone who knows how and where to obtain the necessary spares, the impact on fleet availability is immediate.

AS SEEN BY

COLIN SMITH, LOGISTICS COORDINATOR
BOND OFFSHORE HELICOPTERS LTD.



“Since the implementation of your new colleague at the EC UK platform, the service to Bond has been greatly improved. We now have a direct contact which allows a faster response to technical queries, AOG requirements, etc. It has been greatly beneficial for logistics, engineering and stores staff at Bond to deal face to face with Vincent Pédelacq and problems can now often be resolved in a matter of hours. It has been a very positive move all round.”

OLIVER SULLIVAN, EBU SUPPLY CHAIN MANAGER
BRISTOW, EASTERN HEMISPHERE.



“Bristow is looking forward to continued improvements and a stronger working relationship with Eurocopter through the support of EC’s Logistic Field Rep Vincent Pédelacq. Vincent has already demonstrated his value through quicker resolution of quality issues and better communication.”

DAVID A. GORSKY, SUPPLY CHAIN DIRECTOR
AT ERA.



“Having our feet on the ground at the customers’ premises provides an insight to the day to day challenges of operating a complex aircraft in a demanding environment. The Logistics Field Representative (Mélanie Campagnani) has given us a direct line to provide real time feedback to the OEM and to receive quick responses on the maintenance requirements for parts orders. Era has benefited greatly from the co-location within our procurement team, as getting answers is as simple as going to the next cubicle. This co-location also drives buy-in to the success of our operation, as they feel the same sense of urgency as if they worked at Era.”



HIGH-VOLTAGE CLEANING

Article
ALEXANDRE MARCHAND

Photo by
**LARRY LICHTENBERGER/
SIMPLEX AEROSPACE**

The certification of a new optional package will be adding yet another feather to the Ecureuil's cap.

The Ecureuil name has already become synonymous with efficiency and versatility, and now the family will be adding a new equipment package to the long list already available to Eurocopter operators. The company Simplex was granted a certification in the U.S. from the FAA on December 15, 2011, for an equipment package used to clean insulators on high-voltage power lines. In Europe, EASA certification is expected in early 2012, and a Chinese certification should be issued later in the year. "Aerosud already offers a similar system for the Ecureuil," explained Eric Tresamini, Light Helicopter marketing manager. "But that

system has only been certified by the South African Civil Aviation Authority (SACAA)."

The Simplex 510 system will almost certainly have a market waiting for it, as insulators must be kept clean when they are located in sand, sea and highly polluted environments. Many applications of this kind exist in North Africa and Asia, and it is interesting to note that Eurocopter actually worked together in the mid-1980s with the French company STH, which performs heliborne work and services, to develop a similar system. At the time, French high-voltage power lines were hardly affected by the environments mentioned above, and

the profitability of the project was deemed insufficient.

The system developed by Simplex comes with a 681-litre tank (180 US gallons). A boom measuring 6.7 meters (22 feet) enables work crews to spray cleaning liquid on the insulators at a safe distance from the high-voltage power lines. Other applications are already being studied for the Simplex 510 system, such as cleaning wind turbine blades in the summer and de-icing them in the winter. When this issue of Rotor goes to press, the first system should have already been delivered to a Canadian customer that will be using Simplex on wind farms. ■



EC145 T2

DEVELOPMENT PROGRAM AND SERIES PRODUCTION MOVE FORWARD

Preparations for series production of the EC145 T2 have been wrapped up and assembly has now begun on the first series helicopter. The second prototype, which is being used primarily to test the avionics and automatic pilot systems, performed its first flight last October 28. In parallel, testing on the first prototype continues. Results from the “hot & high” test campaign conducted between July and September 2011 in the United States were very promising. The aircraft was

then sent to Canada to undergo cold weather testing through March 2012. The behavior of all the systems, including the engines, will be covered by the testing so that the T2 can be certified for operations at temperatures as low as -45°C. Once the flight testing is finished, the test data will be complete and the helicopter’s flight envelope can be calculated. EASA certification is scheduled for 2013, followed by certifications from the FAA and other countries.

ECUREUIL AS350 B3e

THE FIRST EUROCOPTER AIRCRAFT FOR THE PIMA COUNTY SHERIFF’S DEPARTMENT (PCSD)

When the PCSD in Tucson, Arizona, was tasked with redefining its helicopter operations, the team traveled the country asking law enforcement operators which aircraft they prefer. “By almost unanimous consent, those we spoke with said that the AS350 was the best aircraft for our missions,” said Lt. Bob Kimmins, Tactical Response Commander for the

PCSD. Scheduled for delivery in early 2012, the AS350 B3e for this new AEC⁽¹⁾ customer will perform border crime enforcement, tactical insertion and search and rescue missions. The AS350 B3e is the latest evolution of the Ecureuil/AStar, offering enhanced safety and performance.

(1) American Eurocopter

DAUPHIN AS365 N3e

FIRST PROTOTYPE LAUNCHED

The first prototype of the Dauphin AS365 N3e, the enhanced version of the Dauphin AS365 N3, entered the assembly line on November 3, 2011. The first flights are scheduled for the summer of 2012, with series production to follow in mid-2013. Over time, an estimated 20 to 30 helicopters per year are to be manufactured in order to progressively replace the Dauphin AS365 N3. The official certification should be issued in September 2013, which would make it possible for deliveries to begin in early 2014.

The Dauphin AS365 N3e and its military version, the MBe, are geared mainly towards the parapublic and military segments (land and naval versions available), but the increased range of services they offer will also satisfy even the most demanding offshore operators. The new upgrades include a 200kg increase in maximum takeoff weight, along with a four-axis automatic pilot and a VEMD⁽¹⁾ screen to help lighten the pilot’s workload.

(1) Vehicle Engine Multifunction Display





Article
REGINA LANGE

Photo by
BUNDESWEHR/EINSFÜKDO

CH-53GS/GE

Eurocopter and the German company ESG⁽¹⁾ have worked together to create a technical solution for the Bundeswehr's CH-53GS/GE helicopters that helps pilots perform safer landings.

USING SENSORS FOR SAFER LANDINGS

The CH-53 is often called on to carry out missions far from its operational base. The Afghan theater of operations is a perfect example, as the helicopter must perform landings in the country's mountainous regions both day and night in poor weather conditions. In such situations, it is vitally important that the helicopter can be set down in complete safety. "Up until now, whenever enough sand is whipped up during landing to impede visibility, the flight engineer has to lay down on the loading ramp and relay the helicopter's position and attitude to the pilot," explained Stefan Emig, who is managing the program. "But with the new SeLa (Sensorgestützte Landehilfe) equipment, the flight engineer can remain in the cabin to accomplish the task." The new package includes two dedicated radar altimeters, an AHRS⁽²⁾ system and a GPS. It can determine the helicopter's horizontal speed and precise spatial position, while also displaying important information

on the helmet-mounted display and MFD⁽³⁾ screen. What's more, two control screens in the back of the helicopter display the status of the terrain beneath the main and nose landing gear. No other system in the world offers these functions. The installation of the special equipment on the first helicopter was entrusted to a consortium formed by Eurocopter and ESG as part of the contract signed on August 10, 2011. A great deal of industrial work was completed upstream, which meant that the installation stage could begin as soon as the contract was signed. The flight test campaign for the first GH-53GS equipped with the SeLa system is scheduled for May 2012, with customer delivery slated for October of the same year. The Bundeswehr's remaining CH-53 GS/GE fleet will then be retrofitted following this initial delivery.

(1) Elektroniksystem- und Logistik- GmbH
(2) Attitude and Heading Reference System
(3) Multi Function Display

FOCUS ON

Cockpit Procedure Trainer (CPT) and Ab Initio Training

On October 6 of last year, the first candidates to successfully complete the ab initio training which began last May on the CH-53GA received their diploma and certificate. The training included classroom work that the soldiers from the Bundeswehr followed at their own facilities in Bückeburg and at the new CH-53GA training center, as well as practical work that was performed on the Bundeswehr's own aircraft. The Bückeburg base received its first flight training simulator, the new Cockpit Procedure Trainer, last October.

NH90 TTH⁽¹⁾

The TTH version of the NH90 has been qualified in its final operational configuration, marking the official completion of the multi-role helicopter's development stage.

FULLY QUALIFIED IN THE FINAL VERSION

The NH90 program recently reached another milestone when the final operational configuration (FOC) for the tactical transport version (TTH) was issued its declaration of conformity.

The declaration of conformity marks the end of the development stage for the TTH version, and gave Eurocopter the green light to make the first deliveries of the NH90 TTH version in its fully operational configuration before the end of last year.

Eurocopter CEO Lutz Bertling greeted the news as "the most important milestone in the NH90 program, the largest military helicopter program ever undertaken in Europe. This is the most modern helicopter in its class, and it is now ready to serve Europe's armed forces with its full operational capabilities. The declaration of conformity demonstrates that this multi-role helicopter satisfies the specifications and operational requirements of its founding customers."

FIRST FOC DELIVERIES IN LINE WITH CONTRACT REQUIREMENTS

The declaration of conformity was issued on October 26 for Italy and Germany and on October 28 for France and Belgium by the NATO Helicopter Management Agency (NAHEMA), which is responsible for managing the NH90 acquisition process on behalf of the participating countries.

Once NAHEMA had given its stamp of approval, the Military Type Certificate (French certificate) was issued for the French variant on November 22, and the first NH90 TTH version in the final operational configuration was delivered to France's armed forces on December 22, 2011. The armed forces of Italy, Belgium and Germany will be receiving their first helicopters this year.



GREATER STABILITY FOR PRODUCTION AND DELIVERY

The issuance of the declaration of conformity finalizes the scope of the Design & Development contract and determines the final actions that must be completed to close out the contract. The definition for the final configuration has therefore been frozen and customer deliveries can begin. With the final configuration now fixed, the program will be gearing up for the next step: the optimization of production and support processes.

The declaration of conformity is also important for two other reasons. First, the Military Type Certificate issued to NAHEMA customers for the TTH version makes it possible to establish a timeline for final certification and the delivery schedule to certain export customers.



Second, it consolidates the qualification for the common TTH/NFH⁽²⁾ components that will be required for qualification of the NFH version in early 2012.

(1) Tactical Transport Helicopter (land version)
(2) NATO Frigate Helicopter (naval version)



SEE A VIDEO OF AIRTELIS' EC225 ON ROTOR ONLINE
www.eurocopter.com

FIRST CLASS-C EC225 DELIVERED TO AIRTELIS

Article
CHRISTIAN DA SILVA

Photos by
THIERRY ROSTANG/EUROCOPTER

The delivery ceremony held on November 17, 2011, was the occasion to celebrate many firsts for the EC225. It was the first EC225 delivered to the RTE subsidiary Airtelis, the first civil EC225 registered in France and also the first EC225 scheduled to receive Class-C certification from the EASA⁽¹⁾, which is slated for 2012.

The EC225 delivered to Airtelis was specially designed for work on high-voltage power lines and is perfectly adapted to the long missions the company carries out in hard-to-reach areas, offering high-precision hover flight, excellent maneuverability and a low environmental impact. Airtelis is already busy building new overhead power lines in the Cotentin region of France, and the company is also planning to benefit from the helicopter's outstanding versatility by offering services to customers besides RTE both in France and abroad—primarily electrical power utilities and infrastructure construction companies.

CLASS C

The Class C certification authorizes helicopters to carry external loads that have contact with land or water, as these types of missions have their own particular constraints. Current EASA regulations require the load to be maintained steady in a pre-defined cone-shaped deployment zone to ensure the aircraft's safety during the operations. The Class C configuration also satisfies the operational requirements of the customer's flight crew by providing the pilot with specialized equipment and data to keep track of the load's position. The new equipment is ergonomic, easy to use, and comes with important advantages: reduced maintenance and improved safety for personnel working on power lines. The package has even been

patented by Eurocopter and is currently undergoing certification. It will be operational for Airtelis in 2012.

ORCHESTRATED SYSTEMS

The patented new equipment includes two systems working in parallel. An electronic system with a processor compares and displays in real time the position of the load with respect to the helicopter's vertical axis. A second, mechanical system polices the angular limitations. As soon as the limit is exceeded, the system warns the pilot. Cameras on the bottom of the helicopter enable the flight crew to monitor the load's movements and the system itself in real time, and an integrated display unit on the pilot's instrument panel indicates the sling's position on a target. The complementary systems allow the crew to effectively respond to the

specific behavioral constraints of loads in contact with the ground, which are much greater than those of loads in the air. "Up until now, we have been using Eurocopter helicopters for surveillance missions and power line maintenance, but with the new EC225 our work teams will be able to reap all the benefits that a heavy-lift helicopter offers for heavy construction work," said Philippe Dupuis, deputy director general at RTE and president of Airtelis. "Acquiring this type of helicopter is a huge advantage for our teams in terms of our heavy construction projects."

(1) European Aviation Safety Agency



CHECK OUT THEIR WEBSITES

- <http://www.airtelis.com/>
- <http://www.audeladesignes.com/helicopteres-reseau-tht-11918>



Article
ALEXANDRE MARCHAND
 Photo by
PATRICK GERTNER/EUROCOPTER

FLIGHT SAFETY

Today, practical applications for an all-electric helicopter remain out of reach: Although electric motors are a reasonable weight and size, the same cannot be said for batteries, where huge progress still needs to be made.

EUROCOPTER EXPLORES A PROMISING AVENUE

"In our project to develop a hybrid internal combustion/electric powertrain for a single-engine helicopter, we sought to use as much electric propulsion as the technology could be expected to supply," explained Christian Mercier, head of the demonstrator team. Eurocopter's objective is to supplement the conventional powertrain with batteries and a backup electric motor, in order to further improve flight safety. The electric motor effectively enables in-

stant control to be taken of the turbine in the event of engine failure, which makes autorotation easier. "The electric powertrain initially comes into play in assisting the pilot to enter stable autorotation," said Mr. Mercier. "It comes into play again during the landing flare, when the rotor speed collapses. Then the reserve of electric power offers the pilot greater room for maneuver." The research began at the end of 2009, with a detailed evaluation of the available

electric powertrains. Mercier explained how he and his team studied closely the solutions chosen in Formula 1 (a leader in the field) and those used for electric airplanes, with the support of EADS IW. "We developed in house all the piloting technology for the electric motor. It's a complex topic which requires intimate knowledge of the laws of helicopter piloting." Investing its own capital, Eurocopter then embarked on the development of a technology

demonstrator based on a standard Ecureuil AS350. The first flight in July 2011 was followed by four test campaigns carried out in strict secrecy throughout the summer.

The demonstrator made it possible to test not only the hybrid powertrain concept itself but also the assumptions that were made concerning its power requirements and use. The tests then demonstrated the effectiveness of automatically maintaining rotor speed during the most critical autorotation phases. "Major efforts still have to be made as regards creating smaller batteries, but economically viable hybrid technology for single-turbine aircraft will soon be within reach," concluded Mr. Mercier.



A “TRUE MOUNTAINEER”

Article
RÉGIS NOYÉ

These were the words used to describe the Ecureuil AS350 B3 by the pilots from the Chinese company State Grid GAC. They were won over by the helicopter following a successful high-altitude test campaign conducted to see how the Ecureuil could handle power line surveillance missions in the Chinese high country.

For nine straight days at the end of last September, an Ecureuil AS350 B3 on loan from Eurocopter China was really put to the test in the mountains of Qinghai. The goal of the campaign was to measure the helicopter’s capabilities in the severe operating conditions encountered during power line surveillance missions, which represent the lion’s share of State Grid GAC’s activities. The operator is a subsidiary of the State Grid group, one of China’s largest companies, which covers 88% of the country’s power grid. A pilot and technician from Eurocopter China provided assistance for the campaign, which was conducted on the new high-voltage power line that runs along Highway 109 between Golmud and Lhasa, Tibet (3,650m).

FLYING HIGH AT 5,321M

The altitude was increased progressively for the tests (to avoid stress on the flight teams more than on the machine!), beginning at 2,700m in Golmud and eventually reaching 5,321m at Tanggula Shankou—the highest point on the national power grid. No helicopter had ever been used before in China at such a high altitude.

With an operating weight of 1,680 kg, the Ecureuil AS350 B3 had no problem remaining in hover flight out of ground effect at this altitude. It only needed 85% of its maximum power to perform the maneuver, leaving plenty of margin to increase the takeoff weight or fly at even greater heights. The pilots were particularly pleased with the excellent handling and maneuverability of the Ecureuil and were impressed by the precise information provided in the flight manual—although they felt the performance curves it listed were a bit too modest!



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FOCUS ON

In Favor of the EC225 in China

In August 2011, Eurocopter delivered a fourth EC225 to the China Ministry of Transport’s Rescue and Salvage Bureau, which recently celebrated its 60th anniversary. The aircraft was handed over at a delivery ceremony in the city of Zhuhai, Guangdong Province. In attendance were a number of Chinese dignitaries, including Mr. Zhang Jinshan, Deputy Director of the Rescue & Salvage Bureau, and the Mayor of Zhuhai, Mr. Huo Rongmeng.

The Ministry of Transport signed on two additional EC225s in 2009, after a very positive experience with the first two EC225s that were delivered in 2007 and used for rescue missions, including the 2008 Sichuan earthquake. A total of ten EC225s are now in service in China for a wide range of missions.

LIFE-SAVING SILHOUETTE IS A FAMILIAR SIGHT IN BELGIAN SKIES

Article
RÉGIS NOYÉ

Photo by
CMH-C. MEUNIER

The Centre Médical Hélicoptéré (CMH) medical facility in Bra-sur-Lienne, Belgium, has enjoyed operational success across its local region since 2006 thanks to an EC145.

With an average time before takeoff of under four minutes, helicopter OO-NHB carried out more than 1,100 emergency medical missions in 2011—30 percent at night (all in VFR)—across the three Belgian provinces of Luxembourg, Liège and Namur. Founded in 1986, the CMH is a fully independent non-profit organization based in one of the country's "red" zones: an area in which road-based emergency services are unable to reach the scene in under 15 minutes.

254 LIVES SAVED

This EC145 is the only helicopter in Belgium that is available 24/7 to respond to medical emergencies. One other emergency medical helicopter, an Ecuireuil based at the Saint-Jean-de-Bruges hospital, only operates in the daytime. "Belgium is very far behind other European countries when it comes to helicopter emergency services," said Philippe Miermans, chief executive of the CMH. "Our ministry of health has done no more than experiment with helicopters." And yet a CMH study shows that thanks to their helicopter 254 heart attack victims were able to receive life-saving treatment in under an hour. Not only would that have been impossible with road ambulances, the response time was much quicker than the 90-minute window prescribed by international cardiology societies. What is more, because transportation by helicopter is three to five times faster than with road vehicles, the medical team is freed up for its next mission much more quickly.

THE IDEAL AIRCRAFT

The CMH is well aware that the EC145 was a key factor in the success of its missions. According to Mr. Miermans, the aircraft has several essential qualities which perfectly suit the local rural geography: an optimum balance between cabin size and overall dimensions, extremely versatile skid landing gear, high speeds and good fuel economy.

The EC145 is the third helicopter the CMH

has used since 1997. It is provided by the Belgian company NHV on a leasing contract, but operated completely independently by the CMH, which only responds to calls with the agreement of the unified European 112 telephone emergency services. It goes without saying that financing the helicopter is a permanent struggle; that the service still exists is in large part thanks to support from members of the public.



Ninety percent of the CMH's missions are to provide medical first response to the injured or sick. In 85 percent of cases, it was possible to land less than 100 meters from the scene of the emergency.



From left to right: Dr Jens Goennemann, CEO Australian Aerospace; Rear Admiral Mark Campbell, Head Helicopter Systems Division; Major General Rick Burr, Commander First Division; Brigadier Neil Turton, Director General Aviation; Brigadier Greg Lawler CSC, Commander 16th Aviation Brigade; Brigadier Andrew Mathewson, Director General Army Aviation Systems; Dr Martin Werner, Vice President Governmental Helicopters Australian Aerospace.

Article
ERIN CALLENDER

Photo by
AUSTRALIAN AEROSPACE

TIGER ARH

Australian Aerospace celebrated a major milestone in its Tiger ARH⁽¹⁾ program by delivering the final production Tiger aircraft, which was formally handed over to the Australian Defence Force (ADF) on December 1, 2011, at the subsidiary's Brisbane facility.

FINAL DELIVERY TO THE AUSTRALIAN DEFENCE FORCE

Representatives of the Commonwealth, aviation and aerospace industry executives, senior officers of the ADF and senior management of Australian Aerospace as well as Eurocopter were on hand for the delivery.

"This is a great day for Army Aviation, the ADF and for Australian Aerospace," said Dr. Jens Goennemann, CEO of Australian Aerospace. "The Tiger ARH has been a complex and demanding program and one not without its fair share of challenges. But extensive collaboration and a cooperative approach by Australian Aerospace, our industry partners and the various ADF branches involved has been a significant contributor to where we proudly stand today."

Acquired under Project Air 87 and assembled directly at Australian Aerospace's facilities, the Tiger replaces the ADF's existing helicopter fleet including Bell 206B-1 (Kiowa) reconnaissance and UH1-H (Iroquois) gunship helicopters. In Australia, the Tigers have already been deployed with the Army's 1st Aviation Regiment in Darwin, the Army Aviation Training Centre in Queensland and with the Australian Defence Aircraft Research and Development Unit in South Australia. This two-crew aircraft is also entering into operations with armed forces around the world, including service with the French Army in Afghanistan since 2009 and in Libya in 2011.

The Tiger ARH is the world's most

advanced armed reconnaissance helicopter, combining a streamlined design and cutting-edge technologies. The largely composite airframe makes the Tiger lighter, faster and more agile than its competitors and reduces the helicopter's radar cross-section. Equipped to carry a 30mm turreted-cannon in the nose, 70mm rockets and Hellfire air-to-ground missiles, the Tiger can detect and engage targets at long distances. This delivery marks the subsidiary's completion of the order for 22 Tiger ARHs, but the teams will continue to work alongside the Army to support, maintain and bring the aircraft to their full maturity.

(1) Armed Reconnaissance Helicopter

EUROCOPTER DE MÉXICO

Within the span of 48 hours, Eurocopter de México (EMSA) celebrated two very important events for the subsidiary's future development. Ground was officially broken at the new Querétaro plant, and the Mexlog logistics platform, located just a few kilometers away from the EMSA main office and the airport, was inaugurated.

REINFORCING THE INDUSTRIAL AND LOGISTICS NETWORK

On October 25, 2011, EMSA officially launched construction work on its new production site for spare parts and aviation components in Querétaro. Representing an investment of approximately 100 million dollars, the plant will manufacture and assemble metal components for helicopters and airframes (tail cones, vertical stabilizers, door structures, etc.). The plant, which is scheduled to open its doors by the end of 2012, will house many different activities: a cutting workshop; facilities

for milling, pressing, surface treatments, and the assembly of individual components and subassemblies; and a new Ecureuil maintenance center.

Two days later on October 27, the inauguration ceremony was held for the Mexlog logistics platform, where spares will be stored for the EC225/EC725 and Dauphin/Panther families. Mexlog will soon be managing parts for the Ecureuil family as well. Attending the ceremony were representatives of the Mexican president, officials from the coun-

try's air force and navy, and important Eurocopter customers such as Pegaso and Helistar. The event provided EMSA the opportunity to demonstrate once again its firm commitment to improving the logistics services it offers its customers.



FOCUS ON

The EC725 Steals the Show at Military Parade

On September 16, 2011, the first two EC725s acquired by Mexico were given a place of honor at the military parade held as part of the Mexican independence day celebrations. The helicopters, which were delivered to the country's air force on July 7 of last year, performed a flight demonstration and were then used by a special forces unit to simulate an infiltration operation. In 2009, the Mexican Secretary of National Defense purchased 12 EC725s in order to modernize the equipment of the country's armed forces and expand their operational capabilities for missions such as evacuation, search and rescue, and firefighting.





THE KINGS OF AERIAL ACROBATICS

FLYING BULLS

A living legend among helicopter aficionados, Siegfried “Blacky” Schwarz is chief pilot of the Flying Bulls squadron stationed in Salzburg, Austria. The Flying Bulls perform in some of the most beautiful aircraft in aviation history (including two Eurocopter helicopters) and are a favorite attraction at air shows. Blacky Schwarz sat down with *Rotor Journal* to talk about his long career as a helicopter pilot and aerial acrobat.

Interviewed by **REGINA LANGE**



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© Cornelius Braun/Red Bull Content Pool

How many flight hours have you logged?

Siegfried Schwarz: I've flown approximately 10,000 hours, including 9,500 on helicopters and 5,000 on Eurocopter products.

Which Eurocopter helicopters have you flown?

S.S.: The first was a Lama SA315 operated by the company Heli Austria. I was the first civil trainee in Austria to receive a helicopter pilot license. I later flew an SA316 Alouette III, all the different single and twin-engine versions of the Ecureuil and finally the BO105 and the EC135.

What types of missions have you performed with Eurocopter helicopters?

S.S.: I transported loads with the Lama, and with the Ecureuil I carried supplies to chalets in the mountains, and also performed lifting work. I then performed air rescues in Austria with the EC135, and still fly it today for passenger transport missions. For aerial acrobatics I fly the BO105. Please note that aerial acrobatics with a BO105 are prohibited. The Flying Bulls are the only air unit

that has been granted special authorization to perform acrobatic maneuvers with this type of aircraft.

What makes a good aerial acrobatics pilot? Who can perform these types of maneuvers?

S.S.: The key is finding a pilot with a great deal of operational experience, who knows just how far you can push a helicopter. In my case, I've been very fortunate to work with Rainer Wilke, the only man with an official certification to perform aerial acrobatics. He was a BO105 instructor for 20 years in Bückeberg and knows the machine like the back of his hand. There are only three of us who do acrobatics with the BO105: Rainer Wilke, the American Chuck Aaron, and me.

What skills are necessary?

S.S.: It goes without saying that you have to have a lot of experience, and really know your machine well. A healthy dose of modesty also helps given the risks involved: you always have to keep in mind that something unexpected can happen at any moment. The key is to never let your guard down.

For how long can a pilot physically withstand the strain involved with these types of maneuvers?

S.S.: Twenty minutes of non-stop acrobatics is already really quite a lot. You might not think so, since the acceleration forces in a helicopter are only 3 to 3.1 g⁽¹⁾, while they can be as high as 11 g in an airplane. But we perform a lot of different maneuvers in quick succession and in a very restricted space.

As a pilot, what makes the BO105 and EC135 different from other helicopters?

S.S.: The BO105 is more like a British sports car. It's got a cramped little cockpit that's not very comfortable, but it has exceptional maneuverability. The EC135 is an extremely accomplished helicopter, and in my opinion is one of the safest aircraft in the world. With its Fenestron[®] tail rotor, great range, low noise and excellent safety levels, the EC135 is in a class of its own. I am a huge fan of the EC135. I've followed its development right from the outset, and even proposed some improvements that were later incorporated on the machine.

(1) The unit "g" is used to measure pressure exerted on a body due to acceleration.

(THINK INNOVATION)

Our commitment to ongoing investment in technology and product development provides Eurocopter customers with innovations in flight safety, reduced operating costs and improved environmental performance.

How to make helicopters that work better.



Thinking without limits

 **EUROCOPTER**

AN EADS COMPANY