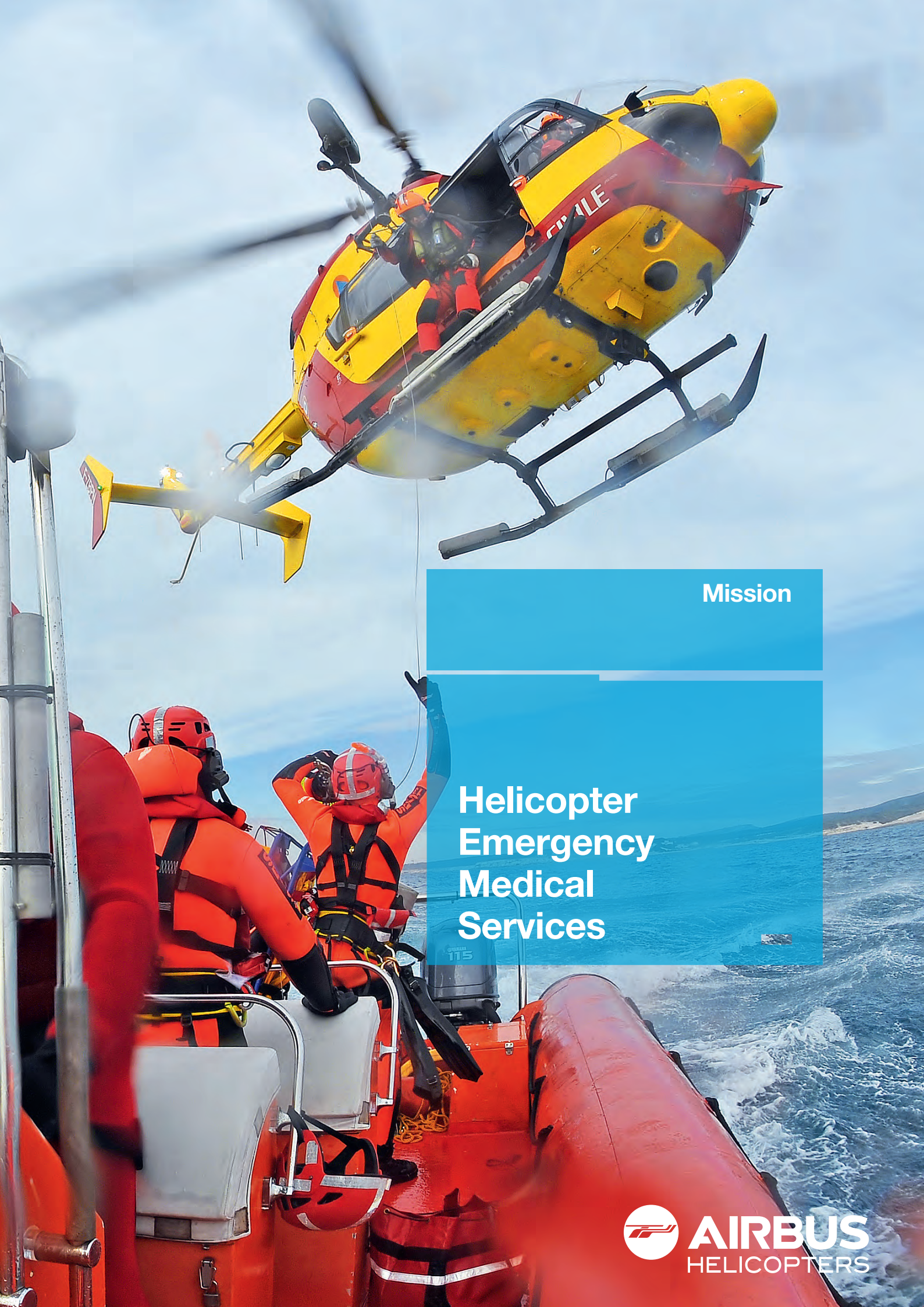

Mission

Helicopter Emergency Medical Services

AIRBUS HELICOPTERS

THE GOLDEN HOUR

– WHEN LIVES ARE AT STAKE, GETTING THERE ON TIME CAN MAKE ALL THE DIFFERENCE

Each year, 2 percent of the population in a developed country will need emergency care and transportation to a hospital. Arriving within the hour is crucial for saving lives.

Many among this 2 percent live outside the “Golden Hour” zone for ground emergency vehicles. When lives are at stake, time is of the essence. Fast and efficient, helicopters allow operators to provide the necessary emergency health care without losing valuable time.

Airbus Helicopters supplies nearly one-third of the world’s civil rotorcraft fleet and has obtained a 60 percent share of the emergency medical services (EMS) market. Its products are the preferred choice for the world’s largest EMS operators and a reference in the industry for newly emerging markets. Airbus Helicopters' longstanding experience in this sector has allowed for an in-depth understanding of the specific needs of EMS end users.


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HEMS: Save time, save lives

Airbus Helicopters offers a wide choice of helicopters, from its 1.7-ton, 5-seat, single-engine EC120 to the 11-ton, 24-seat, twin-engine EC225. These rotary-wing aircraft are fully compliant with all stringent HEMS missions – such as primary, secondary and intensive patient transport as well as disaster recovery – and have been developed to offer easy access and a flexible cabin with flat floors to cope with operators' needs. In order to meet stringent requirements, Airbus Helicopters aircraft integrate the most up-to-date technologies and can be fitted with an array of cutting-edge, certified emergency and medical equipment to save lives.

HEMS roles

Reach difficult and isolated locations
Only an emergency medical helicopter can provide the flexibility to deliver medical care where no ground vehicle can possibly go. In addition, this aircraft can cover distances three-to-five-times faster than a road ambulance and can land as close as possible to the accident site even when unreachable by ground vehicle.

Fast arrival and initial treatment
The speed with which medical teams can reach a patient in life-threatening situations is vital. Thanks to a wide range of medical equipment onboard, the medical crew is able to make an initial diagnosis and start treatment. The stabilized patient can be transported by helicopter to the nearest or most appropriate hospital quickly, smoothly and in comfort.

Provide air medical transport for inter-hospital transfers
HEMS provides a rapid response for urgent transfers of critical patients from one hospital to another. Some patients may need more intensive care, requiring highly sophisticated medical equipment and experts on board even over longer distances. Furthermore, urgent transport of organs and /or specialized medical experts may be necessary.

Cost effective
The cost of a HEMS set-up versus a ground unit set-up, with similar response times and staffing for the same job and covering the same service area, would require an annual budget that is higher for the ground unit. An air medical program may also be cost-effective by extending a regional tertiary care center's capabilities to a larger geographic area. This decreases the need to duplicate expensive trauma centers, burn centers, and neo-natal intensive care units. Finally, an air medical program also decreases the number of ground ambulances needed for long-distance patient transport – freeing more ambulances for local coverage.

Only a helicopter emergency medical service:

- Reaches victims three-to-five-times faster than road units
  - Flies over obstacles and avoids the hassle of winding roads
  - Never gets caught in traffic
  - Reaches victims far from roads
- Significantly enlarges a hospital's health security footprint
- Provides the quickest relief from major pain
- Reduces the risks of high-speed road missions
- Increases the output of EMS teams
- Improves the survival rate
- Saves people from certain death
- Gives the same chance to all, wherever they are

Concentrate on the job ahead
An emergency medical helicopter encounters far less acceleration, braking and vibration than a ground unit. Also, there are no tight turns, screeching stops and bumpy roads with which to contend – allowing medical crews to concentrate on the mission and patients being transported in greater comfort.

When time is of the essence, rely on the experience of Airbus Helicopters

With years of experience and know-how in providing dedicated, fully-equipped helicopters to emergency medical services agencies around the world, Airbus Helicopters has learned what its clients need most.

Flight safety
Airbus Helicopters products are certified according to the most stringent requirements from airworthiness authorities. As a member of the International Helicopter Safety Team (IHST), Airbus Helicopters is also committed to providing additional safety features in flight or on the ground thanks to the unique design of its helicopters: modern glass cockpit, NVG compatibility, reduced footprint, high clearance under the aircraft structure and the Fenestron shrouded tail rotor.

Land safely anywhere
Airbus Helicopters' cockpits offer pilots excellent visibility to help navigate difficult landings.
The company's rotorcraft are designed to provide exceptional maneuverability with compact external dimensions. The out-of-reach high-set main rotor, as well as the shrouded tail rotor, allow landings as closely as possible and maximize the safety of people on the ground.

Low sound levels
Thanks to the use of modern composite materials, low-sound main rotors and the shrouded Fenestron®, Airbus Helicopters aircraft are the quietest helicopters in the world – and operate with substantially lower sound levels than the strict ICAO limits. This is vital to completing operations near high-population areas.

Fast response time
Automatic and safe start-up may allow the pilot to take off within one minute and reach the scene with fast cruising speed in the shortest possible time.

Comfort and ergonomics
The Airbus Helicopter product line offers a spacious cabin with flat floor for the installation of all necessary medical equipment in the most ergonomic way possible. The cabin provides excellent working space for the medical team and allows access to all parts of a patient. Airbus Helicopters aircraft also provide a variety of extra-wide side accesses to facilitate loading and unloading of the stretchers.

Light single-engine helicopters AS350 / EC130

A family concept for economical medical flights

The AS350 and EC130 are the reference single-engine helicopters in EMS missions. The main reasons for their success are performance, visibility, mission flexibility and low operating costs. In addition, the cabins can be accommodated with different levels of EMS kits, according to customer needs.

HEMS Features

The spacious, unobstructed cabin provides exceptional visibility and sufficient space to install all necessary equipment. With its wide side opening, the loading of a stretcher is quick and simple.

EC130 T2

This helicopter offers the largest cabin in its class combined with wide side loading capability of 2.2 meters, and can transport one wheeled stretcher and up to three medical crew members with necessary medical equipment (i.e. Patient Loading System, medical equipment mounting, medical panels, storage and oxygen system as well as overhead ceiling lighting). In addition to the excellent hot and high performance, it provides outstanding visibility, the lowest external sound level in its class as well as the safest operation on the ground and in flight thanks to the Fenestron® tail rotor.

AS350

This most successful and proven single-engine helicopter can transport one stretcher and up to three medical crew members with necessary medical equipment (i.e. Patient Loading System, medical equipment mounting, medical panels, storage and oxygen system as well as overhead ceiling lighting). Its engine power allows operations in high and hot environments. In 2010, a highly successful Himalayan mountain rescue mission was performed at an altitude of 6,900 meters.

Low operating costs

These are the most cost-effective helicopters to operate thanks to the maintenance concept and low fuel consumption.

Light twin-engine helicopters AS355 / EC135 / EC145

The Reference Helicopters for EMS missions

The EC135 offers the perfect solution for a full range of EMS mission scenarios. With its compact size and shrouded tail rotor, the EC135 can land in confined areas. This helicopter's wide, unobstructed cabin offers increased visibility for observation operations. Mission flexibility, low sound, reduced maintenance, operational costs and higher availability are among the many reasons why so many EMS service providers have already chosen the EC135 for their daily operations.

HEMS Features

EC135

Landing in confined area
The EC135's skid landing gear (three heights available) along with its compact design make it possible to land in very confined areas or on unprepared terrain, wherever the injured are awaiting urgent help.
An out-of-reach main rotor and protected Fenestron® tail rotor allows pinpoint landings close to the patient in optimum safety.

Loading with rotor turning at a hospital
Quick and easy patient loading can be performed via the rear clamshell doors with windows, even when the rotors are turning. The rear clamshell door also can be opened easily with one hand. The high-set main rotor and Fenestron® tail rotor ensure that the crew can work safely around the helicopter.

Modern NVG cockpit
Operational safety is ensured by a modern glass cockpit layout with first limit indicator. It features large displays for a moving map, weather radars, and H-TAWS. Pilots can operate safely under VFR and Dual/Single Pilot IFR as well as night operations under NVG conditions.

Disaster management and SAR missions
The EC135 has excellent slope landing capabilities and can perform rapid interventions in situations of high risk, adverse weather, catastrophes and disasters, and in emergencies such as floods, earthquakes, landslides and heavy snowfalls.

Spacious cabin with two medical crew and stretcher, with ample space overhead
The EC135 was designed in close cooperation with medical professionals and rescue experts. It offers an unobstructed cabin with flat floor suited for the installation of a large range of medical devices and equipment adapted to different user's needs. The spacious and ergonomic cabin facilitates in-flight resuscitation (CPR) and endotracheal intubation capabilities.

An onboard anti-resonance isolation system (ARIS) ensures low vibration levels and a smooth ride. The helicopter provides ample room for up to two crew members as well as up to three medical seats (for doctor, flight nurse and/or paramedics) and one stretcher for one patient. A second stretcher can be installed within seconds with two medical seats remaining.

Light twin-engine helicopters – AS355 / EC135 / EC145

Safety first by Airbus Helicopters for EMS missions

The Airbus Helicopters EC135 and EC145 offer unmatched safety in flight and on the ground. Their high main rotor, structural clearance, and tail rotor protections allow the helicopter to land in very confined areas. Exceptional visibility, combined with the compact glass cockpit instrument panel (NVG compatible) ensures the highest safety for demanding missions. The EMS interior can be customized according to customer needs and is removable in just a few minutes..
The new EC145 T2 version provides the best high and hot performance in its class. The most innovative avionic solutions as well as a new powerful Fenestron® make the EC145 T2 the “future reference” HEMS helicopter, whatever the environment.

EC145

Primary EMS missions

The spacious cabin interior and large side opening of the EC145 provides easy access for patients and medical crew. The unrivaled large rear access with a wide opening of the two clamshell doors enables quick, easy and safe patient loading and unloading even while the rotor is turning. Thanks to its outstanding cabin volume, the EC145 can transport two patients on stretchers, both equipped with independent medical apparatus and up to three medical crew and two pilots.

Secondary EMS mission and HICAM

The EC145 provides exceptional capabilities to transfer patients from one hospital to another. It can be equipped with different levels of medical equipment up to HICAMS (helicopter intensive care medical service) and transport one patient with up to three medical crew with two pilots over 300 NM.

The large cabin space offers easy access and an ergonomic working environment, even for long operations.

Modern NVG cockpit

Fast operational safety is ensured by a modern glass cockpit layout with first limit indicator. It features large displays for a moving map, weather radars and H-TAWS. Pilots can operate safely under VFR and Dual/Single Pilot IFR as well as night operations under NVG conditions.

Disaster management SAR mission

The EC145 is equipped with a high performance rescue winch featuring a capacity of 272 kg / 600 lb and a cable length of 90 meters. Its unrivaled side access without door post allows easy stretcher loading, even during the flight when hoisting is mandatory. Thanks to excellent slope landing capabilities, it can perform rapid interventions in situations of high risk, adverse weather, catastrophes and disasters, and in emergencies such as floods, earthquakes, landslides and heavy snowfalls.

Skid landing facilitates the hoist operator action with stand-up capability, facilitating the lifting of rescuer and patient.

Medium twin-engine helicopters – AS365 / EC155 / EC175

Designed for SAR and EMS missions

The Dauphin family has high speed and long range capability, which are key parameters for SAR and EMS secondary missions in certain areas. The spacious cabins of Airbus Helicopters' Dauphin family can easily accommodate bulky medical equipment. The advanced human machine interface, state-of-the-art glass cockpit and unique Airbus Helicopters dual digital 4-axis automatic flight control system maximize the pilot's effectiveness for these demanding missions, even in the most challenging environment. The new EC175 offers high-end capability for EMS transport as well as intensive care transport, MEDEVAC and SAR missions thanks to its large cabin, as well as excellent endurance, range and useful load.

The Dauphin family benefits from years of experience and has been designed to ensure smooth and fast flights

The family offers unmatched visibility in its class. Its state-of-the-art glass cockpit avionics display is compatible with night-vision goggles, making it fully available night and day. The helicopter is equipped with a 4-axis autopilot in standard, while the very low vibration levels provide optimal conditions for patient transport and treatment. The effectiveness and success of today's emergency interventions is centered on the necessity of rapid deployment – a key feature of the Dauphin helicopter series.

Large and unobstructed cabin

Dauphin family cabins offer enough room for multiple patients and medical personnel. The AS365 can be arranged with two stretchers and four seats, while the EC155 features space for two stretchers and eight seats. The high set main rotor and tail rotor allow for safe loading while the rotor is turning.

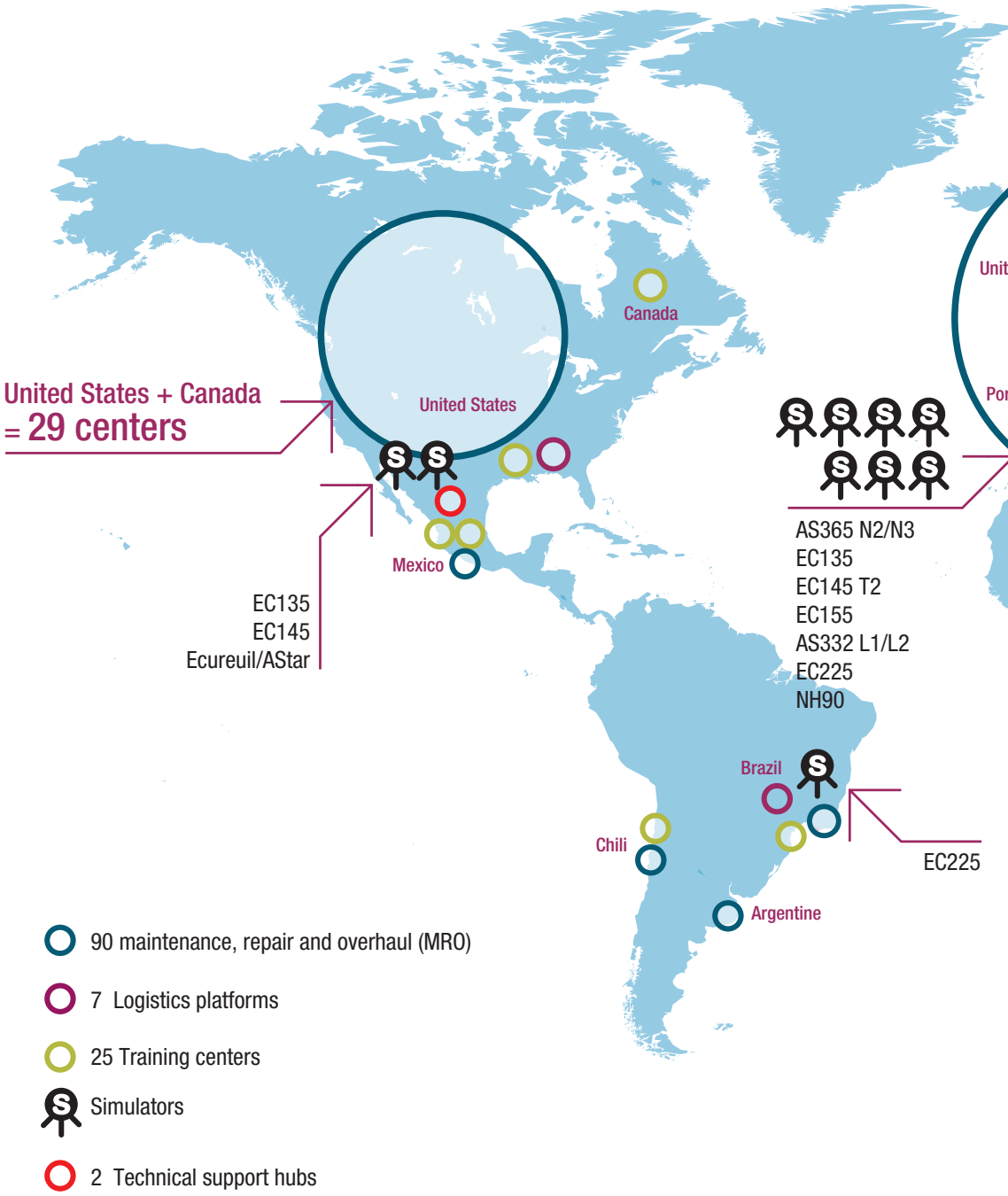
EC175 Instrument panel

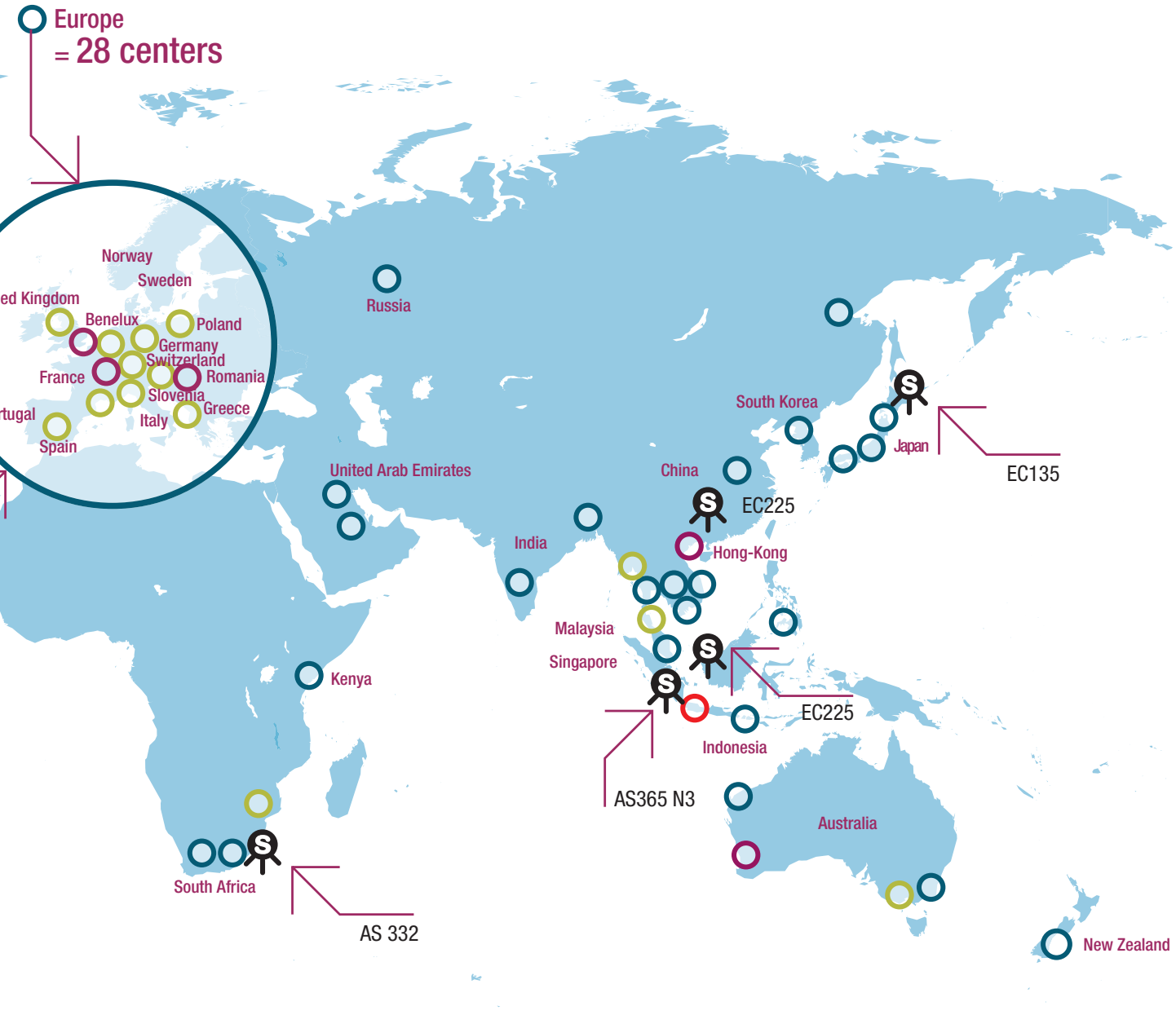
The EC175 is the newcomer in SAR and long-range HEMS secondary missions.

This helicopter completes the wide Airbus Helicopters product line and provides the longest range in its class. It is equipped with the most modern cockpit linked to a 4-axis autopilot. The helicopter's large cabin volume (more than 12m^3) and cabin access position the EC175 as a major player for disaster relief, SAR and hospital transfer.

Ready when duty calls: A worldwide network of service centers is ready to support EMS operators

The Airbus Helicopters global Support & Services network offers operators the full range of local services needed to perform daily operations, from spare parts supply and technical assistance, to MRO services and training.

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China
EC225
India
Hong-Kong
Malaysia
Singapore
EC225
Kenya
Indonesia
AS365 N3
Australia
South Africa
AS 332
New Zealand

A flexible package of services available anytime, anywhere

Airbus Helicopters is committed to keeping EMS service providers flying whenever and wherever they operate. The company's worldwide distribution network is composed of modern automated logistics centers, international logistics platforms, and local inventories around the world. These are completed by 24/7 AOG support.

In-service introduction package

The arrival of a new helicopter in your fleet often entails adjustments to your organization. Airbus Helicopters will assist you in setting up your activities and figuring out the best organization for the logistics and technical assistance for your fleet. We offer additional training and provide you a first set of consumables and necessary tools to start your operations.

Field service

Proximity is the key word for Airbus Helicopters: bringing competencies to its customers.

Our On-the-Job Training (OJT) for technicians covers proven and new technology systems, new maintenance operation modes and optimized maintenance scheduling.

Our technical representatives will support your teams in improving the maintenance of your helicopters, through an optimized trouble-shooting and according to Airbus Helicopters' documentation.

Operational training

Our training solutions range from ab-initio to very specialized mission oriented courses. They focus on real situations and decision-making, acquiring emergency experience before it happens. On top of theoretical courses carried out in our OEM Computer Aided Instruction (CAI) environment, the use of Full Flight Simulators enables us to create the most realistic conditions for such EMS mission scenarios as operating NVGs or hoisting. In line with Airbus Helicopters' strategy to deploy means as near as possible to your operations, our simulators offer crews a safe, local and cost-effective simulation solution, while the aircraft continues to perform missions. You can also benefit from light and modern training media, such as the virtual cockpit procedures trainer (VCPT), the avionics trainer (AVT), and web-based training, for easy self-instruction.

Mission-oriented dedicated services:

Our fast response makes all the difference in the field

Your helicopters must be ready to fly at a minute's notice. To answer the specific needs of an EMS mission, we have introduced specific and customized programs for optimal support of your operations. These ensure the maximum availability, the minimum of operating costs, and full budget control.

Airbus Helicopters' main fixed-hourly-rate programs

	Repair-By-the-Hour	Unscheduled -Maintenance Insurance-Plan	Parts-By-the-Hour	Advanced PBH
Comprehensive coverage	√	√	√	√
Secured maintenance costs	√	√	√	√
TBO provisioning	√		√	√
Repair process	√			
Standard exchange process		√	√	√
Budget control	√	√	√	√

Logistics Field Representative (LFR)

The LFR manages an operator's supply chain by sharing Airbus Helicopters' expertise on logistics flows monitoring, forecasting, inventory management, repair, warranty, etc. The LFR is your focal point of contact for an integrated logistics support.

EMS Equipment

	EC120 B	AS350 B2	AS350 B3e	EC130 T2	AS355 NP
MAXIMUM RANGE (AT MTOW)	710 km / 383 NM	666 km / 360 NM	642 km / 346 NM	616 km / 332 NM	731 km / 395 NM
USEFUL LOAD	721 kg / 1,590 lb	1,030 kg / 2,270 lb	1,013 kg / 2,233 lb	1,088 kg / 2,399 lb	1,097 kg / 2,447 lb
CAPACITY					
MTOW	1,715 kg / 3,781 lb	2,250 kg / 4,960 lb	2,250 kg / 4,960 lb	2,500 kg / 5,512 lb	2,600 kg / 5,732 lb
FAST CRUISE SPEED	223 km/h / 120 kts	246 km/h / 133 kts	254 km/h / 137 kts	236 km/h / 127 kts	222 km/h / 120 kts
STANDARD FUEL TANKS	321kg / 707 lb	426 kg / 939 lb	426 kg / 939 lb	426 kg / 939 lb	577 kg / 1,272 lb
ENDURANCE (AT MTOW)	4 h 19 min	4 h 24 min	4 h 20 min	4 h 00 min	4 h 35 min
IFR/VFR DAY AND NIGHT	Yes	Yes	Yes	Yes	Yes

	EC135 T3/P3	EC145 T2	AS365 N3+	EC155 B1	EC175	EC225
	630 km / 340 NM	663 km / 358 NM	792 km / 427 NM	784 km / 423 NM	1111 km / 600 NM	838 km / 452 NM
	1,498 kg / 3,303 lb	1,731 kg / 3,816 lb	1,891 kg / 4,169 lb	2,301 kg / 5,073 lb	2,897 kg / 7,271 lb	5,534 kg / 12,200 lb
			4	4	4	5
					3	6
	2,980 kg / 6,570 lb	3,650 kg / 8,047 lb	4,300 kg / 9,480 lb	4,920 kg / 10,846 lb	7,500 kg / 16,535 lb	11,000 kg / 24,251 lb
	252 km/h / 136 kts	248 km/h / 134 kts	269 km/h / 145 kts	265 km/h / 143 kts	276km/h / 149 kts	262 km/h / 142 kts
	560 kg / 1,235 lb	728 kg / 1,606 lb	897 kg / 1,977 lb	993 kg / 2,189 lb	2,045 kg / 4,510 lb	2,017 kg / 4,447 lb
	3 h 33 min	3 h 37 min	4 h 06 min	4 h 03 min	6 h 00 min	4 h 05 min
	Yes	Yes	Yes	Yes	Yes	Yes

Glossary

AOG: Aircraft On Ground
AC: Alternating Current
CPR: Cardiopulmonary Resuscitation
ECG: Electrocardiogram
FADEC: Full Authority Digital Engine Control
ICAO: International Civil Aviation Organization
IFR: Instrument Flight Rules
LFR: Logistics Field Representative
MRO: Maintenance, Repair, and Overhaul
MTOW: Maximum Takeoff Weight
NVG: Night Vision Goggles
TBO: Time Between Overhauls
VFR: Visual Flight Rules


FLORIDA HOSPITAL
FLORIDA 1

THE WORLD'S LEADING HELICOPTER MANUFACTURER

To date, Airbus Helicopters has delivered some 17,000 helicopters in 148 countries. With more than 7,700 civil and parapublic helicopters in service, Airbus Helicopters aircraft make up nearly one-third of the world's turbine-engine rotorcraft fleet. This international scope is only natural for a group with the largest and most up-to-date range of helicopters on the market. From From single- and twin-engine light and medium helicopters to 11-ton-class helicopters, Airbus Helicopters has the right aircraft to handle any and all of your civil missions.

Contacts

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