Avicopter Hurries to Win

Avicopter Hurries to Win 沉重加快发业步伐

Airbus: China to be No.1

Airbus: China to be No.1 中国成空客直升机最大市场

Bell: Slowdown to be Short

Bell: Slowdown to be Short 贝尔预计市场增速放缓

First AW119Kx for China

First AW119Kx for China AW119Kx瞩目国内展

Turbomeca Optimistic

Turbomeca Optimistic 透博梅卡期待业绩增长

Honeywell Steps Ahead

Honeywell Steps Ahead 霍尼威尔精耕中国市场

Thales 1st Heli-sim Due

Thales 1st Heli-sim Due 泰雷兹交付首台D级模拟机

Collins Wins on AC312C

Collins Wins on AC312C 柯林斯成AC312C供应商

Frasca for Robinson Sim

Frasca for Robinson Sim Frasca为罗宾逊提供模拟机

AC313 for Firefighting

AC313 for Firefighting AC313配S型系消防系统

Marenco Gains Orders

Marenco Gains Orders 梦兰柯获中国订单

Army Aviation on Parade

Army Aviation on Parade 陆航彰显实力

ShowNews

AVIATION WEEK & SPACE TECHNOLOGY / AIR TRANSPORT WORLD / SPEEDNEWS

September 9, 2015
China Helicopter Expo

2015中国直升机发展论坛拉开直博会序幕

AVIC Unveils Heavy Lifter

The 5th China Helicopter Development Forum was held in Tianjin on Sept. 8. Under the theme of Helicopter Contributes to the “One Belt, One Road” initiative that involves developing infrastructure and trade, government officials from key related departments and industry leaders shared their viewpoints on how to seize the opportunities brought by the new national strategy.

AVIC Board of Directors’ President Lin Zuoming addressed the Forum.

AVIC Unveils Heavy Lifter

Details of the Advanced Heavy Lift (AHL) helicopter project launched last May are being unveiled here at the China Helicopter Exposition. A model on the Avicopter stand depicts current thinking on the 10-ton class helicopter, and shows that design progress is being made.

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AC352 to Star at Show

AC352 to Star at Show

The highlight of this year’s China Helicopter Exposition will occur today when Avicopter reveals its twin-engined, super-medium-sized AC352 to the public for the first time.

The mockup has been seen before, but the helicopter on show here is a real airworthy example, marking its first venture into the public gaze.

Avicopter builds all the airframes for the separate production lines in France and China.

Full details in tomorrow’s ShowNews.
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贝尔直升机采用具备超越同级别产品、表现出众的全集成航电控制系统，不断改变世界飞行的方式。诸如采用佳明G1000H™这类先进设备为飞行员提供一目了然的数据，进一步加强飞行状态感知度，从而确保飞行安全。此外，贝尔直升机还配备了符合人体工程学设计的座椅及满足不同任务所需的套件和配件，承诺提供具备业界领先技术和安全的飞机。

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Hong Kong Launches Multirole H175
香港政府飞行服务队购买7架H175

Hong Kong-based Government Flying Services (GFS) becomes the world’s launch customer for the public-services configured Airbus Helicopters H175, with an order for seven of the new-generation super-medium-sized rotorcraft.

GFS is a department of the Hong Kong Special Administrative Region, with the main responsibility of providing 24-hour emergency support services. It currently flies three Airbus Helicopters AS332s and four H155s for search and rescue and firefighting missions.

Deliveries will begin towards end 2017 with three aircraft, followed by the remaining four in 2018.

The public services configuration offers multirole capabilities including search and rescue, emergency medical services, firefighting, law enforcement and land/maritime border security patrols. GFS’ H175s will have an inbuilt electro-optical system for observation and tracking, along with an enhanced digital map display, both managed from an operator’s console in the cabin.

Other mission equipment includes dual hoists, loudspeaker hailers, a searchlight, and steerable external lighting.

The H175 as it will appear in Hong Kong colors.

香港政府飞行服务队（GFS）采购了7架空客直升机公司的H175超中型直升机，成为采用公共服务配置H175的启动用户。

政府飞行队是香港特别行政区的一个行政部门，主要提供24小时紧急支援服务。该部门目前运营3架AS332和4架H155用于搜救及消防任务。首批3架直升机将于2017年年底开始交付，剩余4架将于2018年交付。

公共服务配置提供了执行多任务的能力，基于任务需求实现了快速无缝运输。该配型直升机可以满足多种任务需求，包括搜救、紧急医疗服务、消防、执法以及陆地和海事边界安全巡逻。

香港政府飞行服务队订购的H175直升机将配有内置的光电系统及增强型数字地图显示，均由客舱内的操作控制面板进行管理。其他任务设备包括双索起吊机、扩音器、探照灯、可调节的外部照明。
Avicopter Hurries to Win Market Share

Avicopter must act with a sense of urgency if it is to capture a significant share of the fast-growing helicopter market.

That’s the message from AVIC Helicopter Co. (Avicopter) Chairman Yu Feng, who says his company must take several steps to gain—and keep—a competitive edge over international helicopter manufacturers.

At stake is a meaningful share of the market for some 140 helicopters a year over the next five years. Avicopter predicts China’s civil fleet will exceed 1,500 helicopters in operation by the end of the Thirteenth Five-Year Plan (2016-2020), up from the nearly 800 expected to be in service by the end of this year. Peak demand will likely come from police forces and search-and-rescue agencies, as well as from emergency medical services, training and tourism.

Avicopter Chairman Yu Feng takes on the foreign competition.

Given that process is another reason, too, perhaps indicating that slowdown might be good for Avicopter, Yu Feng says. The “one-stop” goal is embodied in this year. Peak demand will likely come in the second half of the plan, especially from police forces and search-and-rescue agencies, as well as from emergency medical services, training and tourism.

Avicopter, Yu Feng says, now has well-established research and development facilities and production capabilities. And it is working on new helicopters that it believes will be competitive with international manufacturers—but it must hurry for its new aircraft to be ready to catch that wave.

Development timetables are not the only challenge. Avicopter must win trust in its products as customers currently strongly favor internationally-built machines.

Confidence in domestically-produced helicopters will grow as more enter service, but Avicopter must accelerate that process with another transformation: it must prove itself as an integrated service provider. That means making it a one-stop shop for customers, one that can respond to their specifications and support them in the field.

Indeed, local customer support throughout China should become a main competitive advantage for Avicopter, Yu Feng says. The “one-stop” goal is embodied by Avicopter in its new ACValues 2.0 integrated service strategy, which focuses internal resources toward that target, but will also involve strategic collaboration, he explains.

Avicopter is leading the charge with the 2-ton class AC311, 4-ton class AC312 and 13-ton class AC313, while it is debuting the 7-ton class AC352 here in Tianjin.

Yu Feng notes that a current softening in deliveries in China’s helicopter market may have won it a breathing space to finish development of its two latest models: the 3-ton class AC322 and the 4-ton class AC312C. That slowdown might be good for another reason, too, perhaps indicating a maturing of the market, leading to more solid, stable growth in the future.

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China to be Airbus Helicopters’ Largest Market

The head of Airbus Helicopters China anticipates that the country will be the helicopter manufacturer’s biggest market sometime around 2020.

“With the continuing opening up of low altitude airspace to civil aviation, China will become the biggest market for Airbus Helicopters around the year 2020,” says Airbus Helicopters China President and CEO Norbert Ducrot.

“China is still very far from being the biggest market in the world for helicopters—that is the U.S., which accounts for 150 [Airbus helicopters] per year. But China this year will probably become the second biggest market for civil helicopters.”

Airbus Helicopters has around 40% share of the civil helicopter market in China, says Ducrot, adding that Airbus Helicopters has about 150 helicopters in China, out of a total number of 330 civil, turbine-powered helicopters in the country.

But to achieve the goal of being Airbus Helicopters’ biggest market, there needs to be sufficient numbers of helicopter pilots, adds Ducrot.

He says: “Airbus Helicopters is very interested to invest in training and more product support.” Airbus Helicopters already has a Super Puma H225 simulator in-country at the Hua-ou Aviation Training Center in Beijing, and has around 31 EC225s in China, he says, adding that they sell three-to-five H225s here each year. It is also considering H135 and H125 simulators to help build China’s pilot and crew training system.

“Generally speaking you need to have 50 helicopters in-country for an onsite simulator to be commercially viable. But sometimes you need to make exceptions and put in the investment up front,” in order to generate sales later on.

Another area of focus is increased industrial cooperation. “My ambition is to raise our market share up to 60% in 2020,” says Ducrot. “To achieve this goal, we have a clear strategy to be Chinese and that means being a real partner of Avicopter. We have two large cooperation [initiatives] with Avicopter. The first is the H120, a 2-tonne single-engine helicopter that we jointly developed with Singapore Technologies Aerospace and Avicopter. And the other is the H175,” he says, referring to a 7.6-tonne medium-twin-engine helicopter that Airbus Helicopters and Avicopter jointly developed.

“The H175 entered service in December 2014,” says Ducrot. “We have signed with Avicopter to produce 1,000 of these helicopters,” he says, adding that 500 will be H175s and 500 will be AC352s for the China market.

China’s biggest market, there needs to be sufficient numbers of helicopter pilots, adds Ducrot.

Airbus Helicopters China President and CEO Norbert Ducrot.
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Helicopter Market Difficult for Now, Says Bell
贝尔预计直升机市场增速放缓

Helicopter manufacturers experienced a sales boom in China for the last five years but have had to deal with a slowdown as the economy adjusts.

China’s helicopter market achieved sales increases of 20% per annum between 2009-13, and last year grew by 30%, says Bell Helicopter Vice President for China, Chris Jaran. But this year the growth won’t be the same.

“It’s been slow for commercial helicopters, as it has been for business jets and luxury goods,” he says. “It’s been difficult for all helicopter manufacturers, a tough year so far for everyone.”

He notes that interest in helicopters hasn’t diminished, but customers’ ability to close deals has slowed by about a half.

Now, however, there are signs of hope. “In the last month we’ve seen a marked increase in activity. We’re seeing an upturn now, and that will probably accelerate for the rest of the year,” Jaran says.

Despite the temporary setback, Bell Helicopter delivered four Bell 407s to three different customers in China over the last four weeks alone, bringing its fleet in China to 108 helicopters. “And we still have a pretty good backlog in place,” he says.

The Bell 407, he notes, has been the most popular helicopter in China for the last three years, underscoring the market’s preference—especially at the moment—for less expensive, less sophisticated single-engine helicopters that can perform multiple missions. “China is really a single-engine turbine market,” Jaran says. “There is some reluctance to invest in twin-engined rotorcraft. People want utility rather than size.” The Bell 407 cabin can be reconfigured for different missions in less than an hour, he says, and that has become a market differentiator for Bell.

The company is showing a 407GX with a Garmin cockpit here at Tianjin, and will fly its twin-engine Bell 429 every day. It is also displaying a mockup of the new Bell 505 Jet Ranger X, which has won numerous orders from China and 350 letters of intent worldwide. The helicopter is half way through its flights tests, and expects to win Canadian certification by year-end.

Earlier this year the Bell 505 won the ‘best light single engine helicopter’ category in the “2015 Best of the Best” issue produced by The Hurun Report, a publication famous in China for its 'Rich List'.
安全领域，无往不至

泰雷兹在全球56个国家拥有61000名员工，我们总是携手客户，共同打造更加智慧的解决方案。我们的智能技术致力于在全球范围内保护人身、财产和信息的安全。无论何时何地，在涉及安全的任何领域，泰雷兹无往不至。
First AW119Kx Helicopter Delivered to China
全能“单发王”AW119Kx首次亮相国内航展

The single-engine AgustaWestland AW119Kx helicopter is making its debut here at Tianjin this week after delivery of the first of the type into China last March to a private customer who is using it for passenger transportation.

At least five more AW119Kx helicopters have been ordered by Chinese customers, according to AgustaWestland dealer Sino-US Intercontinental. The helicopter’s large cabin and high-tech integrated flight deck make it ideal for many roles including executive/private transport, EMS, utility, firefighting, law enforcement and other duties, the company notes. More than 240 A119 helicopters have been ordered worldwide.

Sino-US Intercontinental is also showcasing the intermediate twin-engine AW139 and the racy twin-engine A109SP helicopters here at the show.

Zhao Yan, Chairman of Sino-US intercontinental, notes that his company took the lead in introducing the eight-place AW119Kx into China as an official non-exclusive distributor for AgustaWestland civil helicopters in China, excluding Hong Kong and Macau. Since September 2003 it has placed orders for 27 helicopters comprising AW119Kx single engine, GrandNew light twin, AW169 light intermediate, AW139 intermediate and AW189 super medium helicopters. The partnership has further expanded the presence of the AW119, GrandNew and AW139 models and introduced the whole family of new generation types including the AW169 and AW189 into China.

AgustaWestland says it has sold more than 130 commercial helicopters to China since it started in this market 18 years ago; about 37 of them were in service as of the end of 2014. Early last year it established a regional headquarters in Shanghai.

The Italian manufacturer says it and Sino-US Intercontinental are devoting significant efforts to strengthen the level of service in China with comprehensive maintenance and training solutions, to further enhance operational effectiveness and safety and maximize customers’ advantage in using AgustaWestland’s state-of-the-art products in the country.

Sino-US Intercontinental (Sino-US Intercontinental Helicopter Investment Co. Ltd) is part of Shanghai Zenisun Investment Group, a large conglomerate corporation that focuses on real estate and general aviation. The company has been undertaking helicopter sales and operations in China since 2006, providing a one-stop service for helicopter purchase, import, operation, management, support & training as well as airport construction.

AgustaWestland last year inked a EUR400 million contract for 50 helicopters of various types with Beijing Automotive Industrial Corp., (BAIC) one of the largest state-owned automotive companies in China, setting the stage to strategically approach the market for parapublic helicopters.

It also has a joint-venture in China with AVIC, Changhe Agusta Helicopter Company, which assembled 13 AW109 helicopters as the CA109 before concentrating instead on spare parts and customer support.
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Turbomeca: “We Expect Sales in China to Grow”
透博梅卡看好中国直升机市场的发展

Turbomeca CEO Bruno Even, who took on that role in May, talked to International Aviation about the engine manufacturer’s growing involvement in the Chinese helicopter market as Avicopter accelerates development of indigenous designs. Turbomeca already has 500 engines operating in the country, powering one of every two Chinese civil-registered helicopters.

What does the picture look like for Turbomeca in China?

We can demonstrate 40 years of cooperation with Chinese industry. As well as Avicopter aircraft, Turbomeca also powers western-design helicopters. Deliveries of our Arriel engines to Avicopter continue at a steady pace and, with entry-into-service of the Ardiden 3C/WZ16 in the AC352, overall demand is unlikely to diminish. By 2020, the number of civil helicopters here could grow from the current 500 to 1,500.

Turbomeca and AVIC have a long history of cooperation. What’s in the pipeline?

The success of the Arriel engine in China is the result of cooperation with both Avicopter and Avic Engine. The Harbin H425 and H410 (Chinese license-produced Dauphin) are powered by the Arriel or WZ8, a licensed version of the Arriel engine.

In 2006, Turbomeca and Avic Engine agreed to strengthen their partnership by jointly developing the Ardiden 3C. Known in China as the WZ16, this engine was selected by Avicopter to power its AC352, developed in cooperation with Airbus Helicopters. This engine was ground-tested for the first time in 2013. First flight of the AC352 is expected later this year.

Turbomeca is also offering a variant of its Arrius 2 to power the AC3X2, Avicopter’s new three-ton helicopter model.

What is Turbomeca doing to power heavy helicopters?

Turbomeca is positioning itself as a major player in the ten ton-plus heavy helicopter market. To achieve this, it is designing a new family of engines in the 3,000 shp category, known as HPE (High Power Engines).

We are looking at several areas including the compressor, combustion chamber and power-turbine, and researching new, more durable materials and coatings.

Since the beginning of 2015, Turbomeca has been running extensive tests on TECH3000 components and modules. Key technologies have already been validated. Combustion chamber and turbine tests are underway.

Engine tests integrating these new technologies will start at the end of 2015. The TECH3000 and its derivatives will deliver a 25% improvement in fuel efficiency.

Is there a future for electric drive in helicopters?

Turbomeca is not directly involved in electric propulsion. But our parent Safran Group is, through other subsidiaries including Snecma, Labinal Power Systems and Aircelle.

In our opinion, there is still long way to go before a 100% electrically-powered helicopter becomes a reality. But there is definitely a trend towards integrating more electric-driven systems in new-generation helicopters.

At Turbomeca, we are well advanced in designing new engine power-management systems involving electric hybridization.

What are you showing in Tianjin?

We are displaying Arriel 2 and Arrius mockups at the Safran booth (C507). The two models illustrate our considerable expertise across the field of aero engine design.

Avicopter will display on its own booth a flightworthy AC352 prototype, equipped with two Ardiden 3C/WZ16 engines. That will be the first public appearance of this rotorcraft.

Principal Turbomeca targets include reducing the cost-of-ownership and environmental footprint of our engines. To achieve these objectives, a thousand Turbomeca engineers work every day to improve their performance, particularly by designing new compressors with high compression rates.

This is how the new Arrano engine can offer a 15% reduction in fuel consumption over current engines.

Turbomeca is also making innovations in manufacturing materials, resulting in lighter, more robust engines which are easier to build. "We were one of the first aeronautical engine manufacturers to introduce additive manufacturing (3D printing) of components for our series-produced engines."
Turbomeca powers the upgraded AC311, the AC311A model, which is about to enter production with the Arrius 2B1A engine.

Turbo Succesful Company powers the upgraded AC311, the AC311A model, which is about to enter production with the Arrius 2B1A engine.

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透博梅卡目前在中国的业务发展情况是怎样？

透博梅卡与中航工业有着40年的合作关系。除了中航直升机产品外，透博梅卡还为国际上主要的直升机生产商提供动力装置。透博梅卡一直不断地向中航直升机公司交付阿赫耶发动机，另外随着配装阿赫耶3C/涡轴16发动机的AC352直升机即将交付使用，中国市场对直升机发动机的需求量将会不断地增长。到2020年，中国民用直升机的数量可能从目前的500架增加到1500架。

透博梅卡与中航工业有着很长的合作历史，目前双方有什么合作项目？

阿赫耶发动机在中国的成功是透博梅卡与中航直升机和中航直升机公司合作的硕果。阿赫耶发动机对公司生产的H1425和H1410（中国获得授权生产的“海豚”）直升机都配装有阿赫耶发动机。

在2006年，透博梅卡与中航直升机公司签署协议，同意加强双方的合作。共同研发阿赫耶3C发动机。该发动机在中国正式命名为涡轴16，已被中航直升机公司选作该公司与空客直升机公司联合研制的AC352直升机的动力装置。透博梅卡与中航直升机公司联合研制的AC352直升机的发动机，阿赫耶3C/涡轴16发动机已经于2013年完成首次地面测试，并将在今年年底在AC352直升机上进行首飞。

另外，透博梅卡还为中航直升机公司新研制的3吨级直升机AC3X2提供阿赫耶2发动机。透博梅卡在重型直升机动力领域有什么规划？

透博梅卡将会提供10吨级以上重型直升机动力的主要参与者。为此，透博梅卡正在研制全新的2206.5kW级发动机系列，即HPE（大功率发动机）。

透博梅卡集中力量攻关包括压气机、燃烧室和动力涡轮等关键部件，研究新型的、更加耐久的材料和涂层技术。

从2015年年初开始，透博梅卡对TECH3000的部件和单元体进行了广泛的试验，检验了很多关键技术，目前公司正在进行燃烧室和涡轮试验。集成了多项新技术的发动机测试预计于2015年年中开始，TECH3000及其派生型号可将发动机的燃油效率提高25%。

您认为电动直升机的未来前景如何？

透博梅卡公司没有直接涉及电动驱动领域，但是我们的母公司赛峰集团通过旗下的兄弟公司斯奈克玛、拉比纳电源系统和埃塞公司参与了电动驱动的研究。

我们认为，实现纯电力驱动的直升机还有很长的一段路要走，但是新一代直升机的发展趋势毫无疑问是向着集成多电驱动系统的方向发展。对于透博梅卡来说，我们在设计含有混合动力技术的发动机功率管理系统方面处于领先地位。

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AviationWeek.com | September 9, 2015 13
Honeywell Gains Traction in China Helo Market
霍尼韦尔在中国直升机市场受到欢迎

From propulsion to avionics, Honeywell Aerospace is beginning to gain traction in China’s helicopter market.

“We’re starting to see the fruits of our efforts with Chinese helicopter operators,” says Andy Gill, senior director for Business and General Aviation, Asia Pacific, for Honeywell Aerospace.

It is poised for more results as its LTS101 turboshift engines win praise from operators in the field, its Sky Connect Tracker Iridium-based communications system enters trials with customers in China, and it teams up with Shanghai-based General Dynamic Aero Technology (GDAT) to introduce the Honeywell HTS900-powered Bell 407HP as well as BendixKing avionics and avionics support for helicopters.

“Our are also establishing line maintenance and support capabilities with partners in China, including GDAT, so that we don’t have to send equipment out of the country for servicing,” says Gill.

These developments have added weight to Honeywell’s campaign to supply original equipment to Avicopter, he notes.

Honeywell already provides the LTS101 turboshift for the AC311 helicopter, and is discussing re-engining it with the more powerful, more efficient next-generation HTS900. “We have a very good dialog with Avicopter on a range of their models. We’re talking to them on all of those,” he notes. Avicopter has yet to announce an engine selection for the 4-5 ton AC312E/C development of the 12-seat H410/425, but the HTS900 would be in the right sized range.

Gill says there are now 15-20 six-seat LTS101-powered AC311s in operation in China. “We’re getting some very good feedback from operators,” he says, “especially on ease of maintenance.”

GDAT will play a large role in Honeywell’s future. “We’ve been working very closely with them over the last year on initiatives that will bring safety, efficiency, productivity and reliability to our customers,” says Gill.

The BendixKing avionics dealership will enable GDAT to perform a full spectrum of activities from upgrades and refits to technology insertions. Specifically, GDAT will provide support for Honeywell BendixKing products including the Silver Crown Plus avionics systems, the KSN-770, Honeywell’s mission and management systems, Skyforce, Enhanced Ground Proximity Warning System, weather radars, and satellite communications systems.

By establishing a local dealership with a trusted operator such as GDAT, Honeywell can more easily meet the unique needs of Chinese commercial helicopter operators and pilots, says Gill. This is the second dealership agreement Honeywell has signed with GDAT: it already provides sales and support for Honeywell avionics products and services.

Sky Connect Tracker III communications system enables worldwide automated tracking, text messaging and voice capabilities across the Iridium satellite network. It can provide location, flight route and estimated time of arrival, and, when linked to Honeywell health and usage monitoring system (HUMS), it can transmit aircraft status as well. Sky Connect is currently being tested on AC311 and AS 350B helicopters in China.

Honeywell already provides the L TS101 turboshift for the AC311 helicopter, and is discussing re-engining it with the more powerful, more efficient next-generation HTS900. “We have a very good dialog with Avicopter on a range of their models. We’re talking to them on all of those,” he notes. Avicopter has yet to announce an engine selection for the 4-5 ton AC312E/C development of the 12-seat H410/425, but the HTS900 would be in the right sized range.

Gill says there are now 15-20 six-seat LTS101-powered AC311s in operation in China. “We’re getting some very good feedback from operators,” he says, “especially on ease of maintenance.”

GDAT will play a large role in Honeywell’s future. “We’ve been working very closely with them over the last year on initiatives that will bring safety, efficiency, productivity and reliability to our customers,” says Gill.

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霍尼韦尔航空航天集团公务和通用航空亚太区高级总监Andy Gill说：“我们在中国直升机市场的辛勤工作正在结出硕果。”

LTS101涡轴发动机受到市场好评。Sky Connect Tracker III通信系统尝试为中国客户服务，霍尼韦尔与捷德航空（GDAT）合作引进配属HTS900发动机的贝尔407HP直升机和BendixKing直升机航电设备。Gill表示：“霍尼韦尔已与包括GDAT在内的中国伙伴合作建立航线维护和支持业务，这样在中国使用的设备就不用送到国外维护。”

霍尼韦尔的LTS101发动机是AC311直升机的动力装置，该公司还与中航直升机讨论使用更强劲、更高效的HTS900发动机为AC311换发的可能性，并期望将HTS900用作4～5吨级的AC312E/C直升机的动力装置。

GDAT在霍尼韦尔的未来业务中将扮演十分重要的角色。作为霍尼韦尔BendixKing航电的授权经销商，GDAT可以为客户提供全方位的升级和改装服务。同时，GDAT还将为霍尼韦尔的KSN-770航电系统、Skyforce任务和管理系统、增强型近地警告系统、气象雷达和卫星通信系统提供支持。

霍尼韦尔的Sky Connect Tracker III通信系统，利用铱星网络可提供世界范围的自动跟踪、报文和语音通信，还可以提供定位、飞行路径和预计到达时间服务。当该系统与霍尼韦尔的健康管理使用监视系统（HUMS）链接后，它也可以传送飞机状态信息。Sky Connect目前正在中国的AC311和AS350B直升机上进行测试。
AVIC Unveils Heavy Helicopter Design

The design concept for the Sino-Russian heavy helicopter launched during Chinese President Xi Jinping’s visit to Moscow last May has been unveiled here in model form by AVIC’s Avicopter.

The Advanced Heavy Lift (AHL) helicopter to be developed by China and Russia will have a maximum takeoff weight of 38.2 tons, maximum cruise speed of 300 km/h, and a range of 630 km, according to specifications released here at the show. A good hot and high performance will include a ceiling of 5,700 m.

The AHL features a seven-bladed main rotor, a five-bladed conventional tail rotor, and a rear loading ramp. It will be able to carry 10 tons of cargo inside the cabin or 15 tons on an external sling. It’s 10-ton classification means it will be smaller than the world’s largest helicopter – the Mil Mi-26T with 56 tons MTOW and 20 tons of load capacity.

Russian President Vladimir Putin and Xin Jinping were both present at the launch event in Moscow, underscoring the importance of the program to both countries. Helicopters of Russia CEO Alexander Mikheyev and AVIC Board of Directors’ President Lin Zuoming inked the agreement.

“China’s helicopter market is one of the world’s fastest-growing, and we are interested in establishing long-term, all-round strategic relations with China for the development of mutually beneficial cooperation in aircraft-building,” Mikheyev said. “It is very important the idea of building a new heavy helicopter has the backing of both countries’ governments. We are certain that the implementation of this project will open up new horizons of cooperation between China and Russia.”

The general contract for the AHL development is to be signed later this year, says the Russian manufacturer.

The partners expect that demand for the new heavy helicopter in China could exceed 200 airframes by 2040.

The new helicopter will be manufactured in China. But Russian officials say the new rotorcraft should have a Russian-made powerplant. Vladislav Masalov, the head of Russia’s United Engine Corp. (UEC), told Aviation Week that UEC and Russian Helicopters have already studied the feasibility of a design such as a turboshaft on the basis of the gas generator for PD-14, a new turbofan developed for Russia’s MC-21 narrowbody airliner.

2015年5月8日，在中国国家主席习近平和俄罗斯总统普京的见证下，中俄两国在莫斯科签署了关于航空、水电、信息安全等方面的合作协议共32项，总价值达250亿美元。其中包括中航工业与俄罗斯直升机公司签署联合先进重型直升机项目的合作框架协议，目前，中俄双方已就重型直升机项目的技术方案、分工、合作模式等关键要素达成一致意见，该重型直升机项目将填补我国在重型直升机领域的空白，满足我国在抢险救灾、地震救援、高原运输等方面对重型直升机的需求。

根据中航直在本届航展上公布的数据显示，中俄联合研制的先进重型直升机（AHL）最大起飞重量为38.2吨，最大巡航速度300千米/小时，航程达630千米，最大飞行高度为5700米，具有很好的高温高原性能。

AHL直升机配置有7扇浆叶主旋翼和5扇浆叶常规尾桨，且设计有尾舱门用于装载大尺寸货物。AHL可在机舱内运输10吨的货物或者用吊索吊运15吨的重物。这个级别的运输能力要低于世界最大的米-26T，米-26T的最大起飞重量是56吨，载重能力为20吨。

“中国是世界上增长最快的直升机市场之一，我们对于与中国建立长期、全方位的战略合作关系十分感兴趣”，俄直公司董事长亚历山大·米赫耶夫表示，“先进重型直升机项目获得了两国政府的支持意义重大，我们确定这一项目将开创中俄合作的新领域”。

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新的AHL直升机将由中国制造，而根据俄罗斯联合发动机公司高层透露将采用俄制发动机，他们和俄直公司已经研究了在PD-14发动机的基础上研制一款新型涡轴发动机的可行性。PD-14是俄罗斯未来干线客机MC-21所用的国产动力装置。

2015年5月8日，在中国国家主席习近平和俄罗斯总统普京的见证下，中俄两国在莫斯科签署了关于航空、水电、信息安全等方面的合作协议共32项，总价值达250亿美元。其中包括中航工业与俄罗斯直升机公司签署联合先进重型直升机项目的合作框架协议，目前，中俄双方已就重型直升机项目的技术方案、分工、合作模式等关键要素达成一致意见，该重型直升机项目将填补我国在重型直升机领域的空白，满足我国在抢险救灾、地震救援、高原运输等方面对重型直升机的需求。

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Avicopter Unveils Latest AC312C Design

AV500 UAV Nears Market Readiness

The latest design of Avicopter’s four-ton A312C multirole helicopter was unveiled here in Tianjin in model form. With preliminary design now completed by AVIC Hafei, the program, disclosed here two years ago at the show, is making progress toward a date for CAAC certification of December 2018.

The twin-engine helicopter is a drastic systems and performance upgrade of Avicopter’s AC312A, which itself owes its origins to the Aerospatiale Dauphin built under license by Hafei since 1981. The A312C will bring improved life cycle costs, better reliability, and a state-of-the-art glass cockpit by Rockwell Collins. An improved performance in hot and high environments, with the ability to operate and hover high plateau regions, will give it a competitive edge, Avicopter believes.

As-yet-undisclosed twin powerplants will feature a double-channel FADEC control system. Improved main rotor blades and a fenestron shrouded tail rotor system make it capable of flying over 500 km with 600 kg load plus fuel to fly another 30 min, under takeoff conditions of at 4500 m altitude and a temperature of ISA+25°C. In a high altitude environment, The C312C can carry two severely injured patients or six average patients, or a 600 kg load to conduct search and rescue, emergency aid or air medical service within an operating radius of 200 km.

Avicopter has reverted to the AC312A’s shrouded fan on the tail after releasing an initial design two years ago with a conventional four-bladed tail rotor. Compared to the AC312A the development replaces the retractable landing gear with skids, and raises the tailboom high on the fuselage to allow rear clamshell-door access to the cabin.

AVIC China Helicopter Research and Development Institute has been flight-testing its AV500 unmanned helicopter and says that first deliveries to customers are imminent.

The UAV has a maximum take-off weight of 450kg and is designed for civil and military missions including maritime surveillance, environmental monitoring, pipeline patrols, geographical exploration, and aerial photography. Specifications include a maximum speed of 190 km/h, and endurance of 4 hours carrying an 80 kg load, or 6 hours carrying 55 kg. AV500 has an operational ceiling of 3,500 m, and can be remotely controlled from as far away as 200 km.

“The AV500 unmanned helicopter is a modular system and features a metal welded airframe, all-composite skin, skid landing gear and high-mounted horizontal stabilizer, which can be integrated for various payloads according to customer’s needs,” says AVIC. “The system flies with good performance and high reliability,” says AVIC, adding that it is easy to maintain and can be operated manually or automatically.

Assembly of the first AV500 was completed in December 2013.
中航工业直升机是中航工业集团与天津市人民政府共同组建的，专业从事直升机、轻型多用途飞机、螺旋桨的研发制造以及通用航空运营的公司。公司总部设在天津，下辖六家成员单位，包括哈尔滨飞机工业集团有限责任公司、昌河飞机工业（集团）有限责任公司、中国直升机设计研究所、惠阳航空螺旋桨有限责任公司、天津飞龙投资控股有限公司和天津直升机有限责任公司。公司自主创新能力不断增强，产业规模不断扩大，为国家国防和经济建设做出了突出的贡献，是中国直升机产业发展的国家队。
上图展示了不同型号的直升机，包括Z-9、Z-10、Z-19、AC311、AC322、AC352和AC313。
Thales’ First Heli-Sim on Way to China
泰雷兹将向中国交付首台D级模拟机

The first ultra-modern helicopter simulator to be delivered to China by French company Thales could arrive by the end of the year.

Thales is preparing to deliver its first state-of-the-art Level D helicopter simulator to China following factory acceptance in France this summer by expert Chinese helicopter pilots. It’s ready to go, and is awaiting word from customer Haite Group for the shipping date, Thales says, which it expects to be by the end of the year.

The simulator center is under construction near Tianjin International Airport, and will become operational in 2016, the company says.

The Reality H simulator will feature an EC135/H135 cockpit and emergency medical services (EMS) and search and rescue (SAR) training scenarios. Different-type helicopter cockpits can be rolled on and off the simulator at a later date if Chengdu-based Haite chooses to expand the use of the center, Thales says. Prime contractor for the simulator center is Chinese enterprise First State Ltd.

Thales is presenting the Reality H full flight simulator here at Tianjin. It features the ThalesView image generation system, computer generated entities for intelligent management of the virtual animations, a sound generation system, and the Hexaline all-electric motion system. These components deliver the best realism and training value, providing a training environment that mimics the real operational environment, Thales says.

The company says the mission-orientated training system is already in service around the world, providing improved operational efficiency and high quality training supported by a powerful image generation system, large field of view visual display, efficient instructor control and the brand new Thales patented all-electric motion. Thales notes that it draws on its experience in military simulation technologies to guarantee that helicopter pilots and operators benefit from the best technology and training value at an affordable price. Pilots can train in perfect safety for critical procedural and potentially life-threatening scenarios, such as tricky maneuvers and dangerous flight events.

Haite and Thales signed their simulator training agreement in 2013. Thales is a pioneer in the development of full flight and mission training services with a growing network of Thales Training Academies, which started in 2000 with the establishment of HELISIM in Marseille, South of France. This state-of-the-art Training Center is the world’s largest Airbus Helicopter-approved center and welcome customers from all continents. It has seven different cockpits, with a D level of certification for most of them.

Thales is featuring its Reality H helicopter simulator here at Tianjin.
魅影直升机美拍直博会
手机摄影大赛

活动时间：
第三届天津直博会专业及公众日（9月9日-13日）

活动规则：
1. 扫描二维码关注“中航工业”、“中航工业直升机”、“国际航空”、“公务与通用航空”微信公众号
2. 手机拍摄直博会中航工业参展直升机照片，或与直升机合影
3. 照片需含例如中航工业 LOGO 或直升机型号等元素
4. 照片原图发送至“中航工业”、“中航工业直升机”、“国际航空”、“公务与通用航空”微信公众号

奖项设置：
航展结束后，活动评审组将对摄影作品进行评奖。
特等奖1名：总师签名直10模型
一等奖5名：直10模型
二等奖10名：AC313模型
三等奖20名：直升机金属陶瓷邮票
敢拍敢秀奖/最佳画面奖/最佳人气奖各10名：直升机木质陶瓷邮票
Rockwell Collins has been selected to provide the glass cockpit and communications for Avicopter’s development of the twin-engine, 12-seat H410/425 helicopter into the AC312E/C general utility, search and rescue and emergency medical services rotocraft.

Initial delivery of the avionics suite to Harbin Aircraft Industries Group (HAIG) will occur in late 2015 to meet an as-yet-undisclosed first flight schedule. The Civil Aviation Administration of China is expected to certify the aircraft in 2018.

“This is another major win for Rockwell Collins in China and reflects our more than 30 years of building trust with customers in the country,” says Colin Mahoney, senior vice president of International and Service Solutions. “The comprehensive solution we’re providing for the AC312E/C features an advanced architecture that supports future capabilities as they become available, which is especially important for the types of missions that will be flown by the AC312E. Through our long-time, collaborative working relationship with HAIG, we were able to develop an innovative avionics suite that delivers safety, situational awareness and reliability to AC312E operators.”

The avionics comprise Rockwell Collins’ latest helicopter cockpit display system and Pro Line 21 communication, navigation and surveillance equipment. The cockpit display system provides growth to support synthetic vision, helicopter TAWS (terrain awareness warning system) and EFB (electronic flight bag). Options will include the RTA-4112 MultiScan weather radar and the TTR-4100 TCAS II traffic surveillance system.

The AC312E/C will be a 4-5-ton class helicopter that can trace its roots to the license production by HAIG from 1981 of the Aerospatiale AS 365N Dauphin. The AC312C will have a greatly revised and more spacious fuselage, including an all-new tail boom that will be mounted higher to make space for a rear door. It will feature the same ducted tail rotor as the Dauphin, while skids will be fitted instead of the original wheeled undercarriage, according to design features disclosed by Avicopter.
Turbomeca to Expand Support in China
透博梅卡扩展在中国的客户支持

Turbomeca will expand its maintenance and support capabilities in China as the country’s civil helicopter fleet is forecast to add another 1,000 rotorcraft through 2020.

The French engine manufacturer already has 500 turboshafts in service in the country, powering one out of every two Chinese-registered civil helicopters. And it hopes to win an even bigger market share in the next few years’ growth, says Hervé Pasbecq, General Manager of Turbomeca China.

Until three years ago the majority of Turbomeca’s engines in China were license-built by Chinese partners, but now more are powering helicopters imported from the West. Consequently in 2013 Turbomeca opened a maintenance center in Tianjin for Arriel 2, Arrius 2 and Maquila 1 and 2 engines to supplement the overhaul facilities of its Chinese partners.

“You need a certain number of engines in service before building you own facilities,” Pasbecq says. That critical mass has been achieved, and the center is adding capabilities as the fleet grows. Many repairs and overhauls can now be done without sending the engines outside the country, he says.

Maintenance can also be performed by partners including Citic Offshore Helicopter Co., which is a certified maintenance center for the Chinese market.

Turbomeca is also investing with Chinese partners in training activities, including

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To supplement the overhaul and Maquila 1 and 2 engines Tianjin for Arriel 2, Arrius 2 maintenance center in

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Chinese operators; not just big fleets but small fleets, too.”

SBH provides operators with a fixed cost per engine per flight hour. It is available for new or used engines with no minimum number of annual flight hours. Providing continuous financial coverage for scheduled engine repairs and overhaul as well as unscheduled engine repairs, SBH is a highly effective budgeting tool, he notes.

Today, 25 percent of Turbomeca’s customers have chosen a SBH support contract.

Pasbecq said: “If you build a maintenance center for a fleet of 100 engines, you will need another 100 engines to make the center viable.”

China likes to fly its helicopters for 3,000 hours a year, compared with 2,000 in Europe, he notes.

That critical mass has been achieved, and the center is adding capabilities as the fleet grows. Many repairs and overhauls can now be done without sending the engines outside the country, he says.

His company is now targeting big operators, like the Civil Aviation Flight University of China (CAFUC). Three centers have now trained more than 200 technicians, and Turbomeca can call on them to augment its own four field reps and two tech reps based in China.

More Chinese customers are signing up for Turbomeca’s Support by the Hour program (SBH), says Pasbecq. “It is very much welcomed by Chinese operators; not just big fleets but small fleets, too.”

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U.S.-based Frasca International has won a contract to provide a CAAC Level 5 TruFlite R44/Schweizer S300-convertible Flight Training Device (FTD) to XiLin FengTeng GA Corporation, Guanghang, Sichuan Province, China. The company is the largest helicopter corporation in the Southwest of China with twelve helicopters and 35 pilots and offers helicopter medical, business and training for PPL (private) and CPL (commercial) licenses. The FTD will be used primarily for training in emergency situations.

The Frasca TruFlite R44 FTD is a high fidelity simulator for the Robinson R44 and S300 helicopters. The cockpit will accurately replicate the R44 aircraft, including all panels, controls and instrumentation and will be convertible to an S300 configuration as well. Additional features include Frasca’s TruVision visual system providing highly realistic visual training environments.

“We heard a number of customers mention that the fidelity of existing light helicopter simulators was inadequate and limited transfer of learning,” stated John Frasca, President of Frasca International. “We listened and determined that a high fidelity device with FTD Level 5 approval was needed. Our engineers were able to incorporate the fidelity and quality of our Full Flight Simulators into an entry level FTD.”

The cockpit of Frasca’s TruFlite R44 is a replica of the aircraft. Control pressures are realistically simulated by Frasca’s TruFeel control loading system. The TruFlite R44 includes Frasca’s TruVision visual system, providing highly realistic visual training environments. It can also be converted into a S300 by removing the T-style cyclic and adding two S300-style cyclics.

“With this incredibly accurate R44 FTD, we have elevated the level of simulation available for this class of aircraft which allows more training to be performed in the simulator,” says Frasca.

The R44 FTD is designed for use by helicopter flight schools, commercial operators, and parapublic organizations. Future plans for the TruFlite product line are to add an R66 configuration and offer electronic flight instrumentation as an option.

Frasca’s Chinese customers include government flight colleges and universities, Chinese airlines training centers, and privately-owned Chinese aviation academies and schools. Frasca has a representative office in Beijing that provides support for sales, support, CAAC Certification, Re-warranty, operations and maintenance, field services, and equipment and training.

Customers using Frasca simulators in China include; Shandong HaiRuo General Aviation, LTD., XiLin FengTeng GA Corporation, SkyBlue International Aviation Academy, NanShan International Flight Academy, Binzhou Flight Academy, CAFUG, China Southern Airlines, Shenzhen Kunpeng International Flight Academy, QingDao Juian Spartan International Flight Academy and others.

Frasca has installed over 2,600 devices worldwide.
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中国航空业

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中航出版传媒有限责任公司
China Aviation Publishing & Media Co., Ltd.

www.aviationnow.com.cn
Simplex Turns AC313 Into Firefighter

Simplex公司为AC313提供消防系统

Avcicopter’s three-engine AC313 helicopter will be offered for firefighting with state-of-the-art water and foam attack systems developed by Simplex Aerospace of Portland, Oregon.

The first of six Model 380A Fire Attack Systems specially developed for the AC313 will be delivered to Changhe Aircraft Industries Corp. later this year, and the rest by the end of 2016. Simplex believes these are the first firefighting systems developed for a Chinese-manufactured helicopter.

The Model 380A Fire Attack tank for the AC313 holds some 4,000 liters (1,050 U.S. gals). It features a retractable hover pump similar to that on the Sikorsky Firehawk and the Airbus Helicopters EC225.

380A消防系统的其他特点包括：集成到AC313多功能显示器上的摄像系统，增强了悬停泵和舱门操作的可视性和态势感知能力；吊舱集成了数据记录、液位传感器和一个先进的舱门系统。380A消防系统的吊舱可以储存水或泡沫塑料阻燃剂。

除了为AC313提供消防系统外，Simplex公司还为西方国家和俄罗斯制造的直升机提供灭火和水炮系统，以及农业喷雾系统。

A Roadable Flying Vehicle From AVIC

“赛羚”旋翼式飞行汽车

Designers have long dreamed of a “Flying Car” that can beat the traffic, but nobody has yet produced a successful vehicle that is practical, affordable and certifiable. Now AVIC China Helicopter Research and Development Institute is exploring the challenge with its multi-rotor “Sai Ling.” The 100 kg concept model features six rotors—three on each side—that fold into the body to keep everyone out of harm’s way while it’s on the road.

在本届直博会上，中航工业直升机所展出的一款名为“赛羚”的旋翼式汽车，它在汽车基础上增加了直升机的部分功能。

“赛羚”旋翼式无障碍飞行汽车自重为100kg，以多旋翼飞行器技术为基础，由旋翼系统、动力臂系统、控制系统、行走系统、电气系统、车体等部分组成。飞行车的旋翼系统可收放，展开时共有6副旋翼，它们为汽车提供了飞越障碍物所需的升力，并可产生纵向、横向以及航向的操纵力矩。在正常行驶时，该车采用汽车构型，动力臂系统收载于车体中，当它遇到障碍时动力臂从车身中伸出，车辆即可转变为飞行器继续前进。
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Marenco Swisshelicopter Gains Chinese Interest

Here at Tianjin for the third year running, Marenco Swisshelicopter reports growing Chinese interest in the new single-engine, eight-seat SKYe SH09 rotorcraft, which made its first flight last October 2.

“The helicopter raised interest in China from the first days of the launch but demand has significantly increased since the first prototype performed its maiden flight,” says chief commercial officer Mathias Senes.

“Marenco Swisshelicopter already holds preorders for Chinese clients,” he notes, and the company is aiming at establishing long-term partnerships with local operators and service providers.

With a maximum take-off weight of 2,650 kg (5,842 lbs) the SKYe SH09 helicopter offers exceptional hot and high performance, and a low noise signature thanks to the newly developed dynamic assemblies and shrouded tail rotor. It is powered by Honeywell’s 1,000-shp HTS900-2, which is offered as standard fit. Initially that engine was selected merely for the two prototypes.

The composite SKYe SH09 features a modular cabin with a flat floor, and a high ceiling concept with large clamshell doors designed for passenger transport and emergency evacuation roles. The company says the hot-and-high power capability of the HTS900 engine results in a versatile helicopter with a large payload/range capability and an augmented sling load capability of 1,500 kg (3,300 lbs).

Marenco Swisshelicopter is at Booth D419.

Avicopter Shows Ducted-Fan UAV Concept

“飞鸿”涵道旋翼飞行器

中航工业直升机设计研究所在本届直博会上展示了一款名为“飞鸿”的涵道式旋翼无人飞行器，该机以固定翼飞行器的构型为基础，总体布局由共轴对称双旋翼、尾推尾桨、双垂尾、翼身融合机翼（带副翼）等系统组成。“飞鸿”兼具固定翼和涵道旋翼飞行器的特点。在进行垂直起降、悬停和低速飞行时，通过涵道内旋翼的周期变距实现对全机的姿态控制。而在高速飞行时则通过气动操纵面实现飞机控制。“飞鸿”全机重量为60kg，航程40km，最大平飞速度100km/h，它具有特殊开发的飞行控制系统，可执行侦察和目标获取等任务。
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China is a Market For Single-Engine Turbines, Says Bell

That’s the opinion of Chris Jaran, Bell Helicopter’s Vice President for China, whose 206 and 407 models have been the most popular light single-turbines in the country for the last three years, and whose light single-turbine Bell 505 Jet Ranger X has racked up an impressive backlog among Chinese customers.

Evolution of the market has caused this phenomenon, he says.

Many customers are first-time or new operators of commercial helicopters, and they want to start with less investment than needed for a more sophisticated twin, Jaran says. “They favor utility over size,” and have been won over by the Bell singles’ multi-mission capability and quick-change cabins that can be reconfigured in less than hour.

At the same time, there is a growing shortage of commercial helicopter pilots in China. “Right now there are only a few more than there are commercial helicopters,” he notes, a situation that underscores the need for more pilot training schools in China.

Until now the Robinson piston-engined rotocraft have been the helicopters of choice for pilot training, especially for private licenses. “But if you are going to train commercial pilots, you should train them in the helicopters they will mostly fly—single-engine turbines,” Jaran says. “Would you rather have a new commercial pilot with 150 hours in turbines or one with 140 hours on piston-engined aircraft and 10 hours conversion on turbines?”

That’s where the Bell 505 Jet Ranger X fits in, as a simple, economic single-turbine primary training helicopter, he says. Couple that with the expense and difficulty of obtaining Avgas for piston engines, and the Jet Ranger’s advantages become compelling,” he argues.

“Train on a Bell 505 and you have a commercial pilot that’s really ready to go to work.”

Sichuan Police Fly Their First AC311

The first flight ceremony of the Sichuan Police’s first AC311 police helicopter was held in Zigong on February 2, 2015. The helicopter will be used for surveillance, public security, command and dispatch, emergency rescue and other police tasks. The AC311 helicopter, made by Avicopter’s Changhe Company, is equipped with a Honeywell LTS101-700D-2 engine and a highly integrated avionics system. The company claims the helicopter has lower operating costs and better life reliability than competing rotorcraft.

Shanghai Skyway Orders 10 Airbus Helicopters

On June 15, 2015, Shanghai Skyway General Aviation Company signed strategic cooperation agreements with Airbus Helicopters and engine supplier Turbomeca, covering the purchase of 10 helicopters. The agreement includes cooperating to build a maintenance and training center. In addition, Shanghai Skyway signed up for Turbomeca’s Support by the Hour (SBH) program, which provides operators with a fixed cost per engine per flight hour.

China Southern Airlines Manages 21 Helicopters

The helicopter branch of China Southern Airlines received its eighth Sikorsky S-92 on March 8, bringing its fleet of managed helicopters to 21. The main business of the helicopter branch of China Southern Airlines is to provide maritime logistics services, but it also supports public services such as travel, geophysical prospecting, forest protection, aerial photography, pilot training, power line inspection and aircraft management.

Thales and Shanghai AVIC Discuss Helicopter Avionics Venture

Discussions are continuing between Thales and Shanghai AVIC (SAVIC) on forming a partnership to provide joint solutions to the Chinese helicopter market. Under an MoU signed at last November’s Zhuhai Airshow, Thales will bring its latest certified helicopter avionics know-how and technologies, while SAVIC will bring local expertise of systems integration, software development, customer support and through-life services. The joint solution will be based on the Thales TopDeck certified helmet avionics suite, integrating the most advanced technologies available on the market today. It would allow for rapid adaptation of TopDeck to equip new Chinese helicopters and to modernize existing ones.

End of the Road for Airbus Helicopters’ Twin Squirrel

Airbus Helicopters is planning to halt production of its AS355 Ecureuil 2 (Twin Squirrel) twin-engined light helicopter in favor of its more modern products, the company told Aviation Week. Current contracts should see production out through 2016. The AS355 is a twin-engined development of the highly popular single-engine Aerospatiale AS350 Ecureuil (now called the H125). Around 600 AS355s are in operation worldwide, but there was only one in service in Greater China at the end of 2014, according to a survey by Hong Kong consultant Asian Sky Group.
四川省首架警用直升机AC311首飞

四川省首架警用直升机AC311首飞仪式在自贡市举行，该机AC311警用直升机主要用于自贡市公安局巡逻防控、指挥调度、应急救援等任务。AC311直升机由中航工业昌飞公司生产制造，最大起飞重量2200千克，配装了霍尼韦尔LTS101-700D-2发动机以及高度集成的综合航电系统，最大航程达到600千米，续航时间近4小时。与国内外同类直升机相比，AC311直升机具有运营成本低、视野开阔、寿命可靠性高、维护本土化等特点。

中瑞通航订购10架空客直升机

中瑞通航有限公司与空客直升机和透博梅卡公司签署了战略合作协议，协议内容涉及未来10架空客直升机的购买，中瑞通航机队加入透博梅卡SBH全球飞行小时保障计划以及在中国合作建设维修和培训中心等。

南航直升机交付21架

南航珠海直升机公司顺利接收了其第8架S92直升机。至此，该公司执管的直升机数量达到了21架。南航直升机的主要业务是为国内外石油公司提供海上后勤飞行服务，此外还从事公务、旅游、物探、护林、空中摄影、电力巡线、飞机托管、飞行驾驶培训等飞行业务。

泰雷兹与中国航电所合作降低直升机航电系统风险

泰雷兹和中国航空无线电电子研究所（CARERI）结成合作伙伴关系，共同为中国直升机市场提供解决方案。在去年11月珠海航展签署的意向协议基础上，泰雷兹将向中国引进其经过认证的最新直升机航电专有技术，CARERI则在系统集成、软件开发、客户支持和终身服务方面提供国内专家技能。基于经过认证的泰雷兹TopDeck直升机航电设备，这套联合解决方案整合了当前市场上最先进的技术，将为机组人员和乘客提供无与伦比的安全性。TopDeck快速改良特性足以装备新型中国直升机及对现有直升机进行现代化升级。

空客直升机停产“松鼠”II型AS355直升机

空客直升机公司终止生产AS355“松鼠”II型双发轻型直升机以更新其产品线。该型直升机的现有订单可使生产线维持到2016年。AS355是一款双发直升机，是法国宇航公司（Aero-spatiale）所生产的AS355“松鼠”II型单发直升机的前型。它是按照中国香港咨询中心数据显示，截至2014年年底，全世界有600架AS355直升机在服役中，而中国仅有一架该型直升机。

贝尔看好中国单发涡轴直升机市场

贝尔直升机中国区副总裁Chris Jaran认为，相比采用活塞发动机的罗宾逊R22／R44，或者更重更昂贵更复杂的双发机型，单发涡轴直升机更适合中国市场。

在过去3年中，贝尔206和贝尔407是中国深受欢迎的直升机型号，而轻型单发涡轴直升机贝尔505已经在中国客户的支持下获得了“惊人”的订单储备。

Jaran还认为，中国商用直升机飞行员短缺问题将进一步加剧，“现在商用直升机飞行员的数量仅比商用直升机多一点点，差距在个位数”。他指出，这要求中国有更多的飞行员培训学校。

截至目前，罗宾逊活塞式直升机一直是私照飞行员培训的首选。“但是，如果你要培训商用飞行员，你必须用未来他们最有可能驾驶的机型来培训他们，这种机型就是单发涡轴直升机”，他说到。一个是单发涡轴直升机上培训了120小时的飞行员，一个是用活塞直升机培训了140小时外加10小时涡轴改装培训的飞行员，你会选哪个？

他表示，这正是贝尔505直升机的目标市场，即通过这款单发的、经济型的单发涡轴直升机作为主要的培训机型。考虑到活塞直升机所用的 Avgas燃油较昂贵且存在加油难的问题，贝尔505的优势更明显。

“用贝尔505培训商用飞行员将是明智之选”。“
Army Aviation Helos Lead Victory Day Parade

受阅直升机彰显我国陆军航空兵实力

在9月3日的阅兵式上，近200架中航工业制造的飞机按照作战功能编成10个不同类型的空中梯队从天安门广场上空飞过，接受检阅。其中，中航工业直升机生产的6架直升机担任装备方队领队，20架直升机组成“70”字样，另有70架直升机组成的大型机群编队压轴。在受阅的96架直升机中，有9架直8，27架直9WA/WZ，30架直10和30架直19，这些都是我国陆军航空兵装备的主要机型，体现了我国陆军航空兵的实力。

直8是在20世纪90年代以法国SA321“超黄蜂”直升机为基础仿制的一款13吨级大型直升机，由中国直升机设计研究所和昌河飞机工业集团公司联合研制。直8采用3台涡轴6或涡轴6A发动机为动力，其改进型直8F采用加韩惠公司PT6系列发动机。直8最大载荷约4000kg，安装固定座椅时可搭载27名乘客，如果加装活动座椅则最多可搭载39名乘客。

直9W是我国在直9基础上改进而来的武装直升机，早在1999年的国庆50周年阅兵式上接受检阅。本次受阅的直9WA是直9W改进型，采用“海鸥”式双梁武装外挂短翼，可以挂载8枚反坦克导弹，机头部分增加了光电转塔，可以实现昼夜观瞄；机身上装有雷达告警装置，并有干扰弹投放器。直9WZ是直9WA的更进一步改进，起飞重量明显增加，可以挂载8枚更重的反坦克导弹。机上的光电侦察设备也比直9WA先进。

直10是我国自行研发的首款专用武装直升机，也是我国目前最先进的武装直升机。除了在机身结构、飞行性能等方面满足了武装直升机的特殊要求，直10还拥有完整全面的武器系统。除了机头下方1门机炮外，还可以挂载多种专门为直升机开发的导弹系统。在一般作战中，直10可携带8枚反坦克导弹和2具多管火箭发射器。直10在降低直升机信号特征方面做出很大努力，并专门改进了机尾的声学特性，可大幅度减少噪音。

直19是直9W为基础的一款改进型武装直升机。由于直9最初设计为运输型，其机身较宽且机身重量较大，即使进行了改装也难以满足武装直升机的一些特殊要求。因此，直19在直9的基础上大大收窄了前机身并减轻了重量。与全新设计的直10相比，直19几乎全部采用成熟部件，其结构简单、研发风险和成本也比直10低，但武器和航电设备却比直10差别太多。例如，直19可以携带8枚反坦克导弹和2具多管火箭发射器，其机载火力与直10相当。
A total of 96 PLA Army Aviation helicopters flew over Tian'anmen Square in the huge parade on September 3 to commemorate the 70th anniversary of Victory Day for China in World War II. Nearly 200 Army and Air Force aircraft in 10 formations took part, led by a PLA Army Aviation Z-8 helicopter showcasing China's national flag. Another feature was a group of 20 attack helicopters forming the number “70” in the air.
China Market Slowdown Seen as Temporary

Despite a slowdown this year in civil helicopter deliveries and orders from Greater China, the outlook remains rosy, industry experts and observers believe.

The Greater China fleet saw a strong expansion in 2014, growing at a rate of nearly 30% and reaching a total number of 655 helicopters at year-end. The increased easing of airspace regulations and the establishment of new aviation support infrastructure in Mainland China has led to a surge in demand for helicopters in a wide range of applications.

Hong Kong-based Asian Sky Group (ASG) expects China’s demand for civil helicopters to remain strong and maintain its current growth rates during 2015 and beyond, the aviation consultancy says in one of the industry’s most extensive studies of the helicopter market in Asia-Pacific, which it released in February. Other forecasts back up that outlook, despite a slowdown in economic growth that is expected to cause just a blip in overall helicopter demand.

“Roughly 1,000 helicopters a year will be imported into Asia-Pacific, of which 14% — or 140 a year — will be into China,” says Andy Gill, senior director for Business and General Aviation, Asia Pacific, for Honeywell Aerospace. “There’s been a lowering of the growth trajectory, but we see that as a short-term event.”

At French engine manufacturer Turbomeca, President Bruno Even says he expects sales in China to continue to grow as demand is unlikely to diminish. By 2020, the number of civil helicopters could grow from current levels to 1,500, he says.

That figure is in line with Avicopter’s prediction that China’s civil fleet will exceed 1,500 helicopters in operation by the end of the Thirteenth Five-Year Plan (2016-2020), up from the nearly 800 expected to be in service by the end of this year. Peak demand will likely come in the second half of the plan, especially from police forces and search-and-rescue agencies, as well as from emergency medical services, training and tourism.

The slump in oil prices to a six-year low should not seriously impact helicopter demand in China: While growth during 2013 came mainly from the offshore segment, 2014 showed stronger growth in the lighter, entry-level helicopters used for flight training and multi-mission activity such as aerial surveys, firefighting, sling operations, agriculture, power-line repair, and other utility work, says ASG.

Looking at turbine aircraft only, Airbus Helicopters was the leader at the end of 2014 with a market share of 38% by numbers, ASG says. Bell Helicopter held 26%, followed by Sikorsky at 11%, and AgustaWestland at 9%. Avicopter took 3%, and Russian Helicopters 5%.

ASG’s detailed report is available at www.asianskygroup.com.

尽管今年大中华地区民用直升机市场交付量、订单数量有所下滑，但业内专家和观察者依然看好该地区民用直升机市场前景。

大中华地区的直升机机队规模在2014年呈现快速扩张态势，年增长率接近30%，到2014年年底，该地区直升机机队数量达到655架。在中国大陆地区，低空域改革以及一批新的航空基础设施的建设，使许多领域对直升机的需求大大增加。

总部位于香港的亚翔航空有限公司（亚翔航空）在2014年2月发布了“亚太区民用直升机市场报告”。尽管经济下滑可能会导致直升机市场需求的降低，但是亚翔航空预计中国民用直升机市场需求依然旺盛，在2015年以后，市场增长率将维持在现有的水平。

霍尼韦尔航空航电集团公务与通用航空亚太区高级商务总监Andy Gill表示，“今年将有约1000架直升机将交付亚太市场，其中14%（140架）将交付中国。尽管增速有放缓的迹象，但是这只是一个短暂的现象。”

法国发动机制造商透博梅卡公司首席执行官Bruno Even认为，直升机在中国市场需求不会减少，销量还将继续增长。到2020年，中国民用直升机的数量将增长至1500架。

这一数字与中航直升机公司的预测保持一致，该公司预测，到今年年底将有800架左右直升机服役，到“十三五”（2016-2020）末期，中国的民用直升机机队数量将超过1500架。随着警用、搜救、紧急医疗服务、培训和旅游领域对直升机需求的增加，市场高峰将在“十三五”后期出现。

亚翔航空称，尽管油价已跌至6年来的最低点，但是这对中国直升机的需求影响并不太大，2013年市场的增长主要归因于海上石油业务的繁荣。2014年市场表现出对轻型、入门级直升机的兴趣，这类直升机用于执行飞行培训、航空调查、消防、农业、电力巡线等多种任务。在涡轮发动机直升机市场，空客直升机公司产品数量在2014年年底占38%，贝尔直升机占26%，西科斯基11%，阿古斯特维斯特兰占9%，俄罗斯直升机公司占5%，中航直升机占3%。
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