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Taking Off With Camcopter?

Austrian Rotary-Wing UAV Maker Looks to U.S. Market

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BERLIN - As a small, private company, Austria's Schiebel offers a unique product. In the words of Neil Hunter, the company's managing director, "In rotary-wing UAV terms, we are literally the only decent-sized, upper-end tactical capability that's in production."

The vertical takeoff-and-landing (VTOL) UAV in question is the S-100 Camcopter, which has been available for about three years, with almost 100 sold.

While Schiebel is making a mark with its helicopter-style UAV, it remains best known in the United States for mine detection equipment. In the early 1980s, the company developed hand-held mine detectors; in the 1990s, it made major sales to the U.S. Army, with contracts still running.

Driven by the UAV market's bigger profit margins, 80 percent to 85 percent of company revenue is now generated by the UAV division, established about a decade ago.

Although the company intends to develop both product lines as it grows, it has recently increased efforts to gain a foothold in the North American UAV market, an area where it has had limited success.

In August, Schiebel entered a strategic partnership with Boeing, the U.S. aerospace giant. The Austrian company has a history of building alliances as a means of increasing its marketplace footprint. Previous partnerships have linked it with Thales in France and Britain, and with Diehl in Germany.

With a background in the U.K. Royal Navy, Hunter worked on the British Army's Watchkeeper UAV program before moving on to Thales Aerospace in the United Kingdom. He has served as Schiebel's managing director for just over a year.

On the Boeing partnership, Hunter explained that after it monitored Schiebel for several years, the Chicago-based prime contractor first seriously approached his company in September 2008. The working relationship grew before a teaming agreement was announced last summer. Under

the new tie-in, "when it comes to the [Pentagon] and Homeland Security [Department], Boeing will be the prime that will push the Camcopter," Hunter said.

The Boeing partnership does not provide exclusivity nor cover civilian UAV sales. The Camcopter will join Boeing's new Unmanned Airborne Systems portfolio.

Heinz Berger, a Vienna-based industry analyst, said he believes Schiebel offers a niche product.

"While everybody goes into UAVs and UCAVs [unmanned combat aerial vehicles], they went a totally different way with VTOL," Berger said. "They do not even face any serious competition, as the U.S. Fire Scout UAV is in a totally different weight class."

Northrop Grumman has developed the MQ-8B Fire Scout, a helicopter-sized UAV, for the U.S. military. Smaller than the Fire Scout, the S-100 is powered by a 50-horsepower rotary engine. It is 10 feet long, with a height of 3.7 feet and width of 4.1 feet.

In expectation of U.S. orders, Schiebel is planning to open a joint support hub with Boeing before expanding into assembly and production. Currently, all UAV production is handled in Austria. The company's facilities in the Washington area and in Phnom Penh, Cambodia, were established to support its mine detection contracts, but the company is using them to support Camcopter sales.

Schiebel has a third global hub in Abu Dhabi, supporting a 60-vehicle Camcopter contract for the Air Force of the United Arab Emirates. Production is due to be completed in the next few months. Now responsible for assembly and flight-testing the UAVs, the Abu Dhabi facility will soon move to support work, and Schiebel hopes it will serve as a springboard to more Middle East orders.

Meanwhile, Schiebel is still looking for new sales opportunities in mine detection.

"In mine detection terms, there's an awful lot of business out there, and there always will be," Hunter said. To date, mine detection sales have been to military customers, but the company is working to expand into the civilian and U.N. sector.

Schiebel also hopes to generate civil sales for the S-100.

"As we stand today, the civil UAV market hasn't opened up yet; it's only just starting to," Hunter said. The company recently won its first S-100 order from a civil customer, whom it declined to name.

TAKING CAMCOPTER TO SEA

In the near term, the company is pushing the Camcopter for military applications, and it has touted the UAV's applications for anti-piracy work and other maritime missions. Many European

navies are critically short of helicopters, according to Schiebel, but the company recognizes that a cultural shift may be required to adopt VTOL UAVs as an adjunct to manned helicopters.

The Camcopter has been successfully operated on various naval vessels, and Schiebel has conducted "serious talks" with the navies of Germany, the Netherlands, Portugal, Spain and the United Kingdom, Hunter said.

In the United States, which accounts for 60 percent of global UAV sales, the company believes the Camcopter's performance in the Special Operations Command's recent Expeditionary UAS competition sent a powerful message. The command sought a fixed-wing UAV, but Hunter said the UAS trials, which the Camcopter lost, helped bring attention to the aircraft in the U.S. market.

Now supported by Boeing, the company has an eye on the U.S. Coast Guard's multibillion-dollar Deepwater program, where a requirement may evolve for a lighter VTOL UAV for use from smaller patrol vessels.

Beyond the S-100, Schie-bel is working on designs for a new VTOL UAV provisionally known as the S-200. It will be larger, with a flight endurance of more than 10 hours, and carry a 100-kilogram payload, effectively doubling the capabilities of the S-100. But unless a customer emerges, the S-200 is not expected to appear for another two to three years.

The company also plans to complement the Camcopter's electro-optical/infrared (EO/IR) sensor package with a new, bigger radar on the S-200. This will extend the surveillance capability beyond the 50-mile range of the Selex PicoSAR radar on the S-100.

In late 2010, Schiebel plans to offer the S-100 with a heavy-fuel engine as an alternative to petroleum. Also on the horizon is a U.S.-built EO/IR package to complement the five sensor packages so far integrated on various S-100 models.