The Aquila A 210

by Margreet den Hartigh

During the ILA in Berlin Anton van Rijsbergen and I were invited to visit the factory of Aquila in Schoenhagen near Berlin. “Aquila” stands for Eagle in Latin, which can be found in the coat of arms of Brandenburg and the Eagle also can be considered as the “king of the air”. In 1996 Aquila Technische Entwicklungen GmbH is founded by Peter Grundhoff, Alfred Schmiderer and Markus Wagner; all of them having a masters degree in Aerospace Design. Before this they were involved in the development of the Stemme S10 and other sports aircraft.

In 1995 they started their own project with the design and development of a 2-seat aircraft for traveling and training that had to be low priced in relation to its performance and friendly to the environment. After five years this resulted in the prototype of the Aquila A 210. Worth mentioning is the fact that the construction of the A 210 was based on an entirely computer-based design. Already during the maiden flight in 2000, done by Heiner Neumann with 30 years of experience as a test pilot, the A 210 proofed to be successful. “Das Flugzeug ist sehr gut gelungen” was one of his first impressions.

In 2001 the Aquila A 210 was certified according to JAR23 VLA (very light aircraft) allowing unrestricted VFR operation, after which the first production aircraft was delivered in 2002.
The A 210 is a single-engine aircraft in fiber composite construction. It is equipped with 2 side-by-side seats, low wings and a cruciform tail. The spacious, enclosed cockpit provides sufficient room even to tall pilots. Complete glazing of the canopy allows an excellent all-round vision, which is particularly advantageous during instruction and training. The baggage compartment is located behind the adjustable seats, which can easily be accessed through a door located on one side of the fuselage.

The triple-tapered plan form of the wings provides good flight and handling characteristics at minimum drag from cruise speed down to stall speed. The electrically operated Fowler flaps produces maximum lift in landing configuration, which results in low landing speeds and allows short landing distances due to appropriate drag production. The hydraulically operated 2-blade constant speed propeller is driven by a 4-stroke/4-cylinder piston engine of type Rotax 912S (100 hp). The aircraft has two integral tanks inside the wings with a fuel capacity of 60 l each; the cruising speed is 130 kts (240 km/h). A range of 620 nm can be reached at the most economical cruising speed. The possibility to operate the engine on mogas saves money.

During our tour around the factory it became clear that at present Aquila produces two A 210’s per month with 23 employees. If necessary they can deliver 3,5 per month without extending current facilities. The duration from placing the order till delivery of the A 210 is about 2 months. In May 2006 Aquila had built 51 A 210’s including the prototype. They do not deliver from stock, so all aircraft have been sold too except the one that is used as a factory demonstrator. It is not possible to order a dark colored A 210 as the glass-fibre reinforced plastic cannot withstand high temperatures. Aquila builds the instruments panel and takes care of the avionics themselves. An example, of which you will see a picture, hangs on the wall and showed us the complexity of instruments, cabling, etc.

The A 210 can be certified according to full JAR/FAR standards, but Aquila does not have plans to do so because of the related high certification costs. Certification according the
new American LSA standards is not possible due to fact that the empty weight is too high. In spite of the wing span of 10.3 m Aquila will not develop a motor glider based on the A 210 as they think this market is already saturated. As Schoenhagen is not close to all owners of an A 210, Aquila provides a 1-day maintenance course for mechanics so that a mechanic in your neighborhood can do the maintenance safely.

In The Netherlands one A 210 is flying for the Foundation Flying Material Avia Noord at Groningen Eelde Airport. In my opinion the A 210 is a nice plane for training purposes and also for having your own 2-seater, which is comfortable considering the price. So I wouldn’t be surprised at all if there will be more A 210’s in The Netherlands within a few years.