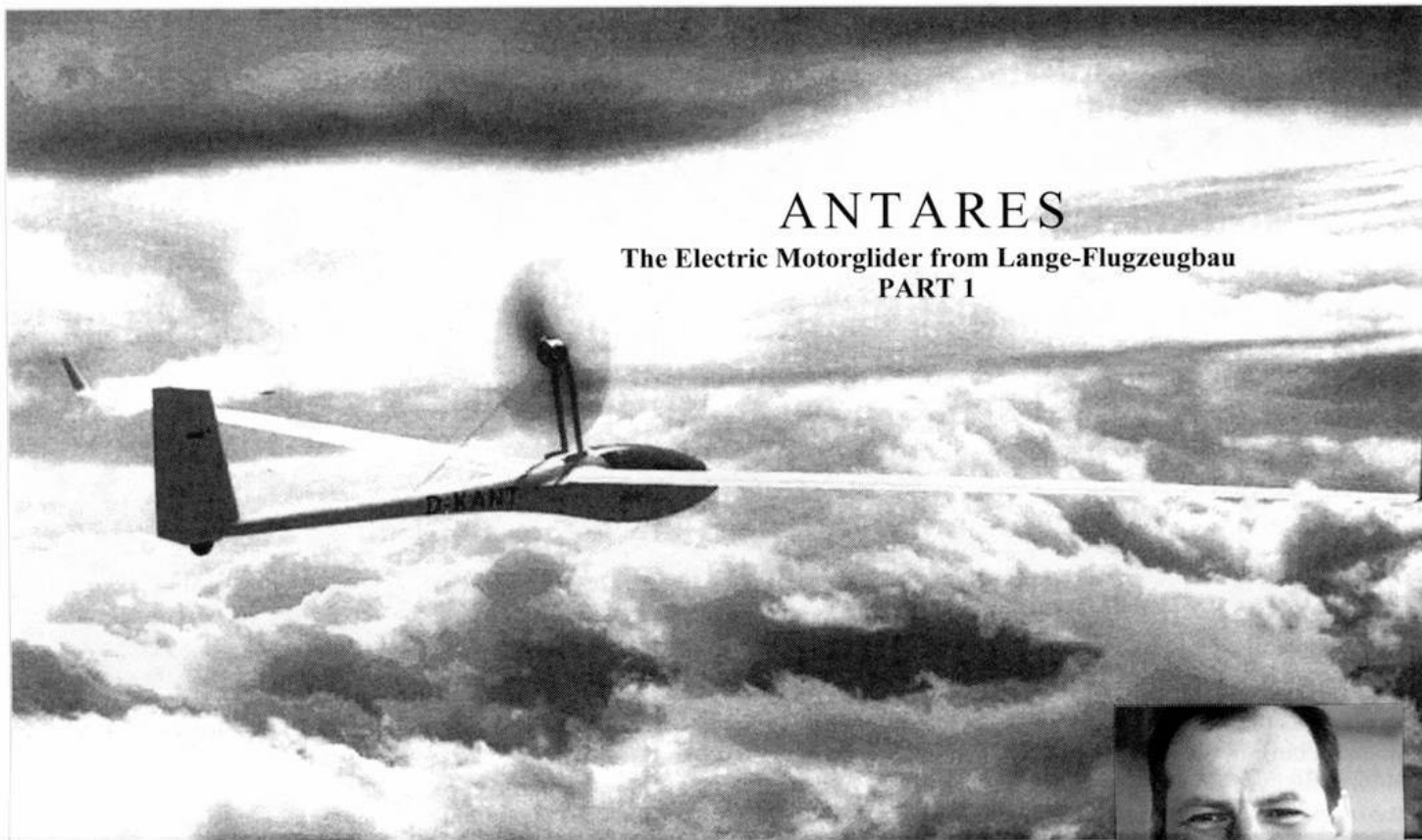


ANTARES

The Electric Motorglider from Lange-Flugzeugbau
PART 1



Antares, is a red supergiant star of the first magnitude and is the brightest star in the constellation Scorpio which is part of the Milky Way. It is 500 light years from Earth and has a surface temperature of about 3,500C. Was this name selected by Dipl. Ing. Axel Lange because this star is bright, big and hot? Perhaps, as his new electric powered sailplane shows great promise in the use of a relatively simple, silent and powerful method of propulsion. Couple this with an advanced state of the art low drag wing, tail and fuselage design and there is indeed something bright, big and hot going on at the new Lange-Flugzeugbau factory at the Zweibrücken Airport, Germany.

Most of the test flying is completed and there are, according to company information, 23 fixed delivery positions sold as of November 2000. Serial production is scheduled for Autumn 2001 with deliveries starting in 2002. It is reported that several world-class soaring pilots have **Antares** delivery positions. The aircraft has both 18 and 20 meter wings with winglets for the 20 M span. The structure is predominantly carbonfiber composite materials. The cockpit is designed as a survival space with a crash zone integrated into the forward fuselage. The power-plant is a 56hp brushless electric motor located at the propeller hub. The slow rotating propeller (1,500rpm) has a 6.5ft diameter. Nickel-Metal-Hydrid batteries are located in the wings. A single lever controls the motor speed and extension-retraction.

A large analog/digital cockpit display shows output, errors or warnings which are signaled both optically and acoustically. The **Antares** concept was designed and developed from the ground up as an electric powered sailplane by a team of experts: Aerodynamic Design and Wind Tunnel Research: Loek Boermans Associate Professor of Aerospace Engineering at Delft, Holland. Electric Motor: Professors R. Jeanneret and A. Vezzini of HTL Biel, Switzerland. Composite Structures: Joachim Lill, Production Specialist CNC Technology. The basic objective of this design team was to develop an ultra high performance electric powered sailplane with a rapid powered climb (944 fpm to over 8,000ft msl), an excellent glide ratio (18M-52, 20M-56), excellent penetration at high speeds (116-128kts), overall very pleasant handling characteristics, minimum induced drag (super ellipse wing), winglets on the 20mm span for further reduction in induced drag, forgiving stall characteristics, a high aspect ratio wing (32:1), minimal aerodynamic losses at the wing fuselage juncture, specifically designed wing airfoils (nine in all fine tuned to each other), a crash safety cockpit incorporating a Survival Zone (special stringers and spars surround the pilot). Price as of November 2000, not including trailer, is DM 208,500. Part II will contain detailed design features and specifications. More info? <www.Lange-Flugzeugbau.com> or <Lisa.Martin@Lange-Flugzeugbau.com> Tel: 011-49-6332-962720; Fax: 011-49-6332-962729.