

ETP-EXPRESS supports Neuron project

Neuron is a joint European project with the purpose to develop a UCAV-demonstrator (Unmanned Combat Aerial Vehicle) including aeronautical future cutting-edge technology. Neuron is one of the most ambitious and high profile aeronautical projects in Europe this decade.



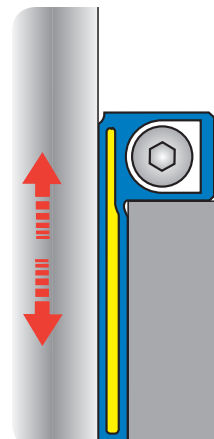
Neuron - scheduled for testflights in 2011.

Building an airplane from the inside out

SAAB Aerosystems, Sweden, responsible for the design and assembly of the fuselage, avionics and fuel system, has taken a different approach on the assembly procedure, rather than using traditionally methods. Building an airplane from the inside out. Can it be done? Yes, with the help of an innovative fixturing design new possibilities have emerged. A number of flexible fixtures, or "hexapods", are used to support the fuselage during assembly. As additional parts to the fuselage are added in the different assembly stages, new fixtures are added or moved to new locations on the structure, thus giving maximum support and also enabling an optimal accessibility around the fuselage for the operators.



Fuselage assembly.



ETP-EXPRESS - enables stepless adjustment of fixtures with high precision

Innovative fixture design

The hexapod fixture was, over some years, developed at the University of Linköping together with partners SAAB, Delfoi, ETP and other industries. The fixture, can through the six arm design, be adjusted into any position required. The keyless hydraulic hub-shaft connection, ETP-EXPRESS, designed and developed by ETP Transmission AB Sweden, fastens each arm. This enables a completely stepless length adjustment and positioning of the fixture. As the hydraulic ETP-EXPRESS when mounted only expands in the radial direction against arm and hub, no axial displacement occurs and the adjusted position will be maintained with high precision. High precision needed for the fuselage assembly.



Fixtures can be adjusted into any position required.

For the future

The project will produce an unmanned aerial vehicle to serve as a technology demonstrator. It will never be produced in series or be operational. However the main attractions of the Neuron project are the new technologies, experiences and knowledge being developed as a part of the project. Technologies adaptable to the next generations UAV aircrafts.



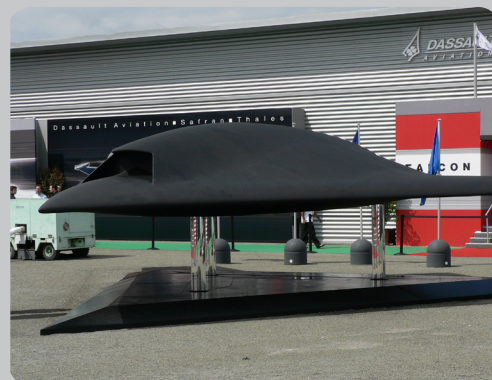
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hydraulic hub-shaft connections are today the normal way to connect machine parts for high precision and ease of mounting.



Facts on the Neuron project:

Neuron is being jointly developed by France, Sweden, Italy, Spain, Greece and Switzerland. The participating aviation industries are Dassault, who are leading the project, SAAB, Alenia, EADS-CASA, HAI, RUAG and Thales.



Mock-up of the Neuron as shown on the Paris air show.

The craft:

Crew:	0	
Length:	9.3	meters
Wingspan:	12.5	meters
Weight:	6 700	Kg
Max. flight time:	3	hours
Max. speed:	0.9	Mach