



Project description

FK133 "Jungmeister"

The **FK133** design is based on the *Bücker Bü133* design.

The original Bücker 133 was designed 1935 as a world class light acrobatic aircraft (425kg empty) equipped with a seven cylinder 160 hp *Siemens Halske SH14* radial engine.

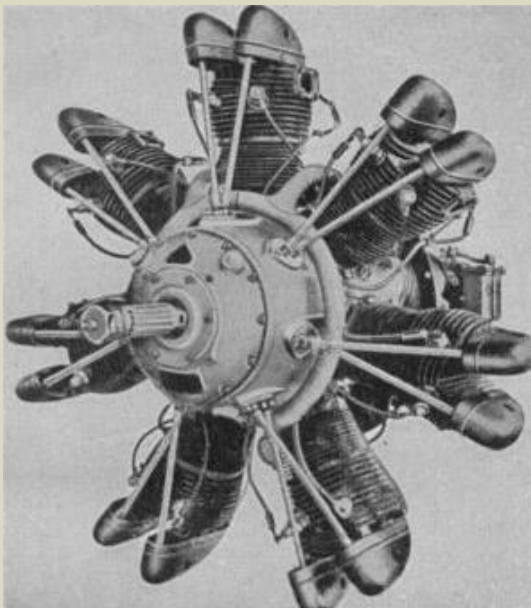
Concept

The idea of the new *FK133* is to have a replica matching the size and the look of the original aircraft, but been more modern in terms of design and construction by having the same or better power-to-weight ratio!



Power

The *FK133* is powered by a seven cylinder *Scarlett 7Si* radial engine. This engine has a comparable max.continuous power output compared to the original Siemens Sh14 engine. The Scarlett provides features such as fuel injection system, electronic ignition and others.



Siemens SH14

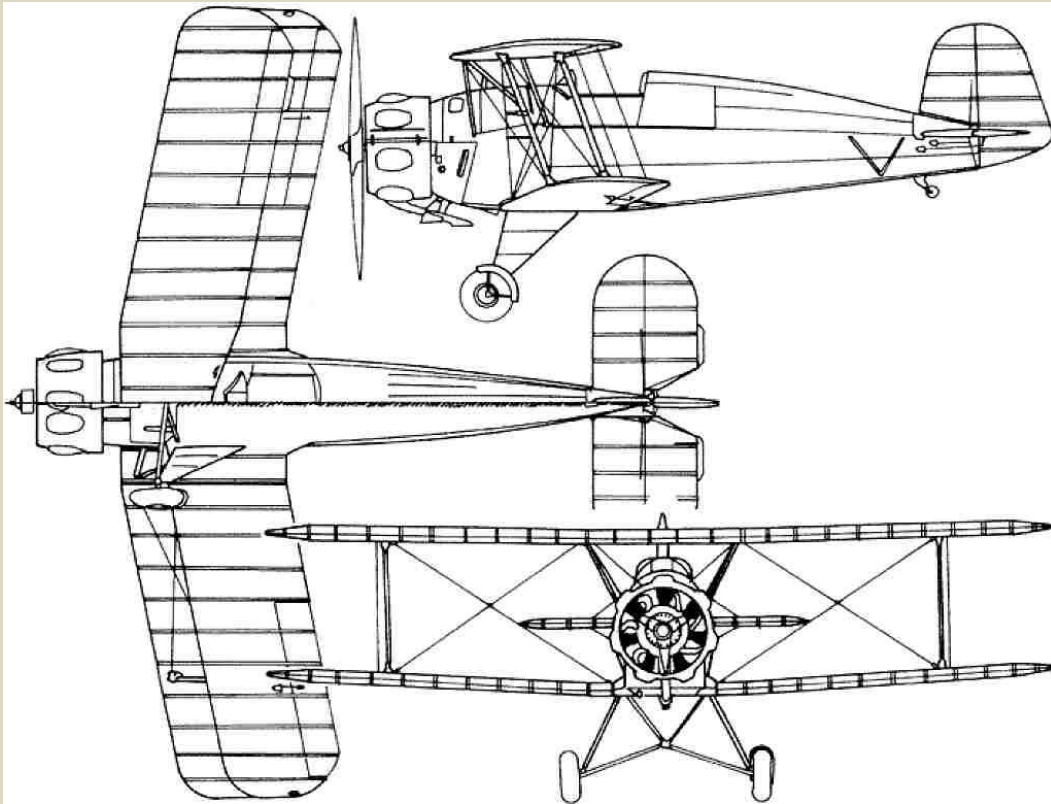


Scarlett 7Si

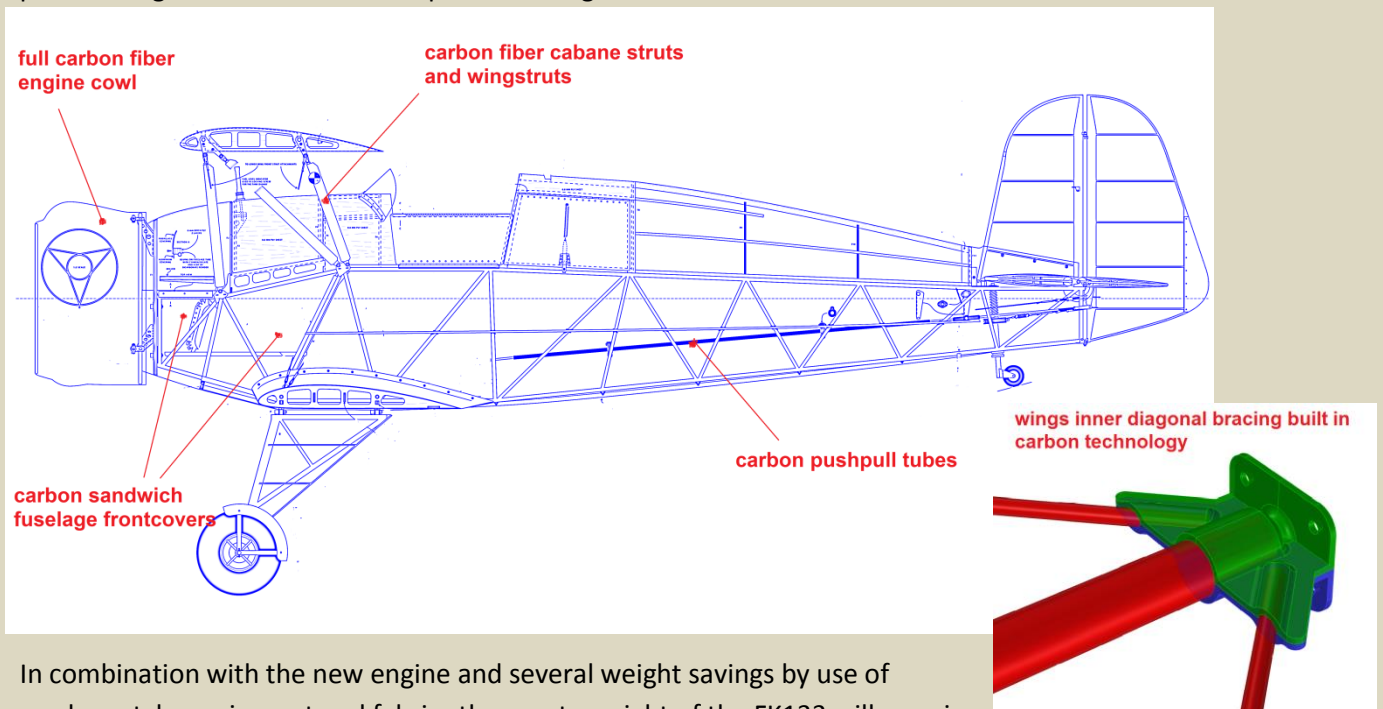
Due to its about 80kg (170 lbs) lower weight the FK133 provides a power-to-weight ratio better than the one of the original Bü 133 Jungmeister

Airframe

The basic structure remains a steel tube fuselage with wooden wings and in so far very comparable with the original design. Many parts such as wingpanels, tail, landing gear asf. are used from the FK131 (Jungmann), just showing minor modifications to match the Jungmeister dimensions.



Some parts of the inner structure, flight controls and fairings are made out of carbon fiber. This will provide a lighter structure with improved strength.



In combination with the new engine and several weight savings by use of modern style equipment and fabrics the empty weight of the FK133 will remain significantly below the Bü133!

FK133 weight calculation (raw breakdown):		
(in compare to FK131)		
1.	FK131 rtf empty weight	300 kg
2.	saving on FK133 airframe (smaller than FK131)	-5 kg
3.	weight difference Scarlett to Walter Mikron	25 kg
4.	larger propeller for Scarlett	4 kg
5.	inverted fuel system with crash protection	6 kg
6.	BRS 1350 versus 1050	3 kg
7.	other differences	7 kg
total calculated empty weight:		340 kg
Empty weight of Bü133:		425 kg

The breakdown above makes the empty weight of FK133 very comparable to a Pitts S1.

The structure is designed for unlimited acrobatics.

Safety

The aircraft is equipped with an emergency rescue system from BRS! The fuel tank system has a special crash protective system as used in modern race cars!

Project planning

The first production of 10 aircraft will be a “quick-build-kit” so they could qualify as Experimental. The first three kits will be built in 2016 and sold at a special introduction price.

Target

The new FK133 Jungmeister will be a proud grandson of its original predecessor. *FK133* features an up-to-date engine where parts are available and affordable, a ballistic parachute system and a modernized airframe-design. That means having much less obligations and requirements compared to the operation and maintenance of an old *Bücker Jungmeister*. On top all costs will remain far below than what you would have to pay for buying and maintaining an old Swiss or Spanish license build Jungmeister – there are only a handful of original Bücker (German) build Jungmeister existing today...

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