Alexander Schleicher Segelflugzeugbau

90 YEARS

1927

Experience · Innovation · Progress

2017

90 Years of Alexander Schleicher Segelflugzeugbau

Since 1927 Alexander Schleicher Segelflugzeugbau has manufactured safe and efficient sailplanes and motor-sailplanes hand crafted from the highest quality materials.

With our 125 employees we are today the world's oldest sailplane manufacturer. Over 9500 aircraft have been built in our workshops.

Alexander Schleicher founded the business in Poppenhausen at the foot of the Wasserkuppe with the vision to make peoples' dreams of flying real and with that he laid the cornerstone for today's business.

Everything began at that time with the construction of wooden sailplanes developed by a variety of outside designers. Right after the re-commencement of aviation in Germany in 1951, it was possible for the firm to engage its own full-time designers.

Our aircraft reflect the long experience of our employees as well as the innovative power of the company as a whole, resulting in the intelligently constructed products which can be marvelled at in the air today.

Edgar Kremer, Winfried and Werner Schleicher have carried the firm forward along the lines of Alexander Schleicher's original vision. Today the company is already led by the third generation, the founder's grandsons, Peter and Ulrich Kremer.

Photo: Arnulf Müller

Ulrich, Peter and Edgar Kremer

Alexander Schleicher

*22. Mai 1901 †26. April 1968

Soaring Pioneer

Company Founder

Visionary

The Schleicher team
in March 2017

Photo: Arnulf Müller

Milestones

Over 8400 aircraft since the new beginning in 1951


Grunau Baby III


ES 49


Rhönlerche I


Condor IV


Ka 2 / Ka 2b


K 6 E

A total of 1228 Ka 6s in various models were built at Alexander Schleicher.

Heinz Huth becomes world champion in 1963 with the Ka 6 CR.


K 7


ASK 13


Photo: Paul Anklam
ASK 14


ASW 15 / 15 B

The much-loved club glider is built 875 times, as well as another 337 under license.

In 1968 Karl Striedieck even set a new world record in a K 8 B.

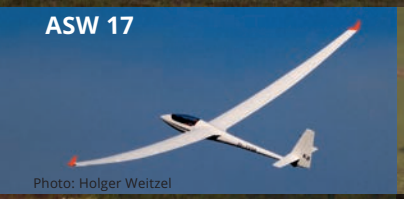


Photo: Holger Weitzel
ASW 17


Photo: Peter F. Selinger
ASK 18


Photo: Peter F. Selinger
ASW 19


ASW 20 / BL / CL


ASK 21


ASW 22


AS 22-2

With 761 aircraft in various models the ASW 20 becomes one of the most successful sailplanes among all Schleicher designs.


ASK 23


ASW 24


ASW 24 E


ASH 25

Developed from the AS 22-2, Martin Heide made the ASH 25 into the most successful Open Class sailplane of all times, with 266 examples in various models.


ASH 26 E


ASW 27


ASW 28


ASW 28-18 E

Rudolf Kaiser's first design for Alexander Schleicher – the beginning of an extremely successful collaboration.


Ka 4 Rhönlerche II

Photo: Jochen Ewald


Ka 6

Ka 6 B / BR

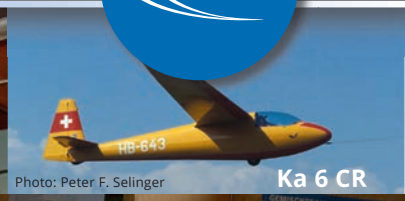


Photo: Peter F. Selinger
Ka 6 CR

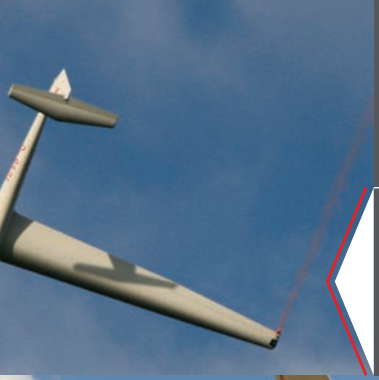
K 8 / K 8 B


K 10

K 11

ASW 12


ASK 16



Rudolf Kaiser's masterpiece.

The first Alexander Schleicher two-seater motorglider still has its fans today.

With the successor of the ASK 13 the age of wooden gliders comes to an end at Schleicher.

950 examples of the ASK 21 have been built up to today.

ASK 21 Mi

Gerhard Waibel's first design and the start of the fibreglass age at Alexander Schleicher – today its home is at the soaring museum on the Wasserkuppe.

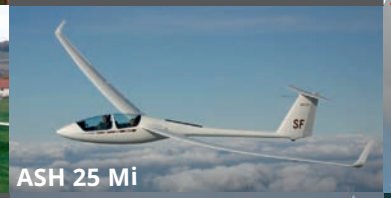

ASW 22 BL

In 1987 Ingo Renner opens the triumphant successes of the ASW 22 B at world champion-ships.
Eight times pilots became world champions with this sailplane.

ASW 22 BLE

ASG 29


ASH 25 E



ASH 25 Mi

National champion, European champion and World champion...

ASG 29 – domination in the 18m class.


ASH 30 Mi

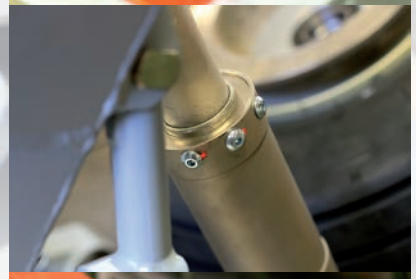

ASH 31 Mi

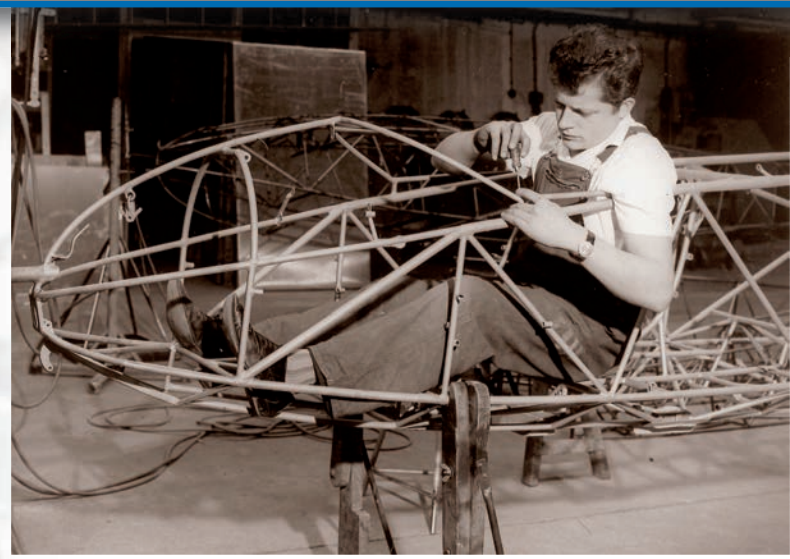
ASG 32 Mi

Controls, Landing gear, Handles & Co.

We manufacture almost everything ourselves...

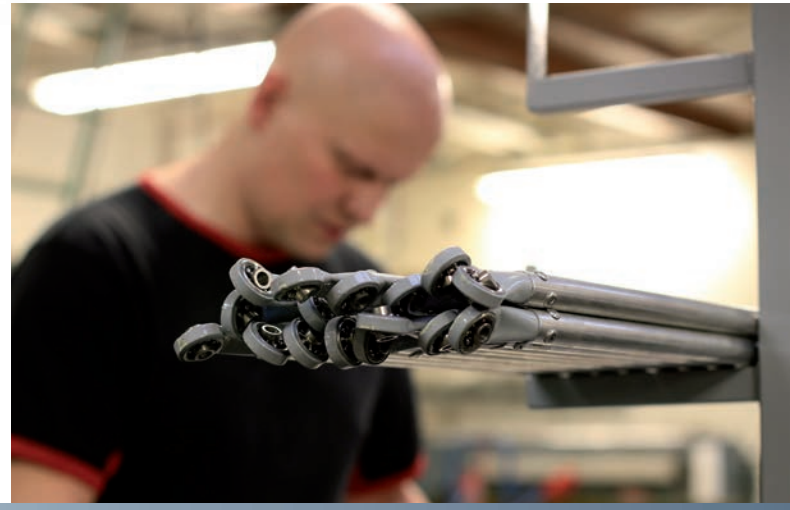
Hightech meets craftsmanship





It has always been our company philosophy to manufacture as many aircraft parts as possible ourselves.

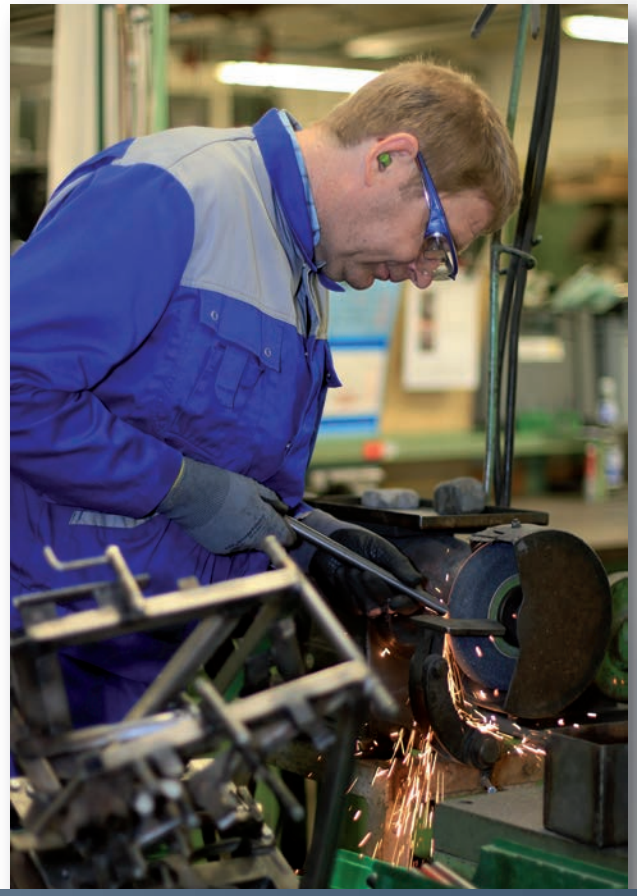
Nothing has changed in this respect. Flexibility, absolute control over the manufacturing process and trouble-free spare parts delivery, even for decades old aircraft, are only a few of the advantages.



Aircraft Manufacturing

Qualified and engaged employees, often with many years of service, manufacture high quality and durable aircraft parts.

The interaction of technical know-how and seamless quality control by experienced inspectors provides a high degree of production quality.



Even though handcrafting products on this scale is rare in industry today, it is for us - with our quantities far removed from mass production - the most appropriate method to manufacture the metal parts for our aircraft.

We see ourselves as a manufacturer rather than as an industrial concern.

Here all employees are still able to create something with their own hands.

Instruction, Practice, Aerobatics

2145 instructional aircraft built from 1951 to 2017

A good training aircraft - the beginning of every soaring career

The production of robust, docile and practical instructional aircraft belongs to the tradition of Alexander Schleicher Segelflugzeugbau.

Following the Ka 2, K 7 and ASK 13, the ASK 21 is meanwhile one of the most constructed sailplanes. Almost every sailplane pilot around the world has at one time or other sat in one of the 950 examples of this type built to date.

ASK 21 the aerobatics trainer

The two-seater Ka 2 was Rudolf Kaisers first commissioned design for Alexander Schleicher. With the Ka 2b in 1955 the span was increased to 16m.

The K 7 was the third aircraft type since the founding of the company which Alexander Schleicher named "Rhönadler.

Up until stopping series production, Schleicher built a total of 617 ASK 13s, with a further 77 built under license at JuBi in Oerlinghausen.

The ASK 21 also offers people who are leg handicapped the opportunity to fly gliders. The rudder is actuated by an additional lever on the left side of the cockpit.

With the self-launching ASK 21 Mi, flying during the week is easier since fewer helpers are required and waiting for a towplane is eliminated. Cross-country flying is made possible for relative newcomers or during uncertain weather conditions.

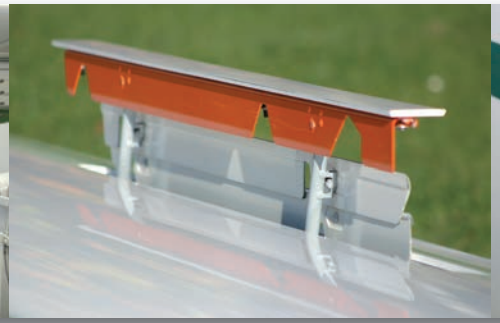
ASG 29 - Domination in the competition classes

Whether Standard class, FAI 15m or 18m class – Pilots flying Schleicher sailplanes have the best chances to win.

The ASG 29 is representative for all aircraft in these classes. Pilots around the world are winning innumerable national and international titles.

Constant improvements in details provide pilots time and again with decisive advantages in competitions.

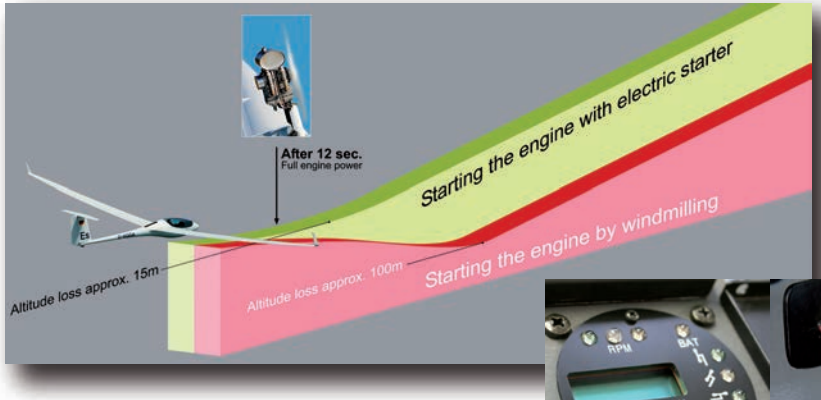
ASG 29 - simply a champion.

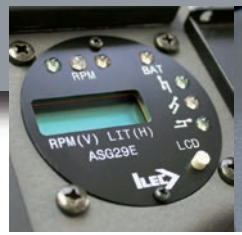



ASW 27 B


ASW 28-18 E

Performance oriented, easy to fly – pure flying enjoyment.





In order to minimize height loss during engine starts, the engine of the new ASG 29 Es has been equipped with a starter motor.

In addition to starting the engine, the starter motor also takes over the propeller brake function and vertical propeller positioning during engine retraction. This reduces the operation to the activation of one switch in the cockpit.

It takes only 12 seconds from the start of extraction until the engine is operating at full power. After activating the switch retraction is also fully automatic.

Compact Open Class

Already 150 times long-span feeling with 21m span

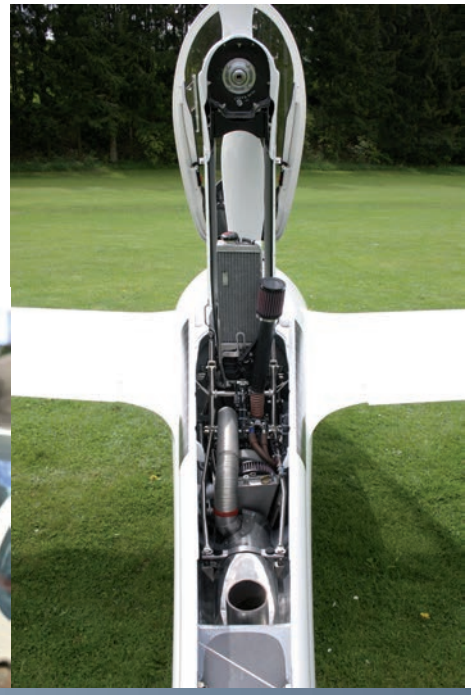
ASH 31 Mi -
the invention of a new class

The decision to further develop the popular self-launch capable ASH 26 by adding the aerodynamic performance potential of the ASG 29 has proven itself to be correct.

So far more than 150 ASH 31 Mi have found enthusiastic owners. At the same time the “31” became the precursor of the 21m aircraft in the Open Class.

Open Class feeling
with compact dimensions

The Wankel engine, originally designed for the ASH 26 E, and refined by the addition of electronic fuel injection, makes this motor glider into an independent, comfortable and powerful self-launcher.



18m and self-launch: Yes, that's also possible!

This possibility extends the ASH 31 Mi range of application:

Self-launch capable with the short wing extensions and with high wing-loading for flying in the 18m class.

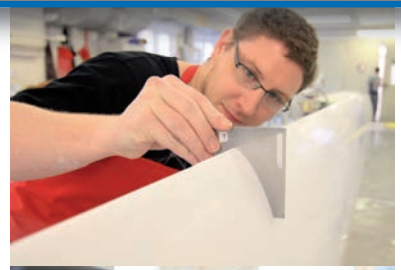
Dreams are created through the use of fibre-reinforced plastics and resin.

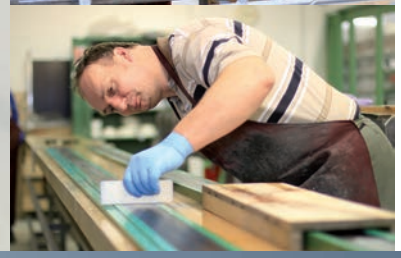
Innumerable steps are required until a sailplane leaves the workshops. First the different departments must create the components and parts from which a complete sailplane is constructed after many hours of work.

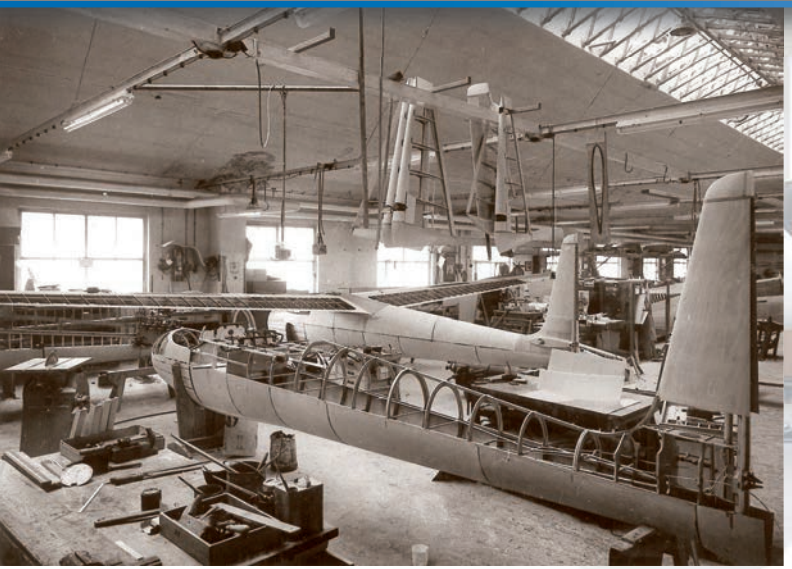
Fuselage construction
Wing construction
Tailplane construction
Metal parts construction
Engine assembly
Spar construction
Small parts construction
Rough assembly
Painting
Final assembly

It is of great importance to us to foster a passion for aircraft construction among young people.

Sound, many-faceted and practical training is the guarantee for developing qualified, young employees from within the company.





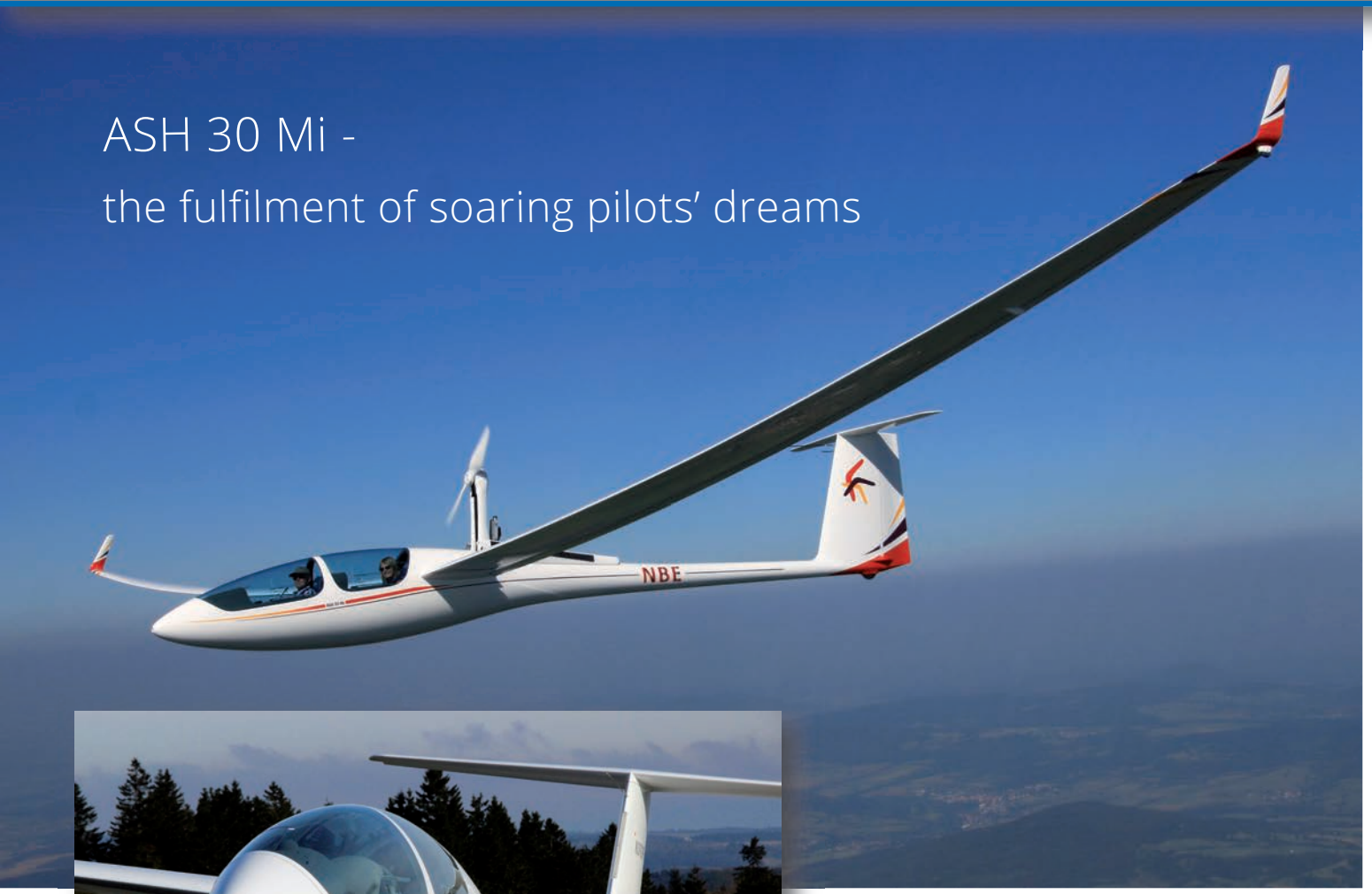


Staff with many hundreds of years experience

A top quality product can only be created if you have staff who know how to achieve the end results.

Often our staff members spend their whole working careers with the construction of sailplanes. A treasure of experience and continuity which benefits the product quality and enables our customers to fulfill their flying dreams.

ASH 30 Mi -
the fulfilment of soaring pilots' dreams



A succession

The ASH 30 Mi continues the successful series of Open Class Alexander Schleicher sailplanes, starting with the ASW 12, to the ASW 17 and ASW 22, right up to the ASH 25.

ASW 22 BLE

ASH 25 Mi

Ingo Renner, J.C. Lopitaux, Janusz Centka, Gérard Lherm, Oscar Goudriaan and Michael Sommer made the ASW 22 BL into a world champion sailplane. Hans-Werner Grosse, Terry Delore, Steve Fossett, Theo Newfield, Manni Albrecht and some other pilots set world records with the ASH 25.

Top quality craftsmanship

With the ASH 30 Mi a sailplane pilot obtains a sailplane constructed with the most exacting craftsmanship, an aircraft which opens up unlimited possibilities and intelligently combines the fine characteristics of a single-seater with the advantages of a two-seater.

Sailplane, Self-launcher and Electric Propulsion

The latest presence in the 20m two-seater class:

ASG 32

That's also the name of the sailplane. As a self-launcher with a Wankel engine it adds the suffix "Mi". The forward-looking Electro sailplane carries "EI" in its name.

All ASG 32 variants have a most modern aerodynamic layout in common. In this respect, the experience and findings gained with the successful ASG 29 were systematically applied.

The wing profile of the ASG 32 is especially noted for its climbing ability, also at higher wingloading which is particularly beneficial for the motorized versions.

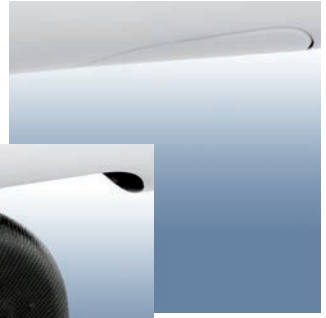
Colour in play

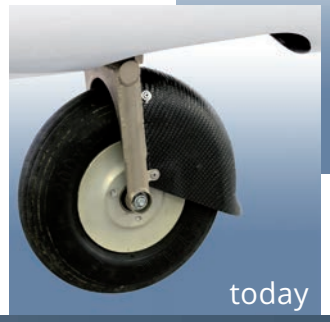
The ASG 32 is the only series-built FRP sailplane in production today which can be painted in various red/orange colours. That now makes it possible to apply these colours to large sections of the fuselage, tailplane and wings.

Innovative – performance optimized

The first retractable tailwheel was already developed for the ASW 20.

Innovative solution for the ASG 32:
No bothersome doors which can be easily damaged in grass -
and in addition, steerable.





A suitable engine for every application

Here also we decided on in-house production

Motorization in sailplanes has become an integral part of the sport today. The desire of many pilots for independence from weakening thermals, towplanes or winches has become ever greater.

After a short period of using acquired motor systems, Schleicher quickly decided to develop their own propulsion systems. Gradually, a variety of systems for different applications were produced.

For self-launching it was decided to employ the Wankel engine, which by now has been installed in six different aircraft types – far over 500 of these systems have been manufactured so far.

A two-cylinder sustainer engine was developed for the narrower fuselages of the ASW 28-18 and the ASG 29.

All components around the engine itself are built in-house, beginning with the control elements, the extraction and retraction mechanics, the muffler, and up to many other parts right to the propeller.

Particularly forward-looking is the development of our first electric sustainer propulsion system by a Schleicher led consortium, including the University of Kassel, the University Baden Württemberg at Mosbach and other companies.

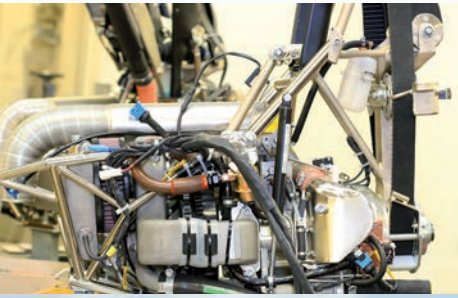
Self-launcher

Low vibration levels, compact, powerful -

the advantages of the Wankel engine applied to motorized sailplanes are clear.

Simple, easily managed engine operation is an added benefit. The fuel injection system and the electronic engine controls, combined with the specially developed propeller also provide performance gains.

This propulsion system has clear advantages in comfort, reliability and longevity over other systems currently on the market.



Sustainer

Equipping aircraft with narrow fuselages with sustainer engines argues for the installation of a compactly designed, light, small two-cylinder, two-stroke engine, directly coupled to the propeller.

The clearly greater range achieved through economical fuel use and the lower noise emissions are the decisive advantages in comparison with jet propulsion systems, for example.

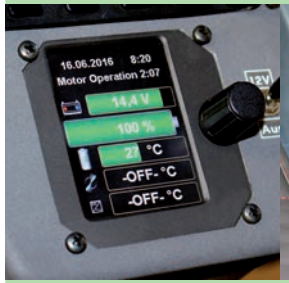
Because of the simplest possible engine operation only 12 seconds are required from engine extraction to the availability of full power.

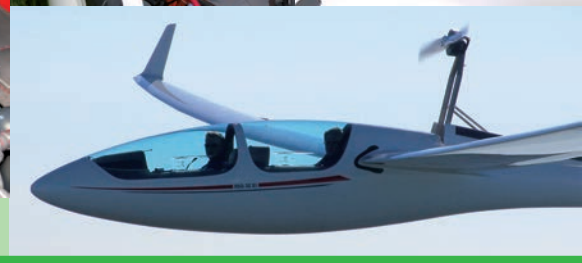
Electric Propulsion

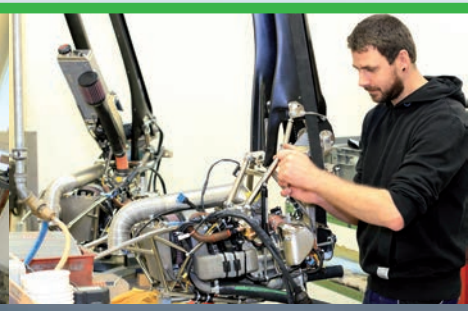
Simple operation and extremely low noise emission, even inside the cockpit, speak for an environmentally friendly electric drive.

We took a big step towards the future with the development of this engine variation, laid out as a sustainer, with its high voltage battery fitting into the engine bay of the Wankel engine.

20 minutes of full power of this 25kW-motor provide a practical climb rate of 1.3 m/sec. and 100 km additional range for the large two-seater, which significantly increases its operating range.







Construction & Prototype Development

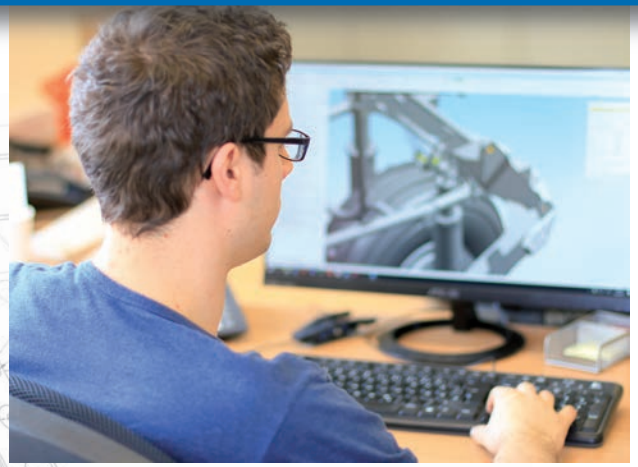
Looking forward, based on experience

How is a sailplane created?

Push the limits of what is feasible, constant improvement and optimization, go in new directions, build on experience, keep looking forward.

The development of a sailplane is far more complex than one might at first think. It is an interaction between a pioneering spirit, engineering know-how and research.

We, as sailplane manufacturers, have always and continue to be forerunners in the application of new materials or new manufacturing techniques, as well as a driving force in the area of aerodynamics.



Names such as Rudolf Kaiser, Gerhard Waibel, Martin Heide and Michael Greiner are closely connected with the development of individual aircraft types.

Rudolf Kaiser and Gerhard Waibel, "ASK" and "ASW"

Manfred Münch, Joschka Schmeisl, Dipl.-Ing. Paul Anklam, Dipl.-Ing. Martin Heide and Andreas Storch make-up the AS-Development team.

Teamwork in Development

Surrounding our highly qualified aerospace engineers is our own development team, acting as ideas generator and converter of ideas into reality.

In close collaboration with the experienced craftsmen in our own prototype division, we continually come up with innovations and improvements. The goal: to perfect our aircraft so that the adventure of soaring becomes unforgettable.

Proven in Practice

A comprehensive flight test program is part of every new development.

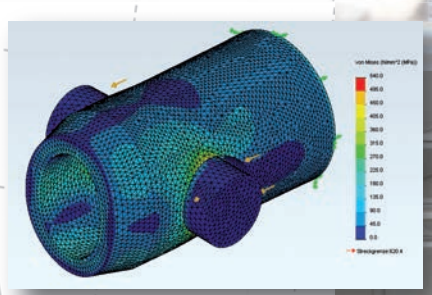
The in-flight behaviour of the sailplane is thoroughly investigated in many configurations and loading situations.

Modern development methods have long replaced drawing boards. Today, 3D modelling of aircraft components and productions tools is the technical norm.

Complex calculation procedures form the basis for weight optimization, safety and longevity.

The application of CNC milling techniques permits high precision manufacturing of the required mould components - guaranteeing absolute profile accuracy.

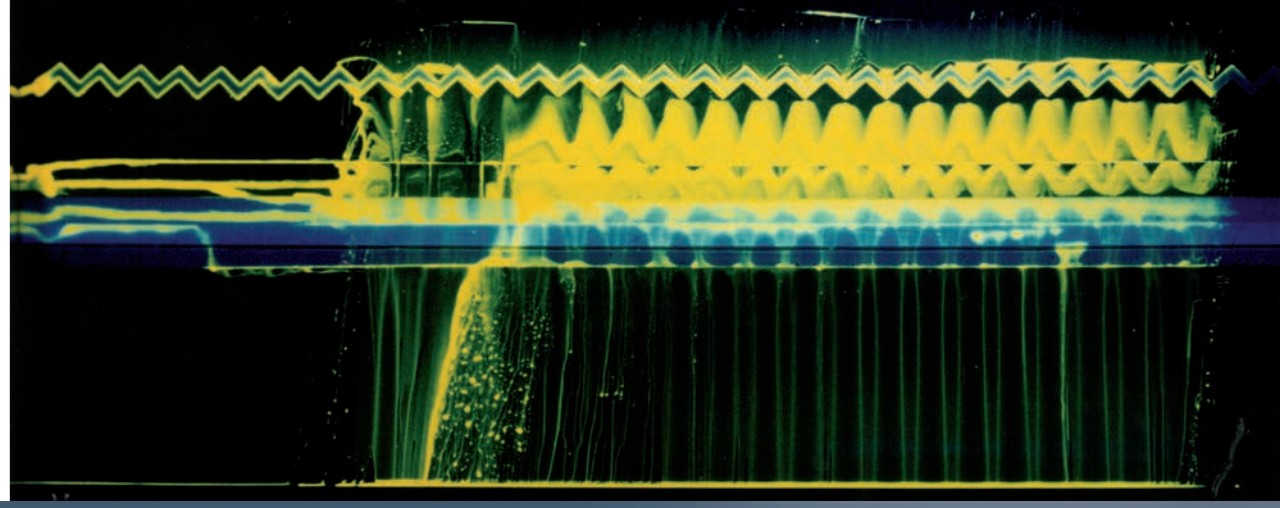
A large number of various checks and load tests verify previously performed theoretical calculations.



Exact manual implementation during the prototype and mould construction process guarantees a high manufacturing quality for subsequent series production.

On-going Research and Development

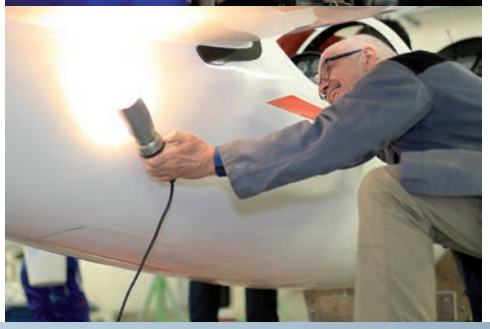
The collaboration between research institutes, material manufacturers, aerodynamicists as well as cooperation in some areas between manufacturers results in on-going further development of our sailplanes.



Final Assembly, Final Acceptance, Cleared to Fly

Now it becomes exciting once more...

Bug wipers, oxygen system, ACL, transponder antenna, GPS, water ballast, Flarm, final glide calculator, blow holes, zig-zag tape, compass compensation, leather cockpit interior, extra battery, centre of gravity weighing and calculations, control surface adjustments, high gloss polishing, avionics testing, tail dolly, yaw string...



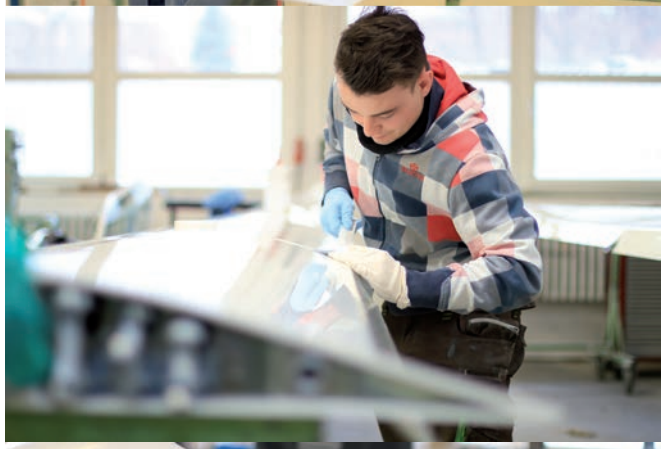
It is highly unlikely that our company founders would have been able to imagine in their wildest dreams what a sailplane looks like today.

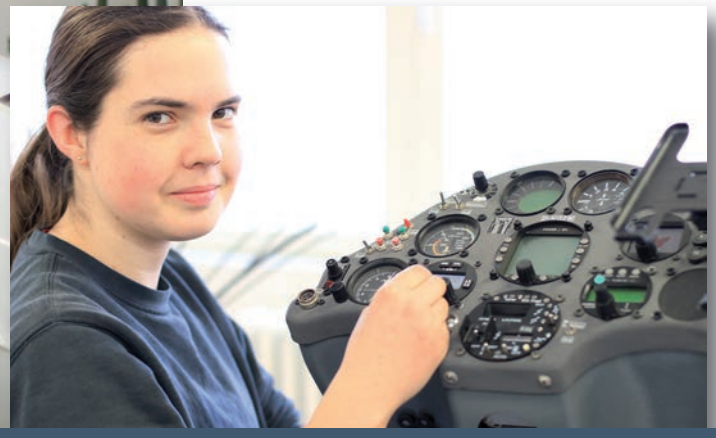
Manufactured of high tech materials, packed with the most modern technology, it has little in common with the wooden aircraft of the first decades in gliding history.

Even though innumerable checks and tests have already been done during the whole construction process, nothing is left to chance even now. Before an aircraft is allowed to leave the factory floors everything is thoroughly re-checked again: final acceptance.

It is always fascinating when an aircraft stands completely assembled in the final assembly hall, equipped with all its instruments and possibly with a fine leather interior - a moment full of awe for every glider pilot.

Only when all of our high expectations of quality are fully met will the company doors open and the aircraft lift off for the first time from the company airfield "Huhnrain".





Spare parts for 60 year old airplanes?

We are able to supply spare parts for our airplanes for many years.

Many customers remain loyal to us for many years and find us to be reliable partners, including after purchasing an aircraft.

Normally, we stock all parts and consumable materials so that an aircraft can get back into the air as quickly as possible.

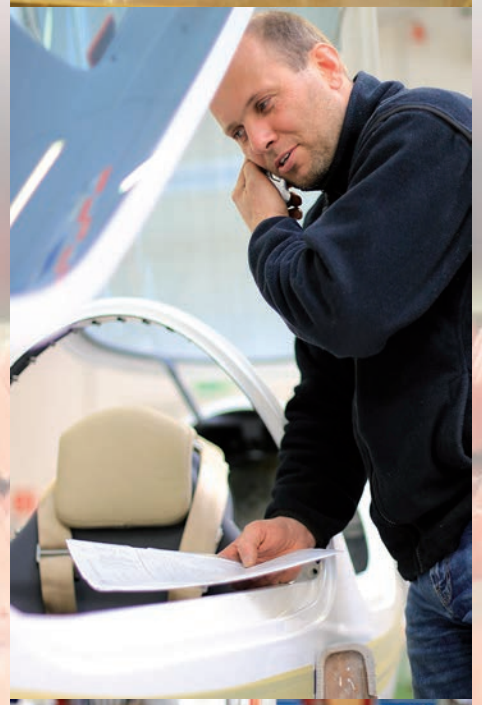
Our service team dealing with spare parts, repair, warehousing and shipping will always do their best to provide quick and uncomplicated assistance worldwide.

Service

Airworthiness checks

Engine service

Repairs



A worldwide network of representatives and service organizations is available to our customers around the globe.
With the assistance of our service team we provide worldwide on site service support.

www.alexander-schleicher.de

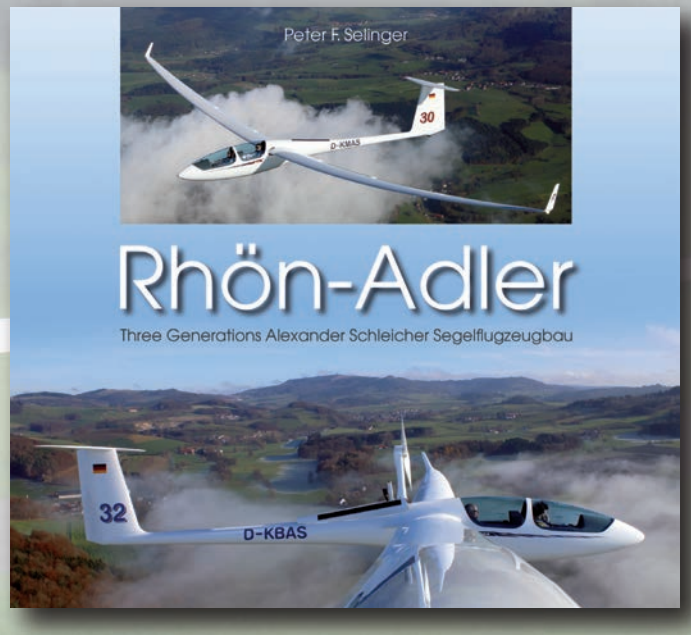
Our current model line-up...

90 YEARS

Instruction and Practice	**ASK 21** **ASK 21 Mi**		17m Span, Aerobatics and cloud flying, Also as a self-launcher
18m and Self-launching	**ASH 26** **ASH 26 E**		Touring soaring flight, Performance, Independence
Standard Class / 18m	**ASW 28** **ASW 28-18** **ASW 28-18 E**		Variable 15m / 18m, Also with a sustainer
FAI 15m and 18m	**ASG 29** **ASG 29 E** **ASG 29 Es**		World Champion sailplane, 15m and 18m span, Fully automatic engine controls
Open Class	**ASH 30 Mi**		26.5m span, Two-seater and self-launch capable in the super class
21m and Self-launching	**ASH 31 Mi**		Open class feeling with 21m span, Also with 18m span
20m Two-seater	**ASG 32** **ASG 32 Mi** **ASG 32 El**		Sailplane, Self-launcher, Electric propulsion

The history of the sailplane manufacturer Alexander Schleicher is vibrant and diverse. The author, Peter F. Selinger, has already accompanied this development for many years.

In the 376 pages of the by now 3rd edition of the Schleicher book "Rhön-Adler" he offers a deep insight into the history of the company from its founding until today.



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