**Cautions for Ka-6 Pilots**
The spoilers are NOT spring loaded shut, know the 'your spoilers are opened' towing signal.
The canopy release looks a like the tow release. Sort out which is which before you fly it.
A weak link is required, the standard Schweizer hook doesn't work.
The Ka-6 weak link (normally stowed in the cockpit) will connect to a Schweizer hook, but won't release at the end of tow.
Please make your first few touch downs with a maximum of half dive brake. The dive brakes are very strong, a bit of practice is needed to time the flare for a full spoiler landing.
When you put the canopy on the ground, make sure the window is not pinned under the frame. It may break if you put it down without holding the window up.
During ground handling, do not pull by the wing tips. Take off the canopy and pull from the bar in the cockpit.
**The following is transcribed from the english translation of the Ka-6 manual..**

# Handbook for sailplane

## Schleicher Ka 6 "Rhonsegler"

A. Main Data
B. Minimum Equipment
C. Adjusting Data
D. Rigging and Derigging
E. Flying Operations
F. Maintenance
G. Center of Gravity

Enclosures:
1. Outline Drawing
2. Drawing with weighing instructions

## A. Main Data

Weights: Empty Weight 400 lbs
Heighest possible Disposable load: 265 lbs
Highest permissible Weight of non-lifting Parts 420 lbs
Permission for:
Bungey launch yes
Auto- and winch-tow until 55 knots
Aero-tow until 75 "
Max Speed at calm air until 110 "
Max speed at rough air until 75 "
Primary Training no
Stalls & Spinnings yes
Stressing-Category 2 as per BVS

# B. Minimum Equipment:

- Safety-belt and shoulder-harness.
- Airspeed indicator ranging from 30-110 knots
- Altimeter
- Back-cushion with rigid filling 4 inches thick (when compressed), if no parachute is taken along.
- Trimming-plane.
- Data-plate.

# C. Adjusting Data:

The adjusting and washout angles as well as the deflections of the control surfaces are shown in the outline drawing.
At repairs it is to be taken care of that the tolerances are being observerd.
By the particular kinematick of the control mechanism the aileron deflection will be influenced by the elevator. With normal and pushed control stick the ailerons must be balanced (stand normal). With pulled control stick they are a little bit zoomed.
The controls have stops:
Rudder-Control: Fixed stop in the rear at the below rudder hinge
Aileron Control: Fixed stop of the control shaft at frame 5
Elevator-control: backward – fixed stop at the seat, forward – adjustable stop at the control shaft
Airbrakes: backwards: Is stopped by the cable of the wheel brake. Adjusting by the turnbuckle.
Forwards: fixed stop, coss-shaft lever stops at plywood block on frame 11 behind.

# D. Rigging and Derigging:

## Rigging:

1) Clean and grease bolts and holes
2) First put left wing in from the side and put in nose-bolt. Do not tilt fuselage.
3) Put in right wing as mentiond under 2
4) Below main-bolt (long handle) to be put in, holes must range.
5) By exact adjusting of wings also the upper holes to be ranged, and put in main-bolt.
6) Main-bolt to be secured with a safety-needle.
7) Aileron-and airbrake-lingages to be joint and secured with safety-needle.
8) Set up elevator unit, front scrwe to be fastened and secured with safety-needle. When setting up the unit pay attention that tcontrol-surface-bellcrank has been put in unobjectionable. Danger for bending the push-rod-rocker by using force.
9) Check-up of controls, airbrake-release hook (automatic jack of release hook) for free movement and function. Inspection for foreign bodies (substances).
10) Set up slot covering.

## Derigging:

Point 1-10 in opposite sequence.
Grease all connexions, danger of corrosion.

# E. Flying

## Trimming

The glider can be flown with pilot-weights of 140 lbs until 220 lbs, with parachute 130-220 lbs. Persons of less weight have to carry ballast (lead sheets as seat-pad). For adjusting the desired stickforce there is a spring trimmer at the stick installed.

## Adjusting of rudder pedals:

Draw back pedals with heels and adjusting-limb in control cable to be put into click-stop. Adjusting also possible during flight.

## Winch-tow

Preset braking piece No II. Max speed 55 knots. Note: In winch-tow pulling means the same as speed increase. At the take off push a little, best pitch-ratio with stick in normal position. Winch-tows only at the c.g. hook.

## Aero-tow

Preset breaking piece No I
Maximum speed 75 knots. Normal tows at nose-hook. Aero-tow at the c.g. hook is permissible when using texile-ropes of max. 100 m (300 ft) length. No experiences on hand about tow at very rough air (wave towing). Release to be bulled through complete!

## Before every take off

Make sure that cockpit and airprakes have clicked in.

## Free flight

The data mentioned here are ascertained by calculation. They refer to the real flying speed (EAS). There is the position-error to be taken into consideration. See fig. 1
Take note that at stronger side-slip the speed indicator will drop to zero due to the lateral incidence of fuselage.

Stalling speed at 570 lbs all up weight = 31 knots.
The lowest sinking speed in straight flight is approx. 37 knots, the best gliding angle at 43 knots.
In turns, the lowest sinking speed is:
30 deg bank 39 knots
45 deg bank 43 knots
60 deg bank 51 knots
Just below of these speeds stalling begins, the sinking speed will increase quikcly. For the beginning it will be advisable to take 43 knots as normal speed for the straight flight as will be for moderate bank in turns.
In thermal cross country flights the optimal speed for straight flight is at 48 knots, if the average climb in the thermal will be 1,6 ftps: corresponding to 65 knots at 6 ftps climb.
Here it is supposed that no lift or down drafts region will be crossed.
These data are only approx. data, but deviations of the optimal speed of 6 knots will reduce the average speed only little.
The speed-noise is unusually small, therefore it is difficult at the beginning to hold the speed by the noise.
The control forces and ways are small and demand a certain care at retraining, when coming from a more inert plane. After being accustomed this point will be found as very pleasant and on longer flights as non getting tired.

## Landing

Approach with about 45-50 knots. With the brakes the gliding angle can be adjusted in wide limits. The touch down will be done with airbrakes not fully opened and not pulled too much. Full pulling of the airbrake-lever will put the wheel brake into operation. The stick must also be pulled wholly in order to avoid getting on ground with the nose.
The glider can be hold with the rudder in a stalled flight with pulled stick. Stronger rudder deflection will bring the glider into a spin. Putting all controls into normal position will stop spinning without after-turning worth mentioning.
In high speed flights it is necessary that the speed-limits will be followed. As soon as a speed of 75 knots is being passed over involuntary the airbrakes are to be opened. Note: at higher speeds the lever-power will work into direction of opeining.
Raindrops, hoar-frost and icing can disturb the wing-surface so much that changed flight-characteristics will follow. Therefore, a a perticular care is necessary by landing in rain; enough overspped.

# F. Maintenance

Humidity is the greatest enemy of a wooden glider. Be careful and make sure that no water will remain in the corners. On suspicion, that water came into wings and fuselage, bring same into a dry room and turn every day. The glider is endangered especially on open transport-cars. In any case it must be taken care for, that by covering the front part no splash-water will touch the wing-root.
Also by condensing-waters considerable quantities of humidity can enter the interior of the glider.
Strong sun irradiation will injure the finish by time, therefore the gliders should not be exposed to the sun more than necessary. The treatment of the varnish with good varnish material will increase the durability of the varnish and improve the surface, an imported fact for the flyijng performance. The perference of the laminar-profil can only be utilized by a smooth surface. It is not the main thing that the varnish will shine, but that an unevenness, durst-grains, dirt-splashes, insects are removed.
Sealings of slits and clefts with adhesive-tape will cause also a gain of performance. However, at the cokpit caution is necessary, when parachute bail-out should be possible.

Cleaning of Plexiglass-canopy only with Plexipol and Plexiklar. If necessary water. Soft cloth (gloves-cloth). In no case run with hard cloth droy on Plexiglass.

## Lubrication of bearings

The ball-bearings are, so far as possible, normally covered and therefore will need no special maintenance. Only the bearings at the wing-root, where the rigging-connections do not allow an unobjectionable protection, must be cleaned with petrol when fouled, and greased again.
The Grease-Nipples of the pedal-bearings and of the elevator-pushrod oscillator at the fin are to be greased about every 25 flying hours.
The rudder and other plain bearings are to be dismantled, cleaned and greased at the yearly overhaul.
Tyre press 35 psi.
The c.g. hook especially is exposed to dirt and needs often cleaning and oiling. If the flying takes place on very stony or sandy grounds it is advisable to protect the skid by screwing a steel plate of 1 mm thickness.
The tail-skid-plate must be renewed by welding on a 2mm from time to time. The tail-skid-plate is to be removed for this purpose. Do not anneal the spring.
The pressure take-openings for the instruments at the fuselage are to be sealed with adhesive tape on transport or longer parking. During out of use it will be the best to dismoun the instruments and store them in a dry room. When mounting connect right.
The safety belts are to be checked currntly for fractures, damp-stain and corrosion.
Repairs All larger repairs and overhaults must be affected by the manufactures. In case of need Mr. Schleicher will inform.

# G. Center of Gravity

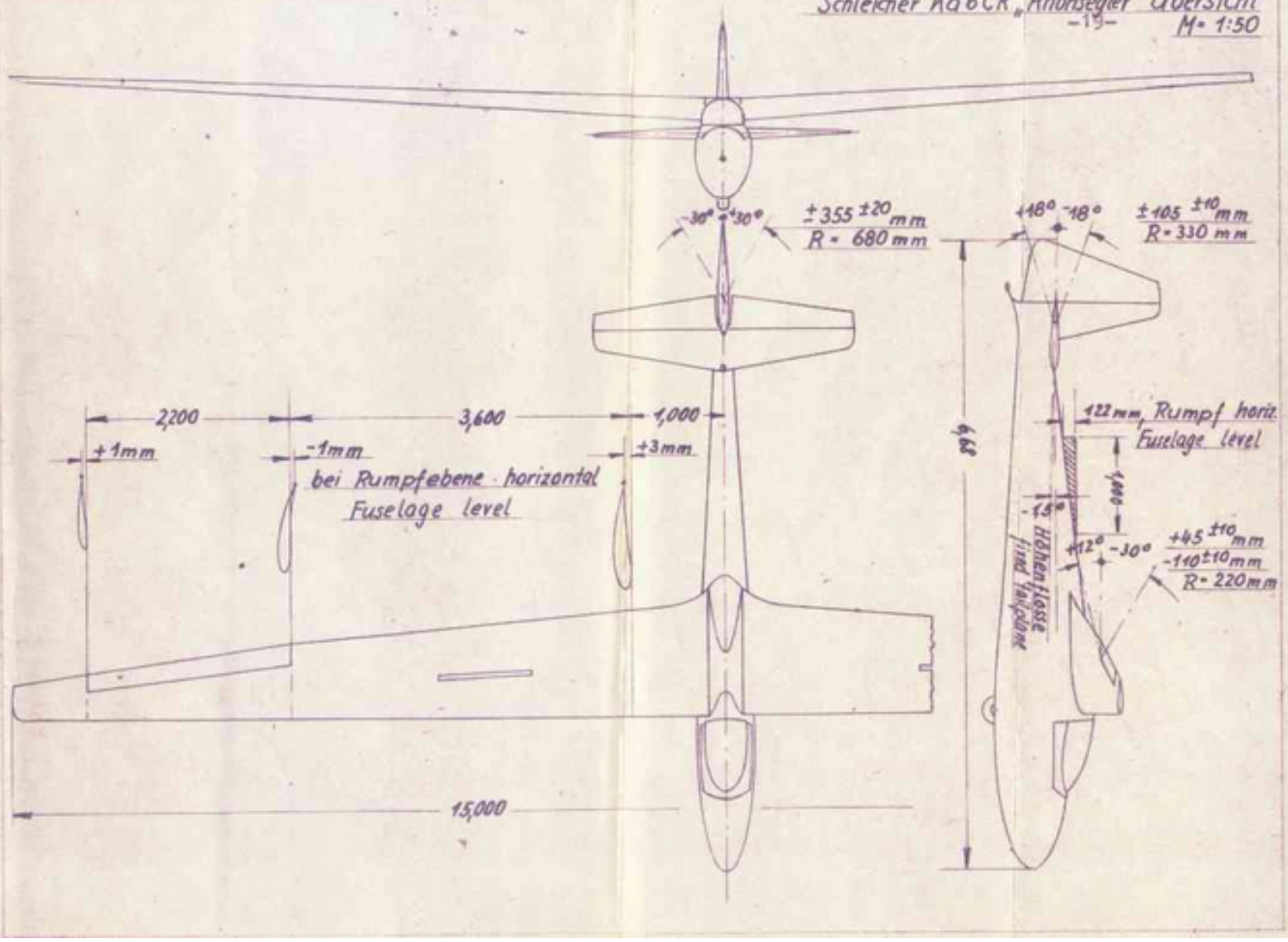
Great influences to the flying characteristics has the center of gravity. Therefore, the prescribed limits must be kept and not exceeded. Far aft position is particularly dangerous. The stalling and spinning characteristics will change then very badly. The sensibility of the elevator will increase. Too much front location of c.g. diminish the performance, and the glider cannot be flown at its maximum lift coefficient.
The following ranges of flight position of c.g. are tested:

a. max forward position:
   7 inches behing leading-edge of wing at rib No. 1
b. max aft position
   14 inches behind wing-leading edge at rib No. 1

Pay attention to c.g. when additional equipment is installed, at repairs and renewing of finish. One can take it as a rule, that gliders become heavier during their life and become tail heavy. Therefore it is advisable to have a new weight regulation of the parts and c.g. balance at each yearly overhault.

# Schleicher Ka 6CR „Rhönsegler" Übersicht

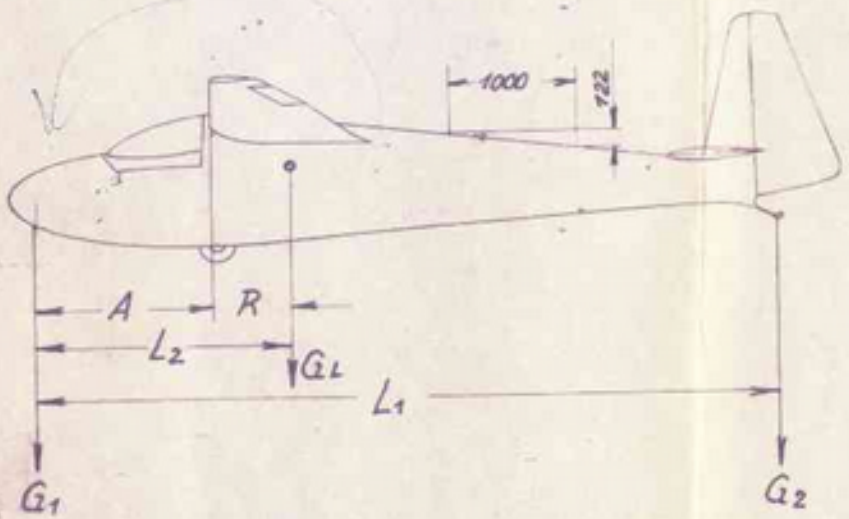
M = 1:50



Schleicher Ka 6 CR „Rhönsegler" Wägeblatt

(Siehe auch Arbeitsblatt 051)






$G_L$ = Leergewicht; empty weight

$G_1$ = Gewicht am Starthaken; weight at bungee launch hook

$G_2$ = Sporngewicht; weight at tail skid

R = Schwerpunkt rücklage; center of gravity position.

$$R = L_2 - A = \frac{G_2 \cdot L_1}{G_L} - A$$

$$G_1 + G_2 = G_L$$

Geforderte Leergewicht – Schwerpunkt lage:
Emty weight – C. of Gr. – position:

| | | | | | | |
|---|---|---|---|---|---|---|
| $G_L$ = Leergewicht; empty weight | 170 | 180 | 190 | 200 | kg | |
| R = Schwerpunktlage; C. of Gr. position | 610 | 590 | 575 | 560 | mm | ±30 mm |

hinter Flügelvorderkante
behind wing leading edge.