



K8 and K8 B

Operating Instructions

**Operating Instructions
for the Sailplane
Schleicher K8 and K8 B**

- A) Main data
- B) Minimum equipment
- C) Wing-and tail setting
- D) Assembly and disassembly
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Attachments:

1. Three-sides view
2. Weight and balance
3. Elevator unit assembly

A) Main data

Weights

Empty weight: 420 lbs.
Max. useful load: 265 lbs.
Gross weight: 685 lbs.
Max. weight of
non-supporting structure: 440 lbs.

Approved for:

Shockcord start: yes
Auto-winch tow: up to 60 mph
Aero-tow: up to 80 mph
Glide, gusty conditions: up to 80 mph
calm conditions: up to 120 mph
Acrobatics: none

Suited for:

Primary training: none
Training of emergencies: yes

Stress classification:

Class II, according to the German Glider
Stress Specification (BVS).

B) Minimum equipment

Four parts safety belt,
airspeed indicator with a range up to
125 mph,
altimeter,
back-pad with solid filling about 4 in.
thick (compressed) if no parachute will
be used,
trimming plan,
data-plate.

C) Wing- and tail setting

(See three-sides view)

The angles of setting and wing wash-out as well as the deflections of the control surfaces are to be gathered from the three-sides view.

Pay attention to the tolerances if repair is necessary.

The position of the ailerons is influenced by the elevator control on account of a special kinematic of the control system. The ailerons have a normal setting if the stick has a normal or pushed position. A pulled stick means lifting the ailerons somewhat.

The deflections of control surfaces and the extension of dive brakes are limited:

Rudder: The rudder is non-adjustable stopped in the rear on the lower rudder hinge fitting.

Ailerons: The control stick is stopped by hardwood blocks on the seat supporting tubes.

Elevator

To the rear: Non-adjustable stop. The control stick strikes against the seat edge.

To the front: Adjustable stopper on the lower side of the elevator push-pull tube striking against the control stick.

Dive brakes

To the rear: Adjustable stopper on the horizontal push rod striking against a frame tube.

To the front: Non-adjustable stop.
The shift lever strikes against a stopper on the frame.
The angle range of the lever will be regulated by this stop device.
The lever movement to the front may not exceed the top center point about 0.4 in. measured from the ball bearing of the forked vertical push rod.

D) Assembly and disassembly

Assembly

Clean and lubricate bolts and holes.

Connect left wing sideways to the fuselage, put in the nose bolt.

Caution! Do not tilt the fuselage.

Do the very same with the right wing.

Connect the main spar fittings with bevelled bolts (put in the lower bolt first). Tighten the bolts. Moving the wings a little will facilitate this procedure. Safety the main bolts with cowling safety pins.

Connect attachment fittings of ailerons and dive brakes. Safety with cowling pins.

Set up the elevator unit by suspending the rear eyebolts on the fuselage pins and tighten the front bolt. Safety with cowling pin. Pay attention to the correct position of the control lever (see the sketch of elevator unit assembly).

Connect the Flettner push rod to the elevator control lever by means of a split pin.

Check clearance and correct operation of controls, dive brakes, and automatic release of the tow coupling.

Make general inspection.

Check pressure of the landing wheel.
(35 lb/sq. in.)

Attach fairings.

Disassembly is essentially the reverse of assembly. Lubricate all attachments to prevent corrosion. It is advisable to tie the Flettner push rod.

E) Flying operations

Trimming

The sailplane may be flown with pilot weights of 132 lbs. up to 220 lbs.

With weights of this range trimming is not required.

Pilots of less weight have to use lead-cushions.

A spring balance on the control stick adjusts the desired manual force of elevator control.

The Flettner balance acts equivalently: movement to the front means nose-heaviness, movement to the rear means tail-heaviness,

Adjustment of rudder pedal control

Draw back the pedals with heels and lock the side click-stop devices of the control cables into the desired position. This procedure will be possible even during the flight.

Auto-winch tow

Preset breaking point No. II

Max. tow speed : 60 mph.

Notice: During winch tow pulling the stick means increase of speed.

After take off push the stick a little forward.

Best climbing attitude will be given with control stick in normal position.

Do winch high launching only with C.G. coupling.

E I) Supplement to the trim plan:

With very light pilots there is ballast necessary. It should be noted that this ballast is to be fixed to prevent blocking of the controls.

It is recommended to use a lead cushion prepared after the scetch below.

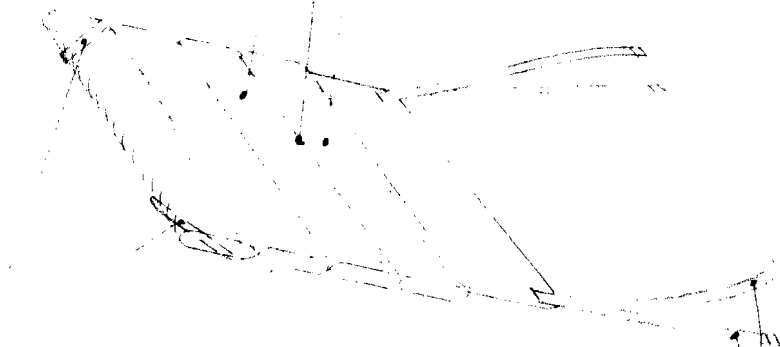
The weight of the ballast cushion should be 20 or 30 lbs. This weight is to be considered when using the trimplan.

*Adjust size
to seat*

Heavy canvas.

About 4 times separated.

*Fill with lead shot or
lead sheet stripes.*



*Webbing to hook in
at the seat corners.*

*Heavy webbing to fix
it on steel tubes or
belt triangle.*

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Trim by weight

Fixing the 17 lbs standard trim weight at the foot board will compensate for 26 lbs pilot weight.

Aero-Tow

Preset breaking point No. I
(min. 661 lbs. - max. 992 lbs.)
Max. speed: 80 mph.

The nose coupling is normal for aero-tow.
Using the C.G. coupling is permissible if
textile cable is applied, max. length 328 ft.

Pull coupling fully through.

Notice: Check the attachments of the cockpit
canopy and of the dive brakes always
before taking off!

Free flight

The values specified as follows are design
values. They relate to the equivalent air-
speed (EAS) - (dynamic pressure).

Pay attention to the deviation of the indi-
cated airspeed (IAS) which depends on the
location of the venturi tube.

The diagram Fig 1 shows the deviation of
IAS versus EAS provided that a normal venturi
tube 3,5 on the nose of fuselage is installed.
(= 0,125).

Stalling speed (V_{S0}) (at a gross weight of 595 lbs.)	- 32 mph.
Minimum sinking speed (horizontal flight)	- at 38 mph.
Best gliding angle	- at 47 mph.

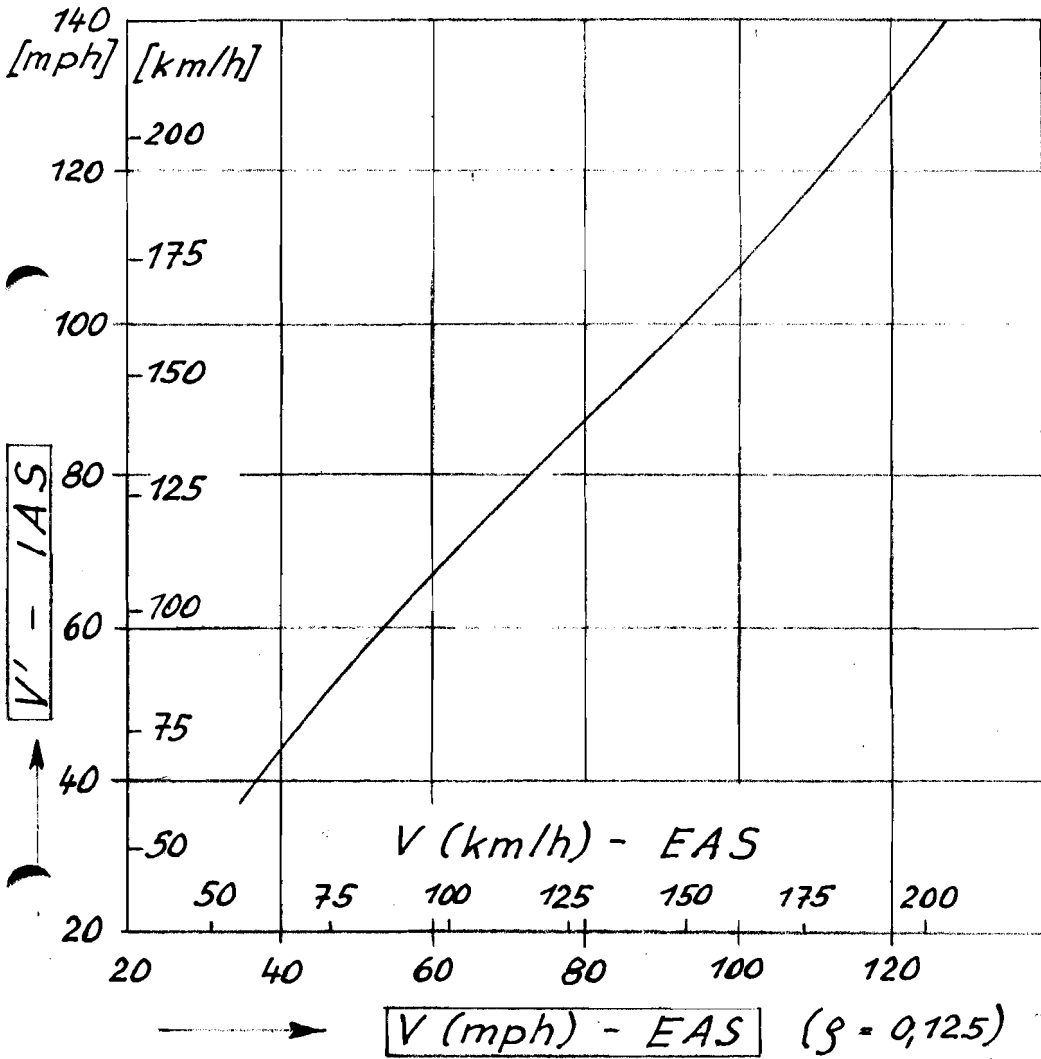


Fig. 1

Landing

Approach with a speed of approx. 44 - 50 mph. The gliding angle will be controlled widely by application of dive brakes. Touch down with dive brakes not fully extended and do not pull too much trough. The plane will be slowed down by pushing the nose down and sliding on skid.

Emergency

The sailplane can be held in a stalling position with fully pulled stick and necessary rudder control. Applying harder rudder brings the plane into a spin. Taking back all controls into normal positions will stop the spin.

When flying with high speeds the speed limits are to be observed.

As soon as the speed exceeds 80 mph extend slowly the dive brakes.

Notice: At high speeds the lever force of the dive brakes acts in the extending direction.

Raindrops, rime, and icing will deteriorate the wing surface so much as to change the flight performances.

Therefore be cautious when approaching in rain, keep sufficient speed in advance.