



Mounting support for Electric-Winch-Box

Introduction:

All gliders, especially modern high performance gliders, suffer a lot of gliding performance (up to 30% or more), if wings are contaminated by bugs.

Although spending a lot of money for high L/D, you might realize that you cover only 35-40km instead of the expected 50km.

Bugs deteriorate performance in all stages of flight like gliding, thermalling and especially on final glides.

Bug Wipers are a big advantage in this case.





Unfortunately, most gliders have been built without considering the installation of bug wipers and without providing appropriate places for the electric winches. This might cause a lot of installation difficulties.


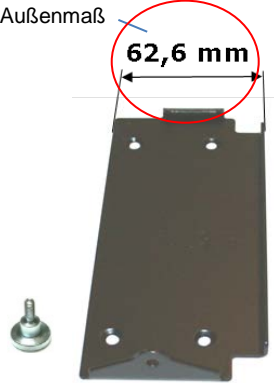
To overcome those difficulties we have developed a lot of solutions

To be able to fix the electric winches into the fuselage and to remove them again for maintenance purposes, we have developed four different types of mounting support plates.

After having installed the mounting support it is quite easy to hook the winch box into the mounting support and to fix it by a knurling screw.

Overview of 4 different types of mounting support plates

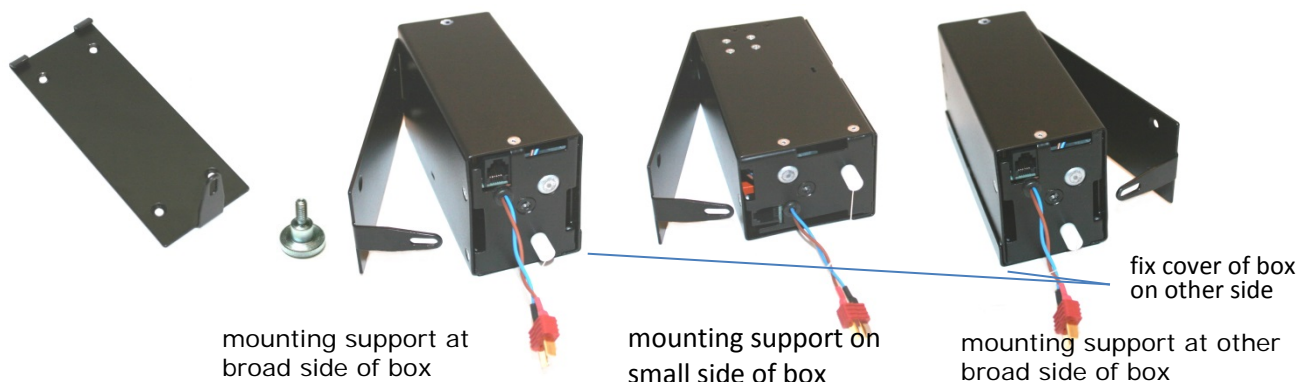
Nr.	Type	Description
1	mounting support Nr.1 	Standard mounting support for mounting winch box on horizontal or vertical surfaces , like luggage compartment (e.g. Schleicher, Binder etc.) The winch box can be fixed to the mounting support on its right or left broad side or small bottom side . <u>Distinctive features:</u> --the knurling knob is placed on the rear side of the box adjacent to the cable connector and guide line.
2	mounting support Nr.2 	For mounting on horizontal surfaces only , like luggage compartment (e.g. Schleicher, Binder etc.) The winch box will be fixed only to the small bottom side of the box. <u>Distinctive features:</u> --the knurling knob is placed on the front side of the box which is free of cable connectors (and opposite to the rear side with cable connector and guide line).
3	mounting support Nr.3 Außenmaß — 61,6 mm 	With supporting rail for mounting on vertical surfaces (Symmetrical to Nr.3.1) like housing of landing gear. The winch box is fixed to the mounting support with its right broad side . <u>Distinctive features:</u> --the knurling knob is placed on the front side of the box which is free of any cable connector (opposite to the rear side with cable connector and guide line).
3.1	mounting support Nr.3.L Außenmaß — 61,6 mm 	With supporting rail for mounting on vertical surfaces (symmetrical to Nr.3) e.g. housing of landing gear of any glider. The winch box is fixed to the mounting support with its left broad side . <u>Distinctive features:</u> --the knurling knob is placed on the front side of the box free of any cable connector (opposite to the rear side with cable connector and guide line).

Nr.	Type	Description
4	Mounting support Nr.4 Außenmaß — 62,6 mm 	With supporting rail for mounting on vertical surfaces up side down (symmetrical to Nr. 4.1) For mounting on vertical surfaces e.g. housing of landing gear of any glider and especially for ARCUS on the left vertical board wall in the area of pilot's left foot at the rear seat. Winch box to be fixed up side down with the left broad side to the mounting support. In this case the cover of the winch box will rest on the supporting rail. <u>Distinctive features:</u> --the knurling knob is placed on the front side of the box free of cable connector (opposite to the rear side with cable connector and guide line).
4.2	Montageschlitten Nr.4.1 Außenmaß — 62,6 mm 	With supporting rail for mounting on vertical surfaces up side down (symmetrical to Nr. 4.1) For mounting on vertical surfaces e.g. housing of landing gear of any glider. Winch box to be fixed up side down with the right broad side to the mounting support. In this case the cover of the winch box will rest on the supporting rail. <u>Distinctive features:</u> --the knurling knob is placed on the front side of the box free of cable connector (opposite to the rear side with cable connector and guide line).

1) Standard Mounting Support Nr.1

There are 3 different possibilities to fix the winch box to the Standard Mounting Support Nr.1 for mounting on horizontal and vertical surfaces.

The knurling screw is **at the rear side** of the box (adjacent to cable connector and guide line).



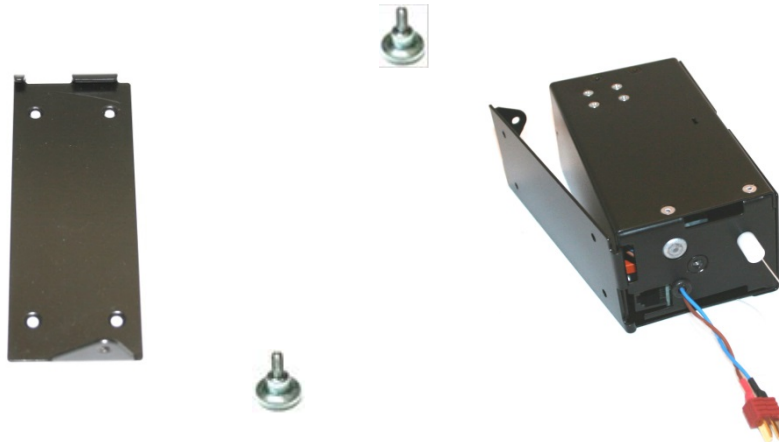
Suitable for Ventus, Discus and all other gliders for mounting the winch box in the luggage compartment or also up right on a vertical wall.

Newly added:

2) Mounting Support Nr.2 for upright installation of winch box (counterpart to Standard Mounting Support Nr.1)

Winch box fixed at small side of box

Knurling Screw **at front side of box** (free of cable connector or guide line)



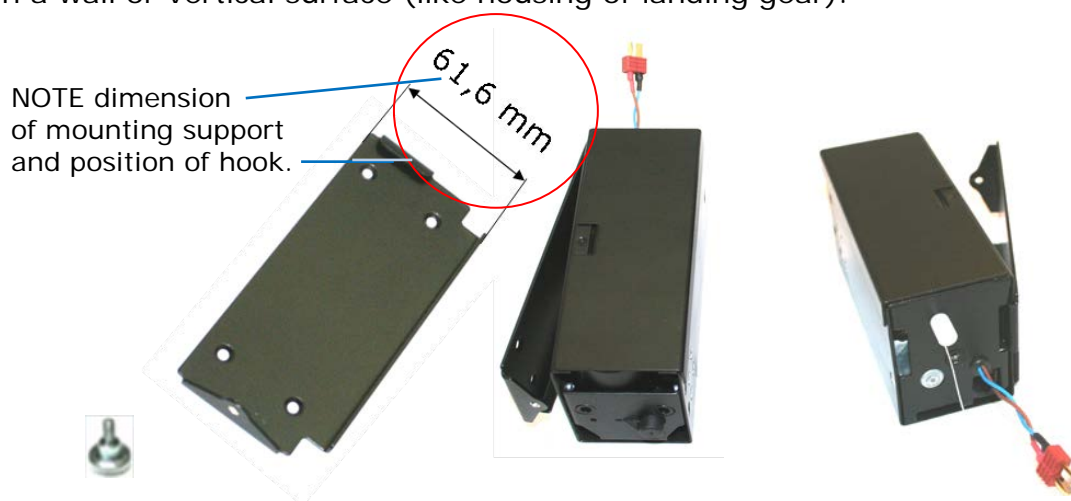
Suitable for Ventus, Discus und all other gliders for mounting in upright position on a horizontal surface like in the luggage compartment.

3.1) Mounting Support with supporting rail Nr. 3.1 for box in upright position. (Counterpart to symmetrical Nr.3.2)

Mounted in **upright position** at broad side of winch box with supporting rail on bottom of box.

Knurling screw on front side of box (free of cable connector and guide line).

Especially suited for **ARCUS** at the right side in the area of pilot's right foot at rear seat and all other gliders for installing winch box in upright position on a wall or vertical surface (like housing of landing gear).



NOTE dimension
of mounting support
and position of hook.

61,6 mm

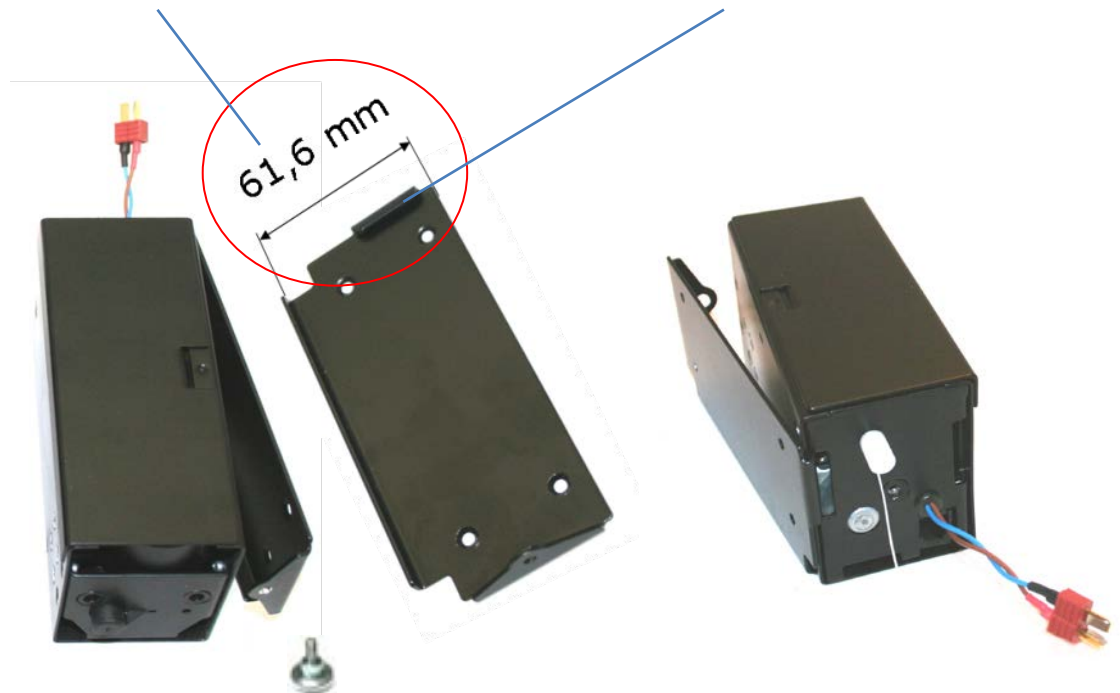
3.2) Mounting Support with supporting rail Nr. 3.2 for box in upright position. (Counterpart to symmetrical Nr.3.1)

Mounted in **upright position** at broad side of winch box with supporting rail on bottom of box.

Knurling screw on front side of box (free of cable connector and guide line).

Especially suited for Ventus, Discus and all other gliders for installing winch box in upright position on a wall or vertical surface (like housing of landing gear).

NOTE dimension of mounting support and position of hook



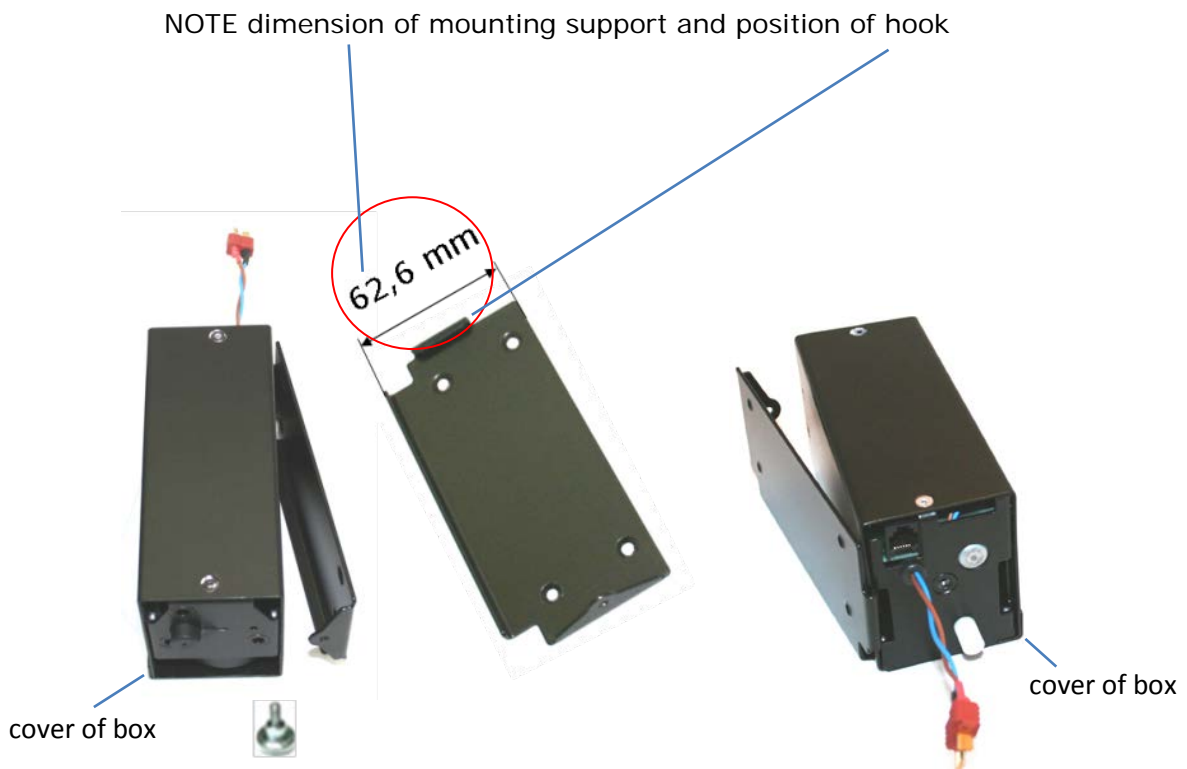
4.1) Mounting Support with supporting rail Nr. 4.1 for box up side down. (Counterpart to Nr. 4.2)

Mounted **up side down** at broad side of winch box with supporting rail on bottom of box.

Knurling screw on front side of box (free of cable connector and guide line).

Specially developed for **ARCUS** at the left side in the area of pilot's left foot at rear seat for mounting box up side down with the cover of the box resting on the supporting rail.

See drawing down below.



4.2) Mounting Support with supporting rail Nr. 4.2 for box up side down. (Counterpart to Nr. 4.1)

For mounting winch **up side down** on vertical surfaces e.g. on housing of landing gear.

Mounted up side down at broad side of winch box with supporting rail on bottom of box.

Knurling screw on front side of box (free of cable connector and guide line).

NOTE dimension of mounting support and position of hook

