

## **Information about glider car towing**

A car tow can be seen as a combination of airplane tow and winch tow. In the beginning the tow is similar to an airplane tow, after the ground run followed by a smooth transition arch into the climb phase (similar to a winch tow). For pilots who are experienced in these two take-off ways, acquiring the car tow launch type is therefore not a major challenge.

Car towing is a good opportunity for pilots of self-sustaining or even self-launching gliders if the runways is too short for a take-off. After towing to a safe height, the further climb can be done by engine and thus brings the same comfortable starting situation for a cross-country flight as an aerotow. Of course, car towing is also possible with pure gliders.

A basic requirement, a car with a tow hook, is something almost every glider pilot has anyways. This means that towing can be used as an inexpensive alternative to starting with a winch. If the airfield length for a conventional car towing is not sufficient for a satisfactory height, a pulley can also be used.

In the following, the legal and technical basics for car towing are presented:

### **Pilot requirement: (only for EU / EASA regulations)**

Source: SFCL.155

If the authorization for the auto tow type is acquired during the training as a glider pilot, this will be entered in the license when issued.

If the acquisition is made after receipt of the license, the entitlement is recorded in the flight log by the instructor who is training.

Acquisition of license: 10 take off with instructor, 5 solo take off under supervision

Exercise requirement: at least 5 car tows in the last 24 months

Training according to the gliding methodology, chapter 1.4.8:

[https://www.daec.de/fileadmin/user\\_upload/files/2019/Sportarten/Segelflug/Ausbildung/Segelflug\\_methodik\\_20190929\\_Praxis.pdf](https://www.daec.de/fileadmin/user_upload/files/2019/Sportarten/Segelflug/Ausbildung/Segelflug_methodik_20190929_Praxis.pdf)

**Glider requirements:**

The glider must be approved for auto tow (CS 22.152);

This information can be found in the flight manual.

**Airfield requirements:**

The requirements for the airfield are usually defined by national authorities.

In Germany the airfield, depending on the type, might need a approval for specific launch methods.

**Requirement Car and Rope:**

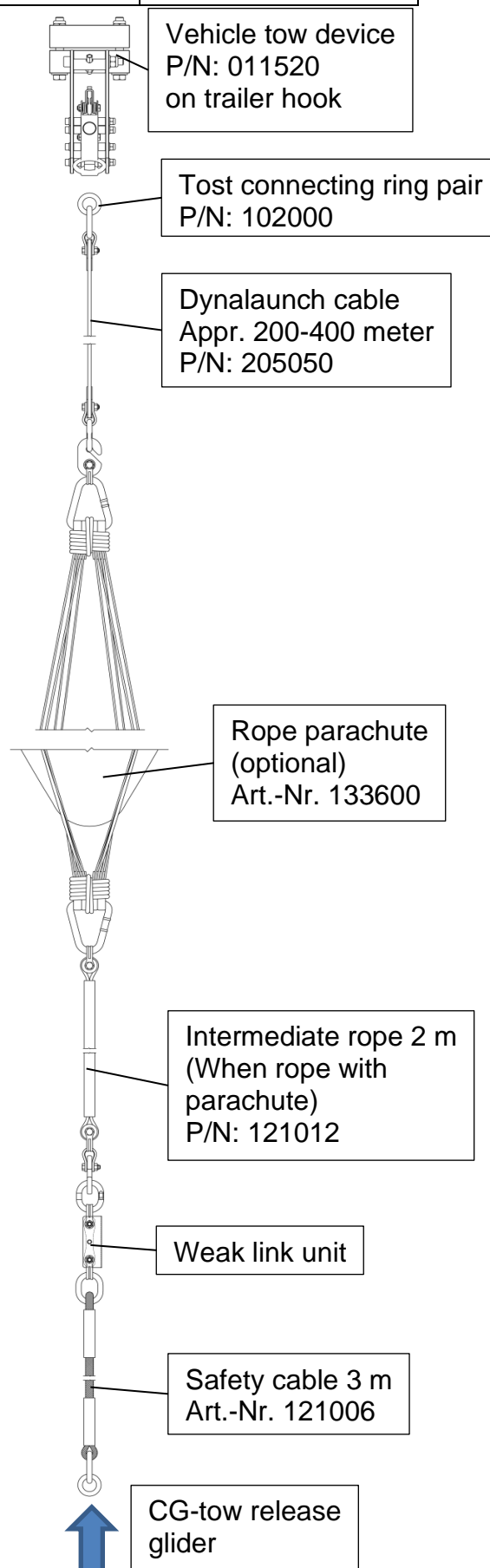
Please refer to SBO, Chapter 2.4.1

[https://www.daec.de/fileadmin/user\\_upload/files/2020/Sportarten/Segelflug/Sport/Downloads/SBO\\_20200125.pdf](https://www.daec.de/fileadmin/user_upload/files/2020/Sportarten/Segelflug/Sport/Downloads/SBO_20200125.pdf)

Ideal is the use of an all-wheel drive vehicle with more than 160 hp, at least 1.7 tons weight, automatic gearshift and sufficient top speed (approx. twice the towing speed). A slightly less powerful vehicle is of course also suitable for lighter single-seaters.

The driver must be able to release the rope. This is possible with the Tost car towing device (P/N: 011520). It can be mounted on a standard 50 mm / 2" trailer hitch in just a few simple steps and, by using an E85 tow hook, offers the option for a safe release.

The rope should have a length of approx. 200 to 400 meters, depending on the length of the airstrip. It should be taken into account that the length of the rope must be subtracted from the available towing distance. If the available rest is no longer sufficient for safe towing, the use of a diverter pulley for vehicle tow to solve the problem is possible (P/N: 500920). The rope structure is the same as for winch towing, see illustration on the right. A standard hose cart can be used to wind up the rope after flight operations. As an alternative, an electrically powered rope retractor from Tost is available. This can be operated via a 12V socket or the cigarette lighter of the towing vehicle. (P/N: 200700)



 <b>TOST</b> Flugzeuggerätebau	<b>Information about glider car towing</b>	04.07.2024 Page 3 of 3
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### **Requirement Driver:**

The certification of the driver is covered by national regulations. For example, for German regulations, see appendix 4 of the start winch operator regulations of the DAeC:

[https://www.daec.de/media/files/Dateien/Sportarten/Segelflug/Downloads/2024\\_Startwindenfahrerebestimmungen\\_1.0.pdf](https://www.daec.de/media/files/Dateien/Sportarten/Segelflug/Downloads/2024_Startwindenfahrerebestimmungen_1.0.pdf)

An instruction with 10 starts is sufficient for holders of a winch driver's license, otherwise training with an examination by a holder of the authorization equal to the winch driver's license is necessary.

The driver must have a license for a car, truck or bus.

### **Further Information:**

If you are interested or have any further questions, please do not hesitate to contact us. We are happy to assist, as manufacturer of the accessories as well as with our practical experience as pilots and flight instructors.

Information for car towing on the website of the company Tost:

<http://www.tost.de>

Car tow in Courchevel:

<https://youtu.be/pcSTKIF0Rxy?feature=shared>

The environmentally friendly alternative: Car tow with an electric car (Tesla Model X)

<https://vimeo.com/225731556>