



TRIKE-FLASH



OWNER'S MANUAL

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Via Perù n. 30

63013 GROTTAMMARE (AP) - ITALY

tel./fax +39.735.632486

www.flyproducts.com - ✉ fly@flyproducts.com

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Safety first, WWW! (Who, Where and When can fly it)

The **TRIKE-FLASH** with Powered Para Gliding (PPG) is the most exciting, least expensive, safest, and most accessible form of aviation available! However, it is still aviation, and it brings with it all the inherent potential dangers of aviation. People can, and do, get hurt, and even killed, in any form of aviation, including Para Trike. For that reason it is imperative that before fly with this Para Trike you must receive proper training from qualified instructors and obtain a valid PPG license, and then offer Para Trike the respect all aviation deserves, respect weather and conditions, and realize that in the end, it is the pilot himself that is fully responsible for his own safety and the safety of fellow pilots and bystanders.

Depending on every national regulations, the Para Trike may only be operated in authorized areas and flights within controlled airspace usually needs a permission given by radio.

Additional requirements like a valid insurance must be fulfilled.

Powered Paragliding is an extremely demanding sport that requires exceptional levels of attention, judgment, maturity, self-discipline, and attention to detail. It is unlikely that you will be able to participate in it safely unless you make a conscious and continual commitment to your own safety.

Due to the inherent risks in flying this or any Para Trike, no warranty of any kind can be made against accidents, bodily injury, equipment failure, and/or death.

This TRIKE-FLASH is not covered by product liability insurance. Do not start it or fly it unless you are willing to assume all risks inherent in the sport of Powered Paragliding and all responsibility for any property damage, injury, or death which may result from the use of this product.

Notation Used

Certain special terms (*NOTE*, *CAUTION*, *WARNING*) will be used throughout this manual. Their usage is defined below.

A **NOTE** provides supplemental information to help clarify a point being made in the text. Generally, a **NOTE** is provided to help assembly, use, or maintenance of the product.

Disregarding a **NOTE** could cause inconvenience, but would not cause damage or personal injury.

A **CAUTION** provides supplemental information to help clarify an area where equipment damage could occur. Disregarding a **CAUTION** could result in permanent and significant mechanical damage, however personal injury is unlikely.

A **WARNING** provides supplemental information to help clarify an area where personal injury or even death could occur from negligence. Disregarding a **WARNING** could result in serious injury or even death.

Congratulations on Your New “TRIKE-FLASH”

FLY PRODUCTS presents a very light Trike for paramotor. The main characteristic of the TRIKE-FLASH it's great versatility.

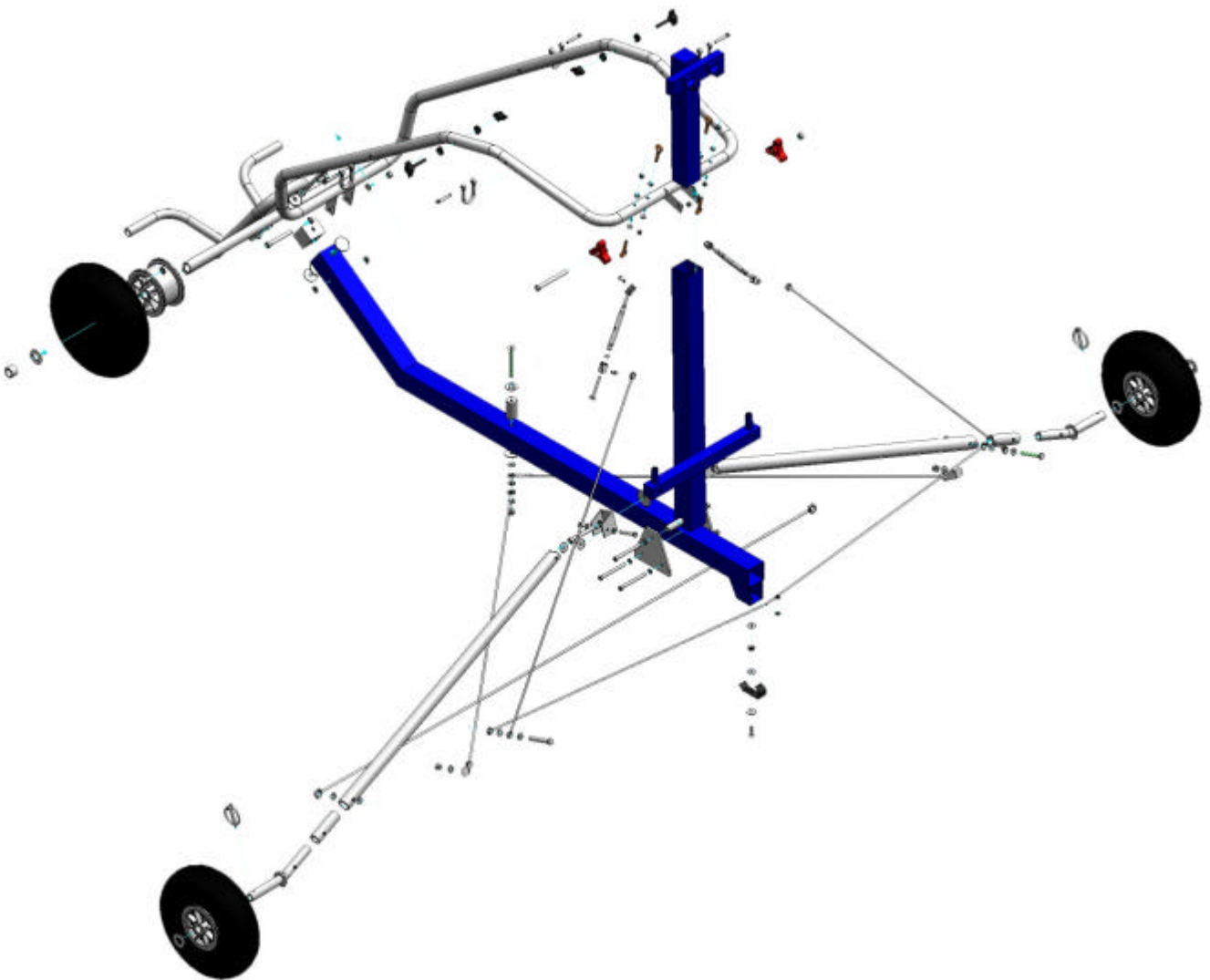
The certification is planned for the **GOLD 130** Engine PPG unit.

For safe flying you should read this manual carefully, make yourself familiar with the **TRIKE-FLASH** and its possibilities.

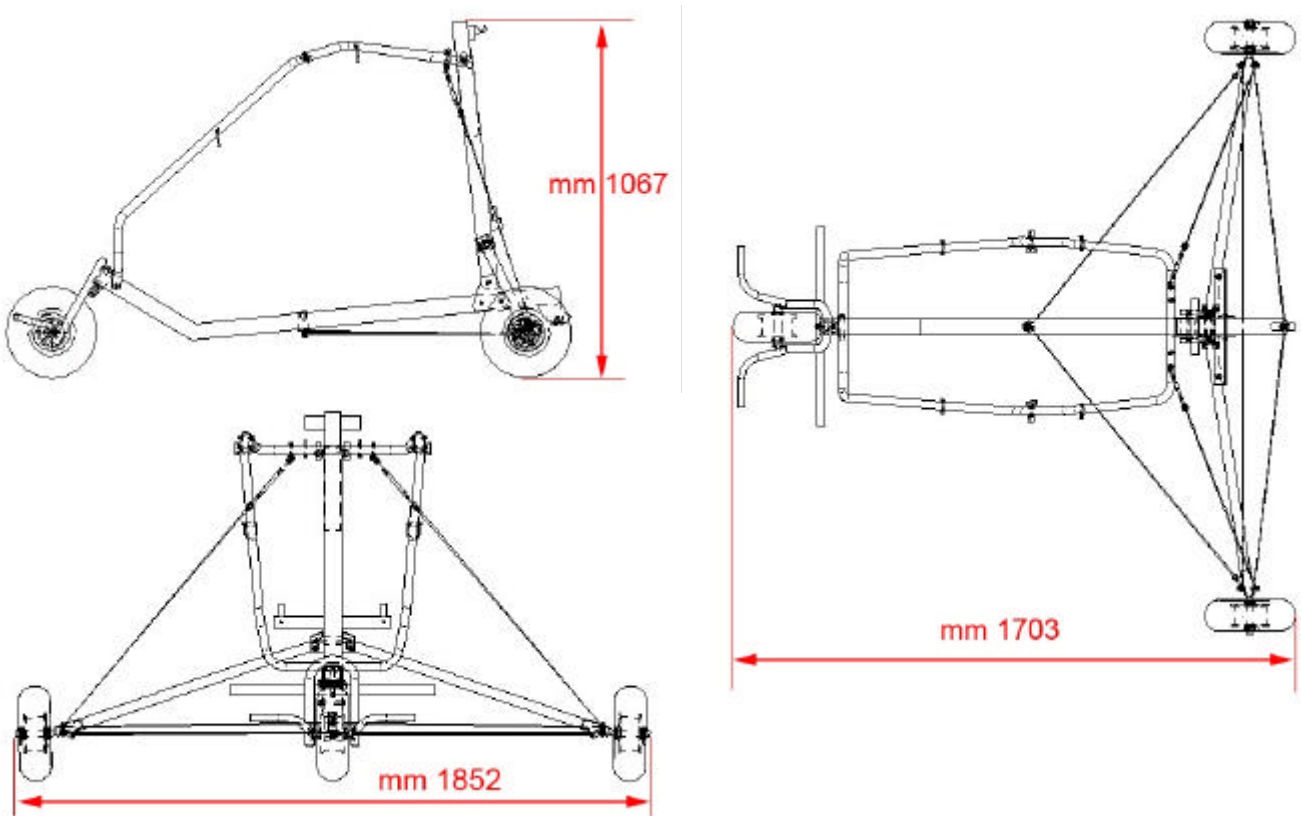
TRIKE-FLASH features

- ? **Easy assembly and disassembly**
- ? **Simply to use**
- ? **Very lightness**
- ? **Big stoutness**
- ? **Extremely reliable**

Diagram of Components



Overall dimensions



Introduction to frame drilling for engine mounting

We deliberately omitted the frame drilling for mounting our GOLD 130 homologated engine to allow the mounting of a different engine model.

You must carry out the drilling operation in any case, follow the next indications:

Necessary tools to operate:

- Drill
- Metal drill points Ø 10 mm and Ø 6,5 mm.
- Hammer
- Rapid glue

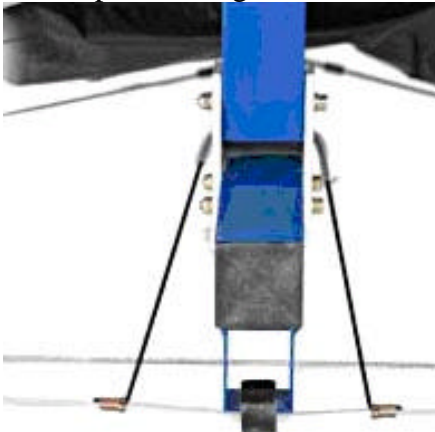
ASSEMBLING “TRIKE-FLASH”

For easier storage and transportation the Trike-flash can be folded to the minimum size.

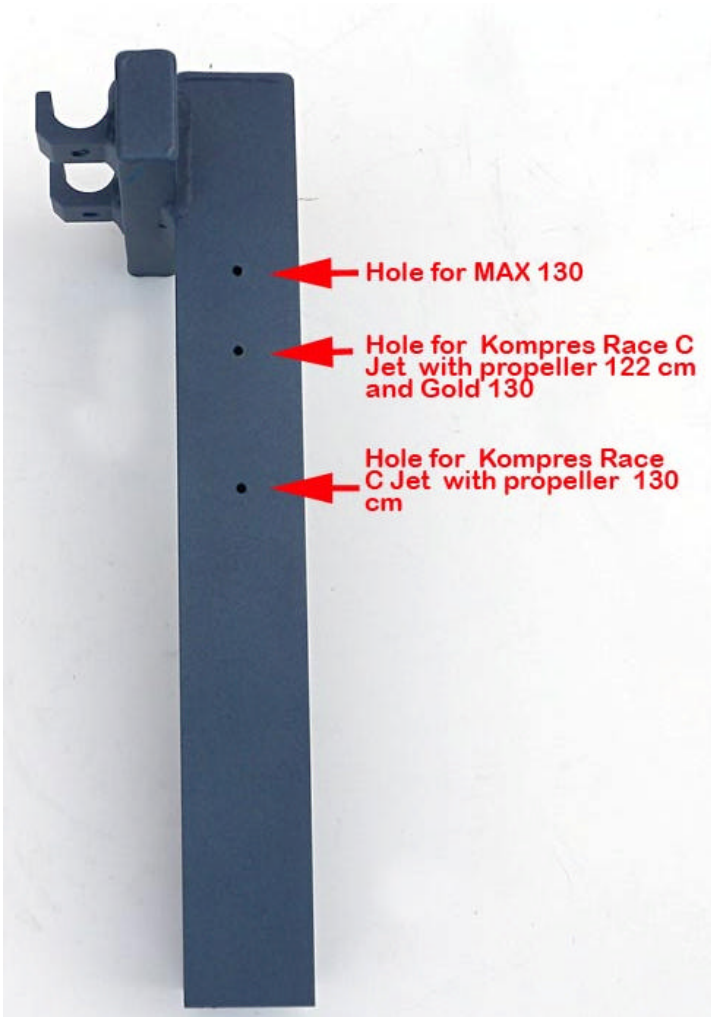
Assembly instructions:



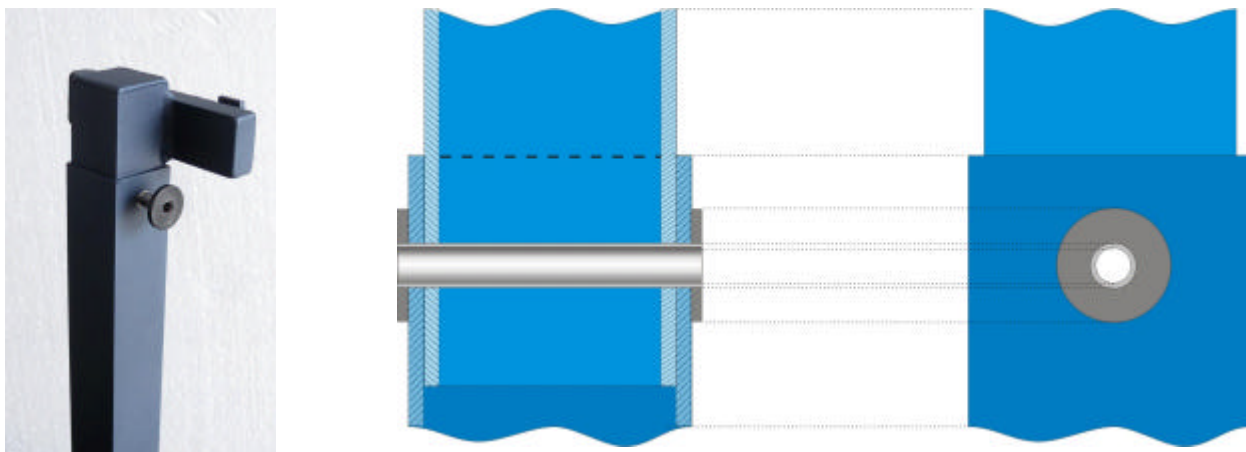
Unscrew the red plastic wing nut and hook rear wires



REMEMBER: Insert this part as you can see in the photo and enlarge the hole for your model with **Metal drill point of Ø 10mm.**

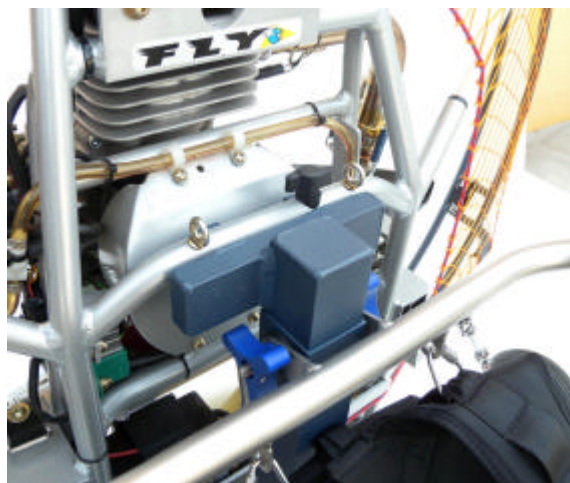


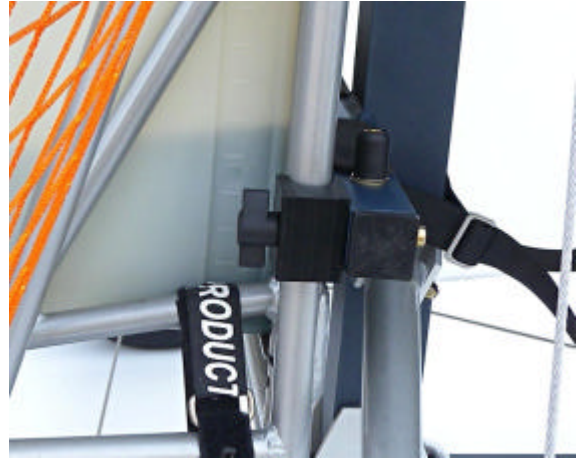
Side drill purpose is to fit there a through-pin, with two reinforcement washers, for prevent a box girder buckling when the upper cradle will lock in that point.

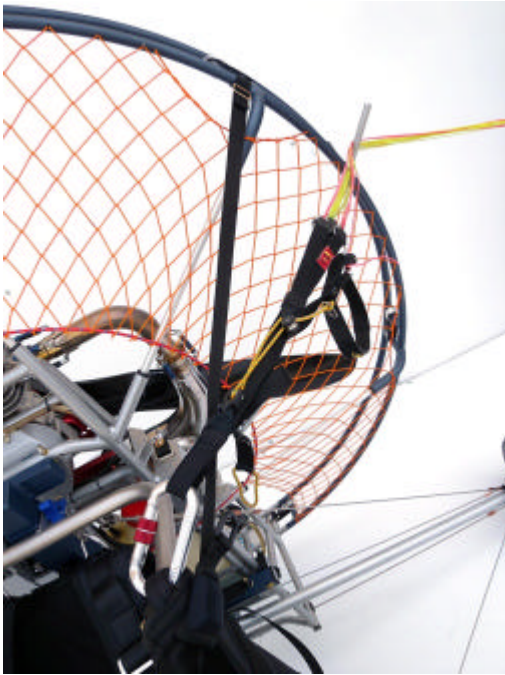


MAX 130 – KOMPRES - RACE C - JET

First step, when the engine mounting is well positioned, drill an hole-through $\varnothing 6,5$ mm on the engine frame (between the two eyelets) in correspondence to the preset hole in one of the two hooks.

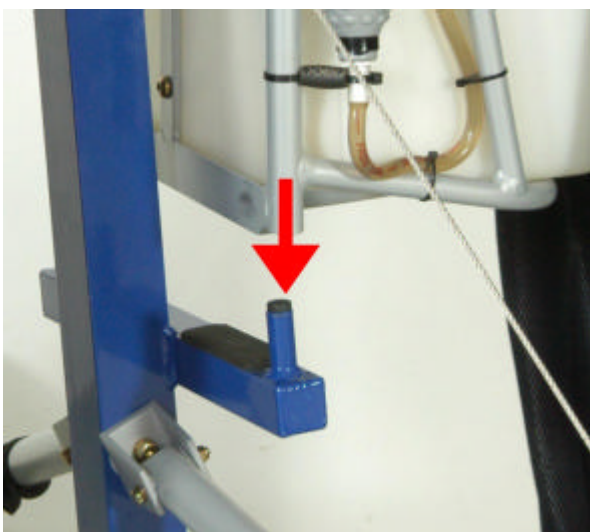






GOLD 130

The lower engine frame drilling for to apply the special cage section expressly projected for the GOLD 130 unit.



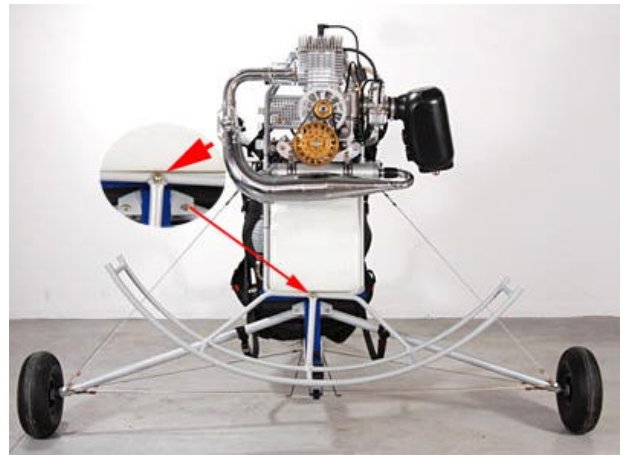
Assemble the two upper cage frames and insert the special lower cage frame.

Lock all velcro strap , true lower frame in line with engine base frame, hold the frame in position and drill with a 6,5 mm point the engine frame trough the preset hole in the cage frame.

Lock it with the issued plastic wing nut, inserting the ovalized support in this way ↙



Fasten the upper plastic wing bolt



This terminate the engine mountig SETUP that is required ONLY for an eventually change of the engine model with different holes position.

Continue from here the standard assembly of the TRIKE-FLASH:

This complete the trike assembly, check your work before go on.

TANDEM AND SINGLE VERSION

Transform the TRIKE-FLASH from single version to double version is very simple, just invert the attachment positions from carabiners to harness and then mount the second harness in the preset attachment positions

TANDEM



SINGLE



Assembly inspection

It is critical to fully inspect the assembly of the **TRIKE-FLASH** to find and remedy any potential problem areas before proceeding.

The inspection should contain, at a minimum, the following items:

- ? **Review each assembly step above**
- ? **Examine all nuts, bolts, and fasteners for security**
- ? **Check the harness for correct mounting, that all straps are secure, that there are no twists on any straps**
- ? **Examine prop cage for correct assembly, that it is strong, the netting is tight and on the correct side**
- ? **Check that nothing can get in the prop. The prop should clear the cage by same distance at all points.**

- ? Check the fuel tank and fuel delivery system.
- ? Check for correct mounting of prop, and correct torque of prop bolts.

PREPARING FOR YOUR FIRST FLIGHT

Given that the certification of the TRIKE-FLASH is planned for the **GOLD 130** Engine PPG unit, you have to follow the procedures described in the proper PPG manual before to take off.

WE summarize here the main points.

WARNING! Use common sense when refueling. Do not refuel a hot or running engine, do not smoke or allow on-lookers to smoke while refueling. Do not refuel near heat or open flame

Pre-flight Inspection

Before your first flight, and before every flight, it is absolutely essential to perform a pre-flight inspection on your aircraft.

WARNING! Failure to perform a sufficient pre-flight has been a contributing factor to accidents in all kinds of aircraft. Equipment damage, bodily injury, even death can occur due to equipment problems not caught in a pre-flight inspection.

As the saying goes, "Pre-flight as if your life depends on it, because it does!"

The essential items to check are:

- ? **TRIKE** - All the wires well tensioned and tension rods tighten with nuts locked
 - Check all the Velcro straps and all blockings.
- ? **PARAGLIDER** – this PPG was homologated with the SWING "Powerplay Sting140" model which has a 29,5 m² surface, check the lines and canopy integrity.
- ? **ENGINE** – check everything is ok , the silent-block integrity and gasoline mixture level.
- ? **PROPELLER** – blades integrity, bolts clamping.
- ? **RECOVERY SYSTEM** (if there is) – ready and safety catch off.

NOTE! Example of pre-flight checklists can be found at the end of this manual.

It is highly recommended that you use one of the examples, or create your own, print it out, laminate it, and use it whenever you fly.

Also note that these Checklists are examples only, FLY PRODUCTS is not responsible for their use or for their completeness.

Pre-Flight Checklist Examples

The following checklists are provided only as EXAMPLES.

It is recommended to produce one tailored to your own needs, print it and laminate it, and carry it with you.

Pre-Flight Checklist Example 1

Site/Conditions

- ? Current weather
- ? Long-range (next few hours) forecast
- ? Winds aloft
- ? Takeoff/landing direction
- ? Obstructions (especially Power lines)

Wing

- ? Lay wing out into wind¹⁹
- ? Lines straight and clear
- ? Riser/Line condition
- ? Quick-links tight (hand tighten only)
- ? Correct brake length

TRIKE

- ? wires well tensioned and tension rods locked
- ? Webbing and straps for stress
- ? Prop Guard for alignment/stress/wear
- ? All fasteners tight
- ? Carabiners condition
- ? Radio secured
- ? Sufficient fuel

Strap In, Hook Up

- ? Buckles secure
- ? Chest strap tight
- ? Harness adjusted properly
- ? Reserve parachute attachment
- ? Risers hooked up correctly
- ? Carabiners locked
- ? Nothing loose to get in prop
- ? Radio for volume, clearness
- ? Helmet on, tight, fastened

Startup and Launch

- ? Brake lines/risers held correctly, no tangles
- ? Engine run-up to correct RPM
- ? Kill switch working (briefly push)
- ? Look UP during run!

Pre-Flight Checklist Example 2**ENGINE PRE-START**

- 1) CAGE SECURE
- 2) WIRES WELL TENSIONED AND TENSION RODS LOCKED
- 3) GAS AMOUNT AND QUALITY OK
- 4) GAS CAP ON AND SECURE

- 5) TANK VENT OPEN
- 6) THROTTLE CABLE FREE AND FULL
- 7) PROP NUTS TIGHT
- 8) PROP CONDITION
- 9) SHAKE TEST MUFFLER
- 10) SHAKE TEST CARBURETOR
- 11) FUEL LINES OPEN NO KINKS

PRE-FLIGHT

- 1) WEATHER TREND CHECK
- 2) POCKET CHECK (NO LOOSE OBJECTS)
- 3) WHEELS CONDITION AND INFLATING
- 4) HARNESS POCKETS ZIPPED CLOSED
- 5) PARAMOTOR/HARNESS CONNECTS SECURE
- 6) EARPLUGS IN
- 7) HELMET ON AND SECURE
- 8) RISERS/BRAKES/LINES FREE AND CORRECT
- 9) 3 HARNESS BUCKLES GOOD
- 10) LEG STRAPS TIGHT
- 11) ELECTRIC STARTER SYSTEM READY
- 12) SET UP ALTIMETER AND GPS
- 13) CHECK RESERVE PARACHUTE PINS
- 14) PRIME CARBURETOR

RUN-UP

- 1) ENGINE SECURE
- 2) CHECK THROTTLE CABLE FREE
- 3) CLEAR PROP! START
- 4) CHECK CUT OFF
- 5) FULL MAX CHECK, VIBRATION OK
- 6) IDLE CHECK
- 7) WARM UP AND KILL

TAKEOFF

- 1) LINES/BRAKES TAUT AND CORRECT
- 2) WING ORIENTATION TO WIND
- 3) START
- 4) THROTTLE CUT-OFF CHECK
- 5) FULL POWER CHECK, IDLE OK
- 6) WIND, CHECK FOR CHANGE
- 7) CHECK TRAFFIC
- 8) CLEAR

Even though you must know these information learned in your license-flight , we wont remember you some important flight information:

Flights under special conditions

RAIN:

In principle no flights under rainy conditions should become necessary. Anyway, every pilot may get into unforeseeable worse weather conditions. And so if the rain is only very light, the flight may be continued for a certain time, but the wet canopy will get heavier. Therefore flight speed will increase, causing a higher stall speed as well.

With a wet wing fly carefully, avoid sudden maneuvers and don't be excessively slow when landing.

If the rain gets stronger land! *No flights in strong rain!*

WIND:

If the wind speed is over 10 km/h **AVOID ABSOLUTELY TO FLY!**

FLIGHTS IN SNOWY CONDITIONS:

They are not permitted at all. In case it starts to snow during flight land soon as possible!

EXTREME TEMPERATURES:

Remember that flight parameters changes in different temperature levels.

At high temperatures the required power and the required flight speed increases, so that the take off distance gets longer than in winter. This is similar to flights in high altitudes.

Dangerous situation

Extreme flying with a trike and full gas are extremely dangerous and therefore cannot be tested. They must be avoided at all costs. Problems do not arise during a normal flight. However, pilot error during the flight or extreme wind conditions may force the wing into an unusual flying position. This may require the pilot to make corrections during flight to which he may not be used to.

In this section we explain how to correct extreme situations if they do arise. The maneuvers described below are based on the legal -take-off weight as described in the technical data section.

These instructions do not replace safety training or specialized literature. We recommend that you undertake special safety training which will prepare you for extreme situations.

Always keep within the recommended limits. Do not perform aerobatics or extreme flying maneuvers.

FRONT STALL

Strong turbulence can cause part or all of the leading edge of the glider to fold or tuck under.

Normally the SWING "Powerplay sting 140" wing will immediately recover into its normal flight position.

- Recovery

If the wing not immediately recover from a frontal tuck, brake quickly and strongly with both steering-lines (brake lines) to re-inflate the glider.

Any weather condition which causes a front stall is dangerous. If you get into such weather land as soon as possible and do not continue before the weather got quieter!

FULL STALL

A full stall could occur if full brake is applied during the flight. The paraglider slows down, surges backwards and deflates. If the brakes are held down, the canopy comes up over the pilot again.

- Recovery

Fully release the brakes within 3 seconds. If you release the brakes too slowly, the paraglider may spin. The spin stops automatically when the brakes are released completely.

ASYMMETRICAL TUCKS

In turbulent air, one side of the paraglider may collapse. Some of the cells deflate and the wing may collapse or spin.

During test flights the "Powerplay sting 140" wing self-recovered it turned less than 90° and stabilized itself.

- Recovery

- Counter-brake slightly on the side of the paraglide that is still inflated to stop it turning away and to stabilize it.
- Counter-brake just enough that the paraglider continues to fly straight ahead.
- If the wing has not yet self-recovered, pump with the brake on the side that has collapsed in order to open it, making use of the full brake travel.

WARNING! Counter-braking too strongly can result in a stall on the inflated side.

TAKE-OFF PROCEDURE

- Line up the TRIKE-FLASH with the wind direction
- Spread the SWING “Powerplay STING 140” paraglider behind the trike
- Connect correctly all the lines to the Trike
- Pull forward the Trike until the lines are straight
- Avoid to start with the wing too close, this may receive a dash that reducing its lifetime, as well as to an overloading of the push rods: Their steel cables do not support horizontal loads but only vertical !

When you are ready, check the wind again (always take off and land against the wind!), hold the throttle handgrip in the hand, check the cable is free and safe, and both brake handles into hands.

Start the engine , give gas gradually and watch the paraglider movement, if the paraglider doesn't come up symmetrically correct it immediately with the brake, if it is not longer possible abort the take-off! Shut off the engine and redo the sequence from start.

Once the paraglider is over the Trike it may be necessary to brake it a little bit to avoid that the wing may go forward to much and drop over, curves are made just with the paraglider, the Trike will follow.

After a few seconds (depending on the wind, from 2 to 15 meters) with full gas the Trike will take off and fly.

The Flight

Flying the TRIKE-FLASH is very similar to flying a standard backpack motor system, but more comfortable.

You can set the gas with the cruise control on the handgrip and trim the paraglider for to fly straight.

Landing

Landing a Trike is much easier than a with a normal paramotor as the forward speed it's not very important parameter. The essential is to land straight against the wind, avoiding to curve before came completely down!

MAINTENANCE

Regular checks obligation.

In Germany the PARA TRIKE (only with empty mass less than 120 Kg.) must not be checked once a year, it depends on the manufacturer. Most of them declare: must be checked once a year by a qualified person. We too align with this behavior and recommend you to check it once a year!

The same with the canopy, it depends on the manufacturer of the canopy, most of them must be checked in a TWO years cycle by manufacturer.

Ordinary Maintenance

Even if the TRIKE-FLASH don't need important maintenance, we suggest to proceed every 100 hours of use to an accurate inspection of following items:

- WHEEL'S ROLLER BEARINGS

Remove the wheels, extract and clean the roller bearings for check their wear condition: If you have some doubt, don't hesitate, replace immediately!

Before reassemble remember to accurately grease them inside and outside.



- FRONT WHEEL PIVOT PIN

Verify the wear and oxidation condition of the front wheel pivot pin, if it isn't in good condition, don't hesitate, replace immediately!

Check the bolt clamping and tighten if necessary



- REAR WHEELS RODS BOLTS

Verify the wear and oxidation condition of the rear wheels gears bolts, if they aren't in good condition, don't hesitate, replace immediately!

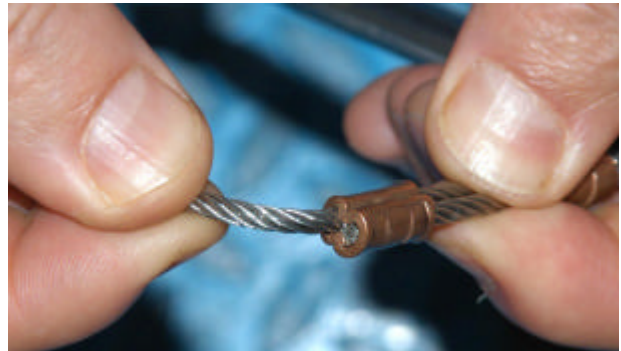
Check the bolts clamping and tighten, if necessary, the bolts on mounting side leaving free to rotate the bolts on wheels rods sides.



- REAR WHEELS STEEL WIRES

Verify the wear and oxidation condition of the rear wheels steel wires, if they aren't in good condition, don't hesitate, replace immediately!

Check wires integrity near the splices bending accurately the cable to verify broken wires.



- EYELETS AND CARABINERS

Check wear conditions inside all eyelets and carabiners. If there are some worn or crack beginnings, proceed immediately to replace!

- HARNESS AND BELTS

Check wear conditions of the harness and all belts.

Cleaning

Clean your **TRIKE-FLASH** with clean water and a mild soap. Dust and dirt can be brushed off, or removed with water and mild soap. Grease and oil can be removed with a good water-based degreaser such as "Simple Green".

Repairs

Minor repairs can be performed by yourself.

Major repairs should be performed by a trained service technician, or by **FLY PRODUCTS**.

CAUTION: Repairs to the harness or any stress-carrying areas of the **TRIKE-FLASH** should only be performed by a certified parachute rigger.

Paraglider

Cleaning

Clean the paraglider only with a soft sponge and clean water.

Harsh chemical substances, high-pressure cleaners or steamers will destroy the surface layer.

Clean the paraglider only if it is absolutely necessary.

Repairs

Repairs should only be carried out by the factory or a specialist recommended by the manufacturer.

You can repair small tears in the wing yourself using the material recommended by the manufacturer, as long as they are in areas which do not bear heavy loads and they are not bigger than 3 cm.

WARNING! Always replace lines that are damaged with only original parts or parts that have been authorized by the manufacturer.

Paraglider inspections

General

Failure to observe the inspection periods will invalidate the warranty and certification.

A properly completed logbook will help you to comply with the periods.

Inspection periods

The SWING "Powerplay STING 140" glider must be inspected as follows:

- Gliders used by schools and commercially used gliders must be inspected (as for the 2-yearly check) every 12 months from the purchase date.
- Gliders for personal use (not used commercially) must be inspected at least every 2 years from the purchase date.
- The paraglider must be inspected after 150 hours of use (including ground handling) if this occurs prior to the periods of 1 year or 2 years as above.

CAUTION : Ground handling time must be at least doubled when working out the total hours of use because of the increased wear and tear on the glider.

Inspection validity

All inspections must be carried out by Fly Products, by SWING, or another inspection agent authorized by Fly Products. The documentation and the result of the inspection must be clearly identifiable by the inspector (date and place / name of inspector) and be entered near the glider information/certification sticker.

Warranty

FLY PRODUCTS will warrant their product to be free from defects in materials and workmanship for a period of six (12) months from the date of purchase. This warranty applies to the product in normal usage situations only. The dealer, from whom you purchased the product, or FLY PRODUCTS, will repair the product free-of-charge.

To obtain warranty service, please contact your dealer or FLY PRODUCTS, and then either bring the product in or have it shipped. Shipping charges are the responsibility of the purchaser.

This warranty does not apply even during the warranty period, and the purchaser shall pay repair or replacement charges if:

? **The cause of malfunction is due to misuse, neglect, negligence, etc. This includes seize of the engine due by an improper carburetor adjustment or improper fuel/oil mix.**

? The malfunction is caused by incorrect pilot operation, i.e. a crash, whack, dork, bang, splat, ding, prong, bend, tweak, trip, fall, bounce, or any other piloting eventuality.

? The malfunction is caused by lack of normal maintenance, or modification, i.e. loose parts falling off and breaking the prop.

? The malfunction is caused by an Act of God, including but not limited to fire, earthquake, hurricane, flood, or other natural calamity.

10.1 Internet info and upgrade

For information, more details and news see our internet site: **www.flyproducts.com**

For safety information , data and rules you can visit the DULV website: **www.dulv.de**