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Thank you for flying ADVANCE

Congratulations on your choice of an PI 2 - a quality product from ADVANCE. We hope that you will spend many rewarding hours in the air with it.

This user manual is an important part of the glider. Here you will find instructions and important information about safety, care and maintenance, and that's why we recommend that you read this document carefully before your first flight.

Register your PI 2 online on www.advance.ch/warranty; you will then receive product updates or safety-related bulletins about the PI 2 direct from us. This information will also be available to download from our website at www.advance.ch, as will the latest version of this manual and further updated information.

If you have any further questions or problems please contact your dealer or get in touch directly with ADVANCE.

Now we wish you a lot of enjoyment with your PI 2, and always «happy landings».

Team ADVANCE
ADVANCE, based in Switzerland, is one of the world’s leading paraglider manufacturers. Since it was founded in 1988, the company has consistently pursued its own directions and concepts, both in development and production. The results are quality products with distinctive characteristics.

Behind the ADVANCE brand name is a team of specialists who share the passion and trust in the company’s products. At home in the air themselves, they contribute their valuable personal experience and dedication to the working processes.

Total control of the production process and supervision of the working practices at the ADVANCE factory in Vietnam ensure a high standard of workmanship. Long term relationships with fabric and line manufacturers means that ADVANCE knowledge and expertise also finds its way directly into the development of new materials.

ADVANCE attaches great importance to after-sales customer support, and has built up a worldwide service network for this purpose. An on-going interaction with its customers brings in a steady flow of new knowledge that finds its way into ADVANCE products, thus completing the «Circle of Service». 
The PI 2

**PI 2 – Light Versatility**

Enjoy the freedom and the versatility – in the air and on the ground. The new PI 2 is one of the lightest low-pack-volume serial wings on the market, and, with four sizes and three specified weight ranges per size, is also one of the most versatile paragliders currently available. Whether for thermaling, Hike & Fly, or use as a MiniWing, it’s you who decide with the new PI 2.

The table shows the EN/LTF A certification as “Beginner”, EN/LTF B certification as “Occasional” (Leisure) and the EN/LTF C level as “Expert”.

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**One wing, many uses**

Each PI 2 size is subdivided into three weight ranges «Thermal», «Hike & Fly» and «MiniWing ». These classifications are a function of wing loading, and require different levels of piloting ability:

**Thermal**

Compact, light, best climbing qualities and maximum safety: in the thermal range, with wing loadings up to 3.5 kg/m², the PI 2 canopy’s quiet pitching behaviour makes it very comfortable to fly, and its modest packed volume suits it for travellers. In its 23 and 27 sizes it can also be recommended as a first light wing. A reduced line setup gives the PI 2 notable performance.

**Hike & Fly**

Easy to carry, easy to sort, easy to manage: the Hike & Fly weight range, with wing loadings between 3.5 and 4.5 kg/m², is intended for leisure pilots and hikers who prefer to savour the important things in life – enjoying time spent in the mountains. “Air Scoop Technology” combined with semi-circular intakes gives the PI 2 high passive safety and agreeable flight characteristics at these weights.

**MiniWing**

Minimum weight and maximum wing loading: this MiniWing area starts at 4.5 kg/m², and provides the PI 2 with an actionwing’s higher trim speed. The purely dynamic possibilities of this flying style encourage maximum flying fun, fast contour-chasing, strong wind soaring or use as an ultralight descent mode for mountaineers – always bearing in mind that its pilots must be very experienced, have specific expertise and accurate handling technique.

**High wing loading:** the higher the wing loading the more agile a canopy becomes, and the more demanding will be its behaviour in extreme situations. This principle applies even more so as the wing itself gets smaller. In referring to the MiniWing ethos we draw attention to PI 2 flying characteristics in this weight range, especially when applied to the 16 and 19 size wings.
Detailed depiction of recommended and extended weight ranges is provided in the “Technical Data” section. The weight figures quoted there apply to total in flight weight – pilot’s weight plus clothes, all the equipment (wing, harness, reserve, instruments etc.; in fact everything that is to go into the air).

### Loading and wing size

The PI 2 has different EN/LTF classifications depending on wing size, its three wing loading ranges, and the demands each combination makes of its pilot.

As a general rule, flying qualities and handling become more demanding at higher wing loading, and steering response is more direct. We can also say that, for simple aeromechanical reasons, smaller wings are more agile (move around faster) than large ones, have shorter brake travel, and are therefore considered to be more demanding to fly – even when flown at their lower wing loadings.

### Beginner – EN/LTF A Certification

The PI 2 23 and 27 sizes have recommended takeoff weight ranges of 65 – 95 kg and 75 – 105 kg respectively, and demonstrate maximal passive safety. This is reflected by the EN/LTF A certification.

As such, the PI 2 makes a good school glider, suitable for beginners. These pilots will continue to feel happy and relaxed under this quiet and well-balanced wing, long after they have completed the basics. Leisure flyers will appreciate the PI 2’s comfortable handling and notably good performance. The recommended takeoff weight range for both these sizes applies to the thermal area, and here the PI 2 demonstrates its good climb and glide abilities.

### Occasional – EN/LTF B

The PI 2 is certified EN/LTF B for the recommended takeoff weight range of the 19 (50 – 75 kg), and in the extended ranges of the 23 and 27 sizes (95 – 110 kg and 105 – 120 kg).

These weight ranges are intended for pilots with a competent active flying style. They can recognise and prevent collapses at their onset, or deal with them without overreacting.
**Expert – EN/LTF C**

Short lines and short brake travel give the PI 2 16 an EN/LTF C over its whole weight range (50 – 90 kg). The 19 wing is also classified as EN/LTF C in its extended range (75 – 95 kg).

In these weight ranges experts are called for who fly with anticipation and foresight, and know how to handle high flying speeds.

**High wing loading:** Smaller wings are generally considered to be more agile – this applies when compared with a larger version of the same paraglider model when flown at the same wing loading. This is why the PI 2 in 16 and 19 sizes are classified EN/LTF C and B respectively, including flight at thermal weights.

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**General advice about paraglider flying**

Taking part in the sport of paragliding requires suitable training, a fundamental knowledge of the materials involved, and the necessary licence and insurance. A pilot must be able to correctly assess the local weather conditions. His/her abilities must be adequate for the actual paraglider to be used.

It is essential that an adequate helmet, suitable footwear and clothing be worn. A reserve parachute must be carried. Before every flight all parts of the equipment must be checked for damage and airworthiness. A proper before takeoff check must always be carried out.

Every paraglider pilot bears sole responsibility for all risks associated with the sport of paragliding, including injury and death. Neither the manufacturer nor the seller of the paraglider can guarantee or be held responsible for the safety of the pilot.
Handle with care

The ADVANCE PI 2 is designed to be as light as possible for its specific areas of use. This places significant demands on those who use and look after it. The owner should become very familiar with the product, its qualities and requirements. Because of its specialised materials and construction the PI 2 can suffer wear and damage if it is carelessly or ignorantly used.

The PI 2 should never be dragged over the ground. Pointed and sharp objects such as stones or twigs can damage the lines and fabric. ADVANCE recommend that you choose your takeoff surface carefully.

Caution: ADVANCE considers it important that you are aware of and respect the PI 2’s lightweight materials. The PI 2 will provide long-term enjoyment, but only if you look after it carefully. Always bear the «Handle with Care» label in mind; the lifetime of this product depends largely on your care.
Preparing the wing

Delivery
Every ADVANCE paraglider has to be flown by the dealer before delivery to check basic settings and trim. The dealer then enters the date of this first flight on the type placard fixed to a rib in the middle of the wing. This entry, together with product registration, confirms that defects in the product, attributable to faulty manufacture, are covered by the extended ADVANCE warranty. See ‘Warranty’ in the “Service” section.

We ask you to fill in the relevant form under “Warranty” on our website within 10 days of purchasing your PI 2. See: www.advance.ch/warranty

Delivery of a PI 2 includes a PIPACK, COMPRESSBAG, repair kit, mini-windsock in the glider colours and a «Getting Started» booklet.

Basic settings
The basic settings of a PI 2 at delivery conform to the original trim that the ADVANCE test team have found to be best. The glider has been certified in this condition. Changes or tampering with these settings, for example altering the line lengths, results in the loss of the wing’s certification. See also the section “Certification”.

Adjusting the brake lines
The brake handle positions have been set at the factory to allow free brake line travel of approximately 8 cm between the brakes free position and the point where brake application first affects the wing trailing edge in unaccelerated flight. This free run makes sure, among other things, that the trailing edge remains unbraked with brakes released, both at takeoff and during accelerated flight, thus implying that the brake line length should not be altered.

We recommend the bowline knot for fastening the brake handles. See illustration at the end of the manual.

Adjusting the speed system
Adjust your PI 2 speed system correctly before your first flight. Make sure that the speed lines run freely through all the pulleys in your harness. Connect the speed lines to the risers with the Brummel hooks. Finally check that your final settings allow the full accelerate travel to be used. To do this hang the harness up, sit in it and get someone to hold up the risers as if in flight.

Caution: The speed lines are ideally set when you can use the full range of the speed system. You must confirm that the speed lines are not adjusted too short – this would cause the wing to be permanently accelerated in flight.
Suitable harnesses

We recommend that you make your first flights with the new paraglider in quiet conditions at a familiar flying site. A few pull-ups on easy ground will give you confidence in handling your PI 2 - from the beginning.
We recommend that you make your first flights with the new paraglider in quiet conditions at a familiar flying site. A few pull-ups on easy ground will give you confidence in handling your PI 2 - from the beginning.

Connecting the risers
The PI 2 risers have the “Easy Connect System” which coordinates with ADVANCE harnesses – with the purpose of helping you clip in correctly. The back of each C-riser has a coloured sewn line running up, and these correspond to similar markings on the harness support loops: red for left, blue for right – in the direction of flight. Both riser markings, correctly coloured and running clearly upwards from the pilot’s viewpoint, is a good indication that the risers are correctly attached.

For maximum compatibility among ADVANCE products these markings will, in future, feature on all ADVANCE harness support loops. Clipping in becomes easier and more reliable in stressful takeoff preparations, especially for beginners and less-than-frequent flyers.

The “Easy Connect System” also makes life significantly simpler when pilots face the glider before takeoff. This applies to the reverse pull-up.

Takeoff
Before every takeoff carry out the following checks:
1. Harness and helmet done up, reserve OK?
2. Lines free?
3. Canopy open?
4. Wind direction and strength assessed?
5. Airspace and field-of-view clear?

PI 2 takeoff behaviour is very straightforward. The PI 2 comes up evenly, whether there’s little or a lot of wind, without hanging back or shooting in front. Because of its light cloth (and other design features) the PI 2 rises exceptionally easily, so it is very important that you modulate your pull-up impulse for the wind and takeoff slope.

This means:
- Less impulse needed in wind and/or on a steep slope.
- A sensible and well-judged pull in zero wind and/or on a shallow slope.

Tip: Before takeoff arrange the canopy into the correct shape. While sorting the lines pull the wingtips towards you (just enough) with the brake lines to achieve the ideal leading edge curve – so that the wingtips do not inflate before the centre.
**High wing loading:** A higher wing loading means that lift-off, minimum and flying speeds will all be noticeably higher; so, after the pull up and canopy check, you must accelerate (run) to a higher speed before the wing can lift you off the ground. The optimal angle of attack for lift-off is minimum sink - about 15% brake. More brake than this (instead of enough speed) is not ideal.

**Light wind takeoff (Forward)**

The PI 2 takes off in a well-behaved manner and only needs a moderate pull up – even in very light wind, so it is not necessary to step back and ‘run into the lines’. Lead the wing up with positive leaning forward, but not much pull on the A-risers, until the canopy is happily overhead. Any directional corrections required while the canopy is rising should be made by moving under the wing centre – not by using brake. After corrections and a look up at the wing a few brisk steps (while still leaning forward) will have you in the air – even in light or no wind. The take-off run can be shortened by careful use of brake (but not too much).

**Takeoff in strong wind (Reverse)**

The reverse takeoff is traditionally recommended for strong winds, but is becoming increasingly useful for modern easy-rising paragliders in moderate conditions. In strong wind control the canopy rising rate by walking (not running – big steps instead, shoulders back) towards the PI 2 as necessary, while maintaining body weight against the wing. Turning round and lifting off is easy with the PI 2.

**Caution:** PI 2 16 and 19 sizes have shorter lines. The lighter canopy has less far to travel as it rises, so will reach its overhead position sooner than sizes 23 and 27.
Tip: In strong wind it is possible to arrange the complete PI 2 pull-up without holding the A-risers. Ease both brakes and briefly step/lean back against the lines (and the wind) to give the initial impulse (as required). This technique leaves you with permanent brake control.

Tip: Playing with the glider on flat ground in wind gives a good feeling for the wing. You can get to know PI 2 characteristics well, and safely investigate takeoff, stalling, pitching and collapsing behaviour without your feet leaving the ground. The ADVANCE test team have a motto: One hour’s ground training is worth ten flights.

Handle with care: Ground practice puts extra wear on the wing.

Normal flight
In quiet air the PI 2 glides best with fully released brakes. Light braking slows the wing to minimum sink speed.

Despite the wing’s high level of stability, an active flying style is recommended in turbulence. Collapses can then be virtually avoided. The technique implies that the canopy always remains overhead the pilot, in other words roll and pitch disturbances should be opposed and corrected.

- When the angle of attack increases (e.g. wing goes back when encountering a thermal, pilot’s weight swings forward) brakes must be released briefly but fully, until the canopy returns to its normal overhead position.
- When wing goes forward (e.g. angle of attack reduces, pilot is left behind) the wing must be immediately arrested with brief but strong braking.

High wing loading: rolling activity increases with wing loading.

Tip: If the PI 2 rolls from side to side in turbulence this cycling can be arrested by brief and symmetrical brake of ca. 20%.

Caution: Always be careful not to get below minimum flying speed, and do not overcontrol when applying controlling brake.

Turning
The PI 2 has precise steering response. Once the free brake line travel has been taken up the wing reacts directly and progressively to increasing steering demands. Steering can be effectively assisted by weight shift. Angle of bank can always be increased, steadied or reduced by brake line position and load.

Outside brake should be used to steady the outside wingtip and control the rate of turn.
High wing loading: High wing loading means high descent rates in the turn. Very good flightpath anticipation and knowledge of the terrain are essential near the ground.

High wing loading: The PI 2 dives for speed very quickly during dynamic changes of direction. This implies that the wing picks up speed quickly when it needs it, and this is reflected in high rates of descent while turning.

Caution: Make sure that your PI 2 has enough speed while turning in thermals - to keep adequate ability to manoeuvre. Go easy on the outside brake.

Tip: If a brake line should break or become detached you can steer your PI 2 by careful use of the C-risers.

Accelerated flight

The PI 2 has a speed system, and the wing is extremely stable in accelerated flight. However, at the lower angles of attack associated with accelerated flight, paragliders are generally considered to be less stable at high speeds. The higher forces associated with higher speed mean that accelerated collapses can be very impulsive. See also section “Collapses”.

If you fly into strong turbulence, first completely release the speedbar before you apply the necessary stabilising brake.

The PI 2’s good canopy stability does allow you to fly through turbulence when accelerated, and to do this you must use active speedbar. This means adapting the speedbar position to a changing angle of attack and pitch attitude, instead of doing this with the brakes. Pitch changes can be kept to a minimum and best glide performance maintained. The following instructions assume a middling speedbar datum position.

- If the wing goes back (e.g. angle of attack increases) push the speedbar - briefly but positively (to push the wing towards its correct position).
- If the wing goes forward (angle of attack decreases) release the speedbar until the wing is again overhead.
Caution: Even though the PI 2 has good canopy stability you should only apply as much speedbar as you feel happy with. Don’t overdo it.

Tip: Do not fly with brake and speedbar applied at the same time, otherwise you will be choosing the worst possible gliding situation, to no advantage.

Tip: For best glide always choose your airspeed taking into account current headwind, sinking air and the expected quality of your next climb.

Collapses

Asymmetric wing collapse (on one side)
The PI 2 has a very stiff and stable canopy. Collapses are rare, especially at high wing loadings, and if an active flying style is employed collapses can be almost totally avoided in normal flying conditions.

If the paraglider does experience a 50%+ side collapse at trim speed it will react with a modest tendency to turn, and heading can be maintained by light countersteering. The paraglider will normally reopen quickly, without assistance from the pilot.

It is important that you then completely release the brakes and allow the glider to regain normal flying speed.

Badly flown wingovers can cause a wingtip to fold in from the side, and create a cravat. The high drag of a cravat can create a strong and immediate desire to turn, quickly leading to a spiral. Prevent this rotation from developing by quickly but carefully applied opposing brake. Then open the cravat by pulling its orange stabilo line. Opening a cravat can also be done quickly by pumping its brake. To do this apply 75% brake on the offending side, reaching this value within two seconds, then release it immediately.

High wing loading: Deliberately simulating collapses is discouraged. At high wing loading the PI 2 has a very collapse-resistant wing, but its reactions to asymmetric wing collapse could turn out to be dynamic.

Symmetrical collapse (Frontstall)

If the front of the wing folds, normal airflow breaks down, the wing stops flying and the pilot swings forward – the wing appears to fall behind. The pilot returns under the wing after a short delay. Wait, without applying brake, until the wing is overhead and flying forward again. After a big front collapse the reopening can be delayed; overreaction with the brakes should be avoided, especially when controlling a surge.
or attempting to help the glider resume normal flight in some way. Such excessive pilot assistance risks a fullstall. Hands up when possible – let it fly.

**High wing loading:** Deliberately provoked collapses are discouraged. At high wing loading the PI 2 has a very collapse-resistant wing, but its reactions to extreme flight situations could turn out to be dynamic, and dealing with them difficult.

**Info:** If you wish to simulate a frontstall at normal wing loadings make sure that you pull all the A lines down together. This advice applies in particular to the Standard Risers, where you must grasp the separated big ears riser together with the main riser, on each side.

**Fast descents**

The ADVANCE test team recommends big ears or the spiral dive as fast and efficient ways of getting down.

**Tip:** Practise fast descents occasionally in easy conditions, so that they do not become emergencies when needed.

**Big ears (folding both wingtips)**

To apply big ears pull both outer A lines down briskly at the same time. This is achieved using the outer split A-risers (Standard Risers) or by directly pulling the red marked outer A lines (Light Risers). This action folds the wingtips, and you can easily hold them in place. Forward and vertical speeds can be increased by applying speedbar in this configuration. Release the A lines to reopen the ears. Internal wing pressure will then do this without further assistance.

**Caution:** Do not fly spirals or dynamic direction changes with big ears applied. Raised loading carried by few lines can damage the structure.

**Caution:** Be aware that big ears bring the wing closer to the stalling angle of attack. Be careful with the brakes during flight with big ears, and do not do big ears with a wet paraglider.
Spiral dive

We recommend a neutral weight distribution in the harness with no active weight steering attempt - as the simplest and most comfortable way to do this manoeuvre. Enter the spiral by progressively applying one brake. Head and field of view should be directed in the turn direction. As the angle of bank increases so will the airspeed, rate of turn, rate of descent and centrifugal loading (g force).

The behaviour of a turning paraglider can be divided into two phases: to begin with a normal turn increases its angle of bank and tightens its radius. The wing carries an increasing pilot weight – the airspeed builds. At the second phase the paraglider enters its spiral mode: in its search for more speed in order to carry the ever-heavier pilot the wing dives to a vertical flightpath and appears, to the pilot, to be tracking laterally around the horizon. Airspeed, descent speed, rate of rotation and g all increase markedly. This is the steep spiral. At the same instant the pilot’s weight becomes mostly supported by the risers on the inside of the turn, and the harness tips to the outside. Do not resist this or try to sit up straight by transferring more weight to the inside risers: keep the neutral sitting position – even though it is, looks and feels out of balance.

To recover: progressively reduce the inside brake - a reversal of the entry procedure. Nothing will appear to happen to begin with, but this does not mean that anything is wrong. When the wing starts to take-up its original bank angle and rise above the horizon the glider is leaving the spiral mode. It will then try to recover quickly, but with too much speed for straight flight; and careful reapplication of some inside brake is required to keep the turn going while the speed reduces. This pro-turning phase does not last long, and feels like one side of a wingoever, but if this is not done, excess speed will cause a zoom climb: the wing will pitch back and the pilot will climb, followed by a forward surge – maybe accompanied by collapsing, cravating etc..

Make sure you start the recovery with plenty of height above the ground. This also requires that you started the manoeuvre with a lot of height. To recover takes about the same time and number of turns as the entry - but recovery starts with a very high vertical speed, and uses more height.

⚠️ Caution: The PI 2 was tested according to current certification requirements. With the neutral sitting position and release of the inside brake a spiral will recover by itself. If the pilot transfers his weight to the inside while the spiral mode is engaged, and vertical speed is high, the spiral may become stable (keep going by itself). In this situation active outside weightshift and outside brake are required to recover from the locked-in spiral.
Carabiner distance of more than 44 cm can additionally encourage strong acceleration and rotation, from which the spiral may not recover by itself.

**High wing loading:** At high wing loading high vertical speed can be reached very quickly.

**Stall**

**One-sided stall (Spin)**
ADVANCE do not recommend deliberate spinning for the PI 2 because of the dynamic behaviour that may result.

When carrying out tight thermaling turns the PI 2 gives early and clear warning of the approaching risk of stall by strongly rising brake loading. If, however, the paraglider should stall, immediately release the brakes fully, to allow the PI 2 to return to normal flight.

**High wing loading:** If one side of the wing is deliberately stalled the PI 2 can react extremely dynamically. ADVANCE advise expressly against provoking a one-sided stall.

**Tip:** As a basic principle both brakes should be immediately and fully released at the onset of all out-of-control situations. This applies especially to an incipient spin.

**Fullstall**
The fullstall can be a very dynamic affair with a PI 2, particularly at high wing loading. ADVANCE do not recommend it.

**B-Stall**
A PI 2 B-Stall is possible to do, but this will strongly challenge all the structure and the permanent shape of the profile.

So we recommend that you do not carry out regular B-Stalls, but it has to be said that the manoeuvre does present difficulties to the pilot. As a rule the B-Stall is considered more difficult for lighter pilots because of the strength required; in fact this ability depends on personal muscle power to weight ratio.

**Parachutal stall**

It has not proved possible to establish a dry PI 2 in stable parachutal stall. If the canopy is wet the PI 2, like every paraglider, is more prone to parachutal stall. If a wet paraglider were to stay in parachutal stall, recovery should be made by applying the speed system. See section “Flying with a wet paraglider”.

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22
Landing

Always fly a proper circuit with a defined final approach. Approach with enough speed, and apply brake as the ground approaches to flatten out the descent angle, then smoothly continue to full brake to reduce the groundspeed at touchdown. If there is no headwind expect to make a few steps of landing run.

Caution: Steep turn reversals will encourage strong PI 2 swinging, and should be avoided near the ground.

Caution: Significant braking prior to landing reduces airspeed, raises the sink rate and steepens the flightpath. It also greatly reduces your ability to manoeuvre.

Caution: Flight below minimum airspeed leads to stalling. This should always be avoided when top landing or on final approach.

High wing loading: High airspeed, and high rate of descent in the turn, make extra demands on the PI 2 pilot when landing at high wingloading.

Handle with care: Never let your wing fall to the ground on its leading edge. The resulting overpressure inside the wing can tear the ribs and damage the leading edge.

Handle with care: After landing in water the canopy can quickly fill up, and become very heavy. The canopy should be lifted out of the water by its trailing edge, giving the water a chance to run out. Otherwise it might tear under this unaccustomed heavy load.

Flying with a wet paraglider (Risk of parachutal stall)

Flying with a wet paraglider raises the risk of parachutal stall. Such parachutal stall is often the result of a combination of several factors. The weight of the water moves the canopy’s centre of mass rearwards, changing its trim resulting in a higher angle of attack, thus bringing the glider closer to its stall boundary. Then there’s the bad effect of the surface water drops on the laminar flow boundary layer near the leading edge, significantly lowering the maximum achievable lift coefficient. If the wet glider also flies near its lower weight limit the angle of attack is further slightly raised, and the airspeed is lower anyway at the lighter wing loading, further reducing the stalling speed margin.

To minimise the risk of parachutal stall you should brake the glider as little as possible. If the wing does go into parachutal stall you should only recover by applying the speed system. See also section “Parachutal stall”.

Winching / Paramotoring
The PI 2 is not suitable for winching or paramotoring – it was developed for Hike & Fly.

Acro
The PI 2 is not suitable for acro flying because of its lightweight construction.
Packing

Always pack your PI 2 rib on rib, so that the plastic rods at the leading edge lie flat on each other at the same height. This will preserve the PI 2’s long life. It will also maintain the fast and reliable inflating qualities at takeoff.

The PI 2 comes with a COMPRESSBAG, which forms a compact and space-saving package to pack in the PIPACK or a reversible EASINESS harness. Space then remains for clothes and instruments etc..

Fold the PI 2 to the width of the COMPRESSBAG, slide it in and pull in the drawstring. Then close the side zippers to press the air out of the COMPRESSBAG and glider. The COMPRESSBAG replaces the familiar inner bag.

To reduce wear at the wing centre you should randomly change the lane which carries the final chordwise fold. Always store your wing in a dry and dark place.

Care and maintenance

Ultraviolet light, heat, humidity, sea water, aggressive cleaning agents, unsuitable storing and physical abuse (dragging across the ground) speed up the ageing process.

The life of a paraglider can be extended significantly by observing the following advice:

- Allow a wet or damp glider to dry by leaving it completely unpacked at room temperature, or outside in the shade.
- If the glider gets wet with salt (sea) water rinse it thoroughly with fresh water.
- Clean the glider only with fresh water, and a little neutral soap if necessary. Do not use solvents under any circumstances.
- If the glider has been subjected to increased stress (such as a tree landing) have it examined by an expert.
- Regularly remove sand, leaves, stones and snow from the cells. Openings with Velcro closures are provided at the wing tips for this purpose.
- Do not leave the glider out in the sun unnecessarily before and after flight (UV light).
- Do not subject the packed glider to excessive temperature.
fluctuations, and do ensure adequate air circulation to prevent condensation forming.

- Do not drag the glider across the ground.
- When landing, make sure that the canopy does not fall on its leading edge.

**Check**

The PI 2 has to have a check every 24 months, or 100 flights, or 100 flying hours – whichever comes first – at an approved ADVANCE checking organisation. At the check the condition of all materials is inspected according to strict guidelines, and with great care and attention to detail. Finally, the overall condition of the paraglider is assessed and recorded in a test report. There’s more information about the check in the “Service” section of this manual, or on www.advance.ch.

**Repairs**

As a general rule you should not attempt to repair a paraglider yourself. The various seams and lines are made with great precision, and, for this reason, only the manufacturer or an authorised service centre may fit identical replacement parts or replace entire cells. Exceptions to this rule are the replacement of lines and the repair of the small tears or holes in the fabric that may be glued with the self-adhesive ripstop included in the repair kit. After a repair, or the replacement of a line, the glider must always be opened out and checked on the ground before the next flight.

Spare parts such as lines, quicklinks and repair materials for the PI 2 can be obtained from ADVANCE or an ADVANCE Service Centre and/or dealer.
## Technical details

<table>
<thead>
<tr>
<th></th>
<th>PI 2</th>
<th>16</th>
<th>19</th>
<th>23</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area flat</strong></td>
<td>m²</td>
<td>16.0</td>
<td>19.0</td>
<td>23.0</td>
<td>27.0</td>
</tr>
<tr>
<td><strong>Area projected</strong></td>
<td>m²</td>
<td>14.0</td>
<td>16.7</td>
<td>20.1</td>
<td>23.6</td>
</tr>
<tr>
<td><strong>Recommended Takeoff weight</strong></td>
<td>kg</td>
<td>50-90</td>
<td>50-75</td>
<td>65-95</td>
<td>75-105</td>
</tr>
<tr>
<td><strong>Increased takeoff weight</strong></td>
<td>kg</td>
<td>–</td>
<td>75-95</td>
<td>95-110</td>
<td>105-120</td>
</tr>
<tr>
<td><strong>Glider weight with standard risers</strong></td>
<td>kg</td>
<td>2.21</td>
<td>2.51</td>
<td>2.88</td>
<td>3.26</td>
</tr>
<tr>
<td><strong>Glider weight with light risers</strong></td>
<td>kg</td>
<td>2.07</td>
<td>2.36</td>
<td>2.74</td>
<td>3.11</td>
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<tr>
<td><strong>Aspect ratio flat</strong></td>
<td></td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Aspect ratio projected</strong></td>
<td></td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Span flat</strong></td>
<td>m</td>
<td>8.5</td>
<td>9.2</td>
<td>10.2</td>
<td>11</td>
</tr>
<tr>
<td><strong>Span projected</strong></td>
<td>m</td>
<td>7</td>
<td>7.6</td>
<td>8.4</td>
<td>9.1</td>
</tr>
<tr>
<td><strong>Certification Recommended Takeoff weight</strong></td>
<td>C</td>
<td>B</td>
<td>A</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>Certification Increased takeoff weight</strong></td>
<td>–</td>
<td>C</td>
<td>B</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td><strong>Number of cells</strong></td>
<td></td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td><strong>Number of risers</strong></td>
<td></td>
<td>3 / 3+1</td>
<td>3 / 3+1</td>
<td>3 / 3+1</td>
<td>3 / 3+1</td>
</tr>
<tr>
<td><strong>Max. accelerate travel</strong></td>
<td></td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>12</td>
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<tr>
<td><strong>Trims</strong></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Riser lengths</strong></td>
<td></td>
<td>47</td>
<td>47</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

1 Pilot, wing, equipment
2 The weight of the wing can vary by up to 100g due to unavoidable manufactured fluctuations in the density of such light fabric.
Materials used

We continually inspect and test the great variety of raw materials that we use. Like all ADVANCE products the PI 2 was designed and manufactured in keeping with the latest knowledge and procedures. We have chosen the materials very carefully in accordance with the most stringent quality demands.

The PI 2 leading edge is made from 40 gm cloth. This contributes much to the PI 2’s longevity.

<table>
<thead>
<tr>
<th>Leading edge</th>
<th>Skytex 32, 70032 E3W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper surface</td>
<td>Skytex 27, 70000 E3H</td>
</tr>
<tr>
<td>Lower surface</td>
<td>Skytex 27, 70000 E3H</td>
</tr>
<tr>
<td>Ribs</td>
<td>Skytex 27, 70000 E91</td>
</tr>
<tr>
<td>Sewing thread</td>
<td>Serafil 60</td>
</tr>
<tr>
<td>Base lines</td>
<td>Edelrid Technora, 8000U-230/190/130, unummantelt, 1.3 mm / 1.1 mm / 1.0 mm</td>
</tr>
<tr>
<td>Gallery lines</td>
<td>Edelrid Technora, 8000U-090/050, unummantelt, 0.8 mm / 0.5 mm</td>
</tr>
<tr>
<td>Brake lines</td>
<td>Edelrid Technora 8000U-190, unummantelt, 1.1 mm</td>
</tr>
<tr>
<td>upper main brake lines</td>
<td>Edelrid Technora 8000U-190, unummantelt, 1.1 mm</td>
</tr>
<tr>
<td>brake main lines</td>
<td>Edelrid Dyneema, 7850-240, ummantelt 1.9 mm</td>
</tr>
<tr>
<td>Risers standard</td>
<td>Polyester / Technora 13 mm</td>
</tr>
<tr>
<td>Riser quicklinks standard</td>
<td>Maillon Rapide 3.5mm Delta S12</td>
</tr>
<tr>
<td>Riser light</td>
<td>Dyneema 10 mm</td>
</tr>
<tr>
<td>Softlinks</td>
<td>Dyneema DC 300</td>
</tr>
</tbody>
</table>
Certification

The PI 2 has EN and LTF certification. The certification test reports can be downloaded from www.advance.ch.

The following certification categories were awarded to the different sizes and their weight ranges:

- **16er**: 50 kg – 90 kg: EN/LTF C
- **19er**: 50 kg – 75 kg: EN/LTF B, 75 kg – 95 kg: EN/LTF C
- **23er**: 65 kg – 95 kg: EN/LTF A, 95 kg – 110 kg: EN/LTF B
- **27er**: 75 kg – 105 kg: EN/LTF A, 105 kg – 120 kg: EN/LTF B

Certification ratings can only provide limited information about a paraglider’s flying behaviour in thermally active and turbulent air. The certification grading is based primarily on provoked extreme flight manoeuvres in calm air.

During the development of an ADVANCE paraglider, the emphasis is first and foremost on flying behaviour and handling, and not exclusively on the certification test. The result is a well-rounded product with the familiar ADVANCE handling. Nevertheless, the certification rating occupies a significant proportion of the specifications that have to be met.
ADVANCE Service Centres
ADVANCE operates two company-owned Service Centres that carry out checks and repairs of all types. The workshops based in Switzerland and France are official maintenance operations, certified by the German Hanggliding and Paragliding Federation (DHV), which has many years’ experience and in-depth product-specific expertise. The ADVANCE worldwide service network includes other authorised service centres which provide the same services. All service facilities use original ADVANCE materials exclusively. You can find all the information about checks and repairs, and the relevant addresses at www.advance.ch.

The ADVANCE website
At www.advance.ch you will find detailed information about ADVANCE and its products, as well as useful addresses which you can contact if you have any questions.

Among the things you will be able to do on the website are:

- complete the warranty card online up to 10 days after purchasing the glider, enabling you to enjoy the full benefits of the ADVANCE warranty.
- find out about new safety-related knowledge and advice concerning ADVANCE products
- download an application form in PDF format which you can use when sending your glider in for a check at ADVANCE.
- find an answer to a burning question among the FAQs (Frequently Asked Questions)
- subscribe to the ADVANCE Newsletter so that you will be regularly informed by e-mail about news and products.

It is well worth visiting the ADVANCE website regularly because the range of services offered is continuously being expanded.

Warranty
To benefit from the comprehensive cover of the extended ADVANCE warranty we ask you to complete the relevant form on the Internet within 10 days of purchase. This document can be found on www.advance.ch under “Warranty”.

As part of the ADVANCE warranty, we undertake to rectify any defects in our products that are attributable to manufacturing faults. In order for a warranty claim to be made, ADVANCE must be notified immediately on discovery of a defect, and the defective product sent in for inspection. The manufacturer will then decide how a possible
manufacturing fault is to be rectified (repair, replacement of parts or replacement of the product). This warranty is valid for three years from the date of purchase of the product. Warranty and Service Intervals begin from the date of the glider’s first flight, recorded on the identification plate. If no date is evident the applicable date is that on which the glider was transferred from ADVANCE to the ADVANCE dealer. The ADVANCE warranty does not cover any other claim. Claims in respect of damage resulting from careless or incorrect use of the product (e.g. inadequate maintenance, unsuitable storage, overloading, exposure to extreme temperatures, etc.) are expressly excluded. The same applies to damage attributable to an accident or normal wear and tear.
Wing parts

- Upper surface
- Air intakes
- Lower surface
- Cells
- Ribs
- Winglet
- Cleaning Velcro
Line plan
Risers

1. Big ears system
2. Quicklinks and clips
3. Softlinks
4. Speed system pulleys
5. Speed system with ‘low friction’ rings
6. Brummel hooks
7. Magnet clips
8. Poppers
9. Swivel
10. Suspension loop with ‘Easy Connect System’ marks
11. ‘Low friction’ brake ring
Instructions Palstek-Note

Step 1

Step 2

Step 3

Step 4

Step 5
Installation instructions Softlink