

USER MANUAL

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Bolero 8

WELCOME

Thank you for choosing Gin Gliders.

Gin Gliders was founded by designer and competition pilot Gin Seok Song with a clear objective: to create paragliding equipment that pilots around the world trust and enjoy flying, whatever their ambitions.

At Gin Gliders, aerodynamicists, competition pilots, engineers, and instructors work together with a single focus: designing better paragliding equipment. We are a hands-on company, with continuous development, testing, and refinement at the center of our work. Our dedicated R&D facilities allow rapid design, manufacturing, and test flying, to ensure that every product is thoroughly evaluated in demanding real-world conditions.

Our own production facilities in East Asia ensure consistent product quality and responsible manufacturing. These facilities are independently certified to AS9100 (Aerospace Standard) and ISO 9001.

We believe that confidence in a paraglider comes from flying it. Through understanding and familiarity, pilots develop trust, which leads to safety, comfort, performance, and enjoyment.

This manual contains essential information for the safe operation, maintenance, and performance of your paraglider. Familiarity with your equipment is a key part of safe flying.

If you have questions regarding the use of this product, please check our website and contact your local dealer or Gin Gliders directly.

We wish you enjoyable flights and always a safe landing.

Gin Gliders Team

Warning

Paragliding is an activity with inherent and unpredictable risks that may result in serious injury or death.

By flying this paraglider, you accept full responsibility for your actions and decisions. You must always follow the safety advice, limitations, and procedures described in this manual. Failure to do so may invalidate the certification of the wing and/or your insurance cover.

No paraglider can be considered safe under all conditions. Neither Gin Gliders nor its local dealers can guarantee your safety or be held responsible for accidents or injuries.

User Manual

This user manual is an integral part of the EN certification of this paraglider. No operating procedures or configurations other than those described in this manual are approved.

You must read and understand this manual fully before your first flight.

Gin Gliders may update this manual at any time. Always refer to the latest version available on the official website. The manual version and publication date are shown on the cover.

www.gingliders.com

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SAFETY AND LIMITATIONS

1. General Safety

Paragliding requires a high level of individual responsibility. Sound judgement, prudence, and risk awareness are essential for safe operation. Because paragliding is relatively easy to learn, pilots may underestimate the risks involved. Carelessness or overestimating one's abilities can quickly lead to critical situations.

Correct assessment of weather conditions is particularly important. Paragliders are not designed to be flown in turbulent or unstable air, or in precipitation. Most serious paragliding accidents are caused by pilots misjudging weather conditions rather than by equipment failure.

This manual does not replace proper training at a certified paragliding school. Independent experimentation outside the procedures described in this manual is strictly prohibited.

2. Certification and Intended Use

2.1 Certification

The Bolero 8 holds an EN-A classification.

EN certification evaluates paraglider behavior under standardized test conditions. These tests provide a reference for passive safety but cannot represent every possible flight situation. Small variations in pilot input, wing loading, or air mass can significantly affect flight behavior.

The flight characteristics described in this manual are based on certification and manufacturer test flights conducted under standardized conditions.

2.2 Intended Use

The Bolero 8 was developed, tested, and certified exclusively as a paraglider for foot launch and winch launch. This wing is not intended for:

- Paramotoring
- Tandem paragliding
- Aerobatic flying (acro)

Use outside the intended purpose is prohibited and invalidates certification. Information on Gin Gliders products designed for motorized flight is available on the Gin Gliders website.

3. Pilot Profile and Required Skills

The Bolero 8 is designed for:

- Beginner pilots
- Student pilots (where EN-A wings are permitted for training)
- Recreational pilots seeking high passive safety and forgiving behavior

The glider offers predictable reactions and good passive safety. However, safe flight still requires active flying, especially in turbulent air.

Pilots should be able to:

- Maintain stable flight using appropriate brake and weight-shift inputs
- Recognize and manage common disturbances such as frontal and asymmetric collapses
- Execute basic descent techniques as taught during training

Participation in safety training is strongly recommended, particularly for pilots with limited recent flight experience.

4. Operating Limitations

4.1 Limitations

The Bolero 8 must only be flown within its certified operating limits and in an airworthy condition. The pilot is responsible for ensuring that the paraglider, equipment, and configuration comply with all requirements before every flight.

Operating limits are exceeded if any of the following apply:

- The take-off weight is outside the certified weight range
- Flight in rain, drizzle, snow, fog, or cloud
- Flight with a wet glider

- Turbulent weather or strong wind exceeding safe launch conditions
- Air temperatures above 50°C or extreme cold combined with moisture (icing risk)
- Aerobatics or intentional extreme maneuvers
- Use of unapproved or modified components

Flying outside these limits is prohibited and may lead to loss of control or structural damage.

4.2 Equipment Requirements

Before every flight, the pilot must ensure that:

- The paraglider is airworthy.
- A certified reserve parachute is carried and correctly installed.
- A suitable harness, helmet, and protective equipment are used.

The reserve parachute must be appropriate for the pilot's take-off weight and installed according to the manufacturer's instructions.

4.3 Modifications

The Bolero 8 is delivered in a configuration identical to the certified test wing. The following will invalidate certification and may be dangerous:

- Any modification to the fabric, lines, risers, or brake system
- Changes to line lengths or riser geometry
- Repairs not carried out by an authorized service center
- Flying with an expired inspection interval

Always inspect your equipment before flight and respect inspection schedules.

4.4 Towing

The Bolero 8 is suitable for winch towing. Tow launches must be carried out only with a qualified tow operator and certified towing equipment, in accordance with all applicable regulations.

Before towing, lay out the glider facing the take-off direction in a shallow arc to ensure smooth and controlled inflation. Allow the wing to rise fully overhead and come under complete control before giving the “start” command. Before initiating the tow, the paraglider must be fully inflated and stable overhead. Excessive braking during inflation may lead to loss of control.

After lift-off, the pilot is towed at a shallow angle to a safe altitude (approx. 50 m). During this phase, remain upright and ready to run. Do not sit back in the harness until safe altitude is reached, so a safe landing is possible in case of tow failure.

Steering during towing should be carried out primarily using weight-shift. Use brief, controlled brake inputs only if necessary.

4.5 SIV (Safety Training)

SIV is recommended to improve understanding of the paraglider and correct reactions in unusual flight situations.

The Bolero 8 may be used for SIV training only under professional supervision, over water, and with appropriate safety equipment and procedures in place.

4.6 Material Overstress

Paragliding may subject the equipment to unpredictable and excessive loads, for example due to turbulence, abrupt maneuvers, or safety training. In some cases, this may result in material damage or changes in flight characteristics.

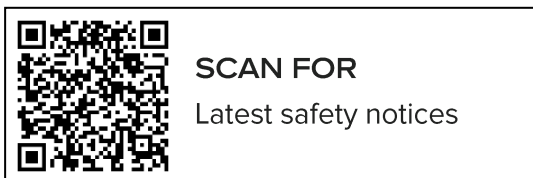
Incorrectly induced maneuvers or excessive loads may exceed the design limits of the paraglider. Damage or deterioration resulting from overstress or safety training is not covered by the warranty.

If damage is suspected, contact your local dealer or authorized service center for inspection.

5. Safety Notices

Gin Gliders publishes safety notices when issues are identified that may affect a specific model or production batch. These notices describe the issue, inspection procedures, and required corrective actions.

Safety notices are published on the Gin Gliders website. It is the owner's responsibility to remain informed and comply with all applicable notices.



GETTING STARTED

1. Before the First Flight

The Bolero 8 is delivered with the trim settings defined by the Gin Gliders R&D team and used during certification. Do not modify the paraglider in any way. Changes such as altering line lengths or fitting non-standard risers will invalidate the certification.

The brake lines are factory set for optimal handling and must not be adjusted. The built-in free travel ensures that the trailing edge remains unbraked during take-off and when flying fully accelerated.

Before flying the Bolero 8 for the first time:

- The paraglider must be inspected and test-flown by a qualified instructor, local dealer, or authorized service center.
- The test flight must be recorded on the paraglider information label.
- Carry out your first flights only in calm, stable weather and at a familiar training site.
- Begin with gentle control inputs to become familiar with the glider's reactions.

Avoid flying in demanding conditions until you have fully adapted to the Bolero 8.

2. Harness

It is important to set up your harness correctly before flying the Bolero 8. Take the time to adjust all harness settings so that you are comfortable and well supported in flight.

The Bolero 8 is certified for use with GH type harnesses (variable cross-bracing). Older harnesses with fixed cross-bracing should not be used.

The chest strap setting has a direct influence on handling and feedback. Depending on wing size, the recommended distance between carabiners (measured between the centers of the hang points) is as follows:

Total weight in flight	< 80 kg	80 to 100 kg	> 100 kg
Width	40 ± 2 cm	44 ± 2 cm	48 ± 2 cm

Don't adjust your leg and shoulder straps too tightly. If you do, you may have difficulty sitting back into your harness after take-off.

3. Reserve

The reserve is intended for emergency situations where normal flight cannot be recovered.

Carrying a certified reserve parachute is mandatory.

- The reserve must be suitable for your total take-off weight.
- Installation must follow the reserve manufacturer's instructions.
- Compatibility with the harness container must be ensured.

4. Weight Range and Wing Loading

The Bolero 8 must be flown within the certified take-off weight range, as specified in the Technical Data section. Take-off weight includes pilot (with clothing), glider, harness, reserve, helmet, other equipment and ballast.

The reactions are quite different at the upper and lower weight range. Upper weight range creates more dynamic handling, faster reactions, better penetration in wind but requires higher pilot precision. Lower weight range, on the other hand, generates slower reactions, more docile handling, reduced sink rate, and less wind penetration. The most balanced handling is generally found in the middle of the weight range.

It's recommended to check your real take-off weight by standing on a scale with all equipment packed. Ballast may be used to fine-tune wing loading.

FLIGHT CHARACTERISTICS

This section describes the normal handling and flight behavior of the Bolero 8. All descriptions refer to a correctly adjusted glider flown within the certified weight range and in normal flying conditions.

1. Pre-flight

1.1 Pre-flight Check

A careful pre-flight check is essential for safe operation. Always carry out the check with the same level of attention before every flight.

At the take-off site:

- Assess the conditions: wind strength and direction, airspace, turbulence, and thermal cycles.
- Check and prepare your equipment: paraglider, harness, reserve handle and pins, helmet, and all accessories.
- Choose a launch area that is wide, even, and free from obstacles.
- Put on your harness and close all leg and chest straps, then put on your helmet.
- Lay out the paraglider in a curved (half-moon) shape and sort the lines.
- Connect the risers to the harness carabiners. Ensure carabiners are closed and no risers are twisted.
- Connect the speed system using the Brummel hooks.
- Perform a final line check. Make sure there are no knots, twists, or lines caught on vegetation or rocks. Take extra care in light wind conditions.

1.2 Final Check (5-point Check)

Immediately before take-off, check:

1. Personal equipment: harness, carabiners, reserve, helmet. All straps closed!
2. Glider: arranged in a half-moon shape, all air intakes open!
3. Lines: untangled, free, and not under the glider!

4. Conditions: wind direction and strength suitable for a safe launch!
5. Airspace and launch area: clear!

2. Launching

2.1 Forward Inflation

Forward inflation is recommended in nil to light wind conditions. Lay out the glider with the lines fully stretched. Lean forward positively and raise the A-risers (both A and A') smoothly in an arc, keeping your elbows bent and your hands approximately at shoulder height. The glider inflates easily and progressively.

As the glider comes overhead, visually check that it is fully and symmetrically inflated and that the lines are free from knots or tangles. Only begin acceleration once the glider is under full control.

2.2 Reverse Inflation

Reverse inflation is suitable in light to strong wind conditions and is recommended as wind strength increases. Partially inflate the glider first, which allows you to untangle the lines. Once ready, raise the glider smoothly in an arc using the A-risers (both A and A').

When the glider is overhead and stable, control it with light brake input if required, turn around, and proceed with the launch. In very strong winds, take a few steps toward the glider during inflation to maintain control.

Reverse inflation allows better control of the glider during the inflation phase and is therefore recommended in stronger wind conditions.

3. In-flight Characteristics

3.1 Normal Flight

With brakes fully released, the Bolero 8 flies at trim speed, which provides the best glide in still air. Brake input is used to adjust speed according to conditions, balancing performance and safety.

Minimum sink is achieved with light brake input. In a normal flying position, knees approximately level and the body slightly reclined, the hands should be positioned between shoulder and eye height. This speed range is ideal for thermalling and ridge soaring.

As brake input increases toward the hips, stall speed is approached. This is accompanied by reduced wind noise and a noticeable increase in brake pressure. These sensations provide clear feedback and should be learned progressively.

3.2 Turning

The Bolero 8 performs best in turns when flown with adequate airspeed and active weight-shift. Enter turns progressively with sufficient speed, initiate weight-shift, then apply inside brake. Once established, regulate turn radius primarily with weight-shift and the outside brake. Excessive braking increases sink rate and should be avoided.

The glider has very low spin tendency and can be turned tightly, when necessary, by careful application of inside brake. As brake input increases further, bank angle and sink rate increase, eventually leading into a spiral dive. Refer to the Rapid Descent Techniques section for details.

Harness type and chest strap setting influence turning behavior and should be adjusted correctly.

3.3 Accelerated Flight

After gaining familiarity with the glider, the speed system may be used to improve penetration in headwinds and increase glide efficiency. Apply the accelerator progressively using your feet. Avoid flying accelerated close to the ground and use caution in turbulence.

Ensure all brake wraps are released before using the speed system. The brake geometry is set to prevent trailing edge deflection during accelerated flight. Applying brake while accelerated creates an unstable profile and significantly increases the risk of collapse. Therefore, avoid applying brakes when using the speed bar.

The glider reacts faster and more dynamically to collapses when accelerated. If a collapse occurs, immediately release the speed bar fully before applying any corrective inputs.

3.4 Active Flying

Active flying aims to prevent collapses and maintain stable flight by continuously managing wing pressure. Maintain light, constant brake tension, approximately equal to the weight of your arms. This allows relaxed flying while giving precise feedback through the brakes.

If pressure decreases on one or both sides, apply the corresponding brake promptly to restore pressure, then release as soon as normal pressure returns. If a collapse occurs, first raise your hands to release the brakes before taking further corrective action.

The Bolero 8 has high pitch stability. However, in turbulence or maneuvers, pitching may occur. If the glider pitches forward, apply brake briefly to slow it. If it drops behind, ease off the brakes to allow it to accelerate.

The goal is to reduce the pendulum effect by matching glider speed to pilot movement. The same principles apply when flying accelerated.

4. Rapid Descent Techniques

Certain situations may require a rapid descent to avoid danger, such as strong lift near cumulus clouds, approaching fronts, or rapidly deteriorating weather.

All rapid descent techniques must be practiced in calm air and with sufficient altitude. They should only be used when necessary and never as a routine flying technique. Thorough pre-flight weather assessment and continuous in-flight observation are the best ways to avoid the need for rapid descent maneuvers.

Rapid descent techniques place increased load on the glider and should be used sparingly. We strongly recommend practicing these maneuvers only under professional supervision during safety training.

4.1 Big ears

Big ears provide a moderate sink rate while maintaining forward speed and directional control. This makes it the most commonly used descent technique.

To enter big ears, pull down both outer A-lines (A') evenly until the wingtips fold inward. The folded area should be large enough to remain stable without flapping. The size of big ears can be increased by pulling the lines down further.

Steering during big ears is achieved by weight-shift. Brake lines should be held steady and must not be shortened or wrapped. Do not use the brakes unless exiting the maneuver.

Sink rate and penetration can be increased by applying the speed bar once big ears are fully established. Always apply the accelerator after entering big ears, never before.

To exit, release both A-lines simultaneously. If necessary, assist re-inflation by applying brake progressively on one side at a time. Avoid deep braking on both sides simultaneously, as this may lead to a stall.

Note that although wing loading increases and collapse resistance improves, overall airspeed is reduced and the stall margin decreases.

4.2 Spiral dive

The spiral dive is the most effective rapid descent method, capable of very high sink rates. It is also the most physically demanding and requires precise control. Significant G-forces may occur.

The Bolero 8 meets EN spiral dive requirements and does not exhibit a tendency to remain in a stable spiral under standard certification conditions. However, harness geometry, chest strap width, excessive sink rates, or unapproved equipment may alter recovery behavior.

Spiral dives can generate very high G-forces, potentially exceeding 6G. These forces may cause disorientation or loss of consciousness, particularly in steep or prolonged spirals.

Only initiate a spiral dive with adequate height for recovery. The maneuver must be exited no lower than 150–200 m above ground.

To enter, apply weight-shift and progressively increase inside brake until the glider enters the spiral. As speed builds, center your weight and regulate descent using weight-shift and the outside brake.

To exit, center your weight or shift slightly to the outside and progressively release the inside brake. If necessary, briefly reapply inside brake to control the pendulum effect during recovery.

If the spiral does not exit immediately, apply both brakes to slow the glider and continue weight-shifting outward until normal flight resumes.

WARNING

- ⚠ Do not attempt to enter a spiral dive while flying with big ears. This places excessive structural loads on the glider.
- ⚠ Spirals with sink rates above 10 m/s are not recommended.
- ⚠ Frequent steep spirals may cause premature ageing of the wing.
- ⚠ Always monitor your physical condition and avoid prolonged exposure to high G-forces.

- ⚠ If you lose control of the glider or find yourself in a stable spiral with excessive sink and are unable to recover immediately, deploy the reserve parachute without delay. High G-forces can rapidly lead to loss of consciousness, preventing later reserve deployment.

4.3 B-Stall

The B-stall produces a near-vertical descent with a sink rate of up to 8 m/s. It offers no clear advantage over big ears or spiral dives and is therefore not recommended in normal situations.

To enter, grasp both B-risers at the marked position and pull them down evenly until airflow is interrupted and the glider enters vertical descent. Hold the risers in this position. Do not pull the B-risers further than necessary, as this may cause a horseshoe configuration. Always ensure the airspace below is clear.

To recover, release both B-risers quickly and symmetrically. Slow or asymmetric release may result in a deep stall or spin. If a deep stall occurs, increase airspeed using the accelerator or by gently pulling the A-risers forward.

5. Landing

Bolero 8 has no special landing technique required. When landing, follow these tips:

- Always choose a large, obstacle-free landing area. Fly a straight final approach into the wind at trim speed.
- Approximately one meter above the ground, apply both brakes smoothly to around half of the total brake travel (about 30-40 cm). This allows the glider to transition into a short, level glide. Just before touchdown, progressively apply full brake to flare and reduce forward speed.
- The strength of the flare must be adapted to wind conditions. In weak or no wind, apply a deeper and more energetic final flare. In stronger headwinds, brake input must be smoother and less abrupt.
- In very strong wind, do not pull the brakes fully, as this may cause the glider to climb and move backwards.
- In strong wind conditions, turn immediately to face the glider as soon as your feet touch the ground. Stall the glider promptly using the rear risers and be prepared to move towards the wing.
- Before landing, slide out of the harness seat board and adopt an upright body position. Never attempt to land while seated. Landing on the back is dangerous and may result in serious injury, even when using a back protector.

- Avoid spirals or steep turns close to the ground. These can cause a dangerous pendulum effect and rapid loss of height.
- Do not allow the leading edge to strike the ground. Hard impacts or repeated ground handling, especially on rough surfaces, can damage seams and internal structure and will accelerate ageing of the glider.

WARNING

- ⚠ Do not attempt an excessively slow landing approach. Gusts, wind gradients, or turbulence near the ground can cause sudden loss of lift or an unintentional stall on any paraglider.

INCIDENTS IN FLIGHT

1. Collapse

1.1 Asymmetric Collapse

Asymmetric collapses occur when part of the glider loses lift and folds under, typically due to a momentary reduction in angle of attack. The glider may turn or dive toward the collapsed side. In most cases, the Bolero 8 will re-inflate spontaneously with correct pilot input.

For recovery, stabilize your position in the harness and avoid falling toward the collapsed side. Control direction with weight-shift and light brake on the open side. Allow the glider to regain speed and re-inflate on its own.

If the collapsed side does not reopen, apply smooth, progressive pumping on the collapsed side. Avoid slow or excessive brake input, as stall speed is increased on a partially collapsed wing. If the collapse occurs while accelerated, immediately release the speed bar, then apply the standard recovery technique.

Cravat may occur (a wingtip becomes trapped in the lines), usually due to poor launch preparation or a severe collapse. For recovery, first control the direction using weight-shift and gentle counter-brake. Attempt to clear the cravat with a short, firm pull on the brake of the affected side.

If the cravat persists, use the stabilo line, pulling it down until the cravat clears.

WARNING

- ⚠ Excessive counter-brake on the open side may cause a stall and lead to further loss of control. If rotation increases uncontrollably or altitude is insufficient, deploy the reserve immediately.

1.2 Symmetric Collapse (Frontal Collapse)

A frontal collapse occurs when the leading edge collapses symmetrically due to a high negative angle of attack. In most cases, the glider will reopen automatically after a brief pitch forward.

For recovery, allow the glider to regain speed. If necessary, apply light, symmetrical braking to assist reinflation. Avoid deep or prolonged braking.

In rare, large frontal collapses, the wing may momentarily form a U-shape. Apply gentle, even brake input until normal flight resumes.

If a frontal collapse occurs while accelerated, release the speed bar immediately.

2. Stall

Stalls occur when the angle of attack becomes excessive and airflow separates from the upper surface of the wing.

WARNING

- ⚠ Unintentional stalls are potentially dangerous and should be avoided in normal flight. Pilots must learn to recognize stall warning signs and react early. Correct reaction timing, altitude awareness, and early intervention are key to resolving all incidents safely. When in doubt, or if control is lost close to terrain, deploy the reserve without hesitation.

2.1 Spin

A spin occurs when one side of the glider stalls while the other continues flying, causing rotation around the stalled side.

For recovery, fully release the brakes on both sides. Allow the glider to surge forward. Check the surge if necessary, once the canopy is above or in front. If the spin persists, verify that all brake input, including wraps, has been completely released.

WARNING

⚠ Never release a spin when the glider is far behind you. Always wait until it is overhead or in front.

2.2 Full Stall

A full stall occurs when the wing completely loses airflow and deforms, resulting in backward surge and vertical descent.

For recovery, do not take wraps on the brakes. Keep brake input symmetrical and controlled. Exit by evenly releasing the brakes. Fully release brakes once the canopy is inflated and in front.

Full stalls should only be practiced under professional supervision during safety training.

WARNING

⚠ If the canopy has dropped behind the pilot, brakes must be held until it moves overhead again. Releasing too early may cause a violent forward surge.

2.3 Deep Stall

A deep stall is characterized by a stable, near-vertical descent with little or no forward speed. Possible causes include:

- Wet or aged fabric
- Out-of-trim lines
- Brake lines too short or held under tension
- Low wing loading

To recognize if the glider is deep stalled, there must be:

- Reduced airspeed and flight noise
- “Mushy” brake feeling

- Vertical descent at approx. 4-5 m/s

For recovery, ensure brakes are fully released. If necessary, apply speed bar or gently push the A-risers forward.

WARNING

- ⚠ Never apply brake during deep stall.
- ⚠ After a deep stall, the glider and line trim must be inspected by an authorized service center before further flight.

CARE AND MAINTENANCE

1. Packing and Storage

1.1 Folding and Using a Packing Bag

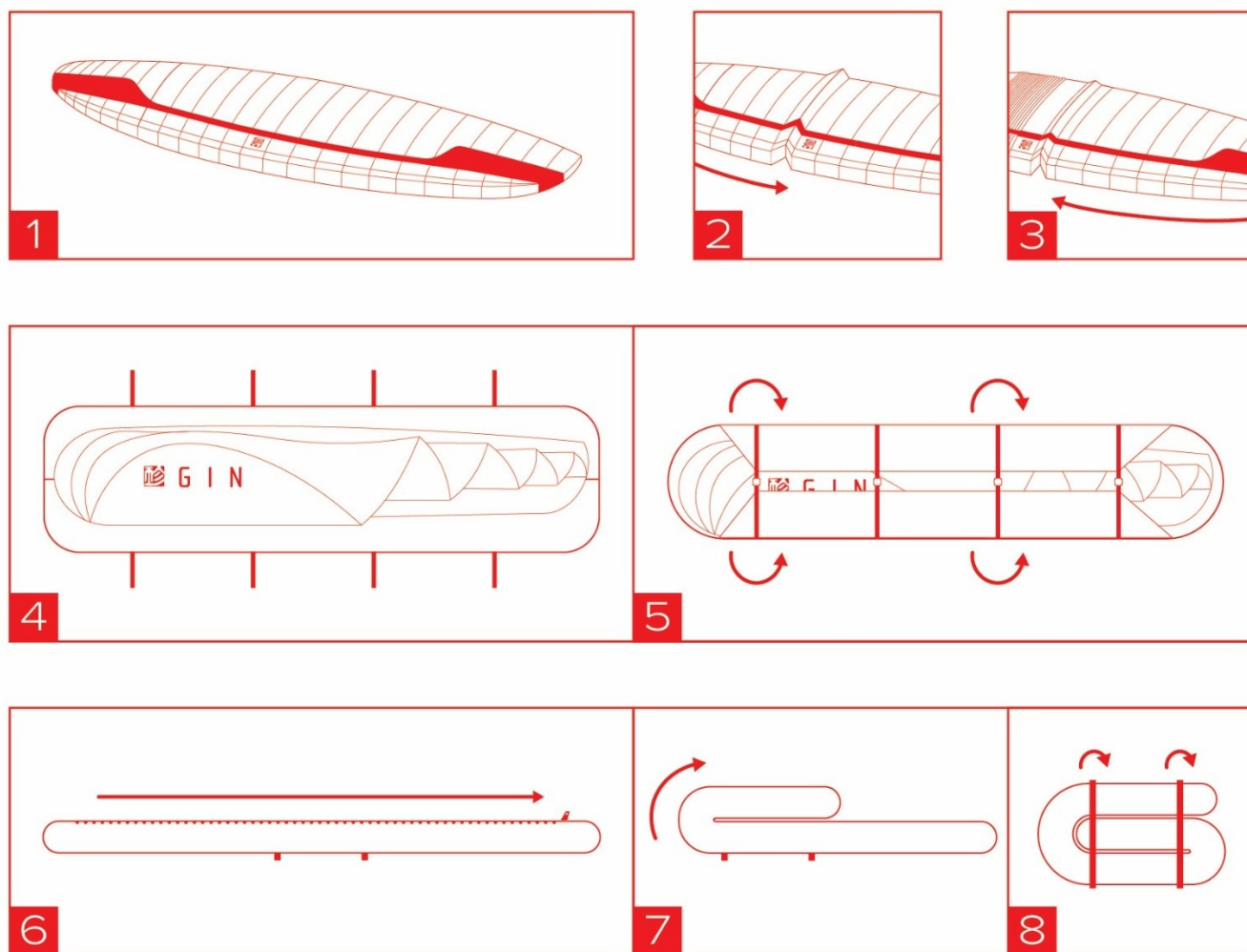
Your paraglider may be packed using standard methods. To protect the profile and leading-edge reinforcements, careful packing is essential.

Gin Gliders recommends packing the wing using a concertina method, as shown in the illustrations, so that all leading-edge reinforcements (Mylar, rods, or equivalent systems) lie flat and are not bent or compressed.

Correct packing preserves the shape of the leading edge, maintains launch behavior and performance, and extends the service life of the wing. Bent or misshapen reinforcements can distort airflow, reduce performance, and affect inflation and launch characteristics.

Recommended packing procedure:

1. Lay out the paraglider on a clean, smooth surface. Do not drag it over abrasive ground.
2. Starting from the center, stack the ribs of one half of the wing carefully on top of each other, progressing toward the wingtip.
3. Repeat for the other half, ensuring that the leading edges are aligned and not bent.
4. Place the concertina bag underneath the folded wing so that the ribs lie along its length.
5. Secure the straps lightly near the leading edge, center, and trailing edge.
6. Close the zip carefully, ensuring that no fabric or lines are trapped.
7. Fold the wing along its length below the leading-edge reinforcements.
8. Apply the compression strap gently. Do not over-compress the glider.



1.2 Rucksack and Transport

Gin Gliders offers a range of rucksacks designed for different flying styles and equipment sizes. The rucksack options depend on the paraglider model and size. For the Bolero 8, we recommend using fast packing bag and classic rucksack (110L or 130L).

For best carrying comfort:

- Place the packed glider inside the harness
- Position the harness in the bottom of the rucksack, with the glider side against your back

Always transport the paraglider in its concertina bag and rucksack. Avoid unnecessary compression.

1.3. Storage

For the long-term:

- Store the paraglider clean, dry, and loosely packed
- Keep it away from direct sunlight
- Ideal storage conditions are 10-25°C and 50-75% relative humidity

If possible, remove the glider from the backpack and spread it loosely in a clean, dry place. If space is limited, open the backpack and internal straps fully to reduce compression.

Avoid:

- Heat sources (car boots in summer, radiators)
- Chemicals (fuel, oil, solvents)
- Areas accessible to animals

High temperatures and moisture accelerate aging processes such as hydrolysis and can damage coatings and fibers.

2. Care

2.1 Ground Handling

The materials used in your paraglider are selected for durability and performance. However, excessive wear is usually caused by handling rather than flying. Avoid:

- Ground handling on abrasive or rocky surfaces
- Dragging the wing across the ground
- Allowing the glider to crash leading-edge first
- Repeated inflation followed by uncontrolled collapses
- Stepping on the fabric or lines
- Opening the wing in strong wind with tangled lines
- Sitting on the backpack with the glider inside

Step toward the wing as it comes down during ground handling to reduce load on seams and fabric.

2.2 Fabric

- Protect the glider from unnecessary UV exposure
- Unpack immediately before flight and pack promptly after landing
- Avoid standing or walking on the fabric
- Ensure no insects or animals are trapped inside when packing

If the glider gets wet, dry it as soon as possible in a shaded, well-ventilated area. Never store the glider wet, as mold and fiber damage may occur.

Salt water must be rinsed off immediately with fresh water.

2.3 Lines

- Protect lines from UV exposure and abrasion
- Avoid kinks when packing
- Do not step on the lines
- Dyneema lines are temperature-sensitive and must not be exposed to heat above 75°C

Do not shorten lines using knots. Knots weaken lines significantly and may lead to failure under load. Only approved knots are permitted for brake line attachment as described elsewhere in this manual.

2.4 Rigid Components

Rigid elements in the wing help maintain profile and stability. These components must not be bent or crushed. If a rigid element becomes damaged or misshapen, it must be replaced by Gin Gliders or an authorized service center.

2.5 Cleaning

We do not recommend cleaning the wing. But if you have to clean or if you land in salt water:

- Use fresh water and a soft sponge
- Rinse thoroughly and dry in shade

Never use:

- Chemicals or solvents

- Brushes or abrasive cloths
- High-pressure cleaners or steam
- Washing machines or swimming pools

Frequent rinsing accelerates material aging and should be avoided.

3. Maintenance and Repairs

3.1 Maintenance

As the pilot of this wing, you must pay attention to any changes in launch behavior, handling, or performance. Regularly inspect risers and connectors, lines, fabric and seams.

Line length and symmetry have a significant influence on flight behavior and safety. Worn or damaged lines must be replaced immediately using original replacement lines.

Gin Gliders recommends that:

- First inspection should be done in 36 months or after 200 hours (including ground handling), whichever is sooner.
- Subsequent inspections should be carried out every 24 months or 150 hours (including ground handling), whichever is sooner.

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

If you use the Bolero 8 in harsh conditions (sand, dust, stones etc.), we recommend a biannual check.

Gliders in professional or school use should be inspected every 100 flying hours and up to a maximum of 300 flights, provided these checks occur at intervals no longer than two years. This recommendation only applies if the wing has been correctly stored and used with regular pilot inspections (at least every 150 flights).

To maintain certification and warranty:

- Inspections must be carried out by Gin Gliders or an authorized service center.
- Inspection results must be documented and recorded on the glider.

Inspections performed by unauthorized persons invalidate warranty.

WARNING

⚠ A damaged line may result in loss of control. Never fly with damaged or modified lines.

3.2 Repairs

All major repairs must be carried out by Gin Gliders or an authorized service center. These facilities use original parts and approved repair procedures.

Damaged lines must be replaced by your local dealer or authorized service center.

Small holes in the sail may be repaired by the pilot using the supplied repair tape.

After any repair:

- Inflate the glider on flat ground
- Check symmetry and line routing before flight

Gin Gliders is committed to the quality and safety of its products. Your local dealer is your first point of contact for service or support. If necessary, Gin Gliders can be contacted directly via the official website.

WARNING

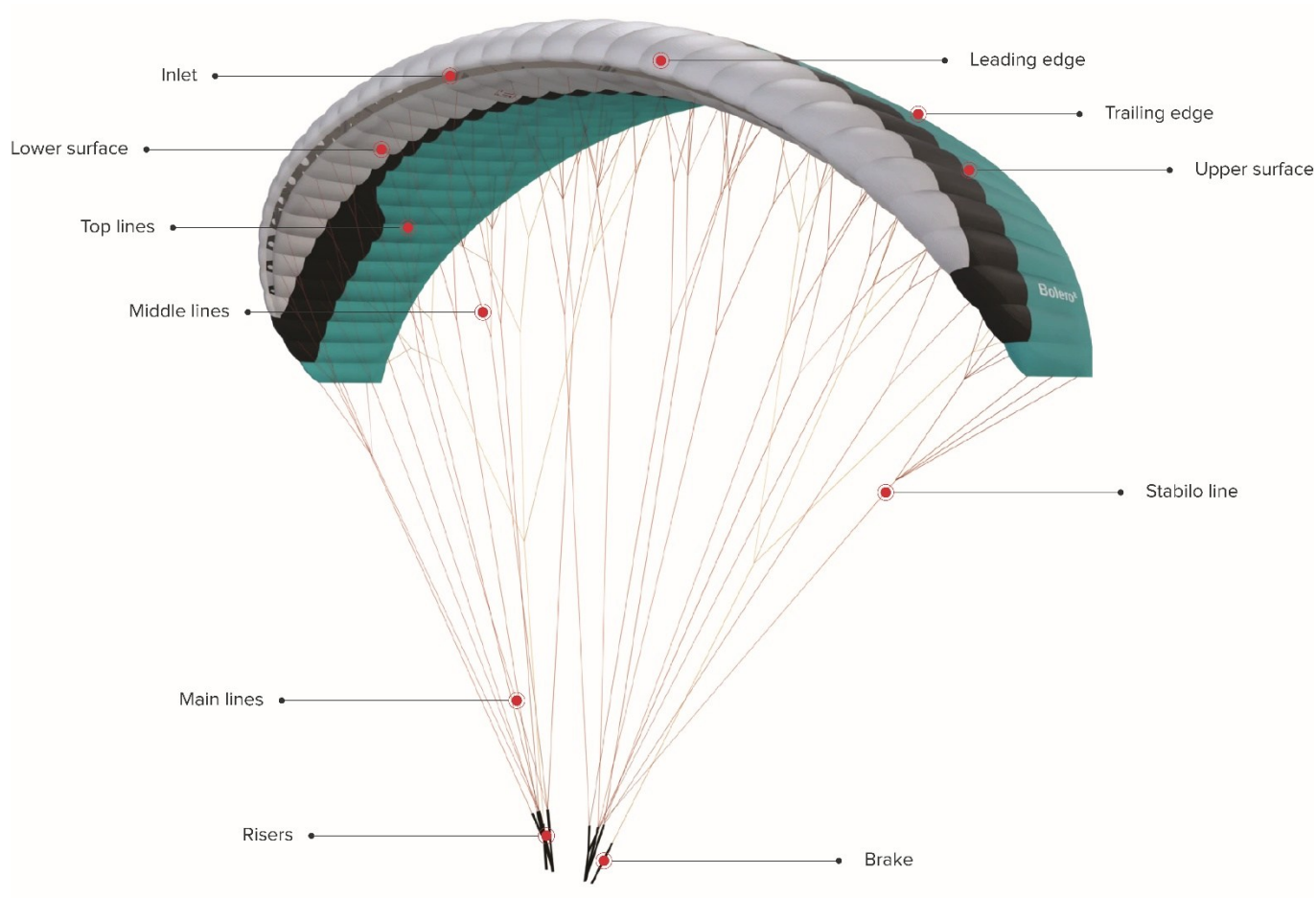
⚠ Do not attempt repairs unless you have the required knowledge, tools, and materials.

3.3 Environmental Responsibility

At the end of its service life, dispose of the glider and its components in accordance with local environmental regulations. Where possible, separate textile, metal, and plastic components for recycling.

TECHNICAL SPECIFICATIONS

1. Illustration



2. Technical Data

	XXS	XS	S	M	L
Flat area (m ²)	22.59	24.37	26.28	28.52	31.44
Flat span (m)	10.41	10.82	11.23	11.70	12.29
Flat aspect ratio	4.8	4.8	4.8	4.8	4.8
Projected area (m ²)	19.37	20.89	22.53	24.45	26.95
Projected span (m)	8.29	8.61	8.94	9.31	9.77
Projected aspect ratio	3.55	3.55	3.55	3.55	3.55
Chord (m)	2.69	2.79	2.89	3.02	3.17
Number of cells	36	36	36	36	36
Glider weight (kg)	3.9	4.1	4.3	4.7	5
Weight range (kg)	50-80	55-90	65-100	75-110	90-130
Ideal weight range (kg)	60-75	65-85	75-95	85-105	105-125
Certification	EN A	EN A	EN A	EN A	EN A

3. Materials

Upper surface leading edge	Myungjin MJ40 MF Myungjin MJ32 MF
Upper surface trailing edge	Myungjin MJ29 MF
Lower surface leading edge	Myungjin MJ40 MF Myungjin MJ32 MF
Lower surface trailing edge	Myungjin MJ29 MF
Ribs	Myungjin MJ38 HF
Top lines	GIN TGL 80
Middle lines	GIN TGL 125 Liros DSL 70 Liros PPSL 120
Main lines	Liros PPSL 120 160 200
Main brake lines	GIN TGL 280
Risers	Güth & Wolf 20 mm Polyester
Line shackles	Stainless steel 3.85 mm
Threads	Amann & Söhne - Mill Faden 150D/3

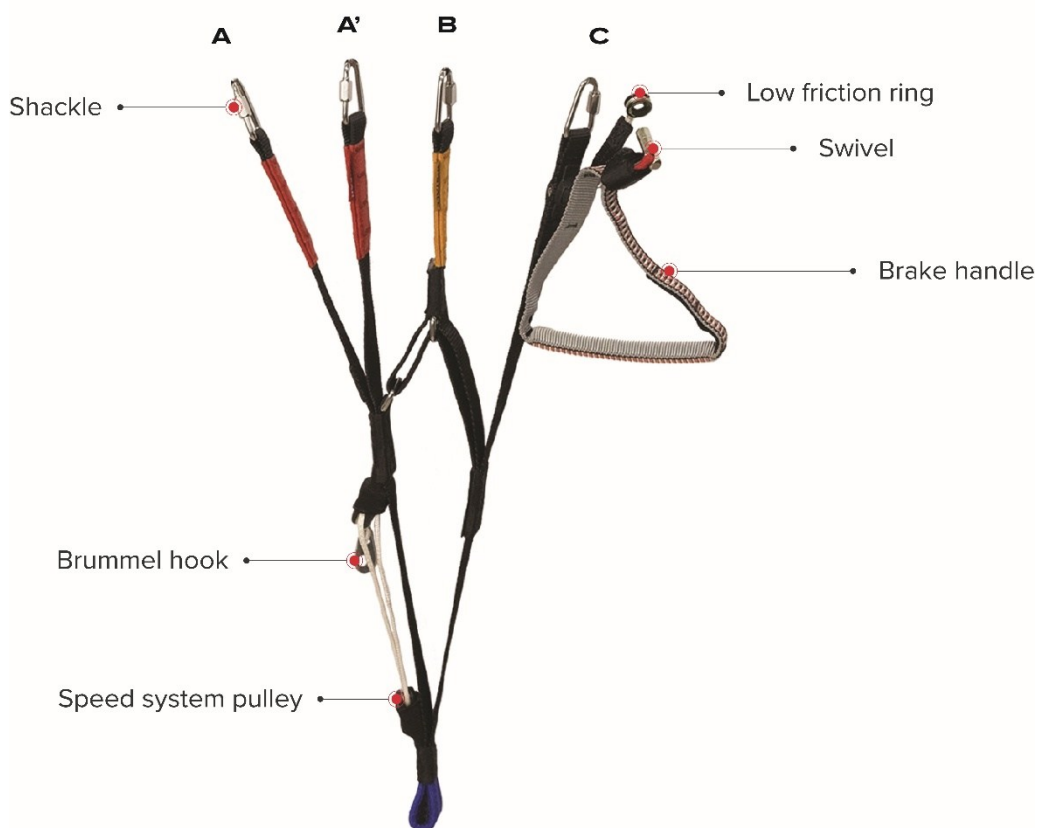
4. Risers and Speed System

4.1 Risers

The Bolero 8 riser system is designed to maintain correct angle of attack throughout the full speed range and incorporates features specific to this glider.

The main brake line runs through a low-friction ring mounted on a brake arm attached to the C-riser via a handshake knot. The ring is replaceable in the event of wear or damage.

The split A-risers, marked in red, facilitate easy and controlled take-off and are used for big ears.



4.2 Speed System

The Bolero 8 is equipped with a speed system that increases trim speed by progressively shortening the front risers, reducing the angle of attack.

The speed system must be correctly installed and adjusted before the first flight. The speed bar is connected to the risers using Brummel hooks. Adjust the system so that, at full acceleration (pulley-to-pulley), the pilot's legs are fully extended while remaining in a comfortable flying position.

An incorrectly adjusted speed system reduces performance and comfort. A system that is too long prevents full acceleration; a system that is too short may cause unintended pre-acceleration and unsafe flight behavior.

5. Lines and Brakes

5.1 Lines

The Bolero 8 features a multi-level line system with A, B, and C line groups, branching progressively from the risers to the canopy. The lines are organized into main, middle, and upper levels and are connected using approved knots and attachment methods.

All main lines are attached to Maillons on the risers and secured with elastic retainers or clips to ensure correct positioning and prevent migration.

Brake lines are bundled into a single main brake line, routed through a low-friction ring on the riser and attached to the brake handle at a defined reference mark.

Detailed trim data (PLMG files) are available from your local dealers or authorized service centers upon request.

5.2 Brakes

The brake line lengths are set at the factory to the configuration used for EN certification and optimized by the Gin Gliders test team. In this configuration, the trailing edge remains completely unbraked at trim speed and in fully accelerated flight.

No adjustment is required under normal conditions.

There must be sufficient free brake travel when flying hands-off to prevent unintentional braking, particularly when using the speed system.

If adjustment is necessary to suit pilot anatomy or harness geometry:

- Adjust in small steps (maximum 2–3 cm)
- Test-fly after each adjustment
- Maintain symmetry between left and right brakes
- Ensure a minimum of approximately 10 cm of free travel in hands-off flight

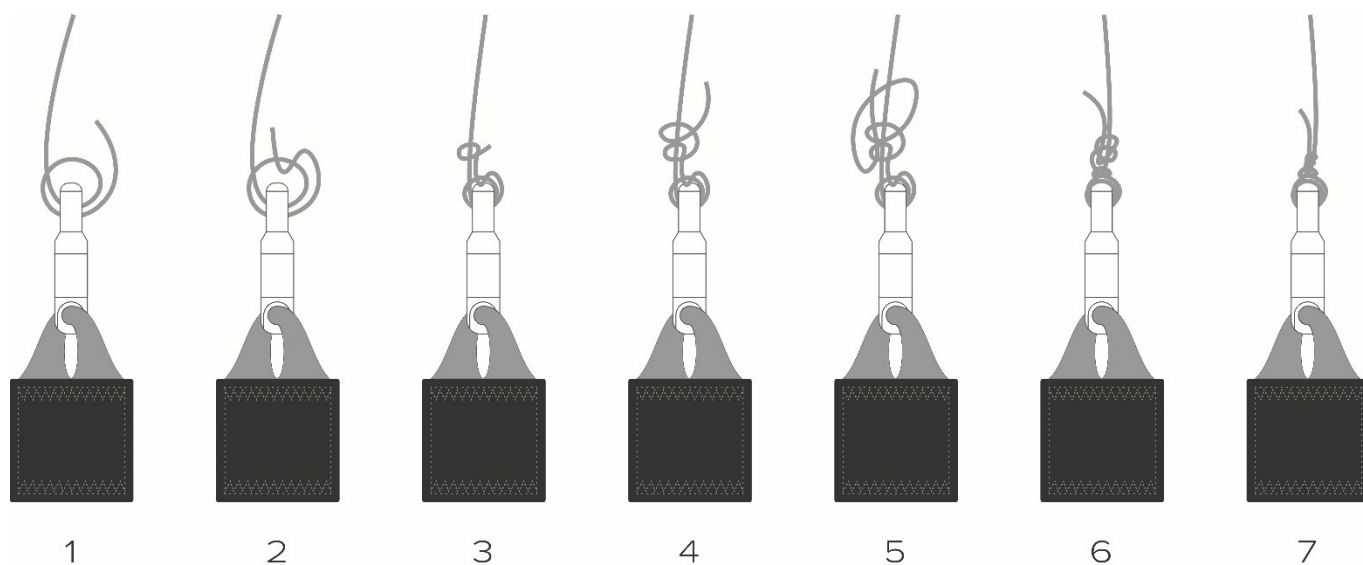
Incorrect brake adjustment may lead to:

- Early or deep stall
- Poor launch behavior
- Reduced performance
- Trailing-edge braking during accelerated flight, increasing the risk of frontal collapse

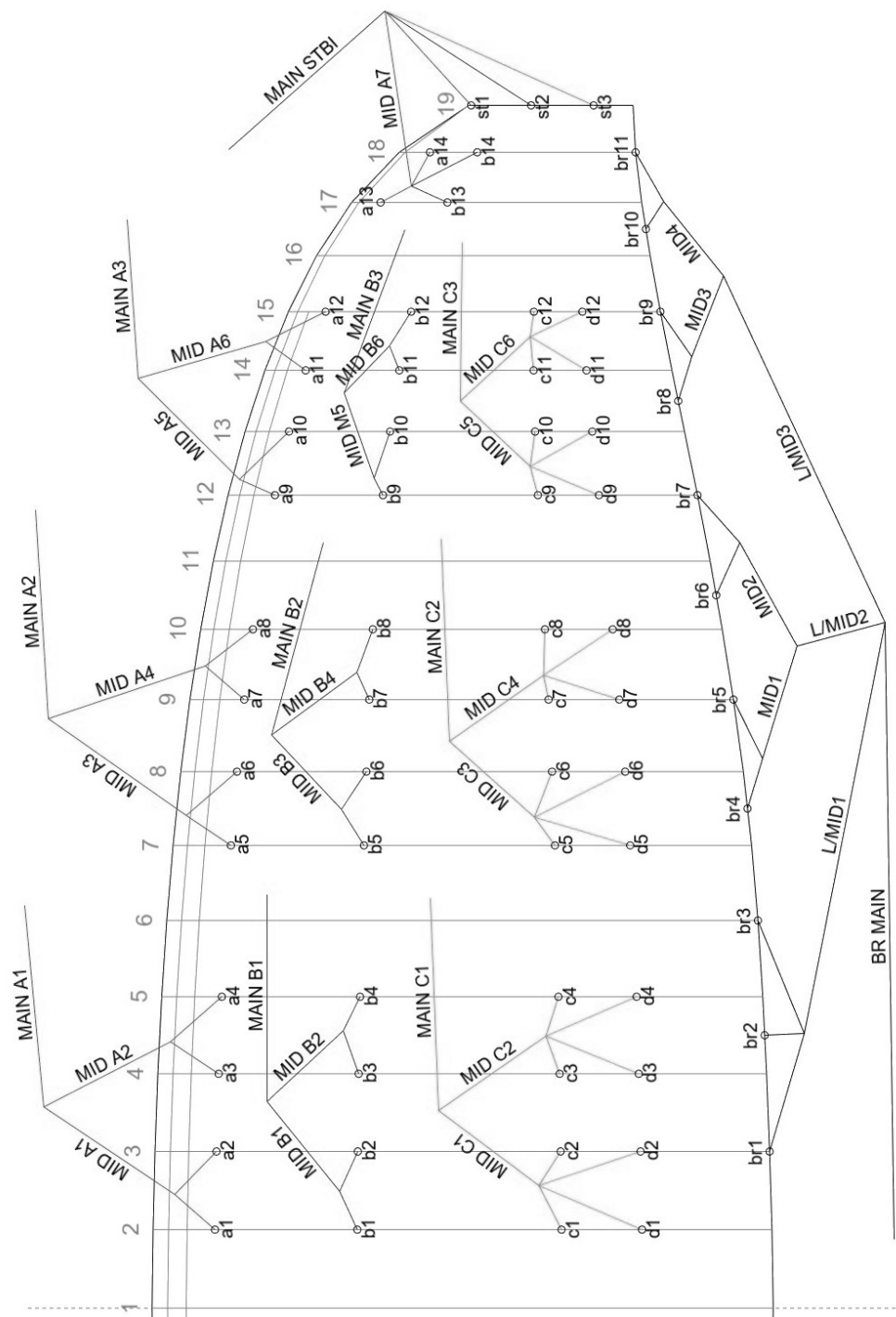
Loose or improperly tied brake knots can result in loss of control.

Environmental effects such as moisture, ageing, or line shrinkage may alter brake lengths over time. Brake settings should be checked regularly, especially if launch or flight behavior changes.

Brake line knots must be correctly tied and secure as shown here:



5.3 Line Diagram





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