

PIA TS 134

Parachute Industry Association (PIA)

TECHNICAL STANDARD 134

NOMENCLATURE STANDARDIZED HARNESS/CONTAINER AND ACCESSORY COMPONENTS

1. SCOPE:

This document identifies and labels the components and sub-assemblies of the parachute harness/container system, which consist of the harness, the container, and ancillary components.

The intention of this document is to describe the most common parts of the harness/container assembly. Not all systems have every part listed in this document. Specialized equipment may have additional parts or have the parts located in different areas from those listed.

1.1 PARACHUTE TYPES AS DEFINED by PIA TS 135

- 1.1.1 Single harness reserve parachute assembly - A certified parachute assembly that is worn in conjunction with a main parachute assembly and used by one (1) person for premeditated jumps. This includes, as applicable, the reserve deployment initiation device, deployment control device, canopy, risers, stowage container(s), harness, primary actuation device, and reserve static line (RSL).
 - 1.1.2 Single harness emergency parachute assembly - A certified parachute assembly that is worn by one (1) person for emergency (unpremeditated) use only. This assembly includes, as applicable, the deployment initiation device, deployment control device, canopy, risers, stowage container, harness, and primary actuation device.
 - 1.1.3 Dual harness reserve parachute assembly - A certified parachute assembly used for premeditated jumps by two (2) people: a parachutist in command and a second parachutist (each in his/her own harness), utilizing one (1) main parachute assembly and one (1) reserve parachute assembly. This assembly includes, as applicable, the reserve deployment initiation device, deployment control device, canopy, risers, stowage container, harness, primary actuation device, and reserve static line.
2. Personnel Harness: An arrangement of webbing and hardware, designed to conform to the shape of the body and secure it so opening forces and weight are evenly distributed during parachute opening and descent.

The following parts are integral to the complete harness assembly.

Reserve Risers: A section attaches canopy to the harness. They may be integrated or detachable.

Upper main lift web: A section from the primary harness ring downward to the chest strap.

Main lift web: A section from the shoulder area downward to the hip area. Generally from the primary harness ring to the leg strap junction.

Lower main lift web: A section from the chest strap downward to the leg strap junction

Chest strap: A section that runs horizontally across the front of the harness and joins the two main lift webs. It generally has detachable and/or adjustable hardware.

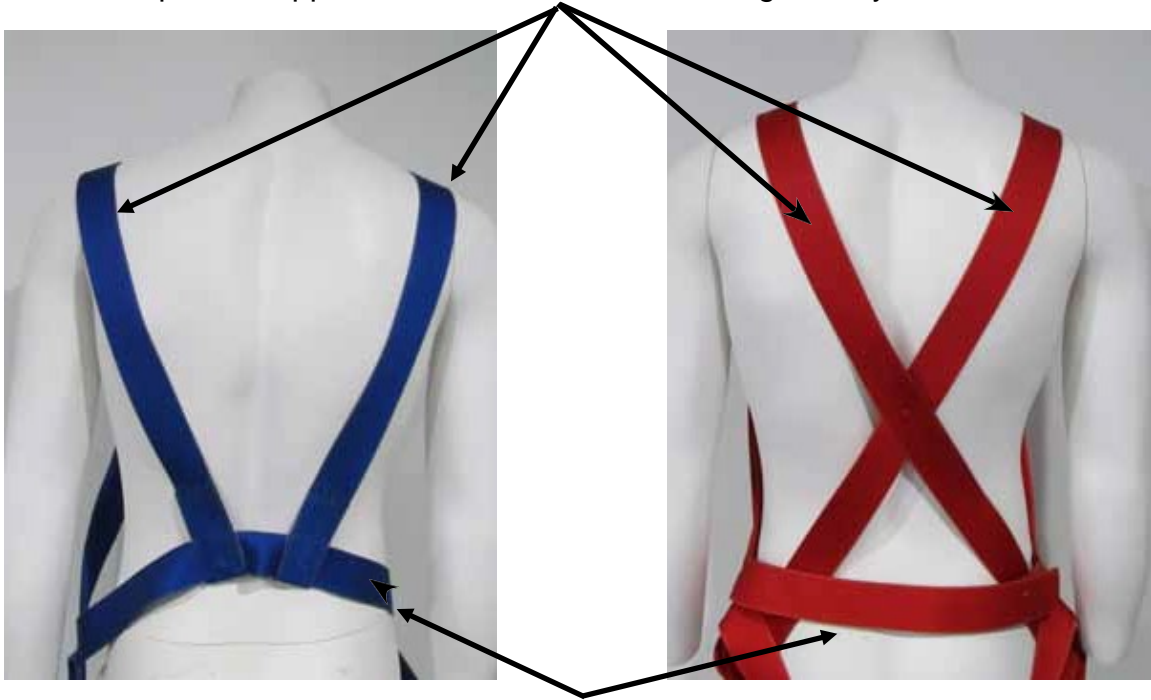
Upper leg strap: A section that runs laterally forward from the junction of the main lift web to encircle the leg. It generally has detachable and/or adjustable hardware.



Lower leg strap: A section that runs rearward from the main lift web junction to encircle the leg. It will meet the upper leg strap.

Back strap: Section that rests against the back.

Diagonal back strap: A section that runs from the lateral back strap to the upper main lift web. On some designs, they cross.



Lateral back strap: A section that runs horizontally across the lower back between the leg strap junctions.

Saddle: A section that passes around the bottom rear of the body to provide support during opening and descent. It may be a continuation of the main lift webs.



Belly band: A webbing section that connects the lower main lift web across the belly. This can be incorporated into the harness or a stand-alone addition.



3. **Container:** The container encloses the canopy, lines, deployment devices, and pilot chute. Designed to protect the parachute prior to use and allow an orderly deployment.

Reserve container: A section that holds the reserve canopy. On dual canopy systems, the upper section.

Main container: A section that holds the main canopy. On dual canopy systems, the lower section.



3.1 **Flaps:** Sections of the container that wrap around the deployment bag and hold the canopy inside the container.

Riser covers: Outer flaps that cover the risers. Located over the shoulder area.

Side flaps: The lateral flaps (left and right) of the container

Pin Cover flaps: A flap that covers and protects the main and/or reserve pin.

Center Midflap: A flap that is between the two (2) containers and is the bottom flap for the reserve container and the top flap for the main container.

Bottom main flap: The lower flap of the main container.



3.2 **Subflap:** Internal flaps that stage the container opening sequence.

Top reserve subflap: The upper flap of the reserve container.

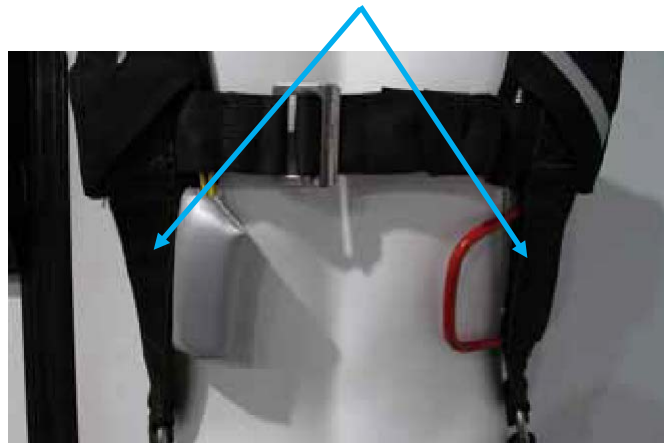
Bottom reserve flap: The lower flap of the reserve container.

Top main flap: The upper flap of the main container.

Bottom main flap: The lower flap of the main container.



3.3 **Ripcord pocket:** A pocket designed to hold in position the main/reserve ripcord or cutaway handle; generally on the front of the harness.



3.4 Backpad: The section of the container from the canopy release over the shoulder and down the back. Typically, the back strap/diagonal/lateral harness is between the backpad and the container. The backpad generally has foam padding to provide comfort to the user.



3.5 Leg pads: Foam padding over and/or around the leg straps to provide comfort to the user and protection to the leg strap webbing.



3.6 Pilot Chute Locations: Optional locations of the hand-deploy pilot chute.

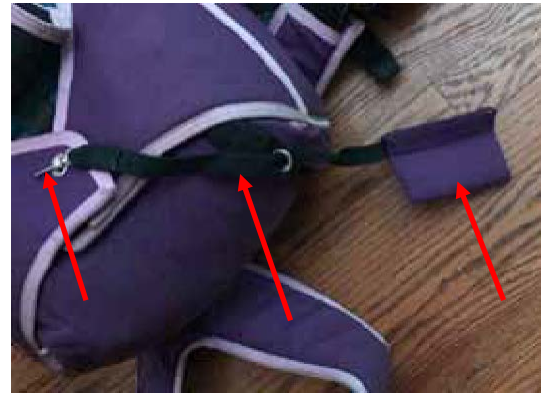
3.6.1 Bottom of Container (BOC): A pouch located on the bottom of the container to hold the pilot chute.



3.6.2 Rear of Leg (ROL): A pouch located on the rear of the leg pad to hold the pilot chute.



3.6.3 Pull-Out Pilot Chute (POP): A springless pilot chute packed inside the main container connected to a handle with a short lanyard and pin.



3.7 Ancillary Components: Additional items associated with a complete sport parachute system.

3.7.1 Main Deployment bag: A device that contains and stages the deployment of the main parachute and suspension lines. Typically attached to the upper surface of the canopy along with a bridle and pilot chute.



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3.7.2 Reserve deployment bag & bridle: A device that contains and stages the deployment of the reserve parachute. The most common devices are bags, diapers, and sleeves. Bags and sleeves are designed to completely separate from the reserve parachute upon deployment.



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3.7.3 Bridle: A piece of cord or webbing, generally with a loop at each end, used to attach the pilot chute to the deployment device or parachute. Can be separate from or incorporated into the pilot chute or deployment device.

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3.7.4 Main pilot chute: A pilot chute used to deploy the main canopy. It may be a spring-activated design (see 3.7.5), a springless, a hand-deploy, or a pull-out configuration.

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3.7.5 Reserve pilot chute: A pilot chute used to deploy the reserve parachute assembly. The most common configuration uses a spring.

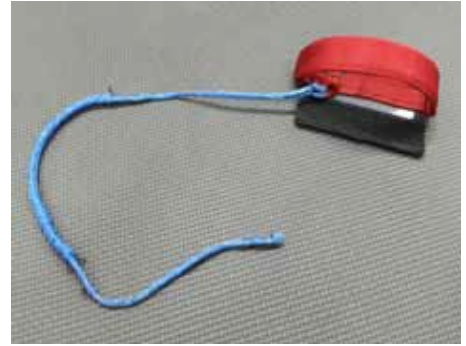
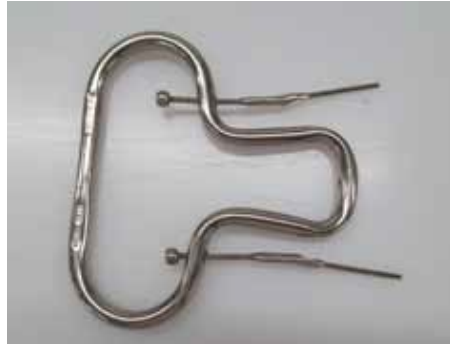
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3.7.6 Handle: An item that you grip and pull to remove a pin or cable from a closing loop. Shape and materials vary depending on manufacturers design.

3.7.6.1 Reserve ripcord: A handle attached to a cable or cord that is used to keep the reserve container secured.

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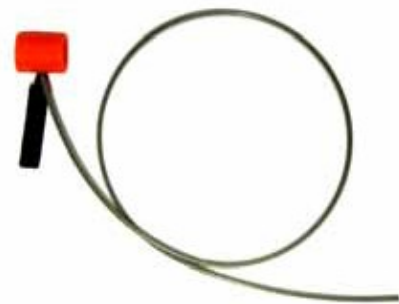
3.7.6.2 Main ripcord: A handle attached to a cable and pin assembly used to keep the main container securely closed.

Found on:
 Sport Solo Sport Student Tandem Pilot Emergency



3.7.6.3 Cutaway handle: A handle attached to a coated cable used to secure the main risers (and canopy) to the harness.

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 Sport Solo Sport Student Tandem Pilot Emergency



3.7.7 Main risers: Webbing straps that connect the main canopy suspension lines to the harness/container. Releasable in flight or on the ground via a riser release system.



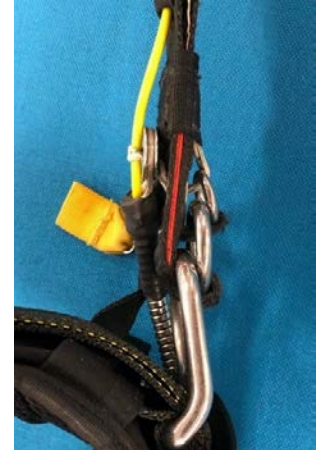
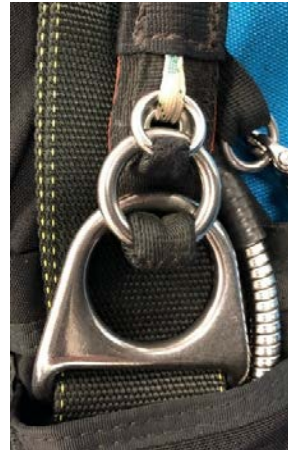
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Tandem Pilot Emergency

3.7.8 Riser Release: A system that attaches the canopy risers to the harness. The riser release allows the risers (and canopy) to be easily removed from the harness.

3.7.8.1 3-Ring Canopy Release (mini or large): The 3-Ring release is a system where one large ring is attached to the harness and two smaller rings are attached to the riser. The rings route through each other; a fabric loop then routes through the smallest ring then through a grommet in the webbing. A smooth cable secures the loop. Removing the cable allows the rings to flip through the larger rings and release.



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3.7.8.2 Reverse 3-Ring: Same as the 3-Ring release except that the grommet is located on a tab attached to the webbing instead of going through the webbing.



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3.7.8.3 Parachute Canopy Release: A release system incorporating a shaped hardware piece (male fitting) attached to each riser and inserted into a locking piece (female fitting) permanently located on each side of the harness.

To activate the release, the safety cover must be opened and the release cable-loop pulled.



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3.7.9 Riser Connector Links: Metal or cord pieces that connect the risers to the suspension lines of the parachute. Connector links are typically supplied with the canopy.

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3.7.10 Toggles: Webbing loop, wooden or nylon rod, or cord loop attached to the steering lines of the parachute allowing the user to control the main, reserve or emergency parachute. Toggles are typically stowed on the rear risers.

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3.7.11 Closing Loop: A length of fabric or cord used to securely close the main or reserve container. Length, construction, material and installation/routing vary by container.

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3.7.12 Reserve Static Line

(RSL): The RSL is a lanyard which connects one or both main risers to the reserve ripcord handle or cable. When the main canopy is released, the RSL pulls the reserve ripcord cable or handle removing its cable or pin from the locking loop.



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3.7.13 Static line: A length of cord or webbing anchored to the aircraft and to the parachute or deployment device. Once fully deployed the parachute releases from the static line and inflates. The length varies by aircraft type and configuration.



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3.7.14 Main Assisted Reserve Deployment System (MARD):

A MARD system connects the main risers to the reserve deployment bridle. During a cutaway the MARD system engages when the main canopy has more drag than the reserve pilot chute. There are many different MARD systems in use.



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