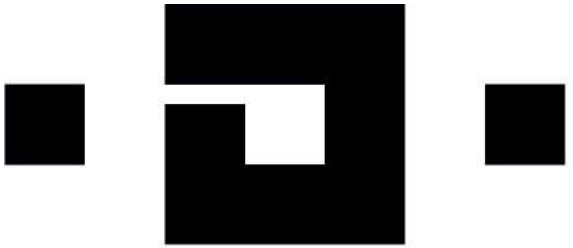


USER'S MANUAL TECHNO 2023

EDITION NR1_02/2023


TECHNO

Congratulations!

Thank you for choosing the Techno 2023 harness. We have done our best to present you with a highest quality product, fulfilling all safety requirements. Please read this manual carefully before using the harness for the first time. This will help you utilize all features of the Techno 2023, maximizing comfort and fun you get out of each flight. We wish you a lot of safe and enjoyable airtime!

Contents

1. Safety

Paragliding is a potentially hazardous sport. When flying a paraglider you have to accept the risks of injury and even death. Improper and/or incompetent use of the harness may increase those risks. Thus the proper training, familiarity with your gear and a valid insurance are mandatory. The pilot has to be able to independently assess the weather conditions, too. All flights are to be absolved with your helmet on and the rescue chute installed. Before each flight a gear check is required as for possible damages and overall airworthiness. In case of any doubts please ask your dealer or manufacturer.

!

POWAIR do not bear any responsibility for damages or injuries resulting from paragliding activities

2. Description

The Techno 2023 harness has been designed for cross country pilots looking for a very light and comfortable pod harness. Due to the large back pocket and low weight, the Techno 2023 is perfect for bivouac flights. The primary goal in this design was to reduce weight while maintaining high comfort and to improve aerodynamics by adding a self-inflating fairing in the rear section. Thanks to the hammock-type construction and the use of lightweight materials, it weighs only 1.96 kg in size M. The comfortable backrest and new, ergonomic seat ensure maximum comfort during the flight. A large adjustment range allows for precise adjustment to the individual preferences of each pilot. Techno 2023 uses a certified, 15cm thick airfoam protector. The rescue parachute is placed in a frontcontainer equipped with a shelf for instruments and an easily accessible safety knife, too. The pod itself protects from the cold and improves the aerodynamics of the pilot. The four-point adjustment of its length also allows one to freely set the angle of the footrest. Under the seat, there is a pocket for a small ballast container or extra luggage. The harness uses lightweight Allen pulleys with ball bearings to improve the speed system's operation. The harness is produced in four sizes S, M, L, and XL.

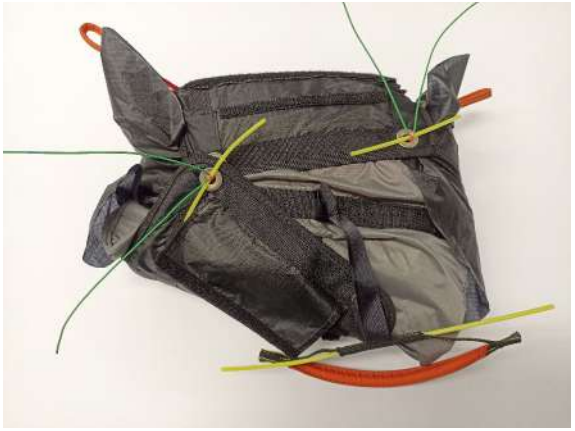
3. Rescue chute installation.

Connect the release handle to the central suspension point of the canopy bag.

Connect both ends of the V-riser to the connecting strap of the reserve parachute using a C6 quicklink.
The V-riser should be fixed in place by the attached O-ring and the square nut tightened with a wrench.

Place the rescue parachute in the frontcontainer.

Pass the assistant lines through the loops in the No. 1 flaps.
Then proceed as demonstrated in the pictures. Use temporary pins.
The flaps of the container are marked with numbers 1, 2, 3.
Close them in that order.



The container is provisorily closed now. Remove the temporary pins and replace them with proper pins of the release handle.
Insert the ends of the pins and the ends of the handle into corresponding pockets. Gently remove the assistant line.

Fasten the velcro pin cover.

Insert the protruding parts of No. 1 flaps and shape the frontcontainer.

!

To avoid accidental opening of the rescue system, pins closing the container must be checked before each flight !

The rescue chute must be periodically aired and repacked according to its manual. The Techno 2023 harness will best accommodate light rescue chutes: Globe Light 90, Globe Light 110 or Globe Light 135 manufactured by Dudek Paragliders. However, use of rescue parachutes by other manufacturers is possible too, as long as their dimensions when packed do not exceed those of the container

Container's volume:

Max	3500 cm3
Min	3000 cm3

!

After each installation of rescue chute in a container, a compatibility test is necessary. In order to do that, hang the harness, equipped ready for flight. Seat down in the harness and assume your usual position in flight. Grab the container release handle and pull it to the side in a resolute effort, so that the parachute is completely out of the container. Still, do not throw it away, so that the bag remains closed. If the trial was successful, put the rescue back into the container

If, however, the parachute could not be released properly, possible reasons may include:

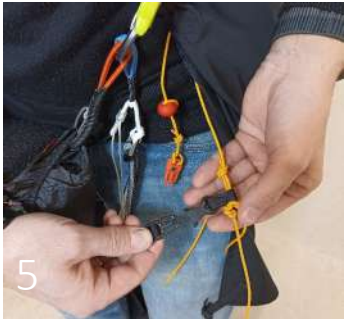
- Too big rescue chute compared to the container's dimensions (after airing and repacking the parachute is usually slightly bigger than a new one)
- Pulling the release handle not strong enough or in wrong direction (to the front, back or up instead of to the side)
- The length of pilot's arm can be a factor in this case. Especially small pilots can find it difficult to throw the chute away properly.
- Be aware that a cumulation of unfavorable circumstances, aggravated with G-forces in possible spiral may render opening the rescue chute difficult or outrightly impossible.

!

The rescue parachute inner contauner is not supplied with the harness. Check that after connecting the handle to the inner container, there is no risk of it becoming entangled in the rescue parachute lines.

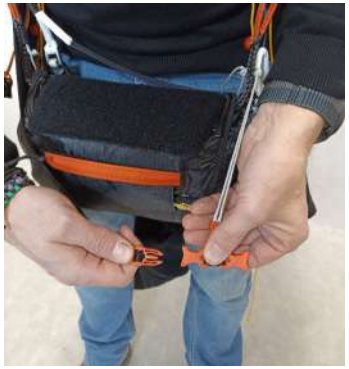
4. Frontcontainer

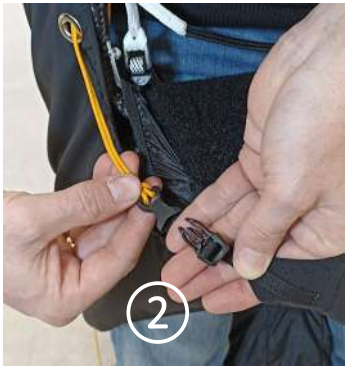
The frontcontainer for the rescue parachute, featuring a centrally located, clearly visible release handle, is mounted to the harness in four points. A short V-strap connects to the carabiners both the canopy and the frontcontainer. Additional fastening to the pod lines allows you to adjust the inclination angle of the instrument panel and stabilizes the front container. There is a safety knife under the instruments, too.



5. The pod

The pod improves aerodynamics of the harness and protects the pilot against cold. There is and adjustable (length/angle) footrest and a two-step speedbar within the pod. The pod is permanently attached to the harness and closed in two places only #1 and #2. The front of the pod automatically inflates after launch, then after landing you can easily squeeze that air out e.g. for packing. The length and inclination of the footrest is adjusted in points #3 and #4.






TECHNO
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6. Speed system

The speedbar should be already installed in your harness. If for some reason it has been removed, fix it as described below. Lead the speedbar lines through the pulleys (under the seat and on the backrest), and then through the slots on both sides of the cocoon. Fasten the hooks to the ends of the lines. Connect the speedbar with rubber bands to the footrest in the pod. Adjust the length of the rubbers so that the bar is easily accessible in flight.

Now it is necessary to adjust the length of the speed system lines. In order to do this, hang yourself in the harness using the risers of the paraglider. Adjust the lines so that the pulleys on the paraglider risers touch each other when the beam is pressed to the maximum. If necessary, adjust the length of the line after testing the speed system in flight.

!

Do not adjust the length of the speed system in flight. The speed system is properly adjusted when you can reach maximum speed on the second step of the speedbar. Speed lines that are too short can cause the paraglider to stay accelerated at all times.

1 – speed system line
2 – two-step speedbar
3 – rubbers connecting speedbar to the footrest.

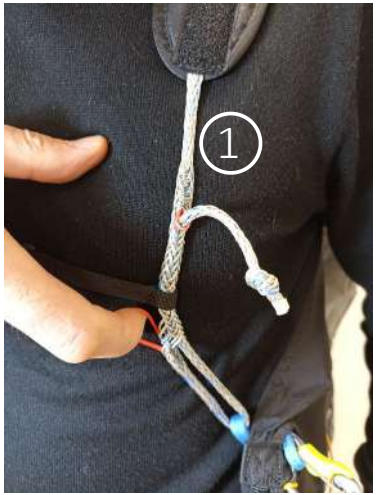
7. Harness straps adjustment

Before adjusting the straps please install your rescue chute and fill the back pocket as for normal flight. Watch out for symmetry – left and right side should be adjusted the same. The first, test flight should be done in easy weather conditions, with necessary corrections to be applied afterwards. When in the air, you can only adjust the chest and shoulder straps due to their accessibility.

1 – shoulder straps
2 – side straps
3 – leg straps
4 – chest strap

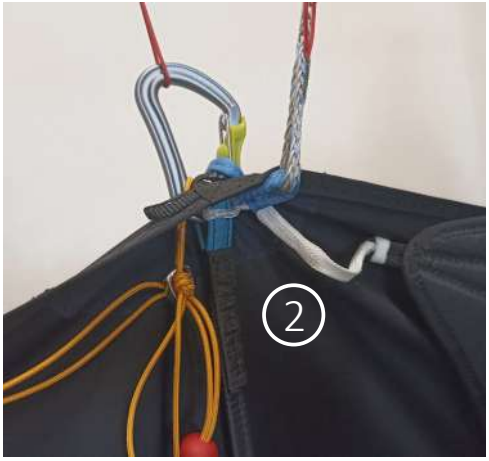
7.1 Shoulder straps

By adjusting the shoulder straps (1) the harness will fit the height of the pilot. Adjust their length so that they adhere to the shoulders and provide clear support for the upper back. Too short straps will make it difficult to get into the harness and may restrict your movements in flight. The shoulder straps clip prevents them from slipping off the shoulders during take-off.



7.2 Side straps

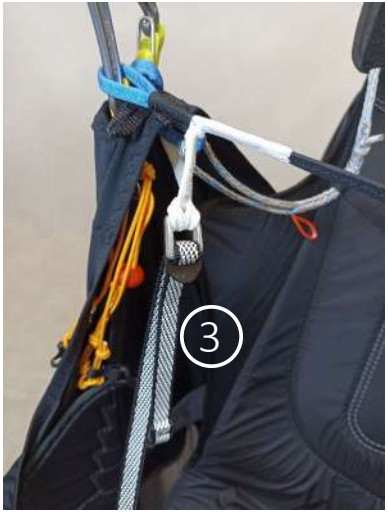
They are used to change the seat / backrest inclination. Complete with the Techno 2023 harness, we have provided you with three sets of side straps of different lengths. Medium length side straps are already installed in the harness. Most probably, you will find this backrest angle comfortable. If not, replace the side straps with longer ones for a more reclined position. If you prefer to fly more seated, install the shortest side straps. Remember that the more the backrest reclines, the greater the risk of twisting in the risers in dangerous flight conditions.



7.3 Leg straps

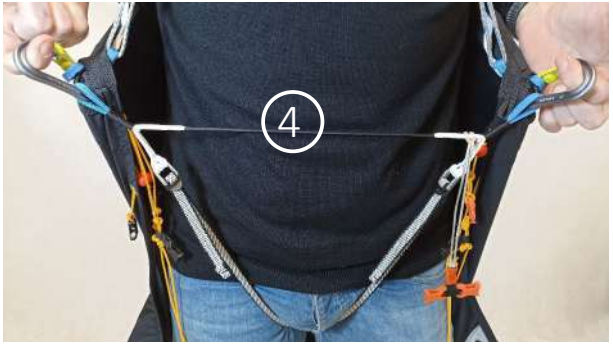
The leg straps are the most important safeguard against falling out of the harness. Their adjustment must allow both easy launch and proper seating in the air. Too short straps can make you uncomfortable and restrain your starting run. Too long straps can make seating into harness impossible without using your hands. In the Techno 2023 harness both leg straps (3) are connected to the chest strap, thus significantly reducing risk of launching without leg straps locked.

In such a strap connection system, used in Techno 2023, leg straps stabilize the harness laterally. Shortening them will limit the side deflections of a harness.



7.4 Chest strap

A chest strap sets the distance between the carabiners. In the Techno 2023 harness, its length is fixed at 45 cm for M size. It has neither length adjustment nor buckles and is connected to leg straps. To fasten the harness, clip both ends directly into the main carabiners. Then plug in both ends of the V-strap to suspend the frontcontainer and connect the rescue chute to the harness.



Optionally, a chest strap with buckles is available. If you have chosen this version, you fasten the harness by connecting both ends of the chest strap to the buckles located near the carabiners. The spacing of the carabiners can be adjusted by symmetrically moving the buckles on the chest strap. It is not possible to adjust the length of the chest strap in the air. After fastening the chest strap, clip in both ends of the V-riser to fix the frontcontainer and connect the rescue chute to the harness.The chest strap with buckles increases the weight of the harness by 50 g.

!

Check the fastening of the chest strap before each flight so that you do not fall out of the harness after take-off.

8. Pockets

Pack the back pocket carefully, as its content can significantly affect the comfort of the flight. For example, hard objects will be uncomfortably felt through the backrest of the harness. Pack trekking poles with their tips up. Since the Techno 2023 is an ultra-light product, you must cover the sharp ends of the poles with a protective cap, otherwise they may damage the harness. Under the front part of the seat, there is a pocket for small ballast (approx. 3 liters in M size). The exact size of this pocket is different for each harness size. It can also be used for extra luggage.

9. Protector

The Techno 2023 is equipped with a certified, 15 cm thick airfoam protector. Fixing the protector in place is shown below.

!

The protector does not require special attention, as long as no hard or water landing occurred. If any of these happens, please follow paragraphs 15 “Cleaning and storage” & 16 “Operation and repairs”.

!

No protector can guarantee total safety for the pilot neither exclude injuries (e.g. to the spine) in case of an accident.

!

A protector offers some guard against hits only for those body parts it was designed to protect.

!

Any modifications to the protector can drastically reduce its effectivity.

!

In case of replaceable protector – it will obviously protect you only when present in the harness.

Protector is certified by:
ALIENOR CERTIFICATION n ° 2754 21 rue Albert Eintsien 86100 CHATELLERAULT France,
zgodnie z rozporządzeniem EU 2016/425 oraz protokołem CRITT SPORT LOISIRS SP002

The CE declaration is available on our website www.dudek.eu

10. Harness/paraglider connection

The Techno 2023 harness is equipped with 18 kN Edelrid Ease aluminium carabiners. Use them to connect the harness to the risers. Another thing to connect before launch is the speedsystem of the harness and the speedsystem of the risers. It is recommended to replace the main carabiners with new ones after 300 hrs airtime.

!

Check before launch if the carabiners are closed and locked against accidental opening.

11. Harness/tow connection

Use a dedicated tow hook to connect the harness to the towing device. Techno 2023 does not have additional points for attaching the release, so fix it to the canopy risers with two Maillon Rapide C5 quicklinks.

!

Do not connect tow release with Edelrid Ease carabiners

12. Preparing harness for flight

Before each flight a thorough check of the harness is required. For your own safety make sure that:

- the harness is not damaged in any way
- the rescue chute container is correctly closed and locked with pins
- rescue chute release handle is correctly set up and has the right shape (quite often it happens to be malformed in transport, so it's important to check if it's not flattened and easy to grab)
- shoulder and leg straps remain correctly adjusted
- all pockets are closed and their zips covered
- the main carabiners are closed, locked and free of any damage
- the speedbar is hooked to the paraglider

Securing the harness:

- Fasten the chest strap by connecting its ends directly to the carabiners. If your harness has a chest strap with buckles, clip them into the corresponding buckles on the carabiners.
- Clip the ends of the V-strap into the carabiners to fix the frontcontainer and connect the harness to the rescue chute.
- Insert the plastic buckles in the lower part of the frontcontainer into the buckles on the pod lines on both sides.
- Fasten the right part of the pod.
- Fasten the left part of the pod.
- Fasten the strap keeping the shoulder straps in place.

!

Always close the chest strap first, and the pod second. Before each start check that the chest strap is firmly closed, especially when it's a subsequent launch. Not properly locked chest strap may lead to falling out of the harness with POSSIBLY FATAL CONSEQUENCES !!!

13. Harness use in practice

Paraglider compatibility

Techno 2023 can be used with any paraglider.

Training

Techno 2023 is not suitable for training flights.

Tandem flying

Techno 2023 is not suitable for tandem flight neither as a pilot, nor as a passenger.

Acro

Techno 2023 was designed for the XC flights. It is not suitable for advanced aerobatic manoeuvres.

The pod

Putting your legs in the pod requires some skill. Helping yourself with your hands is not advised.
Here are some hints:

- Stay inclined after launch
- Put your right heel in the slit and stretch the pod.
- Then put your left foot in the pod, and leave both your feet on the footrest. The pod will close on its own.

If you find it difficult to put your legs into the pod, you can attach the footrest to the shoes with rubber, since that will facilitate getting into the pod. At the top of the footrest there is a loop designed for this purpose. Together with the harness, we have provided you with 1 m of black, round rubber.
The pod is quite efficient at keeping warmth. You can vent it with fresh air by bending one leg. The halves of the pod will move apart letting the wind in.

Speed system operation

Techno 2023 is equipped with ball bearing Allen 20 pulleys, improving speed system operation. Two-step speedbar in the pod stays always extended with two elastics, so it is easy to find in flight.
Both steps of the bar are stiffened with a tape.
In order to use the first step of the bar, catch it with one heel and press it, leaving the other foot on the footrest. In order to engage the second step, use the other leg.
Try not to press your leg down the pod to avoid damaging it.

!

Make sure that speed system stays hooked to the paraglider, even if you are not going to use it.

Speedbar installation and its adjustment is described in paragraph 6, page 17.

Flying with ballast

Under the front part of the seat plate there is a small ballast pouch with capacity of max. 3 litres. When in need of ballast, use water container or bags with lead pellets.

Landing

While on the final approach, assume upright position and get your legs ready for landing. Touchdown when still sitting is unacceptable, as there is high risk of spine injury. Land always on your feet, with a few steps to bleed the speed off if necessary. The protector is NOT a landing aid and was not designed as such.

Waterlanding

Landing in water can be very dangerous, as there is always a risk of drowning. If such a landing is unavoidable, prepare beforehand while still flying. First, cut the chest strap where it attaches to the carabiners. Cut the V-strap too - on one side only, so that the frontcontainer stays suspended on one carabiner. Then unfasten the corresponding bottom strap of the frontcontainer and unfasten the pod as well. Leave your legs on the footrest so you don't fall out of the harness. Get out of the harness just before it hits the water so you don't get entangled in lines or other paraglider components. The harness does not sink, so you can swim up to it and use it as a lifebuoy if you see that there is no risk of entanglement in the paraglider lines.

!

If your harness is equipped with buckles on the chest strap, you can try to unfasten them, but it may be difficult under load. If this fails, cut the chest strap to release the leg straps.

!

Waterlanding while still seated in the harness is extremely dangerous. The protector does not sink and will always float, forcing your head under water and rendering breathing very hard or impossible. Additionally, there is very high risk of getting tangled in lines and drowning. Nevertheless, avoid such situation at all costs.

14. Using a rescue chute

Rescue chute should be used as final means when it's the only way to get the paraglider out of dangerous situation. Using the rescue chute when the paraglider is rotating is dangerous. As long as the altitude margin lasts you have to partially or completely stop the rotation. In order to use the rescue grab the release handle and with quick move detach it from the harness, throwing it with the rescue chute as a far possible away from the rotation (if present). After opening of the chute fold down the paraglider, pulling rear rows of the suspension lines. For landing adapt position as for parachuting landing fall, that is keep your legs together and slightly bent in knees.

15. Cleaning and storage

All materials for the harness have been carefully selected, with their quality and durability in mind. Your care and maintenance of the harness will keep in good condition for a long time. The harness is best cleaned with a wet sponge, possibly a bit of soap. Do not use neither detergents nor solvents. If there is a lot of mud, use the brush first before wet cleaning.
In case of completely soaked harness (e.g. after waterlanding) dry it in a well aired place, away from direct sun operation. Soaked back protector must be taken out of the harness and dried with its zip opened. If this will be not enough, remove the airfoam and dry it separately. Soaked rescue chute always has to be completely removed from the harness, dried and packed again by a licensed person. The harness can be kept in the backpack, or best loose in a well ventilated room, away from the sun. In case of a long-time storage we recommend taking it out of the backpack. Unfortunately some discoloration of the harness' parts is unavoidable over time and this is yet another reason for not exposing it to the sun more than necessary.

!

Do not store a wet harness in the backpack for a long time. Dry it thoroughly before packing. Some parts of the harness are glued and this may affect the condition of these joints.

16. Operation and repairs

Periodic control of the harness condition will keep it in safe operation for a long time. After each hard landing check the back protector too, as the seams or zip quite often get ripped when absorbing impact and damaged protector will be ineffective. If you notice damage to its cover, send it back to the producer for a repair or buy a new one.
Correspondingly, after each use of rescue chute thoroughly check entire harness for damages, paying particular attention to the straps and seams.
Aluminium carabiners should be replaced each 5 years or 300 hours airtime. Scratched or damaged carabiners are not serviceable anymore and have to be replaced at once.
Using damaged harness is out of the question. In case of any doubts please contact your dealer or manufacturer and/or send it to an authorized workshop for closer inspection.

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Techno 2023 is an ultralight harness. The lifespan of this product largely depends on how you handle it. Dragging on the ground, careless packing and storage etc. accelerate the aging process, therefore should be avoided. A lightweight product is much more sensitive to any kind of abuse and damage.

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The Techno 2023 harness is per standard airworthy for 10 years since the date of production.
The AF-15/2022 protector used in the harness is airworthy for 4 years from the date of production.

Environmental care

Paragliding is an outdoor sport. We believe that our clients share our environmental awareness. Exercising paragliding you can easily contribute to environment preservation by following some simple rules. Make sure you are not harming nature wherever you fly. Keep to marked paths, do not make excessive noise, do not leave any garbage and respect fragile balance of the environment.

Recycling of used gear

The harness is made out of synthetic materials, which need to be properly disposed of when worn out. If you are not able to dispose of your gear properly, POWAIR will do that for you. Just send your harness to the address given at the end of the manual, accompanied by a short note.

17. Technical data

Techno 2023		S	M	L	XL
Pilot height	cm	165-175	173-182	180-190	187-195
Spacing of carabiners	cm	44	45	46	47
Weight of the harness *	kg	-	1,96	-	-
Max weight of pilot	kg	100	100	100	100
Load test (100 kg)		EN 1651/LTF91/09	EN 1651/LTF91/09	EN 1651/LTF91/09	EN 1651/LTF91/09
Certificate		EN/LTF	EN/LTF	EN/LTF	EN/LTF

* Weight (kg) with protector, carabiners, speedbar and frontcontainer (version without buckles on the chest strap).
When using the chest strap buckles, add 50 g to the total weight (Techno 2023 B).

Materials

Main strap	Dyneema 12 mm	1500 daN
Leg straps	Dyneema 12 mm	1500 daN
V-strap	Liros 5 mm	2600 daN
Side and chest straps	Liros XTR 6 mm	930 daN
Shoulder straps	Edelrid Taurus	850 daN

Buckles	Edelrid, Finsterwalder (Techno 2023 B version)
Fabrics	Zagros ripstop 70 D 85 g/m2 Lycra 200 g/m2 Porcher 32 g/m2 Porcher 38 g/m2

Set cointains:

1 Harness with integrated pod
1 Carbon footboard
1 Frontcontainer
2 Edelrid Ease 18 kN carabiners
1 Release handle for the frontcontainer
1 Two-piece V-strap
1 Two step speedbar with hooks

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Since POWAIR products are subject to constant improvements, minor differences are possible between the manual and actual product. POWAIR withholds rights to introduce such changes without individual notice.