

Seating & Positioning

# Cushions



**permobil**

## Trusted seating solutions for every individual

At Permobil, we have wheelchair seating solutions for every individual. Solutions designed for all ages, sizes, abilities, and needs. We know how important it is to find the right wheelchair cushion, so we offer the most advanced designs and mediums that work best for you: flowing air, foam, non-flowing air, and hybrids. Then we size it just right for you. Most of our cushions are also designed to adapt and adjust to your needs throughout each day and over time. Permobil seating solutions are tested and refined by clinicians to deliver you protection, positioning, and stability – but even more importantly, peace of mind. Our products have been designed with improving clinical outcomes in mind, so you can live your life to the fullest.

Permobil. Innovating for individuals.

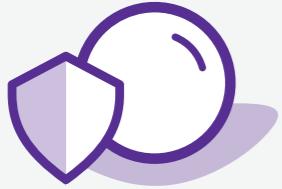


## What's inside:

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Select from a wide variety of Permobil's air, foam, and hybrid cushions, so you can find the seating solution that works best for your individual needs. You can trust our products to provide you with optimal skin and soft tissue protection backed by years of clinical testing, as well as contoured cushions to enhance your stability and positioning.

# Attributes of great seating



## Skin & Soft Tissue Protection

Protecting your skin is one of the most important things to do when you're in a wheelchair. Individuals who use a wheelchair as their primary means of mobility often have sitting times of more than 10 hours per day. These sitting times, in combination with a reduced ability to change position and decreased sensation, can put you at high risk for skin breakdown. In fact, the PPPIA (Pan Pacific Pressure Injury Alliance) has identified immobility as the number one risk factor for pressure injuries.

Pressure cannot be eliminated in seating, so instead, we must focus on the redistribution of pressure. The 2019 PPPIA Clinical Practice Guidelines (CPG) for pressure injury prevention states that pressure injuries are the result of pressure or pressure in combination with shear. When tissues are deformed, a number of unhealthy conditions can occur, including direct damage to cells, inflammation, edema, blood flow restriction, and lymphatic obstruction, all of which are pathways to cell and tissue death and pressure injuries.

The CPG advises that wheelchair cushions can mitigate pressure injury risk by redistributing pressure (through immersion, envelopment, or offloading), managing friction and shear, and managing microclimate. The CPG also notes that cushions alone cannot prevent or heal pressure injuries, but are a key part of an overall plan of care. Selection should depend on the individual's specific needs.

*Most Permobil cushions incorporate elements of immersion, envelopment, and/or offloading in order to help prevent skin/soft tissue injuries.*



## Immersion

Cushion allows the body to sink, to accommodate and support the pelvis.



## Envelopment

Cushion not only immerses, but also surrounds the body and provides greater contact area to redistribute pressures.



## Offloading

Cushion takes pressure off one small surface area and loads it onto a greater surface area that can withstand more pressure.



## Positioning

Good posture decreases pain and reduces your risk of falling out of your wheelchair and being injured. Proper positioning also safeguards the integrity of your bone structure. But did you know that proper positioning also improves your ability to see more of your surroundings, to breathe and swallow better, and have better digestion?

When you are properly positioned, you will be more comfortable and less tired, and you will have better ability to interact with your environment. Improper positioning can cause you serious pain and can even lead to long-term structural issues. That's why our cushions are made with a goal to help promote good posture.

*Most Permobil cushions are designed to promote postural stability and freedom of movement, which may help individuals perform daily living activities.*



## Stability

When the pelvis is stable, this in turn creates stability in the spine, as the two are connected.

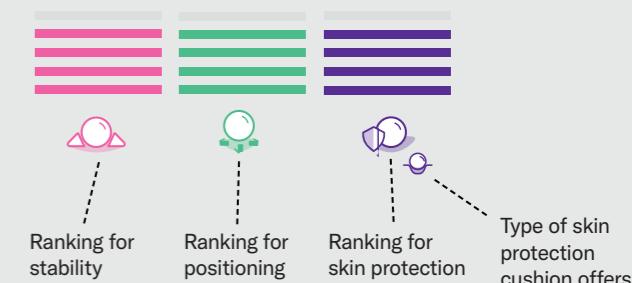
A stable base allows you to transfer easily and control your body position. It also allows you to reach and lean forward, move side to side, and feel more secure in your wheelchair. What a difference that makes in your daily life and being able to take part in activities. We want all those things for you, and more!

Our seating solutions provide you with the support, balance, and dependability you need.

*Most Permobil cushions are designed to help individuals control their body position and prevent sliding, hold their pelvis in place, and enable them to reach and lean with stability.*

## Guide to understanding attributes

Throughout this brochure, charts like the one to the right appear with each cushion. These charts are an indication of that cushion's attributes, as well as the types of skin protection each cushion offers. These ratings are based on clinical, scientific and engineering evidence.



# Science behind our products

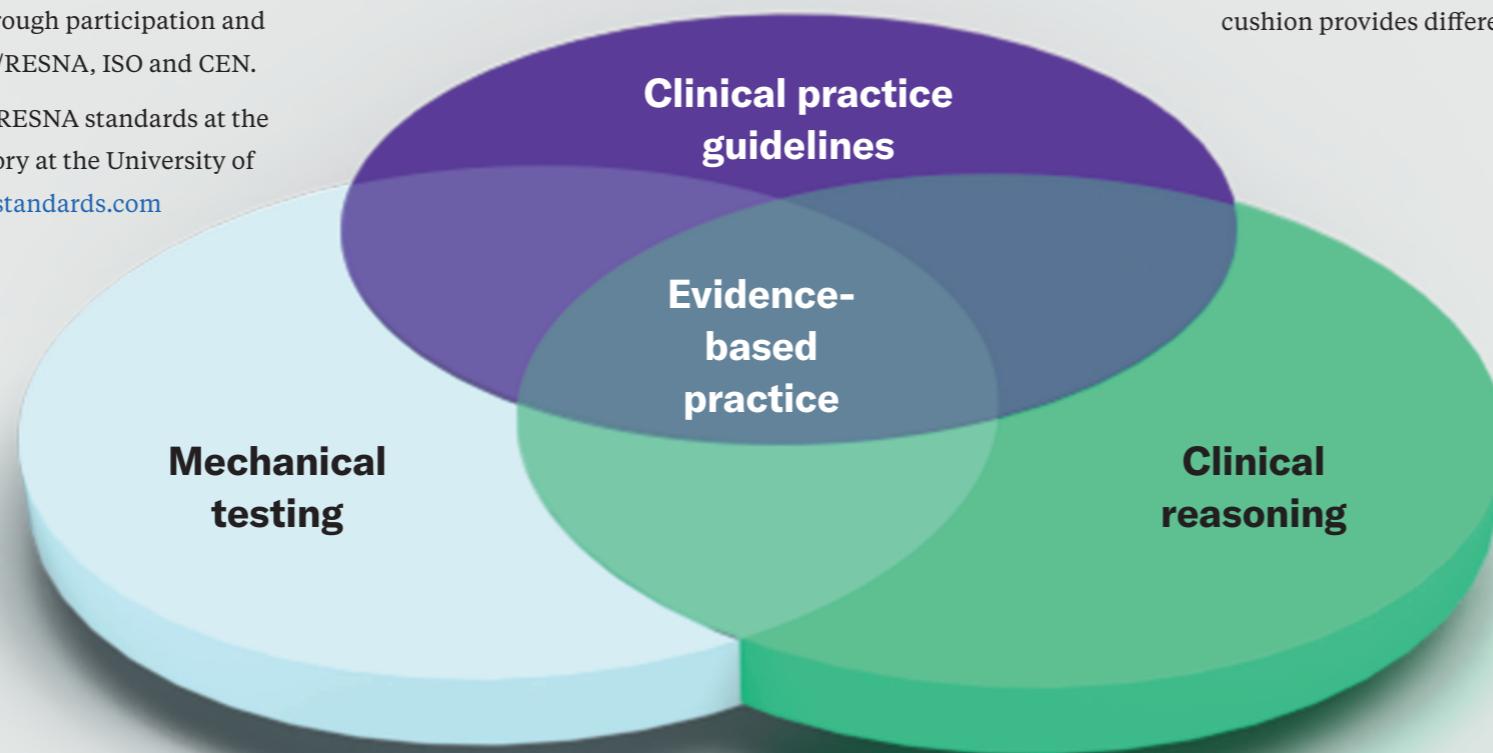
## Evidence-based practice

To demonstrate how Permobil cushions perform, we rely on a range of evidence and best practices, including clinical reasoning and published clinical evidence; mechanical data from standardised bench testing such as ISO (International Organization for Standardization) and RESNA (Rehabilitation Engineering and Assistive Technology Society of North America); current Clinical Practice Guidelines (CPG) for the prevention of pressure injuries; and the medical device regulatory requirements.

## Mechanical testing

Permobil professionals are at the forefront of standardised bench testing and clinical practice, through participation and leadership in the EPUAP/PPPIA, ANSI/RESNA, ISO and CEN.

We test our cushions to ISO and ANSI/RESNA standards at the Tissue Integrity Management Laboratory at the University of Pittsburgh. To learn more: [wheelchairstandards.com](http://wheelchairstandards.com)



Attributes of great seating	Mechanical testing
	<b>Skin Protection</b> Immersion test (ISO 16840-2) reveals how deeply the body sinks into the cushion.  Envelopment test (ISO 16840-12) reveals how the body weight is cradled by the cushion, using envelopment or offloading.  Shear test (Shear force sensor) reveals the potential of the cushion interaction with the body to distort/deform the tissue.  Contact Area (Pressure mapping) reveals how much contact is being made between the seat support and the individual.
	<b>Positioning</b> Slide resistant test (ISO 16840-2) reveals how much force is required to slide forward on the cushion when seated.
	<b>Stability</b> Lateral tilt test (ISO 16840-13) reveals the stability the cushion may provide during side-to-side leaning.

## Clinical practice guidelines

The design, development, and evolution of our cushions have always been based on clinical recommendations to optimise client outcomes. Permobil seating solutions are reviewed and refined by clinicians, as well as by globally recognised knowledge and testing sources. These assessments provide insight into how each of our cushions are unique, and how each cushion provides different benefits.

## Clinical reasoning

Having this range of evidence and information helps with the cushion selection process. Like you, each cushion is unique. Find the one that's best for you.

Clinical practice guidelines	Clinical reasoning
CPG notes pressure injuries result from pressure or pressure in combination with shear.  PPPIA guides use of support surfaces to achieve pressure redistribution in one of two methods: immersion/envelopment or redirection/offloading. PPPIA recommends immersing more than 40 mm to cradle bony prominences, which may reduce the risk of pressure injury.	Lower shear forces minimise the tissue distortion/deformation and may reduce risk of pressure injury.  Achieve as much contact area as possible to promote greater pressure redistribution which may reduce risk of pressure injury.  Immersing the bony prominences may reduce risk of pressure injury.

# History of our products

## ROHO® cushions

For over 50 years, ROHO, Inc. has dedicated its efforts to the research, engineering, and manufacturing of air-cell based cushions, making ROHO cushions the industry standard in skin and soft tissue protection.

ROHO cushions have an air-cell design that keeps you in place while moving as you do, constantly adjusting to your body. It's called DRY FLOATATION® technology (read more in "Our cushion technologies" section), and it's a ROHO product exclusive. These specially developed and adjustable air cells mimic the properties of water and ensure your body is immersed and enveloped to give outstanding pressure distribution.

Each cushion has multiple air cells made of a soft, smooth, and pliable material that reduces shear and friction. Some even have anatomically shaped contours or hybrid foam bases, to offer individuals additional support and stability. With some cushions, you can also set different inflation levels in the separate compartments based on your needs. What truly sets a ROHO cushion apart is the airflow between the cells allowing the cushion to adjust and adapt to the individual, providing a comfortable seat that accommodates new positions, daily movements, and body changes over time.

The proof of performance is clear in many scientific and clinical studies verifying that a ROHO DRY FLOATATION cushion assists in preventing pressure

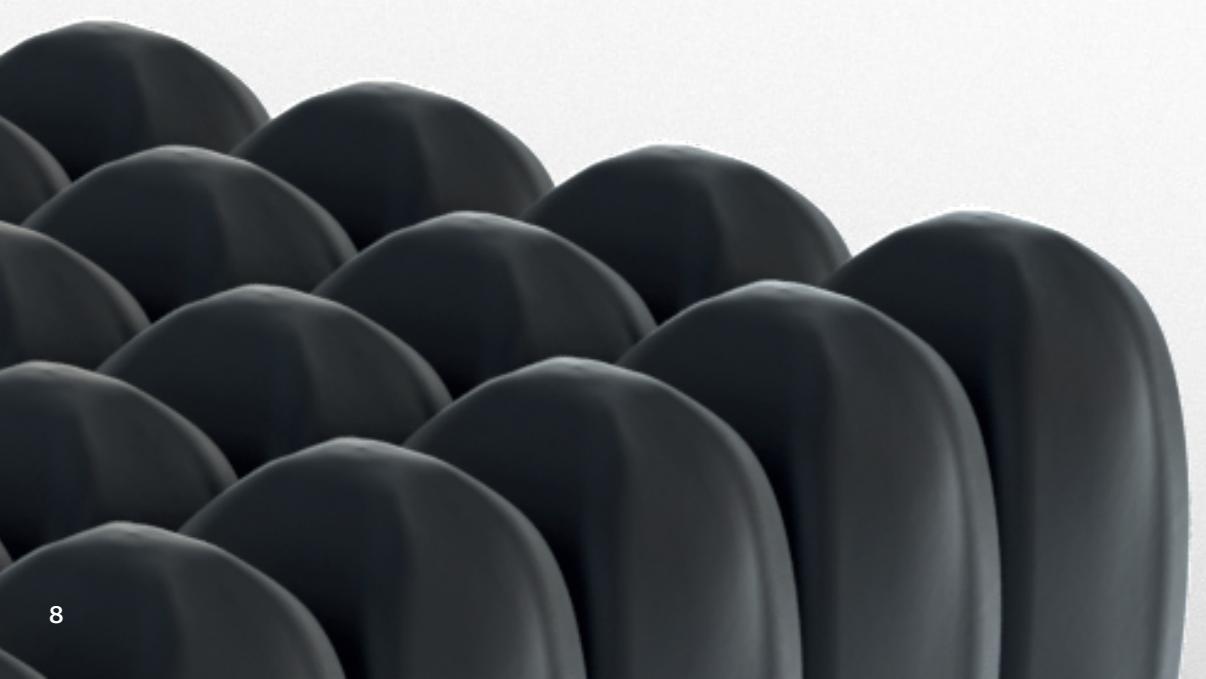
injuries, including deep tissue injuries. ROHO cushions are the world-renowned leader in skin protection and positioning product solutions, and there are currently over one million cushions in use in over 70 countries. This is quite amazing when you consider ROHO cushions started in 1973 with an electrical engineer making just a few cushions each day to support those going through the rehab process. The factory now produces over 1,000 cushions daily!

Whether you need the conforming, pressure-relieving power of DRY FLOATATION technology or you need aggressive positioning and smoother, safer transfers – there's a ROHO cushion designed for you.

### Key benefits:

- skin and soft tissue protection
- positioning and stability capabilities
- adjustments can be made while the individual is seated

*The majority of ROHO cushions are proudly made in Belleville, IL, USA. The high quality of our proprietary neoprene and ISO 13485 certified Quality Management System instill confidence that your cushion will continue to perform year after year.*





## Constantly improving technology

As technology progresses, so do we. We're constantly pushing to improve so we can deliver the stability, protection, and comfort you need to live life to the fullest.

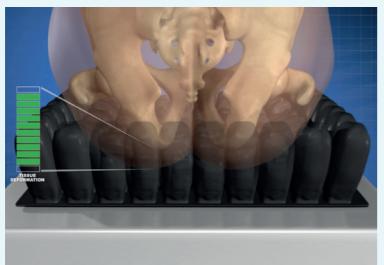
# Our cushion technologies

## DRY FLOATATION® Technology

ROHO's DRY FLOATATION technology is based on hydrostatics which allows the cushion to mimic the pressure redistribution properties of water. The technology follows four fundamentals for ensuring optimal skin protection, stability, and positioning.

### Lets you in

Our unique design lets you easily sink into the cushion, reducing both pressure and discomfort to your skin and soft tissues. When an individual spends the entire day seated, it can create a lot of pressure to deal with. A ROHO cushion allows your body to immerse without resistance into the air cells as it's cradled in a protective environment that delivers comfort and distributes pressure.



### Matches your shape

Water shapes perfectly to the body, so replicating it means the ability of the cushion to match to your individual shape. ROHO cushions make this possible with flexible cells that can provide constant and even forces across all contact areas with the body, while ensuring you remain safe, stable, and in the right position.



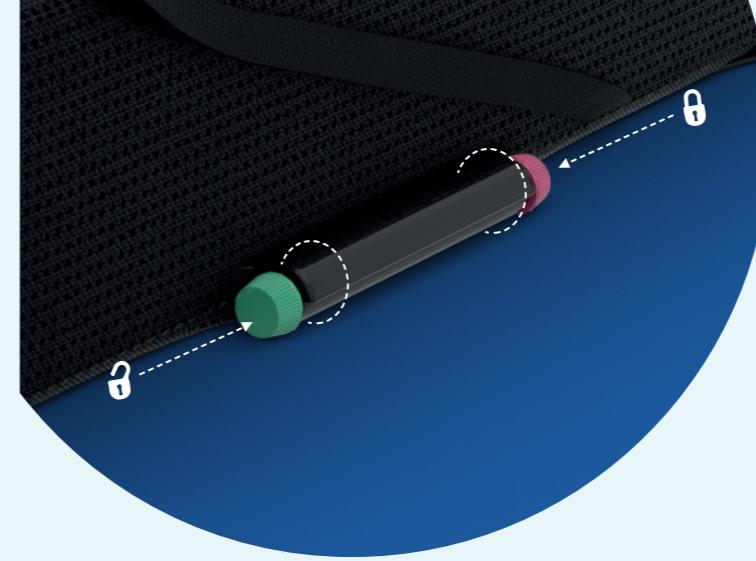
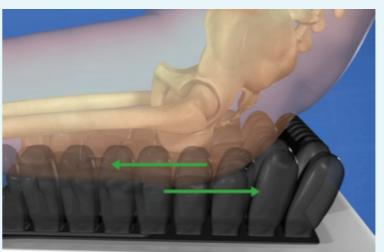
### Moves with you

No matter what you are doing, your ROHO cushion will adapt to your every position. The air cells follow your motions, giving you support and freedom of movement. ROHO cushions are designed to move with the body and constantly adapt to the changes that happen throughout each day and over time.



### Works with you, not against you

Nothing feels like a ROHO cushion. The smooth surface reduces shear and friction without compromising your safety and comfort. The cells in a ROHO cushion are designed to transfer air between one another and adapt as you move. So you can simply go about your day while the cushion works with you, always.



## ISOFLO® Memory Control

You can easily find and set the right position for optimal immersion and skin protection by utilising the exclusive ISOFLO Memory Control on your ROHO Select series cushion. It provides you with the ultimate control over the inflation levels within the air compartments of your ROHO cushion, making it easy to ensure you are positioned properly.

Located at the front of all Select series cushions and within easy reach, a simple push of a button provides you with the ability to customise the fit and make adjustments while seated. The ISOFLO control is colour-coded for easy use (green is open, red is closed).

- With the ISOFLO Memory Control open, air can flow freely throughout the entire cushion, similar to a ROHO Single Compartment cushion.

- With the ISOFLO Memory Control closed, air becomes locked into the separate compartments offering positioning capabilities and providing stability.

### Key benefits:

- quick and simple adjustments
- solution for positioning and stability
- colour-coded visual aid
- used while seated

Available in: ROHO Quadro Select, ROHO Contour Select, and ROHO Hybrid Select

## ROHO Standard & Select Series Covers

The ROHO Standard and Select series cushion covers are intended to protect both you and your cushion. They feature a two-way stretch top to help reduce friction and shear while encouraging immersion and envelopment. The zippered cover is easily removable for cleaning and is machine washable.

*Note: Select series cushion covers include an opening for the ISOFLO Memory Control.*

## ROHO Heavy Duty Cushion Covers

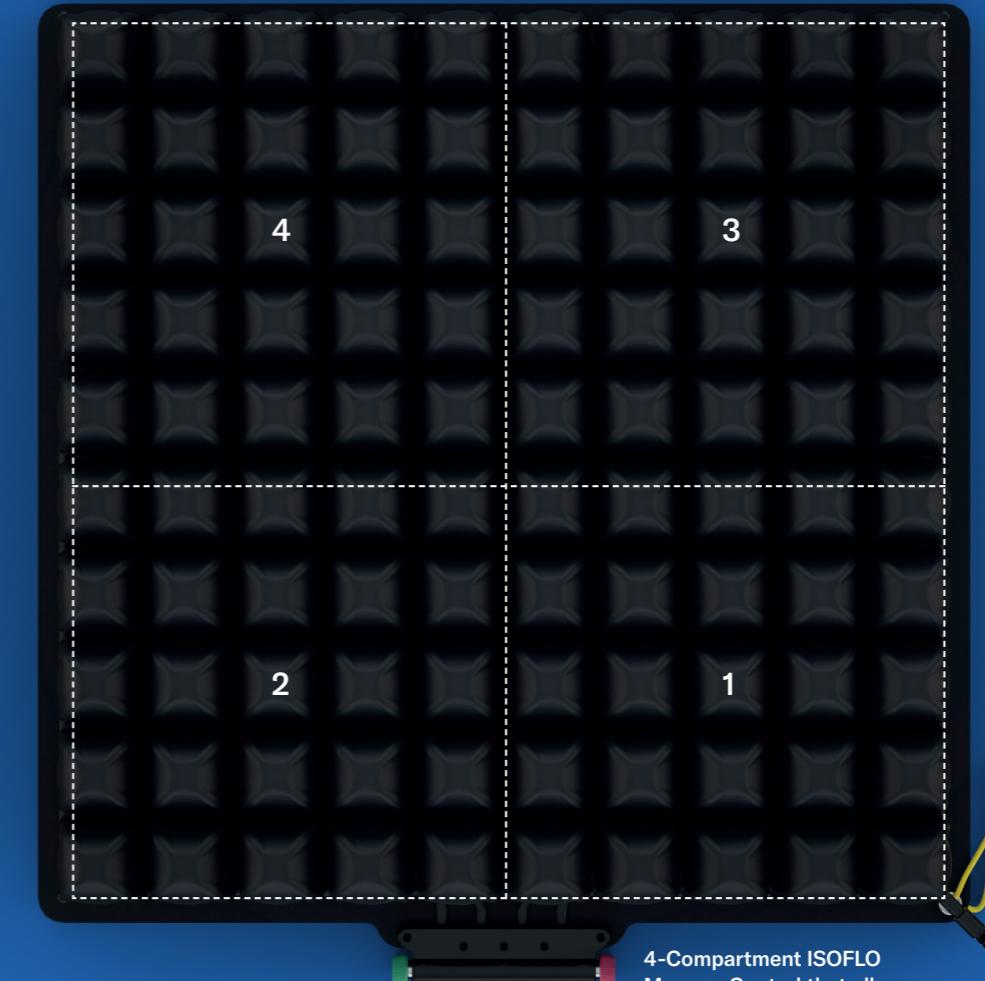
For individuals needing incontinence protection for their cushion, or for a longer-lasting cover, ROHO's Heavy Duty cushion cover is the ideal choice. It has all the features of the Standard cover, however, it is designed for rugged use and everyday wear and tear. The fluid-resistant top and sides serve to protect the cushion underneath by providing a barrier that may prevent moisture from seeping into the cushion material below.

# Our cushions

A system that fits well gives you the support you need. Our seating and positioning products are designed to adapt and adjust to your needs throughout each day and over time.



Cushion shown without cover.



4-Compartment ISOFLO  
Memory Control that allows you  
to easily find and set the right  
position each and every time.



## ROHO QUADTRO SELECT®

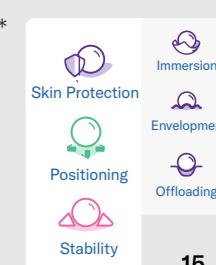
QUADTRO SELECT is the most clinically advanced cushion in the ROHO product family, constantly adapting to your needs or activities. With the exclusive ISOFLO Memory Control and independent four-compartment design, you have the ultimate control over the inflation levels across your cushion, making it easy to ensure you are positioned properly. The interconnected air cells envelop your body, delivering maximum immersion and positioning, while protecting you from skin and soft tissue breakdown.

### Key benefits:

- positions you left and right and front and back
- stabilises and holds the position of your pelvis and thighs
- delivers skin and tissue protection
- easy to set up
- available in three different cell heights: HIGH PROFILE® (10.5 cm/4.25"), MID PROFILE™ (8.5 cm/3.25") and LOW PROFILE® (5 cm/2.25")\*\*

Sizes\*      Widths: 28 cm-67 cm (11"- 26.25")  
                 Depths: 30 cm-60 cm (11.75"- 23.75")

\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)  
\*\* Without load



# Hybrid Select

The Hybrid Select is our most advanced hybrid cushion that provides you with exceptional positioning and stability, plus the ability to offload by simply removing the IT air insert. You can easily find the right position for optimal immersion and skin protection by utilising the exclusive ISOFLO Memory Control. This technology allows you to set the amount of air in the three separate ROHO compartments—the removable IT insert and the dual-zone overlay. The Hybrid Select also uses the positioning capabilities of a contoured, high resiliency foam base with deep leg troughs to offer you support, lateral stability, and provide relief to the coccyx.

## Key benefits:

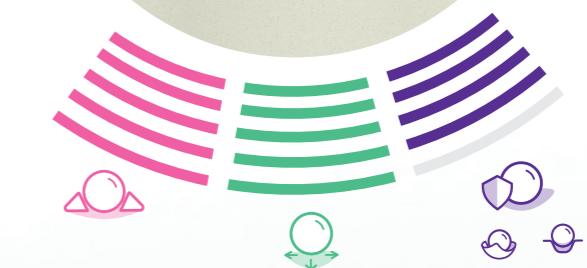
- stabilises and holds the position of your pelvis and thighs
- unique ROHO air cell design specifically crafted to work with the deeper curves of the contoured foam base
- delivers skin and soft tissue protection, with optional offloading under the ischial tuberosities (ITs)
- easy to set up

Sizes\*      Widths: 35.5 cm-51 cm (14" - 20")  
 Depths: 35.5 cm-51 cm (14" - 20")

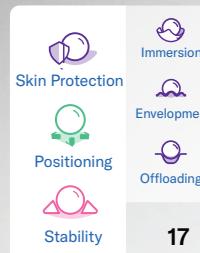
\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)

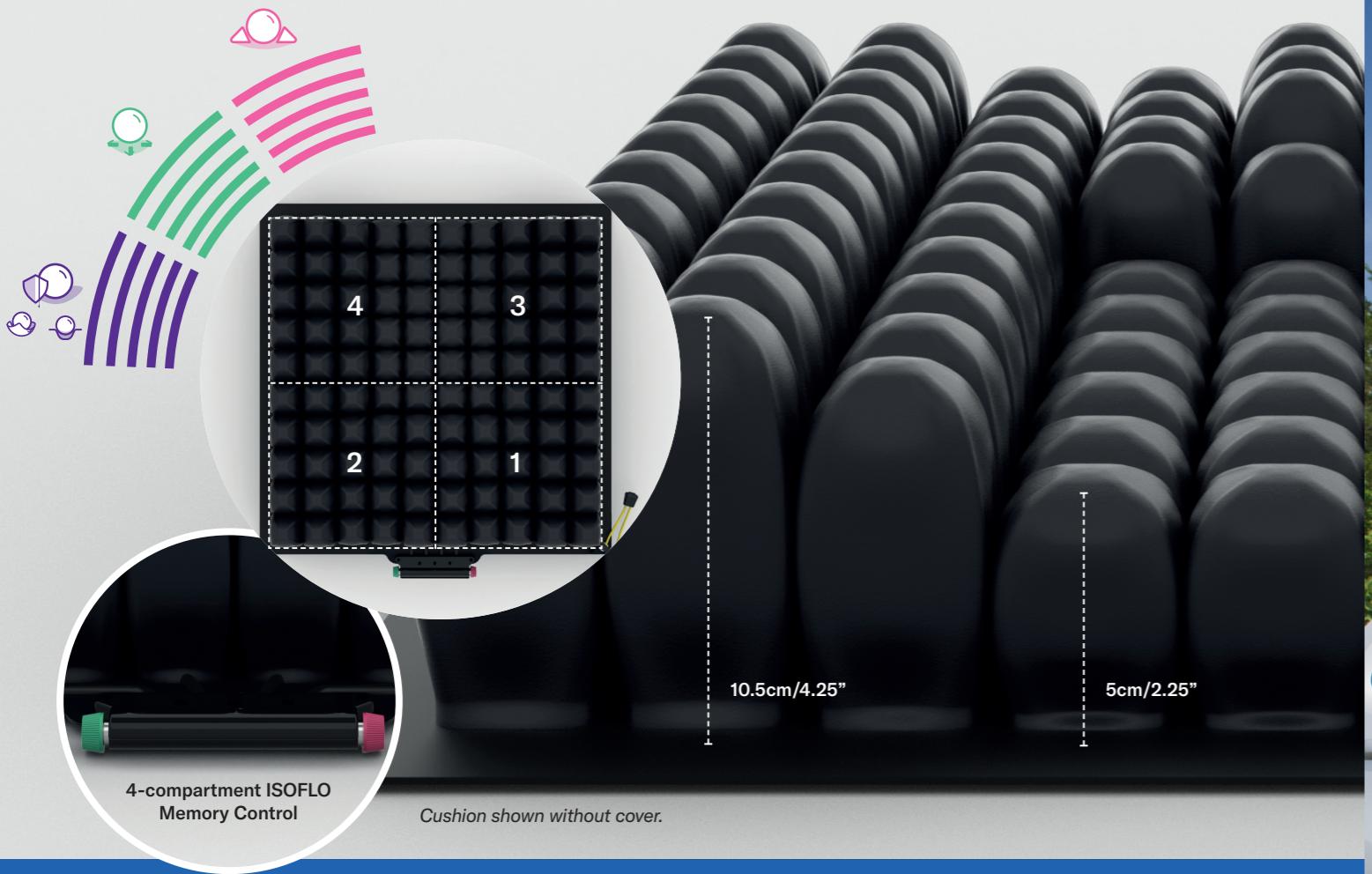


Removable  
IT air insert  
for optional  
offloading.



Cushion shown without cover.





## ROHO CONTOUR SELECT®

Designed for positioning and posture, the CONTOUR SELECT keeps you centered in the middle of the cushion, with your pelvis back in the wheelchair. It comes with the same clinically advanced features and technology as the QUADTRO SELECT, but has multiple cell heights. These varying heights help guide your thighs into the leg channeling paths, and keep you in an upright posture. With the exclusive ISOFLO Memory Control you can lock air into the four separate compartments, providing the stability and positioning you need, and minimising side-to-side and front-to-back motion.

### Key benefits:

- positions you left and right, and front and back
- stabilises and holds the position of your pelvis and thighs
- delivers skin and tissue protection, with additional relief under the ischial tuberosities (ITs)
- easy to set up

Sizes\*      Widths: 36.5 cm-62.5 cm (14.5"- 24.5")  
                 Depths: 38.5 cm-56 cm (15.25"- 22")

\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)





## ROHO HYBRID ELITE® Dual Compartment

The HYBRID ELITE Dual Compartment cushion combines the unique properties of ROHO air cells with the supportive features of foam, in one cushion. The air insert provides you with pressure redistribution around the pelvis with two independent, adjustable air compartments that let you set inflation levels to your shape and ideal position. Meanwhile, the cushioned foam channels hold your legs in place, and provides you with a firm base for sitting stability.

### Key benefits:

- ideal for lateral positioning and lateral stability
- stabilises and holds the position of the pelvis and thighs

Sizes\*      Widths: 35 cm-60.5 cm (13.75" - 23.75")  
                 Depths: 37.5 cm-58 cm (14.75" - 22.75")

*\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)*



## ROHO HYBRID ELITE® SR™ Cushion

The HYBRID ELITE SR™ cushion also combines air and foam in one cushion and is designed for individuals whose primary need is stability. When sitting on the cushion, your pelvis is held and protected with the air insert, and the thighs are aligned with the contoured foam leg channels.



### Key benefits:

- stabilises pelvis and thighs for ideal positioning
- easy to set up

Sizes\*      Widths: 35 cm-60.5 cm (13.75" - 23.75")  
                 Depths: 37.5 cm-58 cm (14.75" - 22.75")

*\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)*





ROHO

## Single Compartment & Single Compartment Sensor Ready

The Single Compartment interconnected air cells allow you to be immersed for pressure redistribution while decreasing friction and shear. These cushions come in three different cell heights depending on your needs and are easy to set up.

With the Sensor Ready version of the cushion, ROHO's exclusive Smart Check\* device can determine the proper inflation level for your cushion and allows you to monitor and adjust it at any time. You get instant feedback and peace of mind knowing that you are protected from skin/soft tissue breakdown.

### Key benefits:

- easy to set up
- Single Compartment is available in LOW PROFILE® (5 cm/2.25")
- Sensor Ready is available in HIGH PROFILE® (10.5 cm/4.25") and MID PROFILE™ (8.5 cm/3.25")

Sizes\*      Widths: 29 cm-68 cm (11.5"- 26.75")  
                 Depths: 29 cm-55 cm (11.5"- 21.75")

\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)

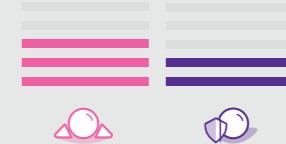


## ROHO AirLITE®

The AirLITE cushion is a non-adjustable, maintenance-free foam cushion with a ROHO air insert that conforms to your body while also preventing you from bottoming out in your cushion. The gentle contour of the leg trough helps you maintain the right position and posture, and lets you feel more secure.

Sizes\*      Widths: 33 cm-51 cm (13"- 20")  
                 Depths: 33 cm-51 cm (13"- 20")

\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)



## ROHO MOSAIC®

The MOSAIC cushion provides the benefits of interconnected large air cells that allow you to sink comfortably into the cushion. It is an easy to inflate, lightweight cushion that protects your skin and soft tissues.

Sizes\*      Widths: 41.5 cm-51.5 cm (16.25"- 20.25")  
                 Depths: 41.5 cm-46.5 cm (16.25"- 18.25")

\*For full size listing, visit [permobil.com/en-nz](http://permobil.com/en-nz)



Cushion shown without cover.



# ROHO cushion information

## Phone

New Zealand : 0800 115 222

## Customer support

[sales.nz@permobil.com](mailto:sales.nz@permobil.com)  
[permobil.com/en-nz](http://permobil.com/en-nz)

## Custom options

For custom options please visit our website or contact customer support.

## Product use and maintenance

ROHO products are user friendly and can be easily used and maintained. A hand pump and operation manual are included with most ROHO products. The operation manual includes setup, care and cleaning instructions, as well as useful information regarding customer support and the product warranty.

## Storage and transport

Clean and disinfect the product before storing. Open the inflation valve(s). Deflate the product. Store the product in a container that protects the product from moisture, contaminants and damage. After storing, follow instructions to prepare the product for use. After transport, inspect the product to ensure it was not damaged.

## Limited warranty

Limited Warranty Term from the date the product was originally purchased: Select Cushions: 36 months; all other DRY FLOATATION products: 24 months; MOSAIC cushion and AirLITE cushion: 12 months. The warranty does not apply to punctures, tears, burns, or misuse. See also the Limited Warranty supplement provided with your product or contact Customer Support.

## Returns

To make a claim under the Warranty, customers should contact the Funder that purchased the product. The Funder will then request Permobil to assess the product for defect. If the product is assessed as potentially having a defect in material or workmanship covered by the Warranty, the Funder will provide instructions to the customer for the product to be shipped to our Permobil service centre.

If you do not receive satisfactory warranty service or cannot contact the Funder to make the Warranty claim, please contact Permobil (Phone: 0800 115 222, Email: [sales.nz@permobil.com](mailto:sales.nz@permobil.com), Postal Address: 181a McLeod Road, Te Atatu South Auckland, 0610, New Zealand). Do not return products to Permobil without Permobil's prior written consent. Returns must be shipped with freight pre-paid. Permobil recommends that you insure the product for its full replacement cost when shipping. You will bear all the expenses of claiming under the Warranty. If your claim is successful, then you may claim back any out of pocket expenses incurred.

No successful claim made under this Warranty will reset the Warranty period.

The benefits given to you in this Warranty are in addition to any other rights or remedies under a law in relation to the product to which the Warranty applies.

## Quality management

ROHO, Inc., a part of Permobil Seating and Positioning, takes quality control much further than the FDA model, with its quality management system being certified to ISO 13485:2016.

“

The Hybrid Select gives me the positioning I need and is easier to transfer from than my current cushion.

— Eric Reyes, *Permobil user*



<sup>†</sup>DISCLAIMER: The information provided here is for informational purposes only. It is NOT intended to substitute for the advice of an appropriately qualified and licensed physician, clinician or other healthcare provider. Always seek the advice of your physician, clinician or other healthcare provider with any questions you may have regarding a medical condition.

The following are trademarks and registered trademarks of Permobil: AirLITE®, CONTOUR-SELECT®, DRY FLOATATION®, HIGH PROFILE®, HYBRID ELITE®, ISOFOLO®, LOW PROFILE®, MID PROFILE™, MOSAIC®, QUADTRO SELECT®, ROHO®, and Smart Check®.

All comments from PPPIA are taken from: European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The International Guideline. Emily Haesler (Ed.). EPUAP/NPIAP/PPPIA: 2019.



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