

Evolution™ and Evolution PSV™

Superior pressure distribution, positioning stability, comfort and simplicity have made the Evolution cushion our most popular wheelchair cushion. By adding the VARILITE PSV (Pressure Setting Valve), we've made the Evolution PSV cushion even better, taking the guesswork out of cushion adjustment.

VARILITE air-foam floatation makes Evolution and Evolution PSV cushions ultralight, without compromising pressure distribution and support.

1. Air-Foam Floatation

Functional areas of the cushion are created by three types of foam: soft foam for the decubitus-sensitive area of the ITs; medium foam for the thigh trough, pelvic bucketing and pre-ischial bar; and firm foam for the perimeter and the medial thigh separator.

Bonding Evolution foam to coated fabric makes the cushion hold air. A valve releases air to immerse the user in the foam, the foam conforms to the user, and the user's weight is distributed over the surface of the cushion.

Independent research has shown VARILITE air-foam floatation to be the #1 impact and vibration dampening technology (RESNA 2000).

2. Positioning Supports

Positioning supports improve stability, which is important for users with compromised sitting balance or who transfer frequently. Multi-stiffness foam provides support as the user is immersed in the cushion. Medial and lateral supports minimize internal and external lower extremity rotation. Pelvic bucketing and a pre-ischial ridge help maintain pelvic position, and thigh troughs promote a neutral femoral position. The Evolution is not intended for individuals with a high level of asymmetrical posture.

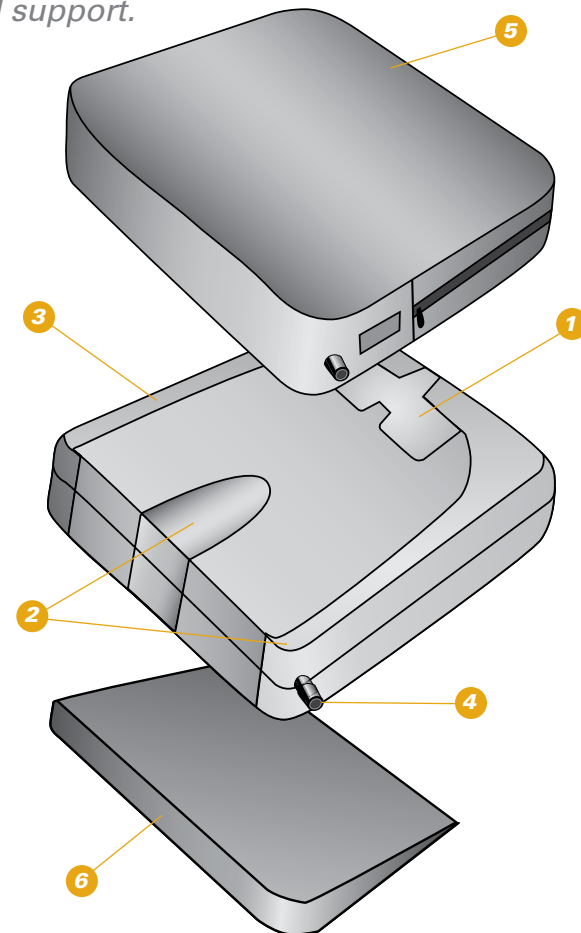
3. Four-way-stretch Fabric

Evolution foam is bonded to four-way-stretch knit fabric for maximum conformity during immersion. The fabric is puncture and water resistant.

4. Valve for Adjusting Air Volume

Evolution PSV cushion uses the VARILITE patent pending Pressure Setting Valve. Sitting on a fully inflated cushion, the user or caregiver opens the PSV to a pre-set position. When the PSV senses that the desired level of immersion has been reached, it stops releasing air. The PSV is then closed.

The Evolution cushion uses a traditional two-way VARILITE valve. Sitting on a fully inflated cushion, the user or caregiver opens the valve and releases air, closing the valve when there is 1 to 1/2 inch (25 to 13 mm) of air and foam between the ITs and the seating surface. To ensure optimal performance and foam integrity, VARILITE recommends that the valve is left open and the cushion is allowed to fully inflate overnight at least once a week.



5. Cover

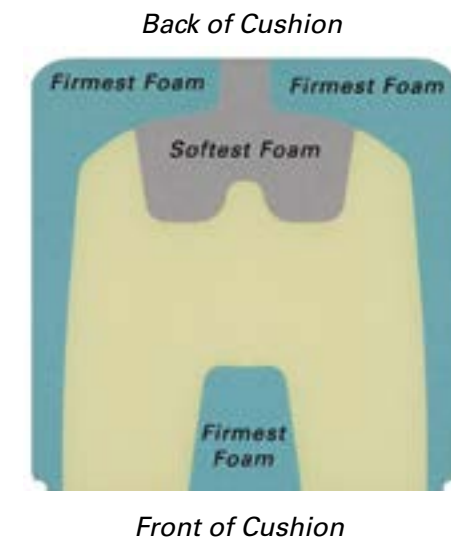
The Evolution and Evolution PSV cushions are available with a mesh or incontinence cover with breathable four-way-stretch material. Reticulated foam inside promotes air exchange and improves pressure distribution. The underside is a rugged nonslip material with hook and loop for added security. Evolution and Evolution PSV covers meet ISO 7176-16 ignition resistance standards for upholstered wheelchair components. Machine washable. For detailed information on cleaning and disinfection of VARILITE cushions and covers, see the Instruction Manual.

6. Wedge

A modifiable closed-cell foam wedge is available as an optional accessory.

Why have three different foam firmnesses?

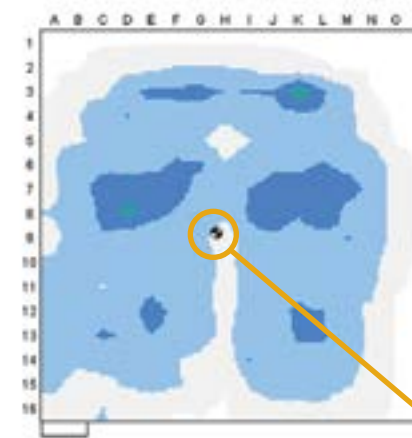
- Stiffer foam is used around the perimeter and at the medial thigh separator to provide posture support.
- Medium foam is used for the thigh trough to create a pre-ischial bar, allow for conformation and increase surface area contact.
- Soft foam in the sacral-ischial area provides pressure displacement at peak points.



Benefits of the Wedge

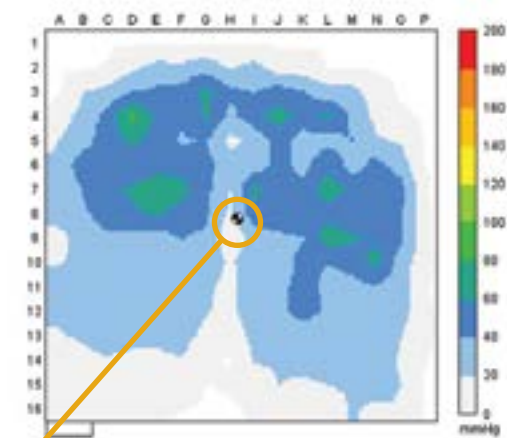
Our VARILITE Wedge reduces the seat-to-back angle, which increases the weight-bearing load on the back of the thighs and decreases the load on the buttocks. The 2 inch (5 cm) tapered wedge trims easily for custom fitting to meet individual needs.

FSA pressure map with Wedge



front of cushion

FSA pressure map without Wedge



front of cushion

center of pressure

Evolution and Evolution PSV cushions are available with the following options:

Cover: Mesh or Incontinence
Wave™ positioning bases: CPW (Contoured Positioning Wedge), LPB (Lateral Positioning Base) or CPB (Contoured Positioning Base)

Please see price list for size availability and HCPCS information.





Evolution™ and Evolution PSV™

For wheelchair users with a moderate-high skin protection and moderate to high positioning needs.

The Evolution and Evolution PSV seating systems are a range of seating cushions offering pressure reduction, comfort and positioning to individuals who use wheelchairs.

Therapists recommend the Evolution and Evolution PSV seating systems for individuals with motor and neurological dysfunction due to spinal-cord injury, stroke, multiple sclerosis, cerebral palsy, and traumatic brain injury.



SEATING SYSTEMS



Evolution™ and Evolution PSV™

VARILITE air-foam floatation combines the best characteristics of air and foam.

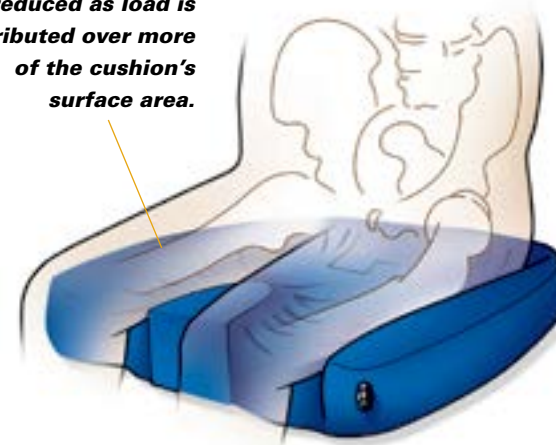
Air acts like a fluid and displaces under load, which makes it ideal for pressure management. Foam acts like a spring and compresses under load. To be effective, foam must be firm enough to prevent bottoming out. However, the firmer the foam, the more it pushes back on the object it is supporting.

Air in a VARILITE cushion supports the load, while foam keeps the air where it is needed, preserves the cushion shape, and prevents bottoming out. Because air supports most of the load, low-density foam can be used. This results in a lightweight cushion with less "push back" or interface pressure.

Air-foam floatation works because of immersion.

VARILITE self-inflating air-foam cushions use multi-stiffness foams to provide support and conformation under different areas of the user. A valve releases air to immerse the user in the foam, and the different foams conform to the user's shape. As immersion increases, the load is distributed over more of the cushion's surface area and pressure points are reduced. Optimal pressure distribution is achieved when the load is distributed over the largest area.

Pressure points are reduced as load is distributed over more of the cushion's surface area.



VARILITE PSV takes guesswork out of cushion adjustment and makes it automatic!

The PSV works by sensing the amount of internal cushion pressure. As air is released, internal pressure decreases as the user is immersed in the cushion for effective pressure distribution.

Sitting on a fully inflated Evolution PSV cushion, the client simply opens the PSV to the appropriate position. When the PSV senses that enough air has been released, it automatically shuts off the flow. The client then closes the PSV. Adjustment is simple and consistent.

The PSV is marked with three pre-set positions, which provide the best range of immersion for most users. The therapist determines the PSV position that results in optimal pressure distribution for a client. (A therapist can mark a different position on the PSV if the user falls outside the pre-determined range.)

Ease of use improves user compliance. A therapist can select the Evolution PSV cushion with confidence, knowing that a client or caregiver can adjust the Evolution PSV cushion easily for optimal pressure distribution. The first time. Every time.



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