

GEMINI spin

anti decubitus cushion



- Unique breathable design for temperature and moist regulation
- High density viscoelastic foam core with 3D symmetrical protrusions
- Textile cover with Outlast® technology

www.geminisystem.cz



 **GEMINI**
seating technology



WHAT IS THE ANTI DECUBITUS SEATING CUSHION OF GEMINI® SPIN?

The anti decubitus cushions of GEMINI® SPIN are designed as a medical aid to prevent the consequences of long-term sitting (e.g. on a wheelchair) in the first place, but primarily they prevent the creation of decubitus and pressure sores in the seating parts of the body. Using a unique construction technology and thanks to the materials applied, the cushions of GEMINI® SPIN provide:

- ideal distribution of user's weight when sitting
- body temperature collection and its optimal regulation in the area of seating
- adapting to the shape of the body seating parts with absorption of body and clothes contour irregularities when sitting
- air flow in horizontal and vertical directions

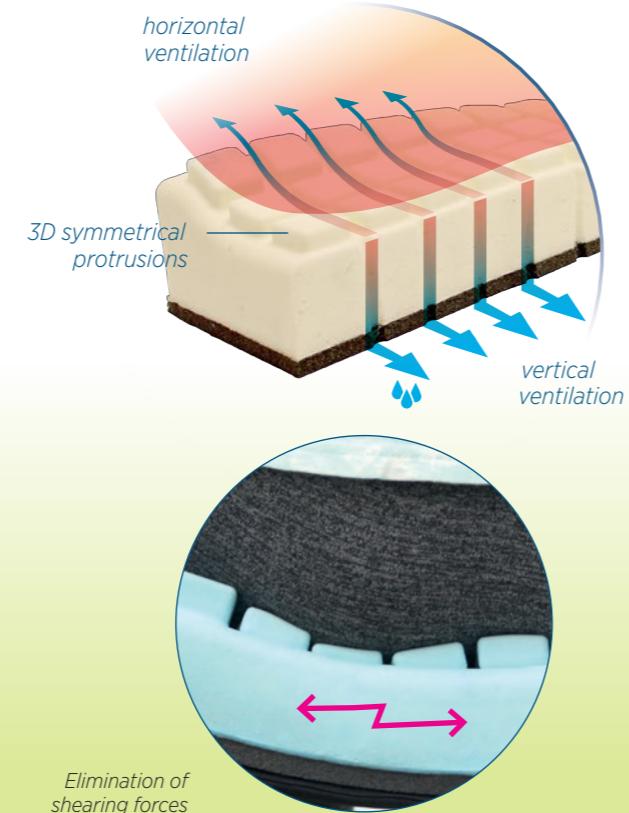
The seating cushions of GEMINI® SPIN are manufactured in 2 profiles. The profile of GEMINI® SPIN VS cushion is flat. The GEMINI® SPIN VSC cushions have an anatomically contoured profile and enable a specific correction of the seating (abduction in the front part and a concave shape in the back part).

JAK FUNGUJE?

First of all, the anti decubitus seating cushion of GEMINI® SPIN creates the core (filling) made of visco-elastic foam; the upper layer is made of a unique net of so called 3D symmetrical protrusions. Visco-elastic memory foam gradually softens after it is loaded by the user, and thanks to the influence of the human body pressure and temperature, the cushion shapes according to the proportions of the seating body parts. At the same time, thanks to the natural deformation and adaptation to the body contour, the 3D symmetrical protrusions improve the comfort of seating in the way that they **distribute the user's body weight in a larger area**, which ensures a reduced pressure in the critical spots. Between the individual protrusions, there is still the air gap ensuring that the air flows in the horizontal level. The 3D symmetrical protrusions also **eliminate the shearing forces** (the movements of the body in the horizontal direction - shuffling here and there), therefore, they minimize the chafing caused by the movement of the user on the seat, which prevents the negative effect of the pressure on the skin and subcutaneous tissues and their stress.

The bottom base of the cushion is created from a 5mm hardened perforated foam polyethylene (PE).

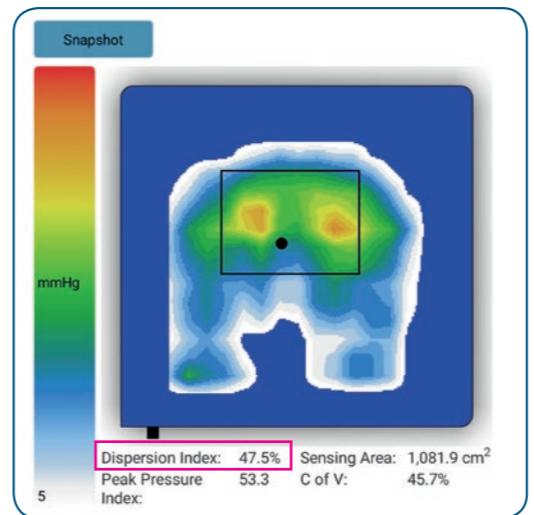
The filling of the cushion is **vertically perforated including the bottom PE base and together with cross-section airflow gaps** make the vertical air flow possible.



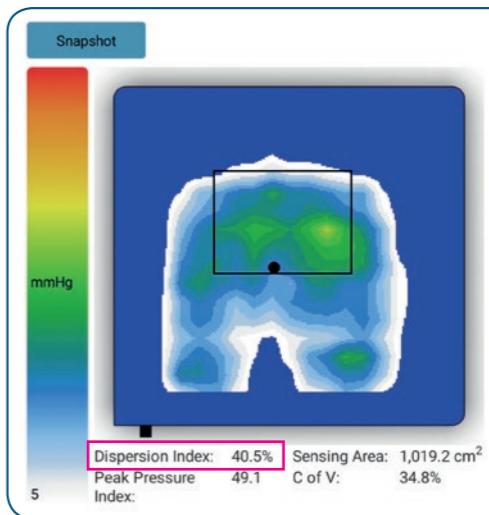
WHAT ARE THE RESULTS?

The comparison of outcomes from a special measurement, so called BODY PRESSURE MAPPING - measurement of the pressure distribution between human body and supporting spots, such as seats and cushions, mats, pillows, and backrests.

a standard cushion
visco-elastic foam



A GEMINI® SPIN seating cushion
visco-elastic foam with protrusions and vertical perforation



Compared to a standard cushion from visco-elastic foam, the GEMINI® SPIN cushion has a better pressure distribution of 15 %.*

The value of **Dispersion Index** is much better for the GEMINI® SPIN type cushions with 3D protrusion technology than for common cushions from visco-elastic foam (Figure on the left)

* The value of a particular measurements in 08/2018-08/2019 period.





WHAT IS INSIDE?

GEMINI® SPIN CUSHION COVER

- The upper seating part is made of 3D fabric with **thermoregulation material layer of Outlast®**.
- The side parts of the cover are made of breathable 3D fabric.
- The bottom part of the cover is designed of perforated netting with anti-slide surface.

GEMINI® SPIN cushion cover is designed to ensure maximum breathability and ability to take the body heat and humidity from user's body and this is the way how it supports anti-decubitus properties of the GEMINI® SPIN cushions.



MAIN GRIP

- for easy cushion transport

HIGH-VISIBILITY LOOPS

- 4 high-visibility loops along the cushion perimeter for better gripping or lifting of a lying cushion

SIDE PARTS OF COVER

- 3D breathable fabric

UPPER PART OF COVER

- 3D breathable fabric with Outlast® fabric layer

FUNCTIONAL LAYER OF CUSHION

- regular net of 3D symmetrical protrusions

CUSHION FILLING (CORE)

- visco-elastic memory foam

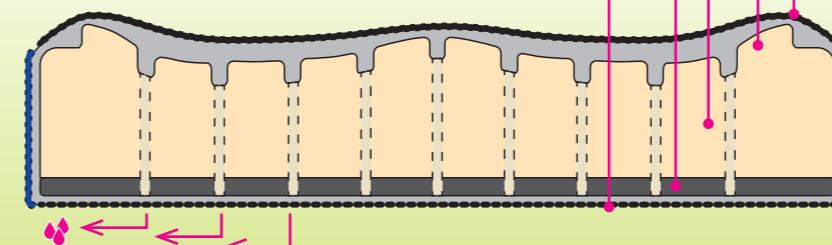
BOTTOM LAYER (CUSHION BASE)

- perforated foam polyethylene (PE) with cross-section gaps for vertical air flow

BOTTOM COVER PART

- anti-sliding netting breathable fabric

Schematic cross-section of GEMINI® SPIN (VSC) seating cushion - front view



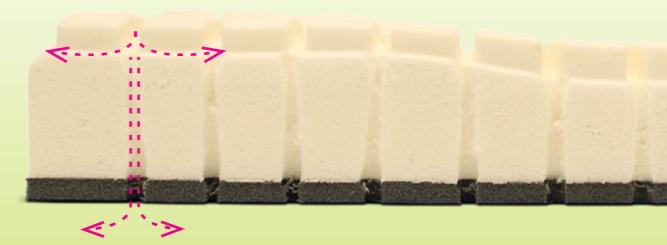
Cross ducts for ensuring ventilation and humidity drain

WHY CAN YOU SEE THROUGH?



Vertical perforations together with applied air-breathable materials ensure real air flow through the cushion.

Real cross-section of GEMINI® SPIN (VSC) seating cushion - side view



Side cover: 3D airflow fabric

Upper part of cover: 3D breathable fabric with Outlast® fabric layer

Bottom: anti-sliding breathable fabric



OUTLAST - WHAT IS IT?

Upper-contact (seating) part of GEMINI® SPIN cushion cover is made of special thermoregulation material of Outlast®.

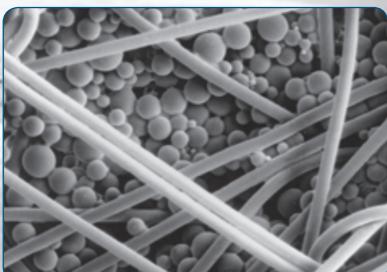
- Outlast® technology, originally developed for NASA, utilizes phase change materials (PCM) that absorb, store and release heat for optimal thermal comfort. Outlast® technology is comparable to ice in a drink; as it changes from solid to liquid, it absorbs heat and cools the drink, keeping that drink at the desired temperature for longer. Outlast® phase change materials work in the same way, but are microencapsulated to be permanently enclosed and protected in a polymer shell. We call microencapsulated phase change materials Thermocules™.
- This encapsulation process makes the Thermocules™ exceptionally durable for many applications. These Thermocules™ can be incorporated into fabrics and fibers and have the capacity to absorb, store and release excess heat. This gives any product containing Outlast® technology the ability to continually regulate skin's microclimate. As the skin gets hot, the heat is absorbed, and as it cools, that heat is released.

Outlast® technology is not wicking technology, which manages moisture by reacting to your sweat and pulling it away from the skin.

Outlast® technology will proactively manage heat while controlling the production of moisture before it begins.

Outlast® coated materials offer a higher capacity to store heat than any of other applications.

Outlast Thermocules™



Outlast® coated fabric material



Outlast® technology enhances textiles by providing the benefit of **proactive temperature regulation** that manages heat and moisture in many textiles. As a company committed to temperature regulation, Outlast can give you the technology to provide more comfortable solutions to everyday life. When you manage temperature, heat, and moisture your customers can feel „just right“.

...not too hot
...not too cold
...just right™



Registered trademark of the Space Foundation,
an initiative of the aerospace industry and NASA.
Patented Outlast® Phase Change Technology is
recognized by NASA as Certified Space Technology™.

For more information visit: www.outlast.com

WHICH CUSHION TYPE IS SUITABLE?

The anti-decubitus seating cushion is a medical aid designed to prevent the consequences of long-term sitting. It is very important to choose the correct type of the seating cushion, and it should be consulted with a professional in this branch (e.g. rehabilitation doctor, physio or ergotherapist, etc.). Part of the correct choice is also the assessment of patient's current state (weight, health conditions, body proportions) and their inclination to decubitus and pressure sore creation, or the effort for the correction of their sitting position.

GEMINI® SPIN seating cushions are available in 2 surface profiles:

GEMINI SPIN VSC



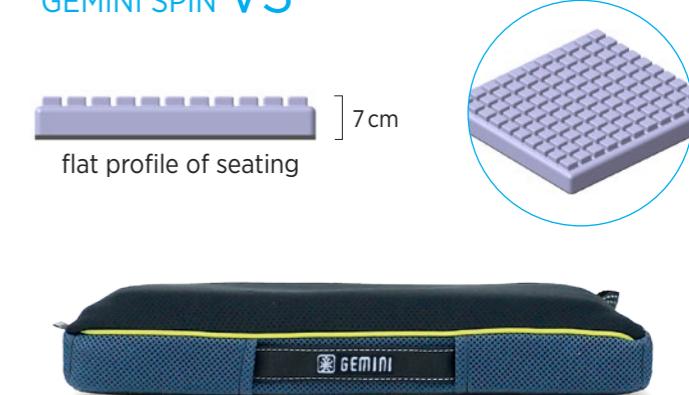
for wheelchair seat depth of (cm)

36 | 38 | 40 | 42 | 44

for wheelchair seat width of (cm)

38 | 40 | 42

GEMINI SPIN VS



for wheelchair seat depth of (cm)

28 to 50 (in steps 2 cm)

for wheelchair seat width of (cm)

28 to 50 (in steps 2 cm)

GEMINI® SPIN seating cushions are offered in 3 types of visco-elastic memory foam firmnesses.

The choice of foam firmness corresponds to the weight of the patient and expected therapeutic effects of the anti-decubitus seating cushion.





anti decubitus cushions



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