

libella

Product Catalog 2024/2025

libella

Libella je zavčta preduktý pro tělesné ztrevýhodnéné jesník poslatim je podporit rovnového lyzického a psychického zdraví uživatelů prostřednictvíní komfortu, stobiltý a celkové lepsiho počítu.

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Libella Product Catalog 2024/2025

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We are a new Czech brand of precision-made compensatory aids. There was no manufacturer on the market that systematically focused on individualizing products for wheelchair users, while at the same time emphasizing quality and design.

That is why Libella was born. On the wheelchair and out of it. At work and at home. We've found it in designing and manufacturing products that help and meet everyone's needs. We appreciate the trust you place in us. We will do our best to live up to your expectations.

By improving health, we also bring well-being



Individuality Products are tailored to specific user

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Originality We are looking for new solutions that are not available on the market

Technology

Balance

We use the latest technology for the benefit of the user

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It all started with the Libella Seat Varia corrective wheelchair seat cushion, created as a student project by designer and brand founder Věra Vystrčilová. The development was based on close cooperation with health specialists and end users of the product. This process determines the success of solving real problems of people in wheelchairs with

our products.

Over time, the range of seat cushions has expanded to include today's **Libella Seat** range.

We have followed up the seat cushions with a range of **Libella Backrests** for wheelchairs to fulfill a complete seating system.

The range is completed with products for therapy, individual exercise and activities of daily living **Libella Ergo**.





Healthy sitting in a wheelchair

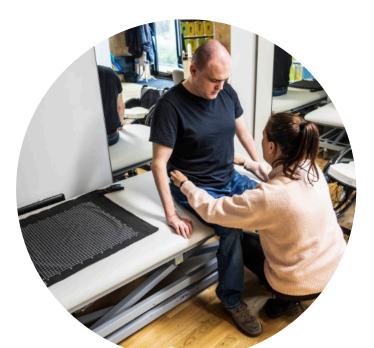
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Disability of the body (most often congenital and gained neuromuscular disabilities) with subsequent confinement to a wheelchair always has some effect on the quality of the sitting position (posture) and other motor functions. The impairment of postural control leads to an imbalance in muscle strength and tone of the postural and trunk muscles. This results in functional and structural changes in the spine and large joints with a pathologically positioned pelvis (poor sitting posture in the wheelchair). Asymmetric mobility in the wheelchair due to the use of the upper limbs to propel the large wheels of the wheelchair also contributes to poor posture. As a result, functional and eventually fixed structural changes, skeletal deformities, additional pain and strain syndromes due to overuse may occur.

An appropriate prevention for correct sitting posture is not only the correct selection of the wheelchair, its components and the correct adjustment of the wheelchair, but also the selection of the seat cushion and back support.

With this in mind, we have developed aids that allow for individual adjustment and response to specific postural defects. The configuration and assembly of the Libella Seat Varia, Junior and Libella Backrest should be carried out in cooperation between the wheelchair user and a healthcare professional (occupational therapist, physiotherapist, doctor, etc.).

Correcting the position of the pelvis and trunk with a corrective seat can sometimes cause an increase in pressure in certain areas, thus counteracting the anti-bedsore effect. This is why we work with different stiffnesses of special 3D printed parts and layering of protective latex layers to maintain the anti-bedsore effect of the seat cushion. The adjustment and configuration of the seat cushion should be checked by pressure mapping.



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'Seat cushions for wheelchair users are available in a variety of materials and material combinations. In my practice, especially for users with muscle imbalances that cause pelvic misalignment, I have been missing a seat that I can customize for each user to achieve the necessary pelvic correction and spinal alignment. I can adjust the Libella Seat Varia to the exact needs of the user and then reconfigure it at any time.'



Zdeňka Faltýnková

physiotherapist and occupational therapist, specialist on healthy seating on wheelchairs



libella seat

This range includes the highly individualized and customized corrective anti-bedsore seat cushions for wheelchair users — **Libella Seat Varia** and **Libella Seat Junior**, seat cushion based on the same design in the basic version of the straight or symmetrically contoured seat — **Libella Seat Basic**. The range also includes the sporty, durable and easy-to-clean **Libella Seat Active** and the **Libella Seat Mono**, a seat for short-term seating not only for wheelchair users.

libella seat:varia 2

A customized seat cushion for correct position of pelvis that helps prevent and treat pressure ulcers.



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reddot winner 2022

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A **unique system** developed in collaboration with wheelchair users, occupational therapists, and physiotherapists using **seating diagnostics** and **pressure mapping** to customize and adjust the wheelchair cushion at any time. We can respond quickly to a potential problem, **relieve pressure points** and **facilitate treatment**. With the help of the seat cushion, it is possible to correct pelvic and trunk misalignments, such as an oblique pelvis, rotated pelvis, retroverted or anteverted pelvis, etc.



1. Lightweight, durable and strong **carbon sandwich base** helps maintain the shape of the seat cushion and ensures that its features and settings do not change during use. It is available in three basic designs — full and with relief holes in two positions. Other custom adjustments are also available. 12

- 2. A layer of ergonomically shaped **3D printed parts** that can be replaced or moved according to the user's needs. There are more than **50 variations** with different contours, densities and sizes.
- 3. A thin layer of **3D fabric** as a transition between the 3D parts and the latex layer provides additional wear protection for the inner parts and allows for better weight distribution.
- 4. Soft anti-bedsore foam latex layer with five ergonomic cut-outs in the most common decubitus areas. The layer increases thermal comfort, its perforations promote air circulation and wick away moisture.
- 5. Superior functional **3D breathable fabric cover** that fits tightly, distributes pressure and does not bunch. Combined with the mesh base, it allows air to flow through all layers of the cushion. The cover comes with a **handle or pocket** of the customer's choice for easy handling of the cushion and is available in **four color combinations**.

Case study

Miroslav Novotný is a sledge hockey player, member of the Czech Ice Hockey Federation, player of HC Sparta Praha Sledge hockey, representative of the Czech Republic in sledge hockey.

He has bilateral lower limb amputations – left below the knee and right at the hip. His asymmetrical sitting posture and increased pressure on the right ischial tuberosity have most likely led to the recurrent development of inflammatory deposits in these areas.

The original foam seat cushion was generally inadequate. It was leaky, ruptured in the area of the right ischial tuberosity, where pressure mapping showed the greatest load, and did not allow for relief of the exposed body parts.

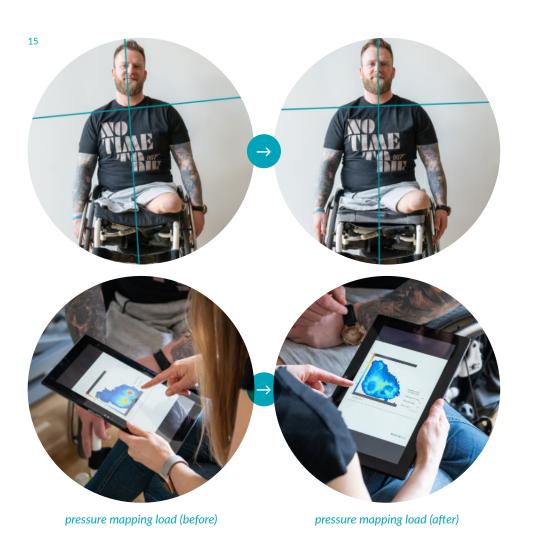
The final Libella Seat Varia seat cushion, which includes a solid carbon plate with cut-outs in the seat tuberosity area for sufficient lightness, 3D printed parts including individually designed parts for sufficient postural correction, a breathable anti-bedsore latex layer and a cover with a handle in the color of his choice. By combining the components appropriately, it was possible to relieve the loaded seating tuberosity that was most likely the source of the health complications and to straighten the slight asymmetry in the pelvis.

Mr. Novotný particularly appreciated the possibility of correcting the sitting posture, the low weight of the seat cushion and its breathability.



reduction of pressure on the ischial tuberosities







'I am excited about my new seat cushion Libella Seat Varia that has provided me with a better upright seating posture and thanks to its breathability I have no longer skin problems. I also appreciate the helpful and professional attitude of the company's staff.'

Miroslav Novotný lower limb amputations in a wheelchair since 2004

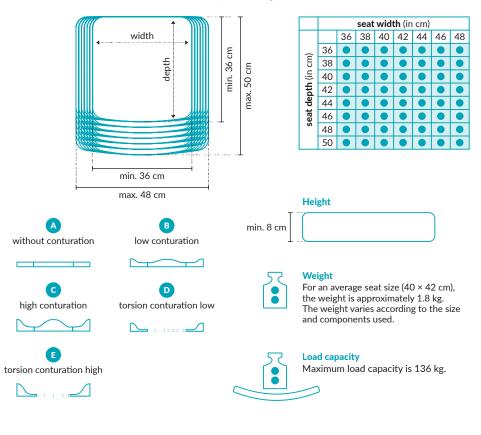


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Sizes and dimensions

Seat width and depth can be chosen in 2 cm steps in all combinations of the dimensions listed below.

The minimum height of the seat cushion is 8 cm, the maximum height and overall dimensions vary according to the customization of the user.



libella seat:basic

libella

Universal anti-bedsore seat cushion for clients of all ages.

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An anti-bedsore seat cushion based on the Libella Seat Varia system. This seat cushion is assembled in **two basic versions** – **classic straight** and **slightly contoured**. The variants are assembled from the most commonly used components to accommodate as many wheelchair users as possible without the need for individual customization. For each variant, the customer receives **two variations of 3D printed parts** in the back of the seat cushion for individual adjustment according to preference – yellow for increased stiffness and stability and white for maximum lightness. This seat also allows for **additional reconfiguration** and component replacement, similar to the Libella Seat Varia.

The cushion is available in a **wide range of sizes**.



- 1. Lightweight, durable and strong **carbon sandwich base** helps maintain the shape of the seat cushion and ensures that its features and settings do not change during use. With hole in the back to relief seat bones and coccyx.
- 3D printed parts assembly. Front part made of green parts = medium stiffness and back part in yellow = soft stiffness. The inserts under the seat bones are white = softest stiffness. The area around the inserts comes in both yellow and white for individual adjustment. Available in two variants:
 - A all 3D printed parts are straight without contouring,
 - B the outermost 3D printed parts and the front middle part are made in a slightly contoured version.
- 3. A thin layer of **3D fabric** as a transition between the 3D parts and the latex layer provides additional wear protection for the inner parts and allows for better weight distribution.
- 4. Soft anti-bedsore foam latex layer with five ergonomic cut-outs in the most common decubitus areas. The layer increases thermal comfort, its perforations promote air circulation and wick away moisture.
- 5. Superior functional **3D breathable fabric cover** that fits tightly, distributes pressure and does not bunch. Combined with the mesh base, it allows air to flow through all layers of the cushion. The cover comes in black color with a handle for easy handling of the cushion.



'Libella Seat Basic offers two variants of configuration for everyday activities. It offers possibility to change inner 3D printed parts in the back of the cushion according to user needs and it comes in a wide range of sizes. It is lightweight and fully washable.'



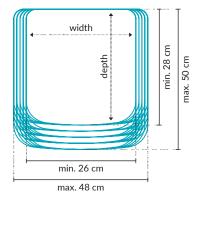
Veronika Liďáková Occupational therapist 24

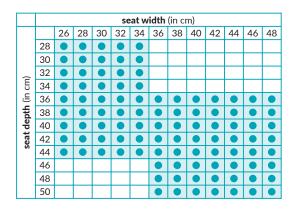
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Sizes and dimensions

Seat width and depth can be chosen in 2 cm steps in all combinations of the dimensions listed below.

The minimum height of the seat cushion is 8 cm, the maximum height and overall dimensions vary according to the customization of the user.







Height



min. 8 cm



Weight For an average seat size (40 × 42 cm), the weight is approximately 1.8 kg. The weight varies according to the size and components used.



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Load capacity Maximum load capacity is 136 kg.

libella seat:junior

Customized seat cushion designed to fit children and small statured persons.



Individually adjustable corrective anti-bedsore seat cushion for **children**, **adolescents** and **people of smaller stature**. The configuration and customization options are based on the Libella Seat Varia, but in **seat widths from 26 cm** and **seat depths from 28 cm**. Analysis during the development process has determined the position of the relief holes under the seat bones, and at the same time has revealed the need for a more pronounced disproportion between seat width and seat depth, so that we can also produce the Libella Seat Junior in **narrower but deeper dimensions** see the table of technical parameters.



Repeated reconfiguration It is possible to reconfigure to actual needs



Low weight Middle-sized cushion weights only 1.1 kg

Easy to clean Cover and components are washable

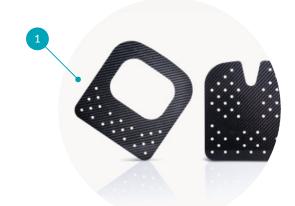


Technology Innovative use of 3D printing reduces production costs

27

- 1. Lightweight, durable and strong **carbon sandwich base** helps maintain the shape of the seat cushion and ensures that its features and settings do not change during use. It is available in 3 basic designs – full and with relief holes in two positions. Other custom adjustments are also available.
- 2. A layer of ergonomically shaped **3D printed parts** that can be replaced or moved according to the user's needs. There are **more than 50 variations** with different contours, densities and sizes.
- 3. A thin layer of **3D fabric** as a transition between the 3D parts and the latex layer provides additional wear protection for the inner parts and allows for better weight distribution.
- 4. Soft anti-bedsore **foam latex layer** with five ergonomic cut-outs in the most common decubitus areas. The layer increases thermal comfort, its perforations **promote air circulation** and wick away moisture.
- 5. Superior functional **3D breathable fabric cover** that fits tightly, distributes pressure and does not bunch. Combined with the mesh base, it allows air to flow through all layers of the cushion. The cover is available in four color combinations.





'Finally, there is a small-sized seating system that offers a wide range of options for solving sitting pathologies. It is very variable, so it can change according to the current health situation or as you grow. It is very lightweight and allows hygiene of all its layers.'

Veronika Liďáková Occupational therapist



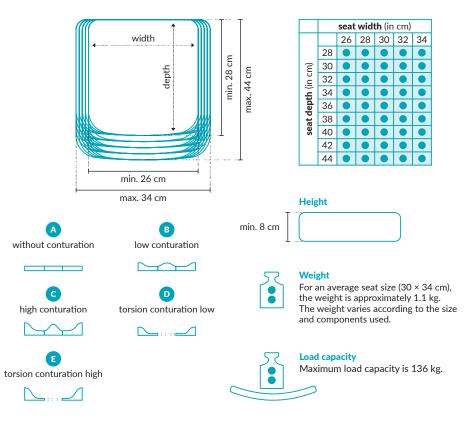
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Sizes and dimensions

Seat width and depth can be chosen in 2 cm steps in all combinations of the dimensions listed below.

The minimum height of the seat cushion is 8 cm, the maximum height and overall dimensions vary according to the customization of the user.





A flexible seat cushion for an active and uncompromising life in a wheelchair. The sports environment requires **durability** and **functionality**. That's why we created Libella Seat Active, a **flexible and breathable seat cushion** that absorbs shock and impact and does not retain water. You'll enjoy its benefits whether you're doing **water sports**, **riding a handbike** or **taking a shower** at home.

The seat height is optional in **5 cm** (with one layer of elastomeric fibers) and **10 cm** (with two layers of elastomeric fibers).



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1. An inner layer of **elastomeric fibers** folded into a dense, lightweight, and durable 3D structure guarantees good pressure distribution, breathability, and elasticity so that the seat always returns to its original shape even after long and intensive pressure.

- 2. The upper inner layer is made up of a breathable **3D textile** that does not absorb water, distributes pressure well, and increases the temperature comfort. It overlays the pattern of the bottom layer and its elasticity and softness provide comfort even when sitting for a long time. The open structure of both layers allows air circulation and any fluid pass-through.
- 3. Functional cover made of **premium waterproof fabric** with a membrane that is **flexible**, **breathable and very fast drying**. The mesh bottom allows airflow and Velcro fasteners ensure it is securely positioned. A zipper around the cover eases the filling removal, and a handle makes it easy to grip and handle.







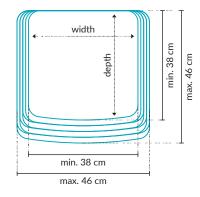
'The Libella Seat Active helps me sit safely during my adrenaline experiences and freeride races, which I have a lot of throughout the year and I use it on all my bikes.'

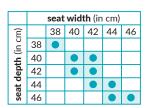
> **Michal Kosík** paraplegic in a wheelchair since 2010



Sizes and dimensions

Seat width and depth is possible to choose in sizes listed in chart. The seat height is optional in 5 and 10 cm.









libella seat:mono

A comfortable seat cushion made of washable foamed latex for everyday activities.

The **Libella Seat Mono** cushion made of foamed latex provides stable, comfortable and safe seating for short-term wheelchair sports activities such as rugby, basketball or floorball, during car rides and everyday sitting in the office. It helps to increase sitting tolerance and reduce the effects of prolonged sitting as prevention for people with vertebral problems (chronic back pain, sciatic nerve pain, muscle stiffness and fatigue) and other neurological or orthopedic diagnoses.



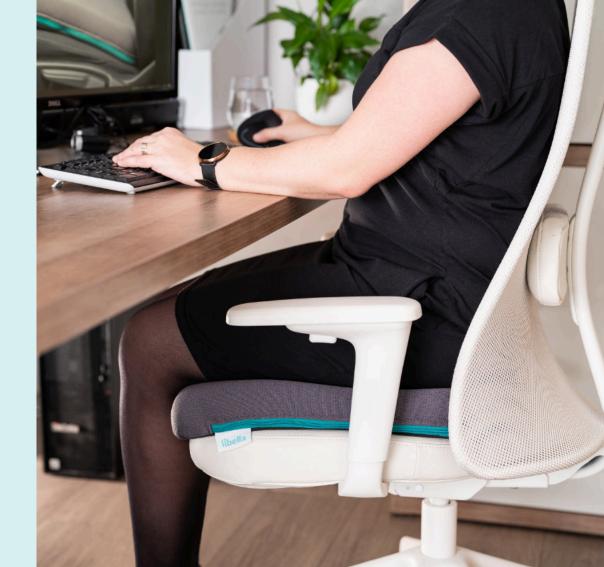
- 1. Perforated **foamed latex** manufactured from natural rubber. Patented production technology extends the product's lifetime and guarantees good ventilation. The **soft, easy-care**, hypoallergenic material with anti-bedsore properties distributes pressure well, is breathable, vapor permeable and resistant to dust mites. Perforations allow air circulation, thermal comfort, and moisture drainage. Compared to memory foam, it does not shed its functional properties over time.
- 2. The cover is made of a **breathable**, **non-slip 3D fabric**, with **good pressure distribution**, that follows the filling material. On the breathable **mesh bottom promoting airflow** through the seat are placed velcro fasteners for a **stable fit in the wheelchair**. A zipper around the cover eases the filling removal, and a handle makes it **easy** to **grip** and **handle**.

40

'Sedentary jobs often lead to back pain. The Libella Seat Mono makes me feel more comfortable and allows me to sit for longer periods of time. It's great that it's washable, especially on hot days.'

42

Petra Kudláčková





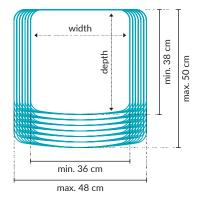
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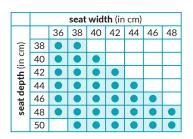
Sizes and dimensions

Seat width and depth is possible to choose in sizes listed in chart.

5 cm

The seat height is 5 cm.









libella protect:seat

Dry and clean active life.

No matter whether you are an **active wheelchair** user caught out by an unexpected shower, work in a dusty environment, or want to **protect the cushion** from food debris or minor incontinence, the Libella Protect Seat is the right choice.



47

Thin, **flexible water-repellent fabric** with membrane, impermeable to liquids and dirt. These can then just be shaken off or wiped off with a damp cloth while you sit comfortably dry. You'll save yourself several cycles of time-consuming washing and drying of the seat itself, thus extending its life.

The cover is available in two sizes:

- \rightarrow Size 'S' up to 40 × 42 cm
- \rightarrow Size 'M' up to 48 × 50 cm

When packed, the cover takes up minimal space in a backpack or drawer and fits into the pocket of the Libella Seat Varia cover.



48

'Finally, I can sit on my wheelchair seat cushion after swimming without getting it wet. Thanks to Protect Seat I also save a lot of space in my backpack for regular training sessions.'

50

Soňa Augustýnová DMO spastic diparesis para swimmer





libella backrest

In this range we offer the high-tech backrest systems for wheelchair users with individually adjustable construction — a double system **Libella Backrest Varia** and a single system **Libella Backrest Mono**. Both systems offer the right support and correction for healthy seating.

libella backrest:varia

54

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A double corrective backrest that adjusts to fit you.



Libella Backrest Varia is a variable, individually adjustable backrest system for wheelchairs. The backrest system is used for **primary and secondary prevention** of deformities of the wheelchair user's trunk. It is intended for corrective support of persons with muscular imbalance or correction of pathological sitting posture of free deformities, as well as support of fixed trunk deformities. It **gradually adapts** to the user and significantly eliminates the risk of further postural deformities and related health complications.



Its variability therefore allows both **moderate corrections** and **adjustments** for preventive purposes or adjustments to deal with more significant deformities (hyper kyphosis, scoliosis, roto scoliosis, hyper lordosis) with very sensitive adjustment according to the individual needs of the user.

The **elegant**, **sophisticated design** with user-friendly functional elements emphasizes high strength, low weight and breathability. It uses the latest materials and technologies – lightweight **aluminum alloys**, **carbon** and **3D printing**.



57

- 1. The **back supports** are assembled in two parts and are available in **different sizes, ergonomic shapes** and **depth contours.** All types are compatible with each other and up to twenty-four different combinations can be made to create both symmetrical and highly asymmetrical trunk support for optimal seat correction. The two parts of the back support are connected by a **solid carbon rib** with slots for **horizontal movement** of the back section against the butterfly shape of the clavicle.
- 2. The **3D fabric cover** design is **breathable**, fits tightly, distributes pressure well and does not bunch. This eliminates the risk of pressure ulcers. The cover is designed for strength and stitching quality. It is removable and **machine washable**.
- 3. The thousand-point articulated arm assembly is constructed of lightweight aluminum alloy. Its durable construction ensures that its settings do not change during use. The adjustable assembly includes six joints for height, forward extension and vertical back angle. Rotation about the vertical axis is enabled by the clamp joints of the forged backrest crossbars. At each end of the arm assembly is a butterfly-shaped piece for horizontal movement of the back sections, which also forms a clamp joint that allows the back sections to be adjusted to a horizontal angle of 20°.
- 4. The **attachment** of the backrest to the wheelchair in **two versions** according to the type of wheelchair for **rigid** and **folding frame**.



'Finally, Libella Backrest Varia was assembled specifically for my body needs. It has reduced my body pain, I don't roll to the side and there is no tightness. A huge thank you to everyone at Libella for their precise work and friendly yet professional approach, they genuinely cared about my wellbeing.'

Nina Křehotová spastic quadriparesis in a wheelchair since 2004

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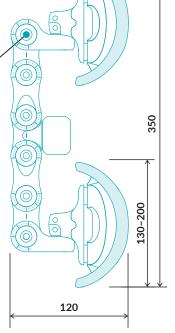
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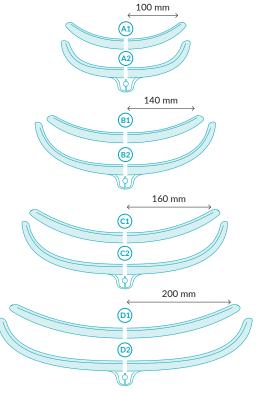
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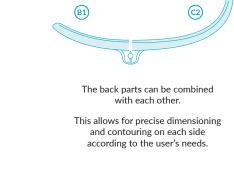
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used to adjust the lateral position, height, tilt and rotation of the backrest.







Weight

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The average two-piece backrest assembly weighs about 1.8 kg, the load capacity of the backrest is 136 kg.

61

libella backrest:mono

A single corrective backrest that adjusts to fit you.

Libella Backrest Mono is a variable, individually adjustable **low back** support system for wheelchairs. It gradually adapts to the user, significantly eliminating the risk of further postural deformities and associated health complications. The elegant, well-thought-out design with userfriendly functional elements emphasizes high strength, low weight and breathability. It uses the latest materials and technologies - lightweight aluminium alloys, carbon and 3D printing.

Libella Backrest Mono contains one back section, so it is more indicated for people with correction needs in the lumbar and lower thoracic spine and pelvis. It is suitable for users who have less trunk instability and asymmetry, thus requiring correction in a shorter section of the spine.

Originality

Sophisticated design to the last detail using the latest technology

Individualization

Adapts to every user

Easy manipulation For everyday loading into the car

> Lightweight The average size of a one-piece backrest weighs only 1.2 kg



Reconfiguration Can be adjusted at any time according to current needs

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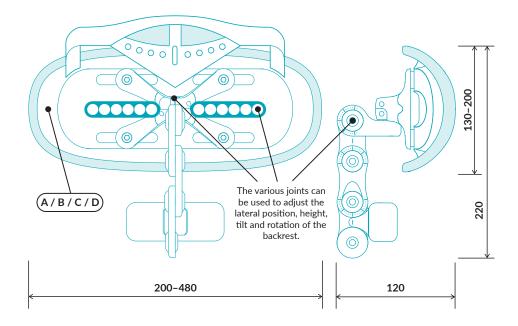
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 The back support is assembled in two parts and are available in different sizes, ergonomic shapes and depth contours. All types are compatible with each other and up to twenty-four different combinations can be made to create both symmetrical and highly asymmetrical trunk support for optimal seat correction. The two parts of the back support are connected by a solid carbon rib with slots for horizontal movement of the back section against the butterfly shape of the clavicle.

- 2. The **3D** fabric cover design is breathable, fits tightly, distributes pressure well and does not bunch. This eliminates the risk of pressure ulcers. The cover is designed for strength and stitching quality. It is removable and machine washable.
- 3. The **thousand-point articulated arm** assembly is constructed of **lightweight aluminum alloy.** Its durable construction ensures that its settings do not change during use. The adjustable assembly includes **six joints for height, forward extension and vertical back angle. Rotation** about the vertical axis is enabled by the clamp joints of the forged backrest crossbars. At each end of the arm assembly is a butterfly-shaped piece for horizontal movement of the back sections, which also forms a clamp joint that allows the back sections to be adjusted to a horizontal angle of 20 °.
- 4. The **attachment** of the backrest to the wheelchair in **two versions** according to the type of wheelchair for **rigid** and **folding frame**.







Sizes and contour options of backrest support are the same as Libella Backrest Varia (see p. 61).

Weight The average one-piece backrest assembly weighs about 1.2 kg.

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assembly weighs about 1.2 kg, the load capacity of the backrest is 136 kg.

libella ergo



68

Includes occupational therapy aids **Libella Ergo Ball** in range of different sizes and colors, for adults and for children.

libella ergo:ball

A playful occupational therapy aid for better grip.

The washable and easy-to-clean **compensatory aid allows training of cognition** (color recognition) and **grip**, and thanks to ingeniously placed internal **magnets** that attract or repel the individual balls, manipulative or strength activities can also be trained. You can use it as a **developmental toy** for your little ones and as a tool for people with **cognitive or fine motor impairments or impaired hand grip function**.

If you stick ordinary cutlery, pen, or toothbrush into the hole in the **flexible and firm structure** and you can ease your **hygiene**, **cooking**, **or eating**. The structure can also hold a pen, so you can use the ball as a **gripping tool** when practicing writing.

The set of balls is kept in an **easily accessible** cotton bag allowing the **manipulation activities training** – taking out and putting in the bag. **Fine motility and knotwork practice** can be trained when tying the bag with a cotton string. The balls vary not only in color but also in stiffness and are suitable as strengthening or anti-stress balls.

The Libella Ergo Ball is made by 3D printing from thermoplastic elastomer (TPE). The **impact-resistant**, **abrasion-resistant**, **health-safe material** has good chemical resistance and is resistant to temperature differences. The bag and the laces are made of 100% cotton.



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libella

'I like to go to my favorite cafe for a good coffee and dessert. Thanks to the Ergo Ball, I can finally enjoy it with dignity and independence.'

72

Petra Veselá

quadriplegic in a wheelchair since 2008



libella

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