Special controls for power wheelchairs

We help people with motor disabilities by offering innovative and practical solutions

mo-vis

Moving forward together

At mo-vis, we develop, produce and commercialize special input devices and their accessories for users of power wheelchairs worldwide.

We want to empower individuals with limited mobility - due to illness or disability - by creating specialized controls for power wheelchairs that foster independence and enhance quality of life.

We don't stop at providing just the tools, we ensure you have the training and support needed to install and use our products seamlessly.

Visit mo-vis.com to find out more about who we are and what we do: order online, find product specifications, download instruction manuals, and read stories about how our products impact our users' life.

Things that matter to us

Accessibility

At mo-vis, we value accessibility. We are always ready to help with any questions from both users and professionals, providing fast and friendly service. We also make sure our products work with most types of power wheelchairs and their electronics, so everyone can benefit from them.

Innovation

While we are always looking for ways to improve our existing products, we are also dedicated to developing new and creative solutions. Our goal is to answer every question and meet the diverse needs of our customers effectively.

Practicality

We want our products to contribute to the best possible quality of life for our users. That is why we deliver practical solutions that make a real difference and meet the everyday needs of people in meaningful ways.

Quality and expertise

Thanks to our experience and expertise, our products are not only technically strong, but they also demonstrate a profound understanding of the users. Safety is our top priority and all our products comply with the necessary standards to ensure reliability and peace of mind.

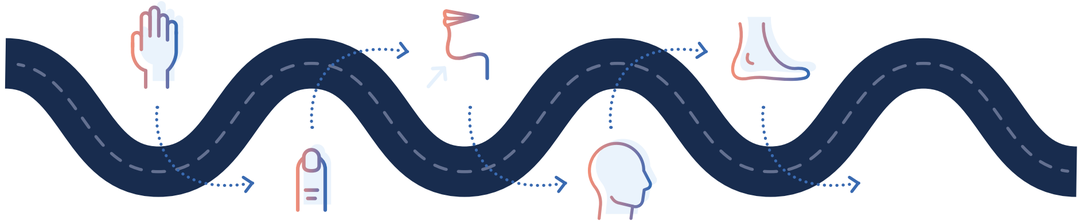
Categories of drive controls

Proportional controls

Hand
Standard / Light / Heavy Duty

Chin
In combination with mounting hardware (harness, swing-away arm).

Foot
Joystick or dedicated control.



Finger
Often in combination with light switches, Hand Warmer, Multi Switch,...

Head
A lot of variability in mounting, programming,...

...
Any other body part that allows for proportional control OR try a digital control.

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We have solutions for people who need the most sensitive wheelchair joysticks possible, as well as for people with increased force and everyone in between.

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Our mission

At mo-vis we work towards a brighter future. One in which we offer people with disabilities the best possible quality of life.

01 Special controls

Micro Joystick | Multi Joystick | All-round Joystick (Light) | Heavy Duty Joystick

Foot Control | Head Control | Sip & Puff | Scoot Control

Micro Joystick

A small and sensitive joystick for people with weak muscle strength.

- Very small and proportional.
- Designed for people with very weak muscle strength and a limited range of motion.
- Because of the low operating force (ca. 8 gr) and throw (3.3 mm), the joystick can easily be controlled by finger, chin, lip, tongue...
- Mounting set and two handles included (small ball and cup).
- Two switches can be linked to the separate interface: (red) on/off power wheelchair - (yellow) mode of the power wheelchair.

P002-51 Micro Joystick Omni
P002-52 Micro Joystick R-net
P002-54 Micro Joystick LiNX
P002-55 Micro Joystick Omni (5gr adapted)

Scan the **QR code** for **more product info**

Multi Joystick

A multifunctional joystick controllable by various body parts.

- Fully proportional, with reduced throw (8 mm) and force (ca. 50 gr).
- This control requires significantly less power and movement compared to a standard joystick and can easily be controlled by finger, chin or lips.
- Mounting set and handle (ball) included.
- Built in compact and discrete housing, with two 3.5 mm jacks for switch input on the joystick.
- Two switches can be linked to the separate interface or directly in the housing: (red) on/off power wheelchair - (yellow) mode of the power wheelchair.

P002-61 Multi Joystick Omni
P002-62 Multi Joystick R-net
P002-64 Multi Joystick LiNX

Scan the **QR code** for **more product info**

All-round Joystick LIGHT

A compact version of a standard joystick developed for all-round use.

- With 250 gr of force required and a throw of 20 mm, this joystick is suitable for the major part of wheelchair users.
- This proportional control is the compact version of a standard power wheelchair module and can be used as a standard, chin or attendant joystick.
- The joystick is also available in a light version, requiring 120 gr of force and with a throw of 7 mm.
- Built in compact housing, with two 3.5 mm jacks for switch input: (red) on/off power wheelchair - (yellow) mode of the power wheelchair.
- Possibility to insert 1 or 2 Satellite Twisters via integrated insert parts.

P002-71 All-round Joystick Omni

P002-72 All-round Joystick Light Omni

P002-75 All-round Joystick R-net

P002-76 All-round Joystick Light R-net

Scan the **QR code** for **more product info**

Heavy Duty Joystick

A large format extremely durable proportional joystick.

- Developed for users with excessive force (spasticity, dystonia...).
- The joystick is fully proportional and characterized by an increased throw (40 mm) and force (650 gr).
- It can be used as a hand operated joystick.
- For OEMs, there is also a Heavy Duty Kit available to change a Curtiss-Wright CJSM2 into a Heavy Duty variant.

P002-73 Heavy Duty Joystick Omni

P002-77 Heavy Duty Joystick R-net

M002-44 Heavy Duty Kit R-net CJSM2

Scan the **QR code** for **more product info**

Foot Control

A control for people with relatively good foot control.

- The low design of 6 cm height keeps your foot close to the foot rest.
- With this proportional control, foot movements allow a user to steer and control the wheelchair.
- With straps you can position and tighten the foot. Optional safety brackets are also available.
- Two switches can be linked to the separate interface: (red) on/off power wheelchair - (yellow) mode of the power wheelchair.

P021-51 Foot Control Omni

P021-53 Foot Control LiNX

Scan the **QR code** for **more product info**

Head Control

For power wheelchair users with little extremity control, but good head control.

- Configurable minimum and maximum force, based on the capabilities of the user to allow for smooth proportional driving.
- If control of the head reduces over time, threshold force can be reconfigured for switched driving as well.
- The use of force sensors makes the system very responsive and safe in all environments.
- Various safety and performance enhancing parameters can be set up directly on the device, such as overload force detection, initial speed and angle compensation.
- The swing-away mounting hardware allows for a large variety of head positioning options. They have easy release knobs and configurable memory location.
- The Head Control can be mounted on the existing head support bracket of power wheelchairs.

P011-61 Head Control Omni Proportional

P011-62 Head Control Omni Switched

P011-63 Head Control Omni Proportional Short

Scan the **QR code** for **more product info**

Programmable via on-board configurator:

- Programmable minimum and maximum force per pad.
- Interesting parameters such as initial speed, veering, angle compensation and overload force detection.
- Programmable functions under gestures, buttons or Sip & Puff.

Customizable to the user:

- By using switches instead of pads.
- Adding satellites.
- Variability in mounting & programming options.

Sip & Puff

The Sip & Puff module is designed to enhance mobility for individuals with little extremity control.

- The Sip & Puff module allows users to control the wheelchair and its movements - forward, backward, left and right - by sipping and puffing into a tube.
- The speed and direction of movement are proportional to the intensity of the sip or puff, providing a smooth and responsive driving experience.
- The system is designed to be used in combination with alternative control hosts, enabling users to combine different input mechanisms based on their personal preferences and physical capabilities. For example, users may choose to use the mo-vis Head Control for forward - backward movement, while using the Sip & Puff mechanism for left and right navigation.

P032-51 Sip & Puff Set Head Control

P032-52 Sip & Puff Module

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Scoot Control

A wheelchair control used by the attendant or caregiver.

- Developed to support an attendant in controlling or maneuvering a power wheelchair, both inside and outside.
- Depending on the type, you can have full access to wheelchair functions, such as Lights, Horn and Speed settings.
- The fully proportional handlebar with rubber handles and two configurable thumb throttles is comfortable to use.
- With an intuitive control panel, you can easily configure the different functions.

P015-61 Scoot Control R-net

P015-65 Scoot Control R-net bundle

P015-66 Scoot Control R-net short bundle

P015-71 Scoot Control LiNX

P015-75 Scoot Control LiNX bundle

P015-76 Scoot Control LiNX short bundle

P015-81 Scoot Control SUBD9

P015-85 Scoot Control SUBD9 bundle

P015-86 Scoot Control SUBD9 short bundle

Scan the **QR code** for **more product info**

Compatibility

To ensure freedom of choice for power wheelchair users, it is essential that special controls are **compatible with all complex rehab wheelchair electronics**. Users should have access to both the best control for them and the best power wheelchair for their unique needs.

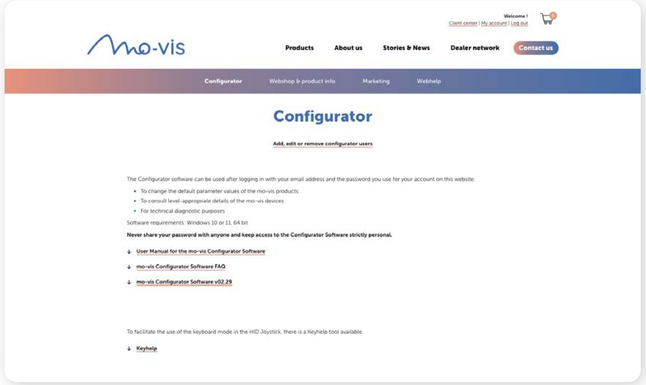
mo-vis products are compatible with the most common wheelchair operating systems through the SUB D9 cable (or as we call it 'Omni'). In certain cases, our controls also come directly with a R-net or LiNX bus cable.

	Omni (SUB D9)	R-net	LiNX
Micro Joystick	X	X	X
Multi Joystick	X	X	X
All-round (Light) Joystick	X	X	
Heavy Duty Joystick	X	X	
Head Control	X		
Foot Control	X		X
Scoot Control	X	X	X

Configurator

Special controls often ask for **case-by-case configuration**. All mo-vis controls are fully adjustable to individual possibilities and needs with well-thought out electronics.

Our dealers & distributors can download our Configurator Software on the website and can connect the device via a USB cable to the PC. For each device, a set of parameters is available.



“The combination of a sensitive, proportional joystick and Hand Warmer allow me to go to Allianz Arena to cheer on Bayern München.”

Hendrik from Germany
on the combination of his Micro Joystick and a Hand Warmer

The importance of differentiating between standard and special drive controls

Power wheelchair users who don't have a suitable control system, can struggle with daily life activities. A proper fit between the personal abilities and the power wheelchair equipment, has a huge impact on independence and self-esteem.

A power wheelchair generally has a standard drive control; usually a hand joystick with display, positioned right before the arm rest.

Special drive controls are alternatives to those standard drive controls. **A special drive control differs from a standard one in two ways:**

- Different operating force required
- Different location on the powerchair

This alternative is a necessity for about 10% of power wheelchair users.

In order to select the right one, combine the next questions:

- What is the simplest available control for this user?
- Does it meet all or their most important needs?
- Does it achieve clinical goals or improve the outcome?

Try involving key parties in the process, such as the user, therapists, Assistive Technology Professionals (ATP) and a service engineer. Input from all these parties is important to choose the best possible alternative!

Power wheelchair joysticks

	Micro Joystick	Multi Joystick	All-round Joystick Light	All-round Joystick	Heavy Duty Joystick
Image					
Description	A small and sensitive joystick for people with weak muscle strength.	A multifunctional joystick controllable by various body parts.	A compact, lighter version of a standard joystick developed for all-round use.	A compact version of a standard joystick developed for all-round use.	A large format extremely durable proportional joystick.
Required force	ca. 8 grams (0.28 oz.), adaptation to 5 grams possible	ca. 50 grams (1.76 oz.)	ca. 120 grams (0.26 lb.)	ca. 250 grams (0.55 lb.)	ca. 650 grams (1.43 lbs.)
Throw	3.3 mm (0.13 in)	8 mm (0.31 in)	7 mm (0.28 in)	20 mm (0.79 in)	40 mm (1.57 in)
Placement	Finger, chin, tongue, lip	Finger, chin	Hand, chin, attendant	Hand, chin, attendant	Hand

02 Input control systems

Twister | Twister Pro | Actuator Keypad (Pro)

Multi Switch | R-net Switch

Twister

Small and elegant switches with very light sensitivity.

- Only requires a light activation force of 30 gr and has an activation surface of 18 mm.
- Offers tactile and auditory (click) feedback.
- Easy to mount in different positions, using our Q2M system.
- Equipped with a 3.5 mm mono jack plug.

P005-70/71/72/73/74 Twister Basic (1500 mm)

P005-75/76/77/78/79 Twister Button (1500 mm)

P005-50/51/52/53/54 Twister on Bended Tube (1500 mm)

P005-40/41/42/43/44 Satellite Twister

And many more!

Scan the **QR code** for **more product info**

Twister Basic

Twister on Bended Tube

Twister Button

Satellite Twister

Gooseneck Twister

Twister

Twister Basic

Separate switch with two mounting screws for mounting on a plate of metal/plastic or integration in tray or flat surface.

Twister Button

Switch in plastic holder (D30). Delivered with a set of easy-to-install and durable mounting pieces.

Twister on Bended Tube

Switch on bended rod of 10 cm (D6). It can be mounted to other rods or the wheelchair by using the Q2M clamps.

Satellite Twister

Equipped with inserts to mount on the All-round Joystick (Light). It only comes with a short cable (300 mm). Dedicated Twister Basic table mounting set (M005-29) available for integration in flat surfaces.

Twister Gooseneck

Switch on a gooseneck of 40 cm and a cable length of 1500 mm. It can easily be mounted on the wheelchair by using the Q2M clamps.

Twister Pro

Separate switch with two mounting screws for mounting on a flat surface or with our Q2M system on other locations.

	Colours	Short (300 mm cable)	Long (1500 mm cable)
Twister Basic	● ● ● ● ●	X	X
Twister Button	● ● ● ● ●	X	X
Twister on Bended Tube	● ● ● ● ●	X	X
Satellite Twister	● ● ● ● ●	X	
Twister Gooseneck	● ● ●		X
Twister Pro	● ● ●	X	X

Twister Pro

A qualitative and durable switch for power wheelchairs, which requires medium force. Can also function as a safety button for R-net or LiNX operated systems.

- Requires an activation force of 75 gr and has an activation surface of 36 mm.
- Offers tactile and auditory (click) feedback.
- Can be mounted with 2 M3 screws on a flat surface (included) or with our Q2M system on other locations.
- Equipped with a 3.5 mm mono jack plug.
- Dip switch on the bottom allows to set resistor values, allowing the button to detect when the switch is disconnected or when the cable is in short circuit.

P030-11/12/13 Twister Pro (D36) 1500 mm

P030-21/22/23 Twister Pro (D36) 300 mm

Scan the **QR code** for **more product info**

Actuator Keypad (Pro)

Control the seating position of an R-net controlled power wheelchair.

- Allows to control the 5 actuator axes (lifts) on an R-net system.
- Available in two different versions: one with buttons and one with paddles.
- 2 different versions of keypads available for CJSM1 or CJSM2 joysticks.
- Simple connection via a 3.5 mm stereo jack into the mode socket of the joystick.
- The keypad can be mounted in line or sideways on a CJSM1 or CJSM2.
- The keypads that are compatible with CJSM2 joysticks can also be mounted on the Scoot Control.
- A sticker sheet is included, to facilitate the use of the keypad.
- We also have PRO versions of our actuator keypads available, where you can assign the keys individually and/or change the order. Prior to installation, you can open up the housing and change the order of the 2-pin connectors.

P016-96 Actuator Keypad Button R-net CJSM1

P016-97 Actuator Keypad Paddle R-net CJSM1

P016-98 Actuator Keypad Button R-net CJSM2

P016-99 Actuator Keypad Paddle R-net CJSM2

P016-86 Actuator Keypad PRO Button R-net CJSM1

P016-87 Actuator Keypad PRO Paddle R-net CJSM1

P016-88 Actuator Keypad PRO Button R-net CJSM2

P016-89 Actuator Keypad PRO Paddle R-net CJSM2

Scan the **QR code** for **more product info**

Multi Switch

With just 1 single input, the Multi Switch offers the possibility to operate up to 4 outputs.

- One 3.5 mm stereo input jack to connect a mechanical switch or a mo-vis proximity sensor as input device.
- Two 3.5 mm stereo jacks to connect up to 4 separate outputs (3.5 mm stereo jack splitter to 3.5 mm mono jack cable is required and optionally available at mo-vis).
- USB-powered (e.g. USB Charger or laptop, tablet, powerbank) and contains its own control electronics.
- Visual feedback: every output channel has its own LED that indicates its status and activity.
- Auditory feedback: beeping for input, select, output and quit function.
- Via the Configurator Software, it is possible to fully customize the Multi-Switch to individual possibilities and needs.

P014-40 Multi Switch

P014-41 Multi Switch proximity sensors

P014-42 Multi Switch proximity set

Scan the **QR code** for **more product info**

“With limited range of motion in my hand, I couldn't see how I could place all those switches close enough together for me to use. That's why I consider the Multi Switch as the most helpful addition of all to me.”

Greg from the US
on the benefits of the Multi Switch

R-net Switch

A custom-made switch array for power wheelchair users to efficiently manage both driving and auxiliary wheelchair functions.

- Custom switch array: support the connection of 10 switches through 3.5 mm mono jacks.
- Auxiliary functions can be operated independently of the device focus (modeless).
- Facilitates control over driving functions and auxiliary functions such as mode selection, profile changes, lighting, horn, seating actuators and mouse control.
- Default settings are provided, while offering full customization through the mo-vis Configurator Software.
- Features triple action programmability for each button to minimize the number of physical buttons needed.
- Equipped with 2 mono output jacks to expand connectivity and integration with other devices or systems.

P034-71 R-net Switch Module

Scan the **QR code** for **more product info**

03 Wheelchair accessories

Hand Warmer

USB Charger

Hand Warmer

Keeps the area around the power wheelchair's input device warm, which improves the flexibility of cold hands and fingers.

- An air heater, powered by the battery power (24 V) of a power chair.
- Recycles air instead of using air from the cold environment: it draws air in at the front, heats it and forces it out again at the front using an internal fan. This results in a huge advantage with regards to the power consumption and efficiency.
- A mechanical switch (e.g. Twister) can be immediately plugged in (on/off, select power levels), although you also have an on-board push button.
- Perspex dome-shaped hoods are available to better maintain the air temperature around the hands (1 or 2 hands).

P012-62 Hand Warmer set

M012-31 Hand Warmer Dome set (2 Hands)

M012-32 Hand Warmer Dome set (1 Hand)

Scan the **QR code** for **more product info**

USB Charger

Can be used to charge any USB-powered device with a power consumption of up to 3 A.

- Available with an R-net cable.
- The unit is powered by the wheelchair and will transform the 24 V input voltage to a USB output voltage.
- The USB Charger has 2 ports: for Apple devices there is one dedicated port, but both ports can be used for all other devices.
- Integrated safety circuits prevent the device from being overcharged when connected to a wrong USB port.
- You can plug in 2 devices as long as the maximum power consumption of all plugged-in devices does not exceed 3 A.

P010-61 Dual Port isolated USB Charger, 3 Amp

Scan the **QR code** for **more product info**

04 Mounting systems

Multi Swing 2G

Manual Swing 2G

Chin Control Harness

Quick-to-mount tools

Multi Swing 2G

A versatile and motorized arm to mount on a power wheelchair.

- With the Multi Swing 2G, devices such as chin joysticks can be positioned to drive.
- The arm can be moved upwards or sideways by pressing a button, depending on the installation method and parameter settings.
- The arm is intended to fit on any electric wheelchair with 24V connection.
- Can also be used for the attachment of small and lightweight communication tools or cupholders. The maximum weight is 1 kg on an maximum distance of 55 cm.
- The arm is attached to the rear of the wheelchair's backrest. For easy mounting, mo-vis proposes two bundles: Q2M or Rail.
- The motor unit also includes 2 output jacks that can be controlled by the input button.

P031-61 Multi Swing 2G Arm

P031-62 Multi Swing 2G Arm Bundle Q2M

P031-63 Multi Swing 2G Arm Bundle Rail

Scan the **QR code** for **more product info**

Manual Swing 2G

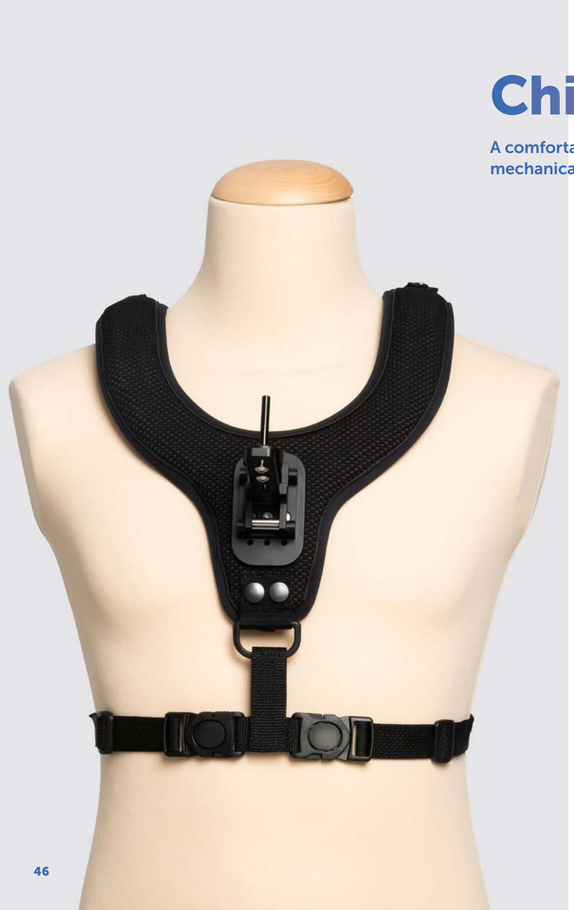
A mechanical swing-away arm to mount on a power wheelchair.

- Designed for the use of a chin control system, but it can also be mounted and used for the attachment of small and lightweight communication tools, such as smartphone or tablet. The maximum weight is 1kg on a maximum distance of 55 cm.
- The Manual Swing can swing away in several directions (up-down / left-right), depending on the installation method.
- The arm is attached to the rear of the wheelchair's backrest. For easy mounting, mo-vis proposes a mounting bundle.
- Different types of joysticks or devices can easily be mounted on the mounting arm through the Quick-to-mount (Q2M) system.

P031-21 Manual Swing 2G Arm

P031-22 Manual Swing 2G Arm Bundle Q2M

Scan the **QR code** for **more product info**



Chin Control Harness

A comfortable harness for mechanical joystick mounting.

- Intended for the mechanical mounting of a joystick on the chest of the user. This way the user can control a power wheelchair by chin.
- Weak muscle strength and a limited range of motion ask for a comfortable and precise installation of the harness. By bending the aluminium interior and adjusting the straps, you easily fit the harness to the user.
- The joystick on the harness can easily be removed when you are not using it. In the set an additional mounting piece is included, so you can 'park' your joystick easily on the side or backside of your wheelchair.

M013-61 Chin Control Harness L

Scan the **QR code** for **more product info**

Quick-to-mount tools (Q2M)

A set of small but intelligent building modules, made of light but durable and robust metal.

- Small, but intelligent building modules, made of light but durable and robust metal.
- Elegant black design.
- Modular expandable.

M007-01 Q2M Universal Clamp

M004-07 Q2M Clamp D6

M004-14 Q2M Clamp D8

M004-74/75/76/77/78 Q2M Rod D6

M004-83/84/85 Q2M Rod D8

M008-04 Q2M Rod Lock

M004-26 Q2M Clamp D6 Split

M004-10 (...) 13 Q2M Dogbones Set

M008-03 Q2M Quick Swing

M004-22 Q2M Mounting Base D6 or **M004-23** D8

M004-90 Q2M Rod D6-D8 60 mm

Scan the **QR code** for **more product info**

05 Other assistive devices

HID Joystick

R-net Link

HID Joystick

The HID Joystick is an alternative control, which can be connected via USB to a another device. This way, you can work in mouse, joystick or keyboard mode on your PC (Windows/OSX), Android device, iOS device, XBOX or XAC.

- Low force joystick available in Micro Joystick (8 gr of force), Multi Joystick (50 gr of force) or Foot Control version.
- Enables people with (very) limited muscular force and/or movements to operate devices such as computers and game controllers.
- Can be operated by hand, fingers, chin, foot...
- Is recommended for people with tetraplegia, (neuro)muscular diseases and other advanced diseases such as amyotrophic lateral sclerosis (ALS) or multiple sclerosis (MS).

P025-61 Micro HID Joystick

P025-62 Multi HID Joystick

P025-63 Foot Control HID

Scan the **QR code** for **more product info**

R-net Link

An R-net interface which allows another device to communicate with the wheelchair using the mo-vis protocol.

- The R-net Link is an interface between the wheelchair electronics and an electronic programmable device equipped with a USB port (e.g. PC with communication software).
- The interface allows to communicate with the wheelchair using the mo-vis protocol.
- The main goal is to allow developers to build an additional user interface on the programmable device.
- 3 categories of possible interaction: dashboard functionality, auxiliary functions and/or drive commands.

P033-51 R-net Link Module

P033-61 R-net Link Module Prof

Scan the **QR code** for **more product info**

Our mission

Our mission is to create special controls for power wheelchairs, so that people with limited mobility (due to illness or disability) can be as independent as possible and optimize the quality of their lives. Our company's focus is on availability, safety and adaptability for the user.

We let you be you

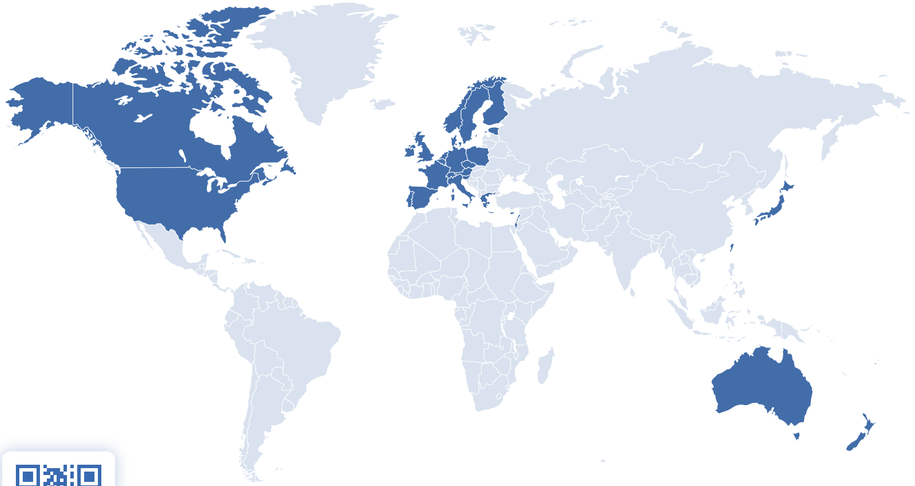
We know that there is **no 'typical' power wheelchair user**. Some may suffer from neurological trauma or disease, others by musculoskeletal trauma or disease. They can be young or old. Most users prefer being assisted to overcome challenges that their abilities present, rather than being disempowered by having them taken away from them.

Therefore it is essential that assistive devices can be **adapted and adjusted to individual needs and requirements**.

You will notice that we often go **the extra mile** with our products. Sometimes this is the result of our own experience and expertise, but we also take suggestions for new products or improvements to existing products to heart. As we want to offer real solutions for real problems, the **needs of our users are always a priority to us**.

Dealer network

mo-vis products are available in **almost 30 countries** across the globe.
See **mo-vis.com/dealer-network**



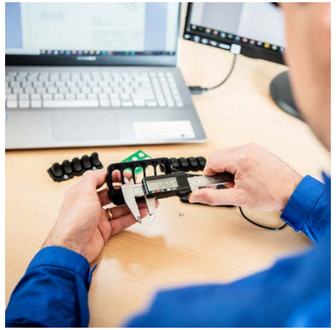
Scan the **QR code** for **more info**

Dedicated development work

At mo-vis, we also do **dedicated development work for OEMs** in this sector. We have experience with complex seating modules, custom product codes or components for products.

We can do just the R&D part of it or we can help with production and assembly.

We are always open to listen to ideas and to cooperate with other likeminded companies or academic institutions.



One of the examples of our development work, is where we made the R-net Link, to function with Jabbla's Tellus. This way, their communication device can now also be used to drive the wheelchair and control the auxiliary functions of the wheelchair.

jabbla
We all have a voice

Our headquarters are in Deinze, Belgium.
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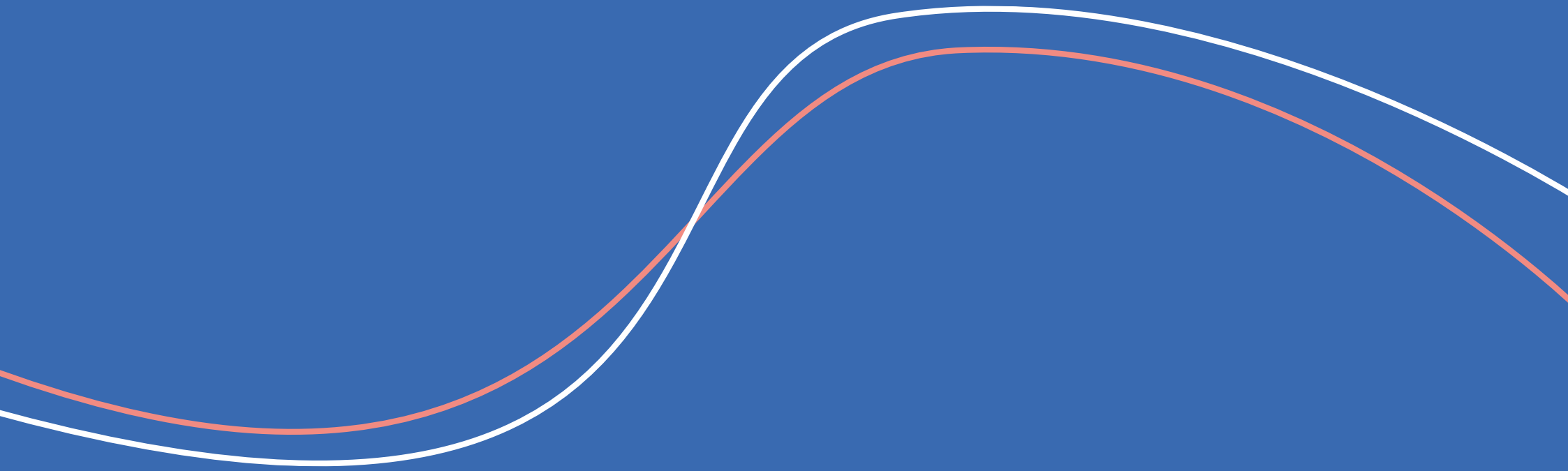

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