User manual

Edition 2.1, August 2023

Multi Swing 2G

P031-61 Multi Swing 2G Arm - P031-62 Multi Swing 2G Arm Bundle Q2M - P031-63 Multi Swing 2G Arm Bundle Rail

mo-vis
moving forward together

Contents

Other languages

CS: Tito příručku naleznete v češtině na našich webových stránkách.

DA: Du kan finde denne manual på dansk på vores websted.

DE: Auf unserer Website finden Sie diese Anleitung in Deutsch.

EN: You can find this manual in English on our website.

ES: Este manual está disponible en español en nuestro sitio web.

FR: Vous pouvez trouver ce manuel en français sur notre site Web.

IT: nostro sito web è disponibile il presente manuale in italiano.

NO: Du finner denne håndboken på norsk på nettstedet vårt.

NL: De Nederlandse handleiding kunt u op onze website vinden.

PT: Pode encontrar este manual em português na nossa página web.

SL: Slovenski priročnik je na voljo na naši spletni strani.

SV: Du hittar den här handboken på svenska på vår webbplats.

You can find the latest version of all our manuals on the website.

About this manual

User manual

Thank you for choosing a mo-vis product!

$C\epsilon$

This manual contains **useful and important information** about your device. **Please read it carefully before use and store safely for future reference**.

Our team (or your authorized dealer) will be happy to answer your questions.

mo-vis bv

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CH | REP	CH-REP: SKS Rehab AG, Im Wyden, 8762 Schwanden GL, Switzerland.
UKCA	UK Responsible Person: QServe Group UK, Ltd., 49 Greek Street, London, WID 4EG, UK.

User manual

Warning labels

Please read this manual, the safety instructions and warning texts carefully, in order to reduce the risks associated to the device. Our products are safe under normal and reasonably foreseeable operating conditions.

> **NOTE:** This symbol indicates general notes and information.

> ⚠ **CAUTION:** This symbol indicates caution for a hazardous situation that, if not avoided, could result in minor or moderate injury.

> ⚠ **WARNING:** This symbol indicates a warning for a hazardous situation that, if not avoided, could result in death or serious injury.

Other labels:

REF	Catalogue number: indicates the manufacturer's catalogue number so that the medical device can be identified.
LOT	Batch code: indicates the manufacturer's batch code so that the batch or lot can be identified.
MD	Medical device: indicates that the item is a medical device.
�	Date of manufacture: indicates the date when the medical device was manufactured.
SN	Serial number: indicates the manufacturer's serial number so that a specific medical device can be identified.
📖i	Consult instructions for use or consult electronic instructions for use: indicates the need for the user to consult the instructions for use.

☔	Keep dry: indicates a medical device that needs to be protected from moisture.
⃠	Do not use if package is damaged and consult instructions for use: indicates that a medical device should not be used if the package has been damaged or opened and that the user should consult the instructions for use for additional information.
CE	CE label: indicates that the manufacturer or importer affirms the good's conformity with European health, safety, and environmental protection standards.
🗑	WEEE: indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.
▰▰	Manufacturer: indicates the medical device manufacturer.

Support, scrapping & recycling

Technical support

🔧 **TROUBLE:** In case of technical problems:

- Contact your dealer
- If your dealer is not available or unknown, please contact mo-vis: contact@mo-vis.com or +32 9 335 28 60.

Always state the product code and device serial number when contacting us. This ensures you are provided with the correct information.

Spare parts and accessories

Contact mo-vis or your dealer for more information about spare parts and accessories.

Scrapping & recycling

⚠ **CAUTION:** For scrapping, adhere to your local waste legislation. Dispose of obsolete electronic parts responsibly in accordance with local recycling regulations.

Limited liability

*mo-vis accepts **no liability** for personal injury or damage to property that may arise from the failure of the user or other persons to follow the recommendations, warnings and instructions in this manual.*

⚠️ **CAUTION:** This product should only be installed by a qualified service engineer.

📄 **NOTE:** All mo-vis user manuals can be found at http://www.mo-vis.com where they can be consulted in PDF format.

📄 **NOTE:** In case any serious incident occurs in relation to this device, this should be reported immediately to mo-vis and the competent authority of the Member State in which the user is established.

Intended use

The Multi Swing 2G is a versatile, motorized arm to mount on a powered wheelchair. With this arm, devices such as a chin joystick can be positioned to drive, and the arm can be moved upwards or sideways by pressing a button whenever needed.

The Multi Swing 2G is intended to be fitted on any power wheelchair with a 24 V connection.

⚠️ **CAUTION:** This device is only intended to support auxiliary wheelchair functions.

Features

The Multi Swing 2G:

- Is 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 a smartphone or tablet. The maximum weight is 1 kg (35.27 oz) at a maximum distance of 55 cm (21.65 in)
- Can swing away in several directions (up-down / left-right), depending on the installation method and parameter settings
- Is attached to the rear of the wheelchair's backrest.

  For easy mounting, mo-vis proposes two different bundles. See Parts and accessories on page 10 for more information.
- Has 1 input (red) and 2 output jacks (yellow and green). You can connect any 'normally

open' button (for example mo-vis Twister) or a mo-vis Twister Pro with an additional safety feature.

- Is fully adjustable to individual possibilities and needs with well-thought-out electronics (USB C connection).

- Has a LED light which will indicate the status and/or error code of the device.

- Different types of joysticks or other devices can easily be mounted on the mounting arm through the Quick-to-mount (Q2M) system

Operation

> ⚠ **CAUTION:** Before inserting a connector, remove the protective cover. If the connections are not used, always put or keep the protective covers in.

The Multi Swing 2G consists of the arm, motor unit and an optional mounting set:

- The M031-66 Q2M Joint Arm Assembly with all its accessories can be positioned in an ideal place for the user.

- The P031-50 Multi Swing 2G motor unit is powered by the electric wheelchair and can rotate the arm away/to the user with a press on a button.

- Optional mounting sets are available to facilitate mounting on the backside of the wheelchair.

Multi Swing 2G motor unit

The P031-50 Multi Swing 2G motor unit has the following connections:

- red: stereo input. With this input you can move the arm and/or operate 1 or 2 other outputs, as up to two switches can be connected by using a splitter cable. A connected switch can be a standard switch or a Twister Pro.
- green: mono output. Can be a function of the wheelchair or an external device.
- yellow: mono output. Can be a function of the wheelchair or an external device.
- USB-c connection
- LED light

The LED shows the status of the device:

Status	Color	Timing	Count	Description
Operational	Green	Continuously on	/	Normal operation
Powersave	Green	Heartbeat	/	Powersave
Warning	Orange	Flash	See *Installation manual*	Part of the functionality is disabled
Error	Red	Flash	See *Installation manual*	Something went wrong

📄 **NOTE:** A warning will block certain functionality of the Multi Swing, while an error will block the arm and the outputs completely.

📄 **NOTE:** You will not notice that you are in powersave mode. It just means that after 1 minute, the motor will draw less current to save the battery of the power chair.

Connection with the power wheelchair

A power wheelchair usually consists of minimum two modules:

- Power module: connected to the batteries and the electric motor of the wheelchair.
- The joystick module: standard joystick on the power wheelchair that can be operated by the user to control the wheelchair.

Both modules are connected to each other and can send each other signals.

The Multi Swing 2G has an XLR plug, which can be connected to either the power module or the joystick of the wheelchair.

Safety features

The Multi Swing 2G holds some safety features:

- The Multi Swing 2G has a configurable output which can inhibit driving of the wheelchair when the joystick is not in the end position (see *Installation manual*).
- The arm can always be pulled away manually if needed, without damaging the mechanics.

⚠️ **CAUTION:** It is advised to only do this in case of emergency and not regularly.

- The movement of the Multi Swing 2G will stop when it senses something blocking the movement.

> ⚠️ **WARNING:** The force of the arm may still be high before it stops, so be alert for possibility of pinching.

Parts and accessories

Available versions

There are 3 versions available:

- P031-61 Multi Swing 2G
- P031-62 Multi Swing 2G Bundle Q2M
- P031-63 Multi Swing 2G Bundle Rail

P031-61 Multi Swing 2G Arm

A Multi Swing package consists of the following parts:

- P031-50 Multi Swing 2G Motor Unit
- M031-66 Q2M Joint Arm Assembly
- M031-74 Q2M Joint Multi Swing 2G Adapter Set
- *D-P031-61-70-MX Multi Swing 2G User manual*
- *D-P031-61-70-M1 Multi Swing 2G Installation manual*

P031-62 Multi Swing 2G Arm Bundle Q2M

In the P031-62 Multi Swing 2G Bundle Q2M, the M031-99 Multi Swing 2G Mounting Set Q2M is included.

P031-63 Multi Swing 2G Arm Bundle Rail

In the P031-63 Multi Swing 2G Bundle Rail, the M031-93 Multi Swing 2G Bracket Set Rail is included.

Accessories

The input jack is of the stereo type, allowing dual channel use. To use both channels, a splitter cable is needed (for example PMCAB-00027 Stereo to Mono Splitter 3.5 mm, see picture).

There are several accessories available to facilitate mounting of the mo-vis joysticks on the Multi Swing 2G. See *Installation Manual*.

Spare parts

For available spare parts, see *Installation manual*.

Qualifications

> ⚠ **CAUTION:** Only a qualified service engineer may install the device.

> ⚠ **CAUTION:** An incorrect programming of the wheelchair or device electronics, may cause damage to the devices or injury to the user.

First time use

> ⚠ **CAUTION:** A qualified service engineer should assist during first time use of the device and make sure that all functions are clear to the user, including what to do in case of problems or doubt.

Cleaning

The device is maintenance-free. Under regular circumstances of use, the device and different parts do not require additional maintenance.

> ⚠ **WARNING:** As dust and dirt could lead to reduced functionality, all parts of the device should be cleaned on a regular basis (monthly) or whenever needed.

- Gently remove dust and dirt with a damp cloth.
- Use only non-aggressive disinfectant cleaning agents.

> ⚠ **CAUTION:** Do not immerse in water or use excessive amounts of liquid.

> ⚠️ **CAUTION:** Do not apply additional lubricants to the moving parts.

Warnings and limitations

> 📋 **NOTE:** This product complies with the limit values for Electromagnetic Compatibility (EMC) with respect to power wheelchairs, as set out in the harmonized standards for the EU in the Medical Device Regulation, No. 2017/745.

> ⚠️ **WARNING:** Do not cover or block the device to avoid uncontrolled behavior of the device or the wheelchair.

> ⚠️ **CAUTION:** If an output inhibit is programmed, then it should be checked monthly if this is still operational. Please see the *Installation Manual* for more information.

Dimensions

PART	DIMENSIONS (METRIC)	DIMENSIONS (IMPERIAL)
Motor unit	137 x 52 x 58 mm	5.39 x 2.05 x 2.28 in
Arm (section)	18 x 18 mm	0.71 x 0.71 in
Extrusion 400 mm + adapter M031-67	420 mm	16.54 in
Extrusion 150 mm + adapter M031-68	200 mm	7.87 in
C-rod	120 mm	4.72 in

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Go to our website for more information on our products or share your experience with us via email.