limoss

Actuator systems
Innovation in motion

limoss Germany

limoss China

Certificates

limoss products are in compliance with technical specifications such as EMV, TÜV, PSE, RCM, KCC, FCC and other requirements such as RoHS, California 65 and PAHs. Depending on customer requests, our products are ready to accept the challenge for other different markets.

Market	Access approval
EU	
USA / Canada	
Korea	
Japan	
Australia	
China	
Other	

Appreciated customers,
dear readers,

It is already time – limoss is turning 10 years old.

Unbelievable

It is inconceivable, how fast a decade passes. The first thoughts of forming of the company happened in 2008 in a small garden shack. Nobody could have expected level of success and growth we have achieved. We started with just a handfull of employees and a small building in 2009. We just met in the mornings as a small team, talked about our tasks and went straight to work.

International

Now, merely 10 years later, limoss is an international company with production facilities in Europe, the US and Asia, as well as strategically placed distribution centers across the globe and basically supply the entire world.

Valueable

Due to our customer focus, the swift implementation of new projects and a high degree of innovation, we have managed to become a valuable long-term partner for many companies.

Support

We are very pleased when our product lineup of actuators, hand controls, control boxes and other accessories make the life of our customers a lot easier. To name everything that we do would go beyond the scope of this letter. Feel free to take a look at our products on following pages, and we are always available for personal discussions.

limoss – ageless

We have customers in almost every segment of the furniture industry – in the care sector children appreciate our products in beds, the middle aged customers are happy about the luxury functions in recliners, sofas and beds. Last but not least the older generation enjoys the amenities and flexibility of beds and adjustable furniture - this guarantees them a high degree of mobility.

Future

Naturally we are confident, that, with the aid of our highly dynamic team and our focus on quality and innovation, we can convince you to choose the products of limoss. We look forward to tackling the challenges of the next 10 years on the market. Become a part of our exciting history – we look forward to working with you.

Thank you for your interest – and remember: limoss has the right actuator for you.

Best regards

Michael Kochem

Michael Kochem
managing director

reddot award 2019
winner

Table of contents

Application examples

limoss offers you perfectly tailored sets for your project.

Whether you are looking for applications for a nursing bed, a TV set, a sofa, a cinema chair or a different piece of furniture - limoss offers you all parts as a complete set. Our sets usually consist of a hand control (wired or radio), a control box, the desired number of drives adapted to your needs and, of course, the appropriate cabling and programming. Our sets come either in the individual components or are already pre assembled and programmed.

We are happy to adapt all of our sets together with you, according to your ideas and requirements   and of course help you to choose the right components for the respective application and load.

limoss sets - the right decision for every application.

We would be glad to advise you to find the right components for your application and develop the combination for you or your customers.

- Use in recliners and sofa
- Use in care beds
- Use in cinema

care   furniture
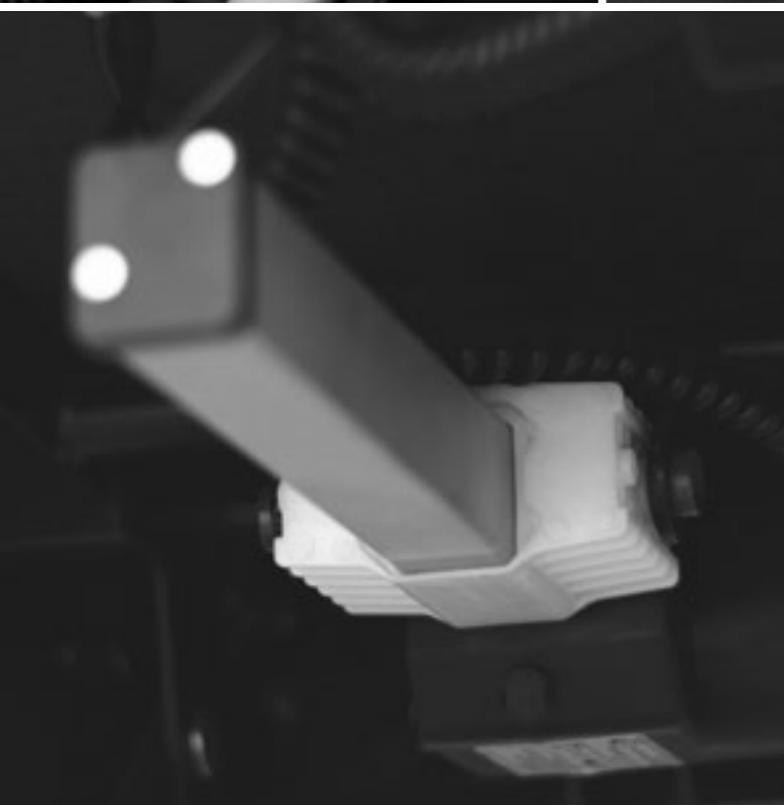
Picture provided by himolla Polstermöbel GmbH

Use in recliners and sofas
Everything you need to relax.

You will also find the right actuator for your particular fitting on pages 18 to 31.

An overview of these enclosure motor control can be found on pages 54 to 61.

Find more hand controls on pages 36 to 53.

Everything you need to operate furniture can be found on pages 62 to 69.

Use in care beds

All you need to support you on a daily basis.

Picture provided by Betten Malsch GmbH

Use in cinema
Everything you need to entertain
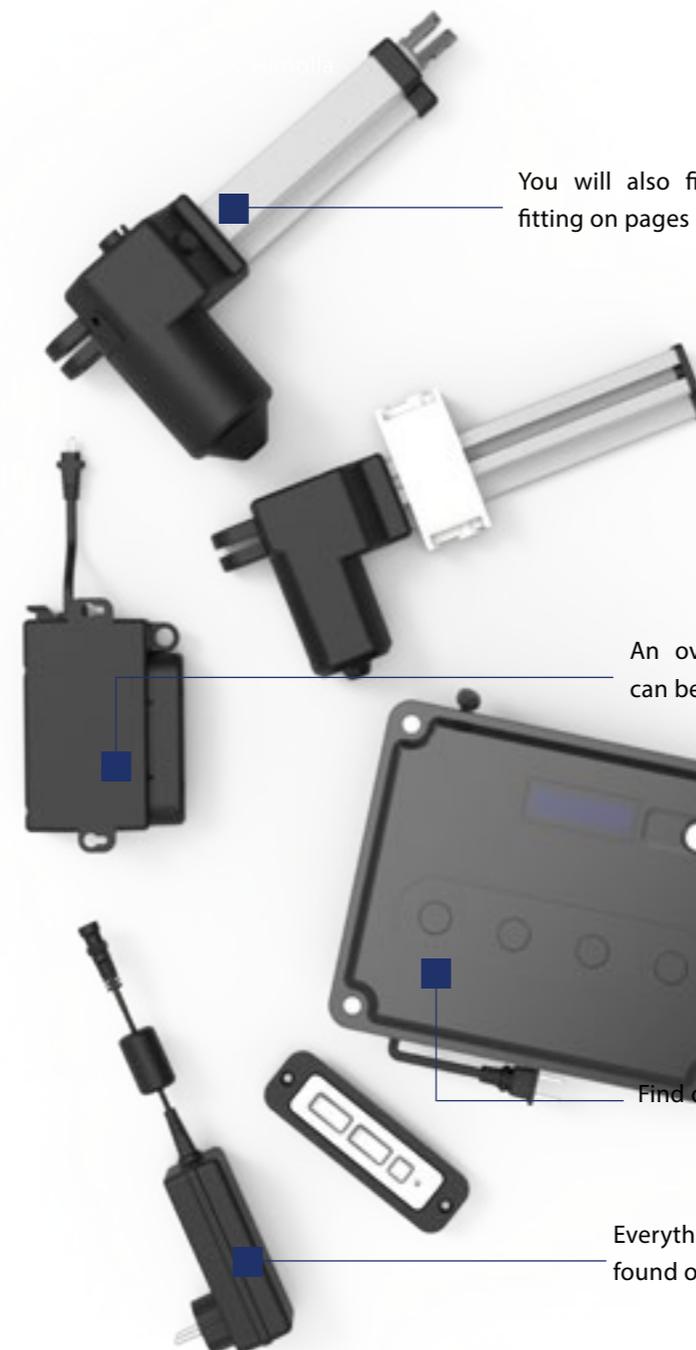
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Find our cinema hand control on pages 51.

Everything you need to operate furniture can be found on pages 62 to 69.
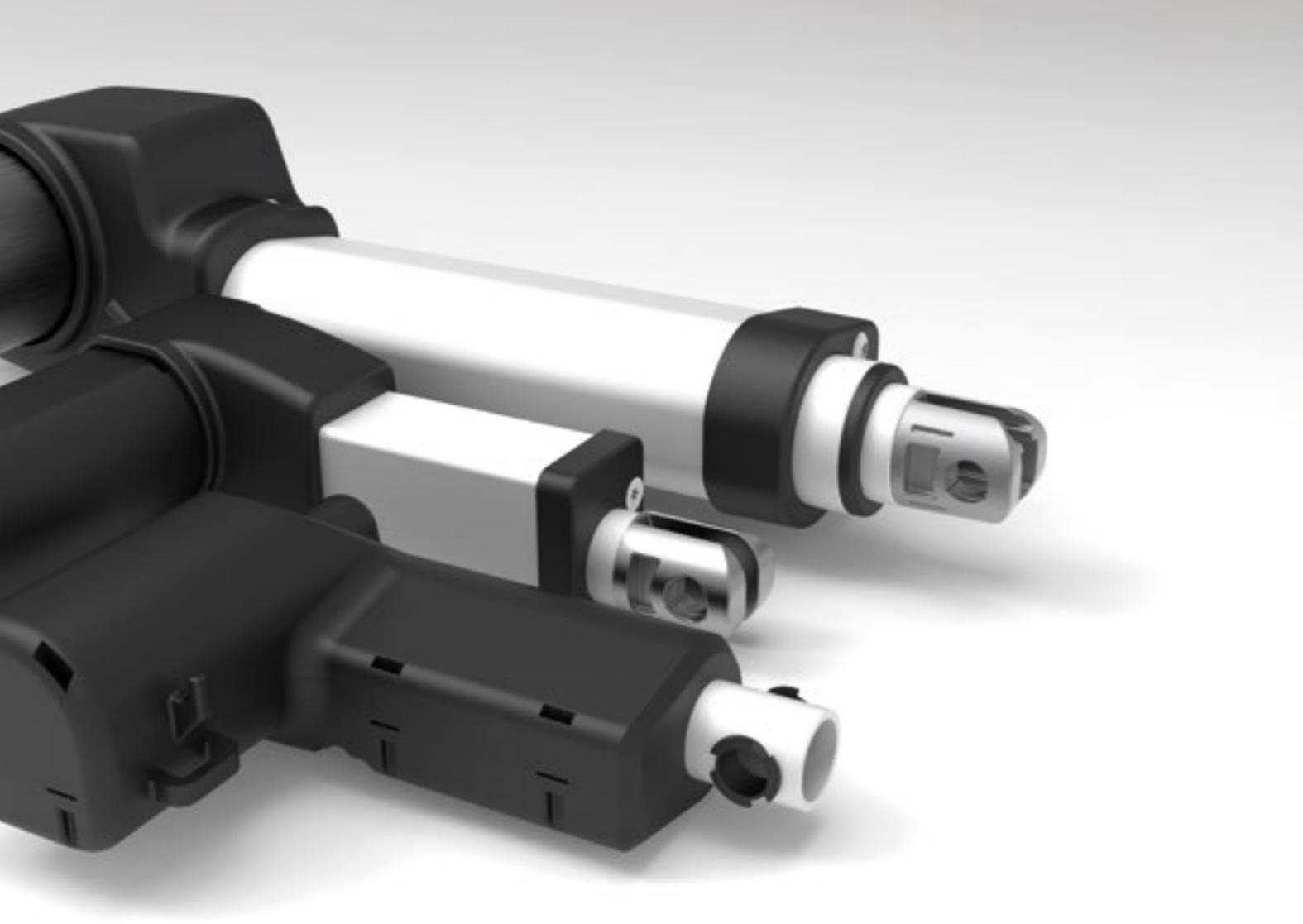
Single actuator

limoss offers a wide range of single actuator in the MD1-series suitable for your needs and requirements in the areas of industry, furniture and medicine.

Due to the wide range of installation situations, our limoss single actuator are available in many different installation dimensions and mounts (see synopsis).
With pleasure we develop a suitable solution for special requirements for and with you.

All single actuator of the MD1-series are compatible with our motor controls and power supplies

Duty cycle max. 10 % and continuous use max. 2 min with subsequent 18 min break

care   furniture

Mounting options

Mounting pipe side

① Metal forkhead

mounting slot
6 mm

crosshole
Ø 10 mm

② Plastic forkhead

mounting slot
6 mm

crosshole
Ø 10 mm

③ Plastic forkhead

without slot

crosshole
Ø 10 mm

④ Thread head

hole
Ø 5 mm

⑤ Hole with bushing

crosshole
Ø 10 mm

⑥ Hole

crosshole
Ø 10 mm

⑦ Hole with metal plug

crosshole
Ø 8 mm
(only for MD130)

⑧ Driver block double clevis

⑨ Driver block single clevis

Mounting motor side
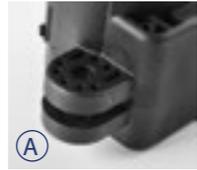
Ⓐ Plastic forkhead

mounting slot
6 mm

crosshole
Ø 10 mm

Ⓑ Plasticforkhead turned 90 degree

mounting slot
6 mm

crosshole
Ø 10 mm

Ⓒ Clip 25 mm

Ⓓ Clip 40 mm

Ⓔ Mounting bolt

mounting with circlips / four

mounting holes
Ø 4,8 mm

Ⓕ Flat slot

four mounting hole
Ø 10 mm

Ⓖ Metal forkhead

crosshole
Ø 8 mm

Mini power pack MD128

The MD128 is the compact version of our MD125. Although its designed to be smaller in all respects, the MD128 still has a potential stroke of 400 mm. The drive also doesn't have to lose strenght – a push and pull force up to 3,000 N is possible.

This new drive is the ideal solution for installation situations where a lot of power is required, but little space is available. When things get really tight, you can use an alternative smaller motor with less power and thus saves some space.

- Push force to max. 3.000 N
- Pull force to max. 3.000 N
- Installation length min. length 120 mm + stroke
- Stroke max. 400 mm
- Speed without load up to 48 mm/sec
- Protection type IP20
- Mounting pipe side 1, 2, 3, 4
- Mounting motor side a

MD102
Small has never been so big

The MD102 is the newest member of our drive family. With him we have developed the smalles drive we have built before.

Never before has a drive been able to cope with narrower and smaller installation situations – with its installation dimensions (150 mm / 170 mm) and strokes (50 mm / 70 mm) the MD102 adapts to even the smallest armchair headrest drives. It weighs less and is much smaller than standard headrest actuators.

- Push force to max. 1.000 N
- Pull force to max. 1.000 N
- Installation length min. length 150 mm + stroke
- Stroke max. 50 mm
- Speed without load up to 10 mm/sec
- Mounting pipe side: 1, 2, 3, 4
- Mounting motor side: a
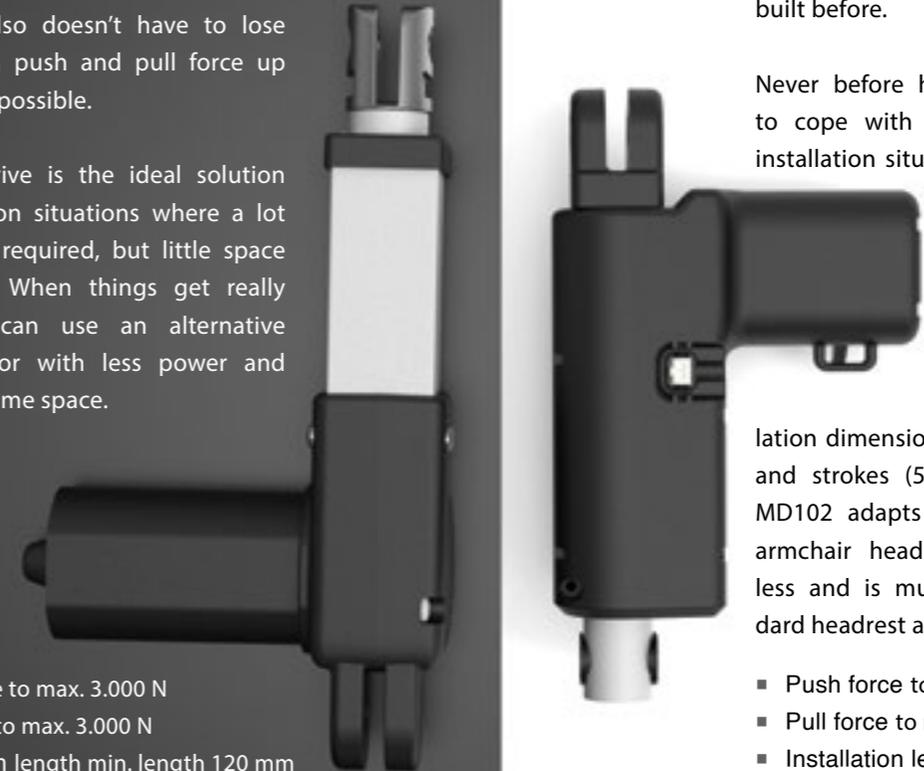
MD100

The MD100 is a very quiet and powerful linear actuator for a multitude of applications, e.g. furniture for seating or bedding in home or care furniture. The single actuator MD100 was developed specifically for applications with up to 95 mm stroke and offers optimum price-performance ratio.

Technical data

- Push force to max. 6.000 N
- Pull force to max. 5.000 N
- Installation length for stroke of 20 mm – 75 mm, min. installation length 215 mm and for stroke of 75 mm – 95 mm, min. installation length 235 mm
- Stroke min. 20 mm - max. 95 mm
- Speed without load up to 40 mm/sec
- Protection type IP20, IP24
- Mounting pipe side 1, 2, 3, 4
- Mounting motor side a, c, d

MD115

Our MD115 is a compact actuator. Thanks to its modular design, it can be equipped with various motors and stroke pipes.

Technical data

- Push force to max. 3.000 N
- Pull force to max. 3.000 N
- Installation length min. 129 mm + stroke
- Stroke min. 10 mm till max. 300 mm
- Speed without load up to 24 mm/sec
- Protection type IP20
- Mounting pipe side 1, 2, 3, 4, 5, 6
- Mounting motor side a

MD120

The MD120 is a drive using the latest technology and it is highly resilient. Supported by its robust structure it can operate up to 8.000 N force.The compact design and high level of performance makes the MD120 the right choice for many applications in the medical sector and for industrial applications.
The MD120 fulfils all requirements for a modern single actuator.

Technical data

- Push force to max. 8.000 N
- Pull force to max. 6.000 N
- Installation length min. 170 mm + stroke
- Stroke max. 600 mm
- Speed without load up to 40 mm/sec
- Protection type IP20, IP44, IP66
- Mounting pipe side 1, 2, 4
- Mounting motor side a, b, d, e, f

MD121

The MD121 is a compact single actuator with a small built-in length and it is highly resilient. Thanks to its minimally required space, the MD121 is ideal for the usage in home care beds or recliners.

Technische Daten

- Push force to max. 6.000 N
- Pull force to max. 5.000 N
- Installation length min. 170 mm + stroke
- Stroke max. 600 mm
- Speed without load up to 40 mm/sec
- Protection type IP20, IP44, IP66
- Mounting pipe side 1, 2, 3, 4
- Mounting motor side a

MD123

The MD123 is an actuator with a telescopic mechanism. Due to the use of two spindles, the actuator has a stroke of up to 600 mm and a push and pull force of 1.000 N.

MD124

The MD124 is suited for small installation situations. The actuator has also the telescopic mechanism, like our MD123. Due to the use of two intermeshing spindles, the actuator has a stroke of up to 730 mm and a push and pull force of 600 N.

A stroke of genius

We always want to help you reach for the stars, that's why we developed the telescopic drive series for you. Become our partner and together we can aim high!

High, higher, highest

The mechanism of the telescopic drive consists out of two intermeshing spindles, that can provide a triple lengthening of the stroke together, even with a smaller installation dimension.
No matter how high, we can cope with almost any installation situation.

Like earth and moon

In order to be variably equipped for every application and to be able to provide the suitable motor, we have developed the telescope duo.

The MD123 performs well with its stability and force absorption. On the other hand, the MD124 finds its space even in the smallest installation situations.

Technical data

- Push force to max. 1.000 N
- Pull force to max. 1.000 N
- Installation length min. 215 mm +0,5 x stroke
- Stroke max. 600 mm
- Speed without load up to 35 mm/sec
- Protection type IP20
- Mounting pipe side 1, 4, 5, 6
- Mounting motor side A

Technical data

- Push force to max. 600 N
- Pull force to max. 600 N
- Installation length min. 170 mm +0,5 x stroke
- Stroke max. 730 mm
- Speed without load up to 35 mm/sec
- Protection type IP20
- Mounting pipe side 5, 6
- Mounting motor side A

MD125

As of now it's possible to use the modified MD125 for position detection using hall effect sensor, available in IP66, too. Thanks to its minimally required space and a built-in length of 120 mm + stroke the MD125 is almost usable everywhere.

Technical data

- Push force to max. 4.000 N
- Pull force to max. 4.000 N
- Installation length min. length 120 mm + stroke
- Stroke max. 400 mm
- Speed without load up to 48 mm/sec
- Protection type IP20, IP44, IP66
- Mounting pipe side 1, 2, 3, 4
- Mounting motor side a

MD130

The MD130 with the compact and elegant design is perfect for limited space furniture applications like headrests.

Technical data

- Push force to max. 1.000 N
- Pull force to max. 1.000 N
- Installation length min. length 153 mm + stroke
- Stroke min. 10 mm to max. 300 mm
- Speed without load up to 29 mm/sec
- Protection type IP20, IP44, IP66
- Mounting pipe side 7
- Mounting motor side g

MD132

The MD132 is a robust single actuator for extreme loads. Due to the full aluminium design, it can be used up to a load of 8.000 N.

Technical data

- Push force to max. 8.000 N
- Pull force to max. 4.000 N
- Installation length min. 190 mm + stroke
- Stroke max. 600 mm
- Speed without load up to 40 mm/sec
- Protection type IP20
- Mounting pipe side 1, 2, 4
- Mounting motor side a

MD140

The linear single actuator MD140 was developed specifically for applications in the leisure furniture sector. The very small distance (from 150 mm) between the mounting points gives it very small installation dimensions that are independent of the stroke length. This makes the actuator ideal for recliners with lift function.

Technical data

- Push force to max. 6.500 N
- Pull force to max. 6.000 N
- Installation length 150 mm or 157 mm
- Stroke max. 600 mm
- Speed without load up to 50 mm/sec
- Protection type IP20
- Mounting pipe side 8
- Mounting motor side a

MD141

The single actuator MD141 was developed specifically for application with little load and higher speed. The MD141 has very small installation dimensions that are independent of the stroke length.

Technical data

- Push force to max. 1.500 N
- Pull force to max. 1.500 N
- Installation length 150 mm or 157 mm
- Stroke max. 600 mm
- Speed without load up to 50 mm/sec
- Protection type IP20
- Mounting pipe side 8, 9
- Mounting motor side a

MD142

The MD142 offers a "value for money" which never previously existed in applications with a load of up to 1.500 N and high adjustment speed. The small installation dimension of only 150 mm is independent of the stroke length.

Technical data

- Push force to max. 1.500 N
- Pull force to max. 1.500 N
- Installation length 150 mm or 157 mm
- Stroke max. 600 mm
- Speed without load up to 50 mm/s
- Protection type IP20
- Mounting pipe side 8, 9
- Mounting motor side a

MD143

The MD143 is based on the modular system of the MD115. In contrast to the stroke pipe design, a sliding block design was selected. Consequently, the benefits of the sliding block can also be take effect under restricted space conditions.

Technical data

- Push force to max. 3.000 N
- Pull force to max. 3.000 N
- Installation length min. 110 mm + stroke
- Stroke min. 50 mm to max. 400 mm
- Speed without load up to 40 mm/sec
- Protection type IP20
- Mounting pipe side 8
- Mounting motor side a

MD144

Our MD144 is based on the modular design of the MD115. Due to the compact and optimized design, it is especially suitable for actuating tasks with small driving powers of up to 2.500 N.

Technical data

- Push force to max. 2.500 N
- Pull force to max. 2.500 N
- Installation length min. 100 mm + stroke
- Stroke min. 50 mm to max. 400 mm
- Speed without load up to 40 mm/sec
- Protection type IP20
- Mounting pipe side 8, 9
- Mounting motor side a

MD145

The MD145 is a further development of our MD144. Further optimization measures and differentiated sliding block variants enable a wide integration into existing fitting variants.

Technical data

- Push force to max. 3.000 N
- Pull force to max. 3.000 N
- Installation length min. 114 mm + stroke
- Stroke min. 50 mm to max. 400 mm
- Speed without load up to 21 mm/sec
- Protection type IP20
- Mounting pipe side 8, 9
- Mounting motor side a

MD146

Due to the small space requirement and the very small installation dimension of 140 mm and stroke, the MD146 can be accommodated even in the most compact fittings.

Technical data

- Push force to max. 2.600 N
- Pull force to max. 2.600 N
- Installation length 140 mm or 150 mm or 157 mm
- Stroke max. 400 mm
- Speed without load up to 48 mm/sec
- Protection type IP20
- Mounting pipe side 8
- Mounting motor side a

Push-force overview
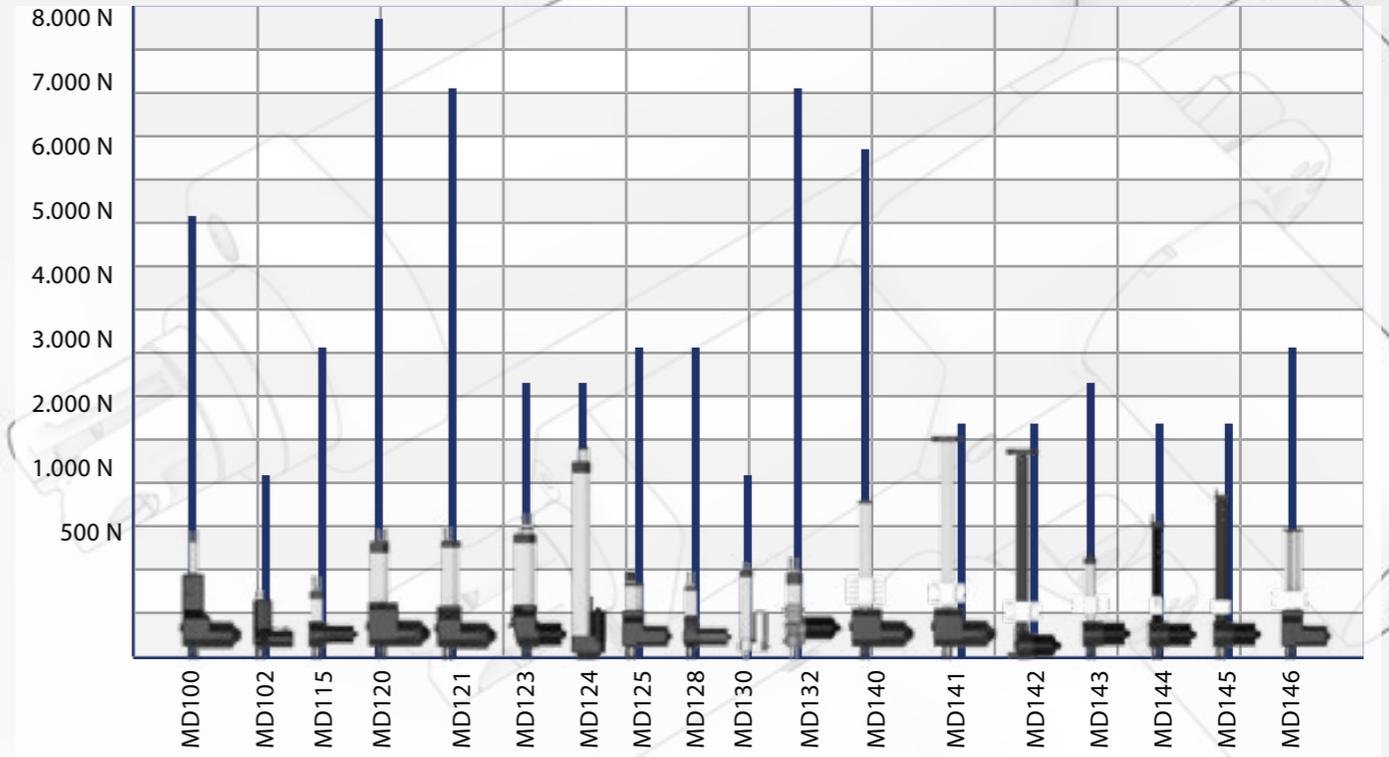
Double actuator

Our limoss double actuator from the MD2-series are extremely robust and reliable. A small packaging volume is achieved by the vertical arrangement of the drive units. The further developed and adapted MD201 optimizes the packaging volume again. Up to sets of 98 units can be transported on an euro pallet.

The double actuator comply with the usual and required standards, protection classes and types and are compatible with various limoss operating elements.

- MD200
- MD201

care furniture

MD200

The MD200 double actuator is a perfect fit for applications requiring a high level of resilience and durability. Due to the vertical positioning of the actuator units, a housing with strikingly improved mechanical qualities and a very compact packing dimension has been achieved.

Technical data

- Push force head 6.000 N and foot 6.000 N
- Installation length 581 mm
- Stroke 48, 53, 69, 74 or 87 mm
- Shaft seating Ø 25 mm
- Installation height 130 mm
- Duty cycle max. 10 % and continuous use max. 2 min with subsequent 18 min break

Optional

- Shaft seating Ø 34 mm
- Position detection using hall effect sensor
- Emergency lowering via 18 V alkaline battery
- External power supply
- Wireless hand control
- Mechanical quick-release
- External RF receiver, with or without LED underbed light
- Integrated underbed LED light LA501

Additional information

- DC motors
- Housing color black RAL 9005 / grey RAL 7035
- Protection type IP20, IP24
- Manufactured according to VDE, protection class II / III
- Mains connection 100 – 240 V AC
- Very low standby consumption
- Compatible with various limoss hand controls
- Connections for up to 2additional drives plus additional function
- Limit switching via micro-switch
- Maintenance low

MD201

MD201, the new and even more innovative double actuator. Through optimization of the MD200 housing an unmatched shipping batch density of up to 98 set of MD201 per euro pallet can be realized.

Technical data

- Push force head 5.000 N and foot 4.000 N
- Installation length 581 mm
- Stroke 48, 53, 69, 74 or 87 mm
- Shaft seating Ø 25 mm
- Installation height 114.5 mm
- Duty cycle max. 10 % and continuous use max. 2 min with subsequent 18 min break

Optional

- Shaft seating Ø 34 mm
- Position detection using hall effect sensor
- Emergency lowering via 18 V alkaline battery
- External power supply
- Wireless hand control
- Mechanical quick release
- External RF receiver, with or without LED underbed lighting
- Integrated underbed LED light LA501
- up to 6.000 N

Additional information

- DC-motors
- Housing color black RAL 9005 / grey RAL 7035
- Protection type IP20, IP24
- Manufactured according to VDE protection class II / III
- Mains connection 100 – 240 V AC
- Very low standby consumption
- Compatible with various limoss hand controls
- Connections for up to 2 additional drives plus additional function
- Limit switching via micro switch
- Maintenance low

Hand controls

To differentiate your product, limoss offers a variety of different hand controls.

Apart from the classic, wired versions we can also offer many of our hand controls as a wireless version in the HC3-series (HC = hand control) or as a built-in hand control in the HC2-series.

In addition, we can offer you many more options to choose from: for example different housing colors and structures, LED lighted buttons in different colors and individual customer logos or button symbols. Many of our hand controls are available with an additionally installed hook or magnetic plate, for easy attachment if the hand control is not used. On request, we can integrate a lock button to lock individual functions. Especially in the care sector, this is a useful and important function.

Furthermore, we are glad to develop customized solutions for you.

- HC100 / HC300
- HC105 / HC305
- HC110
- HC112
- HC115 / HC315
- MD121
- HC130
- HC135
- HC146
- HC147
- HC148
- HC149
- HC150 / HC350
- HC151
- HC155
- HC165
- HC180 / HC380
- HC190 / HC390
- HC200
- HC201
- HC205
- HC206
- HC207
- HC208
- HC220 - HC222

- HC225
- HC226
- HC229
- HC230
- HC232
- HC233
- HC234
- HC235
- HC236
- HC237
- HC238
- HC239
- HC240
- HC243
- HC246
- HC259
- HC280
- HC313
- HC314
- HC316
- HC317
- HC330
- HC338
- HC346
- HC370
- HC395
- HC396
- HC518
- HC519

care   furniture

Bring color into your life

Since the beginning of time, bright colors have been used to highlight extraordinary objects. We can help you to create a stir in your furniture application with just a drop of paint!

HC121

The HC121 is available in many colors and gives your furniture a new look with its elegant design. The rotary switch is placed slightly higher and is visually highlighted by blue LED backlighting – real eye candy!

In its function the HC121 convinces particularly by the simple operation of the lighted rotary switch, that selects the drive. Then you can extend and retract the drive by pressing the rocker switch.

- For 1-, 2-, 3- or 4-motor systems
- Colored cover yellow RAL 1032
- Ergonomic back in black RAL 9005
- Select actuator with the rotary switch
- LED background lighting

HC100 / HC300

- Ergonomically shaped design hand control
- Combination of 4 to 6 buttons for 1-, 2- or 3-motor systems
- Housing color black RAL 9005
- Also available as wireless HC300 hand control

HC105 / HC305

- Ergonomically shaped design hand control
- Combination of 2 to 10 buttons for 1-, 2-, 3-, or 4-motor systems
- Housing color black RAL 9005
- Also available as wireless HC305 hand control
- LED lighted buttons optional

HC115 / HC315

- Slim design hand control in bicolor version Combination of 2 to 9 buttons for 1-, 2-, 3-, or 4-motor systems
- Flashlight function
- Also available as wireless HC315 hand control
- Keypad recessed in order to avoid accidental activation

HC130

- High quality hand control with a slightly curved design
- 2 arrow buttons for 1-motor system
- Housing color softtouch black RAL 9005
- Buttons with blue LED back lighting

HC110

- Budget friendly hand control
- Combination of 2 to 8 buttons for 1-, 2-, 3-, or 4-motor systems
- Housing color black RAL 9005

HC112

- Basis model in bicolor version
- Combination of 2 to 8 buttons for 1-, 2-, or 3-motor systems
- Housing color black RAL 9005
- Keypad recessed to avoid accidental activation

HC135

- 2 to 6 buttons for 2-motor system
- Housing color black RAL 9005
- Plastic housing

HC146

- Slimline hand control for care sector
- 2 to 12 buttons, as required for 3- or 4-motor systems
- Keypad recessed to avoid accidental activation
- Protection type IP66
- Mechanical lock button
- With first-error security

HC147

- Hand control for care sector 2 to 10 buttons, as required for 2-, 3- or 4-motor systems
- Keypad recessed to avoid accidental activation
- Protection type IP66
- Mechanical lock button
- With first-error security

HC148

- Slimline hand control for care sector
- Combination of 2 to 8 buttons, as required for 1-, 2-, 3- or 4-motor systems
- Keypad recessed to avoid accidental activation
- Protection type IP66
- Mechanical lock button
- Lighted buttons

HC151

- Particularly compact hand control
- Combination of 2 to 6 buttons, as required for 1-, 2- or 3-motor systems
- Housing color black RAL 9005

HC155

- Classic hand control in small version
- Combination of 2 to 6 buttons for 1- or 2-motor systems
- Housing color black RAL 9005

HC149

- Suitable hand control for the care sector with speech output for the blind
- Combination of 3 to 9 buttons for 1- or 2-motor systems
- Housing color light grey RAL 7035
- Protection type IP44
- Mechanical lock button

HC150 / HC350

- Also available as wireless HC350 hand control
- Combination of 2 to 9 buttons for 1-, 2-, 3- or 4-motor systems
- Housing color black RAL 9005
- Classic hand control
- Protection type IP44

HC165

- Keypad recessed to avoid accidental activation
- Combination of 2 to 8 buttons, as required for 1-, 2-, or 3-motor systems
- Housing color black RAL 9005

HC180 / HC380

- Up to 4-actuator system
- Wireless, built-in hand control with 3.5" touch screen
- Display resolution 320 x 480 pixels
- Display variable and customise
- Frame with stainless steel effect
- Detachable control unit, as HC380

HC190 / HC390

- Paddle control
- Combination of 2 or 4 buttons for 1- or 2-motor systems
- Housing color black RAL 9005
- Protection type IP44
- Also available as wireless version HC390
- With first fault protection optional

HC200

- Built-in hand control with brushed stainless steel finish
- Combination of 2 to 6 buttons, as required for 1-, 2-, or 3-actuator systems

HC206

- Elegant, high-quality built-in hand control with brushed stainless steel finish
- Combination of 2 or 4 buttons for 1- or 2-motor systems
- Buttons with LED backlighting

HC207

- Built-in hand control with zinc surface
- Combination of 2 rocker-switches for 2-motor systems and 1 button for additionally reset
- USB / Audio / DC jack port optional

HC201

- High-quality built-in hand control with stainless steel finish
- Combination of 2, 4 or 6 buttons for 1-, 2- or 3-motor systems

HC205

- Elegant and high quality built-in hand control with brushed stainless steel finish
- Combination of 2 to 4 buttons for 1-, 2- or 3-motor systems

HC208

- 2 button for 1-motor system
- Zinc die-cast housing
- Round buttons

HC220 / HC221 / HC222

- Small round built-in hand control
- 2 big buttons for 1-motor system
- Housing color black RAL 9005
- USB port optional

HC225

- Classic oval built-in hand control Combination of 2 or 5 buttons for 1- or 2-motor systems
- Housing color black RAL 9005

HC226

- For 1-motor system
- Built-in hand control with control lever (not contained in delivery content) to install between seat and armrest
- Housing color black RAL 9005

HC232

- Elegant, high-quality, built-in hand control with brushed stainless steel finish
- 2 buttons for 1-motor system
- Blue LED backlighting

HC233

- Elegant, high-quality, mounted hand control
- Metal surface
- 2 roller switches with ribbed surface for 2-motor system
- Quick and easy mounting with spring clamps

HC229

- Capacitive touchsensor built-in hand control
- Combination of 2 or 4 buttons for 1- or 2-motor systems
- Higher ESD safety by galvanic isolation of capacitive sensor area (up to 21 kV)
- Stainless steel touchbuttons

HC230

- Beautifully designed, modern, built-in hand control
- 2 arrow buttons for 1-motor system
- Mounted using spring clamps
- Buttons with blue LED backlighting
- Housing color softtouch black RAL 9005
- USB port optional

HC234

- Built-in hand control with galvanized brushed chrome
- Combination of 2 to 4 buttons, as required for 1-, 2-, or 3-motor systems
- Blue background lighting

HC235

- 2-button touchsensor for 1-motor system
- Housing color black RAL 9005
- Force feedback
- Easy and fast installation and adjustment with spring clips
- Upperpart surface PLEXIGLAS®

HC236

- Combination of 2 to 6 buttons, as required for 1-, 2-, or 3-motor systems
- USB port optional
- Built-in hand control with zink brushed pearl chrome

HC237

- 2 touch buttons for 1-motor system
- Micro slot on the aluminium for the backlighting
- Easy and fast installation and adjustment with spring clips
- Aluminium housing upperpart
- Housing color black RAL 9005

HC240

- 2 buttons for 1-motor system
- Protection type IPX6
- Housing color black RAL 9005

HC243

- For 1-motor system
- 0 standby hand control
- Chrome plated surface
- Softtouch surface

HC238

- Combination of 1 to 4 touch buttons for 2-motor system
- Easy and fast installation and adjustment with spring clips
- Upperpart glass
- USB port optional

HC239

- Built-in hand control with zinc die-cast housing
- Combination of 2 rocker switches for double actuators systems and one button for an additional reset

HC246

- Up to 6 buttons for 1-, 2-, or 3-motor systems
- Housing color black RAL 9005
- USB port optional

HC259

- Capacitive touchsensor built-in hand control
- Combination of 2 or 4 buttons for 1- or 2-motor systems
- Higher ESD safety by galvanic isolation of capacitive sensor area (up to 21 kV)
- Stainless steel touch buttons

HC280 `care`

- Nurse panel for care attendants
- Up to 25 buttons possible
- Safe function due to internal limoss singe fault safety
- For 4-motor applications with additional functions
- Single buttons can be locked
- Protection type IP66

HC313 `furniture`

- New, wireless hand control
- Combination of 2 to 6 buttons, as required for 2-motor system
- Housing color black RAL 9005
- 2 x AAA batteries

HC317 `furniture`

- Slim design hand control
- Combination of 2 to 9 buttons for 2-motor system
- Housing color black RAL 9005
- Flashlight function
- LED lighted buttons
- 3 x AAA-battery

HC330 `furniture`

- Ergonomically shaped hand control
- Combination of 18 to 22 buttons for 3- or 4-motor systems
- Housing color black RAL 9005
- Lighted buttons
- 3 x AAA-batteries

HC314 `furniture`

- Wireless hand control
- Combination of 2 to 8 buttons as required for 4-motor systems
- Plastic housing
- Housing color black RAL 9005
- 1 x CR2032-battery

HC316 `furniture`

- New, extra slim, wireless hand control
- Combination of 2 to 6 buttons for 1- or 2-motor systems
- Housing color black RAL 9005
- 1 x CR2032 battery

HC346 `furniture`

- Keypad recessed to avoid accidental activation
- Combination of 2 to 8 buttons for 4-motor system
- Housing color black RAL 9005
- Lighted buttons
- 3 x AAA-batteries

HC370 `furniture`

- CR2032 battery
- RF Frequency: 2.4 GHz
- Working mode broadcasting only
- Control range max. 50 m in open space
- Built–in 2.4 GHz 3dBi antenna
- Button lock / password input

HC395

- Wireless hand control
- Anodized aluminium housing color black RAL 9005
- Symbol illuminated
- Operation of a seating chair with one button
- Function is selected by inclination of the hand control
- Integrated lithium-polymer-battery

HC396

- Wireless hand control
- Upper section glass
- Operation of a seating chair with one button
- Housing color black RAL 9005
- Function is selected by inclination of the hand control
- 1 x CR2032-battery

HC518

- Wireless hand control
- Up to 7 buttons for 1-, 2-, or 3-motor systems
- Housing color white RAL 9010
- 1x CR2032 battery

HC519

- Wireless hand control
- Housing color black RAL 9005
- 2 buttons for 1-motor system

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HC338
Modern and timeless

The HC338 is our latest development of wireless hand controls. The slim appearance and the high-quality glass surface show its elegant and modern shape, underlined by an impressively aluminum housing. The design is complemented by an integrated magnet, that serves as a clever and variable positioning possibility on the furniture.

The buttons can be individually positioned according to customers request and printed with symbols of your choice, as well as with your customer logo.

The hand control is activated by a motion sensor and the individual buttons give a haptic feedback – a hand control that just feels good and perfectly complements your product design!

- Radio hand control
- Glass front cover with anodized aluminium housing
- Combination of 1 to 6 touch sensor buttons
- Awakened by motion detection sensor
- Haptic vibrations feedback and interactive backlight function
- Built-in lithium polymer battery

reddot award 2019
winner
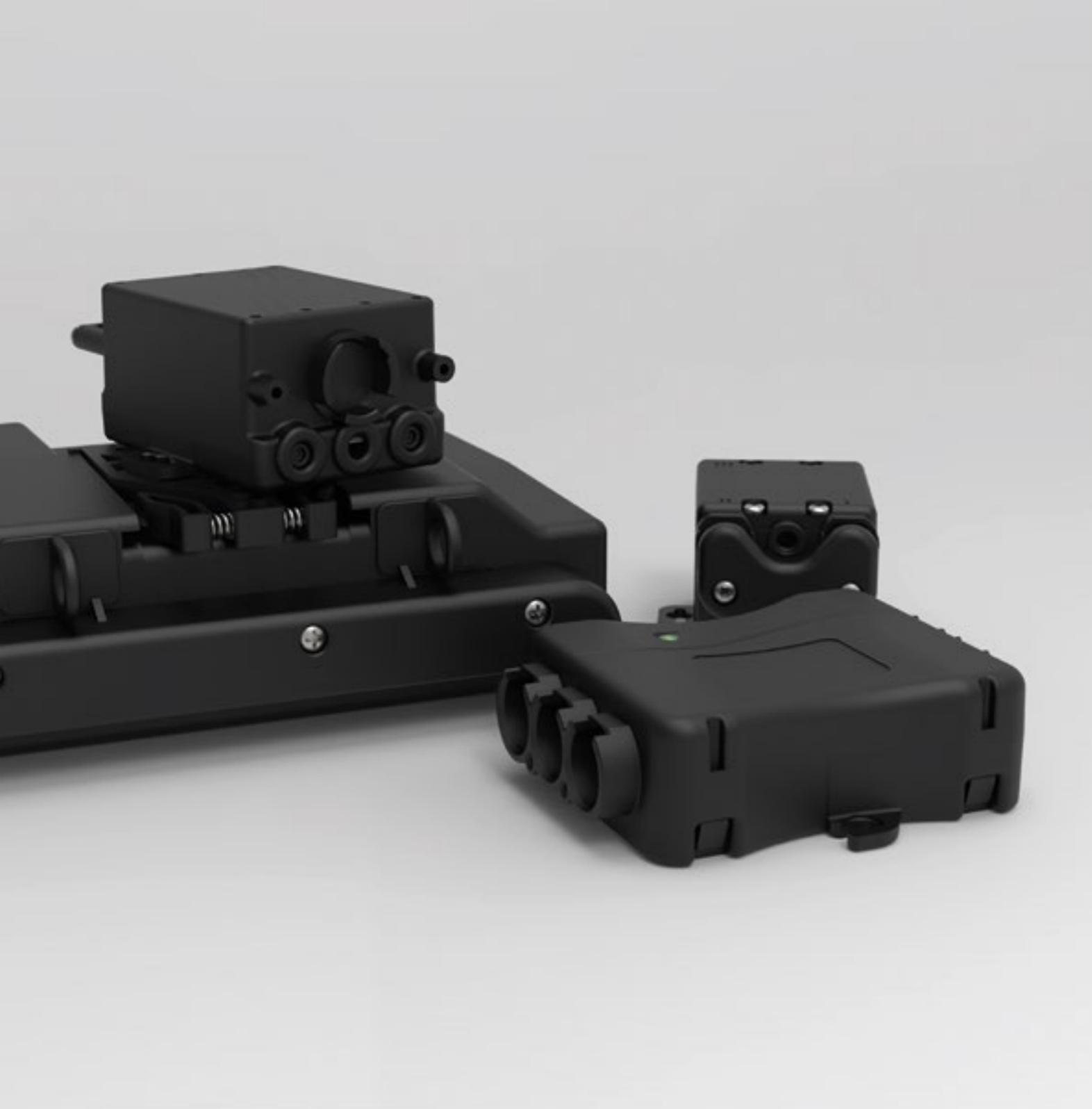
Motor controls

limoss offers a wide range of motor controls for simple and complex controls in the furniture and care sector. Special attention is paid to the possibility to consider certain dependencies of the fittings or to reach individual positions directly. We offer the opportunity to the motor control with a wireless hand control or via wireless with your smartphone.

In addition, it is possible to integrate special functions like switch outputs for lighting or massage functions. Especially for the medical sector, the motor controls can be equipped with additional safety functions like first-error security or the Trendelenburg position.

The voltage supply is supplied exclusively by the external voltage sources of the limoss MC1-series.

Technology

- Direct and relay controlled systems
- Universal controls
- Medical platforms
- Wireless remote controls
- Bluetooth based controls
- Cinema network systems
- Freely programmable medical system
- Sensor supported systems

Housing form*

- MC227

Charts

- Motor controls

* only newest housing forms.
You will find other models on our webside
www.limoss.de

care   furniture

Technology

Directly & relay controlled systems

- Cost-effective variant for simple control processes
- Up to 4 motors can be controlled without an external control box
- Emergency lowering can be integrated in many housings
- Cascaded processes of actuator
- Controllable integrated lighting in the double motors
- Expansion option with plug-in wireless solutions
- Expansion option with first-error security for medical applications
- Freely programmable function processes when using hall effect sensors in the actuator

Universal controls

- Control of up to 4 actuators
- Automatic recognition of connected drives
- Customer-specific configuration is loaded via the connected actuator
- Special version for care use is available

Wireless based controls

- Control platform for smartphones and tablets
- Up to 4 motors can be connected
- Supports 2 vibration actuator or 1 vibration actuator and 1 underbed lighting
- The app for the terminal device recognises the correct number of motors automatically
- Supports up to 8 memory positions when using hall effect sensors in the actuator
- Simple symbol alterations to memory position
- Supports additional wired hand controls and foot controls
- Customer-specific programming can create the company's "own" app; this allows the app to be found under the customer's name in the Apple App Store or Google Play Store
- Direct link to Apple App Store or Google Play Store from company QR code

Cinema network systems

- Microprocessor relay control
- Extension of function via software
- Local control of actuators by handcontrol or via bus system from a PC
- Possibility to connect up to 15 controls in line
- Manually saving of reset points
- Support the application of standard actuator and actuator with hall sensors
- Additionally functions can be controlled by hall signals or time-controlled
- Supports up to 2 hand controls
- Supports up to 3 actuators

Care platforms

- Microprocessor relay control
- Control of up to 5 actuators
- First-error security
- Emergency lowering can be integrated in many housings
- Can be used in double actuator of the MD2-series
- Can be expanded with light control box for the use of bedside lamps
- Up to 3 hand controls / foot switches

Wireless remote controls

- Microprocessor relay control
- Control of up to 4 actuator in the case of single actuator emergency lowering can be integrated in many housings
- Switching outputs for lighting or massage features are possible
- Can be used in our double actuator from the MD2-series and in external housing units
- Customer-specific configuration by software
- Freely programmable function processes when using hall effect sensors in the actuator

Freely programmable care system

- Microprocessor relay control
- Supports up to 3 hand controls
- Supports up to 5 actuators
- Simple configuration
- First-error security
- Supports emergency lowering
- Supports operation of bedlamps
- Freely programmable function processes when using hall effect sensors in the actuator
- Interaction between two hand controls (selective lock of button function)

Sensor supported systems

- Microprocessor relay control
- Acceleration sensor recognize position in the room (tilt sensor)
- Different variants for double actuator and control boxes
- Supports up to 4 actuators
- Supports follow-up function
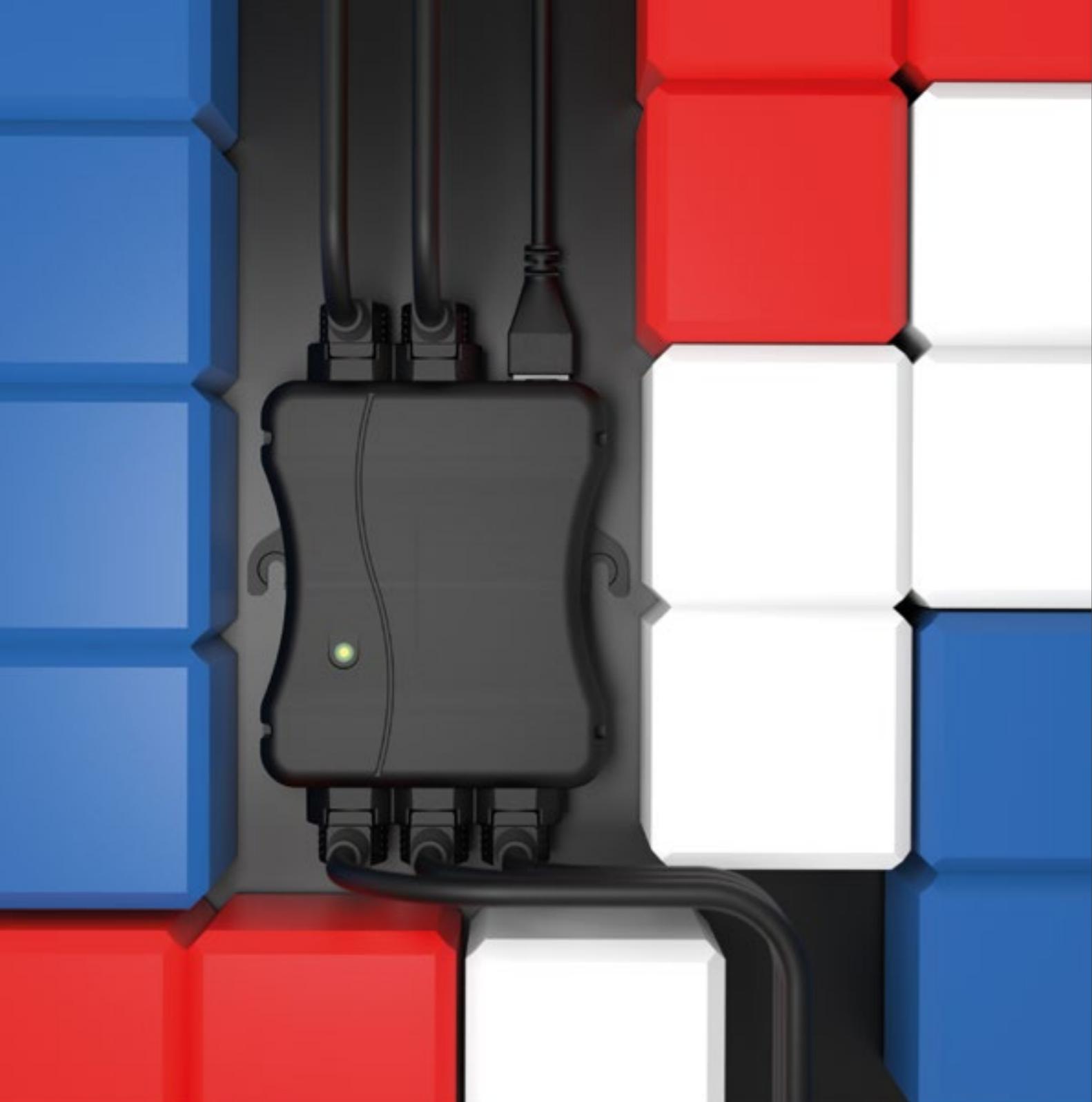
MC227

Space saving miracle

The MC227 is the most space-efficient motor control we have ever designed before. Up to three drives, two hand controls and one touch hand control can be connected in the slightest space. In addition we integrated a diagnostic option. The elegant housing can easily be stowed or fixed by its integrated mounting option.The

- 5 input / output
- One special slot supports two actuators, total support up to three actuators and up to three hand controls
- Duty cycle max 10 %, continuous use max. 2 min with subsequent 18 min break

	Slots (input / output)	Protection class	Protection type	Mounting to clip	Mounting to clip on actuator	Battery case	Dimensions (L x W x H) in mm without plug lock	Dimensions (L x W x H) in mm with plug lock	Installation hole distance
MC210	8 pieces	II / III	IP20, IPX4, IPX6	▪	▪	1 piece	238,3 x 69,5 x 111,0	238,3 x 69,5 x 133,0	
MC220	5 pieces	III	IP20, IPX4, IPX6	▪		1 piece	161,5 x 45,5 x 79,0	161,5 x 45,5 x 101,0	145,5 mm
MC222	5 pieces	III	IP20, IPX4, IPX6	▪	▪	2 pieces	192,5 x 45,5 x 79,0	192,5 x 45,5 x 101,0	176,5 mm
MC224	7 pieces	III	IP20, IPX4, IPX6	▪	▪	2 pieces	192.5 x 49.9 x 99.0	192,5 x 49,9 x 121,0	176,5 mm
MC225	4 pieces	III	IP20, IPX4				72,0 x 44,0 x 68,3	72,0 x 44,0 x 79,3	
MC226	modular	III	IP20	▪			161,5 x 35,2 x 98,5	161,5 x 35,2 x 120,5	145,5 mm
MC227	6 pieces	III	IP20	▪			116,0 x 96,0 x 34,0		
MC230		III	IP20, IPX4				84,0 x 29,0 x 39,0		
MC235	3 pieces	III	IP20, IPX4				82,0 x 44,0 x 93,1	82,0 x 44,0 x 102,2	69,0 mm
MC250	1 piece	III	IP20				76,0 x 33,6 x 114,0		62,0 mm
MC260	9 pieces	III	IP20, IPX4, IPX6	▪		2 pieces	216,8 x 61,6 x 126,5	216,8 x 61,6 x 148,5	

Example MC235

W

L

H
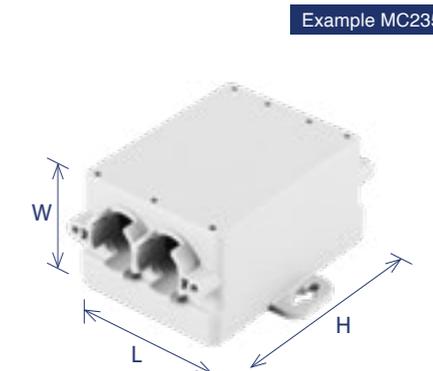
Power supplies and accus

Universally usable for all our limoss products are our different power supplies. Our MC-series (MC = motor control) offers different wall or ground mounted transformers. This allows the customer to decide where the transformator should be placed. The power supplies are available for the common country versions with their own plugs or adapter solutions.

Special features that comply with current standards, such as protection classes and types, fuses, overload protection, short circuit fuse and stain relief are listed separately, depending on the power supply.

We offer our black limoss power supplies (housing color black RAL 9005) with the required cable lengths, different output voltage, special plugs, emergency power (via batteries) and other possible combinations.

- MC110
- MC115
- MC120
- MC121
- MC122
- MC125

- MC130 / MC165
- MC140
- MC151
- MC160 / MC166
- MC161

care   furniture

MC110

The AC adapter MC110 is the base model for all systems with up to two actuators. It is small, light, compact and available with 24 V or 29 V output.

MC115

The AC adapter MC115 has greater reserve capacity and can be used in all standard systems. For applications in the medical field, it is the first choice. It is available with 29 V or 35 V output.

MC120

The inline power supply MC120 offers all the performance of the MC110 and is the base variant of the ground transformers. On the secondary side different power supply lines can be connected. It is available with 29 V output.

MC121

The AC adapter MC121 can be converted by attaching various adapters for different countries quickly and without tools. It is available with 29 V output.

MC110 — Technical data

- Input voltage 100 – 240 V AC
- Output voltage 24 V DC / 29 V DC / 35 V DC
- Output current 1.0 to 2.0 A
- Safety NTC-temperature-sensor, primary fuse, overload protection
- Overcurrent shutdown, output short circuit protection
- Protection type IP20
- Protection class II
- Intermitted mode with 10 % duty cycle
- With max. continuous use of 2 min
- LED "ON" indicator (green)
- Plug-in power cable on secondary side

MC115 — Technical data

- Input voltage 100 – 240 V AC
- Output voltage 24 V DC / 29 V DC / 35 V DC
- Output current 1.5 to 2.5 A
- Safety NTC-temperature-sensor, primary fuse, overload protection, overcurrent shutdown, output short circuit protection
- Protection type IP66
- Protection class II
- Intermitted mode with 10 % duty cycle
- With max. continuous use of 2 min
- LED "ON" indicator (green)
- Plug-in power cable on secondary side

MC120 — Technical data

- Input voltage 100 – 240 V AC
- Output voltage 24 V DC / 29 V DC / 35 V DC
- Output current 1.0 to 2.1 A
- Safety NTC-temperature-sensor, primary fuse, overload protection
- Overcurrent shutdown, output short circuit protection
- Protection type IP20
- Protection class II
- Intermitted mode with 10 % duty cycle
- With max. continuous use of 2 min
- LED "ON" indicator (green)
- Plug-in power cable on secondary side

MC121 — Technical data

- Input voltage 100 – 240 V AC
- Output voltage 29 V DC
- Output current 2.0 A
- Safety NTC-temperature-sensor, primary fuse, overload protection
- Overcurrent shutdown, short circuit protected output
- Protection type IP20
- Protection class II
- Intermittent service with 10 % duty cycle
- With maximum continuous operation of 2 min
- LED operating status indicator (green)
- Secondary side coupling

MC122

The inline power supply unit MC122 has all features of the MC120, however, with a higher output power of 3 A 29 V. On the secondary side, various network supply lines can be connected.

_____ Technical data

- Input voltage 100 - 240 V AC
- Output voltage 29 V DC
- Output current 3.0 A
- Safety NTC-temperature-sensor, primary fuse, overload protection, overcurrent shutdown, output short circuit protection
- Protection type IP20
- Protection class II
- Intermitted mode with 10 % duty cycle with max. continuous use of 2 min
- LED "ON" indicator (green)
- Complies with the European directive 2009/125/EG
- Plug-in power cable on secondary side

MC125

The inline power supply MC125 offers all the performance of the MC120, is however designed as a ground transformer. Especially for the medical sector an optimal choice. It is available with 29 V and 35 V output.

_____ Technical data

- Input voltage 100 – 240 V AC
- Output voltage 29 V DC / 35 V DC
- Output current 2.0 to 2.5 A
- Safety NTC-temperature-sensor, primary fuse, overload protection, Overcurrent shutdown, output short circuit protection
- Protection type IP66
- Protection class II
- Intermitted mode with 10 % duty cycle with max. continuous use of 2 min
- LED "ON" indicator (green)
- Plug-in power cable on secondary side
- Optional earth conductor (PE)

MC130 / MC165

The inline power supply unit MC130 is equipped with an additional battery MC165 that ensures the operation of the drive system even if a power failure occurs. On the secondary side, various network supply lines can be connected. The power supply unit is only available with 29 V output power.

_____ Technical data

- Input voltage 100 - 240 V AC
- Output voltage 29 V DC
- Output current 2.0 A
- Safety NTC-temperature-sensor, primary fuse, overload protection, overcurrent shutdown, output short circuit protection
- Protection type IP20
- Protection class II
- Intermitted mode with 10 % duty cycle with max. continuous use of 2 min
- LED "ON" indicator (green)
- Complies with the European directive 2009/125/EG
- Plug-in power cable on secondary side

MC140

The inline power supply MC140 is equipped with an extra battery, which ensures operation of the drive system even during a power failure. On the secondary side different power supply lines can be connected. It is available with 29 V output.

_____ Technical data

- Input voltage 100 – 240 V AC
- Output voltage 24 V DC / 29 V DC / 35 V DC
- Output current 1.0 to 2.5 A
- Safety NTC-temperature-sensor, primary fuse, overload protection
- Overcurrent shutdown, output short circuit protection
- Protection type IP20
- Protection class II
- Intermitted mode with 10 % duty cycle with max. continuous use of 2 min
- LED "ON" indicator (green)
- Complies with the European directive 2009/125/EG
- 2 x 9 V emergency lowering batteries

MC160 / MC166   care furniture

The lithium-ion accu MC160 has a compact design and 1.800 mAh storage capacity on the best attributes of an allrounder. It can be used in many ways both in the care as well as in upholstery applications.

Technical data

- Nominal voltage 25.2 V at 1.8 Ah
- Protection class III
- Protection type IP20, IP66
- Internal charger
- Housing color black RAL 9005
- Overcurrent protection
- Short circuit fuse
- LED "ON" indicator (green / red)

MC161   furniture

The lithium-ion accu MC161 is more compact and smaller than the accu MC160. It can be clipped into a holder in an installation-friendly manner.

Technical data

- Capacity 1.5 Ah
- Protection class III
- Protection type IP20
- Internal charger
- Housing color black RAL 9005
- Overcurrent protection
- Short circuit fuse
- LED "ON" indicator

MC151   furniture

The inline power supply MC151 is available with an output voltage of 29 V or 24 V. Different feeders can be connected at the secondary terminals.

Technical data

- Capacity 1.5 Ah
- Protection class III
- Protection type IP20
- Internal charger
- Housing color black RAL 9005
- Overcurrent protection
- Short circuit fuse
- LED "ON" indicator

Accessories

Matching accessoires for every system.

limoss offers a variety of different, complementary accessoires to expand your systems with seat sensors, reading lamps, underbed lighting, radio plug-in solutions, app controls, high-quality wireless audio systems or massage motors. Our accessoires and our other items are compatible with all our common limoss systems.

- MC250
- MC301 / MC307
- MC308 / MC309
- MC310
- MC311
- Charging jack
- USB charging port
- MD186
- Seat sensors
- LA100 - LA102
- limoss app
- Wireless charger

care furniture

Wireless Charger

Wireless into the future
Mobility is the sign of our time – wireless energy transfer can achieve an uprecedented level of independence. Just put the smartphone on the charging station and the battery will be charged.

Enhance your quality of life
Nowadays, owning a smartphone is a standard of living for almost everyone that you don't want to miss anymore. Now you are not even tied to a cable to recharge your battery – ultimate comfort and convenience.

One for everything and everything in one
No matter which smartphone you own, our wireless charger is compatible with every technically prepared smartphone. Share the innovation with your family and friends! A charger for every location – whether at home, on vacation, in the office or just on the road – the wireless charger is always reliable.

Optical brilliance
Lying on the table or fully integrated in the furniture, the look of the wireless charger shines everywhere with its elegance. Cable spaghetti is matter of the past!

- MC570 input: 9 V / 1.6 A
- Diameter: 105,0 mm x 16,4 mm
- Standby Consumption: max. 0.2 W
- Samsung Fast Charge 10 W
- iPhone Fast Charge 7.5 W

MC311

Great performance – small package

The motor control MC311 is our latest wireless plug-in solution in the limoss family and can control up to 4 drives. It is possible to connect an additional wired hand control to control the furniture.

An intelligent identification ensures the perfect interface of the app, The presentation of the number of buttons and the operation of the app varies with the respective connected drives.

In addition, a battery-powered emergency lowering can be connected, therefore our motor control HC311 is prepared for emergencies and well equipped for every situation.

- Application MC311 1-, 2-, 3- or 4-motor systems
- Protection class III
- Protection level IP20, IP24
- Housing color black RAL 9005
- Control mode wireless
- Frequency 2.4 GHz
- Wireless range approximately 15 m

MC250

The MC250 is an add-on solution to extend common limoss actuator with radio or bluetooth. The housing is equipped with a hand control connection to be able to control the furniture with a wired hand control.

MC301 / MC307

The MC307 control box is to expand a wired hand control to existing systems with radio variant. 1- and 2-motor dirves systems can be controlled.

MC308 / MC309

The MC308 and MC309 control boxes are plug-in versions for our MD200 and MD201 to expand these with wireless or bluetooth variants. The housing has an integrated underbed light.

MC310

The MC310 control box is an especially small add-on solution to add the wireless feature to existing systems. The housing was especially designed for use in MD200 and MD201, however, it can also be combined with common controls of the MC2-series.

Technical data

- 1 slot (input) for cable hand control
- Protection class III
- Protection type IP20, IP24
- Housing color black RAL 9005

Technical data

- RF plug-in solution for all limoss actuators and controls
- Application MC301 1- to 4-motor systems
- Application MC307 1- to 2-motor systems
- Frequency 2.4 GHz
- Operating distance approx. 8 m
- Easy pairing function

Technical data

- Special plug-in wireless solution MC308 special for double actuator MD200
- Special plug-in wireless solution MC309 special for double actuator MD201
- Type of application are systems with 1 or 2 motors
- Integrated LEDs fur underbed light
- Frequency 2.4 GHz
- Range approximately 9 m
- Easy pairing function

Technical data

- Miniature radio add-on solution
- No-load switching, i.e. only suitable for relay controls (therefore only for relay systems)
- Small and compact, ideal for adding a radio function to the system
- Application max. 2-motor systems
- Radio symbol illuminated
- Frequency 2.4 GHz
- Range approx. 10 m
- Easy pairing function

Charging jack

The charging jack ensures the connection between all limoss power supplies and battery systems. The timeless and simple design allows for discreet integration into any piece of furniture.

Technical data

- Stylish connection for battery charging in furnishing systems
- Simple and discreet installation
- High-quality chrome finish

USB charging port

The USB charging port can be combined with many limoss systems and provides 5 V / 2.1 A, also for tablets.

Technical data

- Can be integrated into existing systems with external mains adapter
- Stylish component with chrome finish
- Power output 5 V / 2.1 A
- Power output sufficient for charging all common terminal devices, including tablets

MD186

The massage actuator MD186 further completes the program of our actuators in the range of comfort functions. In connection with the hand control different intensities and even massage programs can be selected.

Technical data

- Large and powerful massage motor for mounting under a bed platform
- Housing color black RAL 9005

Seat sensors

The seat sensor can be incorporated into the upholstery and makes it possible to activate special functions when loading or unloading the seat.
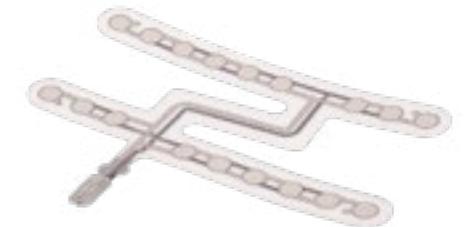
Technical data

- Auto close function
- Programable system for time delay
- Size of sensor area 129,6 x 219,7 mm or 126,3 x 265,0 mm
- Plug-in solution

LA100 - LA102 `care` `furniture`

With the underbed light LA100 you can set special accents. The economical LED lamp can be combined with many limoss systems and is optionally equipped with an integrated motion sensor.

Technical data

- Many limoss systems can be connected
- Supply voltage 24 to 35 V
- Low power consumption of less than 1 W
- Color temperature 4.000 K
- LA101: LA100 with additionally motion detector
- LA102: LA101 with additionally light control

Audio system `furniture`

The audio system can be coupled quickly and easily with most wireless enabled smartphones. The output power of 10 W allows it to share his music on a small scale.

Technical data

- Can be integrated in all systems with external mains adapters; no extra SMPS required
- Fully compatible with all SMPS units sold by limoss
- Two 3" broadband loudspeakers with 10 W audio output, 4 Ohm resistance
- Protocol supported wireless
- Range depends on playback device approximately 10 m
- Easy coupling via A2DP protocol
- Compatible with most bluetooth enabled end devices

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limoss app

In order to meet the requirements of a modern smart home, with the limoss bluetooth app, we made it possible to control our limoss actuators with a smartphone or tablet.

The application is easy to use and offers a variety of possibilities, such as customizable button symbolics, the integration of a customer logo, control of special functions like memory positions, operation of the underbed light and much more.

Technical data

- The app supports iOS from version 6.0 and android from version 4.35
- With bluetooth 4.0 technology limoss controller box support fast pairing with smartphone and disconnect when app in background or quit
- MC220 support up to 4 hall motors
- MC250, MC308, MC309 support up to 2 standard actuators respectively MD200 and MD201
- Support 2 massage motor or 1 massage motor + 1 underbed light
- Adjust the control buttons layout automatecially according to how many motors attached after calibration
- Support max. 8 memory positions, and change icon of your favourite position more suitable

Additional information

- Supports limoss MC220 bluetooth control
- Supports limoss plug-in MC250 bluetooth, MC308 bluetooth, MC309 bluetooth
- Supports wired hand control and wireless hand control

Optional

- Custom specific app

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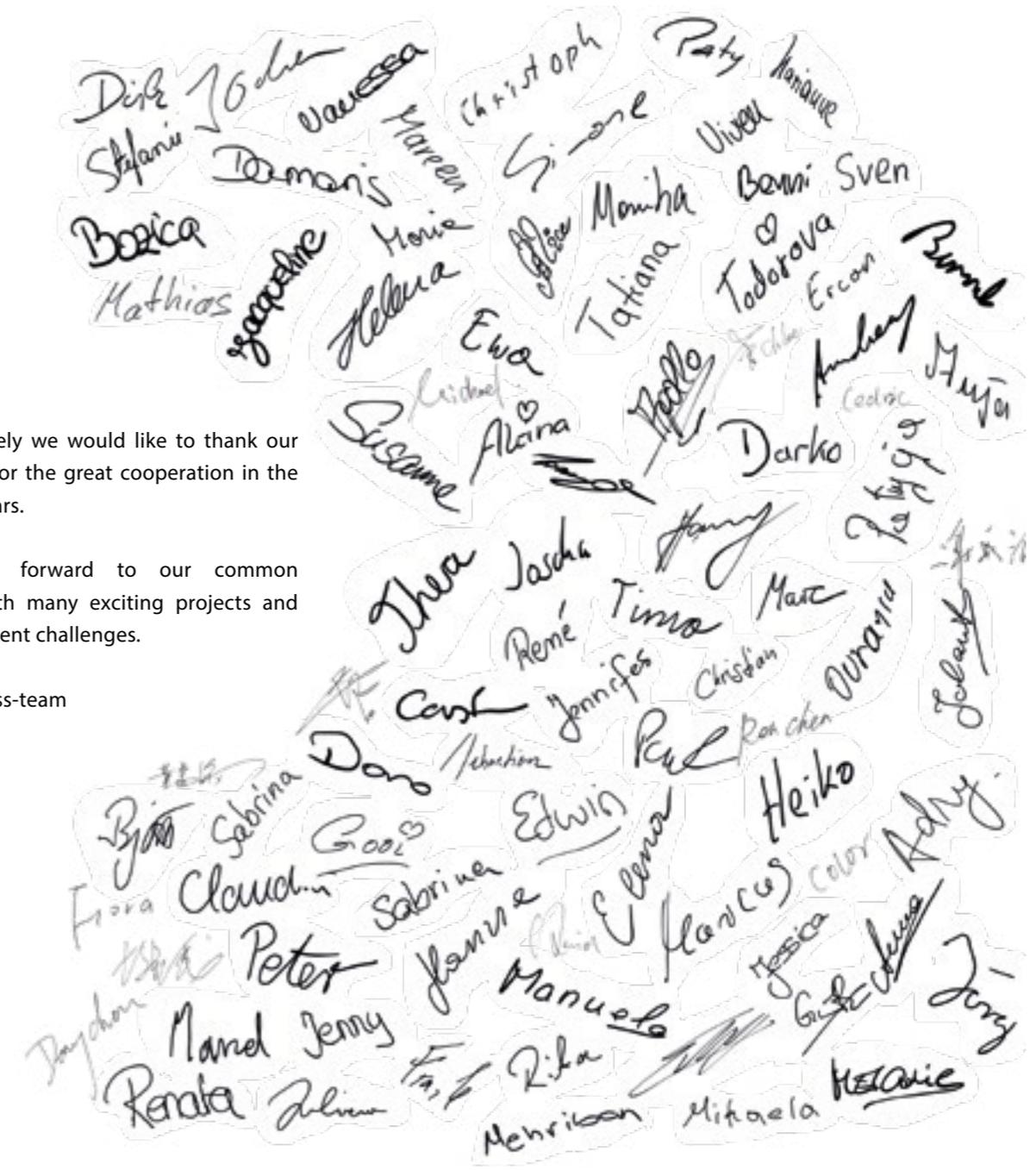
Conclusively we would like to thank our partners for the great cooperation in the last 10 years.

We look forward to our common future with many exciting projects and development challenges.

Your limoss-team

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