

# TRUMPF | MARS

Flexible, mobile and strong



INNOVATIONS FOR PATIENT CARE

**TRUMPF**



## Modern operating in every position with every refinement

The surgery of tomorrow demands new operating tables. Tables that can carry plenty of weight, are highly versatile and can fit seamlessly into any logistics chain. With the new MARS operating table family, TRUMPF Medizin Systeme has continued to rigorously refine features such as the modularity and flexibility of our operating tables. As a result the MARS has attained the status of an accomplished all-rounder, combining several different specialist tables in one. All this at a great price: even better value for money saves the operating team plenty of energy and the clinic additional costs.

### **Overweight patients carried with ease**

Patient weights up to 360 kilograms

### **Fast and easy manoeuvrability**

Thanks to the electric motor drive and power-assisted brakes

### **Ideal for intra-operative diagnostics and flexible deployment**

Thanks to the 270 mm length adjustment and virtually unlimited modular extensibility

### **Fully compatible with other TRUMPF operating tables**

Table top components can easily be exchanged for extension modules from the TITAN, JUPITER and SATURN operating tables from TRUMPF

### **Extremely low**

For easy operating from a seated position in ophthalmology, neurology and other disciplines

### **All control functions within reach at all times**

Thanks to the infrared controls, foot switch, cable remote control or control panel







## Maximum modularity and flexibility come as standard in a TRUMPF operating table

### **Free choice of table top combinations.**

The basic equipment for the MARS comprises the longitudinally-adjustable table top and, depending on the version, either a seat section and lower back section or a seat section, lower back section and leg section – you choose everything else according to your specific requirements. The individual modules are inter-changeable and can be combined in an unlimited number of ways. This means you can put together precisely the operating table you need while eliminating unnecessary additional expense. All MARS modules are fully compatible with modules from the TITAN, JUPITER and SATURN operating tables.

### **Intelligent modules for greater safety and convenience.**

The attachment points between the individual table top (sections) are mechanically coded, thus preventing impermissible combinations when configuring the table top. To aid orientation during power-assisted positioning, a signal goes off once the 0-position has been reached for the section being moved.

Another convenient feature is that, by simply assembling the table in reverse (i.e., attaching a head section to the seat section) you can permit motorised movement of the head section. All the control units recognise the reversed assembly once the head side has been specified on the table's control panel, and the longitudinal adjustment and power-driven functions of the running gear (the motorised drive and straight-line movement) are activated by remote control.

### **Choice of control units.**

Depending on your own personal preferences and the space available, you can choose from the following control units for the MARS: cable remote control, infra-red remote control or foot switch. The column keypad is based on the principle of two-fingered safety operation.



1

1. Optimum adaptability to patients of all sizes.



2

2. Seat section extension for urology.



3

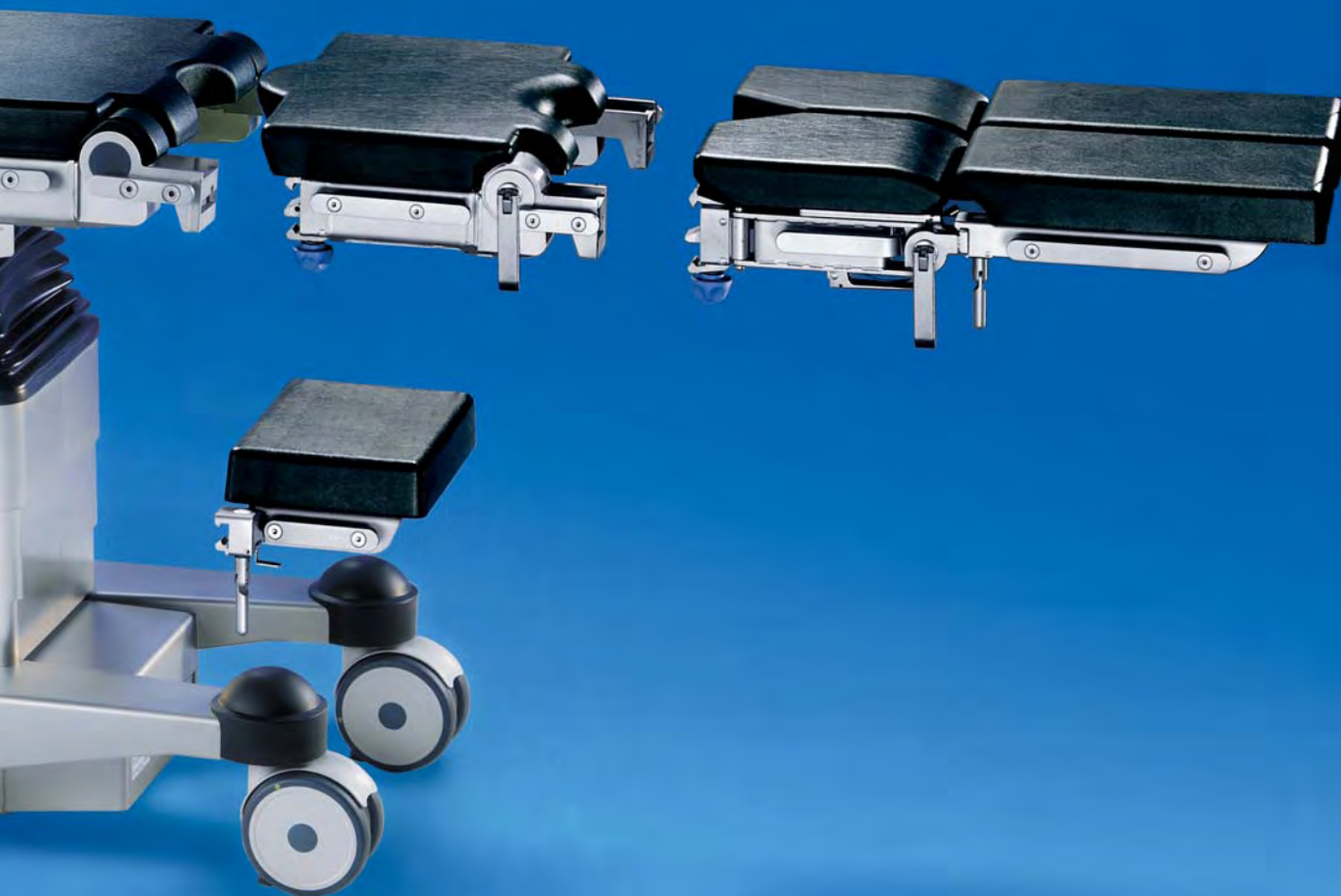
3. Reverse assembly of table top to allow motorised movement of the head section.



4

4. Ophthalmology adapter.





5. Flexible extension units for use in orthopaedics and traumatology.



6. Optimised access to the operating area thanks to extreme spread of the leg sections.



7. Good range of longitudinal adjustment with electrical fixing for precise positioning under the C-Arm.



8. Carbon segments for 360° radiolucence under the C-Arm.



## Safe movement, even with overweight patients, thanks to the power assistance from the electric motors



### **Precision for very heavy patients.**

The MARS is designed for very heavy patients weighing up to 360 kg, and its range of functions sets new standards in this respect. Electrically-powered joints and precise adjustment lighten the workload for the entire operating team. The modular accessories system gives the surgeon the same range of options as in the treatment of patients of normal weight.

### **Moves (almost) by itself.**

The motor-powered running gear does all the hard work when moving patients, while an additional wheel lowers for extra ease of movement and to keep the table moving in a straight line. In contrast, during the entire operation the MARS remains absolutely rooted to the spot on its four electrically-powered extending feet. Forward movement and the motor drive are operated from the remote control.

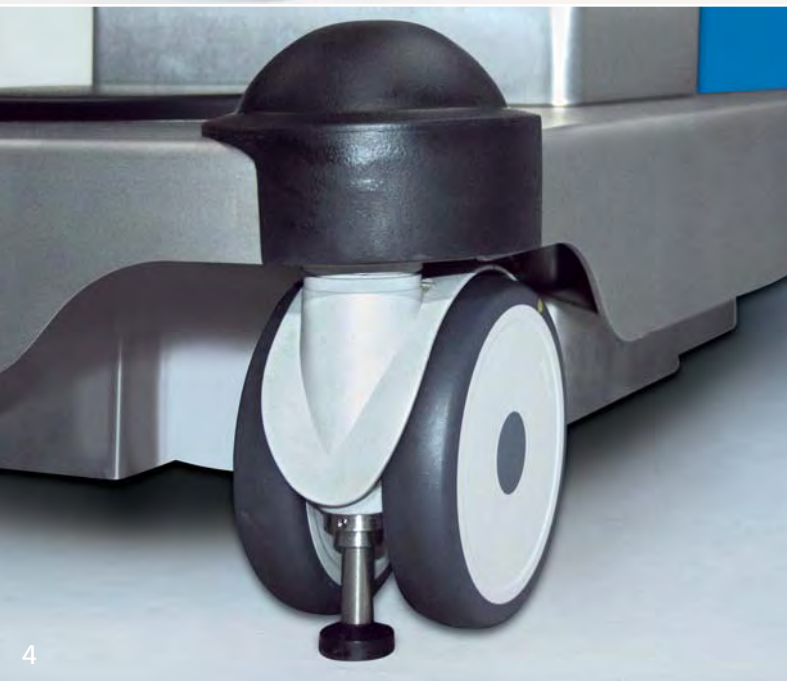
### **Operating from a seated position? No problem!**

For operations while seated in ophthalmology, neurology and other disciplines the TRUMPF offers a special low version of the MARS which retains all the features and options of the normal version of the MARS. The table top height of 600 mm also make the MARS lower version the ideal operating table for shorter surgeons whatever the discipline.

### **MARS International**

Some versions of the MARS are precisely designed to American requirements. Apart from the different electrical current and standard rail dimensions this also involves an extended basic table top with additional leg section since clinic personnel in the USA are used to three-part table tops.





1. All features can also be used with heavily overweight patients.

2. Wide range of positioning height differences catered for by normal and low versions.

3. Quick and easy to move thanks to electric drive motor.

4. The MARS stays firmly in place during operations thanks to its four electrically-powered extending feet.

5. Full use of the low version for instance in neurosurgery using a Wilson Frame.

## The ease of operation and crafted precision of the MARS make a difficult job easier

### **Doing a lot in a small space**

The joints, lifting mechanism and brackets of the MARS remain fully functional even under the heaviest of loads. The length, height, tilt and trendelenburg are all electrically adjustable, as are the attachable leg sections and back section.

### **Convenient flexibility**

The wide angle of adjustment, range of heights and class-leading 25° tilt all help the operating team concentrate on their work, while the raised running gear housing provides additional leg room.

### **Precise mechanism**

The unique attachment points permit the swift repositioning of table sections for changing patient positions, from reverse assembly to full radiolucence with carbon segments.

### **Variable control options**

Safety at the operating table is paramount, which is why TRUMPF offers options for controlling important functions from a variety of locations, by foot switch, control panel, infrared remote control or cable remote control.

### **Remote Diagnostics**

We offer an optional remote diagnostics system. This will allow our engineers to remotely diagnose, and in some cases – remedy, any problems that may arise. If the problem cannot be solved remotely, our engineers will know which spare parts to bring when they visit you.



1. Reverse assembly of the table top permits the precise electrical adjustment of the head section.

2. Joint with soft padded cover. Hygienic to clean like all the padding.

3. Flex and reflex position set by simply pressing a button, for instance via the infrared remote control.

4. Computer-controlled service and remote diagnostics via USB data access.



# General Surgery



# Gynaecology and Urology



7



8



9



10



11



12

1. Abdomino-sacral rectum amputation

2. Positioning for MIC interventions

3. Proctological interventions

4. Struma positioning with head rest system

5. Lateral thorax position

6. Gastric banding

7. Caesarean position

8. Lithotomy position

9./10. Urology

11. Renal positioning

12. Salpingo-graphy



# Traumatology and Orthopaedics







7



8



9



10



11



12

1./2. Tibia extension

3./4. Femoral extension in supine position

5./6. Femoral extension in lateral position

7. Shoulder operation

8. Arthroscopy

9. Prone upper arm positioning

10. Hip operation with extension adapter

11. Hip operation with carbon segment 450

12. Hand surgery using hand table

## Vascular and cardiosurgery



1

1. Vascular surgery



2

2. Cardiosurgery



# Craniotomy



3. Craniotomy semi-seated

4. Craniotomy in the prone position

5.16. Craniotomy in the supine position with carbon head clamp

7.18. Spinal surgery with Wilson Frame



# Ophthalmology and ENT



1. Jaw surgery



2. Ophthalmology



3. ENT positioning

# Paediatric Surgery



4. General surgery

5. Shoulder operation

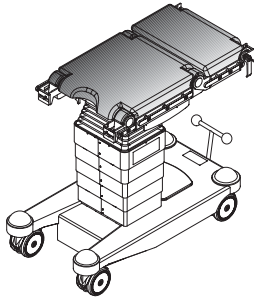
6. ENT



# Technical Details

**MARS 2.01 | Normal version | Base version**

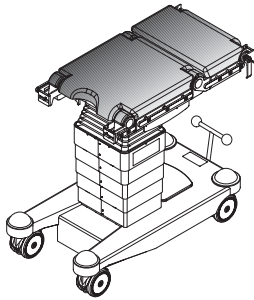
**Part No. 1380094**



Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement, direction and brake controlled via foot switch; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel.

**MARS 2.02 | Normal version | Longitudinal adjustment**

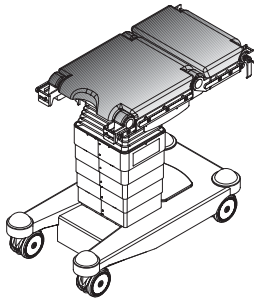
**Part No. 1380095**



Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement, direction and brake controlled via foot switch; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel.

**MARS 2.03 | Normal Version | Longitudinal adjustment | Electrical brake**

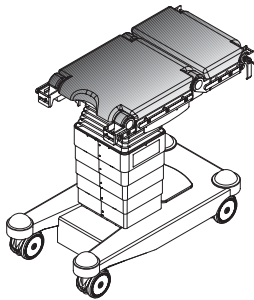
**Part No. 1380096**



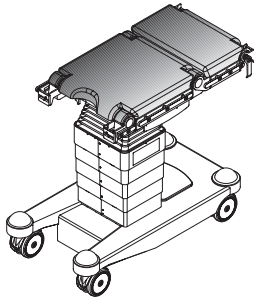
Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel.

**MARS 2.04 | Normal Version | Longitudinal adjustment | Electrical brake | Drive**

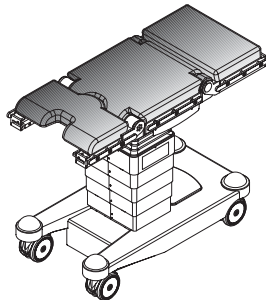
**Part No. 1380097**



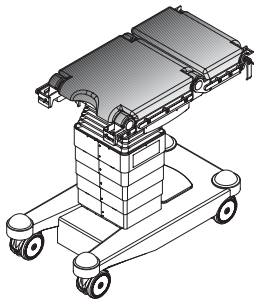
Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; additional remote control-operated lowering drive wheel ensures good manoeuvrability; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel.

**MARS 2.05 | Low Version | Longitudinal adjustment | Electrical brake | Drive****Part No. 1380198**

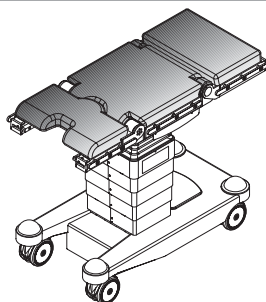
Mobile operating table for patient weights up to 360 kg in low version; with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; additional remote control-operated lowering drive wheel ensures good manoeuvrability; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel.

**MARS 2.06 | US Version | Standard height | Longitudinal adjustment | Electrical brake | 3-part table top****Part No. 1380199**

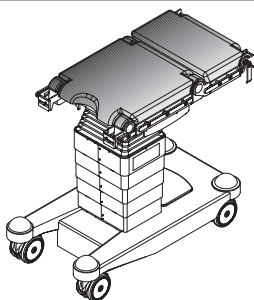
Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section, lower back section and leg section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel. Standard rails and voltage supply complying with US standards.

**MARS 2.07 | US Version | Standard height | Longitudinal adjustment | Electrical brake | 2-part table top****Part No. 1380200**

Mobile operating table for patient weights up to 360 kg with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel. Standard rails and voltage supply complying with US standards.

**MARS 2.08 | US Version | Low Version | Longitudinal adjustment | Electrical brake | 3-part table top****Part No. 1380201**

Mobile operating table for patient weights up to 360 kg in low version; with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section, lower back section and leg section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel. Standard rails and voltage supply complying with US standards.

**MARS 2.09 | US Version | Low Version | Longitudinal adjustment | Electrical brake | 2-part table top****Part No. 1380202**

Mobile operating table for patient weights up to 360 kg in low version; with electromechanical battery or mains-operated table adjustment; table top base with longitudinal adjustment consisting of seat section and lower back section which can be adjusted or extended for any surgical requirements by individual combination with mechanical modular components (upper back section, various types of head and leg section, extension accessories, shoulder adapter, seat section extension, positioning module for head disciplines); the whole reclining area is radiolucent and contains no metallic cross-linkages. Controlled optionally via either infra-red or cable remote control, via the additional key-pad fitted flush in the column housing or via the foot switch; detachable, foam-filled, electrically-conductive pad; stable running gear design featuring 4 double-jointed casters provides extra leg room for the surgeon; movement and direction controlled via remote control; electromechanical braking via remote control-operated extending foot; table top frame, column housing, attachment points, standard rails and running gear frame made of disinfectant-resistant, easy-to-clean stainless steel. Standard rails and voltage supply complying with US standards.



## Adjustment ranges and technical data



*Flex or reflex position*

### Technical Data

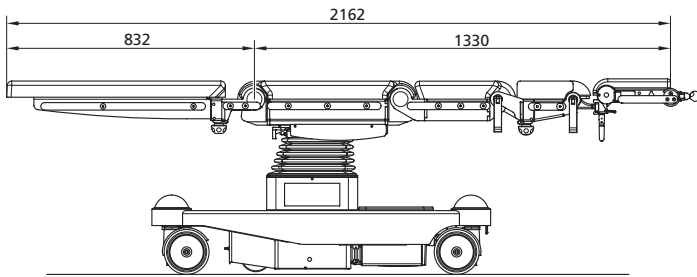
Drives	electric motors
Height adjustment (without pad)	
Standard height	700 mm – 1,100 mm
Low version	600 mm – 950 mm
Longitudinal adjustment (manual)	270 mm
Trendelenburg / reverse trendelenburg	+ 35° / - 25°
Tilt	± 25°
Leg section up / down	
With two-part table top	± 90°
With three-part table top	+ 90° / - 105°
Lower back section up / down	+ 80° / - 40°
Maximum patient weight	360 kg

### Adjustment ranges

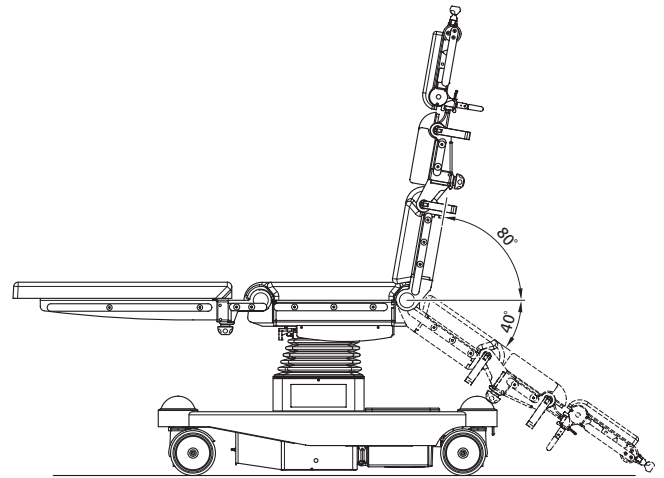
The very wide adjustment ranges in both the manual and powered system make the MARS outstanding in its performance class:

- Patient weights up to 360 kg
- 700 mm to 1,100 mm height adjustment in the standard version
- 600 mm to 950 mm height adjustment in the low version
- + 35° / - 25° Trendelenburg / reverse trendelenburg
- ± 25° tilt
- 270 mm longitudinal table top adjustment
- Variants with electromechanical running gear drive and electromechanical brake

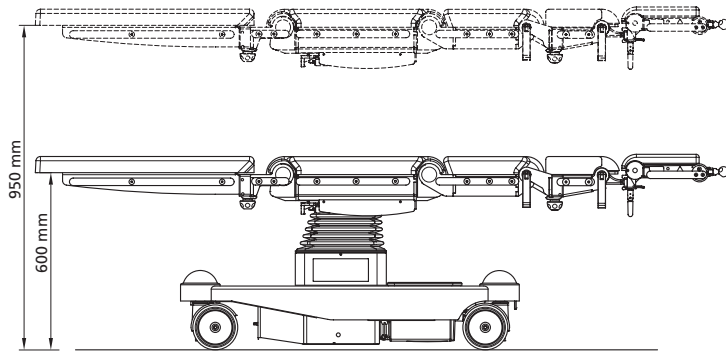
*Dimensions*



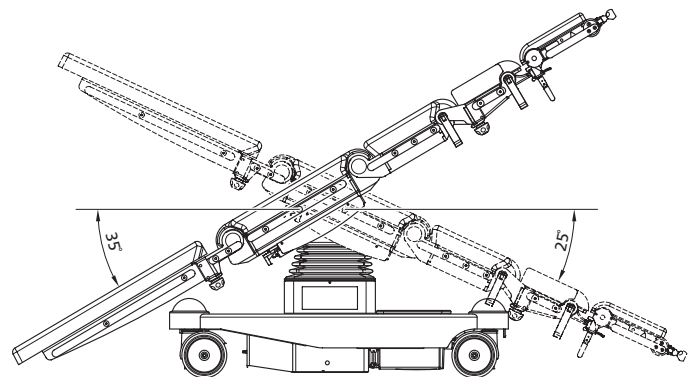
*Back section up / down*



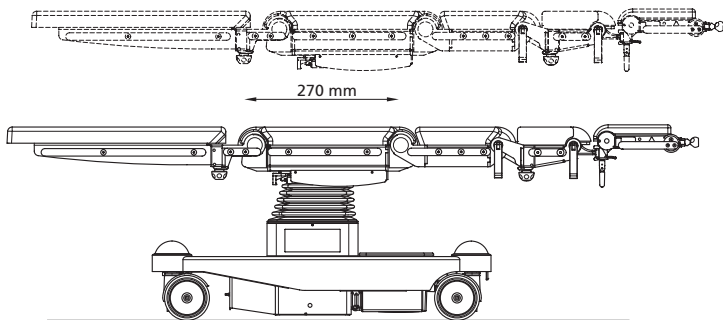
*Height adjustment*



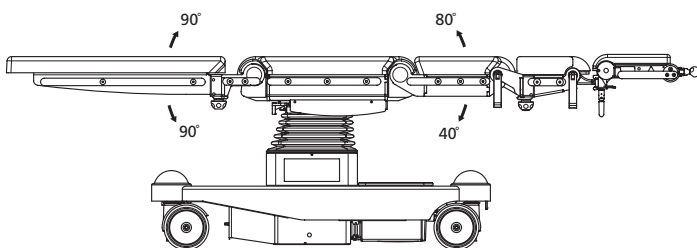
*Trendelenburg / reverse trendelenburg*



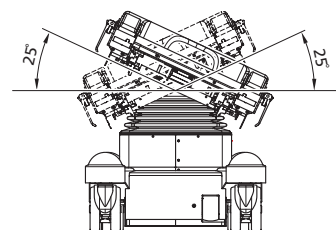
*Longitudinal adjustment*



*Leg section up / down*

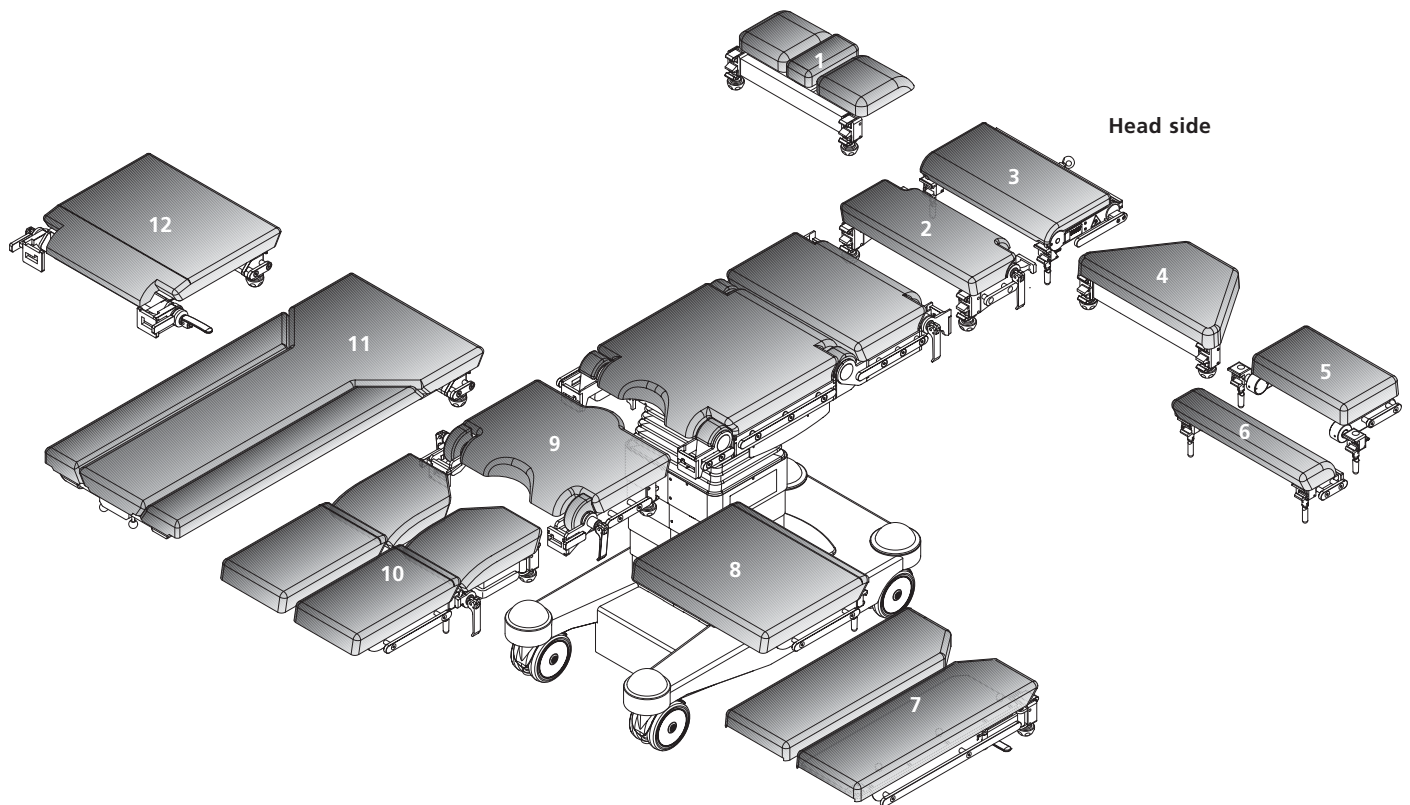


*Tilt*





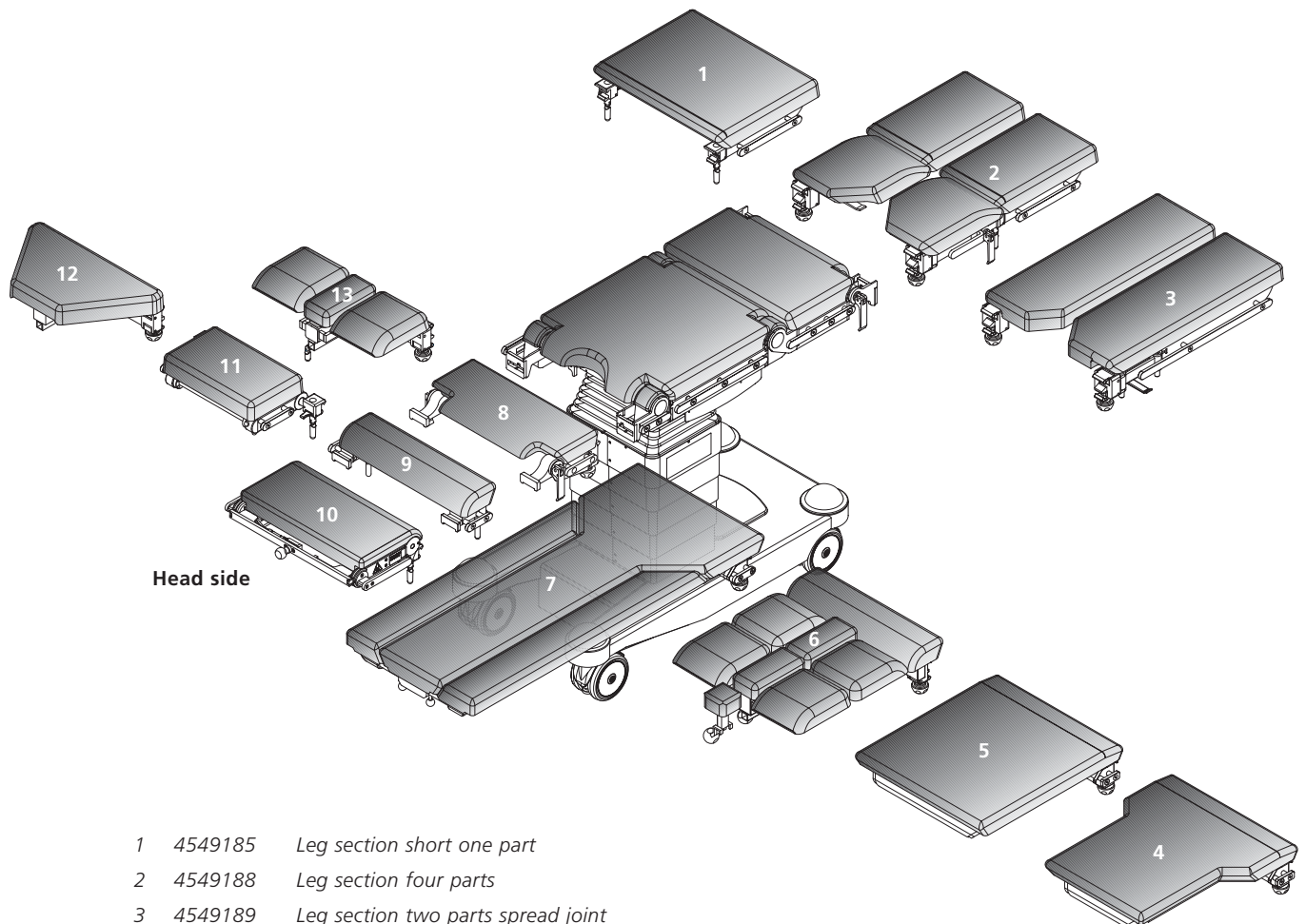
## Components for maximum flexibility



- |    |         |                                         |
|----|---------|-----------------------------------------|
| 1  | 4544103 | Shoulder positioner                     |
| 2  | 4549101 | Upper back section                      |
| 3  | 4549601 | Head section 530 double joint           |
| 4  | 4549176 | Ophthalmology adapter, special retainer |
| 5  | 4549151 | Head section single joint comfort       |
| 6  | 4549339 | Table top segment 130                   |
| 7  | 4549189 | Leg section two parts spread joint      |
| 8  | 4549185 | Leg section short one part              |
| 9  | 4549106 | Pelvis extension JUPITER / MARS         |
| 10 | 4549188 | Leg section four parts                  |
| 11 | 1227688 | Table top segment carbon three parts    |
| 12 | 1277921 | Table top segment carbon 450            |

Accessories for extensions are connected via the adapter (foot-sided).

# Components for maximum flexibility (reversed assembly)



- |    |         |                                         |
|----|---------|-----------------------------------------|
| 1  | 4549185 | Leg section short one part              |
| 2  | 4549188 | Leg section four parts                  |
| 3  | 4549189 | Leg section two parts spread joint      |
| 4  | 1277923 | Table top segment carbon narrow         |
| 5  | 1277922 | Table top segment carbon 600            |
| 6  | 1266242 | Shoulder segment                        |
| 7  | 1227688 | Table top segment carbon three parts    |
| 8  | 4549101 | Upper back section                      |
| 9  | 4549339 | Table top segment 130                   |
| 10 | 4549601 | Head section 530 double joint           |
| 11 | 4549151 | Head section single joint comfort       |
| 12 | 4549176 | Ophthalmology adapter, special retainer |
| 13 | 4544103 | Shoulder positioner                     |



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