

MAQUET

A CLASS OF ITS OWN MAGNUS OPERATING TABLE SYSTEM

SURGICAL WORKPLACES





A SYSTEM FOR ALL APPLICATIONS **MAQUET – THE GOLD STANDARD**



Modern system solutions: The procedures that are carried out every day in clinical practice can no longer be seen in isolation. Efficient workflows demand that operational equipment and work process be optimally matched to each other. The MAGNUS operating and transport system is an integral component of a closely meshed logistics system. Coordination and ergonomics for users and comfort for patients are just as important as the commercial aspects. But the central factor is always the same – time.

This is true not only from the point of view of business management, but above all from the perspective of efficient, gentle patient treatment. With its MAGNUS operating table, MAQUET has created a system which links patient care, the operating area and post-operative treatment much more closely with each other. And that benefits both the patient and the user.

MAQUET – The Gold Standard.

A CLASS OF ITS OWN THE MAGNUS OPERATING TABLE SYSTEM

MAGNUS links functional areas: In addition to the actual operation, preparation, transport and post-operative care play a further major, logistically complicated role in parts of the operating procedure. MAQUET has therefore been working for years on solutions aimed at integrating all these individual areas and the various challenges that they present into a variable, overarching system. The company's MAGNUS operating table system is the convincing culmination of this effort. Because of its special chassis frame and the table surface that is adjusted by electric motors, MAGNUS allows patients to be transported in a seated position from the ward directly to the operating theatre. The large wheels and ease of steering easily overcome any uneven floors and just one member of the nursing staff can move the table safely and without any risk of back injury.



MAGNUS expands the operating spectrum: In minimally invasive surgery in particular, extreme positions are often required in order to provide an optimum exposure area through the use of gravity. Here, MAGNUS sets new standards, with tipping angles of up to 80° and lateral tilt angles of up to 45° – and these can be combined. Together with the modular elements which have been designed to be used together, this opens up almost unlimited positioning opportunities and new, ergonomically improved working methods in surgery.

- The Easy-Click system and various positioning modules guarantee maximum flexibility
- Special cushions ease pressure superbly well
- Intuitively operated control interfaces ensure rapid, uncomplicated intra-operative position changes
- The table column, with its inclining saddle technology, allows extreme tilt angles and maximum freedom of positioning for optimum radioscopy



Just one movement is enough to interchange the various MAGNUS modules easily and safely using improved Easy-Click technology.



Pressure-easing cushions are easy to clean and do not block X-rays



Intuitive operating interface with illuminated keypad area and extensive position memory



The MAGNUS operating table column allows extreme tilt angles, and ensures that the table surface can be extended a particularly long way, both cranially and caudally, for radioscopy.



*MAGNUS sets new standards
of mobility and flexibility.*

MOBILITY AND VARIABILITY MAGNUS TRANSPORTERS



Technology for the logistical challenges of everyday life in the modern clinic

Fast, safe and more comfortable for nursing staff: Transporters with additional functions are the answer to the increasing requirements of clinical procedures, both now and in the future. Because of its special chassis frame and the table surface that is adjusted by electric motors, MAGNUS makes it easier to transport patients in both seated and lying positions within the clinic.

Operating on both in-patients and out-patients: The operating table surface on the transporter is CE-approved as an operating table. With operations on out-patients, patients can therefore be brought in, operated on and taken out again on the table surface – without any need to transfer them. The table surface is fully compatible with the operating table columns in the operating department, which provides incredible flexibility and smooth transfers.





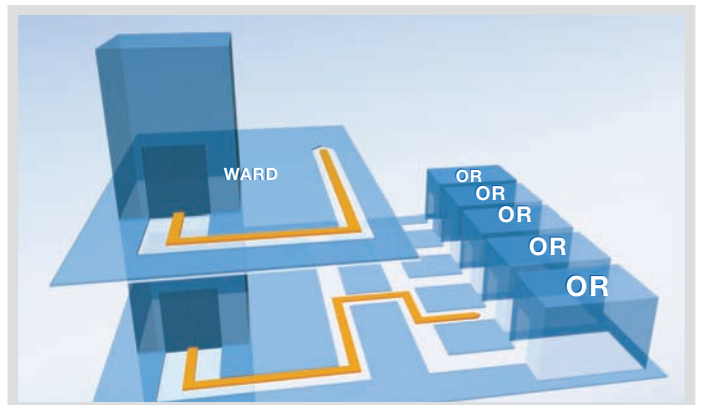
LOGISTICS AND ERGONOMICS MAGNUS TRANSPORTERS

Supporting both patients and staff: MAGNUS avoids patient transfers, helps protect the back muscles of nursing staff and supports patients optimally in every phase of the intervention with carefully tuned positioning options. In fact, it goes way beyond the facilities offered by a normal operating table, and can be seen instead as a modern clinic management system.

Just one member of the nursing staff can easily move MAGNUS. The large wheels move smoothly over uneven floors or lift thresholds and make lining up easier. In the operating theatre, the upright back plate ensures stable patient support, if spinal anaesthesia is required, for example, or to ease the patient's breathing post-operatively.



Moving around wide, immobile beds is a strain on both staff and patients.



All sorts of floor situations have to be overcome on the route between the individual areas and functional units.



All module elements are connected easily, quickly and safely using Easy-Click. One touch is enough.

FLEXIBILITY AND MODULARITY THE MAGNUS OPERATING TABLE SURFACE

MAGNUS facilitates every surgical interventions: The operating table surface, with its perfect height adjustment, helps surgeons to relax during their work whether they are standing or sitting. Extreme adjustment ranges, especially for tilting and tipping, simplify and optimise patient positioning, making the system more functional than ever before.

Maximum adjustability – a new level of mobility in operating tables: The inclining saddle principle allows even the most extreme adjustments to be made, with angles that go way beyond what has been normal to date. MAGNUS thereby opens up new possibilities for minimally invasive surgery in particular. But other surgical disciplines will also benefit from this new development – MAGNUS has significant potential for the future, even today.



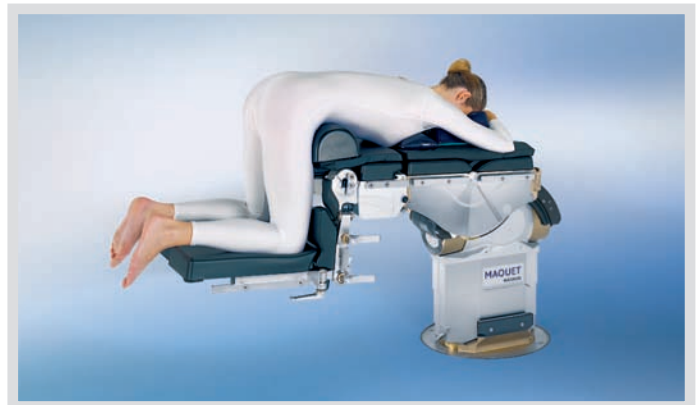
The modular design principle leaves nothing to be desired when it comes positioning possibilities.



Extreme positioning for intra-operative radioscopy and excellent access for the OR team. Positioning example: nephrectomy, side position



Positioning example: thoracic surgery, side position



Knee-elbow position for intervertebral disc operations or rectal surgery with the four-part standard leg plate (no special accessories necessary)

SUPPORT AND RADIOSCOPY THE MAGNUS CUSHION CONCEPT AND POSITIONING

Ideal conditions for radioscopy between operations:

Because of the extreme positioning possibilities, MAGNUS comes as close as possible to the vision of the “floating” patient who can be moved in all directions. Ideal radioscopy facilities and free access to the area to be operated on make working in the operating theatre much easier.

Positions that reduce pressure: Through its many studies on foam types and structures, heights and covering fabrics, MAQUET has developed operating table cushions that offer maximum positioning comfort and patient safety. These cushions distribute the pressure particularly efficiently, reduce shearing forces and guarantee a secure side hold.



All cushion supports can be removed without tools and are easy to clean and disinfect.



Maximum extension, caudal



Maximum extension, cranial



The height-adjustable table column provides an ergonomical working height when seated.



Maximum height for working when standing up



*Comfortable for patients –
and fewer back problems for
surgeons and their assistants*

CONTROL AND POSITIONING MAGNUS MANUAL OPERATION

Intuitive operation – easier than ever: The MAGNUS manual operating device, with its own display and self-explanatory symbol keys, allows rapid, intuitive operation. The integrated program memory can store and reproduce up to ten different patient positions. Temporary storage (e.g. if the C arm is used during operations in the flat position) and resetting to the operating position are also possible. The display provides useful status information and draws attention to any operating errors. Different language versions are also available. In addition, the illuminated keypad makes working in darkened MIC rooms considerably easier. The operating interface is available as a cable-connected pendant or remote IR device and guarantees safe operation of the operating table system even in the most critical phases of the operation.



Intuitive use of symbols on the manual operating device



Charging station for remote operating interface

Illuminated keys make working even in darkened operating theatres safe and convenient





STABILITY – FOR SAFE OPERATIONS MAGNUS OPERATING TABLE COLUMNS



Extreme positions and ideal access: The heart of the MAGNUS system is the operating table column. Its inclining saddle principle allows tipping angles up to 80° and lateral tilt angles up to 45°; its stable tilt positions guarantee optimum radioscapy conditions and free access to the operating area. The operating table surface can be passed simply from the transporter to the table column without any transfer work. Easier on the staff – gentler for the patient.

Mobile operating table column: The mobile column can be moved together with the operating table surface using a transporter and set down at any location required. The power is supplied by maintenance-free batteries which are integrated into the pedestal and which last for at least a week of operations.

*The heart of the MAGNUS system:
the operating table column with inclining saddle technology*

THE SYSTEM – SIMPLE AND VERSATILE TO MEET THE CHALLENGES OF TODAY AND TOMORROW



MAGNUS allows ideal positioning and makes surgical interventions more flexible: The perfectly coordinated modular design of the operating table surface creates functions and positioning possibilities which make both micro-surgery and major operations far simpler and more flexible. For both out-patient and in-patient surgery, the table system is designed ergonomically, to allow relaxed working and maximum patient comfort. In combination with the innovative inclining saddle technology used in the table column, the extreme positioning possibilities and superb cushioning concept, this creates an overall system that meets tomorrow's requirements today.

A perfectly tuned system





Connecting bracket with standard interface for skull clamp and other head supports (1180.36A0)



Universal module for adjustment to patients of different sizes (1180.55A0)



Lightweight transfer board to support patients' legs outside the operating theatre, e.g. during anaesthesia (1180.57A0)

Torso support
1180.10A0

Motor-driven joint module set
1180.11 B0

Pair of leg plates, 4-part
1180.54A0



POSITIONING EXAMPLES SUPINE POSITION



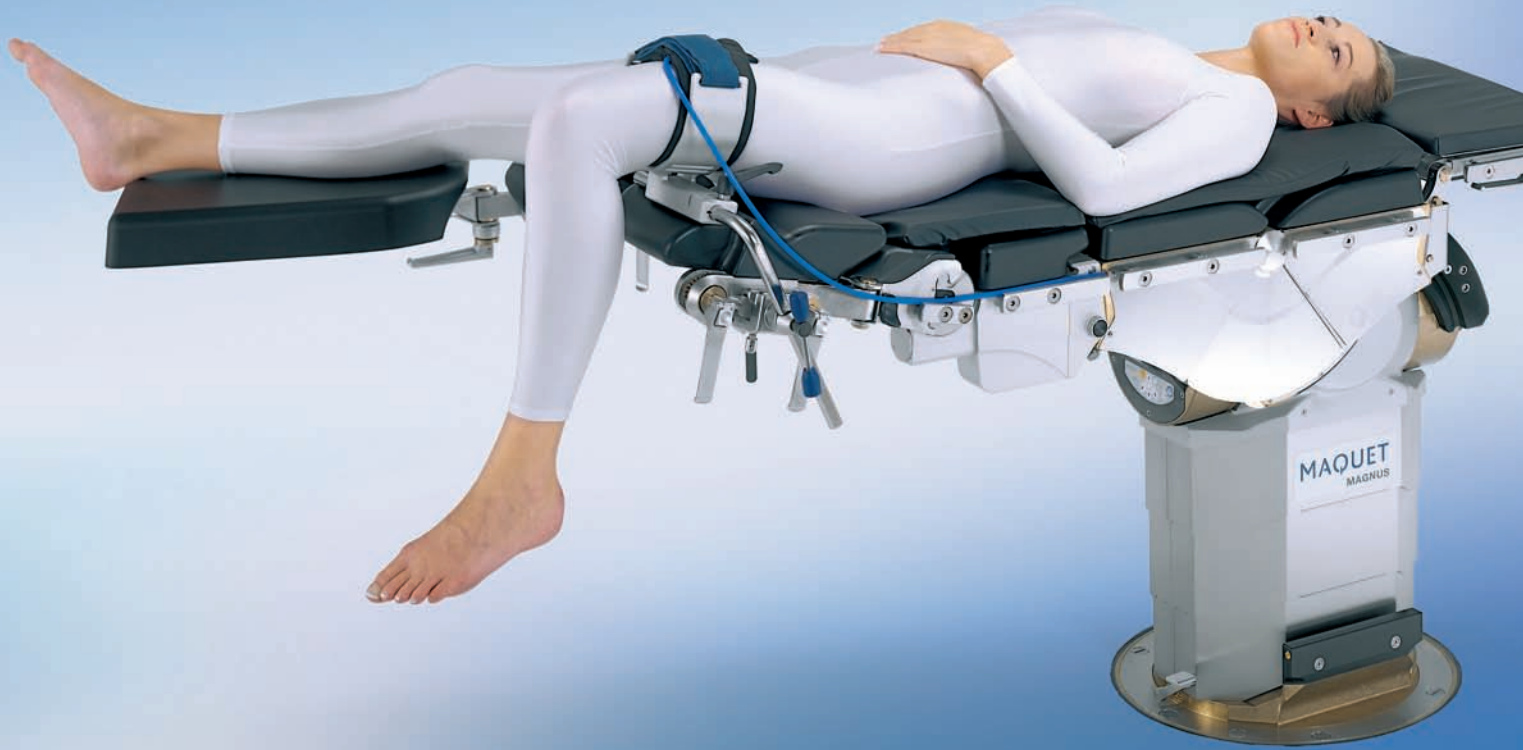
Maximum head lowering angle up to 80° with lateral tilt up to 45° at the same time



Stable position even with extreme tilt

Positioning example: foot lowering angle approx. 50°; max. to 80°





Knee arthroscopy with lower leg swinging free



Goitre operation with relaxed neck position



Conventional and laparoscopic cholecystectomy with optimum access to operation area

Note: All the patient positions shown are given by way of example and are incomplete from a nursing/medical point of view. Further accessories, such as body supports or vacuum mattresses, may need to be used for complete patient safety.

POSITIONING EXAMPLES LITHOTOMY POSITION



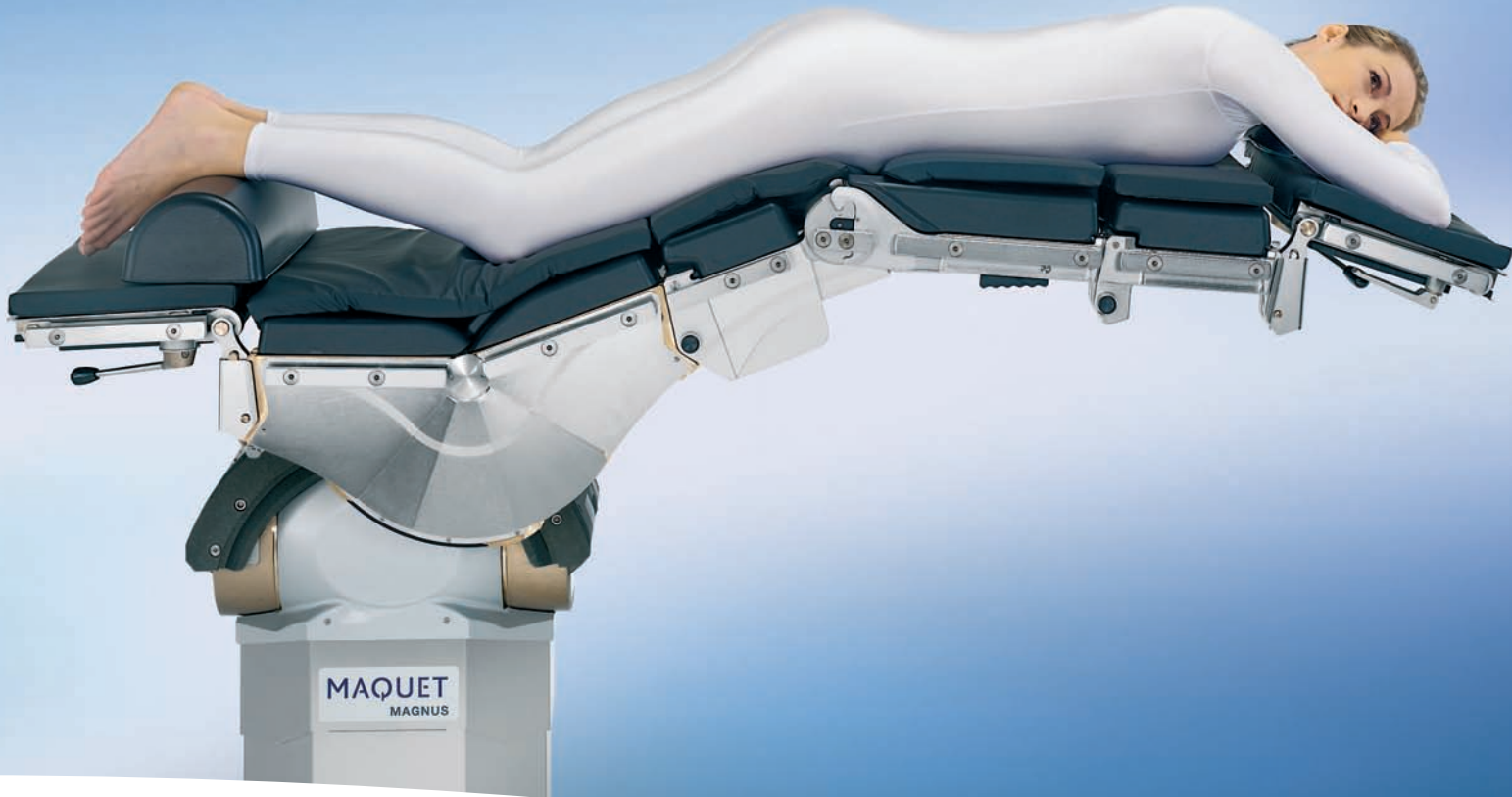
Preparation in gynaecology. Induction phase with transfer board



Intervention in lithotomy position – leg supports motor-operated

Neurosurgery: The length of the back plate can be adjusted to suit patients of different heights.





*Spinal surgery in prone position
with ideal access for the C arm*

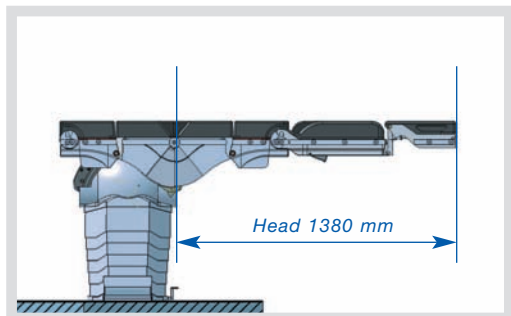
POSITIONING EXAMPLES KNEE ELBOW POSITION



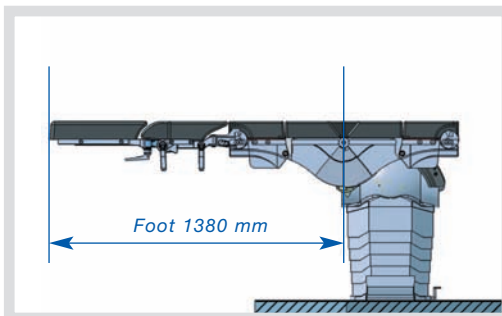
*Preparation and position for
spinal and rectal surgery.
Inclining saddle technology and
the modular elements create a
comfortable position for the
patient and the clearest possible
access for the surgeon.*



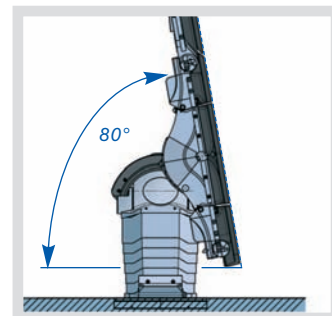
TECHNICAL DESCRIPTION



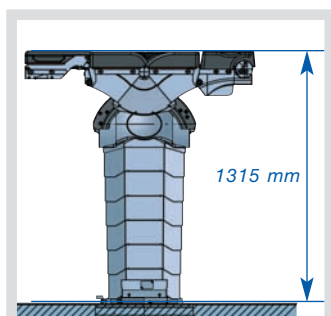
Window suitable for radioscopy with positioning in head direction



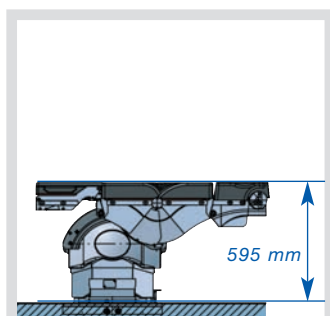
Window suitable for radioscopy with positioning in foot direction



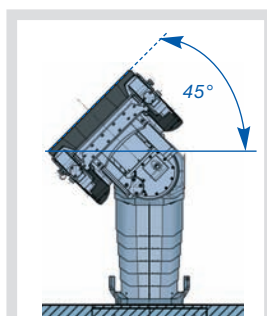
Foot/head tilt max. 80°



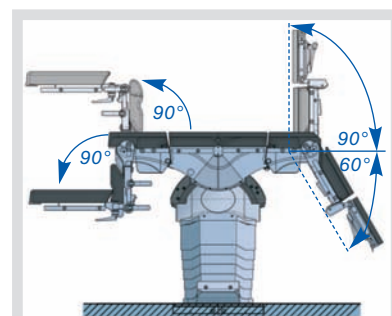
Highest position including cushioning



Lowest position including cushioning



Tilt to left/right max. 45°



Back plate position: up/down +90°/-60°,
Leg plate position: up/down +90°/-90°,
Lower leg position: up/down +90°/-90°

MAGNUS OPERATING TABLE COLUMN

- Operating table column to take system-compatible operating table surfaces
- Electronically controlled column drive
- Operating table surfaces can be taken over from both sides and head or foot first, as required. Automatic detection of direction of operating table surface on the column and assignment of function keys on operating device accordingly
- Horizontal adjustment of column head (post-operative) either by calling up the zero setting function using the operating device or by retraction of the transporter and control of the “Up/down” column function
- Control of the motor-driven movements of the operating table system via IR operating device, pendant operating device or foot-operated switch and via the additional operating panel integrated in the operating table column
- Two splash-proof plug connections for the parallel connection of pendant operating device and foot switch
- Cr-Ni steel column cladding

AVAILABLE IN FOUR VERSIONS

- **1180.01A0 Stationary version** for installation in floor assembly plate 1120.98A0 or 1150.98A0
 - Liquid-tight assembly, flush with finished floor edge; can be rotated through approx. 350° and fixed in any position
 - Power supply to operating table column via stationary transformer unit with battery buffer
- **1180.01B0 Stationary version** with floor mounting plate for installation on finished floor
 - Power supply same as 1180.01A0
- **1180.01C0 Mobile version**, can be moved with transporter
 - Power supply to operating table column through maintenance-free batteries integrated into floor slab; operating capacity between two charges: approx. 1 operating week
 - Batteries are recharged and operating table column is operated via mains power supply through a mobile transformer unit which is included in the delivery

OPERATING TABLE SURFACE

1180.10A0 Modular universal operating table surface

- Operating table surface as symmetrical basic unit, divided twice, with interfaces identical on both sides for individual configuration in accordance with surgical requirements (plug-in module can be selected optionally)
 - Positioning surface between bars without cross-struts, suitable for radioscopia for intra-operative use of image amplifier
 - Operating table surface frame and side rails (10 x 25 mm) made from Cr-Ni steel
 - X-ray-permeable hybrid cushioning, 80 mm thick, electrically conductive. The support plates can be removed without tools for easy cleaning
 - The centre part of the sandwich-structure cushion (lying protection with visco-elastic foam and two-way stretch covering) provides excellent pressure distribution and reduces shearing forces
- Operating surface is powered by electric motors for the longitudinal extension function (open for radioscopia with C arm) and “back plate up/down” and “leg plates up/down” functions
- All drives with electronically regulated gentle start-up for smooth start-up of every movement for maximum patient comfort.
- Reproduces the most recently saved patient position after C arm checking in different patient position via manual control device
- Up to 10 patient positions can be easily stored and accessed using the manual control device. Horizontal alignment of all drive surface segments including operating column head via zero setting function. The practical horizontal alignment of the individual functions meets medical requirements and avoids unfavourable intermediate positions for the patient.

- Operating surface can be adjusted using plug-in modules (see below) for various specialist surgical disciplines or different patient body sizes.

Interfaces for the simple, safe adaptation of modules, such as:

- motor-driven joint module 1180.11A0/B0
 - standard back plate 1180.31A0 for general surgery
 - extension plate 1180.32A0
 - transfer board as leg rest for the initial phase in lithotomy positions 1180.57A0
 - leg plates, divided into 4, can be bent, spread and positioned upright for knee-elbow positioning 1180.54A0
 - other special accessories, such as shoulder module, carbon fibre reinforced plastic modules
 - plug-in extension
 - double-joint head plate 1180.53A0
- Very easy adaptation guaranteed via snap closure (Easy Click) – immediately holds devices tight to prevent them accidentally coming loose.

EXTERNAL TABLE SURFACE CONTROL

- As an option, the table surface can be adjusted independently of the column on the transporter. This means that nursing or anaesthesiological requirements can be met in terms of changing the patient position on the approach or in the recovery room.
- In addition, the table surface can be moved into the beach-chair position on the transporter. This allows patients to be transported over long distances in a comfortable position.

Technical data	
Length of universal table surface: head-side configuration with 1 pair joints, back plate, extension plate and head plate	1952 mm
Length of universal table surface: leg-side configuration with 1 pair joints, head plate and leg plates	2033 mm
Width of universal table surface	540 mm
Width across side rails	580 mm
Radioscopia window between bars	410 mm

Motorised adjustments	
Height (upper edge of cushion) Stationary column	595 – 1315 mm
Height (upper edge of cushion) Mobile column	625 – 1345 mm
Inclination head/foot down	80°/80°
Tilt, left/right	45°/45°
Longitudinal shift	460 mm
Back plates up/down	+90°/-60°
Leg plates up/down	+90°/-90°
Max. patient weight incl. accessories	250 kg

WORLDWIDE AND CLOSE TO THE CUSTOMER **MAGNUS SERVICE AND TRAINING**

Expert service: MAQUET's own Service Division can be reached any time via the hotline. The Service Team provides customers worldwide with experienced specialist staff who will do everything to avoid or minimise down times in the operating theatre. In addition, regular maintenance by MAQUET helps increase the functional reliability of our medical equipment.

First aid on the spot: The appropriate hospital engineer can make an initial diagnosis immediately using the Ethernet interface on the MAGNUS Operating Table System. In this way, any faults which may occur can often be repaired on the spot, or important information can be passed on to the MAQUET service engineer which makes repairs easier and thus saves costs. A modem connection is also used to prepare external fault diagnoses and to provide software updates.

Ready to face the future: A modern communication centre, the MAQUET Surgical Academy offers a wide range of specialist events on subjects relating to medicine, health policy and hospital management.

The infrastructure of this unique facility includes an exhibition hall presenting the complete product range, two auditoriums with multi-media equipment, four conference rooms and a number of fully equipped, functioning operating theatres and intensive-care rooms.

Experts working with small groups in workshops pass on information that is useful in the everyday life of any clinic. Practically based teaching materials complete the range of services we offer, including an introduction to positioning for operations, which explains surgical positioning step by step in clear and practical terms.



MAQUET's Surgical Academy in Rastatt



MAGNUS with an Ethernet interface for rapid initial diagnosis



*Competent experts are easily
reached by telephone*

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