Dornier
NAUTILUS

Revolutionary concept with unrivaled flexibility

The versatile X-ray workstation for urological applications

Dornier *MedTech*

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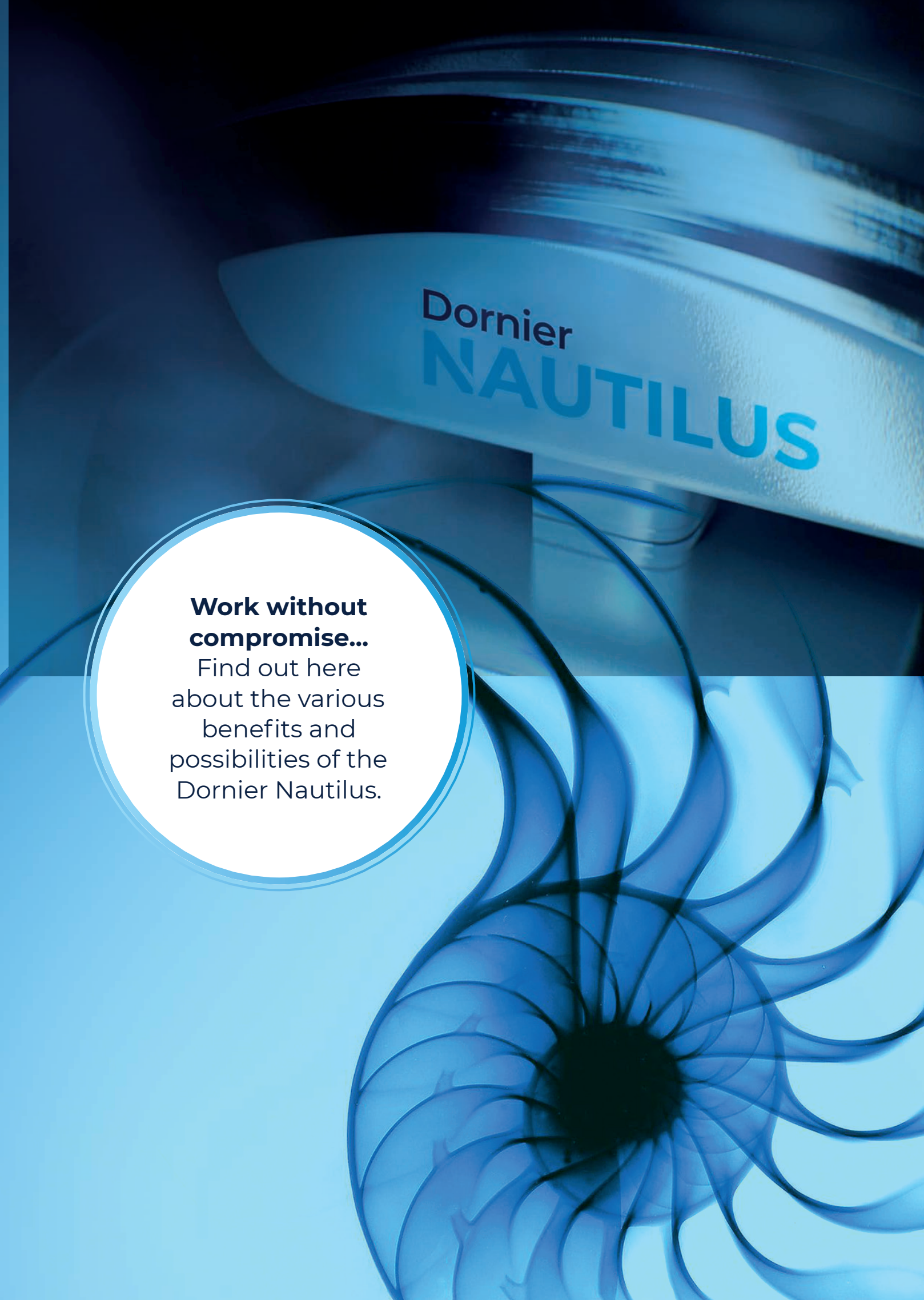
For urology – developed by experts

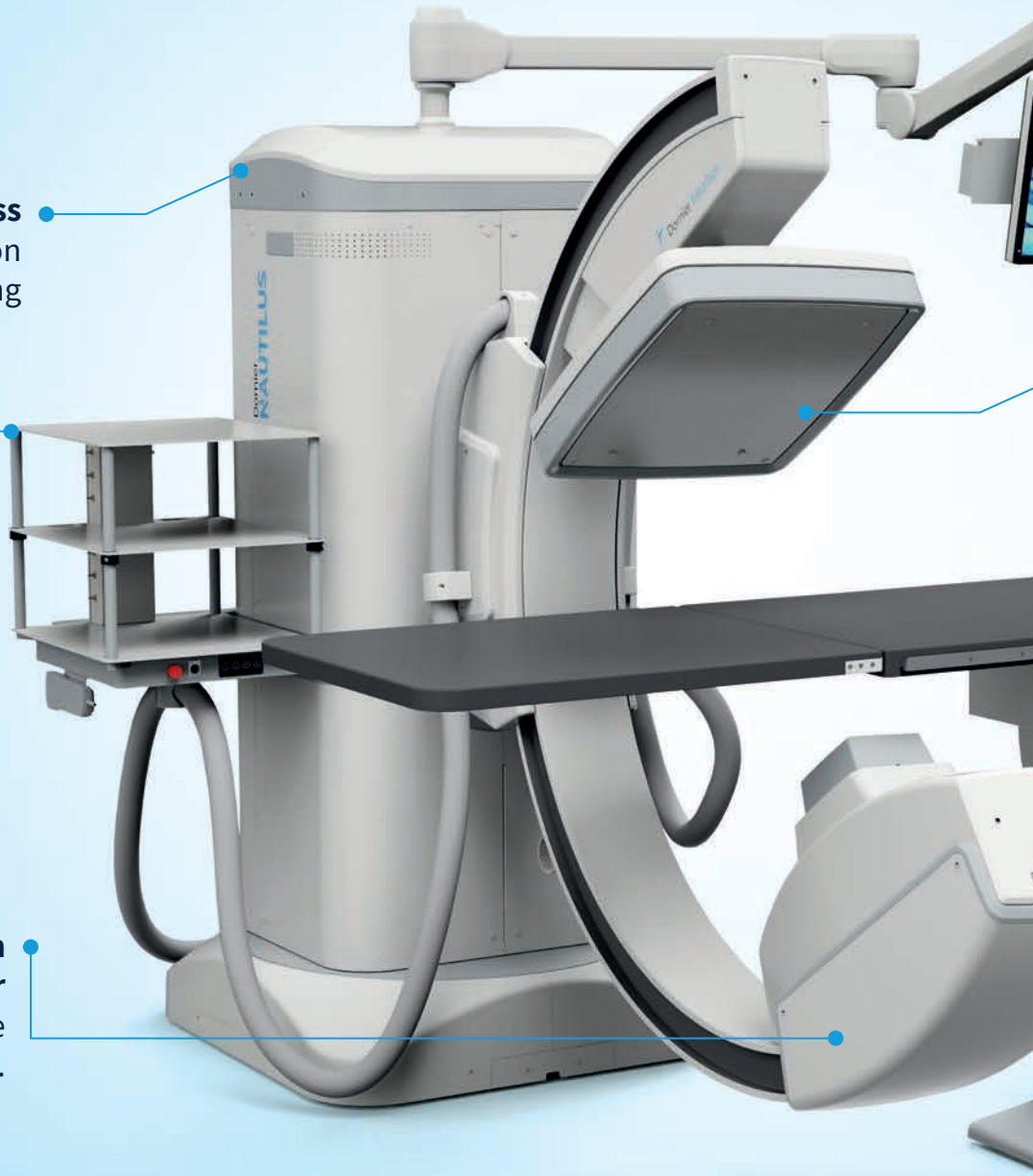
Their ingenious structural design has proven itself for millions of years and secured them a unique position in nature: the nautilidae – a genus of underwater animals that are among the oldest creatures on earth. Their Latin name, Nautilus, was given at the start of developing a revolutionary X-ray workstation for urology, setting new standards in technology and design.

After three years of development, it's finally here. The Dornier Nautilus combines the flexibility of a mobile C-arm and the performance of a fully integrated workstation. The innovative Dornier Nautilus provides you, your practice staff and your patients with the ultimate in efficiency, convenience and safety.



Work without compromise...
Find out here about the various benefits and possibilities of the Dornier Nautilus.

The Dornier Nautilus at a glance. Benefits and possibilities.



Free table access
C-arm parking position with 90° swiveling

Accessories shelf
Three compartments for surgical equipment

80 kW high frequency generator
Immediate image acquisition without delay.

360 ACCESS

True 360° table access with free-standing treatment table.

Unrivaled flexibility through C-arm parking position.

High-resolution imaging from **limitless angles** with flexible C-arm.

SYNC

Full-ranged C-arm and table movements.

Independent or with sophisticated synchronisation

21 inch monitors
Flexible monitors due to integrated support arm

43 x 43 FPD with SID hub
Detector-to-source flexibility captures KUB (Kidney-Ureter- Bladder) in one shot.

Motorized free-standing table
Isocentric and non-isocentric Trendelenburg table tilting.

Fully radiolucent table top made of carbon fiber.

Urology applications

- Percutaneous endourological procedures
- Transurethral procedures
- Diagnostic urology procedures
- Contrast studies
- Micturition Cystourethrogram (MCU)
- Laparoscopic procedures
- Pediatric urology procedures

Also for X-ray examinations in radioscopy, radiography and diagnosis of:

Vascular surgery, interventional gastroenterology, endovascular applications, simple interventional radiology, orthopedics, pacemaker implantation, catheterization procedures, optional digital subtraction angiography (DSA), traumatology, angiographic procedures, electrophysiological studies, pediatrics, respiratory endoscopy

Maximize system utilisation with wide spectrum of applications.

Designed for urology, (interventional) radiology, gastroenterology and more.

Raising new standards in radiation protection through the flexible positioning of x-ray tube under table.

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Large variety of positions and perspectives

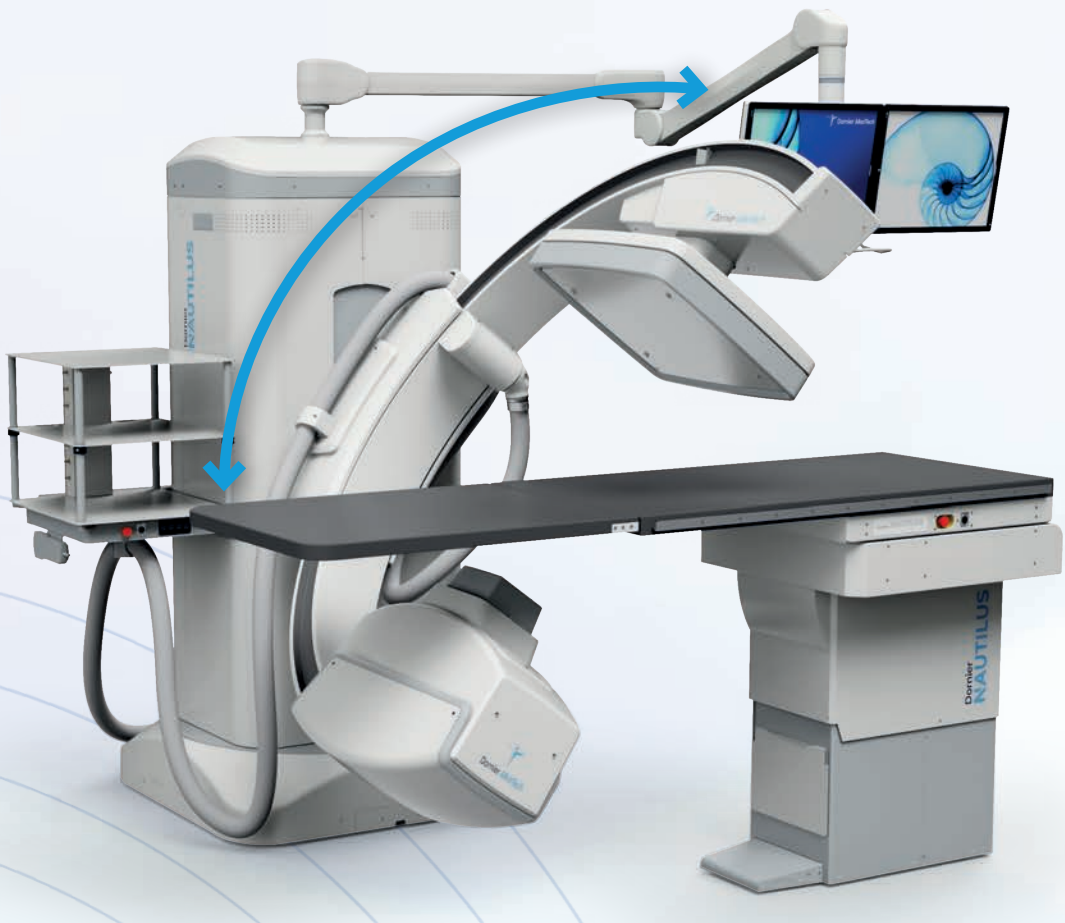
An X-ray unit detached from the patient table results in entirely new flexibility and usage options. With the numerous rotation options of the C-arm, all the required images can be taken conveniently and with consideration for the patient without having to tilt the table or reposition the patient.

The motorized table can be brought into both the isocentric and the regular Trendelenburg position. The innovative parking position for the C-arm offers higher work efficiency and greater convenience as the operating table is then freely accessible on all sides.

The Nautilus is a product that has not existed in urology until now. It combines several devices in a harmoniously functioning system and is precisely coordinated to the requirements and needs of urologists. To get right to the point: Nautilus suits the doctor, staff and patients – not the other way round.

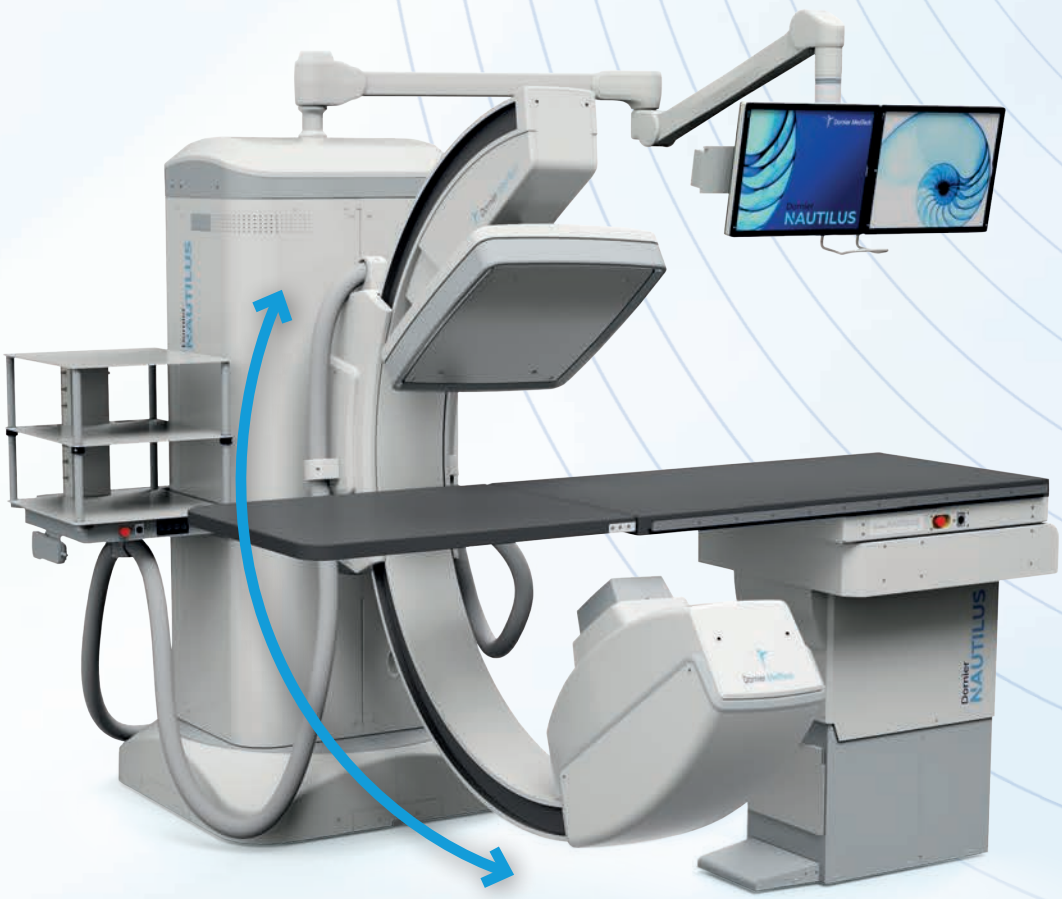
Matthias Kuchinke, Product Manager and Application Specialist at Dornier MedTech

Lateral rotation of the X-ray C-arm



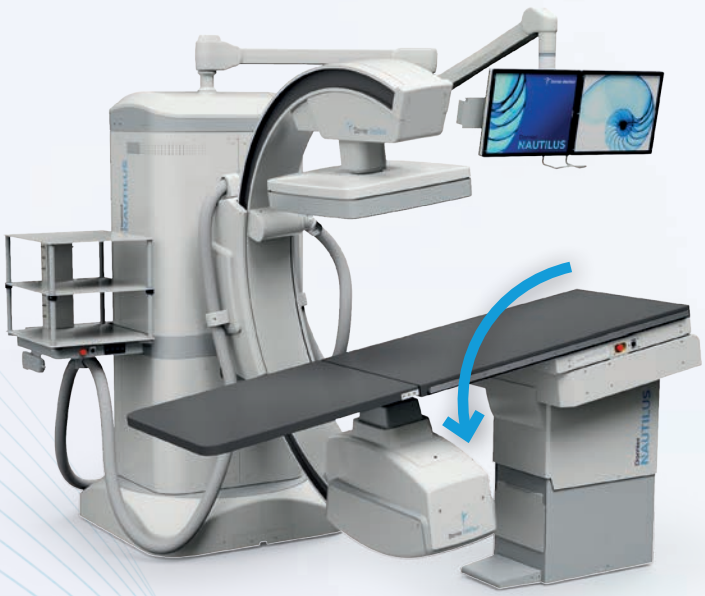
- Uninterrupted views: With its lateral rotation, artifacts and disruptive factors are eliminated during the treatment.
- Improved guidance: The simultaneous use of orbital and lateral rotation enables precise localization and display of the treatment area.
- Continuity: Frequently required basic positions can be stored in three memory positions. Three additional system storage positions provide the consistently same perspective as needed.
- Under control: The current positions of the C-arm and patient table are permanently displayed on the monitors in the control and treatment room.

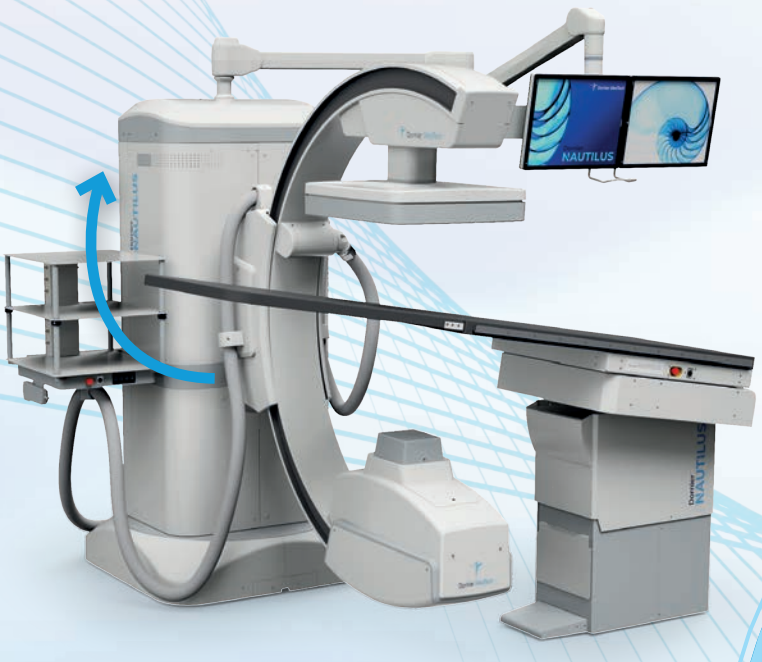
Orbital rotation of the X-ray C-arm



- Uninterrupted views: With its orbital rotation, artifacts and disruptive factors are eliminated.
- New perspectives: orbital rotation provides greater certainty, especially in PCNL or ERCP.
- Lateral views: The rotation range of 135° allows for laterally taken images without repositioning.
- Continuity: Frequently required basic positions can be stored in three memory positions. Three additional system storage positions provide the consistently same perspective as needed.
- Control: The current positions of the C-arm and patient table are permanently displayed on the monitors in the control and treatment room, which makes it easier to align the system precisely.
- Unique: Always allows an artifact-free presentation without annoying overlays even with PCNL in a supine position.

Movements of the C-arm and patient table





- Ideal perspective: Patient table and C-arm can be synchronized or moved independently of each other.
- Intuitive operation: C-arm and patient table can be navigated easily and safely.

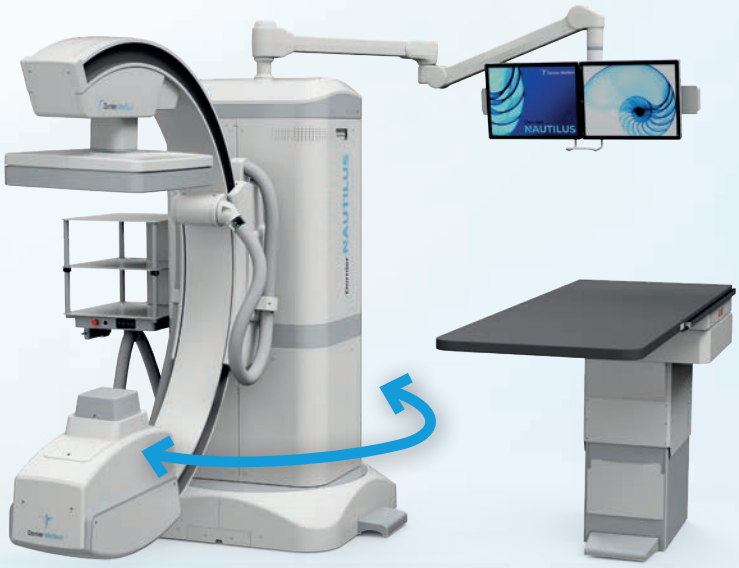
Thanks to the C-arm's slim design, the Nautilus provides more unrestricted space than conventional urological X-ray workstations. Treatments can be carried out conveniently from both sides.

Positions of the C-arm and possibilities

Horizontal position of the C-arm

- Images taken standing or sitting, e.g. at micturition examinations
- Lateral and orbital rotation option enables flexible choice of the ideal perspective in each case

360° ACCESS



Parking position of the C-arm

- Full 360° access to the table for operators, anesthetists and surgical staff
- Easier positioning and repositioning of patients than with workstations with a fixed X-ray column
- Optimal operating table for purely endoscopic treatments

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New standards in radiation protection for users and patients

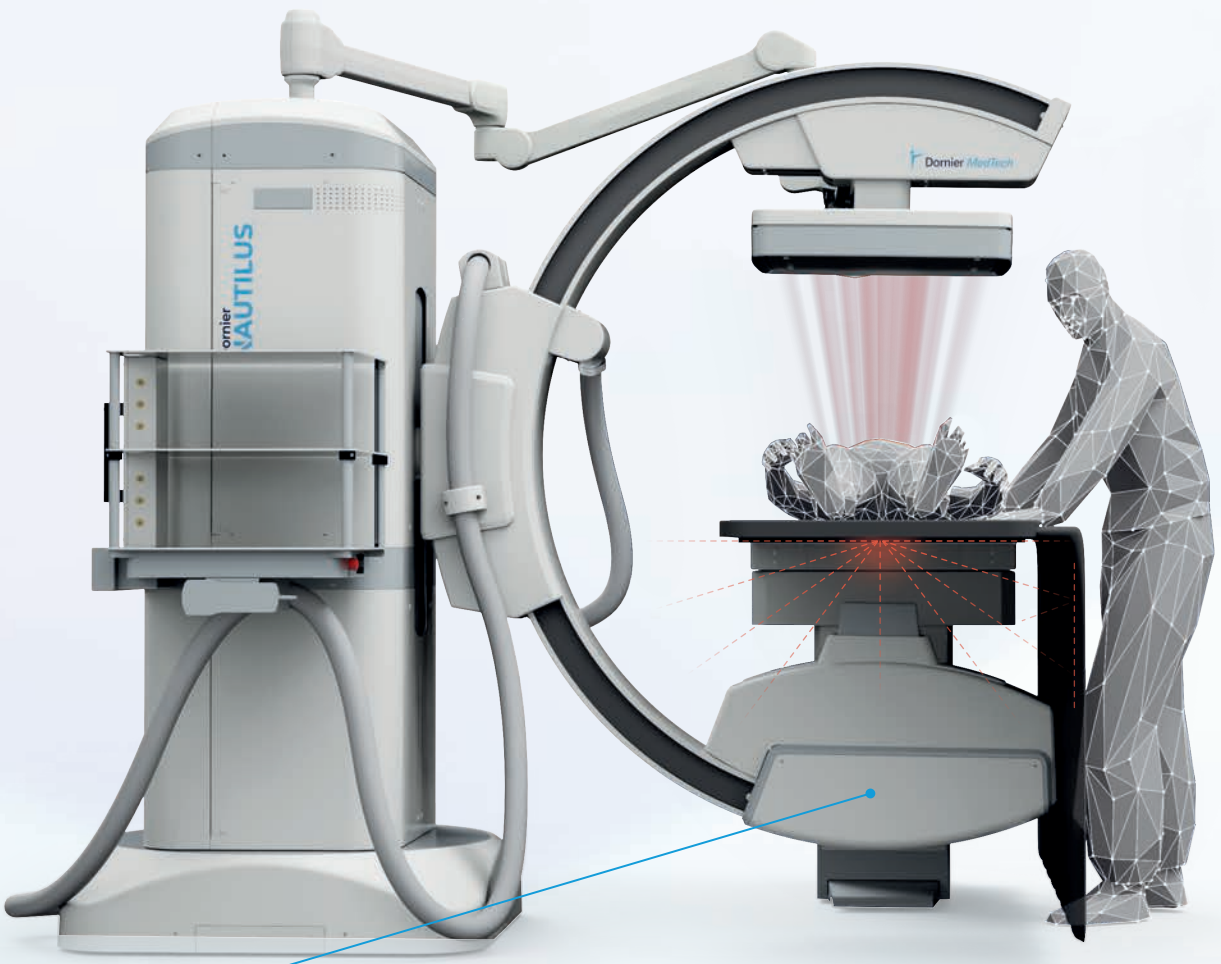
For even more radiation protection, the Nautilus offers an equally simple and ingenious solution. The X-ray tube can be positionedunderneath the table. Which means the radiation source can be shielded easily and safely. If necessary, the X-ray tube can also be placed in the usual position over the table.

Another innovative bonus: With the option of lowering the image receiver and raising the patient table at the same time, patients are brought closer to the image receiver than with conventional urological workstations. This adaptation option (SID hub) lowers the radiation dose, reduces the zoom effect,and enlarges the image section. The Nautilus projects the urogenital tract from the bladder to the kidney with one-time irradiation to create a high-resolution image.

Excellent staff is an important asset for a hospital, more so than ever today. Which is why I consider improved radiation protection – as low as can be reasonably achieved – as a particular quality criterion and safety characteristic of the Nautilus.

Dr. Michael Straub, Executive Senior Physician
Head of Endourology and Urolith Center at the Rechts der Isar Hospital at the Technical University of Munich

The benefits of radiation protection



Positioning the X-ray tube under the table

- Maximum distance of the radiation source from the head of the operator and the staff
- Additional effective minimization of exposure to scattered and main radiation using protective lead aprons

Currently, the Dornier Nautilus is the only urological workstation that meets the EAU guidelines for X-ray protection due to the positioning of X-ray tube under table.*

* EAU guidelines on urolithiasis 2022, status: March 1, 2022

SID hub (Source-image-distance)

- Optimization of contrast and sharpness of images
- Improvement of image quality
- Minimization of the exposure due to scattered radiation for users
- Minimization of the dose exposure for patients

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High-end technology for optimal workflow

With its unique usability and functionality, the Nautilus sets new standards in urological practice. The 80 kW high-frequency generator ensures immediate image acquisition without delay, the flat panel detector (FPD) provides large high-resolution X-ray images from any diagnostically relevant angle. The integrated support arm with flexibly positioned 21” monitors and the intelligent patient table enable an efficient workflow and therefore a high level of convenience for doctor and patients.

With the Nautilus, we have managed to develop a product that patients, doctors, staff and the entire hospital can benefit from. With its innovative technology and new options, the Nautilus offers a versatility that no other urological table has. This is especially important for hospitals with limited space available.

Jamie Mellem, Head of Technical Support at Dornier MedTech

Intelligent patient table

- Carbon fiber table for artifact-free images (no bladder cut-off)
- Isocentric or non-isocentric Trendelenburg tilting
- Anti-collision system (ACS)

Flat panel detector

The 43 cm x 43 cm dynamic a-Si panel detector

- reproduces the entire urinary tract (KUB) in a single shot and thus reduces the dose,
- minimizes image noise and streak formation.

80 kW high-power generator

- Detailed image quality
- Sufficient power reserves also for obese patients and complex cases
- Dynamic sequences with up to 30 images per second
- No overheating due to liquid cooled X-ray tube

Anatomical programs

- Optimal image quality for the body area to be examined
- Reduction of X-ray dose
- Manual control of important parameters possible
- Storage of preferred settings

Lens-boost software

If needed, relevant sections/areas can be optimized on the X-ray image and highlighted very clearly.

Pediatric program

For X-rays of children.

- Removable stray radiation grid
- Additive copper filter
- Specific pediatric program

With the laser crosses on the FPD and the X-ray tube, you can navigate quickly, precisely and without radiation to the desired position.

Medical grade monitors

- Excellent image quality due to high resolution, strong contrast ratio, stable brightness
- Up to three external image sources via plug-and play (e.g. endoscopy, ultrasound) can be integrated simultaneously
- Image storage in DICOM format in the patient record and in the PACS
- Extensive DICOM-3 functions for seamless integration in hospital networks

Leading technology. Improving life.

Company Overview

Dornier MedTech is a medical device company headquartered in Munich, Germany, and is a full subsidiary of Advanced MedTech. As a pioneer in the field of urology, Dornier is one of the most trusted names in the industry.

We continue to drive clinical performance and spearhead innovation in urology, launching several pioneering technologies and revolutionary therapies in recent years. As the world's first MDR-certified integrated urology company, and one of the original founders of the Urology Care Foundation (formerly known as the American Foundation for Urologic Diseases), we take pride in holding ourselves to the highest standards of patient safety and product efficacy.

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