



**PHILIPS**

**Surgery**

BV Endura

Making the difference  
**with Live Image Guidance**

Versatile all-round surgical imaging

# Making the difference with Philips Live Image Guidance

Together we make the difference in surgical procedures to enhance patient outcomes and save lives. With our Live Image Guidance we aim to remove barriers to safer, effective, and reproducible treatments, delivering relevant clinical value where it's needed most – at the point of patient treatment.

Intelligent and intuitive integration of multi-modality imaging, patient information, and procedure-based applications deliver critical information to optimize real-time guidance through complex vasculature and bone structures. Our BV Endura mobile C-arm solution provides the flexibility to seamlessly support a wide range of surgical procedures. From open to minimally invasive, from fracture repair to spinal surgery, from vascular to general surgical procedures. This system enables quick positioning and easy patient access. For routine and challenging cases, superb quality images can enhance diagnostic and treatment confidence.

Together, we open doors to new procedures and techniques that truly make a difference in people's lives.

## **A new level of productivity and ease**

The BV Endura is a versatile, all-round surgical imaging system that is engineered to handle a wide range of surgical procedures. You get superb quality images to support critical decisions across diverse applications. Compact and flexible, it provides a reliable imaging solution wherever it's needed to expand your imaging reach.

This system comes with a 9" or 12" image intensifier and goes anywhere you need it: surgery, intensive care, and emergency. It can handle a full range of applications:

- Orthopedic surgery
- Pain management procedures
- Abdominal surgery
- Thoracic surgery
- Vascular procedures
- General surgery



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# Greater insight and confidence

in finding and treating the problem

## Exceptional quality images

A number of features enhance image quality regardless of the procedure you are performing:

- High level fluoroscopy produces high quality images of virtually every patient, whatever their anatomy or size
- Unique BodySmart software – delivers consistently superb image contrast. It adjusts the measuring field to the anatomy wherever it is on the image intensifier
- Automatic asymmetric shutter positioning – sets shutters at the touch of a finger for superb image quality
- Automatic contrast and brightness control – enhances images in real time

## Supports critical decision making

Our full digital 1K<sup>2</sup> imaging chain includes powerful image processing functions, such as advanced noise reduction and 2D edge enhancement, providing high quality images time after time. It provides high quality fluoroscopy, subtraction runs, and roadmap guidance to support orthopedic, and vascular surgeons in performing challenging procedures. From complex fractures to minimally invasive vascular cases.



AP Hip – the BV Endura enhances image quality and manages X-ray dose by applying one shutter to visualize the dynamic screw.



Hysterosalpinogography – these procedures are increasingly being performed by mobile C-arm systems. The BV Endura provides excellent image quality to support these exams.



Ankle fracture – the BV Endura provides excellent image quality even without applying shutters to streamline workflow.



DSA angiography of the lower limb visualizes details of fine vessels with superb quality images.



Pediatric abdomen – this image provides a high quality visualization of the entire abdomen at low dose levels.



Pain management procedure – the BV Endura allows clinicians to visualize needle placement along the spine.

# Better user experience

to promote consistency and efficiency

Every procedure has its own challenges, whether you are delicately placing a pedicle screw or deploying a stent in a difficult position. The Mobile View Station with rotatable and height adjustable monitors gives you the flexibility to handle it all. Thanks to its compact size, this system can be easily moved around even in small operating rooms. Its small footprint allows it to be brought as close to the operating table as desired. The unique design also enables easy cleaning of the equipment.



You can quickly display previous images on the fly during a procedure using our remote control.

With the BV Endura and the intelligent viewing concept, the operator can enter patient demographics manually or retrieve a worklist via the hospital network on the Mobile View Station when and where it's most convenient, without connecting it to the C-arm. When the physician wants to view images during a procedure, the operator simply puts the Mobile View Station in position. The 19" LCD monitors provide high quality visualizations of anatomy and their height can be adjusted to the surgeon's preference.

## Efficient workflow

To promote efficient workflow, the BV Endura has a fully integrated DICOM connectivity solution (full RIS/HIS compatibility, export of examination onto the hospital network), and is IHE compliant. An intuitive user-interface, with buttons exactly where you need and expect them to be, makes working with the BV Endura fast and easy. With a touchscreen on the left monitor, patient administration and post-processing on acquired images is literally at your fingertips.

The Anatomatically Programmed Fluoroscopy (APF) allows you to set the ideal parameters of the system for any dedicated procedure with one touch of a button. The single user concept includes our unique remote control and footswitch, which allow you to control the system from the table. With the remote control (option), you can quickly pull up previous images yourself. These efficient time savers are designed to help you quickly perform procedures. Additional options such as the paper/transparency printer and Medical DVD recorder can of course easily be accommodated into your Mobile View Station.



# Lower barriers

for minimally invasive interventions





### Manage dose efficiently with relevant acquisition settings

Different types of procedures require different imaging parameters: dynamic, static, large, and small. The BV Endura provides a pre-set list of acquisition settings grouped by types of exams. You can easily select the relevant procedure and anatomical program from the list and the system automatically applies the parameters to get the required image quality without applying more X-ray dose than necessary. Manual adjustments can be made as needed.

### Comprehensive X-ray dose management

With the BV Endura, you benefit from highly evolved X-ray technology with comprehensive dose management features. Philips was the first company to market the mobile C-arm and has over half a century of experience in developing mobile C-arm systems for the surgical environment. That translates into a full range of radiation management features that allow low X-ray dose for lengthy surgical procedures, while providing exceptional quality images:

- Efficient beam filters with an additional 0.1 mm of copper and 1 mm of aluminum increase the quality of the X-ray beam, allowing a 40%<sup>1</sup> reduction in skin entrance dose rate compared to the minimum filtering required by international standards<sup>2</sup>.
- Continuous fluoroscopy for consistent low dose imaging
- Reduced fluoroscopy modes apply 1/2 and 1/4 the dose of continuous fluoroscopy with no noticeable difference in image quality for static images
- Unique asymmetric shutters increase collimation flexibility
- Shutters and image orientation can be adjusted while on the last image hold, without using radiation

### Increased dose awareness

All our mobile C-arms provide radiation dose awareness features which aid in the documentation, analysis, and awareness of radiation dose in the OR. These include DICOM Radiation Dose Structured Reporting, dose indication during the procedure, and a dose alert when the examination dose exceeds a preprogrammed level.

### DoseAware real time dose feedback (option)

The DoseAware<sup>3</sup> dose monitoring system provides real-time feedback that is displayed during a procedure, so staff can immediately adjust working habits to manage radiation exposure. DoseAware also provides a time-stamped record of where and when X-ray dose was acquired.



<sup>1</sup> Compared to conventional filtration of 3 millimeters aluminium as required by IEC 60601-2-43, 2010.

<sup>2</sup> IEC 60601-2-43: 2010 specifies minimum filtering of 3 mm aluminium. Data was obtained from non-clinical testing using PMMA phantoms.

<sup>3</sup> DoseAware is not a replacement for the thermoluminescent dosimeter (TLD) as a legal dose meter.

# Increased economic value

We are committed to working with you to reduce re-admissions, streamline workflow, and increase patient volume by opening the door to new procedures and techniques. By supporting a wide range of procedures and enhancing workflow efficiency during imaging, the BV Endura can help you increase system utilization and reduce the total cost of ownership.

## **The versatile imaging solution**

Get the economical choice with the BV Endura. You can perform a wide variety of procedures using one imaging solution: a full range of general surgical procedures, as well as dedicated vascular, thoracic, abdominal, pain management, and orthopedic surgery.

## **Your needs, your support**

As your healthcare business changes, we are changing right alongside you. Today's healthcare providers are looking for more flexibility in the support they receive from their imaging partners. Our BV Endura is the result of a close collaborative process. Our new portfolio of RightFit Service Agreements<sup>4</sup> have also been designed from the ground up based on extensive input from healthcare providers to meet their service challenges and business priorities.

## **Philips Remote Services<sup>4</sup>**

Our worldwide Remote Services is an advanced, virtual private network that links your Philips Healthcare equipment to our global Remote Services Customer Care Centers. Services that formerly required onsite visits are now available by connecting to our remote experts. This includes system error identification, diagnosis, and troubleshooting, as well as immediate remote repair online.

<sup>4</sup> The RightFit Service Agreements portfolio is not yet available in all countries.





