

The [redacted] is a powerful mobile fluoroscopy system for the most challenging interventional procedures. The powerful pulsed technology allows you to go the distance in longer studies, capture moving anatomy and see through your largest patient. It consists of a mobile C-arm Stand for image acquisition and a Mobile View Station, with two LCD monitors for image processing, review, archiving and display. The BV Pulsera provides outstanding image quality at lowest possible dose. The system is compact, easy to operate and is highly reliable.

The [redacted] Vascular Surgery package provides a set of advanced options to provide optimal performance in vascular surgery, including digital subtraction, as well as general surgery or orthopedic surgery cases. The 12" image intensifier (31 cm) provides 70% more field of view compared to the 9" image intensifier (23 cm).

Mobile C-arm Stand:

- Light-weight counterbalanced multi-directional C-arm with compact image intensifier, designed for effortless positioning
- Extended rotation range for maximum projection flexibility (+90 to -45 degrees)
- Ultra-compact foot, with rear-wheel steering, including pushbar and handles for easy maneuverability and positioning of the stand
- Extended vertical movement to fit desired working height, especially for obtaining low lateral positioning
- Dedicated parallel movement for easy positioning along operating table
- Automatic cable deflectors
- Flat, easy to clean, user-friendly control desk with lighted display and soft-buttons for flexible application-driven control
- Including:
 - footswitch and handswitch
 - handheld remote control
 - radiation indicator
 - system lock (requires a key to enable or disable X-ray control)
- Handheld remote control:
 - Fluoroscopy Mode selection (normal, subtraction, trace, roadmap)
 - Run loop
 - Overview
 - Retrieve previous image / run
 - Retrieve next image / run
 - Park image on reference monitor
 - Protect image / release image
 - Smart Mask
 - Unsubtract / subtract run

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X-ray generation:

- 15 kW Microprocessor controlled X-ray converter generator
- Rotating anode X-ray tube for the most demanding interventional procedures
- Slim tank unit with 0.3/0.6 IEC dual focus
- Tank temperature measuring device for over-temperature detection and protection
- Integrated beam-filter to reduce the patient skin dose by 40%
- X-ray tank designed for maximum cooling capacity, allowing lengthy procedures
- Anatomical Programmed Fluoroscopy (automatic setting of fluoroscopy parameters) provides optimal image quality for each examination type

X-ray collimation:

- Full-lead shutters are independently, asymmetrically rotatable and movable
- Both iris and shutters can be set on Last Image Hold, avoiding the need for unnecessary radiation, or during fluoroscopy
- Automatic Shutter Positioning feature detects anatomy and positions shutters automatically

Imaging system:

- 12" (31cm) triple mode high contrast image intensifier
- Three user selectable field input sizes: 12" / 9" / 7" (31/23/17cm)
- High resolution 1kx1k digital CCD-TV system with automatic dose-rate control

X-ray operation:

- X-ray modes:
 - Low Dose Fluoroscopy
 - High Definition Fluoroscopy
 - Pulsed fluoroscopy (12.5 pulses per second)
 - Half dose fluoroscopy (12.5 pulses per second)
 - Quarter dose fluoroscopy (6.25 pulses per second)
 - Pulsed exposure (3 to 8 pulses per second)
 - Digital exposure
 - Radiographic mode for cassette exposures
 - Anatomical Programmed Fluoroscopy (automatic setting of fluoroscopy parameters) provides optimal image quality for each examination type. Includes unique Orthoplus (boost) exam type for obtaining low noise images in large patients or dense anatomy.
 - Abdomen
 - Head/Spine
 - Ortho
 - HQ Ortho
 - Orthoplus
 - Thorax
 - Vascular (subtracted fluoroscopy)
 - Vascular HQ (subtracted fluoroscopy)
 - Vascular Cerebral (subtracted fluoroscopy)
 - Vascular CO2 (subtracted fluoroscopy)
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Image processing:

12-bit Digital Fluoroscopy Imaging unit, with dedicated video pipeline processor. Featuring the SmartVision imaging chain, providing the optimal image quality with lowest possible dose.

- Image database and display:
 - Patient database including 16 images RAM memory
 - Storage of 10,000 images on hard disk at maximum 8 frames per second
 - Mosaic - overview of 16 images on one monitor
 - Run loop
 - Digital rotation, mirror left/right and up/down on last image hold
 - Video invert
- Advanced image acquisition and processing:
 - Body Smart anatomic adapting measuring field
 - Digital 1k x 1k throughout the entire image chain
 - Adaptive temporal recursive filtering for noise integration
 - Vignette correction
 - Dynamic movement detection to avoid motion blur
 - Real-time 2D edge enhancement, contrast and brightness
- Complete post-processing functions:
 - Annotation
 - Post-processing edge enhancement, contrast and brightness
 - Automatic contrast and brightness on the mobile view station
 - Zoom and roam (factor 2x real-time magnification, freely moveable to any section of the image)
 - Measurement (to precisely quantify lengths and angles in images)
- Electronic shutters (for block-out over-exposed image areas)
- Pulsed exposure at a maximum rate of 8 pps, with a maximum of 60 mA (standard is 5 pps)
- Subtracted fluoroscopy features included:
 - Trace mode (maximum opacification)
 - Roadmap mode with Smartmask
 - Trace Mode (for maximum opacification of vasculature)
 - Roadmap Mode with SmartMask (re-use of previously acquired images)
 - Remasking (to select the optimal mask for subtraction)
 - Landmarking (to provide a non-subtracted background image for anatomical reference)
 - Real-time pixelshift (to minimize movement artefacts)
 - View Trace (creating a trace image, post processed)
 - CO2 subtracted fluoroscopy mode
 - CO2 trace mode (trace white)
 - CO2 roadmap with smartmask (re-use of previously acquired images)

Mobile view station:

The ultra compact Mobile View Station perfectly fits in the surgical workflow. The unique intelligent viewing concept of the Mobile View Station provides the user with easy transportation, easy system set-up and optimal viewing capabilities.

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- Flexible Monitor Positioning provides ergonomical operation, easy transport, and easy storage
 - Rotate monitors 180 degrees for optimized viewing angle
 - Fold monitors together for easy storage and transportation
 - Height adjustment: Monitors are always at optimal working height, regardless the height of the physician. Adjust the height by up to 10 inches (25cm). Height is adjusted manually and is stepless, permitting positioning at any desired height between the lowest and the highest position.
- user interface, on screen display, alphanumeric keyboard and touchpad
- Touchscreen: Left (live) monitor gives touchscreen access to patient administration and post-processing with the touch of a finger. Image quality of the monitors is unaffected by the touchscreen.
- Multiple video in/out options included:
 - Two digital video out connections (DVI-D) permits digital output of left and right monitor images without any loss of signal quality for display on compatible external monitors with DVI-D-in. Signal: 1280x1024@60Hz
 - One composite video in connection (BNC) permits display of external video signals like an endoscope or ultrasound on the right monitor of the mobile viewing station.
 - One composite video out connection (BNC) permits display of live monitor image on an additional monitor or recorder.
 - Easy storage to USB flash-drive, for personal use of images.
 - Note: Video and USB cables may only be connected when in compliance with the precautions described in IEC 60601-1-1. (e.g. extra grounding or separation, depending on the location and use of the connected system parts)
- Designed to integrate medical DVD Recorder, video paper/transparency printer and ViewForum Surgical Workstation.
- Patient Privacy Protection - Password protects system to reduce the risk of unauthorized access to patient information.

High Brightness LCD Monitors:

Two Philips High Brightness 19" Color LCD monitors for superb diagnostic Image Quality. Double the light output compared to the standard LCD Monitors.

- 19" dark screen with dark frame
- Monitor image size comparable to a 20" CRT
- TFT technology for 170 degrees viewing angle in both horizontal and vertical direction
- Resolution: horizontal: 1280 dots, vertical: 1024 lines
- Maximum brightness: 722 cd/m2
- Minimum Contrast Ratio: >700:1
- Backlight stabilization
- Touchscreen (left)
- Height adjustment

Clinical Education Program for

Surgery Systems

Clinical Education Specialists will provide sixteen (16) hours of Surgery OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available if the participant meets the guidelines provided by
 Depending on your system configuration, the first four (4) hours onsite may be spent

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configuring new equipment for specific clinical needs, as well as reviewing important safety features and quality procedures. Please read guidelines for more information. Note: Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation.

Follow-Up OnSite Education: Clinical Education Specialists will provide sixteen (16) hours of tailored XR OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEUs are not available in all cases.

Education entitlement expires one (1) year from equipment delivery date.