1   ******   **Veradius rel 1.2 Neo Gen Ortho**   **1**

The Veradius Neo is our second generation powerful mobile C-arm with flat detector and rotating anode that brings the advantages of flat detector technology to the operating room, incorporating Philips' Trixell flat detector design for mobile fluoroscopy. Easy to operate and transport, the system consists of a mobile C-arm stand with optimized geometry for improved patient access and a compact Mobile View Station with two 19" LCD monitors for image processing, review, archiving and display. The additional stand monitor supports visual control for the operator.

The Veradius Neo flat detector was developed by imaging experts to deliver excellent imaging performance with exceptional dose efficiency. Benefiting from Philips years of market leadership in flat detector catheterization lab design, the Veradius flat detector delivers superb image quality with higher dynamic range and virtually distortion free image quality. In addition the super thin flat detector frees up valuable space. It gives more room to see team members and coordinate tasks. The removable grid allows additional dose reduction for small anatomies The powerful pulsed technology and exceptional heat management capabilities of this system allow you to go the distance in lengthy cardiovascular/interventional procedures. The rotating anode technology and 15 kW generator give the power to see through virtually any patient and to see fine details in the steepest projections.

Veradius Neo provides the technology, power, and image quality to handle the most advanced interventions as well as all routine procedures.

Excellence in surgical imaging

The Veradius Neo is the product of a collaborative process that involved surgeons and technologists from around the world.

Excellence in surgical imaging means:

- Easily access and image even obese patients for lumbar spine or hip procedures thanks to optimized C-arc dimensions
- Quickly position the system with less effort, through smooth movements and color-coded C-arc
- Visualize complex bone structures and place screws precisely, guided by the undistorted, high-contrast images that the advanced Flat Detector imaging can provide
- Control your cardiovascular workflow seamlessly using dedicated vascular protocols, the system's footswitch, and remote control
- Provide visualization and confidence for endovascular repairs with high quality fluoroscopy, DSA runs and roadmap guidance. Images have superb contrast thanks to high dynamic range of the Flat Detector
- View dynamic transaortic aneurysm anatomy with sharp, high quality images using pulsed exposure mode

Excellence in Dose Management

As the first to introduce the mobile C-arm, Philips has over half a century of experience in developing mobile C-arm systems for the surgical environment. That translates into a full range of dose management features that allow low X-ray dose for lengthy minimally invasive procedures, while providing exceptional quality images:

- Philips' beam filters reduce patient skin dose without compromises of Image Quality
- The monoblock design results in sharp pulses to ensure excellent dose management.
- The easily removable grid on the flat detector makes it possible to visualize small anatomy and extremities with exceptional image quality and excellent dose efficiency

Mobile C-arm Stand:

- Counterbalanced multi-directional C-arm with compact flat detector 10.3" x 10.3" (26.2 cm x 26.2 cm)
- Ultra-compact foot, with rear-wheel steering, including pushbar and handles for easy maneuverability and positioning of the stand
- Deep C-arm with 29 inch (73cm) depth for optimal access even to obese patients
- Color coding on the C-arm brakes to simplify communication between team members
- 140 degrees rotation (+90/ -50 degrees) for maximum projection flexibility
- 12" positioning monitor at the stand that helps the operator to accurately position the system
- 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
- Handswitch, footswitch to enable X-ray, select zoom size, switch between subtracted and unsubtracted images, review images and select X-ray modes
- Hand held remote control that enables easy access to fluoroscopy mode selection and main image processing functionality for an optimized workflow
- Radiation indicator
- System lock (requires a key to enable or disable X-ray control)
- Privacy protection: password protects patient information from unauthorized access
- Springbow to hold sterile drapes at the C-arm

Flat detector Imaging system:

- Trixell amorphous silicon detector
- Cesium Iodide Scintillator
- Active detector size: 28.7 cm x 26.2 cm
- Field of view: 10.3" x 10.3" (26.2 cm x 26.2 cm)
- Matrix: 1560 x 1420 pixels
- Pixel pitch 184 µm
- Dynamic range 102 dB (16 bit)
- Three user selectable zoom formats: 10 inch (27 cm), 7 inch (18 cm), 5 inch (13 cm)
- Automatic dose-rate control
- Removable grid, makes it easy to visualize small anatomy and extremities with less X-ray dose

- Grid 70 lines/cm, grid ratio 13:1
- Integrated FD laser for easy positioning without X-ray

X-ray modes:

- Low Dose Fluoroscopy (from 3 up to 15 pps, optional up to max 23 pps)
- Fluoroscopy (from 3 up to 15 pps, optional up to max 23 pps)
- High Quality Fluoroscopy (from 3 up to 15 pps, optional up to max 23 pps)
- Boost fluoroscopy mode, for the most challenging procedures to produce high-quality images of virtually every patient
- Motion fluoroscopy mode, optimized for imaging moving objects
- Digital exposure (max 125 mA, max 330 ms pulse) for extra sharp snapshot

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
- Integrated beam-filter to reduce the patient skin dose by 40%
- X-ray tank and housing designed for maximum cooling capacity (1,900 kHU/min), allowing lengthy procedures
- Automatic setting of fluoroscopy parameters based on anatomy (Anatomical Programmed Fluoroscopy) provides optimal image quality for each examination type

X-ray collimation:

- Full-lead shutters are independently, asymmetrically rotatable and movable. For optimal adjustment in all anatomies
- Both iris and shutters can be set on Last Image Hold, avoiding the need for unnecessary radiation, or during fluoroscopy
- With Philips' unique Automatic Shutter Positioning feature, shutters can be optimally adjusted to the anatomy of interest with one push of a button to produce superb image quality

Image processing:

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

- Body Smart anatomic adapting measuring field, allows free positioning of the anatomy, even at the edge of the image by providing automatic image adjustment
- Adaptive noise reduction with pixel based movement detection, to reduce motion blur
- Digital rotation, mirror left/right and up/down on last image hold
- The system automatically optimizes contrast and brightness to provide the optimal image quality
- Post-processing edge enhancement, contrast and brightness
- Annotation
- Video invert

- Digital zoom and roam (factor 2x real-time magnification, freely movable to any section of an image), applicable in all detector zoom formats
- Measurement (to quantify lengths and angles in images)
- Electronic shutters (to block-out overexposed image areas)

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.

- Monitors rotate 180 degrees for optimized viewing angle
- Monitor height can be increased or decreased up to 25 cm (10") to conveniently adjust to the surgeon's position. For safe and easy transport and storage, simply fold the monitors and move them to their lowest position
- Digital Video out (2 DVI connectors) to display the images on additional monitors without loss of resolution
- Video in (1 BNC connector) enables display of external video signals like endoscopy or ultrasound on the right C-arm monitor
- Easy storage to USB flash-drive (bmp format)
- Storage of 2.000 images on hard disk
- Mosaic - overview of 16 images on one monitor
- Run loop
- Designed to integrate Medical DVD Recorder (optional), video paper/transparency printer (optional) and to build in ViewForum workstation (optional)

Dose awareness enhancements:

To document and analyze dose usage.

- Dose display on Mobile View Station: cumulative dose, dose-rate (fluoroscopy) and DAP (exposure)
- Alert when exceeding a pre-defined examination dose-level
- Dose reporting

LCD Monitors:

- Two 19" High Brightness Color LCD monitors for diagnostic image quality
- TFT technology for 160 degrees viewing angle in both horizontal and vertical direction
- Resolution: horizontal: 1280 dots, vertical: 1024 lines
- Maximum light output: 650 cd/m2
- Contrast Ratio: >700:1
- Backlight stabilization
- Touch screen user interface: infra-red technology permits touch-screen access to the graphical user interface on the live monitor (left monitor) without sacrificing image quality. Patient administration, post-processing or export functionality are intuitively accessed at the tip of your finger

DICOM:

The DICOM software converts the digital images of the C-arm into DICOM compatible image formats to send them to PACS systems, PC environment, and/or to a printer within the network.

DICOM is seamlessly integrated into the system for digital image to DICOM translation. A highly intuitive user interface simplifies the use.

Standard features:

- DICOM Print
- DICOM Store - enables image transfer to DICOM compliant workstations for off-line processing of images, dynamic reviewing of runs, store images/ runs on CD-R to PACS systems and to a PC environment
- Modality Worklist Management (MWL) for communications with the RIS/HIS system
- Modality Performed Procedure Steps (MPPS)
- Storage Commit (SC)
- Full Compliance to the IHE Scheduled Workflow integration profile as an Acquisition

The DICOM image formats are:

- Secondary Capture (SC) with/without text and X-ray Angiography (XA - multi frame)

Clinical Education Program for Veradius Surgery Systems

To ensure that the transition to your site's new Veradius Neo system goes smoothly, Philips includes a full 32 hours of OnSite Education, delivered in two 16-hour blocks.

Initial OnSite Education:

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 Philips. Depending on your system configuration, the first four (4) hours onsite may be spent configuring new equipment for specific clinical needs, as well as reviewing important safety features and quality procedures.

Follow-Up OnSite Education:

Clinical Education Specialists will provide sixteen (16) hours of tailored 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.

Note:

- Please read guidelines for more information, which will be provided to you during the scheduling process
- Philips personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation
- Education expires one (1) year from the earlier of equipment delivery date or purchase date

Pain extension Veradius Neo and Veradius Unity

The pain exam consists of fluoroscopy, a special boost mode for imaging dense objects and it provides digital subtract functionality to enable clear visualization of contrast injections. The subtract functionality also makes it possible to image the
exact vasculature in delicate regions of the spine to potentially reduce accidental injection in the vessels.

3   ******   **Spring bow for C-Arc**   **1**

Comprising:

- Springbow for sterilizable cover of the C-arc

4   ******   **Video Paper/Transparancy**   **1**
                                                Printer

Thermal multimedia printer for printing images from live (= left) monitor onto paper or blue transparency.

Features:

- Multiformat 1 2 4 6 images to be printed on one page in both landscape and portrait format
- Hard copies of clinical images available for archiving
- Full size image printed in about 20 seconds

Comprising:

- Printing unit UP-990AD integrated in the Mobile View Station of the system
- Printing paper roll (UPP-210HD)

SELECTION OF ANY OPTION WILL INCREASE THE CONTRACT PRICE BY THE AMOUNT SHOWN IN THE PRICE COLUMN. OPTIONAL EQUIPMENT PRICING VALID ONLY IF PURCHASED IN CONJUNCTION WITH EQUIPMENT QUOTED.

Line #	Part #	Description	Qty	Each	Price	Initial
1	**	**Airfare to Cleveland for Biomed Training**	1			

Includes one (1) participant's airfare from North American customer location to the Cleveland Training Center (CTC) in Cleveland, Ohio. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced. Expires one (1) year from the earlier of equipment delivery date or purchase date.

Line #	Part #	Description	Qty	Each	Price	Initial
2	**	**Food Transpt Lodging for Cleveland Biomed Training**	10			

Includes one (1) day of modest lodging, ground transportation, and meal expenses in Cleveland, Ohio for one (1) attendee. All other expenses will be the responsibility of the attendee. Details are provided during the scheduling process. Note: Cancellation/rescheduling policy strictly enforced. Although this part is only for one day, it is sold in multiple quantities to account for entire length of course. Expires one (1) year from the earlier of equipment delivery date or purchase date.

Line #	Part #	Description	Qty	Each	Price	Initial
3	**	**XD3951BVFAMILYR2/VERADIUS CTC 8D**	1			

Course Number:
 Xd3951

System Codes:
 718074 (Endura R2), 718075 (Endura R2.3), 718094 (Pulsera R2.2), 718095 (Pulsera R2.3), 718130 (Veradius R1.1), 718131 (Veradius R1.2)

Course Title:
 BV Family R2/ Veradius

Course Length:
 7.5 days

Delivery Method(s):
 Instructor led

Modality:
 iXR-surgery

Location:
 ISC Academy: Best, Cleveland, Singapore

Target Audience:
 Service Engineer

DESCRIPTION:

The service engineer is trained to a technical and application level which will enable him to do installation, planned maintenance and corrective maintenance on the BV Family R2/Veradius systems according to the service philosophy. This course is offered as modular instructor-led training. The BV Family R2/Veradius course is primarily a hands-on workshop. (20% theory/80% hands-on).

PREREQUISITES:

Engineers attending this course must have:

Mechanical skills
Basic Computer skills
Knowledge of Surgery system architecture
Knowledge of Dicom/networking
Operating experience with measuring equipment.
Prior attendance to:

 • See training path:http://pww.incenter.ms.philips.com/Default.aspx?tabid=3221

Course objectives:

After attending this course, the engineer will have knowledge of:

Configurations and product structure
Physical and mechanical aspects
Technical aspects of applications
(Pre)-installation and PM procedures
Image Quality and safety aspects
Block-, simplified- and system diagrams
Veradius Flat Detector and Imaging
CM procedures
He will be capable of:

Operating the system
Programming the system

Handling test software
Calibrating the system
Performing adjustments
Making performance tests
Implementing new releases
Performing FCO's
Performing CM
He will learn how to:

Install and Configure the Flat Detector
Configure the system
Work with the BV Scope Service software
Perform imaging adjustments
Perform corrective maintenance on FRU-level
Perform Remote Service