PHILIPS, XR-RAD, VAMC BUFFALO, NY

EQUIPMENT PO# 528-B30051

TURNKEY PO# 528-B30044

Line #	Part #	Description	Qty
1		**EasyDiagnost Eleva DRF with WPD**	**1**

EasyDiagnost Eleva DRF

The EasyDiagnost Eleva is a nearby controlled (conventional) R/F system for routine Radiographic and Fluoroscopic examinations like barium and iodine studies, dedicated vascular and non-vascular diagnostics and interventional procedures. All system controls are at tableside, so in every phase of the examination the patient can get full attention. The spring balanced servo assisted tower allows easily controlled movements. The system can easily be integrated in today's hospital and departmental workflow requirements.

Comprising:

- EasyDiagnost Eleva Stand and Spot Film Device Digital
- Wireless Portable Detector
- Eleva concept
- Ergonomic Eleva User Interfaces
- Accessories
- Remote access

EasyDiagnost Eleva Stand and Spot Film Device Digital

The high quality R/F stand is designed with life-time quality in mind. From the choice of the materials up to the process oriented production line, the EasyDiagnost Eleva sets world standards in production quality and reliability.

The Spot film device ensures easy handling in every phase of the examination.

Stand and Spot film device feature:

- a highly durable and top quality stand, supporting an under table tube
- a smart overall design as well as low-noise and low-vibration mechanics to help patients feel taken care of during treatment
- servo assisted longitudinal and vertical movement of the tower for exact and fast positioning of the x-ray beam in all tilt positions
- spring balanced and servo assisted compression movements for effortless GI work
- a compression stop can be set in various positions for patient safety e.g. in myelograms
- covered table mechanics for protection of patient and user as well as for easy way to clean the system
- anti-collision protection ensures safe movement of the stand during tilting and avoids damage to movable items (like stools, etc.)

Stand specifications:

Aramid tabletop

- foam core from 25 mm hard foam, upper layer 1.7 mm scratch resistant Aramid, bottom layer 0.8 mm plastic material with high durability
- filtration value (typical): 0,7 mm (at 100 kV, 2,7 mm AL HVL)
- size 200 cm x 69 cm (78.7 inch x 27.2 inch)
- maximum load 250 kg (550 lbs.)
- longitudinal movement +/- 83 cm (32.7 inch), constant speed of 6 cm/s (2.4 inch/s)
- lateral movement -10 / + 9 cm, (-3.9 inch / + 3.5 inch), constant speed of 4.2 cm/s (1.7 inch/s)
- flat section rails for accessories

carrier for spot film device with patented spider servo for effortless and sensitive movements:

- longitudinal direction, servo assisted: 75 cm (29.5 inch)
- lateral direction 22 cm (8.7 inch), manual movement
- compression 30,5 cm (12 inch), spider-assisted (EasyTouch)
- parking 52 cm (20,5 inch), manual

Spot film device digital

Eleva Control Console (see below)

- carrier for different image intensifier 23, 31, 38 cm (9,12 or 15 inch)
- motorized oscillating and moveable carbon fibre covered grid 60 lines/cm (152.4 lines/inch), ratio 10:1, focus 80 cm 31.5 inch) without tube lift or 90 cm (35.4 inch) with tube lift
- AMPLIMAT chamber with automatic selection of measuring fields
- compression cone with motorized movement from and into parking position
- automatic collimation in X- and Y-direction, secondary shutters close to image intensifier entrance
- removable lead rubber radiation protection

X-ray shielding for under table tube operation resulting in optimal protection of the operator during routine operation

Wireless Portable Detector

Philips wireless portable detector is part of the Eleva platform and defines a new dimension of flexibility and freedom within the RF room.

Main benefits at a glance:

- DR speed and excellent image quality with the positioning flexibility comparable to CR
- Reduced patient infection risk and easy handling thanks to the detector's cable-free design
- Everlasting connection, no broken cable
- Easy handling for exposures in bed, wheelchair or weight-bearing feet
- Flexible positioning for lateral or oblique projections
- Instant image display

- State-of-the-art CsI detector technology and UNIQUE image processing for optimal image quality at the lowest dose
- Easy, precise and safe positioning around the patient, even for difficult projections, provided by a rich set of dedicated accessories

The wireless portable detector covers all relevant anatomy with its large detector area of 35 x 43 cm (14 x 17"). Depending on anatomy, it can be positioned in different orientations and offers full diagnostic information even with large patients. Combined with Philips advanced UNIQUE image processing, grid-line correction algorithm and state-of-the-art Cesium Iodide (CsI) technology, it has an excellent quantum efficiency (DQE) and helps to reduce the required patient dose. It provides instant image display with superb image quality on the Eleva workspot for increased diagnostic confidence.

Thanks to its cable-free design, the wireless portable detector allows quick and efficient procedures with high hygienic standards. The integrated handle on the detector, its robust design and a rich set of optional dedicated accessories (mobile holder, bed holder, click-on grids, detector protector and hygienic bags) offer easy, safe and quick positioning in the room. Special projections like laterals can easily be performed without moving the patient. Its slim design is optimized for critical environments and minimizes the risk of interfering with life supporting equipment, cables, tubes and catheters.

The detector features advanced low-power WiFi connection technology and is designed according to IEC 60601-1-2. It is compliant with life supporting devices and with pacemakers designed according to IEC (EN) 45502-2-1. The detector battery is automatically recharged when the detector is placed in its wall-mounted docking station and can be used up to 2.5 hours without charging. An additional backup cable connection allows instant image transfer in case WiFi connection is not available or the battery power becomes low.

Specifications

- 35 x 43 cm (14 x 17") wireless portable digital flat detector with Cesium Iodide (CsI) technology, active detector area 34.1 x 43.2 cm (13.4 x 17"), resolution 2372 x 3000 pixels, pixel pitch 0.144 mm, pixel depth 16 bits
- Image resolution: up to 3.47 line pairs per mm
- Weight: 4.7 kg (10.4 lbs)
- Maximum patient weight: 100 kg (220 lbs) for weight-bearing examinations
- WLAN network standard: IEEE802.11 a or g (configurable)
- Encryption: default WPA2
- Optional click-on grids 40/8/130: 40 lines/cm (100 lines/inch), ratio 8, focus 130 cm (51") for use with source-image distance from 110 to 180 cm (44" to 56"), available in portrait and landscape orientations

Comprising:

- Wireless portable detector 35 x 43 cm (14 x 17")
- Wall-mounted docking station, battery and backup cable
- Set of hygienic plastic bags
- Software licenses

Eleva concept and Eleva User Interfaces

The Eleva concept increases productivity by adapting the system to the way you work: The system is customizable and performs to the users specification from pre-exam to archive to support varying workflow patterns (from high throughput exams to time consuming procedures) and increase overall efficiency.

The Eleva concept features:

- customizable system pre-sets like SpectraBeam RF filter selection (option) and pre-defined print formats
- bi-directional RIS coupling (option) automatically activating the appropriate Eleva system pre-sets to increase exam efficiency even more
- revolutionary User Interface Concept, including several modules:
  - Eleva Stand Control at the spot film device (examination room)
  - Table Side Operation control
  - Eleva Footswitch (examination room)

Eleva Examination Control

The Eleva Examination Control (incl. keyboard and mouse) integrates all functions for patient administration, selection of acquisition and fluoroscopy parameters as well as all controls for operating the different subsystems in one desk. It provides convenient, logical and ergonomic arrangement of controls and displays.

It supports the philosophy that only those controls and related displays are active that are required for a certain type of examination.

Eleva Handswitch

Ergonomically designed handswitch for exposure control from the control room.

Eleva Stand Control at the spot film device

To operate the system at table side (nearby operation).

All stand movements, operation of main imaging functions, fluoroflavour selection, image intensifier field size selection, collimator control, etc. can be selected without leaving the patient.

Eleva Control Console with:

- table movement controls (tilting, lateral & longitudinal tabletop moves)
- collimator control
- EasySelect display and control for Eleva settings
- SmartWindow display provides information on the system status
- single/serial exposure technique selection
- controls for 4 image intensifier formats
- frame speed selection
- more operational functions needed for examinations

EasyGrip:

The ergonomic handle for ambidextrous one-hand operation on the system. All system controls are available at the table for full attention to the patient. The dynamic fluorograb button is integrated within reach for instantaneous grabbing of fluoroscopic images and complete runs.

EasySelect:

Eleva programming parameters, dose levels and pulse rates can be selected via 10 softkeys for easy adjustment of examination parameters partly even under fluoroscopy

SmartWindow:

Display of guidance for all operational functions of the EasyDiagnost Eleva. A clear, situation dependent online information for error free handling is provided to the user.

Table Side Operation (available only with 2nd tube option, CS 3):

Located close to the footend of the table the TSO gives the user a convenient possibility to move the tabletop with the patient in the right position for e.g. phlebography studies. Longitudinal, lateral and tilting movements can be controlled.

In case of tomography (option) a test run can be executed from here without leaving the patient.

Eleva Footswitch:

For exposure and fluoroscopy control in the examination room.

Accessories

The following accessories are standard:

- detachable footrest with easy-to-clean surface
- pair of ergonomic handgrips

A wide range of accessories are available as option to support the systems' multifunctional capabilities.

Remote access

Access to the system's service software procedures from a remote location via network or modem connection. Remote access to a system can shorten the time needed e.g. changing system settings or problem diagnosis.

It contains:

- License for use of the Remote Access service software

mShield

Philips mShield is part of an overall strategy to safeguard the data integrity of medical information systems. It protects Philips fluoroscopy modalities from potential malicious software attacks within the hospital network. It decouples the modality from the network and creates a secure environment. By restricting traffic to only authorized devices, mShield acts to prevent malicious activity directed from the modality to unrelated devices on your hospital network.

Network communication can be restricted to DICOM communication and remote service only.

Thereby channels, which hackers need for attacks or viruses need to spread become unavailable.

The total system uptime can be increased. The cycle time of required security upgrades (patches) can be elongated and synchronized with regularly maintenance activities. No valuable treatment time is lost through system downtime or staff dealing with network problems. Once installed it requires almost no maintenance or update.

Philips mShield's design is based on the latest recommendations of International industry standard bodies, such as NEMA,COCIR and JIRA, which recommend firewalls as an "effective and flexible tool" to safeguard the data integrity of medical information systems.

The mShield hardware is designed to fit into a professional medical environment with dedicated robustness against high temperature or high- voltage hazards.

It is located between the modality and the department network.

mShield comprises:

- mShield hardware
- Software license and documentation on CD
- Dedicated modality rule types

Compatible with:

- EasyDiagnost Eleva Rel. 3.1 and higher
- EasyDiagnost Eleva DRF Rel. 3.1 and higher

UPS

Uninterruptable Power Supply

The UPS feeds in case of a power breakdown the EasyDiagnost core components (System Controller, Remote Input/Output, Automatic Image Processing, ViewForum, Ethernet Switch, Firewall) to store images and/or complete the last task.

- Bridging time: 60 minutes
- Max. charging time: 6h

Clinical Education Program for Digital R/F Systems

RAD Handover OnSite Education: Clinical Education Specialist will provide one 24 hour onsite training for RAD (Digital Radiography) for up to four(4) technologists, selected by the 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. Please read training guidelines for more information.

RF Handover OnSite Education: Clinical Education Specialist will provide one 28 hour onsite training for RF (Radiographic Fluoroscopy) for up to five (5) technologists, selected by the 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.

Please read training guidelines for more information. Note: Site must be patient-ready. 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 equipment installation date (or purchase date if sold separately). Ref#226227-080418

Both RF (28 hours) and RAD (24 hours) weeks must run consecutively and students should attend both training sessions.

Training on DVD recorders (if purchased) will be conducted by the manufacturer of the DVD recording system and not Philips Clinical Education.

System Parts

- 989001003371 FLOOR PLATE EASY D. 45/90

- 989001003392 INSULATION KIT ED 45/90

- 980306030007 CABINET BOX (Quantity of 3)

- 980306690109 CABLES F/ EASY DIAG-SCP INSTALL

- NRFA791 UPS

2		**Bucky device for wireless detector in the table**	**1**

Easy-to-operate tray, allowing the positioning of the wireless portable detector in portrait or landscape orientation.
Automatic collimation for X-ray beam limitation to digital flat detector, according to pre-programmed examination parameters. Removable grid for optimal image quality and dose. An integrated three-field automatic exposure control chamber ensures optimum image quality with correct radiation dose even for difficult projections.
Comprising:

- Tray for wireless portable detector
- AMPLIMAT measuring chamber
- Removable grid: 40 lines/cm (100 lines/inch), ratio 8, focus 110 cm (44 inch) default. The grid specification might vary according to your selection.

3 **Vertical stand with Bucky tray for WPD** **1**

Motorized vertical stand for chest and wall Bucky applications.
Vertical movement of detector unit 30 cm - 180 cm (12 inch - 72 inch) (centre of detector above floor). Counterbalanced vertical carriage, automatic collimation, AMPLIMAT measuring chamber 5 fields and user interface, Bucky unit with static, removable grid and parking slit for 2 grids.

Comprising:

- Tray for wireless portable detector
- Upper and lower eccentric position for cassettes
- 5 Field AMPLIMAT measuring chamber
- Integrated parking place for 2 grids
- Exchangeable grid: 40 lines/cm (100 lines/inch), ratio 8, focus 140 cm (56 inch) default. The grid specification might vary according to your selection.

4 **Ceiling suspension including tube SRO 33100** **1**

Ceiling suspension for over-table radiographic work with ergonomic handle, control buttons, and release brake, as well as convenient color-coding of movements.
Wide 16.5 cm (6.5") LCD display on tube head for clear status information.
Integrated centering laser in the tube head for easy positioning.

- Four-part aluminium telescopic column with spring counter balanced holder for X-ray tube assembly, adaptable to individual room heights
- Ceiling height at source-image distance 110 cm (44"): 2.65 m to 3.20 m (8' 8.3" to 10' 5.9")
- Minimum ceiling source distance: 87.1 cm (34.3")
- Possible room height adjustment: 37.5 cm (14.8")
- Lowest tube position: 30 cm (11.8") measured from center of beam to the floor
- Length of rails: base rails 4.3 m (14' 1.3"), optional rails extension 2.7 m (8' 10.3")
- Longitudinal travel: 3.44 m (11' 3.4"), 6.14 m (20' 1.7") with rails extension option
- Transverse travel: 1.50 m (4' 11") with short transverse rails, 3.22 m (10' 6.7") with long transverse rails
- Vertical travel: 1.65 m (5' 5.2")
- Rotation of focal spot around vertical axis of column: 360° (±180°), with rotation stop +180°/-165° and lock position every 45°
- Angulations of focal spot around horizontal axis: ±125°, lock positions 0° and ±90°

Control handle

- Centering device in longitudinal and transversal directions
- Brake/locking controls and central three-axis brake-release at lowest position of handle
- Wide 16.5cm (6.5") LCD information display and control buttons

Automatic Collimator

- Motorized automatic collimation, manual overrule possible, with light field indicator
- Angle of aperture and rotation: 2 x 15°, ±45°, depending on the collimator (see type number plate)
- Timer switch: up to 30 s
- Inherent filter value: <0.3 mm at 100 kV, depending on the collimator
- Added filters: 2 mm Al or 1 mm Al + 0.1 mm Cu or 1 mm Al + 0.2 mm Cu
- Source-image distance measurement tape

Equipment for cassette size sensing (automatic collimation) and automatic beam limitation for radiographic exposures on EasyDiagnost Eleva's second plane for improved workflow.
Sensing functionality detects the size of the inserted cassette or Portable detector and adjusts the shutters to the correct field size.

Comprising:
Sensing functionality in the automatic collimator

X-ray tube SRO 33100:

High quality SRO 33 100 Super ROTALIX tube for the EasyDiagnost Eleva system.

Specification:

- Tube voltage 40 - 150 kV
- Nominal focal spot values 0.6 / 1.2 (IEC 336/93)
- Anode diameter 90 mm
- Anode target angle: 13 degrees
- Anode heat storage capacity 300 kHU (220 kJ)
- Maximum continuous heat dissipation 250 W (with cooling)
- Maximum heat content of assembly 1700 kHU (1260 kJ)
- ROT 360 air-cooled ROTALIX housing with thermal safety switch.

5 **15" I.I./TV-CCD** **1**

15-Inch (38 cm) Image Intensifier

Image Intensifier / Television subsystem: X-ray imaging subsystem for fluoroscopy and Digital Imaging for EasyDiagnost Eleva

Image Intensifier

- 15-inch (38 cm) multi-mode image intensifier
- Possible field sizes: 15 12.2 9.8 and 6.7" (38 31 25 and 17 cm)
- Titanium input screen for high spatial resolution high DQE and low dose.

- Fibre optic output screen for high light-transfer efficiency and high contrast.

CCD

- Camera

- TV chain with 1024 x 1024 matrix CCD camera
- Horizontal and vertical scan reversal
- Average automatic dose rate control (ADC)
- Automatic gain control (AGC)
- Variable measuring fields

6 **20 DEGREES TRENDELENBURG** **1**

20 Degrees Trendelenburg

90/20tilting of the entire tabletop of the EasyDiagnost Eleva. This standard setting enables the user to move the patient from an upright position to a 20º head-down position (Trendelenburg) for various applications like stomach colon or myelography etc.

A variable speed allows a smooth and careful start; acceleration to 6º moves the table quickly in the required position. Standardly the system slows down and stops at 0º for the user's convenience. A "no-stop" button next to the tilting handle avoids a stop in 0º position if an uninterrupted movement is required.

Specifications:

- Positive tilting angle: 90º
- Negative tilting angle: 20º(Trendelenburg position)
- Tilting speed: Variable from 0-6º
  -Tilting movement controls at Spot film device as well as on the tableside operation console (TSO) in case the over-table tube (option) is available

7 **80 kW Generator with IQX** **1**

The 80 kW power pack is a microprocessor-controlled X-ray generator with sophisticated high-frequency inverter technology.

The generator is designed for a wide range of fluoroscopy and radiography applications. The unique dose-management system supports features like Grid Controlled Fluoroscopy, Pulsed Fluoroscopy and IQX. The generator is engineered for long-term reliability and a minimum single-space requirement.

Specification:

- Automatic and manual exposure techniques and automatic kV reduction (bolus chase)
- The generator supports the IQX function which regulates exposure settings during the exposure pulse (in-pulse controlled)
- Exposure output power:

    - kV 40 - 150 kV (Second beam table and wall Bucky)
      40 - 125 kV (II TV exposures)
    - mA 1 - 1100 mA
    - ms 1 ms - 4 s with AEC (Automatic Exposure Control)
      1 ms - 16 s without AEC
- Manual:
    - Two factor technique (kV - mAs)
    - Three factor technique (kV - mA - s)
- Automatic:
    - One factor falling load (kV)
    - Two factor constant load (kV/mA)

Automatic kV reduction (bolus chase)
Support of IQX Intelligent exposure

- Fluoroscopy techniques:
  For enhanced image quality and dose management the generator supports continuous fluoroscopy, Grid Controlled Fluoroscopy (option) and Pulsed Fluoroscopy (option) techniques
- Fluoroscopy output power:
    - kV 40 - 110 kV
    - mA 0.2 - 6 mA
- Access times:
    - from fluoroscopy standby to fluoroscopy mode: < 0.3 s
    - from fluoroscopy to radiography mode: 0.4 - 0.8 s (dep. on tube)
    - from radiography to fluoroscopy mode: 0.4 s
- Up to two double-focus tubes can be operated by a dual-speed rotor control Philips compatible tubes : RO, SRO, SRM
- Area Dose Calculation and display (option) and fluorosopy entrance dose rate limitation
- Automatic mains adaptation

IQX provides excellent, reliable and consistent image quality for digital exposures, both in static and dynamic studies. IQX controls and adapts the exposure parameters within the X-ray pulse. The automatic and fast regulation of kV during each exposure leads to crisp image quality for all types of studies, for all patients.

<u>IQX features:</u>

- Short exposure times eliminates motion blur.
  Exposure times are kept within an application-dependent customizable time range. This ensures that every single image is correctly exposed and free from motion blur, even with rapidly changing density.
- Automatic kV-optimization.
  IQX automatically adjusts the settings, relative to the standard kV-value recommended for a particular organ type. Thus the settings are optimized for the actual object density.
- Fast, in-pulse adaptation to (changes in) density.
  This kV-adjustment takes place within the first millisecond of the exposure, enabling adaptation to sudden changes in object density (e.g. during dynamic studies).

Tube voltage: 55 -125 kV
Controlling range: customizable relative to a defined start value

8 **DOSE CALCULATION** **1**

Dose Calculation

Area dose product and patient entrance dose are calculated from the values of the examination known in the Eleva system (kV mA time patient settings etc.)

The system calculates and provides the values for:

- area dose
- area dose rate
  -entrance dose
- entrance dose rate
  and displays those on the Eleva Examination Control and on a Reference monitor (optional)

  Includes:
- Dose calculation software license

Compatible with:

- EasyDiagnost Eleva

9 **DoseWise incl. GCF** **1**

SRM 22 50 Super ROTALIX Metal tube assembly, including tube housing and automatic collimator in combination with Grid Controlled Fluoroscopy (GCF).

Grid Controlled Fluoroscopy

GCF is a Philips exclusive method of pulsed fluoroscopy, providing superb image quality at minimum dose. This is achieved by the use of a grid-switched X-ray tube SRM 22 50 and the control of X-ray parameters kV, mA and time within each single pulse (in-pulse control).

Major features of GCF are:

- Excellent image quality for fluoroscopy with each single pulse
- Maximum dose reduction
- On the fly selection of three different pulse rates (user programmable between 0.5 to 30 f/s) and continuous fluoroscopy for maximum user flexibility
- Dedicated and proprietary pediatric settings with a further decreased pulse time and an optimized kV/mA-curve
- GCF lock-in mode to maintain image quality during abrupt variations in absorption e.g. bringing lead gloves in the beam to position a patient
- Adaptive measuring fields maintain a constantly high image quality even when the field of interest is limited by shutters moving in

It contains:

- Grid controlled fluoroscopy (GCF):

- Pulse time: 5 ms - 20 ms (typical)
- Pulse frequency: 0.5 - 30 f/s

High-quality SRM 22 50 Super ROTALIX Metal Tube with electronic grid for EasyDiagnost Eleva and DRF room solutions.

Specification:

- Tube voltage: 40-125 kV
- Nominal focal spot values: 0.5 / 1.0 (IEC 336/93)
- Anode diameter: 100 mm
- Anode target angle: 15 degrees
- Anode heat storage capacity: 380 kHU (280 kJ)
- Maximum continuous heat dissipation: 300 W (with cooling)
- Maximum heat content of assembly: 2040 kHU (1510 kJ)

ROT 504 GS Air-Cooled ROTALIX Housing with Thermal Safety Switch

Automatic X-ray beam collimator with:
- Motor driven rectangular and circular collimation
- Power-up selftest
- Auto calibration at power-up
- Supports a maximum of 4 pre-filters programmable with SpectraBeam RF

SpectraBeam RF
SpectraBeam RF is an automatic X-ray beam spectrum optimization for EasyDiagnost Eleva. Depending on personal preference, regarding dose and image quality, the optimal filter can be pre-programmed in the Eleva settings for automatic selection.

Comprising:

- Automatic, remote-controlled spectral filter disk with 4 filter values
- 2 mm AL
- 1 mm AL + 0.1 mm Cu
- 1 mm AL + 0.2 mm Cu
- None

10 **DICOM InterOperability Package** **1**

DICOM Interoperability Package
The Interoperability package provides the EasyDiagnost Eleva with a complete set of DICOM interoperability functions.

Comprising:
· DICOM Q/R & Multimodality View
· DICOM Export / Storage Commit
· DICOM Worklist Management
· MPPS
DICOM Query/Retrieve and Multimodality View

EasyDiagnost with Extended Digital Imaging supports DICOM Import (DICOM Store (SCP)), meaning that a DICOM mode can push images into the Extended Digital Imaging database.

The DICOM Q/R Multimodality View package adds the following capabilities:
· DICOM Query and Retrieve (both DICOM Q/R (SCU and SCP)), allowing the Extended Digital Imaging to Query / Retrieve images from another DICOM node and vice versa.
· Import and basic viewing functionality for DICOM images of non X-Ray modalities e.g. MRI, CT, etc.
All DICOM SOP-classes as described in the related DICOM Conformance Statement are supported.

DICOM Export/Storage Commit

The DICOM Export/Storage Commit package provides exporting capabilities for images from the EasyDiagnost with Extended Digital Imaging to other DICOM workspots, workstations and PACS systems.

The DICOM Export packages includes the following capabilities:
· DICOM Export (DICOM Store (SCU)), allowing the export of images in DICOM format
· DICOM Storage Commit (SCU)
All DICOM SOP-classes as described in the DICOM Conformance Statement of Extended Digital Imaging are supported.
DICOM Worklist Management

DICOM Worklist Management provides the connection to a RIS (Radiology Information System) in order to query and receive patient and examination request information (scheduled worklist).

With the DICOM Worklist Management packages EasyDiagnost Eleva with Digital Imaging or Extended Digital Imaging acts like a DICOM WLM (SCU) with these capabilities:
· Query RIS for current scheduled worklist automatically
· Query RIS for current scheduled worklist on demand
· Customize RIS Query
All DICOM SOP-classes as described in the DICOM Conformance Statement of Digital Imaging and Extended Digital Imaging are supported.

MPPS

A DICOM Modality Performed Procedure Step (MPPS) is an information object that describes the activities, conditions and results of an examination (imaging procedure) performed on a modality.The MPPS package is capable of reporting this information back to the connected RIS (Radiology Information System).

With the DICOM MPPS package the EasyDiagnost Eleva System supports DICOM MPPS as SCU with the following capabilities:
· Report status of the current examination back to RIS
· Provide RIS with examination information
The MPPS DICOM SOP-class as described in the DICOM Conformance Statement of Extended Digital Imaging is supported.

Comprising:
· DICOM Query and Retrieve software and license
· DICOM Multimodality Import and Viewing software and license
· DICOM Export software and license
· DICOM WLM software and license
· DICOM MPPS software and license

11 Eleva Examination Control-A 1

Eleva Examination Control

The Eleva Examination Control (including keyboard and mouse) is a 19” flat panel color TFT LCD display designed for touch input. It offers sturdy hardware buttons to modify most frequently adjusted exposure parameters.
It integrates all functions for patient administration, selection of acquisition and fluoroscopy parameters as well as all controls for operating the different subsystems in one user interface.

The Eleva Examination Control user interface offers facilities for:
Patient and examination administration

Preparation:

- Manual entry of patient data
- Import of RIS work list (DICOM) (optional)
- Display of user-defined help text for room preparation and procedure

Examination:

- Automatic adaptation of X-ray parameters depending on patient age, size and weight, as retrieved from RIS
- Automatic selection of system settings according to scheduled examination from RIS
- Manual selection of acquisition parameters, like:
- Auxiliary selection and indication
- Selection and display of exposure parameters
- Selection of parameters for special examinations like bolus chasing and full spine scan, etc. (optional)
- Selection of predefined acquisition programs
- Selection of different fluoroscopy flavors for pulsed fluoroscopy & Grid Controlled Fluoroscopy (optional)
- Selection of spectral filters for fluoroscopy and exposure (optional)
- Collimation on last image hold

Reporting:

- Printouts of dose report (optional)
- Support of DICOM MPPS (optional)
- Display of dose-information either calculated (Option: Dose Calculation) or measured (Option: Dose Measurement)

Comprising:

- Active Matrix TFT LCD display with anti-reflex touch front, hard coated top sheet
- Wide visible screen size: 19 inches diagonal
- Integrated hardware buttons for control of exposure parameters and system power on/off

12 **LCD 18" Control Room Monitor** **1**

LCD 18" Control Room Monitor
High-quality 18-inch LCD monitor for medical applications. Its future oriented LCD technique delivers cristal-clear images, displayed absolutely flicker-free. The flat design requires little space in the control room and is as such universally usable.

Specification:
· monochrome display 18"
· native format 1280 x 1024 SXGA
· wide viewing angle
· high brightness with brightness control (500 cd/m2)
· internal selectable lookup table for grayscale transfer function
Comprising:
· 18 inch LCD monitor
· cable set
· pedestal

13 **LCD 18" Examination Room Monitor** **1**

LCD 18" Examination Room Monitor
High-quality 18-inch LCD monitor for medical applications. For use in the examination room as live monitor. Its future oriented LCD technique delivers cristal-clear images, displayed absolutely flicker-free. The flat design requires little space in the examination room and is easy to maneuver due to its light weight.

Specification:
· monochrome display 18"
· native format 1280 x 1024 SXGA
· Progressive Display (flicker-free) mode
· wide viewing angle
· high brightness with brightness control (500 cd/m2)
· internal selectable lookup table for grayscale transfer function
· internal power supply (110 - 240 VAC)
· weight:approx. 10 kg (3,9 lbs)
Comprising:
· 18-inch LCD monitor
· cable set

14 **MONITOR TROLLEY** **1**

Monitor Trolley

Mobile support for 1 or 2 examination room monitors. It allows the user to position the monitors according to the procedure and preferred working position. The design allows easy handling and one-hand use.

Includes:

- Monitor trolley for 1 or 2 monitors

15 **ADDITIONAL SET OF SERVICE DOCUMENTATION** **1**

Additional Set of Service Documentation

For all EasyDiagnost systems

16 **Direct access to Philips' PACS "iSite"** **1**

This feature allows access to an existing iSite PACS or web distribution product directly on Eleva Workspots. The iSite viewer will be an integrated part of the Eleva Workspot, thus improving the department workflow.

Users will be able to:

- Check and manipulate images that have been sent to PACS with respect to hanging, labeling, image impression, etc
- Review previous X-ray examinations of a patient
- Review previous multi modality (CT, MR, US, etc.) examinations of a patient without leaving the Eleva Workspot.

Comprising:

- Software license for connection to an existing iSite PACS or web distribution product

Compatible with:

- EasyDiagnost Eleva Rel. 4.0 in combination iSite Rel. 3.5, 3.6 or 4.1

17 **Clinical QC** **1**

This convenient image statistic tool provides the advanced user with functionality to analyze rejected images by operators and rejection reasons. It serves as well for monitoring and analyzing general parameters. Data files can be downloaded for further usage or archiving on a standard PC.

It perfectly supports the quality standards of the department and supports teaching situations.

Comprising:

- Software license

Compatible with:

- EasyDiagnost Eleva 3.0

18 **PAIR OF SHOULDER RESTS** **1**

SHOULDER SUPPORTS/ Pair of shoulder rests

19 **Ankle Clamps** **1**

Ankle clamps For patients in a.p. or p.a. position in connection with shoulder rests. Compatible with: diagnostic tables with footrest provided with 30 mm mounting hole accessory facilities Successor of 9890 010 03601 due to the modification of the bolt.

20 **Stretch grip f. wall stands** **1**

To keep the patient's arm overhead or beside the Bucky unit during exposure.
To be insert at the Bucky unit at right or left side.

Comprising:

- Arm rest, U- shaped for different grip height, tiltable from –90° to +90° for height and side position
- wall holder for parking

Compatible with:

- BuckyDiagnost VS (advanced package)
- BuckyDiagnost VS with digital detector and DigitalDiagnost VM

21 **Set of CS Ceiling Rails** **1**

For longitudinal carriages of CS monitor ceiling suspension or auxiliary ceiling suspension; length 4.3 M.

Comprising:

- 2 CS rails.
- Adjustable end/stops.
- Spacer strips.
- Fixing parts.
- Brake rails.

Compatible with:

- CS 2 CS 4.
- Monitor ceiling suspension.
- Rail extension 9890 010 01622.
- Rail for cable carrier 9890 010 02422.

22 **Mobile holder for the wireless portable detector** **1**

The wireless detector mobile holder is designed to take full advantage of the wireless portable detector to perform free exposures in optimal conditions.

Main benefits at a glance

- Mounted on wheels for easy moving and positioning in the room
- Holds the wireless portable detector in a safe and precise position
- Very easy to put the detector in and to take it out
- High detector positioning flexibility

- Can hold the wireless portable detector with or without a grid on it
- Brakes on the wheels for fixed and safe positioning
- Also compatible with 35 x 43 cm (14 x 17”) CR cassettes

The mobile holder provides outstanding positioning flexibility for the wireless portable detector. Mounted on wheels, it is easily positioned in the room and all around the patient. With or without a grid on it, the wireless portable detector can be held in various positions depending on projection requirements. The positioning is achieved quickly and easily, thanks to very intuitive use and self-locking joins. Featuring a height adjustable arm with swivel, the detector is safely held and can be lifted, tilted, swiveled or rotated to the best convenience.

Specifications

- Dimensions: length 68 cm (26.8”), width 67 cm (26.4”), height 150.7 cm (59.3”)
- Vertical movement range of holder arm: 68 to 128 cm (26.8 to 50.4”), center of large portable detector
- Weight: 53.2 kg (117 lbs)

Comprising

- Mobile detector holder

Compatible with

- Wireless portable detector 35 x 43 cm (14 x 17”) and CR cassettes 35 x 43 cm (14 x 17”)

23 Grid WPD 40/8/130 Landscape 1

Attachable, fixed grid in landscape orientation for the wireless portable detector.

Main benefits at a glance

- Easy to attach/detach to/from the wireless portable detector, thanks to its click-on mechanism
- For examinations where the detector is used in landscape orientation
- Can be used with source-image distance from 110 to 180 cm (44” to 56”)
- Fiber interspaces and carbon fiber cover plates ensure higher contrast and lower required dose than conventional aluminium interspaces grids
- Combined with Philips advanced UNIQUE image processing and grid-line correction algorithm, it provides optimal image quality for increased diagnostic confidence

Specifications

- Fixed grid 40/8/130: 40 lines/cm (100 lines/inch), ratio 8, focus 130 cm (51”)
- Fiber interspaces and carbon fiber cover plates
- Interspaces in landscape orientation
- Weight: 1.8 kg (3.9 lbs)

Comprising

- Attachable, fixed grid

Compatible with

- Wireless portable detector 35 x 43 cm (14 x 17”)

24 **Grid WPD 40/8/130 Portrait** **1**

Attachable, fixed grid in portrait orientation for the wireless portable detector.

Main benefits at a glance

- Easy to attach/detach to/from the wireless portable detector, thanks to its click-on mechanism
- For examinations where the detector is used in portrait orientation
- Can be used with source-image distance from 110 to 180 cm (44” to 56”)
- Fiber interspaces and carbon fiber cover plates ensure higher contrast and lower required dose than conventional aluminium interspaces grids
- Combined with Philips advanced UNIQUE image processing and grid-line correction algorithm, it provides optimal image quality for increased diagnostic confidence

Specifications

- Fixed grid 40/8/130: 40 lines/cm (100 lines/inch), ratio 8, focus 130 cm (51”)
- Fiber interspaces and carbon fiber cover plates
- Interspaces in portrait orientation
- Weight: 1.8 kg (3.9 lbs)

Comprising

- Attachable, fixed grid

Compatible with

- Wireless portable detector 35 x 43 cm (14 x 17”)

25 **Food Transpt Lodging for Cleveland Biomed Training** **14**

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.

26 **XD3848C Bio ELEVA-EASY/MULTI SYS.R2 CTC14+** **1**

Class Length: 14 days (excludes Saturdays, Sundays, and Philips holidays)

Delivery Method: Lecture/Lab

Location: Cleveland

Accreditation: N/A

DESCRIPTION:

The Biomed is trained to a technical level, which will enable him to do the setting to work, calibration, and corrective maintenance on the Windows NT and Windows XP MultiDiagnost Eleva II/TV, and the EasyDiagnost Eleva systems according to the service philosophy.

Prior to attending the course, the student must take XD9016, URF Eleva Basics eLearning and XD9026- URF Eleva Operating eLearning. Both XD9016 & XD9026 are part of this course and there will be no extra cost to obtain these classes.

Description of XD9016:

Class Length: 8 hours
Delivery Method: CBT
This CBT is intended for those who have finished their basic training as X-ray CS field engineer. After some months of field experience this course will be the entrance to the Eleva Platform systems. The CBT provides fundamental information on fluoroscopy and imaging aspects belonging to the Eleva systems as preparatory training for the course XD3853 URF Eleva Platform.

Description of XD9026:
Class Length: 3 hours
Delivery Method: CBT
This CBT training will train the Field Service Engineer to a basic level of understanding the Eleva products structure, the Eleva workflow and how to Operate the Eleva Examination console. He is also trained on the basics of operating a ViewForum connected to an Eleva system.

PREREQUISITES:
Completion the following courses:

XD3002 - X-ray Systems, Basic Part 2 (bundled with: XD9015-X-ray Systems, Basic Part1) or other basic X-ray course, or prior X-ray modality service training/experience

AND-

1 of the following:

XD9016 – URF Eleva Basics
AND-

XD9026- URF Eleva Operating

Additional courses that are recommended:

XD3671(C) - Bucky Diagnost Part 2 (bundled with XD9022-Bucky Part1)

CS9027 - Dicom
CS9020 - Basic Networking

COURSE AIMS:
During this course the engineer will be provided with information on:

- Configuration and product structure of the URF Eleva Systems.
- (Pre) installation and setting to work
- Safety aspects
- Simplified Block and System diagrams
- Corrective Maintenance (CM)
- mShield (firewall)
- Remote Services (RSN)

The Engineer will learn how to:

- Install the system with the help of the SMI
- Work with the Field Service Framework service tool.
- Work with EVA service tool and perform basic EPX parameter adjustments.
- Set up the Velara generator using the Agent service tool and/or FSF.
- Perform mechanical and imaging adjustments
- Perform corrective maintenance at the FRU-level
- Configure and perform basic operation of the ViewForum Workstation
- Handle service software programs
- Connect the system to a local hospital network (RIS, printer and PACS)

* PHILIPS PROPRIETARY MATERIALS SUCH AS DIAGNOSTIC SOFTWARE AND SERVICE DOCUMENTATION ARE NOT INCLUDED IN THE TRAINING AND WILL NOT BE AVAILABLE FOR USE OUTSIDE OF THE TRAINING ENVIRONMENT. THE TRAINEE MUST RETURN ALL

PROPRIETARY MATERIALS RECEIVED DURING THE TRAINING AT THE END OF THE TRAINING. CUSTOMER ACKNOWLEDGES AND AGREES THAT NEITHER CUSTOMER NOR TRAINEE WILL RECEIVE A LICENSE TO SUCH PROPRIETARY MATERIALS AND THAT THE TRAINEE MAY NOT BE ABLE TO FULLY UTILIZE THE TRAINING WITHOUT THE USE OF SUCH PROPRIETARY MATERIALS. (CERTAIN LICENSES MAY BE OBTAINED THROUGH PURCHASE OF A PHILIPS RIGHTFIT SERVICE AGREEMENT.) Course dates and location to be finalized by Philips. Philips shall attempt to accommodate Customer requested dates and training location. The price quoted includes course tuition. Travel and living expenses are not included, but may be purchased separately through Philips.

IMPORTANT Notes Regarding Admission to Philips Customer Engineer Training Courses:

1. Trainee must meet all prerequisites
2. Course expires one (1) year from equipment installation date (or purchase date if sold separately)
3. Customer must sign Philips Nondisclosure statement
4. Trainee must sign Philips Nondisclosure statement
5. Customer must sign Philips terms and conditions of training

27 **XD9032 Bio EasyDiagDRF eLearn** **1**

EasyDiagnost Eleva DRF

Course Number: XD9032
Class Length: 4 hours (excludes Saturdays, Sundays, and Philips holidays)
Delivery Method: CBT
Modality: URF and RAD
Location: At home
Accreditation: None

DESCRIPTION:
This CBT training will train the experienced URF Eleva Field Service Engineer, who has already experience with the Essenta DR, to a level of technical knowledge and understanding, which enables him to succesfully work on the EasyDiagnost Eleva DRF. This module covers the radiology part of the EasyDiagnost Eleva DRF.

COURSE-WARE:
On line

All course materials are on CSIP level 1.

PREREQUISITES:
Engineers attending this course must have:
* Mechanic skills
* Computer skills
* Knowledge of URF system architecture
* Operationg experience with measuring equipment
* Knowledge of URF Imaging subsystems
* Knowledge of Dicom/networking
* Knowledge of the Trixell 4600 digital detector
* Knowledge of the Application workspot

Prior attendance to XD3854C, XD3853 or XD3848 URF Eleva Platform and the:
* XD9013 PCR Basic
* XD3674 Essenta DR

The student has to have field experience on URF Eleva systems and radiology systems.

COURSE AIMS:
During this course the engineer will be provided with the theoretical knowledge of:
* the major system components
* the connection between the EasyDiagnost Eleva and the DR part
* the workflow
* service
* corrective maintenance
* upgrading the EasyDiagnost with the DR option

He will learn how to:
* identify the components of the EasyDiagnost Eleva DRF system
* describe the workflow of an EasyDiagnost Eleva DRF system
* describe how the EasyDiagnost and the DR part are connected
* which tools are used to service the EasyDiagnost Eleva DRF
* where to get information about system status during fault finding
* the upgrade possibilities

KEY TOPICS:
* system survey
* workflow
* operating
* how the EasyDiagnost Eleva and the DR part are connected
* how to service the EasyDiagnost Eleva DRF
* corrective maintenance
* upgrading the EasyDiagnost Eleva with the DR option

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IMPORTANT Notes Regarding Admission to Philips Customer Engineer Training Courses:

1. Trainee must meet all prerequisites
2. Course expires one (1) year from equipment installation date (or purchase date if sold separately)
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28 **XD9019 Bio EasyDiagEleR2 eLearn** **1**

EasyDiagnost Eleva, R2 Diff

Course Number: XD9019
Learning Time: 3 hours (excludes Saturdays, Sundays, and Philips holidays)
Delivery Method: Online
Modality: Universal R/F
Location: At home
Accreditation: None
Audience: CS engineers

DESCRIPTION:
This training will train the experienced Eleva Field Service Engineer to a level of technical knowledge and understanding, which enables him to succesfully work on the EasyDiagnost Eleva Release 2. This module covers the differences between the releases and explains the new features.

COURSE-WARE:
Online, CSIP level 1

PREREQUISITES:
Prior attendance to Eleva courses XD3853, XD3854, XD3855 or XD3848

The student should have field experience on Eleva systems, especially with FSF and EVA.

COURSE AIMS:
During this course the engineer will be provided with knowledge of:
- the changes in FSF
- the changes in the EVA tool
- The new features in the Sysco

He will learn how to:
- use FSF to configure, adjust and troubleshoot the Velara generator
- use FSF to switch between application and service EPX database
- use FSF to configure the virus scanner, access service documentation, transfer data to USB stick, etc.
- use the EVA tool and EEC to perform RIS mapping new style
- work with the new EVA structure and use the online help functionality

KEY TOPICS:
- Configure, adjust and troubleshoot Velara generator
- EPX database changes
- EVA changes
- Use of USB stick for data transfer

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29 **dXR Additional RIS Mapping OnSite Ed 8h** **1**

Clinical Education Specialists will provide eight (8) hours of RAD/RF OnSite Education for up to four (4) systems of the same release level at the same physical address. For more than 4 systems, systems of different modalities, systems at different locations or systems of different release levels you must purchase additional time. It is recommended that for every 4 systems another 8 hours of blocked time is purchased. If there are multiple modalities, it is recommended an 8 hour block of time for each new modality and/or new release level. If the systems are located at different physical addresses then it is recommended that an additional 8 hours of blocked time is purchased. CEU credits are not available for this training event. Clinical Specialist time onsite is specifically for system configurations. If training of staff is necessary due to changes implemented then OnSite Education for up to four (4) key operators selected by customer, including technologists from night/weekend shifts (if necessary) will be provided. 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.

Education expires one (1) year from equipment installation date (or purchase date if sold separately).