

VAMC PORTLAND, OR  
PO# 648-B31007

Line #	Description	Qty
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1	<b>MultiDiagnost Eleva 6.2</b> <b>MultiDiagnost Eleva w. FD</b>	1
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The MultiDiagnost Eleva FD-MX is a multi-purpose C-arm based digital X-ray system for routine R/F examinations, dedicated vascular and non-vascular diagnostics and interventional procedures.

The MultiDiagnost Eleva FD-MX is equipped with Philips' latest dynamic Flat Detector that provides excellent image quality at the lowest possible patient dose.

With its customizable Eleva concept the MultiDiagnost Eleva with Flat Detector increases productivity by adapting the system to the way you work. The system can be easily integrated in today's hospital and departmental workflow requirements.

Comprising:

- Tilt-C arm stand
- Flat Detector 30 x 40 cm subsystem
- Eleva control
- User Interface

Tilt C-arm stand

The tilting table with integrated C-arm facilitates compound beam projections, and allows versatile patient positioning.

The stand features:

- Philips' unique scanning concept of a moving C-arm and a fixed tabletop - No patient movement
- Increases patient safety
- Increases patient comfort
- Sterile design, e.g. under-the-table C-arm ensures sterility in lateral projections both in AP and PA setting
- BodyGuard anti-collision system automatically senses patient body position and size in order to take safely advantage of the system's projection flexibility

Stand specifications:

- Single side suspended tabletop at the right or left side of the system
- Carbon fiber table top will be delivered with the clinical package (maximum weight on table 200kg (440 lbs))
- Tabletop height adjustment with a step up height of 60 cm (23")

- Longitudinal table tilting from +90 to -20 degrees Trendelenburg
- C-arm that can be positioned in PA (detector over table) or AP (detector under table) projection
- Longitudinal C-arm scanning range of 160 cm (63") for full body coverage (patient coverage 198 cm (78"))
- Lateral C-arm scanning range of 40 cm (15.7")
- Isocentric C-arm rotation of 90 degrees LAO to 90 degrees RAO
- C-arm angulation of 45 degrees cranial to 45 degrees caudal
- SID range of 95-125 cm (37-49")
- Flat Detector / table top clearance of max. 81 cm (32") for optimal patient access

#### Flat Detector Subsystem

#### Flat Detector subsystem, with 30 x 40 cm Flat Dynamic X-Ray Detector

- Maximum field of view: 30 x 38 cm (landscape mode) or 38 x 30 cm (portrait mode)
- Image matrix: 2480 x 1920 pixels at 14 bits depth
- Detector zoom fields: 30 x 30 cm, 22 x 22 cm, 16 x 16 cm, 11 x 11 cm
- Pixel size: 154 um
- Detector bit depth: 14 bits
- Detector quantum efficiency: 73% at 0 lp/mm

The Flat Detector is provided with a refresh light to eliminate ghost images (provide temporal artifact-free images).

To provide the best flexibility between image coverage, stand projection and patient accessibility, the Flat Detector has a 90 degrees pivot and supports landscape-mode and portrait-mode image acquisition.

Measuring fields are customizable per application as well as user selectable.

Collimation of the X-Ray beam can be performed on the Last Image Hold image to adjust the position of the shutters without X-Ray radiation.

#### Eleva concept

The customizable Eleva concept increases productivity by adapting the system to the way you work: the system 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 efficiencies, the Eleva concept features:

Customizable system pre-sets like SpectraBeam RF filter selection (option), measuring field selection and default collimator settings

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:

- Elevation Examination Control (control room)
- Keyboard & Mouse (control room)
- Handswitch (control room)
- Elevation Nearby Stand Control on pedestal (examination room)
- Elevation Footswitch (examination room)

Elevation Examination Control (touch screen):

The Elevation Examination Control (incl. keyboard) 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. The easy to use touch-screen 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.

The system user interface offers facilities for:

- Patient and examination administration

Preparation:

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

Examination:

- Automatic selection of system settings according to scheduled examination from RIS
- Automatic adaptation of X-ray parameters depending on patient age, size and weight retrieved from RIS
- Display of dose-information and current actual dose rate, accumulated during course of examination and per exposure run (option). Patient area dose values on image level providing insight on the dose needed for acquiring an image on a View/Workstation
- Automatic lay-out of image sets according to the user's preferred method of presentation and interaction for different type of viewing circumstances (hanging protocols)

Reporting:

- Printouts of dose report (optional)
- Support of DICOM MPPS (optional)

Selection of acquisition parameters, like:

- Auxiliary selection and indication
- Selection and display of exposure parameters
- Selection of parameters for special examinations like bolus chasing, total legs and full spine scan, etc. (optional)
- Selection of predefined acquisition programs
- Selection of different frame rates for Grid Controlled Fluoroscopy
- Selection of spectral filters for fluoroscopy and exposure (optional)

## Eleva Nearby Stand Control (incl. pedestal)

To operate the system at the table side, either mounted on the pedestal or anywhere on the tabletop of the system.

For nearby operation of:

- All stand movements, store / recall positions, AP/PA change, etc.
- Operation of main imaging functions, fluoro flavour selection, detector zoom field selection, collimator control
- 90 degrees Flat Detector pivot for portrait or landscape acquisition

## Eleva Footswitch (examination room)

For exposure and fluoroscopy control

## Eleva Handswitch (control room)

Ergonomic handswitch for exposure control

## Accessories

Many accessories are available as option to support the systems' multifunctional capabilities.

## Clinical packages

Clinical packages are available to optimize the MultiDiagnost Eleva with Flat Detector system for dedicated applications or multifunctional use. One of the optional clinical packages must be selected to complete the system.

Optional: 3D-RX

## MD Eleva FD R6.2

MD Eleva release 6.2 brings along the following extra features:

- 40 lines grid + grid line suppression algorithm and 2D Harmonization in image processing. These features bring out an improved Image Quality within the Fluoroscopy setting
- Kv-mA curve automatically adapts to selected fluoroscopy speed (4 fps, 7.5 fps, 15 fps). This property allows optimal Image Quality at every speed

In addition, this version entails the following changes versus previous model characteristics:

- 30 fps 10242
- Max table load 200kg
- Addition of structure dose reporting
- Addition of 5th FOV (11cmx11cm)
- Modified GoTo Ap/Lat movement to always keep iso center

- Increased Roll speed (12°/s to 20°/s)
- 19" inches monitors

#### Clinical Education Program for R/F Systems

Handover OnSite Education: Clinical Education Specialist will provide one twenty-eight (28) hour week of RF OnSite Education for up to four (4) students, selected by customer, including technologist 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 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.

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

Recommendations: For MultiDiagnost customers that have purchased 3D RX, it is highly recommended that part# 989801292309, XR 3D RX Handover OnSite 16h is purchased to assist customers in maximizing the workstation capabilities.

Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref# 524-120315

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|----------|---|----------|
| <b>2</b> | <b>Floor plate MD-Eleva</b>   | <b>1</b> |
|          | Floor plate for MultiDiagnost Eleva   |          |
| <b>3</b> | <b>MDE-FD GI diagn.+Interv pack</b>   | <b>1</b> |
|          | Package for GI diagnostic and interventional examinations including ERCP. Containing:   |          |
|          | - universal package comprising table top, footswitch, detachable footrest and handgrips; SRM 0608 tube with Philips' Grid Controlled Fluoroscopy; mShield to safeguard the data integrity of medical information systems; extended digital imaging for fast acquisition, fluoro grabbing, viewing, storage, printing and post processing of images; 2 LCD monitors 19", one for in the control room and one for in the examination room |          |
|          | - minus 90 degrees tilt extension   |          |
|          | - Remote operation in control room  |          |
|          | - 80kW microprocessor controlled generator with IQX   |          |
|          | - SRM 0608 tube with Philips' Grid Controlled Fluoroscopy   |          |
|          | - dose calculation which is displayed on the EEC  |          |
|          | - collimator light for patient positioning in AP without radiation  |          |
|          | - SpectraBeam for automatic X-ray beam spectrum optimization  |          |
|          | - extended digital imaging for fast acquisition, fluoro grabbing, viewing, storage, printing and post processing of images  |          |
|          | - mShield to safeguard the data integrity of medical information systems  |          |
|          | - colon map for reconstruction and printing of a survey image of the colon  |          |
|          | - DICOM IO package for seamless integration into your workflow:   |          |
|          | DICOM Query & Retrieve, Multimodality View, Export, WLM and MPPS.   |          |

- 2 LCD monitors, one for in the control room and one for in the examination room

Universal package

The Universal Package completes the MultiDiagnost Eleva with all required basic accessories

to perform universal radiology & fluoroscopy examinations.

Comprising:

- Carbon fiber table top with dimensions of 227 x 56 cm (89 x 22") and a maximum table load of 200 kg (440 lbs)
- Detachable footrest
- Pair of handgrips
- Mattress
- Eleva examination room universal footswitch for exposure and fluoroscopy control

Extension tilt movement to -90 degr. tilt

Extended tilt movement to -90 degrees (Trendelenburg) for applications such as myelograms and flexible

room layout requirements. The tilt movement has a variable speed of 2-4.5 degrees/sec. The tilting speed

is automatically reduced to zero in horizontal (can be programmed application depended) and at the end position.

Operation is possible from the remote or nearby control desk.

With the suspended side up, the center of the X-ray source the minimum distance of the centre beam to the floor is 46 cm.

Remote operation MD-FD

Functional extension offering flexible remote operation in the control room.

Duplication of functions on Eleva Nearby Stand Control.

The remote control panel permits control of the most important system functionality, as described below.

The remote control panel facilitates:

. Joy-stick control of beam scan

The operator can select:

- . Monitor oriented operation, or Patient oriented operation
- . Joy-stick control of tabletop tilt movement
- . Joy-stick control of angulation
- . Control of collimator light
- . Joy-stick control of collimator functionality
- . Control for 90 degrees pivot Flat Detector
- . Selection of detector zoom fields
- . Control of fluoroscopy functionality

Comprising:

- Remote operation for stand controls including footswitches for fluoroscopy and exposure

80KW generator MD-FD w. IQX

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 and IQX.

The generator is engineered for long-term reliability and minimum space requirement.

Specification:

. Automatic and manual exposure techniques.

The generator supports the IQX function which regulates

exposure settings during the exposure pulse  
(in-pulse controlled).

Exposure output power:

kV 40 - 150 kV

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)

IQX Intelligent exposure

Fluoroscopy techniques:

For enhanced image quality and dose management, the generator supports Grid Controlled Fluoroscopy technique.

Access times:

From fluoro standby to fluoro: < 0.3 sec

From fluoroscopy to radiography: 0.4 - 0.8 sec

From radiography to fluoroscopy: 0.4 sec

Automatic mains adaptation

Mains voltage: 50/60 Hz, 380 / 480 V +/- 10 %

IQX features:

- 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

G.C.F. with SRM 06 08 GS X-ray tube

Grid Controlled Fluoroscopy is a Philips-unique 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 06 08 and the control of the X-ray parameters kV mA and time within each single pulse (in-pulse control).

Major features of GCF are:

- . Unrivalled image quality for fluoroscopy with each single pulse
- . Maximum dose reduction
- . On the fly selection of three different pulse rates (user programmable for maximum flexibility for the user)
- . Dedicated pediatric setting 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 keep 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 - 20 ms (typical)
- Pulse frequency: 0.5 - 30 fr/s
- SRM 06 08 Super ROTALIX Metal for 125 kV high speed with nominal focal spot values 0.6 / 0.8 and max. 37 / 54 kW (based on 250 W) short time load.
- Tube voltage: 40 - 125 kV
- Tube current: 0 - 200 mA
- Nominal focal spot values: 0.6/0.8 (IEC 336/93)
- Anode target angle: 12 degrees
- Anode cooling rate: 3.3 kW
- Anode heat content: 593 kJ (800 kHU)
- Anode speed: 3000 rpm / 9000 rpm
- Acceleration time: 1.4 sec

ROT 505 water cooled ROTALIX housing with thermal safety switch

Dose calculation

Patient dose can be calculated based on dose area product. The dose levels are calculated based on the system parameters (e.g. kV mAs collimator position etc.). The dose levels are displayed at the Eleva Examination Control and on the reference monitor (for this a reference monitor needs to be purchased).

The generator supports all necessary data to calculate:

- . Area dose product
- . Dose
- . Dose rate

Comprising:

- Dose calculation software

Collimator with light

Automatic X-ray beam limiting device for MultiDiagnost Eleva with light.

In AP projections the light can be used for patient positioning without radiation.

The collimator light can be used to extend your application mix with free cassette exposures.

Comprising:

- Collimator with rectangular shutters
- Light for simulation of X-ray beam
- Circular collimation

SpectraBeam RF

SpectraBeam RF is an automatic X-ray beam spectrum optimization for MultiDiagnost 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 disc with four filter values:
- 1 mm AL + 0.1 mm Cu
- 1 mm AL + 0.2 mm Cu
- 1 mm AL + 0.3 mm Cu
- None

Extended digital imaging

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The Extended Digital Imaging System of the MultiDiagnost Eleva with Flat Detector offers high performance digital image acquisition for fluorographic and fluoroscopic applications. All image-processing parameters are set instantly, so within a split-second the MultiDiagnost Eleva with Flat Detector system is ready to acquire and display high quality digital images. As a result of the brilliant quality the user can diagnose and report directly from the monitor, during or immediately after the examination.

Images can be acquired in 1024 matrix size, with a maximum speed of 8 frames/sec. and optional with a maximum speed of 30 frames/sec.

Live fluoroscopy images can be captured as single images or as complete runs. Any run of images can be displayed in a loop with adjustable speed and direction.

In addition it offers automatic on-line digital image processing and reviewing with the integrated ViewForum software. Extended Digital Imaging offers printing facilities by preset

layout, a number of preset layouts for specific examinations are available. The printing functionality can be extended with tailor-made printing protocols according to personal settings with the optional Print protocol editor.

Printing can be done by the touch of a button utilizing print protocol, which have been pre-programmed for the examination, making the workflow more efficient.

Extended Digital Imaging is, in combination with the optional Subtracted acquisition and vascular postprocessing able to support vascular procedures.

Main features of Extended Digital Imaging:

- . Acquisition
- . Digital image acquisition (14 bit)
- . Single and multiple shot exposures
- . Acquisition speed up to max. 8 frames/sec.
- . Acquisition matrix 1024 x 1024
- . Acquisition image capacity up to 4000 images in 1024 x 1024 matrix

Fluoro grab

Grabbing of single fluoroscopic images

Dynamic fluoro grab: grabbing of runs of fluoroscopic images

AutoStore of images into the ViewForum database on the hard disk

Viewing

Easy navigation through examinations, runs and images

On-line (re)viewing of high quality images

Automatic, adaptive image processing

o Automatic electronic shutters

Last image hold

Run cycle: display of images in a loop with adjustable speed and direction

Flexible image overview

Excellent image quality by using optimized 2D harmonization algorithms

Direct Mouse manipulation

User log-on

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Default Display protocols  
Flexible screen layouts  
Post processing  
Contrast, brightness, edge enhancement and grayscale inversion  
Zoom  
Measurements  
Multiple free text annotation with adjustable font size  
Copy annotation strings within a run  
Image processing (16 bit)  
Automatic and manual asymmetric rectangular and circular electronic shutters  
Rotate, flip  
Zoom/Pan  
Magnification  
Printing  
One touch printing according to personal settings or preset layouts  
Manual printing with free style layout  
Multi tasking: background printing  
Paper printing  
DICOM print  
Storage  
Local storage on hard disk (minimal 72 GByte)  
AutoStore (to the hard disk) in the background  
Archiving to e.g. PACS in the background with optional DICOM export package  
CD/DVD recording optional  
Movie export to \*.avi  
Comprising:  
- Cabinet with 14 bit digital image processor  
- Quick review module  
- ViewForum keyboard with mouse for image processing  
- 130 GByte hard disk

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

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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

Colon Map

ColonMap is a package for reconstruction and printing of a survey image of the colon.

ColonMap is a dedicated software package which extends the anatomical coverage for the lower Gastro Intestinal area. It creates one digital overview image from a series of acquired images.

Specific print protocols for ColonMap reconstruction are included.

For customization or definition of additional print layouts the optional Print Protocol Editor is required.

The ColonMap software delivers a digital survey image of the colon from a series of images acquired by narrow beam technique (slit scanning).

ColonMap overcomes the coverage limitations of the image intensifier. While cassette techniques

are used to perform diagnosis on these acquired images

ColonMap cannot be regarded as a replacement to perform diagnosis. Diagnosis can be done on the images from the Digital Imaging system taken during the same procedure. They can be printed next to the survey image.

Comprising:

- ColonMap license and software

DICOM Inter-operability package

Extended Digital Imaging systems supports PMSnet-import and DICOM-import (DICOM Store(SCP))

meaning that a DICOM node can push images into the Extended Digital Imaging database.

The DICOM Q&R MMV package adds the following capability:

. DICOM Query and Retrieve (both DICOM Q/R (SCU and SCP))

. Allowing the Extended Digital Imaging to Query / Retrieve images from another DICOM node

. Basic viewing functionality for DICOM images of different modalities e.g. MRI CT C/V etc.

The DICOM Export provides exporting capabilities for images from the Extended Digital Imaging System

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)

The DICOM Worklist Management provides a bidirectional connection to a RIS (Radiology Information System)

in order to query and receive patient and examination information (scheduled worklist).

With the DICOM Worklist Management package the Extended

Digital Imaging System acts like a  
DICOM WLM (SCU) with the capabilities:

- . Query RIS for current scheduled worklist automatically
- . Query RIS for current scheduled worklist on demand
- . Customize RIS Query

The DICOM MPPS package provides capabilities of reporting  
information about the current examination  
back to the connected RIS (Radiology Information System).

With the DICOM MPPS package the Extended Digital Imaging  
System acts like a DICOM MPPS (SCU)

with the following capabilities:

- . Report status of the current procedure step back to RIS
- . Provide RIS with examination information

All DICOM SOP-classes as described in the DICOM  
Conformance are supported.

Comprising:

- DICOM Query and Retrieve Multimodality View license and software
- DICOM Export license and software
- DICOM WLM license and software
- DICOM MPPS license and software

Monochrome LCD display for use in control room

Monochrome LCD display for use in the control room as desktop version.

Main characteristics:

- 19" monochrome TFT-LCD display
- Native format 1280 x 1024 SXGA
- Wide viewing angle (~170°)
- Progressive display; high line rate, flicker-free non-interlaced display
- High brightness with luminance stabilization (max 1000Cd/m<sup>2</sup>, default 500 Cd/m<sup>2</sup>)
- Internal selectable lookup table for grayscale transfer function
- Grey-scale resolution: 10 bit with grey-scale correction
- Internal power supply (100-240 V)
- Weight 7.6 kg (16.7 lbs) including pedestal
- Size 42.5 (W) x 37.5 (H) x 9.68 (D) cm (16.7 x 14.8 x 3.8 inches)
- PMS PD-format (B/W) via BNC-connector
- VGA standard PC-format (RGBHV)
- DVI interface standard
- UL and CE mark

Comprising:

- 19" monochrome display, including cable set

Monochrome LCD Examination monitor

Monochrome LCD display for use in examination room as life monitor.

Main characteristics:

- 19" monochrome TFT-LCD display
- Native format 1280 x 1024 SXGA
- Wide viewing angle (~170°)
- Progressive display; high line rate, flicker-free non-interlaced display
- High brightness with luminance stabilization (max 1000Cd/m<sup>2</sup>, default 500 Cd/m<sup>2</sup>)
- Internal selectable lookup table for grayscale transfer function
- Grey-scale resolution: 10 bit with grey-scale correction
- Internal power supply (100-240 V)
- Weight 5.6 kg (12.32 lbs) without pedestal
- Size 42.5 (W) x 37.5 (H) x 9.68 (D) cm (16.7 x 14.8 x 3.8 inches)

- Antireflective protection screen
  - PMS PD-format (B/W) via BNC-connector
  - VGA standard PC-format (RGBHV)
  - DVI interface standard
  - UL and CE mark
- Comprising:
- 19" monochrome display, including cable set

**4** **Ceiling rails for monitor suspension** **1**

Comprising:

- 2 clip rails length 430 cm.
- Mounting material.

**5** **Left side suspended table top** **1**

The left side suspended table top optimizes the system regarding:

- Applicational requirements
- Room layout requirements
- Angiographic and interventional procedures

E.g. for special procedures like ERCP and peripheral angiography the left side suspended table top can be beneficial.

Comprising:

- Left side table top suspension

**6** **UPGR. TO DOSE MEASUREMENT** **1**

To extend the existing dose calculation in the selected package into dose measurement.

During radiographic and fluoroscopic procedures the following parameters are measured to provide

dose information to the user:

- . Dose area product
- . Dose area product rate

The parameters are measured at the collimator. The data is displayed at the Eleva Examination Control and on the reference monitor.

Comprising:

- Measuring chamber for system tube, including power and cabling, in case, an over table tube is content of the order, a second measuring chamber is provided

Compatible with:

- . Initial deliveries of MultiDiagnost Eleva with Flat Detector system with an Orthopedic, GI, Trauma or Urology package

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**19" reference LCD exam room**

1

Monochrome LCD display for use in the examination room as reference monitor.  
Geometry settings and dose values can be displayed on the reference monitor as well.

Main characteristics:

- 19" monochrome TFT-LCD display
- Native format 1280 x 1024 SXGA
- Wide viewing angle (~170°)
- Progressive display; high line rate, flicker-free non-interlaced display
- High brightness with luminance stabilization (max 1000Cd/m<sup>2</sup>, default 500 Cd/m<sup>2</sup>)
- Internal selectable lookup table for grayscale transfer function
- Grey-scale resolution: 10 bit with grey-scale correction
- Internal power supply (100-240 V)
- Weight 5.6 kg (12.32 lbs) without pedestal
- Size 42.5 (W) x 37.5 (H) x 9.68 (D) cm (16.7 x 14.8 x 3.8 inches)
- Antireflective protection screen
- PMS PD-format (B/W) via BNC-connector
- VGA standard PC-format (RGBHV)
- DVI interface standard
- UL and CE mark

Comprising:

- 19" monochrome display, including cable set

Compatible with:

- initial deliveries of MultiDiagnost Eleva systems

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**2 monitor ceil. susp. LCD**

1

Height adjustable monitor ceiling suspension for two monitors. This device allows the user a flexible position of the monitors in the examination room depending on the application and the preferred working position. The counterbalanced arm holds the monitors in any wished height and gives free space on the floor. The design allows easy movements and a one-hand use.

Specification:

- The height adjustable swivel arm has a:
  - 430 cm (172 inch) longitudinal travel
  - 340 degrees rotation
  - 105 cm (42 inch) vertical range
  - length of 120 cm (48 inch)
  - maximum permitted load incl. mechanical parts: 37kg

Comprising:

- monitor ceiling cart
- counterbalanced swivel arm
- monitor carriage
- 3 pcs. cable carrier for CS 9804 652 2

## OPTIONS

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 #	Description	Qty		
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1	<b>2K IMAGING</b>	1		
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2K Imaging for the MultiDiagnost Eleva with Flat Detector systems provides 2K Image Acquisition and 2K Image Processing and 2K Image Storage.

Image quality is amongst others related to the amount of pixels in the image and the amount of pixels

determines the level of detail visible. With the 2K Imaging up to 4 times more information is available

compared to conventional 1K processing systems.

Main features of 2K imaging:

- 2K Image Acquisition, Processing and Storage
- Acquisition frame/speed up to 4 frames/sec, exposure only
- Selectable for the 38x30cm, the 30x38cm and the 30x30cm detector format

Comprising:

- SW License

Compatible with:

- MultiDiagnost Eleva with Flat Detector systems, R4.1.3 and higher.

2	<b>Automatic calibration</b>	1		
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Pixel Calibration enables true size printing of exposures and in ViewForum measurements on exposures. The pixel spacing on the detector plate is adjusted for the geometrical magnification to calculate the pixel spacing on patient level. It is assumed that the region of interest is 10cm above the center of the tabletop. The dicom attributes pixel spacing and estimated radiographic magnification factor are exported. For fluoro grabs the attributes are available but empty.

Comprising:

- pixel calibration software

Compatible with: Initial MultiDiagnost-Eleva with Flat Detector.