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## **JunoDRF**

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The Juno DRF is a multi-purpose digital fluoroscopy and radiography system.

The built-in dynamic flat panel detector allows for high frame rate fluoroscopy as well as high-resolution radiography. Therefore one room, one detector and one imaging platform can perform a wide range of applications that typically require multiple devices when based on legacy equipment. According to the actual workload and patient workflow requirements, it can quickly switch from dynamic contrast studies such as GI, urological and vascular investigations to general radiographic studies such as chest or extremity exams.

Maximizing the return on investment by increasing the flexibility of the equipment on the one hand and allowing for a higher throughput on the other hand is the leading idea behind this two- in-one concept.

An automatic setup of the geometry after the selection of an examination for example helps shorten the in-room preparation times. Based on the built-in procedure database, parameters like table tilt, source image distance, collimation, filter settings and grid selection are set automatically prior to the exam.

The application range covers amongst others gastro-intestinal, skeletal and thorax exams, angiographies (option), iodine studies and interventions.

Features included are:

For the stand:

- a patient weight capacity of 284kg (626 pounds) without any restrictions of movements
  - 90° tilting in both directions (+/-)
  - oblique projections up to +/- 40° also at the edges of the table
  - 62 cm (24.4") step up height to increase patients' and radiographers' comfort
  - a longitudinal patient coverage of 203cm (80") without the need for tabletop movements
  - motorized transversal table top movements
  - variable SID from 110cm (43.3") to 180cm (71") enabling true DR functionality for e.g. chest x-rays
  - automatic selection between two different grids or no grid, based on the actual examination (120cm (47.2") or 180cm (71"))
  - flat tabletop (235.6 x 73.8 cm)
  - automatic remote controlled compressor with variable compression force incl. motorized removal and parking functionality
  - a base set of accessories (all removable) comprising 2 handgrips and a footrest
  - tableside control user interfaces for in room geometry control
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For the imaging system:

- the 43cmx43cm (17"x17") dynamic flat panel detector
  - with a resolution of 2880x2881 pixel
  - a pixel size of 148µm
  - 16 bits dynamic range
  - 1 to 30 frames per second for continuous fluoroscopy
  - 1 to 15 frames per second for pulsed fluoroscopy
  - series exposures at up to 8 frames per second
- image processing
  - vertical and horizontal flip
  - rotation in (90° steps)
  - brightness and contrast adjustment
  - gamma correction
  - grey scale inversion
  - harmonization
  - spatial filters
  - free text and predefined annotations
  - manual and automatic shuttering
  - anatomy based image processing, applying anatomy based processing algorithms to maximize image quality
- image review
  - single image review
  - playback of dynamic sequences at acquisition speed
  - cine loop
  - multi image mosaic review
  - "mosaic plus" review, showing one large plus 5 or 7 small images
  - zoom
- interactive print layout editor
- DICOM connectivity
  - DICOM export (DICOM store (SCU) and DICOM print (SCU)), allowing the export of images in DICOM format
  - DICOM storage commit (SCU)
- short term image storage
  - >8000 images storage capacity on hard disk
- tomography
  - Linear tomography with Arc-Plane movement
  - in all table positions
  - from 7° to 45° tomography angle
  - at variable speed up to 22.4°/s
  - providing automatic tomo sequences with automatic layer height increase and bi-directional movements
  - layer height between 0 and 350mm, in 1mm steps (0-13.8", 0.04" steps)
  - tomoscopy, allowing to keep the organ centered when taking oblique projections during fluoroscopy

User interfaces:

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- In the control room, a graphic user interface provides access to the imaging system
- a geometry control console allows the remote control of all table movements including tomography, the collimator and compressor
- the generator console and the double footswitch for fluoroscopy and exposure

Bundle NNAH766 Consists of:

1. NEDA004 Juno DRF
2. (3) 980306030007 Cabinet box
3. 980306690109 Cables F/ Easy Diag – SCP Install
4. 989801292644 28 hours of clinical applications

#### **Clinical Education Program Juno DRF:**

Handover OnSite Education: Clinical Education Specialists will provide twenty-eight (28) hours of Juno DRF OnSite Education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 28 hours. CEU credits may be available if the participant meets the guidelines provided by Philips. Please read guidelines for more information. 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.

Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref #644-110721

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#### **80 kW generator incl. pulsed fluoroscopy**

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The 80 kW power pack is a microprocessor controlled X-ray generator with high frequency inverter technology. The generator is designed for a wide range of fluoroscopy and radiography applications.

Specification:

- automatic and manual exposure techniques
- Exposure output power:
  - kV 40 - 150 kV
  - mA 10 - 1000 mA
- 1 ms - 6.3 s exposure time
- Techniques: two factor (kV - mAs), three factor (kV - mA - s) and AEC
- fluoroscopy techniques: for enhanced image quality the generator supports continuous fluoroscopy and pulsed fluoroscopy techniques with automatic or manual mA and kV adjustments.

- fluoroscopy output power:
  - kV 40 - 125 kV
  - mA 0.5 - 10 mA

Built in safety mechanisms constantly check the load, voltage, current, anode temperature and rotation to avoid malfunction.

### 3      \*\*      **Tube RTC 700 HS 0.6/1.0**      1

The RTC 700 HS 0.6/1.0 is a high performance radiography and fluoroscopy X-Ray tube featuring:

- Focal spots of 0.6 and 1.0 mm
- 800 kHU anode heat storage capacity
- Anode diameter of 102 mm
- Anode angle 12.5°
- Anode speed of 3,000 / 10,000 rounds per minute
- Nominal input power of up to 40 / 100 kW (small/ large focus)
- Maximum voltage of 150 kV
- Maximum heat dissipation 125 kHU/min (80 kHU/min. continuously)
- Heat storage capacity of the housing: 1500 kJ

### 4      \*\*      **Motorized tube ceiling suspension**      1

Ceiling suspended, vertically motorized column equipped with an X-ray tube and a high end X-ray collimator for over table Bucky radiography and trauma work. The telescopic column is counterbalanced and can be moved smoothly in all directions. All indicators and displays are clearly arranged and provide the current system status.

If combined with the vertical stand, the ceiling suspension provides auto tracking functionality. Therefore, the tube will follow the receptor automatically to improve the workflow.

Comprising:

- Operating range:
  - Longitudinal 350 cm (manual)
  - Transverse 218 cm (manual)
  - Vertical 150 cm (motorized, manual operation possible)
- Focus floor distance 28 - 178 cm (at a ceiling height of 278 cm)
- Over table tube with collimation device

RTM 101 HS 0.6/1.2 is a high performance radiography X-Ray tube featuring:

- Focal spots of 0.6 and 1.2 mm
  - 400 kHU anode heat storage capacity
  - Anode diameter of 102 mm
  - Anode angle 12.5°
  - Anode speed of 3,000 / 10,000 rounds per minute
  - Nominal input power of up to 40 / 100 kW (small/ large focus)
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- Maximum voltage of 150 kV
- Maximum heat dissipation 125 kHU/min (80 kHU/min. continuously)
- Heat storage capacity of the housing: 1280 kJ
- Collimator
  - Including laser beam for bucky centering
  - Digital SID measurement plus retractable measuring tape

**5      \*\*                      CS incl. 19" monitor                      1**

Monitor ceiling suspension including one in room 19" high brightness greyscale monitor.

Comprising:

- Ceiling suspension, height adjustable
- One 19" high brightness medical monochrome LCD providing
  - Resolution of 1280x1024 pixels and
  - Brightness of 1500 cd/m<sup>2</sup>

In case longitudinal travel rails are required, accessory "Ceiling rails for single Monitor" needs to be selected.

**6      \*\*                      Nearby control trolley for in-room operation                      1**

The nearby control trolley provides the full set of imaging and geometry control functions to work right next to the patient. It includes a 19" high brightness monochrome LCD monitor, keyboard and mouse that allows control of imaging parameters and review functionalities. A second geometry control desk integrated into the trolley provides control of the geometry, collimator and compressor. An additional double footswitch is included as well.

**7      \*\*                      DICOM worklist management                      1**

The DICOM worklist management package includes the following functionality:

- DICOM worklist management (SCU), providing a bidirectional connection to a RIS (radiology information system) in order to query and receive patient and examination information (scheduled worklist)

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

**8      \*\*                      DICOM modality performed procedure steps                      1**

The Dicom MPPS option enables the modality to send a report about the performed examination including data about the start and end time, number of exposure, exposure factors, dose delivered.

**9      \*\*                      Floor-top mounting plate                      1**

In case the regular floor plate cannot be used for sub-surface mounting of the system, the floor top mounting plate provides an above-surface fixing device.

**10      \*\*989001004281      DAP measuring system                      1**  
**DAP Measuring System:**

Dose Area Product meter for fluoroscopy and radiography for the table tube.  
 The DAP readout is distributed via DICOM parameter.

11	**	<b>DAP meter for 2nd tube</b>	1
		<b><u>DAP meter for 2nd tube:</u></b>	
		Dose Area Product meter for radiography for the ceiling suspended tube. DAP is indicated at independent display.	
12	**	<b>X-ray exposure handswitch</b>	1
		X-Ray exposure handswitch for exposure release on digital detector.	
13	**	<b>Ceiling rails for single monitor</b>	1
		<b>CS</b>	
		The ceiling rails for the single monitor ceiling suspension allow for longitudinal travel of the single monitor ceiling suspension.	
14	**	<b>Lateral cassette support</b>	1
		Lateral cassette support. Can be fixed in every position along the table top	
15	**	<b>Compression Band</b>	1
		Compression band. Can be fixed in every position along the table top.	
16	**	<b>Mattress GXR Systems</b>	1
		<b><u>Mattress GXR Systems:</u></b>	
		Mattress for URF-systems with flat and curved table.	
		Specification:	
		<ul style="list-style-type: none"> <li>• Length: 2000 mm (80 inch)</li> <li>• Broadness: 500 mm (20 inch)</li> <li>• Thickness: 30 mm (1.2 inch)</li> </ul>	
		The mattress is made out of foam (HL 2551) embedded in a synthetic cover which is sealed at the side of the mattress. At one side you can see 4 small ventilation holes.	
17	**	<b>Side bar</b>	1
		A rod to mount at the side of the table with two quick set lever stops. To support the patient during rolling over on the tabletop in several applications. Compatible with:	
		<ul style="list-style-type: none"> <li>• Diagnostic tables with flat section locking rails</li> </ul>	
18	**	<b>PAIR OF LEG SUPPORTS</b>	1
		Pair of leg supports.	
19	**	<b>PAIR OF SHOULDER RESTS</b>	1
		SHOULDER SUPPORTS/ Pair of shoulder rests	
20	**	<b>XR Add OnSite Clin Educ 16h</b>	1

Clinical Education Specialists will provide sixteen (16) hours of tailored RAD, R/F or Surgery 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. Please read Guidelines for more information, which will be provided to you during the scheduling process. 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 the earlier of equipment delivery date or purchase date.

**21      \*\*                      Airfare to Cleveland for                      2**  
**Biomed Training**

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.

**22      \*\*                      Food Transpt Lodging for                      14**  
**Cleveland Biomed Training**

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.

**23                                      XD3006 Bio JUNO DRF CTC 5                                      2**

Course Number:    XD3006  
 Course Title:        JUNO DRF  
 System Codes:      709020  
 Delivery Method(s): Instructor-Led

**DESCRIPTION:**

The CS engineer is trained to a technical and applicational level which will enable him to perform Setting to Work and full PM and CM according to the service philosophy.

**PREREQUISITES:**

Engineers attending this course must have:

- Mechanical skills
- Basic Computer skills
- Knowledge of URF system architecture
- Knowledge of dose(-rate) control (loops)
- Knowledge of DICOM/networking
- Operating experience with measuring equipment

Prior attendance to:

- XD3002, X-Ray Systems Basic Part 2 (XD9015 Part 1 bundled)

**COURSE OBJECTIVES:**

After attending this course the engineer will have knowledge of:

- Configurations and product structure
- Technical aspects of the application
- Installation aspects

- Safety aspects
- System diagrams

he will be able to:

- Operate the system
- Perform Setting to Work
- Handle test software
- Make performance tests
- Perform CM on PCB/unit level

<b>24</b>	<b>Turnkey Operation</b>	<b>1</b>
Philips Healthcare Turnkey Project N-EAS131835 Room 5 (G026) Project Budget and SOW Renovation for Easy Diagnost Eleva DRF Release 5 VAMC— Salem, VA July 22, 2014, Expires 45 Days From This Date		
<b>25</b>	<b>Trade in Allowance</b>	<b>1</b>
Customer represents and warrants that (i) Customer has, and shall have when title passes, good and marketable title to the equipment being traded in and (ii) has the authority to effect such trade in. Product: Siemens AXIOM Serial Number: TBD Manufacturer: SIEMENS MEDICAL SYSTEMS INC		

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Trade-In authorization number: 31788

De-install Date: Not later than 180 days after receipt of Order

Customer will be trading-in equipment that is described on the attached System Disclosure Form (the "Trade-In"), which Trade-In the parties agree (i) will be removed on the De-install Date and (ii) is currently in the condition as represented on the System Disclosure Form. In addition, the parties agree as follows:

1. Customer represents and warrants that Customer has good and marketable title to the Trade-In as of the date of this Quotation and will have good and marketable title when Philips removes the Trade-In from Customer's site (the "Removal Date");
2. Title to the Trade-In shall pass from Customer to Philips on the Removal Date, unless otherwise agreed by Philips and the Customer;
3. Notwithstanding anything to the contrary in any Business Associate Addendum, Customer represents and warrants that as of the Removal Date all Protected Health Information will have been de-identified or removed from the Trade-In;
4. Philips may test and inspect the Trade-In prior to de-installation. If the condition of the Trade-In is not substantially the same on the Removal Date (ordinary wear and tear excepted) as it is identified on the System Disclosure Form, then Philips may reduce the price quoted for the Trade-In;
5. If the removal date is delayed until after the De-Install Date, unless Philips causes the delay, then Philips may reduce the price quoted for the Trade-In by six percent (6%) per month.
6. Philips is responsible for normal de-installation costs of the Trade-In.
7. The trade-in value will not include costs associated for any facility modifications and/or rigging required for de-installation and must be accounted for separately.
8. Customer is responsible for all plumbing necessary to properly drain coolant from chiller system and cap the lines.
9. Prior to the Removal Date, Customer shall remove from the room all equipment that is not being de-installed.

## OPTIONS

### 1      \*\*      **TIMS 2000 SP w mobile cart**      1 **TIMS DICOM System 2000SP**

TIMS converts any non-DICOM medical modality to DICOM. The resulting digital study can be sent to PACS, recorded to CD/DVD/USB/network, and printed to film or paper. TIMS is available for a small fraction of the cost of a modality upgrade. For speech pathology and endoscopy, TIMS records the entire procedure, and provides special features for the instant review and analysis of the studies.

TIMS captures both static images and motion video at 30 frames per second, including high resolution video formats such as 1024 x 1024 pixel resolution fluoroscopy.

TIMS 2000 SP benefits for speech pathology!

#### **Record the entire procedure:**

TIMS can record the entire swallow study and have it available for immediate review.

#### **High resolution:**

TIMS can record at high resolution (1024 x 1024) for superior image quality. No longer do you have to sacrifice image quality for convenience. TIMS provides both and more.

#### **Synced audio:**

Record and review synced audio with high resolution video.

#### **Instant access:**

TIMS provides instant access to your studies. There is no rewinding or fast forwarding the tape or DVD. Just click and you are there – immediately.

#### **Viewer and Timer:**

TIMS provides a free DICOM Viewer with a stopwatch timer in the 100s of a second for timing swallow events.

#### **Record to CD/DVD:**

TIMS records your speech pathology studies on CD/DVD or USB memory sticks with our DICOM Viewer for immediate review on your own computer.

#### **DICOM format:**

All studies are in the medical industry standard DICOM format.

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## OPTIONS

TIMS can send the studies or even portions of the studies to PACS so that you can have a permanent archive on PACS.

### **Editing:**

TIMS allows simple and easy editing of studies.

### Key Features:

- Acquire from any medical modality
- DICOM conversion
- Static & streaming capture
- High resolution video capture
- Synced audio capture & review
- Capture the entire study
- DICOM send & receive
- One-click DICOM send
- Record to CD/DVD/USB/network
- DICOM & Windows print
- DICOM query/retrieve
- Import/Export AVI, JPG, BMP, PNG
- DICOM Modality Work List
- Review & edit studies

### Consists of the following:

- Computer, mouse & keyboard
  - Monitor
  - Microphone
  - Cart
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