

V.A. MEDICAL CENTER
700 SOUTH 19TH
BIRMINGHAM, AL

PO# 521-3B5002

Ln	Spectrum-Dynamics P/N Description	Quantity	U/M
1	7020008-01 2 DAYS OF FOLLOW-UP ON SITE APPLICATIONS See below for Description	1.0	EA
2	9000018-01 D-SPECT ADDITIONAL PROCESSING STATION, 110V See below for Description	1.0	EA
3	9000014-01 D-SPECT® CARDIAC SCANNER, 110V See below for Description	1.0	EA
4	9030095-01 JASZCZAK PHANTOM AND HOLDER See below for Description	1.0	EA
5	00001 SHIPPING COST See below for Description	1.0	
6	9100102-01 SIMULTANEOUS DUAL ISOTOPE PROTOCOL	1.0	EA

7	6000009-01 SOFTWARE, CEDARS PlusPack2 See below for Description	1.0	EA						

Ln	Spectrum-Dynamics P/N Description	Quantity	U/M	Unit Price [USD]	Disc %	Total Price [USD]
8	6000016-01 SOFTWARE, CEDARS, QBS See below for Description	2.0	EA			

Description for Ln 1 2 DAYS OF FOLLOW-UP ON SITE APPLICATIONS

Additional two days of applications that will expire 18 months from time of system installation. These two days MUST be used in a consecutive day format and is limited to 3 attendees.

Description for Ln 2 D-SPECT ADDITIONAL PROCESSING STATION, 110V

- D-SPECT Processing software:
 - D-SPECT Viewing software:
 - Local data HD dedicated for Windows(minimum 160 GB HDD):
 - Local data HD dedicated for D-Spect processing station (minimum 160 GB HDD):
 - 19" or 24" LCD Monitor with 1280 x 1024 resolution:
 - Easy-to-use GUI (graphical user interface):
 - QGS and QPS Cedars Sinai quantitative software package:
 - Patient DICOM CD application:
- Note: Specifications are subject to change without notice.

Description for Ln 3 D-SPECT® CARDIAC SCANNER, 110V

D-SPECT® Cardiac Scanner

The D-SPECT Camera is a dedicated nuclear cardiology solid state gamma camera for fast imaging, with superior performance in sensitivity and resolution

I. Imaging Room Module:

- a) 9 independently controlled CZT based solid state detectors
 - Tungsten collimators
 - Gated SPECT acquisitions can be completed in as fast as 2 minutes
 - Small, compact system
 - Upright and supine imaging
 - Built in diagnostic tools
 - D-SPECT calibration QC accessory kit
- b) D-SPECT Acquisition Station
 - Core Duo3GHz processors with 4GB RAM
 - D-SPECT acquisition applications software
 - Automated protocol setup using SmartR (RFID based) technology
 - Local data HD dedicated for Windows (160 GB HDD)
 - Local data HD dedicated for D-Spect acquired patients (320 GB HDD)
 - 19" LCD Monitor with 1280 x 1024 resolution
 - CD/DVD RW
 - Acquisition QC tools
 - Patient database
 - Daily QC application software
- c) IVY ECG MODEL 3000 2. Processing module:
 - a) D-SPECT Processing Station
 - T7500 Xeon processors with 4GB RAM
 - D-SPECT processing software
 - D-SPECT proprietary reconstruction software
 - Local data HD dedicated for Windows (160 GB HDD)
 - Local data HD dedicated for D-Spect processing station (320 GB HDD)
 - 19" LCD Monitor with 1280 x 1024 resolution
 - Easy-to-use GUI (graphical user interface)
 - QGS and QPS Cedars Sinai quantitative software package

- CD/DVD RW

3. R-SCAN System module:

All of the necessary RScan hardware is a standard component of the system configuration. The RScan wristband enables various protocols. The consumables used with the RScan hardware are purchased separately and are required for all clinical imaging. A start up kit for 100 patients is included with the standard D-SPECT configuration.

a) RScan system

- RScan laptop
- RScan application software package
- RFID RScan wristband printer
- RScan consumable start up kit (wristbands for 100 patients)

4. Includes 3 days of on site applications training.

** Note: specifications are subject to change without notice.

Description for Ln 4 JASZCZAK PHANTOM AND HOLDER

Jaszczak Phantom and plate holder designed for the D-SPECT cameras.

Description for Ln 5 SHIPPING COST

Shipping Cost

Description for Ln 7 SOFTWARE, CEDARS PlusPack2

PlusPack is an OPTIONAL, add-on feature to QGS and QPS which includes the following: * Stress Rest Registration and Serial Change The standard methods for perfusion defect analysis compare each acquisition to normal limits. A more sensitive method for defining the difference between two studies is direct quantification of perfusion changes between images by a 3D elastic registration of two myocardial perfusion studies. No databases are required for the calculation of stress-rest changes (ischemia) or serial image changes. This can be particularly useful in assessing changes in perfusion patterns on serial studies or in resolving discrepancies between visual analysis and PFQ. * Motion Frozen This is a novel technique to create cardiac "motion-frozen" perfusion or viability images, by warping ECG-gated images to the end-diastolic position. Such "motion-frozen" perfusion and viability images have improved resolution and contrast since the blurring effect of cardiac motion is removed. * QGS Phase Information A new Phase toggle on the QGS page gives access to phase information for gated datasets, providing information regarding the synchrony of contraction from gated myocardial perfusion SPECT images, and can be of importance in assessing the likelihood of a patient benefiting from the growing procedure of cardiac resynchronization therapy (CRT). * Shape Index This new parameter defines 3D left ventricular (LV) geometry derived from LV contours in end systolic and end diastolic phases. Shape index is defined as the ratio between the maximum dimension of the LV in all short-axis planes and the length of the mid-ventricular long axis. The new parameter has been shown to improve the identification of left ventricular failure.

Description for Ln 8 SOFTWARE, CEDARS, QBS

QBS (Quantitative Blood Pool SPECT) is an interactive standalone application for the automatic segmentation and quantification of gated short axis blood pool (red blood cells, RBC), SPECT.

D-SPECT™ Cardiac Imaging System Specifications

Detector Specifications

Intrinsic Spatial Resolution

FWHM in UFOV	NA
FWTM in UFOV	NA

D-SPECT uses Integral Collimators

Intrinsic Spatial Linearity

Differential in UFOV	NA
Integral in UFOV	NA

Linearity defined by pixilated structure with NO drifts

Extrinsic Energy Resolution

FWHM at 140 keV	≤7%
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Intrinsic Energy Resolution

FWHM at 140 keV	N/A
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Extrinsic Uniformity

Differential in UFOV	< 3%
Integral in UFOV	< 4%

Intrinsic Uniformity

Differential in UFOV	N/A
Integral in UFOV	N/A

D-SPECT uses Integral Collimators

Max Count Rate with Scatter

(Per Camera with < 5% Count Loss) > 1,350,000cps

Reconstructed Spatial Resolution

FWHM with Scatter at 15cm	5.0mm
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Dimensions and Weight

Height	190cm (74.8in.)
Depth	216cm (85.04 in.)
Width	172.4cm (67.87in.)
Weight	670kg (1477 lb.)
Flood Loading- No Patient	610kg/m ² (125 lb./ft ²)

Patient Chair

Max Patient Weight (Static)	246kg (542 lb.)
Max Patient Weight (Dynamic)	171kg (377 lb.)

ECG Gating

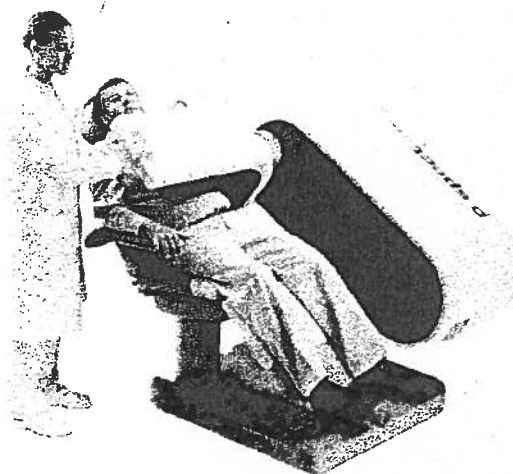
Number of Frames per R-R	8 or 16
Automatic Beat Centering	Yes
Integrated ECG	Yes

Detector Properties

Detector Technology	Solid State
Detector Type	Pixilated Crystals
Collimator Type	Tungsten
Number of Detectors	9
Field-of-View (FOV)	15.74cm x patient adjustable
Useful Field-of-View (UFOV)	15.74x3.94cm (6.2x1.6in.)
Number of Pixels per Detector	1024
Total Number of Pixels	9216
Detector Range of Motion	>110°
Pixel Size	2.26 mm x 2.26 mm
Energy Range	40-170keV
Lead Shielding	175keV

Crystal Properties

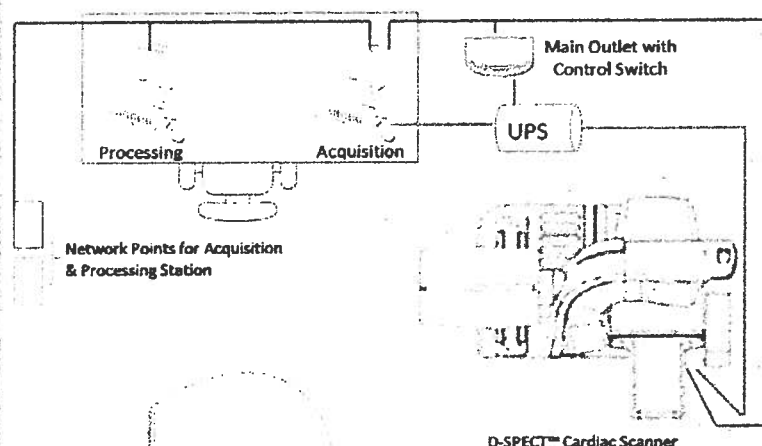
Crystal Material	CZT (Cadmium Zinc Telluride)
Crystal Type	Semi-Conductor
Decay Time	300ns
Detection Efficiency	80%@140keV
Crystal Thickness	5.0mm (0.2in.)



Physical, Environmental, and Power Data

System Component	Condition	Ambient Temperature	Relative Humidity (non-condensing)
D-SPECT Cardiac Scanner	Operation	15-24°C	30-65%
		59-75°F	
	Max Temp Change Rate	3°C per hour	
		5.4°F per hour	
	Storage and Transportation	0-30°C	30-65%
		32-86°F	
	Heat Dissipation Handling	6800 BTU/hr	

D-SPECT System Configuration	Power (VA)	Nominal Input Voltage (VAC)	Allowed Input Voltage (VAC)	Frequency
Without UPS	1000 VA	100/120/220/240/VAC	Nominal \pm 10%	50-60 Hz
With 120V UPS	1440 VA	120 VAC	96-151 VAC	60 Hz
With 230V UPS	1440 VA	230 VAC	181-290 VAC	50 Hz



The D-SPECT™ system has a small footprint that easily fits into compact spaces

*Minimum room requirements for upright imaging are 8'8" x 9'5"

*Minimum room requirements for supine imaging are 9'5" x 11"

*Spectrum Dynamics reserves the right to make changes in specifications without notice or warning

Smart Imaging by Design