St. Vincent's HEALTH SYSTEM

St. Vincent's Ambulatory Healthcare Network | St. Vincent's Birmingham | St. Vincent's Blount

St. Vincent's Chilton | St. Vincent's East | St. Vincent's One Nineteen | St. Vincent's St. Clair

810 St. Vincent's Drive | Birmingham, AL 35205
205.939.7184 | stvhs.com

Filed electronically at shpda.online@shpda.alabama.gov

May 17, 2019

Emily T. Marsal
Executive Director
State Health Planning and Development Agency
100 North Union Street, Suite 870
Montgomery, AL 36104

RE: EQR2019-004
      Request for Determination of Exemption Status
      St. Vincent's East (073-6530180)
      Cardiac Catheterization Lab Equipment

Dear Ms. Marsal,

On April 23, 2019, a Request for Determination of Exemption Status for cardiac catheterization equipment was filed for St. Vincent's East in Birmingham, Alabama. The request includes the replacement of equipment used to perform radiologic imaging for cardiac catheterization procedures.

The Agency responded with a request for clarification concerning the existing cardiac catheterization equipment. The application noted that the equipment would remain to be used as backup. The existing equipment, while it will remain on site, will not be used on a day to day basis. It will only be used if the new Phillips Azurion 7 M20 experiences down time.

If you have any questions or need further information about this request, please contact me via phone at (205) 930-2113 or via email at Brenna.Powell@ascension.org.

Sincerely,

Brenna M. Powell

Brenna M. Powell
Chief Strategy Officer
Ascension, St. Vincent's Health System
and Providence Hospital

ASCENSION

St.Vincent's HEALTH SYSTEM

St. Vincent's Ambulatory Healthcare Network   St. Vincent's Birmingham | St. Vincent's Blount

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810 St. Vincent's Drive | Birmingham, AL 35205
205.939.7184 | stvhs.com

RECEIVED

Apr 23 2019

STATE HEALTH PLANNING AND
DEVELOPMENT AGENCY

Filed electronically at shpda.online@shpda.alabama.gov

April 23, 2019

Emily T. Marsal
Executive Director
State Health Planning and Development Agency
100 North Union Street, Suite 870
Montgomery, AL 36104

RE: Request for Determination of Exemption Status
         St. Vincent's East – Birmingham, Alabama
         Cardiac Catheterization Lab Equipment

Dear Ms. Marsal,

Enclosed, please find a Request for Determination of Exemption Status for cardiac catheterization equipment to be replaced at St. Vincent's East in Birmingham, Alabama. The request includes the replacement of equipment used to perform radiologic imaging for cardiac catheterization procedures.

The equipment cost is $1,471,188 and the hospital will spend approximately $1,700,000 for renovation and installation, which is below the threshold requiring a Certificate of Need. The hospital respectfully requests approval for this equipment replacement.

The filing fee in the amount of $2,942.38 has been submitted via the SHPDA electronic payment portal.

If you have any questions or need further information about this request, please contact me via phone at (205) 930-2113 or via email at Brenna.Powell@ascension.org.

Sincerely,

Brenna M. Powell
Chief Strategy Officer
Ascension, St. Vincent's Health System
and Providence Hospital

ASCENSION

State Health Planning and Development Agency

Mailing address: Post Office Box 303025, Montgomery, Alabama 36130-3025
Street address: 100 North Union Street, Suite 870, Montgomery, Alabama 36104

Request # EQR 2019-004
Date Rec. _____
Received by: _____

REQUEST FOR DETERMINATION OF EXEMPTION STATUS
FOR REPLACEMENT OF EXISTING EQUIPMENT

A filing fee in the amount of $ 2,942.38 *d/c* has been submitted with this application.

REQUESTER IDENTIFICATION (Check One) HOSPITAL (_X_) NURSING HOME (___)
OTHER (___) (Specify) _____

A. _____ St. Vincent's East _____
Name of requester

50 Medical Park Drive East	Birmingham	Jefferson
Address	City	County

Alabama	35235	205-939-7688
State	Zip	Phone

B. _____
Name of Facility/Organization (if different from A)

_ Address	City	County

_ State	Zip	Phone

C. __ St. Vincent's Health System _____
Name of Legal Owner (if different from A or B)

810 St. Vincent's Drive	Birmingham	Jefferson
Address	City	County

Alabama	35205	205-939-7688
State	Zip	Phone

D. __ Brenna Powell, Chief Strategy Officer _____
Name and Title of Person Representing Proposal and With Whom SHPDA Should
Communicate

810 St. Vincent's Drive	Birmingham	Jefferson
Address	City	County

Alabama	35205	205-939-7688
State	Zip	Phone

Rev. 5-13

A-26

DESCRIPTION OF EQUIPMENT TO BE REPLACED   DESCRIPTION OF PROPOSED NEW EQUIPMENT

A.   Manufacturer:

  Phillips   Phillips

  Serial #

  001697   To be assigned upon delivery

B.   Model:

  722006   100237

C.   Name of equipment:

  Allura Xper FD20   Azurion 7 M20

D.   Fair market value of equipment at present:

  $75,000

E.   Cost of equipment (include written price quote):

  $1,471,188 (see attached quote)

F.   Describe use of current equipment:

  Current equipment is used for radiographic/fluoroscopic procedures for visualization and catheter/wire placement for cardiac catheterizations and other similar procedures

  Describe use of proposed equipment:

  Proposed equipment is used for the same purpose, to perform radiographic/fluoroscopic procedures for visualization and catheter/wire placement for cardiac catheterizations and other similar procedures

G.   List any attachments or additional procedures associated with this equipment that could not be performed by old equipment:

  There are no additional procedures that can be performed by the new equipment as compared with the old equipment

H. Can any procedures be performed with the proposed new equipment that cannot be performed with the replaced equipment? If yes, describe in detail:

No new procedures will be performed with the new equipment that cannot be performed with the equipment being replaced

I. Location of existing equipment (include room #):

Building 46 - 3rd Floor, Room 2

J. List specially trained or qualified personnel necessary for operation of equipment:

Cardiovascular physician, registered nurses and radiologic technologists

K. What use will be made of old equipment when replaced?
    (Trade in on new equipment, used as back up, save for parts, etc.)

The existing equipment will remain to be used as backup

L. List job titles of any additional personnel that will be required to operate the new equipment.

No additional personnel will be needed

M. Describe any renovation or new construction that will be necessary for the installation of the replacement equipment and cost.

The room and supporting space renovation, along with equipment installation will be completed at a cost of $1,700,000.

N. Describe any new annual operating cost associated with this project such as maintenance contracts, salaries of new employees hired due to equipment, etc.

No new annual operating costs

III.   COST

A.   Equipment costs $ 1,471,188
     (Costs have to be supported by price quote on manufacturer's
     stationery or letterhead.) Cost of equipment only; do not list
     lease cost.

B.   Less trade-in of old equipment $ 0

C.   Total cost of equipment $ 1,471,188

Calculation of fee for this determination:
Multiply dollar amount in III.C. (total cost of equipment) times 1% (the application fee for a Certificate
of Need); 20% of this amount is the application fee for non-rural hospitals.
For rural hospitals, the application fee is 25% of the application fee as calculated above for non-rural
hospitals.

Include manufacturer's literature on old equipment, if available, and on the new equipment.

Include any other information pertinent to the determination.

The Executive Director may request any other information which is relevant to his decision.

IV.   CERTIFICATION

I certify that the information provided herein is true and correct and that there is no additional
information which would be pertinent to this application which has not been provided. Further, I
understand that any misrepresentation on this application or failure to include relevant information
may void any favorable determination secured by such misrepresentation or omission.
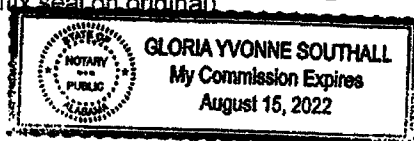

_____
Signature of Applicant

_____
Brenna M. Powell, Chief Strategy Officer
Applicant's Name and Title
(Type or Print)

Sworn to and subscribed before me this

__22__ day of __April_____ , 20 _19__ .

_____
Notary Public (affix seal on original)

GLORIA YVONNE SOUTHALL
My Commission Expires
August 15, 2022

PHILIPS HEALTHCARE
A division of Philips North America LLC
22100 Bothell Everett Highway
P.O. Box 3003
Bothell, Washington 98041-3003

PHILIPS

Quotation #: 1-1WRYZZI	**Rev: 5**	**Effective From:** 17-Dec-18	**To:** 31-Dec-18

Presented To:

ST VINCENT HOSPITAL
50 MEDICAL PARK DR E
BIRMINGHAM, AL 35235-3401

Presented By:

Justin Helms
Account Manager
Tel: (256) 590-3943
Fax:

Steve Shever
Regional Manager
Tel:
Fax:

Tel:

Alternate Address:

Date Printed: 17-Dec-18

Submit Orders To:

22100 BOTHELL EVERETT HWY
BOTHELL WA 98021

Tel: (888) 564-8643

Fax:(425) 458-0390

This quotation contains confidential and proprietary information of Philips Healthcare, a division of Philips North America LLC ("Philips") and is intended for use only by the customer whose name appears on this quotation. It may not be disclosed to third parties without the prior written consent of Philips.

IMPORTANT NOTICE: Health care providers are reminded that if the transactions herein include or involve a loan or discount (including a rebate or other price reduction), they must fully and accurately report such loan or discount on cost reports or other applicable reports or claims for payment submitted under any federal or state health care program, including but not limited to Medicare and Medicaid, such as may be required by state or federal law, including but not limited to 42 CFR 1001.952(h).

Quote Solution Summary

Line #	Product	Qty	Price
	100237 Azurion 7 M20	1	$1,471,188.00
		Equipment Total:	$1,471,188.00

Solution Summary Detail

Product	Qty	Each	Monthly	Price
100237 Azurion 7 M20	1	$1,471,188.00		$1,471,188.00

Buying Group: ASCENSION HEALTH RSMG   **Contract #:** ME000001113

Addt'l Terms:

Each Quotation solution will reference a specific Buying Group/Contract Number representing an agreement containing discounts, fees and any specific terms and conditions which will apply to that single quoted solution. If no Buying Group/Contract Number is shown, Philips' Terms and Conditions of Sale will apply to the quoted solution.

Each equipment system listed on purchase order/orders represents a separate and distinct financial transaction. We understand and agree that each transaction is to be individually billed and paid.

Payment Terms: 0% Down, 70% Upon delivery, 30% Upon Acceptance, Net 60

Quote Summary

Qty	Product
1	NNAE556 Azurion 7 C20
1	NNAE996 CORE IVUS - Cardiac
10	FCV0588 Isolated Wall Connection Box
2	FCV0824 video WCB on rear side 1st MCS
1	NCVD069 ClarityIQ.
1	FCV0834 coupling to video switching
1	NCVC466 VesselNavigation Complete
1	NCVD099 Quantitative Coronary Analysis
1	NCVA694 Subtracted Bolus Chase
1	NCVA101 peripheral X-ray filter
1	NCVD061 optional ref monoplane
1	NCVC544 StentBoost Live
1	NCVA783 table pivot option
1	NCVD100 Left Ventricular Analysis
1	NCVB167 MR/CT Roadmap
1	NCVA695 FD Rotational Angio
1	NCVD072 SmartMask Monoplane
1	NCVD066 XL video slaving to full HD TV
1	NCVD138 table tilt option
1	NCVB882 Cradle extension
1	NCVD078 FD Dual Fluoro monoplane
1	NCVD030 FlexVision XL HD
1	NCVB950 2D Perfusion
1	NCVD049 addl FlexVision XL HD
1	NCVD128 storage extension
1	NCVD178 IW Hardware
1	NCVC546 HeartNavigator R3
1	NCVC327 XperCT Dual
1	NCVC564 XperCT Open and Closed
2	980406041009 Rad Shield w/ Arm (Contoured) 61X76
2	989801220012 Cable Spooler
2	989801220037 M LED 3MC Light
2	989801220273 Ceiling Track w/Column & Handle Ext

Quote Summary

Qty	Product
2	989801220375 Black Anti-fatigue Floor Mat w/logo.
1	989801220380 Full Load Remote UPS
1	NNAE049 XperCT OnSite Clin Ed
1	NNAE278 Heart Navigator OnSite Education
1	NNAE504 Clinical Education Program for Vessel Navigation
1	NNAE596 IXR StentBoost Imaging Systems OnSite Education
1	NNAE957 Clinical Education Program for 2D Perfusion
1	SP059Q Clinical Services Flex Account

System Type:	New
Freight Terms:	FOB Destination
Warranty Terms:	Part numbers beginning with two (2) asterisks (**) are covered by a System 12 Months Warranty. All other part numbers are third (3rd) party items.
Special Notations:	Contingencies must be removed 120 days before scheduled shipment to assure delivery on specified date. Any rigging costs are the responsibility of the Purchaser.

Additional Terms:

Line #	Part #	Description	Qty	Each	Price
1	**NNAE556	Azurion 7 C20	1	$622,720.00	$622,720.00

Advanced solution for vascular, non-vascular, embolization to interventional oncology procedures
Key benefits

- Optimized utilization of your lab by procedure based workflow
- Superb image quality to evaluate small details and vessels with clarity.
- Intuitive user interaction delivering an easy to use, easy to learn system

Changing interventions
With our Live Image Guidance we aim to remove barriers to safer, effective and reproducible treatments, delivering clinical value where it's needed most - at the point of patient treatment. Intelligent and intuitive integration of live imaging, patient information, and procedure-based applications optimize real time therapy guidance.
The 7 series C20 ceiling system is designed to enhance all the different procedures your interventional lab faces, from vascular, non-vascular and embolization to interventional oncology procedures. This future proof solution is designed around a single, standardized hardware and software platform that can be upgraded and expanded as new needs arise or requirements change. Its architecture is made to easily integrate with third party applications and devices. A new workflow approach aims to support interventional teams in carrying out procedures for their patients, consistently and efficiently with great ease of use.

The Philips Azurion 7 C20 uses a range of Procedure Cards to help optimize and standardize system set-up for your cases, from routine to mixed procedures.
Procedure Cards can increase the consistency of exams by offering presets (e.g. most-frequently used, default protocols and user-specified settings) on procedure-, physician- or departmental level. In addition, hospital checklists and/or protocols can be uploaded into the Procedure Cards to help safeguard the consistency of interventional procedures and help to minimize preparation errors.
The Philips Azurion 7 C20 interventional X-ray suite has been specifically designed to save time by enabling the interventional team to work on all activities in the exam room - and at one or more work spots in the control room at the same time - without interrupting each other. This leads to higher throughput and faster exam turnover and contributes to quality of care.

To improve dose management, Philips Zero dose positioning enables you to move the stand and table to the region of interest shown on the last clinical image hold before a new acquisition is started, without any radiation.
Specifications
The Philips Azurion series contain a number of features to support a flexible and patient centric procedural workflow.
The Philips Azurion series (within the limits of the used Operating Room table) are intended for use to perform:

- Image guidance in diagnostic, interventional and minimally invasive surgery procedures for the following clinical application areas: vascular, non-vascular, cardiovascular and neuro procedures.

- Cardiac imaging applications including diagnostics, interventional and minimally invasive surgery procedures.

The Philips Azurion 7 C20 system comprises five functional building blocks:

1. Geometry
2. X-ray Generation
3. Image Detection
4. User Interface
5. Viewing

Each functional building block is explained in further detail including accessories.

1. Geometry
A. 7 C20 stand
The Philips Azurion 7 C20 stand is a stable assembly of a C-arm and a ceiling suspended L-arm. The X-ray tube and the flat detector are integrated into the C-arm. This provides a compact assembly completely free from the floor, with maximal positioning flexibility and unrestricted access to the patient. The robust design ensures excellent reproducibility of projections, needed in for example subtracted imaging procedures and advanced 3D imaging. The L-arm can be rotated and moved in longitudinal direction allowing a three-sided patient approach and total body coverage.
- L-arm rotation around the patient table: +90, 0, -90 degrees.
- L-arm longitudinal movement: 300 cm
This movement features auto-stops at the parking position, cardio/neuro position and lower peripheral position.

B. Patient Support
The patient support provides very light manual float movement, even for heavy patients, thanks to the mono-bearing technology. The long flat carbon fiber tabletop provides ample space to place e.g. catheters and endovascular tools. On customer request, the standard table top can be replaced by a table top for neuro procedures. This table top has a smaller width at the head end for better imaging results in neuro procedures.

- Table top length of 319 cm, width 50 cm (neuro table top is 45cm at head end)
- Metal-free cantilever 125 cm
- Floating table-top movement of 120 cm longitudinal and +/- 18 cm transversal
- Motorized height adjustment range is 74 -102 cm cm for a table without swivel nor cradle/tilt.
- Maximum cantilever of 223 cm , for full patient coverage
- Table tilt +17 /-17 degrees (optional)
- Table cradle +15 / -15 degrees (optional)
- Pivot range 270 degrees (-90 to +180 or +90 to -180 degrees), table can be locked at any position and has stops at 0, +/-13, +/- 90 and +/- 180 (optional)
- Table swivel, 78.2 cm longitudinal displacement, motorized (optional).
- Maximum load: 275 kg (up to 250 kg patient weight plus 25kg accessories or 225kg patient weight plus 50kg accessories) plus 500 N for CPR in any longitudinal position of the table top

The UIM modules are not accessories; make consistent with "AD7 accessories Cardiac"
The Philips Azurion system can be fitted with a comprehensive set of accessories to help you perform your procedures as conveniently as possible. Included are
- 1 cerebral filter

Interventional X-RAY (IXR) Systems
Product Warranty

This product warranty document is an addition to the terms and conditions set forth in the quotation to which this warranty document is attached. Unless specifically listed below, this warranty does not apply to replacement parts. The terms and conditions of the quotation are incorporated into this warranty document. The capitalized terms herein have the same meaning as set forth in the quotation.

1. Twelve (12) Month System Warranty
    1.1 Philips Healthcare a division of Philips North America LLC (Philips) warrants to Customer that the Philips' Interventional X-Ray Systems (System) will perform in substantial compliance with its performance specifications, in the documentation accompanying the System, for a period of twelve (12) months after completion of installation or availability for first patient use, whichever occurs first.
    1.2 Any glassware or flat detectors provided with the System is subject to special warranty terms set forth below.

2. Planned Maintenance.
    2.1 During the warranty period, Philips' service personnel will schedule planned maintenance visits, in advance, at a mutually agreeable time on weekdays, between 8:00 am and 5:00 pm local time, excluding Philips' observed holidays.

3. System Options, Upgrades or Accessories.
    3.1 Any Philips' authorized options, upgrades, or accessories for the System which are delivered and/or installed on the System during the original term of the System warranty shall be subject to the same warranty terms contained in the first paragraph of this warranty, except that such warranty shall expire on the later of:
        3.1.1 upon termination of the initial twelve (12) month warranty period for the System on which the option or accessory is installed,
        3.1.2 after ninety (90) days for parts only from the date of installation.

4. MRC X-Ray Tubes
    4.1 Philips warrants to Customer, for the warranty periods further specified in this section, that the Philips' X-Ray tubes (tubes) will be substantially free from defects in material and manufacturing workmanship, which impair performance under normal use as specified in Philips' System descriptions and specifications.
    4.2 The warranty period for MRC Tubes provided with Customer's purchase of a new or refurbished X-Ray system shall be the shorter of thirty-six (36) months after installation or thirty-eight (38) months after date of shipment from Philips.
    4.3 The warranty period for purchases of replacement tubes shall be the shorter of twelve (12) months after installation or fourteen (14) months after date of shipment from Philips.

5. MRC Tube Warranty Exclusions
    5.1 The above warranty shall not apply to X-Ray Tubes outside the United States and Canada.
    5.2 Philips' obligations under the System warranty do not apply to any System defects resulting from: improper or inadequate maintenance or calibration by Customer or its agents; Customer or third party supplied software, interfaces, or supplies; use or operation of the System other than in accordance with Philips' applicable System specifications and written instructions; improper site preparation; abuse, negligence, accident, loss or damage in transit, unauthorized maintenance or modifications to the System; or, to viruses or similar software interference resulting from the connection of the System to a network.

6. MRC Tube Warranty Remedies
    6.1 If a tube is found to fail during the warranty period, and if, in the best judgment of Philips, the failure is not due to neglect, accident, improper installation, use contrary to instructions, or the exclusions stated above, Philips' tube warranty liability hereunder is limited to, at Philips' option, the repair or replacement of the tube.
    6.2 Any replacement tube would have a warranty period equal to the balance of the warranty period left on the tube replaced.

7. Dynamic Flat Detectors
    7.1 Philips warrants the Dynamix Flat Detectors (detector) provided with the System, if any, will be free from defects in material and manufacturing workmanship for twelve (12) months.
    7.2 Claims must be made within twelve (12) months after installation or fifteen (15) months after date of shipment from Philips, whichever occurs first.
    7.3 If a detector fails to meet this warranty, as Customer's sole and exclusive remedy, upon return of the detector, Philips will provide Customer a replacement detector at no additional charge.

8. System Software and Software Updates
    8.1 The software provided with the System will be the latest version of the standard software available for that System as of the ninetieth (90th) day prior to the date the System is delivered to Customer.
    8.2 Updates to standard software for the System that do not require additional hardware or equipment modifications will be performed as a part of normal warranty service during the term of the warranty.
    8.3 All software is and shall remain the sole property of Philips or its software suppliers.
    8.4 Use of the software is subject to the terms of a separate software license agreement. Customer must sign all such license agreements prior to or upon the delivery of the product.
    8.5 No license or other right is granted to Customer or to any other party to use the software except as set forth in the license agreements.
    8.6 Any Philips maintenance or service software and documentation provided with the System and/or located at Customer's premises is intended solely to assist Philips and its authorized agents to install and to test the System, to assist Philips and its authorized agents to maintain and to service the System under a separate support agreement with Customer, or to permit Customer to maintain and service the System.
    8.7 Customer agrees to restrict the access to such software and documentation to Philips employees, those of its authorized agents, and to authorized employees of Customer only.

9. Warranty Limitations
    9.1 Philips' sole obligations and Customer's exclusive remedy under any product warranty are limited, at Philips option, to the repair or the replacement of the product or a portion thereof, within thirty (30) days after receipt of written notice of such material breach from Customer (Product Warranty Cure Period) or, upon expiration of the Product Warranty Cure Period, to a refund of a portion of the purchase price paid by the Customer upon Customer's request.
    9.2 Any refund will be paid, to the Customer when the product is returned to Philips.
    9.3 Warranty service outside of normal working hours (i.e 8:00 am to 5:00 pm Monday through Friday, excluding Philips' observed holidays), will be subject to payment by Customer at Philips standard service rates.
    9.4 This warranty is subject to the following conditions: the product
        9.4.1 is to be installed by authorized Philips' representitives (or is to be installed in accordance with all Philips' installation instructions by personnel trained by Philips);
        9.4.2 is to be operated exclusively by duly qualified personnel in a safe and reasonable manner in accordance with Philips' written instructions and for the purpose for which the products were intended; and
        9.4.3 is to be maintained and in strict compliance with all reccommended and scheduled maintenance instructions provided with the Product.
    9.5 Philips' obligations under any product warranty do not apply to any product defects resulting from: improper or inadequate maintenance or calibration by the Customer or its agents; Customer or third party supplied interfaces, supplies, or software including without limitation loading of operating system patches to the Licensed Software and/or upgrades to anti-virus software running in connection with the Licensed Software without prior approval by Philips; use or operation of the product other than in accordance Philips' applicable product specifications and written instructions; abuse, negligence, accident, loss, or damage in transit; improper site perparation; unauthorized maintenance or modifications to the product; or, viruses or similar software interference resulting from connection of the product to a network.
    9.6 Philips does not provide a warranty for any third party products furnished to Customer by Philips under this quotation; however, Philips shall use reasonable efforts to extend to Customer the third party warranty for the product.
    9.7 The obligations of Philips described herein are Philips' only obligations and Customer's sole and exclusive remedy for a breach of a warranty.
    9.8 THE WARRANTIES SET FORTH HEREIN AND IN PHILIPS WARRANTY DOCUMENT WITH RESPECT TO A PRODUCT (INCLUDING THE SOFTWARE PROVIDED WITH THE PRODUCT) ARE THE ONLY WARRANTIES MADE BY PHILIPS IN CONNECTION WITH THE PRODUCT, THE SOFTWARE, AND THE TRANSACTIONS CONTEMPLATED BY THE QUOTATION, AND ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, WHETHER WRITTEN, ORAL, STATUTORY, EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF NON-INFRINGEMENT MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
    9.9 Philips may use refurbished parts in the manufacture of the products, which are subject to the same quality control procedures and warranties as for new parts.

10. Philips' Remote Services Network (RSN)
    10.1 Customer will
        10.1.1 provide Philips with a secure location at Customer's premises to store one Philips Remote Services Network router and provide full and free access to this router, (or a Customer-owned router acceptable to Philips) for connection to the equipment and to Customer's network; or
        10.1.2 provide Philips with outbound internet access over SSL; at all times during the warranty period provide full and free access to the equipment and the Customer network for Philips' use in remote servicing of the product, remote assistance to personnel that operate the products, updating the products software, transmitting automated status notifications

from the product and regular uploading of products data files (such as but not limited to error logs and utilization data for improvement of Philips' products and services and aggregation into services).

10.2 Customer's failure to provide such access will constitute Customer's waiver of the scheduled planned maintenance service and will void support or warranty coverage of product malfunctions until such time as planned maintenance service is completed or RSN access is provided.

10.3 Customer agrees to pay Philips at the prevailing demand service rates for all time spent by Philips' service personnel waiting for extended coverage.

11. Transfer of System

11.1 In the event Customer transfers or relocates the System, all obligations under this warranty will terminate unless Customer receives the prior written consent of Philips for the transfer or relocation.

11.2 Upon any transfer or relocation, the System must be inspected and certified by Philips as being free from all defects in material, software and workmanship and as being in compliance with all technical and performance specifications.

11.3 Customer will compensate Philips for these services at the prevailing service rates in effect as of the date the inspection is performed.

11.4 Any System which is transported intact to pre-approved locations and is maintained as originally installed in mobile configurations will remain covered by this warranty.

12. Limitation of Liability

12.1 THE TOTAL LIABILITY, IF ANY, OF PHILIPS AND ITS AFFILIATES FOR ALL DAMAGES AND BASED ON ALL CLAIMS, WHETHER ARISING OR RELATING TO BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE, ARISING FROM A PRODUCT, LICENSED SOFTWARE, AND/OR SERVICE IS LIMITED TO THE PRICE PAID HEREUNDER FOR THE PRODUCT, LICENSED SOFTWARE, OR SERVICE GIVING RISE TO THE LIABILITY.

12.2 THIS LIMITATION SHALL NOT APPLY TO:

12.2.1 THIRD PARTY CLAIMS FOR DIRECT DAMAGES FOR BODILY INJURY OR DEATH TO THE EXTENT CAUSED BY PHILIPS' NEGLIGENCE OR PROVEN PRODUCT DEFECT.

12.2.2 CLAIMS OF TANGIBLE PROPERTY DAMAGE REPRESENTING THE ACTUAL COST TO REPAIR OR REPLACE PHYSICAL PROPERTY TO THE EXTENT CAUSED BY PHILIPS' NEGLIGENCE OR PROVEN PRODUCT DEFECT;

12.2.3 OUT OF POCKET COSTS INCURRED BY CUSTOMER TO PROVIDE PATIENT NOTIFICATIONS, REQUIRED BY LAW, TO THE EXTENT SUCH NOTICES ARE CAUSED BY PHILIPS' UNAUTHORIZED DISCLOSURE OF PHI; and;

12.2.4 FINES/PENALTIES LEVIED AGAINST CUSTOMER BY GOVERNMENT AGENCIES CITING PHILIPS' UNAUTHORIZED DISCLOSURE OF PHI AS THE BASIS OF THE FINE/PENALTY, ANY SUCH FINES OR PENALTIES SHALL CONSTITUTE DIRECT DAMAGES,

13. Disclaimer

13.1 IN NO EVENT SHALL PHILIPS OR ITS AFFILIATES BE LIABLE FOR ANY INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, BUSINESS INTERRUPTION, LOSS OF DATA OR THE COST OF SUBSTITUTE PRODUCTS OR SERVICES WHETHER ARISING FROM BREACH CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHER TORT.

14. FORCE MAJEURE

14.1 Philips and Customer shall each be excused from performing its obligations arising from any delay or default caused by events beyond its reasonable control including, but not limited to: acts of God, acts of third parties, acts of the other party, acts of any civil or military authority, fire, floods, war, embargoes, labor disputes, acts of sabotage, riots, accidents, delays of carriers, subcontractors or suppliers, voluntary or mandatory compliance with any government act, regulation or request, shortage of labor, materials or manufacturing facilities.

Philips' system specifications are subject to change without notice

Non Disclosure Agreement for Philips Confidential Pricing Information

The parties specified below agree to the following terms:

A. Philips

Name	Philips Healthcare, a division of Philips North America LLC
Address	22100 Bothell-Everett Highway, Bothell, WA 98021 United States of America

B. Company

Name	ST VINCENT HOSPITAL
Address	50 MEDICAL PARK DR E BIRMINGHAM, AL 35235-3401

C. Confidential Information

Authorized Purpose	To evaluate Philips' confidential information relating to pricing for imaging equipment ("Pricing") in connection with the potential purchase of such imaging equipment.
Period	Begins on the date Pricing is first disclosed and continues for 5 years from date Pricing is last disclosed.

D. Philips Contact

Name	Justin Helms
Title	
Telephone	(256) 590-3943
Fax	
e-mail	
Signature	

Company Contact

Name	
Title	
Telephone	
Fax	
e-mail	
Signature	

1. The following terms and conditions (the "Agreement") apply to Pricing disclosed by Philips and its Affiliates ("Philips") to Company and its Affiliates ("Company"), in connection with the Authorized Purpose.

   (a) Subject to Philips' prior written consent, Company may disclose, or request that Philips disclose, Pricing to Company's Affiliates that need to know the Pricing for carrying out the Authorized Purpose, provided they are advised of and agree to be bound by this Agreement. Company is responsible for any breach of this Agreement by its Affiliates.

   (b) An Affiliate is any corporation, company, or other entity, that: (i) is under the Control of a party hereto; or (ii) has Control of a party hereto; or (iii) is under common Control with a party hereto. For this purpose "Control" means that more than fifty percent (50%) of the controlled entity's shares or ownership interest representing the right to make decisions for such are owned or controlled, directly or indirectly, by the controlling entity.

2. Philips may disclose Pricing to Company with respect to the Authorized Purpose in writing, orally, or otherwise. All information is assumed to be Pricing, and confidential, if the confidential or proprietary nature is reasonable under the circumstances.

3. All Pricing disclosed by Philips shall remain Philips' the property. Company does not, by implication, estoppel, or otherwise, acquire any intellectual property right, title, or ownership, nor a license to any such intellectual property right, with respect to any Pricing disclosed by Philips hereunder.
   ALL PRICING IS PROVIDED ON AN "AS IS" BASIS, WITHOUT ANY WARRANTY WHATSOEVER. PHILIPS SHALL HAVE NO LIABILITY WHATSOEVER RESULTING FROM THE USE OF THE INFORMATION PROVIDED.

4. Company shall:
   (a) not use the Pricing for any purpose other than the Authorized Purpose;
   (b) not disclose the Pricing to any third party;
   (c) protect the Pricing against disclosure in the same manner and with the same degree of care with which Company protects its own confidential information but not less than a reasonable degree of care; and
   (d) limit circulation of the Pricing to Company's employees as have a need to know in connection with the Authorized Purpose.
   These obligations shall survive the termination of this Agreement. Philips may terminate this Agreement at any time by means of a written notice to Company. Company shall return to Philips, or certify destruction of, all Pricing, immediately upon termination or expiration of this Agreement.

5. Information disclosed by Philips to Company pursuant to this Agreement shall not be confidential to the extent that the information:
   (a) is or becomes part of the public domain without violation of this Agreement or any other obligation of confidentiality;
   (b) is known by Company prior to disclosure by Philips;
   (c) is lawfully obtained by Company from a third party without any breach of confidentiality or violation of law; or
   (d) is developed by Company completely independently of any such disclosure by Philips.

6. If Company is required, pursuant to administrative or judicial action or subpoena, to disclose the Pricing, Company shall use its best efforts to maintain the confidentiality of the Pricing, e.g. by asserting in such action any applicable privileges. Immediately after gaining knowledge or receiving notice of such action or subpoena, Company shall notify Philips and give Philips the opportunity to seek any other legal remedies so as to maintain such Pricing in confidence, including a reasonable protective order.

7. Company may not transfer or assign any or all of its rights and/or obligations or delegate the performance of any or all of its obligations under this Agreement, directly or indirectly, through acquisition, merger or otherwise, without the prior written consent of Philips. Any transfer, assignment or delegation in contravention of the foregoing shall be void.

8. Company shall not disclose, export or release the Pricing in contravention of any applicable laws or regulations.

9. This Agreement shall be governed and construed in accordance with the laws of the State of New York, without giving effect to its conflict of laws provisions.

10. This Agreement contains the entire understanding of the parties and supersedes any previous understandings or agreements with respect to the subject matter hereof. This Agreement may be amended only in writing signed by authorized representatives of each party.

Pricing NDA ver1 – 8/9/07

100237 Azurion 7 M20

- 3 rail accessory clamps
- 1 drip stand
- 1 Set of Elbow Supports
- 1 Set of patient Straps
- 1 Arm Support Board
- 1 Head Support
- 1 Mattress
  The mattress is a slow recovery foam mattress with a density of 58 kg/m3. The mattress has a thickness of 7 cm and adapts to the body shape of the patient. It makes the pressure being divided equally and it recovers when the patient is taken off the mattress. The light yellow cover is easy to clean. Patients are more relaxed due to the comfort of this mattress.
- Table-mounted Radiation Shield
- Anti-fatigue mat with Philips logo

2. X-ray Generation
A. Generator

The 7 C20 system comprises an integrated, micro-processor controlled Certeray generator based on high frequency converter technique. The user interface control of this X-ray Generator is incorporated in the touch screen module, review module, and the on-screen displays. The Certeray generator comprises:

- X-ray generator 100 kW
- Voltage range is 40 - 125 kV
- Maximum current 1000 mA at 100 kV
- Maximum continuous power for fluoroscopy: 1.5 kW

Program selection:

- Pulsed X-ray up to 3.75 , 7.5 , 15 , 30, 60(optional) frames/s for digital dynamic exposures
- Frame rate extension to 30 frames per second.

Designed to enhance visualization of complex and pediatric interventions
Frame rate extension to 30Fr/sec increases the system acquisition speed up to 30 frames per second for cardio studies requiring high speed imaging.
Specifications

The frame rate extension increases the acquisition speed to 15fps and 30fps with a 1024x1024 matrix.

- Pulsed X-ray for pulsed fluoroscopy (3.75 , 7.5 , 15 , 25, 30 frames/s).
- Minimum exposure time of 1 ms
- ECG triggered acquisition: allows acquiring one exposure for each QRS peak with selectable delay time
- Automatic kV and mA control for excellent image quality prior to run to save dose
- X-ray tube load incorporated in the Certeray generator
- Pulsed X-ray for (subtracted) acquisition up to 12 frames/s for vascular applications

B. X-ray tube
The 7 C20 system has the Maximus ROTALIX Ceramic grid switch tube assembly MRC200+ GS 0407 integrated.

The MRC 200+ GS 04 07 tube assembly and cooling unit CU 3101 for cardiovascular systems comprises:

- 0.4/0.7 mm nominal focal spot values maximal 30 and 65 kW short time load
- Grid switching at pulsed fluoroscopy and low load exposure (to eliminate soft radiation and improve image quality)
- Continuous loadability: 3400 W (at 21 degrees C room temperature) / 4000 W (= Max assembly continuous heat dissipation)
- Application of SpectraBeam dose management
- Tube housing is oil cooled with thermal safety switch
- Maximum anode cooling rate of 1820 kHU/min
- Anode heat storage capacity of 6.4 [MHUeff]

C. System intrinsic

- Fully digital imaging chain in maximizing the utilization and technology of the x-ray generator, x-ray tube, flat detector and image processing.
- Customizable EPX protocols to each application according to user preferences for different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, adaptive harmonization)
- Built-in SpectraBeam filtering of low energy radiation to improve image quality and dose efficiency with MRC200+ X-ray tubes.
- Pre-filters of 0.2, 0.5 and 1.0 mm CU equivalent
- Automatic cardiac wedge positioning
- X-ray depth collimator with single semi-transparent wedge filter with manual and automatic positioning.
- Xper Beam Shaping, which means that both shutters and wedges can be positioned on the Last image Hold without the need for X-ray radiation.
- Xper Fluoro Storage, a grab function allows storage and archiving of both a fluoro image or the last 20 seconds of fluoroscopy run. These images or runs can be archived and reviewed as a regular run.

D. User selections

- removable anti-scatter grid to lower x-ray dose for pediatrics (grid ratio 13:1)
- ECG triggered acquisition, offering the possibility to acquire images at the same phase of the heart cycle. This applies to the low dose fluoro and exposure program for EP applications. This allows patient dose reduction by lowering the pulse rate to 1 pulse per heart and let the physician still focus on relevant items
- three programmable fluoroscopy modes can be selected from the control module. Each mode has a different composition of dose rate, pulse speed, filter setting, and image processing (noise reduction, adaptive contour enhancement, and adaptive harmonization)

Roadmap Pro can be selected from the control module.
In the first Roadmap phase a vessel map is created by live fluoroscopy or by selecting an exposure image (SmartMask) with a vessel map which, in the second Roadmap phase, is superimposed with subtracted live fluoroscopy.

100237 Azurion 7 M20

Roadmap Pro features Smart Settings in special clinical modes that are optimized to visualize special materials such as coils and glue.

- Acquisition runs can be done without losing the vessel map of Roadmap Pro.
- Live processing of the vessel map, the device map and the landmark map can be done on the touch screen module.
- Field of View (FoV) can be altered during the second phase.
- Xres for vascular procedures is standard part of Roadmap Pro.

In Roadmap Pro "Automatic Motion Compensation" (AMC) is added to the roadmap functionality. During roadmap, small movements of the patient can lead to subtraction artifacts. These artifacts might conceal important clinical information. "Automatic Motion Compensation" compensates for rigid, uniform (skeletal/table) translations and is therefore very effective in interventional (neurology) applications where subtraction imaging is applied. Disclaimer: AMC only corrects movement artifacts in 2 dimensions. 3 dimensional movements like swallowing or rotation of the head cannot be corrected.

E. User dose awareness

DoseWise program: Philips DoseWise program is a set of techniques, programs and practices built into the X-ray system that ensures excellent image quality during each interventional application, while at the same time reducing x-ray dose at every opportunity. The DoseWise comprises of three building blocks to help reduce x-ray dose without compromising diagnostic quality: system intrinsic, user selection and awareness.

On-system monitor display provides and displays body zone specific Air Kerma data (10 zones for cardiac applications) in numeric and graphical bars.

- Graph displays the accumulated Air Kerma dose for the particular body zone of the actual projection
- When the accumulated Air Kerma dose of the particular body zone reaches the critical skin dose level of 2 Gy, it will be indicated on the display and made visible to the x-ray operator.

Radiation Dose Structured Report
Collection of dose relevant parameters and settings and export to a DICOM database (e.g. PACS) (dose information is sent in MPPS message not as Radiation Dose Structure report), according IEC60601-2-43, 2nd Edition. The reported data can be used for, for example:

- Quality improvement: evaluating trends in X-ray dose performance per facility, system and operator. RDSR enables analysis of average dose levels & variance for routinely performed exams and procedures. Also, typical system usage can be extracted from the data, helping to identify root causes behind deviations and measures to improve.
- Analysis of individual patient cases: using dose levels and system usage per procedure
- Alerting for high dose cases, timely identifying patients at risk or deterministic effects, for proper follow-up.

Secondary Capture Dose Report
The Secondary Capture Dose Report function allows the user to save & transfer, manually or automatically, a patient Dose Report to PACS in DICOM secondary capture format.
The dose report will be stored in the related patient image folder.

Line #	Part #	Description	Qty	Each	Price

3. Image Detection

The system has a 20 inch flat panel image detector. This detector can be rotated over 90 degrees from portrait to landscape and vice versa.

The image chain with the 20 inch flat panel image detector comprises the following:

- A 30 cm by 40 cm (20 in.) diagonal 8 mode Dynamic Flat Detector subsystem for fluoroscopy and cine-fluorography.
- 8 modes 30*38/30*30/26*26/22*22/19*19/16*16/13.5*13.5/11*11 cm, Dynamic Flat Detector
- The outer detector physical housing is 36 x 47.2 cm
- The digital output of the Flat detector is 1904*2586 pixels at 16 bit depth.
- The pixel pitch is 154 micron by 154 micron
- The DQE(0) is >77% providing high conversion of X-ray into a digital image, while maintaining a high MTF.

Philips Azurion offers a storage capacity of (optionally extendable) of 50,000 images at matrix size of 1024 x 1024, in 8 or 10 bit depth. With a matrix size of 2048 x 2048 this is 12,500 images. Maximum number of examinations is 999, with no limit to the maximum number of images per examination.

Xres is a multi-resolution spatial temporal noise reduction and edge enhancement filter for interventional applications. Xres exploits the full benefits of dynamic digital flat detector imaging to enhance sharpness and contrast and has been designed to reduce noise in fluoroscopy and exposure runs. The settings for Xres Cardio can be customized to improve image quality. Xres is a Philips unique image processing algorithm developed at Philips Research for medical applications. Xres is used with Philips MR and US scanners next to Philips Azurion systems.

4. User Interface

User Interface in Examination Room

The User Interface comprises a variety of User Interface modules in the Examination Room. There is the On-Screen Display, the touch screen module, Viewpad and the control modules.

The On-Screen Display is positioned on the left side of the live/ref monitor. The following system information is displayed:

- X-ray indicator
- X-ray tube temperature condition
- Gantry position in rotation and angulation
- Source Image Distance
- Table height
- Table top tilt and cradle angle, if applicable
- Detector field size display
- General System messages
- Selected Frame speed
- Fluoroscopy mode
- Integrated fluoroscopy time
- Skin Dose: dose rate during X-ray, cumulated dose when no X-ray
- Dose Area Product: dose rate during X-ray, cumulated dose when no X-ray
- Graphical bars for Body Zone specific dose-rate and accumulated skin dose levels, related to the 2 Gy level (for cardiac applications
- Stopwatch

Line #	Part #	Description	Qty	Each	Price

The pan handle is an extension of the control possibilities for floating movements of the table top in cardio vascular and neuro systems

Key benefits

- Flexible positioning during cardio and neuro procedures
- Flexible positioning during cardio and neuro procedures

To allow more flexible positioning during cardio and neuro procedures, the pan handle option can be used to perform floating table movements. The pan handle provides a solid grip of the tabletop and can release and apply the tabletop brakes. It can be attached anywhere along the tabletop and accessory rails without affecting the floating range.
Specifications

Pan handle with cable and connector
Table-top attachment clamp
Accessory-rail attachment clamp
Touch screen module

The touch screen module is provided for use at either the tableside or in the control room. Optionally, it is possible to connect in parallel up to three touch screen modules on the system. The touch screen module has a touch screen, which can be operated when covered with sterile covers. The touch screen module allows control of (depending on configuration):

- 3rd party equipment (e.g. CX50, Interventional Tools, EchoNavigator, DoseAware)
- Monitor layout (FlexVision, switchable viewing)
- X-Ray settings (Collimation, Projections, Table, Series and Processing)
- Quantitative Analysis (optional) User can only start QA from the touch screen module. No controls like coronary analysis, left ventricular and vessel analysis can be performed on the touch screen module.
  - Operation of Xcelera, XperIM and IntelliSpace Portal viewing (optional)
- Operation of CX50 Ultrasound (optional)

2nd Touch Screen Module

Key Benefits

- Control system operations with a second touch screen module

Tablet-like touch screen control
During an intervention flexible control of applications and system operations can support fast decisions and communication with team members. The touch screen module provides fast, tablet-like touch response to control system operations. Up to three touch screen modules can be connected to the X-ray system: on the table, on the pedestal and in the control room.
Specifications

The second touch screen module is similar to the standard touch screen module and provides touch screen control of displayed functionality. The following functions can be made available providing the relevant commercial options have been selected:

- Acquisition settings
- Image processing controls
- Channel selection for MultiVision
- Automatic position control (optional)
- Quantitative Analysis controls (optional)
- Xcelera and IntelliSpace Portal viewing (optional)
- Interventional tool controls (optional)
- 3D-RA, Dynamic 3D Roadmap (optional)
- StentBoost, 3D-CA (optional)
- XperCT, XperGuide (optional)
- XIM physio monitoring controls (optional)

Connectivity:

A maximum of 3 touch screen modules can be connected to the X-ray system:

- One touch screen module on the table
- One touch screen module in the Control Room
- One touch screen module on the pedestal

Viewpad
The Viewpad contains the preprogrammed function settings. The system is provided with two Viewpads. The following functions are provided:

- Run and image selection
- File and run cycle
- File overview
- Store to Reference image file
- Copy image to photo file
- Digital (fixed) zoom and panning
- Recall reference images, which means switching control of Viewpad function from life to reference monitor
- Laser pointer, intended to point at regions of interest on the image monitors
- LED indication of laser pointer on/off and battery low
- Subtraction on/off
- Remasking
- Landmarking
- Access flat detector rotation

User Interface in Control Room
The control room comprises a review module, data color monitor and review monitor. The data and review functions are controlled by a single keyboard and mouse. The review module offers the basic functions for review. The most prominent functions can be controlled by the push of a button. The review module comprises the following functionality:

- Power on/off
- File and run cycle
- File, Run, and Image stepping

Line #	Part #	Description	Qty	Each	Price

- Run and file overview
- Reset fluoroscopy timer
- Enable/disable X-ray
- Geo disable

Acquisition monitor. A standard keyboard and mouse control the user interface. The acquisition monitor is intended to follow live case in the ER. System information is displayed on the bottom of the monitor:

- Stopwatch and Time
- System guidance information
- Dose Area Product (DAP) and Skin Dose, as dose rate during X-ray and cumulative dose at no X-ray
- Frame speed settings, fluoroscopy mode, and accumulated Fluoroscopy time
- Exposure and fluoroscopy settings as Voltage (kV), Current (mA) and time (ms)
- Geometry information as rotation, angulation, and SID

The acquisition monitor is designed for standard workflow based on scheduling, preparation, acquisition, review, report, and archive.

Scheduling
In the scheduling page it is possible to add new patients (either querying from RIS/CIS or by creating patient locally). The patients can be listed and selected per date, physician, and intervention type. Previous DICOM patient studies can be uploaded with the DICOM Query Retrieve function in the Philips Azurion system. Patient management protocols are flexible and allow
for multiple studies to be selected under one patient identification number. This means that new studies can be appended to an earlier patient file. Furthermore, each study can contain multiple examinations to allow for split administrative purposes. Each examination contains multiple files, like acquisition file, reference file, and QA results file.

Procedure Cards
Procedure Cards provide the information of room and patient preparation for each individual physician. Procedure Cards are customizable per setting and allow each physician to provide their own room protocols. Procedure Cards is intended to make hard copies of the protocol instructions redundant.

Acquisition
The acquisition page contains information on the currently selected patient.

Reviewing
The review page allows for reviewing of patients:

- Previous examination cases
- Review of other DICOM XA or DICOM SC studies.

Quantitative Vascular Analysis

Key benefits

Line #	Part #	Description	Qty	Each	Price

- Allows quantitative assessment of different size vessels such as aortic and peripheral
- Aids confident decision making for device selection, approach angles and follow-up
- Designed for efficiency with single click functions and fast results

Easily obtain objective assessment of aortic and peripheral vasculature to support decision making and allow quantitative assessment of vasculature during vascular interventions, the 2D quantitative vascular analysis option supports quantification such as aortic and peripheral artery dimensions of about 5 to 50 mm from 2D angiographic images. With one click, the relevant segment is detected and a visualization of the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area is created.
Specifications:

- Automated vessel segmentation
- Diameter measurement along selected segment
- Automated obstruction analysis
- Stenosis diameter, stenosis length
- % stenosis diameter, % stenosis area
- Automated and manual calibration routines
- Store result page

Analysis of the targeted vessel segment has been simplified with the single click function. Position the mouse on or close to the stenotic area and click once to detect the relevant segment. The visualization shows the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area.

Archiving
Clinical studies can be archived to a CD/DVD, USB or a PACS. The archive process can be completely automated and customized with settings. Parameters like multiple destinations, archive formats can be selected to the individual needs and wishes for programming under the settings.

With Philips Azurion the control room comprises of an acquisition monitor
and a review monitor. The review monitor is a 24 inch color TFT-LCD medical grade monitor.
The Graphical User Interface on the Review monitor has the following features and possibilities:

- Step through file, run, or images
- File, and run overview
- Contrast, brightness, and edge enhancement settings
- Flagging of runs or images for transfer
- Applying text annotation in images
- DICOM printing if available
- Executing Quantitative Analysis Packages if available
- Subtraction functionality if available

This system is delivered with printed instructions for use and/or electronic instructions for use, as well as a quick start leaflet. A printed paper instructions for use can also be ordered at no additional cost.
5. Viewing
A. Viewing in Examination room

Philips Azurion systems come with one 27 inch high brightness color medical grade LCD monitor for clinical image display in the Examination room. This LCD monitor is intended for viewing in the examination room and is designed for medical applications. The monitors is used for combined viewing of live images and reference display. Selection and storing of live to reference monitor is controlled by the infra-red remote-control viewpad or via touch screen module.

The On-Screen Display provides status information on stand rotation-angulation, table height, display of system messages, X-ray tube load status, selected fluoroscopy mode, selected detector Field of View, and both the rate and accumulation of the dose area product and Air Kerma dose.

The main characteristics are:

- 27 inch high brightness color TFT-LCD display
- Native format 1920x1080 Full HD
- 10 bit gray-scale resolution with gray-scale correction
- Wide viewing angle (approx. 178 degrees)
- High brightness (max 650 Cd/m2, default 400 Cd/m2)
- Long term luminance stability through backlight stabilization circuit
- Automatic brightness control with backlight sensor
- Control functions on side
- User programmable and standard reference setting
- On-Screen Display
- Internal selectable lookup table for gray-scale transfer function, including DICOM
- Internal power supply (100-240 VAC)
- Integrated LCD protection screen

If applicable included is a flat monitor ceiling suspension for 2 monitors (2F MCS). MCS includes motorized height adjustment. The ceiling suspension allows flexible monitor positioning over a range of about 360 x 300 cm. At customer request, this 2 monitor MCS can be replaced by a 4 or 6 fold MCS or an MCS integration kit HD for non-Philips MCS. The MCS integration kit HD contains vital parts for system operation.

B. Viewing in Control room

Philips Azurion includes two 24 inch high brightness color LCD monitors. The color monitors are for acquisition and reviewing display.

The main characteristics for color monitor are:

- 24 inch color TFT-LCD display
- Native format 1920x1080 Full HD
- High brightness (max 400 Cd/m2, default 350 Cd/m2)
- Wide viewing angle (approx. 178 degrees)
- Long term luminance stability through backlight stabilization circuit
- Automatic brightness control with backlight sensor
- Control functions on side
- User programmable and standard reference setting
- On-Screen Display
- Internal selectable lookup table for gray-scale transfer function, including DICOM
- Internal power supply (100-240 VAC)Integrated USB hub

A Philips Azurion system includes the DICOM Image Interface which enables the export of clinical images to a DICOM destination like a CD-Medical station or a PACS server. The export formats are based on DICOM 3.0 protocols. The system exports clinical studies in Cardiac DICOM XA Multi-Frame or DICOM Secondary Capture formats.

Line #	Part #	Description	Qty	Each	Price

The DICOM Image Interface transfers through its fast Ethernet link, making images available on-line within seconds. The archive process can be configured by X-ray settings. The images are sent out either in the background, or manually upon completion of the examination. The export format is configurable in 512x512 or 1024x1024 matrix in 8 or 12 bit depth. The examination can be sent to multiple destinations for archiving and reviewing purposes. The DICOM Image Interface provides DICOM Storage and DICOM Storage Commitment Services. The DICOM Query/Retrieve function allows older DICOM XA MF and DICOM SC studies to be uploaded in the system. Furthermore, additional information can be appended to a study while keeping the patient identification the same.

Remote Intercom for the Azurion System. The option includes a separate intercom, which is connected independently from the system. This allows placement of the intercom at the preferred working position in the control room and examination room. The listen function can be separately selected on each intercom. Activating the talk function on a selected intercom automatically disables this function on the other intercom.

Uninterruptable Power System (UPS)
Ensures data integrity
A power failure of the hospital mains during an intervention can cause loss of data. If this occurs, the single phase Uninterruptable Power System (UPS) enables a proper shut-down of the X-ray system processor units.
Specifications

In case a full three phase UPS is selected, the single phase UPS is not delivered.

Remote service
Access to the system from a Remote location is possible via network or modem connection. Remote access to a system can shorten the time needed for e.g. changing system settings or problem diagnosis.

Environmental
At Philips Healthcare, we feel the responsibility towards society an d the environment. The latest 7 C20 system is a perfect example of our EcoVision program. Byexamining every aspect of the 7 C20 design and development through a green eye, we drastically reduced the products environmental impact.

System & table APC

Helps to save time and manage X-ray dose with automatic positioning

Positioning the X-ray system to visualize relevant anatomy from different perspectives can involve a great deal of time and many scout images during interventional procedures. To help save time and manage X-ray dose while working, the Automatic Position Controller (APC) provides an easy way for interventional team members to store and recall stand-related positions.

Specifications

The system APC stand and table positions need to be stored and recalled separately.

Clinical Education Program for Azurion System:

Line #	Part #	Description	Qty	Each	Price

The purchase of the Azurion System includes a StartRight entitlement pool that allows for the customized delivery of educational events to improve staff time to proficiency, knowledge on system features, and improve overall lab efficiency. For new users, the recommended series of educational events includes:

Essentials OffSite Education: Philips will provide up to two (2) Cardiovascular Technologists, Registered Technologists, Registered Nurses, or other system operator as selected by customer, with in-depth didactic, tutorial, and hands-on training covering basic functionality and work-flow of the cardiovascular imaging system. In order to provide trainees with the ability to apply all fundamental functioning on their system, and to achieve maximum effectiveness, this class should be attended no earlier than two weeks prior to system installation. This twenty-eight (28) hour class is located in Cleveland, Ohio, and is scheduled based on your equipment configuration and availability. Due to program updates, the number of class hours is subject to change without notice. Customer will be notified of current, total class hours at the time of registration. This class is a prerequisite to your equipment handover OnSite Education. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to guidelines for more information. In the event that an EP Navigator workstation has also been ordered, the offsite training course will be tailored to focus on the electrophysiology functionality of the FD system and the EPN workstation. Travel and lodging are not included, but may be purchased through Philips. It is highly recommended that 989801292102 (CV Full Travel Pkg OffSite) is purchased with all OffSite courses

Initial Handover OnSite Education: The primary Philips Education Specialists will provide twenty-eight (28) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 28 hours, and must include the two OffSite education attendees. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to 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. It is highly recommended for systems that are fully loaded or for customers with a large number of staff members to also purchase 989801292099 (CV Add OnSite Clin Educ 24h).

FollowUp OnSite Education: Philips Education Specialists will provide sixteen (16) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. Students should attend all 16 hours, and must include the two OffSite education attendees. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to 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.

Assessment OnSite Year 1: The primary Philips Education Specialist will perform a two day onsite assessment at the customer site on or close to the first anniversary of the Initial Handover. The Specialist will assess through various means not limited to; physical observation of procedure workflow, tool usage data analysis and staff interviews. The Specialist will then review findings with department head and make recommendations thereof. The Specialist may perform refresher training if required.

Education expires one (1) year from installation date (or purchase date if sold separately). Ref#296339296340296341296342-20170209

Line #	Part #	Description	Qty	Each	Price
2	**NNAE996	CORE IVUS - Cardiac	1	$81,500.00	$81,500.00

Line #	Part #	Description	Qty	Each	Price
		CORE Precision Guided Therapy System			

CORE CPU, Operator's Manual, Power Transformer, Cable Pre-Install Kit, Connection Box, two (2) Standard Controller and one (1) bedrail mount, 19"NEC Monitor Kit, Phased Array PIM Body, FFR functionality, DICOM Network Connection, ChromaFlo Functionality.

-Includes VH IVUS End User License Agreement

The customer agrees that use of the VH IVUS Software is subject to the terms of the End User License Agreement. A copy of the End User License Agreement is also available from your VOLCANO representative or online at www.volcanocorp.com/products/pdf-files/sofware-support-vh-ivus.pdf

iFR Hyperemia-Free Lesion Assessment Modality CORE Interface, Operator's Manual. Customer agrees that use of the iFR Application Software License Application with interface to CORE is subject to the terms of the End User License Agreement. A copy of the End User License Agreement is also available from your VOLCANO representative or online at www.volcanocorp.com

CORE Control Pad

Bedside touchscreen controller offering system control from the sterile field

3	**FCV0588	Isolated Wall Connection Box	10	$1,316.00	$13,160.00

Isolated Wall Connection box to support the display of an external video source on a monitor in the examination room.

Key benefits
- Stream video from other modalities on the interventional X-ray suite:
- Connect external video in the exam room

Easily stream video to other locations
Many interventional facilities use video to record and stream images from other modalities on the interventional X-ray suite for training or presentation purposes. The Video Wall Connection Box facilitates connection of the video source via a standard DVI cable/connector and lossless transfer of the video signal over the approximate 30 meter long cable. It can be mounted in the examination room or in the control room, depending on the location of the video source.

Specifications
The quantity of the VWCB's has to be calculated as follows:
For each video signal via MultiVision: 1 VWCB (max = 4)
For each video signal to FlexVision XL on Cardio System: 1 VWCB (max = 9)
For each video signal to FlexVision XL on Vascular System: 1 VWCB (max = 8)
For each 3rd party video signal directly connected to an LCD in the MCS: 1x VWCB.
Note:
No VWCB is required in case a video signal is connected directly to a dedicated LCD from the following sources:
1) Live/ref Slaving
2) Interventional HW (XtraVision), IntelliSpace Portal, Philips Xcelera (only if workstations are powered by Philips X-ray system)
3)XperIM

Line #	Part #	Description	Qty	Each	Price
4	**FCV0824	video WCB on rear side 1st MCS	2	$5,072.00	$10,144.00

Isolated Wall Connection box on the rear side of the monitor ceiling suspension to support the display of an external video source on a monitor in the examination room.

Key benefits
• Easily connect external video in the exam room
Specifications
A wall connection box to connect external video (input only), USB and Ethernet. One or two WCB's (option) can be attached on the rear side of the 1st MCS with a bracket. A cable box (also attached to rear side of 1st MCS) can be used to store connected equipment cables. A maximum of two WCBs/cable boxes can be attached.

| 5 | **NCVD069 | ClarityIQ. | 1 | $112,432.00 | $112,432.00 |

Significantly lower dose- across clinical areas, patients and operators.

Key benefits
• High-quality imaging at low dose levels
• Enhanced work environment for staff through active management of scatter radiation
• Expands treatment options – enables longer procedures to treat obese and high-risk patients with confidence

See with confidence every time
Interventions are becoming increasingly complex, which lengthens fluoroscopy time and increases the need for high resolution imaging. New devices can be more difficult to visualize, making it harder to position them precisely. The prevalence of patients with a high BMI can also require increased dose levels to visualize anatomy. All of these factors inspired us to completely redefine the balance in interventional X-ray with AlluraClarity.

AlluraClarity with its unique ClarityIQ technology gives you exceptional live image guidance during treatment. What's more, you can confidently manage low X-ray dose levels without changing your way of working. In short, you can see what you have to regardless of patient size.
Specifications
ClarityIQ technology is the foundation of Philips X-ray systems with AlluraClarity. It offers:
- Noise and artefact reduction, also on moving structures and objects
- Image enhancement and edge sharpening
- Automatic real-time patient and table motion correction on live images
- A flexible digital imaging pipeline from tube to display that is tailored for each application area
- Over 500 clinically fine-tuned system parameters making it possible to filter out more X-ray radiation and use smaller focal spot sizes and shorter pulses with the grid switching technology of Philips MRC tube and accompanying generator

| 6 | **FCV0834 | coupling to video switching | 1 | $6,244.00 | $6,244.00 |

Key benefits
• Easily display any data or clinical information needed to work efficiently
Simplify workflow with flexible viewing control
Having patient data and clinical information easily available on screen can enhance decision making and efficiency during interventions. Coupling to Video switching enables coupling of maximum 4 color outputs (e.g. Interventional tools, Xcelera, XperIM and IntelliSpace Portal).

Specifications
Video splitter box to enable coupling of maximum 4 color outputs (e.g. Interventional tools,

Line #	Part #	Description	Qty	Each	Price

Xcelera, XperIM and IntelliSpace Portal) to the switching concept from our partner.
In combination with the MultiSwitch option, the Video splitter box is used to connect a maximum of 3 workstation with a total power dissipation of maximum 1380 W.
For the remaining workstations, up to 4 in total, a second video splitter box needs to be ordered.
In addition, 4 splitter units are delivered to enable coupling of up to 4 of the X-ray system Live and Ref signals to the partner video switching system.
The partner system provides fully galvanically isolated DVI extender cables to connect these signals.

| 7 | **NCVC466 | VesselNavigation Complete | 1 | $82,580.00 | $82,580.00 |

The VesselNavigation Complete package consists of VesselNavigator, 3D-RA, 3D-RA on touch screen module, and 3D Roadmap.

Key benefits
• Complete Live Image Guidance solution for endovascular procedures.
• VesselNavigator supports navigation through complex vessel structures.
• 3D Roadmap provides full 3D view to enhance navigation of guide wire, catheter, and coils through complex vessel structures.

Complete Live Image Guidance solution for endovascular procedures
VesselNavigator Complete provides a complete Live Image Guidance solution for endovascular procedures, allowing you to plan, perform, and follow-up procedures with confidence. It consists of VesselNavigator, 3D-RA, 3D-RA on touch screen module, and 3D Roadmap.

VesselNavigator allows you to reuse 3D vascular anatomical information from existing CTA and MRA datasets as a 3D roadmap overlay on live 2D fluoro images. With its sophisticated visualization, it provides an intuitive and continuous 3D roadmap to guide you through vasculature during procedures. Using 3D Roadmap you can also create an overlay with a 3D contrast enhanced angiography volume. It provides real-time 3D views of the advancement of the guide wire, catheter, and coils through complex vessel structures. 3D Roadmap features automatic motion compensation for neuro exams.
Specifications

VESSELNAVIGATOR
The essential components of VesselNavigator are:
• 3D roadmap navigation with a personalized visualization of a CT or MR overlay of the selected vasculature on live fluoro.
• Both 2D and 3D registration for CT or MR image fusion
• Easy, intuitive four step workflow, with one click vessel segmentation
• Ring markers to easily indicate the ostia and landing zones.

VesselNavigator provides the following functions:
• One click vessel segmentation
• 3D landmarks
• Plan angles
• 2D registration
• 3D registration
• Live image guidance; Real-time overlay of the 3D Vessel segmentation on the live 2D X-ray images from the X-ray system of the same anatomy.
• Table tracking
• Table side control

VesselNavigator movies and snapshots can be stored/archived on:
•   A PACS systems as DICOM Secondary Capture images or movies.
•   USB device.

Line #	Part #	Description	Qty	Each	Price

- One or multiple DVD's, CD-ROM(s) for easy archiving.
- Hard copy via the (DICOM Print) protocol.

3D-RA

3D-RA (3D Rotational Angiography) provides extensive 3D visualization of anatomy and vessels in just four seconds based on one rotational angiography run and one contrast injection. Its high-resolution 3D reconstructions provide critical information about depth and the relationship of one vessel to another to support the accurate assessment of anatomy and vasculature.

Image Acquisition

Image acquisition is performed with the Rotational Angiography feature of the X-ray system with the flexibility to position the C-arm in either head or side position.
C-arm in head position: scan range of 240 degrees with a rotation speed up to 55 degrees/sec.
C-arm in side position: scan range of 180 degrees with a rotation speed up to 30 degrees/sec.

3D Vessel Reconstruction

The rotational run is automatically transferred and displayed as a 3D vessel model: with the Real-Time digital link (option) 120 images are reconstructed into a 3 dimensional model within seconds. Additional reconstructions, using the Reconstructive Zooming Technique, can be performed as well.

Workflow

Automated 3D-RA process from 3D acquisition to 3D Viewing,
3D at touch screen module (option),
3D Automatic Position Control (3D-APC),
3D Follow C-arc.

Calibration

3D-RA calibrations are performed by Philips Customer Support.
3D-RA calibration data are stable over at least 6 months' time.

Viewing

Real Time user interface.
Philips' CRM (Contrast Resolution Management) Technology.
Image rendering:
- Volume/Surface Rendering,
- MIP,
- Endoscopy,
- SUM (pseudo X-ray image)
- Gradient rendering,
- Cut-plane function,
- Orthoviewer,
- MPR (Multi-Planar Reformatting),
- SpineView,
- 5 distance measurements calculated in the same volume, including "Quick measurement".
- Volume calculation
- Automated Vessel Analysis (AVA),
- Computer Assisted Aneurysm Analysis (CAAA),
- Catheter tip shape simulation,
- Virtual stenting,
- Annotation,
- Interpolative Zoom
- Reconstructive Zooming Technique,
- Subtraction of reconstructed volumes,

Line #	Part #	Description	Qty	Each	Price

• Automatic Voxelshift,
• Set grey values WW/WL,
• Store/Recall of user defined projections.

3D-RA ON TOUCH SCREEN MODULE

From the 3D-RA menu on the touch screen module, you can rotate, translate, and take snapshots of images. Views can be stored and recalled. You can select 3D-APC (3D Automatic Position Control) and follow stand mode.
Other 3D-RA functions on the touch screen module:
• Start mouse mode
• Segmentation (window-width/window-level control)
• 3D zoom control
• Recall Anterior-Posterior view

3D AND MR/CT ROADMAP

3D Roadmap overlays real-time 2D fluoroscopy images on a 3D reconstruction of the vessel tree acquired with 3D-RA or XperCT, both available on the X-ray system or previously acquired CT/MR data of the vessel tree. The resulting roadmap shows the progress of a guide wire, catheter, or coil in real-time. It is designed to improve visualization and navigation for complex neuro, vascular, and oncology interventions.

Specifications

3D Roadmap is based on the visualization of the vessel tree from 3D-RA acquisitions. The MR/CT roadmap is based on visualization of the anatomy on previous acquired CT or MR data sets. Both are activated with one button touch at tableside.

Viewing:
• Table side control: bidirectional link between the X-ray system and 3D Roadmap,
• 3D Automatic Position Control,
• 3D Follow C-arc,
• The 3D roadmap provides the freedom to change:
o The angulation of the C-arc,
o The rotation of the C-arc,
o The Field of View,
o The Source to Image Distance,
• Landmarking,
• 3D blending,
• WW/WL settings,
• Store and review runs,
• Store snapshots and movies.

Transfer/ export to:
• Optional Hard Copy unit (DICOM Print)
• DICOM compatible device, supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
• Any PC in a standard PC compatible format (JPEG,AVI)
• One or multiple DVD's, CD-ROM(s)
• USB device.

Line #	Part #	Description	Qty	Each	Price
8	**NCVD099	Quantitative Coronary Analysis	1	$6,480.00	$6,480.00

Line #	Part #	Description	Qty	Each	Price

Key benefits
• Allows quantitative quantification of coronary artery dimensions
• Aids confident decision making for device selection, approach angles and follow-up
• Designed for efficiency with single click functions and fast results

Easily obtain objective assessment of coronary artery
To support decision making and allow assessment of vasculature during cardiac interventions, the 2D quantitative coronary analysis supports quantification of coronary artery dimensions of about 1 to 6 mm from 2D angiographic images. With one click, the relevant segment is detected and a visualization of the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area is created.

Specifications
• Automated segmentation of selected coronary
• Diameter measurement along the selected segment
• Automated obstruction analysis
• Stenosis diameter, stenosis length
• % stenosis diameter, % stenosis area
• Automated and manual calibration routines
• Store result page

Analysis of the targeted vessel segment has been simplified with the single click function. Position the mouse on or close to the stenotic area and click once to detect the relevant segment. The visualization shows the obstruction, healthy vessel, reference diameter, stenosis diameter and plaque area.

| 9 | **NCVA694 | Subtracted Bolus Chase | 1 | $18,544.00 | $18,544.00 |

Helps to visualize vessel structures when blood flow is difficult to estimate.
Key benefits
• Bolus Chase improves results in case of challenging step movements, a mismatch between blood flow and selected program, or lack of real-time image information.

During digital acquisition in non-subtracted mode with uninterrupted real-time image display, the contrast bolus is followed (chased) interactively by a motorized table scan movement using a hanbd-hold speed controller to adapt the speed of the table scan to the contrast flow. With biplane systems, this Bolus Chase is applied with the lateral channel.

Specifications
• Framespeed can be adapted.
• Bolusrun is followed with a maskrun, using the same speed curve and framespeed that was generated during the bolusrun.
• Viewing is possible in the subtracted and non-subtracted mode. If subtracted viewing is not required, the maskrun can be skipped.
• Subtracted Bolus Chase gives fast, accurate results high patient throughput and efficient patient management.
• Automated exposure control and precise speed control generate high quality images and excellent subtraction cases.

| 10 | **NCVA101 | peripheral X-ray filter | 1 | $1,164.00 | $1,164.00 |

• Obtain uniform density of lower peripheral areas

Enhance consistency of lower peripheral images
To help clinicians obtain consistent images of lower peripheral anatomy, this option provides a set of flexible X-ray filters. They provide uniform density in angiographic examinations of the lower peripheral area.

Line #	Part #	Description	Qty	Each	Price
11	**NCVD061	optional ref monoplane	1	$4,408.00	$4,408.00

Additional Ref2 and Ref3 viewport

Key benefits
• Easily display any data or clinical information needed to work efficiently
Simplify workflow with flexible viewing control
Having patient data and clinical information easily available on screen can enhance decision making and efficiency during interventions. Optional ref monoplane offers an additional video output of the X-ray system offering an additional Ref2 and Ref3 viewport on one LCD monitor. Combined with the Dual Fluoro license this enables users to zoom live images during acquisition, while having the Dual Fluoro image visible on the Ref3 viewport.

12	**NCVC544	StentBoost Live	1	$20,876.00	$20,876.00

StentBoost Live

When inserting a stent in complex cardiac vasculature, inexact positioning and under deployment are always a challenge. StentBoost Live allows physicians to improve the visualization of balloons and stents in coronary arteries on-the-fly to clarify the situation at any moment during an intervention. The user simply presses and holds the foot pedal to boost visualization during the cine run. He can use StentBoost Live to check the position of a device in real-time and confirm stent expansion while the balloon markers are still in place. He can then take any corrective action immediately if required.

To do this, StentBoost Live automatically detects the balloon markers in each acquired image. The detected markers are aligned with the markers found in previous image(s) and temporal and spatial filtering is applied to enhance all radiopaque material in close proximity to the markers. All of this occurs in a few hundreds of milliseconds to produce an enhanced visualization in real-time.
StentBoost Live can be applied to any cine run acquisition and at least four frames of images are required.
StentBoost Live features include:
• Automatic marker detection
• Real-time image enhancement during the StentBoost Live run
• Immediately after acquiring the StentBoost Live run, the run is automatically looped three times to allow for further review
• StentBoost Live functionality is fully integrated in the interventional X-ray system
• Image snapshots or movies can be archived to any DICOM compatible PACS. These include DICOM XA and DICOM SC

Note: when ordering Dynamic Coronary Roadmap and/or StentBoost Live for a non-FlexVision system a single dedicated color monitor must be added to the MCS.

13	**NCVA783	table pivot option	1	$4,120.00	$4,120.00

• Flexible positioning for upper extremity angiography
• Easy patient transfer

Flexible positioning and transfers
Transradial access, upper extremity angiography, and patient transfer have never been simpler with our optional Pivot feature. One finger push-to-pivot allows effortless patient positioning. It moves with less friction, making it easier to move larger patients. A secure mechanism locks the tabletop in place to prevent it from moving.

14	**NCVD100	Left Ventricular Analysis	1	$9,248.00	$9,248.00

Line #	Part #	Description	Qty	Each	Price

Key benefits
• Allows quantitative quantification of left ventricular volumes
• Designed for efficiency with single click functions and fast results

Easily obtain objective assessment of coronary artery
To support decision making and allow quantitative assessment of anatomy during cardiac interventions, the 2D Left Ventricular Analysis option supports quantification of left ventricular volumes and local wall motion from angiographic series. It calculates the ejection fraction and local wall motion parameters in different formats. Wall contours can be easily drawn both automatically and manually.

Specifications
• Various LV-volumes: ED, ES, Stroke Volume
• Ejection Fraction
• Cardiac Output
• Centerline Wall Motion
• Slager Wall Motion
• Automated and manual calibration routines
• ECG visualization facilitates image selection for analysis
• Store result pages

| 15 | **NCVB167 | MR/CT Roadmap | 1 | $16,660.00 | $16,660.00 |

Philips MR-CT Roadmap tool allows re-use of the vessel tree image from previously acquired MRA (MR angiography) or CTA (CT angiography) scans for endovascular navigation.

Key benefits
• Roadmap on previously acquired MR and CT angiography datasets, reducing the need for additional X-ray dose and contrast medium
• Reduce treatment risks for patients with renal insufficiency or young patients who are considered X-ray dose sensitive
• Perform procedures with a high level of precision thanks to real-time compensation for gantry and table movement

Accurate 3D guidance for complex interventions
Patients undergoing complex vascular interventions often receive high-resolution CT or MR scans in the diagnostic phase. To manage patients' exposure to additional X-ray dose and contrast medium during the intervention, Philips MR-CT Roadmap tool allows re-use of the vessel tree image from previously acquired MRA (MR angiography) or CTA (CT angiography) scans for endovascular navigation.

Specifications
MR/CT Roadmap extends the capabilities of the integrated 3D product by providing a sustainable 3D roadmap based on previous acquired CT or MR scans to support interventional procedures.
Image Acquisition
A previously acquired CT or MR scan can be imported into the system and matched with a low dose 3D-RA or XperCT scan. The MR/CT Roadmap is activated with one button touch at tableside on the touch screen module. The "live" 2D fluoroscopy image is overlaid with the MR/CT volume presented in 2D or 3D and is automatically displayed on the roadmap monitor in both the examination room and control room.

Intuitive, fully controlled from tableside:
The bidirectional link between the X-ray system and the MR/CT Roadmap allows the user to select the stand position for the procedure in two ways. 3D Automatic Position Control allows the gantry to automatically move to the best interventional projection as shown on the

MR/CT Roadmap monitor. 3D Follow C-arc allows the MR/CT Roadmap to remain in sync with the 2D projection, automatically adjusting viewpoint as the gantry is repositioned.

- Easy 2 step registration of the MR/ CT volumes
- Landmarking to adjust the intensity of the anatomical reference surrounding the vessels and tissue
- 2D and 3D blending to fade in/out the 2D or 3D view
- WW/WL settings to control the contrast/brightness
- Store and review runs for reporting and archive purposes
- Store snapshots and movies

MR/CT Roadmap data can be exported to:
- Any optional DICOM compatible device(e.g. PACS/Printer), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
- Support archive on one or multiple DVD's, CD-ROM(s)
- Image transfer to a standard PC compatible format (JPEG, AVI)
- Store a subset of exportable objects (snapshots and AVI Movies) to a USB device.

Line #	Part #	Description	Qty	Each	Price
16	**NCVA695	**FD Rotational Angio** Realtime 3D impressions of complex vasculature	1	$17,720.00	$17,720.00

Key benefits
- Use 3D imaging to quickly determine the projection angle for treatment in complex vascular interventions, surgery and radiotherapy
- Supports assessment of vascular pathologies for diagnostic and therapeutic decisions.

Revealing hidden structures
The complexity of interventional procedures lies in the fact that every person's pathology is unique. Visualization in three dimensions is therefore vital to aid decision making by the clinician. Rotational angiography provides real-time 3D impressions of complex vasculature and the coronary artery tree. Rotational Angio can be used to quickly determine the projection angle for treatment.

Specifications
Rotational Angio acquires multiple projections with just one contrast injection via a fast rotational scan of the region of interest. A rotational scan is possible both with the X-ray systems in the side position (ceiling mounted systems) and in the head position, providing the flexibility to perform procedures virtually from head to toe.
C-arm in side position:
Max. rotation Speed: 30 degrees/s
Max. rotation Angle: 180 degrees
C-arm in head position:
Max. rotation Speed: 55 degrees/s
Max. rotation Angle: 240 degrees
Max. Frame speeds are given by the frame speed specifications of the system configuration.
The very high movement speed allows using less contrast, whereas the very wide rotation range provides a complete evaluation of the anatomy.
A contrast run can be followed up with a mask run, to allow image/run subtraction.
The stand is designed for a very high mechanical stability. It offers precise positioning and high

reproducibility, assuring you of high quality images and excellent subtraction studies. Rotational Angio results are available on the X-ray system.
Operation of Rotational Angiography is straight forward: the procedure is selected, set up and executed virtually in a matter of seconds, supporting high patient throughput.
A set of dedicated acquisition programs is available on the touch screen module and can be selected at the touch of a button. The Rotational Angio is controlled from the exposure hand- or footswitch.

| 17 | **NCVD072 | SmartMask Monoplane | 1 | $9,892.00 | $9,892.00 |

Key benefits
• Simplifies roadmap procedures by overlaying fluoroscopy with a selected acquired image.
• Enables roadmap procedures to manage radiation dose and contrast media by selecting an image from an acquired series as a mask image.

Supports navigation during interventions without the need of additional contrast media.
SmartMask simplifies roadmap procedures by overlaying fluoroscopy with a selected acquired image in the Live X-ray window.

Specifications
The reference image can be faded in/out with variable intensity, controlled from tableside. SmartMask uses the reference image displayed on the reference monitor. Any previously acquired image can be used as reference. SmartMask facilitates pre- and post- intervention comparisons to assess treatment results.

| 18 | **NCVD066 | XL video slaving to full HD TV | 1 | $10,280.00 | $10,280.00 |

Slave FlexVision XL screen to a 3rd party Full HD monitor

Key benefits
• Easily display any data or clinical information needed to work efficiently
• Follow procedure from outside Examination Room or Control Room

Simplify workflow with flexible viewing control
Having patient data and clinical information easily available on screen can enhance decision making and efficiency during interventions. With this option, a Full HD (1920x1080) downscaled copy of the FlexVision XL large screen content can be displayed on a 3rd party Full HD monitor.

Specifications
Full HD (1920x1080)
A 30m fiber video extension is included.
No monitor is included.

| 19 | **NCVD138 | table tilt option | 1 | $16,904.00 | $16,904.00 |

Table tilt option provides precise imaging of contrast medium, blood, or objects in the body.

Key benefits
• Tilts the table to support gravity oriented and puncture procedures
• Keeps the region of interest in the isocenter of rotation and angulation
• Allows more precise imaging of contrast medium, blood, or objects in the body

Precise imaging during gravity oriented and puncture procedures
To obtain high quality results and avoid re-takes during gravity oriented or puncture procedures, it's important to keep the region of interest centered at all times. The tilt option allows you to tilt the table. As the table tilts, the X-ray beam automatically adapts to the movement to keep the region of interest in the isocenter of rotation and angulation of the stand. As a result, your region of interest always remains centered to allow more precise imaging of contrast medium, blood, or objects in the body.

The table floats even when tilted, and the region of interest can be followed by panning the tabletop. When combined with the Bolus Chase option, the table tilt option enables phlebography to be performed with a head-up tilted patient.

Specifications
- Motorized table height from 78.5 - 103.5 cm
- Maximum tilt range: -17 degrees (head down) to +17 degrees (head up).
- Tilt speed: 2 degrees/sec
- Automatic safeguarding system with manual override
- Panning range in tilted plane: equal to the standard tabletop specifications (longitudinal 120cm, lateral 36cm)
- Easy to use controls

20	**NCVB882	Cradle extension	1	$13,316.00	$13,316.00

- Moves the tabletop in a cradle motion from side to side to support surgical and puncture procedures
- Improves access to patients
- Allows precise imaging of contrast medium or blood

Precise imaging during surgery and puncture procedures
To obtain high quality imaging results and help in avoiding re-takes during surgical or puncture procedures, it can be useful to swing the tabletop from side to side in a cradle movement. This extension moves the tabletop in a cradle motion to improve access to patients. It also allows precise imaging of contrast medium or blood.

21	**NCVD078	FD Dual Fluoro monoplane	1	$16,240.00	$16,240.00

An additional fluoro channel in parallel to the standard fluoro channel

Key benefits
- View the subtracted fluoroscopy next to the default non subtracted fluoroscopy
- View a digitally zoomed fluoroscopy image next to the default fluoroscopy image

Second fluoro image to support complex interventions
For complex interventions, it can be useful to view the subtracted fluoroscopy image next to the normal fluoroscopy image. The Dual Fluoro option provides an additional fluoro channel in parallel to the default fluoro channel. The dual fluoro option allows to view live digitally zoomed fluoroscopy next to non-zoomed fluoroscopy.

Specifications
The Dual fluoroscopy mode is selected via the touch screen module.
The trace subtracted fluoro image will be displayed on the live viewport, the non-subtracted fluoro image is displayed on the reference 3 viewport.
In Dual Fluoro mode, the live fluoroscopy image can be zoomed digitally, providing a larger view of the region of interest for complex interventions. The zoomed live fluoroscopy image will be shown on the live viewport, while the entire non zoomed image will be shown on the reference 3 viewport. The fluoro zoom function is controlled via the touch screen module.

22	**NCVD030	FlexVision XL HD	1	$90,004.00	$90,004.00

FlexVision XL HD is an integrated viewing solution designed to give you full control over your viewing environment which brings High Definition viewing.

Key benefits
- Easily access multiple, up to 8, video inputs (including third party systems) video inputs to inform decision making during procedures
- Create custom display templates to support diverse procedures
- The screen layout of the FlexVision XL HD can also be changed from the control room
- Enlarge images to reveal more details and support comfortable working positions

Line #	Part #	Description	Qty	Each	Price

Diagnostic information easily made available at table side

In today's interventional setting, as you perform more complex procedures with smaller devices in complex anatomy, you rely on various types of diagnostic information to guide you. To inform decision making in the exam room, Philips offers an advanced digital workspace called FlexVision HD. You can display multiple images in a variety of custom layouts on a large, high-definition LCD screen. Zoom in and out to enhance fine details, while maintaining an overview of all information. Create custom display templates for specific procedures/physician preferences to easily support diverse procedures.

Specifications

FlexVision XL HD offers:
• Native resolution of FD20 can be displayed.
• Sharp images at full size without zoom
• High Definition display at native resolution for ultimate detail
• Up to 2k*2k image display fully integrated
• Enhanced small vessel visualization

1. DVI video composition unit.
The DVI video composition unit allows the user to direct and switch the video output of all connected medical equipment to specific sub windows of the Philips 58-inch color LCD with LED backlight in the Examination Room.
• The DVI video composition unit is operated from the touch screen module.
• The DVI video composition unit supports a wide variety of display formats (up to 1920x1200)
• Up to 11 external inputs are connected to the DVI video composition unit via wall connection box or boxes.

2. Medical grade, high resolution color LCD in the Examination Room
This display supports the image quality requirements for monochrome X-ray images as well as color images and replaces all displays normally delivered with the system for the Examination Room.
Main characteristics are:
- 58-inch, 8 Megapixel color LCD
- Native resolution: 3840x2160
- Brightness: Max: 700 Cd/m2 (typical) stabilized: 400 Cd/m2
- Contrast ratio: 1:4000 (typical)
- Wide viewing angle (approx. 176 degrees)
- Constant brightness stabilization control
- Lookup tables for gray-scale, color and DICOM transfer function
- Full protective screen Ingress Protection: IP-21

3. Large color LCD control (touch screen module)
• Enlarge information at any stage during the case via the touch screen module in the Examination Room or Control Room.
• Select viewing lay-outs via the touch screen module in the Examination Room.
• Create new layouts by matching inputs to desired locations on preset templates.
• Adjust the screen layout during the procedure without going into configuration
• 20 layouts; each layout is customizable, size of viewports can be customized by end user X-ray status area visible with all X-ray details

4. Monitor ceiling suspension
Monitor ceiling suspension for use in the Examination Room carries the 58-inch color LCD, providing highly flexible viewing capabilities. The monitor ceiling suspension is height-adjustable and moveable along ceiling rails. It can be positioned on either side of the table.

5. Snapshot
The snapshot function allows the user to store/save a screen-capture of any image on the FlexVision HD as a photo image to the current acquisition patient study.

Line #	Part #	Description	Qty	Each	Price
23	**NCVB950	**2D Perfusion**	1	$25,688.00	$25,688.00

Line #	Part #	Description	Qty	Each	Price

2D Perfusion brings functional imaging in the interventional suite and therefore allows assessing tissues perfusion during the intervention. It is based on a digital subtraction angiography (DSA) and it calculates the transit time of the contrast trough the vessels, displaying it as a full color image.
2D Perfusion can be used for the identification of perfusion alterations in tissue in case of vascular pathologies and it allows to compare side by side pre, peri, and post-procedural perfusion images to identify treatment end point and to verify procedure outcome.

In addition to a visual interpretation, a quantitative analysis of the perfusion is presented. For a user defined region of interest, a time density curve can be 2D Perfusion is a tissue perfusion visualization interventional software option.

Key benefits
• High-definition perfusion imaging with comprehensive data analysis tools
• Immediate perfusion feedback during procedures
• Dedicated image acquisition protocols for different anatomical regions

Real-time, high-definition tissue perfusion visualization
Interventional procedures often require deeper insight and understanding of the underlying tissue perfusion. Whether you are trying to restore vessel patency to overcome ischemia or are trying to achieve a controlled restriction of perfusion in tumor embolization. Our real-time 2D Perfusion imaging helps you identify the severity of the condition of the perfusion level before the intervention and verify the effect of the treatment immediately afterwards.

Unique acquisition settings create high-definition visualizations that show the flow of contrast into small blood vessels at a very high level of detail, helping you assess and quantify hypo and hyper perfused tissues during interventions. This additional information during angiographic interventions facilitates the review of procedural outcome.

Specifications
The functional parameters available are:
• Mean Transit Time
• Arrival Time
• Time to Peak
• Wash-in Rate
• Width
• Area Under Curve

• 2D Perfusion supports subtracted X-ray exposure runs acquired with a 2D Perfusion protocol.
• 2D Perfusion supports runs acquired on the frontal channel or on the lateral channel.
• The 2D Perfusion protocol acquires up to 173 images at 3 frames per second.
• 2D Perfusion supports runs of 5 images or more
• Runs can be transferred to 2D Perfusion over the DICOM network or over the Real Time Image Link (option).
• 2D Perfusion provides different options for exploring the time-to-density curve,
• 2D Perfusion allows to draw 2 different types of ROI: elliptical or freeform. Changes to the elliptical ROI automatically update the curve in the analysis graph.
• In procedures where it is required to compare left and right hemispheres, 2D Perfusion allows to draw a mirror line to compare the perfusion behaviors in the ROI between the hemisphere suspected to have a perfusion alteration and the normo-perfused hemisphere.

2D Perfusion includes EPX's for Neuro, Abdominal and Peripheral examinations. 2D Perfusion allows to select the frames where the presence of contrast is detected in order to reduce the motion artifacts.

Line #	Part #	Description	Qty	Each	Price
24	**NCVD049	addl FlexVision XL HD	1	$57,712.00	$57,712.00

Line #	Part #	Description	Qty	Each	Price

Additional FlexVision XL HD with Philips 58 inch monitor. The content is a slave of the 1st FlexVision XL HD screen.

| 25 | **NCVD128 | storage extension | 1 | $4,796.00 | $4,796.00 |

Extends image storage capacity on your X-ray system

As imaging data becomes larger, you can quickly reach the limit of the storage capacity on your interventional X-ray system. The Storage extension extends the storage capacity of your interventional X-ray system.

Specifications

By default 50.000 images are available, this option will give 100.000 images (this is for 1K2 image size).

| 26 | **NCVD178 | IW Hardware | 1 | $18,952.00 | $18,952.00 |

Key benefits
• Facilitates the interventional tools and multimodality viewing in exam room and control room
• Supports import and viewing of DICOM compatible data from CT and MR imaging modalities

View multimodality images in exam room and control room

Images from a variety of sources are being increasingly used during interventions for a variety of Live Image Guidance tools. The Interventional Tools Hardware option provides the hardware for our interventional tools. It enables DICOM compatible data from other imaging modalities to be imported and viewed in the exam room and control room. To support fast results, a real-time digital image link is provided between the Interventional Hardware workstation and the X-ray system.

Specifications

The Interventional hardware is the hardware for the 3D interventional tools that includes Real Time Link. It enables import and viewing of DICOM compatible data from other imaging modalities.
The Interventional Hardware comprises at least:
• Computer Workstation
• Control Room 24" display
• 16 GB memory
• 1.5 TB disk for the operating system, application software and application data
• Internal CD-ROM / DVD writer
• Mouse tablet to interact with all the interventional tools at the table side.
Conditionally:
FD Calibration Tool Kit for 3D-RA

| 27 | **NCVC546 | HeartNavigator R3 | 1 | $37,116.00 | $37,116.00 |

HeartNavigator R3 automatically segments anatomical structures, anatomical landmark points and anatomical planes from previously acquired DICOM compliant CT datasets.

Key benefits
• Deeper anatomical understanding to plan and perform TAVR/TAVI, mitral valve replacement and LAAC procedures
• Immersive user experience and fully automated tasks simplify planning, measurement, device selection and choice of X-ray viewing angle
• Enhanced insight into calcification distribution

Insightful planning and guidance for Structural Heart Disease procedures
When planning a structural heart disease (SHD) procedure, an objective assessment on vascular anatomy can help you work with greater confidence and avoid complications. Understanding the patient's individual anatomy when planning a transcatheter aortic valve replacement or implantation (TAVR/TAVI), mitral valve replacement, left atrial appendage closure (LAAC) or other procedure helps you select the appropriate approach, and size and type of a device. In addition,

Line #	Part #	Description	Qty	Each	Price

safely navigating the valve delivery devices through anatomy and deploying the valve in the correct position are recognized as technical challenges when performing TAVR/TAVI procedures.

HeartNavigator Release 3 automatically segments anatomical structures, anatomical landmark points and anatomical planes from previously acquired DICOM compliant CT datasets to support a wide variety of structural heart disease procedures. Different visualization tools, including anatomical landmarks, virtual devices, viewing planes and measurements are available to support precise planning.

Specifications
• Automatic segmentation of tissue, anatomical structures, landmarks, calcium, anatomical planes and viewing angles within the cardiac CT data for TAVI/TAVR
• Automatic distance, diameter, area and perimeter measurements for TAVI/TAVR
• Automatic Free centerline measurement along the ascending aorta for TAVI/TAVR
• Segmentation, measurements and viewing angles for other SHD procedures, e.g. mitral valve replacement and left atrial appendage closure
• Up to date virtual device library for TAVI/TAVR procedures
• Report with all relevant measurements, viewing angles and selected device as print for use in exam room or stored on the PACS.
• Live guidance with CT overlay and automatic viewing angles
• Highly automated intuitive workflow
• Enhanced anatomy visualization

Please contact your local sales person for any CT compatibility details.

| 28 | **NCVC327 | XperCT Dual | 1 | $51,012.00 | $51,012.00 |

XperCT Dual allows two scans to be made on the X-ray system at a defined interval, resulting in CT-like images.

Key benefits
• Aids in assessment of soft tissue, bone structure, and stent deployment
• Fast reconstructions support fast decisions during procedures
• DualPhase acquisitions allow visualization of arterial and post-arterial contrast enhanced images to support oncology interventions

Supports assessment of soft tissue, bone structure, and stent deployment
One of the challenges during interventional procedures is to treat the region of interest without affecting healthy tissue or organs. XperCT Dual is a version of XperCT, which allows two scans to be made on the X-ray system at a defined interval, providing high resolution, high contrast images within seconds. Physicians can use the CT-like images of XperCT Dual to assess soft tissue, bone structure, and stent deployment before, during, and after interventions. This aids in avoiding structures and identifying feeder vessels.

Specifications
XperCT Dual protocols are available covering routine procedures such as biopsies and drainages but also advanced procedures such as abdominal oncological imaging up to neuro high resolution stenting. All protocols can be selected at the tableside via the touch screen module.

The DualPhase dual view functionality allows the simultaneous visualization of two 3D datasets acquired at different times of the procedure such as the arterial and post-arterial contrast enhancement in oncologic liver imaging. In this DualView, XperCT Dual allows the segmentation of multiple lesions at the same time in the viewed datasets.

XperCT Dual acquires up to 60 frames/sec. (frame rate extension to 60frames/sec is included) and supports fast abdominal protocols with 5 to 8 second acquisition times for the X-ray system, thereby minimizing respiratory artifacts. The XperCT volume is displayed automatically within 8 to 15 seconds after acquisition. No user interaction is required.

XperCT Dual includes Metal Artifact Reduction to reduce the artifacts caused by metal presence in the region of interest. BMI Noise Reduction is included to reduce the noise caused by large size patients (only available when Abdominal XperCT runs are selected).

Line #	Part #	Description	Qty	Each	Price

The XperCT volume can be viewed in the control room and in the examination room. The viewing package comprises:
- 3D volume viewing in any desired orientation
- Slice viewing in any desired orientation
- Slice viewing at any slice thickness with a minimum of 0.5 mm
- Five distance measurements calculated in the same volume, including "Quick measurement" feature
- Cut-plane functionality to provide precise insight into anatomical structure
- Unique high-resolution reconstructive zoom technique
- Graphical display of stand position including rotation and angulation parameters
- Contrast and brightness control
- Contrast resolution 5-10 Hu
- Spatial resolution of the initial reconstruction: 10 lp/mm
- Contrast range -1000 to 2000 Hu
- High resolution imaging mode produces
- 512x512x512 volume rendered reconstructions
- XperCT Dual can be controlled via the touch screen module and the mouse at tableside.

The XperCT volume can be matched with (when additional options are available) 3D-RA (3D Rotational Angiography) and pre acquired CT, PET/CT or MR volumes. This view allows combining multiple images from different modalities in order to provide additional anatomical insight. This multimodality volume can be viewed with the following functionalities:
- Registration of the two volumes from the same patient
- The resulting volume can be viewed with complete 3D-RA viewing functionality
- The XperCT slice can be overlaid onto the 3D vessel for better assessment of the region of interest
- Three different contrast rendering options to allow viewing of the 3D vessel in the soft tissue structure
- (128x128x128, 256x256x256, 384x384x384 and 512x512x512 volumes)
- Movie clip recording functionality (AVI) to capture dynamic views
- 3D automatic position control at tableside: When an working position is selected from the XperCT volume the C-arc steers itself to the selected position
- 3D Follow C-arc at tableside
- XperCT data and 3D-RA with XperCT Dual overlay is stored in the same patient file as all other patient related data. All this data can be reviewed at any time.

XperCT data can be exported to:
- Any optional DICOM compatible device (e.g. PACS/Printer), supported are DICOM XA, DICOM SC, DICOM CT and DICOM 3D
- Support archive on one or multiple DVD's, CD-ROM(s)
- Image transfer to a standard PC compatible format (JPEG, AVI)
- Store a subset of exportable objects (snapshots and AVI Movies) to a USB device.

Line #	Part #	Description	Qty	Each	Price
29	**NCVC564	XperCT Open and Closed	1	$3,712.00	$3,712.00

For Philips Azurion Interventional X-ray suites, Open trajectory function is available in propeller mode in addition to the current standard trajectory.

Specifications

Open Trajectory provides 3D rotational acquisitions with start and stop positions of +55° to -185° respectively. This protocol opens the arc to the left side of the patient allowing for a wider translation of the angiographic table towards this direction; thereby shifting the isocenter of the C-arm to the right lateral side of the patient. This enables visualizing off-centered regions of interest (such as the periphery of the liver) in a single sweep. In this function, the data is acquired at the same frame rate as XperCT Dual (60 frames/sec). With 'XperCT Open and Closed' functionality, customers can continue to retain the current standard closed trajectory protocols. Therefore, customers will be able to choose either of the trajectories in propeller mode during the procedure as per their preference.

Line #	Part #	Description	Qty	Each	Price
30	**980406041009	Rad Shield w/ Arm (Contoured) 61X76	2	$2,352.00	$4,704.00
		Contoured Rad Shield with Arm rest. 61X76			
31	**989801220012	Cable Spooler	2	$324.00	$648.00
32	**989801220037	M LED 3MC Light	2	$9,588.00	$19,176.00
		MAVIG M3 MC LED - Multi Color / power Supply Included Includes Portegra2 Ext Spring Arm 75/90cm			
33	**989801220273	Ceiling Track w/Column & Handle Ext	2	$3,528.00	$7,056.00
		Mavig 2.5m Ceiling Track with Ceiling trolley, 360 degree column, and brake handle extension.			
34	**989801220375	Black Anti-fatigue Floor Mat w/logo.	2	$160.00	$320.00
		Black Anti-fatigue Floor Mat with Philips Logo 36" x 60"			
35	**989801220380	Full Load Remote UPS	1	$35,660.00	$35,660.00

MGE Galaxy 5000 80 kVA Full Load – 40kW UPS with remote capability. Includes top feed cabinet and optional side panels, ISX0001369526 G5TUPSU80KPAdjacent MGE Galaxy 5000 Battery Cabinet with one full string of batteries and standard Galaxy 5000 Adjacent battery Temp sensor.
High Voltage 6 Alarm Relays Card
MGE GALAXY 5000 Remote Alarm Status Panel
MGE SNMP/Web Communication Card
Top Feed Auxiliary Cabinet
In the event of a power loss the UPS provides emergency power to allow system function and full X-Ray exposure and fluoroscopy for up to 15 minutes.

| 36 | **NNAE049 | XperCT OnSite Clin Ed | 1 | | |

Clinical Education Program for XperCT
CV XperCT Handover OnSite Education:

Philips Education Specialists will provide eight (08) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to 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# 335-100615
This training is provided only with the purchase of XperCT. If the option is not ordered, training will not be provided.

| 37 | **NNAE278 | Heart Navigator OnSite Education | 1 | | |

Clinical Education Program for iXR Heart Navigator:

iXR Heart Navigator OnSite Education: Philips Education specialist will provide sixteen (16) hours of education for up to (4) students selected by the customer . The Physicians performing the procedures are required to be part of the training session. CEU credits may be available for each participant that meet the guidelines provided by Philips. Please refer to guidelines for more

Line #	Part #	Description	Qty	Each	Price

information. Note: Site must be patient ready. Philips personnel are not responsible for actual patient contact or operation of the equipment during the educations sessions except to demonstrate proper equipment operation.

iXR Heart Navigator OnSite Live Case Follow Up Education: Philips Education Specialist will provide twenty -four (24) hours of education for Physicians and staff for live case use of the Heart Navigator software. This will be a follow up visit to the initial training of the Heart Navigator software. It is required that Live Valve implantation studies be performed during this education session. No CEU credits will be available for this session. Please refer to guidelines for more information. Note: Site must be patient ready. Philips personnel are not responsible for actual patient contact or operation of the equipment during the educations sessions except to demonstrate proper equipment operation.

Education expires one (1) year from equipment installation date (or purchase date if sold separately). Ref # 694698-20110915
This training is provided only with the purchase of Heart Navigator.

38   ****NNAE504**   **Clinical Education Program for**   1
Vessel Navigation

Philips Imaging Systems Clinical Education Specialist will provide twenty-four (24) hours of education for up to four (4) students, as selected by customer, including technologists from weekend/night shifts as necessary. CEU credits are not available for this portion of training. Please refer to 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#296276-20150820
This training requires the purchase of Vessel Navigation.

39   ****NNAE596**   **IXR StentBoost Imaging**   1
Systems OnSite Education

Philips Imaging Systems Clinical Education Specialist will provide eight (8) hours of education for up to four (4) students, as selected by customer, including technologists from weekend/night shifts as necessary. CEU credits are not available for this portion of training. Please refer to 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#296309-20170315
This training requires the purchase of StentBost Live.

40   ****NNAE957**   **Clinical Education Program for**   1
2D Perfusion

100237 Azurion 7 M20

IXR 2D Perfusion OnSite Education: Philips Education Specialists will provide sixteen (16) hours of education for up to four (4) students, selected by customer, including technologists from night/weekend shifts if necessary. CEU credits may be available for each participant that meets the guidelines provided by Philips. Please refer to 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 # 6034-20131218
This training requires the purchase of 2D Perfusion.

| 41 | SP059Q | **Clinical Services Flex Account** | 1 | $20,000.00 | $20,000.00 |
| | | Flex Training $20,000 (non-discountable) | | | |

SP059Q Clinical Services Flex Account Agreement

Customer may request non-discountable clinical training ("Training") commencing on the warranty start date for a period of three (3) years ("Training Contract Period") from the Philips course catalogs available at the time Training is requested.
As Customer requests Training, the Flex Account balance will be reduced by Philips pursuant to the then current published and non-discountable list price for a given Training, multiplied by the number of Trainees scheduled to attend.

Subject to the terms and conditions in this Agreement, Philips will provide requested Training during the Training Contract Period until the monetary level of training is exhausted or falls below the then current published and non-discounted list price of the requested Training. Training coverage expires at the end of the Training Contract Period and no credit for any unused funds may be carried forward to the next year.
Course catalogs include:

*   Guided pathways to clinical excellence: Imaging Systems continuing education course catalog
*   Education designed around you: Ultrasound course catalog
*   Philips online Learning Center: www.philips.com/learningcenter
*   Some additional clinical education programs may apply

Selections can be made across one or any of these modalities: Computed Tomography (CT), Cardiovascular (CV), General X-Ray (GXR), Hybrid, Magnetic Resonance (MR), Nuclear Medicine (NM), CT Simulation and Treatment Planning (Oncology), and Ultrasound.

Philips Training may be conducted at Philips training facilities, the Customer location(s) listed below in this Agreement ("Customer Site(s)"), through on-line or remote training, or at a third party location as determined by Philips. Customer is responsible for scheduling Training for its employees ("Trainee(s)"). Philips will make reasonable efforts to accommodate Customers scheduling requests. All Training is subject to availability. Philips reserves the right to cancel or reschedule courses at its sole discretion.

Trainee(s) must meet the minimum admission requirements set forth in the course syllabus, must satisfy all prerequisites prior to admission and may be required to sign or acknowledge Philips safety checklist prior to receiving Training. PHILIPS MAKES NO WARRANTY THAT ANY TRAINEE WILL PASS ALL OR ANY PORTION OF THE TRAINING COURSES PROVIDED OR THAT THE TRAINING WILL RESULT IN ANY TRAINEE BEING QUALIFIED OR ABLE TO OPERATE THE SYSTEM.

Unless otherwise indicated in this agreement, all travel and living expenses incurred by the Trainee(s) will be the responsibility of the Customer.

To receive remote training Customer must provide Philips a secure location to store a Philips remote services ("PRS") router (or a Customer owned router acceptable to Philips) for connection to the products and Customer network; provide Philips appropriate access to the PRS router to enable Philips to access the products remotely; provide Philips with a dedicated broadband Internet access node including, but not limited to, public and private interface access suitable to establish a successful connection to the products through the Philips PRS and Customers network for Philips use in remote training, transmitting automated status notification from the products and regular uploading of products data files (such as, but not limited to, error logs and utilization data for improvement of Philips products and services and aggregation into new services). Unless Philips determines in its sole discretion that the products cannot be connected to the PRS, then Customer's failure to provide the access described in this paragraph will constitute Customer's waiver of its rights to remote training under this Agreement. Customer must identify, in writing, one (1) Customer representative to Philips who will manage and be responsible for Customer's selection and scheduling of all Training to be provided by Philips.

LIST PRICE	$3,647,970.00
DISCOUNT	$2,176,782.00
	$0.00
NET PRICE	$1,471,188.00

Buying Group: ASCENSION HEALTH RSMG

Contract #: ME000001113

Addt'l Terms:

Each Quotation solution will reference a specific Buying Group/Contract Number representing an agreement containing discounts, fees and any specific terms and conditions which will apply to that single quoted solution. If no Buying Group/Contract Number is shown, Philips' Terms and Conditions of Sale will apply to the quoted solution.

Each equipment system listed on purchase order/orders represents a separate and distinct financial transaction. We understand and agree that each transaction is to be individually billed and paid.

Price above does not include any applicable sales taxes.

The preliminary delivery request date for this equipment is:_____.

If you do not issue formal purchase orders indicate by initialing here_____.

Tax Status:

Taxable_____ Tax Exempt_____

If Exempt, please indicate the Exemption Certification Number:_____, and attach a copy of the certificate.

Delivery/Installation Address:

_____

_____

_____

Contact Phone #:

_____

Purchaser approval as quoted:

_____

Title:

_____

Invoice Address:

_____

_____

_____

Contact Phone #:

_____

Date:

_____

This quotation is signed and accepted by an authorized representative in acknowledgement of the system configuration, terms and conditions stated herein.