



Clinical confidence in action

Philips Ingenuity Core¹²⁸ specifications

PHILIPS
sense and simplicity

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1. Introduction

Welcome to the benefits of 128-slice scanning, improved spatial resolution and excellence in advanced clinical capabilities. The kind of scanning that offers low dose without sacrificing image quality. Fast, any way you look at it, with speed of reconstruction, as well as speed of collaboration with the IntelliSpace Portal option. It also offers in-room upgradability to Ingenuity CT so its capabilities can grow as your needs grow.

High-resolution with high confidence

Philips Ingenuity Core¹²⁸ offers 4 cm coverage for excellent image quality and is also available with iDose⁴, our iterative reconstruction technique. With a focus on clinical integration and collaboration, patient focus, and improved economic value, the scanner provides improved image quality at low dose with up to 57% improvement in spatial resolution. Now you can personalize image quality based on your patients' needs at low dose. And with Ingenuity Core¹²⁸ with iDose⁴, reconstruction is achieved in seconds rather than minutes. When it's time to grow, Ingenuity Core¹²⁸ is fully in-room upgradable to Ingenuity CT for high performance with no tradeoffs.

Clinical integration and collaboration

- 33% improvement in z-axis visualization with 128 slices
- Ultra-high resolution allows for outstanding spatial visualization
- Personalized image quality at a low dose

Patient focus

- Maintain image quality at low dose
- Low dose, low energy
- Personalized dose across a wide patient population

Improved economic value

- Majority of factory protocols reconstructed with iDose⁴ in less than a minute
- MRC Ice X-ray tube for reliability and fast cooling
- Fully in-room upgradable to Ingenuity CT



Effective power with iDose ⁴ option*	105 kW
Slices	128
Coverage	40 mm
Maximum scannable range	2,100 mm
Bore size	700 mm
Reconstruction speed with iDose ⁴	18 IPS
Reconstruction speed without iDose ⁴	25 IPS
Equivalent anode heat capacity with iDose ⁴ option**	30 MHU

* See Section 9.1 Generator for description.

** See Section 9.2 X-ray tube for description.

Philips Ingenuity Core¹²⁸ is clinical confidence in action.

2. Imaging 2.0

Web 2.0 described the evolution of the web from being data-driven to user-centric, redefining the way people connect, share, and use the Internet. Imaging 2.0 is doing the same, bringing a new world of possibilities for radiology. It is about integration and collaboration, and new levels of patient focus and safety that can help clinicians achieve what was unimaginable just a few short years ago.

The first medical networking platform? That's Imaging 2.0. An unprecedented amount of energy and focus behind new innovations in nearly every aspect of Radiology? That's Imaging 2.0. Transforming the way you see imaging? That's Imaging 2.0. Increasing your clinical integration, enhancing focus on patients, improving the economic value of the tools you count on every day? It's all Imaging 2.0 from Philips.

What could you do with more?

More clinically integrated

As clinical complexity increases and new applications for imaging emerge, influence is shifting away from the traditional role of the radiologist. The key to putting imaging first is to integrate innovation in a natural way. Philips is introducing advances in nearly every aspect of radiology to help you do just that.

More collaboration and patient focus

We're working with you to create smarter integration and better patient satisfaction, while providing greater value for your investment. In this next generation of imaging, we are incorporating advanced technology to facilitate new levels of collaboration between radiologists and referring physicians, to provide efficient, personalized care for patients.

More value from each image

With Philips, you'll also experience hybrid systems while building lifetime value for your investment through improved workflows and easier upgrades to the latest innovations. We're opening up richer views, so you can perform procedures that are less invasive and less expensive while delivering the information you need.

More reasons to believe

Imaging 2.0 from Philips is our approach to clinical collaboration and integration, patient focus and safety, and improved economic value to help radiologists find success in the new realities of practicing medicine.

We are creating smart, patient-adaptive systems for excellent patient comfort and safety. We're designing reliable tools that improve value to you through increased uptime, easier upgrades, and flexible applications.

People focused. Healthcare simplified.

We're dedicated to understanding the challenges you face, and helping you overcome those challenges every day. We believe that better collaboration, enabled through advanced technology, is fueling a revolution in imaging science, one that leads to better outcomes and lower costs. Giving people the best healthcare possible is your mission. It's our mission, too.

3. Ingenuity family

Philips brings you the benefits of high-resolution, low-dose scanning with increased integration and collaboration, patient care, and economic value in a family that's designed to grow as you grow.



Future bound

Ingenuity Core

Future bound, Ingenuity Core offers improved image quality with 4 cm coverage, personalized dose, and is **fully in-room upgradeable** to Ingenuity Core¹²⁸ or Ingenuity CT.

Key benefits

- Improved clinical capabilities with 64 channels and 4 cm coverage
- Upgradeability

Clinical confidence in action

Ingenuity Core¹²⁸

Clinical confidence in action, Ingenuity Core¹²⁸ brings you 128-slice scanning, allows you to personalize dose, and is **fully in-room upgradeable** to Ingenuity CT.

Key benefits

- Clinical benefits of 128-slice CT with a 33% improvement in z-axis visualization
- Upgradeability

High performance – no trade-offs

Ingenuity CT

High performance with no trade-offs, Ingenuity CT allows you to dial in the image quality you want and offers the benefits of iterative reconstruction technique and speed for everyone.

Key benefits

- iDose⁴ iterative reconstruction technique – standard
- Results driven scanning – standard
- O-MAR – standard

4. Ingenuity Data Acquisition and Sampling

Philips uses a set of integrated techniques to provide users more options for achieving low dose while maintaining diagnostic confidence. One of the innovations of the Ingenuity family is Ingenuity Data Acquisition and Sampling (DAS), which provides high-resolution 128-slice, thin reconstructions.



Without Ingenuity DAS



With Ingenuity DAS

5. Dose management

DoseWise is a set of techniques, programs and practices that provides optimal image quality, while protecting people in X-ray environments. It is based on the ALARA (As Low As Reasonably Achievable) principle. It's a philosophy that is active in every level of product design. And it includes creative thinking in three areas: X-ray Beam Management, Less Radiation Time and More Dose Awareness.

5.1 DoseRight automatic current selection

Personalizes the dose for each patient based on the planned scan by suggesting the lowest mAs settings to maintain constant image quality at low dose throughout the exam.

5.2 DoseRight angular dose modulation

Automatically controls the tube current rotationally, increasing the signal over areas of higher attenuation (lateral) and decreasing signal over areas of less attenuation (AP).

5.3 DoseRight Z-DOM (Longitudinal dose modulation)

Automatically controls the tube current, adjusting the signal along the length of the scan, increasing the signal over regions of higher attenuation (shoulders, pelvis), and decreasing the signal over regions of less attenuation (neck, legs).

5.4 Dedicated pediatric protocols

Developed in collaboration with top children's hospitals, age and weight-based infant and pediatric protocols enhance image quality with low dose.

5.5 Locking protocols

Consistency is critical to establishing a high standard of care and this consistency begins with the correct scanning protocols being used. With locking protocols, it is now possible to prevent unapproved modification of your scanning protocols by password-protecting them.

5.6 Dose warning messages

For brain perfusion studies a warning messages is presented if the CTDI_{vol} exceeds 250 mGy.

5.7 DoseCheck

It is now possible to build into each ExamCard an operator notification message that will be shown to the operator if the acquisition is planned and exceeds the specified CTDI_{vol} or DLP. In addition, an alert dose threshold is available that, if an acquisition is planned

and will exceed a specified CTDI_{vol} or DLP, the operator will be required to enter operator name and (if configured) a password to proceed, or the operator can adjust the scan parameters.

5.8 Dose summary table

Captures per-patient dose information for each individual series acquired and reports the total dose for the entire study. The dose summary table can be sent to PACS or a workstation along with the study for easy review by the radiologist.

5.9 DICOM structured reporting

System creates DICOM structured report for dose information that can be used by external systems such as HIS/RIS and PACS systems to extract dose information for a given patient.

5.10 Dose performance data

CTDI _{vol}	Measurement
Head	12.9 mGy/100 mAs
Body	6.6 mGy/100 mAs

Using IEC standard phantoms

Included with Results Driven Scanning*

5.11 DoseRight 3D-DOM

DoseRight 3D-DOM combines in-plane information and longitudinal information from the surview to modulate the dose delivered to the patient according to three dimensions.

5.12 DoseRight Index

DoseRight Index (DRI) is a fourth-generation tool for specifying desired image quality. This tool uses the patient's size, as measured by the surview, and the pre-defined DRI value established by the healthcare institution to deliver the required dose to the patient to produce the desired image quality.

* Available with Results Driven Scanning option. See section 12 Results Driven Scanning for description.

6. Gantry

6.1 Gantry

Feature	Specification
Aperture	700 mm
Focus-isocenter distance	570 mm
Focus-detector distance	1040 mm
Rotation times	0.4,* 0.5, 0.75, 1, 1.5, 2 seconds for full 360° scans 0.28,* 0.33 seconds for partial angle 240° scans Effective cardiac rotation time 0.3 seconds*
Intercom system	Two-way connection between the gantry and console area
Gantry tilt	-30° to +30° with 0.5° increments

*These rotation times are with the Rate Responsive Toolkit



6.2 Control panel on gantry

Controls:

- Multi-directional control for fast movement
- Fine movement in/out control
- Start button
- Pause button
- Visual countdown
- Zero couch location
- Lasers

Audio notification 10 seconds before X-ray On so that operator and staff can exit room before X-ray On.



6.3 Control panel at operator's console

Controls:

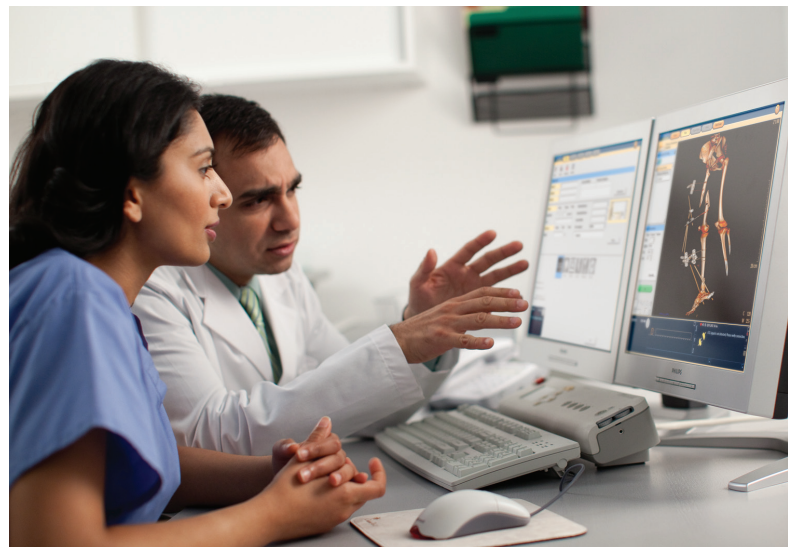
- Tilt
- Table in/out/up/down
- Emergency stop
- X-ray indicator
- Start button
- Pause button

6.4 Auto voice

A standard set of commands for patient communication before, during, and after scanning is available in the following languages:

- | | | |
|------------|------------|--------------|
| • English | • Hebrew | • German |
| • French | • Arabic | • Danish |
| • Spanish | • Russian | • Swedish |
| • Italian | • Georgian | • Chinese |
| • Japanese | • Turkish | • Portuguese |

Customized messages can also be created.



7. Patient table

7.1 Standard table

Feature	Specification
Maximum scannable range	1,860 mm
Maximum longitudinal stroke	1,900 mm
Z-position accuracy	+/- 0.25 mm
Longitudinal speed	0.5 mm/s – 185 mm/s
Vertical range	579 mm to 1,022 mm from the floor 1.0 mm increment
Floating tabletop	Carbon-fiber tabletop with foot pedal and hand controls for easy positioning and quick release
Maximum load capacity	450 lbs (204 kg)

Optional

7.2 Long (extended) table

Feature	Specification
Maximum scannable range	2,100 mm
Maximum longitudinal stroke	2,160 mm
Z-position accuracy	+/- 0.25 mm
Longitudinal speed	0.5 mm/s – 185 mm/s
Vertical range	579 mm to 1,022 mm from the floor 1.0 mm increment
Floating tabletop	Carbon-fiber tabletop with foot pedal and hand controls for easy positioning and quick release
Maximum load capacity	450 lbs (204 kg)

7.3 Bariatric table

Feature	Specification
Maximum scannable range	1,860 mm
Maximum longitudinal stroke	1,900 mm
Z-position accuracy	+/- 0.25 mm
Longitudinal speed	0.5 mm/s – 185 mm/s
Vertical range	579 mm to 1,022 mm from the floor 1.0 mm increment
Floating tabletop	Carbon-fiber tabletop with foot pedal and hand controls for easy positioning and quick release
Maximum load capacity	650 lbs (295 kg)



8. Accessories

8.1 Standard accessories

- Arm rests
- Cushions and pads
- Elevated head holder
- IV poles
- Patient restraint kit
- Table extension
- Table pad



Arm rests



Cushions and pads



Elevated head holder



Head holder and pads



IV poles



Patient restraint kit



Table extension



Table pad

8.2 Optional accessories

- Infant cradle
- Flat head holder
- Load and unload foot pedals
- Radiology Flat Top Kit
- Therapy table top
- CCT/Interventional controls



Infant cradle



Flat head holder



Load and unload foot pedals



Radiology Flat Top Kit



Therapy table top (available only with bariatric couch)

9. Imaging chain

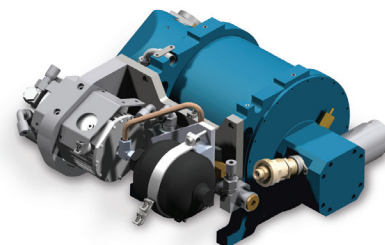
9.1 Generator

Feature	Specification
Effective power with iDose ⁴ option	105 kW
Power rating	80 kW
kVp setting	80, 100, 120, 140
mA range (and step size)	20 – 665 (1 mA steps)

Effective power is calculated by using full generator power (80 kW) and using iDose⁴ at the same time. This gives Ingenuity Core¹²⁸ effectively more power.

9.2 X-ray tube

Feature	Specification
Focal spot sizes, quoted to IEC 336/93 standard	Small: 0.5 mm x 1.0 mm Large: 1.0 mm x 1.0 mm
Equivalent anode heat capacity with iDose ⁴ option	30 MHU
Anode heat capacity	8.0 MHU
Maximum anode cooling rate	1,608 kHU/min
Anode diameter	200 mm
Anode rotation speed	105 Hz (6,300 rpm)
Target angle	7 degrees



Liquid coolant carries heat away from the MRC Ice X-ray tube, so Ingenuity CT is ready for the most demanding scans, one right after the other.

9.3 Detector

Feature	Specification
Material	Solid-state GOS with 43,008 elements
Dynamic range	1,000,000:1
Slip ring	Optical – 5.3 Gbps transfer rate
Data sampling rate	Up to 4,640 views/revolution/element
Slice collimations available	64 (128) x 0.625 mm = 40 mm 40 (80) x 0.625 mm = 25 mm 32 (64) x 1.25 mm = 40 mm 16 (32) x 2.5 mm = 40 mm 2 (4) x 0.5 mm = 1 mm 2 (4) x 0.625 = 1.25 mm 12 (24) x 0.625 = 7.5 mm 12 (24) x 1.25 = 15 mm 20 (40) x 0.625 = 12.5 mm 16 (32) x 0.625 = 10 mm
Slice thickness (helical mode)	0.55 mm – 5 mm
Slice thickness (axial mode)	0.5 mm – 12.5 mm
Scan angles	240°, 360°, 420°
Scan field of view	250 mm, 500 mm

10. Reconstruction

Feature	Specification
Reconstruction speed with iDose ⁴	18 IPS
Reconstruction speed without iDose ⁴	25 IPS

10.1 RapidView IR

RapidView IR is the reconstruction technology designed to support iDose⁴, specifically to provide reconstruction speed (images per second) that allows this iterative reconstruction technique to be routinely used in inpatient, outpatient, and emergency care settings. The majority of factory protocols with iDose⁴ are reconstructed in less than a minute.

10.2 Evolving images

Real-time 256² matrix image reconstruction and display in step with helical acquisition or off-line. Images can be modified for window width and level, zoom, and pan prior to larger matrix reconstruction. At the end of the acquisition, all images are updated with the desired viewing settings.

10.3 Cone Beam Reconstruction

Philips patented Cone Beam Reconstruction Algorithm (COBRA) enables true three-dimensional data acquisition and reconstruction from helical scanning.

10.4 ClearRay reconstruction

A revolutionary solution to beam hardening and scatter artifact, modeling and simulation technology pre-computes and stores beam hardening and scatter corrections in a database that is later referenced to create a correction that is personalized to each individual patient. As a fully three-dimensional technique, contrast scale stability is preserved across different patient sizes, image uniformity is improved, and organ boundaries are better visualized.

10.5 Adaptive filtering

Adaptive filters reduce pattern noise (streaks) in non-homogenous bodies, improving overall image quality.

10.6 Adaptive multicycle reconstruction

Image data can be prospectively gated or retrospectively tagged. Using Philips adaptive multicycle reconstruction technique, we are able to automatically deliver the best temporal resolution possible (as low as 53 mseconds).

10.7 Reconstruction field of view

- 50 to 500 mm continuous
- 25 to 250 mm (Ultra High mode)

10.8 Image matrix

- 512 x 512
- 768 x 768
- 1,024 x 1,024

10.9 Off-line reconstruction

Off-Line (batch) background image reconstruction of user-defined groups of raw data files with automatic image storage.

Optional

10.10 iDose⁴

iDose⁴ is an advanced fourth generation iterative reconstruction technique designed to improve spatial resolution at low dose. When used in combination with the advanced technologies of the Ingenuity Core¹²⁸, it provides a unique approach to managing important factors in patient care – low energy, low dose, and low injected contrast imaging.

Included with Results Driven Scanning*

10.11 Fast preview

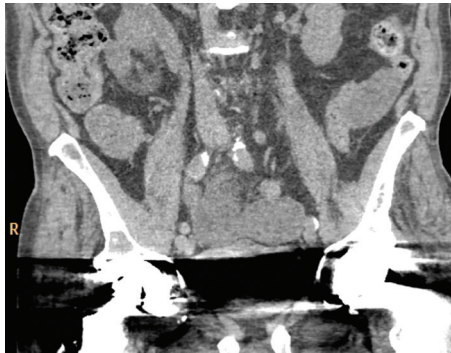
Real-time 512² matrix image reconstruction and 5 mm x 5 mm contiguous slice display with helical acquisition or off-line reconstruction. Images can be modified for window width and level, zoom, and pan prior to larger matrix reconstruction. At the end of the acquisition, all images are updated with the desired viewing settings.

* Available with Results Driven Scanning option. See section 12 Results Driven Scanning for description.

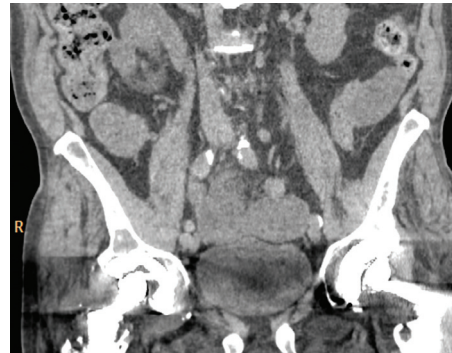
11. Metal Artifact Reduction for orthopedic implants (O-MAR) (optional)

Artifacts from large metal objects, such as orthopedic implants, can be problematic in CT diagnosis and treatment planning, making it difficult to accurately contour anatomic structures and raising the possibility that these artifacts will need to be manually compensated for in the plan. Ingenuity Core¹²⁸ offers the Philips Metal Artifact Reduction

for orthopedic implants to isolate the effects of large metal objects in the image data and uses this to reduce the associated artifacts. The system automatically produces conventional images and Metal Artifact Reduction for orthopedic implants images for clinician review. This can enhance visualization of critical structures and target volumes.



Without O-MAR



With O-MAR

12. Results Driven Scanning (optional)

Ingenuity Core¹²⁸ offers the option of Results Driven Scanning, which is a Philips CT exclusive. The past decade has seen significant advances in the capabilities of the CT scanner; yet the way the operator runs the scanner had changed very little. Results Driven Scanning closes this gap, reducing decision points, automating routine tasks, and integrating into the way you work.

12.1 ExamCards

ExamCards are the evolution of the scanning protocol. With ExamCards, the results are planned, not the acquisition as traditionally done in CT; this reduces decision points and clicks, saves time and can improve operator-to-operator consistency. ExamCards can include axials, coronals, sagittals, MPRs, MIPS, and other results, all of which will be automatically reconstructed and can be sent off to where they will be read with no additional work required by the operator.

12.2 ScanRuler

Interactive timeline of the study that provides the operator a quick overview of the important events of the study, such as survey, acquisition, bolus tracking, auto voice, and injection.

Optional with Results Driven Scanning

12.3 SyncRight

SyncRight is an option available with Results Driven Scanning that allows the CT scanner and the contrast injector to communicate together in a new way. Operators can now visualize the injection and acquisition progress on a single screen. With SyncRight, healthcare institutions can store the injection protocol inside the ExamCard, which means a single click to load the injection protocol and scan protocol. Additionally, operators program the injector directly from the operator console and the system can prompt the operator to stop the injection if the acquisition has stopped.

Results Driven Scanning is a Philips CT exclusive.

13. Networking and archiving

13.1 Networking

Ingenuity Core¹²⁸ supports 10/100/1000 Mbps (10/100/1000 BaseT) network speeds. For outstanding performance, Philips recommends a minimum of 100 Mbps network speed (1 Gbps preferred) and for the CT network to be segmented from the rest of the hospital network.

13.2 DICOM

Ingenuity Core¹²⁸ supports IHE requirements for DICOM connectivity and can work with DICOM 3.0-compliant PACS, scanners, workstations, and printers. It supports IHE requirements for scheduled workflow and other integration profiles as defined in IHE statement.

Ingenuity Core¹²⁸ includes the following DICOM functionality:

- Service class user and profile (CT, MR, NM, Secondary Capture)
- DICOM Print
- DICOM Modality Worklist
- Query/Retrieve User and Provider
- Modality Performed Procedure Step User
- Storage Commitment User
- Removable Media
- Structured Reports

13.3 Archiving

The full implementation of the DICOM 3.0 communications protocol in the Ingenuity CT allows connectivity to DICOM 3.0 compliant scanners, workstations, and printers; supports IHE requirements for DICOM connectivity.

13.4 DICOM DVD/CD writer

A DICOM DVD/CD Writer option stores DICOM images and associated image viewing software on very low cost DVD/CD media. Images on these DVD/CDs can be viewed and manipulated on PCs meeting the minimum specifications. Ideally suited for individual result storage and referring physician support.

13.5 Filming

This function allows the user to set up and store filming parameters. Pre-stored protocols can be set to include auto-filming. The operator can film immediately after each image, at the end of a series, or after the end of a study, and review images before printing. The operator can also automatically film the study at three different windows and incorporate “Combine Images” functionality to manage large datasets. Basic monochrome and color DICOM print capability are supported.

Type	Hard drive		DVD	CD	DVD RAM
Capacity	262 GB	262 GB	4.7 GB	700 MB full disk	4.7 GB
Approximate images	473,000	826,000 (compressed)	8,500	1,240	15,000
Patients	1,577	2,755	28	4	50
Images per study	300	300	300	300	300

14. Clinical enhancements

14.1 Bolus tracking

An automated injection planning technique to monitor actual contrast enhancement and initiate scanning at a predetermined level.

14.2 Spiral Auto Start (SAS)

Spiral Auto Start allows the injector to communicate with the scanner. This allows the technologist to monitor the contrast injection and to start the scan (with a predetermined delay) while in the scan room.

14.3 Patient centering on surview

Centering the patient properly is one of the most important factors in getting good image quality. Traditionally, patients are centered using the gantry laser lights; with this feature it is possible to improve patient centering using the lateral surview with real time feedback.

14.4 Clinical applications, standard

- CT Viewer
- Filming

Optional clinical enhancements

14.5 Rate responsive CV toolkit

Enables cardiac imaging and includes an ECG monitor, Retrospective Tagging, Prospective Gating, the Cardiac Viewer, Heartbeat-CS, and CT Reporting. Uses Philips exclusive adaptive Multicycle Reconstruction Algorithm to enhance the temporal resolution. Includes automatic arrhythmia detection and handling in ECG on the console.

14.6 Step & Shoot Cardiac

Enables low dose, high quality cardiac CT imaging. This axial prospective ECG-gated acquisition technique achieves full heart coverage with sub-millimeter, isotropic resolution within a short breath-hold. Includes automatic arrhythmia detection and handling.

14.7 CT Interventional

CT Interventional includes both CT Fluoroscopy and Continuous CT (CCT) applications and is available as either cart-mount or ceiling-mount. CT Fluoroscopy provides real-time guidance for interventional procedures and CCT biopsy mode enables the clinician to perform gantry room scans using a foot pedal and includes a remote monitor for viewing.

This option also includes the Philips interventional couch control which improves operational efficiency during CT-guided interventional procedures through tableside control of longitudinal movements for patient positioning.

14.8 Clinical applications, optional

CT Reporting
Calcium Scoring
Cardiac Viewer
Brain Perfusion
AVA Stenosis
Dental
Bone Mineral Analysis

Optional with Brain Perfusion Package

14.9 Jog Scan

Jog Scan provides up to 80 mm of imaging area for perfusion studies. The scanner acquires two 40 mm volumes of interest by translating the couch back and forth – doubling the standard perfusion coverage.

15. IntelliSpace Portal

(optional)

The IntelliSpace Portal is a multimodality workspace that facilitates a high level of collaboration among radiologists and referring physicians while streamlining imaging workflow. It uses advanced networking capabilities to facilitate collaboration among clinicians that may ultimately lead to faster, more accurate and informed patient care.

This clinical application turns virtually any PC into an advanced multimodality imaging system workspace that can support radiology, cardiology, oncology, and other specialties' imaging needs. This allows radiologists and referring physicians – who are often burdened with scheduling conflicts – to review the results of multiple imaging modalities at their convenience in their preferred locations via a secure interactive Internet browser. Until now, most powerful visualization workstations were housed in the radiology department, requiring a referring physician to make a special trip to the radiology department in order to view the advanced images so crucial to confident patient diagnoses.

The IntelliSpace Portal offers several exclusive features, including:

- Thin client architecture that makes image data and applications available virtually anywhere for all CT, MR, NM images
- Award winning and easy-to-use applications (based on the Best-in-KLAS Brilliance Workspace Portal)
- Tooling to allow easy communication among clinicians of advanced visualization results
- Integration on the Philips picture archiving and communication system (PACS)
- The Philips “open integration” policy, which allows the IntelliSpace Portal to synch with several third-party solutions by conforming to the Digital Imaging and Communications in Medicine (DICOM) standards
- Multimodality tumor tracking application that provides automated tumor segmentation of lesions from discovery to treatment, and reports on the growth and functional changes of individual lesions in the form of standards (RECIST, WHO, PERCIST)



The IntelliSpace Portal offers comprehensive visualization capabilities such as CT virtual colonoscopy, cardiac plaque analysis, lung nodule assessment, and all routine CT and MR necessities such as perfusion and diffusion analysis, cartilage, assessment and CT and MR angiography. The quantitative clinical application that drives the IntelliSpace Portal facilitates consistent and replicable images and results regardless of the user.

Web Collaboration is our first medical networking platform, and allows for the collaboration among radiologists and referring physicians using the IntelliSpace Portal. Web Collaboration enables clinicians to:

- Share images and data
- Discuss cases in real-time using everyday communication tools such as email and chat programs
- Invite multiple colleagues to join a virtual collaboration meeting to interactively review patient images

16. Image quality

16.1 Spatial resolution

Spatial resolution	Cut-off (+/- 2 lp/cm)
Ultra high mode (lp/cm)	24
High mode (lp/cm)	16
Standard mode (lp/cm)	13

16.2 Noise

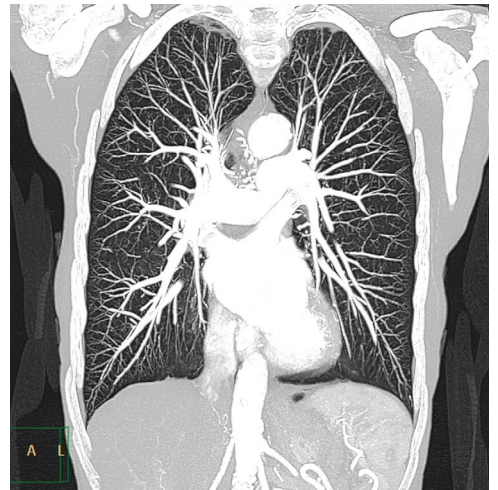
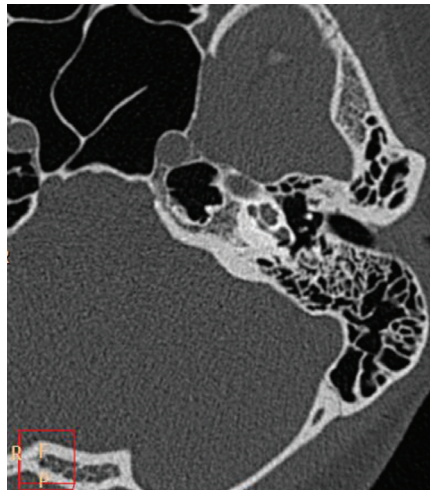
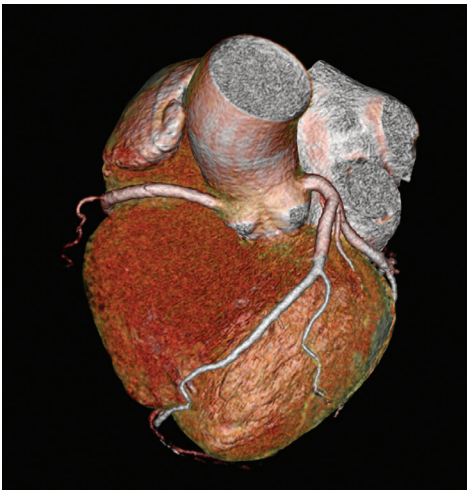
Feature	Specification
Noise	0.27% [120 kVp, 250 mAs, 10 mm, 0.75 sec, 250 mm FOV, UA filter, 21.6 cm water equivalent phantom]

16.3 Low-contrast resolution

Feature	Specification
Low-contrast resolution	4.0 mm @ 0.3% [120 kVp, 250 mAs, 10 mm, 0.75 sec, 250 mm FOV, A filter, 64 x 0.625, 512 matrix, 16.4 mGy at surface of 32 cm phantom]

16.4 Other

Feature	Specification
Absorption range	-1,024 to +3,071 Hounsfield units



17. Feature list

The key features of Ingenuity Core¹²⁸ allow for clinical confidence in action.

Ingenuity Core ¹²⁸
DoseRight automatic current selection
DoseRight angular dose modulation
DoseRight Z-DOM
DoseRight for pediatrics
Dose summary table
Dose warning messages
DoseCheck*
DICOM structured reporting*
Locking protocols
Evolving images
Ingenuity data acquisition and sampling
ClearRay reconstruction

* delivered to all customers when available

Optional

- iDose⁴
- Rate responsive CV toolkit
- Step & Shoot Cardiac
- Jog Scan
- O-MAR
- SyncRight*
- Results Driven Scanning

Included with Results Driven Scanning

- DoseRight 3D-DOM
- ExamCards
- ScanRuler
- Fast Preview
- DoseRight index

*Must have Results Driven Scanning

18. Site planning

A lifetime of value starts here. Reliable from the ground up, Ingenuity Core¹²⁸ is designed to fit seamlessly into your operation.

18.1 Power requirements

- 200/208/240/380/400/415/480/500 VAC
- 50/60 Hz
- 112.5 kVA source (150 kVA preferred)
- Three-phase distribution source

Optional

18.2 Console Uninterrupted Power Supply (UPS)

Provides up to 30 minutes of backup power for host

18.3 Environmental requirements

Temperature

Gantry room	18° to 24° C (64° to 75° F)
Control room	15° to 24° C (59° to 75° F)
Storage/Transport	-5° to +35° C (23° F to 95° F)

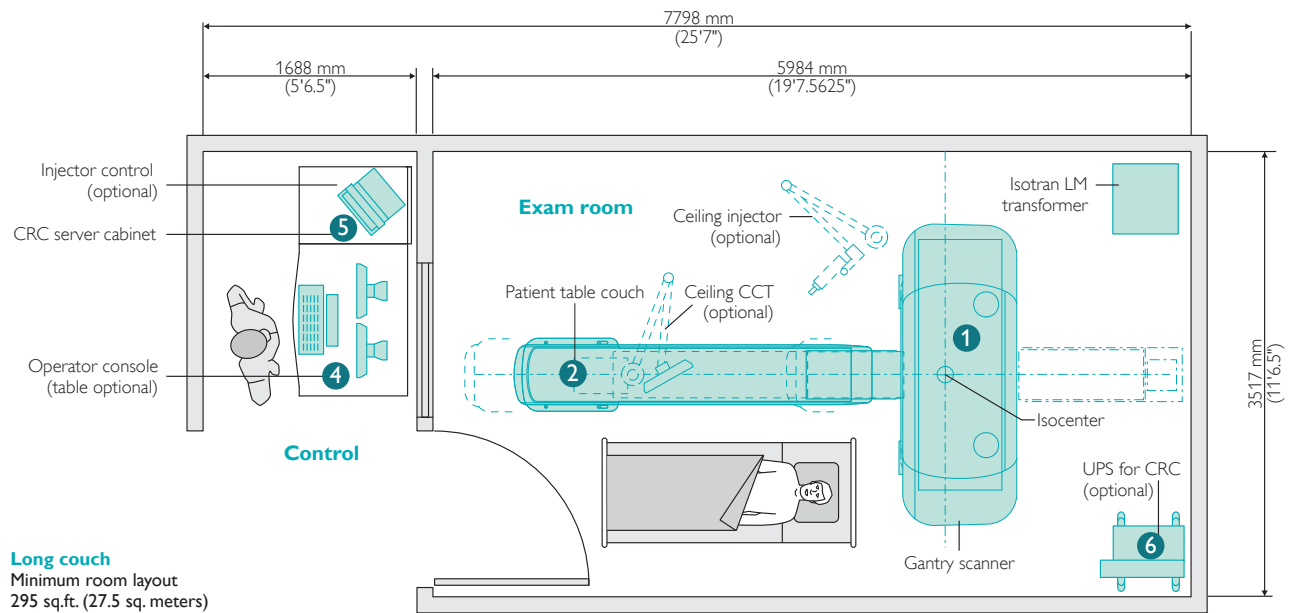
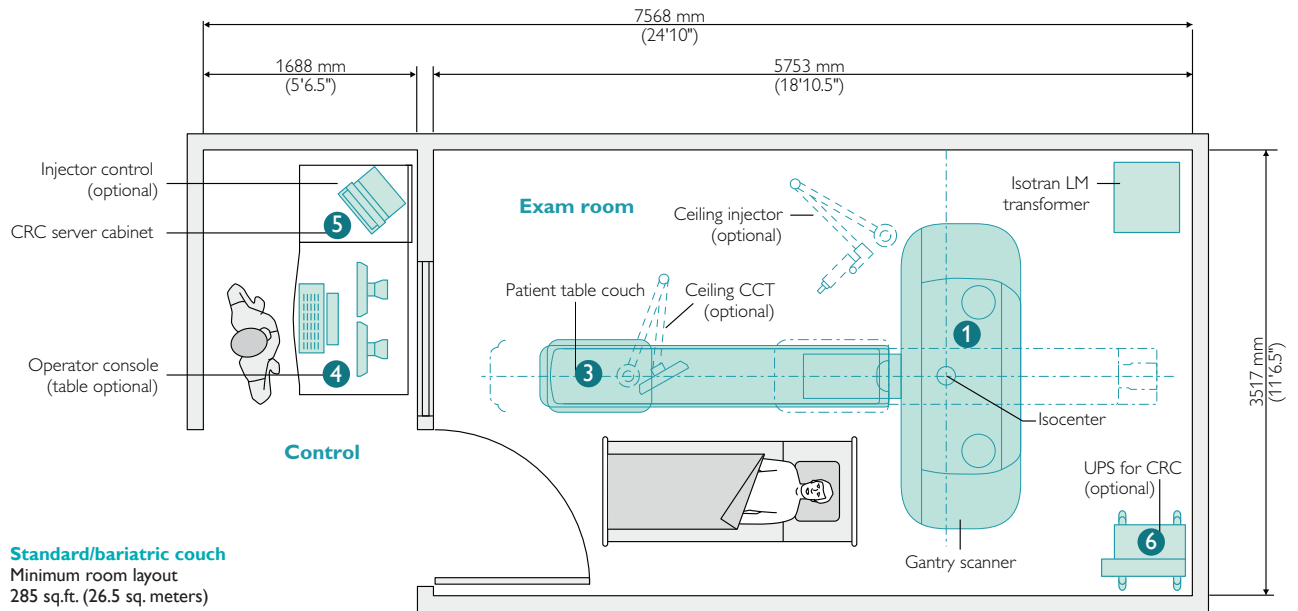
Humidity

Gantry/Control	35% to 70% non-condensing
Storage/Transport	10% to 90% non-condensing

Heat dissipation

Gantry	18,000 BTU/hr
Computer (CRC)	3,572 BTU/hr
Isotran LM	2,210 BTU/hr

18.4 System requirements



These layouts represent minimum space for equipment installation and service access.
National and local codes may require additional space for electrical safety and patient access.

18.5 Dimensions and weights*

	Weight	Height	Width	Depth
1 Gantry	1950 kg (4300 lbs.)	201 cm (79")	238 cm (94")	94 cm (37")
2 Couch, long, at full travel with foot extender	400 kg (880 lbs.)	107 cm (42")	58 cm (23")	565 cm (223")
3 Couch, standard/bariatric	404 kg (890 lbs.)	107 cm (42")	69 cm (27")	515 cm (203")
4 Operator console	88 kg (193 lbs.)	118 cm (47")	120 cm (47")	91 cm (36")
5 Computer/server (CRC)	142 kg (313 lbs.)	77 cm (31")	61 cm (24")	89 cm (35")
6 UPS for CRC	136 kg (300 lbs.)	46 cm (18")	63 cm (25")	66 cm (26")

* Dimensions and weights for one unit

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